

WIOA

Strategic Workforce Development Plan for the Capital Region

2017 – 2020



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Capital Area Regional Strategic Workforce Development Plan PYs 2017-2020

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EXHIBITS –

- **Exhibit A:** Capital Region MOU
- **Exhibit B:** Next Economy Capital Region Prosperity Plan
- **Exhibit C:** Next Economy Cluster Research Workforce Needs Assessment
- **Exhibit D:** EDD LMID Regional Planning Unit Report
- **Exhibit E:** EDD Capital Region Industry Clusters of Opportunity (2010-15)
- **Exhibit F:** CAERC AB 86 Comprehensive Regional Plan
- **Exhibit G:** Los Rios Community College District Strategic Plan (2016)

Workforce Innovation and Opportunity Act 4-Year Regional Planning Unit Plan and Related Local Plans Program Years 2017-2020

Local Workforce Development Area(s)

Regional Lead Contact for RPU

Date of Submission

Local area	Contact name	Phone number

REGIONAL PLAN SIGNATURES

This regional plan represents the Capital Area Regional Planning Unit's efforts to maximize and coordinate resources available under Title I of the **Workforce Innovation and Opportunity Act**.

This regional plan is submitted for the period of July 1, 2017 through June 30, 2021 in accordance with the provisions of the WIOA.

Local Workforce Development Board Chair

Lynn R. Conner
Signature

Lynn R. Conner
Name

Chair, Sacramento Works, Inc.
Title

3/22/17
Date

Chief Elected Official

Jay Schenirer
Signature

Councilmember Jay Schenirer
Name

Chair, SETA Governing Board
Title

3.2.17
Date

Capital Area Regional Strategic Workforce Development Plan Program Years 2017-20

In July of 2014 Congress passed the Workforce Innovation and Opportunities Act also known as WIOA. WIOA Section 108 and California UI Code Sections 14221-22 require Local Workforce Development Areas (LWDA) to submit comprehensive local plans and regional plan to the State Workforce Development Board every four years. This document represents the Strategic Regional Plan for the for the workforce development areas comprising the Capital Region, which consists of Alpine, Colusa, El Dorado, Glenn, Placer, Sacramento, Sutter, Yolo, and Yuba Counties. This plan builds on previous work and is jointly submitted by the Chief Local Elected Officials (CLEOs) and the four Local Workforce Development Boards (LWDBs). The Regional Plan outlines strategies that assist youth and individuals with barriers gain access to employment opportunities, including career pathways, within critical industry sectors identified within the greater Capital Area Regional Planning Unit (RPU). The ultimate goal of these strategies is to support economic prosperity and income mobility. This will be completed through aligning the regional plan objectives in support of sector strategies that enhance WIOA outcomes and the California Workforce Development Board's (CWDB) Unified Strategic Workforce Development Plan Goals. These goals include producing a million "Middle Skill" industry valued and recognized postsecondary credentials while doubling the number of apprenticeships statewide between the years of 2017 and 2027. Strategic areas of focus include:

- Development of the partner network
- Identification of Sector Partnerships and LMI/Workforce Analysis
- Development of Career Pathway Programs (Youth and Adult)
- Service Alignment/Resource Braiding
- Increase of Employer Work-based Training
- Continuous System Performance Review

The Capital Region RPU has developed the regional plan with a clear understanding of the State Policy Framework and its objectives. The State Policy Framework includes three policy objectives:

1. Demand Driven Skills Attainment
2. Enabling upward mobility, and
3. Aligning, coordinating and integrating programs and services

Seven strategies:

1. Sector strategies
2. Career pathways
3. Organizing regionally
4. Earn and learn models
5. Supportive services
6. Building cross-system data capacity
7. Integrating services and braiding resources

And two primary goals:

1. Producing a million “Middle Skill” industry valued and recognized postsecondary credentials
2. Doubling the number of apprenticeships statewide (between the years of 2017 and 2027)

Local systems are informed by collaborative regional planning and coordination that is formalized through the implementation of a Regional Planning Unit (RPU).

NOTE: The responses in this section focus on the regional efforts and initiatives applicable to the Capital Region. Individual local workforce area’s efforts and initiatives are described in each area’s local plan.

A. Provide a List of Regional Partners Who Are Party to the Plan

- i. Describe the geographic boundaries of the Regional Planning Unit and any plans to petition for a regional planning partner modification.

The Capital Region is comprised of four workforce development areas covering nine counties: Sacramento, Yolo, Golden Sierra (El Dorado, Placer and Alpine) and North Central Counties Consortium (Yuba, Sutter, Colusa, Glenn). The four workforce development areas have a long history of working together on joint projects and initiatives, and there are no plans to petition for a modification.

- ii. List the regional partners who are party to the plan and describe their role in developing and implementing the regional plan.

The WIOA (Section 106) includes a requirement that the Governor identify planning regions in the state and enumerates specific elements that must be considered as part of this process. The purpose of identifying regions is to align workforce development activities and resources with larger regional economic development areas and available resources to provide coordinated and efficient services to job seekers and employers. The State of California, Employment Development Department’s (EDD) policy guidance #WSD15-17, California WIOA Regional Planning Units, issued on February 24, 2016, identifies these local areas and names the following four local areas as the Capital Area Regional Planning Unit (RPU):

1. Golden Sierra Job Training Agency (Golden Sierra or GSJTA)
2. Sacramento Employment and Training Agency (SETA)
3. North Central Counties Consortium (NCCC)
4. Yolo County

In August and September of 2016, the RPU solidified its agreement for WIOA systems alignment through the signing of the “Memorandum of Understanding for the Capital Area Regional Planning Unit” or Capital Region MOU, Exhibit A. The purpose of the Capital Region MOU is to establish mutually beneficial relationships in regards to regional coordination and systems alignment including the regional planning items outlined in WIOA Section 106 commonly referred to as the A-H requirements. The RPU further agreed to work towards meeting the objectives in the state plan as indicated above. The RPU expanded the agreement to include the following seven additional elements of alignment:

1. Review and align local policies and procedures
 2. Investigate cobranding of initiatives
 3. Coordinate outreach and business engagement strategies
 4. Coordinate capacity building for Workforce Board Members, Chief Local Elected Officials, Partners and staff
 5. Coordinate Staff and system partners' development activities
 6. Coordinate regional business advisory groups and employer engagement strategies
 7. Continuous planning in response to state and federal requirements
- Specific detail on the MOU can be found in Exhibit A. Representatives from the RPU membership meet to discuss these issues on a monthly basis. Further detail on the coordinated efforts of the parties to the MOU and the efforts of the RPU are expanded within the RPU's regional plan.

Some examples of coordination include the collection of the regional and local Labor Market Data described in the previous section. Additional examples include Slingshot, Rapid Response, Proposition 39, the NEG Sector partnership and others.

In addition to the four workforce boards, other regional partners include the State of California, Department of Rehabilitation (DOR) and the Employment Development Department (EDD)—Unemployment Insurance, Wagner-Peyser, Veterans, Trade Assistance Act, county CalWORKs departments, local economic development agencies, county offices of education, the Capital Adult Education Regional Consortium (CAERC), Job Corps, as well as representatives of Indian and Native American, Migrant and Seasonal Farmworkers and older worker programs, and numerous community based organizations and other partners. Many of the regional partners are simultaneously conducting concurrent planning efforts and workforce board members, partners and staff are participating in these regional planning efforts. For example, the community college's “Doing What Matters for Jobs and the Economy” and “Strong Workforce” initiatives, and the CAERC's AB 86 Comprehensive Regional Plan, March 2015, both involve regional planning on

workforce development, with the goal of alignment and consistency with other planning efforts. CAERC is comprised of 15 members, inclusive of four community colleges, and 11 K-12 school districts, as well as 23 partner organizations.

Central to these efforts is Valley Vision, a regional leadership organization focused on resolving complex problems and multi-stakeholder initiatives across the region. Valley Vision's focus areas include Project Slingshot, the Next Economy's workforce and economic development initiative, the Align Capital Region initiative to align education with industry and the Strong Workforce initiative. Due to Valley Vision's central role in regional planning matters, its expertise in conducting objective research and findings, and its ability to convene and coordinate multi-stakeholder initiatives, multiple regional partners have jointly subcontracted with Valley Vision to lead joint planning efforts. SETA, Los Rios Community College District, Align Capital Region, and private industry have all jointly invested in Valley Vision to lead planning efforts. Valley Vision is able to coordinate these multiple and often overlapping planning efforts in a more efficient manner that reduces the time commitment from partners and private industry.

B. Regional Economic and Background Analysis

- i. Provide a regional analysis of economic conditions including existing and emerging in-demand industry sectors and occupations, and employment needs of employers in existing and emerging in-demand industry sectors and occupations. A local area may use an existing analysis, which is a timely current description of the regional economy, to meet the foregoing requirements.

In 2013, the Next Economy Capital Region Prosperity Plan, Exhibit B, a region-wide economic analysis was released that turned attention to six promising business clusters that the region could tap for job creation and growth opportunity. Advanced Manufacturing, Education and Knowledge Creation, Clean Energy Technology, Information and Communications Technology, Health Services and Life Sciences, and Food and Agriculture were all identified as business clusters where the region has innate advantages, the strongest potential for growth based on economic performance indicators, and – together with the region's prevailing government and construction sectors – could comprise a diversified, robust and sustainable regional economy.

The original cluster research study was commissioned by Next Economy partners at a time when the region was still digging out from the 2008 recession. The region's economic hardship at that time had a lot to do with being heavily reliant on just two economic drivers – government and construction. While vital and significant, the dominance of these two sectors in the region's economic equation left our economy unbalanced, unprepared and devastated.

In 2016, the economic analysis was updated to reflect the post-recession environment to identify critical workforce skills gaps that exist within the six Next Economy-identified clusters today, mobilize and align cluster stakeholders around job strategies, and create targeted workforce action plans for each cluster that identifies skills gaps, education and training resources, and economic impact of the clusters. The Next Economy Cluster Research Workforce Needs Assessment, Exhibit C, has been widely utilized throughout the region by workforce boards, education, economic development, private industry and other partners who agree that economic development and other resources should target and grow these clusters. Included in the Next Economy Cluster Research Workforce Needs Assessment are six cluster reports that provide an overview of the cluster, industry trends and economic impact, as well as an overview of the top demand occupations in the cluster requiring postsecondary education or training, along with projected occupational demand, institutions providing related education and training, and possible workforce gaps.

In addition, the regional workforce boards utilized EDD's LMID Regional Planning Unit Report, Exhibit D, for the analysis of labor market and economic conditions in the region. Further, in early 2016, the four local workforce boards in the region commissioned a comprehensive study by EDD, Capital Region Industry Clusters of Opportunity (2010-15), Exhibit E, that included an examination of additional clusters that are not reflected in the Next Economy Plan but offer job creation and economic growth.

- ii. Provide an analysis of the knowledge and skills needed to meet the employment needs of the employers in the region, including employment needs in in-demand industry sectors and occupations.

Analysis of the knowledge and skills needed to meet the employment needs of the employers in the region, including employment needs in demand industry sectors and occupations can be found in the 2013 Next Economy Capital Region Prosperity Plan and the 2016 Next Economy Cluster Research Workforce Needs Assessment referenced above.

- iii. Provide an analysis of the regional workforce, including current labor force employment and unemployment data, information on labor market trends,

and educational and skill levels of the workforce, including individuals with barriers to employment.

EDD's LMID Regional Planning Unit Report for the Capital Area referenced above was utilized for the analysis of labor market and economic conditions in the region.

- iv. Provide an analysis of workforce development activities, including education and training, in the region. This analysis must include the strengths and weaknesses of workforce development activities and capacity to provide the workforce development activities to address the education and skill needs of the workforce, including individuals with barriers to employment, and the employment needs of employers.

All workforce development activities, including education and training, required under the WIOA legislation are available to adults and dislocated workers either directly through local workforce area job centers, through contracted service providers, through community based organizations, and through the vast network of public and private training institutions, including the school districts, vocational technical centers, community colleges, private proprietary schools, and four-year public and private educational institutions.

The Capital Area RPU places a high priority on serving vulnerable populations with barriers to employment. Regional strategies will include the provision of remedial education services, which may include services designed to improve literacy skills and English language proficiency, and to provide assistance with obtaining high school diplomas or equivalent. The RPU will work with educational partners to develop and/or expand offerings for Integrated Education and Training (IET), which is a service delivery model that provides adult education activities concurrently and contextually with workforce preparation and training activities when appropriate. IET targets training in in demand occupations and sectors. The region will focus on Career Technical Education opportunities that integrate and embed basic education and literacy into the curriculum, improve training completion rates and training related job placement rates, and improve the likelihood of a client's enrollment into subsequent skills courses leading to stackable credentials and a career pathway.

Workforce development activities in the Capital Area Region are coordinated through collaborations between numerous education, labor, social service, economic development, and workforce organizations that bring together resources and services needed to bolster regional workforce development efforts for both job seekers and employers.

Current regional workforce activities that are occurring in the Capital Area Region include:

White House Healthcare Career Pathways

The Capital Region is one of seven national pilot sites for the Whitehouse Initiative for Health Career Pathways launched in April 2016. The goal is to take to scale nationally standardized skills competencies in health care training programs that can establish core skill sets appropriate to each career pathway. The Capital Region was chosen as one of the seven pilots due to its strong foundation of 15 years of industry-led career pathways work to coordinate demands for talent and increase the pipeline for demand healthcare occupations. The initiative is led by the major regional healthcare systems: Sutter Health, Kaiser Permanente, UC Davis Medical Center, and Dignity Health; and includes the regional workforce boards, colleges and education partners, economic development and community based organizations.

Construction and Energy Industry Sector Collaborative

This initiative is supported by the regional workforce boards and is led by the North State Building Industry Association, which represents over 500 business members from the construction and energy sectors. Through regular monthly meetings, the initiative focuses on aligning construction-related education and training programs with industry needs, and developing career pathways that start in the high schools and are connected to careers in construction and energy sectors.

AgPlus Initiative

The regional workforce boards are partners in this initiative led by the Center for Economic Development, California State University, Chico and Valley Vision. The regional partnership covers 28 counties throughout California's Central Valley and has been designated a federal Investing in Manufacturing Communities Partnership area. The goal is to advance the region's agriculture-related manufacturing economy, transforming raw goods into value-added product. The mission is to catalyze the growth and creation of food and beverage manufacturing businesses and middle-skills jobs. The initiative's focus includes: 1) K-12 Food and Beverage Manufacturing Career Pathways, 2) Community College-Industry Curriculum and Training Alignment, 3) Supplier Network Mapping and Match-Making, 4) Central Valley AgPlus University Research Partnership, 5) Central Valley Innovation Hub (iHub) Network, 6) Rural-Urban Connections Strategy (RUCS) Planning and Business Tools, 7) Central Valley Export Training Program and, 8) Regional Finance Fund.

SlingShot Initiative

Led by the Capital Area Region's workforce boards, Slingshot's goal is to enhance the innovation ecosystem by promoting entrepreneurial skills training and micro-enterprise services. SlingShot addresses three areas of focus: mentoring networks that connect entrepreneurs to experienced executives; providing physical spaces for entrepreneurs, such as co-working facilities, maker spaces, incubators and accelerators; and the creation of a Resource Navigator, a searchable, interactive online tool that will house a comprehensive inventory of all the support services available to entrepreneurs across the region. The initiative will enable the nine-county region's innovation ecosystem to expand and strengthen the support it provides to entrepreneurs, small businesses, and start-ups, and will serve to prioritize efforts that will connect rural communities to urban resources.

Expected impacts of the regional SlingShot initiative are:

- Increased access to and communication about regional resources through the creation of a web-based resource navigator
- Increased business incubation and entrepreneurial mentoring
- The fostering of an entrepreneurial and innovative culture

An innovation ecosystem will create more businesses and jobs throughout the region, will create a skilled talent pool, and will support a resilient economy offering widespread mobility opportunities.

Align Capital Region (ACR)

The regional workforce boards are engaged in this initiative which is deploying an operating system to improve how business, education, and community partners advance regional outcomes and economic prosperity in the Capital region. Its mission is to integrate community stakeholders and resources to ensure student success, workforce readiness, and overall prosperity. Regional workforce boards are participating on the Operating Committee and the Alignment Teams to achieve the strategic goal of aligning college and career readiness efforts with regional workforce needs across high-growth industry sectors.

Capital Region Prop 39 MC3 Initiative

The Capital Region MC3 (CRMC3) initiative is led by SETA and supported by the regional workforce boards. The initiative provides career assessment and testing, case management, support services, GED preparation, occupational skills/pre-apprenticeship training and on-the-job training (OJT) to enrolled participants to prepare them for emerging jobs and career ladders in the construction/energy efficiency sectors. As the lead agency, SETA partners

with the GSJTA, the Sacramento Sierra Building and Construction Trades Council (SSBTC), regional Joint Apprenticeship Coordinators, three campuses of the Los Rios Community College District, Northern California Construction Training (NCCT), North State Building Industry Foundation (NSBIF), the California Conservation Corps, Job Corps, and other local community-based and training partners.

The CRMC3 initiative includes the convening of an Industry Advisory Panel. To capitalize on existing efforts and reduce duplication of efforts, CRMC3 coordinates its meetings with the Construction and Energy Industry Sector Collaborative (CEISC), which is a regional community collaborative led by NSBIF. The Collaborative includes training providers, community stakeholders, elected officials, workforce development agencies, organized labor, and employers. The intent of the Industry Advisory Panel is to ensure alignment in meeting the employment and training needs of job seekers and industry, as well as to continue to build a pipeline of opportunity in the construction and energy efficiency industry.

“Build Your Own Workforce” Initiative

This initiative is led by SETA and supported by the regional workforce boards. It is an employer engagement model that clarifies the types of employer support and activities that local boards can provide to increase the employment of entry level workers in their communities. The program will be delivered utilizing the train-the-trainer concept with businesses teaching other businesses how they can hire, train and mentor their own entry-level workers. The program will be developed by business for business. Industries targeted will start with construction, hospitality/tourism, and advanced manufacturing business sectors. This model will provide employers the tools to build their own workforce, and will include developing services and supports to assist other businesses in hiring, training and mentoring entry-level workers. The result will be a “Turn- Key” Mentorship and New Hire Training solution to aid the supervisors and managers of small to medium sized companies in growing their workforce, and that can be utilized by all workforce boards within the Capital Area RPU. The solution will include a road map/template for Career Pathways Development within business clusters and a Coaching Manual for Supervisory Personnel that can be modified for an employer’s specific business.

Workforce Development Professional Apprenticeship

Sponsored by the California Workforce Association (CWA) and piloted by SETA, the Workforce Development Professional Apprenticeship is a State-wide apprenticeship that combines classroom training with on-the-job

training to Workforce Development Professionals. Workforce Development Professionals who successfully complete the apprenticeship program receive a State Apprenticeship Council Certificate documenting their attainment of journey-level Workforce Development Professional skills.

Regional planning efforts of the Capital Area RPU have included the identification of strengths and weaknesses of workforce activities and the delivery of services within the region. The following summarizes key strengths of the region's workforce system:

- Long history and high levels of collaboration and regional planning amongst the Workforce Development Boards and partners throughout the Capital Region.
- Experience with sector strategies, including regional and local sector-based workforce initiatives.
- Valley Vision's provision of regional planning on multi-stakeholder initiatives.
- Promise Zone status in the Sacramento urban core.
- Strong employer partnerships.
- Strong understanding of regional labor market, employment trends, and projections.
- Diverse industry and employer base.
- Exceptional collaboration with the local community college district.
- Existing local partnerships among all WIOA Titles.
- Active career pathways and earn and learn models.
- Willingness of core partners to join regional efforts.
- Wage and employment growth; the region is rebounding from the recession.
- High quality pool of training providers, including access to many CTE programs available through community colleges and AEBG partners.

The following summarizes challenges of the region's workforce system:

- Lack of an integrated, shared data system across the core partners.
- Partners have less of a stake in the system because of lack of resources
- Still finding silos among Titles (opportunities for coordination under WIOA).
- Need for priority alignment between state level agencies and local service delivery.

- Need for sufficient and flexible resources to serve jobseekers with multiple barriers to employment, including basic skills deficiencies, criminal records, homeless, etc.
 - Lack of geographic alignment between economic development regions, area planning councils and community college districts.
 - Uncoordinated and fragmented business engagement across the region and partners.
- v. A significant share of the California population is foreign born, including several million individuals in the workforce who are limited English proficient. The following counties have a workforce that is at least 15 percent limited English proficient: Imperial, Monterey, San Benito, Los Angeles, Tulare, Merced, Santa Clara, Madera, Fresno, Orange, San Joaquin, San Mateo, Santa Barbara, Kern, Kings, Alameda, San Francisco, Napa, Stanislaus, San Bernardino, Ventura, Riverside, San Diego, Yolo, Sutter, Contra Costa, and Sacramento. RPUs containing one or more of these counties must assess and specify in their regional plans how they will address the needs of and provide services to those who are limited English proficient. These RPUs are required to provide an assessment of the need to provide services to and how services will be provided to limited English proficient individuals.

EDD’s LMID Regional Planning Unit Report, Exhibit D, for the Capital Region, includes the following data on foreign born and English Language Learners (ELLs) in the RPU:

English Learners	Population	Percentage
Speaks English Less Than “Very Well”	268,771	11.9%
Speaks English “Very Well”	364,323	16.1%
Speaks Only English	1,625,563	72.0%
Total	2,258,657	100.0%

Source: U.S. Census Bureau, 2010-2014 American Community Survey, 5-Year Estimates.

Native and Foreign Born	Population	Percentage
Native	1,985,786	82.2%
Foreign Born	430,407	17.8%
Total	2,416,193	100.0%

Source: U.S. Census Bureau, 2010-2014 American Community Survey, 5-Year Estimates.

Although the chart above indicates that 11.9 percent of ELLs in the Capital Region Speak English Less Than “Very Well”, based on data from the U.S. Census Bureau, 2011-2015 American Community Survey, American Fact Finder, 5-Year Estimates, the percentages of ELLs speaking English less than “very well”, or Limited English Proficient (LEP), in Sacramento, Sutter, and Yuba counties are greater. They are as follows:

Sacramento -	13.6%
Sutter -	16.5%
Yolo -	14.8%

While a high percentage of individuals with LEPs are employed, there are some glaring labor market consequences to lacking English language proficiency, including lower wages, limited ability for career development and career pathways advancement, increased potential for workplace exploitation, and decreased ability to change jobs.

According to the Metropolitan Policy Program at Brookings, working age LEP adults on average make 25 to 40 percent lower wages than those that are English proficient.

In accordance with the California Dymally-Alatorre Bilingual Services Act, LEPs within all four workforce systems of the Capital Area RPU have universal and meaningful access to the full array of services available through WIOA-funded and/or partner programs. Language assistance is provided at no cost to LEP individuals through use of competent bilingual staff, staff interpreters, contracts or formal arrangements with organizations providing interpretation or translation services, or technology and telephone interpretation services. Additionally, translated written materials are provided, if needed, as well as written notice of the availability of translation, free of charge, to LEP clients.

Although great efforts are made by the four workforce boards of the Capital Area RPU to serve ELLs/LEPs, the following historical challenges still exist:

- WIOA outcomes and the perception that ELL adults won't meet them
- Employer relations often not attuned to companies that have opportunities for ELLs/LEPs
- Many steps to access all services needed to ensure success
- ELLs/LEPs aren't walking in the doors to traditional workforce agencies/providers
- Focus on compliance in serving ELLs/LEPs and not creativity in serving them

To respond to challenges faced by ELL/LEPs and to increase access to workforce system services, the Sacramento workforce board applied for and was successful in securing WIOA ELL Workforce Navigator funding to increase access to workforce system services and to enhance program structure and availability. Under the Sacramento workforce board's ELL Workforce Navigator Pilot, navigators will be established at four WIOA Title II provider locations to assist ELLs in navigating workforce system services through enhanced coordination/integration with the WIOA Title I Sacramento Works America's Job Centers of California (SWAJCC), AEBG and WIOA Title II programs, and other workforce development programs and services. Services will include, but are not limited to, general English-as-a-Second Language (ESL) instruction, vocational English language (VESL) instruction, Adult Basic Education (ABE), high school completion/equivalency, career exploration, labor market research, career pathways development, work based learning, vocational training, support services, and job placement and retention services. Special focus will be placed on targeting outreach to refugee and Special Immigrant Visa (SIV) holder populations. The pilot will seek to expand partnerships with CAERC, Department of Human Assistance (DHA), Refugee Social Services (RSS)/Targeted Assistance Grant (TAG) funded refugee program service providers, local refugee resettlement agencies, and others.

Project Goals:

- Conducting targeted outreach to and increasing access to workforce services for ELLs
- Enrolling/co-enrolling ELLs in workforce programs
- Aligning/integrating WIOA Title I and Title II programs, with emphasis on Integrated Education and Training (IET) for accelerated success
- Evaluating the effectiveness and impact of the pilot navigator structure (local/regional coordination and wrap-around services)
- Building or enhancing existing collaborations and partnerships with CBOs and other regional partners that can assist in the provision of wrap-around services.

Project Outcomes:

- Increase referrals, enrollments and co-enrollments of ELLs in the workforce system
- Increase alignment and integration of WIOA Title I and Title II programs
- Increase in ELLs obtaining high school degrees
- Increase in ELL training enrollments
- Increase in numbers of ELLs obtaining gainful employment

In an effort to coordinate practices and partnerships, the Sacramento workforce board will expand and advance the work and reach of its WIOA ELL Workforce Navigator pilot by including the three other workforce boards within the Capital Area RPU in all trainings and quarterly meetings. Additionally, best practices, program delivery and system improvements, as well as policy development resulting from the pilot will be shared with the other workforce boards of the RPU.

C. Required Content on Regional Sector Pathways

- i. A description of the way planning partners, including local economic development agencies, assessed regional industry workforce needs, including a description of the data sources utilized, the industry leaders engaged, and the manner in which industry engagement took place, including a summary of any relevant convening activities, the dates partners met, who attended, and what was decided.

All of the regional workforce boards in the Capital Area RPU have utilized the Next Economy and EDD reports (Exhibits B, C, D, and E) to assess regional industry workforce needs. Assessments were conducted during the monthly WDB Directors' meetings. In development of these reports, Valley Vision and EDD solicited input from education, economic development agencies, private industry, labor, and community based organizations.

Each of the regional workforce boards is involved in sector pathways initiatives, and wherever possible, attempts to align with existing industry-led efforts to develop regional sector pathways. This approach is preferable to creating duplicative efforts that increase the time commitment for business leaders. Each local area's priorities may be different, but the following is a list of regional sector pathways initiatives that are applicable to all areas:

White House Healthcare Career Pathways

The Capital Region is one of seven national pilot sites for the Whitehouse Initiative for Health Career Pathways launched in April 2016. The goal is to take to scale nationally standardized skills competencies in health care training programs that can establish core skill sets appropriate to each career pathway. The Capital Region was chosen as one of the seven pilots due to its strong foundation of 15 years of industry-led career pathways work to coordinate demands for talent and increase the pipeline for demand

healthcare occupations. The initiative is led by the major regional healthcare systems: Sutter Health, Kaiser Permanente, UC Davis Medical Center, and Dignity Health; and includes the regional workforce boards, colleges and education partners, economic development and community based organizations.

Construction and Energy Industry Sector Collaborative

This initiative is supported by the regional workforce boards and is led by the North State Building Industry Association, which represents over 500 business members from the construction and related sectors. Through regular monthly meetings, the initiative focuses on aligning construction-related education and training programs with industry needs, and developing career pathways that start in the high schools and are connected to careers in construction and related sectors.

AgPlus Initiative

The regional workforce boards are partners in this initiative led by the Center for Economic Development, California State University, Chico and Valley Vision. The regional partnership covers 28 counties throughout California's Central Valley and has been designated a federal Investing in Manufacturing Communities Partnership area. The goal is to advance the region's agriculture-related manufacturing economy, transforming raw goods into value-added product, and the mission is to catalyze the growth and creation of food and beverage manufacturing businesses and middle-skills jobs in the Central Valley. The initiative's focus includes: 1) K-12 Food and Beverage Manufacturing Career Pathways, 2) Community College-Industry Curriculum and Training Alignment, 3) Supplier Network Mapping and Match-Making, 4) Central Valley AgPlus University Research Partnership, 5) Central Valley Innovation Hub (iHub) Network, 6) Rural-Urban Connections Strategy (RUCS) Planning and Business Tools, 7) Central Valley Export Training Program and, 8) Regional Finance Fund.

In addition to these sector pathway programs, the region is planning sector initiatives in the hospitality/tourism sector and insurance/finance sector.

- ii. An analysis of the manner in which regional partners, including industry leaders, have determined, or will determine whether existing training and education programs in the region were/are meeting industry's workforce needs. This analysis should provide a description of any areas of identified

training and education deficiency and what planning partners have committed to do to resolve relevant deficiencies.

The workforce development areas of the Capital Area RPU will determine effective education and training providers and programs through the number of job seekers successfully completing career pathway education and training programs in targeted industry sectors. This will be accomplished and measured by:

1. Increasing the number of programs and credentials resulting in “middle-skills jobs” listed on the State’s ETPL, and increasing the percentage of Individual Training Accounts (ITAs) approved to fund career pathways in high-demand, high-wage occupations.
2. Fostering coordination, cooperation and braiding of WIOA funds with core program funds, such as TANF and DOR, and other partner funds.
3. Offering training-related subsidized employment opportunities to support classroom instruction and improve the marketability of graduates.
4. Encouraging and expanding the use of cohort trainings connected to industry-recognized credential, and monitoring ITA obligations to ensure WIOA resources are maximized.
5. Tracking, reporting and sharing outcome data on industry-recognized certificates/degrees attained, employment gained, job retention, and earnings increases among education, workforce, and human service and economic development systems.
6. Evaluating and publishing education and training provider outcomes, including certificates/credentials attained and employment outcomes.

If education and training deficiencies are identified, the RPU will convene discussions between education and training providers, industry, and other stakeholders to affect alignment of education and training programs with industry needs.

Additionally, the Capital Area RPU will continue to work collaboratively with the Los Rios Community College District, CAERC, and training providers to ensure there is sufficient regional capacity and access to industry recognized credentials or certificates for SWAJCC customers in the region:

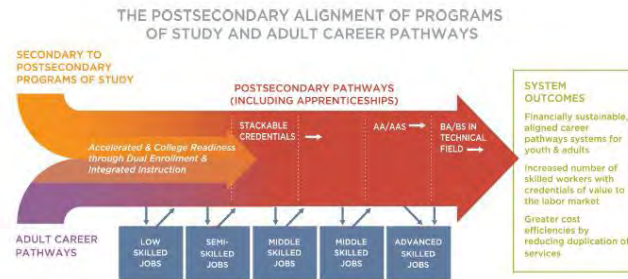
- Participating in assessments of Career Technical Education (CTE) and other program offerings to ensure alignment with emerging and current regional industry sector needs.

- Taking inventory and evaluating pathway trainings on an annual basis to identify opportunities improvement, expansion, or elimination of programs.
 - Promoting communication and marketing channels to increase local workforce system staff, partner and customer awareness of course offerings, enrollment deadlines, and training provider services.
- iii. A description of any existing career pathway programs in the region that have been identified as meeting leading and emergent industry sector needs. This description should specifically articulate the manner in which industry participated in the identification of relevant pathways.

Each of the regional workforce boards is involved in sector pathways initiatives, such as those reflected below. Utilizing Valley Vision as an intermediary on behalf of the Capital Area RPU, efforts are underway to organize regional sector career pathway development around a network of engaged industry, education, labor, and other stakeholders who are invested in regional workforce development. This will be accomplished through industry advisory alignment, engaging employers more efficiently, bringing employers into regional planning, developing strategies to address important industry gaps, and developing partnerships with industry, such as internships and apprenticeships. This approach is preferable to creating duplicative efforts that increase the time commitment for business leaders, educators, and workforce systems.

Valley Vision will lead the Capital Area RPU in identifying, as well as creating and implementing regional sector pathways to meet regional industry needs. Through convening intensive workgroups and planning sessions with the regional workforce boards, businesses, labor, education, economic development in the Capital Area RPU, Valley Vision will serve as a hub for dialogue, information sharing, planning and development of resource strategies. The result will be the development of career pathways that identify key competitive and emerging industry sectors in the RPU, the aligning, coordinating, and integrating of regional resources to support the development of industry-specific partnerships in those targeted priority industries, the aligning of public programs and funding streams, the identifying of resources to support sector initiatives, the integrating of education and training to accelerate learning when possible, and the development of common success indicators and tracking systems.

As illustrated in the diagram below, regional career pathways identified will include intentional connections to employment opportunities providing labor market payoffs at each off-ramp, and will be designed to allow for easy re-entry for participants for education/training continuum.



CURRENT CAREER PATHWAY INITIATIVES OF THE CAPITAL REGION -

White House Healthcare Career Pathways

The Capital Area Region is one of seven national pilot sites for the Whitehouse Initiative for Health Career Pathways launched in April 2016. The goal is to take to scale nationally standardized skills competencies in health care training programs that can establish core skill sets appropriate to each career pathway. The Capital Region was chosen as one of the seven pilots due to its strong foundation of 15 years of industry-led career pathways work to coordinate demands for talent and increase the pipeline for demand healthcare occupations. The initiative is led by the major regional healthcare systems: Sutter Health, Kaiser Permanente, UC Davis Medical Center, and Dignity Health; and includes the regional workforce boards, colleges and education partners, economic development and community based organizations.

Construction and Energy Industry Sector Collaborative (CEISC)

This initiative is supported by the regional workforce boards and is led by the North State Building Industry Association, which represents over 500 business members from the construction and related sectors. Through regular monthly meetings, the initiative focuses on aligning construction-related education and training programs with industry needs, and developing career pathways that start in the high schools and are connected to careers in construction and related sectors.

Capital Region Prop 39 MC3 Initiative

The Capital Region MC3 (CRMC3) initiative is led by SETA and supported by the regional workforce boards. The initiative provides career assessment and testing, case management, support services, GED preparation, occupational skills/pre-apprenticeship training and on-the-job training (OJT) to enrolled participants to prepare them for emerging jobs and career ladders in the construction/energy efficiency sectors. As the lead agency, SETA partners with the GSJTA, the Sacramento Sierra Building and Construction Trades Council (SSBTC), regional Joint Apprenticeship Coordinators, three campuses of the Los Rios Community College District, Northern California Construction Training (NCCT), NSBIF, the California Conservation Corps, Job Corps, and other local community-based and training partners.

The CRMC3 initiative includes the convening of an Industry Advisory Panel. To capitalize on existing efforts and reduce duplication of efforts, CRMC3 coordinates its meetings with the Construction and Energy Industry Sector Collaborative (CEISC), which is a regional community collaborative led by NSBIF. The Collaborative includes training providers, community stakeholders, elected officials, workforce development agencies, organized labor, and employers. The intent of the Industry Advisory Panel is to ensure alignment with CEISC in meeting the employment and training needs of job seekers and industry, as well as to continue to build a pipeline of opportunity in the construction and energy efficiency industry.

“Build Your Own Workforce” Initiative

This initiative is led by SETA and supported by the regional workforce boards. It is an employer engagement model that clarifies the types of employer support and activities that local boards can provide to increase the employment of entry level workers in their communities. The program will be delivered utilizing the train-the-trainer concept with businesses teaching other businesses how they can hire, train and mentor their own entry-level workers. The program will be developed by business for business. Industries targeted will start with construction, hospitality/tourism, and advanced manufacturing business sectors. This model will provide employers the tools to build their own workforce, and will include developing services and supports to assist other businesses in hiring, training and mentoring entry-level workers. The result will be a “Turn- Key” Mentorship and New Hire Training solution to aid the supervisors and managers of small to medium sized companies in growing their workforce, and that can be utilized by all workforce boards within the Capital Area RPU. The solution will include a road map/template for Career Pathways Development within business clusters and a Coaching Manual for Supervisory Personnel that can be modified for an employer’s specific business.

Workforce Development Professional Apprenticeship

Sponsored by the California Workforce Association (CWA) and piloted by the SWI, the Workforce Development Professional Apprenticeship is a State-wide apprenticeship that combines classroom training with on-the-job training to Workforce Development Professionals. Workforce Development Professionals who successfully complete the apprenticeship program receive a State Apprenticeship Council Certificate documenting their attainment of journey-level Workforce Development Professional skills.

Teaching Internship

This apprenticeship is supported by the regional workforce boards and led by the Sacramento County Office of Education. The program offers an intensive and nontraditional pathway into teaching for second career professionals and recent graduates. Following a paid internship model, the program includes practical, relevant coursework for Single Subject Math/Science and Multiple Subject candidates. Intern teachers are assigned on-site mentors and receive ongoing coaching from SCOE supervisors as well as faculty from the School of Education. All credential classes are carefully sequenced to ensure interns are well prepared for their first teaching assignment.

The Capital Region's workforce boards engaged Valley Vision to conduct a comprehensive mapping project of all the industry advisory groups throughout the region. The goal is to increase the effectiveness of industry advisory groups that are working on sector pathways by better informing, communicating and aligning these multiple efforts. A secondary goal is to increase participation from smaller business by reducing the overall time commitment required to participate.

- iv. A description of the work being done by industry, workforce boards, economic development agencies, and relevant faculty partners to recommend and implement any necessary adjustments to further develop career pathway programs that meet regional industry needs.

Regional Mapping Project – The Capital Region's workforce boards have engaged Valley Vision to conduct a comprehensive mapping project of all the industry advisory groups throughout the region. The goal is to increase the effectiveness of industry advisory groups that are working on sector pathways by better informing, communicating and aligning these multiple efforts. A secondary goal is to increase participation from smaller business by reducing the overall time commitment required to participate.

D. Required Content on Industry-Valued Post-Secondary Credential Attainment

- i. Identify the process used to determine industry-valued and recognized postsecondary credentials. Describe the process taken to ensure industry leads this discussion and process.

As mentioned previously, the local workforce boards of the Capital Area RPU, utilized the Next Economy Capital Region Prosperity Plan, Exhibit B, a region-wide economic analysis was released that turned attention to six promising business clusters that the region could tap for job creation and growth opportunity. Advanced Manufacturing, Education and Knowledge Creation, Clean Energy Technology, Information and Communications Technology, Health Services and Life Sciences, and Food and Agriculture were all identified as business clusters where the region has innate advantages, the strongest potential for growth based on economic performance indicators, and – together with the region’s prevailing government and construction sectors – could comprise a diversified, robust and sustainable regional economy.

The original cluster research study was commissioned by Next Economy partners at a time when the region was still digging out from the 2008 recession. The region’s economic hardship at that time had a lot to do with being heavily reliant on just two economic drivers – government and construction. While vital and significant, the dominance of these two sectors in the region’s economic equation left our economy unbalanced, unprepared and devastated.

In 2016, the economic analysis was updated to reflect the post-recession environment to identify critical workforce skills gaps that exist within the six Next Economy-identified clusters today, mobilize and align cluster stakeholders around job strategies, and create targeted workforce action plans for each cluster that identifies skills gaps, education and training resources, and economic impact of the clusters. The Next Economy Cluster Research Workforce Needs Assessment, Exhibit C, has been widely utilized throughout the region by workforce boards, education, economic development, private industry and other partners who agree that economic and other resources should target and grow these clusters. Included in the Next Economy Cluster Research Workforce Needs Assessment are six cluster reports that provide an overview of the cluster, industry trends and economic impact, as well as an overview of the top demand occupations in the cluster requiring postsecondary education or training, along with projected occupational demand, institutions providing related education and training, and possible workforce gaps.

In addition, the regional workforce boards utilized EDD's LMID Regional Planning Unit Report, Exhibit D, for the analysis of labor market and economic conditions in the region. Also, in early 2016, the four local workforce boards in the region commissioned a comprehensive study conducted by EDD, Capital Region Industry Clusters of Opportunity (2010-15), Exhibit E, which included an examination of additional clusters that are not reflected in the Next Economy Plan but offer job creation and economic growth.

Analysis of the knowledge and skills needed to meet the employment needs of the employers in the region, including employment needs in in-demand industry sectors and occupations can be found in the 2012 Next Economy Capital Region Prosperity Plan and the 2016 Next Economy Cluster Research Workforce Needs Assessment referenced above.

- ii. Identify the current industry-valued and recognized postsecondary credentials being emphasized in the regional plan and the process that will be used to ensure their relevance in subsequent years as labor markets change.

The local workforce boards of the Capital Area RPU will target postsecondary credentialing programs that lead to career pathways in the Advanced Manufacturing, Education and Knowledge Creation, Clean Energy Technology, Information and Communications Technology, Health Services and Life Sciences, and Food and Agriculture industry sectors identified in the Next Economy reports as in demand in this region.

Review of training related placements, as well as forecast reports on industry sector demands and trends will be evaluated by the Capital Area RPU on an annual basis and strategies developed, and actions taken accordingly.

- iii. Identify the manner in which regional partners, including industry leaders determined that the relevant credentials are actually industry valued.

The Next Economy reports, which represent the engagement of education, economic development agencies, private industry, labor, and community based organizations, were utilized to determine that relevant credentials are industry valued.

- iv. Identify the relevant training and education providers providing the credentials.

Relevant education and training opportunities are accessed through providers available through the State's ETPL, which includes approved institutions, such as public educational institutions, or private vocational schools and colleges. Training and education providers in the Capital Area Region include, but are not limited to:

- **37 School Districts:** Alpine County Unified School District, Center Joint Unified School District, Colusa Unified School District, Davis Joint Unified School District, East Nicolaus High School, El Dorado Union High School District, Elk Grove Unified School District, Esparto Unified School District, Folsom Cordova Unified School District, Galt Joint Union High School District, Hamilton Unified School District, Live Oak Unified School District, Marcum-Illinois Union School District, Marysville Joint Unified School District, Maxwell Joint Unified School District, Natomas Unified School District, Nuestro School District, Orland Unified School District, Pierce Joint Unified School District, Placer Union High School District, Pleasant Grove Joint Union High School District, Princeton Joint Unified School District, River Delta Unified School District, Roseville Joint Union High School District, Sacramento City Unified School District, San Juan Unified School District, Stony Creek Joint Unified School District, Sutter Union High School District, Twin Rivers Unified School District, Washington Joint Union School District, Wheatland School District, Williams Unified School District, Willows Unified School District, Winters Joint Union High School District, Woodland Joint Union High School District, and Yuba City Unified School District
- **11 Community Colleges:** American River College, Cosumnes River College, Davis Center (Los Rios Community College District), El Dorado Center (Los Rios Community College District), Folsom Lake College, Lake Tahoe Community College, Sacramento City College, Sierra College, West Sacramento Center (Los Rios Community College District), Woodland Community College and Yuba College
- **2 Public Universities:** California State University, Sacramento (CSUS), and University of California, Davis
- **9 Accredited Private Colleges and Universities**
- **58 Approved Training Providers on State's ETPL:** Approved providers represent approximately 600 training programs.

- v. Identify how the regional planning partners will establish regional goals for, and track attainment of, industry recognized credentials produced in each region, including each Local Board's contribution, and the total contribution of industry recognized credentials produced by the partners collectively in the RPU.

All of the workforce boards track the number of training-related placements and work closely with the community colleges, adult education and other partners providing training services to track the attainment of industry recognized credentials. In addition, the boards will be established regional credential attainment goals with the State and will be measuring performance against these goals on an annual basis.

E. Required Content on Accessibility and Inclusivity

- i. A description of regional planning outreach efforts made to include stakeholders and CBOs representing the individuals from target populations that represent the demography of the region, including those groups who have experience serving or working with high-need and historically disadvantaged communities such as farmworkers, ex-offenders, those who are limited English proficient, out of school and/or disconnected and foster youth (including former foster youth). This description should include how and which groups (by name) were contacted and invited to participate in regional planning efforts.

All of the regional workforce boards in the Capital Area RPU have conducted planning efforts that include public input meetings with multiple stakeholders from education, economic development, private industry and community based organizations via local Workforce Development Board (WDB) meetings, required partner and other regional planning meetings. In addition, the WDB Directors meet on a monthly basis with regional partners and stakeholders to plan and discuss alignment of policies, procedures and systems across the region.

These meetings provide an opportunity for partners providing direct services to share current workforce development information and to discuss increasing the efficiency of regional and local systems by eliminating duplication, leveraging program funding and improving referrals and aligning with state and regional goals. Furthermore, ongoing regional training opportunities through the Capital Area Investment Zone (CAIZ) Training

Team are provided, ensuring consistent professional development and capacity building activities covering a comprehensive spectrum of topics.

- ii. A description of the manner in which AEBG consortia participated in the WIOA regional planning process.

Many members and partners of AEBG consortia are WDB members within the Capital Area RPU, including the community college districts, county offices of education, adult education districts, and DOR. Consortia members attend monthly meetings covering a wide range of workforce development and related topics including updates on both local and regional workforce efforts. AEBG consortia input on the Capital Area RPU's regional workforce plan, as well as each local plan is being solicited.

- iii. An analysis of the need for basic skills education in the RPU, including background on the demography and languages spoken in the region, as well as an enumeration of the estimated number of individuals being served regionally, the types of basic skills related services offered in the RPU, and an overview of the way the regional partners are working together to meet any unmet needs.

The LMID Regional Planning Unit Report, Exhibit D, prepared by EDD, September 1, 2016, provides the background on the demography and languages spoken in the Capital Region. The local workforce boards within the Capital Region are active members and participate in AEBG consortia meetings. The CAERC AB 86 Comprehensive Regional Plan, Exhibit F, issued in March 2015 indicates that in the 2013-14 program year, approximately 25,000 adult learners in the Capital Region were provided elementary and secondary skills programs and services, including non-accredited high school diploma, General Education Development (GED) preparation and testing, credit recovery courses, Adult Basic Education (ABE), and Adult Secondary Education (ASE) courses. The Plan further indicates that in the same program year, approximately 13,000 adult, immigrant and English learners were provided English as a Second Language (ESL), Vocational ESL, and U.S. Citizenship courses. Courses cover the breadth of language proficiency levels from Beginning through Advanced Literacy. Member and partner agencies of CAERC have capitalized on building community partnerships to enhance basic skills related services by integrating technology, as well as blending learning as an option for course instruction with distance learning.

The following CAERC's priorities are consistent with the WIOA regional and local plan goals:

1. Build and Expand Adult Education Offerings
 2. Develop Alignment and Pathways
 3. Increase Student Support Services
 4. Enhance Data and Accountability Systems
- iv. An analysis of the way basic skills education will be integrated into regional sector pathways programs emphasized by the regional plan, including an analysis of any strategies to serve members of the regional population who have limited English proficiency.

Workforce development areas of the Capital Region RPU serve as on-ramps for sector pathways by offering a progressive continuum strategy aligning and integrating education, job training, counseling, and support services to create seamless pathways to postsecondary credentials and employment. For low-skilled adults, career pathways may begin later in life. Workforce area career pathway systems allow individuals to enter at any skill level, to stop when the need arises and to re-enter without having to repeat what has already been learned. Pathways within the systems weave together job centers, adult education, community college programs, CBOs, and employers. Pathways may begin with adult basic education programs, such as English language acquisition. Basic education effectively serves as a bridge program that prepares low-skilled adults to enter and succeed in postsecondary education, often integrating adult education with occupational skills training in the same class, thereby providing an occupational context for education. Individuals that are limited-English proficient are provided English language instruction to increase proficiency levels sufficient to succeed in courses and programs requiring a certain level of proficiency for participation.

- v. A description of regional efforts to streamline and coordinate intake, assessment, and referrals of individuals needing basic skills remediation.

The workforce boards comprising the Capital Area RPU are working towards aligning intake, assessment and referral processes for individuals in need of basic skills education within the region. This is being accomplished through ongoing RPU meetings, including line staff from the four local workforce systems, along with core program and other partners involved in the

provision of adult basic education, adult secondary, high school completion/equivalency, and English language services. In addition, the boards are reviewing local policy directives and formal processes and will be adopting revised policies and processes that are consistently aligned.

- vi. An analysis of the ways in which RPU partners, including Local Boards, Community Colleges, Adult Schools, and AEBG consortia will ensure program and physical accessibility and participation in regional sector pathway programs for individuals with disabilities.

Services to individuals with disabilities (IWDs) are fully integrated within all workforce board systems within the Capital Region. Each system has a designated an Equal Opportunity (EO) Officer and three of the four workforce areas have Disability Resource Coordinators (DRCs) established under and funded by the U.S. Department of Labor's Disability Employment Initiative (DEI).

As a result of the DEI, workforce areas within the Capital Region are able to provide IWDs additional technical assistance and support through the designated DRCs. Under the four year DEI initiatives, the DRCs provide ongoing training local workforce system and partner staff to continue to build and increase their capacity to ensure effective service delivery and awareness of disability etiquette and accommodation needs. In addition, the initiatives have helped to cultivate improved and increased physical access to job centers and career pathways by IWDs, have improved physical and program accessibility through strengthened relationships with core programs and other partners, such as community colleges, WIOA Title II funded partners, and AEBG consortia, have strengthened relationships with employers, and increased job placement opportunities for IWDs. To ensure the continuous improvement of physical accessibility to the system for IWDs, ongoing evaluation by the Capital Area RPU of resources and adaptive stations and assistive technologies available region-wide will be conducted on an ongoing basis. Upon the introduction of new technologies or adaptive equipment to the local workforce development systems, the DRCs will coordinate training to ensure proper use of the equipment or technologies.

Further, the workforce boards with the Capital area RPU will coordinate with community colleges, adult education, AEBG consortia and other partner programs to review reasonable accommodation policies and procedures ensuring a comprehensive, systematic approach to ensuring IWDs physical and programmatic accessibility and participation in regional sector pathway.

- vii. As appropriate, an analysis of the need for, and a description of the means by which regional partners will work together to place individuals enrolled in TANF/CALWORKS in regional sector pathway programs.

Based on the California Department of Social Services (CDSS), Welfare to Work (WTW) Division's Annual Summary January 2016, approximately 16,000 CalWORKs applications were approved in Fiscal Year (FY) 2014-15 in the nine counties comprising the Capital Area RPU, which is approximately seven percent of the state's total, 230,000 approved cases. Many CalWORKs recipients within the Capital Region are low-skilled adults and often are basic skills deficient with little or no work experience. The workforce boards within the region promote sector pathway programs to CalWORKs recipients by providing on-ramps for sector pathways through a progressive continuum strategy that aligns and integrates education, job training, counseling, and support services to create seamless pathways to postsecondary credentials and employment. For low-skilled adults, career pathways may begin later in life. Workforce area career pathway systems allow individuals to enter at any skill level, to stop when the need arises and to re-enter without having to repeat what has already been learned.

Pathways for CalWORKs within the regional workforce system will weave together job centers, county CalWORKs staff, adult education, community college programs, CBOs, other partners and employers. Workforce system staff, as well as core program and other partners will integrate/braid services through strong, comprehensive IRTs to ensure the success of CalWORKs recipients as they progress along pathways. Pathways may begin with adult basic education programs, such as English language acquisition. Basic education effectively serves as a bridge program that prepares low-skilled adults to enter and succeed in postsecondary education, often integrating adult education with occupational skills training in the same class, thereby providing an occupational context for education. CalWORKs individuals that are limited-English proficient are provided English language instruction to increase proficiency levels sufficient to succeed in courses and programs requiring a certain level of proficiency for participation.

Ongoing participation on the Los Rios Community College District's CalWORKs Interagency Coordinating Council (ICC) provides an important means of communication for community organizations, local workforce boards within the Capital Region, county CalWORKs offices, representatives of the California Community Colleges Chancellor's Office (CCCCO) and other key stakeholders involved in CalWORKs planning and service delivery to

ensure all partners keep abreast of issues, changes in policy, and the evolving needs of CalWORKs students. Coordinated efforts, such as identifying mutual program goals and protocols and procedures, promoting continuous improvement, and ensuring ongoing communication between Los Rios Community College District and the key stakeholders and partner agencies ensures service and system alignment and is essential to the success of CalWORKs students participating in career pathways within the Los Rios Community College District. Additionally, meetings of the ICC focus on information-sharing on new policies, programs, services, funding, local trends, concerns, student educational and employment data, and other areas relevant to CalWORKs service delivery in the Los Rios Community College District.

- viii. An analysis of the way regional program partners will work together to provide supportive services to individuals enrolled in regional sector pathways programs, including individuals from populations with barriers to employment. Regional plans should demonstrate how partners will work together to ensure a comprehensive provision of services that facilitate program completion.

The workforce development areas of the Capital Region RPU provide a variety of wraparound and support services to customers to increase their success in education, training and employment activities, and work with all core programs and partners to coordinate education, training, and support services through an Integrated Resource Team (IRT) approach. Wraparound services through resource referral are provided by coaches within the job centers. Enrolled customers are assigned a career coach that develops an Individual Employment Plan outlining the short and long terms goals and the plan to attain those goals including addressing any barriers to successful program completion and outcomes.

Financial needs assessments are conducted with customers by career coaches to determine the appropriate level of support needed. When a customer is supported by an IRT, including other system partners or programs, a determination is made on the responsible party or parties for the provision of support. Support services include social service supports such as transportation, childcare and housing assistance. Other support includes ancillary supports, such as training and work clothing and boots, tools, equipment, union dues and employment-related fees. Support services are provided during customer participation in individualized career services, and may be provided to assist in the retention of employment for a short period of time.

- ix. A description of the role of CBOs, such as Independent Living Centers, in helping provide services to and integrating individuals with barriers to employment into region sector pathway programs, including participation in program development, outreach, and the provision of specialized supportive services for relevant target populations.

The local workforce boards of the Capital Region continue to ensure that the full range of employment and training opportunities are available to all populations, especially those who may have become disenfranchised in the past and are facing multiple barriers to employment. At local job centers and through building, strengthening, and maintaining strong partnerships with community based organization, such as local Independent Living Centers, and other core program and partner organizations traditionally serving special populations, the Capital Region is able to ensure universal access to services and staff at all job center locations. By working together and integrating resources and services, the needs of special populations are met.

Services within the systems are provided by job center staff, co-located partners, cross-trained staff providing access to partner services, or through real-time access to partner services, including community based organizations serving special populations. Through established MOUs, with core program and other partner agencies, the Capital Region ensures services are targeted, coordinated and provided to individuals on public assistance, limited English proficient, immigrant, migrant and seasonal farm workers, individuals with disabilities, ex-offenders, older individuals, veterans, homeless, as well as Native Americans. Many of these organizations have co-located staff throughout the local workforce systems to assist with outreach efforts and to further ensure that all populations have access to employment, education and training opportunities.

As mentioned previously, financial needs assessments are conducted with all enrolled customers by career coaches to determine the appropriate level of support needed. When a customer is supported by an IRT, including other system partners or programs, a determination is made on the responsible party or parties for the provision of support. Support services include social service supports such as transportation, childcare and housing assistance. Other support includes ancillary supports, such as training and work clothing and boots, tools, equipment, union dues and employment-related fees. For enrolled, special populations, such as IWDs, specialized supportive services can include the purchase of software programs and equipment that assists the visually or hearing impaired conduct work at computer stations once placed into employment. Support services are provided during customer participation in individualized career services, and may be provided to assist in the retention of employment for a short period of time.

- x. A description of the process Local Boards and their partners will use to retain individuals in relevant programs as they work their way through the career pathway progressing into livable wage jobs and careers.

As mentioned previously, the workforce development areas of the Capital Region RPU provide a variety of wraparound and support services to customers to increase their success in education, training and employment activities, and work with all core programs and partners to coordinate education, training, and support services through an IRT approach, better ensuring the success of customers as they progress along their career pathway journey. Wraparound services through resource referral are provided by coaches within the job centers. Enrolled customers are assigned a career coach that develops an Individual Employment Plan outlining the short and long terms goals and the plan to attain those goals including addressing any barriers to successful outcomes. Financial needs assessments are conducted with customers by career coaches to determine the appropriate level of support needed. When a customer is supported by an IRT, including other system partners or programs, a determination is made on the responsible party or parties for the provision of support. Support services include social service supports such as transportation, childcare and housing assistance. Other support includes ancillary supports, such as training and work clothing and boots, tools, equipment, union dues and employment-related fees. Support services are provided during customer participation in individualized career services, and may be provided to assist in the retention of employment for a short period of time.

F. Required Content on Job Quality Considerations

- i. Provide a description of the projected earnings of those employed in occupations directly related to the regional sector pathway programs emphasized in the regional plan.

The projected earnings for those employed in targeted industry sectors are detailed in the JP Morgan Chase funded cluster update to the Next Economy Capital Region Prosperity Plan, Exhibit B. This is a region-wide economic analysis that turned attention to six promising business clusters that the region could tap for job creation and growth opportunity in the Advanced Manufacturing, Education and Knowledge Creation, Clean Energy Technology, Information and Communications Technology, Health Care and Life Sciences, and Food and Agriculture sectors.

- ii. Provide a comparison of the foregoing wage levels to the median wage in the relevant RPU.

As indicated in the attached Next Economy Cluster Reports, the median hourly wage across all occupations in the Capital Region is \$22.69 per hour. While the RPU's median earnings performance measure does not compare directly to the median hourly wages, when compared to the per hour median performance goal, it represents 52% of the Capital Region's total median wage experience. However, given the Region's focus on hard-to-serve customers with multiple barriers to employment, including low-income, public assistance, homeless, individuals with disabilities, and its focus on developing entry-level jobs with career pathways for these customers, this overall level of performance is exemplary.

- iii. Provide a description of the way each of the Local Boards in the RPU will assist and prioritize working with employers who offer jobs with good wages and benefits, especially those employers who have a history of hiring high need or historically disadvantaged population, including from populations with barriers to employment.

The workforce boards within the Capital Area RPU, in collaboration with workforce, education and economic development partners, conduct employer roundtables focusing on priority and emerging industry sectors to determine the workforce training and educational barriers that hinder job creation in the regional economy. Sector initiatives are driven by and developed with input received directly from the employer community. These roundtables provide input on the barriers that employers face in hiring individuals as well as skill gap deficiencies in the regional workforce which inhibit job creation in the regional economy. The input provides the basis for training curriculum development and the creation of industry advisory committees that support the training initiatives with an increased commitment to hire training program graduates.

A few significant employers that have demonstrated consistent hiring of hard to serve, high need populations within the Capital Region include Turner Construction, Sutter Health, Kaiser, Dignity Health, UC Davis Med Center, and Siemens, representing the construction, health services, and advanced manufacturing industry sectors.

- iv. Provide a description of the process Local Boards will take to implement incumbent worker training strategies to ensure progression along career pathways.

The workforce development areas of the Capital Region RPU provide support and direction to both employers and their incumbent workers. Industries are

in constant transition driven by changing national and state policy (i.e., healthcare reform and climate change legislation), global competitiveness, and innovation. This is especially true for small and medium sized businesses, which require frequent workforce skills upgrading in order to remain competitive. The workforce boards have a successful track record of working with the Employment Training Panel (ETP) to leverage ETP funding for incumbent worker training and are able to quickly implement new pathway programs as demands arise. In response, local systems are able to provide guidance to employers on sustainability, up to and including upgrade training to their incumbent workers. By aligning upskills training programs for incumbent workers in key industries that drive local and regional economies, the local workforce systems of the Capital Region are able to meet the skills demands of employers, as well as provide career ladder opportunities for incumbent workers. This is coordinated and realized through strong employer engagement, industry-valued and recognized training, and support from career coaches within the local workforce systems.

G. Required Content on Regional Assessment

- i. Provide a description of how the regional partners in the RPU will work together to track training-related employment for individuals entering the labor market.

The RPU will develop, adopt, and implement a consistent, regional case closure process that will require the timely collection and entry of training-related employment outcome data in CalJOBS for customers completing a training activity. The data will be reviewed on an annual basis and used to assess the value of the trainings being provided.

H. A description of the manner federal WIOA regional plan requirements not covered by the State Plan required content are being met

Not applicable.

I. Provide Regional Memorandum of Understanding(s) or Cooperative Service Agreements between RPU partners.

See Exhibit A.

- J. Provide Any Community College and AEBG Related Attachments to the Regional plan, including Strong Workforce Program regional plans required as part of Assembly Bill (AB) 1602 (Assembly Budget Committee, Chapter 24, Statutes of 2016).

See Exhibits F and G.

EXHIBITS

Exhibit A: Capital Region MOU

Exhibit B: Next Economy Capital Region Prosperity Plan

Exhibit C: Next Economy Cluster Research Workforce Needs Assessment

Exhibit D: EDD LMID Regional Planning Unit Report

Exhibit E: EDD Capital Region Industry Clusters of Opportunity (2010-15)

Exhibit F: CAERC AB 86 Comprehensive Regional Plan

Exhibit G: Los Rios Community College District Strategic Plan (2016)

**MEMORANDUM OF UNDERSTANDING
FOR THE
CAPITAL AREA REGIONAL PLANNING UNIT**

I. Preamble

The WIOA Section 106 includes a requirement that the Governor identify planning regions in the state and enumerates specific elements that must be considered as part of this process. The purpose of identifying regions is to align workforce development activities and resources with larger regional economic development areas and available resources to provide coordinated and efficient services to job seekers and employers. WSD15-17 identifies these local areas and names the following four local areas as the Capital Region Regional Planning Unit (RPU) each of whom are parties to this MOU:

1. Golden Sierra Job Training Agency (Golden Sierra or GSJTA)
2. Sacramento Employment and Training Agency (SETA)
3. North Central Counties Consortium (NCCC)
4. Yolo County

II. Purpose of MOU

The purpose of this MOU is to establish a mutually beneficial relationship in regards to regional coordination and systems alignment including the regional planning items outlined in WIOA Section 106.

Regional Coordination and Planning:

WIOA Section 106 (c)(1) outlines specific requirements for designated regional planning units. These include:

- A. The preparation of a regional plan
- B. The establishment of regional service strategies
- C. The development of sector initiatives for in-demand industries or occupations within the region
- D. The collection and analysis of regional labor market data
- E. The establishment of administrative cost sharing agreements as appropriate
- F. The coordination of supportive services as appropriate
- G. The coordination of services with economic development
- H. The establishment of an agreement concerning how the planning region will collectively negotiate and reach agreement with the Governor on performance accountability and reporting

WIOA Section 106 (c)(2) requires the local boards and chief elected officials within a planning region to prepare, submit, and obtain approval of a single regional plan that includes a description of the activities described above and that incorporates local plans for each of the local areas in the planning region.

State Plan:

The State Board (April 14, 2015) has identified 2 statewide goals and 7 program/policy strategies that apply to the core programs. The parties to this MOU agree to work towards meeting the objectives in the state plan and its goals and strategies which are as follows:

Goals:

- 1 million middle skill credentials
- Doubling the number of apprenticeships statewide

Seven program/policy strategies:

1. Developing Sector Strategies
2. Building Career Pathways
3. Utilizing Earn and Learn Training
4. Organizing Regionally
5. Creating Cross System Data Capacity
6. Service Delivery
7. Providing Support Services for Successful Outcomes

Other Considerations:

In addition, when appropriate, the parties to this MOU agree to:

1. Review and align local policies and procedures
2. Investigate cobranding of initiatives
3. Coordinate outreach and business engagement strategies
4. Coordinate capacity building for Workforce Board Members, Chief Local Elected Officials, Partners and staff
5. Coordinate Staff and system partners' development activities
6. Coordinate regional business advisory groups and employer engagement strategies
7. Continuous planning in response to state and federal requirements

III. Parties to the MOU.

This MOU is entered into by each Party whose signature appears on a signature page of this MOU. Faxed signatures or signatures provided in electronic, portable document format (.pdf) are binding and may be treated as original signatures for all purposes. This MOU may be executed by any Party in any number of counterparts, but all counterparts shall be considered one MOU. By executing a counterpart, each Party to the MOU acknowledges that this MOU accurately reflects such Party's understanding and authorization to distribute a copy of such executed counterpart to any other Party signatory to this MOU.

IV. Funding of Services and Operating Costs.

This MOU defines in general terms the basis on which the Parties will cooperate, and as such, does not constitute a financial obligation to serve as a basis for expenditures. Expenditures of funds, human resources, equipment, supplies, facilities, training, public information, and expertise will be provided by each signatory to the extent that their participation is required and resources are available.

This MOU in no way restricts the Parties from participating in similar activities or arrangements with other public or private agencies, organizations, or individuals.

This MOU does not obligate the Parties to enter into any agreements, contracts, or other obligations.

Nothing in this MOU may be construed to obligate the Parties, the State of California, or the United States to any current or future expenditure of resources in advance of the availability of appropriations from Congress. Nor does this agreement obligate the Parties, the State of California, or the United States to spend funds on any particular project or purpose, even if funds are available.

V. **Access to Services for Workers, Youth and Individuals with Barriers to Employment.**

The AJCC system will ensure access for workers, youth and individuals with barriers to employment by:

- Offering priority for services to recipients of public assistance, other low-income individuals, individuals who are basic skills deficient, and other individuals with barriers to employment, when providing individualized career services and training services with WIOA adult funds.

Each Party agrees to ensure that the policies and procedures as well as the programs and services provided at the AJCC are operated in compliance with the Americans with Disabilities Act of 1990 and its amendments. Additionally, the Parties agree to fully comply with the provisions of WIOA, Title VII of the Civil Rights Act of 1964, the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, 29 CFR Part 37 and all other regulations implementing the aforementioned laws.

VI. **Shared Technology and System Security.** To the extent allowed by federal and state laws and regulations, the Parties agree to share data and technology as well to ensure that all data and systems are secure.

WIOA emphasizes technology as a critical tool for making all aspects of information exchange possible, including client tracking, common case management, reporting, and data collection. To support the use of technology, and to the extent allowable, each Party agrees to:

- *Comply with the applicable provisions of WIOA, the California Welfare and Institutions Code, California Education Code, Federal Rehabilitation Act, and any other appropriate statutes or requirements.*
- *The principles of common reporting and shared information through electronic mechanisms, including shared technology.*
- *Commit to share information to the greatest extent allowable under their governing legislation and confidentiality requirements.*
- *Maintain all records of the AJCC customers or Parties (e.g. applications, eligibility and referral records, or any other individual records related to services provided under this MOU) in the strictest confidence, and use them solely for purposes directly related to such services.*
- *Develop technological enhancements that allow interfaces of common information needs, as appropriate.*
- *Understand that system security provisions shall be agreed upon by all Parties.*

VII. **Confidentiality.** Each Party agrees to comply with the provisions of WIOA as well as the applicable sections of the California Welfare and Institutions Code, the California Education Code, the Federal Rehabilitation Act, and any other appropriate statute or requirement to assure the following:

- *All applications and individual records related to services provided under this MOU, including eligibility for services and enrollment and referral, shall be confidential and*
- *Shall not be open to examination for any purpose not directly connected with the delivery of such services.*

- *No person will publish, disclose use, or permit, cause to be published, disclosed or used, any confidential information pertaining to AJCC applicants, participants, or customers overall unless a specific release is voluntarily signed by the participant or customer.*
- *Each Party agrees to abide by the current confidentiality provisions of the respective statutes to which AJCC operators and other Parties must adhere, and shall share information necessary for the administration of the program as allowed under law and regulation. Each Party, therefore, agrees to share client information necessary for the provision of services such as assessment, universal intake, program or training referral, job development or placement activities, and other services as needed for employment or program support purposes.*
- *Client information shall be shared solely for the purpose of enrollment, referral or provision of services. In carrying out their respective responsibilities, each party shall respect and abide by the confidentiality policies of the other parties.*

VIII. **Non-Discrimination and Equal Opportunity.** No Party shall unlawfully discriminate, harass or allow harassment against any employee, applicant for employment or AJCC applicant for service due to gender, race, color, ancestry, religion, national origin, veteran status, physical disability, mental disability, medical condition(s), age, sexual orientation or marital status. Each Party agrees to comply with the provisions of the Fair Employment and Housing Act (Government Code Section 12990, et. seq.) and related applicable regulations.

Each Party will assure compliance with the Americans with Disabilities Act of 1990 and its amendments, which prohibits discrimination on the basis of disability, as well as other applicable regulations and guidelines issued pursuant to the Americans with Disabilities Act.

IX. **Grievances and Complaints Procedure.** Each Party agrees to establish and maintain a procedure for grievances and complaints as outlined in WIOA. The process for handling grievances and complaints is applicable to customers and Parties. These procedures will allow the customer or entity filing the complaint to exhaust every administrative level in receiving a fair and complete hearing and resolution of their grievance. The Parties further agree to communicate openly and directly to resolve any problems or disputes related to the provision of services in a cooperative manner and at the lowest level of intervention possible.

The Parties agree to try to resolve policy or practice disputes at the lowest level, starting with the site supervisor(s) and staff. If issues cannot be resolved at this level, they shall be referred to the management staff of the respective staff employer and the operator, for discussion and resolution.

X. **Effective Dates and Term of MOU.** This MOU shall be binding upon each Party hereto upon execution by such Party. The term of this MOU shall be three years, commencing on the date of execution by the first three Parties to June 30, 2019. The MOU will be reviewed not less than once every year to identify any substantial changes that have occurred or should occur.

XI. **Modifications and Revisions.** This MOU constitutes the entire agreement between the Parties and no oral understanding not incorporated herein shall be binding on any of the parties hereto. This MOU may be renegotiated, amended, or modified at any time by mutual agreement of all the Parties. Any such amendment or modification shall be in writing and agreed to by all Parties.

XII. **Term and Termination.** The Parties understand that implementation of the AJCC system is dependent on the good faith effort of every Party to work together to improve services to the community. The Parties also agree that this is a project where different ways of working together and providing services are being tried. This MOU shall remain in effect for a period of three (3) years from the Effective Date. This MOU may be terminated by any Party by providing written notice and explanation to the other Parties at least 30 calendar days in advance of the effective date of termination. The termination of this MOU shall not affect the validity or duration of activities or agreements under this MOU that are initiated prior to such termination or that are continued by the remaining Parties.

XIII. **Renewal.** This MOU may be renewed for additional periods of 3 years, by mutual written consent of the Parties.

XIV. **License for Use.** During the term of this MOU, all Parties to this MOU shall have a license to use space of the AJCCs for the sole purpose of conducting acceptable AJCC services as outlined herein.

XV. **Press Releases and Communications.** All Parties shall be included when communicating with the press, television, radio or any other form of media regarding its duties or performance under this MOU. Participation of each Party in press/media presentations will be determined by each Party's public relations policies. Unless otherwise directed by the other Parties, in all communications, each Party shall make specific reference to all other Parties.

The Parties agree to utilize the AJCC logo developed by the State of California and the Local Board on buildings identified for AJCC usage and on letterhead, envelopes, business cards, any written correspondence and fax transmittals in accordance with state branding guidance.

XVI. **Hold Harmless/Indemnification/Liability.** In accordance with provisions of Section 895.4 of the California Government Code, each Party hereby agrees to indemnify, defend and hold harmless all other Parties identified in this MOU from and against any and all claims, demands, damages and costs arising out of or resulting from any acts or omissions which arise from the performance of the obligations by such indemnifying party pursuant to this MOU. In addition, except for Departments of the State of California which cannot provide for indemnification of court costs and attorney's fees under the indemnification policy of the State of California, all other Parties to this MOU agree to indemnify, defend and hold harmless each other from and against all court costs and attorney's fees arising out of or resulting from any acts or omissions which arise from the performance of the obligations by such indemnifying party pursuant to this MOU. It is understood and agreed that all indemnity provided herein shall survive the termination of this MOU.

Signatories

GOLDEN SIERRA JOB TRAINING AGENCY

By: *John*
Title: *Executive Director*

Dated: *9/20/16*

Sacramento Employment and Training Agency

By: *Kathy Kossich*
Title: Executive Director

Dated: *8/23/16*

North Central Counties Consortium

By: *Tanya Crooks*
Title: *Executive Director*

Dated: *9/20/16*

Yolo County

By: *Glenn Lyth*
Title: *Executive Director*

Dated: *9/20/16*

next economy

CAPITAL REGION PROSPERITY PLAN

ACCELERATE JOB CREATION AND NEW INVESTMENT IN CALIFORNIA'S CAPITAL REGION

The Capital Region of California, covering El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba counties, is joining together to pursue a competitive and strategic economic development agenda to bring about resiliency, vitality and a wide range of new opportunities for job creation, innovation and increased investment.

2013–2017

prepared by Valley Vision and the Center for Strategic Economic Research, March 2013

A MESSAGE FROM THE NEXT ECONOMY LEADERSHIP GROUP

Next Economy is a business-led, volunteer-driven regional endeavor that strives to transform a \$97 billion annual economy that has suffered widespread hardship and a lagging recovery into one that is diversified, robust and sustainable. Recognizing that competition in today's global economy increasingly occurs at the regional level, and that the Capital Region's economic advantages are narrowing under dated economic development practices, the business leadership from the Sacramento Metro Chamber, the Sacramento Area Commerce and Trade Organization (SACTO), the Sacramento Regional Technology Alliance (SARTA) and Valley Vision launched Next Economy as a collective response. This initiative uncovers competitive strengths and maps out a set of interlocking strategies to accelerate job and wealth creation and boost new investment across the Capital Region.

Given the size and complexity of the challenge, economic development activities must be strategic and synchronized if they are to have lasting impact. A series of independent, localized steps will not bring about true economic growth and prosperity for all. Broad-based job creation efforts are necessary to revive the economic health of the Region.

More than a plan, Next Economy is a movement. It aims to align regional economic development activities and focus them for maximum impact. To do so, Next Economy issues a region-wide call to action: *Mobilize private industry, government, and academic and civic leadership to focus on a set of common strategies and actions to accelerate job creation and new investment in California's Capital Region with the goals of supporting innovation and entrepreneurship, diversifying the regional economy and improving the business climate for economic growth.*

Because no single organization can accomplish the broad range of strategies and actions encompassed in the Capital Region Prosperity Plan, Next Economy challenges government leaders, educational institutions, not-for-profit economic development organizations and private industry to initiate bold new approaches to bring about economic recovery and to actively work together to make those approaches succeed. In this way, Next Economy is deliberately designed to invite direct participation from the broadest array of organizations and people possible who are committed to widespread prosperity across the Region. This Prosperity Plan aims to transform the Region's economy by mobilizing leaders around a common playbook for action, enabling organizations to select the "plays" that suit their strengths and capabilities and put them into action in ways that best fit the needs of those they serve.

In the end, success lies in ensuring that Next Economy strategies and actions are deeply integrated into organizations' work plans, with strong accountability mechanisms and champions across all segments of the Capital Region's leadership. We encourage you to take part in this important movement to accelerate job creation and investment. Together we will move the Capital Region to the Next Economy.

Brice Harris | Martha Lofgren | Craig McNamara | Mark Otero | Susan Peters | Jim Williams

CA Community Colleges Brewer Lofgren, LLP

Sierra Orchards

BioWare

Sacramento County

Williams + Paddon

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PART ONE:

NEXT ECONOMY EXECUTIVE SUMMARY

Goals

The Capital Region Prosperity Plan lays out five overarching goals:

1. **Foster a strong innovation environment**
2. **Amplify the Region's global market transactions**
3. **Diversify the economy through growth and support of core business clusters**
4. **Grow and maintain a world-class talent base**
5. **Improve the regional business climate for economic growth**

A Unified Vision

By uniting job-creating activities under a common vision for regional joint action, the Capital Region is poised to shape a new reputation. **Vision**—*Within five years, the Capital Region will be widely regarded as a:*

- ◆ **Sought-after place for business growth, investment and entrepreneurship**
- ◆ **Desirable place for a quality workforce and young professionals to live, study, work, play and contribute**
- ◆ **Diverse economy renowned for its core business clusters and driven in large part by export activity**

Strategic Economic Agenda

The Capital Region Prosperity Plan lays out five overarching goals and a set of associated long-range objectives and action-oriented strategies designed to accelerate job creation and investment. To move the Region's Next Economy vision to reality, these strategies will be activated through a set of high-priority tactics and performance measures developed in coordination with regional stakeholders and organizations. Implementation began in the first quarter of 2013. If the Region works together to achieve these goals, it stands to benefit from an additional **35,000 new jobs** and **\$5.3 billion of output** by 2017, over and above expected business as usual performance.

1. FOSTER A STRONG INNOVATION ENVIRONMENT

Objective 1:

BOLSTER UNIVERSITY TECHNOLOGY TRANSFER AND COMMERCIALIZATION

Strategies:

- ◆ Embed regional research, university technology transfer and entrepreneurship programs within the Region
- ◆ Identify regional industry needs and align university research capacity for new discoveries and emerging technologies
- ◆ Develop strong relationships between regional research universities and small business, financing, and incubator and accelerator programs and services on a region-wide basis
- ◆ Encourage linkages between researchers making discoveries and entrepreneurs and companies able to commercialize and deploy
- ◆ Explore opportunities for developing university-industry research centers around regional research strengths and core business clusters

Objective 2:

EXPAND ACCESS TO CAPITAL FOR HIGH-GROWTH COMPANIES AND SMALL AND MEDIUM ENTERPRISES

Strategies:

- ◆ Establish a centralized access point for information about the sources of capital available across all stages of a company lifecycle
- ◆ Build new forms of debt and equity capital available to high-growth companies and small and medium enterprises
- ◆ Facilitate effective connections between funders and companies
- ◆ Strengthen relationships with external funding sources interested in regional deal opportunities
- ◆ Leverage public-sector investment power to increase the level of regional investment

Objective 3:

BUILD A ROBUST NETWORK OF BUSINESS INCUBATOR AND ACCELERATOR SERVICES

Strategies:

- ◆ Link existing and emerging incubator and accelerator programs into a regional network
- ◆ Expand the scope and capacity of incubator and accelerator services based on potential market demand
- ◆ Connect emerging companies in the Region to appropriate components of the incubator and accelerator network

- ◆ Market the existence and outcomes of the incubator and accelerator network internally and externally
- ◆ Build a targeted retention effort focused on viable companies that have received incubator and accelerator services

2. AMPLIFY THE REGION'S GLOBAL MARKET TRANSACTIONS

Objective 1:

GROW INTERNATIONAL TRADE AND EXPORT ACTIVITY

Strategies:

- ◆ Build a comprehensive regional service provider network that offers effective business assistance, financing, and targeted support services for international trade
- ◆ Market the availability and outcomes of the service provider network internally and externally
- ◆ Develop an ongoing series of foreign trade missions exclusively designed for local company export promotion
- ◆ Form strategic relationships with international business networks, existing foreign companies and foreign government agencies to identify and support international trade opportunities
- ◆ Ensure the Region's transportation infrastructure has the capacity to increase global goods movement and passenger travel

Objective 2:

INCREASE THE LEVEL OF FOREIGN DIRECT INVESTMENT

Strategies:

- ◆ Enhance coordinated marketing efforts focused on foreign direct investment
- ◆ Create a diverse and effective group of lead-generation resources for priority foreign direct investment targets
- ◆ Expand the amount and frequency of foreign trade trips targeting specific companies, industry trade shows and business networks
- ◆ Develop a strategic network of service providers and regional leaders to assist with outreach efforts and foreign company prospects
- ◆ Market investment opportunities within the Region to potential foreign investors

3. DIVERSIFY THE ECONOMY THROUGH GROWTH AND SUPPORT OF CORE BUSINESS CLUSTERS

Objective 1:

FORM FUNCTIONAL BUSINESS NETWORKS AND ESTABLISH SPECIFIC CLUSTER INITIATIVES

Strategies:

- ◆ Recruit members from across the entire value chain to form cluster alliance groups
- ◆ Perform ongoing cluster needs assessments and facilitate effective solutions
- ◆ Develop annual cluster alliance group priorities and action plans that focus on increased jobs and investment, drive implementation of needed growth activities and monitor progress against stated objectives
- ◆ Maintain cluster-specific resource guides listing relevant regional programs, services and providers

Capital Region Core Business Clusters

- ◆ **Advanced Manufacturing**
- ◆ **Agriculture & Food**
- ◆ **Clean Energy Technology**
- ◆ **Education & Knowledge Creation**
- ◆ **Information & Communications Technology**
- ◆ **Life Sciences & Health Services**

Objective 2:

CREATE AND ALIGN TARGETED PROGRAMS AND SERVICES TO SUPPORT CLUSTERS

Strategies:

- ◆ Develop marketing materials to build internal and external cluster visibility
- ◆ Align regional business attraction and retention programs with cluster opportunities
- ◆ Build targeted innovation and entrepreneurship resources for cluster activities
- ◆ Explore opportunities to create formal public-private partnerships to foster and grow cluster opportunities
- ◆ Facilitate new domestic business-to-business sales and foreign exports to increase economic base activities within core clusters
- ◆ Encourage the creation of local and regional incentives that support growth of primary jobs across core clusters and other industries

Objective 3:

BUILD STRONG ECONOMIC FOUNDATIONS FOR SUSTAINED CLUSTER GROWTH

Strategies:

- ◆ Align education and workforce development efforts to address current and anticipated gaps in labor supply and demand within the clusters

- ◆ Advocate for public policy at the state and local levels that supports conditions necessary for cluster growth
- ◆ Build a robust regional network of suppliers and service providers for effective cluster operations
- ◆ Address specialized facilities and infrastructure needs that strengthen connectivity required for cluster growth

4. GROW AND MAINTAIN A WORLD-CLASS TALENT BASE

Objective 1:

CREATE MECHANISMS TO ATTRACT NEW TALENT AND RETAIN EXISTING TALENT

Strategies:

- ◆ Establish connections between active young professionals groups throughout the Region and engage members as ambassadors in talent attraction and retention efforts
- ◆ Execute a talent-attraction campaign targeting young professionals, experienced entrepreneurs, and high-demand occupations and skills
- ◆ Implement a talent-retention strategy focusing on students and recent graduates of regional education and training programs
- ◆ Develop mechanisms to better connect new, existing and prospective students and residents to career opportunities and lifestyle assets in the Region
- ◆ Invest in the Region's cultural infrastructure as a means to retain and attract talent

Objective 2:

ALIGN TRAINING AND EDUCATION PATHWAYS TO INCREASE ECONOMIC PROSPERITY FOR BUSINESSES AND WORKERS

Strategies:

- ◆ Mobilize the community to advance and support continued investment in education and related infrastructure
- ◆ Develop critical career pathways that align with core business clusters across all education and training levels
- ◆ Address critical gaps in workforce supply and demand across core business clusters and other large industry sectors

5. IMPROVE THE REGIONAL BUSINESS CLIMATE FOR ECONOMIC GROWTH

Objective 1:

REMOVE ECONOMIC AND REGULATORY BARRIERS TO STIMULATE GROWTH

Strategies:

- ◆ Partner with the business community and other regions in the state to communicate with and influence state policymakers
- ◆ Coordinate the Region's business advocacy efforts to reduce local and regional regulatory barriers to improve the Region's business climate
- ◆ Build a proactive effort to educate elected officials and local government leaders about key business issues and industry needs
- ◆ Leverage existing regional advocacy programs and, where possible, other state associations' and prominent industry-specific lobbying efforts to influence a reduction in regulatory barriers at the state and federal levels
- ◆ Foster an effective system to respond to company-specific local-level regulatory issues
- ◆ Encourage streamlined and predictable permitting policies and procedures across all local jurisdictions in the Region
- ◆ Pursue local implementation of state and federal regulatory requirements that is uniform, streamlined and cost effective

Objective 2:

AMPLIFY THE REGION'S VISIBILITY AND REPUTATION AMONG KEY AUDIENCES

Strategies:

- ◆ Mobilize a set of interlocking campaigns, aligned with the Next Economy vision, that solidify the Region's reputation as the economic, cultural and recreational capital of the State of California
- ◆ Establish a media partner network committed to publishing content that celebrates local and regional achievements internally and externally
- ◆ Establish a mechanism for collecting, assembling, coordinating and disseminating key messages and celebratory content

Objective 3:

INTENSIFY ECONOMIC DEVELOPMENT ACTIVITIES THAT DRIVE GROWTH AND INVESTMENT

Strategies:

- ◆ Build a significant fund that can be used to directly invest in competitive new company locations or expansions that create high-value jobs
- ◆ Establish a formal, region-wide system to retain local companies and high-quality jobs

- ◆ Prioritize Next Economy strategies and identify strategic and coordinated funding sources for implementation of actions that offer high anticipated job and wealth creation outcomes
- ◆ Pursue opportunities with state agencies and departments that result in increased investment, procurement and/or private-sector job creation
- ◆ Educate the public and investors about the Region’s economic development activities, the value they offer and the job and wealth creation opportunities they present

Objective 4:

DEVELOP A NEXT ECONOMY GOVERNANCE STRUCTURE THAT ENSURES IMPLEMENTATION AND ACCOUNTABILITY

Strategies:

- ◆ Align strategic objectives of Capital Region non-profit organizations with a goal of collaborating on Next Economy implementation strategies
- ◆ Obtain endorsement from all cities and counties in the Capital Region of Next Economy Goals and Unified Vision, and coordinate Next Economy implementation strategies and objectives with public-agency partners
- ◆ Enact a formal agreement among principal organizations specifying roles and performance obligations toward Next Economy execution
- ◆ Track implementation progress, manage accountability, report regularly, celebrate successes and adjust strategies and actions as necessary for efficiency and maximum return on investment for economic development activities
- ◆ Examine merits associated with completion of a regionwide Comprehensive Economic Development Strategy (CEDS)

“We are not going to be guided at the outset by those things that everyone agrees with, but rather be guided by the magnitude of potential achievement.”

*—Roger Niello
president & CEO, Sacramento Metro Chamber*

PART TWO: STRATEGIC PLAN FOR REGIONAL JOINT ACTION

THE CHALLENGE

The Capital Region of California faces an immediate challenge: **To jump-start an economy that has been hit hard by the global recession and continues to lag behind other regions in the state and the nation.**

The business leadership from the Sacramento Area Commerce and Trade Organization (SACTO), the Sacramento Regional Technology Alliance (SARTA), the Sacramento Metro Chamber and Valley Vision recognized this challenge and launched Next Economy in the fall of 2011 as a new regional initiative to uncover the six-county Capital Region's competitive strengths and map out a set of interlocking strategies that together can accelerate job and wealth creation and boost new investment.

The Capital Region Prosperity Plan sets in motion a unified economic agenda and long-range vision for widespread regional joint action. The Plan lays out five overarching goals, a set of performance-based strategies and objectives, and a detailed Implementation Plan designed to accelerate job and wealth creation and boost new investment across the Capital Region.

As a regional volunteer-driven endeavor, Next Economy aligns public and private sector economic development activities and focuses them to achieve maximum impact. By mobilizing private industry, government, academia and civic leadership around a set of common strategies and actions that prioritize job and wealth creation, the Region is best positioned to reinvigorate and diversify its economy.

Together, there exists the ability to leverage the Region's strengths and distinctive assets and to improve the economic environment in ways not possible when working independently. For this reason Next Economy is deliberately designed to invite active participation from all organizations, jurisdictions and individuals committed to job creation and economic growth.

Capital Region

The six-county Capital Region consists of El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba counties, covers 23 cities, spans roughly 6,300 square miles and comprises 2.3 million residents, making it the fourth largest metropolitan region in California and the 25th largest in the United States.

The Capital Region represents a \$97 billion economy and for 10 years has been one of the fastest-growing metropolitan areas in California and the United States.

With a significant number of residents still out of work in the metropolitan area as a result of the prolonged recession and an unsettling number of home foreclosures, business closures and relocations to other regions and states, urgent and expansive job-creation efforts are necessary to revive economic health on a regional scale.

To create employment opportunities and revive regional economic health, economic development activities must be strategic and sustainable, and the Capital Region's leadership—representing private industry, government and academia together—must take swift, decisive and collaborative action to have meaningful impact.

By aligning economic development activities and focusing resources on opportunities that generate new jobs and attract increased investment, the Region responds to the challenge it faces and will:

Transform the economic landscape into a diverse and robust economy that leverages the Capital Region's distinct advantages and improves conditions for the area's 70,000 businesses and 2.3 million residents.

CAPITALIZING ON REGIONAL ASSETS

The Capital Region has many attributes that enhance its economic vitality. With a strong civic and social infrastructure; access to world-class research, health care and educational institutions; reliable and low-cost electricity; some of the richest agricultural lands in the world and seismic stability, the Region offers a wide array of assets that can be leveraged more effectively. Among the Region's distinguishing assets are:

- ◆ **A broad and established network of educational and research institutions** includes UC Davis, Sacramento State, seven community colleges, numerous vocational, professional and private schools (including medical, law and business schools) and local campuses of colleges headquartered elsewhere in the nation. The combined enrollment of these institutions is approximately 192,000 students: a higher adult participation rate compared to other parts of the state and nation.
- ◆ **Sacramento International Airport** is one of the finest passenger airports serving Northern California. Over the past five years the airport provided services to an average of 10 million passengers annually, drawing travelers from all over the north state, and recently completed a massive \$1 billion terminal construction project that improved passenger service and created an impressive new access point from the Capital Region to the world.

- ◆ **High-quality, comprehensive health and medical services** are another distinguishing feature of the Capital Region. With a history of productive collaboration that may be unmatched anywhere in the nation, the region’s health services network—Dignity Health, Kaiser Permanente, Sutter Health, UC Davis Health System and others—continues to experience the greatest gains in the share of total regional employment. In addition, the region boasts sizable expansion of health care facilities—over 2 million square feet of new treatment and research space is nearing completion.
- ◆ **The western half of the Region is one of the most productive agricultural areas in the world** with its rare combination of clean, reliable water supplies, rich soil, ideal growing climate and local infrastructure that supports a very diverse crop mix. The Region is situated at the confluence of the Sacramento and American rivers in northern California’s expansive Central Valley and offers a variety of natural, rural and urban landscapes.
- ◆ **The Region has three of the top ten most progressive utility companies in the United States** as community providers of natural gas and electricity: Pacific Gas and Electric Company (PG&E), the Sacramento Municipal Utility District (SMUD) and Roseville Electric. SMUD has received more than \$164 million in stimulus funding for smart grid implementation, photovoltaic pilot projects and renewable-energy development programs. Both PG&E and SMUD were ranked among the top 10 “smartest” utilities in the nation by *Intelligent Utility* magazine’s annual UtiliQ analysis.
- ◆ **The Region’s deepwater port provides a central hub** and immense economic opportunities for cargo conveyance.
- ◆ **The Capital Region enjoys one of the most diverse populations** in the country, providing a rich cultural mix that enhances economic, social and political life.
- ◆ **Today more than 100 biotechnology and medical device companies and 15,000 life sciences employees** call the Capital Region home. *(Source: SACTO’s 2012/2013 Sacramento Regional Report)* With an abundant and highly qualified workforce trained at world-class educational institutions, available land and zoning in place, and collaborative efforts that will finance and develop new biomedical facilities, the Region offers the greatest and most flexible opportunities for further expansion of the industry. Companies across the Region are leading in manufacturing, research, and development of a wide variety of medical equipment, optical instruments, analytical devices, measuring and controlling devices, and biological and other health-related products.

The Sacramento Region ranked 3rd in the U.S. for the percentage of clean economy jobs, 7th for the percentage increase of green jobs, and 12th in the total number of green jobs.

*Brookings Institution
Sizing the Clean Economy:
A National and Regional Green Jobs Assessment, July 13, 2011*

- ◆ **With a host of state agencies and organizations headquartered** in the Region, such as the California Environmental Protection Agency, California Energy Commission, California Air Resources Board, CalPERS (Public Employees' Retirement System) and CalSTRS (State Teachers' Retirement System), Caltrans (Department of Transportation), California ISO (Independent System Operator Corporation) and the Legislature and Office of the Governor, regional leaders have unique access to affect the decisions of policymakers.

- ◆ **The Capital Region has emerged as a hub for clean energy technology**, with more than 200 "green" firms and organizations, many with headquarters in the Region, according to SACTO's 2012/2013 Sacramento Regional Report. The Region is a large and expanding market for several clean-technology industries, including solar, wind, energy efficiency and biomass. California State University, Sacramento, is the home of the California Smart Grid Center and many of the Region's universities, community colleges and private postsecondary institutions offer green curricula and areas of research. Today 4.5 percent of area jobs, or roughly 37,000 people, are in clean tech, according to a recent study by the Brookings Institution, and the Region boasts the third-highest number of registered electric cars in the country. The Region also ranked fourth in the first-ever U.S. Metro Clean Tech Index, a study released in October 2012 ranking the nation's largest metropolitan areas on four different clean-technology measures.

The Region offers a high quality of life, moderate cost of living relative to other parts of California, a broad spectrum of recreational activities, numerous natural and economic assets, and is home to the California state capital.

Among the Region's key assets:

- ◆ **Broad and established network of world-class educational and research institutions**
- ◆ **Three of the top ten most progressive utility companies in the U.S.**
- ◆ **Renowned health systems and medical services**
- ◆ **Sacramento International Airport and Mather and McClellan cargo airfields**
- ◆ **Headquarters of state government, agencies and associations**
- ◆ **One of the most productive agricultural areas in the world**
- ◆ **Two major rivers and a deepwater port**
- ◆ **One of the most diverse populations in the country**
- ◆ **California's hub of the interstate transportation system**
- ◆ **History of productive, broad-based regional cooperation**
- ◆ **Access to cultural and recreational opportunities and world-renowned locations in the state**

A UNIFIED VISION

By uniting job-creating activities under a common vision for regional joint action, the Capital Region is poised to shape a new reputation.

VISION—*Within five years, the Capital Region will be widely regarded as a:*

- ◆ **Sought-after place for business growth, investment and entrepreneurship**
- ◆ **Desirable place for a quality workforce and young professionals to live, study, work, play and contribute**
- ◆ **Diverse economy renowned for its core business clusters and driven in large part by export activity**

MOBILIZING ECONOMIC STAKEHOLDERS AND UNCOVERING THE FACTS

A seed grant from the Morgan Family Foundation matched by general contributions from local companies and organizations (see page 69), supported the comprehensive research and broad community engagement upon which the Capital Region Prosperity Plan is built. To ensure fact-based decision-making, Next Economy conducted extensive research that began in the fall of 2011. Thousands of stakeholders representing hundreds of organizations and institutions from across the six-county Capital Region were then invited to react to this research to help identify ways to solve the Region’s economic growth challenge.

Extensive quantitative research encompassing six distinct economic measurements and a series of public input sessions occurred between September 2011 and March 2012:

- ◆ Three large-scale regional forums were held to garner public input using instant voting technology: 1) November 15, 2011, at West Sacramento City Hall (250 attendees), 2) February 17, 2012, at Folsom Community Center (400 attendees) and 3) May 4, 2012, at Sacramento State (250 attendees);



- ◆ Quantitative research assessments included: 1) evaluation of regional trends, 2) current economic conditions assessment, 3) regional business cluster analysis, 4) base economic foundations evaluation, 5) a regional economic development ecosystem analysis, and 6) an innovations scorecard analysis;
- ◆ Feedback was obtained from nearly 100 of the Region’s C-level executives (i.e., CEO, COO, CFO); and
- ◆ Dozens of work sessions were convened with topic experts in the areas of life science and health services, information and communications technology, food and agriculture, clean energy technology, advanced manufacturing, and innovations to pinpoint the Region’s challenges, sources of strength and unique competitive advantages.

The research pointed to several leading opportunities for increasing regional competitiveness (*Source: CSER Next Economy Findings Report, pg 35*):

- ◆ Regional economic diversification through business clusters
- ◆ Enhancing the innovation environment
- ◆ Increasing engagement with global markets
- ◆ Developing and attracting talent

These research conclusions were further substantiated by qualitative input obtained from hundreds of individuals who provided insight into current impediments to the Region’s economic health. Foremost, regulatory and economic barriers obstruct business growth and competitiveness across all segments of the Region’s economy. The full Next Economy research report, conducted by the Center for Strategic Economic Research, can be downloaded at <http://www.nexteconomycapitalregion.org/Research.html>.

“Next Economy represents a breakthrough in the way we go about creating jobs and drawing new investment to the Capital Region. By collaborating locally, we compete better globally based on the strength of an entire region working together.”

—Bill Mueller
CEO & Managing Partner, Valley Vision

PART THREE: FRAMEWORK FOR ECONOMIC GROWTH

This Plan lays out five overarching goals to accelerate job growth and new investment that are based on empirical economic data gathered by CSER. Each goal is supported by associated long-range objectives and strategies.


GOALS

1. Foster a strong innovation environment
2. Amplify the Region's global market transactions
3. Diversify the economy through growth and support of core business clusters
4. Grow and maintain a world-class talent base
5. Improve the regional business climate for economic growth

PURPOSE

- ◆ Increase total number of jobs created
- ◆ Increase percentage of capital investment captured
- ◆ Achieve economic base diversification through the scaling up of key business clusters
- ◆ Expand economic foundations for long-term growth
- ◆ Encourage innovation, new business creation and capital formation
- ◆ Remove unnecessary impediments to business investment and expansion
- ◆ Ensure that the regional workforce possesses the education and skills needed for the jobs in demand

EXPECTED ECONOMIC BENEFIT

Effective regional implementation of the objectives, strategies and actions outlined under each of these goals could generate **35,000 new jobs** and **\$5.3 billion of output** in the next five years over and above expected business as usual performance. Each of the five goals will contribute to the incremental increase in the following ways: 

In fall of 2011, when the Next Economy planning process began, the Region's economy supported roughly **877,000** jobs and **\$97 billion** of output.

GOAL 1 – INNOVATION: Increased technology transfer, business start-up activity, patent generation, and debt and equity capital investment

GOAL 2 - GLOBAL TRADE: Amplified export activity and greater inflows of foreign direct investment

GOAL 3 – CLUSTERS: Improved cluster performance and development and greater economic diversity

GOAL 4 – TALENT: Increased in-migration and decreased out-migration of high-quality talent and workforce alignment to business needs

GOAL 5 - BUSINESS CLIMATE: Reduction of costs to business from regulations, enhanced business retention, and direct investment in high-value businesses

CAPITAL REGION CORE BUSINESS CLUSTERS

Expanded economic development opportunities can be realized by facilitating growth and development across entire value chains and related infrastructure and services as an alternative to efforts focused on specific industry sectors. Over the past decade a large number of regions have adopted this cluster-based concept within their economic development efforts to boost competitiveness and enhance economic vitality.

The Center for Strategic Economic Research analyzed historical and projected economic performance across nearly 300 detailed economic activities in the Capital Region to identify a set of potentially viable cluster opportunities. Six business clusters were identified as offering leading opportunities for economic growth and expansion.

Several other factors were examined to assess the viability of the identified clusters, including patents granted, venture capital investment, non-employer patterns, global emerging technology trends, national and regional expert insight, and presence of ongoing initiatives.

By shifting the Region's economic development discourse to emphasize clusters over industries, a wider array of outcomes can result by facilitating growth and development across an entire value chain and related infrastructure and services (as an alternative to efforts focused on a specific industry sector), and by drawing attention to an interrelated set of foundational economic factors.

CAPITAL REGION CORE BUSINESS CLUSTERS

ADVANCED MANUFACTURING

\$1.74B annual output and 11,409 total employment

AGRICULTURE & FOOD PRODUCTION

\$3.4B annual output and 37,442 total employment

CLEAN ENERGY TECHNOLOGY

\$846M annual output and 3,015 total employment

EDUCATION & KNOWLEDGE CREATION

\$1.11B annual output and 16,618 total employment

INFORMATION & COMMUNICATIONS TECHNOLOGY

\$9.69B annual output and 30,096 total employment

LIFE SCIENCES & HEALTH SERVICES

\$8.64B annual output and 98,646 total employment

Source: Center for Strategic Economic Research, 2012

ECONOMIC DEVELOPMENT ECOSYSTEM

The economic development ecosystem in a regional economy consists of a set of economic foundations necessary to support overall economic vitality as well as the landscape of regional organizations and associated programs and services that help facilitate the creation of jobs, investment and wealth. Across the nation, regional economic development programs generally fall within six main categories. Business attraction and marketing programs seek to facilitate new economic stimulation and diversification of the regional economy. Business retention and expansion programs focus on providing support to keep and grow companies already located in the Region.

Job creation and innovation stem from programs focused on entrepreneurial and small-business development. Business finance programs provide financing outside the standard private-sector model, contributing additional means to allow businesses to start, expand and remain competitive.

Technology development programs focus on supporting business creation and expansion of existing businesses through development and deployment of new products and services. A quality workforce is one of the most critical drivers of regional economic competitiveness; workforce development programs concentrate on creating a workforce aligned with the occupational and skill demands of businesses in the regional economy.

In order to effectively align regional economic development activities, identify areas of needed focus or program expansion, and determine the strategic framework of Next Economy, the Center for Strategic Economic Research conducted an assessment to catalog the Capital Region's existing economic development programs and services in comparison with standard practices. The information gathered through this evaluation helped define and prioritize Next Economy goals, strategies and objectives.

Economic development programs generally fall within six main categories:

- ◆ Business attraction and marketing
- ◆ Business retention and expansion
- ◆ Entrepreneurial and small-business development
- ◆ Business finance
- ◆ Technology development
- ◆ Workforce development

REGIONAL ECONOMIC FOUNDATION FOCUS AREAS

An evaluation of regional organizations within the six-county Capital Region revealed that most of the standard set of economic development programs and services are being provided to some degree. There are, however, areas where the Region can more effectively align efforts, broaden the scope of existing programs or create entirely new programs based on critical focus areas or gaps in the Region's economic development portfolio.

Areas identified as impediments or gaps were considered prime areas of opportunity in the creation of Next Economy regional economic development strategies. Two leading areas emerged as a central focus for economic development. First, with the exception of a few distinct programs, the availability of business finance provided directly through regional organizations is very limited.

Second, there are program gaps in the technology development arena, particularly related to specialized business space, technology deployment assistance, specialized talent attraction and retention campaigns, and technology transfer and commercialization.

Cities without business accelerators risk losing start-ups.

—Los Angeles Times, July 5, 2011

Leading opportunities for boosting the Region's economic metabolism

- ◆ Access to capital
- ◆ Business incubation and acceleration
- ◆ Technology transfer and commercialization
- ◆ Talent attraction and retention
- ◆ Business retention, expansion and support
- ◆ Global market transactions

There also exists a principal opportunity to further develop regional business retention and expansion efforts into a full-blown regional support system and incorporating early-warning customer relationship management, targeted business outreach and follow-up, open business feedback systems, and business assistance service coordination.

The need for expanded, focused and coordinated regional business retention and expansion efforts is critically important at a time when the Region faces economic strain from business closures and relocations, and as local-level efforts suffers from declining resources.

When considering the Region's global market transactions, roughly \$3.7 billion of export activity occurs each year in the Region with more than half of the value generated through computer and electronics products, and farm crop exports. (source: CSER)

Manufacturing of transportation equipment, machinery, chemicals, and food represent the balance of exports based on recent U.S. Department of Commerce figures.

While significant, the Region's export volume is half of statewide regional averages, and shows a lower export-per-employee value (\$4,000 compared to \$8,600 statewide), due primarily to a limited number and range of export products. *(source: CSER)*

Additionally, metropolitan regions that build up their capacity to deliver both high quality education and life-long learning better position themselves to serve any economic future, especially one increasingly dependent on knowledge and innovation. This is not just an imperative in light of the fast changing workforce demands in a global high-tech economy, but it also serves as a compelling economic growth and marketing strategy that the Capital Region must seize.

The Region has 43 colleges and universities that fuel and develop our skilled workforce. The Region's sizable education infrastructure, physical plant size, direct employment and service industries, overall economic impact and long-term growth trends are, when taken together, a highly valuable competitive advantage.

Several organizations undertake international trade and export activities in the Capital Region.

The Northern California World Trade Center (NCWTC), an affiliate of the Sacramento Metro Chamber and licensed by the World Trade Centers Association in New York, offers trade education and information, hosts in-bound trade missions, and organizes a Business Leadership Certificate Program.

The Center for International Trade Development, part of the Los Rios Community College District and one of 14 centers located throughout California, helps business owners, staff, importers and exporters expand their trade knowledge through mentoring, training and counseling.

The Sacramento Area Commerce and Trade Organization (SACTO) actively recruits business and investment from companies in Europe and the Pacific Rim and elsewhere through regular foreign trade trips and trade show participation.

The Sacramento Asian Chamber of Commerce (SACC) regularly hosts local delegation trips to Asia for business development and market education.

IMPLEMENTATION AND REGIONAL ENGAGEMENT

This Plan lays out a shared economic strategy and unified vision for the six-county metropolitan area to accelerate job creation—specifically in core wealth-generating business clusters—and to advance the cultural, civic and economic quality of the Region for residents, businesses and visitors.

The tactical applications to achieve the objectives and strategies are identified as a set of actions in the Implementation Plan (see page 36). The Implementation Plan does not list everything the Region currently does, could do or will do, but does define the key actions and lead coordinating champions who have committed to apply the resources and organizational expertise needed to achieve success.

Next Economy serves as a playbook for economic growth designed to enable jurisdictions and organizations to pursue particular “plays” that suit their strengths and capabilities, and to activate them in ways that fit the needs of those they serve.

Successful implementation requires broad, concerted and coordinated application across all segments of the Region’s leadership. Regional stakeholders are encouraged to take part in this important movement to accelerate job creation and investment across the Capital Region. There are three pathways for stakeholders to participate in Next Economy implementation:

1. Using the playbook approach, stakeholders can apply the Next Economy **Executive Summary** as the strategic framework for devising customized actions and ensure that Next Economy activities are integrated into work plans.
2. A more formal path is for regional partners to craft a unique **Partner Teaming Agreement** that describes the actions, resources, partnerships and capacity that regional partners are willing to commit to support Next Economy efforts to accelerate job creation and new investment here. All of the Partner Teaming Agreements will become an integral part of the Capital Region Prosperity Plan and monitored for progress.
3. Finally, Next Economy seeks to obtain official **Resolutions of Support** from cities, counties and special districts across the Region. The resolution affirms that the goals and strategies of Next Economy will serve as the fundamental structure behind public-sector economic development activity. These endorsements will unite regional economic development efforts by confirming that the Capital Region Prosperity Plan serves as their economic playbook.

“If you want to go fast, go alone. But if you want to go far, we need to go together.”

—Gavin Newsom
Lieutenant Governor, State of California
California Economic Summit, May 2011

GOVERNANCE

A formal governance structure that encompasses tracking mechanisms, performance measures, ongoing refinement and communication is the linchpin of the Next Economy initiative. A commitment to accountability that ensures the Region accomplishes what it set out to do, has been a driving force behind Next Economy since the beginning and is what sets it apart from other regional initiatives.

The business leadership from the Metro Chamber, SARTA, SACTO and Valley Vision have joined together not just throughout the planning of Next Economy, but now also by participating in a **Teaming Agreement** that specifies their roles and performance obligations toward Next Economy execution. The agreement provides a written framework for how the organizations will work together to implement the Capital Regional Prosperity Plan and coordinate future activities. It is an unprecedented agreement between regional economic development organizations and by itself is a significant contribution of Next Economy.

To ensure progress toward performance and impactful outcomes, a new **Oversight Group** assembled in February 2013, marking a leadership shift from planning and research to the critical phase of implementation. The Oversight Group, weighted toward business, will monitor ongoing execution and performance and hold Next Economy partner organizations and leaders accountable for progress based on agreed-upon metrics.

The master responsibility of the Oversight Group is to monitor the Implementation Plan and serve as its custodians over the five-year life of the Plan, adjusting it as needs dictate. The group will also be responsible for addressing barriers to Next Economy implementation so that promised activities are successfully carried out; engaging in active problem-solving to lift barriers to performance; renewing metrics and performance expectations as needed; and serving as the forum for mobilizing region-wide efforts to meet new economic growth opportunities in a way that is responsive to new or unforeseen marketplace challenges, opportunities or emerging needs.

Each of the four champion organizations, as well as NextEd and the Northern California World Trade Center, have committed their 2013 board chair and 2014 incoming chair as members of the Oversight Group, which will meet at quarterly intervals throughout each year to measure progress against the Plan. Additional representatives from private industry, academia and government will complete the group's composition.

Outcomes will also be monitored through research that tracks economic performance against success measures. The Center for Strategic Economic Research (CSER) will benchmark a set of jobs and economic output performance measures to keep Next Economy focused on progress toward each of the five goals.

The chief measures are jobs created and dollars accrued, but there are process measures as well. CSER has calculated the total jobs and financial contribution that Next Economy will create by the five-year mark if fully implemented, above the current expected growth rate of the economy, and will conduct periodic benchmark research to evaluate results over time. Performance will be reviewed by the Oversight Group and results will be publicized throughout the course of Next Economy execution.

PART FOUR:

CAPITAL REGION ECONOMIC AGENDA

1. FOSTER A STRONG INNOVATION ENVIRONMENT

To boost the Region’s innovation environment, bolster high-revenue producing employment sectors and effectively compete in a globalized, information-age economy, new investment—public and private—must be leveraged and entrepreneurship and risk-taking must permeate the economy.

This goal focuses on stimulating innovation and new company creation by creating the conditions to grow emerging industries and new businesses, and by putting into practice collaborative mechanisms to accelerate the development of new technologies and industries.

The Capital Region contains many of the necessary ingredients to support entrepreneurs and small businesses, but success in the future will require increased access to technology transfer and commercialization support from the Region’s universities, and an even more robust network of investors, assistance providers and sources of innovative products and services.

“The opportunity for technology growth in our region is huge and the participation of our flagship companies is essential to ensuring that potential is fulfilled.”

—Meg Arnold
CEO, Sacramento Regional Technology Alliance

This goal can be achieved by improving access to private and public equity and debt capital, providing technical support to businesses through a regional network of business accelerator and incubator services targeting high-growth and small and mid-sized companies, and improving technology transfer from area universities and colleges to launch new businesses or grow existing enterprises.

Small businesses and emerging growth enterprises are a primary generator of new jobs and wealth and make up more than 90 percent of all businesses in the Sacramento metropolitan area. (*Source: CSER Next Economy Report, pg 19*) The small-business segment is forecasted to be extremely active in the future economy and will recruit thousands of new entrants. The Region’s ability to attract, accelerate and incubate this segment will be aided by technology tools and global communications.

Objective 1:

BOLSTER UNIVERSITY TECHNOLOGY TRANSFER AND COMMERCIALIZATION

Strategies:

- ◆ Embed regional research, university technology transfer and entrepreneurship programs within the Region
- ◆ Identify regional industry needs and align university research capacity for new discoveries and emerging technologies
- ◆ Develop strong relationships between regional research universities and small business, financing, and incubator and accelerator programs and services
- ◆ Encourage linkages between researchers making discoveries and entrepreneurs and companies able to commercialize and deploy
- ◆ Explore opportunities for developing university-industry research centers around regional research strengths and core business clusters

Objective 2:

EXPAND ACCESS TO CAPITAL FOR HIGH-GROWTH COMPANIES AND SMALL AND MEDIUM ENTERPRISES

Strategies:

- ◆ Establish a central access point for information about the sources of capital available across all stages of a company's lifecycle
- ◆ Build new forms of debt and equity capital available to high-growth companies and small and medium enterprises
- ◆ Facilitate effective connections between funders and companies
- ◆ Strengthen relationships with external funding sources interested in regional deal opportunities
- ◆ Leverage public-sector investment power to increase the level of regional investment

Commercialization Activities

Investigation



Feasibility



Development



Introduction



Growth



Maturity

*SSTI, A Resource Guide
for Technology-Based
Economic Development*

Funding Types

Debt

Private-sector loans
Private-sector lines of credit
Peer lending
Asset-based lending
Revolving loan funds
Bonds
Government financing programs

Equity

Personal funds
Friends and family
Partners
Angel investors
Venture capitalists
Common or preferred stock
Private or corporate investors

Indirect

Crowd-funding
Grants
Loan guarantees
Linked deposits

Objective 3:

BUILD A ROBUST NETWORK OF BUSINESS INCUBATOR AND ACCELERATOR SERVICES

Strategies:

- ◆ Link existing and emerging incubator and accelerator programs into a regional network
- ◆ Expand the scope and capacity of incubator and accelerator services based on potential market demand
- ◆ Connect emerging companies in the Region to appropriate components of the incubator and accelerator network
- ◆ Market the existence and outcomes of the incubator and accelerator network internally and externally
- ◆ Build a targeted retention effort focused on viable companies that have received incubator and accelerator services

Types of Incubator and Accelerator Services

- ◆ **Mentoring**
- ◆ **Basic business training and technical assistance**
- ◆ **Peer-based support**
- ◆ **Education sessions**
- ◆ **Networking**
- ◆ **Access to subject matter expertise**
- ◆ **Shared business services**
- ◆ **Physical facilities and equipment**
- ◆ **Access to investment capital**
- ◆ **Celebration/promotion**

2. AMPLIFY THE REGION'S GLOBAL MARKET TRANSACTIONS

The exchange of capital, goods, and services across international borders can represent a sizable share of a region's economic activity. As the global economy continues the shift to one determined by information and innovations, the economic, social, and political importance of international trade continues to rise.

Economic growth occurs when regions export to other regions, especially internationally. The challenging economic conditions across the nation, coupled with the collapse of the domestic-focused growth model that historically has driven the Capital Region economy, make it more important than ever for businesses to connect and serve growth markets and new customers in other parts of the world.

Access to global markets is crucial to achieving true economic growth. In the Capital Region the level of export activity is relatively low and dominated by only a few products, yet the Region possesses strong assets for global connections and growth, according to the research findings of CSER's Next Economy report.

World-class healthcare, education and research institutions, for instance, present important opportunities for direct foreign investment. UC Davis' global reputation as a top-tier research institution—contributing to breakthroughs in food, health, life and environmental sciences—together with the collective strengths of the Region's public and private higher education institutions forms a strong competitive advantage. Matched with leading healthcare, medical services, life and biological sciences, agriculture and clean tech industries, and a well-educated workforce that hails from countries and cultures all over the world, the Region is well positioned to thrive in a global marketplace.

With the majority of global purchasing power occurring today outside the U.S., the Region must exercise these outstanding assets and leverage rapid growth in emerging markets and new investment opportunities—both in terms of increased export transactions and attraction of investment from other countries looking for growth connections to the U.S.—in order to expand economic base activities.

Accessing Global Markets

The Capital Region has a robust transportation infrastructure that features major activity at Sacramento International, McClellan, Mather and Executive Airports and at the expanding Port of West Sacramento, replete with a Foreign Trade Zone designation.

Sacramento is at the crossroads of major freeways and interstate highways that connect the state and nation, enabling unfettered goods movement. There is a strong consensus on the Region's long-range road and highway investments, with more than \$11 billion in additional investments planned over the next few decades.

Objective 1:

GROW INTERNATIONAL TRADE AND EXPORT ACTIVITY

Strategies:

- ◆ Build a comprehensive regional service provider network that offers effective business assistance, financing, and targeted support services for international trade
- ◆ Market the availability and outcomes of the service provider network internally and externally
- ◆ Develop an ongoing series of foreign trade missions exclusively designed for local company export promotion
- ◆ Form strategic relationships with international business networks, existing foreign companies and foreign government agencies to identify and support international trade opportunities
- ◆ Ensure the Region’s transportation infrastructure has the capacity to increase global goods movement and passenger travel

Exports—purchases of goods, services or intellectual property from a domestic location by a business or resident located in a foreign country

Objective 2:

INCREASE THE LEVEL OF FOREIGN DIRECT INVESTMENT

Strategies:

- ◆ Enhance coordinated marketing efforts focused on foreign direct investment
- ◆ Create a diverse and effective group of lead-generation resources for priority foreign direct investment targets
- ◆ Expand the amount and frequency of foreign trade trips targeting specific companies, industry trade shows and business networks
- ◆ Develop a strategic network of service providers and regional leaders to assist with outreach efforts and foreign company prospects
- ◆ Market investment opportunities within the Region to potential foreign investors

Foreign direct investment—domestic investments by entities in a foreign country that create new or expanded business activities, provide capital for projects or facilities, or involve a merger or acquisition of an existing company

3. DIVERSIFY THE ECONOMY THROUGH GROWTH AND SUPPORT OF CORE BUSINESS CLUSTERS

Over the past decade, many successful regions have adopted a cluster-based concept in their regional economic development efforts to boost competitiveness and enhance economic vitality. Using analyses of economic performance, CSER uncovered six viable clusters within the Capital Region for their job and wealth creation potential.

It is a pivotal shift in focus for a region historically dominated by government and construction-sector employment and related economic activity—those sectors hit hardest by the global recession. While housing and construction have been mainstays of the regional economy and will continue to contribute, a truly sustainable economy cannot rely on the recirculation of wealth as these sectors do. It is important to invest in new and emerging business clusters that import wealth from outside the Region and expand economic growth opportunities across an entire value chain.

According to recent U.S. employment statistics, the Capital Region’s government workforce is one of the largest per capita of any metropolitan region in the United States. Government has been a valuable contributor to the Region’s economy and there is little question that the presence of government has dampened the effects of past economic downturns. In the face of current economic and financial realities, however, forecasts call for flat to negative employment in the government sector for the foreseeable future.

To diversify the Region’s economic base, this goal focuses economic development activities on core business clusters in which the Region possesses innate advantages. Establishing strategic initiatives that support sustained growth across core clusters not only offers immense job and wealth creation benefits, there is added value in mounting a reputation as a national, even international, center for distinct economic activity.

A regional cluster

analysis determined that six core business clusters in the Capital Region present the greatest opportunities for wealth generation, new investment and expansion of economic base activities, based on economic performance, innovation activity, and other relevant dynamics:

- ◆ **Advanced manufacturing**
- ◆ **Agriculture and food**
- ◆ **Clean energy technology**
- ◆ **Education and knowledge creation**
- ◆ **Information and communications technology**
- ◆ **Life sciences and health services**

DESIRABLE CLUSTER ATTRIBUTES

Economic	Locational
<ul style="list-style-type: none"> ◆ Strong presence of economic base activities ◆ Alignment with workforce structure ◆ Linkages to other clusters ◆ Import substitution capacity ◆ Robust multiplier effects ◆ Productivity integration ◆ Broad future growth potential 	<ul style="list-style-type: none"> ◆ Prominent company visibility ◆ Regional competitive advantage ◆ Presence of supporting attributes ◆ Innovation activity

Objective 1:

FORM FUNCTIONAL BUSINESS NETWORKS AND ESTABLISH SPECIFIC CLUSTER INITIATIVES

Strategies:

- ◆ Recruit members from across the entire value chain to form cluster alliance groups
- ◆ Perform ongoing cluster needs assessments and facilitate effective solutions
- ◆ Develop annual cluster alliance group priorities and action plans that focus on increased jobs and investment, drive implementation of needed growth activities, and monitor progress against stated objectives
- ◆ Maintain cluster-specific resource guides listing relevant regional programs, services and providers

Objective 2:

CREATE AND ALIGN TARGETED PROGRAMS AND SERVICES TO SUPPORT CLUSTERS

Strategies:

- ◆ Develop marketing materials to build internal and external cluster visibility
- ◆ Align regional business attraction and retention programs with cluster opportunities
- ◆ Build targeted innovation and entrepreneurship resources for cluster activities
- ◆ Explore opportunities to create formal public-private partnerships to foster and grow cluster opportunities
- ◆ Facilitate new domestic business-to-business sales and foreign exports to increase economic base activities within core clusters
- ◆ Encourage the creation of local and regional incentives that support growth of primary jobs across core clusters and other industries

Objective 3:

BUILD STRONG ECONOMIC FOUNDATIONS FOR SUSTAINED CLUSTER GROWTH

Strategies:

- ◆ Align workforce development efforts to address current and anticipated gaps in labor supply and demand within the clusters
- ◆ Advocate for public policy at the state and local levels that supports conditions necessary for cluster growth
- ◆ Build a robust regional network of suppliers and service providers for effective cluster operations
- ◆ Address specialized facilities and infrastructure needs that strengthen connectivity required for cluster growth

4. GROW AND MAINTAIN A WORLD-CLASS TALENT BASE

Young, educated people are both an indicator of and a significant contributor to a region’s economic vitality, making a skilled labor force one of the key factors companies consider when locating to or expanding within a community.

In addition to being a business attractor, a talented workforce also drives innovation, entrepreneurship, and ultimately economic growth. Increased mobility among this population and their desire to live in regions with a variety of employment, recreation and cultural opportunities make it critically important for the Region to understand the factors that attract young talent and keep them connected to the community.

Continuing to integrate and align training and education pathways is essential to increase economic prosperity in the Region. Equally so, the Region must create mechanisms to attract new talent and retain existing talent.

The Region’s educational pipeline consists of a strong and diverse mix of institutions that provide a variety of opportunities to develop the skills and knowledge needed to succeed in the workforce. Yet, if those skills are not sufficiently matched to employment needs or if employers encounter difficulty in finding sufficiently skilled applicants to fill highly technical positions in a range of specialties, it puts the Region at a disadvantage and imposes a critical barrier to growth and success.

“The regions that have great jobs and high employment are the ones that work to strategically align education to advance their economic objectives. I believe the Sacramento Region can do that.”

—Brice Harris
Chancellor, California Community Colleges
LEED Convergence Event, December 2011

The Region offers a strong network of universities and colleges and a high level of collaboration among organizations focused on education and workforce development. Strengthening this collaboration and alignment between educators and workforce development program providers can create new opportunities and increase the efficacy of existing resources to attract and retain skilled talent.

Objective 1:

CREATE MECHANISMS TO ATTRACT NEW TALENT AND RETAIN EXISTING TALENT

Strategies:

- ◆ Establish connections between active young professionals groups throughout the Region and engage members as ambassadors in talent attraction and retention efforts
- ◆ Execute a talent attraction campaign targeting young professionals, experienced entrepreneurs, and high-demand occupations and skills
- ◆ Implement a talent retention strategy focusing on students and recent graduates of regional education and training programs
- ◆ Develop mechanisms to better connect new, existing and prospective students and residents to career opportunities and lifestyle assets in the Region
- ◆ Invest in the Region’s cultural infrastructure as a means to retain and attract talent

Objective 2:

ALIGN TRAINING AND EDUCATION PATHWAYS TO INCREASE ECONOMIC PROSPERITY FOR BUSINESSES AND WORKERS

Strategies:

- ◆ Mobilize the community to advance and support continued investment in education and related infrastructure
- ◆ Develop critical career pathways that align with core business clusters across all education and training levels
- ◆ Address critical gaps in workforce supply and demand across core business clusters and other large industry sectors

Young professionals choose location first

A study commissioned by CEOs for Cities in 2006 found that 64 percent of college-educated 25–34 year olds chose the city they wanted to live in before the job.

5. IMPROVE THE REGIONAL BUSINESS CLIMATE FOR ECONOMIC GROWTH

Business costs and regulatory environments play an integral role in economic development. Not only is the state's business-unfriendly reputation deterring new companies from considering California as a place for business, it often compels existing businesses to consider the benefits of moving to other states. In fact, the single largest impediment to business growth and job creation in California is the regulatory environment, according to a survey of nearly 100 C-level executives at the Vistage All-City 2012 Conference, Sacramento, CA.

Whether large or small, employers require a predictable, growth-oriented and business-friendly environment and access to assets that foster economic opportunity. If the Region is to unleash the entrepreneurial spirit and innovative culture that creates 21st-century jobs, business leaders must leverage their power—both locally and in partnership with regions across the state—to influence removal, reduction and improvement of local and state regulatory burdens that stand in the way of enterprise growth.

Recognizing the layers of complexity associated with regulatory issues, this goal establishes a starting point for addressing economic impediments that prevent growth for the Region's existing 70,000 businesses and within the Region's core business clusters. By focusing collective efforts on reducing locally controlled regulations, the Capital Region will position itself as the business-friendly alternative in the State of California. A focused regional approach to reducing costs to business also provides the foundation for other Next Economy efforts at sustained economic growth.

Regulatory obstacles are only part of the equation, however. To become more attractive to business investment and stimulate entrepreneurial and job growth, the Region must differentiate itself from other regions in California and the nation by expanding the range of and promoting access to the critical services needed for businesses to launch, expand and thrive.

Another important factor in stimulating economic vitality is identity of *place*—how people within and outside of a community perceive it. Research, both qualitative and quantitative, ranked the Capital Region's vague economic identity and lack of national awareness as a chief barrier to business growth, relocation and attraction of investment. Promoting global recognition of the Region's core business clusters, outstanding quality of life factors and large number of first-rate assets is central to improving the Region's economic health.

A range of economic development services for business attraction, creation, expansion, and retention is currently provided by a host of organizations in the Capital Region.

“If places are going to meet the economic challenges of the future, they will need to make the promotion of innovation a larger part of their economic development policy framework.”

*Information Technology & Innovation Foundation,
Innovation in Cities and Innovation by Cities*

Optimizing access to and delivery of these services is critically important to the Region's future, but this goal also calls for increasing the scope and range of existing business services. As well, a joint focus on establishing new or enhanced efforts and partnerships across the Region will improve efficiency and leverage resources.

Objective 1:

REMOVE ECONOMIC AND REGULATORY BARRIERS TO STIMULATE GROWTH

Strategies:

- ◆ Partner with the business community and other regions in the state to communicate with and influence state policymakers
- ◆ Coordinate the Region's business advocacy efforts to reduce local and regional regulatory barriers to improve the Region's business climate
- ◆ Build a proactive effort to educate elected officials and local government leaders about key business issues and industry needs
- ◆ Leverage existing regional advocacy programs and, where possible, other state associations' and prominent industry-specific lobbying efforts to influence a reduction of regulatory barriers at the state and federal levels
- ◆ Foster an effective system to respond to company-specific local-level regulatory issues
- ◆ Encourage streamlined and predictable permitting policies and procedures across all local jurisdictions in the Region
- ◆ Pursue local implementation of state and federal regulatory requirements that is uniform, streamlined and cost effective

Objective 2:

AMPLIFY THE REGION'S VISIBILITY AND REPUTATION AMONG KEY AUDIENCES

Strategies:

- ◆ Mobilize a set of interlocking campaigns, aligned with the Next Economy vision, that solidify the Region's reputation as the economic, cultural and recreational capital of the State of California
- ◆ Establish a media partner network committed to publishing content that celebrates local and regional achievements internally and externally
- ◆ Establish a mechanism for collecting, assembling, coordinating and disseminating key messages and celebratory content

Objective 3:

INTENSIFY ECONOMIC DEVELOPMENT ACTIVITIES THAT DRIVE GROWTH AND INVESTMENT

Strategies:

- ◆ Build a significant fund that can be used to directly invest in competitive new company locations or expansions that create high-value jobs
- ◆ Establish a formal, regionwide system to retain local companies and good-quality jobs
- ◆ Prioritize Next Economy strategies and identify strategic and coordinated funding sources for implementation of actions that offer anticipated high job and wealth creation outcomes
- ◆ Pursue opportunities with state agencies and departments that result in increased investment, procurement and/or private-sector job creation
- ◆ Educate the public and investors about the Region’s economic development activities, the value they offer and the job and wealth creation opportunities they present

Objective 4:

DEVELOP A NEXT ECONOMY GOVERNANCE STRUCTURE THAT ENSURES IMPLEMENTATION AND ACCOUNTABILITY

Strategies:

- ◆ Align strategic objectives of Capital Region non-profit organizations with Next Economy implementation strategies
- ◆ Obtain endorsement from all cities and counties in the Capital Region of Next Economy Goals and Unified Vision and coordinate Next Economy implementation strategies and objectives with public-agency partners
- ◆ Enact a formal agreement among principal organizations specifying roles and performance obligations toward Next Economy execution
- ◆ Track implementation progress, manage accountability, report regularly, celebrate successes and adjust strategies and actions as necessary for efficiency and maximum return on investment for economic development activities
- ◆ Examine merits associated with completion of a regionwide Comprehensive Economic Development Strategy (CEDS)

PART FIVE: IMPLEMENTATION PLAN

To identify competitive strengths and lead opportunities for greater economic growth across the six-county Capital Region, immense amounts of qualitative and quantitative data were gathered from Q4-2011 through Q1-2012 (CSER’s summary of findings is available at www.nexteconomycapitalregion.org/Research.html). This body of qualitative research was combined with a broad collection of community input, and those various data sets were applied to devise the principal focus areas for the Capital Region’s leadership to jointly pursue over the next five years. Strategies for each area focus collectively on the goals of business attraction and retention, entrepreneurship support, regulations, capital formation, exports and technology transfer.

Given the immensity of the task—to *propel the Region’s \$97 billion-a-year regional economy in a steady upward direction*—implementation must draw together the strength and assets of multi-sector private industry, academia and research, government, and nonprofit and community groups. The goal is to ensure that Next Economy’s vision, goals and strategies permeate throughout partnering agencies’ and organizations’ work plans and championed across all sectors of the Region’s leadership.

At the same time, caution has been taken to not prescribe activities or to impose actions on public agencies, non-profit organizations or private sector leaders. Rather, Next Economy is deliberately designed as an economic development “playbook” that regional partners will apply in ways that are consistent with their mission, capacities and constituent interests.

Consequently, the Implementation Plan that follows does not contain all activities conducted in the Region or all activities that could be pursued. It also does not list each organization that will affect implementation. Instead, it calls on a core set of “coordinating champions,” each of whom has committed to apply the resources, organizational capacity and expertise needed to achieve success.

The coordinating champions will use the action items identified in the Implementation Plan as a road map and will work with regional partners and local organizations to jointly execute activities that drive results. Regional stakeholders are invited to submit Partner Teaming Agreements that describe those actions, resources, partnerships and capacity they are willing to commit to accelerate job creation and new investment. Partner Teaming Agreements will become an integral part of the Implementation Plan.

The Implementation Plan is a living document to be updated and refined over the course of execution based on changing conditions, market demand, new opportunities or unforeseen challenges.

In addition, efforts will be expanded as new partners engage and as regional implementation advances. ● ● ●

1. FOSTER A STRONG INNOVATION ENVIRONMENT

Objective 1: **BOLSTER UNIVERSITY TECHNOLOGY TRANSFER AND COMMERCIALIZATION**

Coordinating Champion: **UC Davis**

Strategies:

1. Embed regional research, university technology transfer and entrepreneurship programs within the Region

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Create or expand university service units to support start-ups, at their earliest stages, that are emerging directly from university research		X			
b) Develop regular and consistent mechanisms to highlight emerging start-ups and discoveries		X			
c) Partner with private sector efforts to attract capital to the Region’s start-up companies in order to maximize the impact of technology transfer efforts		X			
d) Establish a regional “front door” access point to university technology transfer offices and formal pathways for moving new ideas from research to marketplace	Q4				
e) Enhance regular communication with and active participation of university technology transfer and commercialization faculty and staff with regional economic development organizations to promote economic growth			X		

2. Identify regional industry needs and align university research capacity for new discoveries or adapting emerging technologies

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Establish regular summits in which universities and the regional business community exchange information and develop relationships based on identifying areas of fit between regional industry needs and emerging university centers of research excellence				X	
b) Participate in existing regional industry and business cluster groups to establish relationships with business leaders and identify industry needs			X		
c) Benchmark outcomes of technology transfer programs with peer and model institutions and identify promotional strengths as well as opportunities for improvement		X			
d) Elevate technology transfer and commercialization as a core objective within regional universities and increase external visibility and internal accountability accordingly	Q4				

3. Develop strong relationships between regional research universities and small business, financing, and incubator and accelerator programs and services on a region-wide basis

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Define hand-off points between university resources and innovation and entrepreneurship resources for start-up companies emerging from campus research		X			
b) Ensure that key university faculty and staff are aware of the full range of regional programs in the innovation and entrepreneurship arena and understand how to access services	X				
c) Collaborate with innovation and entrepreneurship service providers to increase awareness of research discoveries and successful commercialization		X			

progress					
d) Evaluate outcomes of and satisfaction with services provided to spin-offs of university-generated research on a regular basis and actively push for program and service improvements			X		

4. Encourage linkages between researchers making discoveries and entrepreneurs and companies able to commercialize and deploy

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Inform and regularly update the regional business community about novel translational research initiatives and any significant changes in university technology transfer practices			X		
b) Expand awareness of university technology transfer marketing efforts by regularly including featured technologies in regional business communications			X		
c) Create regional connection pathways to individuals and the private sector for new company start-up or license opportunities				X	
d) Communicate university technology transfer and commercialization policies and procedures in a clear and concise manner to ensure that the private sector understands how and when to engage in the commercialization and deployment process		X			

5. Explore opportunities for developing university-industry research centers around regional research strengths and core business clusters

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Expand universities' corporate relations activities to actively include interface with leading companies in the Region's core business clusters, with a focus on facilitating interdisciplinary research projects with local industry partners where there is a fit			X		
b) Enhance existing or create new formal university research centers based on regional industry and company strengths as well as university research expertise				X	
c) Build support for development of physical research parks and innovation facilities that can house research centers or provide benefits to university and industry partners focused on core business clusters					X

Objective 2: **EXPAND ACCESS TO CAPITAL FOR HIGH-GROWTH COMPANIES AND SMALL AND MEDIUM ENTERPRISES**
 Coordinating Champion: **SARTA**

Strategies:

1. Establish a centralized access point for information about the sources of capital available across all stages of a company lifecycle

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Identify a regional organization to serve as the first point of contact for information about sources of debt and equity capital, eligibility criteria, qualified uses, and application processes	Q2				
b) Create and distribute a regularly updated resource guide for businesses aimed at providing basic information on sources of debt and equity capital in the Region		X			
c) Convene the Region's financiers on a regular basis	Q5				

	to ensure full sharing of information about sources of capital and changes in those sources					
d)	Coordinate posting and promotion of the resource guide on local and regional economic development websites throughout the Region		X			

2. Build new forms of debt and equity capital available to high-growth companies and small and medium enterprises

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Conduct research and outreach to define feasible models and effective sizes for a regionally focused equity fund and revolving loan fund as well as other proven funding structures	Q4				
b) Assemble early supporters of the equity fund to assist with fund development		X			
c) Identify potential investors for the equity fund, promote the fund, and secure commitments			X		
d) Assess and acquire sources for capitalizing the revolving loan fund including local, state and federal governments as well as financial institutions and foundations			X		
e) Select an entity to administer and promote the equity fund and revolving loan fund based on experience, cost and capacity			X		
f) Develop fund administration processes, award criteria and payment logistics			X		
g) Distribute funds, track outcomes and promote accomplishments				X	

3. Facilitate effective connections between funders and companies

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Regularly educate companies on sources of funding, introduce companies to funders, and showcase regional successes through forums or other appropriate venues				X	
b) Develop a list of target regional companies and contacts to proactively connect to appropriate funding sources				X	
c) Create a regional web portal for posting funding opportunities that meet specified criteria and encourage use of the portal by regional debt and equity funding sources				X	

4. Strengthen relationships with external funding sources interested in regional deal opportunities

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Research company investment deals originating from external sources to identify target outreach markets	Q3				
b) Expand existing and develop new relationships with specific investment funds and networks in the SF Bay Area and other identified target markets	Q4				
c) Promote regional company funding opportunities to investment funds and within networks	Q4				
d) Expand on regional venture capital road shows to showcase regional companies and broader opportunities within target audiences		X			

5. Leverage public-sector investment power to increase the level of regional investment

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Identify a local public-sector champion to lead investment opportunity effort and garner other local government support	Q2				
b) Assess local public-sector banking relationships and combined investment value	Q4				
c) Develop strategies to encourage public-sector sources of funding to invest in regional companies via a range of existing private, for-profit vehicles		X			
d) Encourage local governments to utilize similar banks to increase investment value		X			
e) Initiate outreach to banks emphasizing combined investment value to leverage for additional community investment			X		

Objective 3: **BUILD A ROBUST NETWORK OF BUSINESS INCUBATOR AND ACCELERATOR SERVICES**

Coordinating Champion: **SARTA**

Strategies:

1. Link existing and emerging incubator and accelerator programs into a regional network

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Convene all major current practitioners and providers of business acceleration or incubation services to jointly identify all current scope of work	Q1				
b) Evaluate options for network structure considering factors such as geography, core business cluster opportunities, existing capacity and desired outcomes		X			
c) Identify the most effective method for managing the network and select an appropriate coordinating organization to build effective linkages		X			
d) Conduct outreach to existing and emerging incubator and accelerator programs to secure network participation commitments		X			

2. Expand the scope and capacity of incubator and accelerator services based on potential market demand

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Define the need for new services and increased capacity within the incubator and accelerator network based on existing and potential market demand as well as the ability to generate desired outcomes		X			
b) Evaluate feasible options for new or expanded programs including resource requirements, business structure and alignment with network goals			X		
c) Facilitate the development, expansion or recruitment of incubator and accelerator programs that can address identified market demand			X		
d) Create formal linkages between new or expanded programs to existing programs and services within the incubator and accelerator network			X		
e) Develop consistent and shared metrics to measure outcomes and track effectiveness, gather and publish results, and work with providers to adjust services as necessary				X	

3. Market the existence and outcomes of the incubator and accelerator network internally and externally

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Work with practitioners to develop consistent and shared communications and messaging about the breadth of incubator and accelerator services in the Region		X			
b) Create print and electronic marketing materials describing the incubator and accelerator network services and highlighting outcomes		X			
c) Establish internal and external media relationships focused on emerging companies and regularly share network successes		X			
d) Identify target audiences including companies, business network, and economic development entities within and outside the Region and disseminate information on the network on a regular basis			X		

4. Connect emerging companies in the Region to appropriate components of the incubator and accelerator network

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Engage business networks, entrepreneurship programs, and educational institutions to identify emerging companies that could benefit from incubator and accelerator services			X		
b) Identify company needs and refer emerging companies to members of the incubator and accelerator network as appropriate			X		
c) Maintain contact with referred companies to continue assistance process as needed and gather feedback on network programs			X		
d) Create a shared outreach and communications plan to proactively reach emerging companies and inform them about existing services				X	

5. Build a targeted retention effort focused on viable companies that have received incubator and accelerator services

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Work with service providers to identify a set of criteria to identify targeted companies coming out of incubator and accelerator programs		X			
b) Coordinate with the Metro Chamber and local economic development representatives to ensure targeted companies are integrated into proactive business retention efforts		X			
c) Track targeted company performance and highlight successes as part of the incubator and accelerator marketing efforts			X		

2. AMPLIFY THE REGION’S GLOBAL MARKET TRANSACTIONS

Objective 1: GROW INTERNATIONAL TRADE AND EXPORT ACTIVITY

Coordinating Champion: Northern California World Trade Center (NCWTC)

Strategies:

1. Build a comprehensive regional service provider network that offers effective business assistance, financing and targeted support services for international trade

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Assess the service provider network for international trade taking availability, capacity, outcomes, and best practices	Q3				
b) Identify opportunities for new providers to fill critical gaps in the network and increase capacity or outcomes among existing providers		X			
c) Obtain commitments from core service providers to ensure quality and effectiveness of network		X			
d) Create and distribute a resource guide for regional companies interested in exploring international trade		X			

2. Market the availability and outcomes of the service provider network internally and externally

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Evaluate companies and industries in the Region to identify target audiences for new or increased international trade activity		X			
b) Create marketing materials demonstrating the benefits of international trade and availability of service providers and distribute to targeted companies and industries through direct contact, events and business networks			X		
c) Publicize regional international trade successes among internal and external audiences			X		

3. Develop an ongoing series of foreign trade missions exclusively designed for local company export promotion

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Conduct research on local companies and foreign markets to identify key targets for export opportunities	Q4				
b) Explore opportunities to integrate into state and national networks for foreign trade missions to increase visibility and minimize logistics and costs	Q4				
c) Work with Sacramento Asian Chamber of Commerce (SACC) and other relevant groups to plan an expanded series of international trade missions within targeted foreign markets to expose regional companies to the procedures for conducting business and develop business relationships		X			
d) Coordinate trade missions and recruit targeted companies, partners and service providers to participate			X		
e) Track results of international trade missions and adjust programs as necessary, market successes, and develop continued relationships within the most successful markets			X		

4. Form strategic relationships with international business networks, existing foreign companies and foreign government agencies to identify and support international trade opportunities

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Build relationships with state and national government trade resources for technical assistance in supporting regional companies and identifying market opportunities	Q4				
b) Identify major foreign country trade offices and ethnic chambers of commerce operating in the state and create relationships to aid in international trade promotion		X			
c) Evaluate foreign government agencies in target markets and develop relationships with those where resources can be leveraged for foreign trade missions or specific company needs		X			
d) Leverage existing foreign company relationships and business networks to establish connections to peer companies and business resources in foreign countries			X		

5. Ensure the Region’s transportation infrastructure has the capacity to increase global goods movement and passenger travel

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Invest in modernization and expansion of flights at Sacramento International Airport to accommodate increased international travel					X
b) Build on SACOG goods movement strategies and assessments of other modes of transportation to target funding for infrastructure investment priorities					X
c) Engage the Port of West Sacramento to identify opportunities for utilizing and enhancing cargo goods movement		X			

Objective 2: **INCREASE THE LEVEL OF FOREIGN DIRECT INVESTMENT**

Coordinating Champion: **SACTO**

Strategies:

1. Enhance coordinated marketing efforts focused on foreign direct investment

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Work with NCWTC, ethnic chambers, local and state economic development entities, and other organizations conducting international marketing to coordinate messaging, target audiences, and resources	Q4				
b) Implement geography-specific marketing and social media strategies to create enhanced connections with international audiences		X			
c) Hire a public relations firm specializing in marketing places and foreign markets to increase awareness of the Region among target audiences		X			
d) Track results of place marketing and adjust or renew efforts as necessary		X			

2. Create a diverse and effective group of lead-generation resources for priority foreign direct investment targets

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Build a research portfolio focused on foreign direct investment, international economy, goods movement, and multinational company trends to regularly hone geographic and industry targets	Q4				
b) Engage a qualified lead-generation consultant to provide targeted leads for industry trade shows and direct contact	Q4				
c) Work with existing international companies and regional business networks to identify foreign prospects and create first line of communication		X			

3. Expand the number and frequency of foreign trade trips targeting specific companies, industry trade shows and business networks

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Attend key domestic and international trade shows that align with regional industry strengths, core business clusters and foreign direct investment targets		X			
b) Become involved in business networks focused on foreign direct investment targets and attend domestic and international meetings		X			
c) Expand trade show and business network trips to include foreign company prospect meetings as appropriate		X			

4. Develop a strategic network of service providers and regional leaders to assist with outreach efforts and foreign company prospects

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Identify critical types of service providers and regional representatives for foreign company interactions and build commitments to support prospect activities	Q3				
b) Recruit service providers to fill gaps in the network and create a comprehensive resource guide for foreign companies		X			
c) Engage regional leaders for strategic interactions with foreign company prospects on an as-needed basis	Q4				

5. Market investment opportunities within the Region to potential foreign investors

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Identify potential opportunities for foreign investors that meet immigration and other regulatory requirements	Q4				
b) Explore opportunities to partner with EB-5 regional centers or create a new regional center to actively market regional investment opportunities and coordinate investment procedures	Q4				
c) Take part in marketing trips to present regional investment opportunities to interested investors		X			
d) Work with regional economic development partners to identify other effective ways to market investment opportunities		X			

3. DIVERSIFY THE ECONOMY THROUGH GROWTH AND SUPPORT OF CORE BUSINESS CLUSTERS

Objective 1: **FORM FUNCTIONAL BUSINESS NETWORKS AND ESTABLISH SPECIFIC CLUSTER INITIATIVES**
 Coordinating Champion: *Valley Vision*

Strategies:

1. Recruit members from across the entire value chain to form cluster alliance groups

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Engage representatives from existing Metro Chamber and SARTA committees and programs focused on core business clusters	Q1				
b) Identify existing companies in core business clusters, cluster-related entities, university programs and related public and private sector service providers	Q2				
c) Reach out to potential alliance members and share group expectations, objectives and value	Q2				
d) Secure members and announce launch of enhanced or new alliance groups	Q2				

2. Perform ongoing cluster needs assessments and facilitate effective solutions

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Schedule regular alliance group meetings to allow members to share opportunities and challenges for cluster growth in the Region	Q2				
b) Connect alliance groups to existing organizational committee structures, and/or establish new committees within key regional organizations, in order to serve and advance industry-specific needs of core business clusters		X			
c) Identify common cluster needs, refer to appropriate regional organization for assistance in addressing, and follow up to ensure effective action		X			
d) Publicize cluster successes and resolution of common issues through organizations with internal and external marketing networks		X			
e) Evaluate need to connect with other efforts that could be leveraged to enhance cluster outcomes	Q4				

3. Develop annual cluster alliance group priorities and action plans that focus on increased jobs and investment, drive implementation of needed growth activities, and monitor progress against stated objectives

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Work with alliance group members to identify strategies that will facilitate increased jobs and investment in regional business clusters	Q4				
b) Develop annual action plans focused on implementing top priority strategies	Q4				
c) Facilitate implementation of existing action plans associated with the Agriculture and Food Cluster Strategy and Clean Energy Sector Strategy	Q1				
d) Coordinate with appropriate regional organizations to assist with action plan implementation for all clusters		X			
e) Monitor implementation progress and outcomes and adjust strategies as appropriate		X			

4. Maintain cluster-specific resource guides listing relevant regional programs, services and providers

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Research and create resource guides for cluster companies to access programs, services and providers and distribute at alliance group meetings and through other venues focused on the target audience	Q4				
b) Update resource guides as necessary and redistribute		X			

Objective 2: **CREATE AND ALIGN TARGETED PROGRAMS AND SERVICES TO SUPPORT CLUSTERS**

See strategy-level coordinating champions

Strategies:

1. Develop marketing materials to build internal and external cluster visibility

Coordinating Champion: **SACTO**

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Conduct research to assess cluster characteristics and competitive advantages	Q3				
b) Develop cluster-specific marketing materials to raise internal awareness and promote advantages to external audiences	Q4				
c) Create a marketing campaign using messaging and content from materials targeting related businesses, industry conventions, media and events within and outside the Region		X			
d) Monitor outcomes of marketing efforts and adjust materials and strategies as necessary		X			

2. Align regional business attraction and retention programs with cluster opportunities

Coordinating Champions: **SACTO** and **Metro Chamber**

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Conduct research, gather insight from existing employers, and engage consultants to identify business attraction prospects within each cluster	Q4				
b) Analyze business data to identify business retention and expansion targets for the clusters including major employers, headquarters operations, critical suppliers and emerging companies		X			
c) Work with local governments and real estate developers to evaluate key sites for higher education institution campuses and develop strategies to attract new or expanding institutions		X			
d) Build a business retention response team and conduct proactive target company site visits	Q4				

3. Build targeted innovation and entrepreneurship resources for cluster activities

Coordinating Champion: **SARTA**

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Ensure that business accelerator and incubator programs are able to address cluster-specific needs		X			
b) Encourage targeting of regional equity investments for core business clusters		X			
c) Identify cluster specialized mentoring, financing, and technical assistance expertise and tie into regional service provider networks			X		

4. Explore opportunities to create formal public-private partnerships to foster and grow cluster opportunities
Coordinating Champion: Metro Chamber

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Evaluate momentum in cluster performance and alliance group activities to determine need for additional organizational capacity focused on cluster growth and support			X		
b) Partner with educational institutions, local governments, financial institutions, and the broader business community to develop solutions that address specialized facility and capital needs			X		
c) Garner local government commitment to supporting cluster growth through specific permitting, procurement and other business-oriented programs		X			

5. Facilitate new domestic business-to-business sales and foreign exports to increase economic base activities within core clusters
Coordinating Champions: Metro Chamber and NCWTC

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Assist local companies in identifying key buyers of cluster goods and services in domestic and foreign markets		X			
b) Coordinate group cluster company participation and trips for relevant domestic and international trade shows			X		
c) Develop local cluster showcase events to facilitate increased awareness of local companies and enhance business sales relationships		X			
d) Support efforts to help companies identify and respond to government procurement opportunities		X			
e) Connect cluster companies to the regional service provider network for international trade		X			

6. Encourage the creation of local and regional incentives that support growth of primary jobs across core clusters and other industries
Coordinating Champion: Metro Chamber

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Educate local government elected officials and economic development staff on the characteristics, performance and needs of companies in the core business clusters	Q4				
b) Advocate for targeted cluster incentives to encourage company investment and close relevant cost gaps between competitive locations		X			
c) Encourage inclusion of incentive provisions for company performance and related "clawback" policies		X			

Objective 3: **BUILD STRONG ECONOMIC FOUNDATIONS FOR SUSTAINED CLUSTER GROWTH**

See strategy-level coordinating champions

Strategies:

1. Align education and workforce development efforts to address current and anticipated gaps in labor supply and demand within the clusters

Coordinating Champion: **NextEd**

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Conduct research on workforce supply and demand dynamics in each of the core business clusters	Q3				
b) Engage cluster companies to validate workforce research and provide additional insight on skill and degree requirements	Q3				
c) Share research findings with education and training providers in the Region and encourage/work with providers to develop new or enhanced offerings around cluster needs	Q4				
d) Work with Workforce Investment Boards, job posting services, and other education and workforce development entities to align available resources with cluster needs and communicate opportunities to job seekers		X			
e) Assist education and training providers in marketing new or enhanced programs to potential and current students		X			

2. Advocate for public policy at the state and local levels that supports conditions necessary for cluster growth

Coordinating Champion: **Metro Chamber**

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Distill common regulatory issues from cluster alliance groups and actively review proposed regulations from the perspective of cluster needs	Q4				
b) Communicate the value of the core business clusters, identified regulatory issues, and basic cluster needs with state and local policymakers		X			
c) Partner with key alliance group members to advocate for regulatory changes and new supportive public policies		X			

3. Build a robust regional network of suppliers and service providers for effective cluster operations

Coordinating Champions: **SACTO and Metro Chamber**

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Facilitate relationships between applicable companies not currently providing goods and services to local cluster companies		X			
b) Analyze key domestic and international imports from trade patterns, goods movement and business outreach to identify opportunities for import substitution through increasing local supplier relationships	Q3				
c) Target business retention efforts on critical suppliers and service providers to the clusters		X			
d) Focus business attraction efforts on filling gaps in supplier and service provider networks based on alliance group feedback		X			
e) Partner with Sacramento Convention & Visitors Bureau to recruit industry trade shows to the Region around clusters and related growth industries		X			

4. Address specialized facilities and infrastructure needs that strengthen connectivity required for cluster growth
Coordinating Champions: Metro Chamber and SACTO

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Gather feedback from alliance groups and other interactions with cluster companies to identify critical facility and infrastructure needs		X			
b) Connect with SACOG, state and local government departments, and developers to generate development plans aimed at addressing facility and infrastructure needs		X			
c) Pursue funding opportunities aligned with development plans			X		
d) Coordinate with Valley Vision and the Connect Capital Area Broadband Consortium (CCABC) to execute work plans and enhance high-speed internet access throughout the Region	Q1				
e) Create pilot projects that focus on “greening” large industries in the Region		X			
f) Support creation of feasible food processing and distribution hubs in the Region		X			

4. GROW AND MAINTAIN A WORLD-CLASS TALENT BASE

Objective 1: **CREATE MECHANISMS TO ATTRACT NEW TALENT AND RETAIN EXISTING TALENT**

See strategy-level coordinating champions

Strategies:

1. Establish connections between active young professionals groups throughout the Region and engage members as ambassadors in talent attraction and retention efforts

Coordinating Champion: Metro Chamber

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Conduct formal outreach to young professionals groups throughout the Region to educate them on regional talent attraction and marketing efforts and officially recruit as regional ambassadors for young talent	Q1				
b) Gather feedback through young professionals groups to identify key locational attributes and desirable characteristics and build into talent-focused marketing efforts	Q3				
c) Build social media portals and enlist young professionals to contribute to blogs, testimonials, photo images and videos highlighting the identified key locational attributes and desirable characteristics	Q4				
d) Connect young professionals groups to each other and engage additional partners including the public sector, higher education and the business community	Q4				
e) Develop an annual young professionals summit to amplify networks and engage in regional and statewide issues	X				

2. Execute a talent-attraction campaign targeting young professionals, experienced entrepreneurs and high-demand occupations and skills

Coordinating Champions: SACTO and Metro Chamber

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Conduct research and business outreach to identify high-demand occupations and skills and target audiences for talent attraction	Q3				
b) Engage an experienced consultant to build a talent attraction marketing plan inclusive of targets, messaging, materials, delivery methods and performance measures	Q3				
c) Coordinate with organizations conducting external marketing to target audiences and workforce recruitment to unify talent-attraction campaign messaging and content	Q4				
d) Identify a regional organization to act as the first point of contact for inquiries resulting from the talent attraction marketing campaign with knowledge of resources for housing, employment, entertainment and community services	Q3				
e) Work with the selected consultant to implement the talent attraction marketing plan, monitor outcomes of the campaign, and adjust efforts as necessary		X			

3. Implement a talent retention strategy focusing on students and recent graduates of regional education and training programs

Coordinating Champions: Metro Chamber and NextEd

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Research feasibility of an online job posting service to develop a comprehensive listing of available jobs and internships and work-based learning opportunities in the Region and conduct business outreach to encourage use of the service	Q4				
b) Work with local businesses to create additional internship opportunities in targeted occupational fields and business clusters and explore unique models to fund new internships	Q4				
c) Build support for nontraditional work environments by exploring opportunities for shared space, facilitating telecommuting options, and encouraging home-based and proprietor businesses					X
d) Evaluate case studies for best practices and develop a talent-retention marketing plan inclusive of targets, messaging, materials, delivery methods and performance measures	Q4				
e) Engage regional partners to help implement the talent-retention campaign including higher education institutions, training providers, workforce development entities, corporate recruiters and professional groups		X			
f) Implement the talent retention marketing plan, monitor outcomes of the campaign, and adjust efforts as necessary			X		

4. Develop mechanisms to better connect new, existing and prospective students to career opportunities and lifestyle assets in the Region

Coordinating Champions: UC Davis and Sacramento State

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Build and distribute a resource guide for graduating students and new residents providing information on housing, employment, entertainment and community services		X			
b) Create a website landing page focused on talent retention that includes the job posting service, information on the regional economy and local business, messaging and content from the talent attraction and retention campaigns, and a listing of professional events and meet-up groups		X			
c) Work with community colleges, private higher education institutions and other regional partners to actively educate students about regional amenities, assets and resources		X			
d) Encourage effective physical and virtual connections between higher education institutions and regional assets, amenities, resources and the business community to allow better access for students		X			

5. Invest in the Region’s cultural infrastructure as a means to retain and attract talent

Coordinating Champion: Metro Chamber

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Form a coalition of regional leadership to champion enhancement of and investment in cultural infrastructure	Q4				
b) Support regional outreach and market research efforts to garner endorsement for the effort, validate the list of civic amenities projects, and develop a greater understanding of support for funding specific projects		X	X		
c) Aid the efforts of proponent groups developing Civic Amenities Projects through lobbying, outreach and fundraising			X	X	X
d) Utilize coalition to develop a prioritized list of Civic Amenities that are shown through sound market research to have support of the region’s voters.			X		
e) Create a plan to advocate for and secure funding to develop prioritized civic amenities projects through public and private funding mechanisms.			X		
f) Build a public information and outreach campaign to create visibility for prioritized projects				X	
g) Create a comprehensive Master Plan approach in the Civic Amenities Core District to guide siting of new Civic Amenities		Q1-Q2			

Objective 2: ALIGN TRAINING AND EDUCATION PATHWAYS TO INCREASE ECONOMIC PROSPERITY FOR BUSINESSES AND WORKERS

See strategy-level coordinating champions

Strategies:

- Mobilize the community to advance and support continued investment in education and related infrastructure
Coordinating Champions: Metro Chamber and NextEd

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Assemble an impactful set of information to demonstrate the value of public and private higher education institutions in terms of economic, social and workforce development contributions	Q2				
b) Inform regional business leaders on the value of public higher education institutions and engage as supporters for advocacy efforts	Q3				
c) Execute an awareness and advocacy campaign for investment in and support of public and private higher education institutions targeting state and federal policymakers	Q4				
d) Explore opportunities for the creation of a pooled scholarship fund to support additional Capital Region students with access to regional higher education institutions in preparation for critical careers			X		

- Develop critical career pathways that align with core business clusters across all education and training levels
Coordinating Champion: NextEd

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Conduct research to identify critical career pathways in the core business clusters	Q4				
b) Identify broader education and training opportunities to build risk-taking and entrepreneurship as well as leadership skills	Q4				
c) Disseminate career pathways and skills information to education and training providers and work with providers to support existing and implement new programs and curricula		X			
d) Partner with providers to market new programs and curricula and educate students on career opportunities in core business clusters		X			
e) Explore need for specialized skills in digital media and other fields			X		

- Address critical gaps in workforce supply and demand across core business clusters and other large industry sectors
Coordinating Champion: NextEd

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Conduct a workforce supply and demand analysis addressing broad economic trends, workforce diversity, and specific requirements of core business clusters, as well as existing needs for experienced executives, serial entrepreneurs and engineers	Q4				
b) Reach out to businesses and education and training providers in the Region to validate workforce supply and demand analysis findings and gather additional insight on emerging occupation and skill requirements	Q4				
c) Disseminate workforce supply and demand gaps and skills information to education and training		X			

providers and work with providers to enhance existing offerings and implement new programs and curricula					
d) Engage Workforce Investment Boards, job posting services and other education and workforce development entities to target resources and communicate regional workforce supply and demand dynamics		X			

5. IMPROVE THE REGIONAL BUSINESS CLIMATE FOR ECONOMIC GROWTH

Objective 1: REMOVE ECONOMIC AND REGULATORY BARRIERS TO STIMULATE GROWTH

Coordinating Champion: Metro Chamber

Strategies:

- Partner with the business community and other regions in the state to communicate with and influence state policymakers

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Utilize Metro Chamber Cap-to-Cap and State Legislative Summit activities to proactively pursue Next Economy economic development and regulatory priorities	Q1				
b) Create and publicize a scorecard for state elected officials with grading based on “business friendly” decisions		X			
c) Continue participation in R.E.A.L. Coalition to build solutions to critical statewide issues	Q1				

- Coordinate the Region’s business advocacy efforts to reduce local and regional regulatory barriers to improve the Region’s business climate

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Establish the Capital Region Business Coalition (CapRBC) and leverage its influence to improve the regional regulatory environment	Q2				
b) Formulate and execute a CapRBC strategic policy agenda	Q3				
c) Create and publicize a scorecard for local jurisdictions with grading based on “business friendly” policies		X			
d) Prioritize the top 10 local regulatory impediments and share with local jurisdictions	Q2				
e) Collaboratively formulate recommendations to address top regulatory impediments	Q4				
f) Develop an outreach campaign to business leaders and media to highlight business needs, costs of unnecessary regulations, efforts to address issues, and local jurisdiction responsiveness		X			
g) Build capacity for a clearinghouse on business-friendly regulatory practices and develop an information exchange to keep businesses and other stakeholders informed on changing regulations			X		

3. Build a proactive effort to educate and inform elected officials and local government leaders about key business issues and industry needs

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Organize a regional Mayors and Board Chairs caucus to create regional relationships, share common business and industry issues and identify collaborative solutions		X			
b) Utilize Cap-to-Cap, State Legislative Summit, and CapRBC to inform and engage elected officials, managers and executives, and special districts	Q1				
c) Recruit champions with industry expertise across core business clusters to provide feedback on issues, highlight voluntary industry self-regulation, advise on alternative regulatory approaches and report on industry needs	Q4				

4. Leverage existing regional advocacy programs and, where possible, other state associations' and prominent industry-specific lobbying efforts to influence a reduction of regulatory barriers at the state and federal levels

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Engage labor, environmental and other interest groups to build support for advocacy efforts	Q2				
b) Leverage CapRBC and R.E.A.L. Coalition to build linkages to existing advocacy efforts		X			
c) Develop closer ties with California Chamber of Commerce, U.S. Chamber of Commerce, CMTA, CALED, and NFIB (national and state) and collaborate on regulatory efforts	Q2				
d) Complete a comparative analysis of model approaches and programs and identify ways to adopt best practices through partnerships and organizational efficiency		X			
e) Increase the frequency and scope of proactive regional lobbying efforts at the state and federal levels		X			

5. Foster an effective system to respond to company-specific local-level regulatory issues

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Work with local governments to ensure economic development readiness and develop an effective public-private response system to address company needs and/or retention	Q4				
b) Implement Metro Pulse strategic plan and ensure an effective feedback loop is in place to identify critical regulatory issues arising from business outreach	Q1				
c) Utilize business retention findings to formulate and implement a regulatory strategy	Q2				
d) Establish strike teams to react to company-specific issues and act as champions of related regulatory reform efforts	Q3				
e) Expand business ombudsman capacity through new and existing programs and provide technical and financial resources to help firms with effective regulatory compliance		X			

6. Encourage streamlined and predictable permitting policies and procedures across all local jurisdictions in the Region

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Conduct an audit of jurisdictional permitting procedures and build an updated online clearinghouse of jurisdictional permits and requirements			X		
b) Form a technical public-private task force to assess and institute a common business-friendly permitting system and explore e-permitting platforms where appropriate		X			
c) Promote the use of structured cost-benefit analysis in evaluating existing and proposed policies and provide training to regulatory personnel on how to measure costs and benefits as necessary		X			
d) Help local governments develop more effective, lower-cost policy instruments and assess opportunities for variance mechanisms			X		

7. Pursue local implementation of state and federal regulatory requirements that is uniform, streamlined and cost effective

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Work through CapRBC to create recommendations for implementation of state and federal regulatory requirements		X			
b) Identify top five issues related to local implementation of state and federal requirements	Q2				
c) Develop a local jurisdiction and special districts working group to devise solutions to top five implementation issues	Q4				
d) Promote a look-back mechanism to review implementation of requirements and identify opportunities to streamline, reduce burdens, align with regulatory purpose, and increase efficiencies			X		

Objective 2: **AMPLIFY THE REGION’S VISIBILITY AND REPUTATION AMONG KEY AUDIENCES**

Coordinating Champions: SACTO and Metro Chamber

Strategies:

- Mobilize a set of interlocking campaigns, aligned with the Next Economy vision, that solidify the Region’s reputation as the economic, cultural and recreational capital of the State of California

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Assemble a regional brand task force comprised of communications and community leaders representing each of the six counties	Q3				
b) Assess regional attributes and formulate a campaign based on distinctive characteristics	Q4				
c) Establish a marketing plan including a message platform, creative elements, defined internal and external audiences and effective communications channels		X			
d) Formulate an execution plan that utilizes new and traditional media outlets		X			
e) Produce a series of high-profile Regional Forums around topic-specific needs or business clusters to generate increasing awareness, foster continued momentum and celebrate successes		X			
f) Identify publicity partners and secure their support for promoting campaign messages	Q4				
g) Coordinate marketing effort with regional economic development organizations and other stakeholder organizations		X			

h) Produce and deploy appropriate marketing materials, including web-based and multimedia, to local stakeholders for use in promoting the Capital Region's assets		X			
i) Build partnerships with other economic development entities in the state to collaboratively develop and fund a communications campaign focused on improving the image of California as a place to do business	Q2				

2. Establish a media partner network committed to publishing content that celebrates local and regional achievements internally and externally

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Identify key media partners and reporting/editorial points of contact	Q2				
b) Educate local news outlets and key reporter/editorial staff on regional brand characteristics and key message points	Q3				
c) Enlist support from local media and publicity partners who commit to campaign promotion	Q3				
d) Negotiate agreement with leading local news outlets to whenever possible publicize positive outcomes and achievements	Q3				

3. Establish a mechanism for collecting, assembling, coordinating and disseminating key messages and celebratory content

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Engage a public relations consultant with place marketing expertise to coordinate external media relationships and enhance regional visibility internally and externally		X			
b) Disseminate consistent messaging to stakeholders on activities, regional competitiveness and business climate					
c) issues		X			
d) Monitor awareness and perceptions among key internal and external audiences and adjust public relations efforts as necessary		X			

Objective 3: INTENSIFY ECONOMIC DEVELOPMENT ACTIVITIES THAT DRIVE GROWTH AND INVESTMENT
Strategy-level coordinating champions

Strategies:

1. Build a significant fund that can be used to directly invest in competitive new company locations or expansions that create high-value jobs

Coordinating Champions: Metro Chamber and SACTO

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Research case studies of existing funds at the state and regional levels to weigh structure, sources and outcomes	Q3				
b) Explore feasible fund options and related action plans inclusive of structure, investment criteria, performance policies and sources	Q4				
c) Build a core set of public and private partners to execute action plans and establish responsible entity and related policies		X			
d) Integrate information on the fund into internal and external marketing efforts			X		
e) Monitor outcomes, promote success and adjust fund structure as necessary			X		

2. Establish a formal, regionwide system to retain local companies and high-quality jobs
Coordinating Champion: Metro Chamber

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Develop new Metro Pulse program financing model to build internal capacity and full regional scope	Q1				
b) Analyze business data to identify outreach targets including major regional employers, national and international headquarters operations, core business cluster companies and "gazelle" companies	Q1				
c) Work with service providers, local jurisdictions and regional economic development organizations to build a business response team and implement agreed-upon company follow-up procedures	Q2				
d) Develop an aggressive outreach schedule and conduct proactive target company site visits to effectively gauge company needs	Q2				
e) Monitor response to individual company needs to ensure efficient and effective follow-through among service providers	Q3				
f) Facilitate communication of common regulatory issues to local government through public policy programs	Q2				
g) Track program outcomes, publicize successes and adjust services as necessary	Q4				

3. Prioritize Next Economy strategies and identify strategic and coordinated funding sources for implementation of actions that offer high anticipated job and wealth creation outcomes
Coordinating Champion: Next Economy Oversight Group

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Identify Next Economy strategies and actions that require increased organizational capacity or entirely new programs and services and work with champions on estimating resource requirements	Q1				
b) Prioritize strategies and actions using agreed-upon criteria based primarily on potential job and wealth creation outcomes	Q2				
c) Assemble a team with grant writing and marketing skills to pursue funding opportunities aligned with priorities	Q2				
d) Assess priorities that can be grouped into umbrella funding requests through foundations, financial institutions, government programs or other opportunities	Q2				

4. Pursue opportunities with state agencies and departments that result in increased investment, procurement and/or private-sector job creation
Coordinating Champion: Metro Chamber

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Conduct an evaluation of funding and procurement opportunities within state agencies and departments that touch core business clusters or other key regional industries	Q4				
b) Collaborate with representatives from state agencies and departments to gather insight into existing and future opportunities and advocate for local businesses	Q4				
c) Inform local businesses of applicable opportunities and connect with representatives from state agencies and departments		X			
d) Encourage local business teaming where appropriate to enhance competitiveness in securing projects or funding		X			

5. Educate the public and investors about the Region’s economic development activities, the value they offer, and the job and wealth creation opportunities they present
Coordinating Champions: SACTO and Metro Chamber

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Collect annual outcomes from primary regional economic development organizations and assemble into an informational document	Q3				
b) Create a brief overview of the primary components of regional economic development emphasizing the value in supporting a vibrant economy and facilitating job growth and wealth creation	Q1				
c) Disseminate combined outcomes document to investors, public-sector partners and other stakeholders	Q3				
d) Conduct annual meetings with elected officials throughout the Region to educate them on the value of economic development and share combined outcomes of regional organizations	Q4				
e) Work with local jurisdictions to create an economic development code of ethics that sets ground rules for cooperation and existing company engagement		X			

Objective 4: DEVELOP A NEXT ECONOMY GOVERNANCE STRUCTURE THAT ENSURES IMPLEMENTATION AND ACCOUNTABILITY

Coordinating Champion: Next Economy Oversight Group

Strategies:

1. Align strategic objectives of Capital Region non-profit organizations with a goal of collaborating on Next Economy implementation strategies

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Educate organization leadership and other coordinating champions about strategy and action prioritization for implementation to ensure that resources are directed toward items with the greatest potential outcomes	Q1				
b) Work with organizations to develop messaging around “playbook” concept for purposes of communicating with stakeholders and the media about Next Economy implementation strategies	Q1				
c) Conduct regular outreach with organization leadership and boards of directors to maintain	Q1				

focus on Next Economy objectives throughout the implementation period					
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- Obtain endorsement from all cities and counties in the Capital Region of Next Economy Goals and Unified Vision and coordinate Next Economy implementation strategies and objectives with public-agency partners

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Draft a standard resolution to utilize for endorsement from city councils and boards of supervisors	Q1				
b) Conduct outreach with elected officials to brief them on Next Economy objectives and gain support for the resolution prior to endorsement meetings	Q1				
c) Engage local jurisdiction management and economic development staff to coordinate inclusion of key Next Economy strategies in strategic plans and economic development initiatives	Q1				

- Enact a formal agreement among principal organizations specifying roles and performance obligations toward Next Economy execution

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Draft a common agreement for regional organizations to adopt including endorsement of Prosperity Plan principles, coordinating roles, and performance objectives	Q1				
b) Identify appropriate organizations to adopt the agreement based on mission, regional scope and technical capacity	Q1				
c) Conduct outreach with leadership and boards of directors of principal regional organizations to garner support of Next Economy and ensure adoption of agreement	Q1				

- Track implementation progress, manage accountability, report regularly, celebrate successes and adjust strategies and actions as necessary for efficiency and maximum return on investment for economic development activities

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Incorporate a progress tracker on the Next Economy website and coordinate with responsible parties monthly to report accomplishments and discuss progress toward goals	Q2				
b) Generate a quarterly newsletter distributed to stakeholders and media highlighting accomplishments of responsible parties and related Next Economy efforts	Q2				
c) Develop and distribute an annual Next Economy report focusing on recounting progress on strategies and an update on performance measures	Q4				
d) Evaluate appropriate public forums or events where best to convey Next Economy accomplishments and next steps	Q2				
e) Present annual report highlights at responsible parties' board meetings as well as through SACOG groups	Q4				
f) Participate in the CA Economic Summit and work with leaders to move regionally supported action plans forward	Q1				
g) Produce a Regional Forum that identifies regional barriers to business and economic growth and work with state networks on progress and to address needs at state level	Q4				

5. Evaluate organizational alignment to achieve efficiency and maximum return on investment for economic development activities

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Assess economic development programs and services alongside organizational expertise utilizing research conducted through Next Economy as well as additional regional organization outreach	Q1				
b) Review organizational priorities reflected in strategic plans as well as ability to integrate Next Economy strategies and actions	Q1				
c) Convene a planning meeting including core regional economic development organizations and other relevant stakeholders to discuss organizational alignment in the context of Next Economy	Q2				
d) Ensure follow-through on alignment items identified in the planning meeting	Q3				

6. Examine merits associated with completion of a regionwide Comprehensive Economic Development Strategy (CEDS)

Actions	Year 1	Year 2	Year 3	Year 4	Year 5
a) Communicate with EDA to gain a better understanding of CEDS requirements, alignment with future funding opportunities, and availability of planning grants for report development	Q1				
b) Work with CSER to leverage Next Economy materials to create CEDS report, submit to EDA and make necessary adjustment for approval	Q4				
c) Inform local jurisdictions and regional economic development organizations of approved CEDS and potential funding opportunities through EDA	Q4				
d) Monitor progress, follow EDA reporting requirements and plan for CEDS update		X			

At-A-Glance: PUBLIC AGENCY ENGAGEMENT AREAS

This section highlights the specific objectives and strategies that are most suited for public agency engagement and the primary activity areas (noted in parenthesis) that local government leaders can direct attention and resources toward.

1. FOSTER A STRONG INNOVATION ENVIRONMENT

Objective 1: BOLSTER UNIVERSITY TECHNOLOGY TRANSFER AND COMMERCIALIZATION

Strategy:

- ◆ Explore opportunities for developing university-industry research centers around regional research strengths and core business clusters (*Physical research parks and innovation facilities*)

Objective 2: EXPAND ACCESS TO CAPITAL FOR HIGH-GROWTH COMPANIES AND SMALL AND MEDIUM ENTERPRISES

Strategies:

- ◆ Establish a centralized access point for information about the sources of capital available across all stages of a company lifecycle (*Distribute debt and equity capital resource guide*)
- ◆ Build new forms of debt and equity capital available to high-growth companies and small and medium enterprises (*Capitalize revolving loan fund*)
- ◆ Leverage public-sector investment power to increase the level of regional investment (*Banking relationships*)

Objective 3: BUILD A ROBUST NETWORK OF BUSINESS INCUBATOR AND ACCELERATOR SERVICES

Strategies:

- ◆ Market the existence and outcomes of the incubator and accelerator network internally and externally (*Distribute network information*)
- ◆ Build a targeted retention effort focused on viable companies that have received incubator and accelerator services (*Integrate targeted companies*)

2. AMPLIFY THE REGION'S GLOBAL MARKET TRANSACTIONS

Objective 1: GROW INTERNATIONAL TRADE AND EXPORT ACTIVITY

Strategy:

- ◆ Build a comprehensive regional service provider network that offers effective business assistance, financing and targeted support services for international trade (*Distribute international trade resource guide*)

Objective 2: INCREASE THE LEVEL OF FOREIGN DIRECT INVESTMENT**Strategies:**

- ◆ Enhance coordinated marketing efforts focused on foreign direct investment (*Coordinate messaging*)
- ◆ Develop a strategic network of service providers and regional leaders to assist with outreach efforts and foreign company prospects (*Foreign company interactions*)
- ◆ Market investment opportunities within the Region to potential foreign investors (*Market opportunities*)

3. DIVERSIFY THE ECONOMY THROUGH GROWTH AND SUPPORT OF CORE BUSINESS CLUSTERS**Objective 1: FORM FUNCTIONAL BUSINESS NETWORKS AND ESTABLISH SPECIFIC CLUSTER INITIATIVES****Strategies:**

- ◆ Recruit members from across the entire value chain to form cluster alliance groups (*Alliance group member*)
- ◆ Maintain cluster-specific resource guides listing relevant regional programs, services and providers (*Distribute cluster resource guides*)

Objective 2: CREATE AND ALIGN TARGETED PROGRAMS AND SERVICES TO SUPPORT CLUSTERS**Strategies:**

- ◆ Align regional business attraction and retention programs with cluster opportunities (*Key sites and response teams*)
- ◆ Explore opportunities to create formal public-private partnerships to foster and grow cluster opportunities (*Commitment to cluster growth*)
- ◆ Encourage the creation of local and regional incentives that support growth of primary jobs across core clusters and other industries (*Business needs and incentives*)

Objective 3: BUILD STRONG ECONOMIC FOUNDATIONS FOR SUSTAINED CLUSTER GROWTH**Strategies:**

- ◆ Advocate for public policy at the state and local levels that supports conditions necessary for cluster growth (*Regulations and public policy*)
- ◆ Address specialized facilities and infrastructure needs (*Development plans*)

4. GROW AND MAINTAIN A WORLD-CLASS TALENT BASE**Objective 1: CREATE MECHANISMS TO ATTRACT NEW TALENT AND RETAIN EXISTING TALENT****Strategy:**

- ◆ Invest in the Region's cultural infrastructure as a means to retain and attract talent (*Priority projects*)

5. IMPROVE THE REGIONAL BUSINESS CLIMATE FOR ECONOMIC GROWTH

Objective 1: REMOVE ECONOMIC AND REGULATORY BARRIERS TO STIMULATE GROWTH

Strategies:

- ◆ Coordinate the Region's business advocacy efforts to reduce local and regional regulatory barriers to improve the Region's business climate (*Regulatory impediments*)
- ◆ Build a proactive effort to educate and inform elected officials and local government leaders about key business issues and industry needs (*Business and industry issues*)
- ◆ Foster an effective system to respond to company-specific local-level regulatory issues (*Business outreach and regulatory issues*)
- ◆ Encourage streamlined and predictable permitting policies and procedures across all local jurisdictions in the Region (*Permitting system*)
- ◆ Pursue local implementation of state and federal regulatory requirements that is uniform, streamlined and cost effective (*Solutions for streamlining*)

Objective 2: AMPLIFY THE REGION'S VISIBILITY AND REPUTATION AMONG KEY AUDIENCES

Strategy:

- ◆ Mobilize a set of interlocking campaigns, aligned with the Next Economy vision, that solidify the Region's reputation as the economic, cultural and recreational capital of the State of California (*Coordinate marketing efforts*)

Objective 3: INTENSIFY ECONOMIC DEVELOPMENT ACTIVITIES THAT DRIVE GROWTH AND INVESTMENT

Strategies:

- ◆ Build a significant fund that can be used to directly invest in competitive new company locations or expansions that create high-value jobs (*Execute on action plan*)
- ◆ Establish a formal, regionwide system to retain local companies and high-quality jobs (*Business outreach and response teams*)
- ◆ Educate the public and investors about the Region's economic development activities, the value they offer, and the job and wealth creation opportunities they present (*Elected official outreach and adoption of code of ethics for economic development*)

Objective 4: DEVELOP A NEXT ECONOMY GOVERNANCE STRUCTURE THAT ENSURES IMPLEMENTATION AND ACCOUNTABILITY

Strategies:

- ◆ Obtain endorsement from all cities and counties in the Capital Region of Next Economy Goals and Unified Vision and coordinate Next Economy implementation strategies and objectives with public-agency partners (*Elected official support and plan integration*)
- ◆ Examine merits associated with completion of a regionwide Comprehensive Economic Development Strategy (*CEDS approval*)

At-A-Glance: PRIVATE INDUSTRY ENGAGEMENT AREAS

This section highlights the specific objectives and strategies that are most suited for private industry engagement and that local business leaders can direct attention and resources toward.

1. FOSTER A STRONG INNOVATION ENVIRONMENT

Objective 1: BOLSTER UNIVERSITY TECHNOLOGY TRANSFER AND COMMERCIALIZATION

Strategies:

- ◆ Identify regional industry needs and align university research capacity for new discoveries and emerging technologies
- ◆ Encourage linkages between researchers making discoveries and entrepreneurs and companies able to commercialize and deploy

Objective 2: EXPAND ACCESS TO CAPITAL FOR HIGH-GROWTH COMPANIES AND SMALL AND MEDIUM ENTERPRISES

Strategies:

- ◆ Build new forms of debt and equity capital available to high-growth companies and small and medium enterprises
- ◆ Facilitate effective connections between funders and companies
- ◆ Strengthen relationships with external funding sources interested in regional deal opportunities

2. AMPLIFY THE REGION'S GLOBAL MARKET TRANSACTIONS

Objective 1: GROW INTERNATIONAL TRADE AND EXPORT ACTIVITY

Strategy:

- ◆ Form strategic relationships with international business networks, existing foreign companies and foreign government agencies to identify and support international trade opportunities

Objective 2: INCREASE THE LEVEL OF FOREIGN DIRECT INVESTMENT

Strategy:

- ◆ Develop a strategic network of service providers and regional leaders to assist with outreach efforts and foreign company prospects

3. DIVERSIFY THE ECONOMY THROUGH GROWTH AND SUPPORT OF CORE BUSINESS CLUSTERS

Objective 1: **FORM FUNCTIONAL BUSINESS NETWORKS AND ESTABLISH SPECIFIC CLUSTER INITIATIVES**

Strategies:

- ◆ Recruit members from across the entire value chain to form cluster alliance groups
- ◆ Develop annual cluster alliance group priorities and action plans that focus on increased jobs and investment, drive implementation of needed growth activities, and monitor progress against stated objectives

Objective 2: **CREATE AND ALIGN TARGETED PROGRAMS AND SERVICES TO SUPPORT CLUSTERS**

Strategies:

- ◆ Explore opportunities to create formal public-private partnerships to foster and grow cluster opportunities
- ◆ Facilitate new domestic business-to-business sales and foreign exports to increase economic base activities within core clusters

Objective 3: **BUILD STRONG ECONOMIC FOUNDATIONS FOR SUSTAINED CLUSTER GROWTH**

Strategies:

- ◆ Align workforce development efforts to address current and anticipated gaps in labor supply and demand within the clusters
- ◆ Advocate for public policy at the state and local levels that supports conditions necessary for cluster growth
- ◆ Build a robust regional network of suppliers and service providers for effective cluster operations

4. GROW AND MAINTAIN A WORLD-CLASS TALENT BASE

Objective 1: **CREATE MECHANISMS TO ATTRACT NEW TALENT AND RETAIN EXISTING TALENT**

Strategies:

- ◆ Develop mechanisms to better connect new, existing and prospective students and residents to career opportunities and lifestyle assets in the Region
- ◆ Invest in the Region's cultural infrastructure as a means to retain and attract talent

Objective 2: **ALIGN TRAINING AND EDUCATION PATHWAYS TO INCREASE ECONOMIC PROSPERITY FOR BUSINESSES AND WORKERS**

Strategies:

- ◆ Mobilize the community to advance and support continued investment in education and related infrastructure
- ◆ Address critical gaps in workforce supply and demand across core business clusters and other large industry sectors

5. IMPROVE THE REGIONAL BUSINESS CLIMATE FOR ECONOMIC GROWTH

Objective 1: **REMOVE ECONOMIC AND REGULATORY BARRIERS TO STIMULATE GROWTH**

Strategies:

- ◆ Partner with the business community and other regions in the state to communicate with and influence state policymakers
- ◆ Build a proactive effort to educate and inform elected officials and local government leaders about key business issues and industry needs

PART SIX: NEXT ECONOMY PARTNERS

Resolutions of Support

For the Region’s businesses to compete successfully in a global economic environment, it is imperative that public and private interests in the Region work together to maximize their competitive advantages. Such collaborative and coordinated economic development can stimulate job creation and prosperity across the entire Region.

The Next Economy initiative encompasses the counties of Sacramento, Placer, El Dorado, Sutter, Yolo and Yuba and their 23 incorporated cities.

As leaders and partners with the private sector, the Region’s cities, counties and special districts play an integral role in regional economic development success, particularly if local governments strive to work together rather than individually to improve the Region’s economy. Public sector agencies are asked to support the core principles in the Capital Region Prosperity Plan by adopting supportive resolutions. At time of publication, five counties, 15 cities and three special districts had adopted resolutions by unanimous vote and many others have the item scheduled for consideration in the weeks ahead.

These resolutions affirm regional readiness to use the framework Next Economy provides as their “playbook” for economic development activities in the years ahead.



Approved

1. Placer County 1/8
2. Yuba County 1/22
3. Sacramento County 1/29
4. Yolo County 2/12
5. El Dorado County 3/12



1. City of Sacramento 1/15
2. City of Roseville 1/16
3. City of Rancho Cordova 1/22
4. City of Elk Grove 1/23
5. City of Yuba City 2/5
6. City of Galt 2/5
7. City of Folsom 2/12
8. City of Wheatland 2/12
9. City of Placerville 2/12
10. City of Woodland 2/19
11. City of West Sacramento 2/20
12. City of Rocklin 2/26
13. City of Davis 2/26
14. City of Citrus Heights 2/28
15. City of Colfax 3/13



1. SETA-Sacramento Works 2/7
2. Golden Sierra Job Training Agency 2/7
3. SACOG 3/21

Investors

At its core, Next Economy is a regional volunteer-driven endeavor that strives to move the \$97 billion annual economy of the six-county Capital Region to a more diversified, robust and sustainable economy by synchronizing and maximizing talent and resources.

The research and planning process undertaken thus far was made possible by an economic development grant awarded by the Morgan Family Foundation and the combined investments of many local contributors. Next Economy community leaders, volunteers and local organizations are to be credited for their belief in and support of this important effort.

Next Economy implementation will require new funding support to ensure effective execution, conduct benchmark research to evaluate performance, track and manage accountability measures and coordinate widespread partner engagement. To learn more about investment opportunities, visit www.nexteconomycapitalregion.org.



Next Economy Volunteer Leadership

The business leadership from SACTO, the Metro Chamber, SARTA and Valley Vision inspired the Next Economy effort and worked jointly to enlist a wide range of stakeholders—representing business, labor, education, public sector and economic development interests from across the six-county Capital Region—to chart a path for transforming the economy.

The Next Economy planning and research process was directed by a Leadership Group, a core team of individuals representing a cross-section of private industry, education and government. Serving in an executive capacity, the Leadership Group rallied the talent, insight and expertise of a volunteer Steering Committee, comprising multi-sector representatives with broad expertise. The Steering Committee served as key advisers throughout the process.

Moving into implementation, the volunteer business leadership of the four core regional nonprofits, plus NextEd and the Northern California World Trade Center, has made a five-year commitment to serve in an oversight capacity and to be responsible for tracking progress and serving as custodian of the Implementation Plan over the 5-year life of the plan.

Leadership Group

Brice Harris—Chancellor, California Community Colleges
Martha Lofgren—Partner, Brewer Lofgren LLP
Craig McNamara—President and Owner of Sierra Orchards
Mark Otero—Studio General Manager, BioWare Sacramento
Susan Peters—Sacramento County Board of Supervisors
Jim Williams—Partner, Williams + Paddon Architects + Planners

Project Team

Meg Arnold—CEO, Sacramento Regional Technology Alliance
Barbara Hayes—CEO, Sacramento Area Commerce & Trade Organization
Bill Mueller—CEO & Managing Partner, Valley Vision
Roger Niello—President & CEO, Sacramento Metro Chamber
Ryan Sharp—Director, Center for Strategic Economic Research
Christine Ault—Project Manager, Next Economy

Oversight Group

Ashil Abhat—2013 Chair, Northern California World Trade Center
Naaz Alikhan—2014 Chair, NextEd
James Beckwith—2014 Chair, Sacramento Metro Chamber
Gary Bradus—2014 Chair, SACTO
Kyle Glankler—2013 Chair, NextEd
Michael Jacobson—2014 Chair, Valley Vision
Martha Lofgren—2013 Chair, Sacramento Metro Chamber
CJ Obmann—2013-14 Chair, SARTA
David Parkes—2013 Chair, SACTO
Scott Syphax—2013 Chair, Valley Vision

Steering Committee

Michael Ault—Executive Director, Downtown Sacramento Partnership
James Beckwith—President & CEO, Five Star Bank
Kipp Blewett—Partner, Rubicon Partners
Elisabeth Brinton—Chief Customer Officer, Sacramento Municipal Utilities District
Jason Buckingham—Executive Director, Golden Sierra WIB
Dave Butler—CEO, NextEd
Jack Crawford—General Partner, Velocity Venture Capital
Steven Currall—Dean, UC Davis Graduate School of Management
Russ Davis—Board, North State Building Industry Association
David DeLuz—President and CEO, Greater Sacramento Urban League
Charlie Downs—Senior Principal, ANOVA Architects
Greg Eldridge—CH2M HILL
Pat Fong Kushida—CEO, Sacramento Asian Chamber of Commerce
John Frisch—Cornish & Carey
Joe Gagliardi—CEO, Folsom Chamber of Commerce
Lewis Gale—Dean, University of Pacific
Laura Gill—City Manager, City of Elk Grove
Alex Gonzalez—President, Sacramento State
Larry Greene—Air Pollution Control Officer/Executive Director, Sacramento Metropolitan Air Quality Management District
Theresa Hamilton—CEO, Fremont-Rideout Health Group
Michael Jacobson—Director of Corporate Social Responsibility, Intel
Matt Kelly—Executive Secretary, Sac-Sierra Building & Construction Trade Assoc.
Sandy Kirschenmann—Associate Vice Provost, Drexel University
Kathy Kossick—Executive Director, SETA-Sacramento Works
Ann Madden Rice—Chief Executive Officer, UC Davis Medical Center
Mimi Nguyen—Associate Director, Asian Resources
Steve Nichols—Area Manager, Sacramento, PG&E
Micah Runner—Economic Development Manager, City of Rancho Cordova
David Sanders—Managing Partner, WorldBridge Partners
Scott Syphax—President & CEO, Nehemiah Corporation
Renee Taylor—President & CEO, Northern California World Trade Center
Keri Thomas—Regional Director, Sutter Health
Rebecca Thornton Sloan—Director, External Affairs & Member Services, Sacramento Area Council of Governments (SACOG)
Stan Van Vleck—Partner, Stern, Van Vleck & McCarron
Tim Yamauchi—Executive Vice President/CFO, PRIDE Industries



Public Outreach Log

Since launching the Next Economy research and planning phase in the fall of 2011, both qualitative and quantitative data have been gathered to identify the leading opportunities for economic growth across the Region. That body of research and community input was applied to formulate overarching regional strategies and specific short-term action steps that can provide results over the next 12 months and beyond. Through the planning phase, the volunteer-driven initiative engaged more than 260 different private and public sector organizations and thousands of individuals, convened several dozen public work sessions around priority cluster areas, held three public Regional Forums, and conducted more than 75 separate outreach presentations to groups all across the Region. Following is a master calendar of the public outreach that was conducted as part of the planning and research phase.

# Guests	Organization/Entity	2011					2012										2013					
		A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A
Next Economy Community Forums and Private Sector Input																						
100	Next Economy Kick Off Teleconference Briefings	8/19																				
250	Next Economy Regional Forum #1 - West Sac City Hall				11/15																	
400	Next Economy Regional Forum #2 - Folsom Comm Ctr						2/17															
250	Next Economy Regional Forum #3 - Sac State									5/4												
12	Next Economy Leadership Group	9/29	9/30	10/28	11/15	12/9	1/20	2/10	3/16	4/12	5/16				10/23						3/7	
40	Next Economy Steering Committee			10/28	11/15	12/9		2/3		4/16	5/4	6/1			10/23							
20	Agriculture & Food Work Group/Task Team						2/6	3/7	4/18					9/5		11/14		1/9	2/13			
20	Information & Communications Tech Work Group							3/15	4/10													
8	Advanced Manufacturing Focus Group (1:1 interviews)								X	X												
15	Health Care & Life Sciences Focus Group							3/9	4/13													
29	Innovations & Entrepreneurship Focus Group							3/12														
30	Innovations & Entrepreneurship Focus Group							3/19														
20	Clean Energy Technology (GCA) Focus Group						2/23															
105	Next Economy Teleconference Briefing #1 & #2																				12/5	
80	Next Economy Teleconference Briefing #3																				12/12	
35	Next Economy Teleconference Briefing #4																				12/18	

	State Credit Union					2/16												
50	Placer County Women’s Leadership Group		10/24						7/23									
	Mayor’s Board and Chair Forum - Sac County					3/21												
	Placer County Economic Development Summit					3/14												
250	Rocklin State of the City Address																	3/1
	Placer County Water Agency																	3/7
	Congresswoman Matsui			X														
	Congressman Bera																	1/31
Economic Development Circuit																		
45	Sacramento BOS - Ag Output Economic Workshop					2/28												
20	ED jurisdictional leaders (EDCED Commission)					1/19												
150	CALED Conference						3/22											
15	Yolo Leaders Group								6/20									
15	West Sac Economic Development Advisory Committee								6/27									
15	DSIDE - Davis Economic Corp					2/21												
15	Lincoln Econ Dev Council - Tom Cosgrove						3/14											
20	Metro Pulse Economic Development Leadership										10/24	11/20						
16	SACTO Economic Development Professionals																	1/31
Chamber Circuit																		
15	Regional Chambers Meeting	9/19	9/20						X?									
	Roseville Chamber			X?		1/6												
80	Rocklin Chamber									7/12								
	Elk Grove Chamber						2/27											
	Folsom Chamber				11/21													
	North Sac Chamber - Lattes & Leaders										8/23							
	Sacramento Asian Chamber					2/3												
	Lincoln Chamber						3/23											
100	Rocklin Chamber									7/12								
Business Circuit																		
	President’s Jobs Forum								3/6									
12	Health Care CEOs Roundtable								3/2									
120	Vistage - CEOs Business Group											9/15						
	Society for Marketing Professional Services											9/25						
	Lambda Alpha Real Estate, Brokers and Allied Industries												10/23					
190	Placer Manufacturers Forum												10/30					
60	Auburn Business Perspectives Event																	
	Financial Executives International Sacramento Chapter																	2/19

This report was prepared by **Valley Vision** and the **Center for Strategic Economic Research** (CSER) and is the product of a joint regional partnership between the business leadership of the Sacramento Area Commerce and Trade Organization, Sacramento Regional Technology Alliance, Sacramento Metro Chamber and Valley Vision.



Published March 2013

Additional copies of this report are available for download at www.nexteconomycapitalregion.org.

The full Next Economy research report, produced by the Center for Strategic Economic Research, can be downloaded at www.nexteconomycapitalregion.org/research.

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KEY FINDINGS

NEXT ECONOMY CLUSTER RESEARCH

Workforce Needs Assessment SACRAMENTO CAPITAL REGION



INSIDE:

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Public Education Institutions.....	8
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August 2016

Prepared by: Centers of Excellence,
Los Rios Community College District

Valley Vision

Burris Service Group

This research was conducted with the generous
support of JPMorgan Chase & Co.

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PROJECT DESCRIPTION

Starting in 2008, the six-county Sacramento Capital region (El Dorado, Placer, Sacramento, Sutter, Yolo and Yuba counties) was rocked by the global recession, losing 10% of the region's jobs. In response, regional leaders initiated Next Economy, an action plan to accelerate job creation and new investment in six high-growth business (industry) clusters. Valley Vision, a regional civic leadership organization, managed the three-year Next Economy design, research and implementation process on behalf of a wide range of private and public sector partners.

As of late 2015, after a lagging recovery, the region's economy is picking up momentum, with the unemployment rate decreasing while job growth is accelerating. Valley Vision received funding from JPMorgan & Co. to better understand how the region's key growth industry clusters have changed since the original Next Economy research was conducted in 2012, and what new opportunities have emerged. Valley Vision partnered with the Los Rios Center of Excellence and the Burris Service Group on this effort.

Cluster research is a widely accepted standard of practice for developing regional prosperity strategies to address multiple facets of a region's complex economy. Industry clusters reduce operating costs by shortening supply chains; increasing the flow of information regarding new business opportunities; concentrating workforce training needs in select occupations; and speeding up the identification of gaps in products or services.¹ Firms in identified clusters also may have a reduced risk of failure, as these firms are better supported by the supply chain and can respond more rapidly to shifts in the marketplace.

To support regional workforce planning and strategy development, six clusters were identified as critical to the region's economy. Each study was reviewed in cluster-specific forums and additional data was collected from employer feedback. This data can be found in the proceedings reports on Valley Vision's website. The cluster research, along with employer feedback, was used to develop a regional action plan. As announced at the May 3rd Workforce Summit, Valley Vision is leading the action plan implementation process which will start Fall 2016.

This report presents the key findings for the six industry clusters in the following areas:²

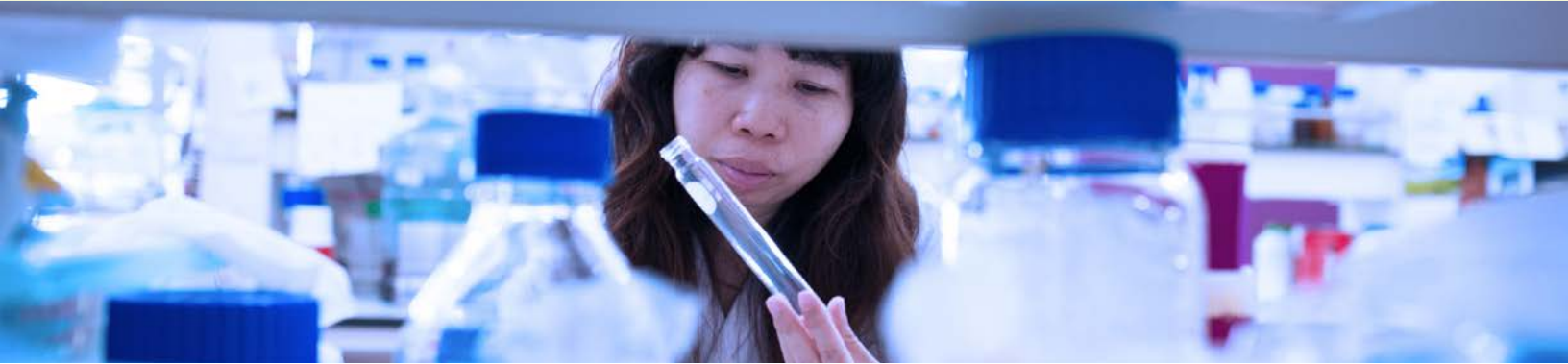
- **Advanced Manufacturing** is a process that integrates the coordinated use of information, automation, software, sensing and networking to improve the efficiency and reduce costs of manufacturing. Although advanced manufacturing methods may be utilized by any manufacturing industry, high use of these methods tends to cluster in six subsectors: Aerospace, Chemical, Computers/electronics, Machinery, Plastics Products and Transportation Manufacturing.
- **Clean Economy** represents six subsectors: Energy and Resource Efficiency, Renewable Energy, Sustainable Farming, Advanced Transportation, Environmental Compliance and Recycling/Waste Reduction. Since the Clean Economy includes all economic activity that provides environmental benefit, industries in this cluster have some overlap with industries in other clusters. Consequently, to prevent over counting of employment, the Clean Economy data was not included in this report.
- **Education and Knowledge Creation**, the second largest cluster, includes industries and establishments that provide systematic information or instruction for the purpose of knowledge creation or learning. Within the cluster, there are five subsectors: Private Education Institutions, Public Education Institutions, Education Support Services, Publishing and Broadcasting.
- **Food and Agriculture** includes interdependent firms in the food value chain. The cluster is composed of four subsectors: Production, Processing, Distribution and Support.³

¹ Cluster Manufacturing: A Supply Chain Perspective.

² Visit valleyvision.org or coeccc.net to access the full reports.

³ Sacramento Area Council of Governments (SACOG) is the principal researcher for the Food and Agriculture cluster study.

- **Information and Communications Technologies (ICT)** is the convergence of computer networking and telecommunications. The ICT umbrella organizes technologies related to telecommunications, computing, networks and other high-tech fields. The cluster is composed of four subsectors: Computer and Electronic Market Retailers/Wholesalers; System Programming, Design, Management and Training Services; System Repair and Maintenance Services; and Telecommunication/Data Processing Centers.
- **Life Sciences and Health Services**, the largest clusters in the region, offers well-paying jobs for thousands of people. This cluster includes five subsectors: Hospitals, Ambulatory Health Care Services, Nursing and Residential Care Facilities, Social Assistance and Life Sciences.



ECONOMIC OVERVIEW

In the **Sacramento Capital region**, the residential population numbered more than 2.4 million in 2014, with an additional 87,000 residents projected by 2019. Over the next ten years (2014–2024), the region’s population is expected to get older. The 60-years-and-older cohort is projected to increase by 28%, while the working age cohort, 20–59 years, is expected to decline by 2%. Population growth and the aging workforce will increase pressure for a skilled and talented pipeline of newly trained workers that can meet the region’s changing economic conditions.

In addition to population demographics, the size and characteristics of a region’s labor force are important considerations in workforce planning. Labor force, employment and unemployment data are based upon “place of residence” – where people live, regardless of where they work. Individuals who have more than one job are counted only once. These data differ from industry employment estimates that are “place of work” based – where the employer/workplace is located, regardless of where the employee resides.

Since 2011, the Sacramento region labor force has increased in size by 17,100 persons, and total employment increased by nearly 79,500 persons (Exhibit 1). In just four years, the unemployment rate dropped by more than five percentage points, suggesting a complete recovery from the recent economic recession.

Exhibit 1. Labor Force and Unemployment Rate, Sacramento Region⁴

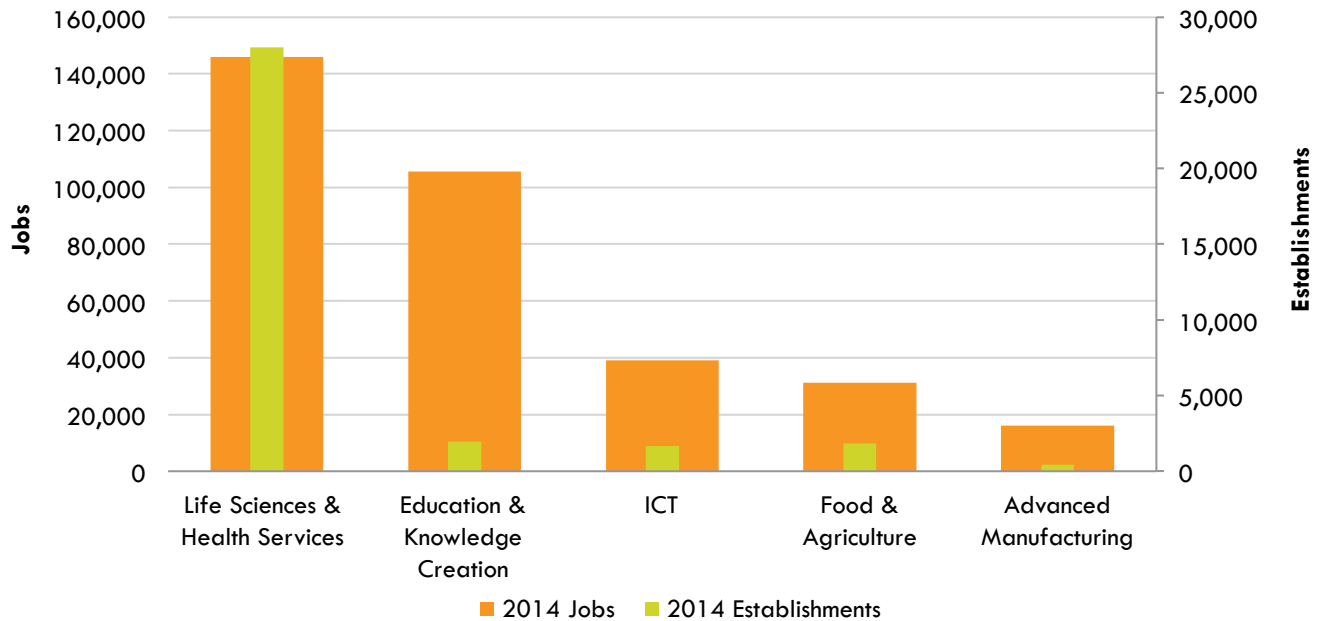
	2011	2014	2015	2011–2015 Change
Labor Force	1,115,000	1,122,400	1,132,100	17,100
Employment	977,700	1,038,400	1,057,200	79,500
Unemployment	137,300	84,000	75,000	-62,300
Unemployment Rate	12.3%	7.5%	6.62%	-5.68%

⁴ EMSI 2015.2

LABOR MARKET DATA

The Next Economy clusters represent one-third (32%) of all the jobs in the region and two-fifths (43%) of all the establishments (Exhibit 2). Health Services & Life Sciences is the largest cluster in terms of total jobs and establishments. Education & Knowledge Creation is a close second in terms of total jobs, but has relatively few establishments. This indicates that Education & Knowledge Creation is dominated by organizations with large numbers of employees. In fact, the average number of workers per establishment is 53, 10 times more than the Health Services & Life Sciences cluster and three times more than the Food & Agriculture cluster.

Exhibit 2. Establishments and Jobs by Cluster⁵



The bubble chart below compares the concentration of cluster employment to the projected five-year growth rate in the region, where the size of the bubble indicates the total number of jobs for each industry cluster. Concentration of employment is measured by location quotient analysis which compares the total employment in a region relative to the total employment in a larger area, in this case, California. Clusters and industries with location quotients higher than 1 (usually LQ 1.25 or higher) imply that the cluster is producing more of the product or services than is consumed by local residents. The excess products and services are typically exported outside of the region, which increases the region's overall wealth and competitive position.

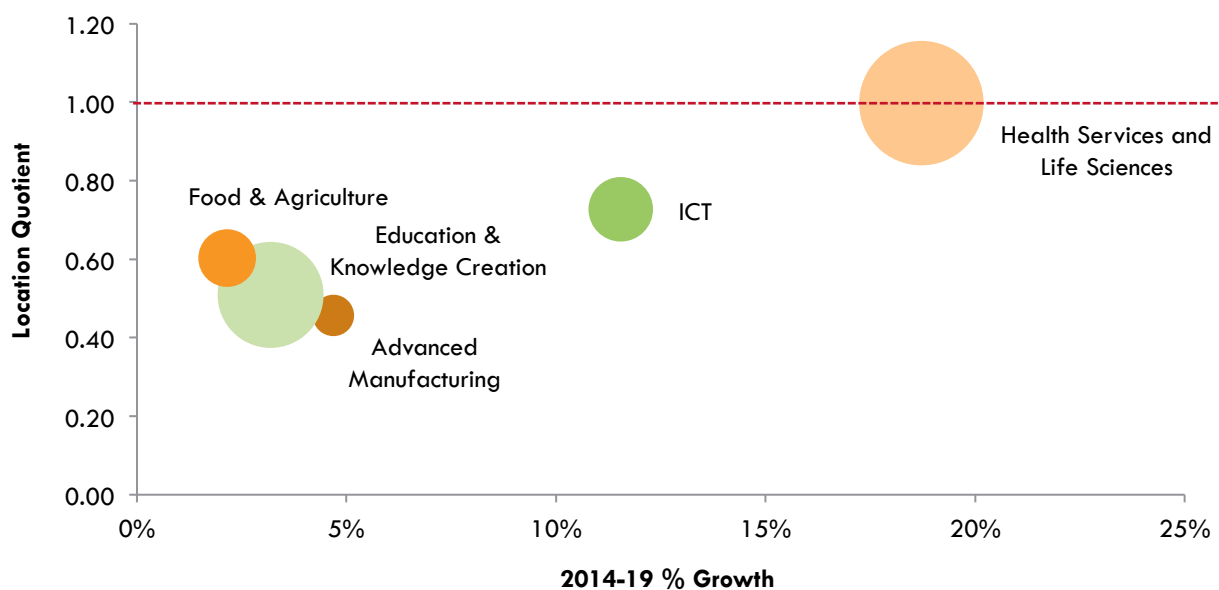
All of the clusters, except Life Sciences and Health Services, have a location quotient below 1, indicating a lower than average concentration of employment (Exhibit 3). The Health Services and Life Sciences cluster has a location quotient of 1.00, indicating average employment levels. Low to average location quotients indicate that the Next Economy clusters are not likely to outperform other regions in the state, unless there is strategic action that increases the region's competitive position in these areas.

All clusters had positive growth rates with Life Sciences and Health Services having the largest growth rate and ICT with the second largest growth rate.

⁵ EMSI 2015.2



Exhibit 3. Projected Growth vs. Location Quotient by Cluster⁶

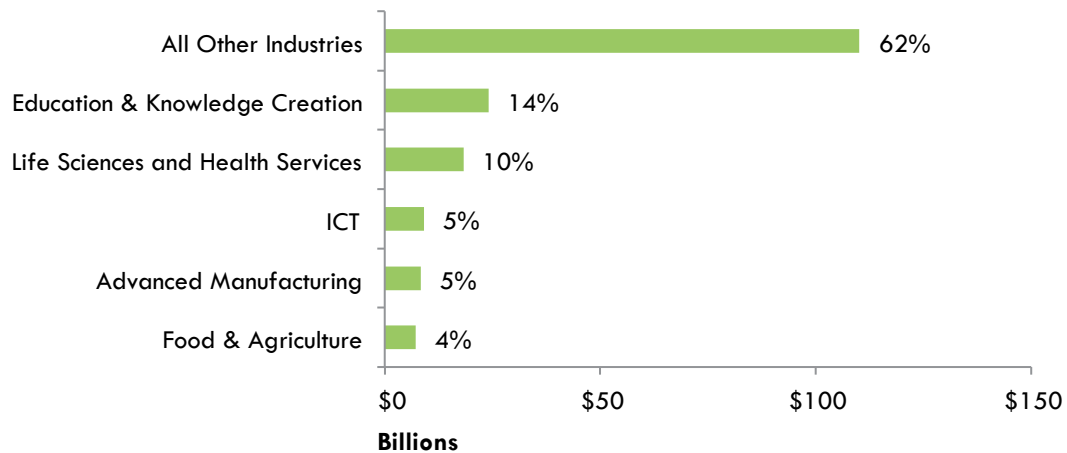


⁶ EMSI 2015.2

ECONOMIC IMPACT

Economic impact provides a quantitative method to estimate the total economic benefit from a project, or in this case, an industry cluster. In other words, it is the “ripple effect” of all economic activities resulting from that cluster. Exhibit 4 displays each cluster’s direct impact on the economy, excluding indirect and induced impacts for comparison purposes. The Next Economy clusters generate nearly 38% of the region’s total domestic output, approximately \$67 billion.

Exhibit 4. Direct Economic Impact by Cluster⁷



⁷ IMPLAN 2013

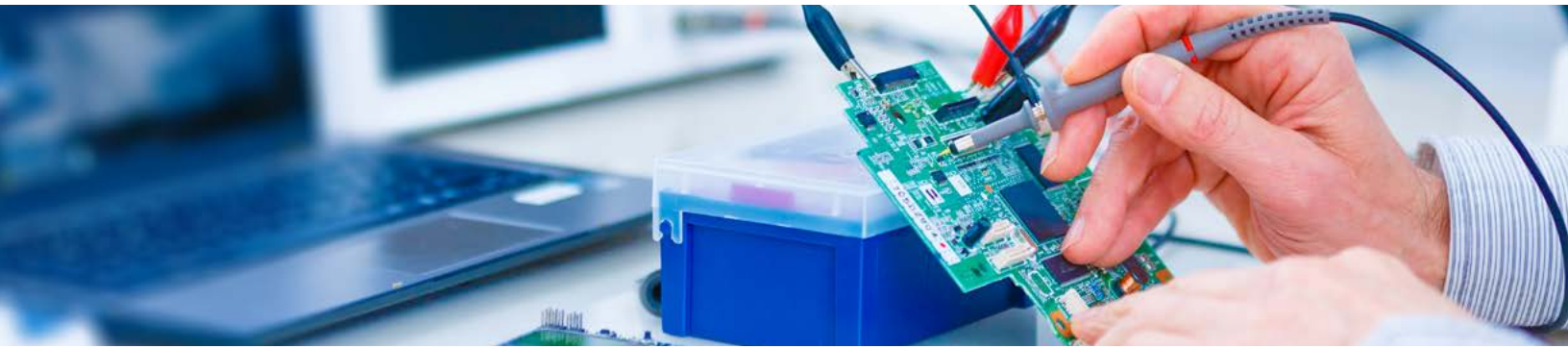
TRENDS BY CLUSTER

Demographic shifts, global competition, technological innovations and other environmental conditions have a significant impact on the region's economy. Below is a summary of some of the most significant trends impacting each cluster.

Industry Cluster Opportunities, Challenges & Trends

Cluster	Opportunities, Challenges & Trends
Advanced Manufacturing	The manufacturing sector has had a tumultuous history in the Sacramento Capital region. To encourage growth, the Advanced Manufacturing cluster must address a variety of challenges, from navigating a complex regulatory environment to developing strategies to compete with low-cost economies. National, state and local legislators can support the cluster by developing and adopting policies that eliminate barriers to success, creating incentives for local production and reducing supply chain leakage.
Clean Economy	Clean establishments provide products and/or services that are aimed at utilizing resources more efficiently, providing renewable sources of energy, lowering greenhouse gas emissions, or otherwise minimizing environmental impact. Legislation and policy continue to drive growth in this cluster.
Education & Knowledge Creation	Optimistic hiring forecasts, increases in per-pupil spending and changing student enrollment projections are expected to influence demand for teachers and education support professions.
Food & Agriculture	California is the fourth largest agricultural economy in the world and the Sacramento Capital region is a vital part of that economy, with some of the most productive farmland on earth. Some of the region's agricultural assets include a world-renowned agricultural institution (UC Davis), food entrepreneurs, favorable climate, local water supply and engaged policy makers.
Life Sciences & Health Services	Several factors are transforming the Life Sciences and Health Services cluster. At the regional level, demographic factors such as a growing and aging population are creating demand for expanded health care services. At the national level, the Patient Protection and Affordable Care Act (ACA) contains provisions that are increasing demand for health care services and changing the way services are delivered.
Information & Communication Technologies	The life cycle of advancements in information and communication technologies (ICT) has been developing exponentially rather than in a sequential, linear fashion and is projected to continue in this way. Because technology innovations are progressing at such a rapid pace, businesses are challenged to balance their technological agility by adopting new computing platforms, software, enterprise applications and devices while continuing to drive growth and achieve productivity. These factors are changing skills required of workers and the demand for new workers.

OCCUPATIONS IN DEMAND



Staffing patterns were utilized to identify the top occupations in each cluster. Inclusion criteria included: postsecondary education/training and annual job openings. The projected annual demand for these occupations was compared to the region’s related training supply to identify potential misalignments between the education system and regional workforce needs. Exhibit 5 displays the occupations with the most job openings and limited training supply in the region.

Exhibit 5. Occupations in Demand by Cluster

Advanced Manufacturing:	machinist, computer-controlled machine tool operators, welders and first-line supervisors of production/operating workers
Clean Economy:	engineers and sales representatives*
Education & Knowledge Creation:	elementary and secondary teachers and training/development specialists
Food & Agriculture:	food scientists, control processing technicians, mechanics and farmers
Health Services & Life Sciences:	registered nurses, EMTs/paramedics and health information technicians
ICT:	database administrators, network administrators, security professionals, and software development specialists














































*Labor market information is not available for these occupations. However, clean economy employers indicated that it is difficult to find qualified applicants for these positions.



PUBLIC EDUCATION INSTITUTIONS

In the Sacramento Capital Region, there are seven community colleges and two public universities that offer training programs that support the Next Economy clusters (Exhibit 6). In addition, there are several private education institutions and private universities that offer programs. Visit the individual reports for a detailed listing of existing training programs offered by public and private education institutions.

Exhibit 6. Public Education Institutions with Educational Programs by Cluster

	Advanced Manufacturing	Clean Economy	Education & Knowledge Creation	Food & Agriculture	Health Services & Life Sciences	ICT
American River College						
Cosumnes River College						
CSU - Sacramento						
Folsom Lake College						
Sacramento City College						
Sierra College						
UC - Davis						
Woodland College						
Yuba College						

NEXT STEPS

Valley Vision, along with Center of Excellence and other partners, conducted forums with the Next Economy cluster employers to review each cluster's findings, high priority occupations and skills gaps that could be addressed through a concerted cluster workforce action plan. Valley Vision compiled a summary of the proceedings as well as an action plan for each cluster, which can be found on Valley Vision's website.

MORE ABOUT...

More About The Centers of Excellence

The Centers of Excellence (COE) for Labor Market Research deliver regional workforce research and technical expertise to California community colleges for program decision making and resource development. This information has proven valuable to colleges in beginning, revising, or updating economic development and Career Technical Education (CTE) programs, strengthening grant applications, assisting in the accreditation process, and in supporting strategic planning efforts.

The Centers of Excellence Initiative is funded in part by the Chancellor's Office, California Community Colleges, Economic and Workforce Development Program. The Centers aspire to be the leading source of regional workforce information and insight for California community colleges. More information about the Centers of Excellence is available at www.coecc.net.

For more information on this study, contact:

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This study was conducted with the support of JPMorgan Chase & Co. In addition, this study was supported by Economic and Workforce Development funds awarded by the Chancellor's Office, California Community Colleges. It was produced pursuant to grant agreement number 15-305-001.

More About Valley Vision

Since 1994, Valley Vision's work has driven transformative change and improved lives across Northern California. An independent social impact and civic leadership organization headquartered in Sacramento, Valley Vision strengthens our communities through unbiased research, boundary-crossing collaboration and change leadership. Our work improves overall quality of life and creates the conditions for economic prosperity and community health and vitality. More information about Valley Vision is available at valleyvision.org.

More About Burris Service Group

The Burris Service Group (BSG) is a full-service consulting practice providing expertise in economic development, strategic economic research, real estate site strategy, management, and institutional growth. The company was established based on the clear need that advisory services be delivered in an "action-oriented" form. The founder of BSG, Robert Burris, brings to his clients an active local and international network of professionals, as well as 20 years of experience in economic development, market and economic analysis, commercial real estate information, corporate sales, and consulting.



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SERIES: 1 OF 6

ADVANCED MANUFACTURING CLUSTER: WORKFORCE NEEDS ASSESSMENT

SACRAMENTO CAPITAL REGION



October 2015

Prepared by: Centers of Excellence,
Los Rios Community College District

Valley Vision

Burris Service Group

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Important Disclaimer

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INTRODUCTION

Starting in 2008, the six-county Sacramento Capital region (El Dorado, Placer, Sacramento, Sutter, Yolo and Yuba counties) was rocked by the global recession, losing 10 percent of the region's jobs. In response, regional leaders initiated Next Economy, an action plan to accelerate job creation and new investment in six high-growth business (industry) clusters. Valley Vision, a regional civic leadership organization, managed the three-year Next Economy design, research and implementation process on behalf of a wide range of private and public sector partners.

As of late 2015, after a lagging recovery, the region's economy is picking up momentum, with the unemployment rate decreasing while job growth accelerating. Valley Vision received funding from JPMorgan Chase & Co. to better understand how the region's key growth industry clusters have changed since the original Next Economy research was conducted in 2012, and what new opportunities are emerging. Valley Vision is partnering with the Los Rios Center of Excellence and the Burris Service Group on this effort.

Cluster research is a widely accepted standard of practice for developing regional prosperity strategies to address multiple facets of a region's complex economy. Industry clusters reduce operating costs by shortening supply chains; increasing the flow of information regarding new business opportunities; concentrating workforce training needs in select occupations; and speeding up the identification of gaps in products or services. Firms in identified clusters may also have a reduced risk of failure, as these firms are better supported by the supply chain and can respond more rapidly to shifts in the marketplace.

This report presents findings on the analysis of the Advanced Manufacturing cluster. It is the first in a series covering the six Next Economy-identified clusters. Additional reports are forthcoming in the areas of the "clean economy," education and knowledge creation, food and agriculture, information and communications technologies, and life sciences and health services. Each report provides an overview of the cluster, industry trends and economic impact, as well as an overview of the top demand occupations in the cluster requiring postsecondary education or training, along with projected occupational demand, institutions providing related education and training, and possible workforce gaps.

This research will be used to develop cluster-based workforce action plans. Valley Vision will work alongside regional education, and workforce and economic development partners to convene six cluster-based employer forums, setting priorities and developing strategies to address critical workforce gaps, better align education and workforce development resources to meet employer and workforce needs, and strengthen the regional economy overall.



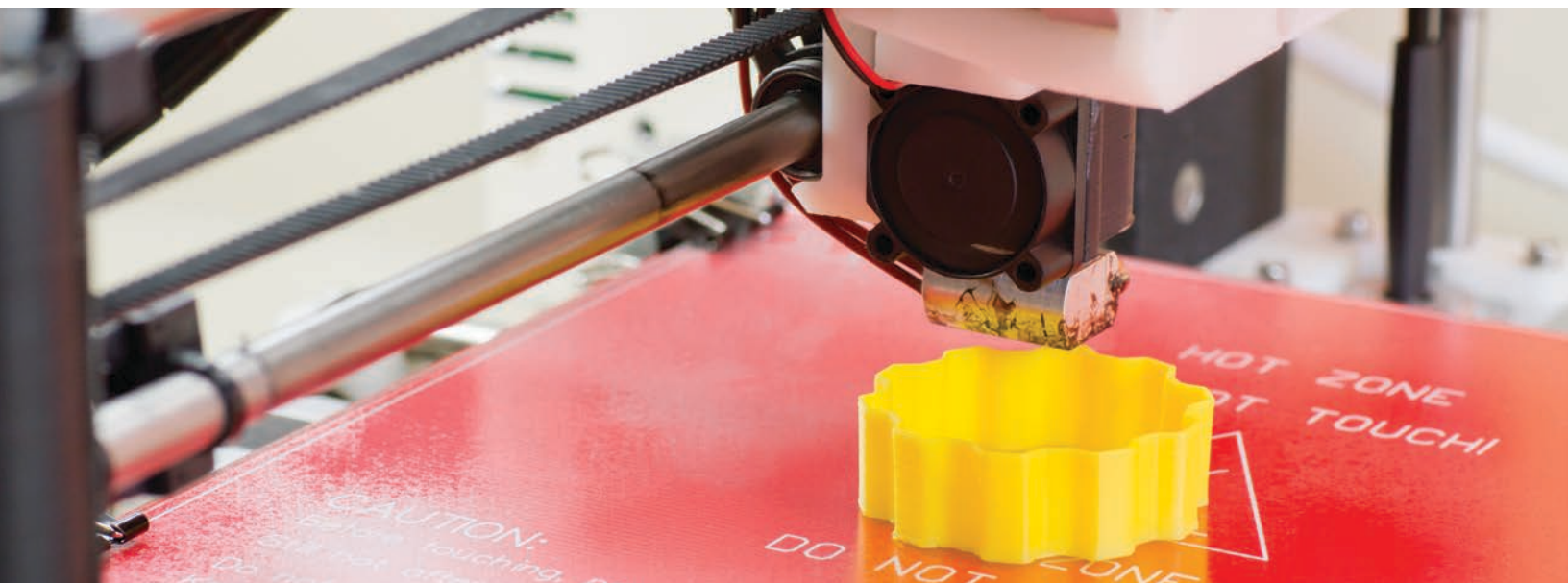
¹ Cluster Manufacturing: A Supply Chain Perspective

² Sacramento Area Council of Governments (SACOG) is the principal researcher for the Agriculture Cluster study, which will focus primarily on industry trends and excludes workforce development and training needs.

CLUSTER DEFINITION

Advanced manufacturing is a process that integrates the coordinated use of information, automation, software, sensing and networking to improve the efficiency and reduce costs of manufacturing.³ Although advanced manufacturing methods may be utilized by any manufacturing industry, high use of these methods tends to cluster in the following six subsectors:⁴

- **Aerospace Manufacturing** – firms that manufacture or assemble complete aircraft, aircraft engine, engine parts, aircraft parts, guided missiles, space vehicles, auxiliary equipment, and search, detection and navigation instruments. Support firms that provide expertise in design and production in areas such as precision tuning, control systems, and fluid power valve design are also included in this cluster.
- **Chemical Manufacturing** – firms that manufacture industrial chemicals, fertilizers/pesticides, and miscellaneous chemical products.
- **Computers/Electronics Manufacturing** – firms that manufacture computer and peripheral equipment, communications equipment, audio and video equipment, semiconductors, electronic components, and measuring, electromedical, and control instruments. This cluster also includes firms that manufacture and produce magnetic and optical media.
- **Machinery Manufacturing** – firms that manufacture agriculture, construction, and mining machinery; industrial machinery; commercial and service industry machinery; ventilation, heating, air-conditioning, and commercial refrigeration equipment; metalworking machinery; engine, turbine, and power transmission equipment; and other general purpose machinery.
- **Plastic Products Manufacturing** – firms that engage in manufacturing plastic products, such as plastic bags, packaging film, polystyrene foam products, and plastic bottles. This cluster also includes chemical industries that support plastic production.
- **Transportation Manufacturing** – firms that engage in manufacturing motor vehicles, trailers, and related parts; railroad rolling stock; ships and boats; and other transportation equipment. This cluster also includes supportive industries such as oils/lubricants and component parts.



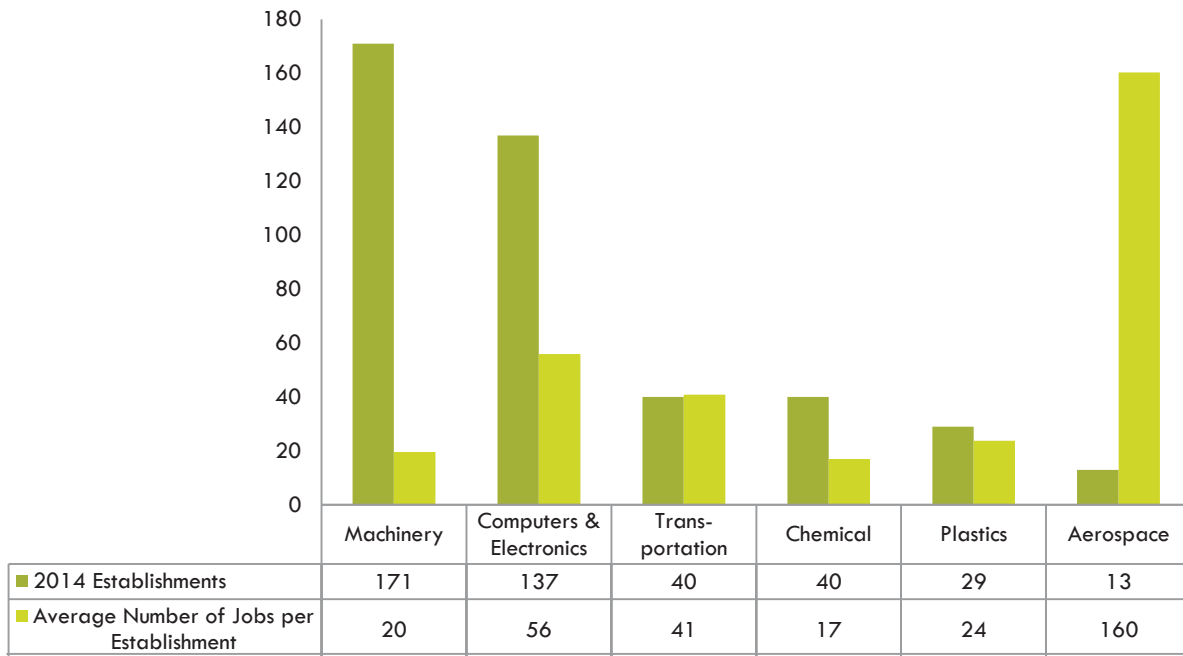
³ Advanced Manufacturing Portal: manufacturing.gov.

⁴ Establishments that use advanced manufacturing processes can be found in any manufacturing subsector. Subsectors that are known to have infrequent use of advanced manufacturing techniques were excluded from the analysis. Food processing which may represent a significant number of establishments that utilize advanced manufacturing techniques was excluded from the analysis to avoid duplication of industry employment counts published in the agriculture supply chain cluster study.

ESTABLISHMENTS

Exhibit 1 displays establishments and the average number of jobs per establishment for the advanced manufacturing subsectors in the Sacramento Capital region. As shown, the machinery subsector has the most firms, with a low number of workers per establishment compared to other subsectors in the region. The computer and electronic subsector is the second largest subsector in terms of total establishments, and it has a relatively high number of workers per establishment. Aerospace has the fewest establishments and the highest average number of jobs per establishment, most likely due to the dominance of Aerojet Rocketdyne, a large aerospace firm located in Rancho Cordova.

Exhibit 1: Establishments and Average Employment by Subsector, 2014⁵



⁵ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

CONCENTRATION OF EMPLOYMENT

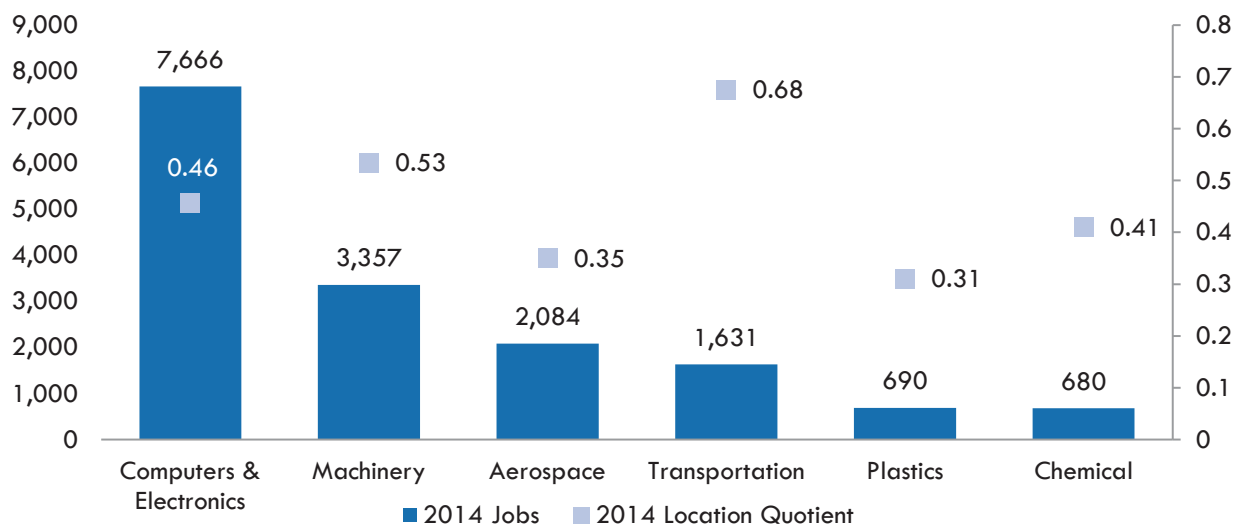
In 2014, there were about 16,100 advanced manufacturing jobs, 42 percent of the total manufacturing employment and 1.5 percent of the total employment in the Sacramento Capital region. As shown in Exhibit 2, the majority of advanced manufacturing jobs were in computer and electronic product manufacturing (48%; 7,666 jobs), followed by machinery (21%; 3,357 jobs) and aerospace (13%; 2,084 jobs).

Location quotient analysis compares the total employment in a region relative to the total employment in a larger area—in this case, California. A location quotient of less than one indicates a lower concentration of employment for that industry in the region than in the state overall. A location quotient of more than one indicates a higher concentration of employment for the region than in the state overall. All of the advanced manufacturing subsectors in the Sacramento Capital region have a location quotient that is less than one, indicating a lower concentration of employment compared to other areas of the state.

Within the subsectors, there are industries with above average location quotients, indicating a high concentration of employment for those industries than in the state overall. These include:

- **Computers & Electronics:** computer terminal and other computer peripheral equipment manufacturing (6.52 LQ); electronic computer manufacturing (2.9 LQ); carbon and graphite product manufacturing (2.81 LQ); switchgear and switchboard apparatus manufacturing (1.63 LQ) and audio and video equipment manufacturing (1.41 LQ).
- **Machinery:** printing machinery and equipment manufacturing (3.75 LQ); machine tool manufacturing (1.4 LQ); and packaging machinery manufacturing (1.25 LQ).
- **Aerospace:** guided missile and space vehicle propulsion unit and propulsion unit parts manufacturing (17.94 LQ); and guided missile and space vehicle manufacturing (1.2 LQ).
- **Transportation:** railroad rolling stock manufacturing (3.45 LQ) and travel trailer and camper manufacturing (1.22).
- **Plastics:** plastics packaging film and sheet (including laminated) manufacturing (1.87 LQ).
- **Chemical:** printing ink manufacturing (1.57 LQ).

Exhibit 2: Total Employment and Location Quotient by Subsector, 2014⁶



⁶ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

TRENDS AND PROJECTIONS

During the recession, the Advanced Manufacturing cluster declined significantly, shedding 1,770 jobs in three years (2007–09). However, in 2010, the cluster started to rebound. Over the next five years, the Advanced Manufacturing cluster is projected to grow moderately, adding as many as 755 jobs by 2019. Aerospace is projected to add the most jobs, followed by machinery manufacturing and plastics. The computers and electronics subsector is expected to slightly decline with a loss of about 100 jobs over the next five years.⁷

Exhibit 3: Employment Trends and Projections, 2009–2019⁸

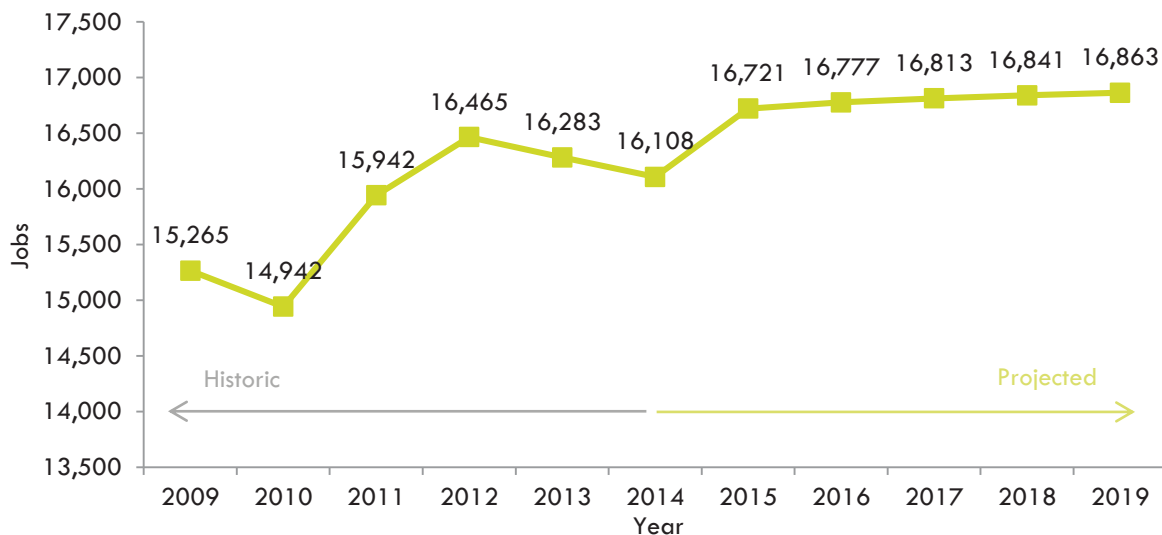


Exhibit 4: Employment Projections by Subsector, 2014–2019⁸

Advanced Manufacturing Subsector	2014 Jobs	2019 Jobs	Change	% Change
Aerospace	2,084	2,410	326	16%
Chemical	680	711	31	5%
Computers & Electronics	7,666	7,564	(102)	(1%)
Machinery	3,357	3,609	252	8%
Plastics	690	863	173	25%
Transportation	1,631	1,706	75	5%
Total Advanced Manufacturing Jobs	16,108	16,863	755	5%

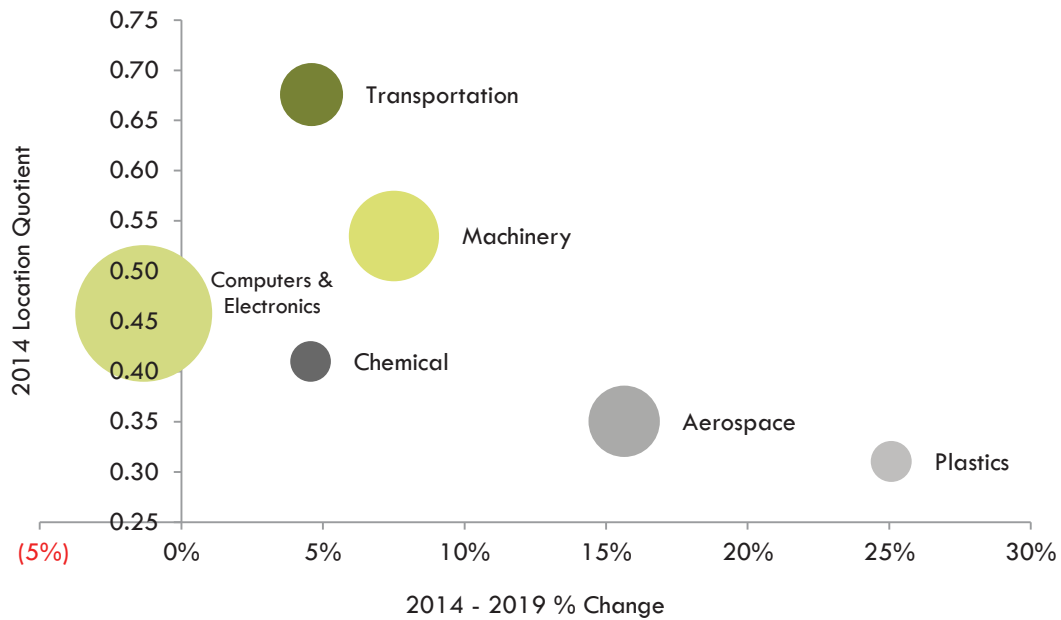
⁷ Projection data indicates that the aerospace subsector is projected to add the most jobs over the next five years. However, recent articles in the Sacramento Business Journal report that Aerojet Rocketdyne, the largest aerospace business in the region, is reducing the size of its workforce. As such, the growth of this subsector may be less than projected by historic trends.

⁸ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

TRENDS AND PROJECTIONS

The bubble chart below compares the projected five-year growth rate to the concentration of employment in the region, where the size of the bubble indicates the total number of jobs for that subsector. While all of the advanced manufacturing subsectors in the Sacramento Capital region have a lower concentration of employment than the statewide average, some subsectors are closer to the average than others. The transportation and machinery subsectors have a higher location quotient than other subsectors and a moderate projected growth rate. Aerospace and plastics have a relatively low concentration of employment in the region but high projected growth rates when compared to the other subsectors.

Exhibit 5: Growth Rate vs. Subsector Concentration⁹

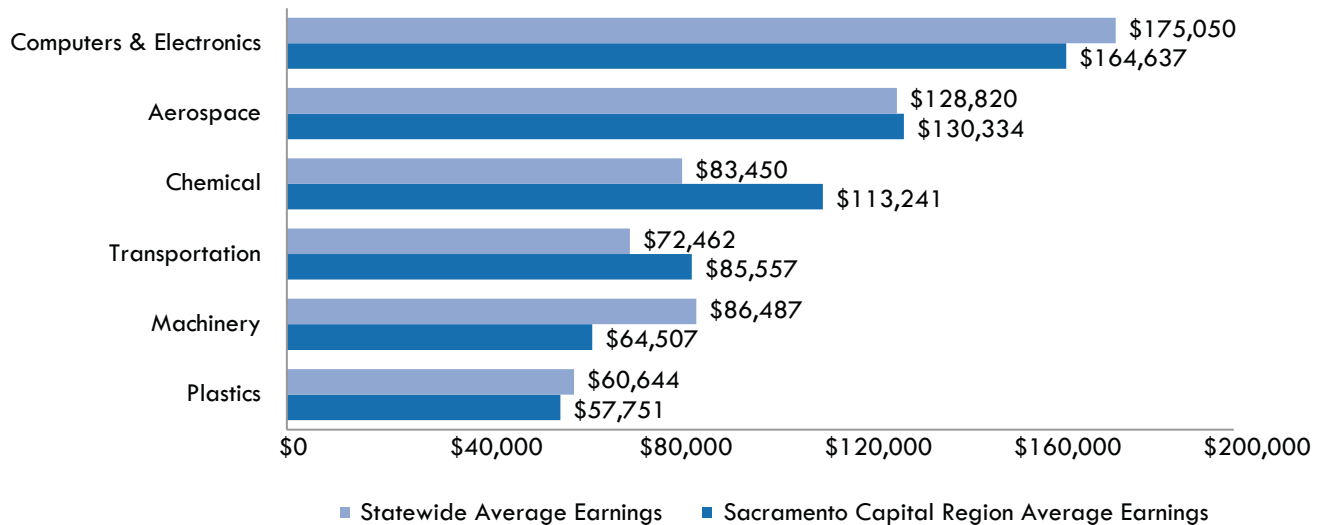


⁹ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

EARNINGS

The computer and electronics subsector provides the best earnings in the Sacramento Capital region, followed by aerospace and chemical product manufacturing. The earning calculation includes an average of all wages, salaries, proprietor earnings and supplemental earnings (such as retirement benefits, bonuses, etc.) for all occupations in the sector. All of the subsectors, with the exception of plastics, provide earnings above the average earnings across all industries in the Sacramento Capital region.¹⁰

Exhibit 6: Earnings by Manufacturing Subsector, 2014¹¹



¹⁰ The average earnings across all industries in the Sacramento Capital region is \$63,377.

¹¹ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

SHIFT SHARE ANALYSIS



Shift share analysis is a method for determining how much of regional job growth can be attributed to national trends and how much is due to unique regional factors. Exhibit 7 displays four key components:

- **Industrial Mix Effect** – represents the share of regional industry growth explained by the growth of the specific industry at the national level.
- **National Growth Effect** – represents how much of the regional industry's growth is explained by the overall growth of the national economy. Given that the nation's economy is growing, it is normal to see positive change in each subsector.
- **Expected Change** – the change expected due to national growth effect and industry mix effects.
- **Regional Competitive Effect** – explains how much of the change in the subsectors is due to some unique competitive advantage that the region possesses, because the growth cannot be explained by national trends in the industry or the economy as a whole.

Five of the six subsectors are outperforming national trends (both overall national trends and national trends in the specific subsectors), while transportation is underperforming compared to national trends. This suggests that the region has a competitive advantage in the Advanced Manufacturing cluster compared to other areas of the nation.

Exhibit 7: Shift Share Analysis by Subsector, 2013–2018¹²

	Industrial Mix Effect	National Growth Effect	Expected Change	Regional Competitive Effect
Aerospace	(360)	133	(227)	553
Chemical	(48)	43	(5)	35
Computers & Electronics	(881)	487	(394)	293
Machinery	(226)	213	(13)	264
Plastics	25	44	69	105
Transportation	(12)	104	92	(17)

¹² EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

ECONOMIC IMPACT

Economic impact provides a quantitative method to estimate the total economic benefit from a project, or in this case, an industry cluster. In other words, it is the “ripple effect” of all economic activities resulting from that cluster. Impact analysis is typically comprised of direct, indirect and induced impacts:

- Direct impacts are those resulting from the expenditures of operations within that industry cluster.
- Indirect impacts are those resulting from suppliers of that cluster spending money and hiring employees.
- Induced impacts are the combined value of employees of the industry cluster spending money at a household level.

Combined, these three variables equate to the total economic impact of a project or industry cluster.

The Advanced Manufacturing cluster impacts the Sacramento Capital region’s economy in several ways. The IMPLAN input-output model was used to measure the cluster’s total economic impacts.¹³ First, the cluster directly benefits the economy through the operations and jobs supported by the establishments within its subsectors. Exhibits 8 and 9 show that the Advanced Manufacturing cluster directly contributes over \$8.3 billion in output and 16,000 jobs to the regional economy. In addition to this direct effect, these establishments generate an indirect impact through their supplier purchases—around \$2.3 billion in output and 13,000 jobs are created within sectors that generally supply this cluster. Finally, the Advanced Manufacturing cluster creates an induced effect of almost \$1.8 billion and approximately 13,000 jobs as a result of consumption activities within the local economy of both direct (cluster) and indirect (supplier) employees.

Exhibit 8: Total Output Impacts¹⁴

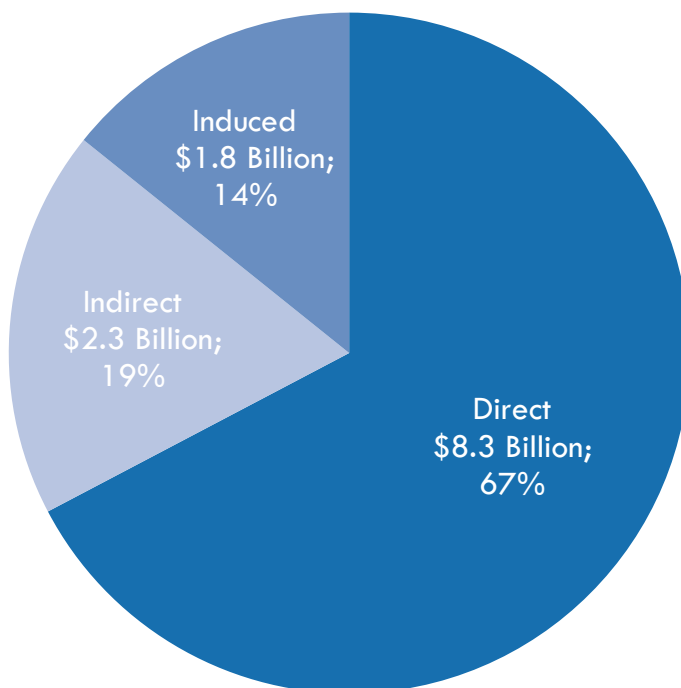
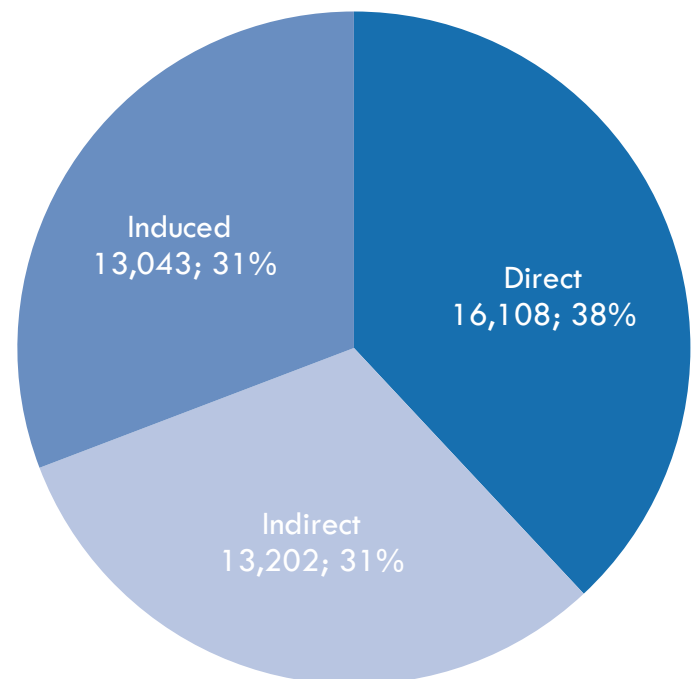


Exhibit 9: Total Employment Impacts¹⁴



¹³ IMPLAN is input-output modeling system used to conduct economic analysis.

¹⁴ IMPLAN: 2013 data supplemented with EMSI data.

ECONOMIC IMPACT

The Advanced Manufacturing cluster contributes a total of \$12.4 billion in output, more than 42,000 jobs and \$3.3 billion in labor income. Exhibit 10 breaks down the employment impacts by each subsector within the Advanced Manufacturing cluster and by output, employment, and labor income (which includes all forms of employment income, including employee compensation and proprietor income). With about \$7.1 billion in output, 23,000 jobs, and \$1.9 billion in labor income, the computers and electronics subsector, by far, accounts for the largest share of the cluster's total economic impacts while the plastics subsector has the smallest share.

Exhibit 10: Total Economic Impacts by Cluster Subsector¹⁵

	Direct	Indirect	Induced	Total
Output				
Total	\$8,347,285,605	\$2,291,152,989	\$1,765,912,765	\$12,404,351,359
Aerospace	\$757,451,735	\$149,331,040	\$219,653,590	\$1,126,436,365
Chemical	\$684,756,534	\$180,982,176	\$81,623,742	\$947,362,451
Computers & Electronics	\$4,752,630,388	\$1,342,687,005	\$1,044,749,216	\$7,140,066,609
Machinery	\$1,027,404,219	\$276,375,394	\$215,496,190	\$1,519,275,803
Plastics	\$231,389,984	\$52,409,098	\$38,065,334	\$321,864,415
Transportation	\$893,652,746	\$289,368,276	\$166,324,693	\$1,349,345,715
Employment				
Total	16,108	13,202	13,043	42,353
Aerospace	2,084	848	1,622	4,554
Chemical	680	994	603	2,277
Computers & Electronics	7,666	7,605	7,717	22,988
Machinery	3,357	1,710	1,592	6,658
Plastics	690	308	281	1,279
Transportation	1,631	1,737	1,229	4,596
Total Labor Income				
Total	\$1,891,401,897	\$798,205,403	\$597,013,936	\$3,286,621,236
Aerospace	\$276,493,645	\$59,169,162	\$74,253,710	\$409,916,516
Chemical	\$62,219,040	\$62,245,734	\$27,594,309	\$152,059,083
Computers & Electronics	\$1,130,725,534	\$459,711,044	\$353,209,954	\$1,943,646,532
Machinery	\$230,027,954	\$97,913,785	\$72,855,596	\$400,797,335
Plastics	\$40,220,556	\$17,761,606	\$12,868,960	\$70,851,122
Transportation	\$151,715,169	\$101,404,071	\$56,231,407	\$309,350,647

¹⁵ IMPLAN, 2013 data supplemented with EMSI data.

ECONOMIC LEAKAGE

Supply chain leakage is a primary factor in determining the value of an industry multiplier used to define the total “ripple effect” of that industry cluster. Stronger supply chain linkages, better described as a cluster using more locally sourced products and services, has a reciprocal benefit of lower leakage, increasing the multiplier and the total impact on the surrounding economy.

It was determined through an in-depth analysis of the advanced manufacturing industry cluster and its subsets, that there is a relatively high level of supply chain leakage, roughly 68 percent. Conversely, 32 percent of goods and services supporting the industry cluster are purchased within the region.¹⁶

CHALLENGES AND OPPORTUNITIES

The manufacturing sector has had a tumultuous history in the Sacramento Capital region. To encourage growth, the Advanced Manufacturing cluster must address a variety of challenges, from navigating a complex regulatory environment to developing strategies to compete with low-cost economies. National, state and local legislators can support the cluster by developing and adopting policies that eliminate barriers to success, creating incentives for local production, and reducing supply chain leakage. This section of the report reviews some of the cluster’s major challenges, as well as a few opportunities that may help drive regional growth in the future.

Challenges

There are a number of factors that have inhibited the manufacturing sector’s ability to compete locally and internationally. Some of these challenges include:

- **Complex regulatory environment.** Employers have communicated that California’s complex regulatory climate is difficult, expensive and time-consuming to navigate, such as conducting environmental impact studies or obtaining permits.
- **International competition from low-cost economies** such as China, Singapore, South Korea, Russia, etc. According to a recent study, California manufacturing firms have:¹⁷
 - Higher health care expenditures compared to countries where health care is paid for by general tax revenues;
 - Higher salaries and other benefits, such as paid leave, insurance, and retirement plans;
 - Higher costs associated with litigation claims;
 - Higher costs associated with environmental compliance;
 - Higher corporate tax rates than most other countries (the tax rate in the United States is 40 percent, the second highest tax rate among major trading partners).
- **U.S. competition.** In addition to international competition, California-based manufacturers are targets of state government programs to recruit manufacturers from California through incentive and off-set programs. These programs target high wage jobs that will most likely not return to California.
- **U.S. high school students lag** behind in math and science based on Program for International Student Assessment (PISA) test scores.¹⁸
- **U.S. manufacturers report a shortage of skilled production workers** (machinists, operators, craft workers, etc.) which is hindering their ability to expand operations or improve productivity.¹⁹

¹⁶ IMPLAN, 2013 data supplemented with EMSI data.

¹⁷ The Facts About Modern Manufacturing, 9th Edition, Manufacturing Institute, Manufacturers Alliance for Productivity and Innovation (MAPI), and National Association of Manufacturers.

¹⁸ Manufacturing 2.0: A More Prosperous California, Milken Institute.

¹⁹ Boiling Point? The Skills Gap in U.S. Manufacturing, Deloitte and Manufacturing Institute.

CHALLENGES AND OPPORTUNITIES



Opportunities

Competition from low-cost economies is one of the major challenges faced by the manufacturing sector. However, the total cost of outsourcing to other countries is often miscalculated. According to the Reshore Initiative, the sticker price provided by out-of-the-country manufacturing firms does not include costs associated with:

- National policy issues (trade negotiations, etc.)
- Changes in currency exchange rates
- Trade secret thefts
- Supply chain disruptions
- Lengthy delivery times
- Traveling to the manufacturing site to assess and resolving production issues

Further, in the last few years many countries have started to raise their prices to adjust for increases in wages and higher transportation/fuel expenses in their own country. By examining the total cost of outsourcing, the Reshore Initiative argues that hiring local production firms is just as price-sensitive as hiring firms from low-cost economies. Also, there are several benefits to working local, such as

- Improved quality and consistency of inputs;
- Ability to create just-in-time operations that reduce costs and improve business-to-business relations;
- A reduction of issues related to securing intellectual property;²⁰ and,
- Good public relations/marketing for “made in America” goals. As this viewpoint gains popularity, it may shift production back to the United States, creating jobs in the process.

The Sacramento Capital region offers several benefits to businesses that choose to locate their facilities in the region. Compared to other regions in the state, the Sacramento Capital region offers a lower cost of operations, lower cost of housing for employees, access to the Port of West Sacramento, Interstate 5 and Interstate 80 to keep shipping costs low, and access to local universities and colleges with established engineering programs to support research and development, as well as workforce needs. In addition, some manufacturers may find it beneficial to be located near the state’s capital to influence policy and regulatory issues.

²⁰ The Reshore Initiative: <http://www.reshorenw.org/>

OCCUPATION OVERVIEW

Staffing patterns were utilized to identify the top 15 occupations in the Advanced Manufacturing cluster. Occupations selected for inclusion in the study had to meet the following criteria:

- Cluster businesses employ 100 or more workers in the occupation.
- The percent of total jobs employed by the cluster is significant.
- The minimum education requirement is a high school diploma plus on-the-job training, postsecondary award, associate degree, or bachelor's degree.

Exhibit 11 displays the top occupations that meet the criteria, sorted by percent employed by cluster. As shown, the majority of semiconductor processors are employed by the advanced manufacturing sector, followed by computer-controlled machine tool operators and machinists. This report provides occupational data across all industries to provide a complete picture of the employment demand. Training requirements may vary depending on the industry that employs the occupation.

Exhibit 11: Top 15 Occupations, 2014²¹

SOC	Description	Percent Employed by Cluster	Percent Employed by All Other Industries
51-9141	Semiconductor Processors	86%	14%
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	73%	27%
51-4041	Machinists	54%	46%
17-2061	Computer Hardware Engineers	47%	53%
51-9011	Chemical Equipment Operators and Tenders	45%	55%
17-2112	Industrial Engineers	35%	65%
17-2011	Aerospace Engineers	28%	72%
11-3051	Industrial Production Managers	26%	74%
17-3023	Electrical and Electronics Engineering Technicians	26%	74%
17-2141	Mechanical Engineers	23%	77%
51-4121	Welders, Cutters, Solderers, and Brazers	21%	79%
17-2071	Electrical Engineers	21%	79%
51-1011	First-Line Supervisors of Production and Operating Workers	17%	83%
17-2072	Electronics Engineers, Except Computer	17%	83%

OCCUPATION DEMAND

Exhibit 12 displays the employment demand for the top occupations, across all industries. For each occupation, replacement estimates include retirements and general separations, but not turnover within the occupation. As such, replacements and new job growth combined is a good measure of demand for workers.

First-line supervisors of production and operating workers is the largest occupation in the group with the most annual openings over the next five years. Electrical engineers as well as welders are also large occupations with significant annual openings created by new job growth and replacement needs. Semiconductor processors is the only occupation in the group projected to decline; with a loss of three jobs over five years. While there is no new job growth for this occupation, there is a demand for replacement workers.

²¹ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

OCCUPATION DEMAND

Exhibit 12: Employment Outlook, 2014–2019²²

Description	2014 Jobs	2019 Jobs	2014–2019 Change	2014–2019 % Change	Total Replacements	Total Openings	Annual Openings
First-Line Supervisors of Production and Operating Workers	2,200	2,268	68	3%	192	260	52
Electrical Engineers	1,515	1,648	133	9%	178	311	62
Welders, Cutters, Solderers, and Brazers	1,389	1,503	114	8%	207	321	64
Mechanical Engineers	1,059	1,199	140	13%	199	339	68
Electronics Engineers, Except Computer	1,007	1,071	64	6%	115	179	36
Machinists	892	1,007	115	13%	123	238	48
Electrical and Electronics Engineering Technicians	811	859	48	6%	94	142	28
Computer Hardware Engineers	797	808	11	1%	134	145	29
Industrial Production Managers	681	708	27	4%	68	95	19
Industrial Engineers	542	635	93	17%	88	181	36
Aerospace Engineers	379	452	73	19%	49	122	24
Computer-Controlled Machine Tool Operators, Metal and Plastic	272	324	52	19%	43	95	19
Chemical Equipment Operators and Tenders	271	288	17	6%	60	77	15
Semiconductor Processors	146	143	(3)	(2%)	25	25	5

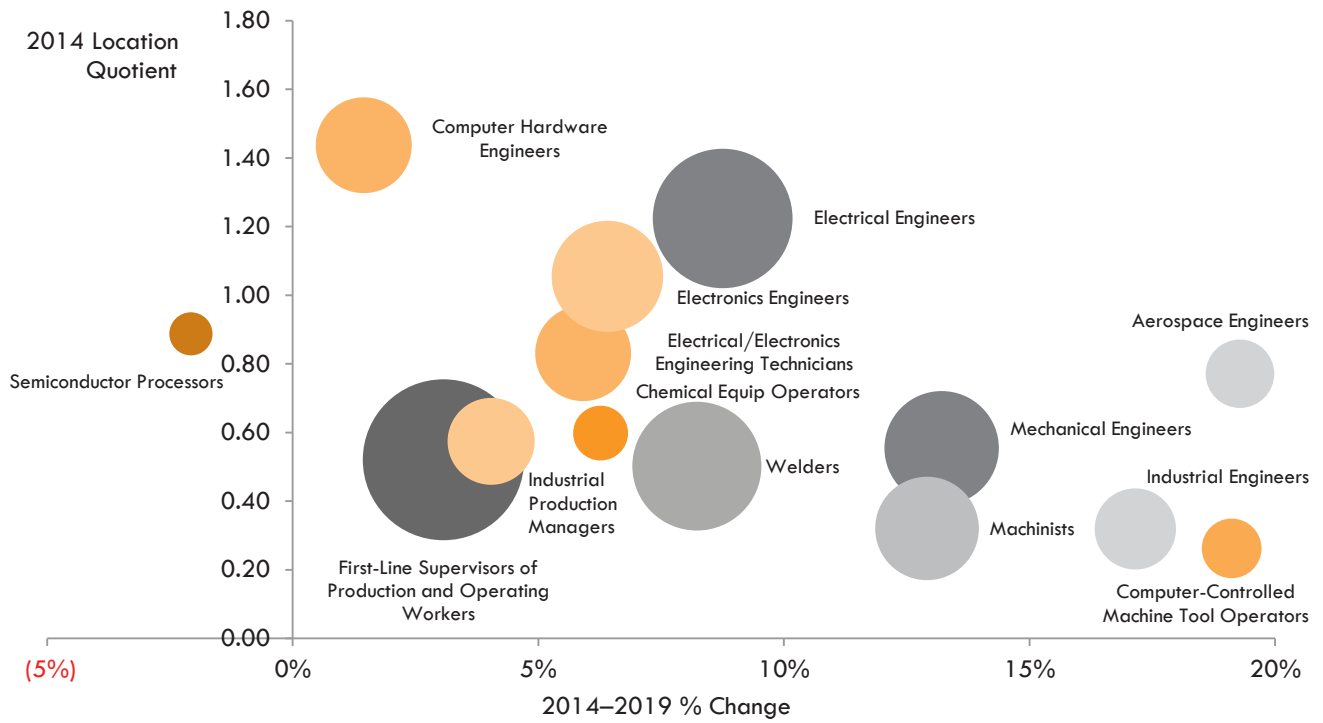
In addition to industry analysis, location quotient can also be applied to occupations. In this case, the location quotient compares an occupation's total employment in a region relative to the state's total employment for that occupation. A location quotient of less than one indicates a lower concentration of employment for that occupation in the region than in the state overall. A location quotient of more than one indicates a higher concentration of employment for the occupation than in the state overall.

The bubble chart on the following page compares the concentration of occupation employment to the projected five-year growth rate in the region, where the size of the bubble indicates the total number of jobs for each occupation. As shown below, the majority of advanced manufacturing occupations have a location quotient less than one, indicating a lower concentration of employment than in other regions of the state. Relative to the other occupations in the group, aerospace engineers, industrial engineers and computer-controlled machine tool operators are relatively small occupations with aggressive projected growth rates. Electrical engineers, mechanical engineers and machinists are mid-size occupations with moderate projected growth rates. First-line supervisors of production and operating workers is the largest occupation in the group with a modest projected growth rate.

²² EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

OCCUPATION DEMAND

Exhibit 13: Growth Rate vs. Occupation Concentration²³

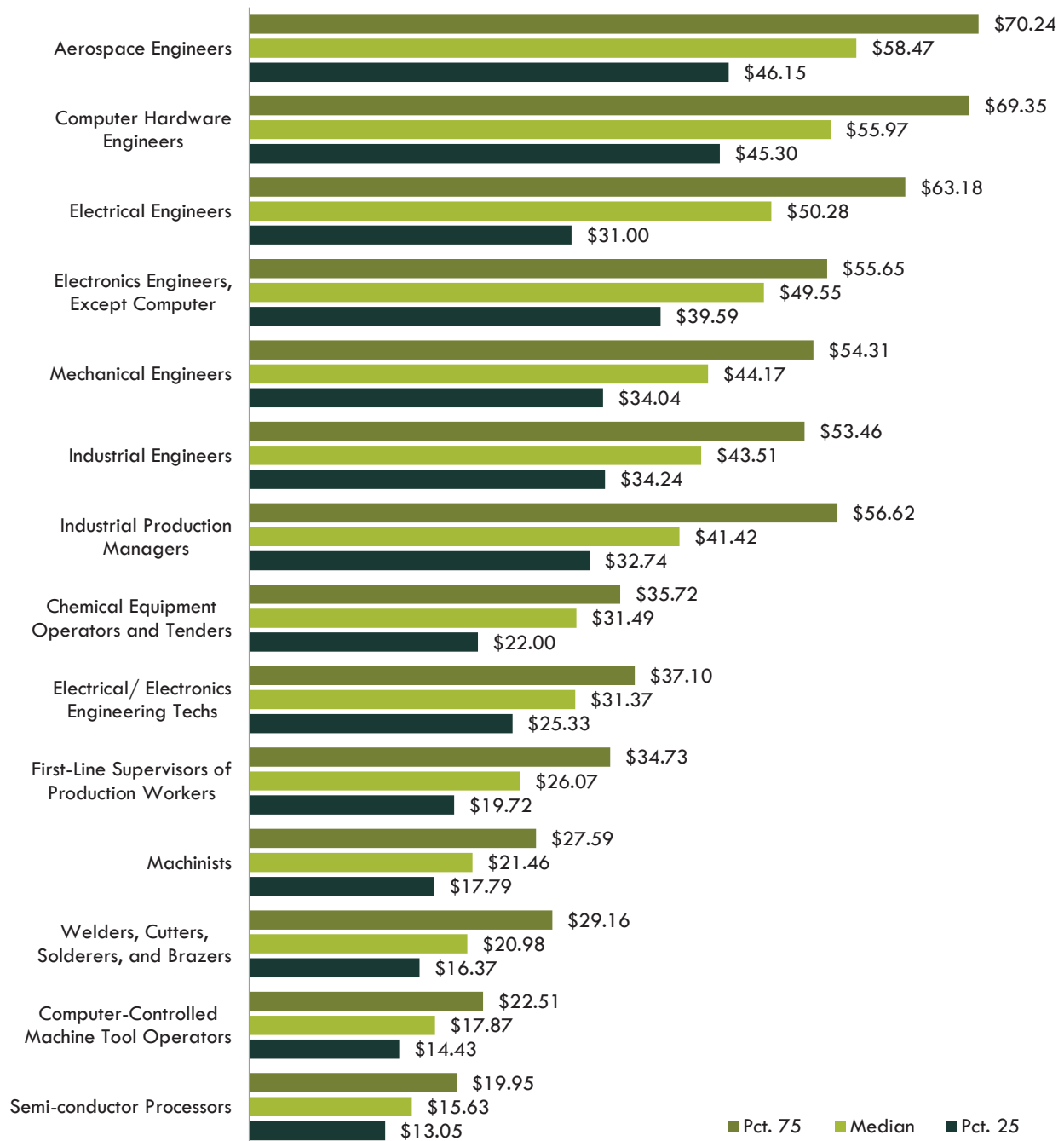


²³ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

OCCUPATIONAL WAGES

The majority of occupations in the Advanced Manufacturing cluster earn wages above the regional median wage. Aerospace engineers is the highest paid occupation, followed by computer hardware engineers and electrical engineers. The lowest paid occupations in the group include semi-conductor processors, computer-controlled machine tool operators and welders. The median hourly wage across all occupations in the Sacramento Capital region is \$22.69 per hour.

Exhibit 14: Hourly Wages, 2015²⁴



²⁴ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

EDUCATION ASSESSMENT

This section provides an overview of the educational programs that support occupations in the Advanced Manufacturing cluster in the Sacramento Capital region. Minimum education requirements are assigned to three categories:

- **Entry-level occupations** require a high school degree plus moderate to long-term on-the-job training. In this category, employers may prefer applicants if they have a formal education, such as a certificate or degree.
- **Mid-level occupations** require postsecondary training, certificate or associate degree.
- **Advanced-level occupations** require a bachelor's degree. Most of these positions do not require related work experience.

Exhibit 15 identifies the minimum education requirements for the top 15 occupations in the Advanced Manufacturing cluster by education category.

Exhibit 15: Minimum Education Requirements

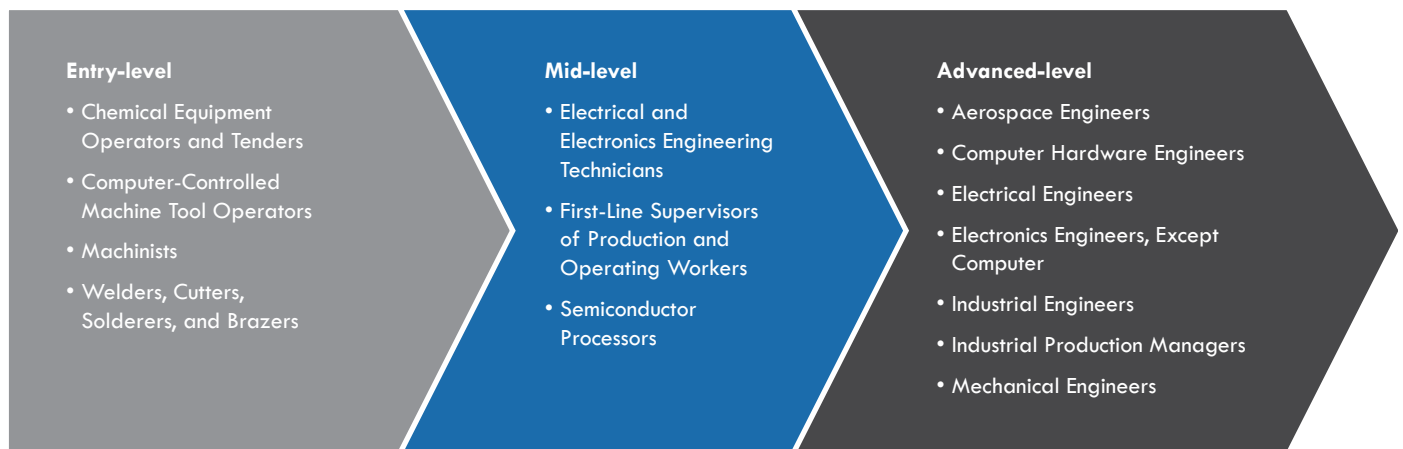


Exhibit 16 lists the colleges and programs with certificate and degree programs that provide a workforce pipeline to the Advanced Manufacturing cluster. The table organizes the programs by category: entry-level, mid-level and advanced-level. There are six programs in the entry-level occupation group, conferring 110 certificates and associate degrees annually. The welding program directly prepares for careers as welders, cutters, solderers and brazers. The manufacturing and industrial technology program provides a range of educational pathway options. There are no training programs for chemical equipment operators and tenders, computer-controlled machine tool operators or machinists.

Three public community colleges and two private education institutions provide training programs that support the mid-level occupation group. Combined, these education institutions confer an average of 345 certificates and associate degrees annually. The electronics and electric technology program prepares students for electrical and electronics engineering technicians, while industrial electronics is aligned with the semiconductor processors occupation.

There are three universities (two public, one private) with training programs that support the advanced-level occupation group. Combined, these education institutions confer an average of 825 bachelor's, master's, and PhD degrees annually. With the exception of industrial engineers, there is a training program that directly prepares students for each of the occupations in the advanced-level occupation group.

The total certificates and degrees conferred provide some information about the supply of workers to an industry or cluster. However, it is limited in that there are several unknown variables that impact the supply, such as migration trends, employer preferences, worker preparedness, and graduate/completion duplication.

EDUCATION ASSESSMENT

Exhibit 16: Advanced Manufacturing Education Programs & Awards, Sacramento Capital Region^{25&26}

Category	College/Program	Award Type	3-Year Average Certificate/Degrees Conferred
Entry-Level Occupations	American River College, Welding Technology	Associate of Science, Certificate	66
	Cosumnes River College, Welding Technology	Certificate	2
	Sierra College, Welding Technology	Certificate	18
	Sierra College, Manufacturing and Industrial Technology	Associate of Science, Associate of Arts, Certificate	12
	Yuba College, Welding Technology	Associate of Science, Certificate	11
	Yuba College, Manufacturing and Industrial Technology	Associate of Science	1
Mid-Level Occupations	American River College, Electronics and Electric Technology	Associate of Science, Certificate	188
	American River College, Industrial Electronics	Certificate	3
	Sacramento City College, Electronics and Electric Technology	Associate of Science, Certificate	9
	Sierra College, Electronics and Electric Technology	Associate of Science, Certificate	1
	Sierra College, Industrial Electronics	Associate of Science, Associate of Arts, Certificate	78
	Charles A Jones Career and Education Center, Electrical and Electronic Engineering Technologies/Technicians	Certificate	29
	ITT Technical Institute-Rancho Cordova, Electrical, Electronic and Communications Engineering Technology/Technician	Associate	37
Advanced Occupations	University of California-Davis, Aerospace, Aeronautical and Astronautical/Space Engineering	Bachelor's degree	50
	University of California-Davis, Computer Engineering, General	Bachelor's degree	52
	California State University-Sacramento, Computer Engineering, General	Bachelor's degree, Master's degree	22
	University of California-Davis, Computer Science	Bachelor's degree, Master's degree, PhD	152
	California State University-Sacramento, Computer Science	Bachelor's degree, Master's degree	82
	California State University-Sacramento, Electrical and Electronics Engineering	Bachelor's degree, Master's degree	97
	University of California-Davis, Electrical and Electronics Engineering	Bachelor's degree, Master's degree, PhD	45
	University of Phoenix-Sacramento Valley Campus, Operations Management and Supervision	Bachelor's degree	0
	California State University-Sacramento, Mechanical Engineering	Bachelor's degree, Master's degree	110
	University of California-Davis, Mechanical Engineering	Bachelor's degree, Master's degree, PhD	215

²⁵ California Community College Chancellor's Office Data Mart. National Center for Education Statistics (NCES). Higher education institutions are required to report completion data to NCES if they participate in any federal financial assistance program authorized by Title IV of the Higher Education Act. Completion data not reported to the NCES or CCCCO Data Mart were not included in the estimate.

²⁶ The 3-year average includes academic years 2011-12, 2012-13 and 2013-14.

SKILLS ASSESSMENT

Exhibit 17 displays the top skills and professional credentials for the Advanced Manufacturing cluster occupations selected for inclusion in this study. The data is based on analysis of job posting data, aggregated by Burning Glass. This online tool uses intelligent “spidering” to search the Internet for job listings, removes duplication, and aggregates the data into a search database. As shown below, most of the skills/knowledge areas are specialized and require specific training and/or certification.

Exhibit 17: Skill and Professional Credential Preferences, Advanced Manufacturing Cluster Occupations²⁷

Occupation	Top Skill/Knowledge Areas	Top Certifications/ Professional Credentials
Aerospace Engineers	Computer aided drafting/design (CAD), CATIA, systems engineering, physics, validation, product development, mathematics & chemistry	Federal Aviation Administration (FAA) Certification
Chemical Equipment Operators and Tenders	Forklift operation, inspection, machinery cleaning, chemical reactions and international traffic in arms regulations	Forklift Operator Certification
Computer Hardware Engineers	Electrical engineering, hardware design, validation, verilog, simulation, C++, debugging, concept development, PCB layout and design, oscilloscopes and product design	None Listed
Computer-Controlled Machine Tool Operators, Metal and Plastic	Computer Numerical Control (CNC), inspection, machine operation, machining, lathes, capability maturity model (CMM), micrometers, blueprints, calipers and mathematics	None Listed
Electrical and Electronics Engineering Technicians	Repair, test equipment, schematic diagrams, calibration, oscilloscopes, inspection, soldering, robotics, wiring, and programmable logic controller programming	None Listed
Electrical Engineers	Simulation, AutoCAD, electrical design, computer aided drafting/design (CAD), electrical systems, validation, schematic diagrams, programmable logic controller (PLC) programming	Professional Engineer, Leadership in Energy and Environmental Design (LEED), Engineer in Training Certification
Electronics Engineers, Except Computer	Simulation, test equipment, radio frequency engineering, circuit design, optimization, product development, C++, MATLAB	None Listed
First-Line Supervisors of Production and Operating Workers	Scheduling, merchandising, process improvement, administrative functions, loss prevention, payroll administration, inspection of packages, access and/or egress control, and forklift operation	Forklift Operator Certification
Industrial Engineers	Inspection, six sigma, validation, medical device, process improvement, product development, manufacturing processes, process control, failure modes and effective analysis, packaging, ISO 9001 standards, and JAVA	Certified Qualified Engineer, American Society for Quality (ASQ) Certification, Six Sigma Certification
Industrial Production Managers	Inspection, scheduling, good management practices (GMP), process improvement, six sigma, manufacturing processes, validation, lean manufacturing, collaboration, packaging, and product development	Six Sigma Certification, Quality Management Certification
Machinists	Machining, computer numerical control (CNC), lathes, inspection, blueprints, dimensions, mathematics, and micrometers	None Listed
Mechanical Engineers	Computer aided drafting/design (CAD), mechanical design, product development, validation, manufacturing processes, AutoCAD, HVAC, product design, and concept development	American Society of Mechanical Engineers (ASME) Certified, Professional Engineer
Semiconductor Processors	Inspection, process equipment, clean room experience, physics	None Listed
Welders, Cutters, Solderers, and Brazers	TIG welding, blueprints, MIG welding, inspection, inventory maintenance, hand tools, power tools, Arc welding, and flux core welding	Welding Certification (e.g. AWS Certified Welder)

²⁷ Burning Glass, 2015.

SUMMARY

Advanced manufacturing is a process that integrates the coordinated use of information, automation, software, sensing and networking to improve the efficiency and reduce costs of manufacturing. Although advanced manufacturing methods may be utilized by any manufacturing industry, high use of these methods tends to cluster in the following subsectors: aerospace, chemical, computers/electronics, machinery, plastics production and transportation manufacturing.

In 2014, there were about 16,100 advanced manufacturing jobs, 42 percent of the total manufacturing employment and 1.5 percent of the total employment in the Sacramento Capital region. The majority of advanced manufacturing jobs were in computer and electronic product manufacturing, machinery and aerospace. Over the next five years, the Advanced Manufacturing cluster is projected to grow moderately about five percent. Overall, the Advanced Manufacturing cluster provides above average earnings compared to the average earnings across all industries in the Sacramento Capital region.

Fifteen (15) occupations were selected for inclusion based on three criteria: (1) cluster businesses employ 100 or more workers in the occupation, (2) the percent of total jobs employed by the cluster is significant, and (3) the minimum education requirement is a postsecondary award, associate degree, bachelor's degree or high school diploma plus on-the-job training. As these occupations are also employed by other industries (beyond the Advanced Manufacturing cluster), occupational data across all industries was provided for a complete picture of the employment demand.

Over the next five years, the top occupations in the Advanced Manufacturing cluster are projected to grow by 8 percent, adding over 190 new jobs and need about 315 replacement jobs annually. The majority of these occupations earn wages above the regional average. The minimum education requirements range from a high school degree plus on-the-job training to postsecondary training and associate degree to bachelor's degree. For the occupations that require a minimum of a high school degree plus on-the-job training, many employers prefer applicants if they have a formal education, such as a certificate or degree.

In the Sacramento Capital region, there are 10 education institutions supporting the advanced manufacturing occupations selected for this study. Key findings from the education assessment include:

- Four education institutions, conferring 110 certificates and associate degrees annually, support occupations in the entry-level group (i.e. minimum education is a high school degree plus on-the-job training).
- Three education institutions, conferring 345 certificates and associate degrees, provide training programs that support the mid-level occupation group (i.e. minimum education is postsecondary training, certificate or associate degree).
- Three education institutions, conferring 825 bachelor's, master's, and PhD degrees annually, have training programs that support the advanced-level occupation group.
- There are no specific training programs for chemical equipment operators, computer-controlled machine tool operators, machinists or industrial engineers. However, employers may accept other certificates/degrees when evaluating candidates for these positions.

From a high level supply and demand assessment, it appears that the region's education institutions are preparing more graduates than needed to support the top 15 occupations in the Advanced Manufacturing cluster. However, an actual oversupply may not be occurring due to unknown variables impacting the supply of workers in the region. For example, many graduates from four-year engineering programs do not stay in the region, but rather migrate to other areas to find their first job. In addition, graduate/completion duplication occurs when a student obtains more than one degree or certificate in the same year. Further, some students pursue additional education upon completion of a degree or certificate (i.e. transfer from a community college to a four-year program). Lastly, the identified educational training programs may crosswalk to occupations in other industry clusters, such as information and communication technologies (ICT). These factors inflate the total supply estimates, making it appear larger than it is.

SUMMARY

Valley Vision, along with the Center of Excellence and other partners, will be conducting forums with advanced manufacturing employers to review the cluster findings, high priority occupation and skills gaps that can be addressed through a concerted cluster workforce action plan. Priorities that may be elevated based on this analysis include:

1. Develop or expand training programs for machinist and computer-controlled machine tool operators. These programs have high projected growth and replacement needs, and no discernible education programs in the region exist.
2. Identify engineering specialties that are the most difficult to fill. Determine strategies to recruit engineers with specific specialties from outside the area.
3. Conduct primary research to assess potential skill gaps in existing training programs. Partner with regional employers and education institutions to identify skill requirements and competencies, and to close skills gaps.
4. Incorporate training to prepare students for the professional credential/certificates most in demand, such as Certified Qualified Engineer, American Society for Quality (ASQ) Certification, and Six Sigma Certification.



APPENDIX A: ADVANCED MANUFACTURING CLUSTER DEFINITION



The Advanced Manufacturing cluster is comprised of the following NAICS codes.

Aerospace

- 336411 Aircraft Manufacturing
- 336412 Aircraft Engine and Engine Parts Manufacturing
- 336413 Other Aircraft Parts and Auxiliary Equipment Manufacturing
- 336414 Guided Missile and Space Vehicle Manufacturing
- 336415 Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing
- 336419 Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing
- 334511 Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing

Chemical Manufacturing

- 325110 Petrochemical Manufacturing
- 325120 Industrial Gas Manufacturing
- 325130 Synthetic Dye and Pigment Manufacturing
- 325180 Other Basic Inorganic Chemical Manufacturing

- 325193 Ethyl Alcohol Manufacturing
- 325194 Cyclic Crude, Intermediate, and Gum and Wood Chemical Manufacturing
- 325199 All Other Basic Organic Chemical Manufacturing
- 325212 Synthetic Rubber Manufacturing
- 325220 Artificial and Synthetic Fibers and Filaments Manufacturing
- 325311 Nitrogenous Fertilizer Manufacturing
- 325312 Phosphatic Fertilizer Manufacturing
- 325314 Fertilizer (Mixing Only) Manufacturing
- 325320 Pesticide and Other Agricultural Chemical Manufacturing
- 325510 Paint and Coating Manufacturing
- 325520 Adhesive Manufacturing
- 325611 Soap and Other Detergent Manufacturing
- 325612 Polish and Other Sanitation Good Manufacturing
- 325613 Surface Active Agent Manufacturing
- 325620 Toilet Preparation Manufacturing
- 325910 Printing Ink Manufacturing
- 325920 Explosives Manufacturing

APPENDIX A: ADVANCED MANUFACTURING CLUSTER DEFINITION

325992 Photographic Film, Paper, Plate, and Chemical Manufacturing

325998 All Other Miscellaneous Chemical Product and Preparation Manufacturing

Computers & Electronics

334111 Electronic Computer Manufacturing

334112 Computer Storage Device Manufacturing

334118 Computer Terminal and Other Computer Peripheral Equipment Manufacturing

334210 Telephone Apparatus Manufacturing

334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing

334290 Other Communications Equipment Manufacturing

334310 Audio and Video Equipment Manufacturing

334412 Bare Printed Circuit Board Manufacturing

334413 Semiconductor and Related Device Manufacturing

334416 Capacitor, Resistor, Coil, Transformer, and Other Inductor Manufacturing

334417 Electronic Connector Manufacturing

334418 Printed Circuit Assembly (Electronic Assembly) Manufacturing

334419 Other Electronic Component Manufacturing

334513 Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables

334514 Totalizing Fluid Meter and Counting Device Manufacturing

334515 Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals

334613 Blank Magnetic and Optical Recording Media Manufacturing

334614 Software and Other Prerecorded Compact Disc, Tape, and Record Reproducing

335311 Power, Distribution, and Specialty Transformer Manufacturing

335312 Motor and Generator Manufacturing

335313 Switchgear and Switchboard Apparatus Manufacturing

335314 Relay and Industrial Control Manufacturing

335911 Storage Battery Manufacturing

335912 Primary Battery Manufacturing

335921 Fiber Optic Cable Manufacturing

335929 Other Communication and Energy Wire Manufacturing

335931 Current-Carrying Wiring Device Manufacturing

335932 Noncurrent-Carrying Wiring Device Manufacturing

335991 Carbon and Graphite Product Manufacturing

335999 All Other Miscellaneous Electrical Equipment and Component Manufacturing

511210 Software Publishers

Machinery

332710 Machine Shops

333111 Farm Machinery and Equipment Manufacturing

333112 Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing

333120 Construction Machinery Manufacturing

333131 Mining Machinery and Equipment Manufacturing

333132 Oil and Gas Field Machinery and Equipment Manufacturing

333241 Food Product Machinery Manufacturing

333242 Semiconductor Machinery Manufacturing

333243 Sawmill, Woodworking, and Paper Machinery Manufacturing

333244 Printing Machinery and Equipment Manufacturing

333249 Other Industrial Machinery Manufacturing

333314 Optical Instrument and Lens Manufacturing

333316 Photographic and Photocopying Equipment Manufacturing

333318 Other Commercial and Service Industry Machinery Manufacturing

APPENDIX A: ADVANCED MANUFACTURING CLUSTER DEFINITION

333413 Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing

333414 Heating Equipment (except Warm Air Furnaces) Manufacturing

333415 Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing

333511 Industrial Mold Manufacturing

333514 Special Die and Tool, Die Set, Jig, and Fixture Manufacturing

333515 Cutting Tool and Machine Tool Accessory Manufacturing

333517 Machine Tool Manufacturing

333519 Rolling Mill and Other Metalworking Machinery Manufacturing

333611 Turbine and Turbine Generator Set Units Manufacturing

333612 Speed Changer, Industrial High-Speed Drive, and Gear Manufacturing

333613 Mechanical Power Transmission Equipment Manufacturing

333618 Other Engine Equipment Manufacturing

333911 Pump and Pumping Equipment Manufacturing

333912 Air and Gas Compressor Manufacturing

333913 Measuring and Dispensing Pump Manufacturing

333921 Elevator and Moving Stairway Manufacturing

333922 Conveyor and Conveying Equipment Manufacturing

333923 Overhead Traveling Crane, Hoist, and Monorail System Manufacturing

333924 Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing

333991 Power-Driven Handtool Manufacturing

333992 Welding and Soldering Equipment Manufacturing

333993 Packaging Machinery Manufacturing

333994 Industrial Process Furnace and Oven Manufacturing

333995 Fluid Power Cylinder and Actuator Manufacturing

333996 Fluid Power Pump and Motor Manufacturing

333997 Scale and Balance Manufacturing

333999 All Other Miscellaneous General Purpose Machinery Manufacturing

Plastics

325211 Plastics Material and Resin Manufacturing

325991 Custom Compounding of Purchased Resins

326111 Plastics Bag and Pouch Manufacturing

326112 Plastics Packaging Film and Sheet (including Laminated) Manufacturing

326113 Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing

326121 Unlaminated Plastics Profile Shape Manufacturing

326130 Laminated Plastics Plate, Sheet (except Packaging), and Shape Manufacturing

326140 Polystyrene Foam Product Manufacturing

326150 Urethane and Other Foam Product (except Polystyrene) Manufacturing

326160 Plastics Bottle Manufacturing

326199 All Other Plastics Product Manufacturing

Transportation

314994 Rope, Cordage, Twine, Tire Cord, and Tire Fabric Mills

324191 Petroleum Lubricating Oil and Grease Manufacturing

326211 Tire Manufacturing (except Retreading)

326212 Tire Retreading

326220 Rubber and Plastics Hoses and Belting Manufacturing

326291 Rubber Product Manufacturing for Mechanical Use

332613 Spring Manufacturing

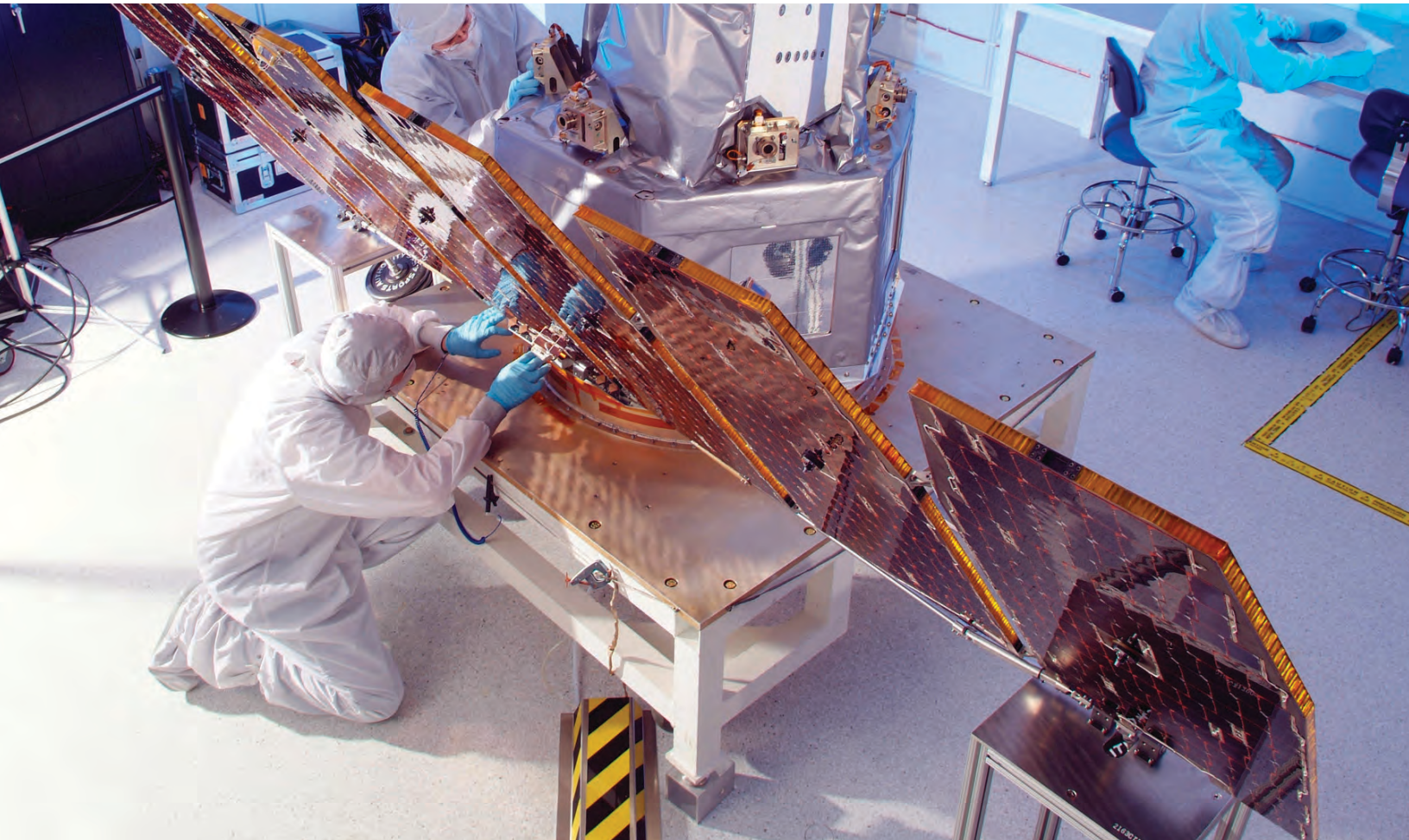
336111 Automobile Manufacturing

336112 Light Truck and Utility Vehicle Manufacturing

336120 Heavy Duty Truck Manufacturing

APPENDIX A: ADVANCED MANUFACTURING CLUSTER DEFINITION

336211 Motor Vehicle Body Manufacturing	336360 Motor Vehicle Seating and Interior Trim Manufacturing
336212 Truck Trailer Manufacturing	336370 Motor Vehicle Metal Stamping
336213 Motor Home Manufacturing	336390 Other Motor Vehicle Parts Manufacturing
336214 Travel Trailer and Camper Manufacturing	336510 Railroad Rolling Stock Manufacturing
336310 Motor Vehicle Gasoline Engine and Engine Parts Manufacturing	336611 Ship Building and Repairing
336320 Motor Vehicle Electrical and Electronic Equipment Manufacturing	336612 Boat Building
336330 Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing	336991 Motorcycle, Bicycle, and Parts Manufacturing
336340 Motor Vehicle Brake System Manufacturing	336992 Military Armored Vehicle, Tank, and Tank Component Manufacturing
336350 Motor Vehicle Transmission and Power Train Parts Manufacturing	336999 All Other Transportation Equipment Manufacturing



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The Centers of Excellence Initiative is funded in part by the Chancellor's Office, California Community Colleges, Economic and Workforce Development Program. The Centers aspire to be the leading source of regional workforce information and insight for California community colleges. More information about the Centers of Excellence is available at www.coecc.net.

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More About Valley Vision

Since 1994, Valley Vision's work has driven transformative change and improved lives across Northern California. An independent social impact and civic leadership organization headquartered in Sacramento, Valley Vision strengthens our communities through unbiased research, boundary-crossing collaboration and change leadership. Our work improves overall quality of life and creates the conditions for economic prosperity and community health and vitality.

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CLEAN ECONOMY CLUSTER: WORKFORCE NEEDS ASSESSMENT SACRAMENTO CAPITAL REGION



May 2016

Prepared by: Centers of Excellence,
Los Rios Community College District

Valley Vision

Burriss Service Group

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Economic and Workforce Development Program

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INTRODUCTION



Starting in 2008, the six-county Sacramento Capital region (El Dorado, Placer, Sacramento, Sutter, Yolo and Yuba counties) was rocked by the global recession, losing 10 percent of the region's jobs. In response, regional leaders initiated Next Economy, an action plan to accelerate job creation and new investment in six high-growth business (industry) clusters. Valley Vision, a regional civic leadership organization, managed the three-year Next Economy design, research, and implementation process on behalf of a wide range of private and public sector partners.

By the end of 2015, after a lagging recovery, the region's economy finally reached pre-recession job counts, with the unemployment rate decreasing while job growth is accelerating. Valley Vision received funding from the JPMorgan Chase Foundation to better understand how the region's key high growth industry clusters have changed since the original Next Economy research was conducted in 2012, and what new opportunities are emerging. Valley Vision is partnering with the Los Rios Center of Excellence and the Burris Service Group on this effort.

Cluster research is a widely accepted standard of practice for developing regional prosperity strategies to address multiple facets of a region's complex economy. Industry clusters reduce operating costs by shortening supply chains; increasing the flow of information regarding new business opportunities; concentrating workforce training needs in select occupations; and speeding up the identification of gaps in products or services.¹ Firms in identified clusters may also have a reduced risk of failure, as these firms are better supported by the supply chain and can respond more rapidly to shifts in the marketplace.

This report presents findings on the analysis of the Clean Economy cluster. It is one in a series of six reports covering Next Economy-identified clusters. The five other reports include Advanced Manufacturing, Education and Knowledge Creation, Food and Agriculture, Information and Communications Technologies, and Life Sciences and Health Services.² Each report, except the Clean Economy study, provides an overview of the cluster; industry trends and economic impact; overview of the top demand occupations in the cluster requiring postsecondary education or training; projected occupational demand; institutions providing related education and training; and possible workforce gaps. Due to data limitations, the Clean Economy does not include economic impact analysis or employment data for occupations that require postsecondary education. The report does include profiles of employers that represent the range of businesses in this evolving cluster. Visit valleyvision.org or coecc.net to access all of the Next Economy reports.

This research will be used to develop cluster-based workforce action plans. Valley Vision worked alongside regional education, workforce, and economic development partners to convene six cluster-based employer forums, setting priorities and developing strategies to address critical workforce gaps, better align education and workforce development resources to meet employer and workforce needs, and strengthen the regional economy overall.

¹ Cluster Manufacturing: A Supply Chain Perspective.

² Sacramento Area Council of Governments (SACOG) is the principal research for the Food and Agriculture Cluster study, which focuses primarily on industry trends.

CLUSTER DEFINITION



According to the Brookings Institute, “The Clean Economy is economic activity—measured in terms of establishments and the jobs associated with them—that produces goods and services with an environmental benefit or adds value to such products using skills or technologies that are uniquely applied to those products.” For purposes of this study:

A **Clean Establishment** is an organization that provides products and/or services that are aimed at utilizing resources more efficiently, providing renewable sources of energy, lowering greenhouse gas emissions, or otherwise minimizing environmental impact.

A **Clean Job** is an occupation that 1) directly works with policies, information, materials, and/or technologies that contribute to minimizing environmental impact, and 2) requires specialized knowledge, skills, training, or experience in these areas.

The Clean Economy cluster comprises the following six subsectors:

Energy and Resource Efficiency includes establishments that focus on making new and existing buildings resource efficient and friendly to the environment. Establishments within this subsector range from the manufacturing of more efficient products and systems, construction of new “greener” buildings and retrofitting of existing ones, as well as installation and repair of energy- and resource-efficient equipment.

Renewable Energy includes establishments that focus on producing, distributing, and installing technologies, which harness, generate, store, and distribute renewable sources of energy. Industries in this subsector include solar, wind, waste-to-energy, biofuels/biomass, hydropower, and geothermal.

Sustainable Agriculture includes establishments that utilize agriculture practices that reduce negative impacts on the environment as well as conserve resources for future generations. Establishments within this subsector include organic farming, natural pesticides, and water conservation consultation.

Advanced Transportation includes establishments that focus on the technology, manufacturing, and servicing of vehicles that run on alternative fuels, as well as the “greening” of transportation infrastructure and logistics processes.

Environmental Compliance includes organizations and governmental agencies that plan, establish, execute, and control environmental quality standards, usually in regards to air, water, land, and other environmental resources. In addition this subsector includes private establishments that provide products or services that support compliance with environmental regulations and mandates.

Recycling and Waste Reduction includes organizations that collect and sort recycled materials, reuse or remanufacture recycled materials, and/or manufacture new products with recycled materials. In addition, the subsector includes establishments that reduce and divert food waste and bio-waste from landfills.

ANALYZING THE CLEAN ECONOMY CLUSTER EXHIBIT C

The Clean Economy cluster encompasses businesses in six subsectors: Energy and Resource Efficiency, Renewable Energy, Sustainable Agriculture, Advanced Transportation, Environmental Compliance, and Recycling/Waste Reduction. Unfortunately, the North American Industry Classification System (NAICS), commonly used to define cluster activity, does not provide sufficient detail to analyze industry and employment trends in these subsectors. As a result, an adapted version of the Standard Industrial Classification (SIC) system, predecessor of the NAICS system, was used to identify industries within the Clean Economy cluster.

InfoUSA, a private business that maintains business and consumer data for research and marketing purposes, created an expanded SIC code system that can be applied to the classification of emerging industries. Using this expanded SIC code system, industries were selected for inclusion if they can be considered fully part of each subsector. **As such, this data does not represent a complete picture of the Clean Economy cluster, but rather only a small percentage of the total.** This report also relies on secondary research to evaluate the evolving nature of the Clean Economy cluster by assessing changes in the economy, emerging new technologies, environmental concerns, and policy drivers. In addition, this study highlights one organization from each subsector that is making a significant contribution to the region's economy to illustrate facets of this emerging and growing cluster.

ENERGY AND RESOURCE EFFICIENCY

Energy and Resource Efficiency represents one of the greatest total employment opportunities for the Sacramento Capital region. This subsector consists of establishments that make new and existing buildings more resource efficient and friendly to the environment. Because buildings are such a significant consumer of energy and contributor to greenhouse gas emissions, they have become a focal point for potential solutions. In 2008 and 2013, California released building efficiency standards to require buildings to be built more efficiently.

In addition to state mandates, some local home owners have taken steps to lower energy usage by taking part in incentives offered by local utility companies, such as free to low-cost energy audits and rebates for energy-efficient appliances and systems. Energy audits, like the Home Energy Rating System (HERS), are used to identify costly inefficient HVAC systems, ducts/vents, and insulation. In some cases, the cost of fixing energy-inefficient defects is minimal compared to the potential cost savings.

Local businesses have also made substantial investments in retrofitting and building structures that meet stringent energy efficiency standards established by the U.S. Green Building Council. In the Sacramento Capital region, there are more than 560 Leadership in Energy and Environmental Design (LEED) certified buildings.³ LEED certification recognizes new and existing buildings that meet rigorous energy efficiency, resource efficiency, and recycling standards. As a third-party nationally recognized organization, LEED is one of the most accepted certifying agencies of high performance, green buildings.⁴

Information and Communication Technologies (ICT) is expected to have a significant impact on the Energy and Resource Efficiency subsector. Many businesses and homes in the Sacramento Capital region have smart meters that are communicating energy data and performance information to utility companies. The next evolution is a mass adoption of smart buildings with communicating devices linked to lighting, chillers, fans, pumps, appliances, HVAC systems and other equipment. Cloud computing capabilities will further enhance remotely obtaining field data and enabling management and analysis of building systems to reduce overall energy usage and costs.⁵

³ U.S. Green Building Council, usgbc.org/projects. Accessed March 3, 2016.

⁴ <http://www.usgbc.org/leed>. Accessed April 8, 2016.

⁵ *How Information and Communications Technologies Will Change the Evaluation, Measurement, and Verification of Energy Efficiency Programs*. December 2015. American Council for an Energy-Efficient Economy (ACEEE).

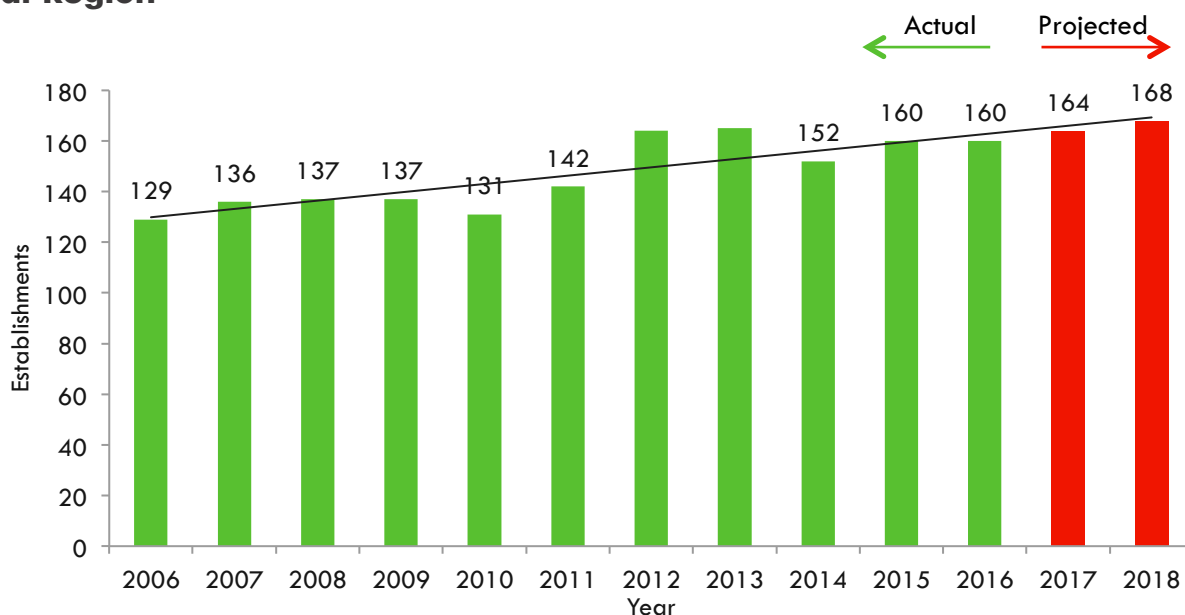
ENERGY AND RESOURCE EFFICIENCY

Exhibit 1 displays establishment and employment data for the Energy and Resource Efficiency industries as classified by the expanded SIC code system developed by InfoUSA. Over the last five years, the region has added 19 new establishments and more than 1,000 new jobs. Most of this projected growth shown in Exhibit 2 may be attributed to the energy management systems and products industry, which is composed of building contractors that specialize in retrofitting or building energy- and resource-efficient structures.

Exhibit 1: Energy and Resource Efficiency, Employment and Establishments, Sacramento Capital Region⁶

	2011 Jobs	2016 Jobs	2011–2016 Job Change	Percent Change	2016 Establishments
Energy Management Systems and Products	207	1,015	808	390%	63
Insulation Contractors-Cold & Heat	376	386	10	3%	27
Controls Control Systems/Regulators (Wholesale)	125	321	196	157%	11
Energy Conservation & Management Consultants	235	171	-64	-27%	34
Energy Conservation Products, Services, & Systems	147	150	3	2%	12
Water Conservation Products & Services	35	125	90	257%	5
Controls Control Systems/Regulators (Manufacturing)	61	43	-18	-30%	5
Energy Raters	2	4	2	100%	1
Leak Detecting Service	5	2	-3	-60%	2
Total	1,193	2,217	1,024	86%	160

Exhibit 2: Energy and Resource Efficiency, Establishments, Sacramento Capital Region⁶



⁶ ReferenceUSA: Business Database, 2016.

ENERGY AND RESOURCE EFFICIENCY

There are a range of occupations that support the Energy and Resource Efficiency subsector. Classified by the Occupational Information Network (O*NET), Exhibit 3 displays the occupations that conduct work activities that directly relate to the Energy and Resource Efficiency subsector. Significant research has been compiled about the tasks, skills, abilities, and knowledge requirements for these occupations. However, little data is available on employment estimates, replacement needs, and projections.

Occupations without O*NET codes associated with Energy and Resource Efficiency businesses include: building performance/retrofitting specialists, Home Energy Rating System (HERS) raters, and acceptance test technicians. In addition, there are several occupations that work both within traditional and energy/resource efficiency establishments. These include: building operators, construction managers, electricians, plumbers, and other specialty trade contractors.

Exhibit 3: Energy and Resource Efficiency Occupations⁷

ONET Code	Title	Description
13-1199.01	Energy Auditors	Conduct energy audits of buildings, building systems, or process systems. May also conduct investment grade audits of buildings or systems.
17-2199.03	Energy Engineers*	Design, develop, or evaluate energy-related projects or programs to reduce energy costs or improve energy efficiency during the designing, building, or remodeling stages of construction. May specialize in electrical systems; heating, ventilation, and air-conditioning (HVAC) systems; green buildings; lighting; air quality; or energy procurement.
49-9021.01	Heating and Air Conditioning Mechanics and Installers	Install, service, or repair heating and air conditioning systems in residences or commercial establishments.
47-4099.03	Weatherization Installers and Technicians	Perform a variety of activities to weatherize homes and make them more energy efficient. Duties include repairing windows, insulating ducts, and performing heating, ventilating, and air-conditioning (HVAC) work. May perform energy audits and advise clients on energy conservation measures.

* Employers who participated in the Clean Economy forum indicated that they have experienced difficulty finding qualified applicants for this occupation.



⁷ Occupation Information Network (O*NET): www.onetonline.org. Accessed March 3, 2016.

ENERGY AND RESOURCE EFFICIENCY

In the Sacramento Capital region, there are seven education institutions that offer training programs that support the Energy and Resource Efficiency subsector, as shown in Exhibit 4.

Exhibit 4: Energy and Resource Efficiency Education Programs, Sacramento Capital Region

College/University/ Training Center	Name of Program	Award(s)
Center for Employment & Training (CET)	HVAC Technician & Green Technology	Certificate
Charles A. Jones Career and Education Center	HVAC&R Maintenance Technology/Technician	Certificate
Cosumnes River College	Construction, Building Performance and Energy Assessment	A.S. Degree, Certificate
Cosumnes River College	Green Buildings: Environmental Design, Energy Management and Performance Based Construction	Certificate
Sacramento City College	Commercial Building Energy Auditing and Commissioning Specialist	Certificate
Sacramento City College	HVAC Systems Design CADD	A.S. Degree, Certificate
Sacramento City College	Mechanical (HVAC/Plumbing Systems)	A.S. Degree, Certificate
San Joaquin Valley College	HVAC Technology	Associate Degree
Sierra College	Energy Technology	A.S. Degree
Sierra College	Energy Technology	Certificate
Twin Rivers Adult School	HVAC&R Maintenance Technology/Technician	Certificate
UC Davis Extension	Green Building and Sustainable Design	Professional Concentration
UC Davis Extension	Sustainability and the Built Environment	Certificate

Business Spotlight: E3 CA, Inc.

E3 CA, Inc. provides all types of compliance inspections for LEED and other building code programs, as well as commissioning in the design and construction process for new buildings and diagnostic testing for commercial and multifamily/mixed-use buildings. The company has continued to grow since it was founded in 2007 from two to 14 employees today. In the past four years, E3 CA, Inc. has inspected nearly 1,000 buildings and 60,000 units.

According to the President/CEO of E3 CA, Inc., California building codes and standards are driving demand for their services. As California moves to net-zero energy requirements over the next 15 years, E3 CA, Inc. anticipates that there will be a shortage of energy auditors and building performance contractors. The company is eager to partner with the region's community colleges to develop a pipeline of qualified and trained applicants entering the field.⁸

⁸ Interview with E3 CA, Inc., Tommy Young, President/CEO. www.e3cainc.com. April 11, 2016.

RENEWABLE ENERGY

Renewable Energy represents a substantial number of employment opportunities for the Sacramento Capital region. This subsector comprises establishments that are involved in renewable energy generation including solar, wind, geothermal, hydroelectric, and biomass. Solar is projected to have the largest number of jobs in the region with SolarCity, Sunrun and other solar-related businesses headquartered in the region.

The solar industry has expanded rapidly over the last few years due to the federal Investment Tax Credit (ITC) and improved quality of solar panels. The ITC has largely been responsible for the fast pace of solar installations in both residential and commercial projects. In December 2015, Congress extended the 30 percent ITC for project costs, with a multi-year phase down through 2023. The renewal of this policy is expected to continue to support revenue streams and job creation throughout California and the nation.⁹

New, improved technology for solar panels is producing greater efficiency gains. Many of today's solar panels have an aperture efficiency of 22 percent. In addition, there are prototype solar panels that have shown to be more than 40 percent efficient in a laboratory environment. As these new panels are introduced to the marketplace, the return on investment for commercial and residential consumers will be significantly improved.

Exhibit 5 displays establishment and employment data for Renewable Energy industries as classified by SIC codes at the eight-digit level. Unfortunately, this exhibit does not include data for biomass-related industries as there are not any SIC codes with biomass classification. Over the last five years, the region has added 31 new establishments and 290 new jobs. Most of this growth may be attributed to solar wholesale, solar heating contractors, and solar energy research and development (Exhibit 6).

In addition to a thriving solar industry, the region also has several bio-digesters. One of the largest economic drivers of waste diversion is AB 1826, the California Integrated Waste Management Act. A recent amendment to this bill requires business that generate a specified amount of organic waste per week to arrange for recycling services for that organic waste. This amendment will reduce food waste in landfills as well as create additional market opportunities for bio-digester establishments.

Exhibit 5: Renewable Energy, Employment and Establishments, Sacramento Capital Region¹⁰

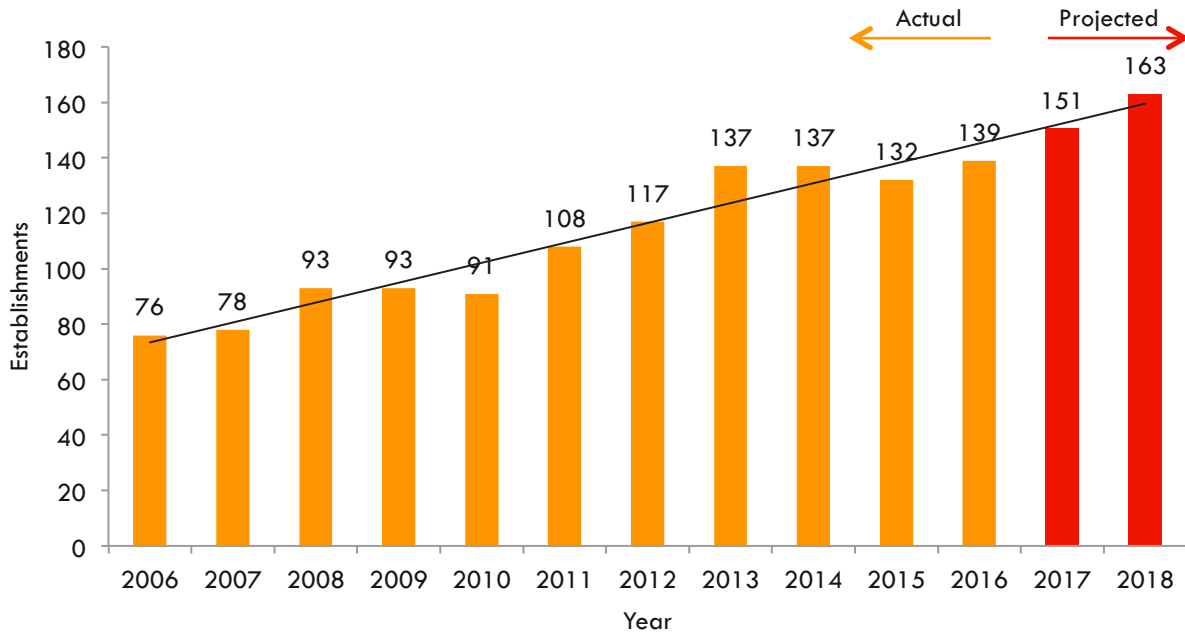
	2011 Jobs	2016 Jobs	2011–2016 Job Change	Percent Change	2016 Establishments
Solar Energy Equipment-Wholesale	246	403	157	64%	64
Energy Conservation & Mgmt Consultants	235	171	-64	-27%	34
Solar Heating Contractors	46	169	123	267%	19
Solar Energy Equipment-Manufacturers	109	102	-7	-6%	5
Solar Energy Research & Development	22	76	54	245%	9
Turbines-Manufacturers	0	27	27	n/a	2
Solar Heating Systems	3	8	5	167%	3
Solar Energy Equip & Systems-Svc & Rpr	0	5	5	n/a	2
Geothermal Htg/ Cooling Equip/Systs-Dlrs	5	1	-4	-80%	1
Wind Energy Systems (Whls)	4	0	-4	-100%	0
Total	670	962	292	44%	139

⁹ California Solar Energy Industries Association, CalSEIA Annual Report 2015. www.calseia.org.

¹⁰ ReferenceUSA: Business Database, 2016.

RENEWABLE ENERGY

Exhibit 6: Renewable Energy, Establishments, Sacramento Capital Region¹¹



O*NET has identified 19 renewable energy occupations (Exhibit 7, following page). Occupations that are most in-demand in the Sacramento Capital region include solar energy installation managers, solar photovoltaic installers, and solar sales representatives and assessors.



¹¹ ReferenceUSA: Business Database, 2016.

RENEWABLE ENERGY

Exhibit 7: Renewable Energy Occupations¹²

ONET Code	Title	Description
51-8099.01	Biofuels Processing Technicians	Calculate, measure, load, mix, and process refined feedstock with additives in fermentation or reaction process vessels and monitor production process. Perform, and keep records of, plant maintenance, repairs, and safety inspections.
11-3051.03	Biofuels Production Managers	Manage biofuels production and plant operations. Collect and process information on plant production and performance, diagnose problems, and design corrective procedures.
11-9041.01	Biofuels/Biodiesel Technology and Product Development Managers	Define, plan, or execute biofuels/biodiesel research programs that evaluate alternative feedstock and process technologies with near-term commercial potential.
51-8099.03	Biomass Plant Technicians	Control and monitor biomass plant activities and perform maintenance as needed.
11-3051.04	Biomass Power Plant Managers	Manage operations at biomass power generation facilities. Direct work activities at plant, including supervision of operations and maintenance staff.
17-2141.01	Fuel Cell Engineers	Design, evaluate, modify, or construct fuel cell components or systems for transportation, stationary, or portable applications.
17-3029.10	Fuel Cell Technicians	Install, operate, or maintain integrated fuel cell systems in transportation, stationary, or portable applications.
11-3051.02	Geothermal Production Managers	Manage operations at geothermal power generation facilities. Maintain and monitor geothermal plant equipment for efficient and safe plant operations.
51-8099.04	Hydroelectric Plant Technicians	Monitor and control activities associated with hydropower generation. Operate plant equipment, such as turbines, pumps, valves, gates, fans, electric control boards, and battery banks. Monitor equipment operation and performance and make necessary adjustments to ensure optimal performance. Perform equipment maintenance and repair as necessary.
11-3051.06	Hydroelectric Production Managers	Manage operations at hydroelectric power generation facilities. Maintain and monitor hydroelectric plant equipment for efficient and safe plant operations.
47-1011.03	Solar Energy Installation Managers*	Direct work crews installing residential or commercial solar photovoltaic or thermal systems.
17-2199.11	Solar Energy Systems Engineers	Perform site-specific engineering analysis or evaluation of energy efficiency and solar projects involving residential, commercial, or industrial customers. Design solar domestic hot water and space heating systems for new and existing structures, applying knowledge of structural energy requirements, local climates, solar technology, and thermodynamics.
47-2231.00	Solar Photovoltaic Installers*	Assemble, install, or maintain solar photovoltaic (PV) systems on roofs or other structures in compliance with site assessment and schematics. May include measuring, cutting, assembling, and bolting structural framing and solar modules. May perform minor electrical work such as current checks.
41-4011.07	Solar Sales Representatives and Assessors*	Contact new or existing customers to determine their solar equipment needs, suggest systems or equipment, or estimate costs.
47-4099.02	Solar Thermal Installers and Technicians	Install or repair solar energy systems designed to collect, store, and circulate solar-heated water for residential, commercial or industrial use.
17-2199.10	Wind Energy Engineers	Design underground or overhead wind farm collector systems and prepare and develop site specifications.
11-9199.09	Wind Energy Operations Managers	Manage wind field operations, including personnel, maintenance activities, financial activities, and planning.
11-9199.10	Wind Energy Project Managers	Lead or manage the development and evaluation of potential wind energy business opportunities, including environmental studies, permitting, and proposals. May also manage construction of projects.
49-9081.00	Wind Turbine Service Technicians	Inspect, diagnose, adjust, or repair wind turbines. Perform maintenance on wind turbine equipment, including resolving electrical, mechanical, and hydraulic malfunctions.

* Employers who participated in the Clean Economy forum indicated that they have experienced difficulty finding qualified applicants for this occupation.

¹² Occupation Information Network (O*NET): www.onetonline.org. Accessed March 3, 2016.

RENEWABLE ENERGY

In the Sacramento Capital region, there are three education institutions that offer training programs that support the Renewable Energy subsector. Both provide training for solar-related occupations (Exhibit 8).

Exhibit 8: Renewable Energy Education Programs, Sacramento Capital Region

College/University	Name of Program	Award(s)
American River College	Solar Energy Systems Design, Estimation, and Sales	Certificate
American River College	Solar Energy Technology	Certificate
Sierra College	Solar Photovoltaic	Skills Certificate
Sierra College	Solar Photovoltaic Advanced	Skills Certificate
UC Davis Extension	Renewable Energy	Professional Concentration

Business Spotlight: Sacramento Municipal Utility District (SMUD)

SMUD is a publicly-owned utility providing electricity to Sacramento County and portions of Placer and Yolo Counties. Their power sources include hydropower, natural-gas-fired generators, solar and wind renewable energy, and electricity purchased from the wholesale market. The utility's long-term strategy is to increase the amount of power obtained from renewable energy to ensure a green, sustainable portfolio. Currently, their hydroelectric plants represent a large percentage of their renewable energy production with the lowest production costs.

SMUD is active in research and investments to achieve the state's mandated renewable energy goal: 33% of energy sources produced by renewable energy by 2020 (AB32). The availability of a qualified workforce is key to achieving this goal. SMUD needs workers with knowledge of the integration of energy systems, information technology, and operations. In addition, applicants need strong critical thinking, creativity, collaboration, and communication skills.¹³



¹³ Interview with Susan Wheeler, Workforce Pipeline Planning and Education Relations Strategist, Organization and Workforce Development, Sacramento Municipal Utility District (SMUD). www.smud.org. April 13, 2016.

SUSTAINABLE AGRICULTURE



The region's Sustainable Agriculture subsector is largely driven by agricultural philosophies, policies, and practices that promote healthy food production and preserve valuable working lands and natural resources. This subsector includes establishments that utilize agriculture practices that reduce negative impacts on the environment as well as conserve resources for future generations. Along with production, agriculture service providers, such as establishments that produce natural pesticides and safe soils, are included in this category.

Transitioning from conventional farming to sustainable farming practices is a slow and evolving process that requires advocacy, education, and public policy. To assist with this effort, the USDA's Agricultural Marketing Service's National Organic Program offers resources and education tools to growers who want to adopt organic farming practices. Their how-to manuals and support services help farmers understand and implement USDA organic standards, qualify for certification, and prepare for inspection.¹⁴ The California Certified Organic Farmers organization offers additional resources to farmers who are transitioning to organic practices.¹⁵ Farm to Fork, SACOG, California Department of Food and Agriculture, and other organizations are supporting the growth of local food systems which can have environmental benefits

In addition to organic agricultural practices, farms must adapt to changing weather patterns, microclimates, and water availability. In the future, energy producers and farmers may share or compete for the same land and water resources. In many cases, food and energy production will occur in tandem within agricultural centers. As science and technology innovations advance in the Sustainable Agriculture subsector, so will the need for tech-savvy farmers, agricultural workers and service providers.¹⁶ Ecosystem services is another emerging aspect of sustainable agriculture.

Exhibit 9 displays the occupations identified by O*NET that support the Sustainable Agriculture subsector. Occupations without O*NET codes that work in sustainable agriculture include: policy analysts and scientists that conduct research in the area of sustainable farming standards and practices.

Exhibit 9: Sustainable Agriculture Occupations¹⁷

ONET Code	Title	Description
19-1031.01	Soil and Water Conservationists	Plan or develop coordinated practices for soil erosion control, soil or water conservation, or sound land use.
11-9013.02	Farm and Ranch Managers	Plan, direct, or coordinate the management or operation of farms, ranches, greenhouses, aquacultural operations, nurseries, timber tracts, or other agricultural establishments.

In the Sacramento Capital region, there are three education institutions that offer training programs that support the sustainable agriculture subsector (Exhibit 10).

¹⁴ *New Outreach and Education Tools Available to Support Organic Certification*. March 8, 2016. National Sustainable Agriculture Coalition. <http://sustainableagriculture.net/blog/sound-and-sensible/>

¹⁵ California Certified Organic Farmers. <https://www.ccof.org/>

¹⁶ Little data is available through SIC codes on the total employment and establishments of the Sustainable Agriculture subsector.

¹⁷ Occupation Information Network (O*NET): www.onetonline.org. Accessed March 3, 2016.

SUSTAINABLE AGRICULTURE

Exhibit 10: Sustainable Agriculture Education Programs, Sacramento Capital Region

College/University	Name of Program	Award(s)
Sierra College	Sustainable Agriculture	A.S. Degree; Certificate
UC Davis	Sustainable Agriculture and Food Systems	Bachelor of Science
Woodland College	Environmental Horticulture	A.S. Degree; Certificate
Woodland College	Sustainable Agriculture	Certificate

Business Spotlight: California Safe Soil

California Safe Soil manufactures a certified organic liquid fertilizer and soil amendment made from food waste obtained from supermarkets and farms. The company co-locates with various distribution outlets for recovery of imperfect or unharvested food from farmers and spoilage from grocery retailers. Their products, Harvest-to-Harvest and Harvest-to-Harvest Organic, are made through a process of grinding, heating, and enzymatically digesting the food, then blending it to produce a complete plant-and-soil nutrient that can be used in conventional and organic agricultural crop production to promote soil fertility.

California Safe Soil is currently producing soil nutrients at several plants across the state. With increasing demand for fertilizers that use biological agents rather than chemicals, the company plans to open a new production facility in McClellan Park. To support operations at this facility, California Safe Soil will be recruiting applicants for plumbing and electrical positions, as well as sales and marketing.¹⁸



¹⁸ Interview with California Safe Soil, Dan Morash, Founder. www.calsafesoil.com. April 12, 2016.

ADVANCED TRANSPORTATION



The Advanced Transportation subsector includes establishments that focus on alternative vehicles, technologies, and fuels with the ultimate goal of reducing petroleum dependence and greenhouse gas emissions. To move forward the Advanced Transportation subsector, Governor Jerry Brown issued an executive order to put 1.5 million zero-emission vehicles (ZEV) on California's road by 2025.

To meet this mandate, California and the Sacramento Capital region need more public charging stations. Currently, there are fewer than 8,000 public charging outlets across the state.¹⁹ While there has been significant growth in the installation of charging stations, the National Renewable Energy Laboratory estimates California will need as many as 51,000 public charging stations and 167,000 workplace charging units to achieve the Governor's goal.

The planning, permitting, and installation of electric vehicle charging stations is a complex process. In an effort to improve the process, the California Energy Commission has provided funding to regional multiagency coordinating councils around the state. In the Sacramento Capital region, the Sacramento Area Council of Governments (SACOG) is leading the effort to develop better ZEV deployment and infrastructure.

In addition to developing a strong electric vehicle infrastructure, the Sacramento Capital region is a major junction for train travel within the continental U.S..²⁰ Regional transit networks also offer bus, light rail, and streetcar transportation options. However, the Sacramento Regional Transit District has experienced a 20 percent drop in ridership after cuts in routes and an increase in fares during the recession; ridership has not yet recovered.²¹ To compensate, the Agency may again raise fares or ask for a half-cent sales tax increase on a ballot measure to pay for transit improvements and alleviate traffic congestion.

In advance of the new sports and entertainment arena opening in October in Sacramento, Regional Transit is hoping to lure new ridership to the downtown area with expanded routes that are more convenient than traffic jams and expensive parking charges.

¹⁹ <http://www.evchargernews.com/regions/ch-sac-all.htm>. This region includes the following counties: Butte, El Dorado, Fresno, Madera, Nevada, Placer, Sacramento, San Joaquin, Solano (Eastern portion), Sutter, Tulare, and Yolo.

²⁰ <http://www.up.com/index.htm>

²¹ Sacramento RT Faces Critical Year for Ridership and Revenue. <http://www.sacbee.com/news/local/transportation/article65885202.html>. March 13, 2016.

ADVANCED TRANSPORTATION

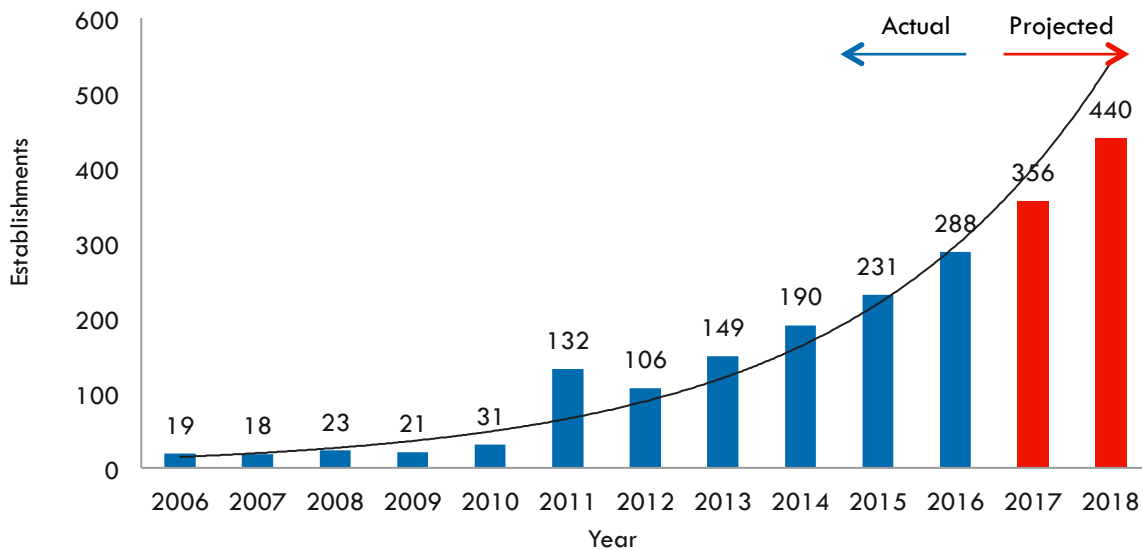
Exhibit 11 displays establishment and employment data for Advanced Transportation industries as classified by SIC codes at the eight-digit level. Over the last five years, the region has added 156 new establishments and 304 new jobs. Establishment growth is being driven by the installation of new public charging stations since each new station is counted as one establishment (Exhibit 12). However, because the stations are not staffed, no new jobs have been created from this exponential growth.

Exhibit 11: Advanced Transportation, Employment and Establishments, Sacramento Capital Region²²

	2011 Jobs	2016 Jobs	2011-2016 Job Change	Percent Change	2016 Establishments
Electric Cars-Automobile (Mfrs)	12	2	-10	-83%	1
Electric Charging Station	0	0	0	n/a	264
Railroads	148	528	380	257%	12
Trains	4	5	1	25%	1
Transit Lines	302	235	-67	-22%	10
Total	466	770	304	65%	288

Note. Siemens was not captured in this dataset due to the SIC classification structure. Siemens is an international company that designs and manufactures passenger trains, light rail cars, and high speed trainsets. More than 800 people are employed by Siemens at the South Sacramento facility.

Exhibit 12: Advanced Transportation, Establishments, Sacramento Capital Region²³



The rise in the number of advanced technology vehicles and alternative fuel vehicles has increased the demand for qualified workers with specialized knowledge and diagnostic skills. As a result, many employers operating fleets, dealerships, and automotive shops are now requiring supplementary certification or training. The planned expansion of the EV infrastructure may also result in additional employment opportunities, such as jobs for workers with knowledge and expertise in charging unit installation and maintenance.

²² ReferenceUSA: Business Database, 2016.

²³ ReferenceUSA: Business Database, 2016.



Exhibit 13: Advanced Transportation Occupations²⁴

ONET Code	Title	Description
49-3023.02	Automotive Specialty Technicians	Repair only one system or component on a vehicle, such as brakes, suspension, or radiator.

In the Sacramento Capital region, American River College offers several Advanced Transportation training programs (Exhibit 14). There are three programs with a focus on clean diesel and one with a broader focus on alternative fuels and advanced technologies.

Exhibit 14: Advanced Transportation Education Programs, Sacramento Capital Region

College/University	Name of Program	Award(s)
American River College	Alternative Fuels and Green Vehicle Technology	Certificate
American River College	Clean Diesel Hybrid Technology	Certificate
American River College	Clean Diesel Management Systems	Certificate
American River College	Clean Diesel Technology	Certificate

Business Spotlight: Phil Haupt Electric

Phil Haupt Electric offers full commercial and residential electrical services in the Sacramento region. Services include site analysis, engineering, and installation of electric vehicle charging stations at various multi-unit dwellings, commercial, retail, public, government, and residential locations. The company has installed nearly 700 charging stations throughout northern California.

As more electric vehicles with ranges of 200 miles or more become available to consumers, Phil Haupt Electric expects that the demand for EVs will significantly increase. Currently, the company is experiencing difficulty finding qualified workers in the electrical field who meet their minimum standards.²⁵

²⁴ Occupation Information Network (O*NET): www.onetonline.org. Accessed March 3, 2016.

²⁵ Interview with Phil Haupt Electric, Inc., Becky Haupt, Co-Owner. www.philhauptelectric.com. April 27, 2016.

ENVIRONMENTAL COMPLIANCE

Over the past few decades, state and federal agencies have implemented new laws, regulations, and standards designed to protect air, water, natural resources, wildlife, and public health. One of the primary goals of environmental regulations is to limit greenhouse gases entering the atmosphere.

The Sacramento Capital region is home to a number of government agencies that monitor and regulate environmental mandates and polices. Regulatory efforts include oversight and regulation of peak power usage, alternative storage for and use of chemicals, recycling of manufacturing waste, reducing amounts of hazardous waste, improving wastewater treatment processes, and switching to solid-state lighting, to name a few.

In addition, some companies and public sector institutions have gone further than required by law to reduce their companies' environmental impact. These companies have changed their business practices and systems to preserve natural resources and minimize the environmental impact of their daily activities. In the region, more than 500 organizations have been certified as a "Sustainable Business," a recognition conferred by the Business Environmental Resource Center, an entity established by the Sacramento County Board of Supervisors.²⁷

Driven by both legislation and corporate responsibility, many organizations are adopting business practices that reduce their carbon footprint. This shift is driving demand for environmental and ecological consulting services that can provide solutions for business and government clients to comply with and implement sustainability programs.

Exhibit 15 displays establishment and employment data for Environmental Compliance industries as classified by SIC codes at the eight-digit level. Over the last five years, the region has added 32 new establishments and 110 new jobs. Most of the job growth can be attributed to environmental conservation organizations, environmental & ecological services, and state government environmental programs. City and county government programs reduced headcount during this same period.

Exhibit 15: Environmental Compliance, Employment and Establishments, Sacramento Capital Region²⁶

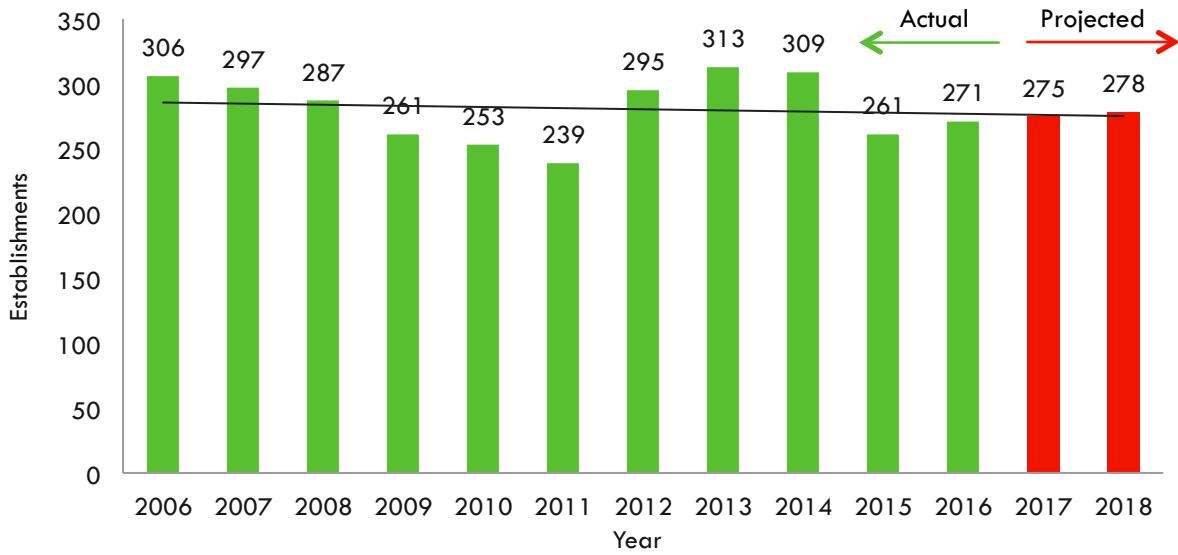
	2011 Jobs	2016 Jobs	2011–2016 Job Change	Percent Change	2016 Establishments
Air Pollution Control	5	3	-2	-40%	1
Air Pollution Measuring Equip (Whls)	4	4	0	0%	1
City Government-Environmental Programs	303	26	-277	-91%	3
County Government-Environmental Programs	222	61	-161	-73%	7
Environmental & Ecological Services	1870	2063	193	10%	206
Environmental Products & Supls (Whls)	19	22	3	16%	6
Environmental Conservation/Ecologcl Org	0	247	247	n/a	36
State Government-Environmental Programs	3959	4018	59	1%	10
Water Pollution Control	2	0	-2	-100%	0
Environmental Analysis Services	0	50	50	n/a	1
Total	6,384	6,494	110	2%	271

²⁶ <http://www.sacberc.org/>

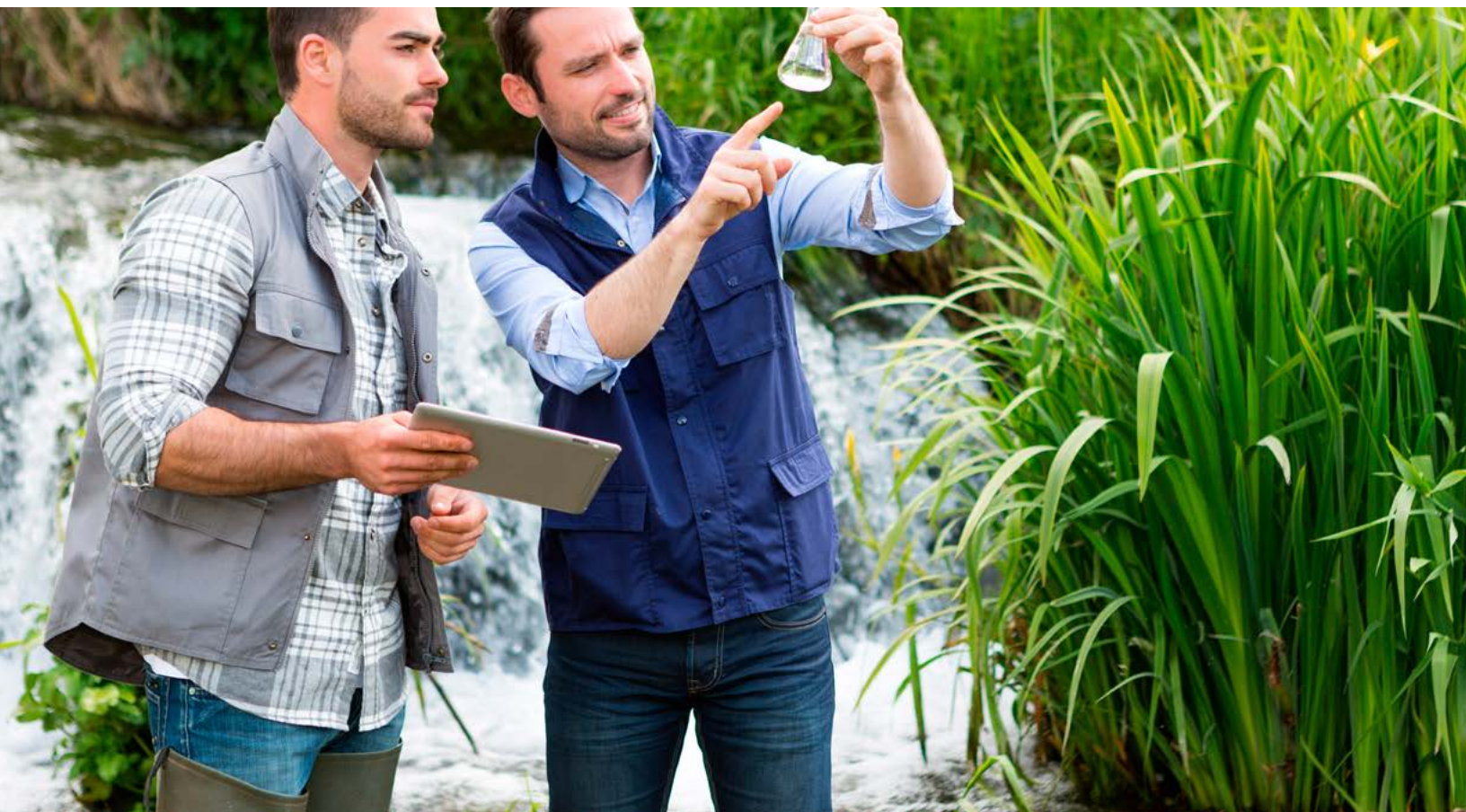
²⁷ ReferenceUSA: Business Database, 2016.

ENVIRONMENTAL COMPLIANCE

Exhibit 16: Environmental Compliance, Establishments, Sacramento Capital Region²⁸



The advancement of clean, sustainable organizations has created demand for skilled employees with knowledge of environmental compliance, sustainability goals, and performance outcomes. Below are some of the occupations that specialize in this area.



²⁸ ReferenceUSA: Business Database, 2016.

ENVIRONMENTAL COMPLIANCE

Exhibit 17: Environmental Compliance Occupations²⁹

ONET Code	Title	Description
11-9199.11	Brownfield Redevelopment Specialists and Site Managers	Plan and direct cleanup and redevelopment of contaminated properties for reuse. Does not include properties sufficiently contaminated to qualify as Superfund sites.
11-1011.03	Chief Sustainability Officers	Communicate and coordinate with management, shareholders, customers, and employees to address sustainability issues. Enact or oversee a corporate sustainability strategy.
19-2041.01	Climate Change Analysts	Research and analyze policy developments related to climate change. Make climate-related recommendations for actions such as legislation, awareness campaigns, or fundraising approaches.
11-9199.02	Compliance Managers	Plan, direct, or coordinate activities of an organization to ensure compliance with ethical or regulatory standards.
13-1041.01	Environmental Compliance Inspectors	Inspect and investigate sources of pollution to protect the public and environment and ensure conformance with federal, state, and local regulations and ordinances.
19-3011.01	Environmental Economists	Conduct economic analysis related to environmental protection and use of the natural environment, such as water, air, land, and renewable energy resources. Evaluate and quantify benefits, costs, incentives, and impacts of alternative options using economic principles and statistical techniques.
17-3025.00	Environmental Engineering Technicians	Apply theory and principles of environmental engineering to modify, test, and operate equipment and devices used in the prevention, control, and remediation of environmental problems, including waste treatment and site remediation, under the direction of engineering staff or scientist. May assist in the development of environmental remediation devices.
17-2081.00	Environmental Engineers	Research, design, plan, or perform engineering duties in the prevention, control, and remediation of environmental hazards using various engineering disciplines. Work may include waste treatment, site remediation, or pollution control technology.
19-4091.00	Environmental Science and Protection Technicians, Including Health	Perform laboratory and field tests to monitor the environment and investigate sources of pollution, including those that affect health, under the direction of an environmental scientist, engineer, or other specialist. May collect samples of gases, soil, water, and other materials for testing.
19-2041.00	Environmental Scientists and Specialists, Including Health	Conduct research or perform investigation for the purpose of identifying, abating, or eliminating sources of pollutants or hazards that affect either the environment or the health of the population. Using knowledge of various scientific disciplines, may collect, synthesize, study, report, and recommend action based on data derived from measurements or observations of air, food, soil, water, and other sources.
13-1041.07	Regulatory Affairs Specialists	Coordinate and document internal regulatory processes, such as internal audits, inspections, license renewals, or registrations. May compile and prepare materials for submission to regulatory agencies.
13-1199.05	Sustainability Specialists	Address organizational sustainability issues, such as waste stream management, green building practices, and green procurement plans.
11-9121.02	Water Resource Specialists	Design or implement programs and strategies related to water resource issues such as supply, quality, and regulatory compliance issues.

²⁹ Occupation Information Network (O*NET): www.onetonline.org. Accessed March 3, 2016.

ENVIRONMENTAL COMPLIANCE

In the Sacramento Capital region, there are six education institutions offering training programs that support the Environmental Compliance subsector (Exhibit 18).

Exhibit 18: Environmental Compliance Education Programs, Sacramento Capital Region

College/University	Name of Program	Award(s)
American River College	Environmental Conservation	A.S. Degree; Certificate
CSU Sacramento	Civil Engineering: Environmental/Water Quality Engineering	Master of Science
CSU Sacramento	Civil Engineering: Water Resources Engineering	Master of Science
CSU Sacramento	Environmental Studies	Bachelor of Science; Bachelor of Arts
CSU Sacramento	Water Quality	Certificate
CSU Sacramento	Water Resources Planning	Certificate
Folsom Lake College	Water Management	Certificate
Sierra College	Environmental Studies and Sustainability	A.S. Degree
UC Davis	Ecological Management and Restoration	Bachelor of Science
UC Davis	Environmental Policy Analysis and Planning	Bachelor of Science
UC Davis	Environmental Science and Management	Bachelor of Science
UC Davis	Environmental Toxicology	Bachelor of Science
UC Davis	Sustainable Environmental Design	Bachelor of Science
UC Davis	Civil and Environmental Engineering	Master of Science; PhD
William Jessup University	Environmental Science	Bachelor of Science; Bachelor of Arts

Business Spotlight: California Air Resources Board (CARB)

The California Air Resources Board (CARB) is one of the lead regulatory agencies overseeing the Global Warming Solutions Act of 2016 (AB32). One of its key roles as a lead organization is the coordination of state agencies to establish and engage in efforts that reduce greenhouse gas emissions. As a member of the state's Climate Action Team, the CARB is working with more than 18 agencies to plan, direct, and measure state efforts to achieve the AB32 milestone goals required by 2020 through to 2050.

To ensure environmental compliance for organizations under AB32 regulations, the CARB has established a system of reporting, verifying, monitoring, and enforcement. To facilitate business compliance, CARB holds regular community meetings, provides information and processes written clearly and in simple language, and offers resources about incentives for early compliance and loans.

With the drive toward achieving the goals of 2030 climate stabilization, CARB is pressed to find qualified workers who have excellent project management, critical thinking, and communication skills, as well as the ability to collaboratively identify and solve problems. Knowledge of atmospheric and GIS systems are also highly valued.³⁰

³⁰ Interview with California Air Resources Board (ARB), La Rhonda Bowen, ARB Ombudsman. www.arb.ca.gov. April 12, 2016.

RECYCLING AND WASTE REDUCTION



Recycling and Waste Reduction encompasses a wide range of industries defined by a set of activities that involve collecting and sorting recycled materials, reusing or remanufacturing recycled materials, and/or manufacturing new products with recycled materials.

Businesses involved in recycling and the management of waste reduction often specialize in different areas. Some firms may focus on one particular process, such as cleaning, collecting, sorting, or preparing products for manufacturing or reuse. Others may manage the complete lifecycle of a product. Firms that oversee product lifecycles may collect and sort recycled materials, combine the recycled materials with other materials, and manufacture new products. They may also sell materials not needed for manufacturing to a broker.

In addition, many corporations and businesses are adopting sustainable practices to reduce production waste, create eco-friendly products, and embrace product stewardship that benefit consumers, businesses, and the planet's ecosystems. Some of the most common trends in recycling and waste reduction include:

- **Zero waste:** A philosophy that supports the elimination of all waste by recycling or reusing 100 percent of materials used in the production process. Zero waste not only has a positive impact on the environment, but it also contributes to the economy when it's used as a resource to support employment and business opportunities. Zero waste goals pose a wide range of implementation challenges to organizations and businesses. Composite materials and plastics found in commercial products and consumer packaging can make recycling difficult to separate and also jam sorting equipment. In the meantime, industry associations and recycling groups are trying to address these problems and find solutions to promote zero waste goals as a viable operating method for reducing operating costs and minimizing impacts on the environment.³¹
- **Circular economy:** The principles of the circular economy redefine recycling in terms of materials management, which involves the design of products and packaging, maximizing recycling and reuse objectives. Materials management includes the design, manufacture, and use of recycled and compostable packaging and materials, as opposed to wasteful one-time-use packaging. For example, Mushroom's Materials produce wine shipping materials made from agricultural waste and mushrooms. Their custom-designed and molded material is fully compostable and cost competitive with plastic foams.³²
- **Product stewardship:** One of the major trends of product stewardship is better dissemination of information about disposal of hazardous waste, especially battery and e-waste recovery and recycling. This includes providing greater clarity about where to dispose waste and entry points into the waste management system. Through public campaigns, service announcements provide compelling information on the need to recycle and dispose of hazardous waste in a way that minimizes impacts to the environment.

Exhibit 19 displays establishment and employment data for Recycling and Waste Reduction industries as classified by SIC codes at the eight-digit level. Over the last five years, this subsector declined by 2 percent, losing about 80 jobs. Most of the job decline can be attributed to a decrease in recycling centers and waste reduction establishments (Exhibit 20).

³¹ *Three Headaches for the Recycling Industry*. The New York Times. March 25, 2016. http://www.nytimes.com/2016/03/29/science/three-headaches-for-the-recycling-industry.html?_r=0

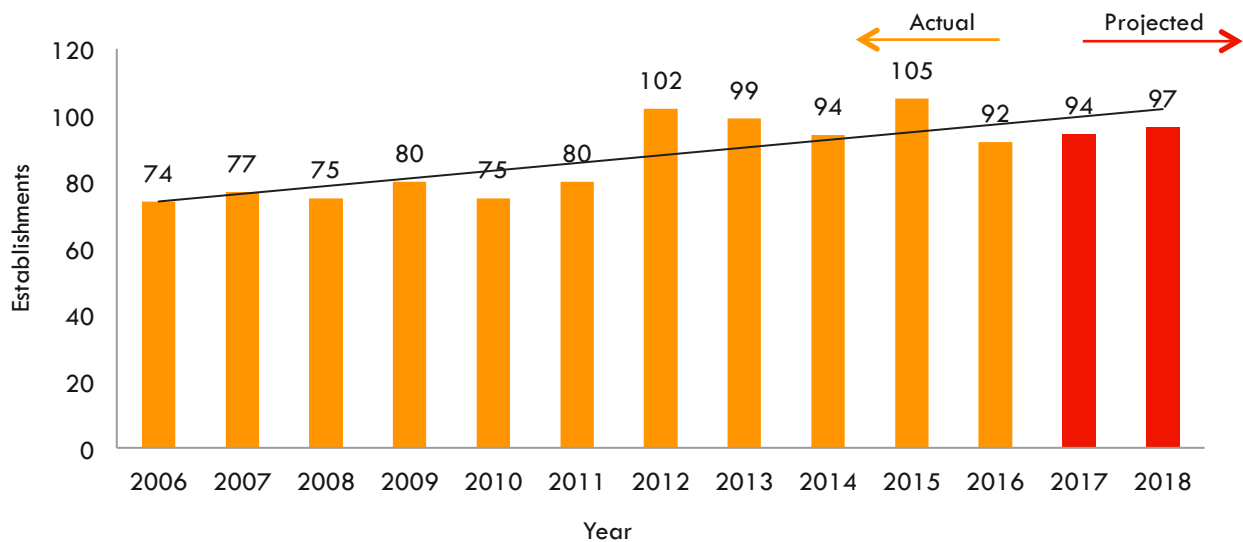
³² <http://www.ecovatedesign.com/>

RECYCLING AND WASTE REDUCTION

Exhibit 19: Recycling and Waste Reduction, Employment and Establishments, Sacramento Capital Region³³

	2011 Jobs	2016 Jobs	2011-2016 Job Change	Percent Change	2016 Establishments
Automobile Dismantling/Recycling (Whls)	16	21	5	31%	2
Recycling Centers (Whls)	926	867	-59	-6%	77
CalRecycling (State Government)	2,000	2,000	0	0%	1
Recycling Equipment & Systems	65	73	8	12%	6
Scrap Metals-Processing/Recycling (Whls)	35	35	0	0%	1
Waste Rdctn Dspsl/Recycle Svc-Ind (Whls)	81	6	-75	-93%	2
Waste Reduction & Disposal Equip-Ind	79	120	41	52%	3
Total	3,202	3,122	-80	-2%	92

Exhibit 20: Recycling and Waste Reduction, Establishments, Sacramento Capital Region³³



³³ ReferenceUSA: Business Database, 2016.

RECYCLING AND WASTE REDUCTION

Exhibit 21: Recycling and Waste Reduction Occupations³⁴

ONET Code	Title	Description
19-2041.03	Industrial Ecologists	Apply principles and processes of natural ecosystems to develop models for efficient industrial systems. Use knowledge from the physical and social sciences to maximize effective use of natural resources in the production and use of goods and services. Examine societal issues and their relationship with both technical systems and the environment.
51-9199.01	Recycling and Reclamation Workers	Prepare and sort materials or products for recycling. Identify and remove hazardous substances. Dismantle components of products such as appliances.
53-1021.01	Recycling Coordinators	Supervise curbside and drop-off recycling programs for municipal governments or private firms.

In the Sacramento Capital region, there is one training program that supports the Recycling and Waste Reduction subsector (Exhibit 22).

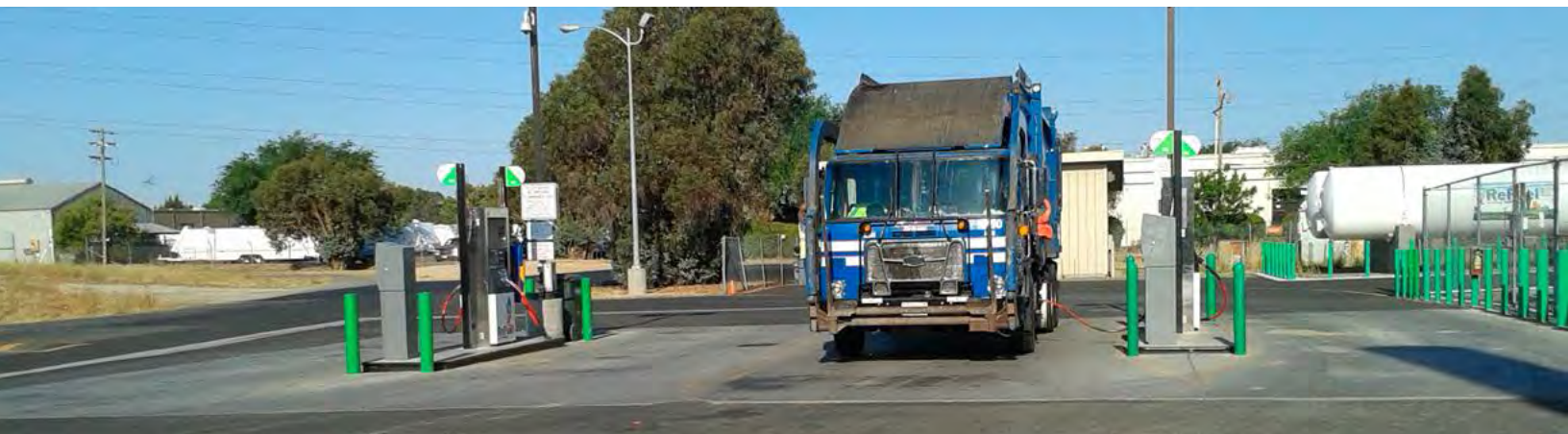
Exhibit 22: Recycling & Waste Reduction Education Programs, Sacramento Capital Region

College/University	Name of Program	Award(s)
CSU Sacramento	Issues in Natural Resource Management	Certificate

Business Spotlight: PackageOne

PackageOne manufactures corrugated packaging material that is produced from recyclable paper and renewable materials. Made from natural, plant-based materials, every product produced is recyclable. Their boxes and packaging are designed for and sold to the industrial wholesale market for displays, food service, agriculture, and shipping. The company also operates a bio-digester.

PackageOne expects to add as many as 70 new positions over the next few years to assist with collection, equipment operation, as well as research and development. Sought after skills include knowledge of electronic maintenance, knowledge of organic chemistry, and a solid understanding of good manufacturing practices.³⁵



³⁴ Occupation Information Network (O*NET): www.onetonline.org. Accessed March 3, 2016.

³⁵ Interview with Package One, Tom Kandris, CEO. www.package1.com. April 13, 2016.

SUMMARY

The Bureau of Labor Statistic's current coding system does not provide sufficient detail to analyze industry trends in the Clean Economy cluster. As such, the data contained in this study is based on a private database of organizations. Because of inadequacies with the private database, the total number of establishments and jobs is likely undercounted.

Even with these inadequacies, this study paints a compelling picture of growth and opportunity in the Clean Economy cluster. Between 2011 and early 2016, the Clean Economy grew by 35 percent, adding more than 250 new organizations in the Sacramento Capital region. Job growth also has been aggressive with the addition of 1,700 new jobs over the last five years.

Within the cluster, employment in the Energy and Resource Efficiency, Renewable Energy, and Advanced Transportation subsectors has grown substantially, while Environmental Compliance and Recycling/Waste Reduction have experienced flat growth. There are several environmental, regulatory, and market trends that have impacted the stability and growth of each subsector in this cluster. These trends include:

- **Energy and Resource Efficiency** – Local businesses have made substantial investments to retrofit and build structures that meet stringent energy efficiency standards established by the U.S. Green Building Council. In the Sacramento Capital region, there are more than 560 Leadership in Energy and Environmental Design (LEED) certified buildings.
- **Renewable Energy** – The federal Investment Tax Credit (ITC) and improved solar panel efficiency is driving growth in residential and commercial solar markets. Incentives and greater efficiency gains improve the return on investment and give businesses and homeowners sufficient justification to invest.
- **Sustainable Agriculture** – Transitioning from conventional farming to sustainable farming practices is a slow and evolving process that requires education and policy support. To help with the transition and assist with the adoption, industry associations offer resources and education tools to answer questions and streamline processes.
- **Advanced Transportation** – In 2012, Governor Jerry Brown issued an executive order to put 1.5 million zero-emission vehicles (ZEV) on California's roadways by 2025. To accomplish this goal, the Sacramento Capital region will need to install thousands of public charging stations.
- **Environmental Compliance** – The Sacramento Capital region is home to a number of government agencies that monitor and regulate environmental mandates and polices. In addition to government mandates, many organizations are voluntarily adopting business practices that reduce their carbon footprint.
- **Recycling/Waste Reduction** – Zero waste is the goal to recycle or reuse 100 percent of all operating and production materials. Businesses that adopt this philosophy often experience both economic benefits as well as minimize their impact on the environment. New legislation is requiring the reduction of food waste into landfills which will further drive changes in recycling and waste reduction practices.

The overall intent of this research was to track the progress of the Clean Economy in the Sacramento Capital region and serve as a foundation for future research. In the next research phase, the goal is to develop a more robust estimate of establishments and employment. Valley Vision will also convene Clean Economy employers to identify next steps for identifying and validating the demand for high priority occupations and skills gaps that can be addressed through a concerted cluster workforce action plan.

MORE ABOUT...

More About The Centers of Excellence

The Centers of Excellence (COE) for Labor Market Research deliver regional workforce research and technical expertise to California community colleges for program decision making and resource development. This information has proven valuable to colleges in beginning, revising, or updating economic development and Career Technical Education (CTE) programs, strengthening grant applications, assisting in the accreditation process, and in supporting strategic planning efforts.

The Centers of Excellence Initiative is funded in part by the Chancellor's Office, California Community Colleges, Economic and Workforce Development Program. The Centers aspire to be the leading source of regional workforce information and insight for California community colleges. More information about the Centers of Excellence is available at www.coecc.net.

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More About Valley Vision

Since 1994, Valley Vision's work has driven transformative change and improved lives across Northern California. An independent social impact and civic leadership organization headquartered in Sacramento, Valley Vision strengthens our communities through unbiased research, boundary-crossing collaboration and change leadership. Our work improves overall quality of life and creates the conditions for economic prosperity and community health and vitality.

More About Burris Service Group

The Burris Service Group (BSG) is a full-service consulting practice providing expertise in economic development, strategic economic research, real estate site strategy, management, and institutional growth. The company was established based on the clear need that advisory services be delivered in an "action-oriented" form. The founder of BSG, Robert Burris, brings to his clients an active local and international network of professionals, as well as 20 years of experience in economic development, market and economic analysis, commercial real estate information, corporate sales, and consulting.



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SERIES: 4 OF 6

EDUCATION AND KNOWLEDGE CREATION CLUSTER: WORKFORCE NEEDS ASSESSMENT SACRAMENTO CAPITAL REGION



February 2016

Prepared by: Centers of Excellence,
Los Rios Community College District

Valley Vision

Burris Service Group

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Important Disclaimer

All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. Efforts have been made to qualify and validate the accuracy of the data and the reported findings; however, neither the Centers of Excellence, COE host District, nor California Community Colleges Chancellor’s Office are responsible for applications or decisions made by recipient community colleges or their representatives based upon components or recommendations contained in this study.

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INTRODUCTION

Starting in 2008, the six-county Sacramento Capital region (El Dorado, Placer, Sacramento, Sutter, Yolo and Yuba counties) was rocked by the global recession, losing 10 percent of the region's jobs. In response, regional leaders initiated Next Economy, an action plan to accelerate job creation and new investment in six high-growth business (industry) clusters. Valley Vision, a regional civic leadership organization, managed the three-year Next Economy design, research and implementation process on behalf of a wide range of private and public sector partners.

As of late 2015, after a lagging recovery, the region's economy picked up momentum, with the unemployment rate decreasing while job growth is accelerating. Valley Vision received funding from the JPMorgan Chase & Co to better understand how the region's key growth industry clusters have changed since the original Next Economy research was conducted in 2012, and what new opportunities are emerging. Valley Vision is partnering with the Los Rios Center of Excellence and the Burris Service Group on this effort.

Cluster research is a widely accepted standard of practice for developing regional prosperity strategies to address multiple facets of a region's complex economy. Industry clusters reduce operating costs by shortening supply chains; increasing the flow of information regarding new business opportunities; concentrating workforce training needs in select occupations; and speeding up the identification of gaps in products or services.¹ Firms in identified clusters may also have a reduced risk of failure, as these firms are better supported by the supply chain and can respond more rapidly to shifts in the marketplace.

This report presents findings on the analysis of the Education and Knowledge Creation cluster. It is one in a series of six reports covering Next Economy-identified clusters. Additional reports include advanced manufacturing, the "clean economy," food and agriculture, information and communications technologies, and life sciences and health services.² Each report provides an overview of the cluster, industry trends and economic impact, as well as an overview of the top demand occupations in the cluster requiring postsecondary education or training, along with projected occupational demand, institutions providing related education and training, and possible workforce gaps. Visit valleyvision.org or coecc.net to access completed reports.³

This research will be used to develop cluster-based workforce action plans. Valley Vision will work alongside regional education, and workforce and economic development partners to convene six cluster-based employer forums, setting priorities and developing strategies to address critical workforce gaps, better align education and workforce development resources to meet employer and workforce needs, and strengthen the regional economy overall.



¹ Cluster Manufacturing: A Supply Chain Perspective

² Sacramento Area Council of Governments (SACOG) is the principal research for the Food and Agriculture Cluster study, which will focus primarily on industry trends and excludes workforce development and training needs.

³ Reports will be posted to the valleyvision.org and coecc.net websites throughout the spring 2016 when finalized.

CLUSTER DEFINITION

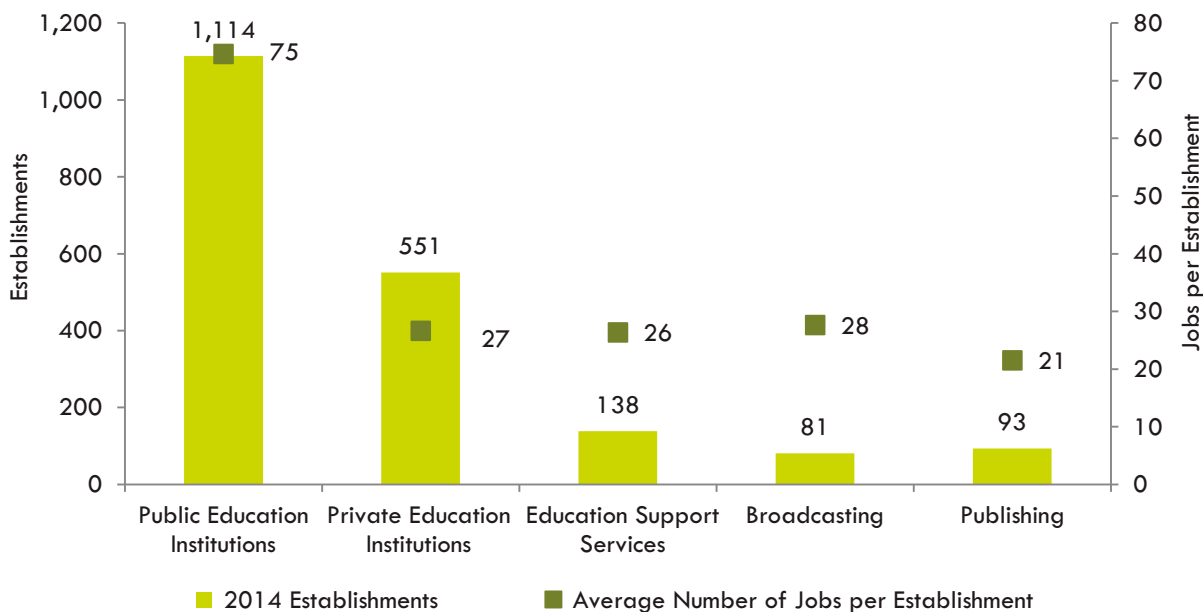
The Education and Knowledge Creation cluster includes industries and establishments that provide systematic information or instruction for the purpose of knowledge creation or learning. Within the cluster, there are five subsectors:

- **Private Education Institutions**, typically controlled by nongovernmental agencies, include preschools, secondary schools, colleges and universities.
- **Public Education Institutions**, supported primarily by public funds, include preschools, secondary schools, colleges, and universities.
- **Education Support Services** provide non-instructional services that support educational processes or systems, such as educational testing services, guidance counseling, and student exchange programs.
- **Publishing** establishments produce newspapers, magazines, other periodicals, and books.
- **Broadcasting** establishments create content or acquire the right to distribute and broadcast content via radio, television or Internet.

ESTABLISHMENTS

Exhibit 1 displays establishments and the average number of jobs per establishment for the Education and Knowledge Creation subsectors in the Sacramento Capital region. As shown, public education institutions have the most establishments and the highest number of workers per establishment compared to other subsectors in the region.

Exhibit 1: Establishments and Average Employment by Subsector, Education and Knowledge Creation Cluster, Sacramento Capital Region, 2014⁴



⁴ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.3

CONCENTRATION OF EMPLOYMENT

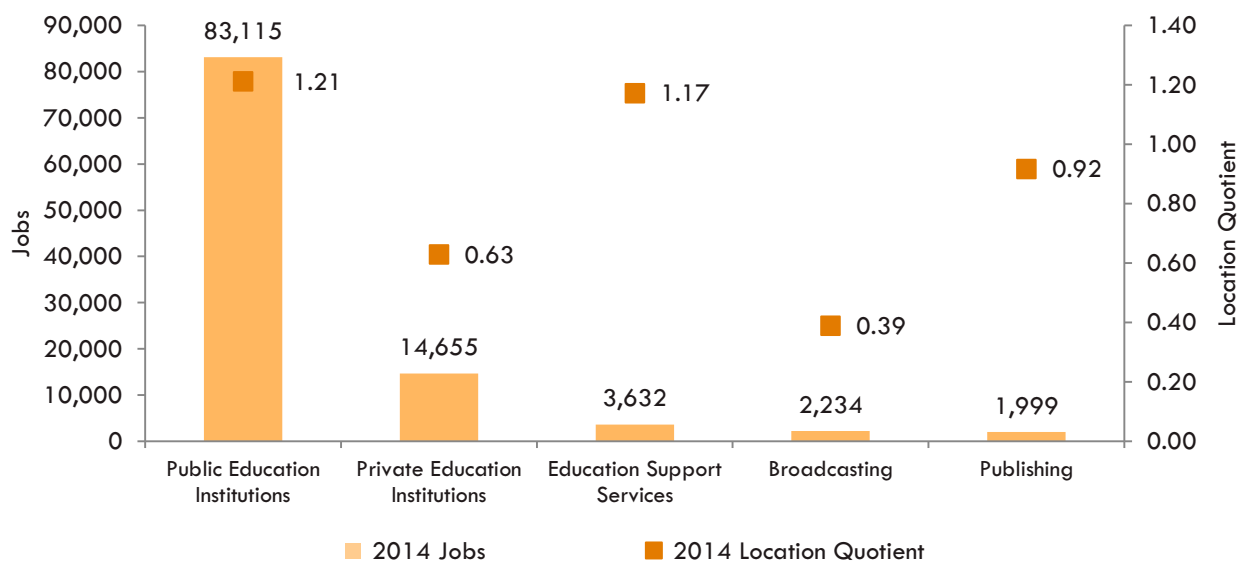
In 2014, there were about 105,600 jobs in the Education and Knowledge Creation cluster, 10 percent of the total employment in the Sacramento Capital region. As shown in Exhibit 2, the largest subsector is public education institutions (79%; 83,100 jobs), followed by private education institutions (14%; 14,700 jobs). Combined, education support services, broadcasting and publishing comprised the remaining seven percent of the cluster.

Location quotient analysis compares the total employment in a region relative to the total employment in a larger area, in this case, California. A location quotient of less than one indicates a lower concentration of employment for that industry in the region than in the state overall. A location quotient of more than one indicates a higher concentration of employment for the region than in the state overall.

In the Sacramento Capital region, public education institutions, education support services and publishing have location quotients that are close to one, indicating an average concentration of employment compared to other areas of the state. The private education institutions and broadcasting subsectors have location quotients well below one, indicating a lower than average concentration of employment. Within the subsectors, there are industries with above average location quotients, indicating a high concentration of employment for those industries than in the state overall. These include:

- **Public Education Institutions:** Colleges, Universities, and Professional Schools (State Government) (1.49 LQ); and Colleges, Universities, and Professional Schools (Local Government) (1.99 LQ)
- **Private Education Institutions:** Junior Colleges (1.53 LQ); Apprenticeship Training (2.55 LQ); Other Technical and Trade Schools (1.61 LQ); and Sports and Recreation Instruction (1.3 LQ)
- **Education Support Services:** Exam Preparation and Tutoring (1.51 LQ); and Educational Support Services (2.31 LQ)
- **Broadcasting:** Radio Networks (1.52 LQ)

Exhibit 2: Total Employment and Location Quotient by Subsector, Education and Knowledge Creation Cluster, Sacramento Capital Region, 2014⁵



⁵ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

TRENDS AND PROJECTIONS

The Education and Knowledge Creation cluster declined by three percent over the last five years, mostly due to significant cuts in funding to public education. Over the next five years, the Education and Knowledge Creation cluster is projected to grow by 3 percent, adding about 3,400 jobs by 2019. The private education institutions subsector is projected to add the most jobs, followed by public education institutions and education support services. Publishing and broadcasting are expected to decline over this time period.

Exhibit 3: Employment Trends and Projections, Education and Knowledge Creation Cluster, Sacramento Capital Region, 2009–2019⁶

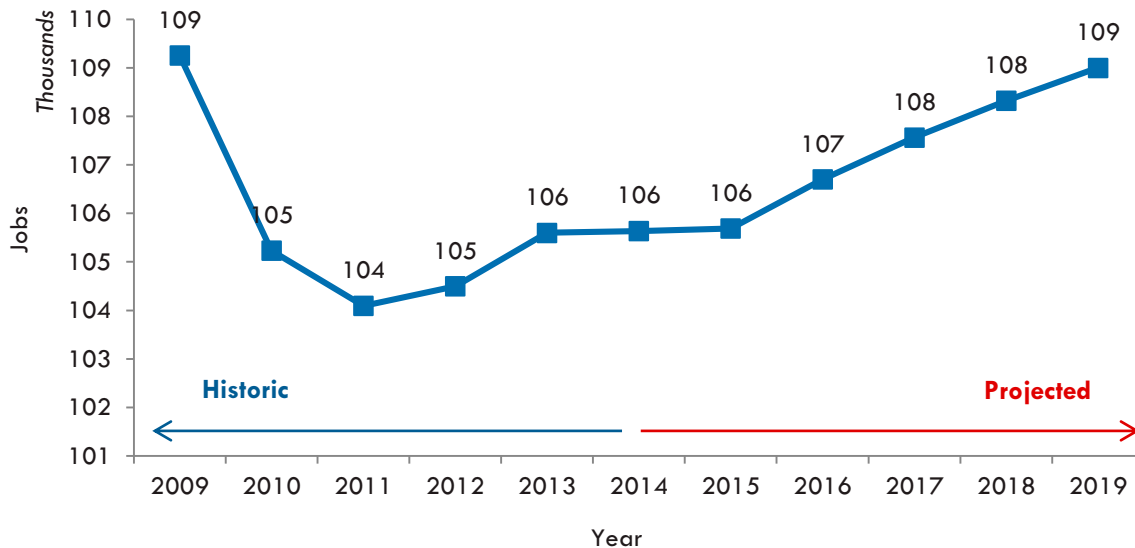


Exhibit 4: Employment Projections by Subsector, Education and Knowledge Creation Cluster, Sacramento Capital Region, 2014–2019⁶

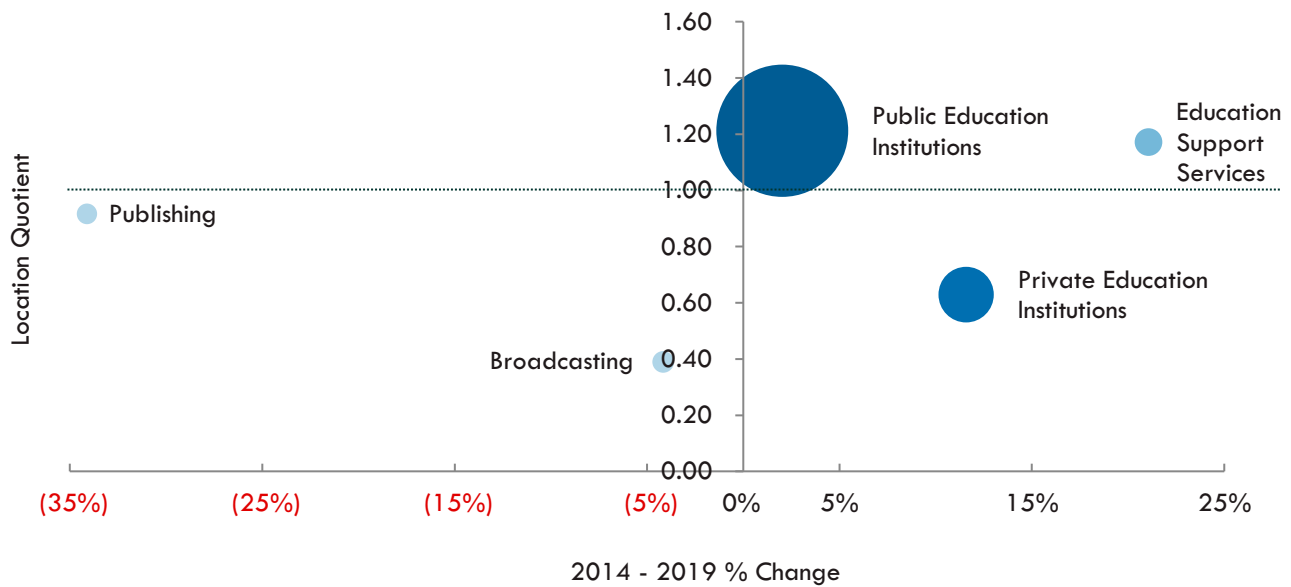
Education and Knowledge Creation Subsector	2014 Jobs	2019 Jobs	Change	% Change
Private Education Institutions	14,655	16,352	1,697	12%
Public Education Institutions	83,115	84,796	1,681	2%
Publishing	1,999	1,317	(682)	(34%)
Broadcasting	2,234	2,141	(93)	(4%)
Education Support Services	3,632	4,397	765	21%
Total	105,636	109,004	3,368	3%

⁶ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

TRENDS AND PROJECTIONS

The bubble chart below compares the projected five-year growth rate to the concentration of employment in the region, where the size of the bubble indicates the total number of jobs for that subsector. Public education institutions, education support services and publishing agencies have an average concentration of employment compared to other areas of the state. The broadcasting and private education institutions subsectors have a below average concentration of employment. Public education institutions is the largest subsector, but with slow projected growth over the next five years.

Exhibit 5: Growth Rate vs. Subsector Concentration, Education and Knowledge Creation Cluster, Sacramento Capital Region⁷

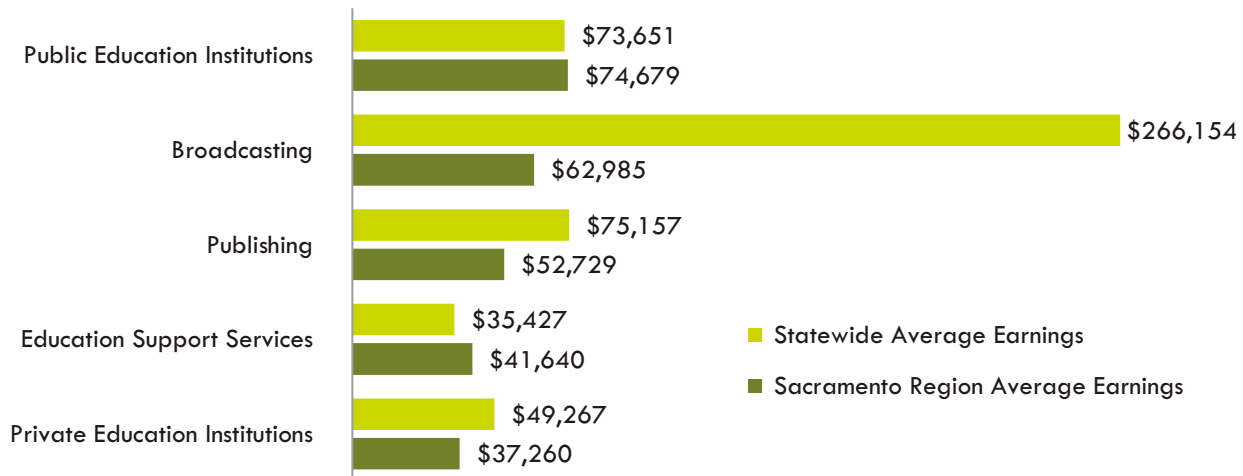


⁷ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

EARNINGS

Public education institutions provide the best earnings in the Sacramento Capital region, followed by broadcasting. However, broadcasting wages are significantly higher in other areas of the state than in the Sacramento Capital region. All of the Education and Knowledge Creation cluster subsectors, except public education institutions, provide earnings that are below the regional average across all industries.⁸ The earning calculation includes an average of all wages, salaries, proprietor earnings and supplemental earnings (such as retirement benefits, bonuses, etc.) for all occupations in the subsector.

Exhibit 6: Earnings by Subsector, Education and Knowledge Creation Cluster, Sacramento Capital Region, 2014⁹



⁸ The average earnings across all industries in the Sacramento region is \$63,400 and includes wages, salaries, proprietor earnings and supplements.

⁹ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

SHIFT SHARE ANALYSIS



Shift share analysis is a method for determining how much of regional job growth can be attributed to national trends and how much is due to unique regional factors. Exhibit 7 displays four key components:

- **Industrial Mix Effect** – represents the share of regional industry growth explained by the growth of the specific industry at the national level.
- **National Growth Effect** – represents how much of the regional industry's growth is explained by the overall growth of the national economy. Given that the nation's economy is growing, it is normal to see positive change in each subsector.
- **Expected Change** – the change expected due to national growth effect and industry mix effects.
- **Regional Competitive Effect** – explains how much of the change in the subsectors is due to some unique competitive advantage that the region possesses, because the growth cannot be explained by national trends in the industry or the economy as a whole.

Three of the five subsectors are significantly underperforming compared to national trends; two subsectors are slightly overperforming. This suggests that the region does not have a competitive advantage in the Education and Knowledge Creation cluster compared to other areas of the nation.

Exhibit 7: Shift Share Analysis by Subsector, Education and Knowledge Creation Cluster, Sacramento Capital Region, 2014–2019¹⁰

	Industrial Mix Effect	National Growth Effect	Expected Change	Regional Competitive Effect
Private Education Institutions	782	888	1,670	27
Public Education Institutions	(1,792)	5,036	3,244	(1,564)
Publishing	(581)	121	(460)	(222)
Broadcasting	7	135	142	(235)
Education Support Services	432	220	652	113
Cluster Total	(1,153)	6,400	5,247	(1,880)

¹⁰ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

ECONOMIC IMPACT



Economic impact provides a quantitative method to estimate the total economic benefit from a project, or in this case, an industry cluster. In other words, it is the “ripple effect” of all economic activities resulting from that cluster. Impact analysis is typically comprised of direct, indirect and induced impacts:

- Direct impacts are those resulting from the expenditures of operations within that industry cluster.
- Indirect impacts are those resulting from suppliers of that cluster spending money and hiring employees.
- Induced impacts are the combined value of employees of the industry cluster spending money at a household level.

Combined, these three variables equate to the total economic impact of a project or industry cluster.

The Education & Knowledge cluster impacts the Sacramento Capital region’s economy in several ways. The IMPLAN input output model was used to measure the cluster’s total economic impacts. First, the cluster directly benefits the economy through the operations and jobs supported by the establishments within its subsectors. Exhibits 8 and 9 show that the Education & Knowledge cluster directly contributes roughly \$24.1 billion in output and 106,000 jobs to the regional economy. In addition to this direct effect, these establishments generate an indirect impact through their supplier purchases—about \$12.8 billion in output and 81,000 jobs are created within sectors that generally supply this cluster. Finally, the Education & Knowledge cluster creates an induced effect of nearly \$9.5 billion and approximately 68,000 jobs as a result of consumption activities within the local economy of both direct (cluster) and indirect (supplier) employees.

Exhibit 8: Total Output Impacts¹¹

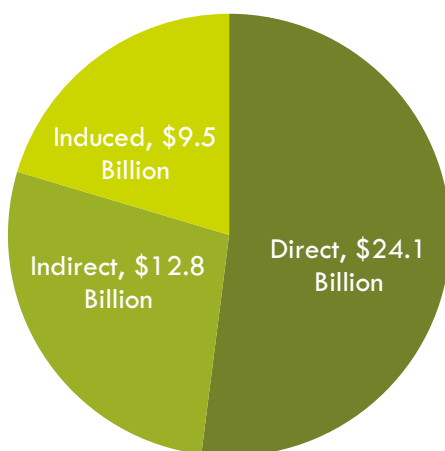
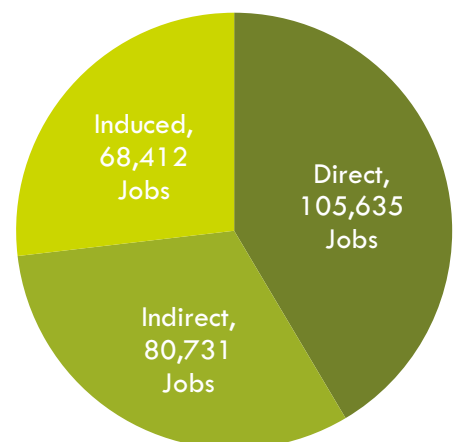


Exhibit 9: Total Employment Impacts¹¹



¹¹ EMSI employment and IMPLAN 2013 data coefficients

ECONOMIC IMPACT

The Education & Knowledge cluster contributes a total of \$46.4 billion in output, 255,000 jobs and \$17.6 billion in labor income. Exhibit 10 breaks down the employment impacts by each subsector within the Education & Knowledge cluster and by output, employment, and labor income (which includes all forms of employment income, including employee compensation and proprietor income). With about \$42.0 billion in output, 219,000 jobs, and \$16.0 billion in labor income, the public education institutions subsector accounts for the largest share of the cluster's total economic impacts while the education support services subsector has the smallest share (except in employment where publishing accounts for the smallest share).

Exhibit 10: Total Economic Impacts by Cluster Subsector¹²

	Direct	Indirect	Induced	Total
Output				
<i>Total</i>	\$24,118,116,854	\$12,801,360,648	\$9,455,970,198	\$46,375,447,699
Public Education Institutions	\$21,676,315,368	\$11,759,078,854	\$8,607,790,366	\$42,043,184,589
Private Education Institutions	\$811,234,626	\$264,339,138	\$376,012,121	\$1,451,585,885
Education Support Services	\$183,520,747	\$66,181,351	\$89,205,761	\$338,907,859
Broadcasting	\$1,011,545,597	\$557,319,019	\$275,916,277	\$1,844,780,894
Publishing	\$435,500,515	\$154,442,286	\$107,045,672	\$696,988,473
Employment				
<i>Total</i>	105,635	80,731	68,412	254,777
Public Education Institutions	83,115	73,652	62,273	219,040
Private Education Institutions	14,655	1,744	2,721	19,120
Education Support Services	3,632	442	645	4,719
Broadcasting	2,234	3,921	1,998	8,153
Publishing	1,999	971	775	3,745
Total Labor Income				
<i>Total</i>	\$9,754,494,797	\$4,530,589,994	\$3,108,223,558	\$17,592,069,892
Public Education Institutions	\$8,925,511,057	\$4,231,939,785	\$2,861,781,580	\$16,019,232,422
Private Education Institutions	\$497,788,477	\$76,046,606	\$125,017,834	\$698,852,917
Education Support Services	\$115,648,329	\$20,623,231	\$29,658,383	\$165,929,943
Broadcasting	\$215,546,934	\$201,980,372	\$91,765,760	\$509,293,066
Publishing	\$109,807,716	\$53,361,366	\$35,592,461	\$198,761,543

ECONOMIC LEAKAGE

Supply chain leakage is a primary factor in determining the value of an industry multiplier used to define the total "ripple effect" of that industry cluster. Stronger supply chain linkages, better described as a cluster using more locally sourced products and services, has a reciprocal benefit of lower leakage, increasing the multiplier and the total impact on the surrounding economy.

It was determined through an in-depth analysis of the Education & Knowledge Creation cluster and its subsets, that there is a high level of supply chain leakage, roughly 75 percent. Conversely, 25 percent of goods and services supporting the industry cluster are purchased within the region.

¹² EMSI employment and IMPLAN 2013 data coefficients

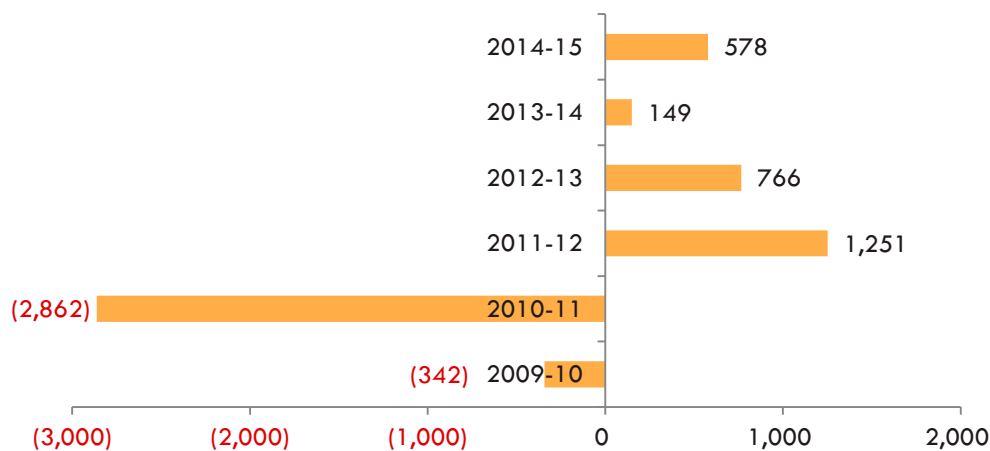
INDUSTRY TRENDS IN EDUCATION AND KNOWLEDGE CREATION

Several environmental, demographic and regulator factors are expected to influence demand for teachers and education support professions. These include:

- **Optimistic hiring forecast** as school budgets stabilize post-recession. During the recession, K-12 new teacher hiring froze and layoffs occurred for those with the least seniority due to state funding cuts. In California, nearly 32,000 teaching jobs were eliminated between 2007 and 2012. Secondary schools in the Sacramento Capital region reduced their teacher workforce between 30 and 70 percent.¹³ These staff reductions created larger class sizes with fewer education programs, support services and resources.¹⁴ Credentialed teachers who were laid-off either entered other professions or opted to work at charter schools.

In the Sacramento Capital region, public schools experienced the largest decline in teacher staffing levels in the 2010-11 academic year. As the state budget recovered from the recession, school districts started hiring teachers, a trend which is expected to continue into the short-term future. The California Department of Education estimates that K-12 public school districts in the Sacramento Capital region will need to hire 1,288 teachers in 2016-17 academic year.

Exhibit 11: Change in FTE Teacher Staffing Levels, Secondary Public Schools, Sacramento Capital Region¹⁵



- **Per-pupil spending may significantly increase driving demand for more services and staff in the education field.** In the proposed budget for 2016-17, Governor Brown has substantially increased funds to support K-12 education that will allow schools to expand base programs and services. Per-pupil expenditures would increase to \$10,591, an additional \$368 over 2015-16 levels. And total per-pupil spending after adding all sources of funding would rise to \$14,550, a \$366 increase over 2015-16.
- **Resurgence of enrollment in university teacher training programs.** The economic downturn that led to school districts' teacher lay-offs and hiring freezes discouraged students from entering university teacher preparation programs, resulting in a decline of more than 24,000 candidates — a 55% reduction in enrollments over the past five years statewide.¹⁶ Total teacher preparation enrollment was reduced alone by 24 percent between 2011-12 and 2012-13.

¹³ *New Teachers Scarce After State Funding Cuts*, Sacramento Bee, March 7, 2014.

¹⁴ *Investing in Our Future: Returning Teachers to the Classroom*, Executive Office of the President, August 2012.

¹⁵ California Department of Education. Data Reporting Office. Report Prepared: 2/5/2016.

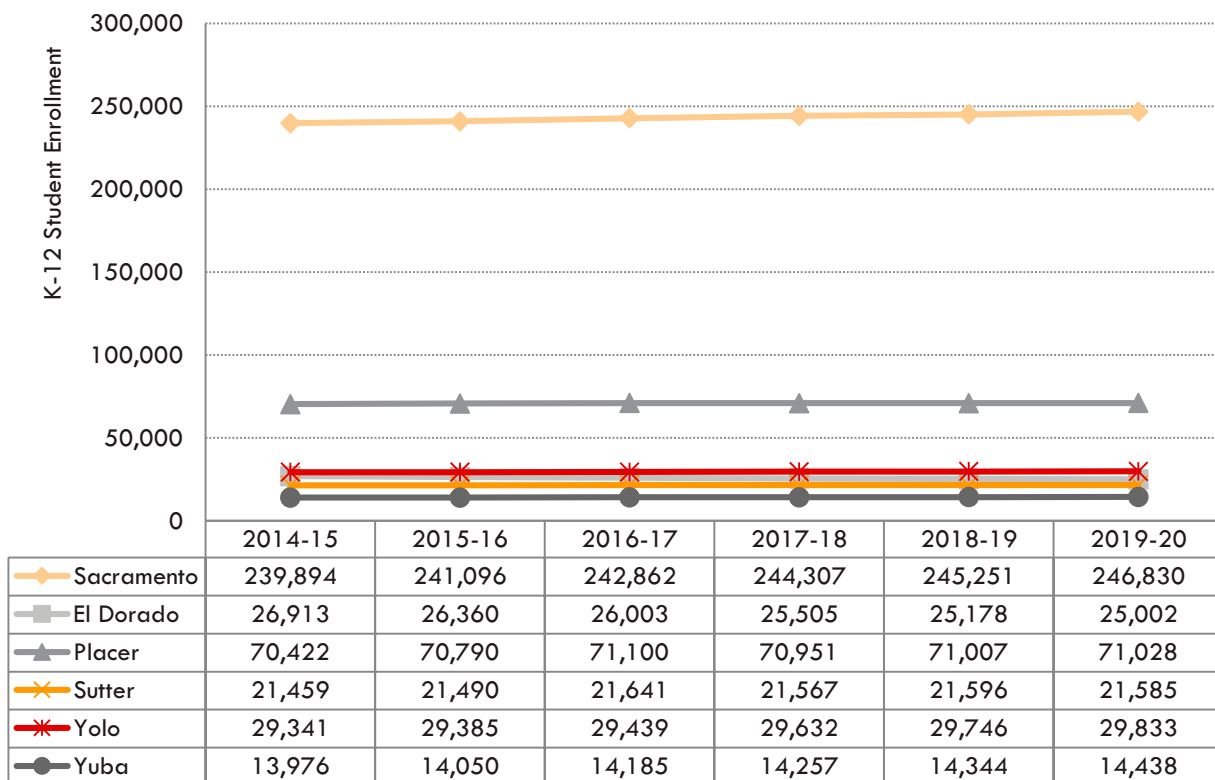
¹⁶ <http://www.ctc.ca.gov/reports/TS-2013-2014-AnnualRpt.pdf>

INDUSTRY TRENDS IN EDUCATION AND KNOWLEDGE CREATION

With increased teacher hiring underway, college students are now again being encouraged to enter teaching careers, including programs at Cal State University Sacramento and UC Davis. However, due to fewer students currently in the teacher education preparation pipeline, it may take a few years for educational supply to balance with the projected demand.

- **Upcoming teacher retirements unlikely to create future workforce shortages.** Even with the region's aging population, teacher retirements are unlikely to create future staffing shortages over the next five to ten years as previously expected.¹⁷ According to analysis conducted by The Center for Teaching and Learning at WestEd, the number of teachers nearing retirement age is expected to remain constant over the next few years. Rather, governmental policy and demographic shifts will have a more significant impact on demand.
- **Changing student enrollment projections drive teacher hiring.** Shifting age populations among individual communities may increase or keep teacher hiring flat. As shown in Exhibit 12, all of the Sacramento Capital region counties anticipate enrollment growth, except for El Dorado County. Within the counties, some districts anticipate growth while others continue to plan for enrollment declines.

Exhibit 12: Secondary Student Enrollment Projections by County, Sacramento Capital Region¹⁸



¹⁷ Black, A., Tiffany-Morales, J., Tyler, N., and Sarnoff, R. (2013). *Teacher Retirement Trends in California: 2006/07–2011/12*. A Report by the Center for the Future of Teaching and Learning at WestEd. San Francisco: WestEd. Report available at: <http://www.sjsu.edu/secondary/trtc.pdf>

¹⁸ California Department of Education. Data Reporting Office. Report Prepared: 2/5/2016.

INDUSTRY TRENDS IN EDUCATION AND KNOWLEDGE CREATION

- **Anywhere, anytime learning and lifelong learning opportunities abound.** With Internet-based education and mobile computation — anywhere, anytime learning is moving out of the classroom and onto screens and even embedded in the built environment of mobile and other devices. This type of learning will mean that informal and ad hoc education will more fully complement formal education and credentialing systems.

Beyond online education credit courses offered by college and university programs, there are now a multitude of short online courses and tutorials called MOOCs — Massive Open Online Courses — offered by universities such as Stanford, UC Berkley, Harvard and MIT, among others that offer training or certifications to assist in skill development for both professionals and lifelong learners, with many subjects offered for free.¹⁹ With increases in longevity, a more volatile economy and accelerating technological changes, lifelong learning and adult education will continue to expand. The idea that education is reserved for youth will soon become indefensible, even counter-productive. Continuous professional development and skill acquisition will be necessary to serve older, multi-career individuals.

Industries in knowledge creation have undergone a technological transformation that has forever changed the way broadcasting and publishing will be accessed and personalized by the consumer. Broadcasting and publications — their media production and business, perhaps more than any other industries — have been disrupted by the Internet. Television, radio, newspapers, magazines, and books have become more decentralized and personalized for the consumer.

As media is converted into digital forms, how information is accessed — news and entertainment — has radically changed. Today's media industry provides consumers with an overwhelming number of options for on-demand news and information, powered by broadband or wireless networks. Consumers are now able to self-direct how they interact with media and selectively control the type of content they access. These shifting consumer preferences are stifling traditional knowledge creation industries. Some of the recent trends include:²⁰

- **Television Broadcasting:** As increasing number of viewers are opting for Internet streaming options. Companies which make changes to meet consumer preferences by offering interactive and customized services will be more successful.
- **Radio Broadcasting:** Digital media platforms like podcasts, MP3 players and streaming radio have inundated the radio industry for the past five years, providing stiff competition. As with television broadcasting, many traditional radio broadcasters are integrating online and customized access.
- **Newspaper Publishing:** Digital versions of newspapers have become the go-to source of news for many consumers. Adopting technological innovations using Internet and mobile platforms will help publishers to expand real-time reporting while cutting traditional printed publication's labor, printing and distribution costs.
- **Book Publishing:** The shift in technology and consumer preferences for mobile reading devices such as e-readers, iPads and tablets, and e-book publications have created restructuring in the publishing industry, leading to a decline in book publishing and its revenue. As consumers have products and reading materials easily available online, book publishers are developing new products such as e-books and generating additional revenue from the demand for college textbooks as college enrollments increase.

¹⁹ online.stanford.edu and www.edX.org

²⁰ IBISWorld.com

OCCUPATION DEMAND

Twelve (12) occupations were selected for inclusion in the study based on the following criteria:

- Annual job openings were significant.
- The minimum education requirement is a high school diploma plus on-the-job training, postsecondary award, associate degree or bachelor's degree.

Exhibit 13 displays the employment demand for the Education and Knowledge Creation cluster occupations selected for inclusion in the study. Over the next five years (2014–2019), these occupations are projected to grow by 4%, adding about 1,200 new jobs and 3,800 replacement jobs.²¹ Sacramento Capital region employers will need to fill as many as 1,000 openings annually to keep pace with cluster growth, retirements and other separations.

Elementary school teachers is the largest occupation in the group with the most annual openings over the next five years. Secondary school teachers and middle school teachers are also large occupations with significant annual openings created by new job growth and replacement needs. For each occupation, replacement estimates include retirements and general separations, but not turnover within the occupation. As such, replacements and new job growth combined is a good measure of demand for workers.

Exhibit 13: Employment Outlook, Education and Knowledge Creation Occupations, Sacramento Capital Region, 2014–2019²²

Description	2014 Jobs	2019 Jobs	2014–2019 Change	2014–2019 % Change	Total Replacements	Total Openings	Annual Openings
Elementary School Teachers	10,226	10,662	436	4%	1,265	1,701	340
Secondary School Teachers	5,191	5,308	117	2%	777	894	179
Middle School Teachers	3,082	3,250	168	5%	370	538	108
Teachers and Instructors, All Others	2,625	2,844	219	8%	236	455	91
Education, Training, and Library Workers	1,843	1,900	57	3%	86	143	29
Kindergarten Teachers	1,707	1,766	59	3%	266	325	65
Training and Development Specialists	1,616	1,789	173	11%	158	331	66
Writers and Authors	915	906	(9)	(1%)	114	114	23
Library Technicians	802	847	45	6%	225	270	54
Advertising Sales Agents	778	735	(43)	(6%)	147	147	29
Editors	550	501	(49)	(9%)	75	75	15
Producers and Directors	410	423	13	3%	81	94	19
Total	29,747	30,931	1,186	4%	3,802	5,089	1,017

²¹ This study excludes occupations that require more than a bachelor's degree. As such, postsecondary instructors were not selected for inclusion in the study.

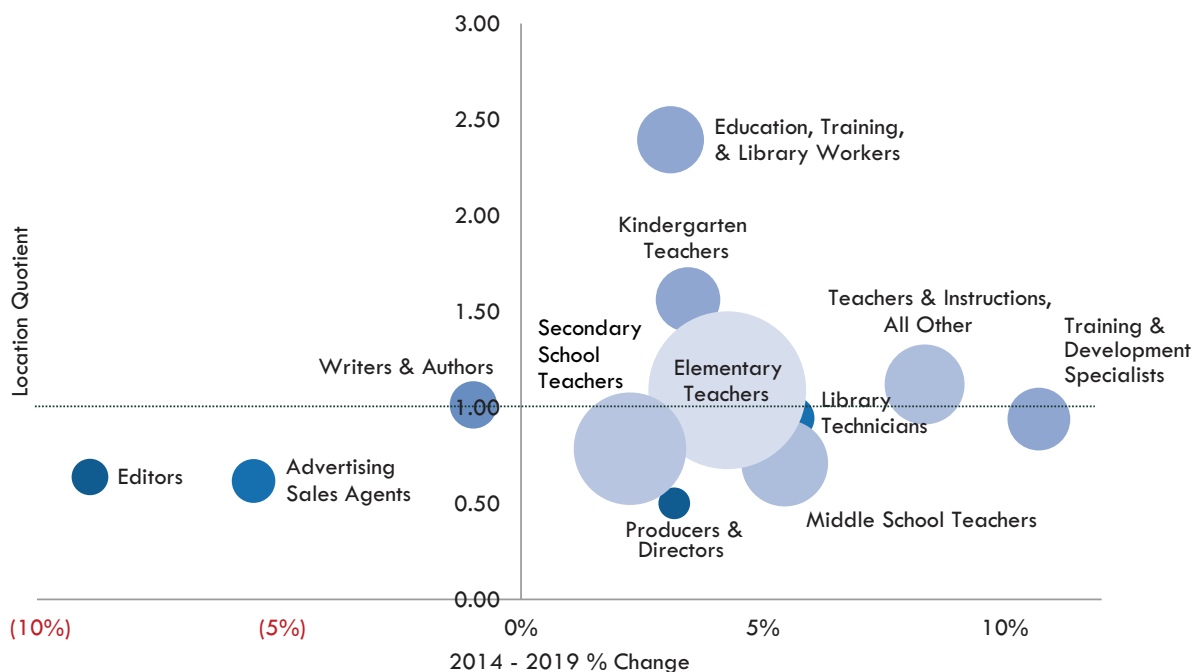
²² EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2



In addition to industry analysis, location quotient can also be applied to occupations. In this case, the location quotient compares an occupation’s total employment in a region relative to the state’s total employment for that occupation. A location quotient of less than one indicates a lower concentration of employment for that occupation in the region than in the state overall. A location quotient of more than one indicates a higher concentration of employment for the occupation than in the state overall.

The bubble chart below compares the concentration of occupation employment to the projected five-year growth rate in the region, where the size of the bubble indicates the total number of jobs for each occupation. As shown below, elementary school teachers is the largest occupation, with average concentration in the region and a moderate projected growth rate. Education, training and library workers have an above average location quotient and a moderate projected growth rate. Training and development specialists is projected to grow faster than any other occupation in the group, with an average concentration of employment in the region. Editors and advertising sales agents, two of the smallest occupations in the group, are projected to decline, with below average employment concentrations.

Exhibit 14: Growth Rate vs. Occupation Concentration, Education and Knowledge Creation Occupations, Sacramento Capital Region²³

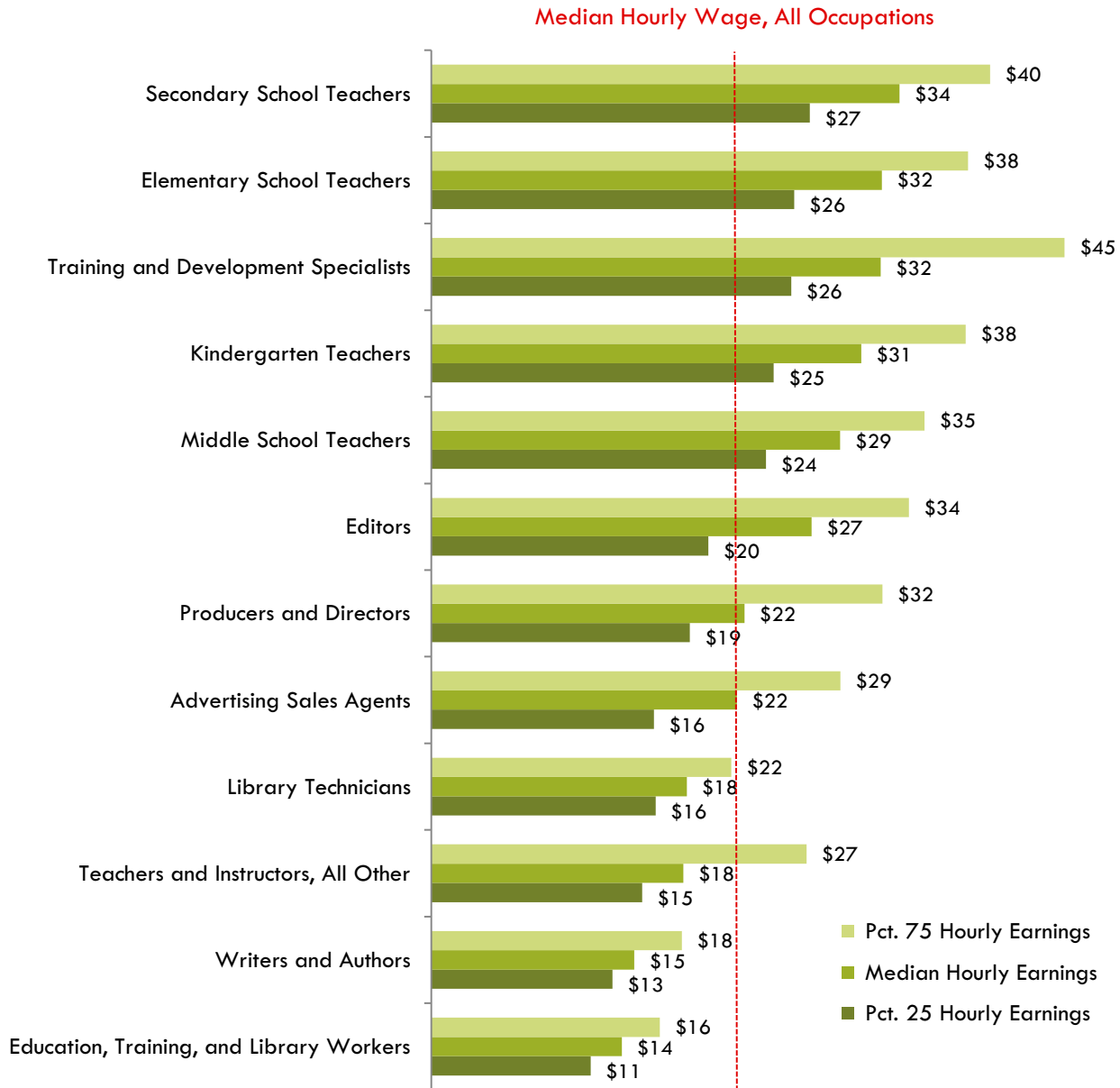


²³ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

OCCUPATIONAL WAGES

About half of occupations in the Education and Knowledge Creation cluster earn wages that are close to or above the regional median wage across all occupations. Secondary school teachers is the highest paid occupation (based on median hourly earnings), followed by elementary school teachers and training and development specialists. The lowest paid occupations in the group include teachers and instructors, all other, writers/authors and education, training and library workers. The median hourly earnings across all occupations in the Sacramento Capital region is \$22.69 per hour.

Exhibit 15: Hourly Wages, Education and Knowledge Creation Occupations, Sacramento Capital Region, 2015²⁴



²⁴ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

EDUCATION ASSESSMENT

This section provides a review of the training and education supply programs supporting the Education and Knowledge Creation cluster for the occupations selected for inclusion in this study. Exhibit 16 identifies the minimum education requirements for the Education and Knowledge Creation cluster occupations. The minimum education requirement for the majority of occupations is a bachelor's degree.

Exhibit 16: Minimum Education Requirements, Education and Knowledge Creation Occupations

Description	Entry Level Education	Typical On-The-Job Training
Advertising Sales Agents	High school diploma or equivalent	Moderate on-the-job training
Editors	Bachelor's degree	None
Education, Training, and Library Workers	Bachelor's degree	None
Elementary School Teachers	Bachelor's degree	Internship
Kindergarten Teachers	Bachelor's degree	Internship
Library Technicians	Postsecondary non-degree award	None
Middle School Teachers	Bachelor's degree	Internship
Producers and Directors	Bachelor's degree	None
Secondary School Teachers	Bachelor's degree	Internship
Teachers and Instructors, All Other	Bachelor's degree	Internship
Training and Development Specialists	Bachelor's degree	None
Writers and Authors	Bachelor's degree	Moderate on-the-job training

Exhibit 17, on the following page, lists the colleges with certificate and degree programs that provide a workforce pipeline to the Education and Knowledge Creation cluster. The table includes an estimate of the certificate and degrees conferred each year by program, based on a three-year historical average.

In the Sacramento Capital region, there are 25 training programs supporting the Education and Knowledge Creation cluster occupations. These programs confer an average of 749 degrees and certificates annually. Based on a high level assessment of supply and demand, there could be gaps in the workforce pipeline in two areas: teaching occupations and library workers. The supply and demand data also suggests that there could be a significant oversupply of writers, authors and editors.

The total certificates and degrees conferred provide some information about the supply of workers to an industry or cluster. However, it is limited in that there are several unknown variables that impact the supply, such as migration trends, employer preferences, worker preparedness, qualified unemployed labor force, and graduate/completion duplication. Therefore, it is necessary to conduct additional research to verify potential training shortages in the region.

EDUCATION ASSESSMENT

Exhibit 17: Educational Programs & Awards, Education and Knowledge Creation Occupations, Sacramento Capital Region^{25&26}

Category	College	Program	Award Type	3-Year Average
Teaching	California State University-Sacramento	Teaching Credential	Postbaccalaureate Certificate	No Data
	California State University-Sacramento	Child Development	Bachelor's degree; Master's degree	231
	California State University-Sacramento	Teacher Education	Master's degree	178
	Rudolf Steiner College	Waldorf Teacher Education	Postbaccalaureate Certificate	24
	University of California-Davis	General Education	Master's degree	42
	University of California-Davis	Teaching Credential	Postbaccalaureate Certificate	143
	University of Phoenix-Sacramento Valley Campus	Elementary Education and Teaching	Master's degree	6
	University of Phoenix-Sacramento Valley Campus	Secondary Education and Teaching	Master's degree	8
	William Jessup University	Elementary Education and Teaching	Bachelor's degree	21
	William Jessup University	Teacher Education	Master's degree and Postbaccalaureate Certificate	8
Library Workers	Sacramento City College	Library & Information Technology	Associate degree; Certificate	12
Writers, Authors & Editors	American River College	Journalism & Mass Communication	Associate degree	5
	American River College	Technical Communication	Associate degree; Certificate	5
	Cosumnes River College	Broadcast Journalism	Associate degree	0
	Cosumnes River College	Journalism	Associate degree	4
	Sacramento City College	Journalism	Associate degree; Certificate	3
	Sierra College	Journalism	Associate degree	1
	California State University-Sacramento	Journalism	Bachelor's degree	40
Producers/Directors	Cosumnes River College	Television Production	Associate degree; Certificate	3
	Cosumnes River College	Radio Production	Associate degree; Certificate	1
	Cosumnes River College	Radio, Television & Film Production	Associate degree	3
	Yuba College	Mass Communications	Associate degree; Certificate	5
Advertising Agents	American River College	Advertising and Sales Promotion	Associate degree	0
	Sacramento City College	Advertising	Associate degree	1
	Cosumnes River College	Advertising/Public Relations Program	Associate degree	No Data

²⁵ California Community College Chancellor's Office Data Mart. National Center for Education Statistics (NCES). Higher education institutions are required to report completion data to NCES if they participate in any federal financial assistance program authorized by Title IV of the Higher Education Act. Completion data not reported to the NCES or CCCCO Data Mart were not included in the estimate.

²⁶ The 3-year average is based academic years 2011-12, 2012-13 and 2013-14 for private education institutions and public four-year universities and 2012-13, 2013-14, and 2014-15 for community colleges.

SKILLS ASSESSMENT

Exhibit 18 displays the top skills and professional credentials for the Education and Knowledge Creation cluster occupations selected for inclusion in this study. The data is based on analysis of job posting data, aggregated by Burning Glass. This online tool uses intelligent “spidering” to search the Internet for job listings, removes duplication, and aggregates the data into a search database. As shown below, most of the skills/knowledge areas are specialized and require specific training and skills.

Exhibit 18: Skill and Professional Credential Preferences, Education and Knowledge Creation Occupations²⁷

Occupation	Top Skill/Knowledge Areas	Top Certifications/ Professional Credentials
Advertising Sales Agents	Advertising, sales, marketing, persuasion, management training, cold calling, business development, and account management	None listed
Editors	Editing, journalism, social media, Adobe Photoshop, copy editing, video editing, proofreading, content management and blogging	None listed
Education, Training, and Library Workers	Troubleshooting technical issues, faxing, personnel management, office equipment, workshops, record keeping and data management	None listed
Elementary School Teachers	Lesson planning, curriculum development, maintaining student records, group instruction, assessment data, managing student data, child cognitive development and record keeping	First Aid CPR AED, Certified Testing Expert Level, Certified Teacher
Kindergarten Teachers	Lesson planning, child development, curriculum development, group instruction, record keeping and first aid	None listed
Library Technicians	Repair, record keeping, office equipment, word processing, library reference, inventory maintenance, data entry, library resources, and scheduling	Typing Certification
Middle School Teachers	Child development, lesson planning, child supervision, first aid, training programs, record keeping, workshops and curriculum development	First Aid CPR AED, Certified Teacher
Producers and Directors	Broadcasting, social media, Adobe Photoshop, video production, journalism, scheduling, collaboration, video editing, content management, and concept development	Project Management Certification
Secondary School Teachers	Lesson planning, curriculum development, record keeping, group instruction, tutoring, workshops, educational programs, maintaining student records, and report writing	Certified Teacher
Teachers and Instructors, All Other	Tutoring, record keeping, lesson planning, screening, scheduling, faculty training, mentoring, first aid, child development and workshops	First Aid CPR AED
Training and Development Specialists	Training programs, training materials, technical training, instructional design, sales scheduling, onboarding, collaboration, workshops and learning management systems	None listed
Writers and Authors	Copy writing, journalism, social media, technical writing/editing, blogging, proofreading, concept development, content management, concise and creative writing	None listed

²⁷ Burning Glass, 2015.

SUMMARY



The Education and Knowledge Creation cluster represents a range of industries and establishments that provide systematic information or instruction for the purpose of knowledge creation or learning. The cluster is comprised of two categories: education (private and public institutions and support services) and knowledge creation (publishing and broadcasting establishments).

In 2014, the Education and Knowledge Creation cluster employed 105,600 workers, 10 percent of the Sacramento Capital region's total workforce. The majority of the cluster's workforce is employed by public education institutions. In the Sacramento Capital region, there are several environmental and market conditions that are impacting the Education and Knowledge Creation cluster.

- **Education.** The Sacramento Capital region's educational workforce rebounded after the recession to employ more teachers and administrators funded by additional tax revenues and driven by new state guidelines. This swell of recent employment has created optimism among students and other professionals interested in entering the teaching profession as evidenced by an increase in university teacher preparation enrollments. However, it could take a few years for students in the pipeline to become credentialed and qualified for employment.
- **Knowledge Creation.** Broadcasting and publications—their media production and business, perhaps more than any other industries, have been disrupted by the Internet. Television, radio, newspapers, magazines, and books have become more decentralized and personalized for the consumer. As consumer preferences shift, many traditional publishers and broadcasters struggle to keep pace with the changing environment, causing a decline in revenues and subsequently staffing levels. These declines are projected to continue in the short-term future.

Twelve (12) occupations were selected for inclusion in the study based on the total number of job openings and minimum education requirements, including:

Education-Related Occupations

- Education, Training, and Library Workers
- Elementary School Teachers
- Kindergarten Teachers
- Library Technicians
- Middle School Teachers
- Teachers and Instructors, All Other
- Training and Development Specialists
- Secondary School Teachers

Broadcasting and Publication-Related Occupations

- Advertising Sales Agents
- Editors
- Producers and Directors
- Writers and Authors

SUMMARY

Over the next five years, occupations in the Education and Knowledge Creation cluster are projected to grow modestly, adding about 1,200 new jobs and 3,800 replacement jobs. All of the education-related occupations are projected to add new positions, while most of the broadcasting and publication-related occupations are projected to decline. However, annual demand for replacement workers is strong across the cluster. About half of occupations in the Education and Knowledge Creation cluster earn wages that are close to or above the regional median wage. The minimum education requirement for the majority of occupations in the Education and Knowledge Creation cluster is a bachelor's degree.

In the Sacramento Capital region, there are 25 training programs supporting the Education and Knowledge Creation cluster occupations. These programs confer an average 749 degrees and certificates annually. Based on a high level assessment of supply and demand, there could be gaps in the workforce pipeline in two areas: teaching occupations and library workers. The supply and demand data also suggests that there could be a significant oversupply of writers, authors and editors.

Valley Vision, along with the Center of Excellence and other partners, will be conducting forums with Education and Knowledge Creation employers to review the cluster findings, high priority occupation and skills gaps that can be addressed through a concerted cluster workforce action plan. Priorities that may be elevated based on this analysis include:

1. Conduct additional research on the supply and demand of teaching occupations to identify areas in short supply (such as academic and CTE disciplines).
2. Expand library technician programs to meet the projected labor market needs.
3. Develop articulation agreements among community colleges and universities to strengthen the teacher training pipeline.



APPENDIX A: EDUCATION AND KNOWLEDGE CREATION CLUSTER DEFINITION

The Education and Knowledge Creation cluster is comprised of the following NAICS codes.

Private Education Institutions

- 611110 Elementary and Secondary Schools
- 611210 Junior Colleges
- 611310 Colleges, Universities, and Professional Schools
- 611410 Business and Secretarial Schools
- 611420 Computer Training
- 611430 Professional and Management Development Training
- 611511 Cosmetology and Barber Schools
- 611512 Flight Training
- 611513 Apprenticeship Training
- 611519 Other Technical and Trade Schools
- 611610 Fine Arts Schools
- 611620 Sports and Recreation Instruction
- 611630 Language Schools
- 611692 Automobile Driving Schools
- 611699 All Other Miscellaneous Schools and Instruction

Public Education Institutions

- 902611 Elementary and Secondary Schools (State Government)
- 902612 Colleges, Universities, and Professional Schools (State Government)
- 903611 Elementary and Secondary Schools (Local Government)
- 903612 Colleges, Universities, and Professional Schools (Local Government)

Education Support Services

- 519120 Libraries and Archives
- 611691 Exam Preparation and Tutoring
- 611710 Educational Support Services
- 902619 All Other Schools and Educational Support Services (State Government)
- 903619 All Other Schools and Educational Support Services (Local Government)

Publishing

- 323117 Books Printing
- 511110 Newspaper Publishers
- 511120 Periodical Publishers
- 511130 Book Publishers
- 511199 All Other Publishers
- 519110 News Syndicates
- 519190 All Other Information Services

Broadcasting

- 515111 Radio Networks
- 515112 Radio Stations
- 515120 Television Broadcasting
- 519130 Internet Publishing and Broadcasting and Web Search Portals

MORE ABOUT...

More About The Centers of Excellence

The Centers of Excellence (COE) for Labor Market Research deliver regional workforce research and technical expertise to California community colleges for program decision making and resource development. This information has proven valuable to colleges in beginning, revising, or updating economic development and Career Technical Education (CTE) programs, strengthening grant applications, assisting in the accreditation process, and in supporting strategic planning efforts.

The Centers of Excellence Initiative is funded in part by the Chancellor's Office, California Community Colleges, Economic and Workforce Development Program. The Centers aspire to be the leading source of regional workforce information and insight for California community colleges. More information about the Centers of Excellence is available at www.coecc.net.

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More About Valley Vision

Since 1994, Valley Vision's work has driven transformative change and improved lives across Northern California. An independent social impact and civic leadership organization headquartered in Sacramento, Valley Vision strengthens our communities through unbiased research, boundary-crossing collaboration and change leadership. Our work improves overall quality of life and creates the conditions for economic prosperity and community health and vitality.

More About Burris Service Group

The Burris Service Group (BSG) is a full-service consulting practice providing expertise in economic development, strategic economic research, real estate site strategy, management, and institutional growth. The company was established based on the clear need that advisory services be delivered in an "action-oriented" form. The founder of BSG, Robert Burris, brings to his clients an active local and international network of professionals, as well as 20 years of experience in economic development, market and economic analysis, commercial real estate information, corporate sales, and consulting.



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FOOD AND AGRICULTURE: CLUSTER AND WORKFORCE NEEDS ASSESSMENT SACRAMENTO CAPITAL REGION



April 2016

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Valley Vision

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Important Disclaimer

All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. Efforts have been made to qualify and validate the accuracy of the data and the reported findings; however, neither the Centers of Excellence, COE host District, nor California Community Colleges Chancellor’s Office are responsible for applications or decisions made by recipient community colleges or their representatives based upon components or recommendations contained in this study.

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Economic and Workforce Development Program

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INTRODUCTION

Across the Sacramento Capital region, including the six counties of El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba, approximately 75 percent of land is agricultural, forest, or other open space.

Agriculture in the Sacramento Capital region is not only highly productive and diverse, it is a major economic driver. However, agriculture is often overlooked due to a poor understanding of how the industry's economic impacts reverberate throughout the larger regional economy.

In response, the Sacramento Area Council of Governments (SACOG) has shifted the planning paradigm to more explicitly include agriculture and rural areas. Through cutting-edge technical work and stakeholder engagement, SACOG's Rural-Urban Connections Strategy (RUCS) project strives to bring the region's understanding of rural issues on par with those in urban settings and has demonstrated how policies and strategies impact both parts of the region.

SACOG, the principal researcher for this report, has partnered with Valley Vision and Los Rios Center of Excellence to explore connections among the Food and Agriculture cluster, the labor force, and the larger regional economy. The report draws on recent employment and other data to begin to quantify the substantial economic contribution of the regional food system.

Given the broad nature of the cluster, however, these data sources don't capture the full network of economic impacts associated with the food system, thus providing only a partial picture of the role of food and agriculture in the regional economy. To address this data limitation, the report also draws on a RUCS impact analysis to further illustrate food system components that cannot be quantified through other data sources. The full findings of this larger impact analysis will be available in July 2016.

This report is part of a series covering the six Next Economy identified clusters, including the areas of Advanced Manufacturing, "Clean Economy," Education and Knowledge Creation, Information and Communications Technologies, and Life Sciences and Health Services. Each report provides an overview of the characteristics, industry trends and projections, and economic impact of the clusters. These research reports will be used to develop cluster-based workforce action plans that set priorities and recommend strategies for addressing critical workforce gaps. More information about these Sacramento Capital region workforce action plans can be found at www.valleyvision.org.



SACOG is an association of local governments in the six-county Sacramento area that provides transportation planning and funding and serves as a forum for regional issues, including linking land use, transportation, and air quality.

RUCS is the region's rural economic and sustainability strategy, which is complementary to the **Blueprint**—the region's overall growth strategy.

RUCS Topical Areas

	The Infrastructure of Agriculture
	Regulations
	Land Use and Conservation
	Economic Opportunities
	Forest Management

OVERVIEW OF THE FOOD AND AGRICULTURE CLUSTER

This report moves beyond the farm to analyze the economic contributions of the larger Food and Agriculture industry cluster in the Sacramento Capital region. An industry cluster is a group of interdependent firms and related institutions that are linked through strong relationships and transactions. The full range of inputs and outputs in the Food and Agriculture cluster include various types and scales of production, markets, and value-added processing in addition to the work on farms, ranches, and fields. Related food industries provide resources and equipment for growing or harvesting crops and processing, packaging, or using crops or animal products to prepare other food products (e.g., bakeries). In this analysis, SACOG divided industries within the Food and Agriculture cluster into the following four subsectors:

Cluster research is a widely accepted practice for developing regional prosperity strategies for sustained job creation and growth that leverage unique regional strengths. Industry clusters increase firm competitiveness through shared infrastructure and a concentrated workforce; reduce operating costs with shorter supply chains; increase the flow of information regarding new business opportunities; and foster innovation with informal collaboration and heightened competition. Economic clusters often serve as the driving force of many regional economies.



Food and Agricultural Production – These firms produce, farm, and harvest crops or animal products. Food and agricultural production firms include grain, seed, nut, vegetable, and fruit farming and harvesting; cotton, hay, and tobacco farming and harvesting; pre- and post-harvest activities; nursery production; dairy production; animal ranching, farming, and production; feedlots; aquaculture; apiculture; farm labor contractors; and farm management services.

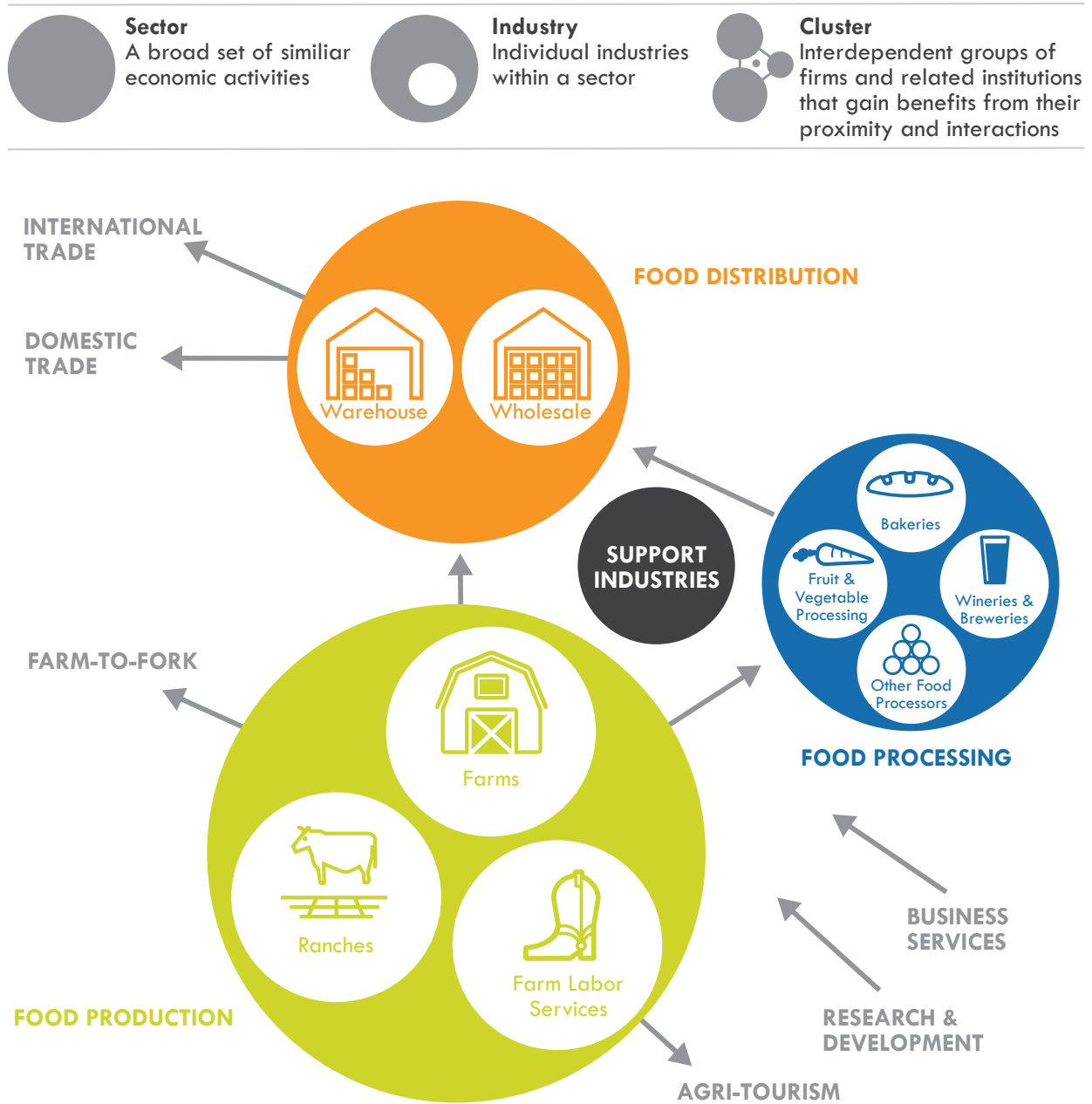
Food and Agricultural Processing – Firms in this segment of the cluster process, mill, manufacture, package, and/or prepare other food products using crop or animal production as inputs. Food and agriculture processing firms include flour, rice, and corn milling; fat and oil processing; meat processing and/or rendering; specialty canning; creameries; bakeries and other prepared food manufacturing; and breweries, wineries, and distilleries.

Food and Agricultural Distribution – These firms store, transport, or sell crop or animal products in bulk quantities as merchant wholesalers. Food and agriculture distribution firms include grocery, meat, dairy, grain, fruit and vegetable, confectionary, and alcohol merchant wholesalers; refrigerated and farm product warehousing and storage; and food service contractors.

Food and Agricultural Support – These firms support agricultural production by providing resources and equipment for growing and harvesting crop and animal products. Food and agriculture distribution firms include animal production support, fertilizer manufacturing, pesticide manufacturing, farm and food machinery and equipment manufacturing, farm supply merchant wholesalers, and nursery and florist merchant wholesalers.

OVERVIEW OF THE FOOD AND AGRICULTURE CLUSTER

Figure 1: Cluster Components: Food and Agricultural Cluster



The Food and Agriculture cluster impacts many elements of the Sacramento Capital region’s economy. This study quantifies employment in the cluster’s core production, support, processing, and distribution activities (represented by the colored circles above). Due to data limitations, however, the study does not quantify employment in related industries, such as those in gray text in the above graphic.

OVERVIEW OF THE FOOD AND AGRICULTURE CLUSTER

In keeping with other food system studies, SACOG's cluster definition incorporates the direct economic activity resulting from food that is grown, processed, and distributed in the Sacramento Capital region. Further associated economic impacts—such as businesses indirectly providing agriculture or ecosystem services stemming from food production—are not captured in this cluster definition due to data limitations. Notably, the analysis does not quantify the (substantial) employment and impact of food at the point of consumption, such as restaurants, grocery stores, events, institutions, or other business entities. The analysis also does not quantify the effect of agritourism, environmental services, or research and development (R&D), as these elements cannot be isolated out of the aggregate data sets. So while the subsequent cluster analysis does provide an updated investigation into the core activities connected to the food system in the Sacramento Capital region, its data and job figures do not represent the full network of associated economic impacts and employment.

As part of the Next Economy efforts to better understand how the Sacramento Capital region has emerged from the global recession, this report delves into the regional Food and Agriculture cluster, quantifying employment and other data points for its four subsectors. The data analysis begins by describing **current conditions** in the cluster, then explores recent trends as the cluster continues to support the region's economic rebound, and concludes with a look forward to key **challenges and opportunities** in sustaining this recent growth. Consistent with other efforts to update the six Next Economy clusters, this report draws on recent data from the EMSI data series¹ for the year 2014. The work also incorporates other RUCS datasets, analyses, and insights to complement the EMSI data and illustrate areas not quantified in the base data series.



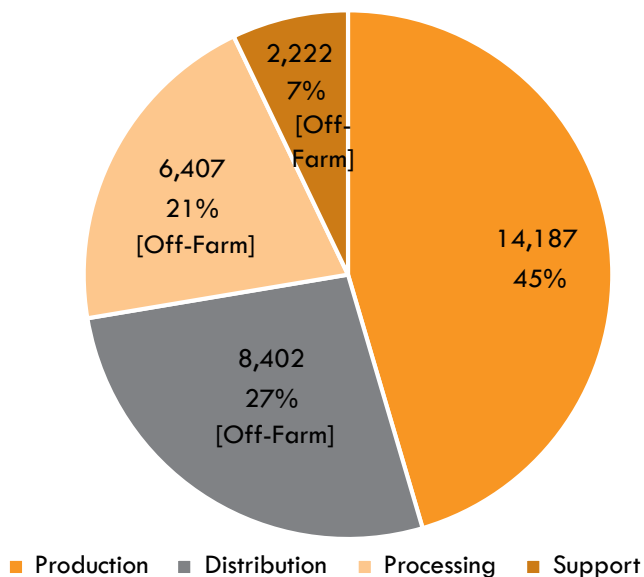
¹ The Economic Modeling Specialists Intl. (EMSI) dataset aggregates over 90 data sources into a unified look at wages, employment, firm concentration and other indicators. The Los Rios Center of Excellence provided the EMSI data for this project; cluster analysis was conducted by SACOG, and all conclusions are SACOG's alone. The Center of Excellence conducted the workforce and training analysis, Part 4 of this report. The geography of the study is the six-county Sacramento Capital region and the study year is 2014 (unless otherwise noted). The report's EMSI data rollup includes estimates for self-employed and sole proprietor workers.

PART 1. FOOD AND AGRICULTURE CLUSTER CURRENT CONDITIONS

EMPLOYMENT

The Food and Agriculture cluster is an important part of the Sacramento Capital region's economy. In 2014, the measured subsectors of the cluster included more than 31,200 jobs, which is about 3 percent of total employment in the six-county region. As shown in Figure 2, the largest concentration of these jobs (45 percent) was in food production, specifically the crop production industry. Remaining employment was spread across the distribution (27 percent), processing (21 percent), and support (7 percent) subsectors respectively. Notably, these "off-farm" industries together made up the majority of employment in the Food and Agriculture cluster (55 percent), showcasing how food system job opportunities extend beyond the farm, ranch, and field into other facets of the regional economy. While the support subsector included the lowest number of jobs overall, the region contained a significantly greater proportion of support employment compared to California as a whole.

Figure 2: 2014 Food and Agricultural Employment by Subsector²



A survey conducted by the California Farm Bureau in 2012 found that many growers in the SACOG region experience labor shortages, and reported a statewide shortage between 10 percent and 30 percent. If the issue persists, this challenge could inhibit further growth in the cluster.



² EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

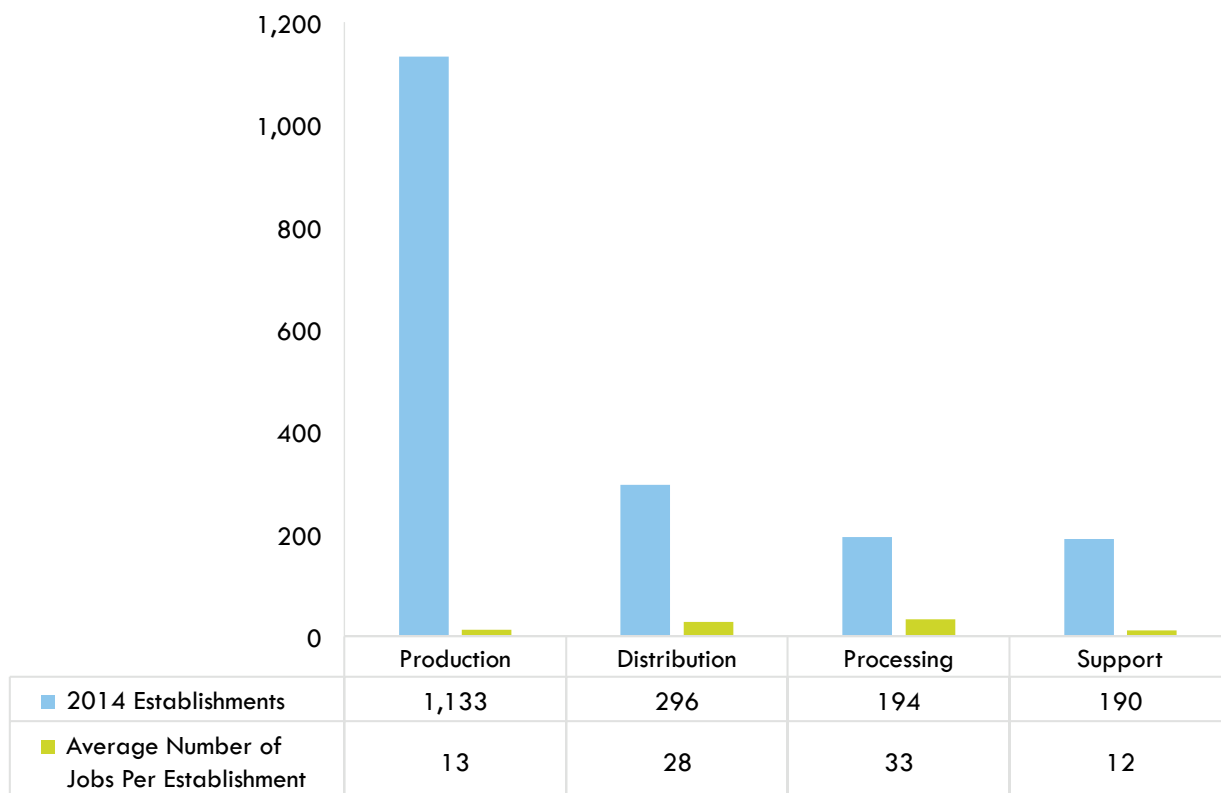
ESTABLISHMENTS

Overall there are more than 1,800 establishments in the regional Food and Agriculture cluster. Figure 3 displays the total number of establishments and the average number of jobs per establishment for the four cluster subsectors. As shown, the production subsector has the most firms, yet also has one of the lowest averages of workers per establishment compared to other subsectors in the region. This stems from the unique nature of agricultural production compared to many other industries. For example, farmers often draw on off-farm labor contractors at various points in the year. These farm labor contractor establishments each average around 100 employees in the region.

The processing subsector has a smaller number of total establishments, but has the highest average number of workers per establishment. (This total of around 200 processing establishments does not include the components of food processing that occur on farms.) Larger processing facilities in the region—such as fruit and vegetable canning or soft drink manufacturing—on average employ more than 100 workers per establishment. Recent RUCS work has centered on the market opportunity to complement regional food processing activities with a focus on mid-scale facilities, such as food hubs.

An **establishment** is a business providing goods and/or services within an industry, generally engaging in a single type of economic activity and operating from a single physical location. Most employers have only one establishment; however, larger employers may have several.

Figure 3: Establishments and Average Employment by Subsector, 2014³



³ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

CONCENTRATION OF EMPLOYMENT: REGIONAL AND SUBSECTOR CONCENTRATION

Location quotient (LQ) analysis provides a useful tool to identify regional economic specializations (see box at right). Compared to the state as a whole, the Sacramento Capital region's Food and Agriculture cluster contains many areas of specialization, yet also is less concentrated in several key industries. As shown in Figure 4, the production and processing subsectors in the region have a location quotient that is less than 1, indicating a lower concentration of employment in these areas compared to the state average. Conversely, the distribution and support subsectors in the region have a location quotient higher than 1, highlighting regional concentrations in these industries. The support sector has a particularly high location quotient, as jobs within this subsector are almost twice as concentrated in the region compared to the state average.

Within the cluster subsectors, individual industries with regional location quotients significantly above the state average include:

- **Processing** – rice milling (4.37 LQ), rendering and meat byproduct processing (3.63 LQ), dried and dehydrated food manufacturing (3.19 LQ), flour milling (2.88 LQ), roasted nuts and peanut butter manufacturing (2.87 LQ), and soft drink manufacturing (1.79 LQ);
- **Distribution** – farm product warehousing and storage (5.46 LQ); and,
- **Support** – farm machinery and equipment manufacturing (2.19 LQ).

Subsector industries with location quotients significantly below the state average include:

- **Processing** – animal (except poultry) slaughtering (0.20 LQ), tortilla manufacturing (0.20 LQ), perishable prepared food manufacturing (0.25 LQ), and wineries (0.28 LQ);
- **Distribution** – packaged frozen food merchant wholesalers (0.15 LQ), refrigerated warehousing and storage (0.17 LQ), and wine and distilled alcoholic beverage merchants (0.24 LQ); and,
- **Production** – farm management services (0.09 LQ).

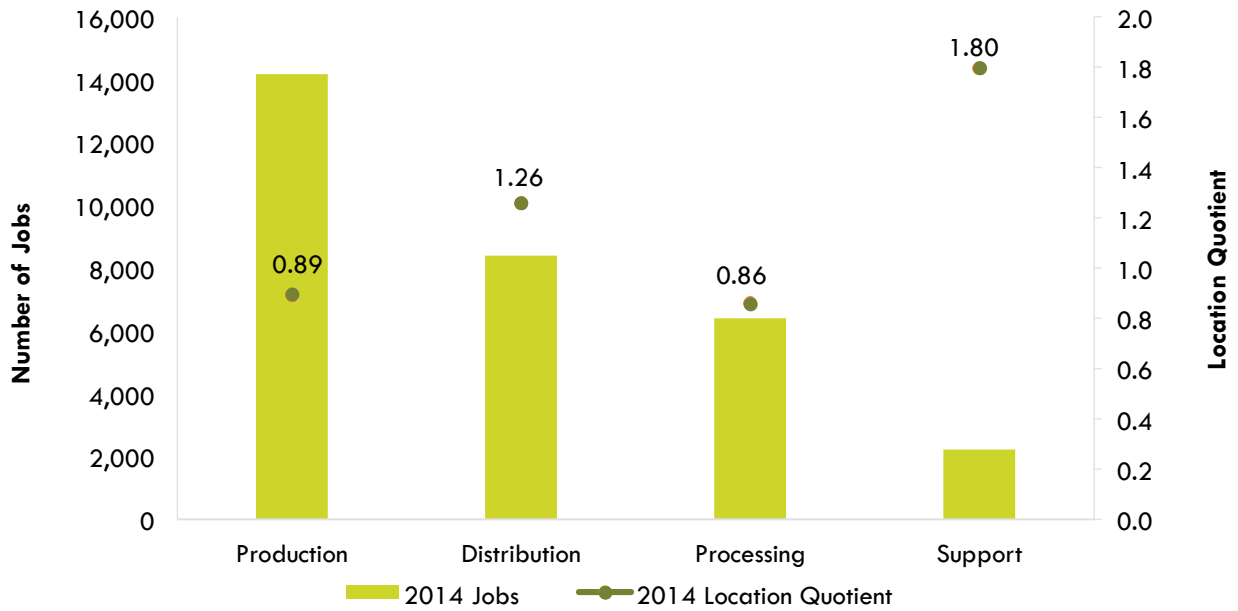
While the processing sector includes many of the industries with the highest location quotients (as indicated above), it also includes the most industries with the lowest location quotients. This is why processing in aggregate has the lowest relative concentration of employment compared to the other cluster sectors, even though it includes many individual industries with high location quotients.

A **location quotient** is a ratio that compares regional employment in a particular industry to employment in that same industry at a larger geography (in this case, California). A location quotient of less than 1 indicates a lower proportion of employment for that industry in the Sacramento region than in the state overall. A location quotient of more than 1 indicates a regional industry with a higher concentration of employment compared to the state average.



CONCENTRATION OF EMPLOYMENT: REGIONAL AND SUBSECTOR CONCENTRATION

Figure 4: Total Employment and Location Quotient by Subsector, 2014⁴



⁴ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

CONCENTRATION OF EMPLOYMENT: GEOGRAPHIC CONCENTRATION

Firms in a cluster draw a productive advantage from their geographic concentration. In addition to co-location, firms in a cluster share common resources and technologies and rely on a similar labor pool and institutions. Figure 5a illustrates where employees in the Food and Agriculture cluster are most concentrated in the region, using SACOG's Draft 2015 Employment Inventory.⁵ Overall, the largest concentrations of cluster employees are located in the cities of West Sacramento, Sacramento (especially downtown and southeast), and Woodland. Additionally, there is a significant grouping of employees in the Live Oak and Marysville areas and some lesser concentrations of employees in Davis, Rocklin, Galt, and near the community of Courtland in Sacramento County. The hotspot mapping analysis measures where cluster employment is most concentrated; the results show how Food and Agriculture cluster employment extends far beyond the farm. By design, the hotspot analysis does not visually display all areas of activity, just those with distinct co-location. As such, the following maps do not depict all the various food system employment that occurs throughout the entire six-county Sacramento Capital region.

The regional nature of the Food and Agriculture cluster becomes particularly apparent when paired with the RUCS crop map showing acres of agricultural production. Figure 5b provides a simplified version of the crop map. (The full map includes data at the individual field and crop level.) While the production component of the cluster is more dispersed in terms of employment, its substantial agricultural output supports the additional economic activity and jobs found in the other subsectors of the cluster. In other words, without this corresponding agricultural production the cluster's contribution to the regional economy would be severely limited. Future RUCS work under the Food System Multiplier project will show how a decrease in agricultural production would lead to economic contraction throughout the cluster, and throughout the economy as a whole.

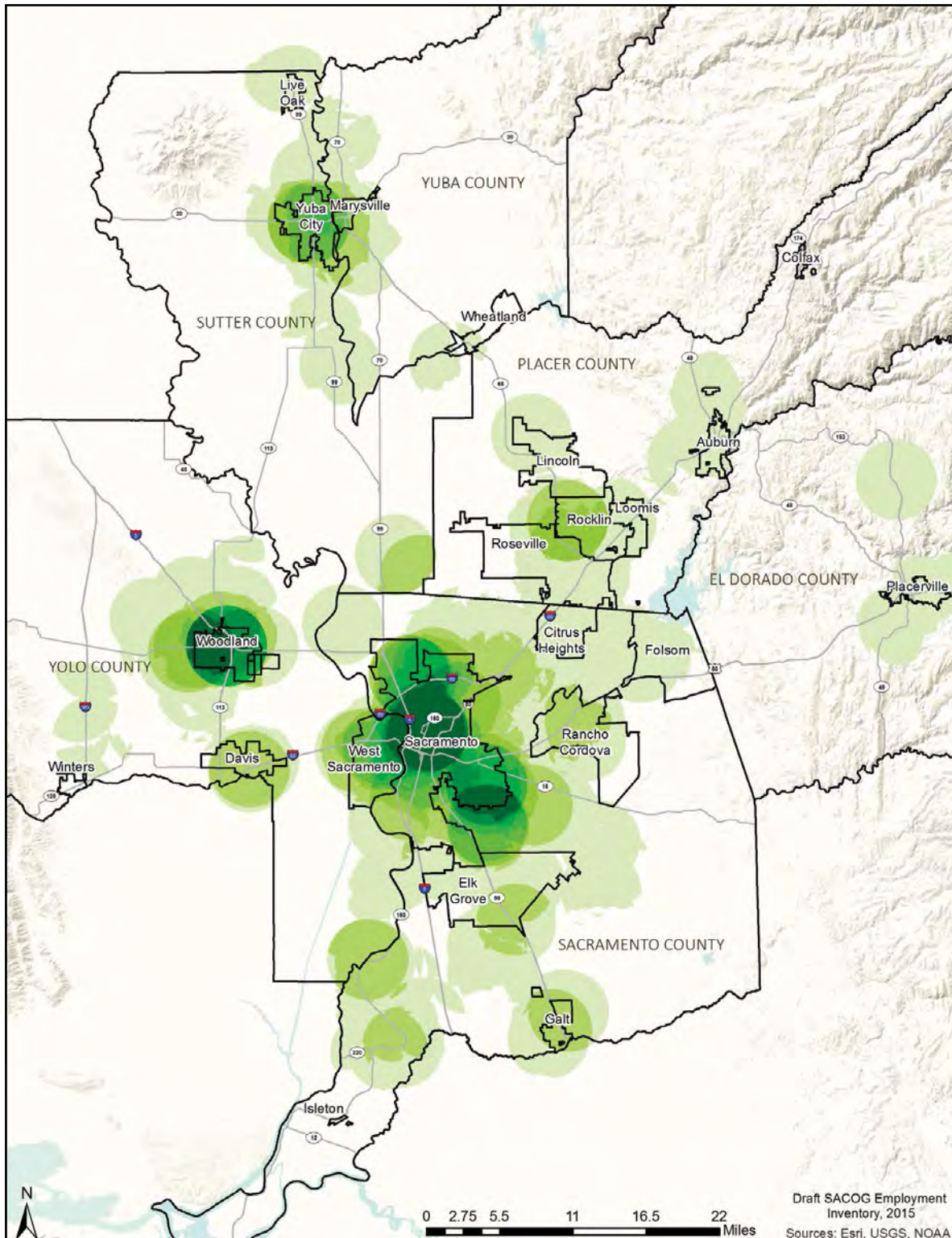
Employment concentrations vary when broken out by cluster subsector, as shown in Figure 5c–5f. Jobs in the production subsector are concentrated around Galt; western Woodland; and the area of Sacramento County between the cities of Sacramento, Rancho Cordova, and Elk Grove. Areas near Marysville and Yuba City, Davis, the communities of Ryde (Sacramento County), and Norton (Yolo County) also include significant concentrations of production jobs. This finding stems from the inclusion of farm labor contractor firms in the production segment of the cluster. These firms may be incorporated in a single facility, but supply labor to farms across the region. Thus, in the production map below, the mapping emphasizes the physical location of farm labor supply firms, not necessarily how this labor spreads throughout the region.

Distribution jobs are more spread out across the region, but are generally concentrated in the cities of Yuba City and Sacramento (north, downtown, and southeast), with some groupings in Rocklin and Courtland. Processing is characterized by large employment concentrations in Woodland, eastern West Sacramento, central Sacramento, and Sacramento County between the cities of Sacramento and Elk Grove. Finally, the support subsector follows a similar concentration pattern to the cluster average (main concentrations in Yuba City, west of Woodland, and southeast Sacramento, plus significant groupings in Davis and central Sacramento). However, for this subsector Rancho Cordova includes one of the greatest concentrations in employment, with additional significant groupings near Live Oak, Auburn, McClellan Airfield, West Sacramento, and the community of Walnut Grove.

⁵ SACOG's Draft 2015 Employment Inventory was developed using data from the Employment Development Department. The information is in draft form, as SACOG is currently reviewing and editing the data for final release later this year. While employment estimates may change on a smaller scale, the location and total of employees at the cluster level provides useful information about employment concentration. The employment concentration maps use the spatial analyst function in GIS to calculate "densities" of employment by standard deviation from the mean to show where employment is clustered geographically.

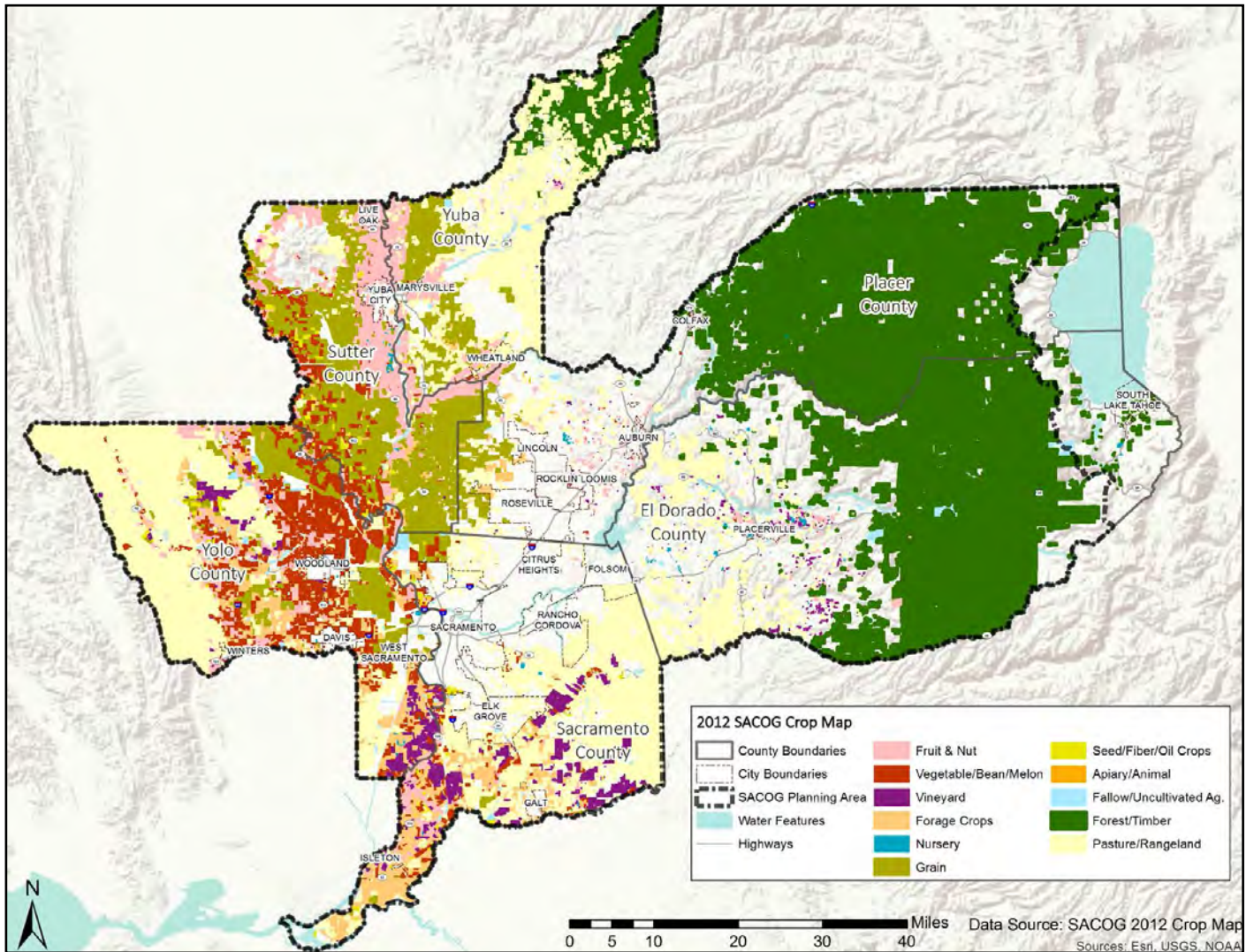
CONCENTRATION OF EMPLOYMENT: GEOGRAPHIC CONCENTRATION

Figure 5a: Food and Agriculture Cluster Employment Concentration



CONCENTRATION OF EMPLOYMENT: GEOGRAPHIC CONCENTRATION

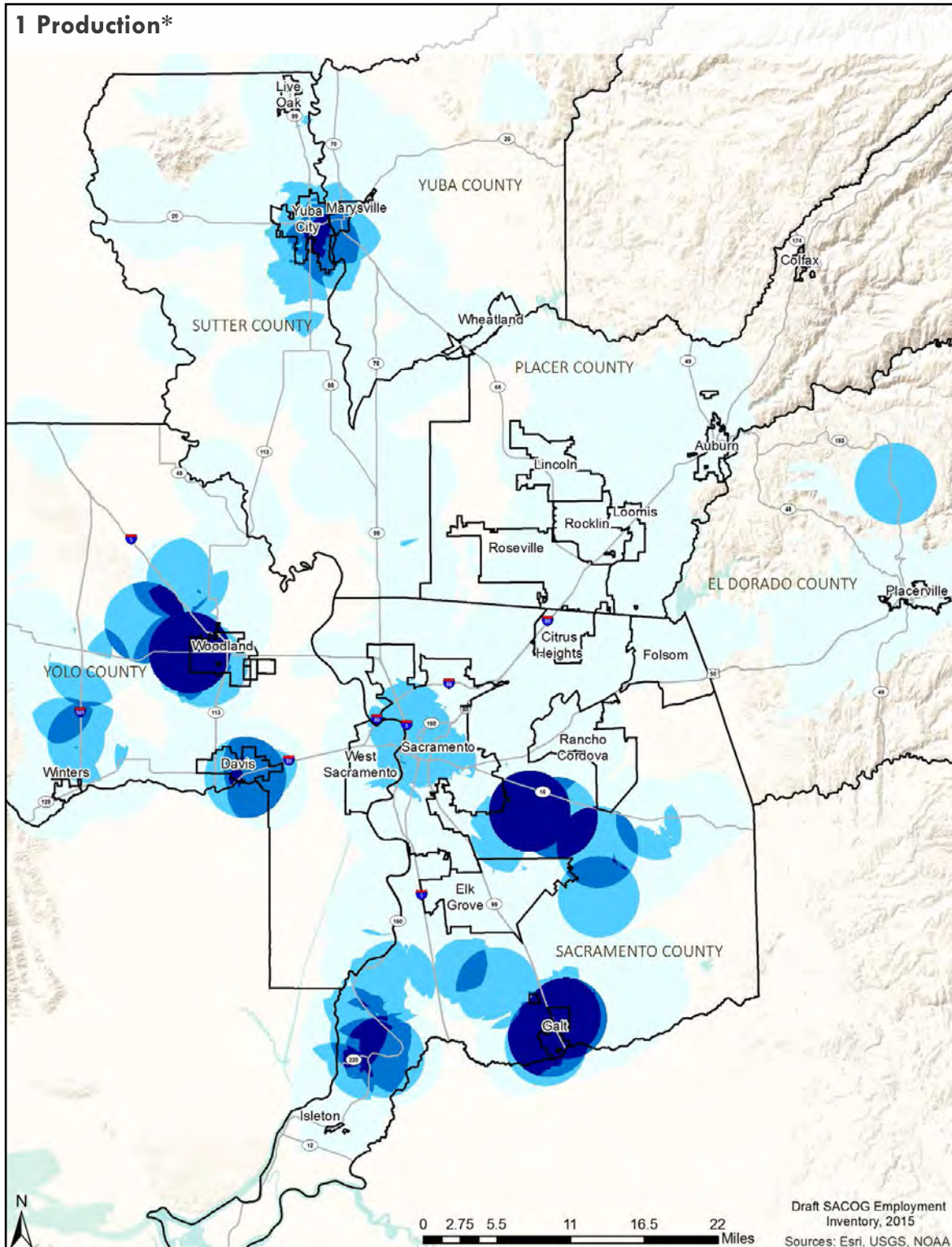
Figure 5b: RUCS 2012 Crop Map



* Farm labor contractor firms in the production segment of the cluster may be incorporated in a single facility, but may supply labor to farms across the region. The map emphasizes the physical location of farm labor supply firms, but not necessarily how this labor spreads throughout the region. All maps show areas of particular concentration, not each subsector's full economic activity.

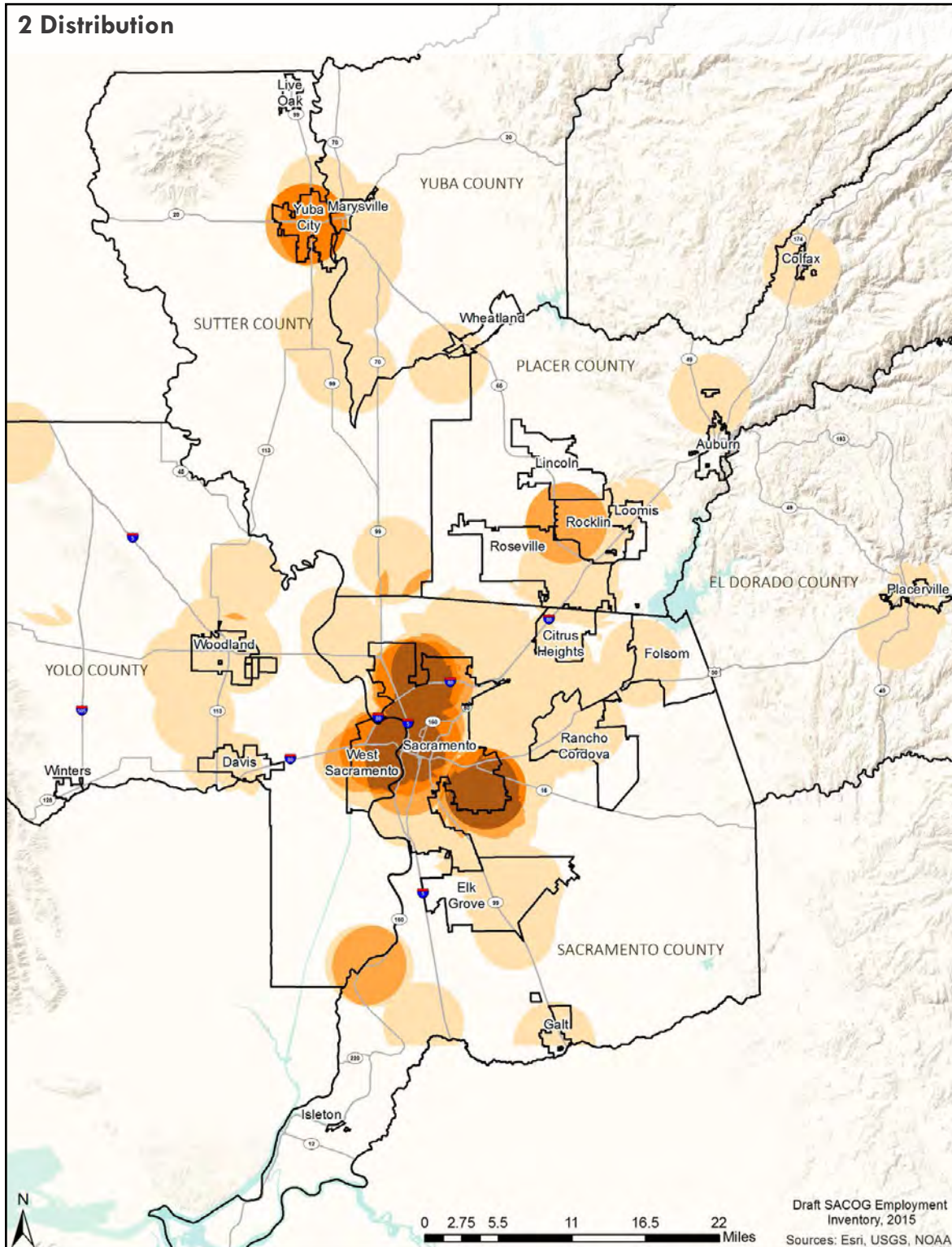
CONCENTRATION OF EMPLOYMENT: GEOGRAPHIC CONCENTRATION

Figure 5c: Employment Concentration by Cluster Subsector



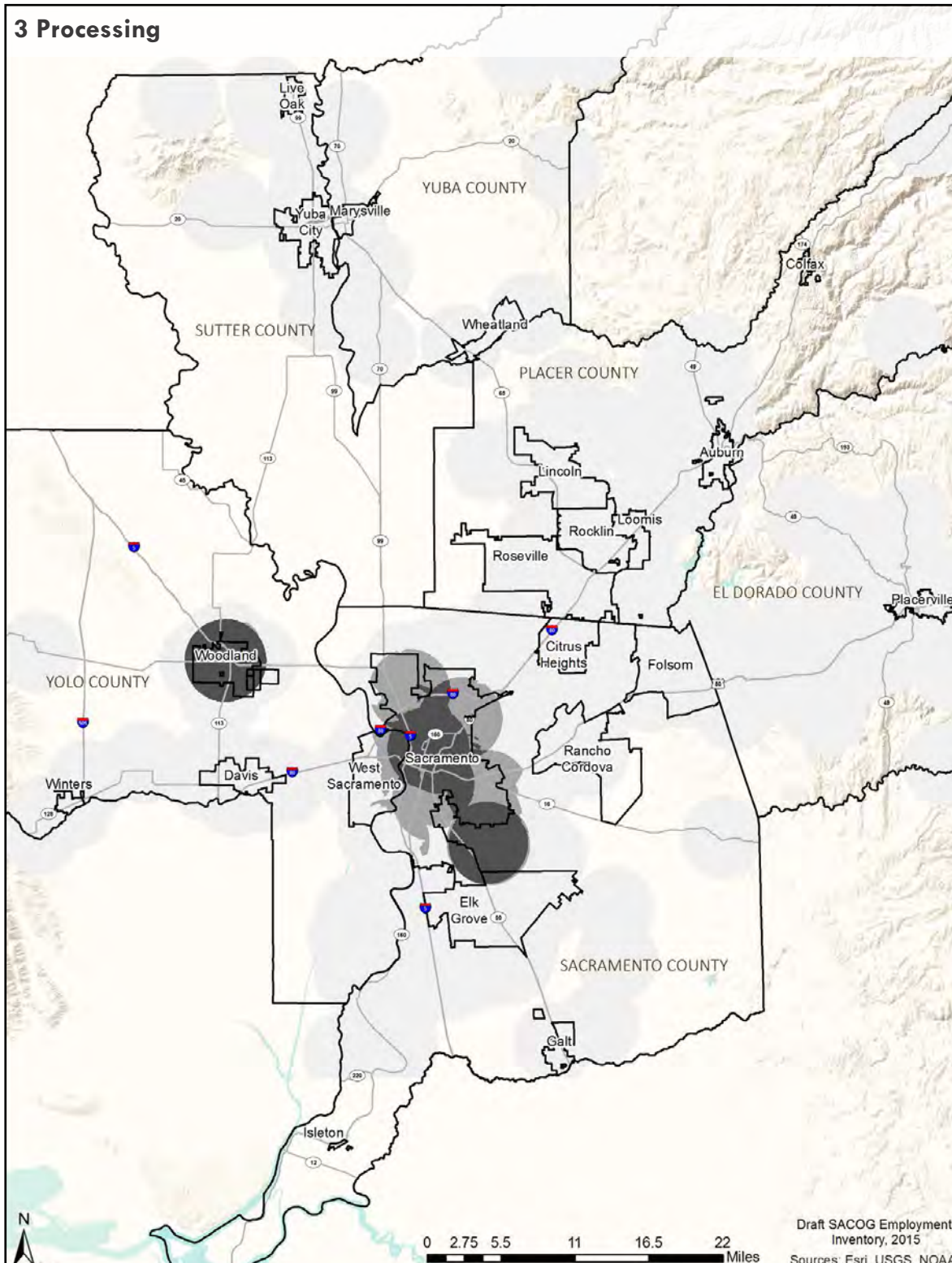
CONCENTRATION OF EMPLOYMENT: GEOGRAPHIC CONCENTRATION

Figure 5d: Employment Concentration by Cluster Subsector



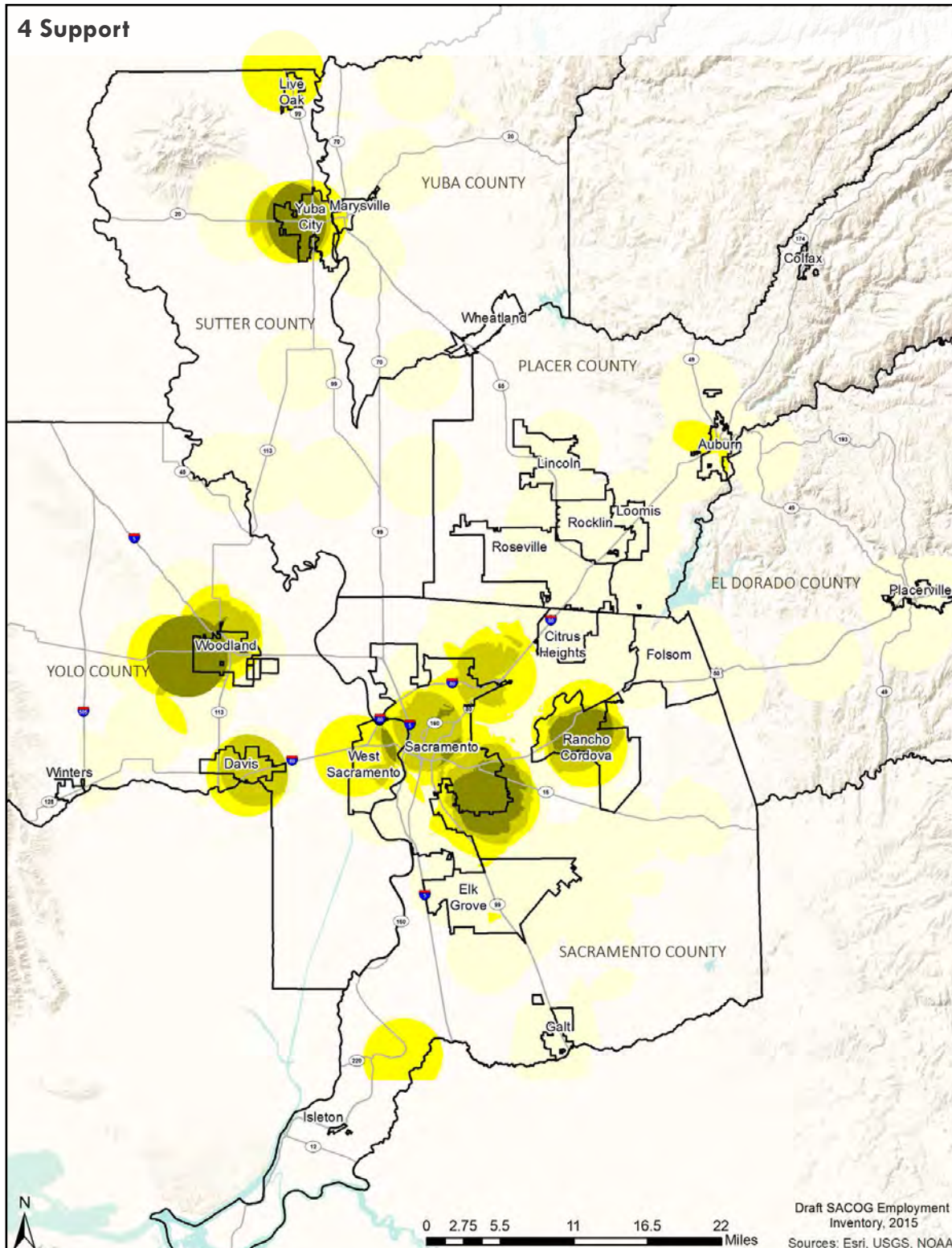
CONCENTRATION OF EMPLOYMENT: GEOGRAPHIC CONCENTRATION

Figure 5e: Employment Concentration by Cluster Subsector

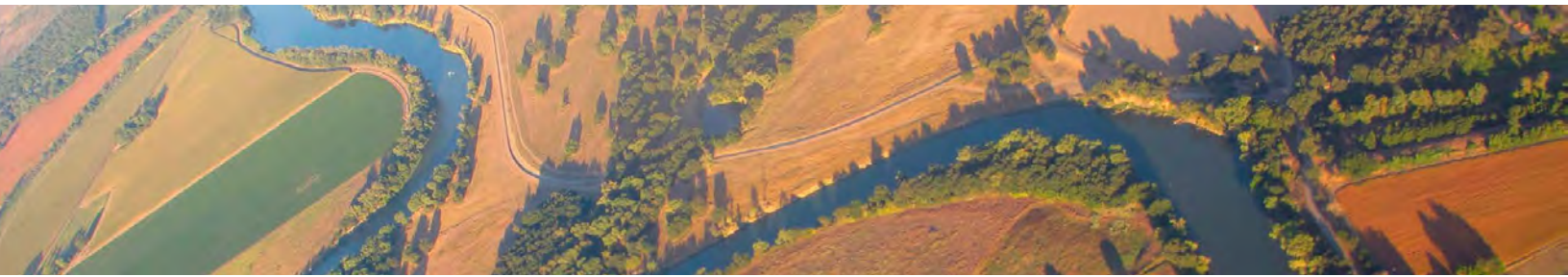


CONCENTRATION OF EMPLOYMENT: GEOGRAPHIC CONCENTRATION

Figure 5f: Employment Concentration by Cluster Subsector



ECONOMIC IMPACT



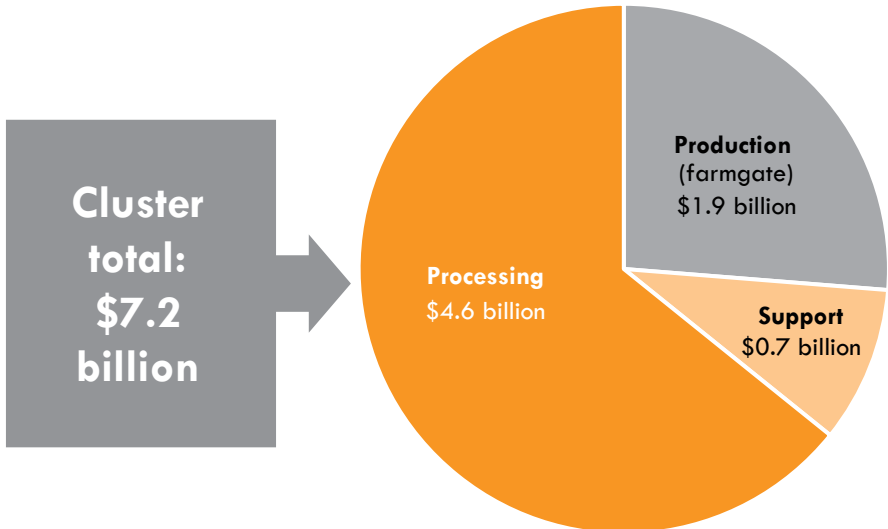
In addition to providing jobs both on and off the farm, the Food and Agriculture cluster also plays an important role in the region’s overall economic output. Consistent with other Next Economy cluster updates, this report uses the IMPLAN model to measure the direct economic impacts of the Food and Agriculture cluster.

As shown in Figure 6, the Food and Agriculture cluster directly contributes over \$7.2 billion⁶ to the regional economy, or about 4 percent of total output in the Sacramento Capital region. However, this output total does not include the contribution of the distribution component of the cluster, due to data limitations in the base model. As such, this initial measure underestimates the full economic contribution of the cluster, but provides a starting point for comparison. Forthcoming RUCS work in the Food System Multiplier project will provide further output detail by segment, including how the cluster’s overall direct economic activity leads to additional economic activity through a multiplier effect.

Of the three segments measured in the model, the processing subsector contributes the highest direct output, a total of \$4.6 billion, followed by the production sector, \$1.9 billion of farmgate value in 2013. (The farmgate value is the net value of the product after it leaves the farm.) The support sector estimate accounts for the smallest share of the cluster’s total economic impacts at less than \$1 billion. Farmgate value increased to \$2.4 billion in 2014 in spite of the drought.

According to the 2012 USDA Census of Agriculture, the majority of the region’s farms (83 percent) are smaller than 180 acres, and 64 percent of farms earn less than \$25,000 per year. Larger operations with higher revenues are seen throughout the region. Yet, as with the rest of the state, our region is made up of mostly smaller family farm operations that rely heavily on off-farm income.

Figure 6: Food and Agriculture Cluster Output, 2013⁷



⁶ The IMPLAN analysis uses data for the year 2013 (a year earlier than the 2014 employment and firm data).

⁷ IMPLAN, 2013. The economic contribution of the distribution segment of the cluster cannot be determined from the base model.

EMPLOYMENT CHANGE

Like all areas of the economy, the Food and Agriculture cluster was heavily impacted by the recent recession. Yet, in the last several years the cluster has rebounded, adding jobs at a rate faster than the regional economy. This section of the report explores some recent trends in how the Food and Agriculture cluster has rallied from the recession to better compete locally, nationally, and globally.

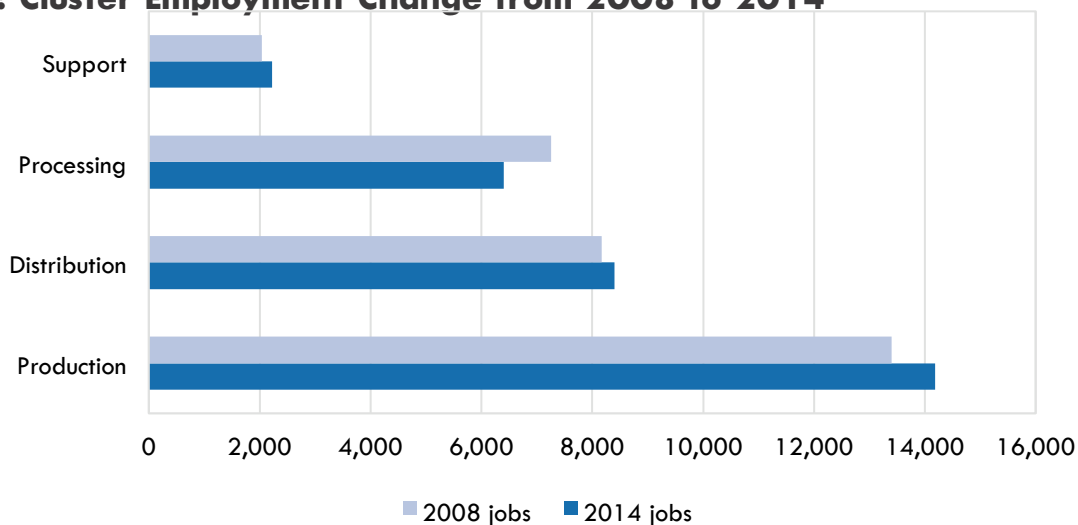
Between 2007 and 2008, the Food and Agriculture cluster lost almost 400 jobs and continued to decline until 2010 for a total loss of more than 1,100 jobs. However, unlike other clusters, by 2011 the cluster had already started to recover, adding almost 800 jobs. By 2014, employment in the cluster had returned to its pre-recession high. Indeed, while the region as a whole in 2014 still had not recovered all jobs lost in the recession, the distribution segment of the Food and Agriculture cluster increased employment by 3 percent, with a 6 percent increase in agricultural production employment and 9 percent in the support segment compared to 2008.

While the other segments of the cluster have added jobs since 2010, processing was the only sector to actually lose jobs during the previous five years, continuing a downward trend that predates the recession reflecting in part the impact of technological innovations. As processing is an important value-adding segment of the cluster, this contraction in employment is a key challenge. However, this overall trend masks some momentum for individual processing industries, such as wineries (27 percent employment growth over the last five years) or nut processing (18 percent employment growth over the last five years).

The Food and Agriculture cluster has outpaced the region at large in economic recovery.



Figure 7: Cluster Employment Change from 2008 to 2014⁸



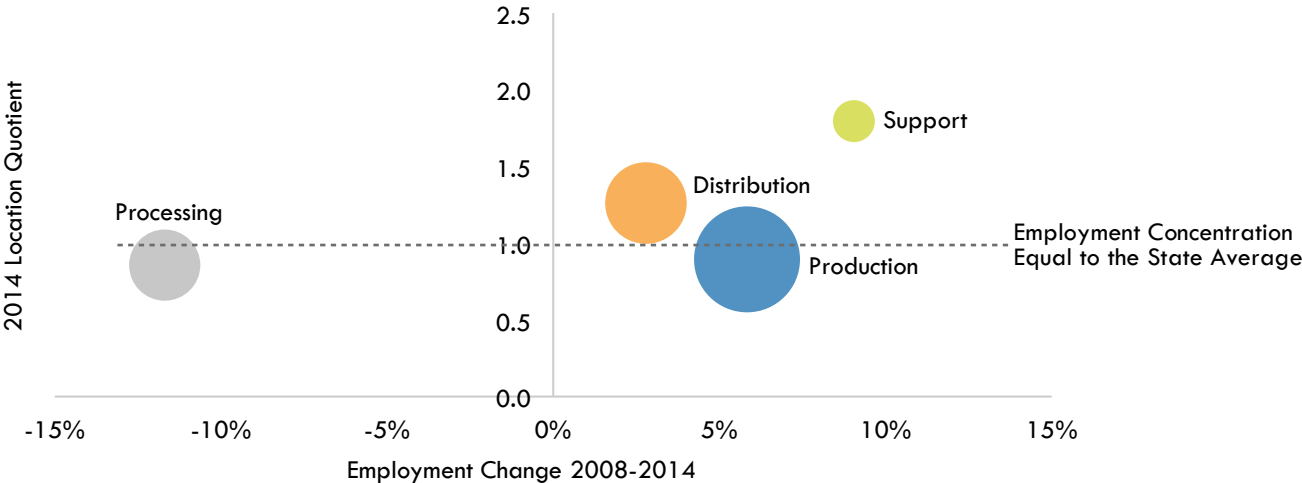
⁸ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

EMPLOYMENT CHANGE



Figure 8 below incorporates current conditions and recent trends in the cluster into a single graphic. The bubble chart compares regional employment growth from 2008 to 2014 (on the x axis of graph) to the current concentration of employment in the region (y axis), with the size of the bubble indicating the current total number of jobs for each segment of the cluster.⁹ The graphic substantiates the findings of the above section. Production and processing sectors in the Sacramento Capital region have a lower concentration of employment than the statewide average, while the support and distribution segments have a higher concentration. While the support sector had the smallest overall number of jobs in 2014, it experienced the greatest increase in employment from 2008 to 2014 and had the highest concentration of employment relative to the state average. Conversely, the processing subsector had the lowest concentration of employment of any subsector and continues to lose jobs year over year.

Figure 8: Cluster Employment Change and Concentration¹⁰



⁹ Location quotient is for year 2014 compared to the California average. Likewise, total employment is for 2014.

¹⁰ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

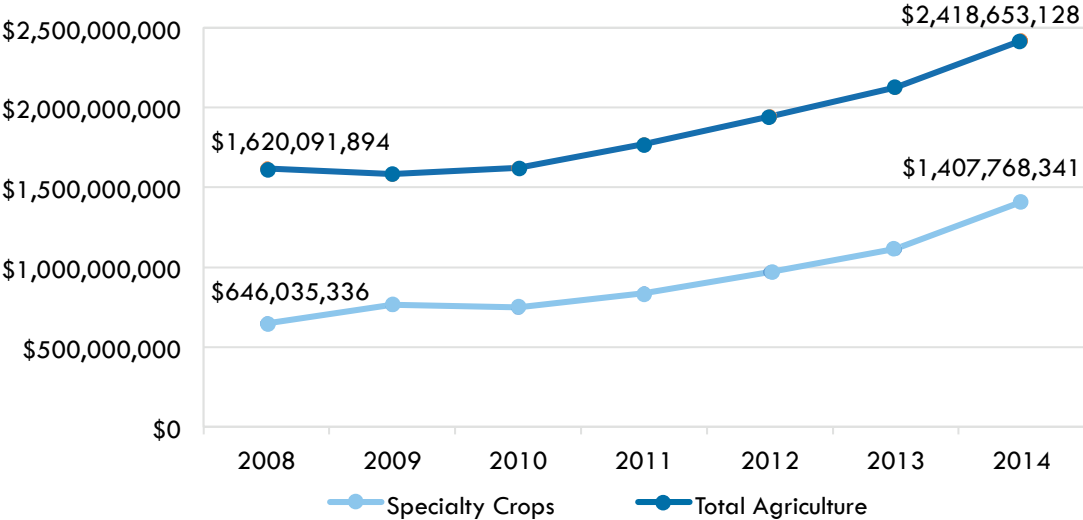
ECONOMIC IMPACT CHANGE



In the past several years, the value of regional agricultural production has soared. As shown in Figure 9, the total value of agricultural production in the SACOG region rose from \$1.6 billion in 2008 to \$2.4 billion¹¹ in 2014, an increase of 49 percent. Even when adjusted for inflation this translates to an increase of 36 percent in real dollars, far outpacing the regional economy as a whole.¹² With a substantial increase of 118 percent in total value (98 percent when adjusted for inflation), specialty crops (including vegetables, fruits, and nuts) saw an increase in value from \$600 million to over \$1.4 billion from 2008 to 2014. To highlight this trend, the following section compares specialty crops to all agricultural crop production, showing how specialty crops accounted for 95 percent of the growth in value between 2008 and 2014.

The **RUCS** appendix of SACOG’s **MTP/SCS** demonstrates that while the value of agricultural commodities in the region had declined in near parallel with the decline in agricultural acres in past years, record commodity prices today have somewhat reversed this trend. It appears that some fallowed land has been brought back into production to take advantage of higher prices in the marketplace.

Figure 9: Value of Agricultural Output, 2008–2014¹³ (in nominal dollars)¹⁴



¹¹ Note that this \$2.4 billion is for the year 2014, one year after the study’s 2013 IMPLAN estimate of \$1.9 billion, referenced in the economic impact section of this report.

¹² Values adjusted for inflation using the Consumer Price Index Inflation Calculator by the Bureau of Labor Statistics.

¹³ *El Dorado and Alpine Counties Agricultural Crop and Livestock Report*, 2008, 2010, 2012, 2014; *Agricultural Crop Production Report for Placer County*, 2012, 2014; *Sacramento County Crop and Livestock Report*, 2008, 2010, 2012, 2014; *Sutter County Crop & Livestock Report*, 2014; *Yolo County Agricultural Crop Report*, 2008, 2011, 2014; and *Crop Report for Yuba County* 2008, 2010, 2012, 2014. The years of crop reports accessed vary among counties because some counties include more years in their past value comparisons than others.

¹⁴ Nominal dollars are the value of the output in its given year and are not adjusted for inflation.

ECONOMIC IMPACT CHANGE

As shown in Figures 10a and 10b respectively, 63 percent of total farmgate value and 70 percent of specialty crop farmgate value in the region were generated by Sutter and Yolo counties in 2014.¹⁵ Conversely, El Dorado and Placer counties have the lowest agricultural and specialty crop values in the region, but this total does not include timber. El Dorado, Sutter, Yolo, and Yuba counties all have a similar proportion of specialty crop value as compared to total agricultural value (ranging from 61 percent to 64 percent), while Placer County has a far lower proportion of specialty crop value at 16 percent. The proportion of total agricultural value by county was very similar from 2008 to 2014, only shifting by about 1 percent. This trend was similar for specialty crops, except for a more significant decrease in Sacramento County (-7 percent) and increase in Sutter County (+5 percent) over the same period.

Figure 10a: Total Agricultural Value, 2014¹⁶

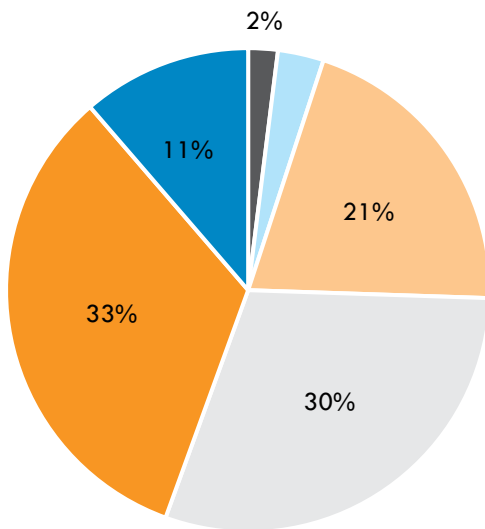
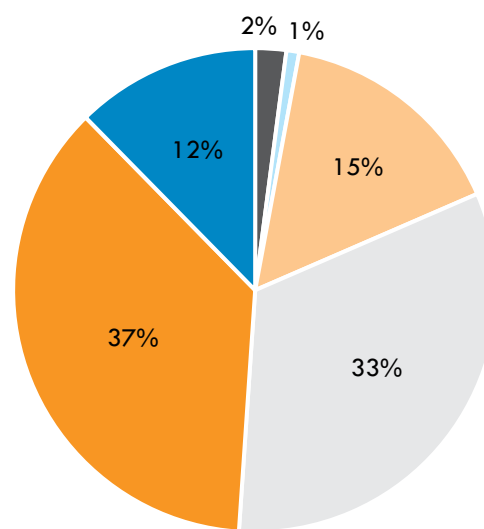


Figure 10b: Specialty Crop Value, 2014¹⁶



■ El Dorado ■ Placer ■ Sacramento ■ Sutter ■ Yolo ■ Yuba



¹⁵ While county agriculture reports generally categorize crop and livestock yields in a similar fashion, there is some variation in the type of crops rolled up into a given category which makes it difficult to truly normalize the reports for comparison across counties. Within this dataset these discrepancies occur in El Dorado County where the report includes data from Alpine County, Yolo County which includes an organic category encompassing some non-specialty crops, and Yuba County which includes some miscellaneous field crops in a vegetable crop category. However, these differences are minor overall, and the data still provides useful county comparisons.

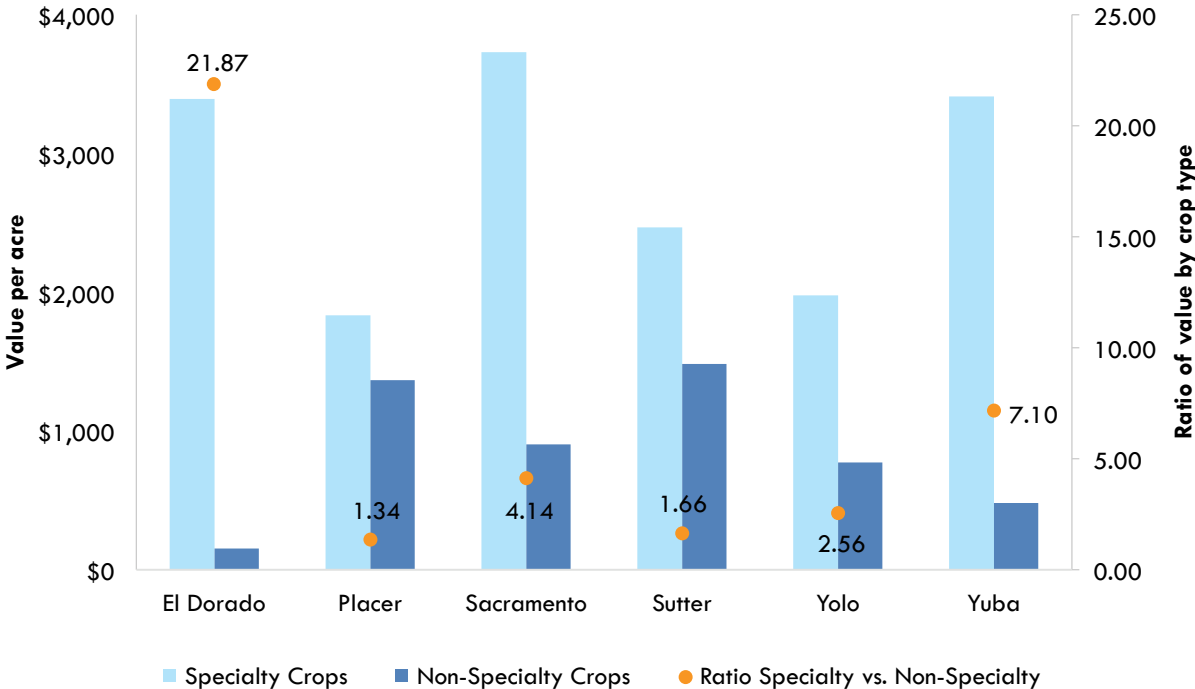
¹⁶ *El Dorado and Alpine Counties Agricultural Crop and Livestock Report, 2008, 2010, 2012, 2014; Agricultural Crop Production Report for Placer County, 2012, 2014; Sacramento County Crop and Livestock Report, 2008, 2010, 2012, 2014; Sutter County Crop & Livestock Report, 2014; Yolo County Agricultural Crop Report, 2008, 2011, 2014; and Crop Report for Yuba County 2008, 2010, 2012, 2014.* The years of crop reports accessed vary among counties because some counties include more years in their past value comparisons than others.

ECONOMIC IMPACT CHANGE



Within the region, specialty crops generated about three times the value per acre in 2012 compared to other agricultural products (Figure 11). Specialty crops in all counties generated a higher value per acre than non-specialty crops, although the difference was most pronounced in El Dorado (factor of 22) and Yuba (factor of 7) counties and least evident in Placer (factor of 1.34) and Sutter (factor of 1.66) counties. Sacramento County had the highest specialty crop value per acre (\$3,728), while Placer County had the lowest (\$1,832).

Figure 11: Agricultural Value per Acre¹⁷



¹⁷ SACOG 2012 Crop Map.

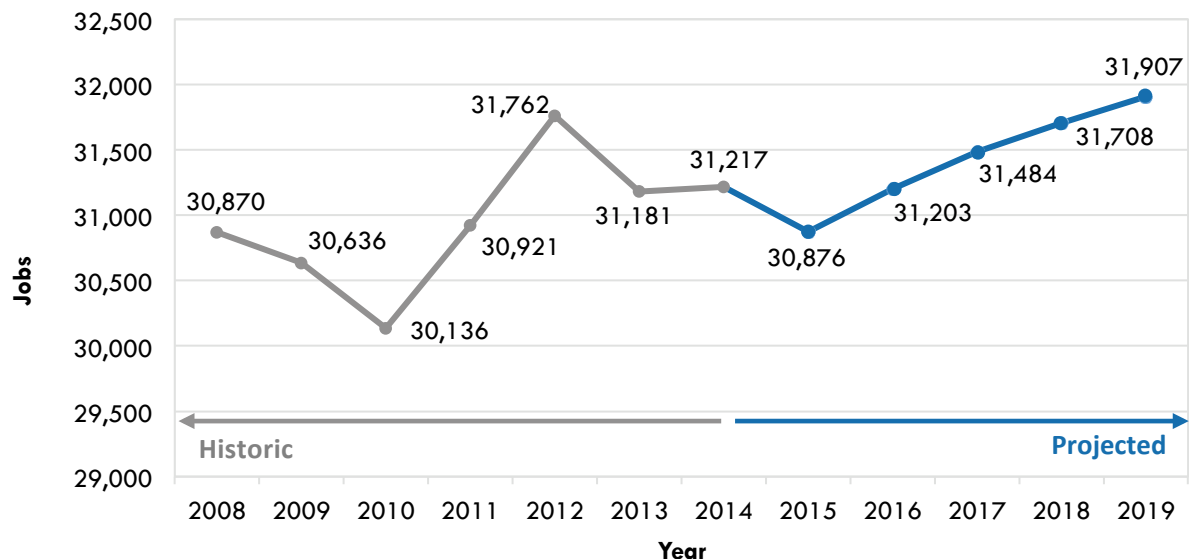
PART 3. LOOKING FORWARD

EMPLOYMENT TRENDS AND PROJECTIONS

This section uses employment projection estimates from EMSI to look out five years from the study base year of 2014, providing consistency with other Sacramento Capital region workforce reports. These estimates provide one possible indicator of future conditions if current trend lines continue. Yet, it is also important to recognize our potential to change this trajectory through the proactive strategies contained in the Food and Agriculture cluster action plan. The following section illustrates some other potential future outcomes in the cluster drawing on RUCS cases studies, food hub financial analyses, and other regional food economy initiatives including the Central Valley Ag Plus Food and Beverage Manufacturing Consortium managed by Valley Vision.

As shown in Figure 12, after a forecasted loss in employment of about 350 jobs between 2014 and 2015, the EMSI estimates project the cluster to recover and add an additional 700 jobs by 2019. By 2019, the region is expected to include 145 more jobs than the high in 2012.

Figure 12: Employment Trends and Projections, 2008–2019¹⁸



As shown in Table 1, the distribution subsector is projected to add both the greatest number and proportion of jobs (927 jobs, 11 percent), followed by the support subsector (203 jobs, 9 percent). The processing subsector is expected to experience job loss over the next five years, totaling more than 500 jobs (8 percent).

Table 1: Employment Projections by Subsector, 2014–2019¹⁸

Food and Agriculture Subsector	2014 Jobs	2019 Jobs	# Change	% Change
Production	14,187	14,251	64	<1%
Distribution	8,402	9,329	927	11%
Processing	6,407	5,902	-504	-8%
Support	2,222	2,425	203	9%
Total Cluster Jobs	31,217	31,907	690	2%

¹⁸ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

ALTERNATIVE CLUSTER TRAJECTORIES: RUCS CASE STUDY



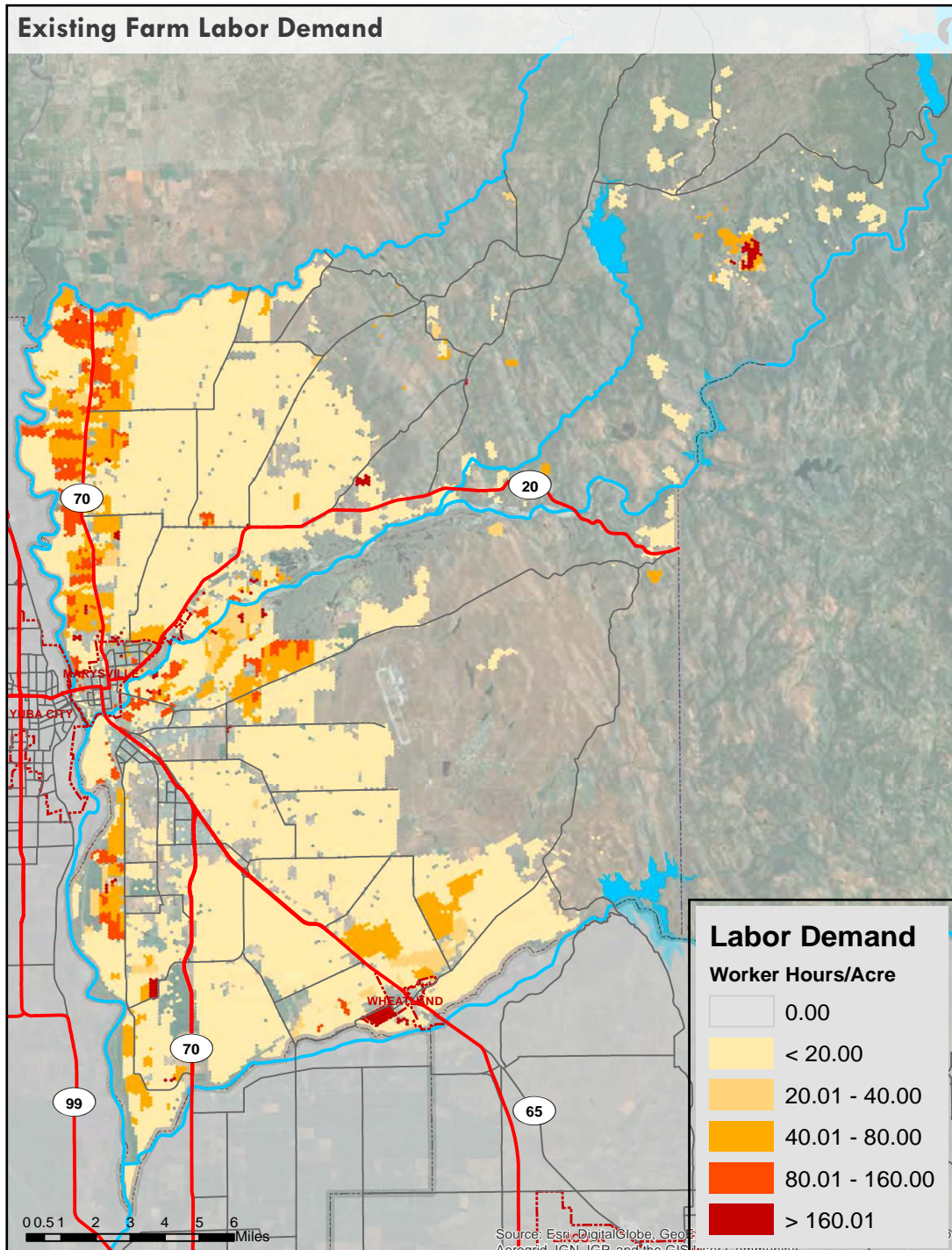
Emerging market opportunities coupled with the convening, priority setting, and strategy development that will result in the Food and Agriculture cluster workforce action plan for the Sacramento Capital region (among other efforts) have the potential to dramatically change the trajectory of this vital cluster into the future. Through its scenario planning efforts, RUCS has developed a suite of tools and models to test a range of changes in market demand and cost of production, illustrating alternative possible futures in the cluster that respond differently to market changes and supportive strategies. These scenarios model an increase in crop and value-adding activities that meet the rapidly increasing demand for locally grown food (including that at regional institutions such as schools, hospitals, or even the Sacramento Kings arena) to show how emerging market opportunities will result in employment, not only in the production component of the cluster, but across the entire supply chain. The Farm-to-Fork movement is also increasing demand.

One area of focus for RUCS has been on ways to internalize more of our food system, in turn reducing economic leakage out of the region. In particular, these scenarios test burgeoning local market opportunities that respond to consumer demand while offering growers a means to diversify. For example, one scenario conducted in a case study for Yuba County analyzed the effects of a major cropping pattern shift to specialty crops geared to local consumption. While the scenario represents an extreme boundary-setting example of possible future change, the subsequent mapping of its results show the potential for sustained economic return and food cluster employment opportunities as smaller shifts occur in the food system. Notably, the modeled scenario quadrupled overall production value in the study area, along with an increase in labor demand (and thus job opportunities). Other scenarios—such as those conducted in RUCS’ Sacramento Regional Agricultural Infrastructure Project—exhibit the potential to reverse the downward employment trend in regional processing through investments in mid-scale facilities, such as food hubs.

While the RUCS scenarios help demonstrate opportunities for agricultural-based economic development, they also showcase the need for the region to respond to key challenges that, if unaddressed, would inhibit future growth potential. Notably, to activate any of the economic opportunities illustrated through scenario planning requires—among other efforts—a sufficiently aligned workforce. This challenge is particularly relevant for a regional production sector that faces a constrained labor supply.

ALTERNATIVE CLUSTER TRAJECTORIES: RUCS CASE STUDY

Figure 13a: Yuba County Case Study Scenarios



ALTERNATIVE CLUSTER TRAJECTORIES: RUCS CASE STUDY

Figure 13b: Yuba County Case Study Scenarios

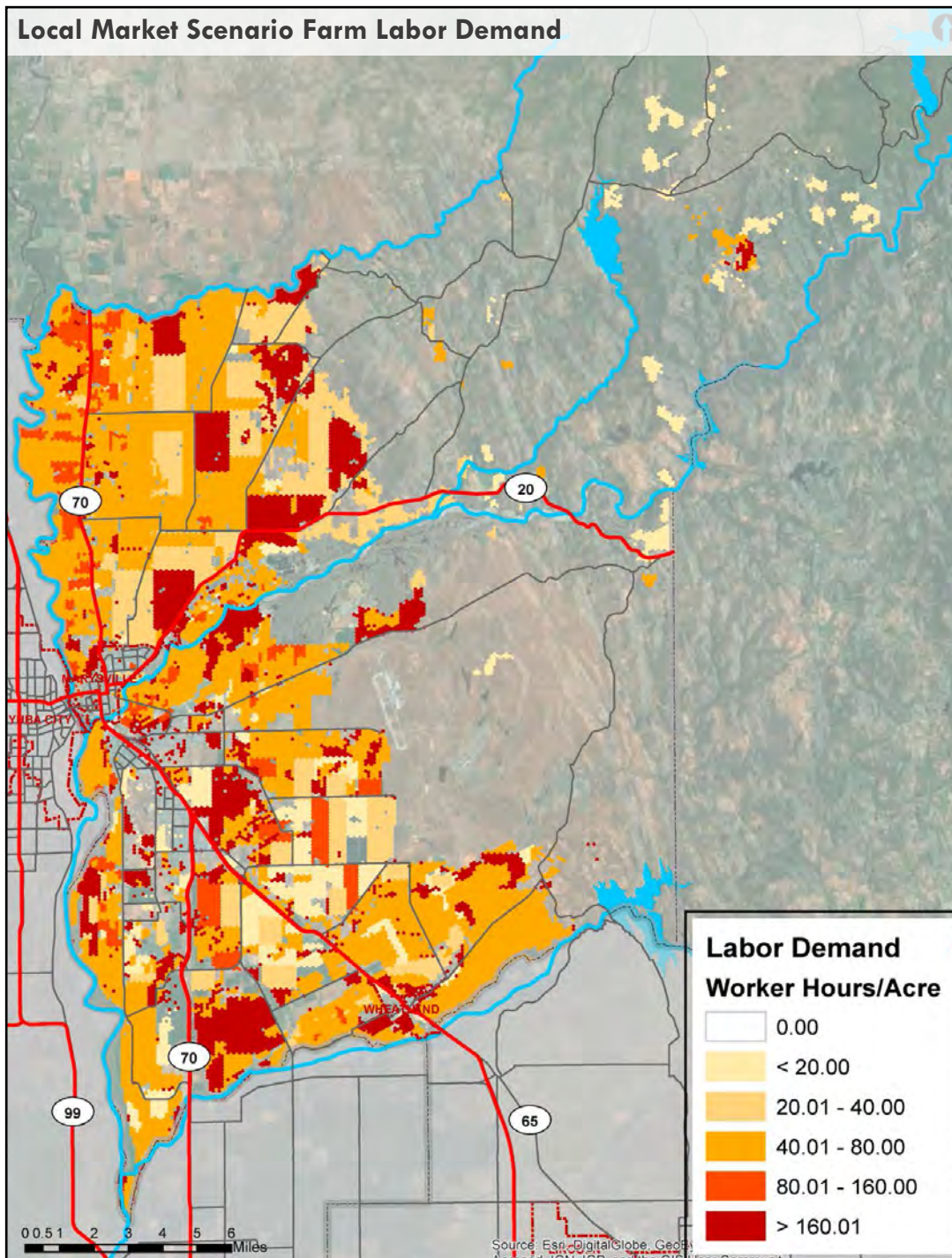
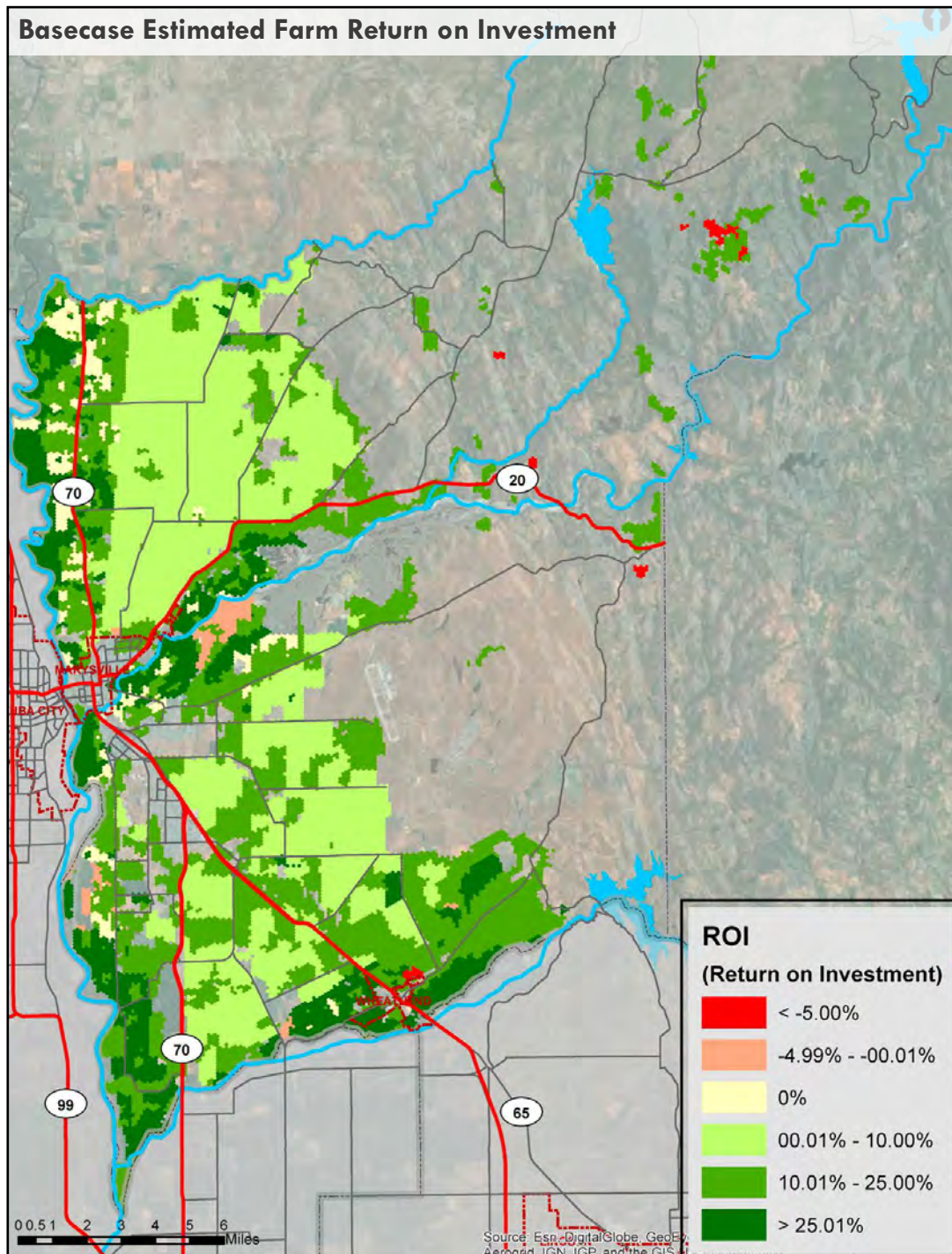


Figure 13a and 13b measures the estimated increase in farm labor from a possible future scenario capitalizing on the increasing demand for local food, and Figure 13c and 13d estimates grower return from the same scenario. Together these RUCS scenarios illustrate market opportunities that augment economic return and lead to more employment opportunities in the Food and Agriculture cluster. Regional partners are acting to address key challenges to better capitalize on these opportunities, including the development of cluster-based workforce action plans.

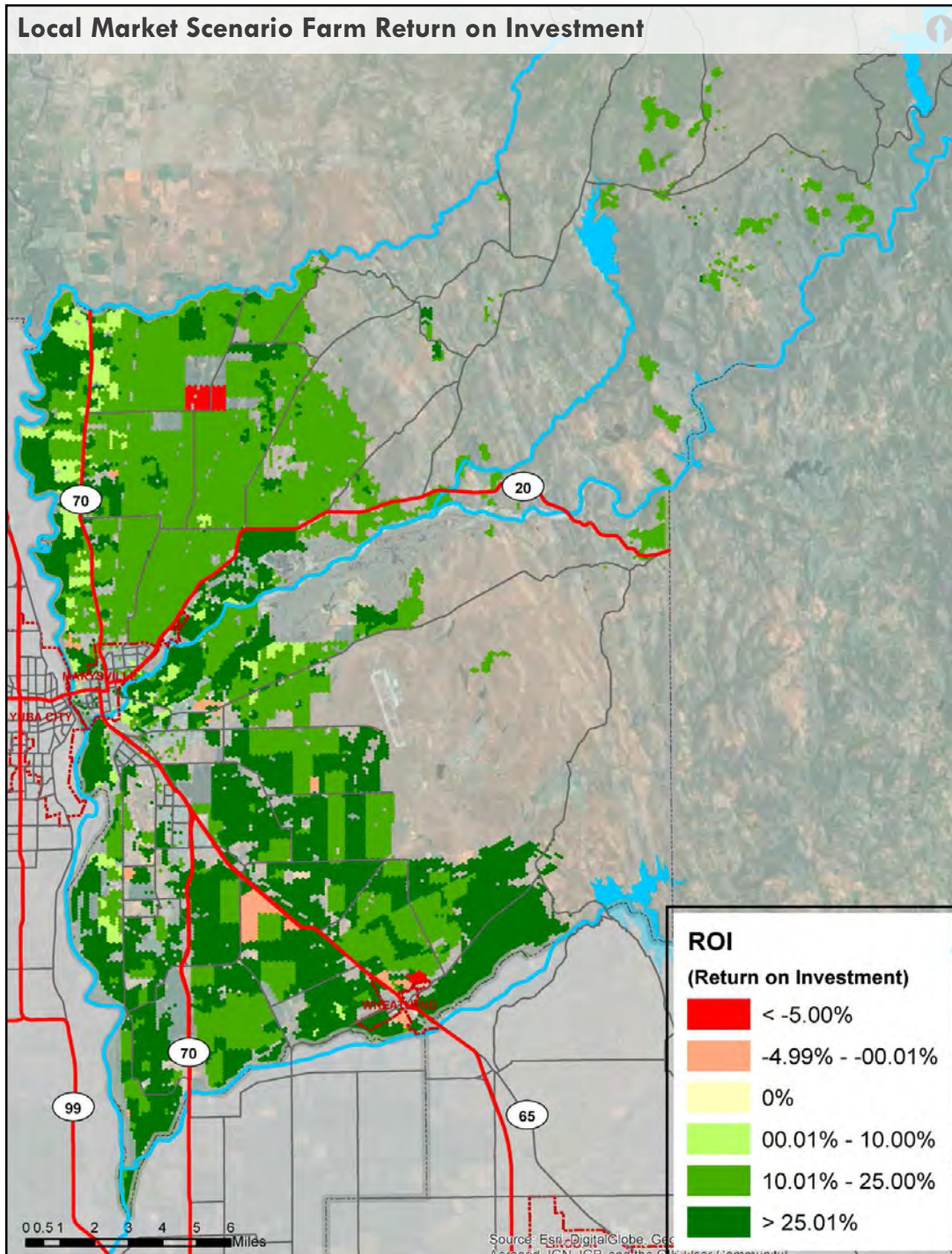
ALTERNATIVE CLUSTER TRAJECTORIES: RUCS CASE STUDY

Figure 13c: Yuba County Case Study Scenarios



ALTERNATIVE CLUSTER TRAJECTORIES: RUCS CASE STUDY

Figure 13d: Yuba County Case Study Scenarios



PART 4. WORKFORCE & TRAINING

OCCUPATION DEMAND

Ten occupations were selected for inclusion in the study based on the following criteria:

- Annual job openings were significant.
- The minimum education requirement is a high school diploma plus on-the-job training, postsecondary award, associate degree, or bachelor's degree.

Table 2 displays the employment demand for the Agriculture and Food cluster occupations selected for inclusion in this study. Five of these occupations are employed primarily by the cluster, while the other five are employed throughout the economy. Over the next five years (2015–2020), these occupations are projected to grow by 8%, adding nearly 2,400 new jobs and 3,000 replacement jobs for total openings of almost 5,400 jobs. Heavy and tractor-trailer truck drivers is the largest occupation with the most annual openings, followed by maintenance and repair workers. For the occupations specific to the cluster, soil and plant scientists is largest with the most annual openings, followed by farmers and ranchers.

Table 2: Occupational Employment Outlook, Agriculture and Food Cluster, Sacramento Capital Region¹⁹

Description	2015 Jobs	2020 Jobs	2015–2020 Change	2015–2020 % Change	Total Replacements	Total Openings	Annual Openings
Heavy and Tractor-Trailer Truck Drivers	10,694	11,934	1,240	12%	924	2,164	433
Maintenance and Repair Workers, General	7,694	8,159	465	6%	806	1,271	254
Market Research Analysts and Marketing Specialists	2,798	3,245	447	16%	212	659	132
Sales Managers	3,130	3,244	114	4%	345	459	92
Industrial Machinery Mechanics	1,176	1,286	110	9%	183	293	59
Soil and Plant Scientists	593	629	36	6%	102	138	28
Farmers, Ranchers, and Other Agricultural Managers	1,446	1,376	(70)	(5%)	192	122	24
Agricultural and Food Science Technicians	530	543	13	2%	99	112	22
Farm Equipment Mechanics and Service Technicians	320	326	6	2%	58	64	13
Food Scientists and Technologists	265	280	15	6%	47	62	12
Total	28,647	31,022	2,376	8%	2,967	5,343	1,069

¹⁹ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2016.1

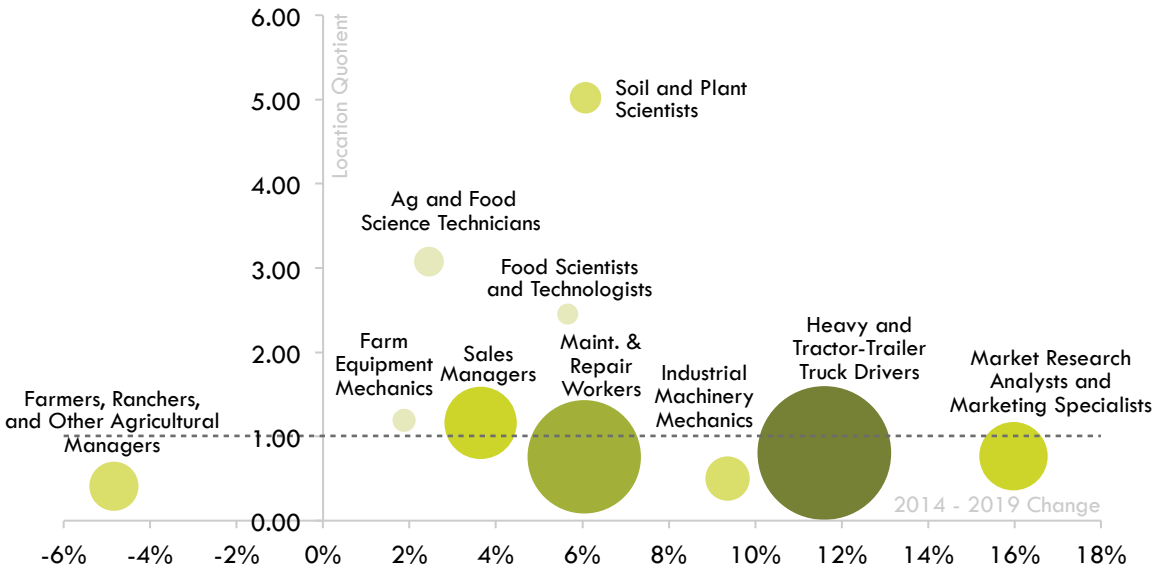
OCCUPATION DEMAND



In addition to industry analysis, location quotients also can be applied to occupations. In this case, the location quotient compares an occupation’s total employment in the region relative to the state’s total employment for that occupation. A location quotient of less than 1 indicates a lower concentration of employment for that occupation in the region than in the state overall. A location quotient of more than 1 indicates a higher concentration of employment for the occupation than in the state overall.

The bubble chart below (Figure 14) compares the concentration of occupation employment to the projected five-year growth rate in the region, where the size of the bubble indicates the total number of jobs for each occupation. As shown below, three of the 10 occupations—soil/plant scientists, food science techs, and food scientists—have a high concentration of employment, but few jobs and moderate projected growth. The largest occupation—heavy and tractor-trailer truck drivers—has an average concentration of employment in the region, but strong projected growth.

Figure 14: Growth Rate vs. Occupational Concentration, Food and Agriculture Cluster, Sacramento Capital Region²⁰

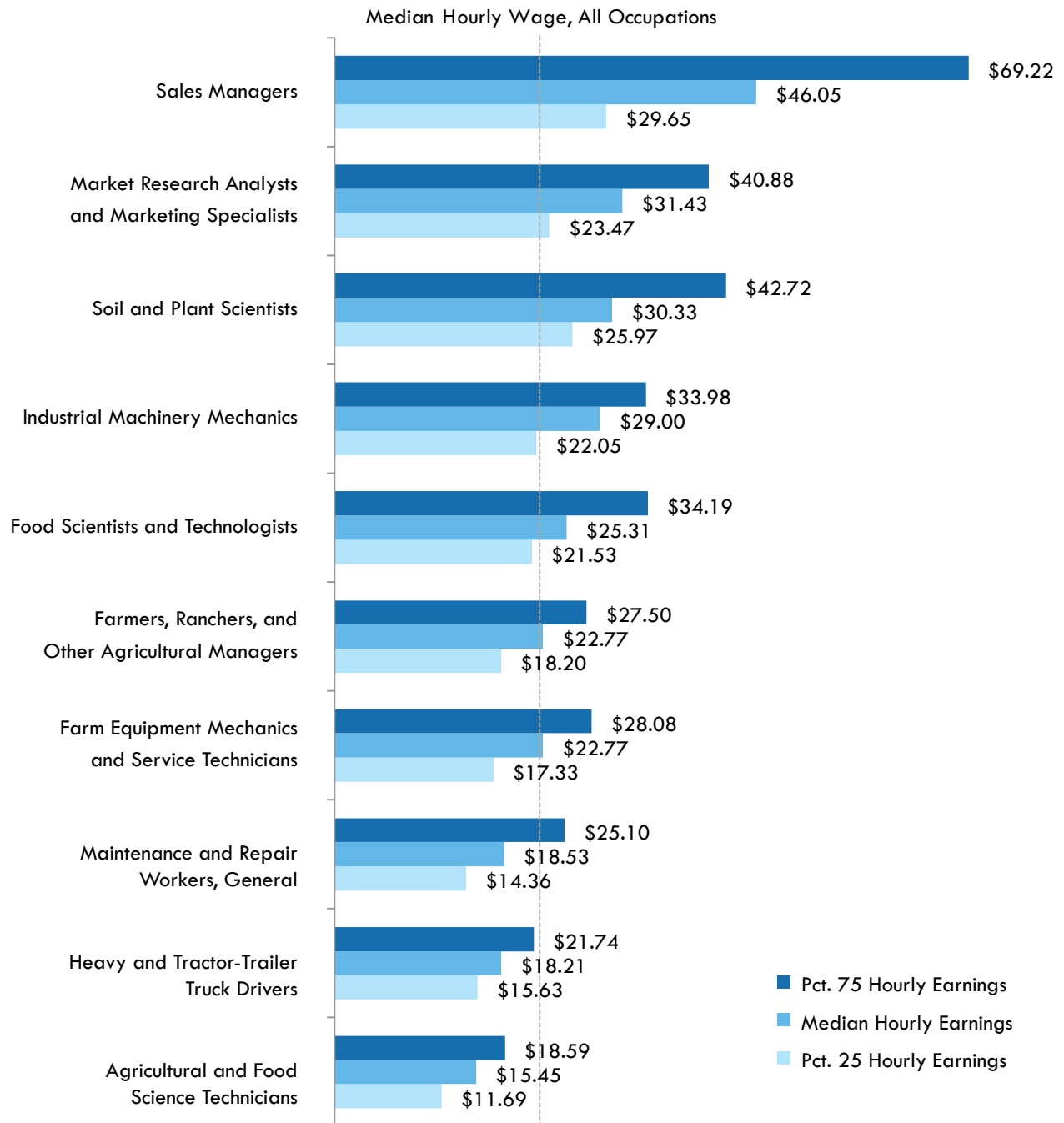


²⁰ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2016.1

OCCUPATION WAGES

The majority of occupations in the Food and Agriculture cluster earn wages that are close to or above the regional median wage. Sales managers is the highest paid occupation, followed by marketing specialists and soil/plant scientists. The lowest paid occupations in the group include truck drivers and food science technicians. However, with the appropriate education and training, food science technicians may advance to food scientist positions and earn wages above the regional average. The median hourly wage across all occupations in the Sacramento Capital region is \$22.69 per hour.

Figure 15: Hourly Wages, Food and Agriculture Occupations, Sacramento Capital Region



EDUCATION ASSESSMENT

This section provides a review of the training and education supply programs supporting the Food and Agriculture cluster for the occupations selected for inclusion in this study. Minimum education requirements are assigned to three categories:

- **Entry-level occupations** require a high school degree plus long-term on-the-job training. In this category, employers may prefer applicants if they have a formal education, such as a certificate or degree.
- **Mid-level occupations** require postsecondary training, certificate, or associate degree.
- **Advanced-level occupations** require a bachelor's degree. Some of these positions require related work experience in order to qualify for an open position.

Exhibit 16: Minimum Education Requirements

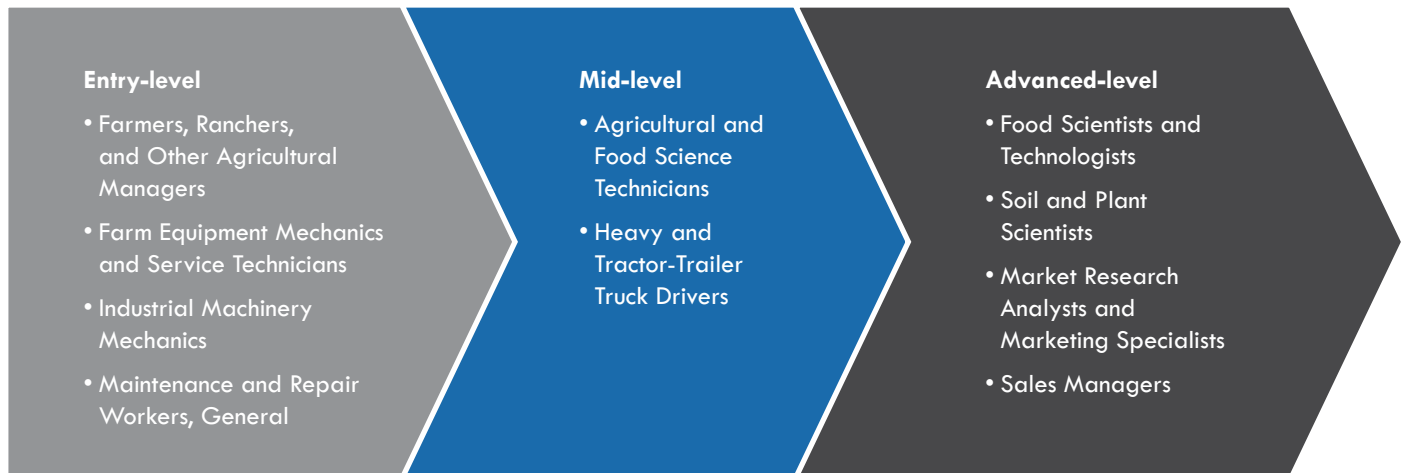


Table 3 displays the number of degrees conferred by educational program in the Sacramento Capital region. As shown, there are several programs providing a pipeline of skilled and qualified applicants for nearly all of the occupations selected for inclusion in this study. Based on an assessment between the supply (average number of degrees conferred annually) and the projected demand (number of job openings), the region is likely to experience the following:

- Significant shortage of industrial machinery mechanics since the demand is significantly outpacing average number of degrees conferred.
- Moderate shortage of farm equipment mechanics and service technicians. Because the demand is too small to justify investing resources in a new training program, local employers should consider partnering and recruiting graduates from the agriculture power equipment technology programs located at Butte College and Modesto Junior College.
- Competition for food technician/scientist graduates, since there is a statewide shortage for qualified graduates entering the field.

The data also suggests an oversupply of graduates for open farming and soil/plant science positions. More information is needed to assess if there is an oversupply, such as employer education preferences, graduate goals, migration trends, worker preparedness, and completion duplication. Many of the agriculture related degrees are conferred by UC Davis, and as students are drawn from outside the region, the perceived oversupply may be overstated.

EDUCATION ASSESSMENT



Table 3: Educational Programs & Awards, Food and Agriculture Occupations, Sacramento Capital Region^{21&22}

Educational Program	3-Year Average Certificate /Degrees Conferred	Number of Training Programs
Animal Science	1	1
Horticulture	21	4
Agriculture Business, Sales & Services	3	2
Nursery Technology	12	2
Agriculture Technology and Sciences	16	4
Equine Science	58	2
Agriculture, Agriculture Operations & Related Sciences	448	2
Agriculture Business & Management, General	2	1
Food Science	74	1
Plant and Soil Science	68	1
Mechatronics Technology	13	1
Truck and Bus Driver/Commercial Vehicle Operator	Not Available	Not Available
Marketing and Distribution	27	6
Business Administration, Marketing Concentration	Not Available	1
Total	743	28

²¹ California Community College Chancellor's Office Data Mart. National Center for Education Statistics (NCES). Higher education institutions are required to report completion data to NCES if they participate in any federal financial assistance program authorized by Title IV of the Higher Education Act. Completion data not reported to the NCES or CCCC Data Mart were not included in the estimate.

²² The 3-year average is based on academic years 2011–12, 2012–13, and 2013–14 for private education institutions and public four-year universities and 2012–13, 2013–14, and 2014–15 for community colleges.

SKILLS ASSESSMENT

Table 4 displays the top skills and professional credentials for occupations in the Food and Agriculture cluster. The data is based on analysis of job posting data, aggregated by Burning Glass. This online tool uses intelligent “spidering” to search the Internet for job listings, removes duplication, and aggregates the data into a search database. As shown, most of the skills/knowledge areas are specialized and require specific training and certifications.

Table 4: Skill and Professional Credential Preferences, Food and Agriculture Occupations²³

Occupation	Top Skill/Knowledge Areas	Top Certifications/ Professional Credentials
Agricultural and Food Science Technicians	Food safety, food science, and inspection	Hazard Analysis and Critical Control Point (HACCP)
Farm Equipment Mechanics and Service Technicians	Equipment repair, schematic diagrams, welding, inspection and forklift operation	None listed
Farmers, Ranchers, and Other Agricultural Managers	Irrigation, biology, repair, scheduling, spreadsheets, farm management, data collection, budgeting, and supervisory skills.	None listed
Food Scientists and Technologists	Food science, product development, food safety, chemistry, experiments, biology, microbiology, labeling and packaging.	Certified Professional Food Safety
Heavy and Tractor-Trailer Truck Drivers	Inspection, commercial driving, HAZMAT, forklift operation, pre- and post-trip inspections, customer service, and repair	Commercial Driver's License
Industrial Machinery Mechanics	Repair, welding, machinery, inspection, schematic diagrams, programmable logic controller programming, and forklift operations	None listed
Maintenance and Repair Workers, General	Repair, plumbing, inspection, HVAC, painting, cleaning, carpentry, customer service, scheduling, and machinery	Environmental Protection Agency Certification
Market Research Analysts and Marketing Specialists	Marketing, social media, project management, budgeting, digital marketing, Adobe Photoshop, market research, building relationships, Facebook, customer service, marketing strategy, and email marketing	None listed
Sales Managers	Sales management, sales, building relationships, business development, budgeting, sales goals, customer service, business planning, prospecting, project management, and supervisory skills	None listed
Soil and Plant Scientists	Botany, agronomy	Non listed



²³ Burning Glass, 2016.

CONCLUSION



The Food and Agriculture cluster has deep roots in the region's history and will be an essential component of the region's future. California is the fourth largest agricultural economy in the world, and the Sacramento Capital region is a vital part of that economy, with some of the most productive farmland on earth. In addition to productive farmland, the Sacramento Capital region boasts an unrivaled array of food system assets, including multi-generational farming and ranching knowhow, world-renowned agricultural institutions such as UC Davis, food entrepreneurs, favorable climate and water supply, and engaged policymakers, to name a few.

This cluster analysis in turn illustrates how these elements fit within the overall regional economy: the measured components of the cluster account for more than 30,000 jobs spread throughout the region and over \$7.5 billion in direct value. While production is the largest subsector in the cluster, there is also significant "off farm" employment (55 percent) in distribution, processing, and support. Recent employment and output trends suggest strong regional competitive advantages in the cluster. Indeed, the cluster has outpaced the overall regional economy in its recovery from the recession. The Food and Agriculture cluster analysis provides the following insight into opportunities for the regional economy:

- The region contains a significantly greater proportion of support employment compared to the state as a whole. Of all components of the cluster, the support subsector experienced the most job growth (as a percentage) between 2008 and 2014.
- The distribution subsector has a higher concentration of employment compared to the state as a whole and is projected to add the greatest number and proportion of jobs by 2019.

CONCLUSION

Specialty crops have driven the region's agricultural production sector to record levels of economic output. Indeed, the value of the food and fiber produced by the region's farms and ranches grew by over a third in inflation-adjusted dollars since 2008 to reach an all-time high in 2014. In addition to highlighting regional strengths, the Food and Agriculture cluster analysis provides further insight into where challenges exist for the regional economy:

- The processing subsector has a lower concentration of employment compared to the state and actually experienced job loss from 2008 to 2014. The sector is projected to experience additional job loss by 2019, continuing a trend that predates the recession.
- The production sector has a lower concentration of employment relative to the state average, though California is the nation's leading agricultural state.
- The region faces a constrained labor supply for farm laborers, which can inhibit future growth. In addition, there is a projected training shortage for industrial machinery mechanics and farm equipment mechanics/service technicians.

The study's base modeling projects employment in the cluster to increase a modest 2 percent by 2019. However, when looking at new and replacement jobs, there are more than 5,000 total job openings over the next five years. The development of cluster action plans and other regional initiatives speak to the Sacramento Capital region's potential to proactively change this trajectory and capitalize on promising market developments, supporting further regional jobs and economic activity.

In short, this report demonstrates the direct contribution of Food and Agriculture industries to the regional economy and begins to illustrate how agricultural cultivation of food and fiber creates jobs and generates income, both on and off the farm. The full economic impact of an industry cluster extends throughout its entire value chain. Due to data limitations however, this cluster analysis does not include related food system elements such as retail and consumption establishments or other activity in R&D, environmental services, or agritourism. As such, the data and analysis contained in the report constitute an important initial—though still incomplete—examination of the cluster and its role in the Sacramento Capital region's economy. Future work will build upon this analysis, including SACOG's Food System Multiplier project that delves into the Food and Agriculture cluster's full ripple effect, modeling how the direct economic output of food and agriculture industries circulates throughout and contributes to the larger regional economy.



APPENDIX A: FOOD AND AGRICULTURE CLUSTER DEFINITION

424940 Tobacco and Tobacco Product Merchant Wholesalers

493120 Refrigerated Warehousing and Storage

493130 Farm Product Warehousing and Storage

722310 Food Service Contractors

Support

115210 Support Activities for Animal Production

325311 Nitrogenous Fertilizer Manufacturing

325312 Phosphatic Fertilizer Manufacturing

325314 Fertilizer (Mixing Only) Manufacturing

325320 Pesticide and Other Agricultural Chemical Manufacturing

333111 Farm Machinery and Equipment Manufacturing

333241 Food Product Machinery Manufacturing

423820 Farm and Garden Machinery and Equipment Merchant Wholesalers

424910 Farm Supplies Merchant Wholesalers

424930 Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers

Production

111110 Soybean Farming

111120 Oilseed (except Soybean) Farming

111130 Dry Pea and Bean Farming

111140 Wheat Farming

111150 Corn Farming

111160 Rice Farming

111191 Oilseed and Grain Combination Farming

111199 All Other Grain Farming

111211 Potato Farming

111219 Other Vegetable (except Potato) and Melon Farming

111310 Orange Groves

111320 Citrus (except Orange) Groves

111331 Apple Orchards

111332 Grape Vineyards

111333 Strawberry Farming

111334 Berry (except Strawberry) Farming

111335 Tree Nut Farming

111336 Fruit and Tree Nut Combination Farming

111339 Other Non-Citrus Fruit Farming

111411 Mushroom Production

111419 Other Food Crops Grown Under Cover

111421 Nursery and Tree Production

111422 Floriculture Production

111910 Tobacco farming, Field and Seed Production

111920 Cotton Farming

111930 Sugarcane Farming

111940 Hay Farming

111991 Sugar Beet Farming

111992 Peanut Farming

111998 All Other Miscellaneous Crop Farming

112111 Beef Cattle Ranching and Farming

112112 Cattle Feedlots

112120 Dairy Cattle and Milk Production

112130 Dual-Purpose Cattle Ranching and Farming

112210 Hog and Pig Farming

112310 Chicken Egg Production

112320 Broilers and Other Meat Type Chicken Production

112330 Turkey Production

112340 Poultry Hatcheries

112390 Other Poultry Production

112410 Sheep Farming

112420 Goat Farming

112511 Finfish Farming and Fish Hatcheries

112512 Shellfish Farming

112519 Other Aquaculture

112910 Apiculture

112920 Horses and Other Equine Production

112930 Fur-Bearing Animal and Rabbit Production

112990 All Other Animal Production

115111 Cotton Ginning

115112 Soil Preparation, Planting, and Cultivating

115113 Crop Harvesting, Primarily by Machine

115114 Postharvest Crop Activities (except Cotton Ginning)

115115 Farm Labor Contractors and Crew Leaders

115116 Farm Management Services

MORE ABOUT...

More About The Centers of Excellence

The Centers of Excellence (COE) for Labor Market Research deliver regional workforce research and technical expertise to California community colleges for program decision making and resource development. This information has proven valuable to colleges in beginning, revising, or updating economic development and Career Technical Education (CTE) programs, strengthening grant applications, assisting in the accreditation process, and in supporting strategic planning efforts.

The Centers of Excellence Initiative is funded in part by the Chancellor's Office, California Community Colleges, Economic and Workforce Development Program. The Centers aspire to be the leading source of regional workforce information and insight for California community colleges. More information about the Centers of Excellence is available at www.coecc.net.

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More About Valley Vision

Since 1994, Valley Vision's work has driven transformative change and improved lives across Northern California. An independent social impact and civic leadership organization headquartered in Sacramento, Valley Vision strengthens our communities through unbiased research, boundary-crossing collaboration and change leadership. Our work improves overall quality of life and creates the conditions for economic prosperity and community health and vitality.

More About Sacramento Area Council of Governments (SACOG)

The Sacramento Area Council of Governments (SACOG) is an association of local governments in the six-county Sacramento Region. Its members include the counties of El Dorado, Placer, Sacramento, Sutter, Yolo, Yuba and the 22 cities within. SACOG provides transportation planning and funding for the region, and serves as a forum for the study and resolution of regional issues. SACOG is the principal researcher for this report.



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SERIES: 2 OF 6

LIFE SCIENCES & HEALTH SERVICES CLUSTER: WORKFORCE NEEDS ASSESSMENT SACRAMENTO CAPITAL REGION



December 2015

Prepared by: Centers of Excellence,
Los Rios Community College District

Valley Vision

Burris Service Group

This research was conducted with the generous
support of JPMorgan Chase & Co.

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All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. Efforts have been made to qualify and validate the accuracy of the data and the reported findings; however, neither the Centers of Excellence, COE host District, nor California Community Colleges Chancellor’s Office are responsible for applications or decisions made by recipient community colleges or their representatives based upon components or recommendations contained in this study.

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Economic and Workforce Development Program

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INTRODUCTION

Starting in 2008, the six-county Sacramento Capital region (El Dorado, Placer, Sacramento, Sutter, Yolo and Yuba counties) was rocked by the global recession, losing 10 percent of the region's jobs. In response, regional leaders initiated Next Economy, an action plan to accelerate job creation and new investment in six high-growth business (industry) clusters. Valley Vision, a regional civic leadership organization, managed the three-year Next Economy design, research and implementation process on behalf of a wide range of private and public sector partners.

As of late 2015, after a lagging recovery, the region's economy is picking up momentum, with the unemployment rate decreasing while job growth is accelerating. Valley Vision received funding from the JPMorgan Chase Foundation to better understand how the region's key growth industry clusters have changed since the original Next Economy research was conducted in 2012, and what new opportunities are emerging. Valley Vision is partnering with the Los Rios Center of Excellence and the Burris Service Group on this effort.

Cluster research is a widely accepted standard of practice for developing regional prosperity strategies to address multiple facets of a region's complex economy. Industry clusters reduce operating costs by shortening supply chains; increasing the flow of information regarding new business opportunities; concentrating workforce training needs in select occupations; and speeding up the identification of gaps in products or services.¹ Firms in identified clusters may also have a reduced risk of failure, as these firms are better supported by the supply chain and can respond more rapidly to shifts in the marketplace.

This report presents findings on the analysis of the Life Sciences and Health Services cluster. It is one in a series of six reports covering Next Economy-identified clusters. Additional reports include advanced manufacturing, the "clean economy," education and knowledge creation, food and agriculture, and information and communications technologies.² Each report provides an overview of the cluster, industry trends and economic impact, as well as an overview of the top demand occupations in the cluster requiring postsecondary education or training, along with projected occupational demand, institutions providing related education and training, and possible workforce gaps.

This research will be used to develop cluster-based workforce action plans. Valley Vision will work alongside regional education, and workforce and economic development partners to convene six cluster-based employer forums, setting priorities and developing strategies to address critical workforce gaps, better align education and workforce development resources to meet employer and workforce needs, and strengthen the regional economy overall.



¹ Cluster Manufacturing: A Supply Chain Perspective

² Sacramento Area Council of Governments (SACOG) is the principal research for the Food and Agriculture Cluster study, which will focus primarily on industry trends and excludes workforce development and training needs.

CLUSTER DEFINITION

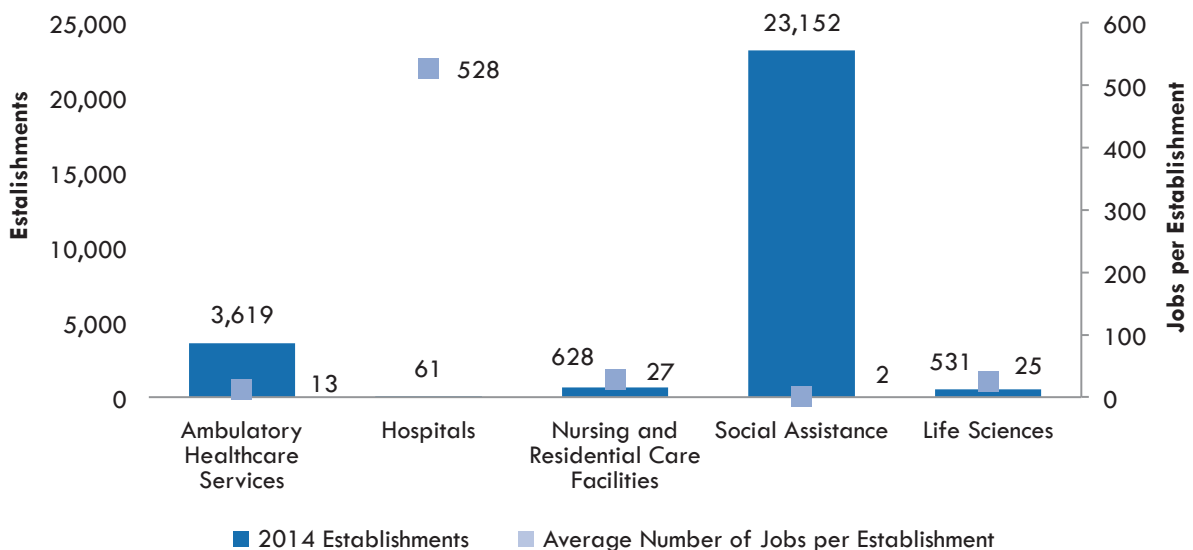
The Life Sciences and Health Services cluster is one of the largest clusters in the region, offering well-paying jobs for thousands of people. This cluster includes five subsectors:

- **Hospitals** provide medical, diagnostic, and treatment services to inpatients and some outpatient services.
- **Ambulatory Healthcare Services** provide healthcare services to outpatients in settings such as offices of physicians, outpatient care centers, and laboratories.
- **Nursing and Residential Care Facilities** provide residential care combined with either nursing, supervisory, or other types of care as needed.
- **Social Assistance** provides social assistance services directly to at-risk children and youth, persons with disabilities, unemployed and underemployed, and the elderly.
- **Life Sciences** conduct research and development; manufacture medical equipment and/or products; and/or retail medical supplies and pharmaceuticals that support the healthcare supply chain.

ESTABLISHMENTS

Exhibit 1 displays establishments and the average number of jobs per establishment for the Life Sciences and Health Services subsectors in the Sacramento Capital region. As shown, hospitals have the fewest establishments and the highest number of workers per establishment compared to other subsectors in the region. The social assistance subsector has the most establishments and the fewest number of jobs per establishment, an estimated two per organization.

Exhibit 1: Establishments and Average Employment by Subsector, Life Sciences and Health Services Cluster, Sacramento Capital Region, 2014³



³ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

CONCENTRATION OF EMPLOYMENT

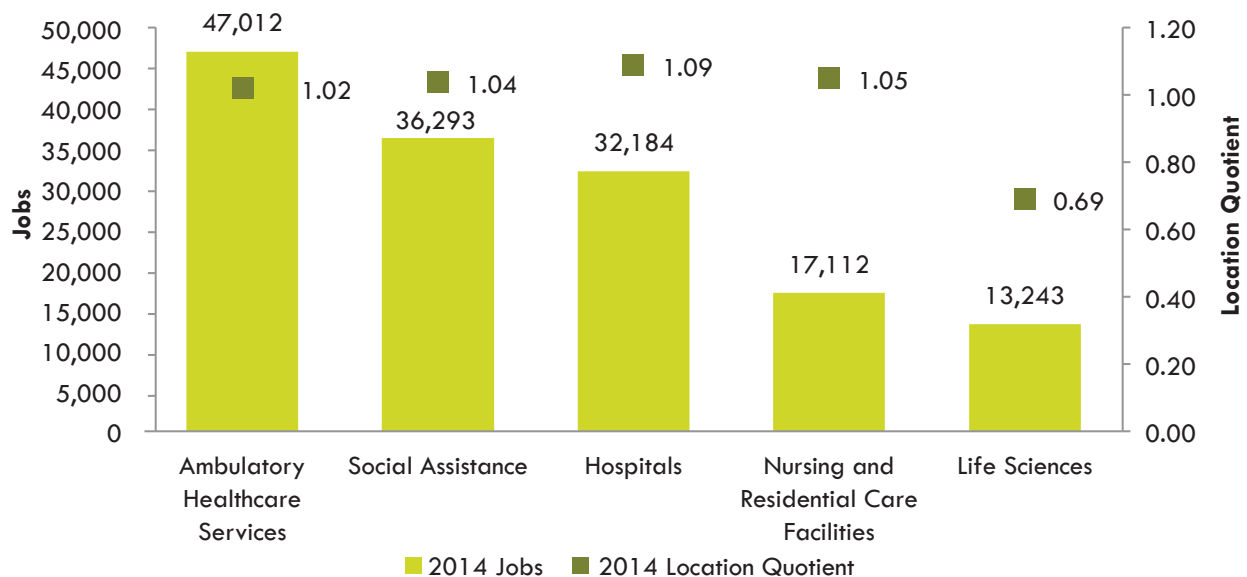
In 2014, there were about 145,800 jobs in the Life Sciences and Health Services cluster, 14 percent of the total employment in the Sacramento Capital region. As shown in Exhibit 2, the largest subsector is ambulatory healthcare services (32%; 47,000 jobs), followed by social assistance (25%; 36,300 jobs) and hospitals (22%; 32,200 jobs).

Location quotient analysis compares the total employment in a region relative to the total employment in a larger area, in this case, California. A location quotient of less than one indicates a lower concentration of employment for that industry in the region than in the state overall. A location quotient of more than one indicates a higher concentration of employment for the region than in the state overall. Most of the cluster's subsectors in the Sacramento Capital region have a location quotient that is close to one, indicating an average concentration of employment compared to other areas of the state. The life science subsector has a concentration well below one, indicating a lower than average concentration of employment.

Within the subsectors, there are industries with above average location quotients, indicating a higher concentration of employment for those industries than in the state overall. These include:

- **Hospitals:** State Government Hospitals (3.11 LQ)
- **Ambulatory Healthcare Services:** HMO Medical Centers (11.79 LQ); Family Planning Centers (1.64 LQ); and Offices of Dentists (1.31 LQ)
- **Nursing and Residential Care Facilities:** Assisted Living Facilities for the Elderly (1.64 LQ)
- **Social Assistance:** Services for the Elderly and Persons with Disabilities (2.84)
- **Life Science:** Research and Development in the Physical, Engineering and Life Sciences (1.85 LQ) and Analytical Laboratory Instrument Manufacturing (1.33 LQ)

Exhibit 2: Total Employment and Location Quotient by Subsector, Life Sciences and Health Services Cluster, Sacramento Capital Region, 2014⁴



⁴ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

TRENDS AND PROJECTIONS

The Life Sciences and Health Services cluster has grown by 29 percent over the last five years, with a sharp increase between 2012 and 2013. The services for the elderly and persons with disabilities industry grew by the most during this time period, accounting for nearly 80% of the cluster's growth. Over the next five years, the Life Sciences and Health Services cluster is projected to grow by 19 percent, adding about 27,300 jobs by 2019. The social assistance subsector is projected to add the most jobs, followed by ambulatory healthcare services, and nursing and residential care facilities. Hospitals are expected to add the least number of positions over this time period.

Exhibit 3: Employment Trends and Projections, Life Sciences and Health Services Cluster, Sacramento Capital Region, 2009–2019⁵

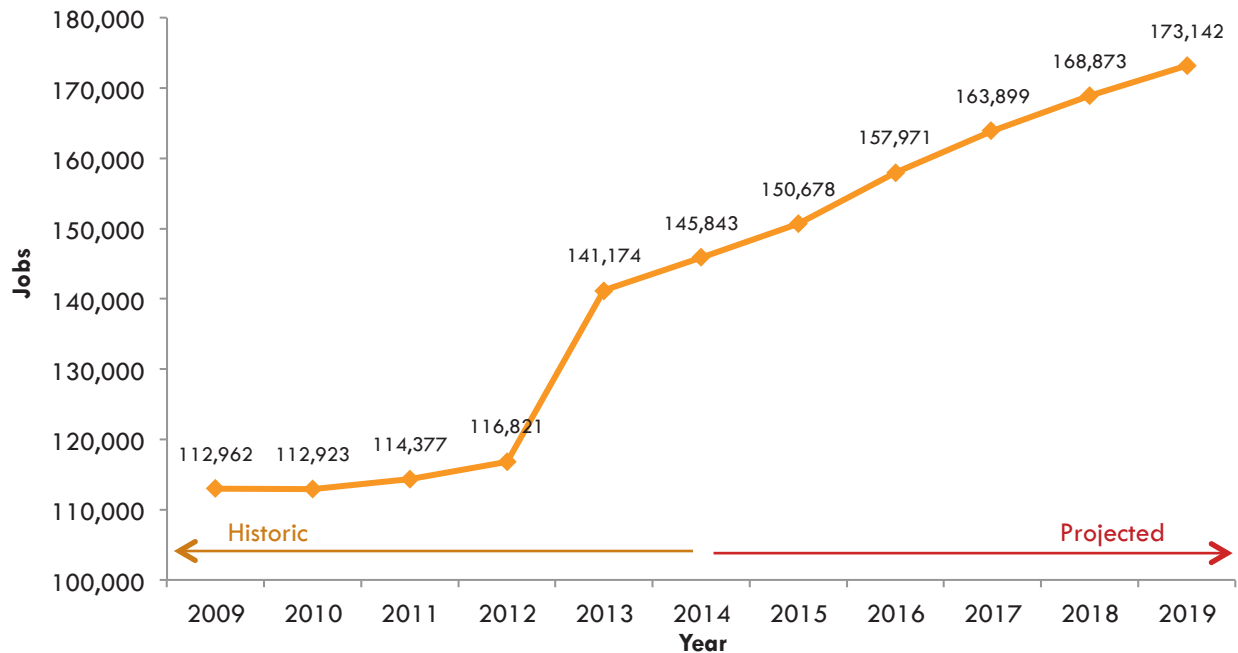


Exhibit 4: Employment Projections by Subsector, Life Sciences and Health Services Cluster, Sacramento Capital Region, 2014–2019⁵

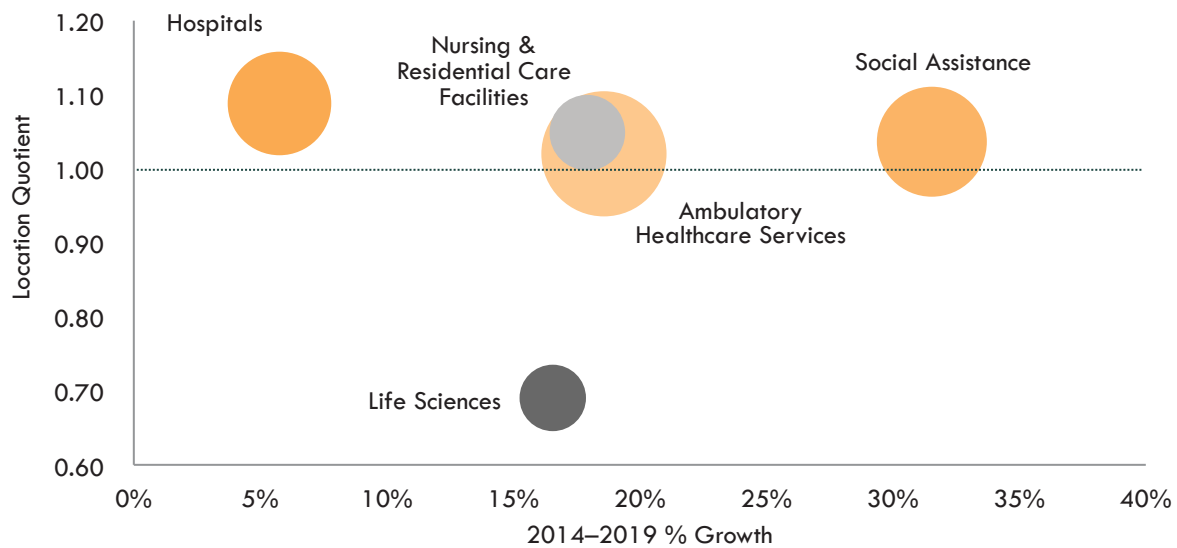
Healthcare & Life Sciences Subsector	2014 Jobs	2019 Jobs	Change	% Change
Ambulatory Healthcare Services	47,012	55,748	8,736	19%
Social Assistance	36,293	47,741	11,448	32%
Hospitals	32,184	34,037	1,853	6%
Nursing and Residential Care Facilities	17,112	20,180	3,068	18%
Life Sciences	13,243	15,436	2,193	17%
Total	145,844	173,142	27,298	19%

⁵ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

TRENDS AND PROJECTIONS

The following bubble chart compares the projected five-year growth rate to the concentration of employment in the region, where the size of the bubble indicates the total number of jobs for that subsector. All of the subsectors, except life sciences, have an average concentration of employment compared to other areas of the state. Ambulatory healthcare services and social assistance are the largest subsectors, with high projected growth. The hospitals subsector is large, but with modest projected growth over the next five years. Life sciences is the smallest subsector with a below average concentration of employment and moderate growth rate.

Exhibit 5: Projected Growth Rate vs. Subsector Concentration, Life Sciences and Health Services Cluster, Sacramento Capital Region⁶

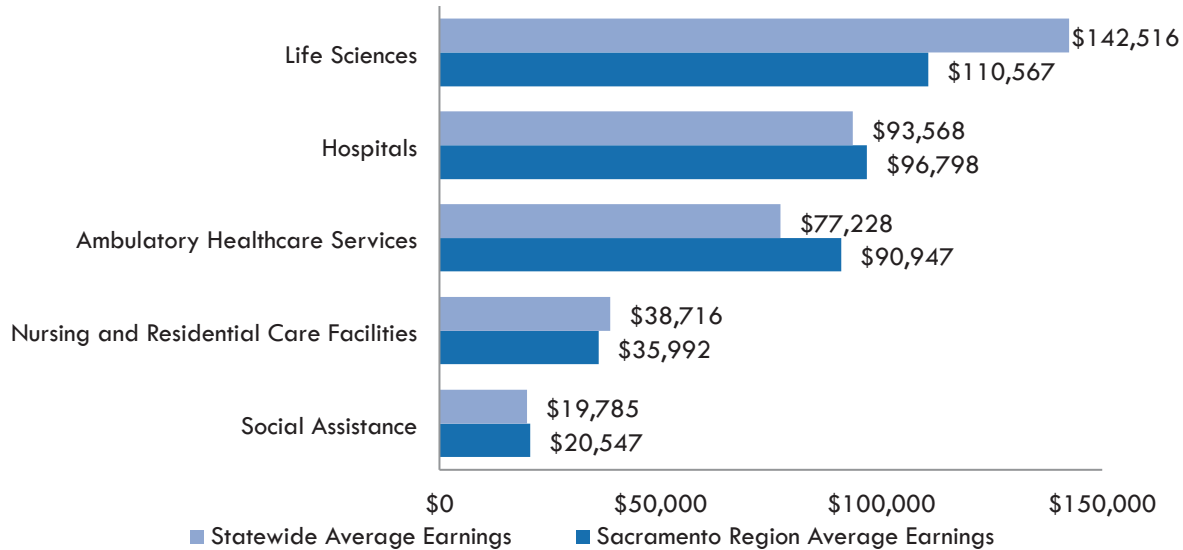


⁶ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

EARNINGS

The life sciences subsector provides the best earnings in the Sacramento Capital region, followed by hospitals and ambulatory healthcare services. These subsectors provide earnings that are above the regional average across all industries.⁷ Nursing/residential care facilities and social assistance organizations provide wages that are below the regional average. The earning calculation includes an average of all wages, salaries, proprietor earnings and supplemental earnings (such as retirement benefits, bonuses, etc.) for all occupations in the subsector.

Exhibit 6: Earnings by Subsector, Life Sciences and Health Services Cluster, Sacramento Capital Region, 2014⁸



⁷ The average earnings across all industries in the Sacramento region is \$63,400 and includes wages, salaries, proprietor earnings and supplements.

⁸ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

SHIFT SHARE ANALYSIS



Shift share analysis is a method for determining how much of regional job growth can be attributed to national trends and how much is due to unique regional factors. Exhibit 7 displays four key components:

- **Industrial Mix Effect** – represents the share of regional industry growth explained by the growth of the specific industry at the national level.
- **National Growth Effect** – represents how much of the regional industry's growth is explained by the overall growth of the national economy. Given that the nation's economy is growing, it is normal to see positive change in each subsector.
- **Expected Change** – the change expected due to national growth effect and industry mix effects.
- **Regional Competitive Effect** – explains how much of the change in the subsectors is due to some unique competitive advantage that the region possesses, because the growth cannot be explained by national trends in the industry or the economy as a whole.

Four of the five subsectors are outperforming national trends, while the hospitals subsector is underperforming compared to national trends. This suggests that the region has an overall competitive advantage in the Life Sciences and Health Services cluster compared to other areas of the nation.

Exhibit 7: Shift Share Analysis by Subsector, 2013–2018⁹

	Industrial Mix Effect	National Growth Effect	Expected Change	Regional Competitive Effect
Ambulatory Healthcare Services	5,197	2,989	8,186	550
Hospitals	57	2,046	2,103	(250)
Nursing and Residential Care Facilities	828	1,088	1,916	1,152
Social Assistance	7,430	2,307	9,737	1,710
Life Sciences	179	842	1,021	1,173
Cluster Total	13,691	9,272	22,963	4,335

⁹ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

ECONOMIC IMPACT

Economic impact provides a quantitative method to estimate the total economic benefit from a project, or in this case, an industry cluster. In other words, it is the “ripple effect” of all economic activities resulting from that cluster. Impact analysis is typically comprised of direct, indirect and induced impacts:

- Direct impacts are those resulting from the expenditures of operations within that industry cluster.
- Indirect impacts are those resulting from suppliers of that cluster spending money and hiring employees.
- Induced impacts are the combined value of employees of the industry cluster spending money at a household level.

Combined, these three variables equate to the total economic impact of a project or industry cluster.

The Healthcare cluster impacts the Sacramento Capital region’s economy in several ways. The IMPLAN input output model was used to measure the cluster’s total economic impacts. First, the cluster directly benefits the economy through the operations and jobs supported by the establishments within its subsectors. Exhibits 8 and 9 show that the Healthcare cluster directly contributes nearly \$18.3 billion in output and 146,000 jobs to the regional economy. In addition to this direct effect, these establishments generate an indirect impact through their supplier purchases—around \$6.0 billion in output and 41,000 jobs are created within sectors that generally supply this cluster. Finally, the Healthcare cluster creates an induced effect of around \$7.7 billion and approximately 56,000 jobs as a result of consumption activities within the local economy of both direct (cluster) and indirect (supplier) employees.

Exhibit 8: Total Output Impacts¹⁰

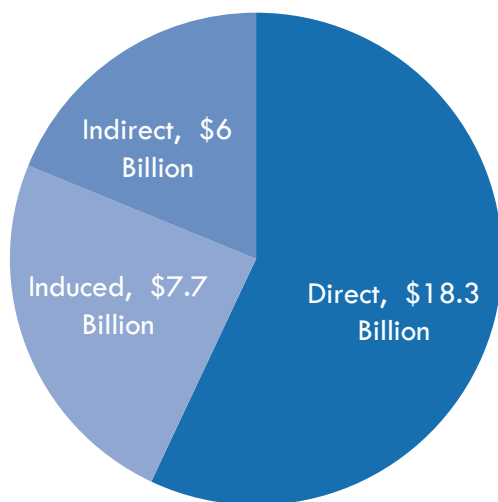
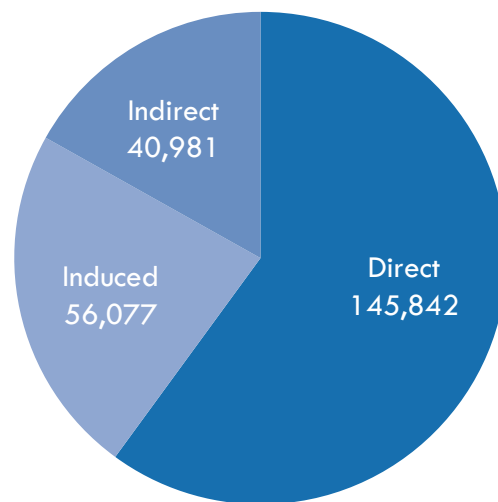


Exhibit 9: Total Employment Impacts¹⁰



¹⁰ EMSI employment and IMPLAN 2013 data coefficients

ECONOMIC IMPACT

The Healthcare cluster contributes a total of about \$32.0 billion in output, almost 243,000 jobs and \$14.4 billion in labor income. Exhibit 10 provides the employment impacts by each subsector within the Healthcare cluster and by output, employment, and labor income (which includes all forms of employment income, including employee compensation and proprietor income). With about \$11.6 billion in output, 82,000 jobs, and \$5.5 billion in labor income, the ambulatory care services subsector, by far, accounts for the largest share of the cluster's total economic impacts while the nursing and residential care facilities subsector has the smallest share.

Exhibit 10: Total Economic Impacts by Cluster Subsector¹¹

	Direct	Indirect	Induced	Total
Output				
<i>Total</i>	\$18,264,356,260	\$6,029,117,542	\$7,749,627,699	\$32,043,101,500
Life Sciences	\$3,555,315,913	\$1,356,387,523	\$1,099,828,851	\$6,011,532,287
Ambulatory Care Services	\$6,715,933,047	\$1,874,234,464	\$2,982,634,470	\$11,572,801,981
Hospitals	\$5,641,456,588	\$1,873,224,134	\$2,598,021,739	\$10,112,702,461
Nursing and Residential Care Facilities	\$1,063,375,296	\$352,314,530	\$492,387,165	\$1,908,076,990
Social Assistance	\$1,288,275,416	\$572,956,891	\$576,755,474	\$2,437,987,781
Employment				
<i>Total</i>	145,843	40,981	56,077	242,900
Life Sciences	13,243	8,489	7,961	29,693
Ambulatory Care Services	47,012	13,068	21,586	81,666
Hospitals	32,184	13,219	18,794	64,197
Nursing and Residential Care Facilities	17,112	2,471	3,562	23,145
Social Assistance	36,293	3,734	4,174	44,201
Total Labor Income				
<i>Total</i>	\$9,779,595,811	\$2,038,863,930	\$2,576,689,367	\$14,395,149,108
Life Sciences	\$1,196,057,292	\$476,414,356	\$365,722,400	\$2,038,194,048
Ambulatory Care Services	\$3,936,188,414	\$605,916,768	\$991,753,841	\$5,533,859,022
Hospitals	\$3,290,297,385	\$683,565,824	\$863,728,073	\$4,837,591,282
Nursing and Residential Care Facilities	\$645,915,824	\$106,830,290	\$163,700,236	\$916,446,350
Social Assistance	\$711,136,896	\$166,136,692	\$191,784,817	\$1,069,058,406

ECONOMIC LEAKAGE

Supply chain leakage is a primary factor in determining the value of an industry multiplier used to define the total “ripple effect” of that industry cluster. Stronger supply chain linkages, better described as a cluster using more locally sourced products and services, has a reciprocal benefit of lower leakage, increasing the multiplier and the total impact on the surrounding economy.

It was determined through an in-depth analysis of the Healthcare industry cluster and its subsets, that there is a relatively high level of supply chain leakage, roughly 57 percent. Conversely, 43 percent of goods and services supporting the industry cluster are purchased within the region.

¹¹ EMSI employment and IMPLAN 2013 data coefficients

INDUSTRY TRENDS



Several factors are transforming the Life Sciences and Health Services cluster. At the regional level, demographic factors such as a growing and aging population are creating demand for expanded healthcare services. At the national level, the Patient Protection and Affordable Care Act (ACA) contains provisions that are increasing demand for healthcare services and changing the way services are delivered. This section explores how these factors are affecting the Life Sciences and Health Services cluster in the region.

Over the next five years, the Sacramento Capital region's residential population is projected to grow by 3.6 percent from 2.4 million to 2.5 million, which is on par with the projected growth rate for the state.¹² By 2019, health care organizations in the region will need to expand their operations to serve an additional 87,000 residents.^{13&14}

Another important demographic factor influencing the Life Sciences and Health Services cluster is the region's aging population. In 2014, approximately 19 percent of the Sacramento Capital region's population was age 60 or older. By 2024, this age group is projected to increase by 28 percent, while the age cohort 20 to 59 is expected to decrease by 2 percent.¹³ Since use of healthcare services increases with age, any increase in numbers of older population cohorts will significantly impact health care demand. Further, the aging of the healthcare workforce itself is expected to create staffing shortages as workers in key healthcare occupations become eligible for retirement.

The Patient Protection and Affordable Care Act enacted in 2010 is a multi-faceted bill that restructured the national healthcare system. The bill is making healthcare more affordable and accessible for residents across the state and nation. According to Gallup, the Affordable Care Act is facilitating the reduction of the uninsured rate across the state and nation.

With the implementation of the Health Insurance Marketplace and Medicaid expansion, the uninsured rate in California dropped by 6.3%, from 21.6% in 2013 to 15.3% in 2014.¹⁵ This equates to 2.44 million more California residents with healthcare coverage than in the previous year. As of January 2015, more than three million California residents have obtained coverage through the Health Insurance Marketplace.¹⁶ In addition to expanded insurance coverage, there are several provisions in the Act that are increasing demand for health services:

- Insurance companies can no longer impose lifetime dollar limits on health benefits.
- Insurance companies can no longer deny coverage due to pre-existing conditions.
- Insurance companies are required to provide benefits for mental health and substance use services.
- Many insurance plans are required to provide preventive health services with no deductible or co-pay.

These provisions as well as the expanded reach of healthcare coverage to previously uninsured individuals are driving demand for healthcare services at the local and national levels.

¹² California's population is projected to increase by 3.4 percent between 2014 and 2019.

¹³ EMSI Population Demographics – 2015.2.

¹⁴ The Sacramento Area Council of Governments long-term population projections indicate a higher population growth than estimated by EMSI. Should the population grow at a higher rate, it will increase the demand for health services across the region.

¹⁵ *State of the State Series, Arkansas, Kentucky Sees Most Improvement in Uninsured Rates*. February, 2015. gallup.com.

¹⁶ U.S. Department of Health and Human Services. *Five Years Later: How the Affordable Care Act is Working for California*. hhs.gov

OCCUPATION DEMAND

Fifteen occupations were selected for inclusion in the study based on the following criteria:

- Annual job openings were significant.
- The minimum education requirement is a high school diploma plus on-the-job training, postsecondary award, associate degree or bachelor's degree.

Exhibit 10 displays the employment demand for the Life Sciences and Health Services cluster occupations selected for inclusion in the study. Over the next five years (2014–2019), these occupations are projected to grow by 14%, adding more than 7,400 new jobs and 6,000 replacement jobs. Sacramento Capital region employers will need to fill nearly 2,700 openings annually to keep pace with cluster growth, retirements and other separations.

Registered nurses is the largest occupation in the group with the most annual openings over the next five years. Nursing assistants and medical assistants are also large occupations with significant annual openings created by new job growth and replacement needs. For each occupation, replacement estimates include retirements and general separations, but not turnover within the occupation. As such, replacements and new job growth combined is a good measure of demand for workers.

Exhibit 10: Employment Outlook, Life Sciences and Health Services Occupations, Sacramento Capital Region¹⁷

Description	2014 Jobs	2019 Jobs	2014–2019 Change	2014–2019 % Change	Total Replacements	Total Openings	Annual Openings
Registered Nurses	17,301	19,451	2,150	12%	1,827	3,977	795
Medical Assistants	6,245	7,090	845	14%	660	1,505	301
Nursing Assistants	5,449	6,716	1,267	23%	597	1,864	373
Dental Assistants	3,403	3,711	308	9%	376	684	137
Social and Human Service Assistants	3,106	3,597	491	16%	449	940	188
Licensed Vocational Nurses	2,919	3,537	618	21%	413	1,031	206
Pharmacy Technicians	2,551	2,788	237	9%	134	371	74
Dental Hygienists	2,165	2,431	266	12%	301	567	113
Child, Family, and School Social Workers	2,109	2,321	212	10%	239	451	90
Medical and Health Services Managers	1,848	2,141	293	16%	251	544	109
Health Information Technicians	1,250	1,419	169	14%	180	349	70
Medical Laboratory Technicians	1,202	1,388	186	15%	173	359	72
Emergency Medical Technicians and Paramedics	1,050	1,259	209	20%	168	377	75
Mental Health and Substance Abuse Social Workers	863	969	106	12%	99	205	41
Biological Technicians	667	747	80	12%	106	186	37
Total	52,128	59,565	7,437	14%	5,973	13,410	2,682

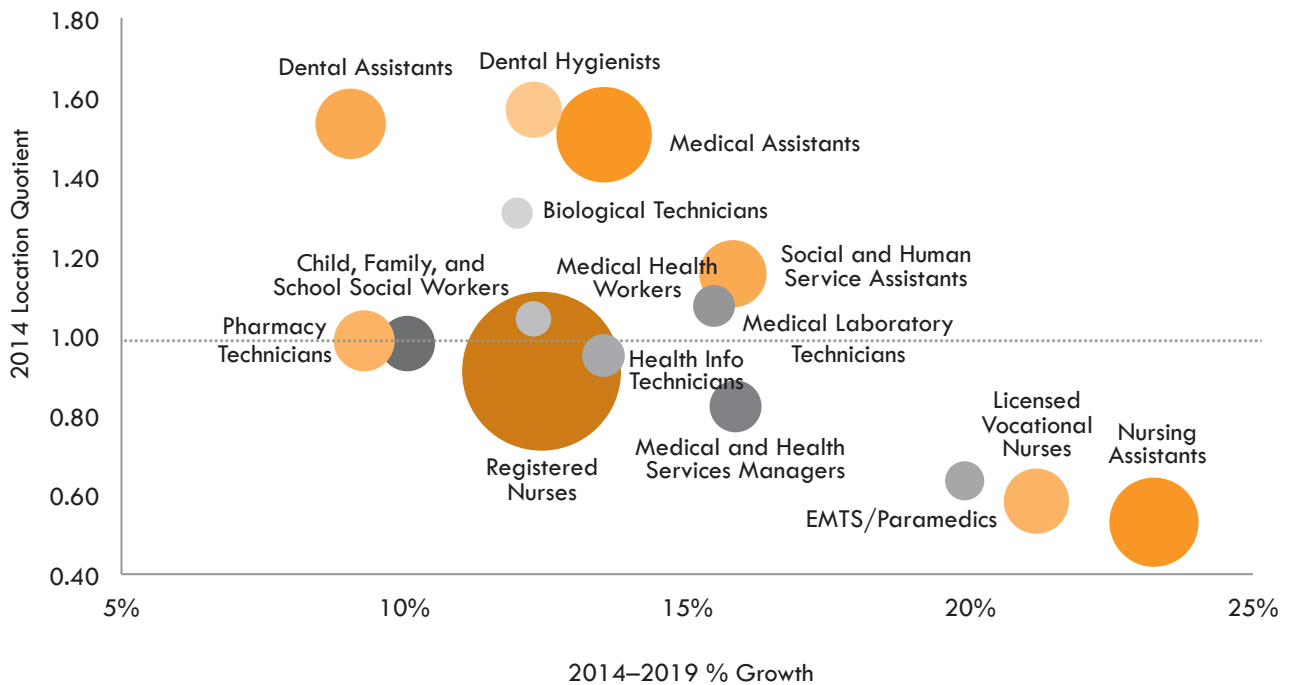
¹⁷ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

OCCUPATION DEMAND

In addition to industry analysis, location quotient can also be applied to occupations. In this case, the location quotient compares an occupation’s total employment in the region relative to the state’s total employment for that occupation. A location quotient of less than one indicates a lower concentration of employment for that occupation in the region than in the state overall. A location quotient of more than one indicates a higher concentration of employment for the occupation than in the state overall.

The bubble chart below compares the concentration of occupation employment to the projected five-year growth rate in the region, where the size of the bubble indicates the total number of jobs for each occupation. As shown below, registered nurses is the largest occupation, with average concentration in the region and a moderate projected growth rate. Dental assistants and dental hygienists have above average location quotients and moderate projected growth rates. Licensed vocational nurses and nursing assistants are projected to grow faster than any other occupation in the group, but have below average concentration of employment in the region.

Exhibit 11: Growth Rate vs. Occupation Concentration, Life Sciences and Health Services Occupations, Sacramento Capital Region¹⁸

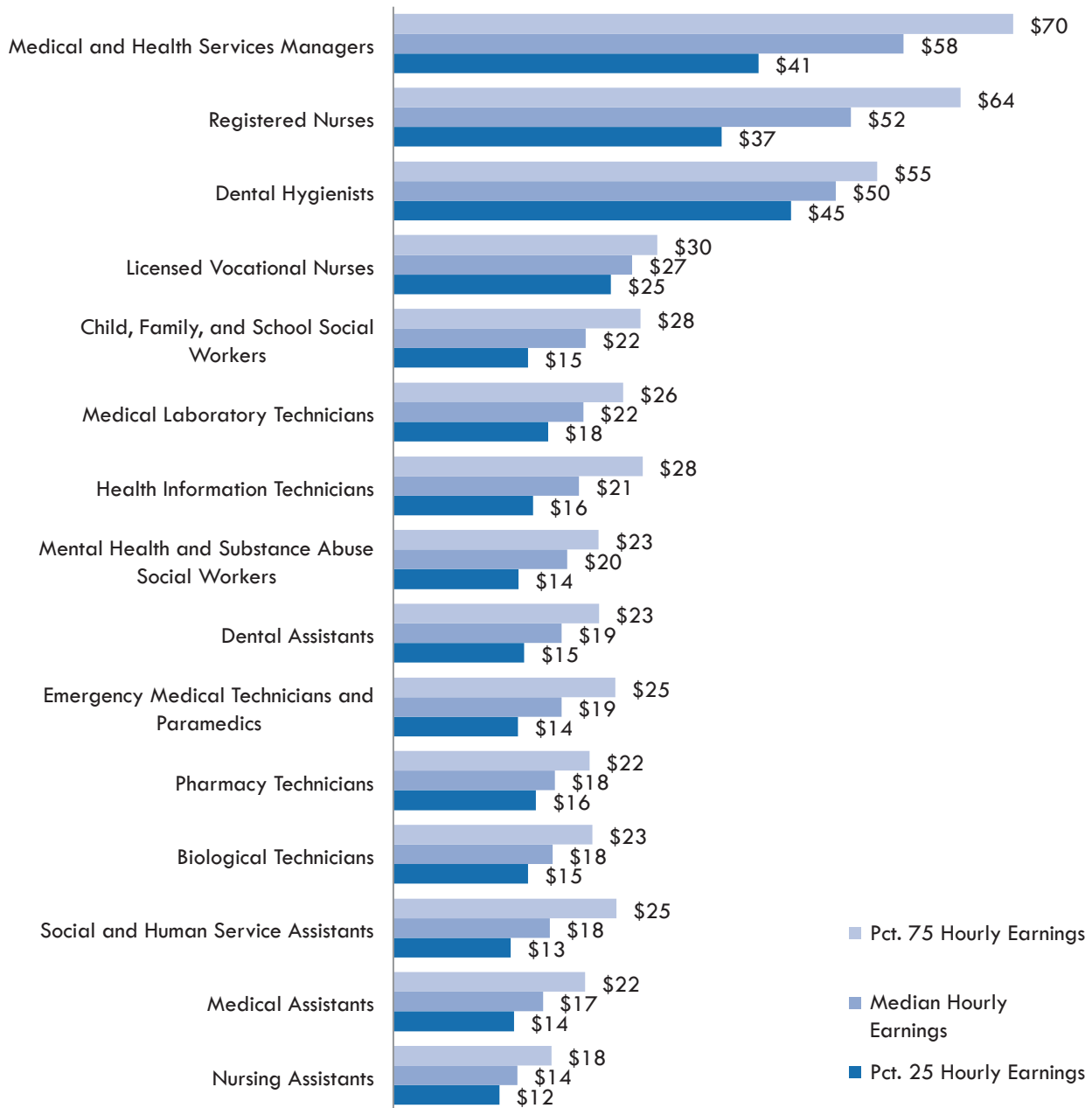


¹⁸ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

OCCUPATIONAL WAGES

Most of occupations included in the Life Sciences and Health Services cluster analysis earn wages that are close to or above the regional median wage. Medical and health services managers is the highest paid occupation, followed by registered nurses and dental hygienists. The lowest paid occupations in the group include social and human services assistants, medical assistants and nursing assistants. The median hourly wage across all occupations in the Sacramento Capital region is \$22.69 per hour.

Exhibit 12: Hourly Wages, Life Sciences and Health Services Occupations, Sacramento Capital Region, 2015¹⁹



¹⁹ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

EDUCATION ASSESSMENT

This section provides a review of the training and education supply supporting the Life Sciences and Health Services cluster for the occupations selected for inclusion in this study. Exhibit 13 identifies the minimum education requirements for the Life Sciences and Health Services cluster occupations. The minimum education requirement for the majority of occupations is a postsecondary certificate or associate degree. Two occupations have a minimum entry-level education requirement of a high school diploma plus on-the-job training. However, postsecondary training or education may give candidates a competitive advantage in the hiring process over those with only a high school diploma.

Exhibit 13: Minimum Education Requirements, Life Sciences and Health Services Occupations

Description	Entry Level Education	Typical On-The-Job Training
Biological Technicians	Bachelor's degree	None
Child, Family, and School Social Workers	Bachelor's degree	None
Dental Assistants	Postsecondary non-degree award	None
Dental Hygienists	Associate degree	None
Emergency Medical Technicians and Paramedics	Postsecondary non-degree award	None
Health Information Technicians	Postsecondary non-degree award	None
Licensed Vocational Nurses	Postsecondary non-degree award	None
Medical and Health Services Managers	Bachelor's degree	None
Medical Assistants	Postsecondary non-degree award	None
Medical Laboratory Technicians	Associate degree	None
Mental Health and Substance Abuse Social Workers	Bachelor's degree	None
Nursing Assistants	Postsecondary non-degree award	None
Pharmacy Technicians	High school diploma or equivalent	On-the-job training
Registered Nurses	Associate degree	None
Social and Human Service Assistants	High school diploma or equivalent	On-the-job training



EDUCATION ASSESSMENT

Exhibit 14 lists the programs with certificate and degree programs that provide a workforce pipeline to the Life Sciences and Health Services cluster. The table includes an estimate of the certificate and degrees conferred each year, based on a three-year historical average as well as the total number of training programs in the region. Appendix B provides a complete list of the educational programs in the region, including the type of degree conferred.

In the Sacramento Capital region, there are 71 training programs supporting the Life Sciences and Health Services cluster occupations. These programs confer an average 2,700 degrees and certificates annually. Based on a high level assessment of supply and demand, there could be gaps in the workforce pipeline in several areas: biological technicians, dental hygienists, emergency medical technicians/paramedics, health information technicians/coders, medical laboratory technicians, and registered nurses.

The supply and demand data also suggests that there could be a significant oversupply of medical assistants, dental assistants and licensed vocational nurses. When there is an oversupply in the workforce systems, new graduates may not be able to find work in their field of study, forcing them to return to school, move out of the region, or find employment in other environments.

The total certificates and degrees conferred provide some information about the supply of workers to an industry or cluster. However, it is limited in that there are several unknown variables that impact the supply, such as migration trends, employer preferences, worker preparedness, qualified unemployed labor force, and graduate/completion duplication. Therefore, it is necessary to conduct additional research to verify potential training shortages in the region.

Exhibit 14: Educational Programs & Awards, Life Sciences and Health Services Occupations, Sacramento Capital Region^{20&21}

Educational Program	3-Year Average Certificate/Degrees Conferred	Number of Training Programs
Alcohol and Controlled Substances	135	7
Biotechnology & Biomedical Technology	18	1
Dental Assistant	282	5
Dental Hygiene/Hygienist	66	2
Emergency Medical Services/Paramedic	15	6
Health Administration	Not Available	1
Health Information Technology/Coding	33	3
Human Services	124	6
Licensed Vocational Nursing	308	6
LVN to RN Bridge	Not Available	4
Medical Assistant	779	12
Medical Laboratory Technology	6	1
Nursing Assistant	Not Available	3
Pharmacy Technician/Assistant	141	5
Registered Nursing	583	8
Social Work	221	1
Total	2,711	71

²⁰ California Community College Chancellor's Office Data Mart. National Center for Education Statistics (NCES). Higher education institutions are required to report completion data to NCES if they participate in any federal financial assistance program authorized by Title IV of the Higher Education Act. Completion data not reported to the NCES or CCCCO Data Mart were not included in the estimate.

²¹ The 3-year average is based on academic years 2011–12, 2012–13 and 2013–14 for private education institutions and public four-year universities and 2012–13, 2013–14, and 2014–15 for community colleges.

SKILLS ASSESSMENT

Exhibit 15 displays the top skills and professional credentials for the Life Sciences and Health Services cluster occupations selected for inclusion in this study. The data is based on analysis of job posting data, aggregated by Burning Glass. This online tool uses intelligent “spidering” to search the Internet for job listings, removes duplication, and aggregates the data into a search database. As shown below, most of the skills/knowledge areas are specialized and require specific training and certifications.

Exhibit 15: Skill and Professional Credential Preferences, Life Sciences and Health Services Occupations²²

Occupation	Top Skill/Knowledge Areas	Top Certifications/ Professional Credentials
Biological Technicians	Biology, chemistry, botany, physics, mathematics, entomology, test equipment, experiments, medical equipment instruction, molecular biology, and data collection	Biomedical Equipment Technician (BMET)
Child, Family, and School Social Workers	Case management, social services, psychology, child development, screening, mental health, treatment planning, and therapy	Social Work License, First Aid CPR AED
Dental Assistants	Dentistry, radiology, patient treatment, front office, oral hygiene, X-Rays, dental procedures and infection control	First Aid CPR AED, Certified Dental Assistant
Dental Hygienists	Oral hygiene, treatment planning, dentistry, X-Rays, patient/family education and instruction, prophylaxis, local anesthetics, scaling, and sealants.	Dental Hygienist Certification
Emergency Medical Technicians and Paramedics	Patient care, first aid, life support, advanced cardiac life support, electrocardiogram, triage, physical demand, trauma, and emergency medical care	EMT, Paramedic Certification, First Aid CPR AED
Health Information Technicians	Medical coding, medical billing, ICD-9-CM coding, health information technology, CPT coding, medical records, data entry, medical terminology, and electronic records, ICD-10	Registered Health Information Technician, Certified Professional Coder, Registered Health Information Administrator
Licensed Vocational Nurses	Patient care, treatment planning, patient/family education and instruction, medication administration, home health, acute care, vital signs measurement, screening, infection control, patient evaluation, care planning and data collection	Licensed Vocational Nurse, First Aid CPR AED, Basic Cardiac Life Support Certification
Medical and Health Services Managers	Patient care, case management, collaboration, nurse management, scheduling, acute care, clinical experience, staff development, advanced cardiac life support, home health, treatment planning and patient direction	Registered Nurse, First Aid CPR AED, Basic Cardiac Life Support Certification, Advanced Cardiac Life Support Certification
Medical Assistants	Patient care, vital signs measurement, appointment setting, injections, scheduling, medical terminology, patient preparation, phlebotomy, front office, electrocardiogram, and electronic medical records	Certified Medical Assistant, First Aid CPR AED, Basic Cardiac Life Support Certification
Medical Laboratory Technicians	Chemistry, phlebotomy, laboratory equipment, biology, data entry, equipment maintenance, laboratory testing, laboratory procedures and pathology	Phlebotomy Certification, Certified Medical Laboratory Technician
Mental Health and Substance Abuse Social Workers	Mental health, treatment planning, case management, psychology, crisis intervention, behavioral health, patient care, discharge planning, social services and patient assistance	Social Work License
Nursing Assistants	Patient care, patient bathing, vital signs measurement, acute care, patient direction, blood pressure checking, patient assistance, and life support	Certified Nursing Assistant, First Aid CPR AED, Basic Cardiac Life Support Certification
Pharmacy Technicians	Pharmacist assistance, labeling, HIPAA, scheduling, data entry, training programs, and prescription processing	Certified Pharmacy Technician
Registered Nurses	Patient care, advanced cardiac life support, acute care, treatment planning, case management, critical care, patient/family education and instruction, collaboration, patient direction, patient evaluation, and telemetry	Registered Nurse, Advanced Cardiac Life Support Certification
Social and Human Service Assistants	Case management, social services, mental health, screening, data entry, psychology, crisis intervention and record keeping	First Aid CPR AED

²² Burning Glass, 2015.

SUMMARY

The Life Sciences and Health Services cluster employs more than 145,000 workers, about 14 percent of the total employment in the Sacramento Capital region. This cluster includes five subsectors: hospitals, ambulatory healthcare services, nursing and residential care, social assistance, and life sciences. In the last five years, this cluster has grown by 29 percent with a sharp increase between 2012 and 2013 – which corresponds with the implementation of the health insurance marketplace and the expansion of insurance coverage to thousands of previously uninsured individuals.

Over the next five years, the Life Sciences and Health Services cluster is projected to grow by 19 percent, adding about 27,300 jobs to Sacramento’s economy. Population growth and an aging workforce are driving demand, as well as expansion of care through the Patient Protection and Affordable Care Act.

There are more than 60 occupations and career tracks for individuals with an interest in the field of Life Sciences and Health Services. Fifteen occupations were selected for inclusion in this study based on total number of job openings and minimum education requirements, including:

- Biological Technicians
- Child, Family, and School Social Workers
- Dental Assistants
- Dental Hygienists
- Emergency Medical Technicians and Paramedics
- Health Information Technicians
- Licensed Vocational Nurses
- Medical and Health Services Managers
- Medical Assistants
- Medical Laboratory Technicians
- Mental Health/Substance Abuse Social Workers
- Nursing Assistants
- Pharmacy Technicians
- Registered Nurses
- Social and Human Service Assistants



SUMMARY

Registered nurses is the largest occupation in the group, with the most annual openings over the next five years. Nursing assistants and medical assistants are also large occupations, with significant annual openings created by new job growth and replacement needs. Most of occupations in the cluster earn wages that are close to or above the regional median wage.

There are 71 training programs supporting the Life Sciences and Health Services cluster. These programs confer an average 2,700 degrees and certificates annually. Based on a high level assessment of supply and demand, there could be gaps in the workforce pipeline in several areas: biological technicians, dental hygienists, emergency medical technicians/paramedics, health information technicians/coders, medical laboratory technicians, and registered nurses. The supply and demand data also suggests that there could be a significant oversupply of medical assistants, dental assistants and licensed vocational nurses. However, due to several unknown variables that impact the supply, more research is necessary to verify potential training and education shortages or oversupplies in the region.

Valley Vision, along with the Center of Excellence and other partners, will be conducting forums with Life Sciences and Health Services employers to review the cluster findings, high priority occupations and skills gaps that can be addressed through a concerted cluster workforce action plan. Priorities that may be elevated based on this analysis include:

1. Conduct primary research to assess potential skill gaps in existing training programs. Partner with regional employers and education institutions to identify skill requirements and competencies, and to close skills gaps.
2. Identify occupations that will be most impacted by projected retirements and the Patient Protection and Affordable Care Act, and develop action steps to increase supply.
3. Develop stackable credentials and training pathways to provide students with career advancement options in the Life Science and Health Services cluster.
4. Identify other Life Science and Health Services occupations not selected for inclusion in this study for additional research and review.



APPENDIX A: LIFE SCIENCES AND HEALTH SERVICES CLUSTER DEFINITION

The Life Sciences and Health Services cluster is comprised of the following NAICS codes.

Life Sciences

- 325411 Medicinal and Botanical Manufacturing
- 325412 Pharmaceutical Preparation Manufacturing
- 325413 In-Vitro Diagnostic Substance Manufacturing
- 325414 Biological Product (except Diagnostic) Manufacturing
- 334510 Electromedical and Electrotherapeutic Apparatus Manufacturing
- 334516 Analytical Laboratory Instrument Manufacturing
- 334517 Irradiation Apparatus Manufacturing
- 339112 Surgical and Medical Instrument Manufacturing
- 339113 Surgical Appliance and Supplies Manufacturing
- 446110 Pharmacies and Drug Stores
- 541380 Testing Laboratories
- 541711 Research and Development in Biotechnology
- 541712 Research and Development in the Physical, Engineering, and Life Sciences

Ambulatory Care Services

- 621111 Offices of Physicians (except Mental Health Specialists)
- 621112 Offices of Physicians, Mental Health Specialists
- 621210 Offices of Dentists
- 621310 Offices of Chiropractors
- 621320 Offices of Optometrists
- 621330 Offices of Mental Health Practitioners (except Physicians)
- 621340 Offices of Physical, Occupational and Speech Therapists, and Audiologists
- 621391 Offices of Podiatrists
- 621399 Offices of All Other Miscellaneous Health Practitioners
- 621410 Family Planning Centers
- 621420 Outpatient Mental Health and Substance Abuse Centers

- 621491 HMO Medical Centers
- 621492 Kidney Dialysis Centers
- 621493 Freestanding Ambulatory Surgical and Emergency Centers
- 621498 All Other Outpatient Care Centers
- 621511 Medical Laboratories
- 621512 Diagnostic Imaging Centers
- 621610 Home Health Care Services
- 621910 Ambulance Services
- 621991 Blood and Organ Banks
- 621999 All Other Miscellaneous Ambulatory Health Care Services

Hospitals

- 622110 General Medical and Surgical Hospitals
- 622210 Psychiatric and Substance Abuse Hospitals
- 622310 Specialty (except Psychiatric and Substance Abuse) Hospitals
- 902622 Hospitals (State Government)
- 903622 Hospitals (Local Government)

Nursing and Residential Care Facilities

- 623110 Nursing Care Facilities (Skilled Nursing Facilities)
- 623210 Residential Intellectual and Developmental Disability Facilities
- 623220 Residential Mental Health and Substance Abuse Facilities
- 623311 Continuing Care Retirement Communities
- 623312 Assisted Living Facilities for the Elderly
- 623990 Other Residential Care Facilities

Social Assistance

- 624110 Child and Youth Services
- 624120 Services for the Elderly and Persons with Disabilities
- 624190 Other Individual and Family Services
- 624310 Vocational Rehabilitation Services

APPENDIX B: LIFE SCIENCES AND HEALTH SERVICES CLUSTER TRAINING PROGRAMS

The following table provides a list of educational programs supporting the 15 life science and health services occupations selected for inclusion in this study.

Program	College	Award Type
Alcohol and Controlled Substances	American River College	Associate of Arts, Certificate
	Cosumnes River College	Associate of Science, Certificate
	InterCoast Colleges, Elk Grove	Certificate
	Lake Tahoe Community College	Associate of Arts, Certificate
	William Jessup University	Certificate
	Woodland College	Associate of Science, Certificate
	Yuba College	Associate of Science, Certificate
Biotechnology & Biomedical Technology	American River College	Associate Degree; Certificate
Dental Assistant	Carrington College California, Citrus Heights	Associate degree, Certificate
	Carrington College California, Sacramento	Associate degree, Certificate
	Kaplan College, Sacramento	Certificate
	Lake Tahoe Community College	Certificate
	Sacramento City College	Associate of Science, Certificate
Dental Hygiene/Hygienist	Carrington College California, Sacramento	Associate degree
	Sacramento City College	Associate of Science
Emergency Medical Services/Paramedic	American River College	Associate of Science, Certificate
	Cosumnes River College	Certificate
	Folsom Lake College	Course
	Lake Tahoe College	Course
	Sierra College	Course
	Yuba College	Certificate
Health Administration	University of Phoenix, Sacramento Valley Campus	Bachelor's and Master's
Health Information Technology/Coding	Asher College	Certificate
	Bryan College, Gold River	Associate degree
	Cosumnes River College	Certificate in Coding; Associate of Science in HIT
Human Services	American River College	Associate of Arts, Certificate
	Cosumnes River College	Associate of Arts, Certificate
	Sacramento City College	Associate of Arts, Certificate
	University of Phoenix, Sacramento Valley Campus	Bachelor's degree
	Woodland College	Associate of Science
	Yuba College	Associate of Science
Health Licensed Vocational Nursing	Carrington College, Sacramento	Associate degree, Certificate
	Charles A Jones Career and Education Center	Certificate
	Curam College of Nursing	Certificate
	Kaplan College, Sacramento	Certificate
	Sacramento City College	Associate of Science, Certificate
	Unitek College, Sacramento	Certificate

APPENDIX B: LIFE SCIENCES AND HEALTH SERVICES CLUSTER TRAINING PROGRAMS

Program	College	Award Type
LVN to RN Bridge	American River College	Associate degree/Certificate
	Sacramento City College	Certificate
	Sierra College	Certificate
	Yuba College	Certificate
Medical Assistant	Cambridge Junior College, Woodland	Certificate
	Cambridge Junior College, Yuba City	Certificate
	Carrington College California, Citrus Heights	Associate degree, Certificate
	Carrington College California, Sacramento	Associate degree, Certificate
	CET, Sacramento	Certificate
	Charles A Jones Career and Education Center	Certificate
	Cosumnes River College	Associate of Science, Certificate
	InterCoast Colleges, Elk Grove	Certificate
	Kaplan College, Sacramento	Certificate
	Lake Tahoe Community College	Associate of Arts, Certificate
MTI College	Certificate	
San Joaquin Valley College, Rancho Cordova	Certificate	
Medical Laboratory Technology	Folsom Lake College	Associate of Science
Nursing Assistant	American River College	Certificate
	Cosumnes River College	Certificate
	Sierra College	Courses
Pharmacy Technician/Assistant	Asher College	Certificate
	Carrington College California, Citrus Heights	Associate degree
	Carrington College California, Sacramento	Associate degree
	Charles A Jones Career and Education Center	Certificate
Cosumnes River College	Associate of Science	
Registered Nursing	American River College	Associate of Science
	Breckinridge School of Nursing, ITT Technical Institute, Rancho Cordova	Associate degree
	California State University, Sacramento	Bachelor's and Master's degree
	Carrington College California, Sacramento	Associate degree, Certificate
	Sacramento City College	Associate of Science
	Sierra College	Associate of Science
	University of California, Davis	Master's degree
	University of Phoenix, Sacramento Valley Campus	Bachelor's degree
Yuba College	Associate of Science	
Social Work	California State University, Sacramento	Bachelor's and Master's

MORE ABOUT...

More About The Centers of Excellence

The Centers of Excellence (COE) for Labor Market Research deliver regional workforce research and technical expertise to California community colleges for program decision making and resource development. This information has proven valuable to colleges in beginning, revising, or updating economic development and Career Technical Education (CTE) programs, strengthening grant applications, assisting in the accreditation process, and in supporting strategic planning efforts.

The Centers of Excellence Initiative is funded in part by the Chancellor's Office, California Community Colleges, Economic and Workforce Development Program. The Centers aspire to be the leading source of regional workforce information and insight for California community colleges. More information about the Centers of Excellence is available at www.coecc.net.

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More About Valley Vision

Since 1994, Valley Vision's work has driven transformative change and improved lives across Northern California. An independent social impact and civic leadership organization headquartered in Sacramento, Valley Vision strengthens our communities through unbiased research, boundary-crossing collaboration and change leadership. Our work improves overall quality of life and creates the conditions for economic prosperity and community health and vitality.

More About Burris Service Group

The Burris Service Group (BSG) is a full-service consulting practice providing expertise in economic development, strategic economic research, real estate site strategy, management, and institutional growth. The company was established based on the clear need that advisory services be delivered in an "action-oriented" form. The founder of BSG, Robert Burris, brings to his clients an active local and international network of professionals, as well as 20 years of experience in economic development, market and economic analysis, commercial real estate information, corporate sales, and consulting.



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 <http://linkd.in/1EUU9wM>

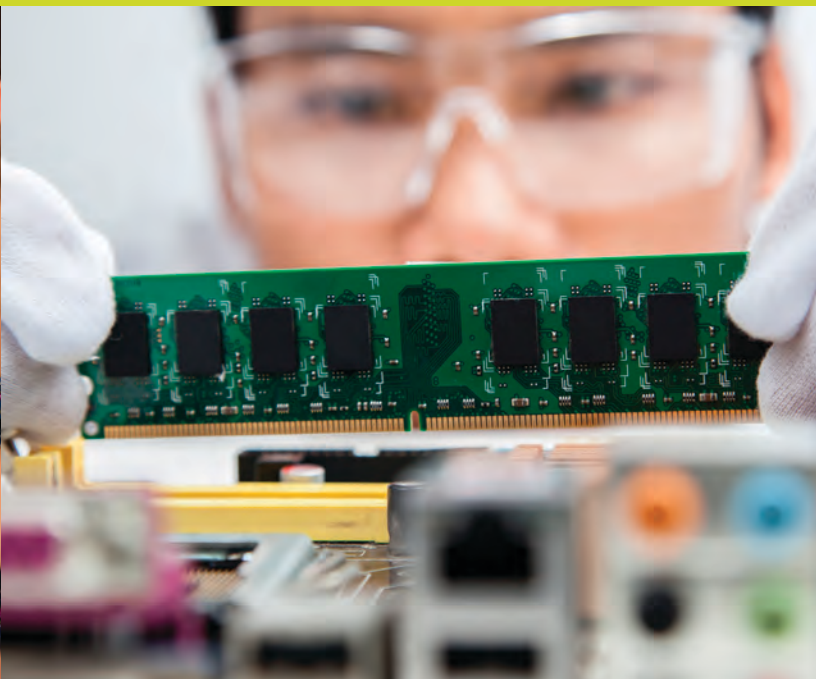


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SERIES: 3 OF 6

INFORMATION & COMMUNICATION TECHNOLOGIES CLUSTER: WORKFORCE NEEDS ASSESSMENT SACRAMENTO CAPITAL REGION



February 2016

Prepared by: Centers of Excellence,
Los Rios Community College District

Valley Vision

Burris Service Group

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Important Disclaimer

All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. Efforts have been made to qualify and validate the accuracy of the data and the reported findings; however, neither the Centers of Excellence, COE host District, nor California Community Colleges Chancellor’s Office are responsible for applications or decisions made by recipient community colleges or their representatives based upon components or recommendations contained in this study.

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Economic and Workforce Development Program

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INTRODUCTION

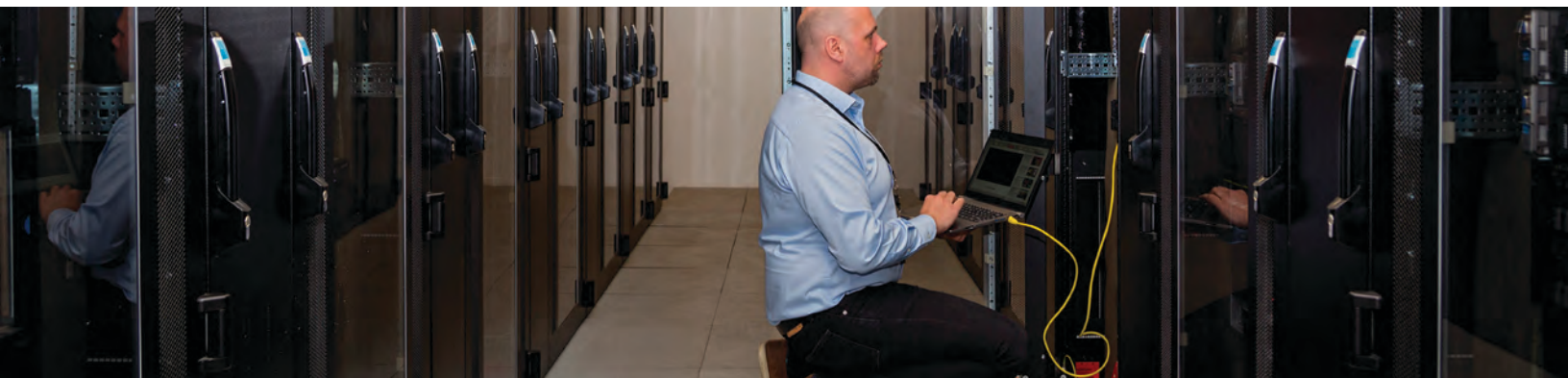
Starting in 2008, the six-county Sacramento Capital region (El Dorado, Placer, Sacramento, Sutter, Yolo and Yuba counties) was rocked by the global recession, losing 10 percent of the region's jobs. In response, regional leaders initiated Next Economy, an action plan to accelerate job creation and new investment in six high-growth business (industry) clusters. Valley Vision, a regional civic leadership organization, managed the three-year Next Economy design, research and implementation process on behalf of a wide range of private and public sector partners.

By late 2015, after a lagging recovery, the region's economy picked up momentum, with the unemployment rate decreasing while job growth accelerated. Valley Vision received funding from JPMorgan Chase & Co. to better understand how the region's key growth industry clusters have changed since the original Next Economy research was conducted in 2012 and what new opportunities are emerging. Valley Vision is partnering with the Los Rios Center of Excellence and the Burris Service Group on this effort.

Cluster research is a widely accepted standard of practice for developing regional prosperity strategies to address multiple facets of a region's complex economy. Industry clusters reduce operating costs by shortening supply chains; increasing the flow of information regarding new business opportunities; concentrating workforce training needs in select occupations; and speeding up the identification of gaps in products or services.¹ Firms in identified clusters may also have a reduced risk of failure, as these firms are better supported by the supply chain and can respond more rapidly to shifts in the marketplace.

This report presents findings on the analysis of the Information and Communication Technologies (ICT) cluster. It is one in a series of six covering Next Economy-identified clusters. Additional reports include advanced manufacturing, the "clean economy," education and knowledge creation, food and agriculture, and life sciences and health services.² Each report provides an overview of the cluster, industry trends and economic impact, as well as an overview of the top demand occupations in the cluster requiring postsecondary education or training, along with projected occupational demand, institutions providing related education and training, and possible workforce gaps. Visit valleyvision.org or coecc.net to access completed reports.³

This research will be used to develop cluster-based workforce action plans. Valley Vision will work alongside regional education, and workforce and economic development partners to convene six cluster-based employer focus groups, setting priorities and developing strategies to address critical workforce gaps, better align education and workforce development resources to meet employer and workforce needs, and strengthen the regional economy overall.



¹ *Cluster Manufacturing: A Supply Chain Perspective*

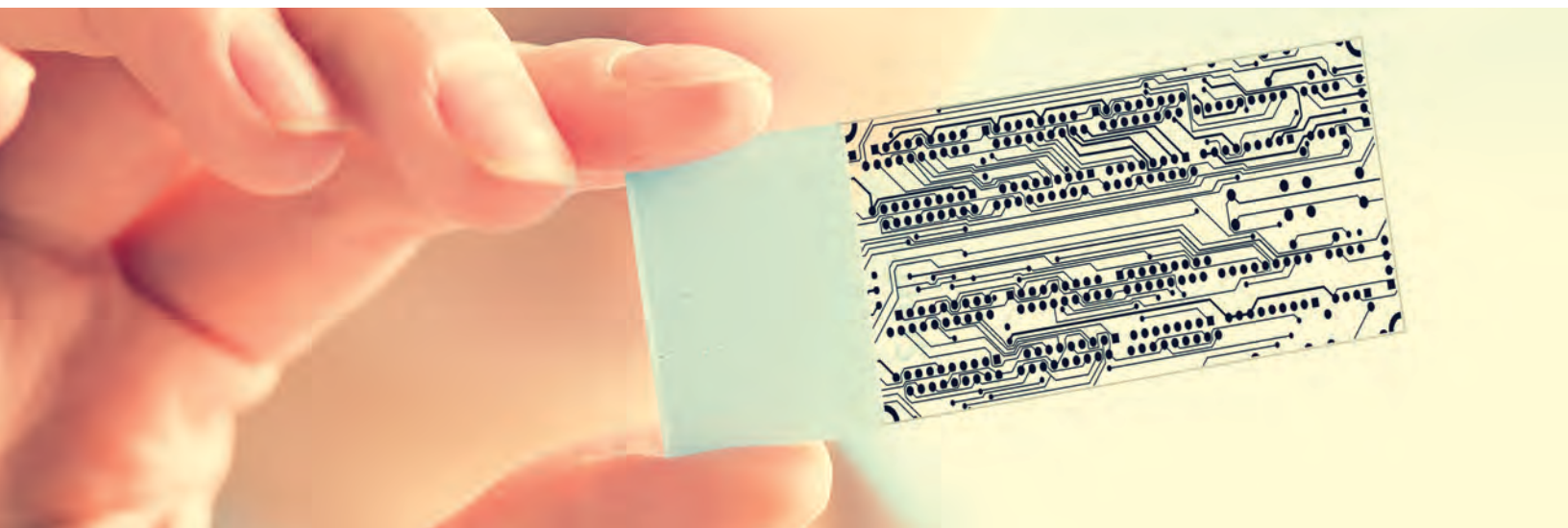
² Sacramento Area Council of Governments (SACOG) is the principal researcher for the Food and Agriculture Cluster study, which will focus primarily on industry trends and excludes workforce development and training needs.

³ Reports will be posted to the valleyvision.org and coecc.net websites throughout the spring 2016 when finalized.

CLUSTER DEFINITION

Information and Communications Technologies (ICT) is the convergence of computer networking and telecommunications. The ICT umbrella organizes technologies related to telecommunications, computing, networks, and other high-tech fields. ICT job functions impact all businesses, regardless of industry type or size of employment. However there are a core set of industries that engage primarily in ICT activities that can be used to define the cluster.

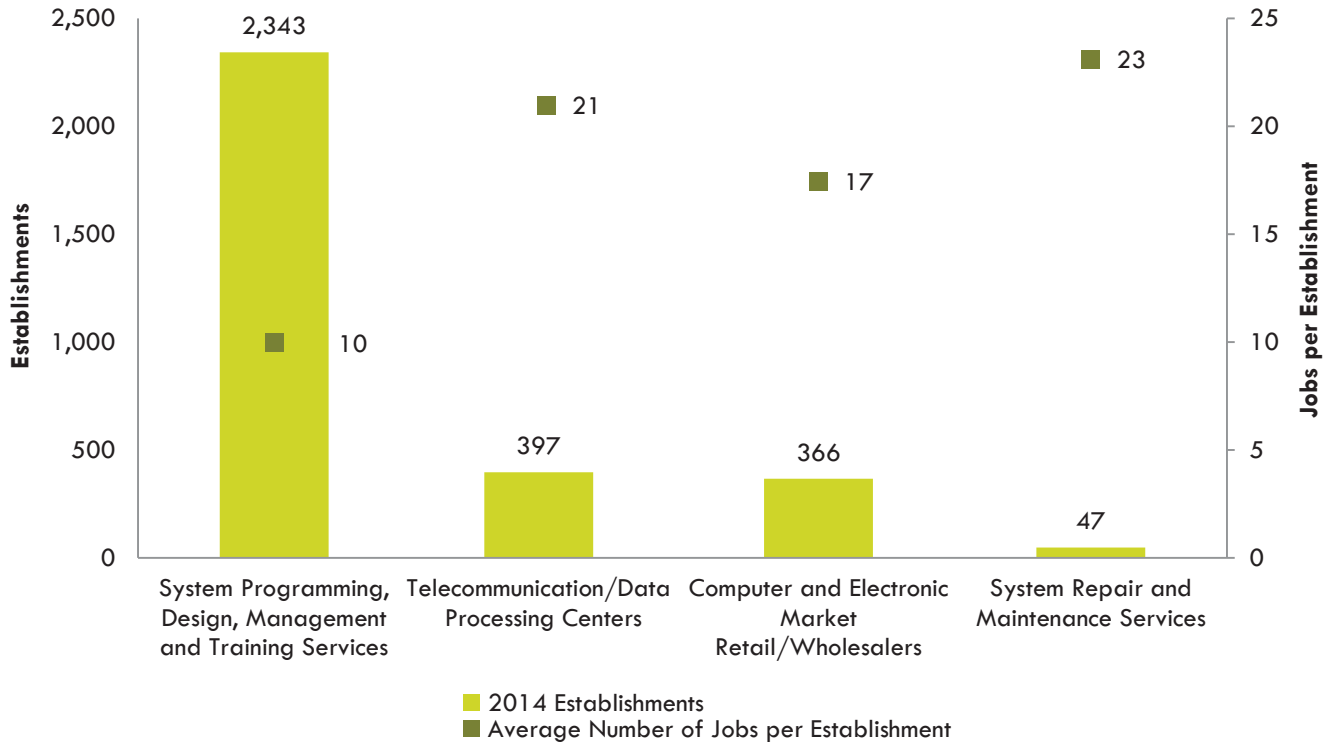
- **Computer and Electronic Market Retail/Wholesalers** – This industry group comprises establishments primarily engaged in the merchant wholesale distribution and retail of computers, computer peripheral equipment, loaded computer boards, and/or computer software. These establishments are also engaged in retailing all types of merchandise using the Internet, Internet auctioning, and business-to-business electronic markets.
- **ICT Component Manufacturing** – This industry group comprises establishments primarily engaged in manufacturing computers, storage devices, terminals, telephone apparatus, broadband and wireless communications equipment, fiber optical cable, and other peripheral and telecommunication equipment.
- **System Programming, Design, Management and Training Services** – This industry group comprises establishments primarily engaged in programming, planning and designing computer systems that integrate computer hardware, software, and communication technologies. This group also includes establishments that provide on-site management and operation of clients' computer systems and/or data processing facilities or training services.
- **System Repair and Maintenance Services** – This industry group comprises establishments primarily engaged in repairing and maintaining computers, office machines and telecommunications equipment.
- **Telecommunication/Data Processing Centers** – This industry group comprises establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video. This group also includes establishments that resell telecommunication services; provide specialized telecommunications services; provide data processing, hosting, and related services; and provide Internet publishing and broadcasting.



ESTABLISHMENTS

Exhibit 1 displays establishments and the average number of jobs per establishment by ICT subsector in the Sacramento Capital region. As shown, system programming, design, management and training services is the largest subsector with over 2,300 establishments, which is nearly six times the size of telecommunication/data processing centers or computer and electronic market retail/wholesalers. System repair and maintenance services is the smallest subsector with only 47 establishments. The average number of jobs per establishment, ranging between 10 and 23, indicates that the ICT cluster is composed of mostly small organizations.

Exhibit 1: Establishments and Average Employment by Subsector, 2014⁵



⁵ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

CONCENTRATION OF EMPLOYMENT

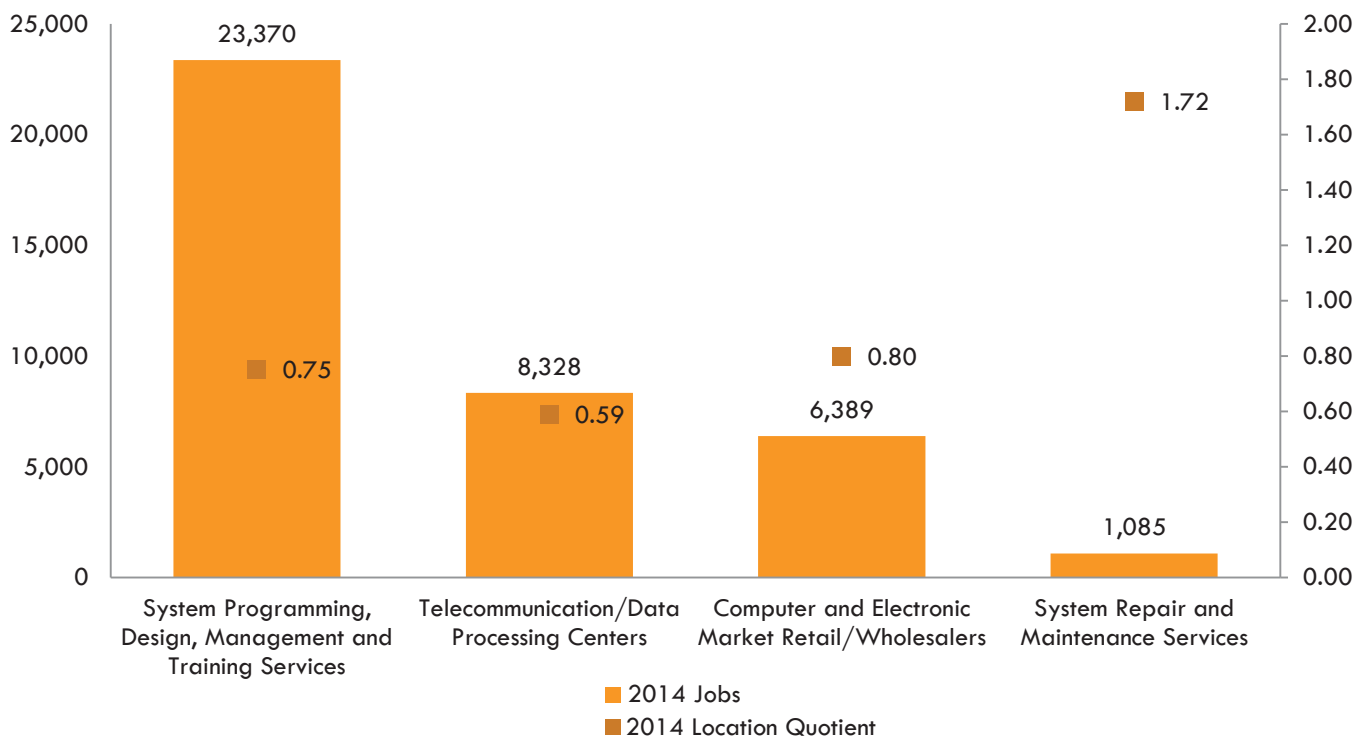
In 2014, there were about 39,200 ICT cluster jobs, about four percent of the total employment in the Sacramento Capital region. As shown in Exhibit 2, the majority of ICT jobs were in system programming, design, management and training services (60%; 23,370 jobs), followed by telecommunication/data processing centers (21%; 8,328 jobs) and computer electronic market retail/wholesalers (16%; 6,389 jobs).

Location quotient analysis compares the total employment in a region relative to the total employment in a larger area — in this case, California. A location quotient of less than one indicates a lower concentration of employment for that industry in the region than in the state overall. A location quotient of more than one indicates a higher concentration of employment for the region than in the state overall.

Three of the four ICT subsectors in the Sacramento Capital region have a location quotient that is less than one, indicating a lower concentration of employment than in other areas of the state. System repair and maintenance services, while it represents relatively low employment compared to the other subsectors, has a larger than one location quotient indicating a higher concentration of employment than the state. Within the subsectors, there are industries with above average location quotients, indicating a high concentration of employment for those industries than in the state overall. These include:

- **System Programming, Design, Management and Training Services:** Other Scientific and Technical Consulting Services (2.38 LQ).
- **Telecommunication/Data Processing Centers:** Cable and Other Subscription Programming (1.85 LQ); and Telecommunications Resellers (1.33 LQ).
- **Computer and Electronic Market Retail/Wholesalers:** Computer and Computer Peripheral Equipment and Software Merchant Wholesalers (1.12 LQ).
- **System Repair and Maintenance Services:** Computer and Office Machine Repair and Maintenance (2.45).

Exhibit 2: Total Employment and Location Quotient by Subsector, 2014⁶



⁶ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

TRENDS AND PROJECTIONS



The ICT cluster has experienced several ups and downs in the last few years with both increases and declines in overall employment. However, over the next five years, the ICT cluster is projected to grow steadily, adding nearly 5,300 jobs by 2019. The system programming, design, management and training services subsector is projected to add the most jobs, followed by computer and electronic market retail/wholesalers.

Exhibit 3: Employment Trends and Projections, 2009–2019⁷

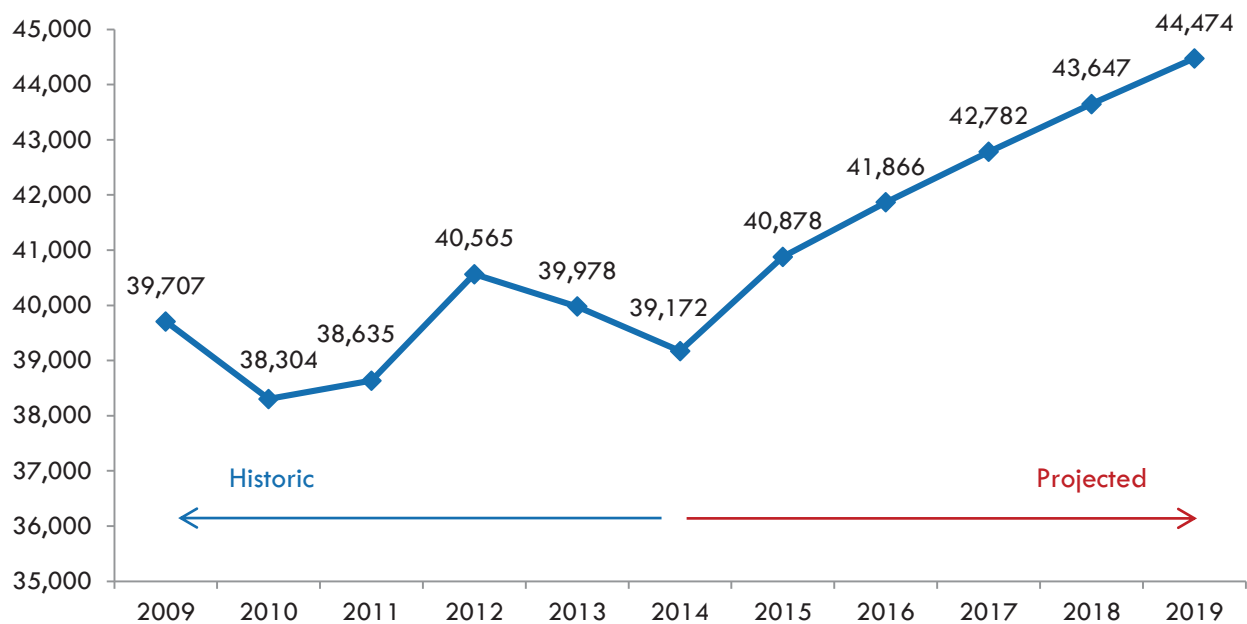


Exhibit 4: Employment Projections by Subsector, 2014–2019⁷

ICT Subsector	2014 Jobs	2019 Jobs	Change	% Change
System Programming, Design, Management and Training Services	23,370	26,667	3,297	14%
Telecommunication/Data Processing Centers	8,328	8,870	542	7%
Computer and Electronic Market Retail/Wholesalers	6,389	7,741	1,352	21%
System Repair and Maintenance Services	1,085	1,196	111	10%
Total ICT Jobs	39,172	44,474	5,302	14%

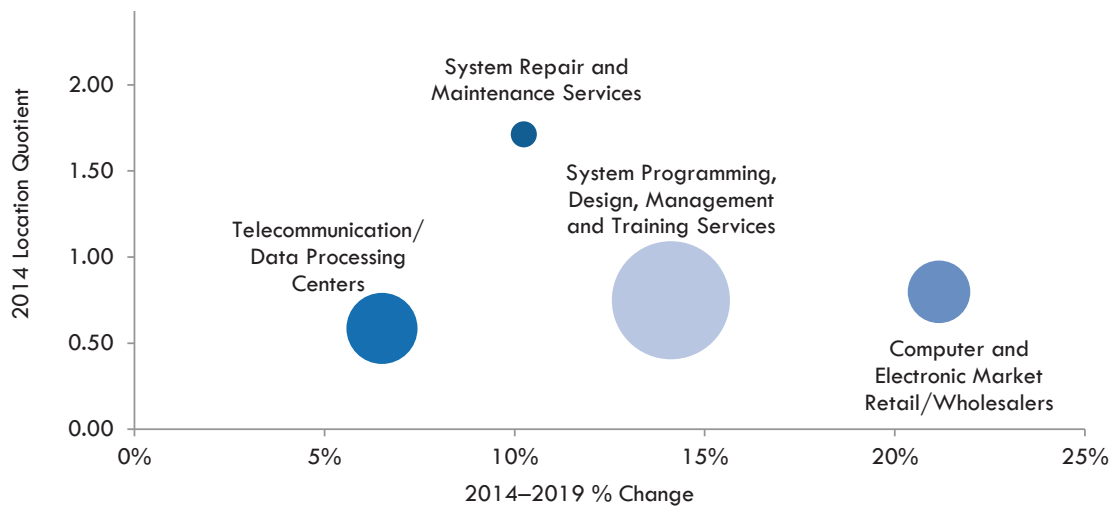
⁷ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

TRENDS AND PROJECTIONS

The following bubble chart compares the projected five-year growth rate to the concentration of employment in the region, where the size of the bubble indicates the total number of jobs for that subsector.

- Systems repair and maintenance services has an above average concentration of employment in the region compared to other parts of the state but is the smallest subsector in the cluster.
- Computer and electronic market retail/wholesalers has the fastest projected growth rate with the second highest location quotient.
- Systems programming, design, management and training services is the largest subsector with a strong projected growth rate and the most projected number of new jobs.
- Telecommunication/data processing centers has the lowest location quotient with a moderate projected growth rate.

Exhibit 5: Growth Rate vs. Subsector Concentration⁸

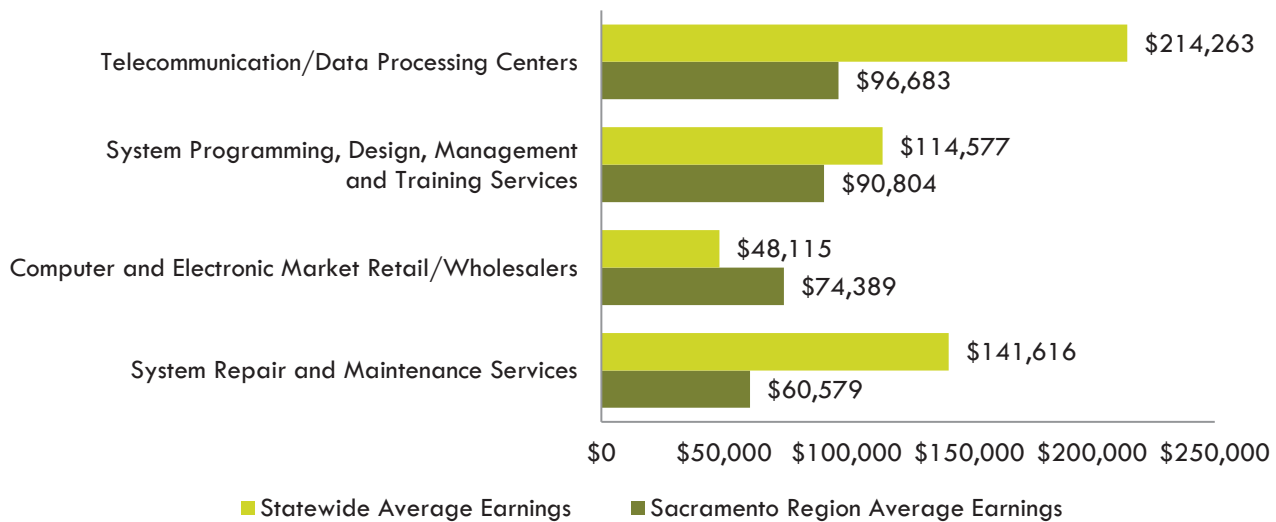


⁸ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

EARNINGS

In the Sacramento Capital region, telecommunication/data processing centers provide the highest earnings in the cluster, followed by systems programming, design, management and training services. The earning calculation includes an average of all wages, salaries, proprietor earnings and supplemental earnings (such as retirement benefits, bonuses, etc.) for all occupations in the sector. With the exception of computer and electronic market retail/wholesalers, the ICT subsectors earn lower wages than the statewide average for the same subsectors. However, the ICT subsectors (with exception of system repair and maintenance services) provide earnings above the region’s average earnings across all industries, which is \$63,400.⁹

Exhibit 6: Earnings by Subsector, 2014¹⁰



⁹ The average earnings across all industries in the Sacramento region is \$63,400 and includes wages, salaries, proprietor earnings and supplements.

¹⁰ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

SHIFT SHARE ANALYSIS



Shift share analysis is a method for determining how much of regional job growth can be attributed to national trends and how much is due to unique regional factors. Exhibit 7 displays four key components:

- **Industrial Mix Effect** – represents the share of regional industry growth explained by the growth of the specific industry at the national level.
- **National Growth Effect** – represents how much of the regional industry's growth is explained by the overall growth of the national economy. Given that the nation's economy is growing, it is normal to see positive change in each subsector.
- **Expected Change** – the change expected due to national growth effect and industry mix effects.
- **Regional Competitive Effect** – explains how much of the change in the subsectors is due to some unique competitive advantage that the region possesses, because the growth cannot be explained by national trends in the industry or the economy as a whole.

Three of the four subsectors are outperforming national trends, while the largest ICT subsector, systems programming, design, management and training services, is underperforming compared to national trends. This suggests that the region has a slight competitive advantage in the ICT cluster overall.

Exhibit 7: Shift Share Analysis by Subsector, 2013–2018¹¹

	Industrial Mix Effect	National Growth Effect	Expected Change	Regional Competitive Effect
Computer and Electronic Market Retail/Wholesalers	(51)	406	355	996
Telecommunication/Data Processing Centers	(583)	530	(53)	595
System Programming, Design, Management and Training Services	3,088	1,486	4,574	(1,277)
System Repair and Maintenance Services	(41)	69	28	83
Total ICT Cluster	857	1,630	2,487	472

¹¹ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

ECONOMIC IMPACT

Economic impact provides a quantitative method to estimate the total economic benefit from a project, or in this case, an industry cluster. In other words, it is the “ripple effect” of all economic activities resulting from that cluster. Impact analysis is typically comprised of direct, indirect and induced impacts:

- Direct impacts are those resulting from the expenditures of operations within that industry cluster.
- Indirect impacts are those resulting from suppliers of that cluster spending money and hiring employees.
- Induced impacts are the combined value of employees of the industry cluster spending money at a household level.

Combined, these three variables equate to the total economic impact of a project or industry cluster.

The ICT cluster impacts the Sacramento Capital region’s economy in several ways. The IMPLAN input output model was used to measure the cluster’s total economic impacts. First, the cluster directly benefits the economy through the operations and jobs supported by the establishments within its subsectors. As shown in Exhibits 8 and 9, the ICT cluster directly contributes \$9.1 billion in output and 39,000 jobs to the regional economy. In addition to this direct effect, these establishments generate an indirect impact through their supplier purchases — about \$3.7 billion in output and 24,000 jobs are created within sectors that generally supply this cluster. Finally, the ICT cluster creates an induced effect of nearly \$2.8 billion and approximately 20,000 jobs as a result of consumption activities within the local economy of both direct (cluster) and indirect (supplier) employees.

Exhibit 8: Total Output Impacts¹²

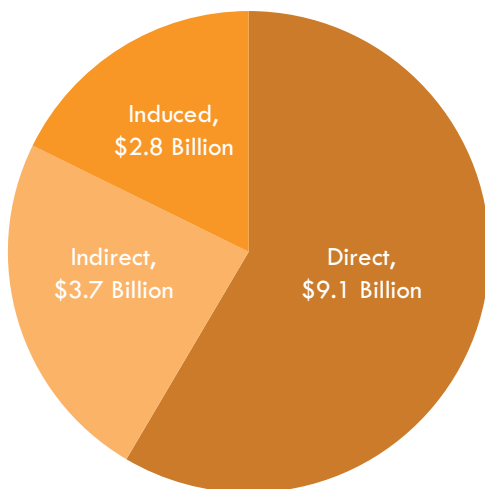
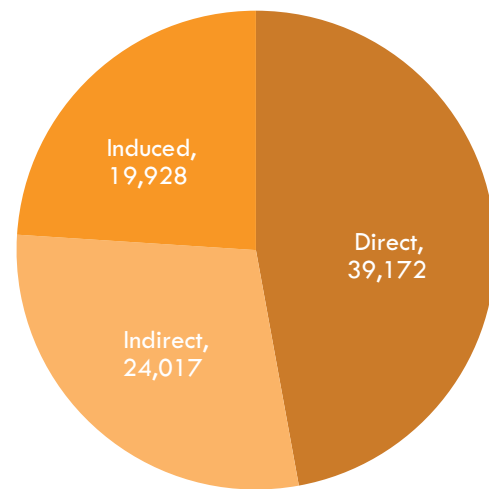


Exhibit 9: Total Employment Impacts¹²



¹² EMSI employment and IMPLAN 2013 data coefficients

ECONOMIC IMPACT

The ICT cluster contributes approximately \$15.5 billion in total output, 83,000 jobs and \$5.1 billion in labor income. Exhibit 10 provides the employment impacts by each subsector within the ICT cluster and by output, employment, and labor income (which includes all forms of employment income, including employee compensation and proprietor income). With about \$5.9 billion in output, 45,000 jobs, and \$2.8 billion in labor income, the system programming, design, management and training services subsector, overall in all of these categories, accounts for the largest share of the cluster's total economic impacts while the system repair and maintenance services subsector has the smallest share.

Exhibit 10: Total Economic Impacts by Cluster Subsector¹³

	Direct	Indirect	Induced	Total
Output				
<i>Total</i>	\$9,080,548,307	\$3,694,286,066	\$2,752,772,808	\$15,527,607,181
System Programming, Design, Management and Training Services	\$3,189,988,342	\$1,190,000,192	\$1,540,133,653	\$5,920,122,186
Telecommunication/Data Processing Centers	\$4,989,995,373	\$2,159,633,047	\$874,877,205	\$8,024,505,625
Computer and Electronic Market Retail/Wholesalers	\$759,038,485	\$311,938,680	\$274,495,375	\$1,345,472,541
System Repair and Maintenance Services	\$141,526,107	\$32,714,148	\$63,266,574	\$237,506,829
Employment				
<i>Total</i>	39,172	24,017	19,928	83,117
System Programming, Design, Management and Training Services	23,370	10,642	11,151	45,163
Telecommunication/Data Processing Centers	8,328	11,151	6,332	25,811
Computer and Electronic Market Retail/Wholesalers	6,389	1,973	1,986	10,348
System Repair and Maintenance Services	1,085	251	459	1,795
Total Labor Income				
<i>Total</i>	\$3,015,555,540	\$1,163,537,349	\$915,425,452	\$5,094,518,341
System Programming, Design, Management and Training Services	\$1,834,464,422	\$499,935,315	\$512,195,958	\$2,846,595,695
Telecommunication/Data Processing Centers	\$783,107,729	\$548,602,167	\$290,909,569	\$1,622,619,465
Computer and Electronic Market Retail/Wholesalers	\$315,214,132	\$103,141,120	\$91,269,584	\$509,624,836
System Repair and Maintenance Services	\$82,769,256	\$11,858,747	\$21,050,341	\$115,678,344

ECONOMIC LEAKAGE

Supply chain leakage is a primary factor in determining the value of an industry multiplier used to define the total “ripple effect” of that industry cluster. Stronger supply chain linkages, better described as a cluster using more locally sourced products and services, has a reciprocal benefit of lower leakage, increasing the multiplier and the total impact on the surrounding economy.

It was determined through an in-depth analysis of the ICT industry cluster and its subsets, that there is a relatively high level of supply chain leakage, roughly 64 percent. Conversely, 36 percent of goods and services supporting the industry cluster are purchased within the region.

¹³ EMSI employment and IMPLAN 2013 data coefficients

ICT TRENDS

The life cycle of advancements in information and communication technologies (ICT) has been developing exponentially rather than in a sequential, linear fashion, and is projected to continue in this way. Because technology innovations are progressing at such a rapid pace, businesses are challenged to balance their technological agility to adopt new computing platforms, software, enterprise applications, and devices while continuing to drive growth and achieve productivity. This section reviews significant ICT trends affecting the business environment and the implications for workforce development and planning.

- **The Internet of Things (IoT).** By 2020 the number of things connected to the Internet is predicted to exceed 50 billion, nine times today's estimate of 4.9 billion. Smart devices or objects connected to the Internet are collecting and transmitting data and transforming the world both personally and socially, and influencing business opportunities and competitiveness. Described as the Internet of Things (IoT) because the network connectivity range is from everyday devices like mobile phones and tablets, individual health monitoring and kitchen appliances, to smart cities that track roadways for transportation planning, and monitoring energy consumption, atmospheric emissions, e-waste and water usage.

Whether data is used for personal use, business development to build and apply the systems, or to support sustainability such as green ICT initiatives driving socio-economic impacts for businesses and government organizations — all of these intelligent devices need to be programmed and integrated. And for optimal use, the data obtained needs to be analyzed and shared to be of value to business, governments, education, civic organizations and consumers.¹⁴

- **Big Data.** With the deluge of data obtained and driven by smart machines, sensors and chips connected to the Internet, many aspects of work in the Sacramento Capital region will be reshaped in the coming years. Cloud data storage and virtual computing server platforms such as Amazon Web Services, Microsoft Azure, and Google Cloud,¹⁵ and the proliferation of sensors, chips and devices connected to the Internet, all translate into a flood of data streams. Being able to work with data will become more of a necessity for most professions, especially within the ICT cluster.
- **“Everything-as-a-Service” (XaaS).** For many companies, transitioning from the old infrastructure to the newest technologies creates implementation challenges, such as migrating systems, training, and motivating employees to adopt and use the new technology. To address these challenges, many organizations are opting to outsource to service providers and forgo the use of on-site services and personnel. Termed “Everything-as-a-Service” (XaaS), organizations can customize their computing environment on-demand from network management and data storage services to enterprise-hosted applications.
- **Cybersecurity and Privacy.** As new technology comes into the marketplace on a functioning digital network, cybersecurity and the impact on the workforce will be significant, driving demand for a variety of security-related occupations, such as information security professionals, computer programmers, forensic science technicians, and intelligence analysts.

These innovations will change not only the content of work but many new occupations will arise. As such, it's critical for education and training providers to continuously update curriculum to reflect the most current knowledge and skill requirements in the field.

WORKFORCE CHALLENGES

Government entities at all levels are experiencing difficulty attracting talented ICT workers who often prefer the private sector with higher wages and benefits such as stock options and even student loan debt repayment. As public sector ICT workers begin retiring in larger numbers, closing the talent gap is necessary to ensure that public services continue to operate securely and meet constituent needs. This will require public employers to rethink how they attract and retain ICT employees and/or change how they maintain and manage their IT services (e.g. XaaS, rather than internal infrastructure).

¹⁴ <https://www.comptia.org/resources/sizing-up-the-internet-of-things>

¹⁵ *Amazon's \$160 billion business you've never heard of.* Found at <http://money.cnn.com/2015/11/04/technology/amazon-aws-160-billion-dollars/>

OCCUPATION DEMAND

Fifteen occupations were selected for inclusion in the study based on the following criteria:

- Annual job openings were significant
- The minimum education requirement is a high school diploma plus on-the-job training, postsecondary award, associate degree or bachelor's degree.

Exhibit 11 displays the employment demand for ICT occupations selected for inclusion in the study.¹⁶ For each occupation, replacement estimates include retirements and general separations, but not turnover within the occupation. As such, replacements and new job growth combined is a good measure of demand for workers.

Combined, there are nearly 6,200 total job openings projected between 2014 and 2019 for the occupations selected for inclusion in this study. Computer systems analysts is the largest occupation in the group, with the most job openings over the next five years. Software developers and computer user support specialists are also large occupations with significant annual openings created by new job growth and replacement needs.

Exhibit 11: Employment Outlook, 2014–2019¹⁷

Description	2014 Jobs	2019 Jobs	2014–2019 Change	2014–2019 % Change	Total Replacements	Total Openings	Annual Openings
Computer Systems Analysts	9,568	10,468	900	9%	800	1,700	340
Software Developers, Systems Software	5,275	5,626	351	7%	413	764	153
Computer User Support Specialists	3,843	4,247	404	11%	330	734	147
Software Developers, Applications	3,309	3,780	471	14%	235	706	141
Computer and Information Systems Managers	2,801	3,015	214	8%	205	419	84
Computer Programmers	2,361	2,458	97	4%	328	425	85
Network and Computer Systems Administrators	1,810	1,980	170	9%	160	330	66
Computer Occupations, All Other	1,273	1,338	65	5%	117	182	36
Computer Network Support Specialists	1,239	1,298	59	5%	103	162	32
Web Developers	1,158	1,276	118	10%	100	218	44
Computer, Automated Teller, and Office Machine Repairers	997	1,057	60	6%	124	184	37
Computer Network Architects	556	614	58	10%	59	117	23
Database Administrators	542	595	53	10%	57	110	22
Information Security Analysts	446	531	85	19%	40	125	25
Total	35,178	38,283	3,105	9%	3,071	6,176	1,235

¹⁶ This report does not provide occupational data isolated to the ICT cluster, but rather includes occupational employment estimates and projections across all industries to provide a complete picture of demand for all employers.

¹⁷ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.3

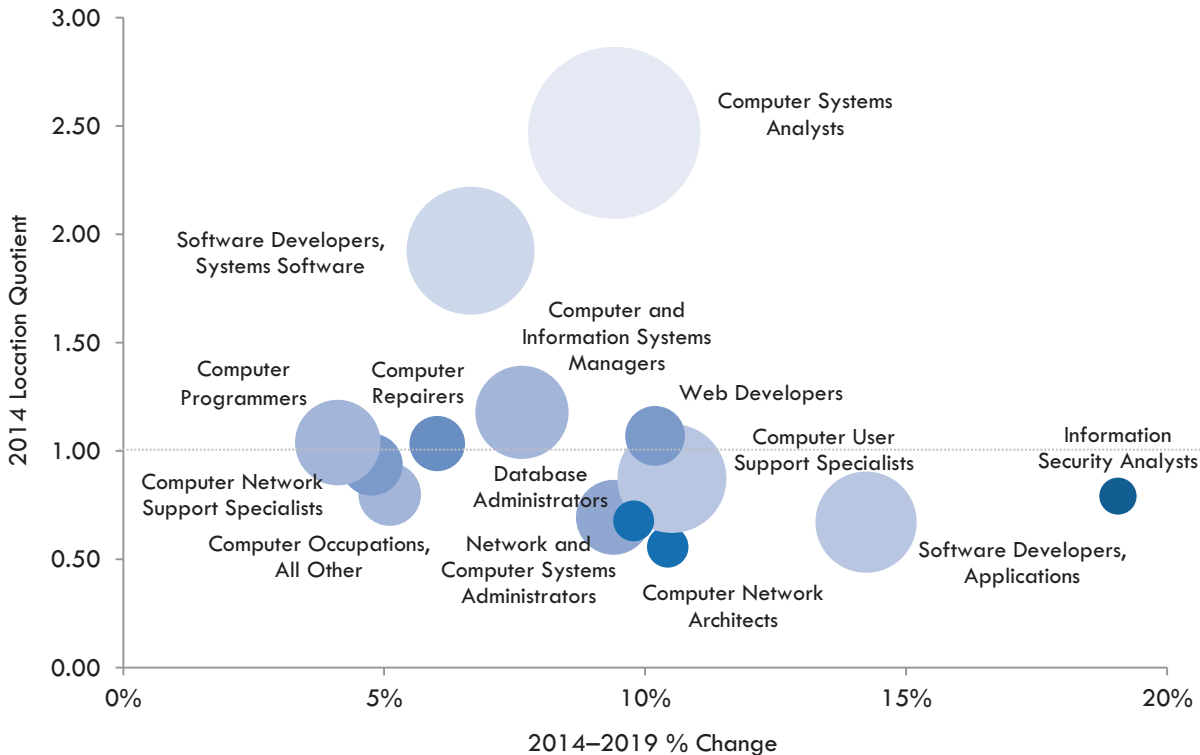
OCCUPATION DEMAND



In addition to industry analysis, location quotient can also be applied to occupations. In this case, the location quotient compares an occupation’s total employment in the region relative to the state’s total employment for that occupation. A location quotient of less than one indicates a lower concentration of employment for that occupation in the region than in the state overall. A location quotient of more than one indicates a higher concentration of employment for the occupation than in the state overall.

The following bubble chart compares the concentration of occupation employment to the projected five-year growth rate in the region, where the size of the bubble indicates the total number of jobs for each occupation. As shown below, more than half of the ICT occupations have a location quotient that is close to one (LQ .8 to 1.18) indicating an average concentration of employment compared to other regions in the state. Relative to the other occupations in the group, computer systems analysts is the largest occupation in the group with a high location quotient and a moderate projected growth rate. System developers, systems software is also a large occupation with a high location quotient and a modest growth rate. Information security analysts is the smallest occupation in the group with the highest projected growth rate.

Exhibit 12: Growth Rate vs. Occupation Concentration¹⁸

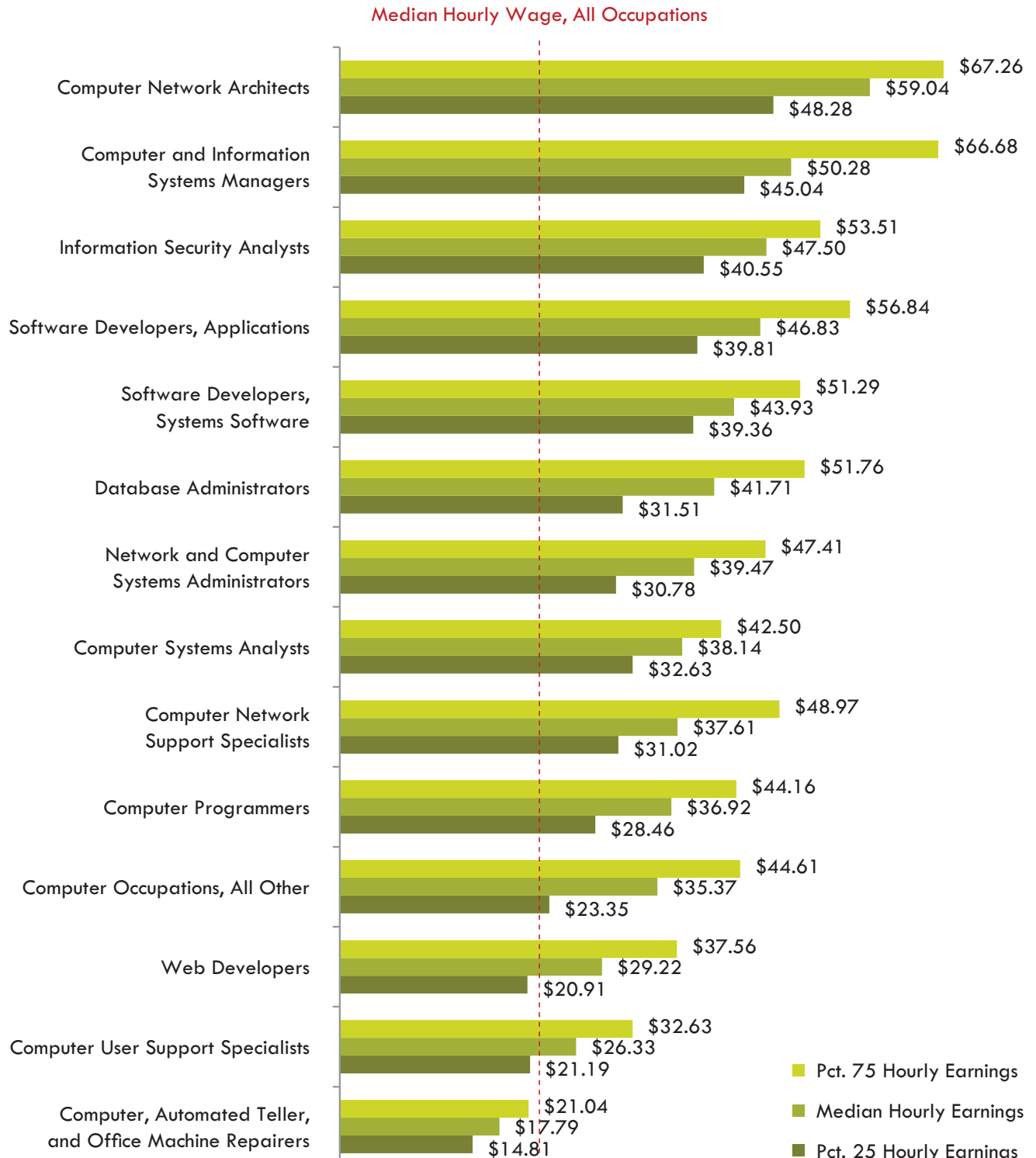


¹⁸ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.3

OCCUPATIONAL WAGES

The median hourly wage across all occupations in the Sacramento Capital region is \$22.69 per hour. With the exception of computer, automated tellers, and office machine repairers, all of the occupations in the ICT cluster earn wages above this regional average. Computer network architects is the highest paid occupation, followed by computer/information systems managers and software developers, applications.

Exhibit 13: Hourly Wages, 2015¹⁹



¹⁹ EMSI: QCEW Employees, Non-QCEW Employees, and Self-Employed, 2015.2

EDUCATION ASSESSMENT

This section provides a review of the educational supply supporting the ICT cluster in the Sacramento Capital region. Minimum education requirements are assigned to two categories:

- **Mid-level occupations** require postsecondary training, certificate or associate degree. Some employers may prefer applicants with a bachelor's degree.
- **Advanced-level occupations** typically require a bachelor's degree. However, some employers will accept an associate degree as the minimum education requirement.

Exhibit 14 identifies the minimum education requirements for the top 15 occupations in the ICT cluster by education category.

Exhibit 14: Minimum Education Requirements

Mid-level

- Computer, Automated Teller, and Office Machine Repairers
- Computer User Support Specialists
- Computer Network Support Specialists
- Web Developers

Advanced-level

- Computer and Information Systems Managers
- Computer Systems Analysts
- Information Security Analysts
- Computer Programmers
- Software Developers, Applications
- Software Developers, Systems Software
- Database Administrators
- Network and Computer Systems Administrators
- Computer Network Architects
- Computer Occupations, All Other



EDUCATION ASSESSMENT



Exhibit 15 displays the total number of certificates and degrees conferred annually in the Sacramento Capital region. Six public community colleges, two public universities, and five private education institutions provide training programs that support the ICT career pathway. Combined, these education institutions confer an average of 1,009 degrees and certificates annually. At a high level, this data suggests a possible training supply gap, as there are more projected annual openings than degrees conferred. Further analysis is necessary to assess alignment among specific training programs and regional workforce needs.

Exhibit 15: ICT Associate Degrees & Certificates Conferred Annually, Sacramento Capital region^{20&21}

Program	Certificates	Associate Degrees	Bachelor's Degree	Master's Degree	Total Awards
Computer and Information Systems Security			12		12
Computer Engineering, General			68	6	74
Computer Graphics			23		23
Computer Information Systems	5	20			25
Computer Infrastructure and Support	17	22			39
Computer Networking	82	131	8		222
Computer Programming	20	40	1		60
Computer Science	1	27	152	60	240
Computer Software Development/Engineering	1			4	5
Computer Support	168	15			183
Database Design and Administration	14	4			18
Other Information Technology	54				54
Software Applications	15	8			23
Wide Web & Multimedia Administration and Design	14	7	10		31
Total	391	274	274	70	1,009

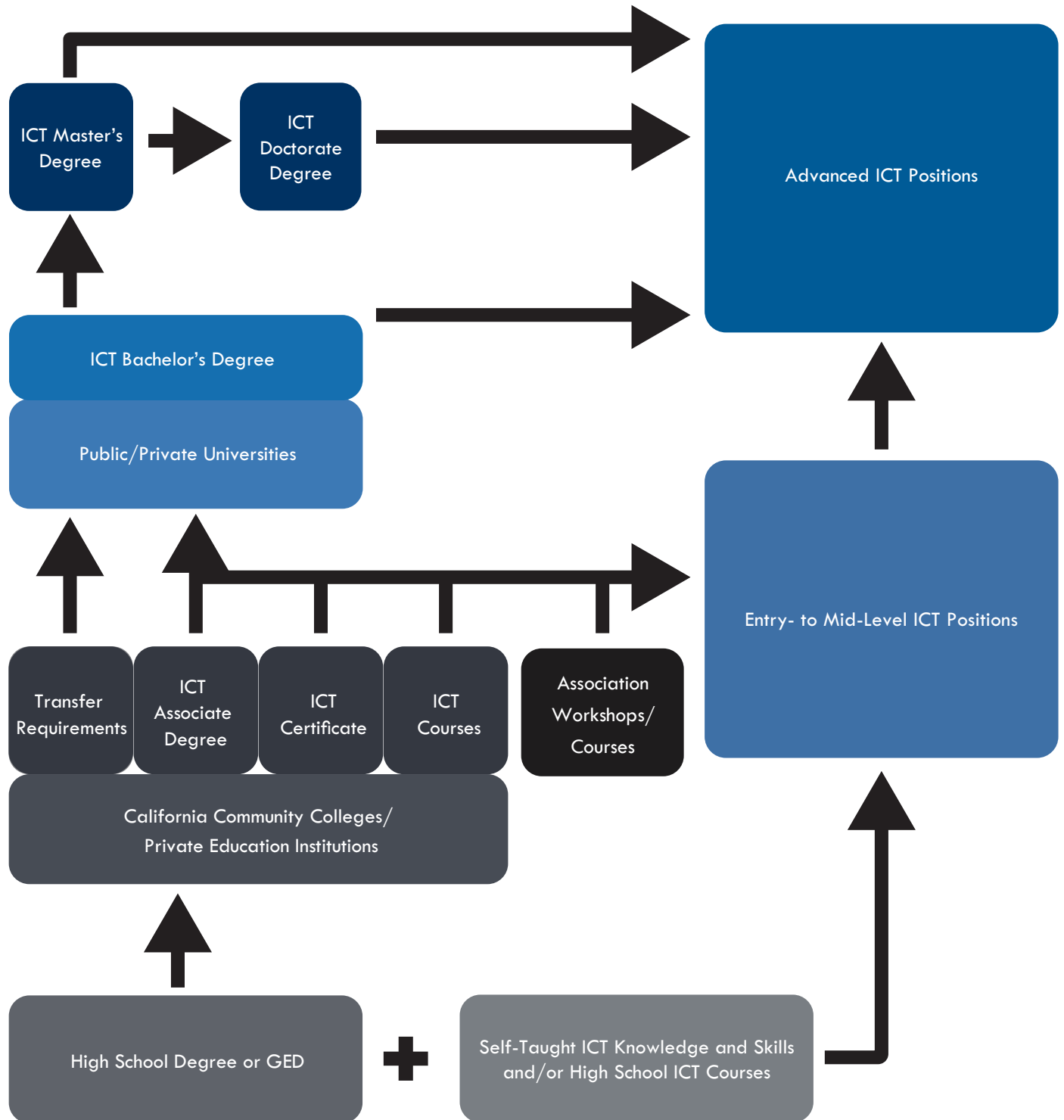
²⁰ California Community College Chancellor's Office Data Mart. National Center for Education Statistics (NCES). Higher education institutions are required to report completion data to NCES if they participate in any federal financial assistance program authorized by Title IV of the Higher Education Act. Completion data not reported to the NCES or CCCCO Data Mart were not included in the estimate.

²¹ For private education institutions and private/public universities, the 3-year average includes academic years 2011–12, 2012–13 and 2013–14. For California Community Colleges, the 3-year average includes academic years 2012–13, 2013–14, and 2014–15.

EDUCATION PATHWAYS

There are multiple education pathways to obtain employment in the ICT field. Some pursue a career in the ICT field by following a specific academic path — AS to BS to Master’s degree then employment, while others take only a few courses that pertain to a specific career path — such as programming or networking courses that prepare for a specific certification. In addition, it is not uncommon for incumbent workers of all education levels to take community colleges courses that help them stay current in their field or gain specialized skills that allow them to transition to a new ICT specialty.

Exhibit 16: ICT Education Pathways



SKILLS ASSESSMENT

Exhibit 17 displays the top skills and professional credentials for the ICT occupations selected for inclusion in this study. The data is based on analysis of job posting data, aggregated by Burning Glass. This online tool uses intelligent “spidering” to search the Internet for job listings, removes duplication, and aggregates the data into a searchable database. As shown below, most of the skills/knowledge areas are specialized and require specific training and/or certification.

Exhibit 17: Skill and Professional Credential Preferences, ICT Occupations

Occupation	Top Skill/Knowledge Areas	Top Certifications/ Professional Credentials
Computer Systems Analysts	Oracle, business process, SQL, SAP, systems analysis, JAVA, technical support, LINUX, Enterprise Resource Planning (ERP), system and network configuration	Certified Information Systems Auditor, Certified Information Systems Security Professional
Software Developers, Systems Software	Systems engineering, LINUX, Python, JAVA, PERL, C++, UNIX, SQL, Domain Name System (DNS), System and Network Configuration, and debugging	Microsoft Certified Systems Engineer, CISCO Certified Network Associate, VMWARE Certified Professional, CISCO Certified Network Professional
Computer User Support Specialists	Technical support, help desk support, repair, software installation, IT support, computer installation and setup, systems and network configuration, LINUX and Transmission Control Protocol/Internet Protocol (TCP/IP)	Certified A+ Technician; Microsoft Certified Systems Engineer
Software Developers, Applications	JAVA, software engineering, JavaScript, SQL, LINUX, Python, C++, Microsoft C#, Object-Oriented Analysis and Design (OOAD), software development, Oracle, Extensible Markup Language (XML)	None Listed
Computer and Information Systems Managers	Business Process, SAP, Oracle, collaboration, SQL, business development, JAVA, mentoring, Enterprise Resource Planning (ERP), ITIL, and Systems Development Life Cycle (SDLC)	Project Management Certification
Computer Programmers	SQL, JAVA, JavaScript, Python, LINUX, .NET Programming, C++, Microsoft C#, Oracle, Extensible Markup Language (XML), and jQuery	None Listed
Network and Computer Systems Administrators	Technical support, CISCO, LINUX, repair, network support, system and network configuration, and Transmission Control Protocol/Internet Protocol (TCP/IP)	CISCO Certified Network Associate, Red Hat Certified System Administrator, Red Hat Certified Engineer, Microsoft Certified Systems Engineer
Computer Network Support Specialists	Oracle, technical support, SQL, JAVA, UNIX, MySQL, LINUX	CISCO Certified Network Associate, CISCO Certified Network Professional
Web Developers	JavaScript, web site development, jQuery, HTML5, JAVA, Hypertext Preprocessor (PHP), web applications, AJAX, web site design, Adobe Photoshop, User Interface (UI) design, JSON, Extensible Markup Language (XML)	None Listed
Computer, Automated Teller, and Office Machine Repairers	Technical support, repair, technical training, record keeping, and schematic diagrams	Certified A+ Technician
Computer Network Architects	CISCO, telecommunications, network engineering, Wide Area Network (WAN), VoIP, firewalls, LINUX and OSPF	CISCO Certified Network Professional, CISCO Certified Network Associate, CISCO Certified Internetwork Expert
Database Administrators	SQL, database administration, Oracle, Extraction Transformation and Loading (ETL), SQL Server, data warehousing, database design, LINUX, JAVA, Python, UNIX and data modeling	None Listed
Computer Operators	Data management, scheduling, ITIL, LINUX, system administration	None Listed
Information Security Analysts	Information security, firewalls, network security, LINUX, cryptography	Certified Information Systems Security Professional, Certified Information Systems Auditor, Certified Information Security Manager

SKILLS ASSESSMENT

The pace of technology is driving corporations away from requiring specific education, placing a higher value on professional certifications and skills rather than degrees. Professional credentials often increase a worker's starting salary, as well as provide a means to promote and advance in a career. The following industry certifications are considered the most in-demand according to the annual 2016 employer survey conducted by Robert Half Technologies:²²

- **Cisco certifications:** Cisco Certified Network Associate (CCNA), Cisco Certified Networking Professional (CCNP)
- **Microsoft certifications:** Microsoft Certified Solutions Associate (MCSA), Microsoft Certified Solutions Expert (MCSE). These credentials replace the Microsoft Certified Professional (MCITP) certification which was retired in 2014.
- **Project management certifications:** Project Management Professional (PMP)
- **Security certifications:** Certified Information Systems Security Professional (CISSP)
- **Virtualization certifications:** VMware Certification Professional (VCP)

Beyond technical skills — soft skills and business skills are highly desirable. Some of the most commonly cited in-demand skills include: collaboration, communication, critical thinking, motivation, perseverance, problem solving, project management, and versatility.



²² https://www.roberthalf.com/sites/default/files/Media_Root/images/rht-pdfs/robert_half_technology_2016_salary_guide.pdf

SUMMARY

The ICT cluster organizes technologies related to telecommunications, computing, networks, and other high-tech fields. ICT job functions impact all businesses, regardless of industry type or size of employment. However, there are a core set of industries that engage primarily in ICT activities that can be used to define the cluster. These include: computer and electronic market retail/wholesalers; ICT component manufacturing; system programming, design, management and training services; system repair and maintenance services; system repair and maintenance services; and telecommunication/data processing centers.

The ICT cluster is projected to grow moderately, adding nearly 3,000 jobs by 2019. The system programming, design, management and training services subsector is projected to add the most jobs. Most of the ICT subsectors (with exception of system repair and maintenance services) provide earnings above the region's average earnings across all industries. Three of the four ICT subsectors in the Sacramento Capital region have a location quotient that is less than one, indicating a lower concentration of employment than in other areas of the state.

The ICT cluster is evolving rapidly, not only changing the content of work but also increasing demand for ICT positions. Some of the technologies impacting the region's workforce needs include:

- **Big Data.** Cloud data storage and virtual computing server platforms and the proliferation of sensors, chips and devices connected to the Internet, all translate into a flood of data streams. Being able to work with data will become more of a necessity for most professions, especially within the ICT cluster.
- **The Internet of Things (IoT).** Smart devices or objects connected to the Internet are collecting and transmitting data and transforming the world both personally and socially, and influencing business opportunities and competitiveness. All of these intelligent devices need to be programmed and integrated. And for optimal use, the data obtained needs to be analyzed and shared to be of value to business, governments, education, civic organizations, and consumers.
- **"Everything-as-a-Service" (XaaS).** On-demand outsourced ICT services from network management and data storage services to enterprise-hosted applications.
- **Cybersecurity and Privacy.** As new technology comes into the marketplace, cybersecurity and the impact on the workforce will be significant, driving demand for a variety of security-related occupations, such as information security professionals, computer programmers, forensic science technicians, and intelligence analysts.

Fifteen ICT occupations were selected for inclusion in this study based on total number of job openings and minimum education requirements, including:

- Software Developers, Systems Software
- Computer User Support Specialists
- Software Developers, Applications
- Computer and Information Systems Managers
- Computer Programmers
- Network and Computer Systems Administrators
- Computer Occupations, All Other
- Computer Network Support Specialists
- Web Developers
- Computer, Automated Teller, and Office Machine Repairers
- Computer Network Architects
- Database Administrators
- Computer Operators
- Information Security Analysts

SUMMARY



There are six public community colleges, two public universities, and five private education institutions that provide ICT training in the Sacramento Capital region. Combined, these education institutions confer an average of 1,009 degrees and certificates annually. At a high level, this data suggests a possible training supply gap, as there are more projected job openings (1,235 annual openings) than degrees conferred (1,009 degrees). The total certificates and degrees conferred provide some information about the supply of workers to an industry or cluster. However, it is limited in that there are several unknown variables that impact the supply, such as graduate migration trends, employer preferences, worker preparedness, and graduate/completion duplication. Further analysis is necessary to assess alignment among specific training programs and region workforce needs.

In addition to formal education, it is also common for ICT employers to require professional credentials. Some of the most in-demand certificates include: Cisco, Microsoft, project management, security, and virtualization certifications. Because skills and certifications are sometimes valued more than degrees, there are multiple education pathways to obtain employment in the ICT field. Some pursue a career in the ICT field by following a specific academic path, while others take only a few courses that pertain to a specific career path. This not only makes it challenging to assess supply gaps, it also makes it difficult to standardize curriculum.

The dynamic changing nature of the ICT cluster requires a nimble education system that can develop and offer new or revised curriculum to meet evolving workforce needs. To keep current, faculty need to upskill their knowledge of and instruction in new technologies, relevant software, and certification standards. As these activities would likely occur outside of classroom instruction, faculty would need additional assigned time funded for them to do so. Having faculty externships available at high-tech companies during summer or other school breaks are a way to enhance their industry experience needed for teaching relevant and in-demand skills.

Valley Vision, along with the Center of Excellence and other partners, will be conducting focus groups with ICT employers to review the cluster findings, high priority occupation and skills gaps that can be addressed through a concerted cluster workforce action plan. Priorities that may be elevated based on this analysis include:

- Conduct a post-employment outcomes assessment to determine misalignment to existing programs.
- Align curriculum among California Community Colleges to increase the ease of transferring for students and consistent standard of instruction recognized by employers and industry.
- Invest in equipment/software and professional development for ICT instructors and educators to ensure that they are teaching the most up-to-date technology.
- Develop strong career pathways between K-12, community colleges and four-year institutions.
- Partner with businesses to increase internship opportunities for community college students and externships for instructors and faculty.

APPENDIX A: INFORMATION AND COMMUNICATION TECHNOLOGIES CLUSTER DEFINITION



The ICT cluster is comprised of the following NAICS codes.

Computer and Electronic Market Retail /Wholesalers

- 423430 Computer and Computer Peripheral Equipment and Software Merchant Wholesalers
- 443142 Electronics Stores
- 454111 Electronic Shopping
- 454112 Electronic Auctions
- 425110 Business to Business Electronic Markets

Telecommunication / Data Processing Centers

- 511210 Software Publishers
- 517110 Wired Telecommunications Carriers
- 517210 Wireless Telecommunications Carriers (except Satellite)
- 517410 Satellite Telecommunications
- 517911 Telecommunications Resellers
- 517919 All Other Telecommunications
- 518210 Data Processing, Hosting, and Related Services
- 519130 Internet Publishing and Broadcasting and Web Search Portals
- 515210 Cable and Other Subscription Programming

System Programming, Design, Management and Training Services

- 541511 Custom Computer Programming Services
- 541512 Computer Systems Design Services
- 541513 Computer Facilities Management Services
- 541519 Other Computer Related Services
- 611420 Computer Training
- 541330 Engineering Services
- 541430 Graphic Design Services
- 541490 Other Specialized Design Services
- 541690 Other Scientific and Technical Consulting Services
- 541990 All Other Professional, Scientific and Technical Services

System Repair and Maintenance Services

- 811212 Computer and Office Machine Repair and Maintenance
- 811213 Communication Equipment Repair and Maintenance

APPENDIX B: CALIFORNIA COMMUNITY COLLEGES DEFINING ICT CAREER PATHWAYS

The California Community College's ICT-Digital Media Sector of the "Doing What Matters For Jobs and the Economy Initiative" has created two structured career pathways in a statewide branded effort to increase employment in the ICT field. Featured are the Business Information Worker Pathway and the IT Technician Pathway. Both pathways align learning content from existing courses that have been validated to meet the needs of business, government and organizations for skill sets in demand. They also help students prepare for specific ICT careers by providing clear and defined knowledge and skills necessary to acquire industry certifications and employment.

Educational Pathways

Sacramento Capital region community colleges have identified existing courses that meet the Business Information Worker pathway and the IT Technician Pathway, and are promoting both to students and industry partners.

Business Information Worker Pathway (BIW)

A short-term pathway to entry-level, middle-skill office jobs requiring training of six months or less — leading to a wide variety of office positions from entry-level clerk to administrative positions in the top industry sectors in the Sacramento Capital region. This pathway offers a set of digital and soft skills in demand. Students can return for advanced credentials and pathways as their income permits.

Business Information Worker Pathway	Courses in Pathway
Requires six-months of less of training	Keyboarding, Microsoft Office, Information Systems, Business Communications, and Human Relations/Customer Service
Sacramento Colleges Identifying BIW Pathway Programs	American River College, Cosumnes River College, Folsom Lake College, Sacramento City College, Sierra College and Yuba College

IT Technician Pathway (ITTP)

A four-stage pathway that identifies IT skill sets in demand, each stage defined by knowledge and skills to acquire third-party industry certifications and employment in the field. Suggested two-years to complete, but can be accomplished in stages over time. Stage Four is currently under development.

IT Technician Pathway	Student Learning Outcomes – Pathway Descriptors
Stage One: Computer Retail Sales & Support	Students learn fundamental IT, business and customer service by taking the first 6 IT Technician Pathway courses and the CompTIA A+ Certification exam
Stage Two: Help Desk/User Support	Students build on the IT Technician Pathway by completing additional networking and security coursework along with suggested industry certifications
Stage Three: IT Technician	Students can further their careers by taking IT courses that teach advanced concepts, including Cyber Security (Ethical Hacking), and Routing and Switching Essentials, and become certified
Stage Four: Further Specialization Options [Under development]	Additional specialty courses include Mobility and Mobile Design, Cloud Essentials, CCNA Preparation, and Project Management/Process Improvement
Sacramento Colleges Identifying ITTP Pathway Programs	Sierra College

For more information, please visit ict-dm.net.

MORE ABOUT...

More About The Centers of Excellence

The Centers of Excellence (COE) for Labor Market Research deliver regional workforce research and technical expertise to California community colleges for program decision making and resource development. This information has proven valuable to colleges in beginning, revising, or updating economic development and Career Technical Education (CTE) programs, strengthening grant applications, assisting in the accreditation process, and in supporting strategic planning efforts.

The Centers of Excellence Initiative is funded in part by the Chancellor's Office, California Community Colleges, Economic and Workforce Development Program. The Centers aspire to be the leading source of regional workforce information and insight for California community colleges. More information about the Centers of Excellence is available at www.coecc.net.

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More About Valley Vision

Since 1994, Valley Vision's work has driven transformative change and improved lives across Northern California. An independent social impact and civic leadership organization headquartered in Sacramento, Valley Vision strengthens our communities through unbiased research, boundary-crossing collaboration and change leadership. Our work improves overall quality of life and creates the conditions for economic prosperity and community health and vitality.

More About Burris Service Group

The Burris Service Group (BSG) is a full-service consulting practice providing expertise in economic development, strategic economic research, real estate site strategy, management, and institutional growth. The company was established based on the clear need that advisory services be delivered in an "action-oriented" form. The founder of BSG, Robert Burris, brings to his clients an active local and international network of professionals, as well as 20 years of experience in economic development, market and economic analysis, commercial real estate information, corporate sales, and consulting.



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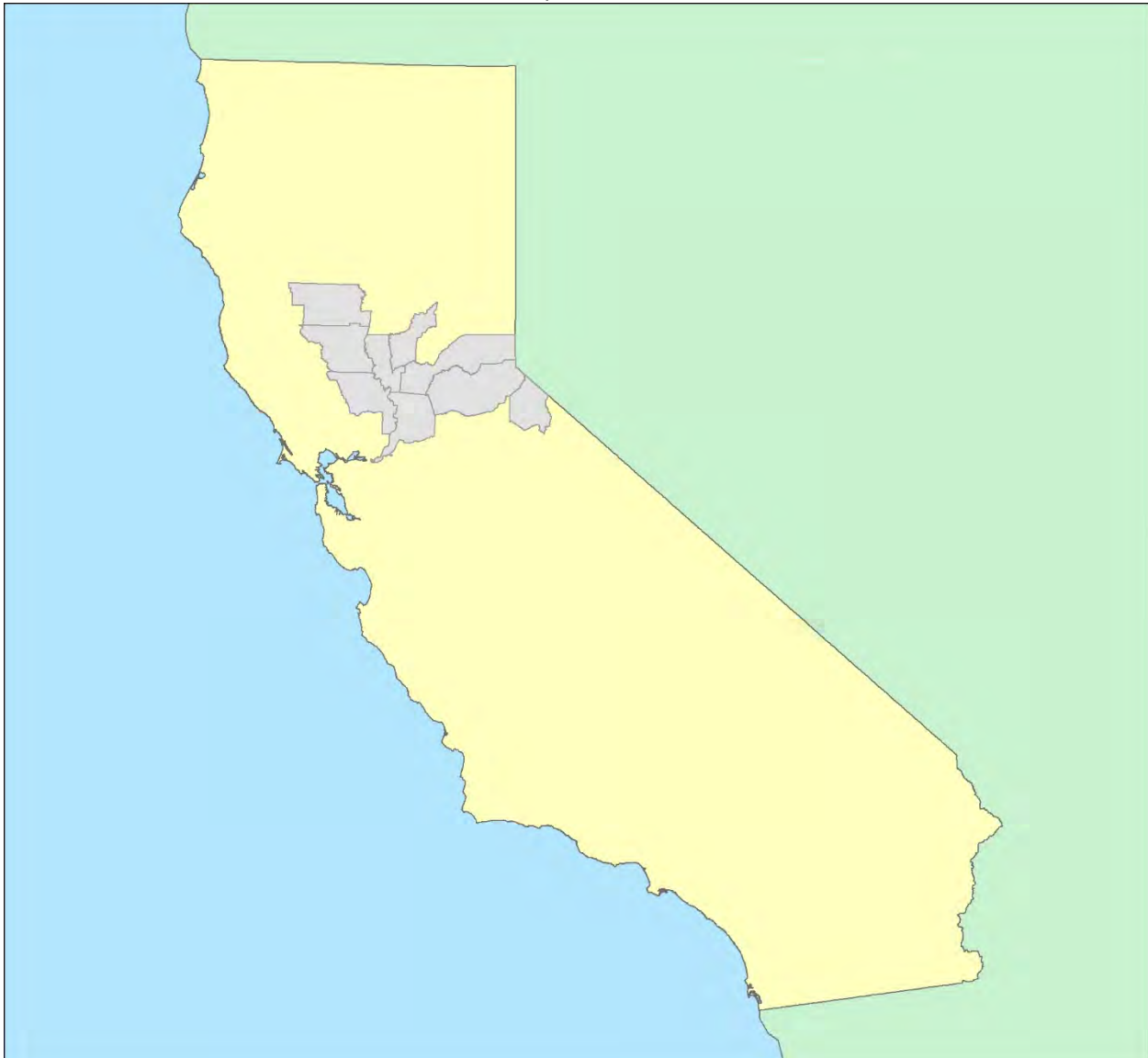
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Regional Planning Unit Summary: Capital

Employment Development Department, Labor Market Information Division
Revised September 1, 2016



Alpine, Colusa, El Dorado, Glenn, Placer, Sacramento, Sutter, Yolo, and Yuba Counties

Regional Planning Unit: Capital

Local Workforce Development Areas: Golden Sierra Consortium, NCCC (North Central Counties Consortium), Sacramento City/County, and Yolo County

Counties: Alpine, Colusa, El Dorado, Glenn, Placer, Sacramento, Sutter, Yolo, and Yuba

Labor Market Profile

	May 2016	May 2015	Change	Percent
Labor Market	1,149,240	1,159,800	-10,560	-0.9%
Employed	1,091,060	1,089,010	2,050	0.2%
Unemployed	58,080	70,680	-12,600	-17.8%
Unemployment Rate	5.1%	6.1%	-1.0%	-

Source: Employment Development Department, Labor Market Information Division.

Data Note: Numbers may not add due to rounding.

Unemployment Insurance Claims

Unemployment Insurance Claims data is available by county [here](#).

Source: Employment Development Department, Unemployment Insurance Division.

Commute Patterns

Living and Employed in the Area	Inflow	Outflow
667,523	216,144	224,756

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2014).

Regional Economic Growth

Major Industry Sector	May 2016 (preliminary)	May 2012	Change	Percent	Location Quotient
Total All Industries	1,009,490	921,060	88,430	9.6%	-
Total Farm	20,500	19,140	1,360	7.1%	0.7
Total Nonfarm	988,990	901,920	87,070	9.7%	1.0
Mining and Logging	500	400	100	25.0%	0.3
Construction	54,500	37,700	16,800	44.6%	1.2
Manufacturing	39,800	36,830	2,970	8.1%	0.5
Trade, Transportation and Utilities	157,260	148,470	8,790	5.9%	0.9
Information	14,300	16,100	-1,800	-11.2%	0.5
Financial Activities	53,300	49,510	3,790	7.7%	1.1
Professional and Business Services	124,050	114,450	9,600	8.4%	0.8
Educational and Health Services	153,510	134,990	18,520	13.7%	1.0
Leisure and Hospitality	101,890	89,090	12,800	14.4%	0.9
Other Services	33,200	30,000	3,200	10.7%	1.0
Government	253,350	241,780	11,570	4.8%	1.7

Source: Employment Development Department, Labor Market Information Division.

Data Note: Numbers may not add due to suppression. Location quotients (LQs) are ratios that allow a Regional Planning Unit (RPU)'s distribution of employment for an industry to be compared to California's distribution of employment for the same industry. Specifically, LQs are calculated by first dividing RPU industry employment by the all industry total of RPU employment. Second, California industry employment is divided by the all industry total for California. Finally, the RPU ratio (first calculation) is divided by the California ratio (second calculation). If an LQ is equal to 1, then the industry has the same share of RPU employment as it does in California. An LQ greater than 1 indicates an industry with a greater share of RPU employment than is the case statewide.

Demand Industry Sectors

Top Demand Industry Sub Sector	Total Projected Job Openings 2012-2022	Location Quotient
Restaurants and Other Eating Places	35,758	1.1
Elementary and Secondary Schools	19,781	1.2
Individual and Family Services	15,819	1.1
Employment Services	12,059	1.0
General Medical and Surgical Hospitals	10,287	1.2
Management, Scientific, and Technical Consulting Services	8,628	1.0
Outpatient Care Centers	8,214	2.1
Other General Merchandise Stores	7,687	1.7
Building Equipment Contractors	7,507	1.2
Grocery Stores	7,493	1.1

Source: Employment Development Department, Labor Market Information Division.

Data Note: Total projected job openings are the sum of new and replacement job openings.

Emergent Industry Sectors

Top Emergent Industry Sub Sector	Numeric Change 2012-2022	Percent Change	Location Quotient
Building Finishing Contractors	4,030	69.4%	1.2
Management, Scientific, and Technical Consulting Services	6,510	68.3%	1.0
Other Specialty Trade Contractors	2,170	64.8%	1.2
Social Advocacy Organizations	730	64.0%	1.1
Foundation, Structure, and Building Exterior Contractors	3,720	61.4%	1.7
Home Health Care Services	1,950	61.3%	1.0
Office Administrative Services	2,280	58.2%	1.4
Individual and Family Services	13,380	56.4%	1.1
Building Equipment Contractors	5,490	53.4%	1.2
Lumber and Other Construction Materials Merchant Wholesalers	650	52.0%	1.5

Source: Employment Development Department, Labor Market Information Division.

Data Note: Emergent industry sectors are industries with the highest levels of growth as measured by percent change.

Top 25 Middle-Skill, Middle-Wage or Higher Occupations

Top 25 Middle-Skill, Middle-Wage or Higher Occupations	Total Projected Job Openings 2012-2022	HWOL Job Ads	Median Annual Wage 2016 1st Quarter
Registered Nurses	6,700	3,471	\$117,104
Heavy and Tractor-Trailer Truck Drivers	2,839	2,374	\$42,182
Medical Assistants	2,734	530	\$34,060
Nursing Assistants	2,171	265	\$36,091
Licensed Practical and Licensed Vocational Nurses	1,626	613	\$57,946
Computer User Support Specialists	1,192	1,124	\$54,996
Dental Assistants	1,128	533	\$40,639
Dental Hygienists	1,096	124	\$96,029
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	1,073	361	\$48,514
Firefighters	723	24	\$60,154
Medical and Clinical Laboratory Technicians	609	88	\$50,279
Telecommunications Equipment Installers and Repairers, Except Line Installers	590	153	\$61,633
Library Technicians	551	14	\$38,639
Medical Records and Health Information Technicians	539	266	\$46,692
First-Line Supervisors of Production and Operating Workers	501	418	\$56,591
Web Developers	468	837	\$75,449
Emergency Medical Technicians and Paramedics	463	52	\$40,485
Paralegals and Legal Assistants	415	143	\$53,224
Radiologic Technologists	375	148	\$90,444
Massage Therapists	374	112	\$35,901
Aircraft Mechanics and Service Technicians	304	29	\$64,042
Medical Equipment Repairers	289	32	\$56,685
Electrical and Electronics Engineering Technicians	285	105	\$66,160
Phlebotomists	270	25	\$42,443
Respiratory Therapists	247	48	\$91,341

Source: Employment Development Department, Labor Market Information Division; The Conference Board Help Wanted OnLine™ (HWOL) Data Series, 120-day period ending June 21, 2016.

Data Note: Middle-skill occupations typically require more than a high school diploma but less than a Bachelor's degree. Middle-wage occupations make at least 80 percent of the area's median annual wage (\$41,621).

Demographic Data

Age	Population	Percent Share of Total Population
Under 5 Years	157,536	6.5%
5 to 9 Years	165,890	6.9%
10 to 14 Years	164,584	6.8%
15 to 17 Years	103,607	4.3%
18 and 19 Years	66,926	2.8%
20 Years	39,610	1.6%
21 Years	37,215	1.5%
22 to 24 Years	103,360	4.3%
25 to 29 Years	168,215	7.0%
30 to 34 Years	162,307	6.7%
35 to 39 Years	151,601	6.3%
40 to 44 Years	157,741	6.5%
45 to 49 Years	164,415	6.8%
50 to 54 Years	171,202	7.1%
55 to 59 Years	154,274	6.4%
60 and 61 Years	56,579	2.3%
62 to 64 Years	78,414	3.3%
65 and 66 Years	45,745	1.9%
67 to 69 Years	55,443	2.3%
70 to 74 Years	72,309	3.0%
75 to 79 Years	54,769	2.3%
80 to 84 Years	42,225	1.8%
85 Years and Older	42,226	1.8%
Total	2,416,193	100.0%

Source: U.S. Census Bureau, 2010-2014 American Community Survey, 5-Year Estimates.

Gender	Population
Male	1,186,749
Female	1,229,444
Total	2,416,193

Source: U.S. Census Bureau, 2010-2014 American Community Survey, 5-Year Estimates.

Median Household Income by County	Median Household Income
Alpine	\$61,343
Colusa	\$50,503
El Dorado	\$68,507
Glenn	\$40,106
Placer	\$73,747
Sacramento	\$55,615
Sutter	\$51,527
Yolo	\$55,508
Yuba	\$45,470

Source: U.S. Census Bureau, 2010-2014 American Community Survey, 5-Year Estimates.

Poverty Status	Population	Percentage
Income in the Past 12 Months Below Poverty Level	388,393	16.3%
Income in the Past 12 at or Above Poverty Level	1,989,143	83.7%
Total	2,377,536	100.0%

Source: U.S. Census Bureau, 2010-2014 American Community Survey, 5-Year Estimates.

Race	Population	Percentage
Hispanic or Latino	523,653	100.0%
White Alone	307,414	58.7%
Black or African American Alone	7,312	1.4%
American Indian and Alaska Native Alone	8,722	1.7%
Asian Alone	4,666	0.9%
Native Hawaiian and Other Pacific Islander Alone	858	0.2%
Some Other Race Alone	153,602	29.3%
Two or More Races	41,079	7.8%
Non-Hispanic or Latino	1,892,540	100.0%
White Alone	1,313,697	69.4%
Black or African American Alone	155,432	8.2%
American Indian and Alaska Native Alone	13,216	0.7%
Asian Alone	287,357	15.2%
Native Hawaiian and Other Pacific Islander Alone	16,430	0.9%
Some Other Race Alone	5,907	0.3%
Two or More Races	100,501	5.3%

Source: U.S. Census Bureau, 2010-2014 American Community Survey, 5-Year Estimates.

Native and Foreign Born	Population	Percentage
Native	1,985,786	82.2%
Foreign Born	430,407	17.8%
Total	2,416,193	100.0%

Source: U.S. Census Bureau, 2010-2014 American Community Survey, 5-Year Estimates.

English Learners	Population	Percentage
Speaks English Less Than "Very Well"	268,771	11.9%
Speaks English "Very Well"	364,323	16.1%
Speaks Only English	1,625,563	72.0%
Total	2,258,657	100.0%

Source: U.S. Census Bureau, 2010-2014 American Community Survey, 5-Year Estimates.

Veteran Status	Population	Percentage
Male Veterans	149,417	91.7%
Female Veterans	13,450	8.3%
Total	162,867	100.0%

Source: U.S. Census Bureau, 2010-2014 American Community Survey, 5-Year Estimates.

Disability Status	Population	Percentage
With Any Disability	298,591	12.5%
No Disability	2,090,242	87.5%
Total	2,388,833	100.0%

Source: U.S. Census Bureau, 2010-2014 American Community Survey, 5-Year Estimates.

Labor Force Participation	Population	Percentage
Employed or in Armed Forces	1,037,864	54.8%
Unemployed	143,913	7.6%
Not in labor force	711,531	37.6%
Total	1,893,308	100.0%

Source: U.S. Census Bureau, 2010-2014 American Community Survey, 5-Year Estimates.

Individuals with Barriers to Employment	Total
Ethnic Minorities	1,102,496
Households with Cash Public Assistance or Food Stamps	96,181
Population 18 and Over with Less Than a 9 th Grade Level Education	102,329
Single Parent Households	160,232
Speak English Less Than "Very Well"	268,771
Youth Ages 10 to 24	515,302

Source: U.S. Census Bureau, 2010-2014 American Community Survey, 5-Year Estimates.

Educational Attainment	Male	Percentage	Female	Percentage
Less than 9th grade	49,571	5.6%	52,758	5.6%
9th to 12th grade, no diploma	73,364	8.3%	60,453	6.4%
High school graduate (includes equivalency)	208,123	23.5%	207,618	22.1%
Some college, no degree	246,229	27.9%	277,469	29.5%
Associate's degree	71,974	8.1%	93,556	9.9%
Bachelor's degree	152,058	17.2%	168,854	17.9%
Graduate or professional degree	82,444	9.3%	80,105	8.5%
Total	883,763	100.0%	940,813	100.0%

Source: U.S. Census Bureau, 2010-2014 American Community Survey, 5-Year Estimates.

Educational Attainment, 25 Years and Over	Hispanic or Latino	Percent of Hispanic or Latino, Total	White alone, not Hispanic or Latino	Percent of White alone, not Hispanic or Latino, Total
Less than high school diploma	88,943	32.4%	60,167	6.3%
High school graduate (includes equivalency)	69,674	25.4%	206,207	21.6%
Some college or associate's degree	78,546	28.6%	369,008	38.6%
Bachelor's degree or higher	37,068	13.5%	320,657	33.5%
Total	274,231	100.0%	956,039	100.0%

Source: U.S. Census Bureau, 2010-2014 American Community Survey, 5-Year Estimates.

Educational Attainment by Race, 25 Years and Over	White Alone	Percent of White Alone, Total	Black or African American Alone	Percent of Black or African American Alone, Total	American Indian and Alaska Native Alone	Percent of American Indian and Alaska Native Alone, Total	Asian Alone	Percent of Asian Alone, Total	Native Hawaiian and Other Pacific Islander Alone	Percent of Native Hawaiian and Other Pacific Islander Alone, Total	Some Other Race Alone	Percent of Some Other Race Alone, Total	Two or More Races	Percent of Two or more races, Total
Less than high school diploma	112,670	10.0%	11,874	11.9%	2,616	18.8%	35,461	18.9%	2,253	20.6%	32,328	36.8%	6,701	12.0%
High school graduate (includes equivalency)	248,453	22.2%	23,267	23.3%	3,548	25.5%	31,782	17.0%	2,967	27.1%	22,946	26.2%	10,924	19.5%
Some college or associate's degree	415,911	37.1%	44,466	44.6%	5,605	40.2%	47,580	25.4%	4,537	41.4%	22,873	26.1%	24,031	42.9%
Bachelor's degree or higher	344,591	30.7%	20,167	20.2%	2,162	15.5%	72,592	38.7%	1,203	11.0%	9,583	10.9%	14,374	25.7%
Total	1,121,625	100.0%	99,774	100.0%	13,931	100.0%	187,415	100.0%	10,960	100.0%	87,730	100.0%	56,030	100.0%

Source: U.S. Census Bureau, 2010-2014 American Community Survey, 5-Year Estimates.

Gross Domestic Product (GDP) by Metropolitan Statistical Area (MSA)

The Bureau of Economic Analysis (BEA) estimates GDP at the State and MSA level only. Where applicable, the tables below display MSA data as a substitute for county level data.

GDP by Sacramento—Roseville—Arden-Arcade MSA (substitute for El Dorado, Placer, Sacramento, and Yolo Counties)

Major Industry Sector	2014 Millions of Current Dollars
Total All Industries	\$112,703
Agriculture, Forestry, Fishing, and Hunting	\$914
Mining	\$238
Utilities	\$1,160
Construction	\$4,752
Manufacturing	\$6,068
Wholesale Trade	(D)
Retail Trade	\$7,516
Transportation and Warehousing	(D)
Information	\$4,680
Finance, Insurance, Real Estate, Rental, and Leasing	\$22,788
Professional and Business Services	\$13,075
Educational Services, Health Care, and Social Assistance	\$10,170
Arts, Entertainment, Recreation, Accommodation, and Food Services	\$3,594
Other Services, Except Government	\$2,831
Government	\$28,402

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Data Note: Industry detail is based on the 2007 North American Industry Classification System (NAICS). (D) Not shown in order to avoid the disclosure of confidential information; estimates are included in higher level totals. Per capita real GDP statistics for 2001-2014 reflect Census Bureau mid-year population estimates available as of March 2015. Last updated: September 23, 2015.

GDP by Yuba City MSA (substitute for Sutter and Yuba Counties)

Major Industry Sector	2014 Millions of Current Dollars
Total All Industries	\$5,472
Agriculture, Forestry, Fishing, and Hunting	\$531
Mining	\$45
Utilities	(D)
Construction	\$188
Manufacturing	\$229
Wholesale Trade	(D)
Retail Trade	\$411
Transportation and Warehousing	\$186
Information	\$75
Finance, Insurance, Real Estate, Rental, and Leasing	\$543
Professional and Business Services	\$257
Educational Services, Health Care, and Social Assistance	\$488
Arts, Entertainment, Recreation, Accommodation, and Food Services	\$142
Other Services, Except Government	\$172
Government	\$1,814

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Data Note: Industry detail is based on the 2007 North American Industry Classification System (NAICS). (D) Not shown in order to avoid the disclosure of confidential information; estimates are included in higher level totals. Per capita real GDP statistics for 2001-2014 reflect Census Bureau mid-year population estimates available as of March 2015. Last updated: September 23, 2015.

Skill Requirements for Top 25 Middle-Skill, Middle-Wage or Higher Occupations

Occupations	Skills																											
	Active Learning	Active Listening	Complex Problem Solving	Coordination	Critical Thinking	Equipment Maintenance	Installation	Instructing	Judgment and Decision Making	Learning Strategies	Management of Personnel Resources	Mathematics	Monitoring	Operation and Control	Operation Monitoring	Operations Analysis	Programming	Quality Control Analysis	Reading Comprehension	Repairing	Science	Service Orientation	Social Perceptiveness	Speaking	Time Management	Troubleshooting	Writing	
Registered Nurses	•	•	•	•	•		•						•					•				•	•	•				
Heavy and Tractor-Trailer Truck Drivers		•	•		•	•							•	•	•				•					•	•	•		
Medical Assistants	•	•		•	•								•						•				•	•	•			•
Nursing Assistants	•	•		•	•								•						•				•	•	•			•
Licensed Practical and Licensed Vocational Nurses		•		•	•				•				•						•				•	•	•	•		
Computer User Support Specialists	•	•		•	•			•					•						•				•	•	•			•
Dental Assistants	•	•			•			•					•						•				•	•	•			•
Dental Hygienists	•	•	•	•	•								•						•				•	•	•			•
Heating, Air Conditioning, and Refrigeration Mechanics and Installers*		•		•	•	•	•							•				•	•	•						•		
Firefighters*		•		•	•			•					•		•				•				•	•	•			
Medical and Clinical Laboratory Technicians	•	•	•	•	•				•	•			•						•		•			•	•			•
Telecommunications Equipment Installers and Repairers, Except Line Installers	•	•	•		•								•		•				•	•	•					•		
Library Technicians	•	•		•	•			•					•						•				•	•				•
Medical Records and Health Information Technicians		•	•		•				•	•			•						•					•	•			•
First-Line Supervisors of Production and Operating Workers		•	•	•	•						•								•				•	•	•			•
Web Developers	•	•	•		•				•				•			•	•		•									•
Emergency Medical Technicians and Paramedics	•	•		•	•				•				•						•				•	•	•			
Paralegals and Legal Assistants	•	•		•	•								•						•				•	•	•			•
Radiologic Technologists	•	•		•	•								•						•				•	•	•			•
Massage Therapists	•	•		•				•					•						•				•	•	•			•
Aircraft Mechanics and Service Technicians		•	•		•	•			•						•				•	•	•					•		
Medical Equipment Repairers	•		•		•	•							•		•				•	•	•					•		
Electrical and Electronics Engineering Technicians*		•	•		•							•	•						•	•				•			•	•
Phlebotomists	•	•		•	•			•					•						•				•	•	•			
Respiratory Therapists	•	•		•				•					•						•			•	•	•	•			

Source: U.S. Department of Labor’s Occupational Information Network (O*NET) at www.onetonline.org.

* Skills listed for the occupation represent a specialty occupation.

Knowledge Requirements for Top 25 Middle-Skill, Middle-Wage or Higher Occupations

Occupations	Knowledge																												
	Administration and Management	Biology	Building and Construction	Chemistry	Clerical	Communications and Media	Computers and Electronics	Customer and Personal Service	Design	Economics and Accounting	Education and Training	Engineering and Technology	English Language	Geography	Law and Government	Mathematics	Mechanical	Medicine and Dentistry	Personnel and Human Resources	Philosophy and Theology	Physics	Production and Processing	Psychology	Public Safety and Security	Sales and Marketing	Sociology and Anthropology	Telecommunications	Therapy and Counseling	Transportation
Registered Nurses		•			•			•			•	•				•		•					•			•			•
Heavy and Tractor-Trailer Truck Drivers	•										•				•		•							•					•
Medical Assistants	•				•			•			•	•							•				•	•				•	
Nursing Assistants					•			•			•	•							•	•			•	•				•	
Licensed Practical and Licensed Vocational Nurses				•	•			•			•	•				•		•		•			•					•	
Computer User Support Specialists	•				•	•		•			•	•	•			•											•		
Dental Assistants				•	•			•			•	•							•				•	•					
Dental Hygienists		•		•	•			•			•	•							•				•	•					
Heating, Air Conditioning, and Refrigeration Mechanics and Installers*			•	•			•	•	•		•	•				•	•				•								
Firefighters*	•		•	•				•			•	•			•		•				•			•					
Medical and Clinical Laboratory Technicians		•		•	•			•			•	•				•		•				•		•					
Telecommunications Equipment Installers and Repairers, Except Line Installers					•			•			•	•				•	•							•			•		
Library Technicians	•				•	•		•			•	•			•	•													
Medical Records and Health Information Technicians	•				•	•		•			•	•			•	•								•					
First-Line Supervisors of Production and Operating Workers	•				•			•			•	•				•	•		•			•							
Web Developers	•				•	•		•			•	•				•									•				
Emergency Medical Technicians and Paramedics				•				•			•	•				•		•					•	•				•	•
Paralegals and Legal Assistants	•				•	•		•			•	•			•	•							•						
Radiologic Technologists		•			•	•		•			•	•				•		•			•		•						
Massage Therapists	•	•			•			•			•	•						•					•	•				•	
Aircraft Mechanics and Service Technicians				•				•	•		•	•				•	•				•	•		•					•
Medical Equipment Repairers	•				•	•		•			•	•				•		•				•	•						
Electrical and Electronics Engineering Technicians*								•	•	•	•	•			•	•					•	•							
Phlebotomists				•	•			•			•	•						•		•			•	•					
Respiratory Therapists		•		•				•			•	•				•		•					•	•					•

Source: U.S. Department of Labor’s Occupational Information Network (O*NET) at www.onetonline.org.

* Knowledge listed for the occupation represent a specialty occupation.⁷

Overview

This report was prepared by the Labor Market Information Division (LMID) of the California Employment Development Department to provide the Golden Sierra, North Central Counties Consortium, Sacramento Employment and Training Agency, and Yolo Workforce Development Boards a resource for workforce development and strategic planning. The findings were derived from the most detailed industry data available from the Quarterly Census of Employment and Wages program, which provides the number of businesses, number of jobs, and total payroll for workers covered by unemployment insurance programs from reports filed by California employers each quarter. Only private, non-government industries are included in this study.



An industry cluster describes a specific grouping of companies with related business activities. These businesses are economically interdependent and may have common supply chains, labor needs, technologies, and economic markets. Industry clusters identified in the Capitol Region – including Alpine, Colusa, El Dorado, Glenn, Placer, Sacramento, Sutter, Yolo and Yuba counties – are those that demonstrated the greatest opportunity for new jobs, rising wages, business expansion, and career development possibilities. The LMID aggregated ten regional industry clusters for the Capitol Region, which were comprised of 195 industries across the nine county region. These industry clusters include (in order of size by total number of jobs):

- Healthcare and Social Assistance
- Arts, Entertainment, and Recreation
- Business Management and Support
- Building and Systems Construction
- Investment Support
- Information Technology and Telecommunications
- Agribusiness, Food and Beverage Production
- Transportation, Warehousing, and Logistics
- Manufacturing
- Energy and Utilities

Capitol Region Industry Cluster Overview (continued)

During the study period, 2010 through 2015, the ten industry clusters demonstrated a combination of:

1. Expanded opportunity (job and/or firm growth).
2. Increased wages.
3. Improved competitiveness (strong or growing concentration of jobs compared to California as a whole).
4. Expanded career opportunities (distribution of job opportunities across the occupational spectrum).

Collectively, these industry clusters comprised 57.3 percent of the total regional jobs in 2015, and 57.0 percent of the region's total wages. The total number of jobs and total wages increased in the region over the study period. The Healthcare and Social Assistance industry cluster was the largest cluster in 2015, accounting for 11.6 percent of total regional jobs, followed by Arts, Entertainment, and Recreation with 10.3 percent. The highest annual wages were found in Information Technology and Telecommunications, with an average wage of \$107,020. The concentration of employment in the Investment Support, Building and Systems Construction, and Healthcare and Social Assistance clusters were slightly higher in the region compared to the state in 2015.

Capitol Region Industry Cluster Descriptions

The **Healthcare and Social Assistance** industry cluster includes private health care providers and other private health related services, employed 112,802 people in 2015, and comprised 11.6 percent of the region's employment. Businesses in this industry cluster primarily provide health care services and health products for individuals. Firms include:

- Health and Personal Care Stores
- Pharmaceutical, and Medical Equipment and Supplies Manufacturing
- Home Health and Other Ambulatory Health Care Services
- General Medical and Surgical Hospitals
- Nursing Care Facilities
- Social Advocacy Organizations

The **Arts, Entertainment, and Recreation** industry cluster includes firms primarily involved in the leisure, hospitality, and tourism industries. This cluster employed 99,964 people in 2015, accounted for 10.3 percent of the region's employment. Firms include:

- Travel Agents
- Charter Buses
- Spectator Sports
- Restaurants and Bars
- Hotels and Motels

The **Business Management and Support** industry cluster provided 92,024 jobs among businesses involved in accounting, legal services, consulting services, and waste management. These firms made up 9.5 percent of total regional employment in 2015. Firms include:

- Administrative and Support Services
- Accounting, Tax Preparation, Bookkeeping, and Payroll Services
- Legal Services
- Management, Scientific, and Technical Consulting Services
- Advertising, Public Relations, and Related Services
- Management of Companies and Enterprises
- Waste Collection

The **Building and Systems Construction** industry cluster includes firms focused on the physical infrastructure of communities. The industries serve the area's need for housing and commercial structures, as well as roadways. The cluster employed 73,306 workers in 2015, and comprised 7.6 percent of total regional employment. Firms include:

- Residential Building Construction
- Nonresidential Building Construction
- Highway, Street, and Bridge Construction
- Cement and Concrete Product Manufacturing
- Building Material and Supplies Dealers

Capitol Region Industry Cluster Descriptions (continued)

The **Investment Support** industry cluster includes firms primarily engaged in finance, insurance, and real estate. This cluster's employment stood at 47,105 in 2015, comprising 4.9 percent of the region's total employment. Firms include:

- Depository and Nondepository Credit Intermediation
- Other Financial Investment Activities
- Insurance Carriers
- Real Estate Services

The **Information Technology and Telecommunications** industry cluster contains businesses involved in computer, peripheral, and other electronic component manufacturing, telecommunications, as well as architectural, engineering, and software publishers. The cluster employed 40,261 workers, and provided 4.2 percent of total regional jobs in 2015. Firms include:

- Computer and Peripheral Equipment Manufacturing
- Semiconductor and Other Electronic Component Manufacturing
- Wired Telecommunications Carriers
- Navigational, Measuring, Electromedical, and Control Instruments Manufacturing
- Architectural, Engineering, and Related Services
- Computer Systems Design and Related Services
- Scientific Research and Development Services

The **Agribusiness, Food and Beverage Production** industry cluster includes establishments primarily engaged in growing crops, raising animals, and manufacturing food and beverages, as well as support activities for crop and animal production. This cluster employed 36,441 people in 2015, or 3.8 percent of the region's workforce. Firms include:

- Oilseed and Grain Farming
- Vegetable and Melon Farming
- Fruit and Tree Nut Farming
- Other Crop Farming
- Animal Food Manufacturing
- Other Animal Production
- Sugar and Confectionery Product Manufacturing
- Support Activities for Crop Production
- Support Activities for Animal Production

Capitol Region Industry Cluster Descriptions (continued)

The **Transportation, Warehousing, and Logistics** industry cluster contains businesses involved in the transportation and supporting industries, such as long distance and specialized freight trucking, courier services, and warehousing and storage. The industry cluster employed 26,322 workers, and provided 2.7 percent of total regional jobs in 2015. Firms include:

- Warehousing and Storage
- Automotive Equipment Rental, Repair and Maintenance
- Freight Transportation Arrangement
- Postal Service, Couriers, and Messengers

The **Manufacturing** industry cluster includes firms primarily involved in the manufacturing of durable goods such as textile mills, machine shops, and plastics and rubber products manufacturers. This group provided 17,701 jobs, accounting for 1.8 percent of the region's employment in 2015. Firms include:

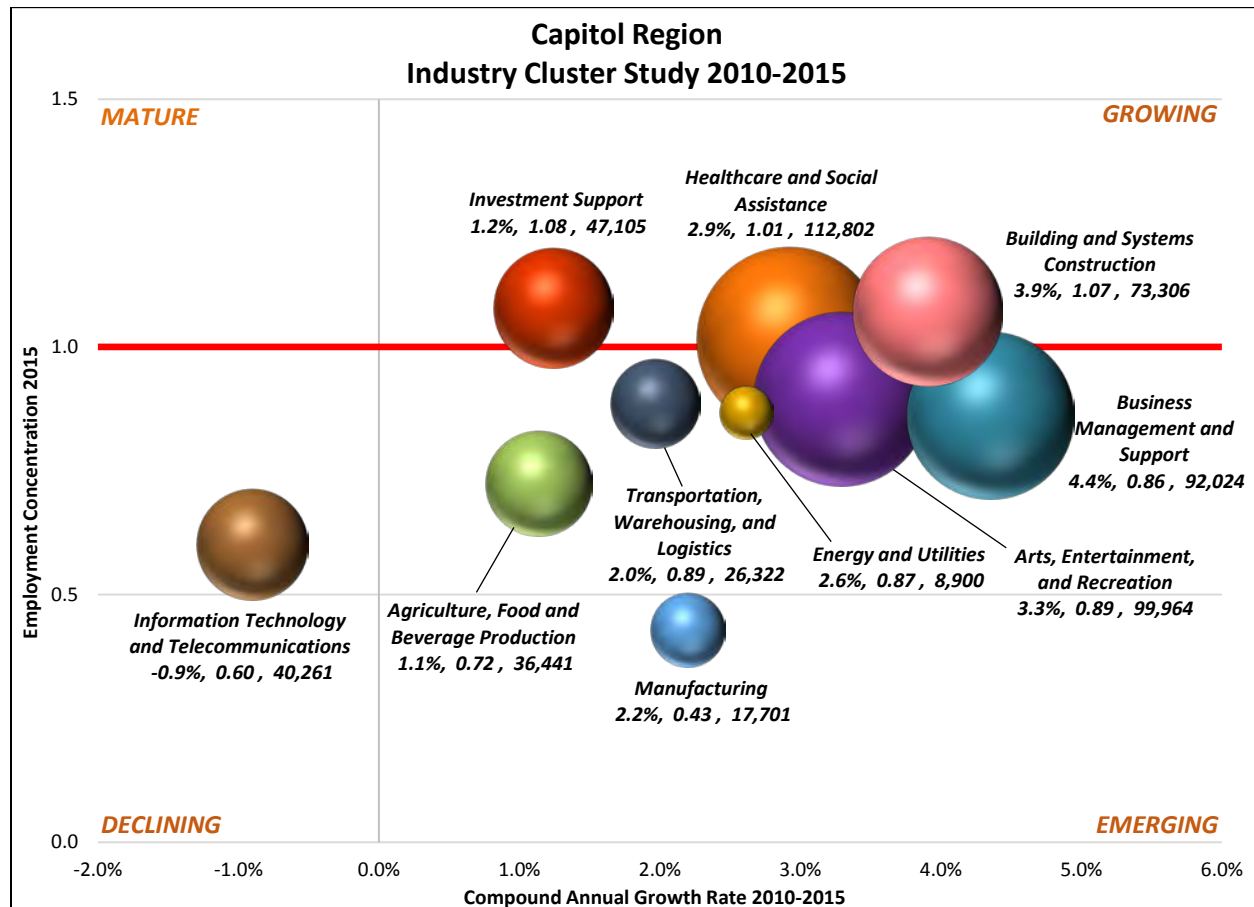
- Cut and Sew Apparel Manufacturing
- Cutlery and Handtool Manufacturing
- Spring and Wire Product Manufacturing
- Metal and Mineral Merchant Wholesalers

The **Energy and Utilities** industry cluster contains businesses involved in the extraction, dissemination, and manufacturing of natural resources, as well as their support activities. This cluster supplied 8,900 jobs, and accounted for 0.9 percent of the region's employment in 2015. Firms include:

- Oil and Gas Extraction/Distribution
- Quarrying
- Water, Sewage and Other Systems
- Utility System Construction
- Electrical Equipment Manufacturing
- Pipeline Transportation
- Petroleum Wholesalers

Capitol Region Industry Clusters 2010-2015

The chart below is a visual representation of the Capitol Region Industry Clusters. Each bubble represents regional industry clusters and displays three important data elements: 2010-2015 compound annual growth rate, 2015 employment concentration, and 2015 employment size.



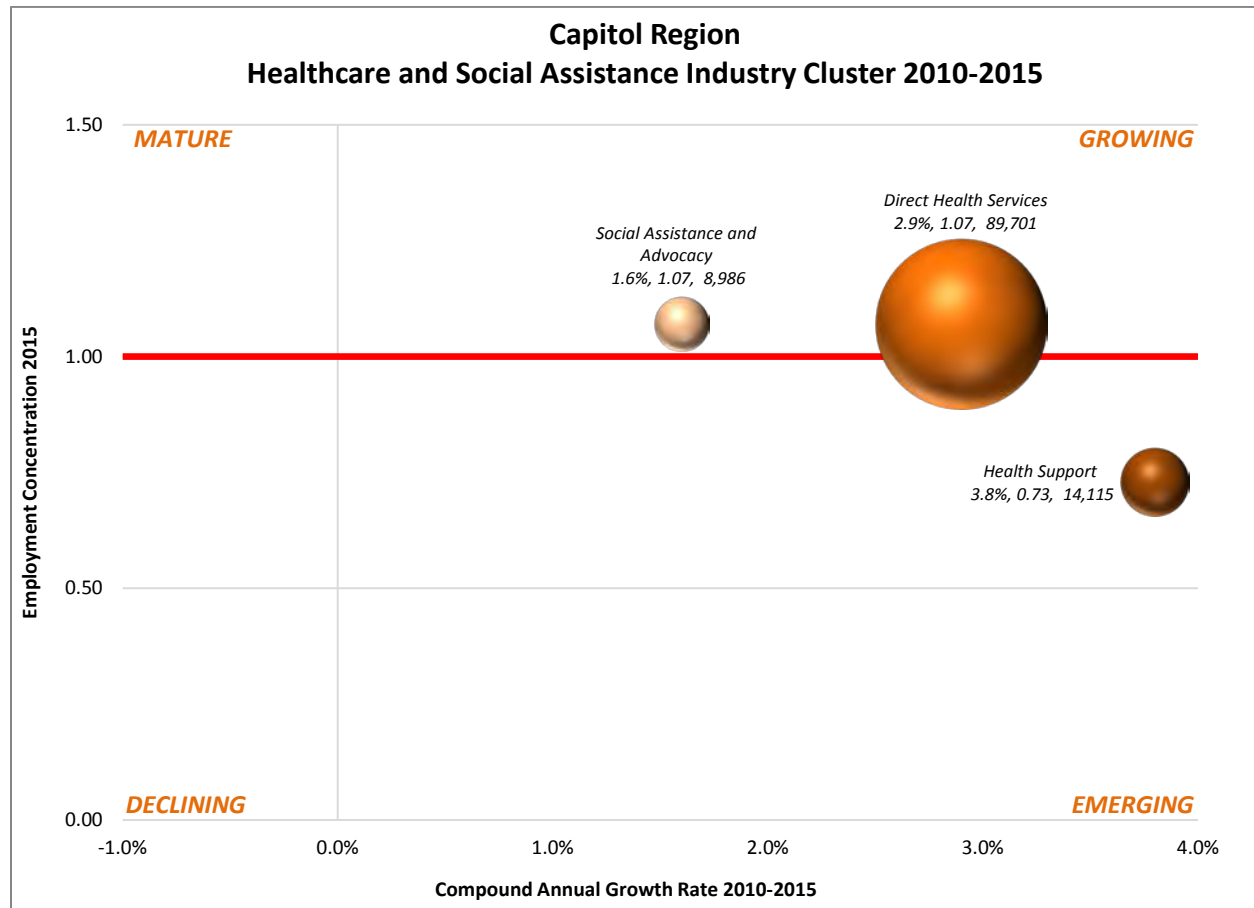
Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Interpreting the Chart:

- Each bubble's position on the horizontal axis represents the level of employment growth experienced by that industry cluster from 2010 to 2015 as measured by the compound annual growth rate. Bubbles positioned on the right of zero indicate job growth and left of zero denotes job loss.
- Each bubble's position on the vertical axis represents the employment concentration for that industry cluster in 2015 relative to California. Employment concentration, also called Location Quotient (LQ), is used to measure an industry cluster's strength and activity level by comparing its employment size to that of a larger area, usually the state or the nation. This study compares regional employment concentration to the California average. A concentration greater than 1.0 indicates a higher concentration of jobs in the industry cluster than found statewide, and industry clusters with a LQ of 1.25 or higher are considered heavily concentrated. A high concentration indicates a competitive advantage and an area of regional specialization compared to the state. Industry clusters with higher location quotients generally consist of export industries, and are the region's strong economic sectors. In theory, they are producing more goods and services than the region alone can consume and thus export the excess goods or services to consumers in areas outside of the region and bring wealth back to the local economy.
- The size of the bubble indicates the employment (number of jobs) in that industry cluster in 2015.

Healthcare and Social Assistance Industry Cluster

The Healthcare and Social Assistance industry cluster is the largest cluster and is comprised of the following industry sub-clusters: Direct Health Services, Health Support, and Social Assistance and Advocacy. The industry cluster employed 112,802 workers, experienced strong employment growth of 2.9 percent per year, and had an employment concentration of 1.01. Overall, this cluster was led by significant growth in Other Residential Care Facilities (up 30.7 percent), which was part of the Direct Health Services sub-cluster. In addition, this industry saw the highest employment concentration at 3.87. Hospitals, also in the Direct Health Services sub-cluster, recorded the largest employment at 25,160 jobs in 2015.



Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Chart interpretation: A bubble's position on the horizontal axis represents the level of employment growth experienced by that industry cluster from 2010 to 2015 as measured by the compound annual growth rate. Bubbles positioned on the right of zero indicate job growth and left of zero denotes job loss. The vertical position represents the employment concentration relative to California in 2015 (the higher the bubble, the greater concentration). A concentration greater than 1.0 indicates a higher concentration of jobs in the industry cluster than found statewide, and industry clusters with a concentration of 1.25 or higher are considered heavily concentrated. A high concentration indicates a competitive advantage and an area of regional specialization compared to the state. The size of the bubble indicates the employment (number of jobs) in that industry cluster in 2015.

Healthcare and Social Assistance Industry Cluster – Summary Table

HEALTHCARE AND SOCIAL ASSISTANCE INDUSTRY CLUSTER Capitol Region		Average Annual Employment 2010	Average Annual Employment 2015	Compound Annual Growth Rate 2010-2015	Average Annual Wages 2010	Average Annual Wages 2015	Employment Concentration 2010	Employment Concentration 2015	Percent of Regional Employment 2010	Percent of Regional Employment 2015
NAICS Code	Industry Description									
<i>Direct Health Services</i>										
6211	Offices of Physicians	11,243	12,605	2.9%	\$97,093	\$98,939	0.72	0.75	1.2%	1.3%
6212	Offices of Dentists	7,457	8,154	2.3%	\$49,864	\$48,180	1.07	1.11	0.8%	0.8%
6213	Offices of Other Health Practitioners	3,642	4,111	3.1%	\$33,442	\$32,522	0.91	0.91	0.4%	0.4%
6214	Outpatient Care Centers	12,349	13,410	2.1%	\$100,001	\$105,463	2.03	1.90	1.4%	1.4%
6215	Medical and Diagnostic Laboratories	1,143	1,143	0.0%	\$54,434	\$54,236	0.60	0.58	0.1%	0.1%
6216	Home Health Care Services	3,002	3,752	5.7%	\$39,087	\$40,731	0.76	0.79	0.3%	0.4%
6219	Other Ambulatory Health Care Services	1,418	1,467	0.9%	\$51,996	\$52,207	0.94	0.92	0.2%	0.2%
622	Hospitals	24,039	25,160	1.1%	\$76,660	\$83,971	1.04	1.11	2.7%	2.6%
6231	Nursing Care Facilities	7,794	8,006	0.7%	\$34,509	\$34,087	1.04	1.00	0.9%	0.8%
6232	Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities	2,149	1,890	-3.2%	\$29,782	\$27,351	0.78	0.68	0.2%	0.2%
6233	Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly	4,544	6,659	10.0%	\$23,755	\$23,581	1.05	1.28	0.5%	0.7%
6239	Other Residential Care Facilities	1,147	3,344	30.7%	\$30,905	\$4,781	1.23	3.87	0.1%	0.3%
<i>Direct Health Services Summary</i>		79,926	89,701	2.9%	\$67,470	\$67,889	1.02	1.07	8.9%	9.3%

Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

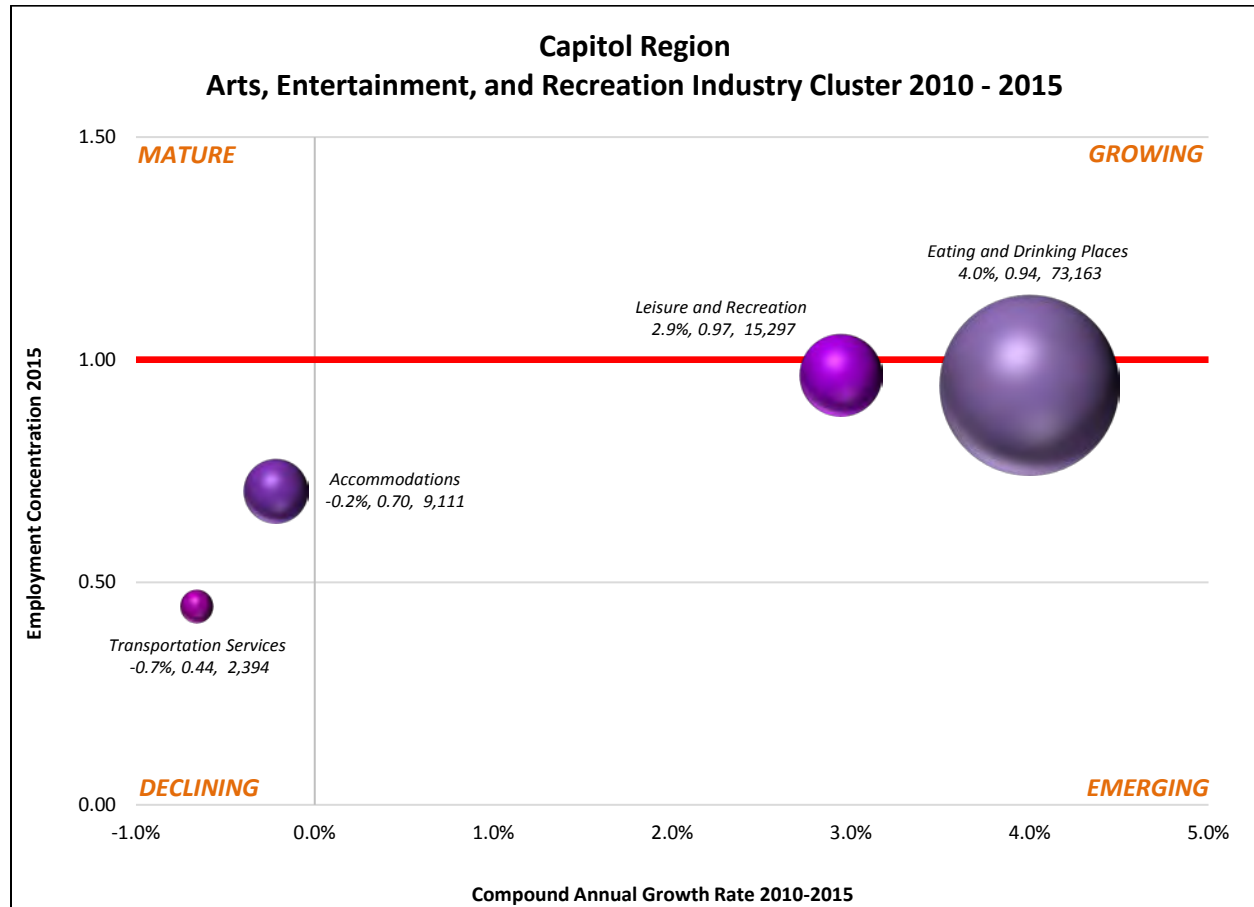
Healthcare and Social Assistance Industry Cluster (continued) – Summary Table

HEALTHCARE AND SOCIAL ASSISTANCE INDUSTRY CLUSTER (continued) Capitol Region		Average Annual Employment 2010	Average Annual Employment 2015	Compound Annual Growth Rate 2010-2015	Average Annual Wages 2010	Average Annual Wages 2015	Employment Concentration 2010	Employment Concentration 2015	Percent of Regional Employment 2010	Percent of Regional Employment 2015
NAICS Code	Industry Description									
<i>Health Support</i>										
3254	Pharmaceutical and Medicine Manufacturing	635	690	2.1%	\$86,563	\$93,507	0.24	0.24	0.1%	0.1%
3391	Medical Equipment and Supplies Manufacturing	788	2,025	26.6%	\$51,049	\$72,317	0.25	0.62	0.1%	0.2%
4242	Drugs and Druggists' Sundries Merchant	532	472	-3.0%	\$57,904	\$60,478	0.39	0.31	0.1%	0.0%
4461	Health and Personal Care Stores	5,760	5,760	0.0%	\$40,647	\$37,885	0.90	0.87	0.6%	0.6%
8121	Personal Care Services	3,932	4,595	4.0%	\$17,187	\$17,528	1.06	1.05	0.4%	0.5%
8122	Death Care Services	515	573	2.7%	\$40,460	\$39,429	0.86	0.91	0.1%	0.1%
<i>Health Support Summary</i>		12,162	14,115	3.8%	\$36,881	\$39,735	0.68	0.73	1.3%	1.5%
<i>Social Assistance and Advocacy</i>										
6242	Community Food and Housing, and Emergency and Other Relief Services	1,022	1,281	5.8%	\$32,071	\$31,922	1.07	1.21	0.1%	0.1%
6243	Vocational Rehabilitation Services	2,273	2,638	3.8%	\$27,097	\$27,366	1.08	1.27	0.3%	0.3%
6244	Child Day Care Services	3,856	3,693	-1.1%	\$22,671	\$22,079	1.03	0.96	0.4%	0.4%
8133	Society Advocacy Organizations	1,280	1,374	1.8%	\$46,649	\$51,193	0.99	0.96	0.1%	0.1%
<i>Social Assistance and Advocacy Summary</i>		8,430	8,986	1.6%	\$28,644	\$29,486	1.04	1.07	0.9%	0.9%
HEALTHCARE AND SOCIAL ASSISTANCE INDUSTRY CLUSTER SUMMARY		100,518	112,802	2.9%	\$60,512	\$61,307	0.96	1.01	11.1%	11.6%

Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Arts, Entertainment, and Recreation Industry Cluster

The Arts, Entertainment, and Recreation industry cluster employed 99,964, grew by 3.3 percent annually, and reported a concentration of 0.89. The average annual wages of \$19,213 were below the regional average annual wage of \$52,774. This industry cluster was divided into four sub-clusters: Eating and Drinking Places, Leisure and Recreation, Accommodations, and Transportation Services. Other Amusement and Recreation Industries held the largest concentration of all industries in this cluster at 1.44, while Performing Arts, Spectator Sports, and Related Industries held the highest average annual wages at \$57,012. Amusement Parks and Arcades reported the highest growth rate in this cluster at 15.5 percent annually. All three of these industries are a part of the Leisure and Recreation sub-cluster.



Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Chart interpretation: A bubble's position on the horizontal axis represents the level of employment growth experienced by that industry cluster from 2010 to 2015 as measured by the compound annual growth rate. Bubbles positioned on the right of zero indicate job growth and left of zero denotes job loss. The vertical position represents the employment concentration relative to California in 2015 (the higher the bubble, the greater concentration). A concentration greater than 1.0 indicates a higher concentration of jobs in the industry cluster than found statewide, and industry clusters with a concentration of 1.25 or higher are considered heavily concentrated. A high concentration indicates a competitive advantage and an area of regional specialization compared to the state. The size of the bubble indicates the employment (number of jobs) in that industry cluster in 2015.

Arts, Entertainment, and Recreation Industry Cluster – Summary Table

ARTS, ENTERTAINMENT, AND RECREATION INDUSTRY CLUSTER Capitol Region		Average Annual Employment 2010	Average Annual Employment 2015	Compound Annual Growth Rate 2010-2015	Average Annual Wages 2010	Average Annual Wages 2015	Employment Concentration 2010	Employment Concentration 2015	Percent of Regional Employment 2010	Percent of Regional Employment 2015
NAICS Code	Industry Description									
<i>Eating and Drinking Places</i>										
7223	Special Food Services	1,506	2,168	9.5%	\$22,190	\$21,678	0.52	0.59	0.2%	0.2%
7224	Drinking Places (Alcoholic Beverages)	1,323	1,588	4.7%	\$13,019	\$14,072	0.86	0.91	0.1%	0.2%
7225	Restaurants and Other Eating Places	59,716	69,407	3.8%	\$16,223	\$16,502	0.96	0.96	6.6%	7.2%
<i>Eating and Drinking Places Summary</i>		62,545	73,163	4.0%	\$16,299	\$16,603	0.94	0.94	6.9%	7.5%
<i>Leisure and Recreation</i>										
711	Performing Arts, Spectator Sports, and Related Industries	1,892	2,108	2.7%	\$56,371	\$57,012	0.68	0.65	0.2%	0.2%
7121	Museums, Historical Sites, and Similar Institutions	318	370	3.9%	\$33,276	\$29,646	0.34	0.35	0.0%	0.0%
7131	Amusement Parks and Arcades	165	293	15.5%	\$14,246	\$13,448	0.08	0.11	0.0%	0.0%
7132	Gambling Industries	794	1,017	6.4%	\$24,453	\$41,893	0.93	1.16	0.1%	0.1%
7139	Other Amusement and Recreation Industries	10,453	11,508	2.4%	\$17,624	\$18,369	1.40	1.44	1.2%	1.2%
<i>Leisure and Recreation Summary</i>		13,621	15,297	2.9%	\$23,728	\$25,437	0.96	0.97	1.5%	1.6%

Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

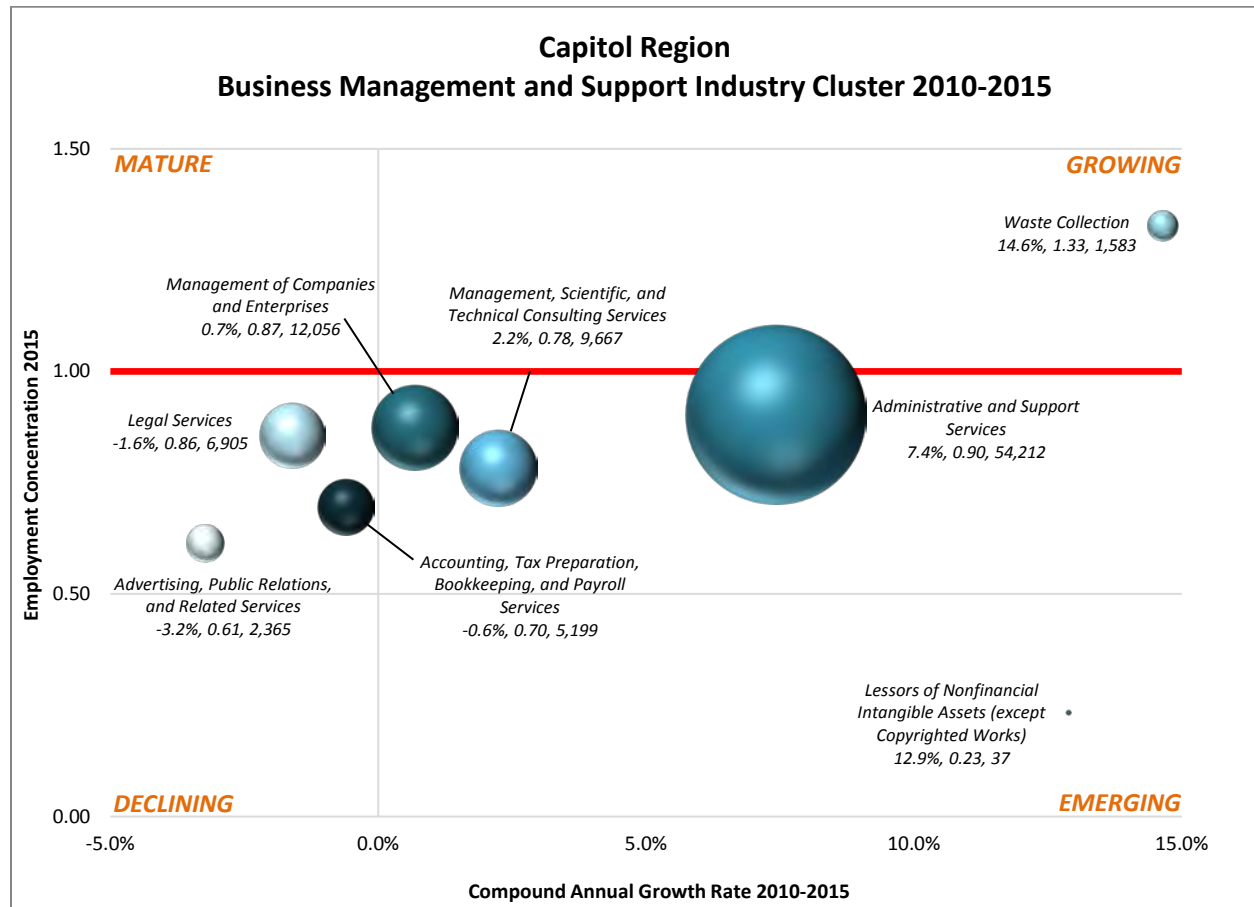
Arts, Entertainment, and Recreation Industry Cluster (continued) – Summary Table

ARTS, ENTERTAINMENT, AND RECREATION INDUSTRY CLUSTER (continued) Capitol Region		Average Annual Employment 2010	Average Annual Employment 2015	Compound Annual Growth Rate 2010-2015	Average Annual Wages 2010	Average Annual Wages 2015	Employment Concentration 2010	Employment Concentration 2015	Percent of Regional Employment 2010	Percent of Regional Employment 2015
NAICS Code	Industry Description									
<i>Accommodations</i>										
7211	Traveler Accommodation	8,771	8,687	-0.2%	\$24,564	\$24,713	0.74	0.69	1.0%	0.9%
7212	RV (Recreational Vehicle) Parks and Recreational Camps	403	403	-0.1%	\$24,425	\$23,141	1.45	1.31	0.0%	0.0%
7213	Rooming and Boarding Houses	16	21	8.0%	\$25,578	\$15,681	0.22	0.22	0.0%	0.0%
<i>Accommodations Summary</i>		9,190	9,111	-0.2%	\$24,560	\$24,623	0.75	0.70	1.0%	0.9%
<i>Transportation Services</i>										
4811	Scheduled Air Transportation	591	605	0.6%	\$46,000	\$45,500	0.25	0.24	0.1%	0.1%
4853	Taxi and Limousine Service	221	315	9.2%	\$24,508	\$24,914	0.62	0.68	0.0%	0.0%
4855	Charter Bus Industry	125	125	0.1%	\$35,885	\$38,402	0.70	0.64	0.0%	0.0%
4859	Other Transit and Ground Passenger Transportation	884	851	-0.9%	\$30,136	\$31,698	1.09	1.02	0.1%	0.1%
4872	Scenic and Sightseeing Transportation, Water	34	60	15.1%	\$23,200	\$24,308	0.28	0.46	0.0%	0.0%
5615	Travel Arrangement and Reservation Services	604	438	-7.7%	\$52,883	\$54,446	0.49	0.35	0.1%	0.0%
<i>Transportation Services Summary</i>		2,458	2,394	-0.7%	\$39,225	\$38,622	0.49	0.44	0.3%	0.2%
ARTS, ENTERTAINMENT, AND RECREATION INDUSTRY CLUSTER SUMMARY		87,815	99,964	3.3%	\$18,958	\$19,213	0.90	0.89	9.7%	10.3%

Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Business Management and Support Industry Cluster

The Business Management and Support industry cluster employed 92,024 people, showed an employment concentration of 0.86, and grew by 4.4 percent annually. The average annual wage in this cluster was \$49,723. Administrative and Support Services reported the largest employment with 54,212 employees. Waste Collection recorded the largest growth rate over the study period at 14.6 percent and held the highest employment concentration at 1.33.



Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Chart interpretation: A bubble's position on the horizontal axis represents the level of employment growth experienced by that industry cluster from 2010 to 2015 as measured by the compound annual growth rate. Bubbles positioned on the right of zero indicate job growth and left of zero denotes job loss. The vertical position represents the employment concentration relative to California in 2015 (the higher the bubble, the greater concentration). A concentration greater than 1.0 indicates a higher concentration of jobs in the industry cluster than found statewide, and industry clusters with a concentration of 1.25 or higher are considered heavily concentrated. A high concentration indicates a competitive advantage and an area of regional specialization compared to the state. The size of the bubble indicates the employment (number of jobs) in that industry cluster in 2015.

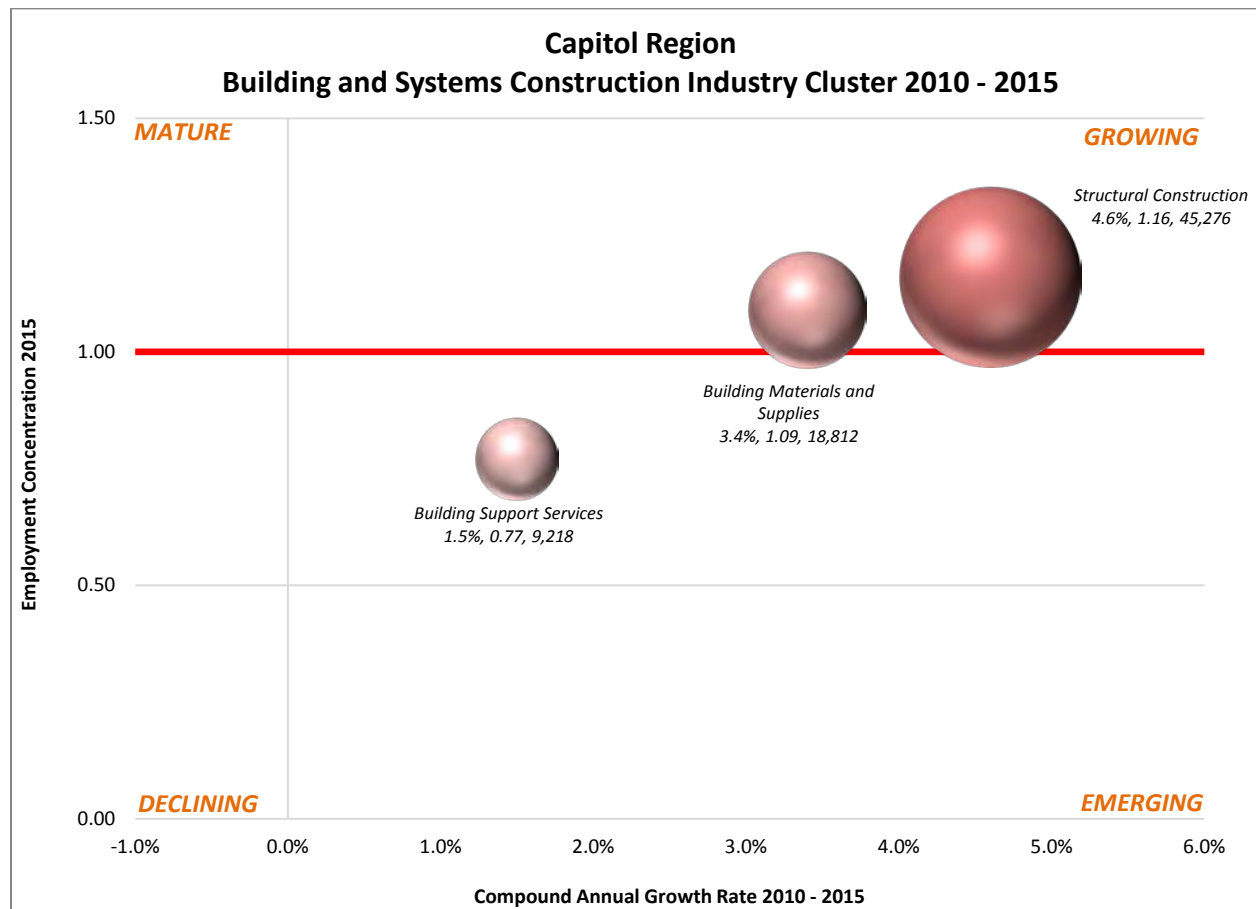
Business Management and Support Industry Cluster – Summary Table

BUSINESS MANAGEMENT AND SUPPORT INDUSTRY CLUSTER Capitol Region		Average Annual Employment 2010	Average Annual Employment 2015	Compound Annual Growth Rate 2010-2015	Average Annual Wages 2010	Average Annual Wages 2015	Employment Concentration 2010	Employment Concentration 2015	Percent of Regional Employment 2010	Percent of Regional Employment 2015
NAICS Code	Industry Description									
5331	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	23	37	12.9%	\$81,999	\$77,130	0.13	0.23	0.0%	0.0%
5411	Legal Services	7,363	6,905	-1.6%	\$78,921	\$78,315	0.90	0.86	0.8%	0.7%
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	5,326	5,199	-0.6%	\$59,252	\$58,087	0.76	0.7	0.6%	0.5%
5416	Management, Scientific, and Technical Consulting Services	8,847	9,667	2.2%	\$68,239	\$66,100	0.85	0.78	1.0%	1.0%
5418	Advertising, Public Relations, and Related Services	2,697	2,365	-3.2%	\$58,610	\$71,624	0.77	0.61	0.3%	0.2%
5511	Management of Companies and Enterprises	11,729	12,056	0.7%	\$73,977	\$77,715	0.97	0.87	1.3%	1.2%
561	Administrative and Support Services	40,710	54,212	7.4%	\$35,757	\$35,211	0.79	0.90	4.5%	5.6%
5621	Waste Collection	916	1,583	14.6%	\$49,934	\$47,952	0.94	1.33	0.1%	0.2%
BUSINESS MANAGEMENT AND SUPPORT INDUSTRY CLUSTER SUMMARY		77,612	92,024	4.4%	\$51,918	\$49,723	0.83	0.86	8.6%	9.5%

Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Building and Systems Construction Industry Cluster

The Building and Systems Construction industry cluster is composed of the following three industry sub-clusters: Structural Construction, Building Materials and Supplies, and Building Support Services. The industry cluster had an employment concentration of 1.07, employed 73,306 workers, had an average annual wage of \$50,714, and grew by 3.9 percent. Support Activities for Forestry had the highest annual growth rate of 27.6 percent annually, and also had the highest employment concentration in 2015 of 3.02. This industry was a part of the Building Materials and Supplies sub-cluster. Logging, also in the Building Materials and Supplies sub-cluster, grew at 20.7 percent annually, the second highest growth rate in this cluster. Land Subdivision, in the Structural Construction sub-cluster, reported the highest average annual wages in 2015 at \$91,260.



Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Chart interpretation: A bubble's position on the horizontal axis represents the level of employment growth experienced by that industry cluster from 2010 to 2015 as measured by the compound annual growth rate. Bubbles positioned on the right of zero indicate job growth and left of zero denotes job loss. The vertical position represents the employment concentration relative to California in 2015 (the higher the bubble, the greater concentration). A concentration greater than 1.0 indicates a higher concentration of jobs in the industry cluster than found statewide, and industry clusters with a concentration of 1.25 or higher are considered heavily concentrated. A high concentration indicates a competitive advantage and an area of regional specialization compared to the state. The size of the bubble indicates the employment (number of jobs) in that industry cluster in 2015.

Building and Systems Construction Industry Cluster – Summary Table

BUILDING AND SYSTEMS CONSTRUCTION INDUSTRY CLUSTER		Average Annual Employment 2010	Average Annual Employment 2015	Compound Annual Growth Rate 2011-2015	Average Annual Wages 2010	Average Annual Wages 2015	Employment Concentration 2010	Employment Concentration 2015	Percent of Regional Employment 2010	Percent of Regional Employment 2015
NAICS Code	Industry Description									
<i>Structural Construction</i>										
2361	Residential Building Construction	4,742	6,076	6.4%	\$51,837	\$49,881	0.98	1.04	0.5%	0.6%
2362	Nonresidential Building Construction	4,381	4,422	0.2%	\$78,598	\$71,600	1.33	1.18	0.5%	0.5%
2372	Land Subdivision	493	384	-6.1%	\$86,274	\$91,260	0.99	0.80	0.1%	0.0%
2373	Highway, Street, and Bridge Construction	2,082	2,495	4.6%	\$84,174	\$77,265	1.73	1.90	0.2%	0.3%
2379	Other Heavy and Civil Engineering Construction	346	381	2.4%	\$87,115	\$83,595	0.80	0.80	0.0%	0.0%
2381	Foundation, Structure, and Building Exterior Contractors	5,760	8,193	9.2%	\$43,938	\$45,070	1.28	1.48	0.6%	0.8%
2382	Building Equipment Contractors	10,641	12,273	3.6%	\$60,712	\$59,789	1.16	1.09	1.2%	1.3%
2383	Building Finishing Contractors	5,720	7,236	6.1%	\$42,186	\$41,966	1.00	1.07	0.6%	0.7%
2389	Other Specialty Trade Contractors	3,591	3,816	1.5%	\$55,010	\$55,106	1.19	1.06	0.4%	0.4%
<i>Structural Construction Summary</i>		37,754	45,276	4.6%	\$57,634	\$55,136	1.16	1.16	4.2%	4.7%

Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Building and Systems Construction Industry Cluster (continued) – Summary Table

BUILDING AND SYSTEMS CONSTRUCTION INDUSTRY CLUSTER (continued) Capitol Region		Average Annual Employment 2010	Average Annual Employment 2015	Compound Annual Growth Rate 2011-2015	Average Annual Wages 2010	Average Annual Wages 2015	Employment Concentration 2010	Employment Concentration 2015	Percent of Regional Employment 2010	Percent of Regional Employment 2015
NAICS Code	Industry Description									
<i>Building Materials and Supplies</i>										
1133	Logging	64	136	20.7%	\$38,897	\$51,303	0.56	1.11	0.0%	0.0%
1153	Support Activities for Forestry	122	323	27.6%	\$50,703	\$54,081	1.42	3.02	0.0%	0.0%
3211	Sawmills and Wood Preservation	530	454	-3.8%	\$51,884	\$53,636	2.33	1.87	0.1%	0.0%
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing	239	200	-4.3%	\$51,211	\$42,387	1.77	1.21	0.0%	0.0%
3219	Other Wood Product Manufacturing	1,293	1,567	4.9%	\$44,001	\$40,914	1.43	1.69	0.1%	0.2%
3255	Paint, Coating, and Adhesive Manufacturing	77	85	2.5%	\$79,223	\$70,453	0.25	0.30	0.0%	0.0%
3272	Glass and Glass Product Manufacturing	149	235	12.0%	\$41,960	\$43,304	0.36	0.54	0.0%	0.0%
3273	Cement and Concrete Product Manufacturing	900	1,689	17.1%	\$60,761	\$56,089	1.07	1.88	0.1%	0.2%
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	189	261	8.4%	\$80,416	\$61,799	0.56	0.82	0.0%	0.0%
3351	Electric Lighting Equipment Manufacturing	98	102	0.8%	\$70,991	\$73,799	0.23	0.23	0.0%	0.0%
337	Furniture and Related Products Manufacturing	1,360	1,445	1.5%	\$38,036	\$36,983	0.70	0.70	0.2%	0.1%
4233	Lumber and Other Construction Materials Merchant Wholesalers	1,298	1,543	4.4%	\$51,595	\$48,946	1.23	1.34	0.1%	0.2%

Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Building and Systems Construction Industry Cluster (continued) – Summary Table

BUILDING AND SYSTEMS CONSTRUCTION INDUSTRY CLUSTER (continued) Capitol Region		Average Annual Employment 2010	Average Annual Employment 2015	Compound Annual Growth Rate 2011-2015	Average Annual Wages 2010	Average Annual Wages 2015	Employment Concentration 2010	Employment Concentration 2015	Percent of Regional Employment 2010	Percent of Regional Employment 2015
NAICS Code	Industry Description									
<i>Building Materials and Supplies (continued)</i>										
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	1,414	1,486	1.2%	\$56,563	\$54,418	0.99	1.01	0.2%	0.2%
4441	Building Material and Supplies Dealers	6,832	7,289	1.6%	\$34,397	\$31,848	1.11	1.10	0.8%	0.8%
4442	Lawn and Garden Equipment and Supplies Stores	1,060	1,145	1.9%	\$40,129	\$34,516	1.78	1.60	0.1%	0.1%
5323	General Rental Centers	242	161	-9.7%	\$43,920	\$46,767	0.87	0.68	0.0%	0.0%
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	600	692	3.7%	\$65,722	\$65,196	0.68	0.64	0.1%	0.1%
<i>Building Materials and Supplies Summary</i>		16,467	18,812	3.4%	\$43,772	\$41,996	1.02	1.09	1.8%	1.9%

Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

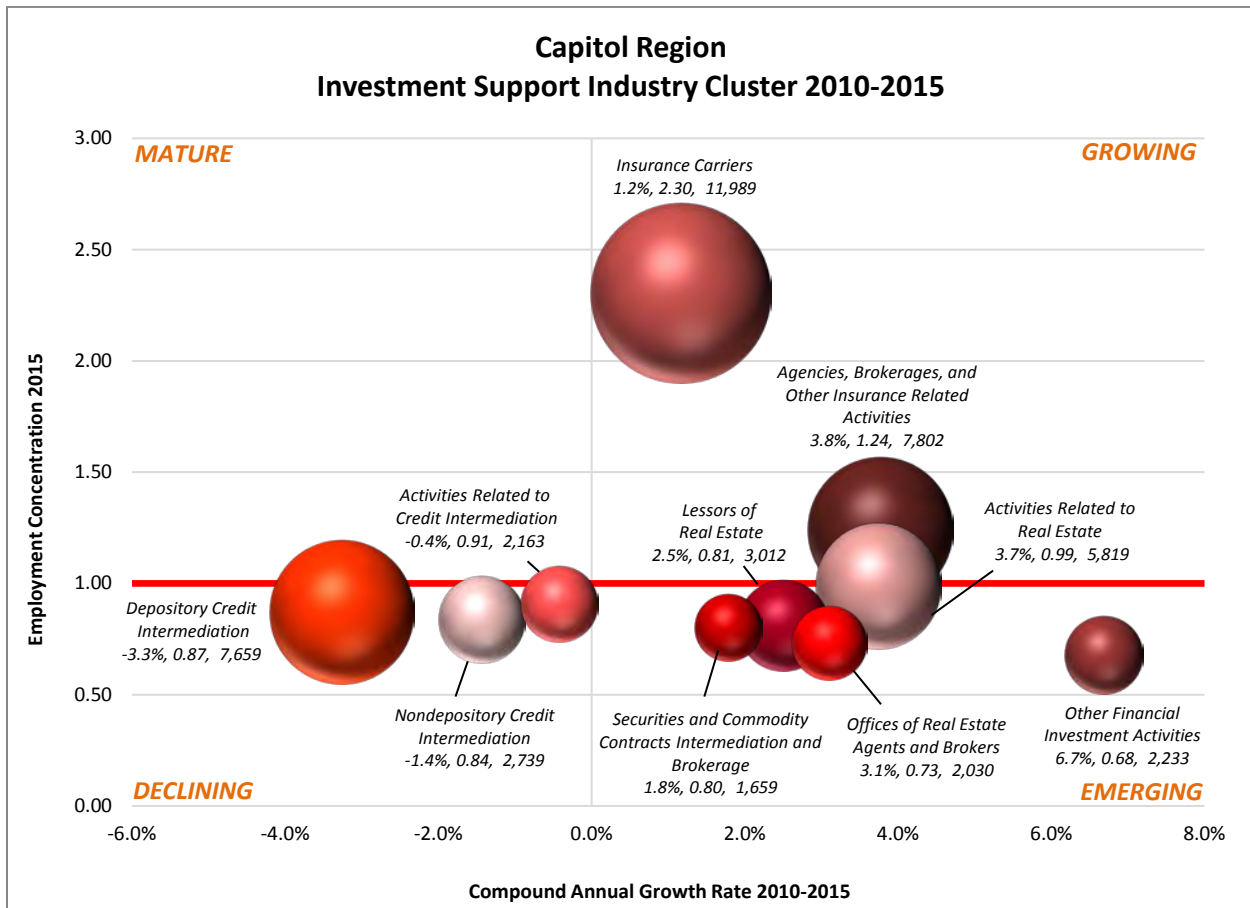
Building and Systems Construction Industry Cluster (continued) – Summary Table

BUILDING AND SYSTEMS CONSTRUCTION INDUSTRY CLUSTER (continued) Capitol Region		Average Annual Employment 2010	Average Annual Employment 2015	Compound Annual Growth Rate 2011-2015	Average Annual Wages 2010	Average Annual Wages 2015	Employment Concentration 2010	Employment Concentration 2015	Percent of Regional Employment 2010	Percent of Regional Employment 2015
NAICS Code	Industry Description									
<i>Building Support Services</i>										
4232	Furniture and Home Furnishing Merchant Wholesalers	208	271	6.9%	\$46,902	\$44,687	0.20	0.22	0.0%	0.0%
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	1,165	1,216	1.1%	\$65,924	\$67,266	0.42	0.42	0.1%	0.1%
4421	Furniture Stores	1,546	1,500	-0.7%	\$32,511	\$35,293	1.15	1.21	0.2%	0.2%
4422	Home Furnishings Stores	1,488	1,885	6.1%	\$32,269	\$28,987	0.86	0.99	0.2%	0.2%
4431	Electronics and Appliance Stores	3,403	3,344	-0.4%	\$54,280	\$54,258	0.85	0.90	0.4%	0.3%
4812	Nonscheduled Air Transportation	138	103	-7.1%	\$59,096	\$71,892	0.68	0.48	0.0%	0.0%
5629	Remediation and Other Waste Management Services	742	899	4.9%	\$46,494	\$45,576	1.04	1.01	0.1%	0.1%
<i>Building Support Services Summary</i>		8,689	9,218	1.5%	\$47,435	\$46,790	0.74	0.77	1.0%	1.0%
BUILDING AND SYSTEMS CONSTRUCTION INDUSTRY CLUSTER SUMMARY		62,909	73,306	3.9%	\$52,597	\$50,714	1.04	1.07	7.0%	7.6%

Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Investment Support Industry Cluster

The Investment Support industry cluster had 47,105 employees, grew by 1.2 percent annually, and reported an employment concentration of 1.08. The cluster posted 2015 average annual wages of \$70,820; this is well above the Capitol Region's total industry 2015 average annual wage of \$52,774. Insurance Carriers was the largest industry with 11,989 employees, and had the largest employment concentration at 2.30. Over the study period, Other Financial Investment Activities experienced the largest growth rate at 6.7 percent annually. Securities and Commodity Contracts Intermediation and Brokerage showed the highest average annual wage in 2015 at \$130,393.



Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Chart interpretation: A bubble's position on the horizontal axis represents the level of employment growth experienced by that industry cluster from 2010 to 2015 as measured by the compound annual growth rate. Bubbles positioned on the right of zero indicate job growth and left of zero denotes job loss. The vertical position represents the employment concentration relative to California in 2015 (the higher the bubble, the greater concentration). A concentration greater than 1.0 indicates a higher concentration of jobs in the industry cluster than found statewide, and industry clusters with a concentration of 1.25 or higher are considered heavily concentrated. A high concentration indicates a competitive advantage and an area of regional specialization compared to the state. The size of the bubble indicates the employment (number of jobs) in that industry cluster in 2015.

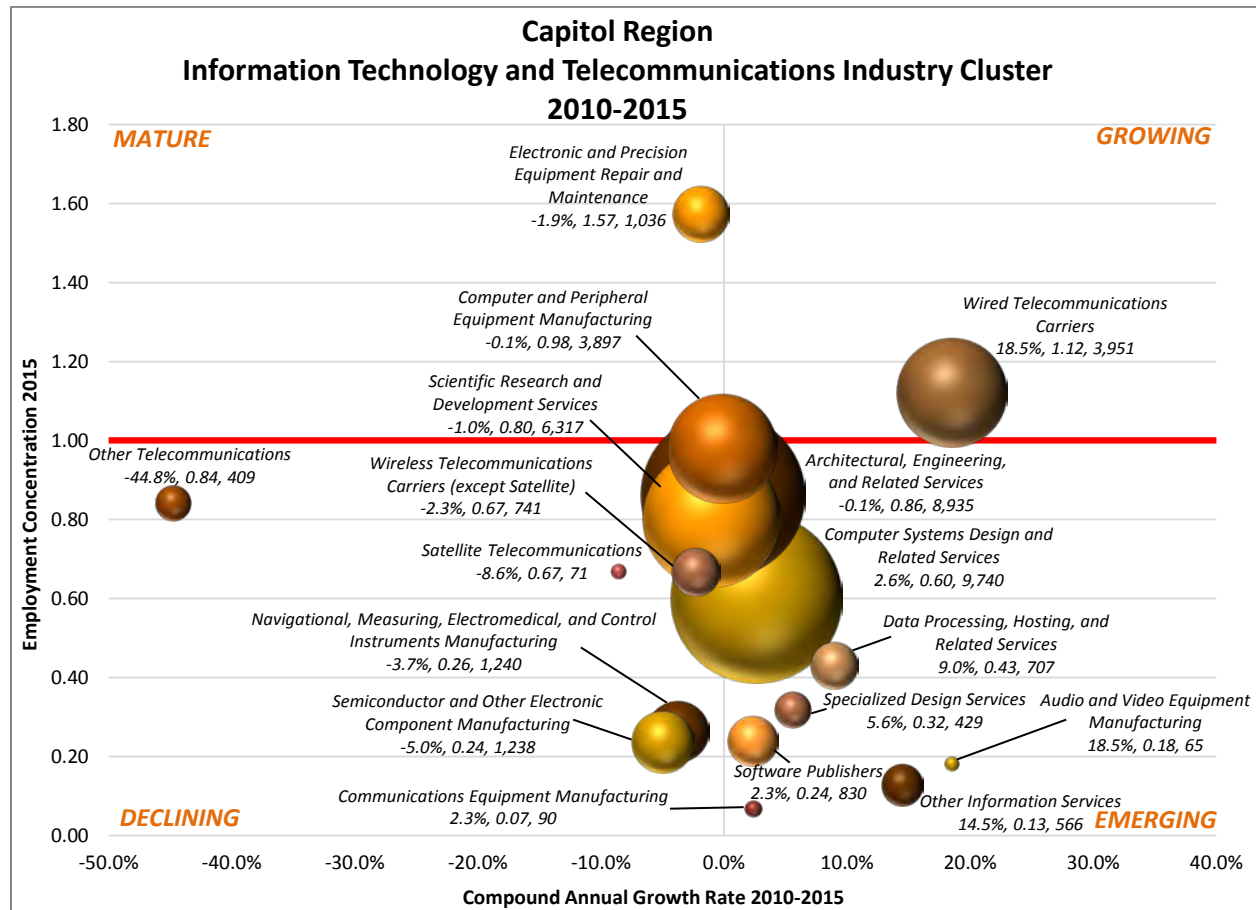
Investment Support Industry Cluster – Summary Table

INVESTMENT SUPPORT INDUSTRY CLUSTER		Average Annual Employment 2010	Average Annual Employment 2015	Compound Annual Growth Rate 2010-2015	Average Annual Wages 2010	Average Annual Wages 2015	Employment Concentration 2010	Employment Concentration 2015	Percent of Regional Employment 2010	Percent of Regional Employment 2015
NAICS Code	Industry Description									
Capitol Region										
5221	Depository Credit Intermediation	8,743	7,659	-3.3%	\$61,617	\$62,700	0.88	0.87	1.0%	0.8%
5222	Nondepository Credit Intermediation	2,901	2,739	-1.4%	\$85,755	\$89,366	0.92	0.84	0.3%	0.3%
5223	Activities Related to Credit Intermediation	2,200	2,163	-0.4%	\$69,290	\$86,938	1.09	0.91	0.2%	0.2%
5231	Securities and Commodity Contracts Intermediation and Brokerage	1,546	1,659	1.8%	\$116,943	\$130,393	0.73	0.80	0.2%	0.2%
5239	Other Financial Investment Activities	1,723	2,233	6.7%	\$63,797	\$83,919	0.62	0.68	0.2%	0.2%
5241	Insurance Carriers	11,445	11,989	1.2%	\$76,503	\$83,119	2.07	2.30	1.3%	1.2%
5242	Agencies, Brokerages, and Other Insurance Related Activities	6,727	7,802	3.8%	\$69,207	\$70,851	1.20	1.24	0.7%	0.8%
5311	Lessors of Real Estate	2,728	3,012	2.5%	\$31,053	\$35,576	0.74	0.81	0.3%	0.3%
5312	Offices of Real Estate Agents and Brokers	1,796	2,030	3.1%	\$52,317	\$56,650	0.71	0.73	0.2%	0.2%
5313	Activities Related to Real Estate	5,024	5,819	3.7%	\$41,678	\$42,574	0.91	0.99	0.6%	0.6%
INVESTMENT SUPPORT INDUSTRY CLUSTER SUMMARY		44,834	47,105	1.2%	\$66,019	\$70,820	1.05	1.08	5.0%	4.9%

Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Information Technology and Telecommunications Industry Cluster

The Information Technology and Telecommunications industry cluster employed 40,261 workers in 2015, declined by 0.9 percent annually, and had an employment concentration of 0.60. The average annual wages for this cluster was \$107,020, more than double that of the region. The largest industry was Computer Systems Design and Related Services with 9,740 employees. Wired Telecommunication Carriers and Audio and Video Equipment Manufacturing experienced the largest growth rate at 18.5 percent each, while Electronic and Precision Equipment Repair and Maintenance had the highest employment concentration rate at 1.57.



Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Chart interpretation: A bubble's position on the horizontal axis represents the level of employment growth experienced by that industry cluster from 2010 to 2015 as measured by the compound annual growth rate. Bubbles positioned on the right of zero indicate job growth and left of zero denotes job loss. The vertical position represents the employment concentration relative to California in 2015 (the higher the bubble, the greater concentration). A concentration greater than 1.0 indicates a higher concentration of jobs in the industry cluster than found statewide, and industry clusters with a concentration of 1.25 or higher are considered heavily concentrated. A high concentration indicates a competitive advantage and an area of regional specialization compared to the state. The size of the bubble indicates the employment (number of jobs) in that industry cluster in 2015.

Information Technology and Telecommunications Industry Cluster – Summary Table

INFORMATION TECHNOLOGY AND TELECOMMUNICATIONS INDUSTRY CLUSTER		Average Annual Employment 2010	Average Annual Employment 2015	Compound Annual Growth Rate 2010-2015	Average Annual Wages 2010	Average Annual Wages 2015	Employment Concentration 2010	Employment Concentration 2015	Percent of Regional Employment 2010	Percent of Regional Employment 2015
NAICS Code	Industry Description									
Capitol Region										
3341	Computer and Peripheral Equipment Manufacturing	3,914	3,897	-0.1%	\$213,186	\$203,220	1.10	0.98	0.4%	0.4%
3342	Communications Equipment Manufacturing	82	90	2.3%	\$126,249	\$54,810	0.05	0.07	0.0%	0.0%
3343	Audio and Video Equipment Manufacturing	33	65	18.5%	\$74,970	\$51,362	0.09	0.18	0.0%	0.0%
3344	Semiconductor and Other Electronic Component Manufacturing	1,519	1,238	-5.0%	\$77,762	\$76,727	0.28	0.24	0.2%	0.1%
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	1,444	1,240	-3.7%	\$75,183	\$78,111	0.26	0.26	0.2%	0.1%
5112	Software Publishers	756	830	2.3%	\$98,383	\$89,580	0.27	0.24	0.1%	0.1%
5171	Wired Telecommunications Carriers	2,003	3,951	18.5%	\$66,401	\$82,086	0.91	1.12	0.2%	0.4%
5172	Wireless Telecommunications Carriers (except Satellite)	812	741	-2.3%	\$69,195	\$74,269	0.62	0.67	0.1%	0.1%
5174	Satellite Telecommunications	102	71	-8.6%	\$67,463	\$55,826	0.40	0.67	0.0%	0.0%
5179	Other Telecommunications	4,396	409	-44.8%	\$88,987	\$90,847	1.96	0.84	0.5%	0.0%
5182	Data Processing, Hosting, and Related Services	502	707	9.0%	\$95,037	\$84,636	0.43	0.43	0.1%	0.1%
5191	Other Information Services	329	566	14.5%	\$69,159	\$66,249	0.14	0.13	0.0%	0.1%

Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

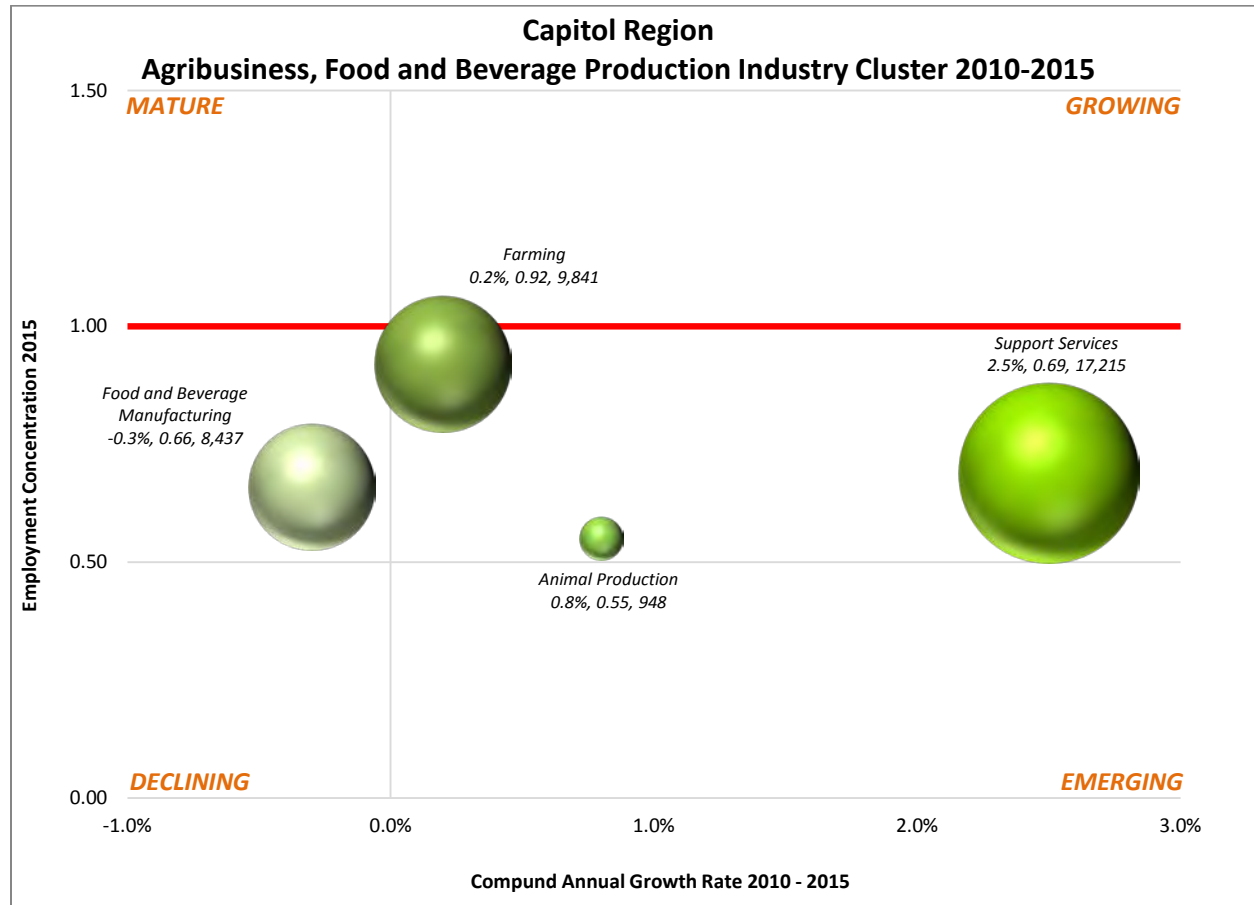
**Information Technology and Telecommunications Industry Cluster (continued) –
Summary Table**

INFORMATION TECHNOLOGY AND TELECOMMUNICATIONS INDUSTRY CLUSTER (CONTINUED)		Average Annual Employment 2010	Average Annual Employment 2015	Compound Annual Growth Rate 2010-2015	Average Annual Wages 2010	Average Annual Wages 2015	Employment Concentration 2010	Employment Concentration 2015	Percent of Regional Employment 2010	Percent of Regional Employment 2015
NAICS Code	Industry Description									
Capitol Region										
5413	Architectural, Engineering, and Related Services	8,977	8,935	-0.1%	\$85,432	\$85,653	0.91	0.86	1.0%	0.9%
5414	Specialized Design Services	345	429	5.6%	\$47,004	\$53,935	0.29	0.32	0.0%	0.0%
5415	Computer Systems Design and Related Services	8,784	9,740	2.6%	\$102,415	\$102,410	0.69	0.60	1.0%	1.0%
5417	Scientific Research and Development Services	6,583	6,317	-1.0%	\$130,749	\$139,304	0.89	0.80	0.7%	0.7%
8112	Electronic and Precision Equipment Repair and Maintenance	1,117	1,036	-1.9%	\$59,914	\$56,629	1.47	1.57	0.1%	0.1%
INFORMATION TECHNOLOGY AND TELECOMMUNICATIONS INDUSTRY CLUSTER SUMMARY		41,696	40,261	-0.9%	\$105,913	\$107,020	0.68	0.60	4.6%	4.2%

Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Agribusiness, Food and Beverage Production Industry Cluster

The Agribusiness, Food and Beverage Production industry cluster is composed of the following four industry sub-clusters: Farming, Food and Beverage Manufacturing, Support Services, and Animal Production. The industry cluster had 36,441 employees, grew by 1.1 percent annually, reported an average annual wage of \$40,204, and employment concentration of 0.72. Oilseed and Grain Farming, in the Farming sub-cluster, held the largest concentration at 6.69 in 2015. Animal Food Manufacturing, part of the Animal Production sub-cluster, had the highest growth rate at 32.6 percent annually, followed by Dairy Product Manufacturing, in the Food and Beverage Production sub-cluster, at 23.1 percent. The highest wages were reported in Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing at \$102,167.



Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Chart interpretation: A bubble's position on the horizontal axis represents the level of employment growth experienced by that industry cluster from 2010 to 2015 as measured by the compound annual growth rate. Bubbles positioned on the right of zero indicate job growth and left of zero denotes job loss. The vertical position represents the employment concentration relative to California in 2015 (the higher the bubble, the greater concentration). A concentration greater than 1.0 indicates a higher concentration of jobs in the industry cluster than found statewide, and industry clusters with a concentration of 1.25 or higher are considered heavily concentrated. A high concentration indicates a competitive advantage and an area of regional specialization compared to the state. The size of the bubble indicates the employment (number of jobs) in that industry cluster in 2015.

Agribusiness, Food and Beverage Production Industry Cluster – Summary Table

AGRIBUSINESS, FOOD AND BEVERAGE PRODUCTION INDUSTRY CLUSTER Capitol Region		Average Annual Employment 2010	Average Annual Employment 2015	Compound Annual Growth Rate 2010-2015	Average Annual Wages 2010	Average Annual Wages 2015	Employment Concentration 2010	Employment Concentration 2015	Percent of Regional Employment 2010	Percent of Regional Employment 2015
NAICS Code	Industry Description									
<i>Support Services</i>										
1151	Support Activities for Crop Production	6,353	7,239	3.3%	\$25,839	\$27,164	0.57	0.58	0.7%	0.7%
1152	Support Activities for Animal Production	91	147	12.7%	\$21,795	\$20,040	0.51	0.88	0.0%	0.0%
4244	Grocery and Related Product Merchant Wholesalers	4,726	5,147	2.2%	\$53,582	\$51,366	0.80	0.83	0.5%	0.5%
4245	Farm Product Raw Material Merchant Wholesalers	287	380	7.3%	\$55,075	\$ 54,411	2.82	3.08	0.0%	0.0%
4248	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers	905	969	1.7%	\$61,053	\$65,438	0.83	0.79	0.1%	0.1%
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	1,921	1,898	-0.3%	\$57,206	\$57,735	0.66	0.63	0.2%	0.2%
4452	Specialty Food Stores	1,327	1,434	2.0%	\$22,599	\$19,367	0.69	0.78	0.1%	0.1%
Support Services Summary		15,610	17,215	2.5%	\$ 40,379	\$ 39,816	0.67	0.69	1.7%	1.8%

Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

**Agribusiness, Food and Beverage Production Industry Cluster (continued) –
Summary Table**

AGRIBUSINESS, FOOD AND BEVERAGE PRODUCTION INDUSTRY CLUSTER (continued) Capitol Region		Average Annual Employment 2010	Average Annual Employment 2015	Compound Annual Growth Rate 2010-2015	Average Annual Wages 2010	Average Annual Wages 2015	Employment Concentration 2010	Employment Concentration 2015	Percent of Regional Employment 2010	Percent of Regional Employment 2015
NAICS Code	Industry Description									
<i>Farming</i>										
1111	Oilseed and Grain Farming	1,458	1,392	-1.2%	\$35,036	\$37,292	7.86	6.69	0.2%	0.1%
1112	Vegetable and Melon Farming	1,832	1,683	-2.1%	\$39,633	\$36,853	0.89	0.83	0.2%	0.2%
1113	Fruit and Tree Nut Farming	4,625	4,980	1.9%	\$26,885	\$30,961	0.78	0.82	0.5%	0.5%
1114	Greenhouse, Nursery, and Floriculture Production	871	1,063	5.1%	\$28,286	\$31,321	0.53	0.63	0.1%	0.1%
1119	Other Crop Farming	973	723	-7.2%	\$35,399	\$41,269	1.14	1.00	0.1%	0.1%
<i>Farming Summary</i>		9,759	9,841	0.2%	\$31,471	\$33,660	0.92	0.92	1.1%	1.0%

Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

**Agribusiness, Food and Beverage Production Industry Cluster (continued) –
Summary Table**

AGRIBUSINESS, FOOD AND BEVERAGE PRODUCTION INDUSTRY CLUSTER (continued)		Average Annual Employment 2010	Average Annual Employment 2015	Compound Annual Growth Rate 2010-2015	Average Annual Wages 2010	Average Annual Wages 2015	Employment Concentration 2010	Employment Concentration 2015	Percent of Regional Employment 2010	Percent of Regional Employment 2015
Capitol Region										
NAICS Code	Industry Description									
<i>Food and Beverage Manufacturing Industry Cluster</i>										
3111	Animal Food Manufacturing	46	143	32.6%	\$40,636	\$46,559	0.20	0.66	0.0%	0.0%
3112	Grain and Oilseed Milling	931	946	0.4%	\$54,021	\$53,156	3.64	3.72	0.1%	0.1%
3113	Sugar and Confectionery Product Manufacturing	89	122	8.2%	\$23,341	\$33,443	0.24	0.33	0.0%	0.0%
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing	2,279	1,726	-6.7%	\$55,016	\$47,188	1.17	0.96	0.3%	0.2%
3115	Dairy Product Manufacturing	172	394	23.1%	\$55,800	\$56,281	0.16	0.37	0.0%	0.0%
3116	Animal Slaughtering and Processing	171	214	5.8%	\$55,651	\$68,280	0.13	0.17	0.0%	0.0%
3118	Bakeries and Tortilla Manufacturing	1,298	1,171	-2.5%	\$44,516	\$33,722	0.53	0.47	0.1%	0.1%
3119	Other Food Manufacturing	1,050	1,202	3.4%	\$54,662	\$58,281	0.74	0.70	0.1%	0.1%
3121	Beverage Manufacturing	1,899	1,845	-0.7%	\$50,574	\$44,365	0.73	0.59	0.2%	0.2%
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	146	196	7.7%	\$102,679	\$102,167	1.27	1.60	0.0%	0.0%
3331	Agriculture, Construction, and Mining Machinery Manufacturing	456	479	1.2%	\$49,134	\$50,811	1.48	1.20	0.1%	0.0%
<i>Food and Beverage Manufacturing Summary</i>		8,536	8,437	-0.3%	\$52,401	\$49,184	0.70	0.66	0.9%	0.9%

Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Capitol Region Industry Clusters of Opportunity (2010-2015)
Prepared by California Employment Development Department, Labor Market Information Division, March 2016

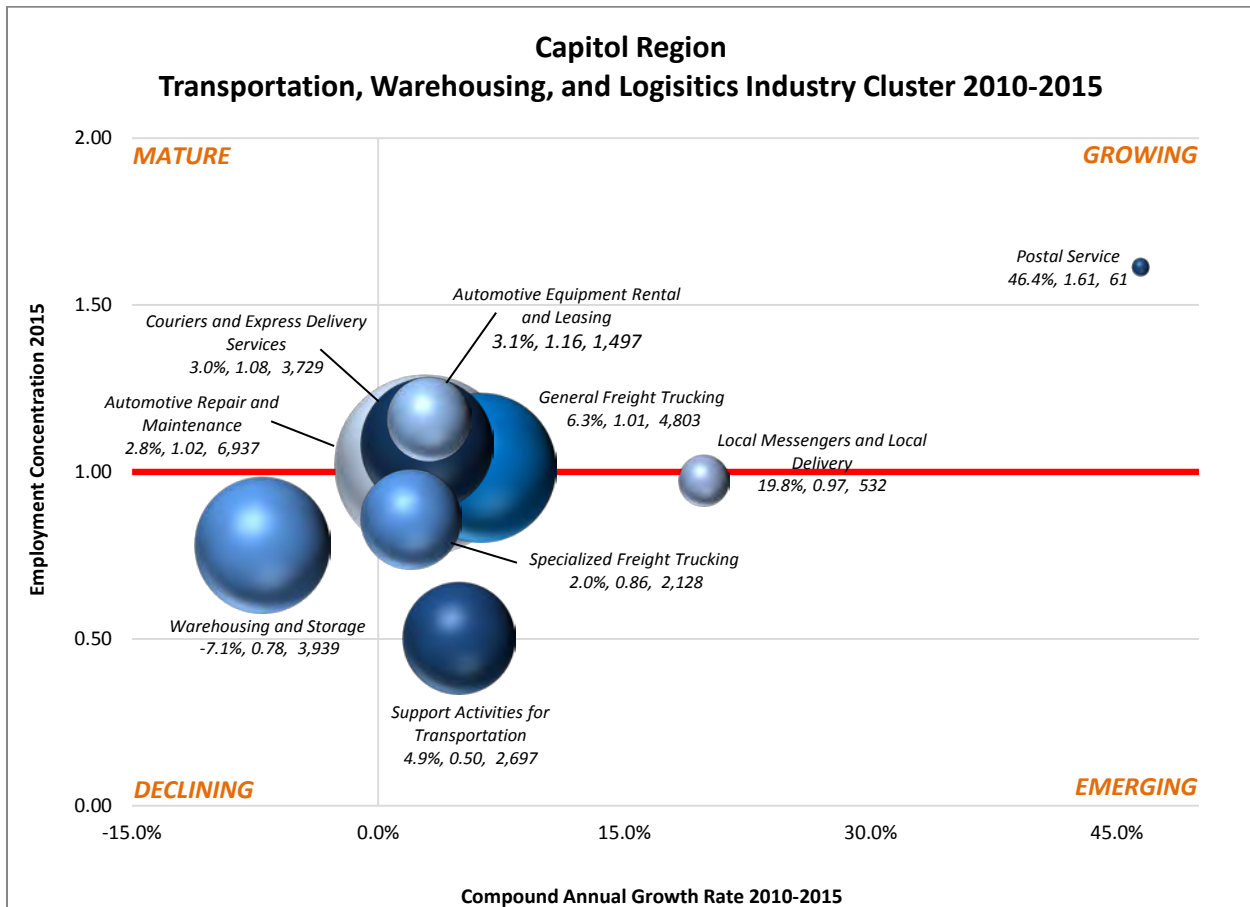
**Agribusiness, Food and Beverage Production Industry Cluster (continued) –
Summary Table**

AGRIBUSINESS, FOOD AND BEVERAGE PRODUCTION INDUSTRY CLUSTER (continued) Capitol Region		Average Annual Employment 2010	Average Annual Employment 2015	Compound Annual Growth Rate 2010-2015	Average Annual Wages 2010	Average Annual Wages 2015	Employment Concentration 2010	Employment Concentration 2015	Percent of Regional Employment 2010	Percent of Regional Employment 2015
NAICS Code	Industry Description									
<i>Animal Production Industry Cluster</i>										
1121	Cattle Ranching and Farming	647	578	-2.8%	\$30,172	\$31,972	0.46	0.42	0.1%	0.1%
1123	Poultry and Egg Production	39	38	-1.1%	\$31,349	\$30,320	0.23	0.26	0.0%	0.0%
1124	Sheep and Goat Farming	7	9	7.9%	\$18,993	\$36,132	0.21	0.32	0.0%	0.0%
1125	Aquaculture	30	45	10.6%	\$71,900	\$55,064	0.95	2.02	0.0%	0.0%
1129	Other Animal Production	197	279	9.1%	\$39,471	\$39,487	1.38	2.01	0.0%	0.0%
<i>Animal Production Summary</i>		920	948	0.8%	\$33,498	\$35,252	0.52	0.55	0.1%	0.1%
AGRIBUSINESS, FOOD AND BEVERAGE PRODUCTION INDUSTRY CLUSTER SUMMARY		34,825	36,441	1.1%	\$ 40,647	\$ 40,204	0.73	0.72	3.9%	3.8%

Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Transportation, Warehousing, and Logistics Industry Cluster

The Transportation, Warehousing, and Logistics industry cluster showed an employment concentration of 0.89, employed 26,322 workers, and grew at a rate of 2.0 percent annually. The average annual wage for this cluster was \$41,298. The largest industry was Automotive Repair and Maintenance, with 6,937 employees in 2015. Postal Service saw the largest growth rate over the study period at 46.4 percent and recorded the highest concentration at 1.61.



Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Chart interpretation: A bubble's position on the horizontal axis represents the level of employment growth experienced by that industry cluster from 2010 to 2015 as measured by the compound annual growth rate. Bubbles positioned on the right of zero indicate job growth and left of zero denotes job loss. The vertical position represents the employment concentration relative to California in 2015 (the higher the bubble, the greater concentration). A concentration greater than 1.0 indicates a higher concentration of jobs in the industry cluster than found statewide, and industry clusters with a concentration of 1.25 or higher are considered heavily concentrated. A high concentration indicates a competitive advantage and an area of regional specialization compared to the state. The size of the bubble indicates the employment (number of jobs) in that industry cluster in 2015.

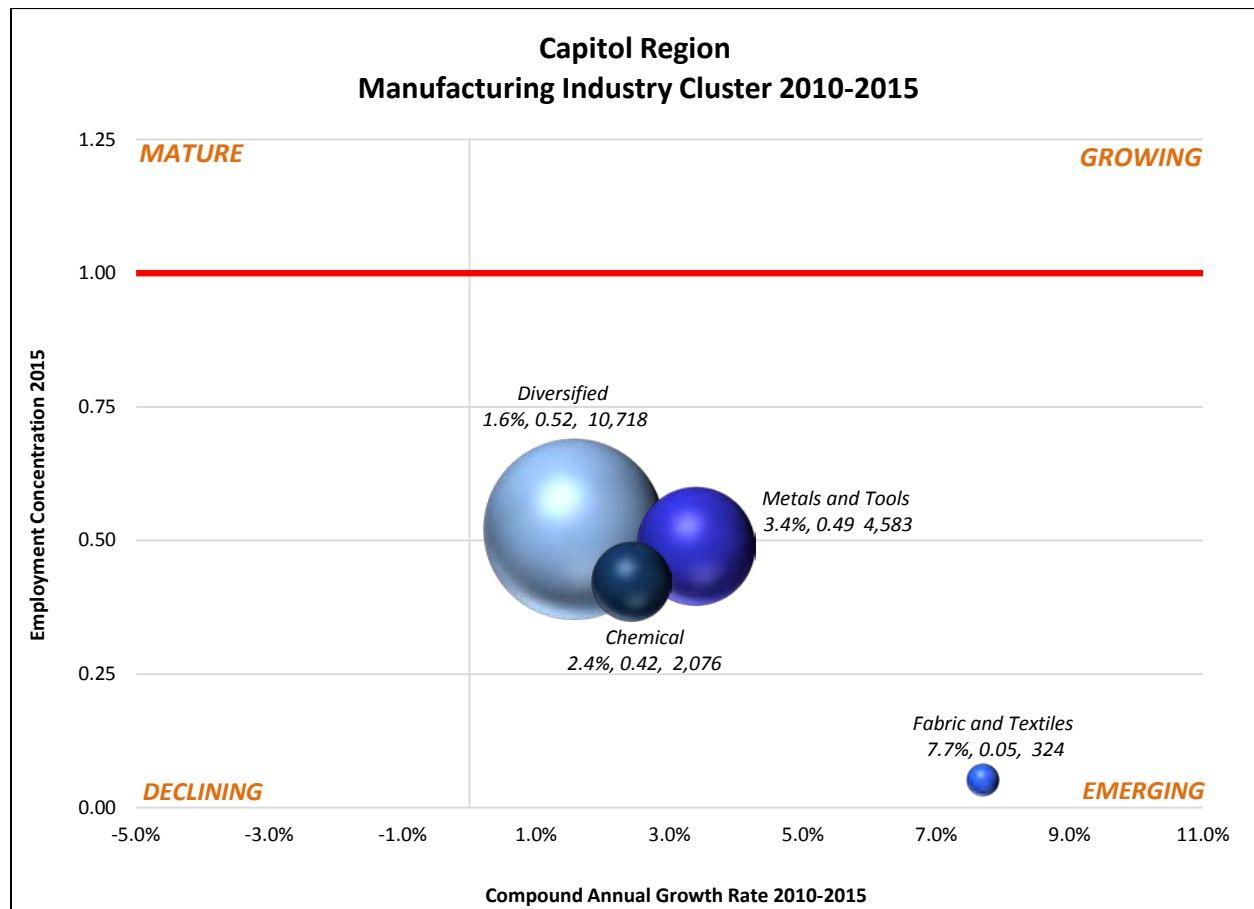
Transportation, Warehousing, and Logistics Industry Cluster – Summary Table

TRANSPORTATION, WAREHOUSING, AND LOGISTICS INDUSTRY CLUSTER Capitol Region		Average Annual Employment 2010	Average Annual Employment 2015	Compound Annual Growth Rate 2010-2015	Average Annual Wages 2010	Average Annual Wages 2015	Employment Concentration 2010	Employment Concentration 2015	Percent of Regional Employment 2010	Percent of Regional Employment 2015
NAICS Code	Industry Description									
4841	General Freight Trucking	3,764	4,803	6.3%	\$41,150	\$38,860	0.90	1.01	0.4%	0.5%
4842	Specialized Freight Trucking	1,966	2,128	2.0%	\$37,129	\$39,801	0.88	0.86	0.2%	0.2%
488	Support Activities for Transportation	2,225	2,697	4.9%	\$50,751	\$48,405	0.46	0.50	0.2%	0.3%
4911	Postal Service	13	61	46.4%	\$31,942	\$28,161	0.25	1.61	0.0%	0.0%
4921	Couriers and Express Delivery Services	3,317	3,729	3.0%	\$44,779	\$44,716	1.05	1.08	0.4%	0.4%
4922	Local Messengers and Local Delivery	258	532	19.8%	\$33,117	\$25,199	0.57	0.97	0.0%	0.1%
4931	Warehousing and Storage	5,277	3,939	-7.1%	\$46,867	\$47,944	1.25	0.78	0.6%	0.4%
5321	Automotive Equipment Rental and Leasing	1,325	1,497	3.1%	\$42,951	\$41,154	1.18	1.16	0.1%	0.2%
8111	Automotive Repair and Maintenance	6,203	6,937	2.8%	\$37,007	\$36,454	.99	1.02	0.7%	0.7%
TRANSPORTATION, WAREHOUSING, AND LOGISTICS INDUSTRY CLUSTER SUMMARY		24,348	26,322	2.0%	\$42,388	\$41,298	0.92	0.89	2.7%	2.7%

Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Manufacturing Industry Cluster

The Manufacturing industry cluster had 17,701 jobs, grew by 2.2 percent annually, and had an employment concentration of 0.43. The cluster posted annual average wages of \$57,720; this is above the Capital Region’s total industry 2015 annual average wage of \$52,774. This industry cluster is comprised of four sub-clusters, listed in descending order: Diversified, Metals and Tools, Chemical, and Fabric and Textiles Manufacturing. The largest sub-cluster, Diversified Manufacturing, provided 10,718 jobs, grew by 1.6 percent annually, and has an employment concentration of 0.52. The Metals and Tools Manufacturing sub-cluster provided 4,583 jobs, grew by 3.4 percent annually, and has an employment concentration of 0.49. The Chemical Manufacturing sub-cluster provided 2,076 jobs, grew by 2.4 percent annually, and has an employment concentration of 0.42. The Fabric and Textiles Manufacturing sub-cluster provided 324 jobs, grew by 7.7 percent annually, and has an employment concentration of 0.05 percent.



Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Chart interpretation: A bubble’s position on the horizontal axis represents the level of employment growth experienced by that industry cluster from 2010 to 2015 as measured by the compound annual growth rate. Bubbles positioned on the right of zero indicate job growth and left of zero denotes job loss. The vertical position represents the employment concentration relative to California in 2015 (the higher the bubble, the greater concentration). A concentration greater than 1.0 indicates a higher concentration of jobs in the industry cluster than found statewide, and industry clusters with a concentration of 1.25 or higher are considered heavily concentrated. A high concentration indicates a competitive advantage and an area of regional specialization compared to the state. The size of the bubble indicates the employment (number of jobs) in that industry cluster in 2015.

Manufacturing Industry Cluster – Summary Table

MANUFACTURING INDUSTRY CLUSTER Capitol Region		Average Annual Employment 2010	Average Annual Employment 2015	Compound Annual Growth Rate 2010-2015	Average Annual Wages 2010	Average Annual Wages 2015	Employment Concentration 2010	Employment Concentration 2015	Percent of Regional Employment 2010	Percent of Regional Employment 2015
NAICS Code	Industry Description									
<i>Diversified Manufacturing</i>										
3222	Converted Paper Product Manufacturing	538	753	8.8%	\$58,293	\$60,780	0.42	0.62	0.1%	0.1%
3231	Printing and Related Support Activities	1,738	1,779	0.6%	\$46,728	\$48,775	0.62	0.69	0.2%	0.2%
3332	Industrial Machinery Manufacturing	145	274	17.3%	\$43,434	\$51,346	0.17	0.30	0.0%	0.0%
3333	Commercial and Service Industry Machinery Manufacturing	129	108	-4.3%	\$54,232	\$67,031	0.19	0.16	0.0%	0.0%
3339	Other General Purpose Machinery Manufacturing	416	526	6.1%	\$59,411	\$54,905	0.42	0.54	0.0%	0.1%
3359	Other Electrical Equipment and Component Manufacturing	151	259	14.6%	\$62,187	\$59,402	0.21	0.33	0.0%	0.0%
336	Transportation Equipment Manufacturing	3,092	3,398	2.4%	\$80,688	\$91,528	0.48	0.51	0.3%	0.4%
3399	Other Miscellaneous Manufacturing	921	881	-1.1%	\$45,014	\$49,532	0.49	0.47	0.1%	0.1%
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	1,657	1,661	0.1%	\$44,379	\$44,709	0.79	0.73	0.2%	0.2%
4239	Miscellaneous Durable Goods Merchant Wholesalers	1,288	1,079	-4.3%	\$43,038	\$42,265	0.50	0.41	0.1%	0.1%
<i>Diversified Manufacturing Summary</i>		10,074	10,718	1.6%	\$57,556	\$62,756	0.50	0.52	1.1%	1.1%

Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Manufacturing Industry Cluster (continued) – Summary Table

MANUFACTURING INDUSTRY CLUSTER (continued) Capitol Region		Average Annual Employment 2010	Average Annual Employment 2015	Compound Annual Growth Rate 2010-2015	Average Annual Wages 2010	Average Annual Wages 2015	Employment Concentration 2010	Employment Concentration 2015	Percent of Regional Employment 2010	Percent of Regional Employment 2015
NAICS Code	Industry Description									
<i>Metals and Tools Manufacturing</i>										
3321	Forging and Stamping	18	19	2.2%	\$69,017	\$63,912	0.03	0.03	0.0%	0.0%
3322	Cutlery and Handtool Manufacturing	24	38	12.3%	\$42,384	\$35,791	0.16	0.28	0.0%	0.0%
3323	Architectural and Structural Metals Manufacturing	1,342	1,643	5.2%	\$49,323	\$46,846	0.82	0.89	0.1%	0.2%
3324	Boiler, Tank, and Shipping Container Manufacturing	256	206	-5.3%	\$59,214	\$54,896	0.80	0.69	0.0%	0.0%
3325	Hardware Manufacturing	6	44	63%	\$46,673	\$54,781	0.04	0.30	0.0%	0.0%
3326	Spring and Wire Product Manufacturing	38	54	9.0%	\$43,523	\$41,332	0.21	0.29	0.0%	0.0%
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	888	990	2.7%	\$53,442	\$52,670	0.37	0.37	0.1%	0.1%
3328	Coating, Engraving, Heat Treating, and Allied Activities	167	247	10.3%	\$34,577	\$34,889	0.18	0.25	0.0%	0.0%
3329	Other Fabricated Metal Product Manufacturing	553	437	-5.7%	\$49,875	\$48,106	0.56	0.41	0.1%	0.0%
3335	Metalworking Machinery Manufacturing	494	615	5.7%	\$59,338	\$58,525	0.71	0.81	0.1%	0.1%
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	224	291	6.8%	\$53,972	\$46,485	0.34	0.43	0.0%	0.0%
<i>Metals and Tools Manufacturing Summary</i>		4,009	4,583	3.4%	\$51,808	\$49,477	0.47	0.49	0.4%	0.5%

Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Manufacturing Industry Cluster (continued) – Summary Table

MANUFACTURING INDUSTRY CLUSTER (continued) Capitol Region		Average Annual Employment 2010	Average Annual Employment 2015	Compound Annual Growth Rate 2010-2015	Average Annual Wages 2010	Average Annual Wages 2015	Employment Concentration 2010	Employment Concentration 2015	Percent of Regional Employment 2010	Percent of Regional Employment 2015
NAICS Code	Industry Description									
<i>Chemical Manufacturing</i>										
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	184	156	-4.1%	\$78,522	\$84,192	0.27	0.23	0.0%	0.0%
3259	Other Chemical Product and Preparation Manufacturing	49	56	3.1%	\$37,446	\$44,694	0.14	0.16	0.0%	0.0%
3261	Plastics Product Manufacturing	642	767	4.6%	\$52,330	\$46,182	0.27	0.32	0.1%	0.1%
3262	Rubber Product Manufacturing	169	165	-0.6%	\$49,156	\$43,653	0.50	0.53	0.0%	0.0%
3271	Clay Product and Refractory Manufacturing	233	178	-6.5%	\$52,819	\$43,854	1.43	1.28	0.0%	0.0%
3279	Other Nonmetallic Mineral Product Manufacturing	388	398	0.6%	\$51,048	\$56,722	1.33	1.31	0.0%	0.0%
4246	Chemical and Allied Products Merchant Wholesalers	220	356	12.8%	\$69,935	\$64,421	0.31	0.47	0.0%	0.0%
<i>Chemical Manufacturing Summary</i>		1,885	2,076	2.4%	\$56,067	\$53,741	0.38	0.42	0.2%	0.2%

Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

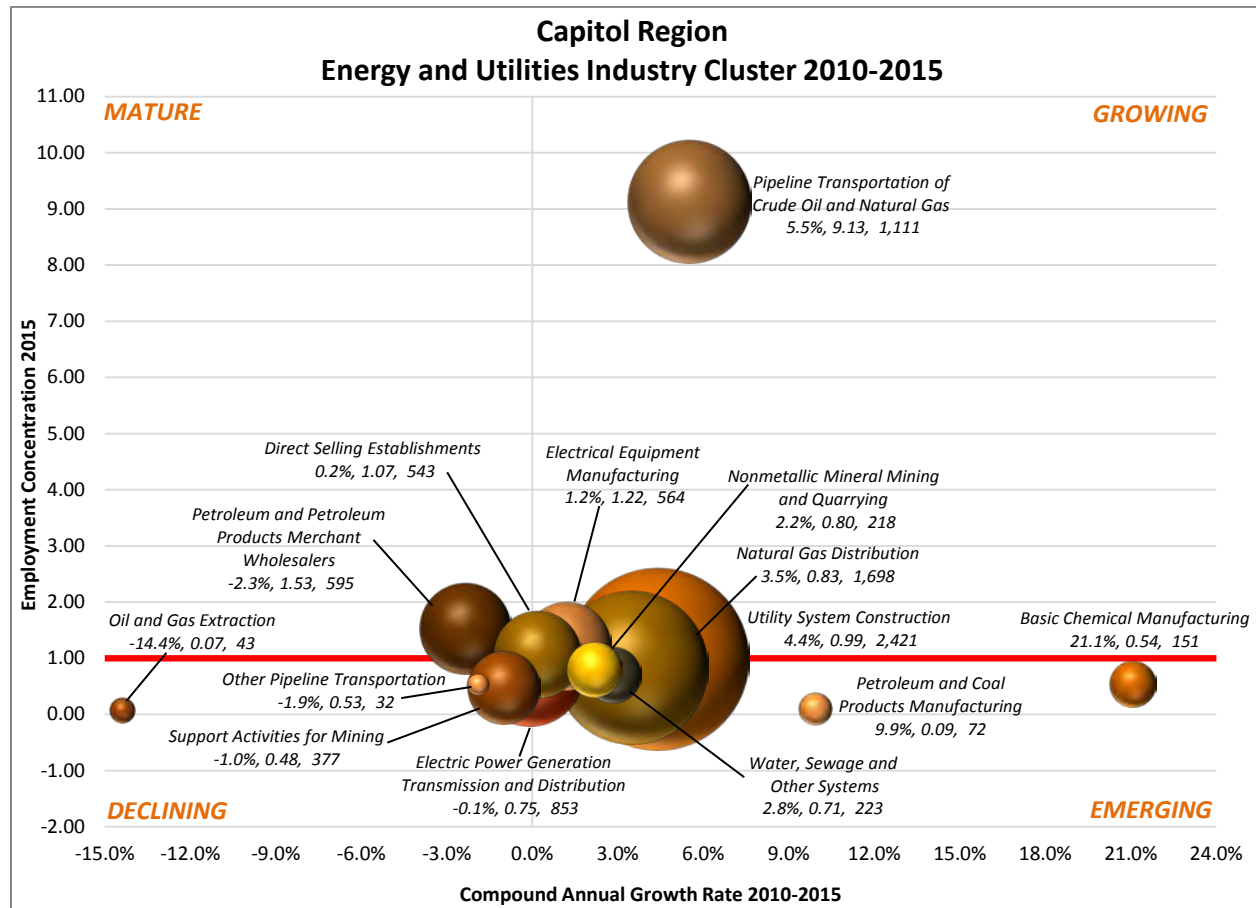
Manufacturing Industry Cluster (continued) – Summary Table

MANUFACTURING INDUSTRY CLUSTER (continued) Capitol Region		Average Annual Employment 2010	Average Annual Employment 2015	Compound Annual Growth Rate 2010-2015	Average Annual Wages 2010	Average Annual Wages 2015	Employment Concentration 2010	Employment Concentration 2015	Percent of Regional Employment 2010	Percent of Regional Employment 2015
NAICS Code	Industry Description									
<i>Fabric and Textiles Manufacturing</i>										
313	Textile Mills	34	15	-18.2%	\$28,969	\$16,387	0.06	0.03	0.0%	0.0%
3149	Other Textile Product Mills	85	144	14.2%	\$37,509	\$33,608	0.27	0.47	0.0%	0.0%
3152	Cut and Sew Apparel Manufacturing	63	35	-13.4%	\$23,099	\$31,278	0.02	0.01	0.0%	0.0%
3169	Other Leather and Allied Product Manufacturing	15	22	10.5%	\$42,080	\$28,284	0.10	0.18	0.0%	0.0%
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	45	108	24.6%	\$64,002	\$36,803	0.02	0.05	0.0%	0.0%
<i>Fabric and Textiles Manufacturing Summary</i>		241	324	7.7%	\$37,735	\$33,253	0.04	0.05	0.0%	0.0%
MANUFACTURING INDUSTRY CLUSTER SUMMARY		16,209	17,701	2.2%	\$55,667	\$57,720	0.40	0.43	1.8%	1.8%

Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Energy and Utilities Industry Cluster

The Energy and Utilities industry cluster saw an employment increase of 2.6 percent annually, ending the study period with 8,900 employees, and reported an employment concentration of 0.87. The average annual wage for this cluster was \$88,907. Pipeline Transportation of Crude Oil and Natural Gas had the highest employment concentration at 9.13. Electric Power Generation, Transmission, and Distribution posted the highest wages at \$136,460. The largest industry in the cluster was Utility System Construction with 2,421 employees and an employment concentration of 0.99 in 2015. The largest growth was reported in Basic Chemical Manufacturing at 21.1 percent.



Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Chart interpretation: A bubble's position on the horizontal axis represents the level of employment growth experienced by that industry cluster from 2010 to 2015 as measured by the compound annual growth rate. Bubbles positioned on the right of zero indicate job growth and left of zero denotes job loss. The vertical position represents the employment concentration relative to California in 2015 (the higher the bubble, the greater concentration). A concentration greater than 1.0 indicates a higher concentration of jobs in the industry cluster than found statewide, and industry clusters with a concentration of 1.25 or higher are considered heavily concentrated. A high concentration indicates a competitive advantage and an area of regional specialization compared to the state. The size of the bubble indicates the employment (number of jobs) in that industry cluster in 2015.

Energy and Utilities Industry Cluster – Summary Table

ENERGY AND UTILITIES INDUSTRY CLUSTER		Average Annual Employment 2010	Average Annual Employment 2015	Compound Annual Growth Rate 2010-2015	Average Annual Wages 2010	Average Annual Wages 2015	Employment Concentration 2010	Employment Concentration 2015	Percent of Regional Employment 2010	Percent of Regional Employment 2015
NAICS Code	Industry Description									
Capitol Region										
2111	Oil and Gas Extraction	79	43	-14.4%	\$79,159	\$72,133	0.14	0.07	0.0%	0.0%
2123	Nonmetallic Mineral Mining and Quarrying	200	218	2.2%	\$73,869	\$75,961	0.71	0.80	0.0%	0.0%
2131	Support Activities for Mining	393	377	-1.0%	\$63,904	\$72,090	0.58	0.48	0.0%	0.0%
2211	Electric Power Generation, Transmission, and Distribution	856	853	-0.1%	\$137,465	\$136,460	0.63	0.75	0.1%	0.1%
2212	Natural Gas Distribution	1,480	1,698	3.5%	\$118,827	\$125,572	0.77	0.83	0.2%	0.2%
2213	Water, Sewage, and Other Systems	199	223	2.8%	\$52,130	\$49,478	0.70	0.71	0.0%	0.0%
2371	Utility System Construction	2,038	2,421	4.4%	\$73,414	\$70,997	1.07	0.99	0.2%	0.2%
3241	Petroleum and Coal Products Manufacturing	50	72	9.9%	\$113,626	\$119,527	0.05	0.09	0.0%	0.0%
3251	Basic Chemical Manufacturing	70	151	21.1%	\$80,601	\$101,064	0.27	0.54	0.0%	0.0%
3353	Electrical Equipment Manufacturing	538	564	1.2%	\$61,271	\$60,437	1.04	1.22	0.1%	0.1%
4247	Petroleum and Petroleum Products Merchant Wholesalers	654	595	-2.3%	\$62,242	\$59,089	1.45	1.33	0.1%	0.1%
4543	Direct Selling Establishments	539	543	0.2%	\$47,990	\$43,971	0.92	1.07	0.1%	0.1%
4861 4862	Pipeline Transportation of Crude Oil and Natural Gas	897	1,111	5.5%	\$100,961	\$100,570	8.71	9.13	0.1%	0.1%
4869	Other Pipeline Transportation	35	32	-1.9%	\$92,892	\$99,920	0.50	0.53	0.0%	0.0%
ENERGY AND UTILITIES INDUSTRY CLUSTER SUMMARY		8,026	8,900	2.6%	\$87,738	\$88,907	0.81	0.87	0.9%	0.9%

Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages (QCEW) Program, 2010 and 2015 Annual Average.

Data Sources

California Employment Development Department (EDD), Labor Market Information Division (LMID)

[Quarterly Census of Employment and Wages \(QCEW\)](http://www.labormarketinfo.edd.ca.gov/qcew/cew-select.asp) Program, 2010 (2nd Quarter 2010 through 1st Quarter 2011) – 2015 (2nd Quarter 2014 through 1st Quarter 2015)
(<http://www.labormarketinfo.edd.ca.gov/qcew/cew-select.asp>)

The Quarterly Census of Employment and Wages (QCEW) Program, also known as the ES-202 Program, is a Federal-State cooperative program operated by the Employment Development Department's (EDD) Labor Market Information Division (LMID). The EDD staff compiles the data from reports filed by employers each quarter. The QCEW Program produces a comprehensive tabulation of employment and wage information for workers covered by California Unemployment Insurance (UI) laws and Federal workers covered by the Unemployment Compensation for Federal Employees (UCFE) program. More information about the program can be found at the Labor Market Information Division website.

U.S. Department of Labor (DOL), Bureau of Labor Statistics (BLS)

[Employment Concentration](http://data.bls.gov/location_quotient/ControllerServlet), 2015
(http://data.bls.gov/location_quotient/ControllerServlet)

The Employment Concentration, or Location Quotient (LQ), is calculated using data from the Quarterly Census of Employment and Wages (QCEW) Program. The quotient compares regional employment concentration to the national or statewide employment concentration. The resultant measure is a ratio called "location quotient" that indicates the level of specialization of the industry within the selected geographic area. The LQ is used to indicate the extent to which the local economy is importing, self-sufficient, or exporting goods and services.



State of California

Labor and Workforce Development Agency

Employment Development Department

The EDD is an equal opportunity employer/program. Auxiliary aids and services are available upon request to individuals with disabilities. Requests for services, aids, and/or alternate forms need to be made by calling 916-262-2166 (voice). TTY users, please call the California Relay Service at 711.

Capitol Region Industry Clusters of Opportunity (2010-2015)
Prepared by California Employment Development Department, Labor Market Information Division, March 2016



Capital
Adult Education
Regional Consortium



AB 86 Comprehensive Regional Plan

March 1, 2015

The Capital Adult Education Regional Consortium (CAERC) includes the Los Rios Community College District Service Area and Amador County.

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Overview of the Consortium

Assembly Bill 86 charged the California Department of Education (CDE) and the California Community Colleges Chancellor's Office (CCCCO) with the task of jointly implementing an adult education planning process. The legislation appropriated \$25 million to distribute to regional consortia to develop plans with the shared goal of better serving the educational needs of California's adult learners.

AB 86 Regional Planning Process for CAERC

Organizational Structure

The Capital Adult Education Regional Consortium (CAERC) represents adult education providers and colleges within the Los Rios Community College District (LRCCD) service area. At the request of CCCCCO, the CAERC service area was expanded to include Amador County, a geographical area not currently served by a California Community College District.

The educational needs of adults in the region have been served through services of local educational agencies (LEA), county offices of education, community colleges, and community-based organizations (CBO). CAERC is comprised of 15 members—inclusive of 4 community colleges and 11 K-12 school districts—and 23 partner organizations.

Member Organizations

The 15 members of CAERC are comprised of the following:

- Amador County Unified School District
- American River College, Los Rios Community College District
- Center Joint Unified School District
- Cosumnes River College, Los Rios Community College District
- Davis Joint Unified School District
- Elk Grove Unified School District
- Folsom Cordova Unified School District
- Folsom Lake College, Los Rios Community College District
- Galt Joint Union High School District
- Natomas Unified School District
- Sacramento City College, Los Rios Community College District
- Sacramento City Unified School District
- San Juan Unified School District
- Twin Rivers Unified School District
- Washington Unified School District

Note: El Dorado Union High School District and Black Oak Mine Unified School District have opted to join CAERC as partners.

Partner Organizations

Partnerships across educational institutions, apprenticeship programs, workforce agencies, and community-based organizations have been critical to rethinking and redesigning adult education in the region. To ensure that planning is comprehensive and well coordinated across agencies, collaboration with regional partners began in August 2014.

The 23 partners of CAERC are comprised of the following:

- Alta California Regional Center
- Black Oak Mine Unified School District
- Building Skills Partnership
- California Department of Corrections and Rehabilitation
- California Department of Developmental Services
- California Human Development
- California State Library
- Capital Region Academies for the Next Economy - CRANE
- El Dorado County Library
- El Dorado County Office of Education
- El Dorado Union High School District
- Greater Sacramento Urban League
- Highlands Community Charter and Technical Schools
- La Familia Counseling Center
- Mexican Consulate
- Sacramento County Office of Education, Outreach and Technical Assistance Network (OTAN)
- Sacramento Employment and Training Agency (SETA)
- Sacramento ESL Program
- Sacramento Food Bank and Family Services
- Sacramento Job Corps
- Sacramento Public Library Authority
- Yolo County Library
- Yolo County Office of Education

County offices of education are key partners in the planning and implementation of adult education in the region. The county offices of education have structures in place and the expertise to provide overarching facilitation and support to the work of the consortium. CAERC has partnered with Sacramento County Office of Education (SCOE), El Dorado County Office of Education (EDCOE), and Yolo County Office of Education (YCOE).

SCOE operates the state's Outreach and Technical Assistance Network (OTAN), a resource for adult educators geared toward assisting them in the use and integration of technology, electronic collaboration, and information services. OTAN's expertise in technology use and training adds a technology-oriented perspective to the planning process. As part of OTAN, SCOE houses a vast library of resources on adult education,

including historical data and literature on adult education in California over the decades. Such information provides a rich context for understanding the needs and the complexities of adult education programs in the region.

EDCOE, serving the diverse county that covers metropolitan suburbs of Sacramento as well as rural foothill communities of the Sierra Nevada Mountains and Lake Tahoe, provides a wide range of programs to meet community needs. As an intermediate educational agency, EDCOE provides technical assistance and coordinates adult education programs and services between school districts and state control agencies to maximize effectiveness and reduce duplication of efforts.

YCOE provides a wide range of educational and administrative services to the children, parents and school districts of Yolo County. Educational services provided or coordinated by YCOE include: alternative education; curriculum, instructional and intervention services; early childhood education; CTE and youth services; and homeless education and foster youth services.

Other key partners who have committed to participating in CAERC are Sacramento Employment and Training Agency (SETA), California Human Development (CHD), Alta California Regional Center (Alta) and the Sacramento Public Library Authority. SETA, a key representative on the Sacramento Workforce Investment Board, operates a vast system of career and training centers serving both youth and adults, and works with adult education schools to provide English language development, job training, and citizenship courses to refugee families. CHD assists farm workers and other low-income and limited English-speaking populations with obtaining education, training, job opportunities, and improved social conditions necessary for greater self-sufficiency. Alta assists individuals with disabilities in choosing and planning services, and serves as a collaborative partner within a wide network of providers and agencies that work to connect individuals in need with available community resources. SETA, CHD, Alta, and the Sacramento Library, given their expertise in serving adults with diverse needs, offer additional insights into adult learner needs and effective practices. Their participation in the planning process contributes to innovation and even broader alignment across systems.

Shared Leadership Strategies

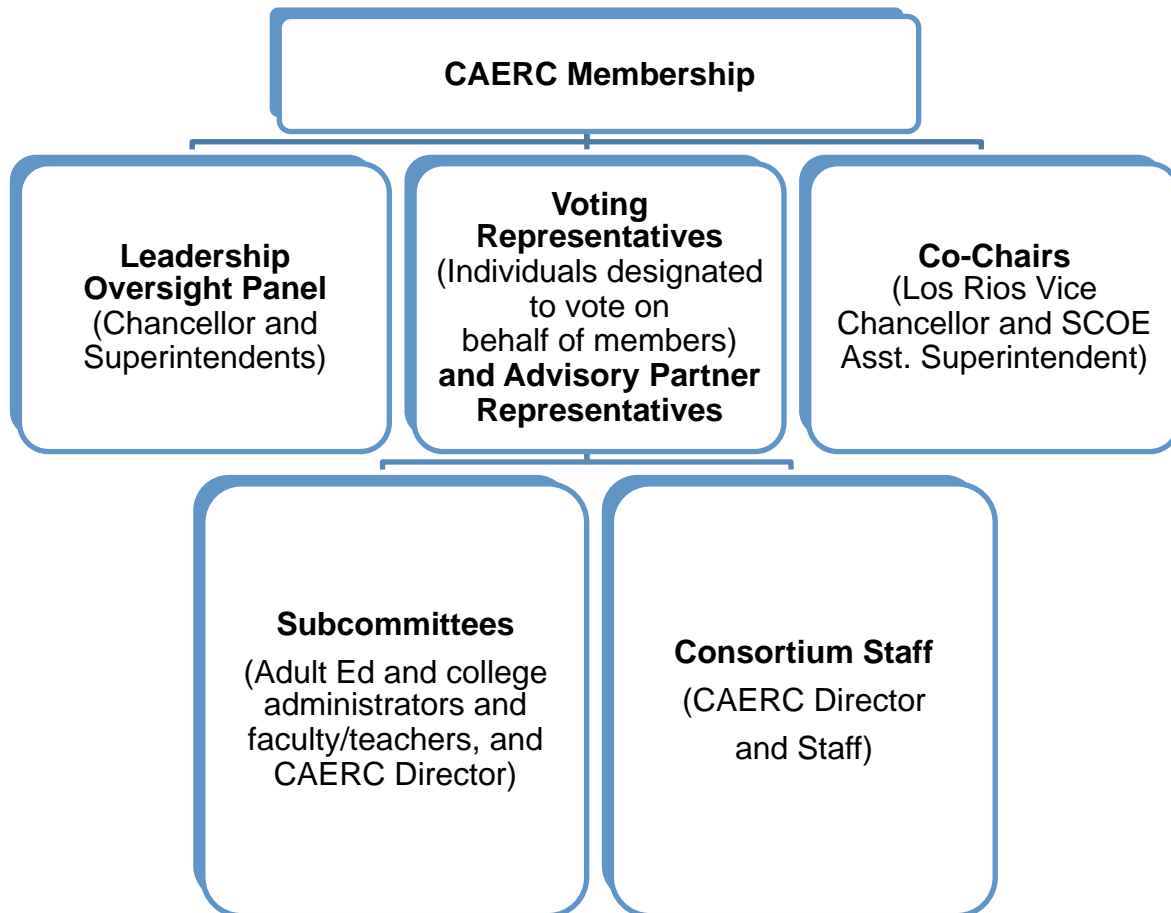
CAERC consists of the following management structure, which facilitates shared leadership of this project: (1) Leadership Oversight Panel; (2) Consortium Co-Chairs; (3) a delegation of voting representatives and advisory partners; (4) Subcommittees; and (5) consortium staff.

Leadership Oversight Panel

The purpose of the Leadership Oversight Panel is to provide leadership and alignment to support the planning process at the highest level. The panel consists of the executive leadership of CAERC members including the chancellor of Los Rios and superintendents of member school districts. The panel convened at the CAERC kickoff

meeting and will meet again after submission of the final CAERC Regional Plan. The Consortium Co-Chairs have provided the Panel with updates on the status of planning efforts, including progress toward AB 86 objectives.

Figure 1.1. CAERC Management Structure



Consortium Co-Chairs

The purposes of the Co-Chairs are to manage the Consortium's planning process and to ensure that grant objectives are met. The Los Rios Vice Chancellor for Education and Technology and the Sacramento County Office of Education Assistant Superintendent of Technology Services serve as the Co-Chairs of the Consortium. Co-Chairs coordinate with each other and work collaboratively to: lead Consortium meetings; facilitate the planning process; lead voting processes; monitor progress toward objectives; provide administrative oversight for contractual relationships; and provide regular reports to the Leadership Oversight Panel.

Proposed CAERC Operational Management Structure

As of this date, it is clear that a range of state level policy and administrative decisions will be made that are pertinent to the operation of adult education consortia. With that understanding, CAERC is not yet proposing a management structure for 2015-16.

However, informal discussions are underway with the Leadership Oversight Panel and CAERC members. When governing legislation and administrative governance rules are finalized, CAERC will revisit leadership and governance and establish a system that meets state requirements and regional needs.

Description of Planning Process

Voting Representatives and Advisory Partner Representatives

The purpose of voting representatives during the planning process has ensured a voice for each CAERC member at key decision points for the Consortium. Each college and school district in the consortium are entitled to one vote. The Co-Chairs do not have a vote. Each college and school district are responsible for identifying one individual plus one alternate authorized to vote on their behalf at CAERC meetings. These individuals should have the authority to coordinate on behalf of the college or school district.

Advisory partner representatives also have a voice within the decision-making process through advisory votes. Advisory votes are solicited and documented during any voting process to ensure that partners are able to express their positions on matters of interest. Partners serve as advisement/feedback to inform the decisions of voting members.

Voting members and partner representatives have been engaged throughout the planning process, meeting or conferring with the Subcommittees (see description below) as necessary to decide on matters.

Subcommittees

Representation and collaboration between subject-area experts are important shared leadership qualities. To ensure all interested parties were involved in the planning process, the Consortium decided to put together Implementation Team/Subcommittees. These groups are made up of representatives from CAERC members, partner agencies, and technical experts. It is our goal to have a collaborative work group to advise the Consortium as we work through the planning process.

Subcommittees:

- Program Area 1: Adult Basic Education (ABE)/Adult Secondary Education (ASE)
- Program Area 2: Adult English Learners
- Program Area 3: Adults with Disabilities (AWD)

- Program Area 4: Career Technical Education (CTE)
- Program Area 5: Apprenticeships
- Objective 6: Professional Development (PD)
- Corrections Roundtable
- Finance

The Subcommittees assist the Consortium by providing data necessary for planning and recommendations to inform decision making. They conduct the necessary conversations and planning required for achieving the grant's objectives and outputs. It is critical that members and partners engage in collaborative dialogue to bring to bear multiple perspectives on adult education needs and strategies.

Description of Teacher and Faculty Involvement

K-12 adult education teachers and community college faculty are key stakeholders to the collaborative, collegial planning process. Input from the teachers and faculty have been solicited throughout each phase of the planning process [Reference Table A]. A listing of CAERC-wide meeting dates can be accessed on the CAERC website at <http://capitaladulthood.org/calendar.html>.

Table A. Phases of the Planning Process

Phases	Meeting Summary
Phase 1 July and August 2014	Members met with teachers and faculty to address and submit their organization's response to Objectives 1 and 2.
Phase 2 September 2014	Members met with teachers and faculty to address and submit their organization's response to Objective 4.
Phase 3 CAERC Summit I September 11, 2014	CAERC members and partners invited frontline staff, teachers, faculty, and administrators to attend and participate at the regional Summit. The focus of the Summit was to address Objectives 1, 2, and 4. 108 in attendance <ul style="list-style-type: none"> • K-12 Teachers and Administrators = 41 • Community College Faculty and Administrators = 35
Phase 3 CAERC Summit II October 17, 2014	CAERC members and partners invited frontline staff, teachers, faculty, and administrators to attend and participate at the regional Summit. The focus of the Summit was to address Objectives 3 and 5. 85 in attendance <ul style="list-style-type: none"> • K-12 Teachers and Administrators = 32 • Community College Faculty and Administrators = 31

<p>Phase 4 October 2014 to December 2014</p>	<p>Program-area subcommittees convened to further collaborate and develop the regional plan. Subcommittee participants include teachers, faculty, administrators, and subject-area experts.</p> <p>Program Area 1: ABE/ASE</p> <ul style="list-style-type: none"> • K-12 Teachers and Administrators = 9 • Community College Faculty = 4 <p>Program Area 2: Adult English Learners</p> <ul style="list-style-type: none"> • K-12 Teachers and Administrators = 3 • Community College Faculty and Administrators = 2 <p>Program Area 3: Adults with Disabilities</p> <ul style="list-style-type: none"> • K-12 Teachers and Administrators = 2 • Community College Faculty = 3 <p>Program Area 4: CTE</p> <ul style="list-style-type: none"> • K-12 Teachers and Administrators = 6 • Community College Faculty and Administrators = 3 <p>Program Area 5: Apprenticeship</p> <ul style="list-style-type: none"> • K-12 Teachers and Administrators = 1 • Community College Administrators = 1 <p>Objective 6: Professional Development</p> <ul style="list-style-type: none"> • K-12 Teachers and Administrators = 2 <p>Objective 7: Leverage Regional Resources</p> <ul style="list-style-type: none"> • K-12 Teachers and Administrators = 5 <p>Corrections Roundtable</p> <ul style="list-style-type: none"> • K-12 Teachers and Administrators = 2 • Community College Faculty and Administrators = 4
<p>Phase 5 January 2015</p>	<p>Program-area subcommittees ranked strategies by program area and developed recommendations for CAERC Members. Subcommittee participants include teachers, faculty, administrators, and subject-area experts.</p> <p>Program Area 1: ABE/ASE</p> <ul style="list-style-type: none"> • K-12 Teachers and Administrators = 9 • Community College Faculty = 4 <p>Program Area 2: Adult English Learners</p> <ul style="list-style-type: none"> • K-12 Teachers and Administrators = 3 • Community College Faculty and Administrators = 2 <p>Program Area 3: Adults with Disabilities</p> <ul style="list-style-type: none"> • K-12 Teachers and Administrators = 2 • Community College Faculty = 3 <p>Program Area 4: CTE</p> <ul style="list-style-type: none"> • K-12 Teachers and Administrators = 6 • Community College Faculty and Administrators = 3

	<p>Program Area 5: Apprenticeship</p> <ul style="list-style-type: none"> • K-12 Teachers and Administrators = 1 • Community College Administrators = 1 <p>Objective 6: Professional Development</p> <ul style="list-style-type: none"> • K-12 Teachers and Administrators = 2 <p>Objective 7: Leverage Regional Resources</p> <ul style="list-style-type: none"> • K-12 Teachers and Administrators = 5 <p>Corrections Roundtable</p> <ul style="list-style-type: none"> • K-12 Teachers and Administrators = 2 • Community College Faculty and Administrators = 4
<p>Phase 6 February 2015</p>	<p>Members met to analyze regional data from the Members Survey to identify capacity for course expansion.</p> <p>18 in attendance</p> <ul style="list-style-type: none"> • K-12 Teachers and Administrators = 13 • Community College Faculty and Administrators = 5 <p>Members voted on regional strategies across program areas and developed CAERC's Implementation Plan.</p> <p>27 in attendance</p> <ul style="list-style-type: none"> • K-12 Teachers and Administrators = 19 • Community College Faculty and Administrators = 8 <p>Finance Subcommittee reviewed the regional key priorities and implementation and determined the preliminary recommendations for CAERC's funding allocation</p> <p>18 in attendance</p> <ul style="list-style-type: none"> • K-12 Teachers and Administrators = 16 • Community College Faculty and Administrators = 2 <p>Members finalized the implementation plan and estimated costs. Members reached consensus on determining CAERC's funding allocation for the four regional key priorities.</p> <p>14 in attendance</p> <ul style="list-style-type: none"> • K-12 Teachers and Administrators = 12 • Community College Faculty and Administrators = 2

Communications Plan

Communication is facilitated and coordinated by the CAERC staff. The goal is to facilitate consistent and effective communication across the consortium internally between members and partners and externally between the consortium and the public. Communication is fostered through periodic emails, monthly consortium meetings, AB 86 newsletter updates, and the consortium website. CAERC has developed a website www.capitaladulthood.org to make the work of CAERC accessible and transparent to the public.

CAERC Staff

The CAERC Project Director provides coordination and facilitation for the 15-month planning process. This individual is responsible for: (1) organizing CAERC meetings in collaboration with the Co-Chairs; (2) producing and maintaining meeting artifacts; (3) coordinating activities of any consultants or sub-contractors; (4) handling day-to-day activities of the CAERC project; and (4) completing and submitting required data, financial reports, and materials to the CCCC and the State AB86 Work Group in a timely manner. To effectively carry out the complex tasks of this project, the Project Director is supported by additional personnel to ensure CAERC staff fulfill the following functions: 1) administrative support; 2) web and database management and information technology technical support; and 3) fiscal administration and management. SCOE houses the project staff at its facilities. Consortium members deemed this arrangement as advantageous given SCOE's available resources to support planning activities and its central location.

Changes from the Original Project Management Plan

- Implementation Team has merged into Subcommittees.
- CAERC has hosted two regional summits: September 11, 2014 and October 24, 2014.

Strengths of the Consortium

The consortium structure has fostered a positive, collaborative environment for rethinking and redesigning adult education in the region. Communication has streamlined with the consortium structure, which has included extensive dialogue between diverse agencies across the region. Through concerted efforts to build partnerships, the adult education network in the Capital Region has expanded to a broader network of organizations with a focused purpose to improve adult education systems. With the AB 86 grant, regional collaboration has been funded and CAERC has been able to address the grant objectives in a timely manner to make a positive impact in the Capital Region.

Challenges for the Consortium

The consortium has faced numerous challenges which have included: 1) the fast and restricted AB86 timeline which has prevented all regional stakeholders from fully participating in the development of the regional comprehensive plan; 2) lack of specific data to evaluate gaps; 3) personnel changes in member districts; 4) limited facilities to host consortium events and meetings; and 4) limited number of member and partner representatives available to participate in the Subcommittee work.

Demographic Profile of Region

Figure 0. Overall CAERC (Los Rios vs. California)

Regional Consortia	Total Population	Poverty	No High School Diploma	Unemployment	ESL	Adults with Disabilities	Citizenship	Literacy
Los Rios	1,623,406	407,475	219,160	165,587	675,269	164,324	231,924	257,596
Total California	37,812,799	9,514,604	7,322,790	3,566,974	15,728,551	3,827,475	5,402,034	5,999,998
Percent CAERC/ Total California	4.3%	4.3%	3.0%	4.6%	4.3%	4.3%	4.3%	4.3%

Source: AB 86 Planning Document

The population of Los Rios was contrasted with the entire population of the State of California to form a population ratio or index to compare the categories listed above in Figure 0.

In this comparison, Los Rios was 4.3% of California's total population. Across the demographic titles included in this table, Los Rios has a lower percentage of persons with "No High School Diploma" and a higher rate of "Unemployment" than the Population Index. "Poverty," "ESL," "Adults with Disabilities," "Citizenship," and "Literacy" ratios were consistent with the Population Index of 4.3%.

Note: Although Amador County is a CAERC member, the consortium data analysis does not include counties like Amador County with a population below 65,000 at this time.

Demographic: Population**Figure 1. County Areas by Age Group Percentiles, 2010**

County	Age Group							
	Total Number (All ages)	Preschool Age (0-4 years)	School Age (5-17 years)	College Age (18-24 years)	Working Age (25-64 years)	Young Retirees (65-74 years)	Mature Retirees (75-84 years)	Seniors (85 or more years)
Amador	37,853	3.8%	12.8%	6.4%	56.1%	11.8%	6.3%	2.6%
El Dorado	180,921	5.2%	17.5%	7.4%	55.1%	8.6%	4.4%	1.7%
Placer	350,275	5.9%	18.4%	7.8%	52.6%	8.3%	4.9%	2.1%
Sacramento	1,420,434	7.1%	18.4%	10.1%	53.2%	5.9%	3.7%	1.6%
Yolo	201,311	6.2%	16.3%	18.9%	48.7%	5.3%	3.1%	1.5%
CAERC	2,190,794	6.6%	18.0%	10.3%	52.9%	6.6%	3.9%	1.7%
California	37,309,382	6.8%	18.1%	10.6%	53.1%	6.1%	3.7%	1.6%

Source: California Department of Finance, P-1 (Age: State and County Population Projections by Major Age Group: 2010-60)

When analyzing data by age group, the average of all 5 CAERC counties fell within 0.5% of the statewide averages across the Age Groups.

An exception among the CAERC counties, Amador's percentages were lower than the State rates and rates attained by other counties in the CAERC during the preparatory age groups of "Preschool Age," "School Age," and "College Age" populations; however, they were higher in the traditional production years age groups of "Working Age," "Young Retirees Age," "Mature Retirees Age," and "Seniors" populations.

Demographic: Household and Family Characteristics**Figure 2.** Population, Housing Units, Total Square Mile Area, Density per Square Mile

Counties	Population	Housing Units	Total Geographical Area (square miles)	Density per square mile of land area		
				Population	Housing Units	Persons/Housing
Amador	38,091	18,032	605.96	64.1	30	2.12
El Dorado	181,058	88,159	1,786.36	106.0	52	2.05
Placer	348,432	152,648	1,502.46	247.6	109	2.28
Sacramento	1,418,788	555,932	994.02	1,470.8	576	2.55
Yolo	200,849	75,054	1,023.56	197.9	74	2.67
CAERC	2,187,218	889,825	5,912	150.5	73	2.06
California	37,253,956	13,680,081	163,694.74	239.1	88	2.72

Source: U.S. Census Bureau, 2010 Census

When analyzing data by household and family characteristics:

- Sacramento had the largest population and the most housing units
- El Dorado had the greatest total geographical area in square miles and the lowest density of 2.12 (Persons/Housing)
- Yolo had the highest density of 2.67 (Persons/Housing)
- Amador also had fewer people per square mile and the fewest housing units than any of the other CAERC counties
- Placer was the closest in size to Sacramento in population and the closest to El Dorado in total geographical area

Noted was the fact that El Dorado, Placer, and Amador counties had more geographical diversity and climate challenges than Sacramento and Yolo

Demographic: Household and Family Characteristics (continued)**Figure 3.** Household Characteristics of CAERC

Geography	Total Households	Percent Family Households (Families)	Percent Nonfamily Households	Average Household Size	Average Family Size
El Dorado County	66,751	69.0%	31.0%	2.7	3.3
Placer County	134,284	70.2%	29.8%	2.7	3.2
Sacramento County	520,580	65.5%	34.5%	2.8	3.4
Yolo County	71,024	60.8%	39.2%	2.8	3.4
CAERC	792,639	66.4%	33.6%	2.7	3.3
California	12,650,592	68.3%	31.7%	2.97	3.56

Source: 2013 ACS (1 year estimates), Counties with 65,000+ population

When analyzing data by household and family characteristics, the percent of family households of all CAERC counties was +/- a few percentage points of the state average of 68.3.

Placer County had the highest percent of “family households” (70.2%) and lowest percent of “non-family households.”

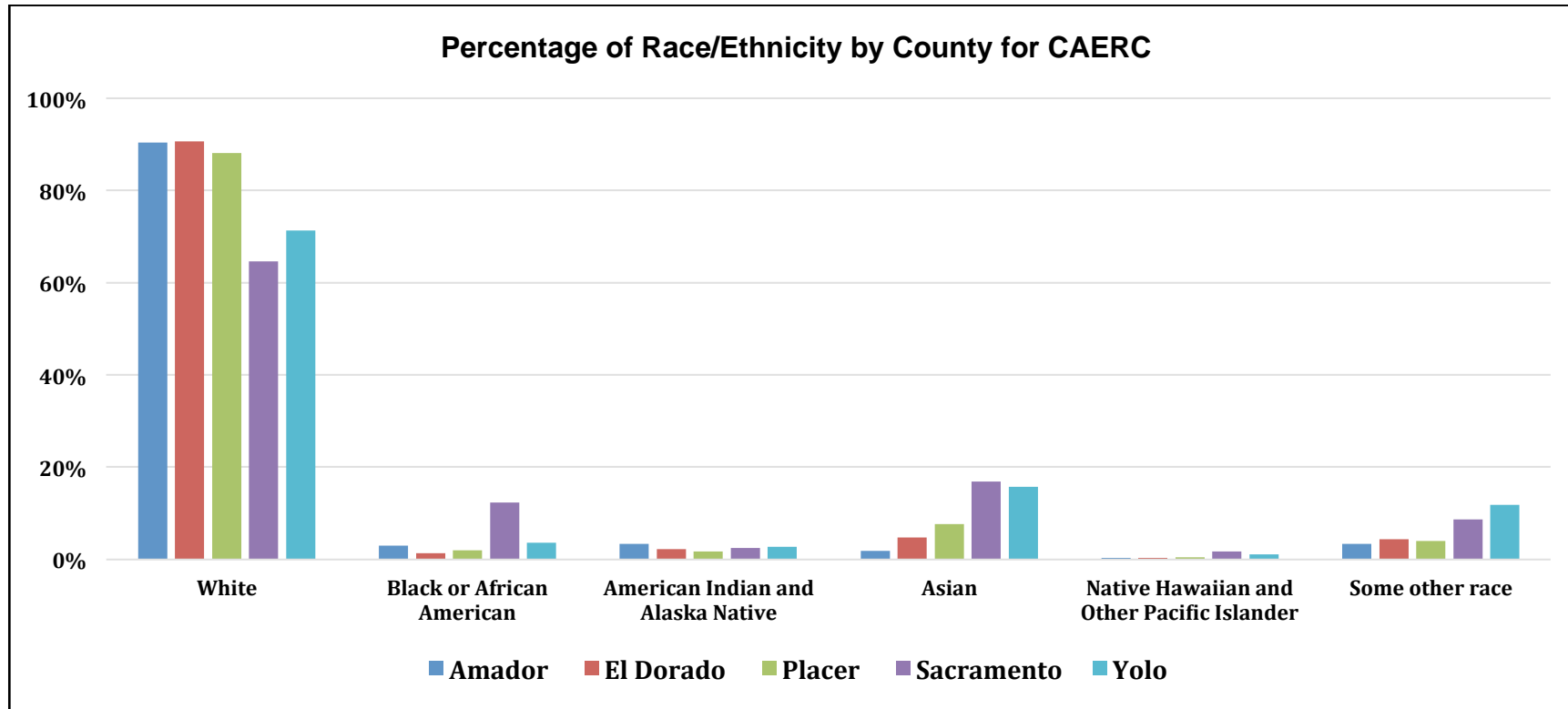
Yolo County had the lowest percent of “family households” (at 60.8%) and the highest percent of “non-family households” (at 39.2%).

With the exception of “Non-family Households,” the percentage data from CAERC totals were all below the statewide data.

Definition: Non-family households are those with non-traditional heads of household. For example, roommates, persons living alone, boarders, renters, etc.

Demographic: Ethnicity

Figure 4a. Percentage of Race/Ethnicity by County for CAERC

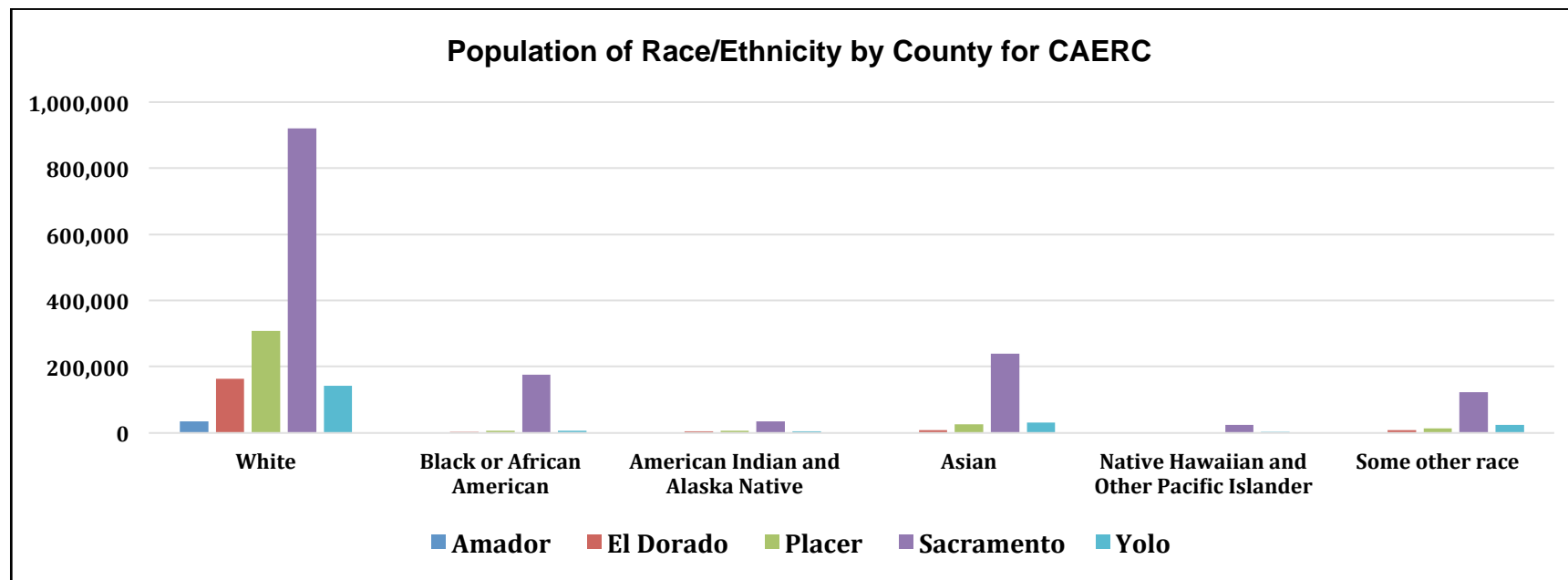


Source: 2008-2012 ACS

When analyzing the data by Ethnicity, across all CAERC counties, “White” was the dominant ethnicity. Sacramento had the lowest proportion of “White” and exceeded the proportion of other CAERC counties for “Black/African American” and “Asian.” Sacramento was just slightly lower than Yolo County in the “some other race” category. Across all five CAERC counties, there was a low, almost even proportion, in the “American Indian and Alaska Native” category.

Demographic: Ethnicity (continued)

Figure 4b. Population by Race/Ethnicity by County for CAERC



Source: 2008-2012 ACS

Obviously, and because of its sheer size, Sacramento had a much greater population in each of the ethnic groups than did any of the other four CAERC counties.

Demographic: Nativity & Language**Figure 5.** Nativity, Language, and Ability to Speak English

Geography	Total Population	Native Born	Foreign Born	Foreign Born Who Are Naturalized U.S. Citizens	5 years and older	Language other than English spoken at home (5 years and older)	Speak English less than "very well" (5 years and older)
El Dorado County	181,737	92.0%	8.0%	53.2%	173,719	12.0%	3.9%
Placer County	367,309	89.0%	11.0%	58.4%	346,693	15.0%	4.5%
Sacramento County	1,462,131	79.4%	20.6%	56.0%	1,362,853	31.6%	14.3%
Yolo County	204,593	76.5%	23.5%	47.4%	192,575	36.5%	16.7%
CAERC	2,215,770				2,075,840		
California	38,332,521	73.1%	26.9%	48.6%	35,831,956	43.8%	18.9%

Source: 2013 ACS (1 year estimates), Counties with 65,000+ population

When analyzing the data in terms of Nativity, it should be noted that our purpose is to work to provide adults with basic skills leading to the acquisition of a high school diploma or equivalency and provide access for immigrants to be eligible for educational services (in citizenship, ESL, and workforce preparation). With the exception of Yolo County, the percentage of “Foreign-Born, Naturalized U.S. Citizens” in the remaining CAERC counties with a population of 65,000+ exceeded the statewide average of 48.6%.

For individuals 5 years and older, the percentage of those speaking “Language other than English at home” and those who “Speak English less than ‘very well’” in the CAERC counties was lower than the statewide average. Note that both El Dorado and Placer Counties were considerably lower in those percentages than both the other two CAERC counties and the statewide average.

Demographic: Nativity & Immigration**Figure 6.** Number of Legal Immigrants to CAERC Counties 2008-2012

County	2008	2009	2010	2011	2012	Total	Annual Average
Amador	27	13	23	23	18	618	21
El Dorado	314	354	293	288	271	5,798	304
Placer	760	748	667	654	667	11,591	699
Sacramento	7,279	7,290	6,122	6,565	6,229	172,097	6,697
Yolo	1,087	966	965	962	808	25,059	958
CAERC	9,467	9,371	8,070	8,492	7,993	215,163	8,679
California	238,433	227,870	208,446	210,591	196,622	5,987,481	206,465

Source: U.S. Citizenship and Immigration Services and the California Department of Finance, Demographic Research Unit

When analyzing this data, the average number of immigrants to the CAERC counties from 2008-2012 was 8,679 per year. The distribution (listed alphabetically) was as follows:

- Amador 0.2%
- El Dorado 3.5%
- Placer 8.1%
- Sacramento 75%
- Yolo 11.0%

Demographic: Education and Dropout Rates**Figure 7. Dropout Rates 2012-13 by Race/Ethnicity for CAERC**

Race/Ethnicity	Adjusted Grade 7 Dropouts	Adjusted Grade 8 Dropouts	Adjusted Grade 9 Dropouts	Adjusted Grade 10 Dropouts	Adjusted Grade 11 Dropouts	Adjusted Grade 12 Dropouts	Adjusted Ungraded Secondary Dropouts	Adjusted Grades 9-12 Dropout Total	Grades 9-12 Enrollment Total	Annual Adjusted Grades 9-12 Dropout Rate
Hispanic or Latino of Any Race	42	38	123	137	239	784	3	1,286	29,450	4.4%
American Indian/Alaska Native, Not Hispanic	2	4	4	9	12	32	0	57	1,140	5.0%
Asian, Not Hispanic	13	12	9	16	25	130	0	180	12,371	1.5%
Pacific Islander, Not Hispanic	2	3	0	4	3	30	0	37	1,258	2.9%
Filipino, Not Hispanic	1	0	3	2	5	23	0	33	2,797	1.2%
African American, Not Hispanic	29	36	73	86	185	460	2	806	11,597	7.0%
White, Not Hispanic	79	102	115	143	245	654	9	1,166	51,725	2.3%
Two or More Races, Not Hispanic	5	7	13	26	26	82	1	148	4,347	3.4%
None Reported	4	2	7	4	11	20	0	42	576	7.3%
CAERC	177	204	347	427	751	2,215	15	3,755	115,261	3.3%
California	3,397	3,062	9,362	10,237	14,993	42,606	318	77,516	1,970,030	3.9%

Source: California Department of Education, Data Quest

- The dropout rate for most ethnic groups showed a consistent increase from grades 7 to 12.
- The highest “Annual Adjusted Grades 9-12 Dropout Rate” (excluding “None Reported”) was “African American, Not Hispanic” at 7.0% followed by “American Indian, Not Hispanic” at 5.0%, then “Hispanic or Latino of Any Race” at 4.4%.
- The lowest “Annual Adjusted Grades 9-12 Dropout Rate” was “Filipino, Not Hispanic” at 1.2% followed by “Asian, Not Hispanic” at 1.5% with the next nearest being “White, Not Hispanic” at 2.3%.

Demographic: Adults with Disabilities**Figure 8.** Population of Civilian Non-Institutionalized Individuals with a **Disability** in CAERC

County	Total Civilian Non-Institutionalized Population	Percent with a Disability
El Dorado County	180,716	12.8%
Placer County	365,018	11.7%
Sacramento County	1,446,736	12.8%
Yolo County	202,780	11.5%
CAERC	2,195,250	12.5%
California	37,831,553	10.6%

Source: 2013 ACS (1-year estimates), Counties with 65,000+ population

For Civilian Non-Institutionalized Individuals with a Disability in the CAERC counties, all 4 counties (with a population of 65,000+) exceeded the statewide average of 10.6%. The percentage difference among those 4 counties was minimal.

Demographic: Adults with Disabilities (continued)**Figure 9. CAERC Populations with Enrolled in Special Education by Age Group and Disability**

	Intellectual Disability	Hard of Hearing	Deaf	Speech or Language Disability	Visual Disability	Emotional Disability	Orthopedic Disability	Other Health Disability	Specific Learning Disability	Deaf- Blind	Multiple Disability	Autism	Traumatic Brain Injury	TOTALS
	(MR)	(HH)	(DEAF)	(SLI)	(VI)	(ED)	(OI)	(OHI)	(SLD)	(DB)	(MD)	(AUT)	(TBI)	
Preschool	76	57	0	1,607	0	0	55	80	0	0	101	549	0	2,525
Elementary	773	82	0	8,082	65	449	169	1,340	5,748	0	187	2,324	0	19,219
Secondary	1,103	68	11	1,289	33	1,522	159	1,989	10,763	0	124	1,514	0	18,575
Postsecondary	396	0	0	0	0	45	27	17	188	0	31	108	0	812
CAERC	2,348	207	11	10,978	98	2,016	410	3,426	16,699	0	443	4,495	0	41,131
California	43,570	10,395	3,695	160,690	4,012	24,442	12,876	70,954	281,888	127	6,208	84,718	1,704	705,279

Preschool = 0-4 years; Elementary = 5-11 years; Secondary = 12-17 years; Postsecondary = 18-22 years.

- Source: California Department of Education, Data Quest
- Secondary Educational level students (aged 12-17 years) demonstrated the highest number of disabilities (in descending order) with “Specific Learning Disabilities” at 10,763 or 57.9%; “Other Health Disabilities” at 1,989 or 10.7%; “Speech or Language Disability” at 1,289 or 6.9%, and “Intellectual Disability” at 1,103 or 5.9%.
- At the secondary level, there are 18,575 currently needing accommodations for their disabilities and will be pressing for further assistance after the age of 22 thus impacting the need for further resources to serve these populations.
- Overall for the Sacramento CAERC, in highest to lowest in descending order, “Specific Learning Disability,” “Speech or Language Disability,” and “Other Health Disability” accounted for the highest number of disabilities.

Note: Additional Demographic Profile Information provided in Objective 2.

Economic Profile of Region

Demographic: Employment, Income, and Poverty

Figure 10a. Percentage of Household/Families/Individuals Whose Income During the Last 12 Months was Below the Poverty Level

Geography	All Families	Married-Couple Families	Families with Female Head of Household/No Husband Present	All People	Persons under 18 Years
El Dorado County	9.2%	7.2%	24.3%	12.3%	15.1%
Placer County	5.9%	4.0%	13.0%	8.4%	8.9%
Sacramento County	14.6%	8.1%	33.3%	19.0%	26.2%
Yolo County	9.5%	4.5%	29.0%	18.8%	18.1%
CAERC Averages of Averages	9.8%	5.6%	24.9%	14.6%	17.1%
California	12.6%	7.5%	28.6%	16.8%	23.5%

Source: 2013 ACS (1 year estimates), Counties with 65,000+ population

When analyzing the CAERC in terms of employment, income, and poverty:

- Sacramento had higher percentages than any of the other three CAERC counties as well as the statewide percentages in all the above listed categories.
- Yolo also exceeded the statewide average in “Female Head of Household/No Husband Present” and “All People” categories.
- Placer had the lowest percentages across all the above poverty categories.

Demographic: Employment, Income, and Poverty (continued)**Figure 10b.** Employment Status of persons 16 years of age and over

Population 16 years and over	Totals	In Labor Force	Employed	Unemployed
Amador	32,464	46.6%	38.5%	17.3%
El Dorado	145,204	64.0%	57.0%	10.9%
Placer	275,551	63.0%	56.9%	9.3%
Sacramento	1,102,516	64.4%	55.9%	13.0%
Yolo	161,157	63.3%	56.8%	10.0%
CAERC	1,716,892	60.3%	53.0%	12.2%
California	29,163,075	64.5%	57.0%	11.0%

Source: 2013 ACS (1 year estimates), Counties with 65,000+ population

Definition: "In Labor Force" are individuals who are currently employed or looking for work.

Demographic: Employment, Income, and Poverty (continued)**Figure 10c.** Estimated Average Incomes of Families, Married-Couple Families, and Nonfamily Households

	Sacramento CAERC	Families	Married-Couple Families	Nonfamily Households
Estimated Population	796,443	529,815	386,159	266,628
Sacramento CAERC Percent earning < \$25,00 per year	18.9%	12.0%	7.5%	35.7%
California Statewide Percent earning < \$25,00 per year	20.2%	15.6%	9.4%	33.6%
Averaged Median Income	\$ 62,008	\$ 75,409	\$ 87,021	\$ 35,829
California Median Income	\$ 61,400	\$ 69,883	\$ 84,974	\$ 40,843
Averaged Mean Income	\$ 80,344	\$ 93,283	\$107,945	\$ 49,530
California Mean Income	\$ 85,265	\$ 94,829	\$110,665	\$ 59,392

Source: 2013 ACS (1 year estimates), Counties with 65,000+ population

The Federal Poverty Guidelines show that the average income of a family of 4 is \$23,050 and a family of 5 is \$27,010.

Overall, in the “Estimated Population” earning <\$25,000 per year, “Nonfamily Households” is the only area where there is a greater poverty level (+2.14%) than the rest of the state.

The “Averaged Median Income” is greater in the CAERC counties than the “California Median Income,” but the “Averaged Mean Income” is lower.

CAERC's Regional Implementation Plan and Funding

Summary of CAERC Regional Implementation Plan

The AB 86 Regional Planning Process has provided a unique opportunity for CAERC members and partners to work collaboratively to build a more comprehensive, aligned, sustainable, and innovative system of educational service delivery to adults. Throughout the planning process, CAERC gathered input from its stakeholders: teachers, faculty, administrators, students, staff, and community partners. The CAERC December Regional Implementation Plan showcases the shared decision-making process and collaborative work among the Consortium members and partners to rethink and redesign adult education in the region.

AB 86 has also provided a unique opportunity to inform the legislature about the importance of restoring and increasing the funding of adult education to sustainable levels that ensure its effectiveness and quality, particularly K-12 adult education, while enhancing the efficiency of the services provided regionally. To move CAERC's regional plan forward, adequate funding that is dedicated to adult education is required to restore and enhance programs and services across the region. CAERC's plan, if appropriately funded, will result in significant improvement and increased efficiencies to the adult education delivery system that will ultimately benefit each of its students and the economy of the region at large.

Four key priorities will need funding to address the regional needs and gaps:

1. Rebuild Adult Education Programs and Services;
2. Pathways and Alignment;
3. Student Support Services; and
4. Data and Accountability System.

The first priority of the Consortium is to secure funding for rebuilding adult education programs in the region and to secure maintenance of effort (MOE) to support current offerings and increase offerings to expand adult education program and services in the region. Although it's still uncertain what the adult education funding formula and method of distribution for next year will be, it's clear that the K-12 adult schools are depending on the AB 86 funding that has been promised by the Governor. The maintenance of current capacity for adult education needs to be included in the regional funding. Even at the height of adult education funding for CAERC K-12 district members (a total of \$33,298,946 in 2007-2008), programs still did not fully meet the needs of the region as many potential adult students were turned away due to impacted enrollment. Since 2007-2008, funding levels for K-12 adult education have been **dramatically reduced by 86%**. (Reference Table A for CAERC Members Funding Allocations.)

As a result, many CAERC K-12 district members have had to significantly cut programs, reduce staffing, and close schools. Despite the significant budget challenges faced by K-12 districts, CAERC K-12 districts have shown resiliency and are dedicated to providing meaningful learning opportunities for their students. However, budget cuts

have taken their toll. The demand for services far exceeds current capacity. At minimum CAERC K-12 districts will need at least **\$4,832,843 for maintenance of effort (MOE)** based on 2013-2014 funding and **\$33,298,946 to restore funding to 2007-2008 funding levels**. Proposed in the latest trailer bill (February 2015), MOE will be determined by FY 2012-2013. This will jeopardize and reduce several K-12 districts' ability to maintain current AE programs and services since this amount is **\$396,193 less** than FY 2013-2014 funding apportionment. Continued operation of programs and services provided by the K-12 district members is highly dependent on the availability of a new dedicated funding stream that will cover the 2012-2013 funding and the difference of 2013-2014's apportionment. Adult schools' support needs to be prioritized in the state's funding model to maintain current capacity and for expansion of services to meet the unmet needs of adult learners in the region.

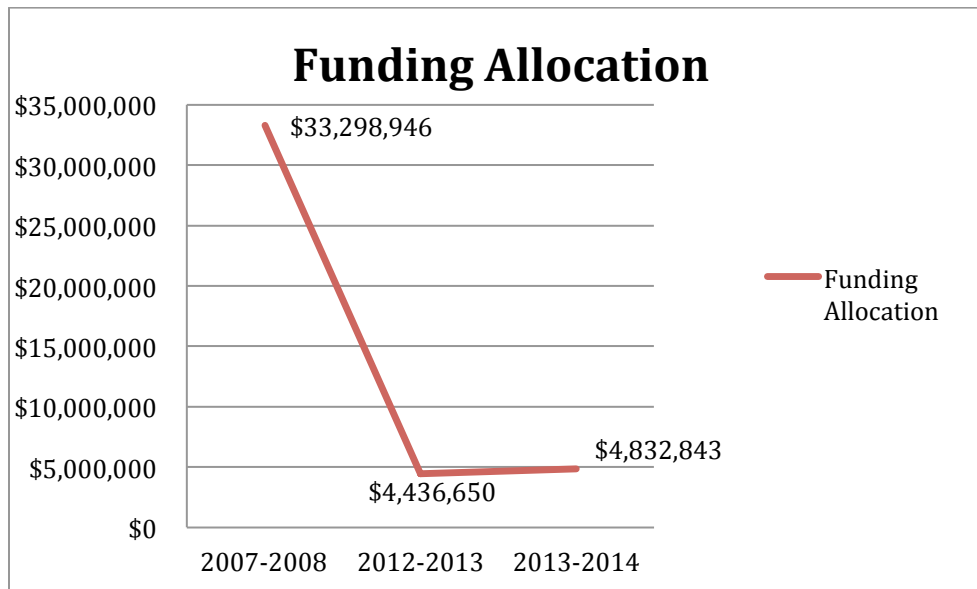
Moreover, this estimated funding needed does not put into consideration that **over 28,000 fewer students** were served in 2013-2014 than in 2007-2008. Nor does the estimated funding needed account for the projected demographic trends. The Capital Region is anticipating a significant increase of adult English learners (+4,000 to 5,000) and College Age -18-24 and Working Age- 25-64 adults (+90,305) by 2020. (Reference Demographic and Economic Profile of the Region in Objective 2.)

The projected cost to implement the regional key priorities in the CAERC Regional Implementation Plan is estimated at **\$12.5 million plus maintenance of effort (MOE) for Year 1: 2015-2016 and \$16 million plus MOE for Year 2: 2016-2017**. At minimum CAERC K-12 districts will need at least \$4,436,650 for MOE based on 2012-2013 funding and \$33,298,946 to restore funding to 2007-2008 funding levels.

Table A. CAERC Members Funding Allocations

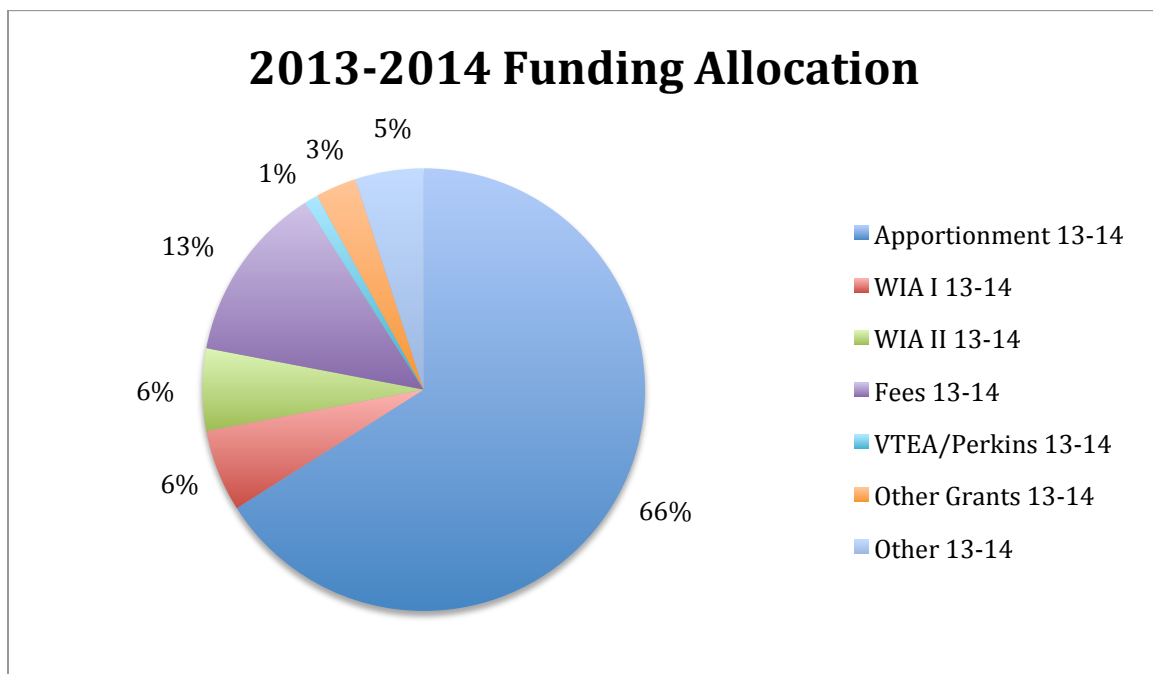
CAERC Members	2007-2008 Funding	2012-2013 Funding	2013-2014 Funding
Amador County Unified School District	\$143,322	\$65,000	\$65,000
Center Joint Unified School District	\$97,321	\$82,251	\$110,049
Davis Joint Unified School District	\$383,648	\$0	\$40,000
Elk Grove Unified School District	\$2,236,345	\$1,967,193	\$2,000,259
Folsom Cordova Unified School District	\$1,325,432	\$309,626	\$324,626
Galt Joint Union High School District	\$320,081	\$0	\$0
Natomas Unified School District	\$141,831	\$84,836	\$94,458
Sacramento City Unified School District	\$15,596,444	\$0	\$0
San Juan Unified School District	\$6,723,030	\$376,635	\$357,790
Twin Rivers Unified School District* Grant Joint Union High School District	\$6,030,332	\$1,611,109	\$1,665,320
Washington Unified School District	\$301,160	\$0	\$175,341
Total K-12 Adult Education	\$33,298,946	\$4,436,650	\$4,832,843

*Twin Rivers USD was formerly Grant Joint Union High School District in 2007-2008



A closer analysis of the funding reveals the following (Reference Table A, Table 1.1a, Table 1.1b, and Table 2.0.):

- The 2012-2013 K-12 apportionment was **\$396,193 less** than the 2013-2014 funding.
- In 2012-2013, several K-12 districts have “swept” adult education funding to the general funds. Four districts did not receive any funds with **\$0 funding apportionment**.
- The most dramatic decrease in funding occurred with Sacramento City Unified School District, CAERC’s largest urban district, with a **\$15.5 million reduction** and full elimination of dedicated funding for adult education programs and services since 2008.
- In 2013-2014, K-12 districts have **heavily relied (34%) on other sources** to fund programs.



- **In 2012-2013, over \$5.4 million in fees** were charged to K-12 district adult students in the region, whereas in 2013-2014, fees were reduced to \$4.2 million. This has made a significant impact on student access by limiting those with financial need to fully access the educational services available. MOE based on 2012-2013 puts more adult learners at-risk as many will not be able to afford potential increases in student fees.

- Funding in 2013-2014 failed to adequately fund services needed in the region, as the unmet need remains extremely high. (Reference Demographic and Economic Profile of the Region in the Overview of the Consortium and in Objective 2.)
- Access to quality adult education services across all five program areas has plummeted as evidenced by 45,199 current enrollments versus 85,860 in 2008-2009 before flex funding. This represents a **47.4% enrollment drop** of 40,661 individuals not having access to the programs in the region.

The unmet needs of adult learners have significantly increased while the number of adult education services has declined. As the data reveals, the need is significant in the Capital Region. It is critical for CAERC K-12 district members that funding for adult education is restored and increased.

Once the first priority is met and the Consortium is assured funds, the Consortium will focus its efforts to address the remaining three key priorities: Pathways and Alignment, Student Support Services, and Data and Accountability System. These three priorities will greatly enhance opportunities for adult learners to complete their goals in a timely manner and includes a shared data and accountability system that will help the Consortium monitor progress and determine areas for future improvements.

Each of the three remaining key priorities is composed of several crosscutting, implementation strategies and approaches reflective of the AB 86 objectives. The Consortium will create seamless transitions and align existing and future adult education programs to postsecondary academic pathways and/or career pathways leading to employment. The plan also aims to support, sustain, and enhance the quality of adult education instructional programs to provide the highest possible learning outcomes for students. In order to achieve this, expanding and enriching student support services will be critical as many services were drastically cut due to underfunding. Finally, the integration of a shared data and accountability system will be essential to monitoring student progress, sharing data, and evaluating program effectiveness.

The plan also identifies an array of local and regional partners, all of whom play a crucial role in providing educational and support services. A hallmark of the Consortium is the genuine commitment among both members and partners to leverage resources to provide the much-needed services for adult learners in the region. (Reference Objective 7 and Table 7.1.)

Below is a summary of CAERC's key priorities and implementation strategies and approaches:

1. Rebuild Adult Education Programs and Services
2. Pathways and Alignment
 - a. Curriculum, Standards, and Assessment Alignment
 - b. Streamline Pathways and Transition Points

- c. Strategies for Accelerating Student Progress
 - d. Professional Development
3. Student Support Services
 - a. Counseling Services
 - b. Regional Outreach and Multimedia Resources
 - c. Community and Student Supports
 - d. Professional Development
4. Data and Accountability System
 - a. Shared and Aligned Data and Accountability System
 - b. Professional Development

Beginning in January 2015, CAERC Program-Area Subcommittees collaborated to prioritize implementation strategies and approaches for their designated program areas based on the Governor's budget and anticipated funding for 2015-2016. These program-area recommendations were presented to the Members. Members then finalized the list of regional strategies across program areas. CAERC's Finance Subcommittee and CAERC Members further collaborated to determine funding allocations based on the four regional key priorities and to develop CAERC's Regional Implementation Plan.

Reference:

- CAERC Regional Strategies By Ranking and Regional Priority
- CAERC Recommended Funding Allocations
- CAERC Regional Implementation Plan

CAERC Regional Strategies By Ranking and Regional Priority

Regional Strategy	Regional Priority			
	1	2	3	4
(1) Expand AE Course Offerings in the Region	x			
(2) Develop Regional Asset Map and Pathways Roadmap		x		
(3) Align Courses and Streamline Pathways		x		
(4) Provide Professional Development to Support Regional Priorities	x	x	x	x
(5) Analyze Regional Labor Market and Needs to Align Implementation and Expansion	x			
(6) Coordinate and Expand Marketing and Outreach Efforts			x	
(7) Increase Number of Transition Specialists and Incorporate Collaborative Case Management			x	
(8) Establish Virtual Communication Network Among AE Providers Support Collaboration Across Systems	x	x	x	x
(9) Increase Consortium Awareness on AE Funding Options to Access Braided, Well-Sequenced Funding	x			
(10) Coordinate Transitional Planning for AWD Among PreK-22 Providers			x	
(11) Design, Pilot, and Utilize Consortium-Wide Data and Accountability System				x
(12) Increase Availability and Access to Support Services			x	
(13) Train, Pilot, and Implement iBEST in CTE Programs		x		
(14) Increase Vocational English as a Second Language (VESL) Course Offerings and Program Components to Accelerate Student Progress and Placement Into the Workforce for Adults for Whom English Is a Second Language		x		

CAERC Recommended Funding Allocations

The Governor's Budget (January 2015) provides \$500 million Proposition 98 General Fund for the Adult Education Block Grant. Although CAERC's apportionment remains unknown, K-12 districts will be funded based on FY 2012-2013 maintenance of effort (MOE), and 5% has been set aside for consortium administration. Consensus was reached among the CAERC Members on what percentage of the remaining funds will be distributed to each of the four regional key priorities.

The Members unanimously agreed that a significant percentage of CAERC's apportionment of 72% in Year 1 will be used to rebuild AE programs and services in the region. With over \$28.8 million reduction in funding since 2008, it was imperative to rebuild and expand AE offerings so that gap of services can be addressed. This reflects the consortium's commitment to increasing student access immediately across the region. In Year 1, the remaining monies will be distributed among regional priorities: Priority #2 Pathways and Alignment 9%; Priority #3 Student Support Services 10%; and Priority #4 Data and Accountability 4%. The emphasis in Year 1 is collaborative planning, piloting new programs, and establishing new processes and structures.

Funding allocations shift slightly in Year 2: Priority #1 Rebuild AE Programs/Services 68%; Priority #2 Pathways and Alignment 10%; Priority #3 Student Support Services 12%; and Priority #4 Data and Accountability 5%. Rebuilding AE Programs/Services remains a top priority. The focus transitions from planning to full implementation with a greater emphasis on supporting curriculum and standards alignment and increasing access and availability to student support services.

However, these "preliminary" allocations will be reassessed when CAERC's apportionment of the Adult Education Block Grant becomes known. The funding allocations are contingent upon funding, pending legislation, and new rules and regulations.

Reference Summary of Remaining Funds Allocation

Summary of Remaining Funds Allocation		
Key Regional Priority	Year 1 2015-2016	Year 2 2016-2017
Regional Priority #1: Rebuild AE Programs/Services	72%	68%
Regional Priority #2: Pathways and Alignment	9%	10%
Regional Priority #3: Student Support Services	10%	12%
Regional Priority #4: Data and Accountability System	4%	5%

CAERC Regional Implementation Plan

The CAERC Regional Implementation Plan is subject to change upon the funding allocation from the Adult Education Block Grant. The consortium will reassess the implementation plan when CAERC's apportionment becomes known. The plan is contingent upon funding, pending legislation, and new rules and regulations. Regional strategies, timelines, and estimated costs will be adapted as needed.

Regional Key Priority	Strategy	Estimated Cost	2015 -2016	2016 - 2017	Potential Role of the Consortium
Rebuild AE Programs and Services	<p>(1) <i>Expand AE Course Offerings in the Region</i></p> <p>(5) <i>Analyze Regional Labor Market and Needs to Align Implementation and Expansion</i></p>	<p>Year 1 Collaborative meetings to determine course expansion based on regional analysis \$84,000</p> <ul style="list-style-type: none"> Release time ½ day and prep time ½ day = \$250/person 15 participants Food, meeting materials, printing \$100/meeting <p>Regional analysis = \$10,000</p> <p>Course expansion = \$9,000,000 (final cost to be determined based on AE allocation)</p> <p>Year 2 Collaborative meetings to determine course expansion based on regional analysis \$84,000</p>	<p>Establish workgroup.</p> <p>Survey Members/Partners to identify capacity for expansion and to determine what courses are currently offered.</p> <p>Contract provider and collaborate with Partners (e.g., SETA, Sacramento Job Corps, CRANE) to develop report of regional analysis of labor market.</p> <p>Contract provider to develop regional asset map and pathways roadmap.</p> <p>Analyze regional data and labor market to align implementation and expansion.</p> <p>Identify current administrative infrastructure capacity to expand.</p> <p>Determine cost for course expansion for each program area.</p>	<p>Workgroup will meet quarterly to:</p> <ul style="list-style-type: none"> Evaluate the enhanced and expanded course offerings Adjust course offerings as needed <p>Workgroup will phase out and faculty/staff will take over workgroup responsibilities.</p> <p>Update course expansion to regional asset map.</p> <p>Monitor and evaluate progress of strategy.</p>	<p>Communicate importance of member/partner participation in workgroups.</p> <p>Prepare facilitation notes and materials for meetings.</p> <p>Host and coordinate workgroup meeting dates, times and locations.</p> <p>Connect and leverage Partners (e.g., SETA, Sacramento Job Corps, CRANE) for resources and services.</p>

Regional Key Priority	Strategy	Estimated Cost	2015 -2016	2016 - 2017	Potential Role of the Consortium
<p>Rebuild AE Programs and Services</p>		<ul style="list-style-type: none"> • Release time ½ day and prep time ½ day = \$250/person • 15 participants • Food, meeting materials, printing \$100/meeting <p>Regional analysis = \$10,000</p> <p>Course expansion = \$12,000,000 (final cost to be determine based on AE allocation)</p>	<p>Workgroup (members/partners by program and across programs):</p> <ul style="list-style-type: none"> • Determine what courses are currently present among members/partners • Determine what new courses, additional course offerings, and course days, times, and locations will have the most positive impact on students based on workgroup knowledge, and discussion/surveys/input from teachers and students • Develop course descriptions for new courses • Revise existing course descriptions to address identified gaps • Secure locations and classroom space for additional offerings • Write job descriptions for additional positions (emphasis on full-time for highest quality) and hire based on funding <p>Include course expansion to regional asset map.</p>		

Regional Key Priority	Strategy	Estimated Cost	2015 -2016	2016 - 2017	Potential Role of the Consortium
Rebuild AE Programs and Services	(9) Increase Consortium Awareness on AE Funding Options to Access Braided, Well-Sequenced Funding for AWD	<p>Year 1 Develop and present professional development (e.g., OTAN, workgroup, Alta Regional, DOR) \$10,000</p> <p>PD \$10,500 (\$350/person training, release time, facilities, and food)</p> <p>Year 2 Digital access to professional development; update as needed (OTAN) Cost = TBD</p> <p>PD \$10,500 (\$350/person training, release time, facilities, and food)</p>	<p>Establish workgroup.</p> <p>Develop regional professional development session (workgroup and Partners e.g., OTAN, Alta Regional, DOR).</p> <p>Annually offer regional professional development on how to vendorize.</p> <p>Coordinate with OTAN to record event so that it can be offered digitally.</p>	<p>Annually offer professional development on how to vendorize.</p> <p>Monitor and evaluate progress of strategy.</p>	<p>Host and coordinate planning meetings.</p> <p>Coordinate and deliver professional development event (e.g., registration, printing materials, facilities, evaluation, etc.)</p> <p>Connect and leverage Partners (e.g., OTAN, Alta Regional, DOR) for resources and services.</p>

Regional Key Priority	Strategy	Estimated Cost	2015 -2016	2016 - 2017	Potential Role of the Consortium
<p>Alignment and Pathways</p>	<p>(2) Develop Regional Asset Map and Pathways Roadmap</p>	<p>Year 1 Collaboratively design regional maps with contracted provider \$200,000</p> <p>Year 2 Staff to update website and data \$50,000</p>	<p>Establish regional map workgroup.</p> <p>Identify and define data to be included.</p> <p>Identify tools to graphically represent the data defined by workgroup (customized for Los Rios and Amador County footprint).</p> <p>Contract or identify member/partner with expertise for the service build consistency into the website/data/PD.</p> <p>Develop process for maintaining currency of data.</p>	<p>Develop, roll out, and sustain regional maps with full CAERC participation.</p> <p>Monitor and evaluate progress of strategy.</p>	<p>Host and coordinate collaborative meetings.</p> <p>Collect regional data and compile for maps.</p> <p>Contract provider to develop regional maps if needed.</p> <p>Assist with roll out of regional maps.</p>
	<p>(3) Align Courses and Streamline Pathways</p> <ul style="list-style-type: none"> • (3a) Streamline Pathways 	<p>Year 1 Curriculum meetings for collaboration across program areas and systems (K12 AE, CC, and Partners) = \$250,000</p> <ul style="list-style-type: none"> • Food, materials, and printing • Pathway and program experts/key personnel time • Funding for compensation (e.g., stipends, release time) for K12 AE, CC faculty, group leaders for content areas to collaborate and facilitate 	<p>Establish workgroup (a collaboration model and personnel to do a gap analysis of programs throughout the region)</p> <ul style="list-style-type: none"> • Identify existing pathways • Identify needed pathways • Refine existing pathways • Add new pathways <p>Determine which pathways are common across programs and which are unique per program.</p> <p>Include pathways to regional pathways roadmap.</p>	<p>Continue to refine pathways and implement them across the consortium.</p> <p>Update and include pathways to regional pathways roadmap.</p> <p>Monitor and evaluate progress of strategy.</p>	<p>Host and coordinate collaborative meetings.</p> <p>Guide the facilitation and collaboration amongst all the stakeholders involved within the pathways.</p> <p>Prepare facilitation notes and materials for</p>

Regional Key Priority	Strategy	Estimated Cost	2015 -2016	2016 - 2017	Potential Role of the Consortium
Alignment and Pathways		<p>Year 2 Curriculum meetings for collaboration across program areas and systems (K12 AE, CC, and Partners) = \$250,000</p> <ul style="list-style-type: none"> • Food, materials, and printing • Ongoing funding for compensation (e.g., stipends, release time) for AE, CC faculty, group leaders for content areas to collaborate and facilitate 			<p>meetings.</p> <p>Each content area in K12 AE and CC should be involved in the collaboration.</p>
	<p>(3) Align Courses and Streamline Pathways</p> <ul style="list-style-type: none"> • (3b) Align Standards 	<p>Year 1 Curriculum meetings for collaboration across program areas and systems (K12 AE, CC, and Partners) = \$250,000</p> <ul style="list-style-type: none"> • Food, materials and printing • Pathway and program experts/key personnel time • Funding for compensation (e.g., stipends, release time) for AE, CC faculty, group leaders for content areas to collaborate and facilitate <p>Year 2 Curriculum meetings for collaboration across program areas and systems (K12 AE, CC, and Partners) = \$250,000</p> <ul style="list-style-type: none"> • Food, materials, and printing 	<p>Establish workgroup (a collaboration model and personnel to do a gap analysis of programs throughout the region)</p> <ul style="list-style-type: none"> • Identify existing standards for each program at AE, CCs, career training programs • Identify existing benchmarks and establish new benchmarks <p>Determine which standards are common across programs and which are unique per program.</p> <p>Begin discussion to inform course sequences within K12 AE and to CC.</p>	<p>Continue to refine existing standards and implement them across the consortium.</p> <p>Monitor and evaluate progress of strategy.</p>	<p>Host and coordinate collaborative meetings.</p> <p>Guide the facilitation and collaboration amongst all the stakeholders involved with the implementation of standards to be addressed.</p> <p>Prepare facilitation notes and materials for meetings.</p> <p>Each content</p>

Regional Key Priority	Strategy	Estimated Cost	2015 -2016	2016 - 2017	Potential Role of the Consortium
Alignment and Pathways		<ul style="list-style-type: none"> Ongoing funding for compensation (e.g., stipends, release time) for AE, CC faculty, group leaders for content areas to collaborate and facilitate 			area in K12 AE and CC should be involved in the collaboration.
	<p>(3) Align Courses and Streamline Pathways</p> <ul style="list-style-type: none"> (3c) Streamline Transition Points 	<p>Year 1 No additional cost – this should begin as part of the pathway and standards alignment.</p> <p>Year 2 No additional cost - connected to cost for 3a and 3b workgroup</p> <p>Stipends for faculty to participate in refinement and collaboration.</p> <p>Release time or reassigned time for leads to refine pathways.</p>	<p>Begin discussion to inform transition points as part of the development of pathways and standards.</p> <p>Include transition points to pathways to regional pathways roadmap.</p>	<p>Determine specific transition/entry points within and throughout all program areas. A special emphasis should be given to transition for each content area (Math, Reading, and Writing).</p> <p>Update and include transition points and pathways to regional pathways roadmap.</p> <p>Monitor and evaluate progress of strategy.</p>	<p>Host and coordinate collaborative meetings.</p> <p>Guide the facilitation and collaboration amongst all the stakeholders involved with the transition points to be addressed.</p> <p>Each content area in K12 AE and CC should be involved in the collaboration.</p>

Regional Key Priority	Strategy	Estimated Cost	2015 -2016	2016 - 2017	Potential Role of the Consortium
<p>Alignment and Pathways</p>	<p>(13) Train, Pilot, and Implement Integrated Basic Education and Skills Training Programs (iBEST) in CTE Programs</p>	<p>Year 1 iBEST observation and training in Washington/Oregon (travel and training cost; 2 days per person) \$2,000 per person/ 10 representatives = \$20,000</p> <p>iBest PD for regional CTE providers \$10,000</p> <p>iBest pilot and implementation \$15,000</p> <p>Year 2 iBest implementation \$15,000</p> <p>iBest PD for regional CTE providers \$10,000</p>	<p>Establish iBest workgroup.</p> <p>CAERC representatives observe and participate in iBest training in Washington/Oregon.</p> <p>Representatives provide iBest PD for regional CTE teams.</p> <p>Set up a PD system that includes blended and distance learning for teachers to maximize their ability to accelerate student progress.</p> <p>Pilot iBest in selected locations in region (evaluation and dissemination).</p> <p>Utilize the NextEd Regional Industry Roundtables to review curriculum by industry sector.</p> <p>Connect to support services with Regional Transition Specialists to case manage student progress from High School to K12 AE to CC.</p>	<p>Implement iBest in CTE programs.</p> <p>Continue PD support on iBest.</p> <p>Monitor and evaluate progress of strategy.</p>	<p>Coordinate iBest training.</p> <p>Contract iBest trainers.</p> <p>Host and coordinate planning meetings.</p> <p>Coordinate regional iBest pilot (e.g., registration, printing, materials, facilities, evaluation, etc.)</p>

Regional Key Priority	Strategy	Estimated Cost	2015 -2016	2016 - 2017	Potential Role of the Consortium
<p>Alignment and Pathways</p>	<p>(14) Increase Vocational English as a Second Language (VESL) Course Offerings and Program Components to Accelerate Student Progress and Placement Into the Workforce for Adults for Whom English Is a Second Language</p>	<p>Year 1</p> <ul style="list-style-type: none"> • \$450,000 • Facilities TBD • Collaborative meetings \$84,000 • ESL professional development = \$15,000 (\$500/person) <p>Year 2</p> <ul style="list-style-type: none"> • \$450,000 • Facilities TBD • Collaborative meetings \$84,000 • VESL professional development = \$15,000 (\$500/person) 	<p>Establish workgroup.</p> <p>Analyze regional data to determine potential locations of new and/or expanded VESL courses.</p> <p>Explore technology options for curriculum and course materials.</p> <p>Collaborative planning coordinated by CAERC to ensure consistency between K-12 AE, CC, and Partners (e.g., SETA, Building Skills Partnership) and within each system.</p> <p>Connect and leverage Partners (e.g., SETA, Building Skills Partnership) resources and services.</p> <p>Identify and incorporate workplace skills including soft skills into all ESL courses.</p> <p>Add additional VESL courses to regional asset map.</p>	<p>Analyze regional data to determine potential locations of new and/or expanded VESL courses.</p> <p>Update regional asset map with new VESL courses.</p> <p>Continue collaborative planning for course alignment.</p> <p>Continue offering professional development on VESL.</p> <p>Monitor and evaluate progress of strategy.</p>	<p>Host and coordinate planning meetings and professional development (e.g., registration, printing materials, facilities, etc.).</p>

Regional Key Priority	Strategy	Estimated Cost	2015 -2016	2016 - 2017	Potential Role of the Consortium
Student Support Services	(6) Coordinate and Expand Marketing and Outreach Efforts	<p>Year 1 Collaborative meetings to develop and design print media, electronic media \$75,000</p> <p>Year 2 Continue development and design print media, electronic media.</p> <p>Distribute print media, electronic media regionally \$75,000</p>	<p>Establish workgroup.</p> <p>Develop regional marketing and outreach plan to "re-brand" AE.</p> <p>Develop marketing and outreach tools (e.g., Executive Summary, In-depth newsletter feeder materials, videos, PSAs)</p> <p>Identify target audiences: policy decision makers, corporate heads, stakeholders, CTE, the users, etc.</p> <p>Identify and leverage Partners resources and programs as part of outreach.</p>	<p>Continue development of marketing and outreach tools.</p> <p>Distribute and disseminate.</p> <p>Monitor and evaluate progress of strategy.</p>	
	(7) Increase Number of Transition Specialists and Incorporate Collaborative Case Management	<p>Year 1 Collaborative planning for workgroup \$84,000</p> <p>One Transition Specialist per Member organization \$600,000 (Beginning Spring 2016)</p> <p>Transition Specialist Regional Coordinator \$120,000 (full year)</p> <p>Year 2 Transition Specialist Regional Coordinator \$120,000</p>	<p>Establish workgroup.</p> <p>Create job descriptions for Transition Specialist Coordinator and Transition Specialist.</p> <p>Hire Transition Specialist Coordinator and Transition Specialists.</p> <p>Collaborate with Partners to support program areas and transitions.</p> <p>Provide PD for Transition Specialists on Collaborative Case Management.</p>	<p>Collaborate with Alignment and Pathways workgroup.</p> <p>Continue PD for Transition Specialists.</p> <p>Collaborate with Partners to support program areas and transitions.</p> <p>Monitor and evaluate progress of strategy.</p>	<p>Host and coordinate planning meetings.</p> <p>Contract/hire Transition Specialists and Transition Specialist Coordinator.</p> <p>Coordinate efforts with Alignment and</p>

Regional Key Priority	Strategy	Estimated Cost	2015 -2016	2016 - 2017	Potential Role of the Consortium
Student Support Services		One Transition Specialist per Member organization \$1,200,000 (full year)	Collaborate with Alignment and Pathways workgroup.		Pathways workgroup.
	(10) Coordinate Transitional Planning for AWD Among PreK-22 Providers	<p>Year 1 Collaborative planning for workgroup \$84,000</p> <ul style="list-style-type: none"> • Release time • Facilities • Food • Printing <p>Annual regional event (CAERC) \$15,000</p> <p>Professional development (SCOE) \$15,000 (\$500/person)</p> <p>Year 2 Collaborative planning for workgroup \$84,000</p> <ul style="list-style-type: none"> • Release time • Facilities • Food • Printing <p>Annual regional event (CAERC) \$15,000</p> <p>Professional development (SCOE) \$15,000 (\$500/person)</p>	<p>Recruit and partner with K-22 special education teams.</p> <p>Collaborative time to coordinate planning to improve communication across system and service providers (e.g., DD Services, Alta Regional, DOR, employers, PreK-22 educational system, AE, SELPA regional networks, etc.).</p> <p>Partner with CAERC partners to host annual regional events to share programs/services and identified gaps.</p> <p>Collaborate with CAERC Partners to provide professional development for teachers and administrators (e.g., K12 AE, K12 SELPA, CC, Alta Regional) to support development of individual transition plans beginning at age 16.</p>	<p>Collaborative time to coordinate planning with Members/Partners.</p> <p>Co-host annual regional events with Partners and Members to share programs and services and identified gaps.</p> <p>Collaborate with Members/Partners to provide professional development for teachers and administrators (K12 AE, K12 SELPA, CC, partners i.e., Alta Regional) to support development of individual transition plans beginning at age 16.</p> <p>Monitor and evaluate progress of strategy.</p>	<p>Host and coordinate planning meetings.</p> <p>Coordinate and deliver regional event and professional development (e.g., registration, printing materials, facilities, etc.)</p> <p>Connect and leverage Partners resources and services (e.g., K12 SELPA, Alta Regional)</p>

Regional Key Priority	Strategy	Estimated Cost	2015 -2016	2016 - 2017	Potential Role of the Consortium
Student Support Services	(12) Increase Availability and Access to Support Services	<p>Year 1 Collaborative planning meetings for workgroup \$84,000 (e.g., release time, facilities, food, materials for meetings, etc.)</p> <p>Funding for support service staff and services as determined by workgroup \$200,000</p> <p>Year 2 Collaborative planning meetings for workgroup \$84,000 (e.g., release time, facilities, food, materials for meetings, etc.)</p> <p>Funding for support service staff and services as determined by workgroup \$500,000</p>	<p>Establish workgroup.</p> <p>Determine what support services are currently present and which ones have the most positive impact on learner persistence and completion based on workgroup knowledge, discussion/surveys/input from pilot district(s) teachers, students, and Partners.</p> <p>Prioritize proposed support services. Select services that will most positively impact student success.</p> <p>Workgroup will continue to meet and:</p> <ul style="list-style-type: none"> • Write job descriptions for necessary support services (e.g., child care providers, tutors, translators). • Create a budget for support services that do not require personnel (translation costs if translators are not necessary). • Find space for support service personnel. • Hire necessary support service staff. <p>Connect and leverage Partners (e.g. Regional Transit, DOR, SETA, Child Action) resources and programs/services.</p>	<p>Workgroups meet quarterly to evaluate implementation and perceived success/impact of student services.</p> <p>Workgroup to phase out, and staff to work and evaluate (based on staff and student surveys and feedback) support services, improving services based on evaluations.</p> <p>Connect and leverage Partners (e.g. Regional Transit, DOR, SETA, Child Action) resources and programs/services.</p> <p>Monitor and evaluate progress of strategy.</p>	Host and coordinate planning meetings.

Regional Key Priority	Strategy	Estimated Cost	2015 -2016	2016 - 2017	Potential Role of the Consortium
Data and Accountability	(8) Establish Virtual Communication Network Among AE Providers Support Collaboration Across Systems	<p>Year 1 Contract professional firm to develop AE Communication Network in collaboration with communication workgroup. \$50,000</p> <p>Year 2 Maintenance, site updates, and hosting fees for AE Collaborative Communication Network \$50,000</p>	<p>Establish communication workgroup.</p> <p>Determine platform and format/specifications of system.</p> <p>Contract provider to develop AE Communication Network.</p> <p>Roll out AE Collaborative Communication Network to Members and Partners.</p>	<p>Update user access.</p> <p>Monitor and evaluate progress of strategy.</p>	<p>Host and coordinate collaborative meetings.</p> <p>Contract provider or platform.</p>
	(11) Design, Pilot, and Utilize Consortium-Wide Data and Accountability System	<p>Year 1 Contract professional firm to develop data and accountability system in collaboration with communication workgroup. \$500,000</p> <p>Year 2 Contract professional firm to maintain, update data system, and provide professional development on how to use the data system required by the state. \$500,000</p>	<p>Establish workgroup.</p> <p>Develop the criteria for initial data gathering and accountability. Each program will need to relay the data they need to collect as a requirement or to make informed data-driven decisions.</p> <p>Contract professional firm to create database.</p>	<p>Follow the state's guidelines regarding a data system and accountability.</p> <p>Provide professional development on how to use data system.</p> <p>Monitor and evaluate progress of strategy</p>	<p>Initiate the development of criteria of data to be collected by compiling the needs across the consortium.</p> <p>Contract professional firm to develop a system to collect data and facilitate the implementation of the expected statewide system.</p>

Regional Key Priority	Strategy	Estimated Cost	2015 -2016	2016 - 2017	Potential Role of the Consortium
Professional Development	(4) Provide Professional Development to Support Regional Priorities	<p>Year 1 Release time, presenter and support fees, food and printing \$150,000</p> <p>Year 2 Release time, presenter and support fees, food and printing \$150,000</p>	<p>Establish PD workgroup and shared database for PD (along leadership teams).</p> <p>Define accountability and assessment SB 173 and identify state priorities.</p> <p>Develop regional PD plan and identify:</p> <ul style="list-style-type: none"> • Priorities for professional development • Strategies for delivery of PD • All existing resources and sharing <p>Provide PD based on regional PD plan.</p> <p>Connect and leverage Partners (e.g., CATESOL, CASAS, OTAN, CALPRO, CCAE) for support and resources.</p>	<p>Continue to provide PD based on regional PD plan based on priorities established in year one after base requirements have been met.</p> <p>Connect and leverage Partners (e.g., CATESOL, CASAS, OTAN, CALPRO, CCAE) for support and resources.</p> <p>Monitor and evaluate progress of strategy.</p>	<p>Host and coordinate planning meetings.</p> <p>Host and coordinate regional PD events (e.g., registration, printing materials, facilities, etc.).</p>

Objective #1: Current Programs and Services

An evaluation of *current levels and types of adult education programs* within its region, including education for adults in correctional facilities; credit, noncredit, and enhanced noncredit adult education coursework; and programs funded through Title II of the federal Workforce Investment Act, known as the Adult Education and Family Literacy Act (Public Law 05-220).

Consortium Summary

Narrative

This section will describe the services and programs the consortium members and partners are currently providing in the consortium's region for each of the program areas as outlined in the AB86 Regional Comprehensive Plan. The evaluation of adequacy and quality will also be provided for each of the program areas. The following describes the evaluation of the current levels and types of adult education programs within the region.

Analysis

See Table 1.1a, Table 1.1b, and Table 1.2.

CAERC is comprised of 15 members, inclusive of 4 community colleges and 11 K–12 school districts, and 23 partner organizations. Member and partner agencies each have unique and effective approaches to serving their adult education student populations with well-prepared teachers, multiple student support services, variety of program-area curricula and assessments. CAERC members and partners provided adult education services for over 50,737 students (reported FY 13–14 unduplicated enrollment) across the five program areas. In 2013–14, \$224,826,039 was spent among CAERC members and partners to fund adult education services in the region. The highest expenditure was in Program Area 5: Adults with Disabilities with \$205,943,772. The lowest expenditure across the five program areas was in Program Area 5: Apprenticeships with a regional cost of \$635,715. (Note: It is expected that the total regional enrollment and regional cost are significantly higher as only 7 out of 20 of the partners reported data.)

Table A. CAERC 2013-14 Enrollment and Operational Cost

Program Area	Unduplicated Enrollment	% of Total Enrollment	Operational Cost	% of Total Cost	Cost Per Student
1. Elementary and Basic Skills	25,528	50%	\$7,967,216.59	3.5%	\$312.10
2. Adult English Learners	12,639	25%	\$5,559,138.21	2.5%	\$439.84
3. Adults with Disabilities	9,406	19%	\$205,943,772.90	91.6%	\$21,894.94
4. Short Term CTE	2,395	5%	\$4,720,196.69	2.1%	\$1,970.85
5. Program for Apprentices	769	2%	\$635,715.14	0.3%	\$826.68
Totals:	50,737	100%	\$224,826,039.53	100.0%	\$25,444.41

In comparing expenditure costs in each program, there was minimal change in Program Area 1, Program Area 2, and Program Area 3 from 2012-13 to 2013-14. However, there was a significant increase in spending in Program Area 4—\$1,010 (2012-13) to \$1,970 (2013-14). Program Area 5 funding per student also dropped from \$1,065 in 2012-13 to \$826 in 2013-14. Reference Figure 1.2.

Figure 1.2. Cost Comparisons



Adult Basic Education (ABE) and Adult Secondary Education (ASE) services are provided at the highest level among the five program areas with 71% (25 out of 35 agencies) of regional adult education services focused on ABE/ASE. The next highest percentage of services included programs for adult English learners with 65% (23 out of 35 agencies). However, there is a significant decrease of providers for Program Area 3: Adults with Disabilities with 20%, Program Area 4: Career Technical Education (CTE) with 37%, and Program Area 5: Apprenticeships with 20%. After a closer look at the distribution of which agencies provided the services, it was evident that CAERC members' (K-12 districts and Los Rios Community College Districts) programs focused on Program Areas 1 and 2. This contrasts with the distribution of services in Program Areas 3, 4, and 5, where partner agencies provided the bulk of these AE services.

Reference Table B and Table C for the summary of services provided by CAERC members and partners.

Table B. Summary of Members Adult Education Services Across Program Areas

Member Organization	Program Area				
	ABE/ASE	ESL	AWD	CTE	APP
Amador County USD	X	--	--	--	--
American River College	X	X	--	--	X
Center Joint USD	X	X	--	--	--
Cosumnes River College	X	X	--	--	--
Davis Joint USD	X	X	--	X	--
Elk Grove USD	X	X	X	X	--
Folsom Cordova USD	X	X	--	X	--
Folsom Lake College	X	X	--	--	--
Galt Joint Union High School District	X	X	--	X	--
Natomas USD	X	X	--	--	--
Sacramento City College	X	X	--	--	--
Sacramento City USD	X	X	X	X	X
San Juan USD	X	X	--	X	X
Twin Rivers USD	X	X	--	X	--
Washington USD	X	X	X	--	--

X = services offered

-- = no services or data not provided

Table C. Summary of Partners Adult Education Services Across Program Areas

Partner Organization	Program Area				
	ABE/ASE	ESL	AWD	CTE	APP
Alta California Regional Center	--	--	X	--	--
Black Oak Mine USD	--	--	--	X	--
Building Skills Partnership	--	X	--	--	--
California Department of Corrections and Rehabilitation	--	--	--	--	--
California Department of Developmental Services	--	--	--	--	--
California Human Development	X	X	--	X	--
California State Library	--	--	--	--	--
Capital Region Academies for the Next Economy (CRANE)	n/a	n/a	n/a	n/a	n/a
El Dorado County Library	--	--	--	--	--
El Dorado County Office of Education	X	X	X	--	--
El Dorado Union High SD	--	--	--	--	--
Greater Sacramento Urban League	--	--	--	--	--
Highlands Community Charter and Technical Schools	X	X	--	X	X
La Familia Counseling Center	X	X	--	--	--
Mexican Consulate	n/a	n/a	n/a	n/a	n/a
Outreach and Technical Assistance Network (OTAN)	n/a	n/a	n/a	n/a	n/a
Sacramento Employment and Training Agency (SETA)	X	X	X	X	X
Sacramento ESL Program	--	X	--	--	--
Sacramento Food Bank & Family Services	X	X	--	--	--
Sacramento Job Corps	X	--	X	X	X
Sacramento Public Library	X	X	X	--	--
Yolo County Library	X	--	--	--	--
Yolo County Office of Education	X	--	--	X	X

X = services offered -- = no services or data not provided

Program Area 1: Adult Basic Education (ABE) / Adult Secondary Education (ASE) Elementary and secondary basic skills, including classes required for a high school diploma or high school equivalency certificate

Capital Adult Educational Regional Consortium Summary

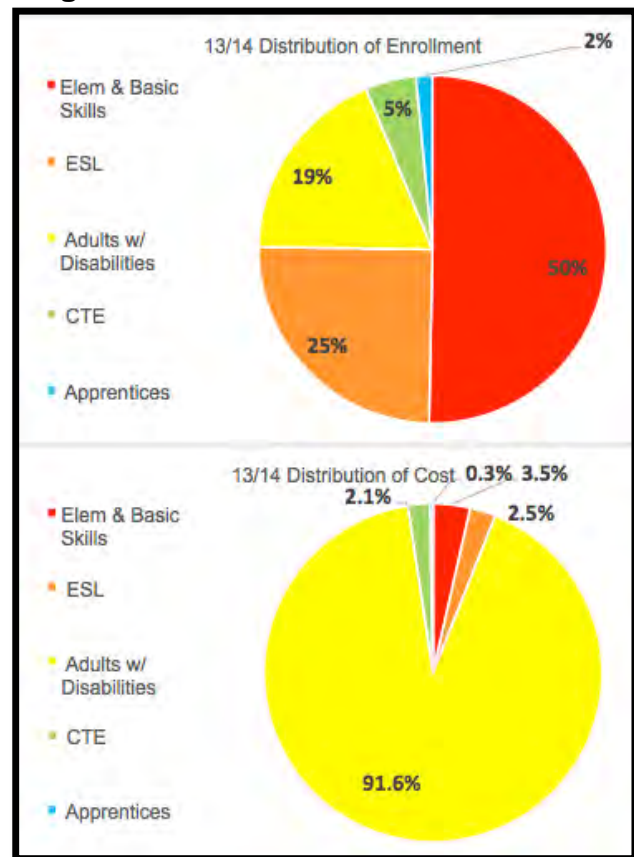
In the Capital Adult Educational Regional Consortium (CAERC), Program Area 1: Elementary and Secondary Basic Skills represented the largest segment with 50% of the total unduplicated enrollment (Programs 1-5) with 25,528 students in 2013-2014. \$7,967,216 was spent among CAERC members to fund Program 1 with an average cost of \$312 per student in 2013-2014. In comparison to the 2012-2013 data, there were no significant changes in student enrollment, operational cost, or cost per student. Details of the CAERC data are included in Table 1.1, Table 1.2, and Figure 1.3.

Members provided a wide variety of programs and services to support adult learners with elementary and secondary basic skills. This included non-accredited high school diploma programs, General Education Development (GED) preparation and testing, California High School Equivalency Exam (CAHSEE) preparation and testing, credit recovery courses, Adult Basic Education (ABE), and Adult Secondary Education (ASE) courses. Members consistently utilized the Comprehensive Adult Skills Assessment System (CASAS) and teacher-designed assessments to measure student progress. Courses were taught by credentialed, K-12 teachers and professional Los Rios Community College faculty who meet state minimum qualifications for their disciplines.

Two members, Elk Grove Adult and Community Education (EGACE) and San Juan Adult Education (SJAE), have capitalized on building community partnerships to further enhance Program 1 services. Five members (Center Adult School, EGACE, Galt Adult Education, SJAE, and Twin Rivers Adult School) have integrated technology and now offer blended learning as an option for course instruction with distance learning.

Refer to **Appendix A** for detailed descriptions of Program Area 1 program and services provided by CAERC Members and Partners.

Figure 1.3

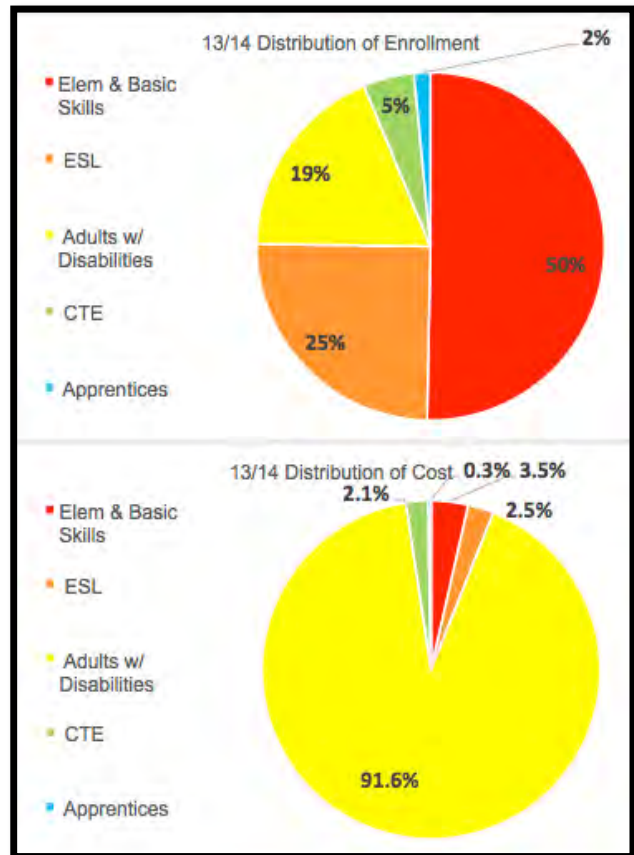


Program Area 2: Adult English Learners Classes and courses for immigrants eligible for educational services in citizenship and English as a second language, and workforce preparation classes in basic skills

Capital Adult Educational Regional Consortium Summary

In the Capital Adult Educational Regional Consortium (CAERC), Program 2: Classes and courses for immigrants eligible for educational services in citizenship and English as a second language, and workforce preparation classes in basic skills represented the second largest segment with 25% of the total unduplicated enrollment (Programs 1-5) with 12,639 students in 2013-2014. \$5,559,138 was spent among CAERC members to fund Program 2 with an average cost of \$439.84 per student in 2013-2014. There was a moderate decline in student enrollment with 2,664 more students served in the previous year 2012-2013. This impacted funding with the reduction of \$420,989 spent on programs and services to support adult immigrants and English learners. Details of the CAERC data are included in Table 1.1, Table 1.2, and Figure 1.3.

Figure 1.3



Members provided a broad spectrum of programs and services to support adult immigrants and English learners. This included courses for English as a Second Language (ESL), U.S. Citizenship, and Vocational English as a Second Language (VESL). Courses covered the breadth of language proficiency levels from Beginning Literacy through Advanced. Consortium members consistently utilized the Comprehensive Adult Skills Assessment System (CASAS) to accurately place students in the appropriate courses based on language proficiency levels. CASAS was also administered to exit and advance students to the next language level. Comprehensive curricular maps with clear performance targets were designed to ensure that students moved across proficiency levels.

Courses were taught by credentialed, K-12 teachers with specialized Teachers of English to Speakers of Other Languages (TESOL) certification and professional Los Rios Community College faculty who meet state minimum qualifications for their disciplines.

To supplement and enrich instruction, three members (Elk Grove Adult and Community Education, Center Adult School, and San Juan Adult Education) included distance learning opportunities, which was comprised of DVDs for checkout, online materials, and videos. Distance learning and technology integration have been critical to increasing student access for students with limited transportation and conflicting work/family schedules. Program 2 offerings have been further enhanced with VESL classes that provide English instruction in a blended learning environment specific to the career aspirations of students. VESL also enriches student learning with career exploration opportunities with the goal of entering training and/or employment. Two members, Elk Grove Adult and Community Education and San Juan Adult Education, have also capitalized on building community partnerships to further expand Program 2 services in their respective areas.

Refer to **Appendix A** for detailed descriptions of Program Area 2 program and services provided by CAERC Members and Partners.

Program Area 3: Adults with Disabilities (AWD) Education programs for adults with disabilities

Capital Adult Educational Regional Consortium Summary

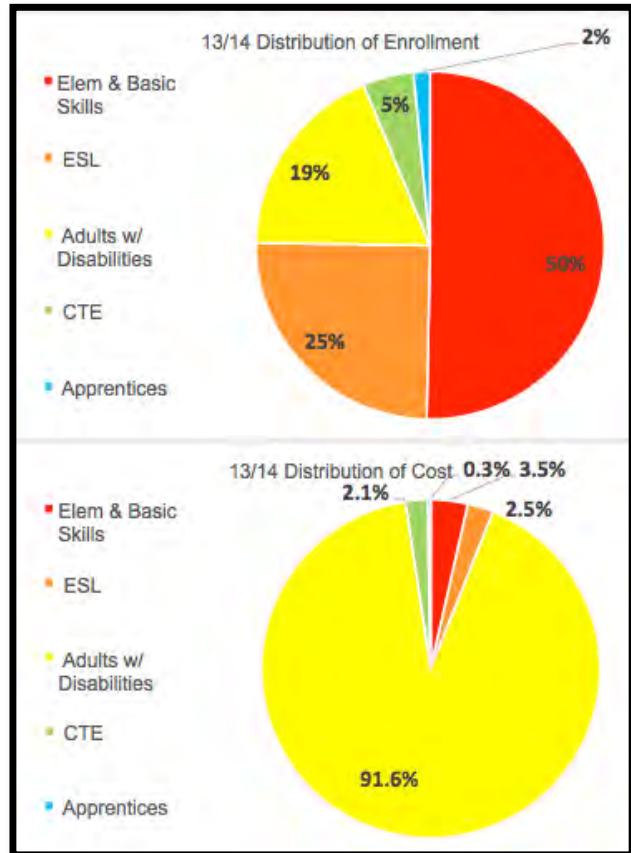
In the Capital Adult Educational Regional Consortium (CAERC), Program Area 3: Education programs for adults with disabilities had the third highest number of unduplicated enrollment with 9,406 students in 2013-2014. This represented 19% of the total enrollment across Programs 1-5. Alta California Regional Center, a CAERC partner, provided services to 8,524 adults with disabilities which is 91% of all services in the region.

A total of \$205,943,772 was spent among all CAERC members and partners to fund Program 3, which accounted for 91.6% of adult education spending in the region. Program 3 had the highest cost per student with \$21,894. Alta California Regional Center, the largest CAERC provider of Program 3, reported \$197,517,000 in operational costs for 2013-2014, whereas CAERC members spent \$1,546,772 for Program 3 with an average cost of \$2,762 per student in 2013-2014.

In comparison to the 2012-2013 data, there was a minimal decline in student enrollment with 100 fewer students served. Services have been eliminated in all but one of the K-12 district members. Just the year before, three additional K-12 district members (Elk Grove Unified School District, San Juan Unified School District, and Twin Rivers Unified School District) provided services for adults with disabilities. In 2013-2014, four members (Cosumnes River College, Folsom Lake College, Sacramento City College, and Sacramento City Unified) have provided programs and services to support adults with disabilities. Only one K-12 district member, Sacramento City Unified, continued to offer fee-based services. However, members have provided disabled students appropriate accommodations designed to assist students in being successful in regular adult education classes. Details of the CAERC data are included in Table 1.1, Table 1.2, and Figure 1.3.

Refer to **Appendix A** for detailed descriptions of Program Area 3 program and services provided by CAERC Members and Partners.

Figure 1.3

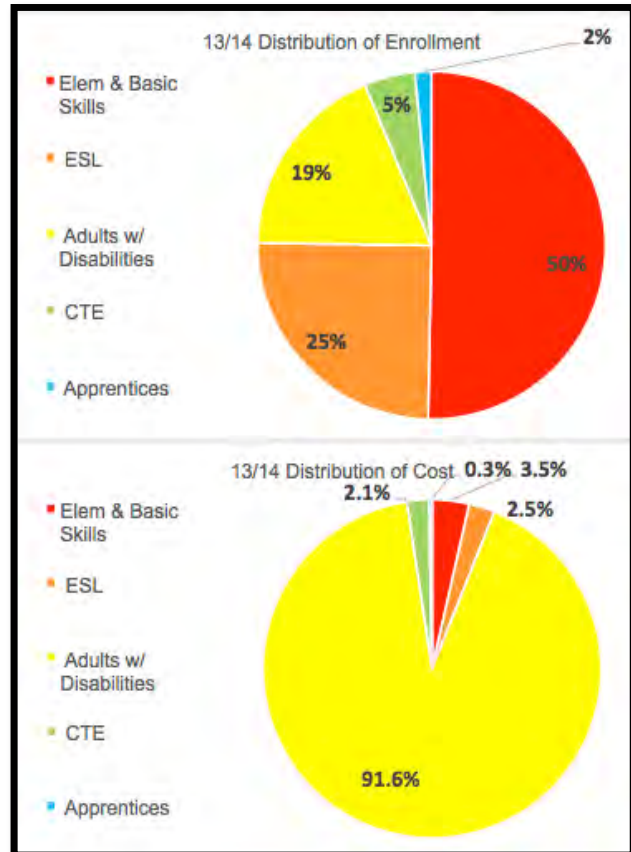


Program Area 4: Career Technical Education Short-term career technical education programs with high employment potential

Capital Adult Educational Regional Consortium Summary

In the Capital Adult Educational Regional Consortium (CAERC), Program Area 4: Short-term career technical education programs had the second lowest unduplicated enrollment with 2,395 students in 2013-2014. This represented 5% of the total enrollment across Programs 1-5. \$4,720,196 was spent among CAERC members to fund Program 4 with an average cost of \$1,970 per student in 2013-2014. Program 4 was the second highest expenditure per student for the Capital Adult Education Regional Consortium. In comparison to the 2012-2013 data, there was also a significant increase in the average cost per student spending with approximately \$1,000 more per student. However, there was a significant decline in student enrollment with 3,040 less students served. Details of the CAERC data are included in Table 1.1, Table 1.2, and Figure 1.3.

Figure 1.3



In 2013-2014, seven members (Davis Joint Unified, Elk Grove Unified, Folsom Cordova Unified, Galt Joint Union High School District, Sacramento City Unified, San Juan Unified, and Twin Rivers Unified) have provided career technical education (CTE) programs and services. Members have offered a diverse range of CTE programs and services representative of different technical fields and industries. The cross-section of programs included Comprehensive Nurse Assistant, Home Health Aide, National Certified Medical Assistant, Medical Assistant Administrative, Billing & Coding Specialist, Truck Driving, Auto Body Repair, Court Reporting, Pharmacy Technician, Office Specialist, Accounting Clerk, Welding & Manufacturing Technologies, Computer-Aided Drafting, Culinary Arts, and Horticulture & Landscaping.

Community partners were essential to providing high-quality services in specific technical fields to adult students in the region. Partners included California Human Development, Highlands Community Charter and Technical Schools, Sacramento Job Corps, Cosumnes River College (CRC), Rio Cosumnes Correctional Center (RCCC), Sacramento Employment and Training Agency (SETA), California Department of

Rehabilitation (DOR), Sacramento County Office of Education, San Joaquin County Office of Education, Yolo County Office of Education, and Boston Reed. All programs were fee-based, and some programs received supplemental funding through Pell Grants, Cal Perkins Grants, SETA Grants, and Stafford Loans. Ongoing collaboration between community partners and members assisted in streamlining programs and services to better meet the needs of students in CTE programs. Several members noted the increase in demand for CTE programs, but unfortunately, were unable to provide services due to fiscal and personnel constraints.

Refer to **Appendix A** for detailed descriptions of Program Area 4 program and services provided by CAERC Members and Partners.

Program Area 5: Apprenticeships Programs for apprentices

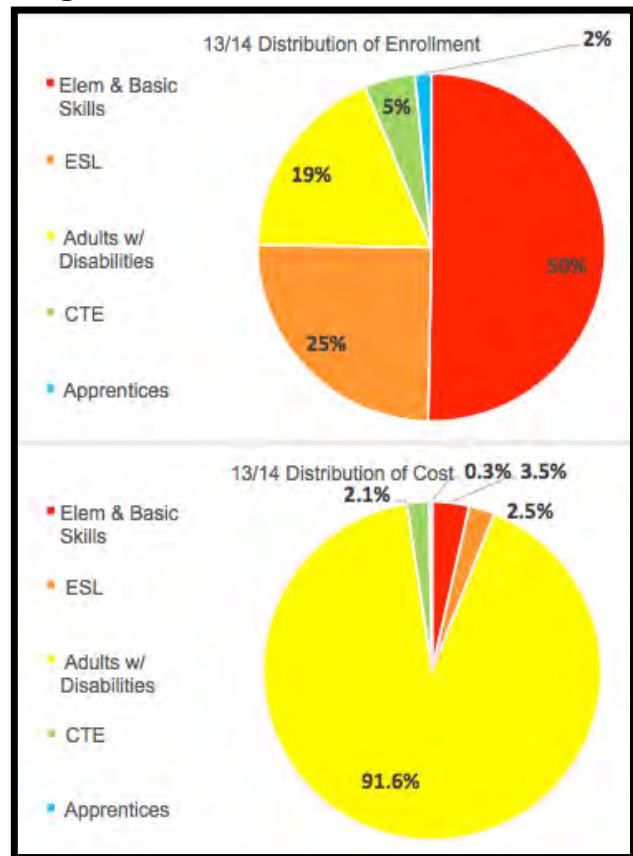
Capital Adult Educational Regional Consortium Summary

In the Capital Adult Educational Regional Consortium (CAERC), Program Area 5: Apprenticeships had the lowest unduplicated enrollment with 769 students in 2013-2014. This represented 2% of the total enrollment across Programs 1-5. \$635,715 was spent among CAERC members to fund Program 5 with an average cost of \$826.68 per student in 2013-2014. In comparison to the 2012-2013 data, there was also a slight increase in student enrollment with 170 more students participating. There was no significant change in total consortium operational cost. Details of the CAERC data are included in Table 1.1, Table 1.2, and Figure 1.3.

In 2013-2014, Los Rios Community College District, Sacramento City Unified, Sacramento County, and San Juan Unified have provided apprenticeship programs and services in the region. Apprenticeships included carpenters, ironworkers, electrical workers, firefighters, sheet metal workers, paramedics, hazardous materials technicians, and roofers. Community sponsors were essential to providing high-quality programs in specific occupations. Sponsors included Carpenters Training of Northern California, Field Iron Workers Apprenticeship, Sacramento Valley Sheet Metal Heating & Air Conditioning, Sacramento Area Joint Apprenticeship, Western Electrical Contractors Association, and California Fire Fighter Joint Apprenticeship Committee. All the apprenticeship programs at American River College were college-level, credit programs.

Some programs were fee-based, and some programs received supplemental funding through Related and Supplemental Instruction (RSI). In 2008-2009, programs received \$1,948,830 in RSI funding. In 2014-2015, programs anticipate \$1,911,269 in RSI funding.

Figure 1.3



AB 86 Apprenticeship List of LEA's		
LEA	Sponsor	Craft/Occupation
Los Rios CCD (ARC)	Carpenters Training of Northern California (Fairfield Only)	Carpenter
Los Rios CCD (ARC)	Field Iron Workers Apprenticeship	Ironworkers
Los Rios CCD (ARC)	Sacramento Area Electrical Apprenticeship	Electrician
Los Rios CCD (ARC)	Sacramento Valley Sheet Metal Heating & Air Conditioning	Sheet Metal
Sacramento City USD	California Fire Fighter Apprenticeship Committee	Fire Fighters
Sacramento City USD	Sacramento Area Joint Apprenticeship	Floor Coverers
Sacramento County	California Fire Fighter Joint Apprenticeship Committee (JAC)	Fire Fighter
Sacramento County	California Fire Fighter Joint Apprenticeship Committee (JAC)	Fire Fighter II
Sacramento County	California Fire Fighter Joint Apprenticeship Committee (JAC)	Fire Medic
Sacramento County	California Fire Fighter Joint Apprenticeship Committee (JAC)	Paramedic
Sacramento County	California Fire Fighter Joint Apprenticeship Committee (JAC)	Fire Officer
Sacramento County	California Fire Fighter Joint Apprenticeship Committee (JAC)	Fire Engineer
Sacramento County	California Fire Fighter Joint Apprenticeship Committee (JAC)	Fire Apparatus Engineer
Sacramento County	California Fire Fighter Joint Apprenticeship Committee (JAC)	Hazardous Materials Technician
Sacramento County	California Fire Fighter Joint Apprenticeship Committee (JAC)	Fire Marshal
Sacramento County	California Fire Fighter Joint Apprenticeship Committee (JAC)	Fire Prevention Officer
Sacramento County	California Fire Fighter Joint Apprenticeship Committee (JAC)	Fire Fighter Paramedic
Sacramento County	California Fire Fighter Joint Apprenticeship Committee (JAC)	Arson/Bomb Investigator
San Juan USD	Western Electrical Contractors	Electrician,

	Association	Construction
San Juan USD	Roofers/Waterproofers	Roofers/Waterproofers
San Juan USD	California Fire Fighter Joint Apprenticeship Committee (JAC)	Fire Fighter
San Juan USD	California Fire Fighter Joint Apprenticeship Committee (JAC)	Fire Fighter II
San Juan USD	California Fire Fighter Joint Apprenticeship Committee (JAC)	Fire Medic
San Juan USD	California Fire Fighter Joint Apprenticeship Committee (JAC)	Paramedic
San Juan USD	California Fire Fighter Joint Apprenticeship Committee (JAC)	Fire Officer
San Juan USD	California Fire Fighter Joint Apprenticeship Committee (JAC)	Fire Engineer
San Juan USD	California Fire Fighter Joint Apprenticeship Committee (JAC)	Fire Apparatus Engineer
San Juan USD	California Fire Fighter Joint Apprenticeship Committee (JAC)	Fire Inspector
San Juan USD	California Fire Fighter Joint Apprenticeship Committee (JAC)	Hazardous Materials Technician
San Juan USD	California Fire Fighter Joint Apprenticeship Committee (JAC)	Training Officer
San Juan USD	California Fire Fighter Joint Apprenticeship Committee (JAC)	Fire Marshal
San Juan USD	California Fire Fighter Joint Apprenticeship Committee (JAC)	Fire Prevention Officer
San Juan USD	California Fire Fighter Joint Apprenticeship Committee (JAC)	Fire Fighter Paramedic
San Juan USD	California Fire Fighter Joint Apprenticeship Committee (JAC)	Arson /Bomb Investigator
San Juan USD	Western Electrical Contractors Association	Electrician, Construction

Related and Supplemental Instruction RSI Funding			
LEA	2008-09	2012-13	2013-14
Los Rios CCD	\$299,483.00	\$757,595.00	\$757,595.00
Sacramento City USD	\$253,000.00	\$201,882.00	\$201,882.00
Sacramento County	\$791,333.00	\$621,644.00	\$621,644.00
San Juan USD	\$605,014.00	\$468,523.00	\$468,523.00
Totals:	\$1,948,830.00	\$2,049,644.00	\$2,049,644.00

Refer to **Appendix A** for detailed descriptions of Program Area 5 program and services provided by CAERC Members and Partners.

Objective #2: Current Needs

An evaluation of current needs for adult education programs within the consortium's region.

Consortium Summary

Narrative

This section will describe and assess current needs for each of the AB86 adult education program areas (1-5), including the needs that are currently unmet.

An evaluation of adequacy and quality will also be provided for each of the program areas.

Analysis

See Table 2.0 and Tables A-H

Consortium Needs Across Program Areas 1-5

In preparation for the first regional Summit held on September 11, 2014, CAERC members and partners were tasked with identifying the region's needs and gaps. At Summit I, attendees met in program-area collaboration teams to share their organization's perspective and to identify the regional trends. Faculty and administration representing all program areas of the consortium came together to brainstorm, discuss, rank, and then vote on perceived needs/gaps in the region.

After the Summit, Program Area Subcommittees convened to refine the list of needs and gaps for the Capital Region. A demographic analysis was conducted to evaluate the regional needs and adequacy. Members had the opportunity to refine their responses to Objective 2, and responses from CAERC partners were solicited.

Some overarching trends appeared across Program Areas 1-5. These regional trends include the need for:

- Targeted, braided, dedicated and coordinated funding for adult education;
- Increased and ongoing coordination and collaboration between K-12 adult education, community college, and community partners across the consortium;
- Transitions and curricular alignment and standardized articulation;
- Common assessment and data systems to track student progress across and within program areas;
- Curricular integration across program areas, specifically apprenticeships;
- Expansion of program services and availability of course offerings;
- Increased student support services for counseling and career development;
- Use of technology in both coursework and communication for coordination and collaboration;

- Consortium-wide professional development coordination and support;
- Consortium-wide communication tools (i.e., websites, social media, email listserv, online forum, etc.);
- Re-branding of adult education to increase awareness and outreach; and
- Increased student access to regional resources (i.e., childcare, mental health services, housing options, transportation, and translation services).

CAERC Summary of Identified Regional Gaps and Needs	
Program Area 1: ABE/ASE	<ul style="list-style-type: none"> • Dedicated Funding for Ongoing Collaboration • Development of Regional Resource Asset Map and Communication Tools • Family Literacy • Common Assessment and Data Systems • Transitional and Curricular Alignment • Student Support Services • Program and Service Expansion • Professional Development
Program Area 2: Adult English Learners	<ul style="list-style-type: none"> • Increased Collaboration and Articulation • Improved Accountability and Assessment • Alignment of Curriculum between Adult Education and Community College, Increased Student Support Services • Expansion Course Offerings • Increased Access to Professional Development.
Program Area 3: Adults with Disabilities	<ul style="list-style-type: none"> • Academic and Transition Assessment Alignment • Streamlined Student IEP Transition • Expanded Access to Resources • Dedicated Funding of Services and Coordination for Students with Autism • Increased Resources and Dedicated Funding
Program Area 4: CTE	<ul style="list-style-type: none"> • Coherent and Aligned Systems for CTE • Equity and Access to CTE Programs • Expanded Communication and Marketing for CTE Programs • Industry-Specific and Generalized Professional Development • Systemic Data Collection System
Program Area 5: Apprenticeships	<ul style="list-style-type: none"> • Dedicated Funding for Apprenticeship Programs • Curricular Integration of Apprenticeships with other Program Areas • Student Support Services – Career Counselors and Job Developers • Increase Awareness about Apprenticeships • Standardized Articulation • Re-brand Adult Education

Demographic and Economic Profiles of Region

A closer look at the regional demographic data revealed that the needs identified from the CAERC members and partners were substantiated. It is clearly evident that post “flex funding,” adult education services dramatically declined. Included in this section are the data analyses and the corresponding data sources.

“The California budget crisis that resulted in a significant reduction of adult education funding and shifted control of the state apportionment funds for adult schools to local school districts created unprecedented pressures on the adult school system. Many local educational agencies were forced to make deep funding and program cuts. Delegating state funding decisions to the local districts has pressured districts to choose between serving adult learners and Kindergarten through twelfth grade pupils. At a time of increasing global competition, the implications of declining adult education funds will become more and more serious, both for the economic future of the state and its residents.”¹ This shift became known as “flex funding.” Flex funding resulted in two things:

¹Source: CDE End-of-Year 2012–13 Progress Report to the Legislature Implementation and Impact of the Workforce Investment Act, Title II: Adult Education and Family Literacy Act

1. The California Education Code regulations regarding the use of adult education funds were relaxed.
2. Local Educational Agency (LEA) Boards could use available funds for any purposes they deemed appropriate.

Historically, annual data collection included ten program areas. Gradually, the ten program areas became five through either consolidation or elimination. The remaining five program areas are:

1. Elementary and secondary basic skills, including classes required for a high school diploma or high school equivalency certificate.
2. Classes and courses for immigrants eligible for educational services in citizenship and English as a Second Language (ESL), and workforce preparation classes in basic skills.
3. Education programs for adults with disabilities.
4. Short-term career technical education programs with high employment potential.
5. Programs for apprentices.

Prior to “flex funding,” CDE had the authority to collect annual enrollment data from LEA’s. As a result of “flex funding” the authority was relaxed. Consequently, the collection of reliable enrollment data for adult education suffered. Since LEA’s were no longer required to collect enrollment data, they used their reduced funding for educational purposes – rather than data collection. Longitudinally reliable data is now available on only two of the five adult education program areas addressed in AB86. They are: **1. Elementary and basic skills (Adult Basic Education including Adult**

Secondary Education); 2. Classes for immigrants (English as a Second Language including citizenship, but not including workforce preparation). The only remaining source was for the enrollment, demographic, and performance data required by the federal government from adult education and literacy providers who receive federal funds authorized under the *Adult Education and Family Literacy Act of 1998 (AEFLA)*, enacted as Title II of the *Workforce Investment Act (WIA) of 1998* (P.L. 105-220). The adult education enrollment data for these two program areas (1 and 2) were provided by the Comprehensive Adult Student Assessment System (CASAS), the assessment and data contractor for California Department of Education (CDE). In 2008-09, enrollment was estimated to be more than 90 percent of the total enrollment statewide leaving 10 percent unaccounted for.

Since 2008-09, the *unaccounted for 10 percent* would have included enrollments from all eligible providers not receiving AEFLA Title II WIA federal funding such as the Los Rios Community College District. Of the 110 community colleges, only 17 applied for and received AEFLA Title II WIA federal funding.

A brief overview of AEFLA Title II WIA follows:

“The Adult Education—Basic Grants to States program authorized under the *AEFLA*, Title II of *WIA* (P.L. 105-220), is the major source of federal support for adult basic education and literacy education programs. When *AEFLA* was authorized in 1998, Congress made accountability for student results a central focus of the new law, setting out new performance accountability requirements for state and local programs that measure program effectiveness on the basis of student academic achievement and employment-related outcomes. The U.S. Department of Education’s Office of Vocational and Adult Education (OVAE) established the National Reporting System (NRS) to not only define the measures and implement the accountability requirements of *AEFLA*, but to act as a reservoir of data collected under these measures.”²

²Source: U.S. Department of Education, Office of Vocational and Adult Education annual report to Congress, PY 2010-11)

“The California Department of Education (CDE) Adult Education WIA, Title II: AEFLA federally funded programs provide educational opportunities and support services to one-fifth of the nation’s adults enrolled in WIA, Title II: AEFLA programs. These programs address the unique needs of individuals and communities by providing adults with the literacy skills and knowledge necessary to become positive contributors to their families and local economies. California adult education programs help learners (a) gain employment or better their current employment; (b) obtain a high school diploma or GED® certificate; (c) attain skills necessary to enter postsecondary education and training; (d) exit public welfare and become self-sufficient; (e) learn to speak, read, and write the English language; (f) master basic academic skills to help their children succeed in school; and (g) become U.S. citizens, exercise their civic responsibilities, and participate in a democratic society.”³

³Source: CDE, California Annual Performance Report 2012–13

Data for the remaining three program areas: **3. Educational programs for Adults with Disabilities, 4. Short-term Career Technical Education programs with high employment potential, and 5. Programs for Apprentices** came from a variety of sources including: U.S. Census—American Community Survey (ACS); California Department of Finance; and California Department of Education—EdQuest. Much of the data for these three program areas included children in grades K-12 or persons 5 years of age and older. Where possible, data for adults was segmented out, but were not necessarily being served. Reference **Table A: 2010 Age Group Percentiles by County**.

In California, as the demand for a highly educated workforce escalates, the state remains challenged in meeting this need. More than 3.5 million adults in CA “do not speak English well or not at all.” Total WIA enrollment data for California went from 618,767 in 2008-09 to 302,169 in 2012-13, a drop of 316,598 learners over a five-year period, or an average of 63,320 per year during those years. As cited in the CDE’s “End-of-Year 2012-13 Progress Report to the Legislature Implementation and Impact of the Workforce Investment Act, Title II: Adult Education and Family Literacy Act:

“The need for adult education in California has the potential to increase dramatically given the following: increasing immigration, low level of skills (a.k.a. skills gap) coupled with a high demand for middle-skill jobs, limited English proficiency of the population, lack of basic skills and workplace readiness, high rate of high school dropouts, and limited postsecondary preparation of many high school graduates.”

And from the U.S. DOE/ 2013:

“Tapping the Potential Profile of Adult Education Target Population. In CA, approximately six million adults do not possess a high school diploma or its equivalent. Approximately three million CA adults without high school credentials are unemployed or not in the labor force.”

Table A. 2010 Age Group Percentiles by County

Source: ACS, U.S. Census

State/County	Age Group							
	Total Number (All ages)	Preschool Age (0-4 years)	School Age (5-17 years)	College Age (18-24 years)	Working Age (25-64 years)	Young Retirees (65-74 years)	Mature Retirees (75-84 years)	Seniors (85 or more years)
Amador	37,853	3.8%	12.8%	6.4%	56.1%	11.8%	6.3%	2.6%
El Dorado	180,921	5.2%	17.5%	7.4%	55.1%	8.6%	4.4%	1.7%
Placer	350,275	5.9%	18.4%	7.8%	52.6%	8.3%	4.9%	2.1%
Sacramento	1,420,434	7.1%	18.4%	10.1%	53.2%	5.9%	3.7%	1.6%
Yolo	201,311	6.2%	16.3%	18.9%	48.7%	5.3%	3.1%	1.5%
CAERC Totals	2,190,794	145,092	395,384	224,676	1,158,205	143,735	86,205	37,497
CAERC Age Group Percentages	100.0%	6.6%	18.0%	10.3%	52.9%	6.6%	3.9%	1.7%
California	37,309,382	6.8%	18.1%	10.6%	53.1%	6.1%	3.7%	1.6%

Data show that there is a significant need in the regional population for adult education programs to support the number of qualified workers needed. Access to quality adult education services across all five program areas have plummeted as evidenced by 45,199 current enrollments versus 85,860 in 2008-09 (before “flex funding”). This represents a 47.4% overall drop of 40,661 individuals not having access to these programs in this region. The unmet needs of adult learners have significantly increased while the number of adult education services have declined. Reference **Table B: Summary of the Evaluation of Existing Adult Education Programs.**

- Program 1: Decreased from 2008-09 enrollments by 25.6% (9,608) in 2012 and 27.9% (10,461) in 2013-14.
- Program 2: Decreased from 2008-09 enrollments by 36.8% (12,772) in 2012 and 34.2% (14,049) in 2013-14.
- Program 3: Decreased from 2008-09 enrollments by 75.7% (2,447) in 2012 and 81.9% (2,649) in 2013-14.
- Program 4: Decreased from 2008-09 enrollments by 70.1% (11,012) in 2012 and 82.0% (7,537) in 2013-14.
- Program 5: Decreased from 2008-09 enrollments by 36.8% (669) in 2012 and 34.2% (623) in 2013-14.

The data reveal a continued decline of AE services from 2012-2013 to 2013-2014. This has caused an ever-widening gap of services for adult learners in the region. The unmet need continues to increase at a steady pace.

Reference:

- **Table B.** Summary of the Evaluation of Existing Adult Education Programs
- **Table C.** Decline of Total Unduplicated Enrollment
- **Table D.** Unduplicated Enrollment by Program Area

Table B. Summary of the Evaluation of Existing Adult Education Programs
Source: CAERC Documentation

Program Area	FY 2008-09 Unduplicated Enrollment	FY 2012-13 Unduplicated Enrollment	FY 2013-2014 Unduplicated Enrollment
1 – Elementary and Basic Skills	37,514	27,906	27,053
2 – Classes with Courses for Immigrants	27,579	14,807	13,530
3 – Adults with Disabilities	3,233	786	584
4 – Short Term CTE	15,714	4,702	2,835
5 – Programs for Apprentices	1,820	1,151	1,197
Total Unduplicated Enrollment Across Program Areas 1-5	85,860	49,352	45,199

Table C. Decline of Total Unduplicated Enrollment

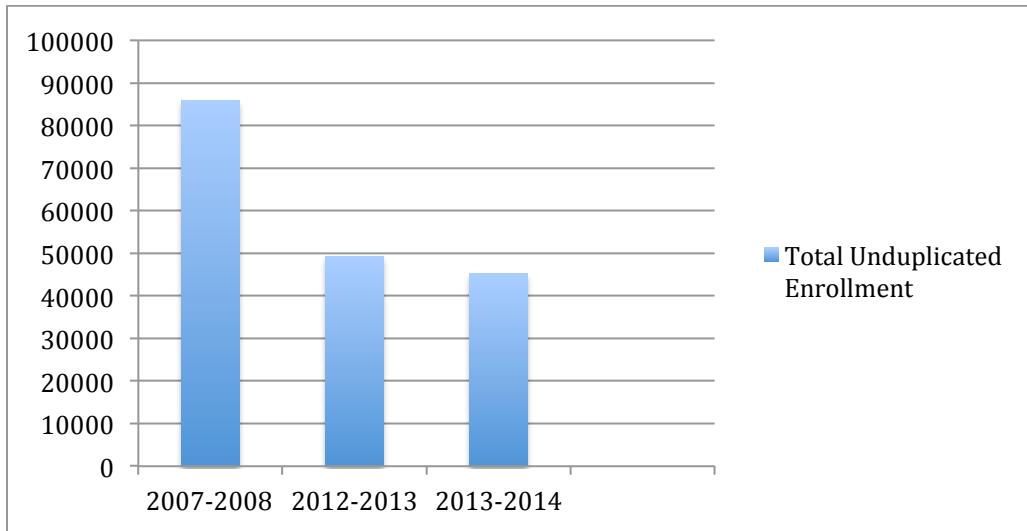
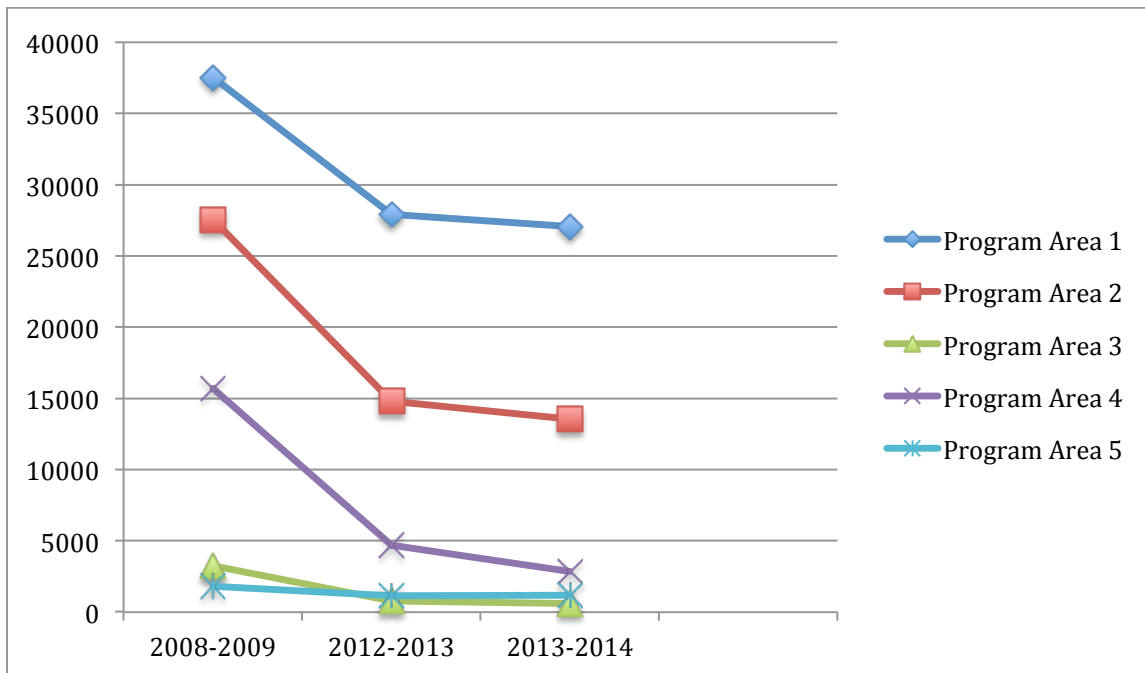


Table D. Unduplicated Enrollment by Program Area



A closer look at the ABE data revealed there was a **drop of 7.5% total ABA enrollment**. Per CASAS data, the CAERC ABE population for 2008-09 was 39.7% compared to 32.2% in 2012-13. In other words, this (ABE) population is increasing, and qualifications for and competition for jobs are also increasing. Consequently, there is a

need for greater access to educational/training opportunities for Program Area 1. Because of the inadequate funding, **25,802 adults are being unserved in Program Area 1: ABE/ASE in the CAERC region.**

Reference: **Table E: Adult Basic Education (ABE) – Elementary Skills**

Table E: Adult Basic Education (ABE) – Elementary Skills

CDE Data 2008-09* 76,516

	CASAS—20012-13—ABE				
	Beginning Literacy	Beginning Basic	Intermediate Low	Intermediate High	ABE Total
Statewide	12,678	17,854	30,706	73,184	134,422
CAERC	7,409	8,529	12,130	25,237	53,305
CAERC % of State	58.4%	47.8%	39.5%	34.5%	39.7%
	CASAS—20012-13—ABE				
	Beginning Literacy	Beginning Basic	Intermediate Low	Intermediate High	ABE Total
Statewide	5,862	11,149	19,643	48,693	85,347
CAERC	3,827	5,356	6,485	11,835	27,503
CAERC % of State	65.3%	48.0%	33.0%	24.3%	32.2%

Report, Table 4: Published from the CASAS Data Portal

Except for high school graduates, the annual unweighted CAERC median averages are less than the statewide data. In order to exceed the average earnings in each county, a person would have to have a Bachelor's degree or better. As a person's education increases, so does his/her annual income. This indicates a need for more adult education services in the region.

Reference: **Table F: Adult Basic Education (ABE) – Adult Secondary/GED (ASE) Median Past 12 Month Earnings by Educational Attainment**

In CAERC counties alone, 88.4% of individuals aged 25 years or older have attained a high school diploma or equivalent. That translates to 168,638 individuals (11.6%) of the population aged 25 years or older who do not have a high school diploma or equivalent. 20.5% to 28.3% of individuals in this age range have attained some college but not a degree. Those who have achieved an Associate's degree range from 6.9% (Yolo County) to 11.1% (Placer County). Interestingly, a higher percentage of that same population has achieved a Bachelor's degree with Placer being the highest at 23.1% and Sacramento the lowest with 18.5%. The Graduate or professional degree average

statewide is 11.5%, and all but Sacramento County exceed that percentage. All CAERC counties exceed the statewide average of 81.7% of individuals being a high school graduate or higher. All CAERC counties, except Sacramento (28.2%), exceed the statewide average of 31.0% for Bachelor's degree or higher.

Reference Table G: Adult Basic Education (ABE) – Adult Secondary/GED (ASE) Percentage of Population by Educational Attainment.

Specifically, ASE Low enrollment for CAERC totals for 2012-13 represented 5,513 fewer individuals (64.4%) than 2008-09 enrollments. The 2012-13 data indicated 5,180 fewer individuals (74.6%) in the ASE High category than in 2008-09. Overall, there is a dramatic drop in ASE enrollments. The 2012-13 statewide ASE totals were 59.9% below the 2008-09 statewide ASE totals. In the CAERC counties, ASE totals were 69.0% lower in 2012-13 than in 2008-09. Statewide, 46,422 individuals went unserved while 10,693 went unserved in CAERC counties.

Reference Table H: Adult Basic Education (ABE) – Adult Secondary/GED (ASE): Enrollment.

Table F. Adult Basic Education (ABE) – Adult Secondary/GED (ASE)

Median Past 12 Month Earnings by Educational Attainment

Geography	Population 25 years and over with earnings	Less than high school graduate	High school graduate (includes equivalency)	Some college or associate's degree	Bachelor's degree	Graduate or professional degree
El Dorado County	\$38,150	\$13,6914	\$27,116	\$34,182	\$55,604	\$69,764
Placer County	\$45,487	\$20,044	\$33,300	\$37,376	\$61,075	\$78,202
Sacramento County	\$36,286	\$19,521	\$26,391	\$34,654	\$52,152	\$71,887
Yolo County	\$34,519	\$16,979	\$30,897	\$32,318	\$44,011	\$60,377
Un-weighted CAERC Averages	\$38,611	\$17,559	\$29,426	\$34,633	\$53,211	\$70,058
California	\$36,297	\$19,057	\$27,262	\$35,888	\$54,931	\$77,093

Source: 2013 ACS (1-year estimates) Counties with 65,000+ population and 25+ years of age.

Median earnings in the past 12 months (in 2013 inflation-adjusted dollars)

Table G. Adult Basic Education (ABE) – Adult Secondary/GED (ASE) Percentage of Population by Educational Attainment

Geography	Population 25 years and over	Less than 9th grade	9th to 12th grade, no diploma	High school graduate (includes GED, etc.)	Some college, no degree	AA degree	BA/BS degree	Graduate or professional degree	High school graduate or higher	BA/BS degree or higher
California	25,147,232	10.1%	8.2%	20.8%	22.0%	7.9%	19.5%	11.5%	81.7%	31.0%
El Dorado County	128,269	2.1%	5.1%	21.0%	28.3%	10.0%	21.7%	11.8%	92.8%	33.5%
Placer County	251,876	2.1%	3.6%	21.3%	26.3%	11.1%	23.1%	12.5%	94.4%	35.6%
Sacramento County	957,553	6.5%	6.7%	23.5%	25.2%	9.8%	18.5%	9.7%	86.7%	28.2%
Yolo County	119,540	8.1%	7.5%	18.5%	20.5%	6.9%	20.3%	18.2%	84.4%	38.5%
CAERC	1,457,238	5.5%	6.1%						88.4%	
Number less than H.S. Diploma		79,907	88,731							

Source: 2013 ACS, U.S. Census

Table H. Adult Basic Education (ABE) – Adult Secondary/GED (ASE): Enrollment

CDE Data 2008-09* 76,516

	CASAS 2008-2009		
Geographical Area	ASE Low	ASE High	ASE Totals
Statewide	51,746	25,755	77,501
CAERC	8,558	6,943	15,501
	16.5%	27.0%	20.0%
	CASAS 2012-2013		
Geographical Area	ASE Low	ASE High	ASE Totals
Statewide	20,344	10,735	31,079
CAERC	3,045	1,763	4,808
	15.0%	16.4%	15.5%

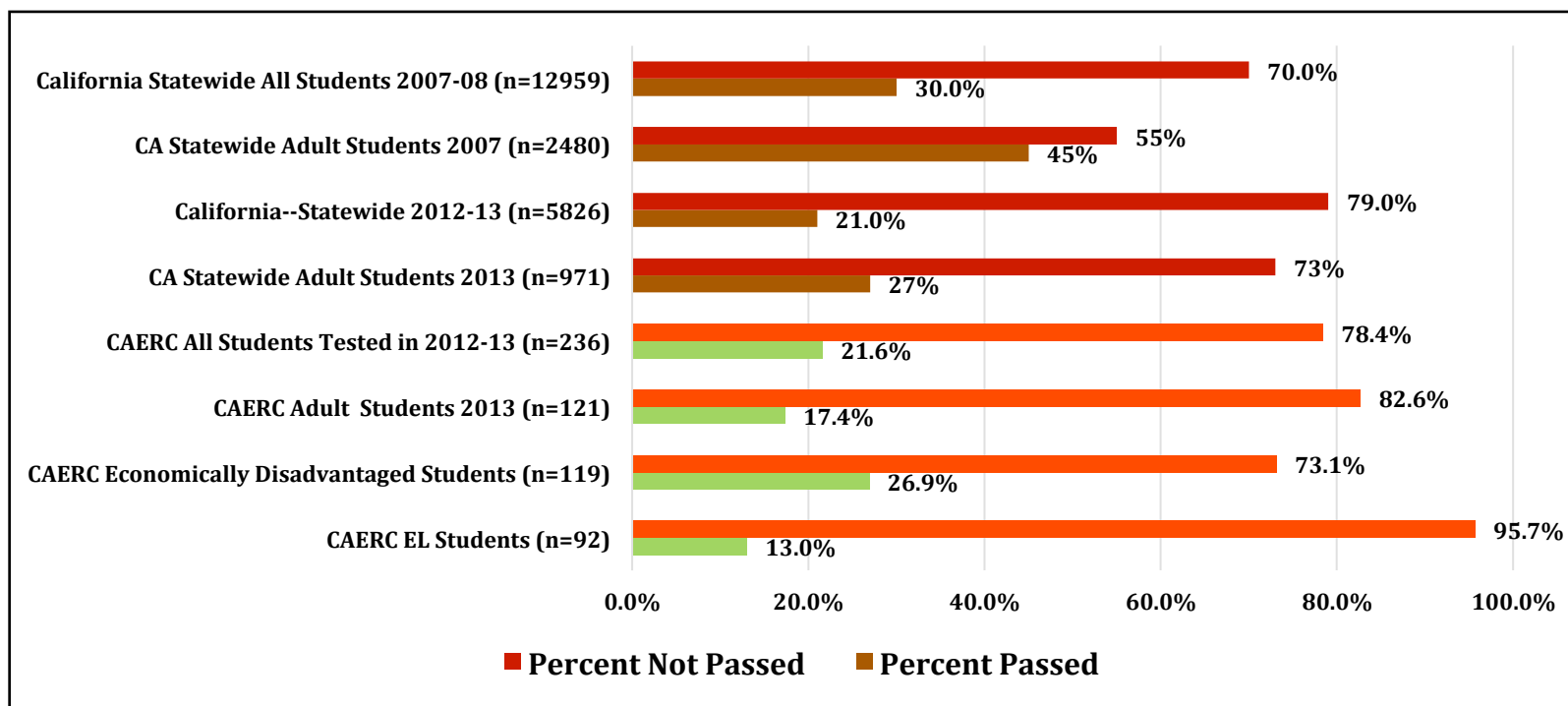
In 2007-08, the overall pass rate (10th graders in all categories) was of 30%. Adult education students taking the CAHSEE had a pass rate of 45%. In other words, adult education students had a 15% higher pass rate than others at that time. Five years later, in 2012-13, the overall pass rate was 21% -- a decrease of 9%. The adult education student pass rate dropped to 27% (a decrease of 18%).

In 2012-13, the overall pass rate for just CAERC counties was 21.6%; adult learners (17.4%); economically disadvantaged learners (26.9%); and, English learners (13%).

Reference Table I: Summary of CAHSEE Performance Data for 2012-13 with comparisons to 2007-08.

Table I. Summary of CAHSEE Performance Data for 2012-13 with comparisons to 2007-08

Source: California Department of Education, Data Quest



“The primary purpose of the California High School Exit Examination (CAHSEE) is to significantly improve student achievement in public high schools and to ensure that students who graduate from public high schools can demonstrate grade level competency in reading, writing, and mathematics. The CAHSEE helps identify students who are not developing skills that are essential for life after high school and encourages districts to give these students the attention and resources needed to help them achieve these skills during their high school years. All California public school students, except eligible students with disabilities, must satisfy the CAHSEE requirement, as well as all other state and local requirements, in order to receive a high school diploma. The CAHSEE requirement can be satisfied by passing the examination or, for eligible students with disabilities, meeting the exemption requirement pursuant to California Education Code (EC) Section 60852.3, or receiving a local waiver pursuant to EC Section 60851(c).”⁴

⁴Source: California High School Exit Examination (CAHSEE) website
<http://www.cde.ca.gov/ta/tg/hs/>

A high school diploma is a passport for further career and educational development. Educational and employment opportunities lead Californians down the pathway from poverty to economic self-sufficiency. They become productive members of society through paying their taxes rather than being an economic burden.

Most special education students enrolled in CAERC counties used the Special Education exemption from taking the CAHSEE exam so no results were reported (actually, most of them didn't take the test). Four students were tested and did not pass. The statewide pass rate for special education students in 2007-08 was 14.0%. In 2012-13, it was slightly lower at 12.0%. *Source: California Department of Education, Data Quest*

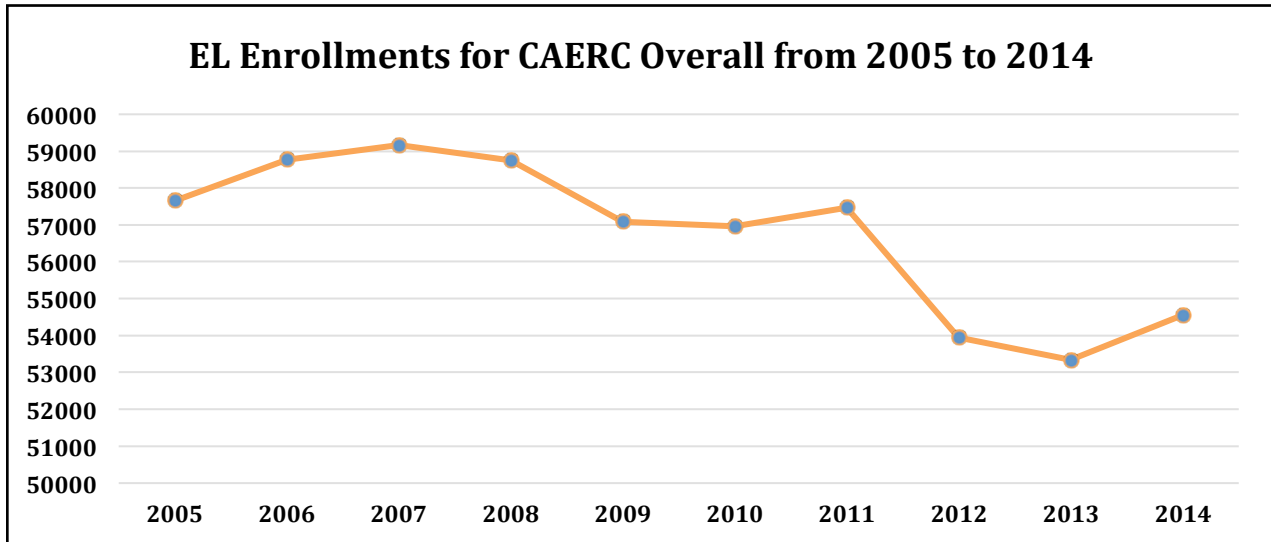
The statewide average for Economically Disadvantaged Students fared better than other categorical students in pass rates on the CAHSEE. The percentage of Economically Disadvantaged Students passing the CAHSEE increased from 19% in 2007-08 to 25% in 2012-13 – a 6.0% increase. In the CAERC counties, the pass rate in 2012-13 was 26.9% *Source: California Department of Education, Data Quest*

Statewide, the CAHSEE pass rate for Migrant Education Students when down from 18% in 2008-09 to 15% in 2013 – a 3.0% decrease. In 2012-13, none of the Migrant Education Students from CAERC counties were tested on the CAHSEE. *Source: California Department of Education, Data Quest*

The CAHSEE pass rate for English learners dropped from 21% in 2007-08 to 14% in 2012-13 – a 7% drop. In CAERC counties, the CAHSEE pass rate for English learners was 13% (a 1% difference than the current statewide EL pass rate). *Source: California Department of Education, Data Quest*

When we look at the CAERC counties, on a county-by-county basis, the data looks relatively flat. However, when we combine all CAERC county data, the data show 4,000

– 5,000 student difference even though we know that there’s been a continual influx of English learners into the CAERC counties over these years. We have an increasing number of English learners migrating into and throughout California but fewer being identified and served as English learners.



Source: CDE, DataQuest, CAHSEE results

We are anticipating a 90,305 increase in the College Age (18-24) and Working Age (25-64) cohorts by 2020. Conversely, when adding the expected Baby Boomers to the Young Retirees (65-74), there will be an increase of 90,768; consequently, there will be 31,245 more individuals entering the traditional “retirement age” cohort than there will be entering the College Age (18-24) and Working Age groups (25-64). When adding all retirees into the equation, it is projected that there will be 121,550 individuals of retirement/senior age by 2020 or 31,245 MORE retirees than workers. This means that career and technical education and apprenticeship programs must be in place to serve this need.

Reference Table J: Projected Shift from 2010 to 2020 State/County Age Group Population.

Table J. Projected Shift from 2010 to 2020 State/County Age Group Population

Difference between 2020 – 2010	Age Group							
	Total (All ages)	Preschool Age (0-4 years)	School Age (5-17 years)	College Age (18-24 years)	Working Age (25-64 years)	Young Retirees (65-74 years)	Mature Retirees (75-84 years)	Seniors (85 or more years)
California	3,334,261	192,439	-10,250	2,517	1,368,384	1,325,835	337,842	117,494
Amador	1,499	56	-462	276	-1,742	2,370	911	89
El Dorado	22,174	1,137	-3,169	4,722	4,178	10,991	3,591	724
Placer	41,407	1,003	-5,162	10,543	13,721	13,254	6,142	1,907
Sacramento	123,088	827	5,199	-3,047	49,446	56,184	10,275	4,204
Yolo	22,346	28	-798	-1,014	13,223	7,969	2,338	601
2010 CAERC	2,190,794	145,092	395,384	224,676	1,158,205	143,735	86,205	37,497
CAERC projected increases from 2010	210,514	3,052	-4,393	11,480	78,825	90,768	23,257	7,525
CAERC PROJECTED INCREASE 2020	2,401,308	148,143	390,991	236,156	1,237,030	234,503	109,462	45,022

Source: Department of Finance, Demographic Research Unit, Report P-1

Summary of Analysis of Need

In summary, the demographics demonstrate the critical need for the Capital Adult Education Regional Consortium to increase services in all Program Areas 1-5. In California, access to and quality of services must be increased dramatically to address the needs outlined in this report (i.e., increasing immigration, low level of skills (a.k.a. skills gap) coupled with a high demand for middle-skill jobs, limited English proficiency of the population, lack of basic skills and workplace readiness, high rate of high school dropouts, and limited postsecondary preparation of many high school graduates).

Highlights from the Region:

- Access to quality adult education services across all five program areas have plummeted as evidenced by **45,199 current 2013-2014 enrollment versus 85,860 in 2008-09** before “flex funding.”
- There was a **47.4% overall drop** of adults in AE programs in the CAERC region.
- Over **40,000 adults do not having access** to AE programs and the number of adults in the CAERC region is expected to increase.
- There was a **drop of 7.5% total ABE enrollment**. The ABE population is increasing, and qualifications for and competition for jobs are also increasing. Consequently, there is a greater need for access to educational/training opportunities for Program Area 1.
- **Over 25,802 adults are being unserved in ABE and 10,693 in ASE** in the CAERC region.
- **168,638 individuals (11.6%) of the population aged 25 years or older who do not have a high school diploma or equivalent.**
- The **CAHSEE pass rate for English learners was only 13%** in the CAERC region.
- The CAERC region is **anticipating 90,305 increase in the College Age (18-24) and Working Age (25-64) cohorts by 2020**. This further heightens the pressing need to rebuild and expand AE programs and services across the region.

It is evidently clear based on the demographic and economic profiles of the region that the greatest need is for ample funding that is targeted, braided, dedicated, and coordinated for adult education. Overwhelmingly, CAERC members and partners have voiced their concern regarding the ever-growing, unmet need in the Capital Region and the pressing need for dedicated funding to maintain current capacity. The ongoing challenge is that the demand for services far exceeds capacity.

Current funding level (FY 2013-2014) is simply inadequate to fully actualize the goals of AB 86. AB 86 has provided a unique opportunity to inform the legislature about the importance of restoring and increasing funding for adult education to sustainable levels that ensure its effectiveness and quality, particularly K-12 adult education, while enhancing the efficiency of the services provided regionally. To move CAERC's regional plan forward, funding must be increased and dedicated to adult education. CAERC's plan, if appropriately funded, will result in significant improvement and increased efficiencies to the adult education delivery system that will ultimately benefit each of its students and the economy of the region at large.

The projected cost to implement the regional key priorities in the CAERC Implementation Regional Plan is estimated at \$12.5 million plus maintenance of effort (MOE) for Year 1: 2015-2016 and \$16 million plus MOE for Year 2: 2016-2017. At minimum CAERC K-12 districts will need at least \$4,436,650 for MOE based on 2012-2013 funding and \$33,298,946 to restore funding to 2007-2008 funding levels. Continued operation of programs and services provided by the K-12 district members is highly dependent on the availability of a new dedicated funding. Support for adult schools needs to be prioritized in the state's funding model to rebuild and enhance AE programs and services.

Refer to **Appendix B** for detailed descriptions of current need in each Program Area 1-5 provided by CAERC Members and Partners.

Objective #3: Seamless Transitions

Plans for consortium members and partners to integrate existing programs and create seamless transitions into postsecondary education or the workforce.

Consortium Summary

Narrative

In preparation for the second regional Summit held on October 24, 2014, CAERC members and partners were tasked with rethinking and redesigning essential elements for Objective 3: Integrating existing programs and creating seamless transitions from their organization's perspective. Then, subcommittees convened to further discuss how to create adult education pathways and align transitions.

Subcommittee members reviewed the consortium member and partner submissions for Objective 3 and developed the draft for the regional plan. During Summit II, attendees met in program-area collaboration teams to provide feedback to the regional plan draft. Faculty and administration representing all program areas of the consortium came together to brainstorm, discuss, argue for, rank and then vote on the strategies to streamline transitions in adult education.

CAERC members and partners recognize that there are multiple pathways that exist for adult learners across Program Areas 1-5. These include transitions to:

- ESL/Citizenship
- ABE/ASE
- CTE/Vocational Education
- Postsecondary Education including transfer to four-year institutions
- Apprenticeships
- Workforce/Employment

CAERC Summary of Approaches/Strategies for Creating Pathways and Alignment	
Program Area 1: ABE/ASE	<ul style="list-style-type: none"> • Curricular and Assessment Alignment • Contextualized Curriculum and Instruction • Increased Student Support Services to Assist with Transitions • Shared and Aligned Data System • Multiple Measures for Student Placement
Program Area 2: Adult English Learners	<ul style="list-style-type: none"> • Collaborative Case Management • Pathway Coordinator • Professional Development

	<ul style="list-style-type: none"> • Pathways Website for Communication
Program Area 3: Adults with Disabilities	<ul style="list-style-type: none"> • Coordinated Transitional Planning with All Stakeholders • Fidelity to the Universal Design Learning (UDL) Framework • Parent Education on Career and College Readiness • Professional Development on Soft Skills for College Readiness • Community College Outreach Services (Summer Bridge) • Curricular and Assessment Alignment • Increased Student Support Services to Assist with Transitions
Program Area 4: CTE	<ul style="list-style-type: none"> • Regional directory roadmap of Services and Programs in ALL Program Areas • Pathways and Data System Alignment • Expansion of Employer and Training Network • Professional Development of CTE Providers • Regional Team for Pathway by Industry Alignment • Support Student Services = College and Career Counseling with Transition Specialists
Program Area 5: Apprenticeships	<ul style="list-style-type: none"> • Access to Counseling for Career Planning • Sequence of Courses/Pathways for Apprenticeship • Common Minimum Credential Requirements for P5 Instructors • Curricular and Assessment Alignment • Expansion of Stakeholders for Apprenticeship • Increased Vocational English as a Second Language (VESL) Programs • Streamline Curriculum Approval Process for Apprenticeships • Re-brand Adult Education

Recognizing the regional needs far outweigh the anticipated AE funding, CAERC Program-Area Subcommittees collaborated to prioritize needs (Objective 4), implementation strategies, and approaches (Objectives 3 and 5) for their designated program areas in January 2015. These program-area recommendations were presented to the Members.

Members further prioritized the list of strategies across the program areas to identify the top regional strategies to include in the CAERC Implementation Plan if funded. Included is the list of regional strategies based on ranking and regional priority completed in February 2015. Reference CAERC Regional Strategies By Ranking and Regional Priority.

CAERC Regional Strategies By Ranking and Regional Priority

Regional Strategy	Regional Priority			
	1	2	3	4
(1) Expand AE Course Offerings in the Region	x			
(2) Develop Regional Asset Map and Pathways Roadmap		x		
(3) Align Courses and Streamline Pathways		x		
(4) Provide Professional Development to Support Regional Priorities	x	x	x	x
(5) Analyze Regional Labor Market and Needs to Align Implementation and Expansion	x			
(6) Coordinate and Expand Marketing and Outreach Efforts			x	
(7) Increase Number of Transition Specialists and Incorporate Collaborative Case Management			x	
(8) Establish Virtual Communication Network Among AE Providers Support Collaboration Across Systems	x	x	x	x
(9) Increase Consortium Awareness on AE Funding Options to Access Braided, Well-Sequenced Funding	x			
(10) Coordinate Transitional Planning for AWD Among PreK-22 Providers			x	
(11) Design, Pilot, and Utilize Consortium-Wide Data and Accountability System				x
(12) Increase Availability and Access to Support Services			x	
(13) Train, Pilot, and Implement iBEST in CTE Programs		x		
(14) Increase Vocational English as a Second Language (VESL) Course Offerings and Program Components to Accelerate Student Progress and Placement Into the Workforce for Adults for Whom English Is a Second Language		x		

Regional Priority:

1. Rebuild Adult Education Programs and Services;
2. Pathways and Alignment;
3. Student Support Services; and
4. Data and Accountability System.

Potential Future Role of the Consortium

Once funding is allocated, consortium workgroups are needed to implement the plans for integrating existing programs and create seamless transitions:

- Continue collaborative efforts with CAERC members/partners for aligning curriculum and pathways.
- Support the identification of academic goals for each specific transition point.
- Design and develop detailed flowchart or visual map that illustrates seamless pathways through adult and postsecondary education or career training.
- Recruit and manage Transition Specialist Coordinator and Transition Specialists in order to maintain consistency, and hold regular meetings for all related consortium members and partners.
- Evaluate existing student data systems for possible adoption by CAERC.
- Fund a consortium-level staff who will maintain current local community resources and access pathways.
- Develop a regional website to support regional communication and coordination inclusive of regional database or asset map.
- Design and provide consortium-wide professional development to support implementation efforts in each program area.
- Host regional network events for each program area.
- Develop regional marketing plan and distribute marketing and outreach materials for the region.
- Create distance-learning courses to be shared among stakeholders.

This section includes the Objective 3 narratives and tables for each of the program areas (1-5) that reflect the list of strategies submitted in December 2014 that CAERC Members used to prioritize strategies and develop the CAERC Implementation Plan for Year 1 and Year 2.

Program Area 1: ABE/ASE

Program-Area Regional Summary

The members and the partners of the Capital Adult Education Regional Consortium (CAERC) recognize the need to design a more streamlined system to assist adult learners in their transition to postsecondary education, career training, and family-sustaining employment. Transitions needed to create pathways and systems alignment include transitions to:

- ESL/Citizenship
- ABE/ASE
- CTE/Vocational Education
- Postsecondary Education
- Apprenticeships
- Workforce

Transitions for ABE/ASE program include students enrolled in: a) library literacy programs; b) adult basic skills/remediation programs; and c) adult secondary education programs, which include high school completion, leading to a high school diploma or a HSET credential, and ensure rigor that will support preparation for post-secondary education and the workforce.

CAERC has identified several key approaches and strategies necessary to create seamless transitions into postsecondary education, including the alignment of assessment and program and curricular standards, the use of multiple measures to accurately place students, common assessment system, comprehensive student support services, and contextualized curriculum and instruction.

Costs and timelines were estimated until further research can be completed. Below is a description of the transitions and approaches/strategies.

Description of Transitions and Approaches/Strategies

Approach/Strategy: Curricular and Assessment Alignment Because community college standards and workforce readiness standards do not necessarily align with adult education standards, there is a gap and a lack of uniformity across the systems. CAERC members (especially faculty) and partners recommend community college and adult school faculty defining and aligning academic standards, assessment instruments, and data collection systems, and they advocate for cross-system collaboration.

Faculty will design and develop consortium-wide common standards and aligned curriculum that will transition adult learners through the various programs: from library literacy programs to the lowest level of adult education, from adult secondary to postsecondary education, apprenticeships, and into employment. CAERC members and partners will need to identify and define the standard and goal for each specific transition point—in other words, the level at which a student may enter and/or exit each segment of the pathway.

A detailed flowchart or visual map, based upon the faculty-created standards and illustrating seamless pathways through adult and postsecondary education or career training, will be a critical resource for student persistence and program completion. Faculty and support staff, acting as coaches or mentors, will also benefit from the use of the flowchart to assist and advise students.

Approach/Strategy: Multiple Measures for Placement. To decrease the skill gap between adult education exit and community college entry requirements, the creation of a formal assessment committee (comprised of community college and adult education faculty) is needed to develop a common or aligned assessment. Multiple measurement criteria need to be developed, not only to help determine the placement level of a student in a program, but to determine his or her support service needs. The measurement should ascertain the student's career and advancement interests or goals to help guide him or her along the correct pathway through programs. Administering non-academic assessments, such as the Learning and Study Strategies Inventory (LASSI), can also be beneficial when determining a student's attitudes regarding learning and studying.

All CAERC members and partners, including local employers and workforce development agencies, will be essential in defining and aligning the college and work-readiness standards appropriate for the region's adult learner population. Consortium-wide professional development will be an essential part of this process and should consist of ongoing, cross-agency collaborative conversations including faculty, workshops, and trainings, as well as annual formal professional development, such as a regional conference.

It is estimated that the process of alignment will take up to three years initially to complete, will heavily include faculty input, and will require ongoing work to assess and monitor student and program progress.

Approach/Strategy: Shared Data System. In order to accurately track the transition of adult education students into postsecondary education, training, or the workforce, a system-wide shared database needs to be developed. The consortium agrees that ready and ongoing access to longitudinal data regarding student and program outcomes is essential in the rethinking and redesigning of adult education in the region. CAERC will review all existing member/partner data collection systems and will identify key data elements that need to be included in a consortium-wide learner information and tracking system. CAERC will also explore the viability of utilizing the California Student Information System (CSIS) and California Longitudinal Pupil Data System (CALPADS).

The long-term goal will be establishment of a web-based longitudinal data system that can be shared amongst CAERC community colleges, adult schools, and community-based organizations. The ideal system will include an array of learner information such as demographics, assessment information, course data, attendance tracking, portfolios, and other data for state and possibly federal reporting. Partner expertise at Sacramento County Office of Education's OTAN Project will assist in all aspects of this endeavor. This data should be explored by content faculty to help guide their decision-making process.

Approach/Strategy: Contextualized Curriculum and Instruction. Teaching adults in the context of college and career readiness is a key strategy to prepare learners to transition to postsecondary education or into the workforce. This can be accomplished through an integration of basic reading, writing, math, and computer applications skill development that helps students see the connection between their career goals and the instruction they receive at the adult education level.

CAERC strongly supports the faculty in developing and aligning a strong and comprehensive *college and career readiness course* that emphasizes the “soft skills” adult learners need to be successful in postsecondary education, career training, and employment. This course would be taught at the community colleges and adult education programs throughout the Los Rios Community College District. The curriculum would include, but would not be limited to, oral and written communication skills, problem-solving skills, and time management skills required in postsecondary education and in a career. Short-term and intensive soft-skills instruction through “boot camps” conducted through adult education programs can also be an effective transition strategy. Agreement on and development of critical “soft skills” to be taught will require faculty input and ongoing collaboration of CAERC members and partners.

Approach/Strategy: Student Support Services. Learners transitioning from adult education, or from library literacy programs, to postsecondary education, career training, or into the workforce will require different support services than a traditional adult student, and comprehensive support networks are an essential resource for non-traditional students to succeed in meeting their educational and career goals.

Orientations and student intake should be conducted on the community college campus to familiarize incoming adult education students with community college enrollment processes, financial aid, campus offices, resources, and intake staff. Support services should consist of a network or “helpdesk” of non-academic resources and information regarding financial assistance, childcare, housing, health care, transportation, etc. This information should be easily accessible not only to students but by counselors, faculty, and staff as well.

To improve persistence and completion, academic support services are necessary and should include tutoring programs offered through the Sacramento Public Library system and on adult education and community college campuses. Faculty should give input to specific skills the tutors should possess and potential training topics. Also critical to the success of the non-traditional adult learner is comprehensive career counseling,

academic counseling, guidance, and support to incoming adult education students. Establishing such a system will require a full-time, dedicated staff member, a “CAERC liaison,” at each community college and adult education campus in the Los Rios District.

Ongoing and formal collaboration with adult schools, local community colleges, community-based organizations, health and human services, and workforce development agencies is necessary to ensure that the needs and barriers of this special population of adult learners entering postsecondary education or the workforce are addressed. Faculty should be highly involved in all collaboration.

Role of the Consortium

- Coordinate and promote cross-system collaboration
- Support a faculty guided identification of academic goals for each specific transition point
- Design and develop a detailed flowchart or visual map that illustrates seamless pathways through adult and postsecondary education or career training
- Recruit and manage “CAERC liaisons” at each community college
- Support faculty development and alignment of a college and career readiness course to be used across the consortium

Reference Program Area 1 Table 3.1 for additional details.

Table 3.1. Implementation Strategies to Create Pathways, System Alignments, and Articulation Among Consortium Participants

Program Area 1: Elementary and Secondary Basic Skills, including classes required for a high school diploma or high school equivalency certificate

Transition to be Addressed	Strategy/Approach to be Employed	Resources Needed	Estimate of the cost	Responsible Parties	Methods of Assessment	Timeline
Student intake (first time students) into program	Student assessed with common or aligned assessment (Developing a common assessment may be more efficient. Trying to align or correlate existing assessments will be too time-consuming and difficult.) Use multiple measure criteria to place and counsel students on options to help determine correct pathway	An aligned assessment Consortium-wide placement standards Detailed flow chart or other visual map to illustrate pathways (OTAN has a pathways graphic tool available) Multiple measure criteria Database to house student information and assessment results Evaluate existing data collection systems and explore possible use of CSIS and CALPADS for use with CAERC Staff to administer assessment and maintain database (Staff could be OTAN technology coordinators) Counselors to help establish student pathways and develop educational plans	TBD	Each stakeholder should be able to help students enter the education program	Data should be tracked via a database to see if there is an impact in a longitudinal study	TBD
Adult Education to Community	Orientations held to familiarize students with	Online orientations already being developed	TBD	Community Colleges will run	Data should be tracked via a	TBD

<p>College:</p> <ul style="list-style-type: none"> • English as a second language (ESL) to adult basic education (ABE) • ABE to adult secondary education (ASE) • ABE to career technical education (CTE) • ABE to community college (CC) 	<p>college. Assisted registration and orientation sessions. In person small group orientations on Community College campus specifically for adult education students, as well as Community College outreach done on adult education campuses. Integrate soft skills into adult education courses through contextualized instruction to help prepare students for transition Develop a soft skills course that will be used at all Community Colleges and adult schools in the LRCCD Conduct boot camps that focus on soft skills Create student support network (i.e. resource network, helpdesk, mentoring, etc.) Align curriculum with state standards (high school and Community College) Clear exit-level to entry-level alignment</p>	<p>Personnel will be needed to run in-person orientation. A liaison between Community College and adult education. This person could be shared between campuses assign one liaison at each CC campus and at each AE campus An adult education center on each Los Rios community college campus Collaboration time to ensure the needs and barriers of the students entering the Community College are being addressed. Collaboration with the Sacramento Works America's Job Center (SWJC) and Title 1 WIA programs. The SWJC system houses coaches and partners.</p>		<p>the orientations Adult schools will prepare students with soft skills. TBD Collaboration between content faculty from adult schools and Community Colleges SWJC system</p>	<p>database to see if there is an impact in a longitudinal study</p>	
<p>Adult Education to career technical education (CTE) programs</p>	<p>Orientation/information sessions by CTE programs Integrate soft skills into adult education course through contextualized instruction to help prepare students for transition</p>	<p>Collaboration time where CTE can share needs of their programs and establish alignment of standards needed at the entry and exit points</p>	<p>TBD</p>	<p>CTE to identify desirable soft skills students should have in place SWJC system</p>	<p>Data should be tracked via a database to see if there is an impact in a longitudinal study</p>	<p>TBD</p>

	<p>Boot camps that focus on soft skills</p> <p>Create student support network (i.e., resource network, helpdesk, mentoring, etc.)</p> <p>Align transitional curriculum: Implement state standards</p> <p>Clear exit-level to entry-level alignment</p> <p>Define standards and goals for each segment of the pathway</p>					
ABE to Employment	<p>Career readiness skills contextualized throughout courses</p> <p>Boot camp on necessary career skills</p>	<p>Career counseling</p> <p>Career workshops offered through the career center at community college campuses and SWJC.</p>	TBD	Adult schools and business partners SWJC system	Data should be tracked via a database to see if there is an impact in a longitudinal study.	TBD
ESL to other programs	<p>Student assessed with common or aligned assessment</p> <p>Use multiple measure criteria to place and counsel students on options to help determine correct pathway</p>	<p>An aligned assessment Consortium-wide placement standards</p> <p>Detailed flow chart or other visual map to illustrate pathways</p> <p>Multiple measure criteria</p> <p>Database to house student information and assessment results</p> <p>Staff to administer assessment and maintain database</p> <p>Counselors to help establish student pathways and develop educational plans</p>	TBD	Adult schools	Data should be tracked via a database to see if there is an impact in a longitudinal study	TBD

Step/modular advancements within adult education	Stackable certificates to recognize student achievements Lowest to highest: All students, regardless of their level at entry, need access to the pathway. Filter down so all can access no matter the entry point	Collaboration time with content faculty to develop common standards to ensure consistency across the consortium	TBD	Content Faculty	Data should be tracked via a database to see if there is an impact in a longitudinal study	TBD
From library program to adult education	Students will have been assessed and transitioned into adult education Clear exit-level to entry-level alignment Informal advising on next steps	Additional funds and personnel for counseling, either formal or informal, to advise about students next steps	TBD	Library program and adult schools	Data should be tracked via a database to see if there is an impact in a longitudinal study	TBD
ASE to employment	Career readiness/soft skills embedded throughout courses Boot camp on necessary career skills	Career counseling Career workshops offered through the career center at Community College campuses and SWJC	TBD	Adult schools and business partners SWJC system	Data should be tracked via a database to see if there is an impact in a longitudinal study.	TBD
ABE to ASE	Students will have been assessed and transitioned into the next level Stackable certificate achievement Clear exit-level to entry-level alignment	Collaboration time with content faculty	TBD	Adult schools SWJC system	Data should be tracked via a database to see if there is an impact in a longitudinal study	TBD

Program Area 2: Adult English Learners

Program-Area Regional Summary

There are a number of pathways that exist for adult learners across Program Areas 1-5. These include transitions to:

- ESL/Citizenship
- ABE/ASE
- CTE/Vocational Education
- Postsecondary Education including transfer to four-year institutions
- Apprenticeships
- Workforce

Costs and timelines were estimated until further research can be completed. Below is a description of the transitions and approaches/strategies.

Description of Transitions and Strategies

Approach/Strategy: Collaborative Case Management. There is a strong need for a system that facilitates the transition of adult learners of ESL to the various pathways listed above. Under the current system, each of the program areas exist mostly independent of one another, and few clearly defined pathways exist for ESL students attempting to transition from one program area to another. At present, there is no systematic method of communication between service providers and little inter-program knowledge of the resources each member and partner offers. In order to promote seamless transitions between the programs offered by the various consortium members and partners, CAERC recommends the use of a case management model which the Case Management Society of America (2008) describes as a “collaborative process of assessment, planning, facilitation and advocacy for options and services to meet an individual’s needs through communication and available resources to promote quality cost-effective outcomes” (1).

Approach/Strategy: Pathway Coordinator. To implement this case management model, the subcommittee recommends the creation of ESL Pathway Coordinator positions to provide academic advising to ESL students within the Capital Adult Education Regional Consortium (CAERC). Following the case management model, these ESL Pathway Coordinators would help students identify appropriate pathways and facilitate these transitions through outreach and coordination with consortium members and partners. As the ESL Pathway Coordinators will be working directly with the members and partners in CAERC, a longer-term goal is that all faculty and staff members of CAERC will become well aware of the local ESL options and will use this knowledge to informally transition students more smoothly between educational pathways in their local area.

The CAERC recommends the employment of one to three ESL Pathway Coordinators and a support staff person per community college campus within the consortium, based on ESL needs in the geographic region of the community college. These coordinators would work closely with the adult school(s) and partner agencies located in the geographic region surrounding their community college campuses and would be responsible for facilitating the transition of ESL students along their selected pathway. These coordinators would have a physical presence at both the community college and adult school(s) and would also visit local partners and members regularly and on a predictable schedule.

Approach/Strategy: Regional Pathways Website. In order to facilitate this collaboration and to leverage regional resources, a central ESL Pathways website/database for the consortium needs to be created. Maintained by the ESL Pathway Coordinators and support staff, this portal would provide information on the local pathway resources available and promote alignment through increased communication and understanding.

Role of the Consortium

Once funding is allocated, the ESL Pathway Coordinator positions would need to be created and filled. ESL faculty members of the consortium will be the main workgroup members writing the description and duties for this position as well as comprise the majority number of hiring committee members. Adequate FTE must be provided to ensure time can properly be dedicated to the writing, hiring, and implementation of this position.

The consortium would also work to provide a common assessment tool accessible to all members and partners (the Consortium should look carefully at the common CCC assessment tool being implemented through AB 743), or at the very least a taskforce delineating equivalencies between the assessment tools used by each member or partner.

The consortium should support existing VESL classes—with the development and implementation of a regional VESL curriculum—that are tied to and aligned with local employer and economic needs.

Technical assistance would also need to be provided for the creation and maintenance of the ESL Pathways website for the consortium and a website for each local community-college-based region.

Reference Program Area 2 Table 3.1 for additional details.

Resources

- Case Management Society of America. (2008). What is a case manager? Retrieved October 19, 2014 from <http://www.cmsa.org/Home/CMSA/WhatisaCaseManager/tabid/224/Default.aspx>

Table 3.1. Implementation Strategies to Create Pathways, System Alignments, and Articulation among Consortium Participants

Program Area 2: Classes and Courses for Immigrants Eligible for Education Services in Citizenship and English as a Second Language and Workforce Preparation Classes in Basic Skills

Transition to be Addressed	Strategy/Approach to be Employed	Resources Needed	Estimate of the Cost	Responsible Parties	Methods of Assessment	Timeline
Transition to the Workforce	<p>Case management model</p> <p>Establish one or more ESL Pathway Coordinators and a clerical staff member per Community College who work with adult education centers and community partners to provide academic advising and help transition students to the workforce (outreach to workforce development agencies and other workforce-related organizations)</p>	<p>Funding</p> <p>Information website for instructors, advisors, students, and employees.</p> <p>Translation services as needed to best communicate with the local community</p> <p>Systematic common assessment practices and tool (perhaps the one being chosen through AB 743)</p>	<p>\$150,000-\$450,000 per Community College</p> <p>These coordinators will cover all transitions</p> <p>\$10,000 for creation of website</p>	K-12 Adult Education, Community College, and SWJC system	Surveys to consortium members and students to evaluate and improve the ESL Pathway Coordinator positions	Within a year of receipt of funding
Transition to ABE/ASE	<p>Case management model</p> <p>Establish one or more ESL Pathway Coordinators and a clerical staff member per Community College who work with adult education centers and community</p>	<p>Funding</p> <p>Information website for instructors, advisors, students, and employees</p> <p>Translation services as needed to best communicate with the</p>	<p>\$150,000-\$450,000 per Community College</p> <p>These coordinators will cover all transitions</p>	K-12 Adult Education, Community College, and SWJC system	Surveys to consortium members and students to evaluate and improve the ESL Pathway Coordinator positions	Within a year of receipt of funding

	partners to provide academic advising and help transition students to ABE/ASE programs (outreach to Community College and adult education and other educational organizations)	local community Systematic common assessment practices and tool (perhaps the one being chosen through AB 743)				
Transition to CTE/Vocational Education	Case management model Establish one or more ESL Pathway Coordinators and a clerical staff member per Community College who work with adult education centers and community partners to provide academic advising and help transition students to CTE/Vocational programs (outreach to Community College and adult education and vocational training programs offered through partners)	Funding Information website for instructors, advisors, students, and employees Translation services as needed to best communicate with the local community Systematic common assessment practices and tool (perhaps the one being chosen through AB 743)	\$150,000-\$450,000 per Community College These coordinators will cover all transitions	K-12 Adult Education, Community College, and SWJC system	Surveys to consortium members and students to evaluate and improve the ESL Pathway Coordinator positions	Within a year of receipt of funding
Transition to Postsecondary including transfer to four year institutions	Case management model Establish one or more ESL Pathway Coordinators and a	Funding Information website for instructors, advisors, students, and employees	\$150,000-\$450,000 per Community College These coordinators	K-12 Adult Education, Community College, and SWJC system	Surveys to consortium members and students to evaluate and improve the	Within a year of receipt of funding

	clerical staff member per Community College who work with adult education centers and community partners to provide academic advising and help transition students to postsecondary programs (outreach to Community College)	<p>Translation services as needed to best communicate with the local community</p> <p>Systematic common assessment practices and tool (perhaps the one being chosen through AB 743)</p>	will cover all transitions		ESL Pathway Coordinator positions	
Transition into ESL/Citizenship	<p>Case management model</p> <p>Establish one or more ESL Pathway Coordinators and a clerical staff member per Community College who work with adult education centers and community partners to help transition students into ESL programs (outreach to adult education, Community College, or partner organizations)</p>	<p>Funding</p> <p>Information website for instructors, advisors, students, and employees</p> <p>Translation services as needed to best communicate with the local community</p> <p>Systematic common assessment practices and tool (perhaps the one being chosen through AB 743)</p>	\$150,000-\$450,000 per community college These coordinators will cover all transitions	K-12 Adult Education and Community College	Surveys to consortium members and students to evaluate and improve the ESL Pathway Coordinator positions	Within a year of receipt of funding
Apprenticeships	<p>Case management model</p> <p>Establish one or more ESL Pathway Coordinators and a clerical staff member per</p>	<p>Funding</p> <p>Information website for instructors, advisors, students, and employees</p>	\$150,000-\$450,000 per Community College These coordinators will cover all	K-12 Adult Education and Community College	Surveys to consortium members and students to evaluate and improve the ESL Pathway	Within a year of receipt of funding

	<p>community college who work with adult education centers and community partners to help transition students to apprenticeships (outreach to workforce development agencies and other workforce-related organizations)</p>	<p>Translation services as needed to best communicate with the local community</p> <p>Systematic common assessment practices and tool (perhaps the one being chosen through AB 743)</p>	<p>transitions</p>		<p>Coordinator positions</p>	
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Program Area 3: Adults with Disabilities

Program-Area Regional Summary

The members and the partners of the Capital Adult Education Regional Consortium (CAERC) recognize the need to design a more streamlined system to assist adult learners in their transition to postsecondary education, career training, and family-sustaining employment. Students and adults with disabilities have decreased opportunities and abysmal outcomes across the continuum of disabilities. The entire system is fragmented, confusing, and misaligned for education stakeholders as well as for parents. It is for this reason, funding must be flexible, program developers and coordinators must collaborate, and practices must be evidence-based and student-focused from PreK and beyond. Programming, instruction, and assessment decisions can no longer be made in a vacuum if students are to obtain the skills necessary to be successful in college, career, and civic life.

Transitions needed to create pathways and systems alignment include transitions from PreK-22 to:

- ESL/Citizenship
- ABE/ASE
- CTE/Vocational Education
- Postsecondary Education including transfer to four-year institutions
- Apprenticeships
- Workforce

It is imperative that the PreK-22 system align and coordinate transitional support between grade levels and across program areas. CAERC recommends that coordination support include outside agency participation in the PreK-22 system as early as necessary and vice versa. For example, the PreK-22 system should expose students to experiences in the community and college settings to promote transition success as early as possible. Transition plans will need to be created with the involvement of all stakeholders emphasizing education, employment, and independent living. All teachers, especially general education staff, would benefit from professional development to ensure students with disabilities are successful in their Least Restrictive Environment (LRE).

CAERC has identified several key approaches and strategies necessary to create seamless transitions including:

- Preparation for community college at the high school level
- Fidelity to the Universal Design Learning (UDL) Framework
- Parent education on career and college readiness
- Coordinated transitional planning with all stakeholders
- Professional development on “soft skills” for college readiness
- Development of Summer Bridge classes

- Curricular and assessment alignment
- Increased support services to assist with transitions

Costs and timelines were estimated until further research can be completed. Below is a description of the transitions and approaches/strategies.

Description of Transitions and Approaches/Strategies

Approach/Strategy: Coordinated Transitional Planning with All Stakeholders.

Students with disabilities require explicit instruction, preparedness, and experiences in the college setting before they are enrolled to ensure a successful transition. The transition from PreK-22 to community college necessitates the need for aligned and connected supports between the two systems. This planning process must actively include parents as part of the “child to adult” bridge. Administrators, teachers, and parents must understand the purpose and priorities of the transition component of the individualized educational plan (IEP) and develop the IEP accordingly beginning at the age of 16 and beyond. It would stand to reason, then, that a robust and aligned career assessment process beginning early in a student’s education is foundational and that transition staff is highly qualified and offered ongoing training and materials with a focus on assessment administration, program development, and post-secondary expectations based on student strengths, interests, and preferences.

In terms of the transition plan itself, it must have coordination and input from all stakeholders. The connections to community college must be explicit at every meeting, and the process for developing transition goals and objectives must be clear with a focus on self-advocacy and self-determination. Outreach to and from Disabled Students Programs and Services (DSPP), transfer of completed student information packets, relevant assessments upon enrollment, support for accommodations, and a defined entry must be considered. CAERC also recognizes that students transitioning from adult education into community college programs should also be considered with the same level of focus and alignment.

Approach/Strategy: Development of Summer Bridge Classes. Additional staff is needed to develop and design the creation of summer bridge classes to support community college outreach programs. These classes should focus on “soft skills” and college and career readiness skills. By increasing these targeted support services, more adults with disabilities can succeed in the community college and/or adult education environment.

Approach/Strategy: Professional Development. Professional development emphasizing equity, access, cultural responsiveness, college/career curriculum, and materials will be necessary to build the staff’s capacity to support students in their transitions.

Approach/Strategy: Curriculum and Assessment Alignment. In order for smooth transitions to occur, curriculum must be aligned to increase program effectiveness. Assessment tools must be aligned with the curricular program to track student progress.

Curriculum and assessment alignment is critical to adequately prepare students with disabilities for their future pathways. Priority should be placed on curriculum that enhances students' self-advocacy, self-regulation, ability to persevere, and communication/collaboration skills.

Approach/Strategy: Fidelity to the Universal Design Learning (UDL) Framework.

An overarching and related instructional framework that must be considered is Universal Design for Learning (UDL). UDL is a focal point in the California PreK Learning Foundations, the California ELA/ELD Framework, and the Smarter Balanced and National Center and State Collaborative (NCSC) assessment and curriculum development. Of particular note, it is recommended that the Smarter Balanced Usability, Accessibility, and Accommodations Guidelines be used as historical, individualized documentation of student accessibility needs at the community college level. Similarly, for students focusing on alternate achievement standards, testing information from standardized assessments (NCSC) should be utilized (along with additional assessment information) for determining appropriate supports in adult education and community college placements. Please reference the state of Maryland, which has implemented UDL practices in their teacher credentialing and evaluation processes.

Role of the Consortium

- Provide consortium-wide professional development to support Program 3 (UDL, CCSS, Cultural Responsiveness, Equity and Access etc.)
- Coordinate transitional planning with all stakeholders
- Support the development of community outreach programs for adults with disabilities
- Collaborate with regional centers and other social service agencies and assist with the focus on employment opportunities to ensure students are job ready.

Reference Program Area 3 Table 3.1 for additional details.

Resources

The following resources were used to research and reference additional information on evidence-based predictors, employability skills, and standards:

- *National Secondary Transition Technical Assistance Center: 16 evidence-based predictors of post-school employment, education, and independent living success*
- *Career Technical Education: Standards for Career Ready Practice/Employability Skills and Framework*
- *National Alliance for Secondary Education and Transition: National Standards and Quality Indicators*
- *California ELA/ELD Frameworks*
- *Common Core State Standards (ELA College and Career Anchor Standards and Eight Mathematical Practices)*
- *Center for Assistive Special Technology (CAST.org)*

Table 3.1. Implementation Strategies to Create Pathways, System Alignments, and Articulation among Consortium Participants

Program Area 3: Education Programs for Adults with Disabilities

Transition to be Addressed	Strategy/Approach to be Employed	Resources Needed	Estimate of the Cost	Responsible Parties	Methods of Assessment	Timeline
<p>1. Community College High School IEP/ Transition Planning meetings, orientation to DSPS. Assessment prior to enrollment, development of student education plan Assessment tools align high school with Community College and are inclusive of the whole system. Earlier assessment administration and support curriculum provided to PreK-22 system Alignment considerations include the Universal Design for Learning lesson planning framework, California PreK Learning Foundations, Smarter</p>	<p>Preparation for Community College at the high school level, i.e., focused pathways programs, specific transition planning, classes focusing on career exploration and required job skills</p> <p>Prepare students for reading a schedule, plan for classes ahead of time</p> <p>Fidelity to UDL instructional framework and consideration of Common Core consortium recommendations and accessibility resources</p> <p>Parent trainings focused on college/career opportunities, adult education resources and access to outside agency support</p> <p>ARC invited and involved in HS transition planning</p>	<p>Professional Development</p> <p>Career Center technicians</p> <p>Curriculum</p>	<p>TBD</p>	<p>School Districts and Community Colleges (DSPS) in collaboration with outside agencies</p>	<p>Creation of additional Community College classes</p> <p>Creation of additional adult education placements</p> <p>Data on student success</p> <p>UDL listed as a priority in Community College and adult education programs. Becomes part of the credential, hiring and evaluation process</p>	<p>Planning to begin immediately and ongoing</p>

<p>Balanced Accessibility resources/ assessment results and assessment, curriculum, and UDL instruction designed for students focusing on alternate achievement standards</p>	<p>and coordination of programs post HS</p> <p>PD to ARC service coordinators focused on their role, limitations in PreK-22 funding, and future planning</p> <p>Hire staff and provide professional development focused on soft skills necessary for college Creation of Summer Bridge classes focusing on orientation/soft skills for adults with disabilities along with extended basic skills classes.</p>					
<p>2. Adult Education Transitions: From PreK-22 system From Regional Center Day Programs From Community College Regional Center intake with no prior adult education support Referral by Regional Center Service Coordinator Meet ARC</p>	<p>Alignment of the assessment tools to guide individuals to college and/or adult education programs</p> <p>Focus of transition plan that describes skills necessary for future placement (Tracking System for resource development, i.e., preparing for increase in students with Autism)</p> <p>Increase the number of</p>	<p>Additional adult education programs</p> <p>Job developer</p> <p>Tracking System</p> <p>Assessment tools</p>	<p>TBD</p>	<p>Regional Center for development of additional adult education programs</p> <p>School Districts and Community Colleges</p>	<p>Increase in adult education programs</p> <p>Placement in job</p> <p>Increase in student success indicators</p>	<p>Planning to begin immediately and ongoing</p>

<p>qualification Alignment considerations include the Universal Design for Learning lesson planning framework, California Pre-K Learning Foundations and UDL instruction designed for students focusing on alternate achievement standards</p>	<p>programs</p> <p>Employment support services</p> <p>Develop ongoing tracking system to determine ongoing post program success</p> <p>UDL instructional, curricular, and assessment practices related to standardized testing information to guide and streamline adult education placements and resources</p> <p>Focus on job readiness as part of the curriculum</p>					
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Program Area 4: Short-term Career Technical Education programs with high employment potential

Program-Area Regional Summary

The Capital Region is poised to imbed Adult School Pathways into a large regional effort to align K-12 and post-secondary CTE Training (university, community college, trades, and private postsecondary) within the Capital Region Academies for the Next Economy (CRANE) and CRANE Apprenticeship Programme (CAP) initiatives. The California Career Pathways Trust (CPT) request for applications was designed and released prior to the robust efforts emerging from AB 86, so the programming at the adult school level was not included in the CPT program design. However, our analysis demonstrates the adult school programming is a perfect fit and actually fills critical shortages in the original design.

Description of Transitions and Approach/Strategy

In general, pathways in the past were not seamlessly linked with post-secondary training options as standard procedure. Linkages did exist, but more so on a relationship basis between local partners due to the strong efforts of individuals who believed it was the right thing to do. Today, we are making every effort to link K-12 pathways with post-secondary programs by industry sector – across the Capital Region.

Two critical gaps in this system are:

Inclusion of adult school programming and training programs within the trades are largely absent from the current pathway design.

CAERC believes the gaps below are within the wheelhouse of the CRANE and CAP consortia, but we will need to integrate the work and fund the relative coordination of each task:

1. A regional roadmap of short-term CTE available for review by all local K-12 districts to maximize access for adult learners.
2. A system of transition specialists to help students navigate the shift in programming and to develop the skill sets necessary to complete short-term CTE and secure entry-level employment.
3. A roadmap that links K-12 pathways to short-term CTE to longer-term CC or university professional programs.

A regional team within the consortium that aligns pathways by industry sector and removes redundancy within the system (i.e., industry advisory boards for each level, rather than one industry advisory board for similar K-14), including adult school.

Funding Gaps

At the current time, there are three years of funding to establish pathways from K-12 to CC, universities, and participating private post-secondary institutions. CAERC does not

have funding to align the work of coordinating short-term CTE within the adult school space.

Reference Program Area 4 Table 3.1 for additional details.

Role of the Consortium

The consortium could facilitate the development of CTE Certificate Programs that lead the student into an apprenticeable occupation, such as entry level medical.

The consortium could facilitate the development of pre-apprenticeship courses that are integrated into CTE pathways.

Table 3.1. Implementation Strategies to Create Pathways, System Alignments, and Articulation Among Consortium Participants

Program Area 4: Short-term Career Technical Education Programs with High Employment Potential

Transition to be Addressed	Strategy/Approach to be Employed	Resources Needed	Estimate of the Cost	Responsible Parties	Methods of Assessment	Timeline
ABE/GED/EL to CTE	Directory of all programs College and career counseling	Staff time to create survey tool and compile data Create database	\$20,000	Consortium lead agency	Enrollment numbers	By June 30, 2015
Transition between systems of CTE training	Create pathways and systems alignment--make sure to include CBO services Articulate courses between systems Dual enrollment Align data systems Regional meetings Professional Learning Community for teachers	Staff time to determine current pathways, identify gaps and overlaps Staff time (meetings) to determine whether articulation agreements, dual enrollment, or another process will work best to create a seamless system of education and training for students. Then sign agreements between providers (not teachers) Conduct regularly scheduled meetings to keep all provider personnel communicating, provide for continued system alignment, and facilitate decision making Create a professional learning community of teachers where we can all learn how each	\$50,000 Leverage some CRANE-CAP funds	Consortium lead agency	Enrollment numbers PLC membership Increase in transfers	

		provider works, understand how we can all best serve students				
Transition from training to employment	Involve employers in training programs Placement services Facilitate the development of CTE Certificate Programs that lead the student into an apprenticeable occupation, such as entry level medical Facilitate the development of pre-apprenticeship courses that are integrated into CTE pathways	Involve employers in vetting curriculum, guest speaking in classrooms, providing internships, etc. Find funding for placement services or determine if any providers can provide placement services.	\$500,000	Consortium	Increase in long-term employment	College and Career Counseling Placement Services
Transition into systems and between systems	Align assessments between systems college and career counseling	Entrance and exit assessments should be aligned to provide a seamless transition between providers	\$50,000	Consortium lead agency	Number of transitions/transfers	By June 30, 2015, align assessments between systems
Transition from military service to training	Credits for vets for work experience	Assess what is happening already and how we can best serve our veterans	\$100,000	Consortium lead agency	Increase in enrollments and completions	

Program Area 5: Apprenticeship

Program-Area Regional Summary

Apprenticeship is a regional priority because it provides an accelerated pathway to economic independence for the individual, and it develops and provides a highly skilled workforce for employers that are partnered with a broad-based education delivery system. Apprentices “earn while they learn.” They are highly skilled taxpayers in high-wage occupations. Apprentices are a critical component of regional economic development. This model adds to the overall regional economy.

The members and the partners of the Capital Adult Education Regional Consortium (CAERC) recognize that the primary transition for apprenticeships involves developing multiple pathways from other adult education program areas (P1-4) to apprenticeship as an outcome. To better facilitate the creation of pathways, systems alignment, and articulation in the region, consideration must be given to transitions to:

ESL/Citizenship

- ABE/ASE
- CTE/Vocational Education
- Postsecondary Education including transfer to four-year institutions
- Apprenticeships
- Workforce

The ultimate goal of adult education is to provide students with the basic skills needed to obtain employment. In order for apprenticeship to be a potential outcome for students from the other four adult education program areas, concepts of apprenticeship must be infused into their curriculum. To that end, the curriculum for all courses in the four main program areas must include content addressing:

- Communication skills, “soft skills,” employability skills, workplace competencies
- Vocational English as a Second Language (VESL) as appropriate
- Reading, Writing, and Mathematical concepts in an occupational context (or Vocational Adult Basic Education (VABE))
- CAERC has identified several key approaches and strategies necessary to create seamless transitions including:
 - Expand access to counseling for career planning such as Apprenticeship, job development, and life needs beginning at the elementary level;
 - Increase access to career exploration classes;
 - Identify sequence of courses/pathways for alignment that will lead to an outcome such as Apprenticeship;
 - Collaborate with apprenticeship stakeholders to examine instructor requirements and curriculum for apprenticeship programs;
 - Mitigate barriers to Apprenticeship opportunities for all adults including those for whom English is a second language;

- Expand of stakeholders for apprenticeship; and
- Increase VESL and VABE programs.

Costs and timelines were estimated until further research can be completed. Below is a description of the transitions and approaches/strategies.

Description of Transitions and Approaches/Strategies

Approach/Strategy: Expand Access to Counseling. Access to career counseling should begin in elementary school. One strategy is to develop common career exploration classes between K-12 adult education and community colleges that address apprenticeship. Another strategy should be to develop a common assessment tool to identify aptitudes for entry into skilled trade apprenticeships. A third strategy is to increase the numbers of career counselors and job developers. There should be a common student ratio between K-12 adult education and community college counselors and job developers. Adding staff is an expensive proposition but critical in achieving the primary objective of maximizing student employment rates.

Approach/Strategy: Identify the Sequence of Courses/Pathways. Pathway alignment is essential to ensuring student success. Pathways should be aligned with regional occupational needs and will vary by region. Sequences should cross over between all adult education program areas as necessary and embed apprenticeship concepts as contained in pre-apprenticeship and orientation to apprenticeship curriculum. For consistency across the region, any transition strategy should be appropriately aligned between K-12 and community colleges. Standardized articulation agreements should be developed that address student movement from K-12 adult education to all community colleges in the region. For a variety of reasons, articulation agreements are often difficult to cooperatively develop and implement. If curriculum is closely aligned in both delivery systems, this task should be significantly easier. However, if difficulty persists, these agreements could be imposed on both systems resulting in opportunities for students to have a smoother, hopefully seamless, transition through the postsecondary systems.

Approach/Strategy: Collaborate with Stakeholders. One of the barriers that prevent the two delivery systems from having common administrative practices and common curriculum is the difference in minimum qualifications for apprenticeship program instructors. The community colleges have regulatory provisions that address both credit and non-credit instructor requirements. The statutory provisions for apprenticeship instructors in the K-12 system are that the instructors must be a journey level person with experience in that occupation. One recommendation is for apprenticeship stakeholders to collaborate on and examine instructor requirements and curriculum to align pathways.

Approach/Strategy: Mitigate Barriers to Apprenticeships. Finally, priority must be given to mitigate barriers to apprenticeship opportunities for adults for whom English is a second language. In part, this can be accomplished by incorporating Vocational

English as a Second Language (VESL) into all program areas particularly Program 2: Adult English Learners.

Role of the Consortium

These transitions require a collaborative effort coordinated by the regional consortium to ensure consistency between K-12 adult education and community college, and within each delivery system. All transition strategies must be focused on facilitating the student to obtain a job and/or movement to and through the postsecondary system.

Possible future roles for the Consortium include:

- Support in aligning course titles and curriculum;
- Facilitate action that leads to the mitigation of regulatory barriers;
- Assist with the development of common marketing materials;
- Develop a central depository as a regional reference for listing information; topics should include course sequences and standards to assist students in selecting classes that lead them to apprenticeship and accessing other resources.
- Support accountability by maintaining a database that includes information such as the number of new career exploration classes added in the region, the number of new counselors, and the comparison of student ratios between K-12 adult education and community colleges; and
- Expand CAERC stakeholders to involve Apprenticeship Sponsors, representatives of businesses with potential employment opportunities, local WIBs, local Government and equal representation from each education delivery system.

Reference Program Area 5 Table 3.1 for additional details.

Table 3.1. Implementation Strategies to Create Pathways, System Alignments, and Articulation Among Consortium Participants

Program Area 5

Transition to be Addressed	Strategy/Approach to be Employed	Resources Needed	Estimate of Cost	Responsible Parties	Methods of Assessment	Timeline
P1-4 to P5 Apprenticeship	<p>Expand access to counseling for career planning, such as Apprenticeship, job development, and life needs beginning at the elementary level</p> <p>Develop common career exploration classes between K-12 Adult Education and Community College that address Apprenticeship Career counselors and job developers with a common student ratio between K-12 Adult Education and Community College</p> <p>Collaborative effort coordinated by the regional consortium to insure consistency between K-12 Adult Education and Community College, and within each delivery system</p>	<p>Funding</p> <p>Commitment by both K-12 Adult Education and Community College</p>	<p>\$120,000 per counselor</p> <p>Reference Program Area 5 Table 4.1 and Program Area 5 Table 5.1</p>	<p>K-12 Adult Education School Districts</p> <p>Community College</p> <p>Regional Consortiums</p>	<p>Number of new counselors</p> <p>Compare student ratios between K-12 Adult Education and Community College</p> <p>Number of new career exploration classes added in the region</p> <p>Regional Consortiums are engaged to insure common implementation</p>	2015-2016 School Year and Ongoing
P1-4 to P5 Apprenticeship	Identify sequence of courses/pathways for each region that will lead to an outcome, such as	Committed K-12 Adult Education Community	\$250,000	Apprenticeship Program Sponsors Regional	Indicators that regional consortia are engaged to insure common	2015-2016 School Year and Ongoing

	<p>Apprenticeship</p> <p>Pathways should be aligned with regional occupational needs (will vary by region) and focused on potential outcomes such as Apprenticeship</p> <p>Collaborative effort coordinated by the Regional consortium to insure consistency between K-12 Adult Education and Community College, and within each delivery system</p> <p>Produce a regional reference document listing course sequences and standards to assist students in selecting classes that lead them to Apprenticeship</p> <p>Sequences should cross over between adult education program areas as necessary</p>			<p>Consortium</p> <p>K-12 Adult Education School Districts</p> <p>Community College</p>	<p>implementation</p>	
<p>P1-4 to P5 Apprenticeship</p>	<p>Collaborate with apprenticeship stakeholders to examine instructor requirements and curriculum for apprenticeship programs</p>	<p>All effected parties</p>	<p>TBD</p>	<p>K-12 Adult Education</p> <p>Community College</p> <p>State Academic Senate</p> <p>Regional Consortium</p>	<p>All instructors of apprenticeship courses for both credit and non-credit are journeymen with experience in the trade taught</p>	<p>2015-2016 School Year and Ongoing</p>

				State Legislature Apprenticeship Program Sponsors		
P1-4 to P5 Apprenticeship	Mitigate barriers to apprenticeship opportunities for adults for whom English is a second language Incorporate Vocational English as a Second Language (VESL) into all ESL classes and program areas Collaborative effort coordinated by the Regional Consortium to insure consistency between K-12 Adult Education and Community College and within each delivery system	Committed K-12 Adult Education community	\$100,000	K-12 Adult Education Community College Regional Consortium	All ESL classes have a significant VESL component	2016-2017 School Year and Ongoing

Objective #4: Address Gaps

Plans to address the gaps identified.

Consortium Summary

Narrative

In preparation for the first regional Summit held on September 11, 2014, CAERC members and partners were tasked with identifying the gaps and strategies from their organization's perspective. At Summit I, attendees met in program-area collaboration teams to share their organization's perspective and to identify the regional trends. Faculty and administration representing all program areas of the consortium came together to brainstorm, discuss, argue for, rank, and then vote on perceived needs/gaps in the region.

After the Summit, Program Area Subcommittees convened to further discuss Objective 4. Subcommittee members reviewed the work from the Summit and the consortium member and partner submissions for Objective 4; some overarching trends appeared across Program Areas 1-5. These regional trends include the need for:

- Targeted, braided, dedicated and coordinated funding for adult education;
- Increased and ongoing coordination and collaboration between K-12 adult education, community college, and community partners across the consortium;
- Transitions and curricular alignment and standardized articulation;
- Common assessment and data systems to track student progress across and within program areas;
- Curricular integration across program areas, specifically apprenticeships;
- Expansion of program services and availability of course offerings;
- Increased student support services for counseling and career development;
- Use of technology in both coursework and communication for coordination and collaboration;
- Consortium-wide professional development coordination and support;
- Consortium-wide communication tools (i.e., websites, social media, email lists, online forum etc.);
- Re-branding of adult education to increase awareness and outreach; and
- Increased student access to regional resources (i.e., childcare, mental health services, housing options, transportation, and translation services).

It is evidently clear based on the demographic and economic profiles of the region that the greatest need is for ample funding that is targeted, braided, dedicated, and coordinated funding for adult education. (Reference Demographic and Economic Profiles in Overview of the Consortium and Objective 2.) Overwhelmingly, CAERC members and partners have voiced their concern regarding the ever-growing, unmet need in the Capital Region and the pressing need for dedicated funding to maintain

current capacity. The ongoing challenge is that the demand for services far exceeds capacity.

Current funding level (FY 2013-2014) is simply inadequate to fully actualize the goals of AB 86. AB 86 has provided a unique opportunity to inform the legislature about the importance of restoring and increasing funding for adult education to sustainable levels that ensure its effectiveness and quality, particularly K-12 adult education, while enhancing the efficiency of the services provided regionally. To move CAERC's regional plan forward, funding must be increased and dedicated to adult education. CAERC's plan, if appropriately funded, will result in significant improvement and increased efficiencies to the adult education delivery system that will ultimately benefit each of its students and the economy of the region at large.

The projected cost to implement the regional key priorities in the CAERC Implementation Regional Plan is estimated at \$12.5 million plus maintenance of effort (MOE) for Year 1: 2015-2016 and \$16 million plus MOE for Year 2: 2016-2017. At minimum CAERC K-12 districts will need at least \$4,436,650 for MOE based on 2012-2013 funding and \$33,298,946 to restore funding to 2007-2008 funding levels. Continued operation of programs and services provided by the K-12 district members is highly dependent on the availability of a new dedicated funding. Support for adult schools needs to be prioritized in the state's funding model to rebuild and enhance AE programs and services.

Below is the summary of the identified regional gaps and needs across program areas.

CAERC Summary of Identified Regional Gaps and Needs	
Program Area 1: ABE/ASE	<ul style="list-style-type: none"> • Dedicated Funding for Ongoing Collaboration • Development of Regional Resource Asset Map and Communication Tools • Family Literacy • Common Assessment and Data Systems • Transitional and Curricular Alignment • Student Support Services • Program and Service Expansion • Professional Development
Program Area 2: Adult English Learners	<ul style="list-style-type: none"> • Increased Collaboration and Articulation • Improved Accountability and Assessment • Alignment of Curriculum between Adult Education and Community College, Increased Student Support Services • Expansion Course Offerings • Increased Access to Professional Development.
Program Area 3: Adults with Disabilities	<ul style="list-style-type: none"> • Academic and Transition Assessment Alignment • Streamlined Student IEP Transition

	<ul style="list-style-type: none"> • Expanded Access to Resources • Dedicated Funding of Services and Coordination for Students with Autism • Increased Resources and Dedicated Funding
Program Area 4: CTE	<ul style="list-style-type: none"> • Coherent and Aligned Systems for CTE • Equity and Access to CTE Programs • Expanded Communication and Marketing for CTE Programs • Industry-Specific and Generalized Professional Development • Systemic Data Collection System
Program Area 5: Apprenticeships	<ul style="list-style-type: none"> • Dedicated Funding for Apprenticeship Programs • Curricular Integration of Apprenticeships with other Program Areas • Student Support Services – Career Counselors and Job Developers • Increase Awareness about Apprenticeships • Standardized Articulation • Re-brand Adult Education

Recognizing the regional needs far outweigh the anticipated AE funding, CAERC Program-Area Subcommittees collaborated to prioritize needs (Objective 4), implementation strategies, and approaches (Objective 3 and 5) for their designated program areas in January 2015. These program-area recommendations were presented to the Members.

Members further prioritized the list of strategies across the program areas to identify the top regional strategies to include in the CAERC Implementation Plan if funded. Included is the list of regional strategies based on ranking and regional priority completed in February 2015. Reference CAERC Regional Strategies By Ranking and Regional Priority.

CAERC Regional Strategies By Ranking and Regional Priority

Regional Strategy	Regional Priority			
	1	2	3	4
(1) Expand AE Course Offerings in the Region	x			
(2) Develop Regional Asset Map and Pathways Roadmap		x		
(3) Align Courses and Streamline Pathways		x		
(4) Provide Professional Development to Support Regional Priorities	x	x	x	x
(5) Analyze Regional Labor Market and Needs to Align Implementation and Expansion	x			
(6) Coordinate and Expand Marketing and Outreach Efforts			x	
(7) Increase Number of Transition Specialists and Incorporate Collaborative Case Management			x	
(8) Establish Virtual Communication Network Among AE Providers Support Collaboration Across Systems	x	x	x	x
(9) Increase Consortium Awareness on AE Funding Options to Access Braided, Well-Sequenced Funding	x			
(10) Coordinate Transitional Planning for AWD Among PreK-22 Providers			x	
(11) Design, Pilot, and Utilize Consortium-Wide Data and Accountability System				x
(12) Increase Availability and Access to Support Services			x	
(13) Train, Pilot, and Implement iBEST in CTE Programs		x		
(14) Increase Vocational English as a Second Language (VESL) Course Offerings and Program Components to Accelerate Student Progress and Placement Into the Workforce for Adults for Whom English Is a Second Language		x		

Regional Priority:

1. Rebuild Adult Education Programs and Services;
2. Pathways and Alignment;
3. Student Support Services; and
4. Data and Accountability System.

Potential Future Role of the Consortium

Once funding is allocated, consortium workgroups are needed to implement the plans for integrating existing programs and create seamless transitions:

- Continue collaborative efforts with CAERC members/partners for aligning curriculum and pathways.
- Support the identification of academic goals for each specific transition point.
- Design and develop detailed flowchart or visual map that illustrates seamless pathways through adult and postsecondary education or career training.
- Recruit and manage Transition Specialist Coordinator and Transition Specialists in order to maintain consistency, and hold regular meetings for all related consortium members and partners.
- Evaluate existing student data systems for possible adoption by CAERC.
- Fund a consortium-level staff who will maintain current local community resources and access pathways.
- Develop a regional website to support regional communication and coordination inclusive of regional database or asset map.
- Design and provide consortium-wide professional development to support implementation efforts in each program area.
- Host regional network events for each program area.
- Develop regional marketing plan and distribute marketing and outreach materials for the region.
- Create distance-learning courses to be shared among stakeholders.
- Explore the feasibility of and facilitate the process of co-locating services for ESL students, assist in the creation of a central website for the consortium, and explore the possibility of creating a California student ID.
- Evaluate the different program curricula and refine alignment between programs. This information would be put on a central website and updated as necessary. Faculty and staff from each program would need to be informed of this alignment and the online resources explaining it.
- Strategize how to offer more courses across program areas that would fit more student schedules.
- Provide FTE/time/financial compensation for adult education staff for participating in professional development.
- Expand and coordinate outreach to other CBO's outside of the CAERC.
- Create goals that support regional system for CTE program and employer needs.
- Coordinate regional job training efforts.

- Develop and/or contribute to the development of a regional or statewide data reporting system.
- Support existing VESL classes—with the development and implementation of a regional VESL curriculum—that are tied to and aligned with local employer and economic needs.
- Collaborate with regional centers and other social service agencies and assist with the focus on employment opportunities to ensure students are job ready.
- Facilitate the development of CTE Certificate Programs that lead the student into an apprenticeable occupation, such as entry-level medical.
- Facilitate the development of pre-apprenticeship courses that are integrated into CTE pathways.
- Lead the collaborative effort to develop regional curriculum for orientation to apprenticeship across program areas.

This section includes the Objective 4 narratives and tables for each of the program areas (1-5) that reflect the list of strategies submitted in December 2014 that CAERC Members used to prioritize strategies and develop the CAERC Implementation Plan for Year 1 and Year 2.

Program Area 1: ABE/ASE

Program-Area Regional Summary

The main needs of the members in the consortium focus on the need for ongoing collaboration and alignment of standards across the stakeholders. This collaboration should expand to include as many partners in the Capital Region as possible to ensure the consortium is meeting everyone's needs. There are many areas where the exit point and entry point to the next phase may not line up and the benefit of collaboration would ease this transition for students as they move from one program area to another.

Another consortium-wide concern is the need for support services such as counseling to help these high needs populations. Helping students select a clear and established pathway to help ensure their success is crucial for increasing student success. Expanding the types of services offered, especially to those at the lowest levels, is critical. As service is expanded, or reestablished, outreach centers will be needed to meet the needs in areas not currently being served. Costs and timelines across all gaps were estimated until further research can be completed. Below is a description of each.

Description of the Program-Area Gaps in the Region and Strategies

Need: Dedicated Funding for Ongoing Collaboration. There is currently no ongoing collaboration across the consortium. Regular meetings that involve all stakeholders will ensure that needs of the adult population are being met. Sharing resources and strategies, as well as establishing well-articulated pathways, benefits all stakeholders in the consortium. A dedicated funding source is needed to ensure this collaboration continues.

Need: Develop Asset Map and Communication Tools. An asset map should be developed to clearly identify the resources of the region including adult schools, community colleges, county offices of education, in addition to other agencies that address the needs of the students being served. Organizations that provide childcare, mental health services, parenting education, and family literacy all need to be clearly identified to the adult learner population which may be unaware of the resources the community has to offer. This should be available on a website, through offices, and through social media as well. The goal is to improve the sharing of information to all stakeholders and relay to students the valuable resources at their disposal that may address some of their needs.

Need: Family Literacy. It is evident that there is a need across the consortium to explore ways to ensure that the need for family literacy is addressed, possibly through the asset map and identification of resources, or perhaps as part of the basic skills

development. Many barriers to completing education plans go beyond the classroom. Every effort needs to be made to support the whole student.

Need: Common Assessment and Data Systems. To help place students and ensure a more uniform approach, there should be a common assessment, or at least a common understanding and correlation between assessments being used. A common tracking system should be in place that houses assessment, placement, and achievement for each student. This will streamline a student's path and promote quicker achievement of goals. This data will help measure the effectiveness of the implemented changes.

Need: Transitional and Curricular Alignment. Investment of time is needed to ensure alignment of transitions and curriculum using benchmarks and expected competencies. An additional possibility is the exploration and implementation of stackable certificates to clearly identify competencies.

Need: Student Support Services. Establishing strong support services should be a high priority, with a focus on proper placement and establishing clear pathways for students. There should be career and academic counseling to help students with their education plan, and other services such as crisis counseling should be available to this high-need population. One of the main deterrents to program completion are life events outside of the classroom. Student tutors or mentors can help meet this need. It is critical that students receive support in these areas for success rates to improve.

Time should be spent exploring ways to address the needs of a population who enters Community College through open access and then repeats a course 3 times unsuccessfully. This situation would prevent the population from continuing on in a course sequence at the community college, dead-ending their current pathway. Adult education can be a tool if this occurs at the basic skills level.

Need: Program and Service Expansion. Establish a way to expand programs to meet the needs of the adult learners in the area. This may be expanding, or reestablishing, centers for adult education, as well as expanding programs to meet the needs of low-level students currently not being served. This may be accomplished through the addition of and/or expansion of distance education programs, including the adoption of learning management systems. Boot camps should be developed and offered to help bridge students and teach soft skills such as college-, career-, and CTE-readiness to ease transitions into new areas. Boot camps can teach computer literacy and incorporate student mentors to meet student needs.

Need: Professional Development. Professional development funds should be made available (in addition to contracted time) to faculty and staff so proper time and energy can be put into planning and exploring programs to improve best practices and pedagogy even before training in the programs begins. Creating and maintaining a working local consortium that has input and control over the decision-making process will create buy-in from the stakeholders in the consortium. Control over the alignment process should be faculty driven and not outsourced.

Implementation Timeline

The timeline is going to depend on the resources available. Each need can be resolved within roughly a year, but there needs to be an understanding that not all items can be accomplished at the same time if it needs to be done by the same individuals. This may necessitate increased funding to hire additional staff to coordinate and manage the implementation of the regional plan.

Reference Program Area 1 Table 4.1 for additional details.

Table 4.1. Implementation Strategies to Address Identified Gaps

Program Area 1: Elementary and Secondary Basic Skills, including classes required for a high school diploma or high school equivalency certificate

Need/Gap Category	Strategies to Address the Gap	Brief Description of the Strategies	Resources Needed	Estimate of the Cost	Responsible Parties	Methods of Assessment	Timeline
<p>1.Lack of support Services</p> <p>Students are not ready for transitioning into post-secondary education, training, and/or employment. They are not ready academically, and need more personal readiness skills. They also need to experience career exploration and identify clear pathways to their goals.</p>	<p>Adding full-time counselors to aid in planning for academic, career, or CTE planning.</p> <p>Establish clear pathways with the student's end goal in mind and ensure proper placement</p> <p>Counselors equipped to help student's college, career, and crisis intervention</p> <p>Ongoing tutoring and/or small group instruction in a dedicated facility</p> <p>Establish a resource database, or asset map, including what is offered by members of the consortium (social services, transportation, tutoring,</p>	<p>Train students to be mentors/tutors.</p> <p>Use community college as a resource to find tutors. Library literacy program tutor training or community college training</p>	<p>Trained tutors/mentoring /training for students</p> <p>Community college and library training programs</p> <p>Funding and support for ongoing professional development to help keep all stakeholders informed and the process current</p> <p>An established subcommittee to provide consistent action and to help guide decisions in the</p>	TBD	Adult schools will need to establish support services	Data should be tracked via a database to see if there is an impact in a longitudinal study	TBD

	<p>and citizenship), as well as community resources (childcare) are available</p> <p>Offer Boot Camp bridge programs to teach soft skills. These camps will focus on college, career, and CTE readiness</p> <p>Continuous collaboration about best practices for transitioning students. Clearly identify the skills students are expected to have when entering other programs</p> <p>Collaboration with the America's Job Centers and Title 1 WIA programs should be a strategy to address this gap. AJCCs have coaches and partners that can address some of the necessary supports and financial assistance for support services.</p>		<p>permanent consortium.</p>				
<p>2.Lack of clearly</p>	<p>Identify and establish</p>	<p>Create a detailed</p>	<p>TBD</p>	<p>TBD</p>	<p>Content faculty</p>	<p>Data should be</p>	<p>TBD</p>

<p>established pathways</p>	<p>clear pathways for easy transitions. These pathways should be specific to students' goals e.g. ABE to CC, ABE to CTE, ABE to Career, ABE to ASE etc</p> <p>Ensure that collaboration among stakeholders (particularly faculty) continues to develop clear and established paths for students</p>	<p>flowchart to illustrate pathways in a visual manner for students and faculty</p>	<p>Funding and support for ongoing professional development to help keep all stakeholders informed and the process current</p> <p>An established subcommittee to provide consistent action and to help guide decisions in the permanent consortium</p>		<p>from across the consortium</p> <p>WIA Title 1 Adult and Dislocated worker resources through the AJCC should be a resource for pathways, and collaboration with AJCC Coaches and Career Pathways Trust Sector coaches could provide information on high demand sectors and employers.</p>	<p>tracked via a database to see if there is an impact in a longitudinal study</p>	
<p>3.Lack of clear or common matriculation process</p>	<p>Introduce common assessment across the consortium, or develop a common understanding of each other's exams and correlate the results</p> <p>Establish a multiple measure placement that utilizes common</p>	<p>TBD</p>	<p>TBD</p> <p>Funding and support for ongoing professional development to help keep all stakeholders informed and the process</p>	<p>TBD</p>	<p>Content faculty from across the consortium</p>	<p>Data should be tracked via a database to see if there is an impact in a longitudinal study</p>	<p>TBD</p>

	standards Establish a pathway for community college students that run into repeatability issues at the community so their path is not deadended		current An established subcommittee to provide consistent action and to help guide decisions in the permanent consortium				
4. Lack of established partnerships and continued dialogue.	Hold ongoing collaborative meetings where all stakeholders (particularly faculty) are present Secure on-site professional development time to collaborate and ensure goals are being properly identified and met Establish online communication networks.	Dedicated funding Expand consortium partners to include other community members and business partners to maintain an open dialogue to ensure that the needs of all stakeholders are being met	TBD Funding and support for ongoing professional development to help keep all stakeholders informed and the process current An established subcommittee to provide consistent action and to help guide decisions in the permanent consortium.	TBD	Entire Consortium	Data should be tracked via a database to see if there is an impact in a longitudinal study	TBD
5.The need to expand services region-wide	Expand areas being served by establishing	TBD	TBD	TBD	Entire consortium	Data should be tracked via a	TBD

<p>and increase spectrum-wide offerings to reach more students at all literacy levels. The library literacy program is not able to serve the number of students with a need</p>	<p>or reestablishing outreach centers</p> <p>Expand number that can be served by utilizing distance education options such as those that emphasize technology</p> <p>Build or expand a program that can serve the lowest literacy levels</p>		<p>Funding and support for ongoing professional development to help keep all stakeholders informed and the process current</p> <p>An established subcommittee to provide consistent action and to help guide decisions in the permanent consortium</p>			<p>database to see if there is an impact in a longitudinal study</p>	
<p>6.Current curriculum among stakeholders lacks alignment. Students entering programs do not have skills needed to be successful</p>	<p>Align and/or develop the transitional curriculum. Establish benchmarks and establish expected competencies</p> <p>Explore the implementation of stackable certificates</p>	<p>Collaborate across consortium faculty and include K-12 to ensure articulation and alignment exists. Create alignment where needed</p> <p>A subcommittee of multi-leveled faculty should be formed to closely review standards on an ongoing basis so recommendations</p>	<p>TBD</p> <p>Funding and support for ongoing professional development to help keep all stakeholders informed and the process current</p> <p>An established subcommittee</p>	<p>TBD</p>	<p>Content faculty from across the consortium</p>	<p>Data should be tracked via a database to see if there is an impact in a longitudinal study</p>	<p>TBD</p>

		<p>can be made to ensure strong alignment in entrance and exit points</p> <p>Begin with the end in mind. Backwards map from community college to ensure that proper preparation happens</p>	<p>to provide consistent action and to help guide decisions in the permanent consortium</p>				
<p>7. There is no common structure or mechanism for student identification and longitudinal tracking</p>	<p>Create an electronic student tracking system that utilizes a database that can be used consortium/ (STATE/CALPADS?) Statewide K-14</p>	<p>Work together as a consortium to develop key identifying information to keep on students that follows them through their educational paths</p>	<p>TBD</p> <p>Funding and support for ongoing professional development to help keep all stakeholders informed and the process current</p> <p>An established subcommittee to provide consistent action and to help guide decisions in the permanent consortium</p>	TBD	<p>Consortium or State</p>	<p>Data should be tracked via a database to see if there is an impact in a longitudinal study</p>	TBD

Program Area 2: Adult English Learners

Program-Area Regional Summary

The statewide budget cuts to Adult Education in the last decade have resulted in substantial program and service gaps. School closures and greatly reduced course offerings have left many adult learners with few options for increasing their English language skills and, hence, community participation and employability. A designated stream of funding for adult education services throughout the region is essential for providers to address the gaps that exist and provide adult learners with the skills they need to enter the workforce and/or higher education.

During the process of reviewing consortium member and partner submissions for Objective 4, some overarching trends appeared across Program Areas 1-5. These trends include a need for increased:

- Availability of course offerings and student support services (e.g., through summer and on weekends);
- Coordination and collaboration between adult education, community college, and community partners; and
- Use of technology (in both course offerings as well as coordination and collaboration).

Across all gaps, costs and timelines were estimated until further research can be completed. Below is a description of each.

Description of the Program-Area Gaps in the Region and Strategies

Need: Increased Collaboration & Articulation. As many of the same students come through the classrooms of different members and partners of the consortium, the lack of communication between institutions needs to be addressed. The educational role each member and partner play, and how these roles relate to each other in relation to adult ESL, is not well understood. As these institutions' goals are very similar—to assist adults needing English towards their educational and/or career goals—these institutions should work in a more unified manner.

Five strategies were identified to address this gap:

1. Co-location of services for ESL students at adult education centers and community colleges including ESL Pathway Coordinators from adult education and community college, CAERC partners, job and training centers, community-based organizations, state agencies (i.e. Department of Human Assistance). This would be implemented at the beginning of funding.
2. Development of articulation agreements and pathways for ESL students to transfer from adult education to community college.
3. Coordinated outreach efforts to the ESL community through CAERC members and partners and at local events.

4. Utilization of technology to facilitate communication and disseminate information on the programs and resources available for the region's ESL students via a central website.
5. Creation of a common identifier (student ID) for California students that can be used across the adult education and community college system to assist with student placement and tracking.

Role of the Consortium

Once funding is allocated, a workgroup of consortium representatives would be needed to explore the feasibility of and facilitate the process of co-locating services for ESL students, assist in the creation of a central website for the consortium, and explore the possibility of creating a California student ID.

Need: Alignment of Curriculum of Adult Ed with CC Student Learning Outcomes.

In addition to creating equivalency between assessment tools, there is a need for alignment of Adult Ed ESL curriculum with that of the local Community College Student Learning Outcomes. This alignment would streamline student transitions from Adult Education to Community College (CC). At the same time, students who score below the CC's lowest level could be appropriately placed in the local Adult Ed program. Four strategies were identified to address this gap:

- Consortium-wide meetings
- Give access to curriculum to CBOs
- Infusion of technology
- Create common competencies regionally

Role of the Consortium

Once funding is allocated, a workgroup of consortium representatives would be needed to evaluate the different program curricula and refine alignment between programs. This information would be put on a central website and updated as necessary. Faculty and staff from each program would need to be informed of this alignment and the online resources explaining it. Facilitated by the ESL Pathway Coordinator (Reference 3.1 Narrative) and in order to maintain consistency, regular meetings would be held by all related consortium members and partners (Reference Program Area 2, Table 4.1 for resources needed and methods of assessment).

Need: Student Support Services. A major barrier for students pursuing education within the consortium's ESL programs is the inability of each program to address the pre-classroom needs of its students. Six strategies address this gap:

- Services available to students: transportation and childcare.
- Citizenship transitions: advisor screens student before entering the class and identifies levels appropriate to enter citizenship preparation.
- Workshops on student services available to address broad needs (financial literacy, mental health literacy, etc.)

- Infusion of technology, including orientations (Pathways Chart - meeting with student to discuss goal setting).
- Discuss family/personal needs with students; address concerns and help meet needs.
- Translation services to help students in lower levels understand their paths and goals.
- Support services for high-risk students.

Role of the Consortium

Once funding is allocated, a consortium-level resource specialist would maintain current local community resources and access pathways. This role would be supported by the ESL Pathway Coordinator (Reference 3.1 Narrative), who would be available to students directly (Reference Program Area 2, Table 4.1 for resources needed and methods of assessment). Free childcare at the Adult Ed centers could be modeled on the CC program at Los Rios (ECE Program).

Need: Increased Course Offerings. Another major gap found in the region is the inability of programs to offer flexible course offerings that reflect the diverse needs of our ESL students. One main strategy addresses this gap:

- Consistent and increased course options—add more off-site classes, satellite sites, and weekend and summer classes.

Role of the Consortium

Once funding is allocated, a workgroup of consortium representatives would be needed to strategize how to offer courses that would fit more ESL student schedules and how to increase the number of programs and courses offered on weekends and during summer. Consistent class time is especially important for English learners as a core component of language learning is immersing oneself in an English-only environment. Long breaks without language practice not only slow down, but actually increase the time needed to learn a new language. This information would be put on a central website and updated as necessary. Faculty and staff at each of these programs would need to be informed of this alignment and the online resources explaining it. Facilitated by the ESL Pathway Coordinator (Reference 3.1 Narrative) and in order to maintain high levels of student access to our ESL programs, regular meetings would be held by all related consortium members and partners on this topic (Reference Program Area 2, Table 4.1 for resources needed and methods of assessment).

Need: Increased Access to Professional Development. A final need in order to ensure the success of the above strategies is the need for time and funding for professional development for all consortium members and partners. Three main strategies address this gap:

- Fund PD opportunities for all members and partners
- Agree on minimum standards of teacher credentialing

- Utilize existing PD resources available to each member/partner

Role of the Consortium

Once funding is allocated, faculty from all consortium members and partners would be encouraged to participate in, and be given FTE/time/financial compensation for participating in, professional development (Reference Program Area 2, Table 4.1 for resources needed and methods of assessment).

Reference Program Area 2 Table 4.1 for additional details.

Table 4.1. Implementation Strategies to Address Identified Gaps

Program Area 2: Classes and Courses

Need/Gap Category	Strategies to Address the Gap	Brief Description of the Strategies	Resources Needed	Estimate of the Cost	Responsible Parties	Methods of Assessment	Timeline
1. Collaboration and Articulation	<p>Coordinate between members and partners, including co-location of services (DHS/welfare, workforce development agencies, CBOs, educational)</p> <p>Utilize technology to facilitate communication and identify available programs and resources</p> <p>Coordinate outreach efforts to the K-12 systems and other community entities</p> <p>Develop articulation agreements and clear pathways for AE to CC</p>	<p>Hire multiple EL coordinators with physical presence at each adult education center aligned with a CC campus and other community partners</p> <p>Hire a CC coordinator</p> <p>Hire ESL advisor at the Adult Center</p> <p>Central resource website/database; listserv, social media, online forum for program updates from members/partners</p> <p>Print outreach materials/PR/presence at local events and employers</p>	<p>Coordinator and advisor, or multiples</p> <p>Programmers, technology infrastructure, analysts</p> <p>Support staff</p> <p>Staff time and funding for materials</p> <p>Modern technology to support the educational programs.</p> <p>Training on use of the technology</p>	<p>One benefited regional coordinator at \$80,000/year</p> <p>Multiple .25 local coordinator/support staff positions at \$25,000/year each</p> <p>Website creation and management: \$100,000/year 1. \$50,000 2. \$15,000</p>	<p>The Consortium members and DHS</p> <p>SWJC system</p>	<p>Surveys of the instructional populations in CC's and adult education and community partners</p>	<p>Implementation at the beginning of funding</p>

	Create common identifiers (student ID) for California students across all systems	Agreed upon demographics that are collected upon intake					
2.Accountability and Assessment	Common guidelines for adult education, community college, CBO assessment Align Levels of Proficiency and Student Learning Outcomes (SLO's) between adult education and community college In-person communication between systems to coordinate and issue recommendations Set of uniform outcomes	Identify the skills that are being assessed at each level Regular meetings between systems	Modern technology to support the educational programs Training on use of technology	Adequate funding to attend meetings (release time, etc.): \$50,000 to start	Partners, adult education faculty, CC faculty, IT technicians	Minutes of meetings, calendars of meetings, shared assessment instruments	1 year
3, Alignment of curriculum of adult education with community college Student Learning Outcomes	Dedicated funding to provide consistency within our programs Cross-system meetings	Share curricula and SLO's across systems Professional development to build faculty skills	Funding to convene work groups Instructor development on technology	\$50,000 per year to fund work groups	Los Rios and adult education faculty and administrators	Copies of curricula in both systems Technology inventory	1 year likely; overlapping with the year devoted to Assessment and

	<p>Give access to CBOs to curriculum</p> <p>Infusion of technology</p> <p>Create common competencies regionally</p>	<p>Develop work groups to do above tasks</p>	<p>use</p> <p>Funding for curriculum adjustment</p>				<p>Account-ability</p>
4.Student Services	<p>Dedicated funding to provide consistency within our programs</p> <p>Workshops on student services available to address broad needs (financial literacy, mental health literacy, etc.)</p> <p>Infusion of technology, including orientations (Pathways Chart: Meeting with student to discuss goals—goal setting)</p> <p>Discuss family/personal needs with students: Address concerns and help</p>	<p>Advisor to coordinate with other members, colleges, and partners to facilitate moving students within consortium programs.</p> <p>Advisor access to other resources and schools (programs/ offerings)</p> <p>Workshops, within class time, at the literacy level of the students focused on the educational and career options available. This would be followed by individual goal setting sessions with advisors.</p> <p>At each agency, a</p>	<p>Funding and facilities for Consortium Resource Specialist.</p> <p>Funding for Resource Specialist/ Counselor.</p> <p>Percentage of full-time employee depending on size of agency, but no less than 25% FTE.</p> <p>Availability of free child care, modeled on CC program at Los Rios (ECE Program connection)</p>	<p>Approximate cost for wage, benefits, and office for consortium level professional \$75,000</p> <p>Cost for site-level individuals at wage scales of those sites. \$75,000/year for child care</p>	<p>Los Rios responsible for consortium level resource specialist and dissemination of information to members and partners</p> <p>Members responsible for site-level roles including assisting partner clients to access resources</p> <p>SWJC system</p>	<p>Student goal attainment</p> <p>Record of services provided</p> <p>Student persistence through attendance and drop out rate</p>	<p>Ongoing and measured within fiscal years</p> <p>Workshops offered twice per year.</p>

	<p>meet needs</p> <p>Services available to students: Transportation and child care</p> <p>Translation services to help students at lower English levels understand their paths and goals.</p> <p>Support services for high-risk students</p> <p>Citizenship transitions: Advisor screens student before entering the class. Identifying levels appropriate to enter citizenship</p>	<p>community resource specialist would be available to meet with students and assist them in connecting with community resources needed to stabilize their lives and families (i.e., housing, food, medical and mental health care); to facilitate a continued focus on education.</p> <p>Advanced students mentoring lower level students: A mentor program for ESL students</p>	<p>Modern technology to support the educational programs.</p> <p>Training on use of the technology</p>				
5. Course offerings	<p>Technology: Infused through all gaps Live feed/cable TV distance learning, online Upgrade tech: smart TV's, etc.</p> <p>Dedicated funding to provide consistency within our programs</p>	<p>Blended learning models</p> <p>Off-site and distant learning classes (work sites, churches, union halls, community centers, elementary school programs, migrant housing centers, community college, adult</p>	<p>Salary for person/group to map existing services (planning grant)</p> <p>Laptops, hardware, tablets, software, IT support, storage,</p>	<p>Per class: \$8,400 per year for instruction</p> <p>\$4,200 per year for volunteer coordination</p> <p>Per site/ infrastructure</p>	All consortium members and partners	<p>Student and staff surveys</p> <p>Reporting the number of students served (including demographics)</p>	1 year, overlapping with years 3 and 4

	<p>Access: Off-site classes, satellite sites, weekend classes</p>	<p>education centers)</p> <p>Mapping where classes already exist and what students are being served and which are not</p> <p>Identify gaps and locations</p> <p>Staff development</p> <p>Hardware set up</p> <p>Class Schedule</p>	<p>training support, funds to support non-traditional classes, volunteer coordinators, DSPS support (including applications)</p>	<p>\$45,000 for 30 laptops</p> <p>\$4,500 for 15 tablets</p> <p>\$4,500 for 30 Microsoft Office licenses</p> <p>\$5,000 for DSPS support</p>			
<p>6. Professional Development (PD)</p>	<p>Infusion of technology</p> <p>Open PD opportunities to CBOs (e.g., WIA)</p> <p>Agreement on minimum standards of teacher credentialing</p> <p>Utilize resources available (CBO, K-12, and CC)</p>	<p>Providers from all systems: Adult education, community partners, and Los Rios. Provide workshops from all systems with opportunities for collaboration</p> <p>Out-of-state Workshop presenters so that we have the opportunity to see other models</p>	<p>PD Coordinator</p> <p>Sites identified to house workshops</p> <p>Modern technology to support the educational programs.</p> <p>Training one use of the technology</p>	<p>\$50,000</p> <p>Sites should be no-cost</p>	<p>OTAN</p> <p>CALPRO</p> <p>Web and face-to-face</p>	<p>Surveys of populations</p> <p>Formalized agreements in hand</p>	<p>Ongoing beginning with implementation</p>

Program Area 3: Adults with Disabilities

Program-Area Regional Summary

As might be expected, the largest regional gap identified is the alignment and tracking of programs, supports, assessments, etc. regardless of the disability category in which students qualify. Because programs for students with disabilities are often implemented in silos, PreK-22 support is fragmented, thus post-secondary opportunities are minimized. Lack of funding was identified across all gaps as a necessary fix. Trends across the program area were: providing effective, focused professional development across the system; developing aligned systems for communication and collaboration; and agreeing upon paperwork design, development, and collection.

Six gaps were identified as priorities within the transition areas of grade levels/programs in PreK-22 and across the entire system into adult education and community college, along with a description of the gap, strategies to address the gap, needed resources, cost, responsible parties, methods of assessment, and timelines. Across all gaps, costs and timelines were estimated until further research can be completed. Below is a description of each.

Description of the Program-Area Gaps in the Region and Strategies

Need: Academic and Transition Assessment. The first gap is that student academic and transition assessments are often duplicated or inconsistent, and that report information is missing, incomplete, or kept in various locations which impacts timeliness and appropriateness of services provided to students. This is a two-pronged gap that includes: 1) alignment and array of the assessments students are administered across programs and agencies; and 2) tracking of the academic, transition, and medical information that is collected throughout students' history in education. Options would need to be explored/developed, a pilot set up that includes all stakeholders, professional development designed and a communication system set up to ensure deep and ongoing implementation. Resources identified were: time to research potential assessment and tracking systems; staff identification with a broad continuum of experience; professional development trainers/PD design (possibly electronic PD); and increased funding. Unless otherwise noted, the responsible parties are districts and community colleges in collaboration with outside agencies. To ensure this gap is addressed and narrowed, the process of researching, identification, and completion at agreed-upon intervals will be used as the assessment method.

Need: IEP Transition. Another gap identified was that the transition component of the IEP is completed to varying degrees of depth, specificity, and consistency, thereby negatively impacting appropriate placement in Career Pathways Academies/program development and minimizing post-secondary outcomes for students and adults with disabilities. Similar to gap #1, professional development and a communication process would be a priority. Equally important is ensuring academic and transition instruction is consistent across all grade levels and focused on adult education and community college expectations. Although transition plans are required beginning at age 16,

systems must be created that are connected—PreK to age 15 and from the time students leave the PreK-22 system into postsecondary options. This requires participation of all stakeholders, including general education, as early as possible. Resources needed would include professional development providers, realistic and relevant transition plan development, buy-in and fidelity to the process, and an agreed-upon definition of “college, career, and civic life” readiness.

Need: Access to Resources. The third gap focuses on limited access to resources due to various circumstances (rural areas, limited transportation options, crossing county lines, ability to use public transportation, decreased number of vendors, etc.). These limitations negatively impact supports, services, and training provided to adults with disabilities. To assist in remedying this gap, development of student housing options on community college campuses and increased funding to encourage program development was recommended. An increase in the number of programs in rural areas, along with an increase in housing options on community college campuses, would facilitate increased enrollment of students from rural areas and an increased number of MOUs—both would be used as measures of success.

Need: Funded Services and Coordination for Students with Autism. The following two gaps are specific to students with Autism (Alta Regional clients) and students with disabilities who do not qualify for Alta Regional services:

- Gap Four: The lack of available funding and services (braided) for students and adults with Autism (Regional Center clients) creates a gap in preparation and readiness for college, careers, and civic life.
- Gap Five: A lack of coordination of programs, supports, and assessments for students with Autism, SLD, Emotional Disturbance, etc. (Non-Regional Center Clients) creates a gap in preparation and readiness for college, careers, and civic life.

Both gaps would require alignment and coordination of supports and services between PreK-22 districts, outside agencies, and community colleges, as well as increased funding, focused program development, materials, professional development, and communication/collaboration procedures. A number of new programs would be established at the community colleges and job placements. An increase in programs that bring community colleges to high school/middle schools and vice versa would be implemented as assessment measures.

Need: Increase Resources and Dedicated Funding. Last, it is necessary to identify available resources, specifically funding as an overarching gap. Without specific attention paid to this gap, students with disabilities across the continuum will not be afforded equity in their opportunities for college, career, and civic life readiness and success. It is not enough to only increase funding, but also to ensure it is targeted, braided, dedicated, and coordinated. Suggestions for funding usage include: the hiring of highly qualified teachers, paraeducators, and support staff (i.e., counselors, behavior specialists, vocational specialists, job developers, mental health service providers); developing Autism programs and vocational programs; coordinating funding from

various sources (i.e., Regional Center, DOR, grants, for adults with disabilities); and employment incentives for employers.

Reference Program Area 3: Table 4.1 for additional details.

Table 4.1. Implementation Strategies to Address Identified Gaps

Program Area 3: Education Programs for Adults with Disabilities

Need/Gap Category	Strategies to Address the Gap	Resources Needed	Estimate of the Cost	Responsible Parties	Methods of Assessment	Timeline
<p>1. Student academic and transition assessment are duplicated or inconsistent. Additionally, report information is missing, incomplete, or kept in various locations which impacts timeliness and appropriateness of services provided to students.</p>	<p>Explore existing options or develop aligned, consistent, statewide academic and transition assessment tools</p> <p>Explore existing options or develop a comprehensive integrated assessment tracking system</p> <p>Develop data collection process across all systems (PreK-22, adult education, CCC, ancillary services) to measure actual gaps in services</p> <p>Create a pilot utilizing the data collection system, to develop and test comprehensive assessment tools and data driven processes, to assist in the transition planning process</p> <p>Improve communication between and across systems</p>	<p>Funding</p> <p>Time to research potential assessment and tracking systems</p> <p>Staff identification with a broad continuum of experience</p> <p>Professional development trainers/PD design (possibly electronic PD)</p>	<p>Depending on district/agency size</p>	<p>School districts and community colleges in collaboration with outside agencies</p>	<p>The process of researching, identification, and completion of this project is progress monitored at agreed upon intervals</p>	<p>Research and identification to begin immediately</p>

	Improve professional development					
<p>2. The transition component of the IEP is completed to varying degrees of depth, specificity, and individualization. This negatively impacts appropriate placement in Career Pathways Academies/program development, minimizing post-secondary outcomes for students and adults with disabilities</p>	<p>College, career, and civic life team discussions and instruction begins early for students with disabilities (PreK/Elementary) and transition is considered anytime students enter the system</p> <p>Universal, consistent training for all entities involved in transition planning</p> <p>All stakeholders are considered valued members of the transition team (district, parents, and outside agency stakeholders)</p> <p>Improved communication across system and service providers (DOR, employers, Regional Center, PreK-22 educational system)</p> <p>Improved professional development in transitional planning and work related skills</p>	<p>Professional development providers</p> <p>Realistic and relevant transition plan development agreed upon by all stakeholders based on assessment</p> <p>Buy-in and fidelity to the process by all stakeholders</p> <p>Agreed upon definition of “college, career, and community readiness”</p>	TBD	<p>School districts, community colleges, related agencies (DOR, Regional Center, etc.)</p> <p>SWJC system</p>	<p>Staff evaluation</p> <p>CDE transition improvement Indicators</p> <p>Number of completed, fully implemented, and positively evaluated MOUs</p>	Immediately

<p>3. Access to resources (rural areas, limited transportation options, crossing county lines, ability to use public transportation, decreased number of vendors, etc.) is limited, thus negatively impacting supports, services, and training provided to adults with disabilities</p>	<p>Development of programs in rural areas</p> <p>Increase transportation options</p> <p>Agency/district partnerships</p>	<p>Funding source</p> <p>Staffing</p>	<p>TBD</p>	<p>School districts and community colleges in collaboration with Regional Center</p> <p>DDS (increased funding)</p>	<p>Increase in number of programs in rural areas</p> <p>Increase in housing options on community colleges campuses thereby increasing enrollment of students from rural areas</p> <p>Increase in the number of MOUs</p>	<p>Immediately</p>
<p>4. The lack of available funding and services (braided) for students and adults with Autism (Regional Center clients) creates a gap in preparation and readiness for college, career, and civic life</p>	<p>Development of specific programs to serve the population</p> <p>Funding increases</p> <p>Formal needs assessment for location and service delivery models</p> <p>Attract highly qualified staff with specific expertise</p> <p>Collaboration with Center for Excellence in Developmental Disabilities</p>	<p>Funding</p> <p>Facilities</p> <p>Staffing</p> <p>Materials</p> <p>MOU</p> <p>Job Development</p>	<p>Dependant on number of programs</p> <p>Agreed upon amount to be identified as start-up and recurring funds</p>	<p>Regional Center</p> <p>Collaboration with districts, NPS, etc.</p>	<p>Number of new programs established</p>	<p>As soon as possible with special attention paid to thoughtful implementation</p>
<p>5. A lack of coordination</p>	<p>Coaching supports</p>	<p>Funding</p>	<p>\$?,000,000</p>	<p>Responsible parties:</p>	<p>Number of new programs</p>	<p>Immediately</p>

<p>of programs, supports, and assessments for students with Autism, SLD, Emotional Disturbance, etc. (Non Regional Center Clients) creates a gap in preparation and readiness for college, career, and civic life</p>	<p>Counseling Connections and experience in career exploring; along with assessment</p> <p>Transition supports</p> <p>Case management</p> <p>Classes focusing on self-advocacy, learning strengths, and accommodation strategies</p> <p>Professional development for staff focusing on Universal Design for Learning</p> <p>Creating connections to the PreK-22 system</p> <p>Alternate media and assistive technology</p>	<p>Professional development</p> <p>Communication system</p> <p>See Comprehensive Assessment Tracking System</p>		<p>Community colleges and districts</p> <p>SWJC system</p> <p>Coaching, counseling supports are in place</p> <p>Completion rates increase</p> <p>Degrees, Certificates, Transfer</p> <p>Development of support classes</p> <p>Increase in enrollment of this population</p>	<p>established at the community college and job placements.</p> <p>Increase in programs that bring community colleges to high school/middle schools, and vice versa</p>	
<p>6. There exists a gap in funding for educating adults with disabilities</p>	<p>Funding must be:</p> <ul style="list-style-type: none"> - Increased - Targeted - Braided - Dedicated <p>Coordination of funding</p>	<p>Funding</p>	<p>TBD</p>	<p>California</p>	<p>Increased budget</p>	<p>Immediately</p>

Program Area 4: Short-term Career Technical Education Programs with High Employment Potential

Program-Area Regional Summary

The Sacramento region recently received \$21M in grant money to develop career pathways in six industry sectors. The largest regional consortium, and a \$15M awardee, is Capital Regional Academies for the Next Economy (CRANE). CRANE is a CAERC partner and will lead the work in systems alignment and pathway development. The targeted career pathways (detailed below) were selected because they align with economic growth in the region. They currently have an annual output of almost \$15B and show huge potential for growth. While CAERC will align all adult school pathways and services with regional industry sectors, priority will be placed on fully developing programs that conduct CTE training in these high-wage, high-demand areas:

- Agribusiness, Natural Resources and Food
- Advanced Manufacturing
- Engineering
- Information and Communication Technologies
- Life Sciences and Health Services
- Construction and Clean Energy

Description of the Program-Area Gaps in the Region and Strategies

A survey of CTE providers in the region identified the following:

- Lack of alignment between secondary, district adult school, and community college CTE programs.
- Career pathways do not exist, are not complete, or are not aligned between CTE provider systems.
- CTE training programs are not available to all clients in the continuum.
- There is a lack of industry specific and generalized professional development for many CTE educators.
- Little communication between CTE provider systems, service providers, and clients.
- No systemic data collection system to track student outcomes and provide longitudinal data across the systems.

Need: Coherent and Aligned Systems for CTE. The CRANE proposal focuses its work on the development of a coherent system that will allow us to enhance and expand locally embraced pathway models such as: Project Lead The Way (PLTW); California Partnership Academies (CPA); Specialized Secondary Programs (SSP); Linked Learning; and National Academy Foundation or hybrids that meet established Linked Learning quality criteria; and transition them into well articulated programs that are responsive to the regional economic needs. To achieve this, our design employs a collaborative structure designed to bring the California Department of Education,

postsecondary institutions, local workforce investment boards, and industry, civic, and non-profit support to each pathway cluster.

Need: Equity and Access to CTE Programs Central to this work of pathway development and systems alignment are equity and access. The consortium intends to create a system of wraparound supports that will increase meaningful access. These supports will include high-quality counseling, development and communication of a transition process (Reference Program Area 4, Table 4.1), transportation or replication, childcare, provisions for English learners, technology, job placement services and follow up services.

Need: Expanded Communication and Marketing for CTE Programs. Making communication and marketing a priority will help to keep the system aligned by creating communication channels between consortium members; safeguard equity and access by informing the public about CTE training options, financial aid, and eligibility requirements; and making sure that the system is prepared to be responsive to changing business and community needs.

Need: Industry Specific and Generalized Professional Development. Through a series of industry sector meetings and professional development opportunities, all teachers in the CRANE region will have access to high-level professional development focused on CTE subject matter, innovative teaching methods, integrated curriculum, and pathway sustainability. Teacher internships will also be offered to help teachers keep current with industry updates. In addition, Professional Learning Communities (PLCs) will be formed using a combination of face-to-face and Internet-based meetings. This will allow teachers to meet regularly to discuss and solve issues of curriculum alignment and student progress.

Need: Systemic Data Collection System. Part of the industry sector meetings and PLCs will be spent aligning and articulating curriculum, looking for opportunities for dual enrollment/credit, entrance requirements, and testing with a goal of regional curriculum, performance tests, common final exams, etc. A regional approach would ensure quality programs that meet the needs of industry.

Stakeholders have identified the Integrated Basic Education and Skills Training (I-BEST) model as a platform to build adult school level programming in the region. We are planning to enhance and improve the programming that was lost in previous budget cuts to a more effective and aligned model that incorporates secondary, district adult education, and community college post-secondary programming.

Funding Gaps

At the current time, the CRANE grant will fund coordination of pathways through June 30, 2017. There is no funding to add a coordination of either all adult school programs or even more needed, industry specific programming within the adult school space.

Reference Program Area 4: Table 4.1 for additional details.

Table 4.1. Implementation Strategies to Address Identified Gaps

Program Area 4

Need/Gap Category	Strategies to Address the Gap	Resources Needed	Estimate of the Cost	Responsible Parties	Methods of Assessment	Timeline
One Coordinated Regional System for CTC	<p>Develop system between WIB, CC, K-12, Adult Ed, CBOs, and employers</p> <p>Create goals that support a regional system of adult education that meet employer needs</p> <p>Have consortium take ownership of coordinating regional job training efforts</p> <p>Convene roundtables for all industry sectors with a focus on high demand jobs and skills</p> <p>Involve employers in the planning of customized training to reflect labor market needs</p>	<p>Time</p> <p>Meeting space</p> <p>CRANE structure and staff</p> <p>Clerical support staff</p> <p>Incentives for employer participation</p>	\$30,000 for .5 clerical salary and benefits for consortium work	Consortium Lead Agency	Set goals: Develop assessments and timeline	

	<p>Establish and strengthen the role of industry advisory councils</p> <p>Establish a process for determining training and funding priorities</p>					
Career Pathways	<p>Align curriculum between CC, K-12, Adult Education</p> <p>Use technology to create distance learning</p> <p>Create a system of industry approved stackable certificates/badges</p> <p>Use articulation/dual enrollment to create an articulated system</p> <p>Create a system where curriculum is vetted by employers to ensure that students are training to meet local industry needs</p> <p>Develop a repository of curricula that is</p>	<p>Teacher stipends for curriculum development</p> <p>Industry roundtable</p> <p>Commitment from industry</p> <p>CRANE structure and staff support</p>	<p>\$100,000</p> <p>Leverage CRANE and SB1070 funds</p>	<p>Consortium Lead Agency</p> <p>Curriculum Committees of K-12 Districts</p> <p>Academic Senate</p> <p>Industry Sector Curriculum Workgroups</p> <p>Employers</p> <p>SWJC system</p>	<p>Curriculum assessed by regional roundtables</p> <p>National, state, and regional certificates</p>	

	<p>reviewed on an annual basis by a committee within the consortia</p> <p>Connect to employers for curriculum input, structure, and support, WBL, i.e. internships, employment, purposes</p> <p>Provide necessary basis skills, math, and literacy instruction to address the needs of those seeking to enter employment</p> <p>Incorporate job readiness/soft skills into all CTE training</p> <p>Create distance learning courses to provide access to students throughout the region</p>					
Access	<p>Determine wraparound supports to increase meaningful access</p> <p>High-quality counseling</p> <p>Develop an expected transition process</p>	<p>Funding to hire and train staff</p> <p>Entity to provide transportation and identify routes and programs involved</p>	<p>\$300,000</p> <p>Leverage GI Bill</p> <p>Possible cost per student:</p>	<p>Child care provider agencies</p> <p>Consortia could negotiate regional contract for</p>	<p>Number of adult students with children receiving training and completing training</p>	<p>Identify wraparound support: 6 months to 1 year</p> <p>Develop tools and training</p>

	<p>Transportation support to regional programs</p> <p>Support for English learners (training)</p> <p>Staff available to assist clients with language barriers</p> <p>Develop tools and training to ensure information about financial aid is readily available</p> <p>Develop child care programs</p> <p>Provide access (technology and internet) for distance learning</p> <p>Opportunities for veterans re-entering the workforce</p> <p>Create work-based learning opportunities</p>	<p>Career and academic counselors</p> <p>Establish satellite distance learning centers</p> <p>Funding for dedicated career paths</p> <p>Collaboration with community colleges and short-term stackable certificates</p> <p>Funding for a liaison to work with businesses and create internship opportunities</p> <p>Financial aid resources</p> <p>Instruction on the technology and provide technology support</p> <p>Location/sites: distance learning space, devices to support the technology-based classroom</p>	<p>\$500</p>	<p>online services</p> <p>Satellite program(s) cost</p> <p>Consortia to work with online vendor to provide PD and staff coordination</p> <p>Transportation coordinated by local program</p> <p>SWJC system</p>	<p>Enrollment projection and performance outcomes</p> <p>Increase access to distance learning centers</p> <p>Established partnership or system for transportation</p>	<p>for staff: 3 to 6 months</p> <p>Hire new staff: 4 to 8 months</p> <p>Develop child care programs: 1 to 2 years</p> <p>Technology access and sites: 6 months to 1 year</p> <p>Create work-based learning opportunities: 6 to 8 months to establish partnership, then ongoing</p>
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		<p>Staff training for financial aid services, community resources, and use of technology</p> <p>Counseling offices: location, counseling hours, staff to provide counseling and referrals for wraparound services</p> <p>Providers to offer support services: transportation, child care, etc.</p>				
Professional Development (PD)	<p>Creation regional PD system.</p> <p>Technology training for teachers</p> <p>Training for teachers on providing effective distance learning</p> <p>Creating Professional Learning Community using technology</p> <p>Training for regional (all) counselors</p>	<p>Funding</p> <p>Trainers</p> <p>Locations</p> <p>Outreach for training opportunities</p> <p>Staff time</p>	\$50,000	<p>Consortium leadership team</p> <p>CTE workgroup</p>	<p>Number of attendees at each PD opportunity</p> <p>Evaluations</p>	<p>Immediate, via CRANE, industry sector meetings</p>

	<p>Specific training about financial aid</p> <p>Training for transition specialists</p>					
Communication	<p>Develop Regional Marketing Plan (include media) using common language to reference training</p> <p>Develop communication channels between consortium members</p> <p>Develop a menu of services</p> <p>Publish tool or aid, clearly describing the pathways and provide to students, institutions and employers/industries</p> <p>Use technology to communicate with consortium partners (newsletter?)</p> <p>Develop communication tool(s) regarding financial aid</p>	Marketing team or outsource to marketing firm	Initially: \$50,000 Ongoing: \$20,000	Consortium lead agency	<p>Review and modify every year</p> <p>Assess effectiveness by sending survey to users via internet to determine satisfaction with product and capture suggested changes</p>	6 months to develop plan and continuous to implement

<p>Data</p>	<p>Develop a regional data reporting system</p>	<p>Staffing to determine what should be collected and conduct a search of what already exists and what can be used</p> <p>Technology: Determine what are the requirements</p> <p>System developers</p>	<p>\$70,000</p>	<p>Consortium lead agency</p>		<p>Development of system by 6/30/2015</p> <p>Data collection and evaluation: Ongoing</p>
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Program Area 5: Apprenticeship

Program-Area Regional Summary

There are six regional gaps in the Apprenticeship program area. The first is inadequate funding. The second is that curriculum in adult education program areas does not address Apprenticeship. The third is a lack of career counselors/job developers in adult education. The fourth is the need for increased awareness of Apprenticeship opportunities by both students and faculty. The fifth is that K-12 adult education Apprenticeship Programs are not able to give college credit. The sixth is a strong need to re-brand and change perceptions in adult education to establish that adult education programs are a pathway to jobs or careers such as Apprenticeship. Across all gaps, costs and timelines were estimated until further research can be completed. Below is a description of each.

Description of the Program-Area Gaps in the Region and Strategies

Need: Increased Funding. Inadequate funding has negatively impacted Apprenticeship Programs. It is important to build support to restore funding to Apprenticeship to 2007-2008 levels. Consensus for this could be built by organizing the Apprenticeship community, the Business community, and the California Apprenticeship Council to advocate for restoration of funding. There is a need to develop trend data that demonstrates the impact of lack of funding on economic development and expansion of Apprenticeship.

Need: Curricular Integration. Curriculum in adult education program areas also does not address Apprenticeship. Infuse Apprenticeship concepts across all adult education program subject areas to provide students with sufficient levels of awareness on what they need to know to achieve successful employment outcomes. These include: basic academic skills; employability skills; understanding of Apprenticeship; access to Apprenticeship Programs or Pre-Apprenticeship Programs; development and implementation of career pathways programs that integrate applied academics; and membership on existing Community College and ROP advisory committees. These efforts can be supported through involvement of the Apprenticeship community and utilization of existing Pre-Apprenticeship Programs. It is necessary to strengthen collaboration time with K-12 adult education, Community Colleges, Apprenticeship sponsors, and Industry Councils.

Need: Support Services - Career Counselors and Job Developers. There is a lack of career counselors/job developers in adult education. To address this gap, strategies include:

- Hire and train job developers and career counselors;
- Establish an outcome-based tracking system, which includes Apprenticeship, in all career plans, as a desired outcome. These may include the number of students counseled and employed, number of career plans created and students self reporting; and

- Establish realistic long- and short-term goals for each student.

Need: Increased Awareness about Apprenticeships. There is a lack of awareness of Apprenticeship opportunities by both students and faculty. To address this gap, strategies include:

- Create a network for Pre-Apprenticeship and Apprenticeship Programs in the region and share best practices;
- Showcase career paths for Apprenticeship and other non-apprentice-able occupations;
- Develop and distribute regional marketing collateral about Apprenticeship for multiple audiences. Partners will include regional Apprenticeship Sponsors, K-12 adult education and community college faculty, counselors, and the California Apprenticeship Council; and
- Involve the local and regional digital media and employers.

Need: Standardized Articulation. K-12 adult education Apprenticeship programs are unable to give college credit where community colleges award credit for the identical course. To address this gap, the consortium needs to develop a standardized articulation agreement that applies to all community colleges and K-12 adult education programs. Statutory and/or regulatory changes are required to award college credit for both K-12 adult education and Community College Apprenticeship Programs, where curriculum meets the Minimum Industry Training Criteria (MITC) and the California Apprenticeship Council (CAC), or meets state and national standards. This process will require participation by Community College Academic Senate, Apprenticeship Program Sponsors, California Apprenticeship Council, and K-12 adult education.

Need: Re-brand Adult Education. There is a strong need to re-brand adult education to change perceptions to establish that adult education programs are a pathway to jobs or careers such as Apprenticeship. To address this gap, strategies include:

- Establish adult education so it is known as a system where students transition to jobs, Apprenticeships, and/or College;
- Build multiple pathways;
- Communicate the revised mission to all stakeholders in adult education, including citizens;
- Train adult education staff on how to implement the new mission; and
- Develop marketing materials with a regional focus. Re-branding will require participation by the California Department of Education, Community College Chancellor's Office, California Apprenticeship Council, Apprenticeship Program sponsors, and K-12 adult education. All consortium members will be stakeholders, as this concept crosses program areas.

Reference Program Area 5 Table 4.1 for additional details.

Table 4.1. Implementation Strategies to Address Identified Gaps

Program Area 5

Need/Gap Category	Strategies to Address the Gap	Resources Needed	Estimate of the Cost	Responsible Parties	Methods of Assessment	Timeline
Inadequate Funding	<p>Restore funding to Apprenticeship to 2007-2008 levels</p> <p>Organize Apprenticeship Community to advocate for restoration of funding</p> <p>Develop trend data that demonstrates the impact of lack of funding on economic development and expansion of Apprenticeship</p>	<p>Apprenticeship Community</p> <p>Business Community</p> <p>California Apprenticeship Council</p>	<p>\$15,000,000*</p> <p>* Amount represents the statewide RSI (Related and Supplemental Instruction) funding level in 2007-1008</p>	<p>Apprenticeship Community</p> <p>California Apprenticeship Council</p> <p>SWJC system</p>	<p>Funding restored in the budge act</p>	<p>By June 2015</p>
Curriculum in adult education program areas does not address Apprenticeship	<p>Infuse Apprenticeship concepts across all program subject areas to integrate standardized Apprenticeship concepts that include: basic academic skills, employability skills, an understanding of Apprenticeship, how to access Apprenticeship Programs or Pre-Apprenticeship Programs</p>	<p>Utilize the existing California Apprenticeship Council Orientation to Apprenticeship curriculum</p> <p>Involve the Apprenticeship Community</p> <p>Utilize existing Pre-Apprenticeship Programs</p>	<p>\$250,000 to support online access to existing curriculum</p>	<p>California Apprenticeship Council</p> <p>Apprenticeship Sponsors</p> <p>Representatives from K-12 Adult Education and Community Colleges who have experience in Apprenticeship</p> <p>SWJC system</p>	<p>Number of adult education programs who have infused the concept of Apprenticeship into the curriculum</p> <p>Number of students who enter Apprenticeship</p> <p>Number of new pathways</p>	<p>2016-2017 School Year and Ongoing</p>

Lack of career counselors/job developers in adult education	<p>Hire and train job developers and career counselors</p> <p>Establish an outcome-based tracking system</p> <p>Include Apprenticeship in all career plans as a desired outcome</p> <p>Establish realistic long and short term goals for each student</p>	<p>Multiple funding sources such as federal and state grants and other funding</p> <p>Participation by: - Apprenticeship Program Sponsors - Employers</p>	<p>\$120,000 per counselor</p> <p>Reference Program Area 5 Table 3.1 and Program Area 5 Table 5.1</p>	<p>State Legislature</p> <p>K-12 Adult Education School Districts</p> <p>Community Colleges</p> <p>SWJC system</p>	<p>Number of students counseled and employed</p> <p>Number of career plans created</p> <p>Students self reporting</p>	2016-2017 School Year and Ongoing
Lack of awareness of Apprenticeship opportunities	<p>Create a network for Pre-Apprenticeship and Apprenticeship Programs in the region and share best practices</p> <p>Showcase career paths in Apprenticeship</p> <p>Develop and distribute regional marketing collateral about Apprenticeship for multiple audiences</p>	<p>Buy-in from Apprenticeship Program Sponsors</p> <p>Local and regional digital media</p> <p>Involvement from employers</p>	\$500,000	<p>Regional Apprenticeship Sponsors</p> <p>K-12 Adult Education and Community College facility and/or counselors</p> <p>California Apprenticeship Council</p> <p>SWJC system</p>	<p>Event surveys (Career GPS, orientation tours)</p> <p>Ask potential students how they heard about Apprenticeship</p> <p>Network of Apprenticeship and Pre-Apprenticeship Programs in region is established and shared</p>	2016-2017 School Year and Ongoing
K-12 Adult Education Apprenticeship Programs are not	Develop a standardized articulation agreement that applies to all colleges and K-12 Adult Education	State Community College Academic Senate	TBD – Statutory Change Required	State Community College Academic Senate	Number of Apprenticeship Programs in K-12 adult education	2016-2017 School Year

able to give college credit	Apprenticeship Programs	Apprenticeship Program Sponsors		Apprenticeship Program sponsors	systems receiving college credit	
Need to re-brand adult education to change perceptions that adult education programs are a pathway to jobs or careers such as Apprenticeship	<p>Establish education so that it is known as a system where students transition to jobs, Apprenticeships, and/or college</p> <p>Build multiple pathways</p> <p>Communicate the revised mission to all stakeholders in adult education and to citizens</p>	<p>Training for adult education staff on how to implement new mission and focus</p> <p>Marketing materials focused on citizens</p>	TBD – Statewide effort	<p>All adult education program areas</p> <p>California Department of Education Community College Chancellor’s Office</p> <p>California Apprenticeship Council</p> <p>Apprenticeship Program Sponsors</p>	<p>Broad recognition of the rebranding of adult education</p> <p>Increase in enrollments</p>	Immediate and ongoing

Objective #5: Student Acceleration

Plans to employ approaches proven to accelerate a student's progress toward his or her academic or career goals, such as contextualized basic skills and career technical education, and other joint programming strategies between adult education and career technical education.

Consortium Summary

Narrative

In preparation for the second regional Summit held on October 24, 2014, CAERC members and partners were tasked with rethinking and redesigning essential elements for Objective 5: Accelerating Student's Progress from their organization's perspective. Then, subcommittees convened to further collaboratively discuss how to develop approaches to accelerate student progress. Subcommittee members reviewed the consortium member and partner submissions for Objective 5 and developed the draft for the regional plan.

During Summit II, attendees met in program-area collaboration teams to provide feedback to the regional plan draft. Faculty and administration representing all program areas of the consortium came together to brainstorm, discuss, advocate for, rank, and then vote on the implementation tasks to accelerate student progress in adult education. See the table below is the summary of approaches to accelerate student progress across program areas.

CAERC Summary of Approaches to Accelerate Student Progress	
Program Area 1: ABE/ASE	<ul style="list-style-type: none"> • Develop Online, Regional Resource Database • Align Curriculum, Standards, and Assessments • Integrate Basic Skills with Other Program Areas • Differentiate Instruction
Program Area 2: Adult English Learners	<ul style="list-style-type: none"> • Enhance and Expand ESL Course Offerings • Increase Academic and Vocational ESL courses • Improve Collaboration to Strengthen and Coordinate Services • Increase Intense Learning Opportunities
Program Area 3: Adults with Disabilities	<ul style="list-style-type: none"> • Provide Support Services, Special Classes, and Training at the Community College • Create Individual Learning Plans focused on a Career Path • Align Assessment and Data Systems • Apply Universal Design for Learning (UDL) in Instructional Planning • Provide Students Opportunities to Explore Career

	<p>Options</p> <ul style="list-style-type: none"> • Monitor Student Progress with Competency-Based Assessments and Instruction
Program Area 4: CTE	<ul style="list-style-type: none"> • Articulate Courses Between Systems • Provide College and Career Counseling • Identify and Streamline Career Pathways • Utilize and Pilot Components of I-BEST Pathways
Program Area 5: Apprenticeships	<ul style="list-style-type: none"> • Infuse Apprenticeship Concepts Across Adult Education Program Areas • Increase Number of Employers for Apprenticeships • Hire and Train a Network of Job Developers and Career Counselors

Recognizing the regional needs far outweigh the anticipated AE funding, CAERC Program-Area Subcommittees collaborated to prioritize needs (Objective 4), implementation strategies, and approaches (Objective 3 and 5) for their designated program areas in January 2015. These program-area recommendations were presented to the Members.

Members further prioritized the list of strategies across the program areas to identify the top regional strategies to include in the CAERC Implementation Plan if funded. Included is the list of regional strategies based on ranking and regional priority completed in February 2015. Reference CAERC Regional Strategies By Ranking and Regional Priority.

CAERC Regional Strategies By Ranking and Regional Priority

Regional Strategy	Regional Priority			
	1	2	3	4
(1) Expand AE Course Offerings in the Region	x			
(2) Develop Regional Asset Map and Pathways Roadmap		x		
(3) Align Courses and Streamline Pathways		x		
(4) Provide Professional Development to Support Regional Priorities	x	x	x	x
(5) Analyze Regional Labor Market and Needs to Align Implementation and Expansion	x			
(6) Coordinate and Expand Marketing and Outreach Efforts			x	
(7) Increase Number of Transition Specialists and Incorporate Collaborative Case Management			x	
(8) Establish Virtual Communication Network Among AE Providers Support Collaboration Across Systems	x	x	x	x
(9) Increase Consortium Awareness on AE Funding Options to Access Braided, Well-Sequenced Funding	x			
(10) Coordinate Transitional Planning for AWD Among PreK-22 Providers			x	
(11) Design, Pilot, and Utilize Consortium-Wide Data and Accountability System				x
(12) Increase Availability and Access to Support Services			x	
(13) Train, Pilot, and Implement iBEST in CTE Programs		x		
(14) Increase Vocational English as a Second Language (VESL) Course Offerings and Program Components to Accelerate Student Progress and Placement Into the Workforce for Adults for Whom English Is a Second Language		x		

Regional Priority:

1. Rebuild Adult Education Programs and Services;
2. Pathways and Alignment;
3. Student Support Services; and
4. Data and Accountability System.

Potential Future Role of the Consortium

Once funding is allocated, consortium workgroups are needed to implement identified approaches to accelerate student progress:

- Continue collaborative efforts with CAERC members/partners for aligning curriculum, standards, and assessment.
- Evaluate existing student data systems for possible adoption by CAERC.
- Develop a regional website to support regional communication and coordination inclusive of regional database or asset map.
- Design and provide consortium-wide professional development to support implementation efforts in each program area.
- Facilitate collaboration to integration program areas.
- Develop distance-learning classes for program areas.
- Develop and host regional events for adults with disabilities to explore career options.
- Develop and conduct a periodic survey to determine local employment trends or access existing data to determine local employment trends.
- Lead the collaborative effort to develop regional curriculum for orientation to apprenticeship across program areas.
- Coordinate efforts to provide opportunities for job/career counselors to network regionally.

This section includes the Objective 5 narratives and tables for each of the program areas (1-5) that reflect the list of strategies submitted in December 2014 that CAERC Members used to prioritize strategies and develop the CAERC Implementation Plan for Year 1 and Year 2.

Program Area 1: ABE/ASE

Program-Area Regional Summary

The main item to address in the region is providing clear pathways for students and streamlining pathways to success. This includes improving students' awareness of various services offered in the region and providing them the information they need to get started. This also includes aligning standards to help students accelerate their transitions, making the process more fluent. The process of fine tuning and aligning the standards between the programs offered will inevitably allow students to accelerate their progress and transition to the next phase of their personal growth. An essential element of this would be developing an individualized education plan for each student. This will ensure that all students clearly know what steps they need to take to achieve their goals.

In addition to clarifying and streamlining pathways, the consortium should work together to integrate basic skills into CTE and Apprenticeship programs so students can start CTE and Apprenticeship programs sooner while making the basic skills more applicable—contextualized—so they can see the importance of basic skills education to their chosen path as well as condense the time needed to complete degrees. Individualized instruction, with the aid of technology, can ensure that students can focus on what they need to learn and quickly move past mastered information.

Costs and timelines were estimated until further research can be completed. Below is a description of the approaches and implementation tasks and approaches/strategies.

Description of Approaches and Implementation Tasks

Approach: Develop Online, Regional Resource Database. Creating a common resource database will ensure that all the resources in the region are represented and that students can access the resources they need. Life challenges are often the cause of students delaying their educational plans. Ensuring that students are aware of resources throughout the community can give them the key to being able to keep moving forward. The database would be virtual, as well as available at a physical location when possible. It would require all partners, as well as an outreach to organizations in the community, to share what they have to offer. Once the initial work of creating the web-accessible database is completed, it will need to be maintained and updated. The resource database would not only serve adult students, but also serve faculty and staff as a reference. Ensuring that faculty and staff are aware of community resources will encourage the development of a coach mentality to help support students and give faculty a tool to help them do that.

Approach: Align Curriculum, Standards and Assessments. Another approach that will streamline and accelerate student progress is the alignment of content standards across the region. If students are able to move from one stakeholder to another in a fluid manner, they will finish their education plan with fewer interruptions and repetition. In order to establish and maintain this type of seamless transition, ongoing, region-wide collaboration is needed. There will need to be a great deal of time available for content teams to meet and create common standards and ensure a shared understanding of what is expected at each level. Once the foundation is laid, this collaboration needs to continue so improvements, adjustments, and growth can occur.

Approach: Integrate Basic Skills with Other Program Areas. One way to shorten the time required for each program is the integration of basic skills into other program areas. Cross-program discussions need to be held to determine if and where programs can be altered to accept students early, given that they will receive basic skills instruction by integrating them into the next phase in their educational plan.

Approach: Differentiate Instruction. A clear way to meet every student where they are in the educational process is to individualize instruction. Differentiating instruction allows students to focus on the skills they need to strengthen while moving quickly through material they have already mastered. One way this can be done is by using computerized instruction, and possibly in a distance education platform that can reach even more students. Moving to computerized instruction will require that computer literacy be addressed. Many students in this population will not know how to use the technology without this support. Distance education raises many issues and may not be an effective use of resources. Success rates may be low, and this needs to be evaluated.

Role of the Consortium

To support implementation efforts, CAERC needs to leverage current resources and develop more consortium-wide resources to address Objective 5. Possible consortium tasks include:

- Develop online regional resource database.
- Support continued collaboration to align curriculum, standards, and assessments.
- Facilitate collaboration to integrate program areas.

Reference Program Area 1 Table 5.1 for additional details

Table 5.1. Work plan for implementing approaches prove to accelerate a student’s progress toward his or her academic or career goals

Program Area 1: Elementary and Secondary Basic Skills, including classes required for high school diploma or high school equivalency certificate

Description of the Approach	Tasks/Activities Needed to Implement the Approach	Resources Needed	Estimate of the Cost	Responsible Parties	Methods of Assessment	Timeline
<p>Create a learning resource database that integrates counseling services and community services and streamlines the transition between pathways. Ensuring each student has an identified pathway established. This would include mentoring, and support services to create an easy, accessible environment. Acceleration will result from ongoing collaboration and streamlining the students’ pathways.</p>	<p>Create a common database</p> <p>Create a resource database of community resources that identifies what each member of the consortium offers</p> <p>Counselors would help students create and educational plan to ensure that each student knows the steps they need to take to be successful</p> <p>Create a coach/mentor mentality among faculty to provide additional support.</p> <p>Encourage mentors—previous or continuing students—that volunteer to help students acclimate to their new environment</p> <p>Ongoing collaboration of content faculty that focuses on continuously aligning and streamlining pathways</p>	<p>Personnel to develop, research, and maintain database</p> <p>Collaboration time to develop and research items to include in database</p> <p>Professional development to aid faculty in learning how to act as a coach/mentor</p> <p>Regional program to recruit and train mentors</p> <p>Time to collaborate and create curriculum that is not publisher driven, that emphasizes streamlining, backwards mapping from the desired outcome to ensure all needed preparation is addressed</p>	<p>TBD</p>	<p>All stakeholders in the region</p>	<p>Data should be tracked via a database to see if there is an impact in a longitudinal study</p> <p>Number of hits on database can be tracked to gage usefulness</p>	<p>TBD</p>

Alignment of standards and sharing of practices to have a greater connection and fluency throughout the consortium	Ongoing, cross consortium, faculty collaboration time is needed to discuss and compare curriculum within individual sites and throughout the consortium to establish and maintain standards	Time and dedicated ongoing funding to ensure content faculty can meet and regularly align standards	TBD	Faculty from across the consortium with dedicated, paid time given for collaboration throughout the year	Data should be tracked via a database to see if there is an impact in a longitudinal study	TBD
Work with other program areas to see how we can support early entry with integrated basic skills instruction	TBD based upon the needs identified by the other program areas	Ongoing collaboration between stakeholders to identify needs	TBD	All stakeholders should take responsibility for identifying possible areas of integration and identifying topics that can be integrated	Data should be tracked via a database to see if there is an impact in a longitudinal study	TBD
Support student's acceleration through differentiated instruction, possibly using computerized resources and/or distance education (or hybrid)	Professional development time to establish appropriate programs and learn how to maximize them for students An analysis of success that can be obtained in the online or distance format	Computer literacy courses for students Computer workstations for students to use Program that can differentiate instruction to meet students' needs	TBD	Adult schools	Data should be tracked via a database to see if there is an impact in a longitudinal study	TBD

		<p>Training for faculty, tutors, and support staff</p> <p>Collaboration time to ensure programs are streamlined and that the program aligns with the common standards across the curriculum</p>				
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Program Area 2: Adult English Learners

Program-Area Regional Summary

In order to accelerate ESL student progress, students must have increased access to English learning opportunities. Second language acquisition research has shown that languages are best learned with long-term (consistent), informed, and positive input¹ (Krashen, 2009). Upon receipt of funding, the Program Area 2 Subcommittee recommends the implementation of the following strategies to increase access to students:

- **Access to flexibly scheduled, year-round, ESL classes:** additional ESL classes at locations throughout the community, ESL classes offered on the weekends, longer ESL classes (in Adult Ed and CBOs), smaller enrollment caps (to have an increase in personalized teacher feedback) for ESL classes, workplace ESL classes
- **More full-time ESL positions** to properly implement, develop, and maintain a high-quality curriculum that best serves the dynamic, diverse educational, linguistic, and professional needs of our students
- **Technology** that increases access to hybrid/distance learning options for ESL
- **Student Support Services** that make studying an easier option for ESL students: daycare, translation services, qualified tutors
- **ESL Pathway Coordinator positions for smoother transitions** between consortium members (CBO to employment, CBO to Adult Ed, Adult Ed to employment, Adult Ed to CC, CC to employment, CC to transfer)

Costs and timelines were estimated until further research can be completed. Below is a description of the approaches and implementation tasks and approaches/strategies.

¹*Krashen, Stephen. Principles and practice in second language acquisition. Pergamon: Oxford, 2009.*

Description of Approaches and Implementation Tasks

Approach: Enhance and Expand ESL Courses. Only through increased exposure to and engagement with English can ESL students accelerate the process of language learning. For many students, ESL class is the only opportunity they have to hear and speak English. If we want to accelerate the pace at which students learn English so that they can move more quickly toward their academic and career goals, Program 2 providers ensure consistent access to ESL classes is a central priority.

In addition to increased access to ESL classes, Program Area 2 providers must ensure that the quality of these classes remains high. CAERC recommends that more full-time ESL teacher positions be created in order to attract highly qualified teachers who will work towards their program development while ensuring student achievement.

Role of the Consortium

To support implementation efforts, CAERC needs to leverage current resources and develop more consortium-wide resources to address Objective 5. Possible consortium tasks include:

- Support continued collaboration to enhance and expand ESL course offerings in the region.
- Support existing VESL classes—with the development and implementation of a regional VESL curriculum—that are tied to and aligned with local employer and economic needs.
- Develop online resource database.
- Provide and development consortium-wide professional development for Program Area 2.
- Develop distance-learning classes for Program Area 2.

Reference Program Area 2 Table 5.1 for additional details

Table 5.1. Work plan for implementing approaches prove to accelerate a student’s progress toward his or her academic or career goals

Program Area 2: Classes and Courses for immigrants eligible for education services in citizenship and English as a second language and workforce preparation classes in basic skills

Description of the Approach	Tasks/Activities Needed to Implement the Approach	Resources Needed	Estimate of the Cost	Responsible Parties	Methods of Assessment	Timeline
Increase access to ESL classes	Year-round classes, more class offerings, classes on the weekends, classes in the community, longer classes, ability to offer smaller classes, workplace classes, and distance/blended learning options	Additional funding, additional teachers, full-time teacher positions, and improved technology Free/low-cost childcare	TBD	K-12 Adult Education and Community College SWJC system	Surveys to members, partners, and students to compare access prior to and after funding. For example: Survey to members would include questions about number of classes offered, increased venues, and increased scheduling options	Immediately upon receipt of funding
Adult Education-specific approach: Increase Academic and Vocational ESL courses	Expanded academic ESL courses: courses that focus on the specific academic vocabulary/reading, grammar, and writing needed to accelerate students’ academic goals, including preparation for the English/Language Arts section of the California High School Exit Examination (CAHSEE), the reading/writing sections of the	Additional funding, additional teachers, full-time teacher positions, improved technology, and creation of courses Free/low-cost childcare	TBD	K-12 Adult Education SWJC system	Surveys to adult education to determine whether these courses have been developed	Immediately upon receipt of funding

	<p>various High School Equivalency (HSE) exams, and entrance into Community College</p> <p>Increased Vocational ESL courses</p>					
<p>CBO-specific approach: Improve collaboration with consortium members and partners to strengthen the services they provide and accelerate student progress (CBOs)</p>	<p>Increase demands and standards</p> <p>Increase use of computer technology (Need PD for teachers) to help increase use of blended/distance learning</p> <p>Master’s level courses/ Academic Training (beyond PD) for teachers</p> <p>Identify clearer pathways to workforce for all skill levels</p> <p>Explore HEP Program for migrant farm workers as a model for GED instruction in other languages</p> <p>Offer online tutoring</p> <p>More advanced writing courses, conversation courses</p> <p>Knowledge of the resources available</p> <p>Collaboration, sharing of resources, and creation of partnerships, with CC and local</p>	<p>Access to professional development/ academic training available to consortium members and partners; improved collaboration and communication among consortium members and partners</p>	TBD	<p>Consortium</p> <p>SWJC system</p>	<p>Surveys to members and partners to ensure this collaboration</p>	<p>Upon receipt of funding</p>

	business					
Community College-specific approach: Build up summer programs and increase intensive learning opportunities	Offer 8-week courses during the semester so students can take 2 courses per semester; need to address the financial aid caps	Additional funding, support of the Community College Support Services: Tutoring, lab, need for childcare, transportation (bus passes or gas vouchers), and counseling, economic services	TBD	Community College	Surveys to Community College to determine whether this has happened	Immediately upon receipt of funding

Program Area 3: Adults with Disabilities

Program-Area Regional Summary

Alignment of student support within and across all levels of the system is crucial for students with disabilities to succeed in post-secondary activities. Programs, curriculum, assessments, instruction, staff understanding and participation must all be included in the development of comprehensive plans to support adults with disabilities. Six approaches have been identified to accelerate student progress:

1. Provide support services, special classes, and training at the community college
2. Create Individual Learning Plans focused on a career path
3. Align assessment and data systems
4. Apply Universal Design for Learning (UDL) in instructional planning
5. Provide students opportunities to explore career options
6. Monitor student progress with competency-based assessments and instruction

Costs and timelines were estimated until further research can be completed. Below is a description of the approaches and implementation tasks and approaches/strategies.

Description of Approaches and Implementation Tasks

Approach: Provide Support Services, Special classes, and Training at the Community College. For this approach to be implemented with success, coaches, teachers, counselors, and support staff will need to be identified, trained, and evaluated appropriately. Additionally, content and focus of support classes and services, in alignment with Career Technical Education standards and priorities, must be determined. Career-based, college-themed curriculum and materials need to be identified and implemented with fidelity and in alignment with Prek-22 and adult education agencies. In collaboration with Disabled Students Programs and Services (DSPS) and Career Technical Education pathways, students with disabilities are provided options that support the development of independence, executive functions, self-regulation, communication/collaboration, and increasing self-awareness of their disability as it manifests in various environments. Program Area 3 providers should consider restructuring remedial classes to meet the needs of students with disabilities.

Resources:

- Student Support Services as Community Colleges: A Strategy for Increasing Students Persistence and Attainment <http://www2.ed.gov/PDFDocs/college-completion/04-student-support-services-at-community-colleges.pdf> -
- Career-Focused Services for Students with Disabilities at Community Colleges (March, 2009) <http://www.ncwd-youth.info/assets/background/disabilities-and-community-colleges.pdf>

Approach: Create Individual Learning Plans Focused on a Career Path. To accelerate student progress, Program Area 3 providers can create Individual Learning Plans focusing on the career path beginning in high school and in concert with Career Pathways and Linked Learning initiatives, community colleges, and adult education programs. Transition plans will need to be aligned and communicated in such a way relevant data can be interpreted and shared with post-secondary placement coordinators. Area 3 providers should collaborate with regional centers and other social service agencies and assist with the focus on employment opportunities to ensure students are job ready. Tasks include developing the design of the aligned plan, training for staff, parents, and care providers, and coordination of communication and fidelity measures.

Resources:

- Federal Government Use of Career Development Research - Presentation to the Society for Vocational Psychology (August 2014)
- Districts Nationwide Embrace Individualized Learning Plans To Help All Students Become College and Career Ready
- Learning to Work: States Using Individualized Learning Plans As Anchor Strategy to Promote College and Career Readiness
- "Planning for Life After High School," Education Week Commentary (February 25, 2014)

Approach: Align Assessment and Data Systems. When systems are aligned, student progress can be accelerated in the adult education system. This begins with the development and implementation of an aligned assessment and tracking system. By aligning assessment and data systems, the opportunity for unnecessary duplication of assessments, academic information, medical records, etc. can be decreased (See Objective 4.1 Gap #1). This is particularly critical for students with disabilities. Program Area 3 providers may also want to explore existing options for statewide assessment tools to track student progress across all systems (PreK-22, adult education, and community college).

CAERC recommends an assessment pilot to test the data collection system and to identify alignment issues that can impact student transitions.

Resource:

- State Longitudinal Data Systems for Tracking Outcomes for Students with Disabilities through Postsecondary Activities (November, 2010)
http://nasdse.org/DesktopModules/DNNspot-Store/ProductFiles/76_e501d36a-f082-44f1-8aca-52d96c886c3e.pdf

Approach: Apply Universal Design for Learning (UDL) in Instructional Planning.

Universal Design for Learning (UDL) is an instructional planning framework that supports students in their acquisition of academic and job readiness skills. When used as an academic and transition lesson-planning framework, UDL principles can lead to increased student access to instruction. Along with alignment across systems, UDL results in increased academic and college, career and civic life readiness with particular attention placed on self-regulation, perseverance, executive functions, collaboration, and self-advocacy/determination. UDL focuses on identifying barriers in the environment that may block student access to the curriculum. Based on Universal Design for Architecture (curb cutouts, closed captioning, etc.), UDL also opens up opportunities for all—not only for students and adults with disabilities.

In terms of access, the National Center and State Collaborative (NCSC) has recommended that all students be communicatively competent and have a mode of communication identified when they enter the system at kindergarten and proficient at using it by third grade. It stands to reason that students transitioning into community college and adult education be communicatively competent in order to self-advocate and be self-determined (NCSC Parent Materials, 2013).

Resources:

- Rose, D. H., Harbour, W. S., Johnston, C. S., Daley, S. G., & Abarbanell, L. (2006). *Universal design for learning in postsecondary education: Reflections on principles and their application*. *Journal of Postsecondary Education and Disability*, 19(2), 17.
- Smith, F. G. (2012). *Analyzing a college course that adheres to the universal design for learning (UDL) framework*. *Journal of the Scholarship of Teaching and Learning*, 12(3), pp. 1-30.
- Gradel, K., & Edson, A. J. (2010). *Putting universal design for learning on the higher education agenda*. *Journal of Educational Technology Systems*, 38(2), 111-121.

Approach: Provide Students Opportunities to Explore Career Options. Students with disabilities would benefit from opportunities to explore possible career options. Job sampling, interning, volunteering, and job exploration provide the needed experiences for success when opportunities for obtaining meaningful work present themselves. These experiences should be offered as early as possible and be appropriately aligned throughout the system and across programs and agencies. Staff such as job developers will create employment opportunities and identify locations. To ensure programs are evidence-based, professional development will need to be provided. Increased funding will also provide additional support for teacher development.

Resources:

- National Secondary Transition Technical Assistance Center website
<http://nstattac.org/>

- National Alliance for Secondary Education and Transition website
<http://www.nasetalliance.org/>

Approach: Monitor Student Progress with Competency-Based Assessments and Instruction. Utilization of competency-based assessments and instruction can accelerate student progress. Competencies and skills are identified in the individual learning plan (i.e., CASAS). Each competency leads to the acquisition of the skills needed for individualized progress. Assessments focusing on skills students have mastered and those that are still in need of development and refinement provide timely information to identify, guide, and accelerate instruction and programming. To support this approach, professional development, identification, and fidelity of implementation of assessments will need to be monitored.

Resources:

- *Defining and Assessing Learning: Exploring Competency-Based Initiatives. Report of the National Postsecondary Education Cooperative Working Group on Competency-Based Initiatives in Postsecondary Education. Brochure [and] Report. Jones, Elizabeth A.; Voorhees, Richard A. (2010)*

The Role of the Consortium

To support implementation efforts, CAERC needs to leverage current resources and develop more consortium-wide resources to address Objective 5. Possible consortium tasks include:

- Coordinate collaboration and communication efforts.
- Provide consortium-wide professional development on UDL.
- Develop and host regional events for adults with disabilities to explore career options.

Reference Program Area 3 Table 5.1 for additional details.

Table 5.1. Work plan for implementing approaches prove to accelerate a student’s progress toward his or her academic or career goals

Program Area 3: Education Programs for Adults with Disabilities

Description of the Approach	Tasks/Activities Needed to Implement the Approach	Resources Needed	Estimate of the Cost	Responsible Parties	Methods of Assessment	Timeline
1. Provide support services, special classes/design, and training at the Community College level	Coaches, teachers, counselors, and support staff identified, trained, and evaluated appropriately Content and focus of support classes/services determined Career-based college themed curriculum and materials identified and implemented with fidelity Alignment with PreK-22 and adult education agencies	Funding and training	TBD	School Districts and Community Colleges in collaboration with outside agencies	Documentation of supports in place	Planning to begin immediately and ongoing
2. Individual learning plans focusing on the career path	Personnel to work with the students Developing the plan Training for staff, parents and care providers Coordination of communication and fidelity measures	Additional staff to develop, monitor, track and complete Individual Learning Plans	TBD	School Districts and Community Colleges Collaborate with Regional Center, DOR SWJC system	Completed learning plans	Planning to begin immediately and ongoing
3. Assessments and information tracking system is coordinated	Explore existing options or develop aligned, consistent Statewide academic and transition assessment tools	Funding Time to research	Depending on district/ agency size; estimated at	School Districts and Community Colleges in collaboration	The process of researching, identification, and completion of this	Research and identification to begin immediately

<p>across all systems</p>	<p>Explore existing options or develop a comprehensive integrated assessment tracking system</p> <p>Develop data collection process across all systems (PreK-22, adult education, CCC, ancillary services) to measure actual gaps in services</p> <p>Create a pilot to utilizing the data collection system to develop and test comprehensive assessment tools and data-driven processes to assist in the transition planning process</p> <p>Improve communication between and across systems</p> <p>Improve professional development</p>	<p>potential assessment and tracking systems</p> <p>Staff identification with a broad continuum of experience</p> <p>Professional development trainers/PD design (possibly electronic PD)</p>	<p>\$250,000</p>	<p>with outside agencies</p> <p>SWJC system</p>	<p>project is progress monitored at agreed up intervals until in place</p>	<p>and ongoing implementation and refinements</p>
<p>4. Universal Design for Learning (student access to instruction)</p>	<p>Professional development for all staff members on the Universal Design for Learning principles to increase students access to instruction</p> <p>Focus on multiple access points</p> <p>Alignment across systems to increase academic and college, career, and civic life readiness</p> <p>Focus is on self-regulation,</p>	<p>Widespread professional development plan including general education, special education, community college staff, and outside agencies</p>	<p>Professional development costs</p>	<p>School Districts and Community Colleges in collaboration with outside agencies</p> <p>SWJC system</p>	<p>Lesson plans and completion of professional development plan on an ongoing basis</p>	<p>Planning to begin immediate and ongoing</p>

	perseverance, executive functions, collaborations, and self-advocacy/determination					
5. Job sampling, interning, volunteering, job exploration	<p>Job developers create opportunities and identify locations</p> <p>Staff identified</p> <p>Professional development</p> <p>Increased funding for support of highly qualified and trained staff</p>	<p>Staff</p> <p>Funding</p> <p>Facilities</p> <p>Employers</p> <p>Technology for PD</p> <p>Tools, materials, and resources to learn job skills</p>	<p>Department of Rehabilitation Services (\$40/hr) with additional facilities, staffing, employer incentives, and technology costs</p>	<p>School Districts with collaboration with Regional Center</p> <p>SWJC system</p>	<p>Student tracking/success data</p> <p>Increase in assessment outcomes for students</p>	<p>Planning to begin immediately and ongoing</p>
6. Competency-based assessment, instruction, and training that leads to acquisition of skills that have been identified in the learning plan (for example, CASAS)	<p>Professional development</p> <p>Identification and implementation of assessment, instruction, and training</p> <p>Small/individualized setting</p>	<p>Staffing increase</p> <p>Funding for purchase of assessments, materials, and curriculum</p>	TBD	<p>School Districts and Community Colleges</p> <p>SWJC system</p>	<p>Completion of assessments</p> <p>Implementation of professional development</p> <p>Pretest/Posttest scores</p>	<p>Planning to begin immediately and ongoing</p>

Program Area 4: Short-term Career Technical Education (CTE) programs with high employment potential

Program-Area Regional Summary

At the current time, the plans to accelerate student adult school progress are district-by-district and not supported on a regional level. There is a strong sense of optimism, however, regarding the current opportunity to set up a regional support structure to improve the models of delivering CTE to adult school students and the teacher and staff support structures to deliver those models.

Several approaches have been identified to accelerate student progress:

- Articulate Courses Between Systems
(Reference Program Area 4 Tables 3.1 and 4.1 for additional details.)
- Provide College and Career Counseling
(Reference Program Area 4 Tables 3.1 and 4.1 for additional details.)
- Identify and Streamline Career Pathways
(Reference Program Area 4 Tables 3.1 and 4.1 for additional details.)
- Utilize and Pilot Components of I-BEST Pathways

Costs and timelines were estimated until further research can be completed. Below is a description of the approaches and implementation tasks and approaches/strategies.

Description of Approaches and Implementation Tasks

Approach: Utilize and Pilot Components of I-BEST Pathways. Develop a team to study, understand, and utilize the components of comprehensive Integrated Basic Education and Skills Training (I-BEST) pathways from Washington State.

Washington's Integrated Basic Education and Skills Training Program (I-BEST) is a nationally recognized model that quickly boosts students' literacy and work skills so that students can earn credentials, get living wage jobs, and put their talents to work for employers.

I-BEST pairs two instructors in the classroom – one to teach professional and technical content and the other to teach basic skills in reading, math, writing, or English language – so students can move through school and into jobs faster. As students progress through the program, they learn basic skills in real-world scenarios offered by the job-training part of the curriculum.

I-BEST challenges the traditional notion that students must complete all basic education before they can even start a job-training program. This approach often discourages students because it takes more time, and the stand-alone basic skills classes do not qualify for college credit. I-BEST students start earning college credits immediately.¹

Resources:

- ¹*From the Washington State Board for Community and Technical Colleges – available at http://www.sbctc.ctc.edu/college/e_integratedbasiceducationandskillstraining.aspx*

The I-BEST model is extensively documented, with training and materials to support implementation. A partnership should be developed that solicits mentorship from high-quality I-BEST programs that mimic the CAERC Program-Area learner demographics. The I-BEST model also bridges students from ABE through training and jobs and then if they so desire, to more advanced and rigorous Community College (CC) training programs.

The CAERC consortium should develop a rollout program to design, implement, and review a series of I-BEST pilots that feed into our regional economic prosperity plan, Next Economy, industry sectors.¹

Steps for an I-BEST pilot:

1. Develop a working partnership that unpacks the literacy and mathematics placement assessments and timelines for new CC placement assessments, then provide training for adult school faculty to align curriculum to prepare adult students for placement exams.
2. Partner with CRANE and Consortium partners to utilize existing structures for stackable certificates and Badges, NOCTI, ConnectEd Studios, LaunchPath.
3. Utilize the NextEd Regional Industry Roundtables to review curriculum by industry sector.
4. Set up a system of support for Transition Specialists to case manage student progress from High School to Adult School to Community College. These transition specialists may be a combination of WIB and district employees. Set up a similar system of support for EL students.
5. Set up a system of blended and distance learning training for teachers to maximize their ability to accelerate student progress.
6. Expand the use of project-based learning to increase student readiness to collaborate on teams.
7. Set up a regional system of sharing data for adult school students so they can continue progress between districts.

Funding Gaps

There are no current funds available to coordinate the support structures for short-term, high-quality adult CTE programming. There is funding for secondary and community college alignment and improvement, but funding would be needed for adult school coordination.

Resources:

- *The Next Economy initiative is available at <http://www.nexteconomycapitalregion.org/>*

Role of the Consortium

To support implementation efforts, CAERC needs to leverage current resources and develop more consortium-wide resources to address Objective 5. Possible consortium tasks include:

- Coordinate I-BEST pilot.
- Set up regional system to share data.
- Coordinate collaboration meetings among stakeholders.
- Set up a system of blended and distance-learning training for teachers.
- Facilitate the development of CTE Certificate Programs that lead the student into an apprenticeable occupation, such as entry level medical.
- Facilitate the development of pre-apprenticeship courses that are integrated into CTE pathways.

Reference Program Area 4 Table 5.1 for additional details.

Table 5.1. Work plan for implementing approaches prove to accelerate a student’s progress toward his or her academic or career goals

Program Area 4: Short-term Career Technical Education programs with high employment potential

Description of the Approach	Tasks/Activities Needed to Implement the Approach	Resources Needed	Estimate of the Cost	Responsible Parties	Methods of Assessment	Timeline
Articulation of Programs	See Tables 3.1 & 4.1					
College and Career Counseling	See Tables 3.1 & 4.1					
Career Pathways	See Tables 3.1 & 4.1					
I-BEST Program	<p>Develop a working partnership that unpacks the literacy and mathematics placement assessments and timelines for new CC placement</p> <p>Partner with CRANE and Consortium partners to utilize existing structures for stackable certificates and badges, NOCTI, ConnectEd Studios, LaunchPath</p> <p>Utilize the NextEd Regional Industry Roundtables to review curriculum by industry sector</p> <p>Set up a system of support for Training Specialists to case manage student progress from High School to Adult School to Community College. These transition specialists may be a combination of WIB and district</p>					

	<p>employees. Set up a similar system of support for EL students</p> <p>Set up a system of blended and distance learning training for teachers to maximize their ability to accelerate student progress</p> <p>Expand the use of project-based learning to increase student's readiness to collaborate on teams</p> <p>Set up a regional system of sharing data for adult school students so they can continue to progress between districts</p>					
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Program Area 5: Apprenticeship

Program-Area Regional Summary

Adult education is essentially a workforce development program with a mission to provide students with appropriate knowledge, skills, and abilities to find employment in areas of their interest and to become productive taxpaying citizens. Apprenticeship is one of several desired outcomes of the efforts in the other four program areas such as a job, military, or postsecondary education. Unlike most adult education students, apprentices are individuals who have a full-time job in one of the over 800 apprenticeable occupations and they are registered with the Division of Apprenticeship Standards in the California Department of Industrial Relations and/or the Federal Department of Labor, Employment and Training Administration, Office of Apprenticeship (ETA). To that end, it is important that apprenticeship concepts be infused throughout all sequences of courses and pathways in each program area to better prepare students to qualify for high-wage, high-skilled occupations.

The three approaches to accelerate student progress involve the students, the educators, and the employers. First, infuse apprenticeship concepts across all adult education program subject areas to familiarize students with the skills needed to be a candidate for apprenticeship. Next, increase the numbers of employers participating in apprenticeship. Finally, hire career counselors and job developers to connect students with apprenticeship and other avenues to employment.

Costs and timelines were estimated until further research can be completed. Below is a description of the approaches and implementation tasks and approaches/strategies.

Description of Approaches and Implementation Tasks

Approach: Infuse Apprenticeship Concepts Across Adult Education Program Areas. The first approach is to infuse apprenticeship concepts across all adult education program subject areas to begin providing students with an awareness level about apprenticeship and other employment opportunities. This can be accomplished by the gradual integration of standardized apprenticeship concepts that are important in apprenticeship and workforce development such as: basic academic skills in an occupational context; employability skills; an understanding of Apprenticeship; and how to access Apprenticeship programs and/or Pre-Apprenticeship programs.

Led by the Consortium, a curriculum should be adapted and adopted that uses reference documents such as the existing California Apprenticeship Council Orientation to Apprenticeship. Combined with existing curriculum used in pre-apprenticeship programs, the general education and trade-specific content in these references should be used by all adult education classes. Integrating this curriculum will accelerate student progress by heightening the awareness of apprenticeship.

Approach: Increase Number of Employers for Apprenticeships. The second approach is to increase the number of employers participating in apprenticeship. Strategies to expand the number of employers who hire apprentices include partnering with professional and trade associations to identify funding sources to train a more highly skilled workforce; educating employers on the benefits of apprenticeship; developing awareness of the value of apprenticeship through marketing materials and public campaigns; and identifying and nurturing apprenticeship in non-traditional occupations. To achieve this end it is critical that adult education build collaborative partnerships with workforce development programs such as professional and trade associations, local Workforce Investment Boards (WIBs), the Division of Apprenticeship Standards (DAS) and the Employment Training Panel (ETP) to identify job opportunities and funding sources and to assist with outreach to employers.

Approach: Hire and Train a Network of Job Developers and Career Counselors. The third approach to accelerate student progress is to hire and train a network of job developers and career counselors who will be regularly available at adult education school sites. They will be part of the team that advises the adjustment of curriculum reflected in regional employment trends. The focus of career counselors will be to assist students by developing a career plan that establishes realistic long- and short-term career and academic goals. The counselors' tools will include the unified regional pathways and course sequences and an assessment and referral tool that will identify student aptitudes for apprenticeships and other occupations. Job developers will focus on identifying and increasing short-term employment opportunities and internships in apprenticeable occupations consistent with student aptitudes. Accelerating students to achieve their end goal would be facilitated by building or increasing relations with more local employers with a structured outreach program to increase placement opportunities.

Role of the Consortium

To support implementation efforts, CAERC needs to leverage current resources and develop more consortium-wide resources to address Objective 5. The Consortium should develop and conduct a periodic survey of employers to determine the knowledge, skills, and abilities needed; further, the survey will assess regional employment trends. The outcome of those surveys will also guide integration of these needs into the adult education curriculum.

The Consortium should lead the collaborative effort to develop regional curriculum. This should include pathways and course sequences for adult education program areas that integrate standardized apprenticeship concepts such as: basic academic skills in an occupational context; employability skills; an understanding of apprenticeship; and how to access apprenticeship programs and/or pre-apprenticeship programs.

The Consortium should lead the development and acceptance of a common assessment that identifies student aptitudes for apprenticeships and other career paths. The Consortium should also coordinate efforts to provide opportunities for counselors to network regionally.

The Consortium should develop a database to include: 1) the number of adult education program areas; 2) districts where the concept of apprenticeship is infused into that program area's curriculum; and 3) the number of students who enter apprenticeship or other employment within the Consortium. The database can be utilized to identify best practices, modify curriculum, identify strengths and weaknesses, and help build connectivity between regional programs.

Reference Program Area 5 Table 5.1 for additional details.

Table 5.1. Work plan for implementing approaches prove to accelerate a student’s progress toward his or her academic or career goals

Program Area 5: Apprenticeships

Description of the Approach	Tasks/Activities Needed to Implement the Approach	Resources Needed	Estimate of the Cost	Responsible Parties	Methods of Assessment	Timeline
Infuse apprenticeship concepts across all adult education program subject areas	<p>Integrate standardized apprenticeship concepts that include: basic skills; employability skills; an understanding of apprenticeships; how to access apprenticeship programs or pre-apprenticeship programs</p> <p>Develop an assessment and referral tool that would identify aptitudes for apprenticeship and other career paths</p>	<p>Existing California Apprenticeship Council Orientation to Apprenticeship curriculum</p> <p>Existing pre-apprenticeship programs</p>	\$250,000	<p>K-12 Adult Education School Districts</p> <p>Community Colleges</p> <p>Apprenticeship Program Sponsors</p> <p>SWJC system</p>	<p>Develop a system to identify the number of adult education program areas and districts who have infused the concept of apprenticeship into curriculum</p> <p>Develop a system to identify the number of students who enter apprenticeship</p>	2016-2017 School Year and Ongoing
Increase the number of employers participating in apprenticeship	<p>Collaborate with workforce development programs to identify job opportunities and assist with outreach to employers</p> <p>Educate employers on the benefits of apprenticeship</p> <p>Identify and nurture apprenticeship programs in non-traditional fields</p>	<p>Employment Training Panel (ETP) Funding</p> <p>Business and Professional Associations</p> <p>Division of Apprenticeship Standards</p>	\$50,000 per year	<p>K-12 Adult Education School Districts</p> <p>Community Colleges</p> <p>Apprenticeship Program Sponsors</p> <p>SWJC system</p>	<p>Develop a system to identify the number of students placed in apprenticeship</p> <p>Develop a system to identify the number of employers participating in apprenticeship</p>	2016-2017 School Year and Ongoing
Hire Career Counselors and Job Developers	Hire and train job developers and career counselors	Multiple funding sources such as federal and state	\$120,000 per counselor	K-12 Adult Education School Districts	Establish an outcome-based tracking system that identifies: Number of	2016-2017 School Year and Ongoing

	<p>Establish realistic long and short term goals for each student</p> <p>Create a career plan with apprenticeship as a desired outcome</p>	<p>grants and other funding</p> <p>Participation by apprenticeship program sponsors and employers</p>	<p>Reference Program Area 5 Table 3.1 and Program Area 5 Table 4.1</p>	<p>Community Colleges</p> <p>SWJC system</p>	<p>students counseled and employed; Number of career plans created</p> <p>Students self reporting</p>	
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Objective #6: Professional Development Narrative

Plans to collaborate in the provision of ongoing professional development opportunities for faculty and other staff to help them achieve greater program integration and improve student outcomes.

Introduction

The demands on and expectations for adult learners are evolving as the skills needed for success in a highly networked and competitive global economy increase. It is critical that the adult education (AE) services offered through CAERC prepare students for success both within the region and beyond. The role of professional development (PD) is critical in building capacity for the adult education programs and staff within CAERC to meet the needs of its learners. The CAERC Objective 6 subcommittee was formed to address issues and planning for PD and presents this brief narrative on the recommendations for PD planning for the consortium, based on input from members. This narrative is drafted as a “living document” anticipating that PD needs will continue to emerge as CAERC continues its own growth and development, and as the plans for the five program areas develop. The PD plan must ultimately be coherent to the program-area plans and the vision for and function of CAERC overall, as well as provide an evidence-based approach to increasing student learning outcomes. This plan ultimately takes a developmental approach to professional development that is oriented toward 1) best practice in collaborative and facilitated decision-making and 2) professional development for targeted content delivery that leverages existing resources and flexibly meets emergent program-area needs.

Method

CAERC members and partners submitted responses to the following two prompts seeking input on current PD strategies and priorities for collaborative PD:

- Table 6.1: Current Professional Development. In the table below, identify current, effective professional development strategies carried out by consortium members that could be adapted for consortium-wide use.
- Table 6.2: Collaborative Professional Development Plan. In the table below, address topics the consortium considers priorities for collaborative professional development. Include, at a minimum, topics to help achieve integration among consortium members and improvement of student outcomes.

A total of twelve CAERC agencies submitted responses. Twenty-three topics were generated in response to Table 6.1, and twenty individual priorities were generated for Table 6.2. The subcommittee reviewed all submissions and were tasked with identifying the “themes, trends and convergences” that appeared in order to synthesize them into a statement of PD priorities for CAERC. A gap analysis was then conducted seeking answers to questions regarding subject matter, access, modality, and approach to PD. Members of the subcommittee attended the CAERC Summit II and attended multiple

program-area discussions to refine understanding of program-area PD needs and interests. The subcommittee then developed draft recommendations for PD that would enable CAERC to address the identified priorities. All program-area leads reviewed and submitted revisions to the PD recommendations draft. Additionally, the PD recommendations were revised based on subcommittee review of the 2/12/15 CAERC Regional Implementation Plan.

Themes

CAERC has identified five themes for PD:

1. Collaboration
2. Evidence-Based Best Practice
3. Pathways and Alignment
4. Instruction for Post-Secondary Skills Development
5. Technology Integration

Collaboration

The greatest overall theme was the value placed on and the desire for a high level of collaboration for PD within CAERC—within, between and across agencies. CAERC has identified several current strategies and priorities for conducting collaborative professional learning inclusive of: professional learning communities for engaging in a shared process of examining student work and data-driven instruction, communities of practice for sharing resources and professional wisdom among teachers, regional PD events, leveraging existing PD opportunities, and participating in networking opportunities to support planning and alignment. There is also an interest in collaboration that would be both face-to-face and technology mediated. This commonly shared interest in collaboration was the cornerstone of identifying the PD priorities in Table 6.2 and in the recommendations that follow this document.

Evidence-Based Best Practices

CAERC has identified a number of individual topics that would be addressed through PD. Topics include: general instructional strategies such as differentiated instruction and Universal Design for Learning (UDL), foundational skills instructional strategies such as teaching critical thinking; subject-specific instructional strategies such as targeted instruction in reading; and instructional strategies for accelerated learning. In addition to supporting CAERC's diverse student population, CAERC-wide PD will be offered on intercultural competency. There is significant professional wisdom within CAERC to address and share best practices, as well as an interest in having resources and subject matter experts contribute to the knowledge base and practice within the consortium. All five program areas need be addressed through CAERC-wide PD.

Pathways and Alignment

Adult learners within CAERC would benefit from a regional system that was highly aligned in its services, and that created a clear pathway to post-secondary education and careers. Topic areas that would contribute to a highly-aligned system include: a common or aligned assessment practice; a shared learner goal-setting practice; a seamless referral process; effective guidance and counseling services; orientation to apprenticeships; and aligned standards and curriculum.

PD should address best practices in pathways development and in each of the areas needed for having an aligned system.

Instruction for Post-Secondary Skills Development

Over the past decade, a shift has taken place in adult education in response to labor market demands. As the labor market value of GED/HSET has decreased, so has the emphasis on adult education to prepare students for post-secondary academic and career education preparation, increased. There are several instructional models (contextualized workforce instruction, job-embedded instruction such as that in apprenticeships, integrated education and training, and college, career, and civic life readiness standards-based instruction) that respond to this shift as well as several instructional foci for improving readiness for post-secondary (problem solving, critical thinking, performance-based competence, digital literacy, engaging with complex texts, numeracy, rigorous language skills instruction). Professional development that supports post-secondary and career readiness of learners was presented in several member responses.

Technology Integration

We live in a technological society and economy. Technology integration to enhance subject area instruction and digital literacy that prepares learners for problem solving and critical thinking tasks should be a key topic addressed. Technology was also considered in several of the recommendations for how to address the PD needs within CAERC given its diverse membership spread over four counties.

Gaps in Access

The major gap identified as a result of analyzing the responses was access to high-quality professional development. Members, by virtue of their funding and institutional affiliation, have access to different PD resources. Several agencies indicated they have no access to formal PD resources due to funding limitations. The question of equity to access was considered in the development of recommendations.

Recommendations

Based on the analysis of current PD strategies and identified priorities, the subcommittee considered:

- How will all five program areas be addressed through PD?
- How can existing PD strategies be leveraged for CAERC as a whole?
- What field experts or subject matter experts can be brought in to support CAERC PD?
- How can PD be delivered (through what modalities and approaches) effectively given the make-up of CAERC?
- How can effective PD methods be best implemented given the make-up of CAERC?
- How can CAERC support the coordination and delivery of PD?
- How can CAERC capitalize on the consortium structure to support Objective 6?

The following are recommendations for a strong consortium-wide approach to PD that encourages collaboration and alignment:

1. Each of the five program areas should be supported with an online Community of Practice (CoP). CoPs provide a mechanism for improving instruction by sharing expertise, experience, and resources among members. CAERC members have deep knowledge in specific subject matter addressed in each program area. CoPs would allow for that knowledge to be shared, capacity built, and practice improved through collaboration. Communities of Practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly¹. The graphic (adapted from Wegner 2012 by CALPRO) shows the processes that take place within a CoP.



2. The consortium should leverage existing PD structures through a professional learning portal that is designed to provide access to different PD resources (such as those offered by the three CDE State Leadership projects CALPRO, CASAS, and OTAN) by virtue of funding and affiliation. To mitigate the primary gap

among members in terms of access, a professional learning portal that allowed regional adult education providers to: 1) indicate the PD they are currently attending; 2) share resources they acquire in the PD they attend; and 3) support professional learning through lessons learned at the PD. The professional learning portal may also serve as the home to the above-mentioned CoPs and provide linkage to national PD sites such as LINKS and Workforce One.

3. A variety of CAERC-wide PD should be centrally and uniquely offered. As needs of the consortium continue to emerge and be identified, CAERC members and partners would benefit from PD offered to meet those unique needs. PD should be offered in multiple modalities (online, face-to-face, blended, etc.) and through different approaches (webinars, workshops, institutes) that require different levels of commitment based on topic.
 - a. Webinars should be on key topics that all members should be aware of and consider within the consortium context such as WIOA, labor market shifts and trends, and significant shifts in understanding of AE such as the current movement to use the CCRS.
 - b. Face-to-face (f-2-f) and blended workshops should be on key topics critical to learner success such as reading, writing and numeracy instruction, increasing the rigor of ESL instruction, orientation to apprenticeship, special education transition planning/disability considerations, effective counseling and case management models and practices, CCRS implementation, integration of common assessments, how to align curriculum, and principles of Universal Design for Learning, etc. Table 6.2 identifies the PD priorities for CAERC. Based on topic, these PD offerings might be facilitated by CAERC field experts or subject matter experts from outside the consortium.
 - c. Professional Learning Communities (PLCs) should be developed and fostered to promote collaboration. Several members indicated that PLCs were a current and effective strategy for meeting learner needs. This data-driven approach to instruction encourages and relies on collaboration, using common assessments, and utilizing standards would therefore address a number of PD priorities. PLCs are job-embedded and provide a process for ongoing PD that requires significant commitment on the part of programs.
 - d. Funds will be set aside to support CAERC member staff attendance at technical conferences on key subject matter.
4. CAERC should provide consortium-wide networking through meetings and regional events to answer key questions to support regional program alignment, cross-program integration, and to meet PD needs for each program area. Conducted as part of regular quarterly summit meetings or as separate quarterly events, these meetings would address critical issues to the functioning of CAERC and the improvement of its capacity to serve adult learners such as:
 - a. Who are CAERC learners? What data can we examine to understand the composition and needs of its learners as a whole?

- b. How successful are our students after they leave AE?
 - c. How can we align services to best serve our students?
 - d. How do we support cross-program integration?
 - e. What partners and resources do we need to better serve our learners?
 - f. How do we determine program accountability and success?
5. The above recommendations require leadership, planning, and resources. Therefore, CAERC should consider dedicated staffing and resources for professional development to assure cohesion of the PD offered to the needs of the consortium as a whole, to assure PD resources, expertise, and knowledge are effectively leveraged, and to support the needs for PD of each program area. Additionally, for the recommendations to be enacted, dedicated resources would need to be earmarked for PD.

Resources:

- ¹<http://www.calpro-online.org/communitiesofpractice.asp>

Next Steps

The next steps for establishing a sound and coherent approach to professional learning within the consortium include:

Year 1: Focus professional development to facilitate planning and collaboration

1. Establish a consortium-wide professional development work group, and establish dedicated PD staffing resources.
2. Provide support for program-area work groups for collaborative decision-making to plan to meet consortium key priorities
3. Identify and refine professional development needs, goals, and objectives (both consortium-wide and program-area specific) as a function of program-area work-group meetings
4. Conceptualize and develop consortium professional development plan for implementation in year 2
 - a. Content of PD needed
 - b. Best modalities for delivery of content
 - c. Expertise within the consortium for the content
 - d. Expertise from outside of the consortium
 - e. Metric for assessing effectiveness of PD
5. Vet and refine the PD plan with program areas and members

Year 2: Focus professional development on continued facilitation and content delivery

1. Implementation of vetted model of PD
2. Professional development content on vetted topics and modalities
3. Utilize metrics to refine PD plan for year 3

Table 6.1. Current Professional Development

In the table below, identify current, effective professional development strategies carried out by consortium members that could be adapted for consortium-wide use.

Topic	Professional Development Strategy	Program Area(s) Addressed	Estimated Cost to Implement Consortium-wide
Collaborative Professional Learning: Professional Learning Communities (PLCs) and Mentoring	<p>PLCs are a recommended method for informing and improving instruction and program decisions that can be employed in all program areas.</p> <p>One-on-one mentoring for new faculty to support professional growth would build instructional capacity in all program areas.</p>	ABE/ASE, ESL, CTE, Apprenticeship	TBD
Evidence-Based Instructional Strategies; General	<p>Instruction in each program area can be built through PD that introduces and supports evidence-based instruction in several general areas. Field experts or subject-matter experts (such as current faculty) can contribute or present in consortium-wide, either fact-to-face or online.</p> <p>Topics: differentiated instruction, scaffolding instruction, effective instructional strategies for adult learners, learner goal setting, how to develop and use common assessments, building critical thinking and problem solving skills, pre-apprenticeship skills needed, job shadowing, soft skills instruction (such as communication and collaboration), using data to inform instruction, universal design for learning, and mentoring models for AE instruction</p>	All	TBD
Evidence-Based Instructional Strategies; Program Area Specific	<p>Evidence-based instruction specific to each program area can be built through PD. Field experts or subject-matter experts can contribute or present in consortium-wide PD, either face-to-face or online.</p> <p>Topics: instructional methods and strategies for accelerating subject-specific instruction (such as reading, writing, and numeracy), effective ESL instructional strategies (such as teaching a multi-level ESL classroom), effective instruction for</p>	ESL, ABE/ASE, CTE, Adults with Disabilities, Apprenticeship	TBD

	<p>ABE/ASE (such as reading, writing and numeracy), integrated education and training methods for AE and CTE, contextualized workforce skills instruction, and targeted subject-area instruction. Data collected from the proposed shared database can be utilized to support a data-driven approach to evidence-based instruction.</p>		
<p>Technology Integration and Digital Literacy Skills</p>	<p>Consortium-wide PD should be offered to support instructors in how to integrate technology into instruction, how to teach digital literacy, and introduce learning software packages found to be effective within the Consortium.</p> <p>Featured technology will be accessible to students at their level. Exploring ways to support students—or alternatives for those who need a different approach—needs to be a priority.</p>	All	TBD
<p>Pathways and Alignment</p>	<p>Consortium-wide PD should be offered to build the alignment of services to create pathways for learners. PD would include the planning and development of pathways within the Consortium. Additionally, PD can support and build knowledge of labor market and industry trends needed to create effective pathways to the workplace.</p> <p>Topics: shared assessment practices, shared learner goal-setting practice, a seamless referral process, effective guidance and counseling services, and aligned standards.</p>	All	
<p>Post-Secondary Readiness</p>	<p>Instruction to build learners' post-secondary readiness should be offered to build a shared understanding and practice.</p> <p>Topics: Common Core alignment, using the College and Career Readiness Standards, civic life readiness, special education transition planning, and building college and career readiness skills in reading, writing, and numeracy, CRANE, and SETA.</p>	ABE/ASE, ESL, CTE, Apprenticeship	

Table 6.2. Collaborative Professional Development Plan

In the table below, address topics the consortium considers priorities for collaborative professional development. Include, at a minimum, topics to help achieve integration among consortium members and improvement of student outcomes.

Topic	Professional Development Strategy	Program Area(s) Addressed	Estimated Cost to Implement Consortium-wide
Best evidence-based practice in each program area	Each of the five program areas should be supported with an online Community of Practice (CoPs) for consortium members. The CoPs would allow for peer-to-peer professional learning on topics identified as significant for learners served by the consortium.	All	
Evidence-based instruction in each program area	Existing PD structures (such as those conducted by member institutions, district-wide, offered by the three CDE State Leadership projects CALPRO, CASAS and OTAN, and national projects such as LINC and Workforce One) can be leveraged through the development of a CAERC online learning portal that can serve as a place to share resources and materials available through other PD forums.	All	
CAERC Webinars	Webinars on key topics that all members should be aware of and consider within the consortium context such as WIOA, labor market shifts and trends, significant shifts in understanding of AE, legislation affecting services for the disabled, Perkins reauthorization, accountability, and assessment practices and requirements.	All	
CAERC-wide face-to-face or online workshops	PD on key topics offered by field or subject matter experts critical to learner success (such as those listed in Table 6.1 reading, writing, and numeracy instruction, increasing the rigor of ESL instruction, CCRS implementation, integration of common assessments, how to align curriculum, I-BEST models, VESL or contextualized workforce ESL instruction, orientation to apprenticeship, how to vendorize programs and services for AWD, collaborative case management, etc.) offered as consortium-wide face-to-face or online learning events. The topics can be identified through the program-area CoPs and deemed needed if leveraged PD is not sufficient to meet member needs.	All	
Collaborative planning for alignment and pathways	<p>PD that supports the development of clear and well-articulated pathways within CAERC should be offered through ongoing planning meetings.</p> <p>Topics addressed should include: Understanding adult learners in CAERC, asset mapping to better understand services offered among members, development of common</p>	All	

	assessment practices, common goal setting practices, shared referral and guidance practices, standards alignment (and standards development is needed), curriculum alignment, integration of apprenticeship concepts, and tracking student data. Inter-campus and program orientations for members and partners to support collaborative planning.		
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Objective #7: Leverage Resources Narrative

Plans to leverage existing regional structures, including, but not limited to, local workforce investment areas.

Consortium Summary

Narrative

The Capital Adult Education Regional Consortium is fortunate to have 15 actively engaged members and 23 partners representing a broad spectrum of agencies. Some of the members and partners have already formed new relationships with each other, and all of the partners see new opportunities in forging relationships with CAERC members. As the regional planning process evolves so will opportunities for leveraging resources and assets that are inherent in all of the CAERC member and partner organizations.

In-depth discussions around Objective 7 were conducted at CAERC monthly member/partner meetings held during November and December 2014. A separate Objective 7 Subcommittee was also established to continue exploring approaches and strategies for developing a more systematic process for leveraging existing resources. Through these discussions, it was determined that it's not just partners that have something to contribute to CAERC. Rather, CAERC agency representatives (members and partners) believe that all entities involved with the consortium have resources or expertise that will benefit the overall consortium-wide effort. With that understanding, both members and partners have identified assets that could ultimately benefit adult learners in the region.

As documented on CAERC Table 7.1, a strong array of resources, assets, and expertise have already been identified. Although the focus is on identifying and leveraging assets and structures to benefit learners, a number of the assets will also directly benefit the tutors, teachers, professors, administrators, and support staff that represent CAERC member and partner agencies. Following is a snapshot of the type of resources identified on CAERC Table 7.1.

- Learner support services: tutoring, counseling, referrals, career coaching, job search and placement, job fairs, translation services, high school equivalency testing centers
- Supplemental learning opportunities: job search and career readiness classes, online learning and blended learning materials, open computer labs
- Professional development possibilities: assessment instruments (CASAS), adults with disabilities, multi-level ESL, VESL, high school equivalency, adult secondary education, teaching with technology
- Resources to support CAERC operations: physical classroom space, communication and information sharing tools, management of information and data systems, marketing and outreach

During the last several months, a range of underlying principles and areas of agreement for leveraging assets have surfaced:

- Recognize that some member/partner resources will be available at no cost (in-kind) while other resources would be offered on a cost-reimbursement basis.
 - Many of the CAERC partners operate programs on a shoestring budget, and most of the K-12 adult education member budgets have been cut severely over the past 5 years. As CAERC further develops its key priorities and implementation strategies, a more systematic resource mapping process can be used to ensure a genuine synergy for leveraging regional structures.
- Utilize member/partner areas of expertise in the core-program content areas.
 - For example, library literacy programs in the consortium have many years of experience in working with volunteers and reading tutors. They have established training programs and systems for assigning tutors to adult learners. This body of expertise can be leveraged to enhance basic skills instructional programs in the region.
- Build on the existing networks offered by members with regional operations.
 - One of the CAERC partners, another consortium known as the Capital Region Academies for the Next Economy (CRANE), is actively engaged in working with regional WIBs, labor organizations, business and business associations, and a wide range of public sector agencies. Through CRANE, it will be possible to leverage other resources to benefit learners. For example, expanded partnerships may provide increased access to a broader range of career pathways and opportunities for employment.
- Capitalize on the expertise and capabilities of partners with statewide reach.
 - Being based in the Sacramento region has provided CAERC a unique opportunity to closely collaborate and network with statewide agencies that provide services throughout California. Partnering with agencies such as the California Department of Rehabilitation and Corrections, California Department of Developmental Services, and the California State Library offers the potential of bringing a broader array of experience and expertise to CAERC.
- Leverage member/partner established communication and data systems.
 - Sacramento County Office of Education's Outreach and Technical Assistance Network (OTAN) has a wide range of expertise with state-of-the-art communication tools, website creation, and database development. This expertise can be leveraged to ramp up information and data sharing among members and partners, implement online professional development, and establish supplemental online and blended learning opportunities for learners.

CAERC members and partners believe that all agencies involved in the consortium have resources or expertise that will benefit the overall effort. When CAERC central operations commence next fiscal year, emphasis will be placed on quantifying assets, developing timelines, and aligning assets to CAERC's key priorities.

Table 7.1. Leverage of Existing Regional Structures

Partner/Member Institution Supporting Regional Consortium	Program Area(s) to be Addressed	Tasks/Activities Needed to Implement Support of the Program	Partner/Member Contribution	Timeline
Alta Regional Center/CA Department of Developmental Services	1 - 3	TBD	Funding and facilities Training for AWD on living skills Provide onsite ESL/HD/GED instruction for AWD	TBD
Building Skills Partnership	2	TBD	Professional development in the areas of multi-level classes, VESL, or teaching with technology	TBD
California Department of Corrections and Rehabilitation, Office of Correctional Education	1 - 5	TBD	Provision of training, workshops, and professional development	TBD
California Human Development	1 - 5	TBD	Facilities for classrooms and trainings	TBD
California Human Development	4 & 5	TBD	Referral services for learners	TBD
California Human Development	4 & 5	TBD	Training on how to search for jobs including employment and training services to agricultural workers Training on how to use computers and Internet to help with job search Training for ESL, GED, and Truck Driving (Sacramento Works Training Center in Galt)	TBD

California Human Development	4 & 5	TBD	Possible funds to reimburse employers a percentage of an employee's pay when the employer hires customers and agrees to train them (OJT- On the Job Training)	TBD
Center Unified School District	1 - 5	TBD	Referral services for learners With existing resources, can serve an additional 100 students. For additional funding of \$55,000, can serve 500 more students (fee-based \$110/per student)	TBD
Community College SB 1070	1	TBD	Provide coordination with assessment and curriculum developed by Community College - backwards map	TBD
El Dorado County Office of Education	1 - 5	TBD	Facilities for classroom instruction, professional development, or tutoring Facility space could include technology-rich classrooms or labs and office space with office technology	TBD
El Dorado County Office of Education	1 - 5	TBD	Professional development in a variety of content/subject areas	TBD
El Dorado County Office of Education	1	TBD	Availability of a Pearson Vue/GED testing center	TBD
Folsom Cordova Adult School	1 - 5	TBD	Facilities for professional development including computer lab.	TBD
Folsom Cordova Adult School	1 & 2	TBD	Professional development for ASE, including HiSET, ESL and implementation of CASAS e-testing.	TBD
Folsom Cordova Adult School	1 - 5	TBD	Traditional classrooms at adult school and potentially other school sites in the district	TBD
Folsom Cordova Adult School	1 - 5	TBD	Share experiences of establishing a training center in partnership with a local NGO	TBD

Highlands Community Charter and Technical Schools (HCCTS)	1 - 5	TBD	High School Diploma, CTE classes; Truck Driving, Pre-Apprenticeship, HVAC (2015), Diesel Technician, CBEEd, logistical assistance to area non-profits and public agencies, assistance and collaborations with California Sheriff's Departments (jail training), various County Probation Departments and facilities for conducting tutoring, classes, and professional development	TBD
Los Rios Community College District	1 - 4	TBD	Student assistant programs for adult education students An introduction to college course or workshop to discuss services and support available at community colleges in the Los Rios District (e.g., EOPs, financial aid, etc.) Community college staff will go to adult education campuses	TBD
Los Rios Community College District	1 & 2	TBD	Provide outreach specialist to Adult Ed Identify outreach specialist at CC - paired with Adult Ed	TBD
Los Rios Community College District	1	TBD	Host a HS completion class on CC campus - dual credit Classroom; concurrent agreement	TBD
Los Rios Community College District	1 & 2	TBD	Facilities and facilitation for collaborative activities	TBD
Los Rios Community College District	1 & 2	TBD	Facilities for professional development	TBD
Natomas Unified School District	1 - 5	TBD	Facilities for classrooms (fee-based)	TBD
Natomas Unified School District	2	TBD	Translation services for Spanish (fee-based)	TBD

Natomas Unified School District	1	TBD	Possible services and resources through “Parent Cores,” a program providing PD to parents in the community. “Parent Cores” services could also provide support with sharing information to community and sharing of Parent Cores structure with other CAERC members wanting to establish similar.	TBD
Sacramento City Unified School District	1 - 5	TBD	Facilities for classrooms (free and fee-based)	TBD
Sacramento City Unified School District	4	TBD	Possible use of specialized instructional materials for CTE programs	TBD
Sacramento City Unified School District	1 & 2	TBD	Professional development in how to use CASAS (orientation and training)	TBD
Sacramento County Office of Education – Outreach and Technical Assistance Network	1 - 5	TBD	Creation and collaboration to develop a web-based depository of regional resource information	TBD
Sacramento County Office of Education – Outreach and Technical Assistance Network	1 & 2	TBD	Communication Tools (listserv, website, adobe connect, video development, etc.)	TBD
Sacramento County Office of Education – Outreach and Technical Assistance Network	1 & 2	TBD	Database development and maintenance for regional database and systems (i.e., asset map P1, resource database P2)	TBD
Sacramento County Office of Education – Outreach and Technical Assistance Network	1 & 2	TBD	Online (25) and blended learning courses (PD) shared among CAERC	TBD
Sacramento County Office of Education – Outreach and Technical Assistance Network	1 - 5	TBD	Professional development online and face-to-face (CALPro)	TBD
Sacramento Employment and Training Agency	1 - 5	TBD	Student support and financial assistance for support services	TBD

			Collaboration with the Sacramento Works America's Job Center (SWJC) and Title 1 WIA programs	
Sacramento Employment and Training Agency	1 - 5	TBD	Resource for pathways and collaboration to provide information on high-demand sectors and employers. Web-based tools: assessments, labor market and training provider information, Career GPS, job placement Collaboration with the SWJCs and Title 1 WIA programs. Resources through the SWJC system (SWJC coaches and Career Pathways Trust Sector coaches)	TBD
Sacramento Employment and Training Agency	1 - 5	TBD	Training in apprenticeship and certificate programs with career pathways to middle-skill jobs resulting in high wages and long-term job retention. Staff assistance/counseling Facilities for classroom and tutoring Collaboration and resources through Sacramento's Local Workforce Investment Board (LWIB), SWJC system, apprenticeships, community-based organizations, and community colleges. Web-based tools: assessments, labor market and training provider information, Career GPS, job placement	TBD
Sacramento Employment and Training Agency	1 - 5	TBD	Universal access to a variety of tools and services including assessments, career coaching, labor market information, job search assistance, education and skills training accessed through the Eligible Training Provider List (ETPL), as well as referrals to the SWTCs	TBD

Sacramento Employment and Training Agency	1 - 5	TBD	Expand training opportunities to provide long-term, unemployed dislocated workers On-the-Job Training opportunities in the private sector	TBD
Sacramento Employment and Training Agency	1 - 5	TBD	Collaboration with partners to implement system improvements and innovation that increase cooperation across program and funding streams, and integrate successful strategies to existing programs and funding stream	TBD
Sacramento Employment and Training Agency	1 - 5	TBD	Referral services for learners	TBD
Sacramento Employment and Training Agency	1 - 5	TBD	Job development and referrals for youth: provide labor market information, job search and placement assistance, outreach, intake and orientation, establish linkages with local educational institutions including higher education and youth service agencies. Coordination and support from the WIA Youth Specialists and SWJC	TBD
Sacramento Food Bank and Family Services	1 - 5	TBD	Facilities for conducting tutoring, classes, and professional development	TBD
Sacramento Food Bank and Family Services	1	TBD	Use of learner instructional materials in both print and online formats	TBD
Sacramento Food Bank and Family Services	1 - 5	TBD	Referral services for learners to other agencies for both academic remediation and career technical education	TBD
Sacramento Job Corps	1 - 5	TBD	Facilities for professional development and trainings. Host Job Fairs on Center, Provide Vocational Training. HS or GED/ESL for students.	TBD

Sacramento Public Library	1	TBD	Professional development in how to deliver basic literacy instruction	TBD
Sacramento Public Library	1	TBD	Professional development in how to deliver early literacy/family literacy/"every child read to read" skills for parents	TBD
Sacramento Public Library	1 - 2	TBD	Facilities for trainings and tutors Marketing and outreach Provide adult tutoring as well as early learning strategies for parents of children ages 0-5	TBD
SETA and Sacramento Job Corps	1 & 2	TBD	Provide support services and communicate resource map Los Rios faculty and K-12 Adult Ed coordinate and research identifying K-12 Adult Ed exit points (curriculum)	TBD
SETA, Next Ed, and local chambers of commerce	4 & 5	TBD	Facilities for job/career fairs Marketing and outreach to local employers	TBD
Twin Rivers Unified School District/Twin Rivers Adult School	1 - 5	TBD	Twin Rivers Adult School Refugee Services has office space to accommodate additional staff and the ability to provide English classes and job services for additional clients.	TBD
Twin Rivers Unified School District/Twin Rivers Adult School	1 - 5	TBD	Facilities for classrooms.	TBD
Twin Rivers Unified School District/Twin Rivers Adult School	1 - 5	TBD	A new GED Testing Center is being set up. Additional capacity to serve GED students is also available.	TBD

Twin Rivers Unified School District/Twin Rivers Adult School	1 - 5	TBD	Diversity training. Professional development in a variety of content/subject areas.	TBD
Twin Rivers Unified School District/Twin Rivers Adult School	1 - 5	TBD	ESL/ELL instruction from Literacy to Intermediate levels with available computer lab	TBD
Yolo County Office of Education	1 - 5	TBD	Facilities for professional development at conference center Facilities for classroom space at alternative education site (minimal facility costs may be required)	TBD
Yolo County Office of Education	4	TBD	Professional development in areas of short-term CTE, Workforce Development, leveraging partnerships, career counseling, and Early Childhood Education (fee-based)	TBD
Yolo County Office of Education	1	TBD	Assist with offering GED preparation and various locations (fee-based, teacher FTE would need to be charged)	TBD
Yolo County Office of Education	1 - 5	TBD	Referral services for learners	TBD

Corrections Roundtable

Objective #1

An evaluation of *current levels and types of adult education programs* within its region, including education for adults in correctional facilities; credit, noncredit, and enhanced noncredit adult education coursework; and programs funded through Title II of the federal Workforce Investment Act, known as the Adult Education and Family Literacy Act (Public Law 05-220)

Narrative

For each of the five program areas listed in AB 86, describe, in a narrative format, the services and programs the consortium members and partners are currently providing in the consortium's region and provide a narrative evaluation of adequacy and quality.

Program Area 1: Elementary and secondary basic skills, including classes required for a high school diploma or high school equivalency certificate

Program Area 2: Classes and courses for immigrants eligible for educational services in citizenship and English as a second language, and workforce preparation classes in basic skills

Program Area 3: Education programs for adults with disabilities

Program Area 4: Short-term career technical education programs with high employment potential

Program Area 5: Programs for apprentices

As part of the overall Capital Adult Education Regional Consortium (CAERC) planning process, the Consortium has identified two correctional-related adult learner populations that have unique adult education needs. The first population consists of inmates residing in Folsom State Prison, Folsom Women's Facility, California State Prison Sacramento, Mule Creek State Prison, Rio Cosumnes Correctional Center, Sacramento County Main Jail, and Amador County Jail correctional facilities (insiders). The second population consists of former inmates of correctional facilities who have recently been released to the community and lack the knowledge or personal resources to transition easily to educational programs or viable employment (outsiders).

Inside population: Folsom State Prison, Folsom Women's Facility, California State Prison Sacramento, Mule Creek State Prison, Rio Cosumnes Correctional Center, Sacramento County Main Jail, and Amador County Jail all have inmates who need Program Areas 1-5 offerings. The current inside providers are CAERC partner California Department of Corrections and Rehabilitation (CDCR) and CAERC member Elk Grove USD's Adult and Community Education (EGACE) program.

- CDCR: Each state prison provides its own WASC-accredited adult education program with adult basic education (ABE) and adult secondary education (ASE) offerings designed for insiders to obtain their high school equivalency and/or high school diploma. CDCR does not have any English as a second language (ESL) classes, so English learners are encouraged to enroll in the regular ABE and ASE offerings. In addition, learners may enroll in a variety of Career Technical Education (CTE) programs. Learners may also obtain job skills through the Prison Industry Authority programs, which are self-supporting. Insiders who already have a high school equivalency and/or a high school diploma, or who earn those credentials while inside, may enroll in available onsite or correspondence education college courses. The CDCR is currently working to modernize its course offerings and delivery systems, expand its CTE program opportunities, and create stronger pathways to program completion, including college degrees. The goal is to greatly increase the number of insiders re-entering their communities educated and prepared to enter the workforce in living wage jobs.
- EGACE: Through established formal partnerships with the Sacramento County Sheriff's Department, EGACE provides WASC accredited ABE, ASE, ESL basic skills, high school equivalency, and some CTE programs to insiders in the Sacramento County Main Jail and Rio Cosumnes Correctional Center. EGACE has insufficient resources to offer enough classes to meet learner needs, as evidenced by the many students placed on waiting lists who cannot progress through their programs in a timely manner.
- Outside population: Many former inmates of local and regional jails and prisons, as well as those released from state prisons outside the consortium area and assigned to local counties, have Program Areas 1-5 needs. The current providers specializing in serving outsiders are CAERC partners Highlands Community Charter School (HCCS), Sacramento Community Based Coalition (SCBC), and Sacramento Adult Day Reporting Centers (ADRC), as well as CAERC members Elk Grove USD and Cosumnes River College (CRC).
- HCCS: The newly opened Twin Rivers USD charter school is designed for adults 22 years and older who do not have a high school equivalency or high school diploma. While any adult learner meeting the school's criteria may attend, HCCS does special outreach to outsiders and has board members who have expertise in law enforcement and corrections. The programs are set up in a structured manner so that enrollees can complete their high school equivalency and/or high school diploma and complete a CTE program with work experience within one year. Completers will be prepared for entry-level positions in living wage jobs. HCCS is working with and recruiting new partners to help outsiders stabilize their living situations so they can attend school, as well as community college partners to develop clear pathways from HCCS programs to other adult education and college CTE programs.
- SCBC: This coalition is a collaborative effort between the Sacramento County Office of Education and CDCR and is designed to assist outsiders just re-entering the community from state prisons. SCBC is committed to improving the lives of local families and residents through a case management approach with

comprehensive services based on each individual's unique needs. Program participants are eligible to receive educational services that include literacy skills, high school equivalency, math skills (general and job-related), vocational training referrals, and introductory computer literacy training. Other services that support participants' ability to complete their educational goals include Driving Under the Influence (DUI) program, outpatient drug and alcohol treatment and education, anger management, parent and family classes, batterers program, and referrals to sober living homes and Alcohol Anonymous/Narcotics Anonymous (AA/NA) meetings.

- ADRC: Sacramento has three ADRCs to serve male and female outsiders 18 years of age or older. Services and programs are based on the outsider's assessed needs. The ADRCs offer on-site case management, counseling, treatment, employment programs, high school equivalency programs, and vocational skills training in construction. The centers are seeking stronger relationships with other adult education providers and community colleges to create improved transition processes for those learners willing to transition to other programs to continue their education pathways. Currently, over 650 participants are served by the three Sacramento ADRCs.
- EGACE and CRC: Insiders who were served by Elk Grove Adult and Community Education (EGACE) while incarcerated are encouraged to continue their adult education programs with EGACE and/or Cosumnes River College (CRC) when they re-enter the community. Program staff who are knowledgeable about insider-to-outsider transition challenges work with incoming learners to better support their transition. Both EGACE and CRC would like to strengthen support for learners in transition.

Objective 2:

An evaluation of current needs for adult education programs within the consortium's region.

Narrative

Describe and assess current needs for each of the AB86 adult education program areas (1-5), including the needs that are currently unmet.

Program Area 1: Elementary and secondary basic skills, including classes required for a high school diploma or high school equivalency certificate

Program Area 2: Classes and courses for immigrants eligible for educational services in citizenship and English as a second language, and workforce preparation classes in basic skills

Program Area 3: Education programs for adults with disabilities

Program Area 4: Short-term career technical education programs with high employment potential

Program Area 5: Programs for apprentices

Insider needs: Due to many changes in jails and prisons, insiders may move among a variety of corrections facilities during their incarceration. Currently, correctional institutions use a system called “Strategic Offenders Management System (SOMS)”, so that each time insiders move to a new correctional facility all records of their educational achievements are available at the next correctional facility. Many insiders are released without sufficient knowledge or resources to quickly access educational and work opportunities on the outside. The consortium has therefore identified the following insider needs for Program Areas 1-5:

- Assessment instruments and processes that are aligned across all institutions (inside and outside).
- A common high school equivalency assessment instrument so learners do not have to repeat test preparation (inside and outside).
- Courses, pre-requisites, and programs that are aligned wherever possible or at least articulated to other institutions (inside and outside).
- Additional adult education course and program offerings for jails to meet learner enrollment demands.
- Clearer pathways from adult education-level courses and programs to college courses and programs (inside and outside).
- Improved transition planning for insiders about to be released, including possession of required documents for education (assessment records, transcripts, etc.) and employment (required work identification documents, resumes, etc.).
- College preparatory courses that “refresh” reading, writing, mathematics, and study skills for students who have high school equivalency or high school diplomas, but have not participated in academics for an extended period of time.

Outsider needs: Once released, outsiders with few or no personal or family resources to assist their transition need immediate access to resources which can direct them to resources to meet basic necessities for shelter, food, medical care, etc. Sacramento Adult Day Reporting Centers (ADRCs), Sacramento Community Based Coalition (SCBC), and other community agencies can help outsiders receive the assistance they need, as quickly as possible, to maintain participation in their education pathways, including referral and other adult education programs such as Highlands Community Charter School (HCCS), Elk Grove Adult Community Education (EGACE), or work opportunities. The consortium has identified the following outsider needs for Program Areas 1-5:

- Assessment instruments and processes that are aligned across all institutions (inside and outside).
- A common high school equivalency assessment instrument so learners do not have to repeat test preparation (inside and outside).
- Courses, pre-requisites, and programs that are aligned wherever possible or at least articulated to other institutions (inside and outside).

- Portable educational records so that former insiders can continue educational pathways without interruption when they move to different institutions. (Educational records include past assessment results/placements, as well as completed courses and programs.) (inside and outside).
- Additional adult education course and program offerings for Sacramento Community Based Coalition (SCBC) and Adult Day Reporting Centers (ADRCs) to meet learner enrollment demands.
- Clearer pathways from adult education-level courses and programs to college courses and programs (inside and outside).
- Improved transition planning for outsiders, including help to obtain required documents for education (assessment records, transcripts, etc.) and employment (required work identification documents, resumes, etc.).
- College orientation and career exploration courses offered onsite at SCBC and ADRC facilities to ease students' transition to college.
- Access to college staff, knowledgeable about inside-to-outside transition challenges, to meet with outsiders when they first arrive at the college campuses.

Next Steps:

The Corrections Roundtable will continue to collaborate and refine the regional plan for inmates and former inmates from the correctional facilities in the region.

Moving Forward

Once CAERC's apportionment from the Proposition 98 Adult Education Block Grant is known, the Consortium will need to address the following tasks at the upcoming CAERC monthly meetings and subcommittee meetings:

- Analyze and review Governor's Revised Budget (May 2015).
- Reprioritize implementation strategies and approaches in designated program areas based on the Governor's Revised Budget and funding for 2015-2016.
- Update the CAERC Regional Implementation Plan and adjust strategies, timeline, and estimated costs as needed.
- Finalize revenue sharing options and funding allocations based on CAERC's four regional key priorities.
- Continue development of Regional Plan for inmates and former inmates in the region (Corrections Roundtable).
- Collaborate with CAERC partners and members to address Objective 7 and finalize specific resources needed to support the final Regional Plan.
- Determine which organization will serve as the Consortium's fiscal agent.
- Update Members list to include any additional K-12 districts and county offices of education in the region.
- Develop recommendations for potential representatives for allocation committee.
- Identify scope of work for CAERC and what tasks will be included in the 5% administration of the Consortium.



Capital
Adult Education
Regional Consortium



APPENDIX A

Objective 1: *Current Programs and Services*

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Program Area 1: Adult Basic Education (ABE) / Adult Secondary Education (ASE)

CAERC Members

Amador County Unified School District (ACUSD)

Amador County Unified School District (ACUSD) serves a regional population of 30,000 in Amador County. The district offers a non-accredited high school diploma program for adults 18 and older. Students are a mix of adults and students needing one or two more classes after high school graduation. Adult high school diploma classes meet Monday through Thursday for five hours, and the curriculum is largely independent study with instructor support using a combination of textbooks, workbooks, and online resources. Students must earn a total of 180 credits and pass the California High School Exit Exam (CAHSEE) in order to receive their diploma. Students choose the hours they attend, setting up a schedule and work plan with their teachers. The high school diploma program is free. Amador Adult Education offers summer credit recovery courses for credit deficient students, 16 years or older, so they may graduate on time.

To enroll, students contact the Adult Education program office or the ACUSD District. Enrollment intact includes an academic counseling appointment and course placement. Student progress is measured through observation, formative assessments, and classroom tests. TABE diagnostic assessments, followed by course assessments that are both formal and informal, are used to measure student progress. Indicators for student achievement/course completion include high school course mastery based on oral, written, and observed student work. Students fulfill the high school requirements in a small class setting, working both in groups and independently. Indicators of course completion include coursework completion with a success rate of 70% and passing of the California High School Exit Examination.

ACUSD reviews both curriculum and instructional methods. Teachers are observed, and curricular materials are newly adopted and address the needs of the 21st Century. All ACUSD teachers have valid California teaching credentials and are highly qualified with an average of 15 years of experience each. Instructors participate in district professional development opportunities and have planned time for collaboration, with one another as well as their comprehensive high school and alternative education high school counterparts.

Program effectiveness is measured using student outcome data, completion and graduation rates, and retention rates. The district also assists students in post-secondary and/or career placement and tracks their successes. ACUSD is small and offers a personal program.

Center Joint Unified School District

Center Adult School provides classes to prepare students to take and pass the CAHSEE. Students can choose to attend classes at the school, study through a distance-learning program, or participate in both as a blended learning program. The class is offered three afternoons per week for three hours for a total of nine hours of instruction per week. In the distance-learning program, students can choose online curriculum, a CD and work packet model, or a traditional textbook style depending on their learning style and what is most accessible for them.

Students are assessed utilizing the Comprehensive Adult Skills Assessment System (CASAS) to determine the level of instruction and to document progress. The program covers the four areas addressed through the General Education Development (GED) test: mathematics, science, social studies, and language arts. When students are ready to take a state-approved test, they can do so at the on-site GED testing center. In addition, in the test preparation classes, if a student is not yet ready for the high school equivalency material, the teacher instructs the student utilizing pre-GED materials.

In spite of high demand, Center Adult School has not offered a high school diploma program in the past due to financial constraints. However, in response to persistent requests for this program, the school is opening a non-accredited diploma program in the fall of 2014 with plans to pursue accreditation in the future. All courses are taught by California-credentialed teachers.

Davis Joint Unified School District

Davis Adult and Community Education offers a non-accredited high school diploma program for adults 18 years and older. Adult high school diploma classes meet once per week for three hours, and the curriculum is largely independent study with instructor support using a combination of textbooks, workbooks, and online resources. Students must earn a total of 180 credits and pass the CAHSEE in order to receive their diploma. Current high school seniors can also take concurrent courses to make up credits and graduate on time with their class. The high school diploma program is free.

Elk Grove Unified School District

Elk Grove Adult and Community Education (EGACE) offers Adult Basic Education (ABE) courses for students whose scores on the Comprehensive Adult Skills Assessment System (CASAS) fall below a score of 236 (below 9th grade.) Enrollment in an ABE class provides students the opportunity to improve basic reading, writing, and/or math skills while preparing to advance to the Adult Secondary Education (ASE) program in which they can earn a high school diploma or a GED certificate, enter CTE training, get or retain a job, or enter college or postsecondary training.

EGACE's ABE Career and Academic Development (CAD) classes are suited for adults who have low reading, writing, and math skills. The majority of these students has a high school diploma or a GED, but lacks the academic and work-readiness skills to move into postsecondary education, training, or employment.

ABE-level high school diploma students can earn credits through *Apex Learning's Literacy Advantage* program, a computer-based/online high school diploma curriculum, which provides differentiated instruction and academic support in all curricular areas. Students work in the classroom under the facilitation of a credentialed teacher and at home. In the correctional education program, ABE instruction assists learners in the remediation of their basic skills and helps prepare them for GED completion. Performance targets for ABE include significant gains on the CASAS test, level completion/advancement, indicating persistence in the program, and earning a certificate of completion in work-readiness skills or computer skills training.

Students with the goal of completing their high school education are enrolled in the Adult Secondary Education (ASE) program, which offers the option of pursuing a high school diploma or a GED credential. High school diploma students have the option of enrolling in the Independent Study program or in classes that meet on a daily basis. Both systems offer instruction through *Apex Learning*, while students in Independent Study have the option of using high school-level textbooks and/or Apex. All high school diploma students are required to complete a computer technology requirement, which aligns with EGUSD's technology requirement for graduation. In addition, EGACE requires high school diploma students to complete a 2.5 credit career development course. EGACE offers a credit recovery program at its main campus for concurrently enrolled EGUSD high school seniors who are 10 or fewer credits shy of graduating with their class.

Test preparation for the California High School Exit Exam (CAHSEE) is required for all EGACE diploma students who have not passed the English language arts and/or the mathematics sections of the CAHSEE. Some students who enroll in the high school diploma program have completed all of their credits while still in high school, but they have failed to graduate because they have not passed the CAHSEE.

GED test preparation courses are offered at two different levels. Students who score below 236 on a CASAS reading test are enrolled in an ABE/Level I test prep course, which provides direct instruction in combination with computer-based instruction. Students who score 236 or above are enrolled in a Level II test preparation class, which offers less direct instruction and more self-paced, computer-based instruction/test preparation. GED students are continuously assessed via GED practice exams in each of the four subjects (Reasoning Through Language Arts, Science, Social Studies, and Mathematical Reasoning) to gauge readiness for the actual exam.

In January 2014, EGACE transitioned from the 2002 GED testing series to the 2014 series, which eliminated paper-based testing and converted to computer-based testing only. The 2014 test is aligned to Common Core State Standards in college and career readiness. EGACE is an approved Pearson VUE GED testing site and is available for students and community members. Computer-based testing is currently available to student inmates at Rio Cosumnes Correctional Center (RCCC) and will soon be available at the Sacramento Main Jail.

EGACE has established formal partnerships with the Sacramento County Probation Department and Elk Grove Food Bank Services to provide GED test preparation/instruction to their clients. For the past two years, EGACE has provided GED instruction at the Cosumnes River College campus. At RCCC, GED classes have expanded over the past few years to include inmates in total segregation, high security, and protective custody.

Elk Grove Adult and Community Education's adult basic (ABE) and secondary (ASE) education program is coordinated by a full-time resource/data analyst and Staff Services Technician (SST). The SST assigned to the program is responsible for managing the testing, scheduling, and registration of the students. Most students register online to schedule an assessment and registration date. Assisted registration is also available for students who are unable to register online. An Admission Representative Technician (ART) oversees the orientation process and sets up the initial assessment and registration sessions for students.

Students interested in enrolling in EGACE ABE and ASE programs (elementary and secondary basic skills) on the main campus on Gerber Road need to register and complete an orientation online on the EGACE website. When students have completed the online registration, they receive an email confirmation with an appointment date and time for an assessment and enrollment session. During the appointment, they take a CASAS pre-test in reading and/ or math to ensure placement into the program at the level that meets their individual academic needs.

Throughout the enrollment process, ABE and ASE faculty (certificated) and staff (classified) are on hand to meet with students to answer questions, receive transcripts, and assist the student with the necessary paperwork and process. In EGACE's correctional education programs at the RCCC, there are two systems in place for enrollment into ABE and ASE programs. Individuals in the lower security areas may send a request to take a class to EGACE faculty or staff. Alternatively, the Sheriff's Department classification staff provides EGACE support staff with a list for orientation. The SST generates a list of students to attend three-hour testing and registration sessions, which are held weekly. Included in the weekly sessions are an overview of EGACE's programs and policies, registration forms, and CASAS Life and Work Reading computer-based/E-Test. Placement into classes occurs once the teacher meets with the Staff Services Technician to finalize the class roster. Students are then sent a copy of their class schedule.

At the Sacramento Main Jail, EGACE distributes interest forms to all floors where classes are conducted. Inmates send their completed interest forms to the Education Office to indicate their interest in enrolling into classes. The EGACE Staff Services Technician creates a list of individuals requesting classes and submits it to the Sheriff's Department classification staff on a weekly basis. Individuals cleared for programming are placed on teachers' wait lists. As space becomes available, the teacher will select individuals from the list, based on the date their names were added to the list, for placement into an orientation, which includes completing a registration form and placement testing (CASAS Life and Work Reading paper-based appraisal and test).

Using an individual's goals, needs, and test scores, the SST will determine into which class he/she will be enrolled.

EGACE serves a diverse population in its ABE and ASE programs, which includes adults 18 years and older who:

- Dropped out of high school
- Failed to graduate with their cohort/class because they did not pass the California High School Exit Exam
- Are former foster youth
- Were pregnant or became parents while still in high school
- Were formally incarcerated in juvenile detention centers
- Are currently incarcerated in county jail, or are ex-offenders previously incarcerated in prison or county jail
- Are EGUSD high school seniors who are short credits and are in jeopardy of not graduating with their cohort/class
- Are dislocated workers who were laid off from their jobs due to the economic downturn and are unable to obtain new employment because they lack a high school diploma, GED credential, or work-readiness skills
- Adults who have not been able to retain employment because they lack a GED or HSD, or are unable to pass employer exams in basic reading, writing, and/or math
- Community members seeking to pass the EGUSD No Child Left Behind paraeducator exam in order to obtain employment within EGUSD

Students enrolled in ABE and ASE enter the program at different educational functioning levels, which are determined by the CASAS. The chart below illustrates the range of academic levels of EGACE students enrolled in ABE and ASE programs.

Percentage Enrolled	ABE/ASE Level	Approximate Grade Level Equivalent in Reading
8%	ABE Intermediate Low	Grades 4-5
43%	ABE Intermediate High	Grades 6-8
30%	ASE Low	Grades 9-10
20%	ASE High	Grades 11-12

EGACE has neither the fiscal nor the human resources to adequately serve students functioning at or below the third grade reading level. These students are generally referred to the Sacramento County Library reading programs. Students who function between grades 0 to 1 are generally enrolled in the Adults with Disabilities Program at the Elk Grove Adult Community Training center.

EGACE analyzes and utilizes a variety of assessments to measure student progress toward achieving identified learning outcomes. Student achievement data is reviewed and discussed by staff at monthly department meetings. The Data, Accountability, and

Evaluation (DAE) team meets monthly, and teachers receive data reports regarding their classes.

CASAS post-tests are administered after every 40 hours of instruction, and teachers use assessment results to target their instruction in order to improve student-learning outcomes. Strategies for improving student outcomes are shared and discussed at monthly staff meetings. Measures that faculty use to track student progress include:

- Percentage of students obtaining a GED
- Percentage of students obtaining a high school diploma
- Percentage of ABE students transitioning to ASE, career technical education courses, or community college
- Percentage of students passing the California High School Exit Exam (CAHSEE)
- Number of courses and credits completed
- Student persistence/retention rate
- Percentage of students completing a National Reporting System (NRS) functional level as compared to the state goal

Indicators of success and performance targets for the ASE and ABE programs include:

- Adult basic education: Students will master basic skills to enable them to advance to ASE or CTE training, get or retain a job, or enter college or postsecondary training. Performance targets include significant gains on the CASAS test, level completion/advancement (indicating persistence in the program), and earning a certificate of completion in work/college-readiness skills or computer skills training.
- Adult secondary education: Students will earn a high school diploma or GED diploma and transition to postsecondary education, training, or employment. Performance targets for ASE students include significant gains on the CASAS test, persistence demonstrated by level completion, and passing the CAHSEE.

Faculty directly responsible for student progress work with teachers during evaluations to reflect on and provide examples of how to measure student outcomes. Some examples used to measure student outcomes include the following:

- CASAS post-tests are administered after every 40 hours of instruction.
- Teachers use multiple assessments of information to evaluate student progress such as standardized tests, performance-based assessments, observation or student performance and work samples, teacher-created tests and quizzes, and tests and quizzes provided through book- and computer-based tests.
- Teachers monitor and maintain records of student progress.
- Teachers engage in goal-setting activities with their students.
- Teachers use CASAS “Class” and “Student Performance Reports” to determine what to revisit/re-teach.
- CASAS post-test results inform teachers when a student is ready to move to the next level (e.g., ABE to ASE, or ASE to CTE).

EGACE seeks to address the various needs of ABE/ASE students with a broad range of support services. In the ASE program, an academic advisor initiates contact at the orientations and provides information about school and community resources and assistance to students who encounter barriers to academic success. The program also provides paraprofessionals who assist in ASE and ABE classrooms, as well as tutoring and support to meet individual learning needs.

EGACE has developed the ABE program, Career and Academic Program (CAD). These classes are designed to provide a bridge for students with low levels of English literacy into postsecondary, career technical education, and employment. CAD classes offer intensive training in basic English and math skills and in the development of work skills, including Microsoft Office, keyboarding, and 10-key.

Students have access to workforce development programs through the Sacramento Works Youth Works Universal and Intensive services and the onsite Sacramento Works Training Center staff and services. Job coaches provide case management, mentoring, referrals to supportive services, career training, work experience opportunities, and work and leadership skills workshops.

EGACE helps facilitate transitions to higher levels within the school and to higher education and training programs outside of EGACE through the services of a transition specialist. The transition specialist also assists students in EGACE's correctional education program as they are released from incarceration.

When students identify that they have (or had) an Individual Education Plan (IEP) from their former high school, administrators, teachers, and the 504 coordinator work with the students to identify appropriate accommodations.

Students who are unable to attend GED test preparation classes can register for the Distance Learning program. Distance learning allows students to study at home using technology and other instructional materials at their convenience. The EGACE distance-learning program offers both online and DVD checkout. Coursework in basic English language arts and math is also available for ABE level students in the distance-learning program. High school diploma students who qualify with a CASAS score of 245 or above and have passed at least one section of the CAHSEE may enroll in the Independent Study program.

Faculty performance is evaluated on the basis of the California State Standards for the Teaching profession. Certificated evaluations are scheduled in accordance with a calendar and timeline published annually by the EGUSD Human Resources department. Faculty members are generally evaluated every two years using a template and data-based questions that are targeted to assess effectiveness and improvement. The primary purpose of faculty evaluations is to assure improvement of job performance, thus improving the quality of education of ABE and ASE students as measured by better student outcomes. In addition to formal observations and evaluations, EGACE administrators also conduct informal, non-scheduled "walk-

through” evaluations. Administrators work with teachers during evaluations to reflect on and provide examples of how to measure student outcomes.

EGACE measures ABE and ASE achievement through examples such as persistence rates, as measured through TOPSpro and Federal Table 4, the number and percentage of graduates and GED completers, the number of courses passed and credits earned, gains made on CASAS tests, and the passage rate of the CAHSEE. EGACE’s priority is to maintain high-quality staff who are well trained in current, research-based adult education practices. EGACE hires teachers who possess specific skills, knowledge, and abilities, in addition to the credentials, certifications, training and experience that match the needs of EGACE. All teachers hold valid credentials for their subject area issued through the California Commission on Teacher Credentialing (CCTC). These include Preliminary or Clear Designated Subject Adult Education Credentials. EGACE also hires, on a part-time basis, EGUSD K-12 teachers who hold Professional Clear Single Subject or Multiple-Subject credentials. A full-time certificated staff member is assigned as a resource teacher to provide additional support for ASE and ABE teachers and students. All hiring goes through EGUSD’s Human Resources department, and staff are required to meet the district’s guidelines before they are recommended to EGACE.

Professional development is a priority within EGACE, and is a combination of both external input and internal processes. The administration budgets for monthly department meetings, pays for conferences, and/or provides release time. The ABE/ASE department has structured its monthly meeting into Professional Learning Communities, one of which focuses on issues in the high school diploma program and the other on the GED. This collaborative effort is organized to increase student learning by identifying the best practices or research-based instructional practices that address student needs. It is a data-driven process through which student improvement is measured and plans are made for program improvement.

EGACE staff relies on key organizations such as the California Adult Literacy Professional Development Project (CALPRO) and the Outreach and Technical Assistance Network (OTAN) to stay abreast of current trends in adult education and identify program needs and changes. EGACE sends a significant number of instructional staff to the annual CASAS National Summer Institute. EGACE staff are also involved in local, state, and regional events of professional organizations such as the California Council for Adult Education (CCAEE).

EGUSD Table Notes: The data in Tables 1.1A and 1.1B indicate the number of total enrollees in the ABE and ASE programs. However, the number of total enrollees does not reflect the number of students who attended at least 12 or more hours of class.

Folsom Cordova Unified School District

Folsom Cordova Adult School (FCAS) offers options for adult students to fulfill the requirements for a high school diploma or High School Equivalency Test (HiSET) certificate. The program is open entry and open exit. Students can access the FCAS website for information about classes and enrollment. They register in person by

submitting an enrollment form, and students entering the high school diploma classes also submit prior high school transcripts. Then they receive a date to return for a CASAS pre-test before they enter a class. CASAS scores help determine a student's educational skill level (scores are shared amongst staff and used to guide instruction and program effectiveness). Depending on class availability, the student can start as early as the next day or the following week.

Folsom Cordova Unified School District serves Sacramento County, one of six counties in the Greater Sacramento region. Sacramento County is a densely populated and diverse community. Its student population is drawn from mostly Rancho Cordova. Data from the American Community Survey and U.S. Census showed that Rancho Cordova residents experience greater needs than the rest of Sacramento County: approximately 17% live below poverty level; nearly 14% receive public assistance/Food Stamps; 10% are unemployed; and 20% of those unemployed had less than a high school diploma. Approximately 17% of residents 18-24 years old and 14% of those 25 or older do not have a high school diploma (WASC 2014).

Assessment is a major tool in the improvement process for FCAS. Student outcomes, measured by CASAS, demonstrate the degree to which FCAS is teaching to the current expectations of the state and employment community. Initial assessment and progress is measured with CASAS. The initial test at orientation evaluates reading and math. Once the student enters his or her classroom, the teacher will also assess using the CASAS subject-specific tests. After 40 hours of instruction, and finishing the subject-specific course, students take a post-test in reading and math. Student assessment is ongoing. In addition to CASAS, teachers use formative assessments to evaluate daily lesson effectiveness in the classroom, and summative assessments for high stakes tests that gauge student ability on Chapter tests, Unit exams, the California High School Exit Exam (CAHSEE), or the HiSET.

Test scores (CASAS & Chapter) are used as indicators for student achievement/course completion along with learner outcomes (post secondary transitions and job placement). Student Learner Outcomes are the outgrowth of California State Education Standards and are posted in each classroom and Student Handbook. Outcomes are written so that students understand what each outcome means, and teachers explain outcomes in the simplest terms so that lower-English-proficient students can understand them.

Assessment tools include CASAS assessments. The scores are used every 40 hours of instruction to show progress. FCAS consistently assesses schoolwide classroom and individual student data to aid in continual program improvement. This cycle of assessment, data review, planning, and implementation ensures a continuous high level of program quality for the school.

Some of the unique features of the program/services that help address adult learner needs include day and evening class schedules that support student availability and flexibility. We also have intervention resources to help those who are struggling, like math support using Renaissance Math, STAR math assessments, CAHSEE support for math and language arts, Apex literacy advantage courses, and one-on-one

student/teacher meetings. FCAS has an on-site educational counselor, as well as supportive services from the Sacramento Employment Training Agency (SETA) for those who qualify.

Evaluation of program adequacy and quality is ongoing. Some of the FCAS protocols are: student and teacher surveys, administrative observations, staff meetings, advisory committee meetings, or Professional Learning Committees (PLCs) working in teams to analyze where there is need for program improvement. Other progress goals are observed: Core performance survey results, CASAS payment points, analyzing school data, HS Grades/Completed courses number of completers, EL Civics completers, and number of Graduates.

Determining program effectiveness is paramount to the success of our school and the achievement of our students. It is what guides our practices to ensure we meet the goals and the mission of our school, as well as student achievement goals. Program effectiveness is evaluated on a regular basis through a variety of measures. For example, we use data analysis to measure student outcomes and the results guide how we implement best practices. Program effectiveness is also determined by student persistence data, walk-through observations to analyze the vitality and energy in the class, test score data, and the number of graduates and completers. The data demonstrates that students who attend the FCAS make educational gains. According to our student surveys, 95.7% of our students responded that they are applying what they are learning, and 92% indicated their class work is demonstrating and supporting literacy. Student survey results indicate that 94.8% are happy with the overall educational experience we provide (WASC 2014).

FCAS hires highly qualified teachers. All ASE instructors hold either an Adult Basic and Adult Secondary Education teaching credential, or a K-12 single subject or multiple subject teaching credential. The years of teaching experience range between 5 and 30.

Professional learning opportunities for program instructors are offered throughout the school year. Through organizations such as CCAE, CALPRO, CATESOL, OTAN, and CASAS, teachers have access to workshops and conferences that ensure they are always current with the most recent research and classroom practices. Teachers also have team planning time to assess data, update course outlines, and refine curricular needs and materials to ensure that they meet with the current student learning outcomes and standards. With the implementation of Common Core, our diploma program is transitioning to FCUSD-approved Common Core curriculum that is being developed by our sister school, Walnutwood High School.

Diploma teachers can participate in weekly professional development/ curriculum design with the staff at Walnutwood High School. They also have access to all district-sponsored professional development opportunities. Our HSE teachers will be sent to professional development /training opportunities regarding the new GED/HiSET tests as they are available.

Galt Joint Union High School District

Galt Adult Education offers a self-paced GED course that utilizes computer-based assessments as well as traditional textbook learning to prepare students for the new 2014 GED test. Students will focus on mathematics, English, social studies, and science and will take computer-based pre-assessments which will help in preparing them for the GED test. Students in this course must take the GED test within six months of enrollment.

Los Rios Community College District

The four Los Rios community colleges within the Capital Adult Education Regional Consortium (American River College, Cosumnes River College, Folsom Lake College, and Sacramento City College) provide credit, non-degree applicable basic skills courses in English reading, English writing, and mathematics. The colleges do not offer noncredit or enhanced noncredit basic skills courses, or classes required for a high school diploma or high school equivalency certificate. Students are placed into the college courses based on results from assessment tests using multiple measures. The assessments are provided free of charge to potential students at each college, and the placement results are portable to any college within the Los Rios District. The courses are designed to prepare students for college-level course work and are available in traditional lecture courses, as well as some open entry/exit lab modules, which allow students additional practice of specific skills.

In addition, some colleges offer courses that emphasize contextualized and/or acceleration strategies. The courses' curricula meet required community college Title 5 curricula standards and are taught by professional faculty who meet state minimum qualifications for their disciplines. Students whose placements indicate they are not ready for the lowest level credit, non-degree applicable basic skills college courses may be referred to available adult education courses or library literacy courses. Underprepared students may also be referred to free online tutoring/refreshers courses such as Khan Academy for skill building.

Natomas Unified School District

The Natomas Unified Adult Education (NUAE) program offers a non-accredited high school diploma program for adults 18 years and older. Adult high school diploma classes meet twice per week for 3 hours, and the curriculum is largely independent study with instructor support using a combination of textbooks, workbooks, and online resources. Students must earn a total of 180 credits and pass the CAHSEE in order to receive their diploma. Current high school seniors can also take concurrent courses to make up credits and graduate on time with their class. The high school diploma program is free.

NUAE program also provides elementary basic skills and secondary courses required to pass the GED. The primary objective is for students to learn basic literacy and numeric skills and enable adults to pass the GED test. Adult high school GED classes meet

twice per week for three hours. The course curriculum includes using a combination of textbooks, workbooks, and online resources. To provide additional language support for English learners, a bilingual instructor is designated for one section of the GED courses.

Potential students enroll in the Natomas Adult Secondary (ASE) program by completing an application. Applications are available through the Adult Education office, school sites, and the district office. If the class being requested is a GED or high school completion class, transcripts must be included with the application. Once an evaluation of the transcripts takes place, an advisement session occurs. Students are then scheduled for a placement exam or placed on a waiting list. Prior to placement in courses, students complete a CASAS pre-test in reading and/or math to ensure placement into the program is at the appropriate level to meet their individual needs. Students must score a minimum of 235, advanced basic, on the CASAS pre-assessment to proceed in the program. Students who do not score above 235 on the CASAS pre-assessment are referred to neighboring Adult Basic Skills (ABE) programs that are better able to meet the lower basic skills needed.

NUSD serves a diverse population in its ASE program, which include adults 18 and older who:

- Dropped out of high school
- Are former foster youth
- Were pregnant or became parents while in high school
- Are not able to retain employment because they lack a GED or high school diploma
- Are applying for the Dream Act
- Are NUSD juniors or seniors in jeopardy of not graduating (concurrent enrollment)

Student progress is measured in the high school completion program by course completions and credit earning, testing through APEX (online distance learning) state standards unit exams, and through frequent assessment in GED using GED practice exams in each of the four subject areas.

The Natomas ASE program offers evening classes every Tuesday and Thursday. This allows for our students to attend classes outside of the regular workday. Additionally, through the use of APEX we are able to simultaneously offer a greater variety of classes to meet the specific needs of our students. Students complete coursework one course at a time, in a self-paced manner, with the support of the instructor.

All students are monitored directly by instructors while formal assessments occur. Implementing CASAS e-tests (online testing) for GED preparation class enables both students and teachers immediate feedback and will be a more efficient use of instructors' time. By using the APEX online high school courses, we are able to offer a full range of high school classes without the cost associated with a larger staff that would be needed to provide a full range of courses. Forty-seven percent of students that

have passed the CAHSEE prior to entering the high school completion program earn their high school diplomas.

NUSD measures ASE achievement through examples such as the number of students who complete the GED Preparation course and have demonstrated readiness for the GED exam through GED practice tests, students self-reporting passing of GED test, student progress as measured through performance on APEX assessments toward credits, student credits towards completion of diploma, and the number of students that graduate high school.

All instructors have met the CCTC requirements for instruction, hold the appropriate teaching credentials, and have a minimum of 8 years of experience teaching adults. Currently, there is not a structured opportunity for designated collaboration in place. Staff meetings are held on an as-needed basis, several times a year.

Sacramento City Unified School District

Sacramento, the capital city of California and seat of government of Sacramento County, is the sixth-largest city in California with an estimated population of 477,892 in 2010. In 2002 *Time* magazine named Sacramento as America's Most Diverse City. The 2010 United States Census reported that the racial makeup of Sacramento was: 45% White, 17.8% Asian, 16.6% African American, 11% other races, 7.1% two or more races, 1.4% Pacific Islander, and 1.1% Native American. 9.8% of Sacramento city residents have less than a 9th grade education (U.S. Census). An estimated 230,000 adults in Sacramento are in need of help to improve their reading and writing skills. Of those adults who are unemployed, 75% have reading and writing difficulties. According to the National Institute for Literacy, 20% of the adults in Sacramento have difficulty with reading, writing, and computational skills necessary to function in everyday life.

Sacramento City Unified School District (SCUSD) serves the city of Sacramento. SCUSD is the 11th largest school district in California. Established in 1854, it is one of the oldest in the western United States. SCUSD serves 43,589 students on 72 campuses. SCUSD's student population reflects the city's diversity: 36% Hispanic or Latino; 18.3% Asian, 16.3% African American; and 19% white. About 7% of students are of two or more races or ethnicities. Residents within SCUSD speak more than 40 languages; 36% of Sacramento residents speak a language other than English at home while 21.7% of students at SCUSD are designated as English learners. Adult English language learners with limited literacy often have little or no formal schooling in their native language. As a result, they need focused instruction to help them increase their reading, writing, and oral proficiency in English (Ellis, 2005). Over 18% of Sacramento residents live below poverty level and 75% of SCUSD students participate in the federal Free and Reduced Lunch Program. Poverty breeds illiteracy by forcing children to drop out of school to work, and these illiterate people are forced to stay on the lowest levels of the work force and thus remain in poverty. Hence, illiteracy in turn reinforces poverty, and poverty is cyclical in families.

According to the National Institute for Literacy, 20% of the adults in Sacramento County have difficulty with reading, writing, and computational skills necessary to function in everyday life. Stephanie Allen, literacy and homework center supervisor for the Sacramento Public Library, reports that about 13% of the adult population in Sacramento County—roughly 140,000 people—is at a below-basic or basic reading level. When you add in those that are at an intermediate level (they can read but improvements are needed for higher-level critical thinking), that number jumps to 20-25 % of the adult population, or close to 250,000 adults. “Adult literacy is a big problem in Sacramento County,” Allen said. “It’s a big problem in California. It’s a big problem nationwide.”

Sacramento businesses are struggling to find qualified hires in sectors that business leaders say are key to the region's economic recovery. The reason, according to a survey by national nonprofit business group America's Edge, is an ever-widening "skills gap" in Sacramento and statewide. Fewer and fewer workers have the technical and "soft" skills needed to compete in the marketplace, the group concludes. Soft skills include communication and critical thinking. Nearly half of the state's available jobs require "middle skills" – a high school education, but not a four-year college degree. Less than 40% of workers have the training needed to fill the positions (*source: sacbee.com, 5/26/11*). The increase of low-income, first generation students and immigrants requires a need for basic skills education, specifically literacy, which delays the flow of potential workers into the work place.

According to the Literacy Foundation, the following are the most frequent causes of illiteracy in adults: Parents with little schooling; doing badly at or dropping out of school—many have not completed high school; difficult living conditions, including poverty; learning disabilities, such as dyslexia, dysorthographia, etc.; and raising of criteria for hiring and technology in the workplace. Adults aged 40 and over with low literacy skills have the distinction of belonging to generations for whom there were attractive job opportunities despite a lower level of schooling. They have always worked in the same place, founding their families, and thus have never felt the need to return to training. With the closing of many companies over the past few years, especially in the manufacturing and primary sectors, these people have found themselves out of work, and are often unable to find a new job, because they have difficulty reading and writing and lack the necessary skills to meet current market requirements.

Of adults in Sacramento who are unemployed, 75% have reading and writing difficulties. Nearly 10% of Sacramento city residents have less than a 9th grade education (*US Census 2007*) while 18.5% of residents over 25 have less than a high school education. Sacramento City Unified School District’s dropout rate of 11.5% in the 2011-12 school year is just below the Sacramento County rate of 13.6%.

Adult Education has been a part of the Sacramento City Unified School District’s public education program since 1872, providing 142 years of service to the Sacramento community. The adult education program before flexibility had grown to include day, evening, and Saturday classes, which meet the needs of the total community. Classes were held in a variety of school and non-school locations throughout Sacramento. The

ESL Programs at the Charles A. Jones Center offer leveled classes for foreign-born students to learn English for everyday life in the United States. Students learn life skills, grammar, reading, pronunciation, listening and speaking. Adult Basic Education courses are designed for English-speaking adults who wish to improve their basic skills in the areas of mathematics, reading, writing, and computer literacy. Completion of these classes helps students develop their academic skills for a successful transition into high school completion, GED, community college, or career training.

SCUSD has not had to recruit students for adult education programs and easily fills classes due to a high demand. That being said, SCUSD Adult Education classes are advertised on the district's website (<http://www.scusd.edu/adult-education>). Brochures and flyers are also placed at all of the One-Stop Centers in the Sacramento area and taken to all job fairs held in the area. Classes are open to all adults 18 years of age or older who meet certain prerequisites and can profit from instruction. According to SCUSD's Board Policy, "district programs and activities shall be free from discrimination based on gender, sex, sexual orientation, race, color, religion, ancestry, national origin, ethnic group identification, marital or parental status, physical or mental disability, age, or the perception of one or more of those characteristics. The Board shall promote programs to eliminate discriminatory practices in all district activities."

Sacramento City Unified School District (SCUSD) offers two Adult Basic Education (ABE) classes and two High School Equivalency (HSE) classes at one site. 329 students were served in 2013-14, which is a considerable decrease from the 4,803 served pre-flexibility. Classes meet five days a week for three hours a day. Students currently pay \$50 per semester to enroll.

ABE courses are an option for students whose scores on the CASAS fall below a score of 236 (below 9th grade.) Enrollment in an ABE class provides students the opportunity to improve basic reading, writing, and/or math skills while preparing to advance to the ASE program in which they can earn a High School Equivalency (HSE) certificate or enter Career Technical Education (CTE) training, or enter college or postsecondary training. ABE classes are suited for adults who have reading and math skills below 9th grade. These students may or may not have a high school diploma or a GED, but lack the academic and work-readiness skills to move into postsecondary education, training, or employment.

Students work in the classroom under the facilitation of a credentialed teacher and at home. ABE instruction assists learners in the remediation of their basic skills and helps prepare them for high school completion. Performance targets for ABE include significant gains on the CASAS test level completion/advancement indicating persistence in the program.

HSE courses are an option for students who score a 236 or above on the CASAS. In this program students are pursuing a high school equivalency certificate. Through the HSE program, SCUSD provides test preparation courses, which provide direct instruction in combination with computer-based instruction. HSE students are continuously assessed using practice exams in each of the four subjects (Language

Arts, Science, Social Studies, and Mathematics) to gauge readiness for the actual exam. In 2013-14, SCUSD ceased offering the GED test. The district is now in the process of implementing HiSET offered by Educational Testing Service (ETS) and hopes to begin testing with paper-based testing in September.

San Juan Unified School District

San Juan Unified School District Adult Education (SJAE) offers a high school diploma, GED, or ABE instructional programs. SJAE serves students both employed and unemployed. Specifically, SJAE students include those in the CalWORKs program, those who identify themselves as Single Parents, Handicapped, Low Income, Refugees, Veterans, Learning Disabled, those who receive SSI and/or Food Stamps, and those in Rehabilitation and other similar categories. Approximately one-half of our current students identify themselves in a category, which puts them at a disadvantage in society.

The elementary and secondary basic skills courses are open enrollment. Students enroll in person on campus. Students are given the CASAS Reading and/or CASAS Math assessments depending upon student academic goals. For high school diploma students, transcripts are evaluated by a certificated counselor. Registration takes place once a week. Signage on campus leads students to the appropriate room where a general orientation is given by a certificated teacher. Assessments are administered.

Placement in a program is based on individual student goals and academic level. Placement of students is determined during registration/orientation based on student interviews, transcripts, and assessments. Students are assessed using the CASAS and teacher-designed assessments. In general, students must attain a minimum score of 230 on the CASAS 187 Reading assessment to be eligible for the high school multi-subject classroom. The student must score 236 on the CASAS 187 Reading assessment to be eligible for Independent Studies. Exceptions can be made based on documentation that supports the likelihood that the student will benefit from the high school diploma program. Students wanting a GED are placed in a multi-level ABE/GED classroom. Otherwise, students are enrolled in the ABE instructional program with the option to transfer to the high school diploma program once their academic skills have improved as evidenced by CASAS scores.

Instructional delivery for the high school diploma program is currently offered via independent studies and multi-subject classroom settings. In both, the teacher facilitates instruction, and the student is expected to instigate inquiries to develop academic growth. Classrooms have computers available to all students. There is also access to a computer in the student lounge during times when the classroom is not available. Additionally, teachers have Smartboards, presentation stations, document projectors (e.g., ELMO), and overhead projectors to enhance instructional presentations.

The curriculum is aligned and incorporates California state standards and Common Core standards. Instructors use the teacher-designed Student Assessment and Goals (SAG) form for each student. This form identifies short-term and long-term student

goals. For instance, short-term goals might be to complete 15 credits within 18 weeks. The long-term goal might be to enroll in the Medical Assistant program after earning a high school diploma. The form also provides CASAS scores and prescriptive suggestions for instruction based on the CASAS analysis of test items.

Program adequacy and quality have been documented based on CASAS learning gains, number of students passing the CAHSEE, number of high school diplomas earned, number of GED certificates earned, and anecdotal communication from students. This data indicates that the program is currently successful in helping students attain the immediate goal of academic certification. Anecdotal evidence is limited to voluntary student response regarding transition to employment or higher education.

The most recent data based on CASAS assessments, the 2012-2013 federal tables for Persister, show that learning gains were recorded in every program, at every level. Each program completing a level included: ABE Beginning Literacy 60%, ABE Beginning Basic 87.5%. SJAE exceeded the state averages in all areas except ABE Beginning Literacy. The ASE educational completion levels far exceeded the state average: 290 students with ASE high school completion and 70 high school graduates last year (2012-2013).

Since 1957, SJAE has helped over 8,500 students earn a high school diploma. 11th-12th grade district high school credit recovery (concurrent) helped 215 district high school students grades 11 and 12 stay on track to graduate in 2012-2013.

Since 2002, the program has awarded over 2,800 GED certificates. 64 students graduated in the 2012-2013 school year with a high school diploma. Most of those students went on to community college, enrolled in a certificate program, or found employment. This represents approximately 30% of San Juan Unified School District's (SJUSD) high school students. In addition, 165 GED certificates were awarded. The federal table 5 Core Follow-up Outcome Achievement indicated that 72% of participants in the cohort achieved their outcome of a high school diploma or a GED.

The ABE/ASE department has partnered with community agencies such as the Department of Human Assistance (CALWorks) apprenticeship programs, military recruiting offices, and the community college system to support students who need basic education skills, GED preparation, and high school credits/diplomas.

Each student has a portfolio with a tracking sheet that lists assignments and scores indicating individual progress. High school completion students must satisfactorily complete all assignments and tests related to the course of study. In addition to quizzes, tests, essays, projects, and oral discourse, paired CASAS scores indicate student learning gains. Class work and participation in directed instruction help evaluate a student's progress. Students passing the California High School Exit Exam (CAHSEE) are an indicator of progress, particularly for those who have attempted and previously failed the exam.

Assessment tools for high school completion students include:

- CASAS post-assessment given approximately 4-6 weeks after initial assessment. CASAS Student Competency Report outlines student weaknesses and dictates areas of instruction on which to focus.
- Publisher- and teacher-created quizzes related to course materials—given at completion of a study unit.
- Writing samples—given at least weekly.
- In addition to the CASAS test, ABE students are given a basic skills math test to determine where to begin their program.
- Based on an initial writing sample, students may be given an Adult Reading Inventory (ARI) to determine grade equivalency in reading.
- Most textbooks have a pretest with an item analysis chart to determine which parts of the book will be assigned.
- Official GED Practice Tests (online) recommend what test-takers should study to improve their scores. Their recommendations are aligned to many of the new 2014 GED materials and many online/software programs as well.

High school completion students have the option of a classroom setting, independent studies, or a blend. ABE and GED students have the option of a classroom, distance learning, or a blend. Coursework is individualized for pacing and can be adjusted to accommodate learning styles. The ABE and GED program offers group instruction during the last 45 minutes of each class. Almost all students participate. These students benefit not only from direct instruction, but also from the interaction with their peers. The individualization of high school completion coursework empowers students to learn how they learn. While the students are driven by external motivations provided by the instructor, the students also develop internal motivation by realizing their individual gifts and potential.

High school completion teachers are highly qualified, certificated in good standing. They each have over 20 years of teaching experience. Teachers are encouraged to participate in self-paced online webinars and face-to-face professional development offered by OTAN. With the budget being drastically reduced, there is no formal collaboration and planning time. Informal meetings during lunch and before or after school are voluntarily held among faculty and staff. E-mail communication is also essential for collaboration.

Twin Rivers Unified School District

Twin Rivers Adult School (TRAS) offers programs to meet the needs, learning styles, and interests of adult learners from diverse populations who seek to accomplish personal, educational, and vocational goals in order to become responsible and productive members of society. Adult Basic Education (ABE), GED, High School Completion (HSC) and English as a Second Language (ESL) give students assessment tests before starting classes to ensure placement at the appropriate program/level.

The Adult High School curricular map has more flexibility. There are four major areas that California requires students to learn, including English, Math, the Natural Sciences, and History and Social Sciences, as well as enrichment or additional learning in areas such as art or career fields. Based upon a student's previous learning, they will have a curriculum tailored to their learning needs; if they made sufficient progress previously in high school, they would be generally earning credits and getting a diploma. If they do not have enough previous learning, they would study specifically for the GED.

TRAS' HSC (ABE and GED) classes meet from 8:15 a.m. to 8:00 p.m. most days, allowing students up to 9 hours per day of instruction or 40.25 hours per week of instruction during the school year from around mid-August to around mid-June. An abbreviated 5-week summer schedule is offered during July. The instructional schedule allows for the first post-test after 40 hours of instruction and then additional post-tests after another 70 hours or more of instruction. Class hours listed above are of more than sufficient intensity to make learning gains. If students are not available to come to class, Independent Study and online classes for High School Completion programs are available, depending upon the student's score on the assessment test.

Washington Unified School District (WUSD)

Washington Adult Education offers a non-accredited high school diploma program for adults 18 years and older. Adult high school diploma classes meet once per week for three hours, and the curriculum is largely independent study with instructor support using a combination of textbooks, workbooks, and online resources. Students must earn a total of 180 credits and pass the CAHSEE in order to receive their diploma. Current high school seniors can also take concurrent courses to make up credits and graduate on time with their class. There is a \$25 registration fee for the high school diploma program, and students may take other classes in the term for which the registration fee has been paid.

Students enroll with an Entry Form when the student first comes in to complete the registration process. An Update Record provides important information about a learner's accomplishments in our program, including process, instructional level at the time of update, and goal attainment. This same Update Record form is used when a student exits the program. It determines the reason why the student was exited. In many cases students do return and are encouraged to do so. Secondary Education classes have a physical capacity of approximately 24 students per class. Every subject implements the CASAS competencies addressing the essential life skills for students. Every student is able to demonstrate adequate progress on the standardized assessments (pre/post-tests) after completing 40 or more instructional hours.

Secondary Education classes have a physical capacity of approximately 24 students per class. Every subject implements the CASAS competencies addressing the essential life skills for students. There is a high percentage of our students who are entering the program and are not employed and come from a limited social disadvantage background.

Last year, 52% of the students in the program achieved their educational result desired, ranging from a diploma to entering post-secondary education. The immediate goal is to provide students who haven't graduated high school the opportunity to gain a diploma, which is the stated goal of at least 60% of WUSD students, a majority of whom are between 18-24 years of age. However, more important WUSD is providing instruction to students in order to move them to a point where they have readiness for their future academic and career opportunities.

About 69% of the students entering the program are not employed, and 81% of students entering the program are characterized as being at a low instructional level in language arts. Curriculum and Instruction is the cornerstone of the adult education program. By delivering first class instruction, Washington Adult School has made huge improvements in the instructional program. All teachers are credentialed in their subject matter. In addition, teachers include life and professional skills to ensure all learners are successful workers and community members. These teachers vary in life experiences and have had success working with at risk students and incorporating literacy into instruction. WUSD have a total of five teachers and one half time clerical support staff in the Washington Adult School. The philosophy of Washington Adult School is that professional development and continuous learning of our staff is critical to student success. Life is a continuous learning process, and this is what we promote to our students. The clerical staff and administration have also attended 16 hours of workshop training at the Sacramento County Office of Education for Tops Pro and accountability reporting to help make sure our data integrity and reporting is accurate and done on a timely basis. Moreover, the clerical staff has been consistently participating in the webinars related to adult education developments. Lastly, WUSD collaborates with the CASAS staff individually on a continuous basis to make sure WUSD is using the most proper and efficient means to track and report student progress data.

CAERC Partners

California Human Development

California Human Development (CHD) is a private, non-profit, community-based human services agency with a wide range of programs and services throughout northern California for families and individuals who seek greater self-sufficiency and improved lives. Through the Farmworker Services and Workforce Division and with funding from the Department of Labor, La Cooperativa Campesina de California as a subgrantee of the Employment Development Department, the Sacramento Employment and Training Agency (SETA) and in collaboration with the Galt Joint Union High School District, CHD is able to provide training and employment services at its CHD Sacramento Works Training Center located at 150 Camellia Way, Galt, CA 95632.

ABE/GED – CHD, in collaboration with SETA and the Galt Joint Union High School District, provides instruction to prepare individuals for the GED exam. Students are referred to the training center after completing an orientation and intake process with their SETA job coach. The CHD GED instructor performs a pre-test to determine strengths and weaknesses and develop an instruction plan for the student. The class is

planned for 250 hours of instruction, but the student is welcome to take each test as they are deemed ready to pass. The instructor is bilingual Spanish/English and is able to assist students in both languages. Some referrals for the class also come from our Farmworker Services program that serves agricultural workers and their dependents. These students may come with very little formal education and will need additional assistance, while others may have completed some of their education in their native country and with little assistance and instruction may be able to pass and attain their GED that will open doors to better jobs and greater opportunities. All programs and training offerings are focused on assisting individuals to find work or better work. To that end, CHD ensures that all students are provided with job search instruction and job referral assistance. The Employment Development Specialist works with the students prior to their completion of training to make sure that they are prepared for employment.

El Dorado County Office of Education

Under the auspices of EDCOE, the Charter Alternative Programs operate a wide range of programs and services for adult learners. The EDCOE regular Adult Ed (AE) program operates three evenings per week, providing instruction at three different campuses with a total of eight hours of service. Adult learners can participate in for-credit classes geared towards a WASC-Accredited HS diploma or non-credit classes that will prepare them for the GED assessment.

Classes occur on Mondays at White Rock Village in El Dorado Hills, CA from 4:00-5:00 p.m. and at EDCOE, which is located in Placerville, CA, on Tuesdays from 5:30-7:30 p.m. and Thursdays from 4:00-5:00 p.m. One additional class operates on Wednesdays on the eastern slope of the Sierras in South Lake Tahoe from 5:00-7:00 p.m. Additionally, an adult learning lab is currently being staffed to provide up to 12 hours of support for adult learners who can independently work toward completion of a HS Adult Ed diploma and/or prepare for the GED. EDCOE also operates two ESL evening classes designed to help students develop English skills. While the regular AE program serves over 60 learners, the demand for classes creates a wait list from 4-6 months to enter the program.

EDCOE has partnered with the Community Corrections Partnership (CCP) to provide educational services to the Placerville Jail, South Lake Tahoe Jail, and the Community Corrections Center (CCC) that operates at the Probation Center in Shingle Springs, CA. The CCP programs currently have 88 students enrolled at the Placerville Jail, 30 students at South Lake Tahoe Jail, and two students at the Probation CCC. The SLT program has been run by EDCOE for 18 years but only recently began to offer a HS diploma track to complement the GED basic skills classes. The programs allow for credit classes ending with a HS diploma and/or a GED, vocational opportunities, and life/employment support classes. The CCC is a relatively new program and is expected to serve 26 students at capacity.

EDCOE also has a partnership with the Shingle Springs Band of Miwok Indians to provide educational services to tribal members on the tribe's Rancheria. Students can work towards a HS diploma via for-credit classes and/or the GED. Vocational

opportunities are being explored and developed. All Adult Education for-credit diploma classes are WASC accredited.

EDCOE has recently opened a Pearson Vue Testing Center which offers opportunities for students to take the online GED and a wide range of other professional certification tests.

EDCOE Adult Education delivers elementary and basic skills instruction in three distinct educational program areas: Adult Basic Education (ABE) for individuals who are below GED level; GED preparation and testing; and a WASC-accredited high school diploma program (which resulted in 35 graduates earning their diploma in the 2013-2014 school years). EDCOE served a total of 344 students in these three programs (exclusive of "inmate education"). The CCP programs served 238 students in 2013-2014. The CCP program did not operate for the entire 2013-2014 school year with the exception of the South Lake Tahoe Jail. The Placerville Jail program began in March 2014, and the Probation program recently accepted its first adult learner. The Rancheria served 25 learners in 2013-2014.

Potential students contact the EDCOE office and typically apply to be on a wait list anywhere from 4-6 months. Students are contacted once there are openings to enroll and start the program. Program reviews take place at regular intervals, and additional evaluation tools are being put in place. Student progress has historically been measured with course completion and credits awarded and/or successfully completing the GED. Indicators for student achievement/course completion are successful completion of the course. Current assessment tools are limited, without a formal assessment across all programs, but individual teachers use an online suite of software programs (GED Academy, Odysseyware, ALEKS) where students are tracked on an on-going basis. Teacher-developed assessments are also utilized. EDCOE is implementing the use of web-based tools across programs to serve students more efficiently and to allow for students to generate credit at an individualized pace.

EDCOE has developed an articulated professional development program to enhance the skills and abilities of staff in working with adult learners and their unique needs. Staff from all programs meet on a regular basis for professional development. Because of the nature and diversity of the programs, including the relative newness of some programs, program evaluation protocols have been limited to date. The AE staff is currently working to design and implement additional evaluation tools and protocols.

The adult school program is WASC accredited. An articulated professional development program is in place to help the teachers develop and refine their skills as they relate to adult learners.

- EDCOE employs highly qualified, certificated instructors, and their education/experience is of a high caliber.
- EDCOE has put in place professional learning opportunities for program instructors. The CCP positions have defined mentor teachers who meet during designated collaboration and planning time.

- EDCOE has developed and is just opening a Pearson Vue Test Center, but the number of students to be served is still limited by the number of computers available and the fact that there is only one testing center location for all of El Dorado County. Testing services are not offered on the East Slope of the Sierra in South Lake Tahoe, although students may travel to the center.

Outreach and Technical Assistance Network (OTAN)

Housed at the Sacramento County Office of Education, the Outreach and Technical Assistance Network (OTAN) is one of three California state leadership projects that support adult educators. OTAN is funded with federal money through a contract with the California Department of Education's Adult Education Office, and provides professional development and online resources to adult educators. In addition, OTAN offers support for technology integration and online collaboration, as well as assistance with implementation of distance learning. OTAN's constituents include adult education teachers and administrators at approximately 200 adult education agencies (including K-12 adult education, community colleges, literacy programs, and community-based organizations).

The academic year 2013/14 marks the sixth year that responsibility for distance learning in adult education has been assigned to OTAN. To provide perspective, in 2008/09, over 73,000 adult learners participated in distance learning, up from 56,000 students in 2007/08. In 2009/10, enrollment in distance learning decreased by 55 percent. The decrease was directly related to budget cuts resulting from 'flexed' funding. Flexed funding removed adult education as a categorical program and allowed school district administration to move funds previously earmarked for adult education to K-12. Although distance learning numbers decreased, there is still a need for professional development for distance educators as well as for the dissemination of research and information on the modality of distance learning. It is incumbent on California to heed research findings and move adult distance learning in the direction of online/blended delivery.

Sacramento Employment and Training Agency (SETA)

As the local Workforce Investment Board for Sacramento County, Sacramento Employment and Training Agency (SETA)/Sacramento Works, Inc. (SWI), provides policy, planning, and oversight for the local workforce development initiatives. SETA/SWI is a joint powers agency of the City and County of Sacramento, with over 30 years of experience in administering federal and state grants, serving diverse populations, coordinating data retrieval for federal and state-funded programs, and meeting the reporting requirements and performance goals of each funded program.

SETA/SWI transitioned from the universal access model of the one-stop career center system and rebranded as America's Job Centers of California (AJCCs) to a model that focuses on work preparedness and attainment of industry-recognized certificates, credentials, or degrees needed for specific job, occupation, or occupational group in one of the Occupational Clusters. Sacramento Works Training

Centers are geographically distributed throughout the County and work with the Sacramento Works Career Centers/AJCC to prepare low-skilled job seekers with the work preparedness and occupational skills necessary for “middle skills” jobs and career pathways.

To increase the number of students pursuing and receiving post-secondary education, the Sacramento Works Job and Training Centers recruit and provide outreach services to potential students throughout Sacramento County. Recruitment and outreach is conducted to individuals accessing services at each location, during workshops, recruitment events, and resource fairs, and through collaborative partners.

- TANF/CalWORKS students who have not graduated high school or possess sufficient English language skills are referred by the Sacramento County Department of Human Assistance to SETA's ABE/GED Coordinator who coordinates the enrollment process.
- TANF/CalWORKS recipients may also be recruited by the Sacramento Works Job or Training Centers and must be determined eligible by the DHA prior to enrollment.
- All other students attend an orientation at a Sacramento Works Job or Training Center, register for services at jobs.sacramentoworks.org, and get a membership card.
- The customer must provide proof of valid Right-to-Work (RTW) documentation, which may include Social Security documentation, age/birth date identification, and Selective Service Registration (if applicable).
- Customers who are Dislocated Workers, veterans, or eligible spouses of veterans must provide documentation of their status.
- Staff will provide customers with assistive technology and accommodations when needed and/or contact the SETA Disability Program Navigator to accommodate special needs.
- Students work with Coaches or attend Career Coaching Workshops to assess skills and develop a MAP (My Action Plan) to identify necessary training, and are then referred to a training program. Some students may need additional courses which develop skills in reading, writing, arithmetic, and speaking/listening in English. To ensure successful transition for the different levels of learners, these students will be enrolled in Adult Basic Education prior to advancement into GED/High School Equivalency prep class.
- Customers who need skill development/training and have demonstrated motivation are referred for enrollment into intensive services.
- In order to receive services, all customers must be registered in Sacramento Employment and Training Agency/Sacramento Works customer tracking system (jobs.sacramentoworks.org).

Demographics of service:

- CalWORKS/TANF recipients (Temporary Assistance to Needy Families)
- High School Drop-outs

- Low-income and disadvantaged individuals
- Workers dislocated from local companies that employ workers who have academic skills deficits and/or are high school drop-outs
- Veterans and the eligible spouses of veterans will receive priority if assessed in need of Adult Basic Education (ABE), High School Equivalency (HSE) prep class/General Education Development (GED), or High School Completion

Students are pre- and post-tested. Evaluations of progress are provided by teachers to Sacramento Works Job and Training Center coaches on a monthly basis. Teachers assign study materials to help students successfully pass the exams. Students also receive comprehensive case management to include, at the minimum, monthly check-ins during training with Job Center Coaches. Indicators for student achievement/course completion include attainment of a GED Certificate, HiSET Certificate, or High School Diploma.

The primary assessment tool used is CASAS, which includes a pre- and post-assessment designed to measure students' skill levels. Quizzes and assessments are part of the regular course curriculum. Frequency of assessment is dependent on student progress toward credential attainment. Students who pursue their GED will schedule GED Ready (practice) tests to determine exam readiness. Final assessments are the GED, HiSET or CAHSEE exams. Unique program features are the case management/coaching services provided, as well as the supportive services provided to ensure student success, typically not provided in mainstream Adult Education instruction. SETA also provides Wrap-around services for students as they progress toward completion of high school diploma or equivalent, ongoing coaching and case management, progression to career technical education, on-the-job-training, and job placement services.

Service providers are evaluated annually, and funding is based on performance. Performance outcomes include 70% attaining high school diploma or equivalency, 55% entering employment, 79% job retention, and average wage at placement of \$12.93 or higher. Quality indicators include completion of GED, High School Equivalency Test and/or High School Diploma, and employment status. All instructors must have a valid California Teaching Credential

SETA's adult basic skills and high school completion providers include:

- Center for Employment Training (10 slots)
- Sacramento City Unified School District (100 slots)
- Asian Resources, Inc. (100 slots)
- Elk Grove Unified School District (40 slots)
- Greater Sacramento Urban League (25 slots)
- California Human Development (20 Slots)
- Crossroads Diversified Services, Inc. (50 slots)
- La Familia Counseling Center, Inc. (30 slots)
- Folsom Cordova Unified School District (25 Slots)

Sacramento Food Bank & Family Services

Sacramento Food Bank & Family Services (SFBFS) offers GEP courses and Adult Basic Education (ABE) courses. The program is based upon individual learning plans; entry and exit is on an ongoing basis. Students must attend an orientation and take a preliminary assessment test. Orientations are held every Thursday at 1:00 pm. Once the student has completed the orientation and assessment, they are required to set up an appointment with the Program Manager to review the assessment and develop an Individual Learning Plan (ILP). As part of the intake process, they are required to set up an account on GED.com and to complete four units of Hands on Banking. At the same time, the student will develop a schedule for tutoring; he/she is required to attend a minimum of three two-hour sessions per week to remain in the program. Once these steps have been completed, the student is given material to complete for his/her ILP. SFBFS serves all adults, aged eighteen and older, who need tutoring for ABE, GED, or for any other purpose which would help the student achieve self-sufficiency and financial independence. No student is turned away; we do not require documentation of any kind. We have tutored students for the California High School Exit Exam and for the Armed Services Vocational Aptitude Test.

Unique program features include that it is a tutoring service based upon an Individual Learning Plan, not classroom setting, and that it is staffed by volunteers from all walks of life. The agency has tutors who are retired professors and teachers, but it also has social workers, lawyers and college students. SFBFS's requirement is that tutors have a passion for helping adults achieve their goals and that they have the ability to help students work through high school level work, including algebra, geometry, science, and social science. All services are provided at no cost to the client, and SFBFS has recently implemented a scholarship program to help students pay for the GED test.

Sacramento Job Corps

Job Corps is a federally-funded residential training and employment program administered by the U.S. Department of Labor. Job Corps provides comprehensive career development services to students including academic, career technical, social and independent living skills, career-readiness training, and support services. The program is intended to prepare income-eligible youth ages 16-24 to obtain and hold gainful employment in their area of study to pursue further education or training, or satisfy entrance requirements for careers in the military.

The Sacramento Job Corps Center is located in the Freeport area of South Sacramento on the former campus of the California Highway Patrol Academy. The Center serves 800 residential and non-residential students annually and has excellent facilities for student living, academics, and career technical training and recreation activities. There is an orientation to Sacramento Job Corps every Thursday morning 8:45 a.m. to 11:00 a.m. After the orientation, a student is given an appointment to return with documents to move forward. Space depends upon trade availability, completed background checks, and other information verified.

Sacramento Job Corps students can earn either a high school diploma or GED (if needed) and obtain career technical training/occupational certifications for entry-level jobs in the following areas:

- Heavy Equipment Operator
- Heavy Equipment Mechanic
- Ornamental Landscaping
- Cement Masonry
- Plastering
- Carpentry
- Heating, Ventilation & Air Conditioning (HVAC)
- Certified Medical Assistant
- Certified Nursing Assistant
- Medical Office Support
- Security Protective Services
- Pharmacy Technician (Off Center)

The Center's graduates have excellent opportunities for jobs because of the beneficial linkages and partnerships established with the business, civic, and nonprofit community and employers throughout the City and County of Sacramento. Sacramento Job Corps' students are contributing members of the community by participating in, and assisting with, city-sponsored events and activities, special events, volunteer opportunities with youth, senior citizens, and community-based organizations' assistance projects. For more information about the Sacramento Job Corps Center, visit the website at sacramento.jobcorps.gov or via phone at (916) 394-0770.

Job Corps is a two-year program; the average stay is between 9 to 13 months. If students do not have a high school diploma or GED, they can choose the one they want to obtain and staff assist them through the program. If they choose to attend College or advanced training, students can stay in the program for three years, or with advanced training they can have up to a six-month extension. To obtain their high school diplomas, students must complete their trade (considered the elected classes). Students can also obtain driver's licenses at the Center. If students have a high school diploma or GED, they can be in their trade all day as long as they TABE out or have at least 11th grade reading and math. If not they will continue having academic classes until they TABE out. They will be in academics for one week and then trade for one week on a rotation basis until they complete both. There is a Training Achievement Record (TAR), which needs to be completed by the student before completing the trade and signed off by both the instructor and the student. An onsite Disability Coordinator works with students who are identified with learning disabilities before starting the program, if possible. Accommodations are put in place for students with disabilities.

Sacramento Public Library

The Sacramento Public Library provides adult literacy programs. Adult learners schedule an appointment to complete a learner intake assessment with Adult Literacy staff. The assessment takes 60-90 minutes to complete. After the assessment is completed, adult learners are placed with a trained volunteer tutor. For this specific program, we serve adult learners at the most basic skill level, including those who are totally illiterate, up to pre-GED and GED level students. Student progress is measured by periodic evaluations given by tutors, and by review of monthly tutor reports submitted by tutors. Upon enrollment, adult learners are also required to complete a “Roles & Goals” form, on which they specify personal learning goals they would like to achieve. Student progress is also evaluated by progress made on achieving these learner-set goals. Student achievement is indicated in a variety of ways, including satisfactory completion of a curriculum series, achievement of learner-set goals, and a portfolio review of student work. Because many of the adult learners have had negative experiences with assessments in the past, the Sacramento Public Library relies on learner-set goal achievement and student portfolio review as opposed to formal assessments in most cases. Assessment is done on an as-needed basis.

Adult Literacy programs in library settings offer several unique features that help address learner needs. First, the library setting is comfortable and non-threatening for many of our adult learners. Second, the one-to-one, relationship-based tutoring works well for many adult learners who are not comfortable in a classroom setting. Third, adult learners are able to specify the location and time at which they are available for tutoring, allowing for much more flexibility than in a classroom setting.

Each Adult Literacy program which is a member of California Library Literacy Services (CLLS) must comply with organizational values, which dictate to a large extent how services are delivered, and which help ensure program quality. Program effectiveness is measured by achievement of learner-set goals specified by the adult learner on the Roles & Goals form required by California Library Literacy Services (CLLS), successful completion of one or more curriculum series, and portfolio assessment of student work.

All services are delivered by trained volunteer tutors drawn from the community at large. Potential volunteer tutors attend an initial 8-hour training conducted by an Adult Literacy Supervisor. Ongoing in-service trainings are held bi-monthly to provide continuing education opportunities. All adult literacy tutors work on an individual basis, at the time and library location of their choice, so opportunities for collaboration and planning are limited. However, tutors do have the opportunity to collaborate with other volunteer tutors at the bi-monthly in-service meetings.

Yolo County Library

The Yolo County Library’s Yolo Reads program offers literacy instruction for adults in Yolo County. The Yolo Reads program serves adults 18 years or older (or 16 years old and not enrolled in school). The program is intended for English speakers who want to improve their reading and writing skills. The process for enrollment involves calling the

Yolo Reads coordinator and scheduling a time for an in-person meeting and assessment of reading level.

Student progress is measured by a Roles & Goals form that is completed monthly. The number of goals that are achieved is reported in a mid-year and final report. Indicators for learner achievement include: regular attendance at sessions with the tutor; setting achievable goals; family support; and the ability to work on their own in addition to working with the tutor. The assessment tool—Roles & Goals—is turned in monthly by the tutor to the program coordinator. The program coordinator contacts the learner and tutor to discuss progress toward the goals and finds any resources that might be needed to achieve these goals.

The unique element of the Yolo Reads program (and all Public Library Adult Literacy programs) is the one-on-one tutoring. This relationship is very different than a classroom setting. It is more of a mentoring relationship, which is often important for adults who have not met with success in other learning situations. The program is also beginning to address the needs of parents of young children. If a parent has low literacy, it is a big indicator that the child may be at higher risk for low literacy. Thus, Yolo Reads is working with the California State Library Literacy program to identify adult learners with young children and introduce them to public library Early Literacy services, help them build home libraries, and encourage parents to read to their child(ren) every day.

The program's evaluation protocols include: WRAT 4 assessment for all incoming learners; a two-hour mandatory training for all volunteer tutors; monthly Roles & Goals report for each learner/tutor pair; mid-year and final report for the California State Library Literacy program; and a yearly budget report as part of the Public Library budget process. The program evaluations include: learner and tutor demographics; total number of learners and tutors; total number of hours donated; total number of Goals achieved by learners; and community participation in the form of program support.

The quality indicators for the Yolo Reads program include meeting community need (as measured by total number of participants and total number of people waiting to be matched with a tutor), meeting learner goals (as measured by the Roles & Goals monthly report), and partnerships with other organizations that have adults with basic adult education needs (Probation, Day Reporting Center, School Districts). The level of education and experience of the volunteer tutors varies. Most have college degrees, and many have experience as teachers or as volunteer working with literacy in similar programs.

All volunteer tutors are provided with workbooks, resources, extensive online resources for ongoing, self-directed learning, a network of peers, and technical support from both the volunteer coordinator and the California State Library Literacy Program. All volunteer tutors complete a required two-hour training. The benefits of the program enhancements are that the learner is successful in an area that helps the learner achieve a Goal in their personal or professional life. This can be helping a child with homework, reading a letter from a grown child, attaining a job or a better job, achieving

education goals such as going to community college, or voting on their own for the first time. This program also meets our community goals of breaking the cycle of illiteracy and poverty by helping parents become more literate.

Table 1.2 Notes: The Yolo County Library provides Adult Basic Education in the form of an Adult Literacy Program. The program has grown in five years from a low of five learners to a high of fifty-seven learners. The budget for the program has varied from \$29,018 to \$38,696 due to a variety of changes in staffing the program and variations in funding from grants and donations.

Yolo County Office of Education (YCOE)

Yolo County Office of Education serves and partners with Davis, Esparto, Winters, Woodland, and Washington (West Sacramento) school districts. The YCOE operates several different programs including county Special Education, Alternative Education, Head Start/Early Head Start, Career Technical Education, College and Career Transitions, Foster Youth and Homeless Youth Services, and English Language Learner Services. Through the coordination of these programs, YCOE has developed strong partnerships with Woodland Community College/YCCD, Yolo County Workforce Investment Board, Yolo County Department of Employment and Social Services, Yolo County Alcohol, Drug, and Mental Health, Yolo County Probation, Yolo County Sheriff's Department, Monroe Detention Center, and several businesses throughout the community.

YCOE has established braided funding from Federal, State, and local dollars that support short-term CTE programs for adults. Examples include the Certified Nursing Assistant (CNA) program where students attend class for 5 weeks, complete 55 hours and are prepared for the state certification exam. During the course students learn both through theory and hands-on clinical demonstration how to work as a CNA. The CNA program has a success rate of 98% passing the state certification, and 72% have become employed. Other students decide to continue their education and do not pursue a career at this time. YCOE coordinates short-term CTE programs in partnership with WCC in welding, alternative energies, and law enforcement. Students who successfully complete the short-term CTE programs have a higher transition rate to a 2-year or 4-year college as they have been introduced to college faculty and programs. Students from throughout the region attend the camp. Students in the short-term CTE programs have also been successful in obtaining employment. YCOE is working with Sacramento City Community College Deans in Davis and West Sacramento to implement similar short-term CTE programs.

YCOE operates the Einstein Education Center (EEC). EEC is a Western Association of Schools and Colleges (WASC) accredited alternative community school for students who want to complete their high school education at their own pace. Students at EEC are able to enroll from ages 16-19 and have until they are 22 to graduate. Students are successful at EEC due to the smaller learning environment, competency-based program, and inclusion of career technical education, community service, and

community college. Students who are not successful at EEC often transition to Woodland Adult Ed to complete their GED.

YCOE, in partnership with Sacramento County Office of Education, Yolo County Probation, Yolo County Sheriff's Department, and the Yolo County Day Reporting Center, has established a site-based GED prep program for AB109 clients and other clients on probation. The partnership is a new venture for YCOE for the 14-15 school year. Clients work with the Yolo County Library Literacy program and are tested for English and Math proficiency prior to being referred to the GED instructor.

In the past, YCOE had several courses for adults, but when ROP funds were put into a flexible category the adult courses dwindled. Examples of prior courses include partnerships with Yolo County one-stop to offer computer application courses. Careers with Children, construction technology, and landscaping, are examples of other courses. A GAP would be the elimination of funding to be able to offer additional short-term CTE courses for students.

Currently, YCOE also partners with the local emergency shelter to offer Serve-Safe training and certification in the shelter's industrial kitchen.

YCOE Educational Services information can be found at www.ycoe.org.

Apprenticeship: YCOE currently partners with Northern CA Construction and Training (NCCT) to refer students to their pre-apprenticeship program. They have locations in Sacramento, West Sacramento, and Woodland. The program assists students with learning the skills necessary to be a successful laborer. NCCT partners with the local 185 laborers union to place graduates with entry-level positions throughout the region. They also work with the pipefitters' and carpenters' unions. A major draw for students is free training and often NCCT is able to work with the union to waive the enrollment fee. We do not operate apprenticeship programs but often partner to list up students with information and resources. Information about NCCT can be found at www.ncct.ws.

Program Area 2: Adult English Learners

CAERC Members

Amador County Unified School District

Amador Adult Education offers English as a Second Language (ESL) courses as needed. The need for ESL programs is limited due to the small population of English learners. Amador County's total population is 37,764 with 2.8% of the population who are five years or over who speak English less than "very well."

Center Joint Unified School District

Center Adult School offers courses in ESL incorporating citizenship and workforce preparation in basic skills. Placement of students is determined by student language proficiency level as measured by the Comprehensive Adult Skills Assessment System (CASAS) assessment tool. Students who test at the Pre-literate to Early Intermediate levels can choose between a 15-hour-per-week daytime class or a six-hour-per-week evening class. Students who test at the Intermediate through Advanced levels can choose between a nine-hour-per-week daytime class and a six-hour-per-week evening class. Instruction addresses the CASAS competency and utilizes citizenship instruction and basic workforce skills as a vehicle for teaching English. To supplement instruction, students enrolled in on-site classes may also elect to enroll in the distance-learning program, which includes online materials and videos.

Davis Joint Unified School District

Davis Adult and Community Education (DACE) offers eight sections of ESL covering all levels from Beginning Literacy through Advanced. ESL classes meet twice per week for two hours in each session (four hours per week). Students are placed according to an oral exam given at the time of registration. There is a \$40 registration fee for ESL classes, and students may take up to two classes per quarter for one registration fee. In addition, DACE provides two advanced ESL classes in Pronunciation and Reading and Writing in the Community Interest program.

Elk Grove Unified School District (EGUSD)

Individuals with limited English skills enroll in ESL classes that range from beginning literacy through advanced levels. Elk Grove Adult and Community Education's (EGACE) ESL program provides adult students with an opportunity to learn English along with the life skills to enable newcomers to integrate into American society and be productive in the workplace, school, family life, and in the community. Classes are offered during the day and evening. Distance learning is also available to ESL students on the main campus and at sites throughout EGUSD through DVD checkout and online study with a credentialed teacher available throughout the week for student contact.

EGACE also provides U.S. Citizenship classes to community members through a Department of Homeland Security grant which has allowed the agency to expand the

number of locations and classes offered, and to implement a partnership with the local California Rural Legal Assistance Foundation (CRLAF), which provides free legal assistance to immigrants who want to become U.S. citizens. EGACE teaches the English language skills and the knowledge of U.S. government and history needed to pass the USCIS interview, while CRLAF assists students in completing the application form and provides legal assistance to overcome any barriers in the citizenship process.

EGACE offers Vocational ESL (VESL) classes that provide English instruction (in a blended learning environment) in the context of a specific career and provides career exploration opportunities to students with the goal of entering training and/or employment. EGACE collaborates with EGUSD's Learning Support Services department to provide classes for immigrants (ESL and citizenship) at several elementary and secondary school sites through funding provided by a family literacy grant. These funds allow schools to provide babysitting and to purchase books and materials for parents of EGUSD English language learners.

An increase in the number of EGACE ESL students who have received their GED over the past three years may be linked to the growing interest in Spanish GED, which is offered at the adult education campus in the evenings. EGACE's partnership with the California Rural Legal Assistance Foundation and the Deferred Action for Childhood Arrivals requirements of enrollment in education may also have influenced a growth in the number of GED passers in this area.

Performance targets for the ESL program include significant gains on the CASAS test, persistence, passing an EL Civics course, additional assessment, getting a job or entering postsecondary education, and becoming a U.S. citizen.

Most ESL students register online through the EGACE website to schedule an assessment and registration date. An ART oversees the orientation process and sets up the initial assessment and registration sessions for the students. The SST assigned to the program is responsible for managing the assessment testing, scheduling, and registration of the students. ESL students have the option of registering for classes at the adult learning center campus (ALC) or for off-site ESL classes, which are located at schools throughout EGUSD.

When students have completed the online registration, they receive an email confirmation with an appointment date and time for an assessment and enrollment session. During the appointment, they take a CASAS pre-test in reading to ensure placement into the ESL level (beginning-low through advanced) that best meets their academic needs. Throughout the enrollment process faculty and staff are on hand to meet with students to answer questions and to assist the students as needed.

In EGACE's correctional education programs at the Rio Cosumnes Correctional Center (RCCC), there are two systems in place for enrollment into ESL classes. Individuals in the lower security areas may send a request to EGACE faculty or staff to take a class. Alternatively, the Sheriff's Department classification staff provides EGACE support staff with a list for orientation. The SST generates a list of students to attend three-hour

testing and registration sessions, held weekly. Included in the weekly sessions is an overview of EGACE's programs and policies, registration forms, CASAS Life and Work Reading computer-based E-Test. Placement into classes occurs once the teacher meets with the Staff Services Technician to finalize the class roster and send the student a copy of his/her class schedule.

At the Sacramento Main Jail, EGACE distributes interest forms to all floors where classes are conducted. Inmates send their completed interest forms to the Education Office to indicate their interest in enrolling into classes. The EGACE Staff Services Technician creates a list of individuals requesting classes and submits it to the Sheriff's Department classification staff on a weekly basis. Individuals cleared for programming are placed on teachers' wait lists. As space becomes available, the teacher will select individuals from the list, based on the date their names were added to the list, for placement into an orientation. The orientation includes: completing a registration form and placement testing (CASAS Life and Work Reading paper-based appraisal and test). An individual's goals, needs, and test scores, will determine into which class he/she will be enrolled.

Students enrolled in ESL courses enter program at different educational functioning levels, which are determined by a CASAS reading pre-test. The chart below illustrates the range of academic levels of EGACE students enrolled in ESL programs.

Percentage Enrolled	ESL Class Level	Approximate Grade Level Equivalent in Reading
30%	Beginning Literacy-Low	Grades 0-1
24%	Intermediate Low	Grades 2-3
24%	Intermediate High	Grades 4-5
22%	Advanced	Grades 6-8

Students enrolled in ESL courses enter program at different educational functioning levels, which are determined by a CASAS reading pre-test. The chart below illustrates the range of academic levels of EGACE students enrolled in ESL programs.

EGACE analyzes and utilizes a variety of assessments to measure student progress toward achieving identified learning outcomes. Student achievement data is reviewed and discussed by staff at monthly department meetings. The Data, Accountability, and Evaluation (DAE) team meets monthly to review reports, and teachers receive data reports regarding their classes.

CASAS post-tests are administered after every 40 hours of instruction, and teachers use assessment results to target their instruction in order to improve student learning outcomes. Strategies for improving student outcomes are shared and discussed at monthly staff meetings.

Faculty and staff use the following measures to track student progress:

- Percentage of students passing at least one English Language Civics performance-based assessment
- Percentage of students achieving a significant gain on a CASAS post-test
- Number of students participating in a citizenship class or module
- Percentage of students attaining U.S. citizenship

Faculty and administration developed the following indicators of success and performance targets to ensure the ESL program is meeting student needs and to comply with grant and California Department of Education (CDE) requirements:

- ESL students will master English well enough to get or retain a job, advance to ASE or career technical education, enter postsecondary education or training, increase involvement in family or civic responsibilities, or become a U.S. citizen.

Teachers use a variety of assessment tools to measure student success:

- Performance-based assessments (e.g., filling out forms, applying for a driver's license, making a doctor's appointment, applying for college or a job)
- Observations of student performance and work samples
- Teacher-created tests and quizzes
- CASAS post-tests results also inform teachers when a student is ready to move to the next ESL level (e.g., beginning-low to beginning-high)

EGACE ESL classes are offered in the community closer to the students' homes or in conjunction with other community programs, such as Elk Grove Food Bank Services, to make classes more accessible. Babysitting services are provided for students at several off-site classes and in citizenship classes through federal grant funding. Students who are unable to attend classes or who are interested in additional instruction can register for the distance learning program, which is offered at the main campus and in conjunction with seat classes offered at campuses off site. The EGACE distance learning program offers both online and DVD checkout. Students with English skills at the high-intermediate or advanced levels can enroll in online ESL classes. Home study materials are available for all ESL levels from beginning through advanced. Students registered in this program drop in weekly for one-on-one instruction from a credentialed instructor, and to check out take-home packets, including DVDs, practice exercises with answer keys, and tests to check progress. Instructional materials are also available for Citizenship.

EGACE's ABE Career and Academic Development classes are designed to provide a bridge for English learners and other students with low levels of English literacy into postsecondary education, career training, and employment. These classes offer intensive training in basic English and math skills and in the development of work skills including Microsoft Office®, keyboarding, and 10-key.

Most recently, EGACE has implemented vocational ESL classes (VESL) that provide English skills to students who want to enter EGACE's Certified Nurse Assistant program or those who want to explore career options. VESL classes employ the Burlington English computer-assisted program.

Faculty performance is evaluated on the basis of the California State Standards for the Teaching Profession. Certificated evaluations are scheduled in accordance with a calendar and timeline published annually by the EGUSD Human Resources department. Faculty members are generally evaluated every two years using a template and data-based questions that are targeted to assess effectiveness and improvement. The primary purpose of faculty evaluations is to assure improvement of job performance, thus improving the quality of education of ESL students as measured by better student outcomes. In addition to formal observations and evaluations, EGACE administrators also conduct informal, non-scheduled "walk-through" evaluations. Administrators work with teachers during evaluations to reflect on and provide examples of how to measure student outcomes.

EGACE measures program effectiveness through examples such as the percentage of students who transition from one level of ESL to the next level, gains made on CASAS tests, English Language Civic additional assessments passed, the percentage of students who transition to ABE, ASE, or CTE programs, and the number of students passing the U.S. Citizenship exam and becoming U.S. citizens.

EGACE's priority is to maintain high-quality staff that is well-trained in current research-based adult education practices. EGACE hires teachers who possess specific skills, knowledge, and abilities, in addition to the credentials, certifications, training, and experience that match the needs of EGACE. All teachers hold valid credentials for their subject area issued through the California Commission on Teacher Credentialing (CCTC). These include a Preliminary or Clear Designated Subject Adult Education Credential. EGACE also hires on a part-time basis EGUSD K-12 teachers who hold Professional Clear Single or Multiple Subject credentials. All hiring goes through EGUSD's Human Resources department, and staff are required to meet the district's guidelines before they are recommended to EGACE.

The ESL department has two resource teachers, one of whom works primarily with on-site teachers, and one who works primarily with teachers who teach off-site classes. Both provide ongoing support and resources and facilitate monthly ESL department meetings.

EGUSD Table 1.1A, 1.1B Notes: The data in table 1.2 indicates the number of total enrollees in the ESL programs. However, the number of total enrollees does not reflect the number of students who attended 12 or more hours of class.

Folsom Cordova Unified School District (FCUSD)

Folsom Cordova Adult School (FCAS) offers 10 ESL classes: seven basic group classes, one citizenship class, and two distance learning classes. Other classes offered

are accent reduction and academic writing for ESL enrichment. The programs are open entry and open exit. Students can call, walk in, or access the FCAS website for information about enrollment. They register by submitting an enrollment form and a registration fee, in person, then receive a date to return for a CASAS pre-test before they enter a class. CASAS scores help determine a student's English level (scores are shared amongst staff and used to place student in appropriate level, guide instruction, and determine program effectiveness). Depending on class availability, the student can start as early as the next day or the following week.

Folsom Cordova Unified School District serves Sacramento County, including Folsom and Rancho Cordova. Sacramento County is one of six counties in the Greater Sacramento region located in the middle of the central valley. Sacramento County is a densely populated and diverse community. The student population is drawn from mostly Rancho Cordova. Over 25% of Rancho Cordova residents are foreign born of which 58%, over four times the county average, speak English less than "very well." This data is supported by FCUSD internal data which shows 73% of students in Rancho Cordova elementary and secondary schools are enrolled in the Free or Reduced Lunch Program and 23.6% are enrolled in English as a Second Language—ESL (WASC 2014).

The ESL population varies as it is impacted by both international and domestic political and economic events. Despite the shift from a predominantly Russian/Ukrainian and Spanish-speaking student body to a more heterogeneous population, we have enjoyed a two-year average completion rate of 62%, and payment points earned per student have been holding steady for the past three years at .96 per student.

Student progress is measured by CASAS assessments (pre- and post-testing) and teacher evaluations. Test scores (CASAS & in-class) are used as indicators for student achievement/course completion along with learner outcomes (post secondary transitions and job placement). Outcomes are written so that students understand what each outcome means. Teachers explain outcomes in the simplest terms so that lower English proficient students can understand them.

Indicators for student achievement/course completion include CASAS assessments, advancement in NRS levels, student level change/promotions, passing of EL Civics assessments, and end-of-program completion certificates. *Assessment tools include CASAS assessments, and scores are used every 40 hours of instruction to show progress.*

Program evaluation protocols encompass student and teacher surveys, administrative observations, staff meetings, advisory committee meetings, Professional Learning Committees—programs (teachers) working in teams to analyze where there is need for program improvement. FCAS monitors student persistence, full classes (are students attending and completing the semester?), level promotions, student outcomes, student gains, EL Civics completers, and student/teacher feedback.

The ESL department staff has many years of teaching experience (5-20 years) in the program. Many of our teachers hold Master's degrees or Teachers of English to

Speakers of Other Languages (TESOL) certificates. Some have taught English as a Foreign Language in other countries. All of them bring a unique teaching experience to the classroom. FCAS is always seeking professional development to support student success. Though there are limited funds, FCAS has been able to participate in a number of professional development opportunities. Last year, a representative from the ESL and parenting program, along with the principal, participated in CALPRO's 5-day Professional Learning Communities (PLC) Institute. The work of the PLC keeps the program focused on student learning and effective teaching practices. This work focuses on what the teachers teach and how student learning is assessed. Though the strategies learned at the PLC Institute have proven valuable, more staff time to work on implementation/curriculum development is needed.

Unique to the program is FCAS's 4-year-old Accent Reduction and Advanced Writing class that helps the intermediate and advanced level students be better prepared to enter higher level classes at the junior college. The class became very popular and beneficial, and a recent extension of hours was made to meet student requests and needs.

Galt Joint Union High School District

Galt Adult Education offers a VESL program, which is a seven-week (250 clock hours) course designed to provide students with written and oral basic English to support student's specific career aspirations. VESL also promotes student learning with career exploration opportunities with the goal of entering training and/or employment.

Los Rios Community College District

The four Los Rios community colleges within the Capital Adult Education Regional Consortium (American River College, Cosumnes River College, Folsom Lake College, and Sacramento City College) provide credit, non-degree applicable basic skills courses in ESL. The colleges do not offer noncredit or enhanced noncredit ESL courses, classes and courses for immigrants eligible for educational services in citizenship, or workforce preparation classes in basic skills. Students are placed into the college basic skills ESL courses based on results from assessment tests using multiple measures. The assessments are provided free of charge to potential students at each college, and the placement results are portable to any college within the Los Rios District.

The ESL courses are designed to prepare students for college-level course work and are available in traditional lecture courses, as well as some open entry/exit lab modules, which allow students additional practice of specific skills. The courses' curricula meet required community college Title 5 curricula standards and are taught by professional faculty who meet state minimum qualifications for the ESL discipline. Students whose placements indicate they are not ready for the lowest level credit, non-degree applicable college ESL courses may be referred to available adult education courses for further preparation.

Table Notes: The data for the credit, non-degree applicable ESL courses are included in Table 1.1.

Natomas Unified School District (NUSD)

Potential Adult ESL students enroll in Natomas Adult Education courses by completing an application. Applications are available at school sites, the Adult Education office, and the District office. Students choose between classes that emphasize family literacy or English language skills. If classes are full, students are put on a waiting list. Students are notified when they are accepted into the program and are assessed by the instructor prior to the beginning of instruction.

The Natomas Unified School District, named the second most diverse school district in the nation in a 2009 New York Times study, is located just minutes north of downtown Sacramento and the State Capitol in California's Central Valley. Our current enrollment consists of 38% of students at the beginning-low level, 26% at intermediate-low, and 36% at the intermediate level. Students enrolled in ESL courses are primarily Latino and Spanish speaking; however, we are receiving applications from a more diverse population, including languages such as Punjabi, Urdu, Russian, Chinese, etc.

A variety of assessments are used to measure student achievement including performance-based assessments, observation of student performance and work samples, teacher-created tests and quizzes, and growth as measured by the CASAS pre- and post-tests.

The Natomas Adult Education ESL program offers both daytime and evening classes every Tuesday and Thursday. This allows for our students to attend classes while their children are in school or in the evening after the regular work day. Additionally, classes are held at multiple school sites in the district to encourage parent participation and ease challenges with transportation. Furthermore, all daytime classes offer childcare.

Program effectiveness is measured through a variety of factors including wait lists, the percentage of students who transition from one level of ESL to another, gains made on the CASAS test, and number of students who transition to other programs including GED. Data is also evaluated from CST scores of students whose parents are involved in ESL family literacy classes.

All instructors of ESL classes meet the CCTC requirements for instruction and have a minimum 10 years of experience in ESL instruction and support. Currently, there is not a structured opportunity for designated collaboration in place. Staff meetings are held on an as-needed basis, several times a year.

Sacramento City Unified School District (SCUSD)

Sacramento City Unified School District (SCUSD) offers eight English as a Second Language (ESL) classes covering all levels from Beginning Literacy through Advanced at one site. In 2013-14, 446 students were served, which is a considerable decrease from the 5,641 served pre-flexibility. ESL classes meet five days a week for three hours in each session. Students currently pay \$50 per semester to enroll.

SCUSD offers ESL, U.S. Citizenship, and Vocational English as a Second Language (VESL) programs for adult English learners. Individuals with limited English skills can enroll in ESL classes that range from Beginning Literacy through Advanced levels. SCUSD's ESL program provides adult students with an opportunity to learn English along with the life skills to enable newcomers to integrate into American society and be productive in the workplace, school, family life, and in the community. Classes are offered during the day and evening. SCUSD also provides U.S. Citizenship classes to community members. These classes teach English language skills and the knowledge of U.S. government and history needed to pass the U.S. Citizenship and Immigration Services (USCIS) interview. The teacher helps students complete application forms for the citizenship process. SCUSD offers VESL classes that provide English instruction in a blended learning environment specific to the student's career aspirations. VESL also enhances student learning with career exploration opportunities with the goal of entering training and/or employment. Targets for the ESL programs include significant gains on the CASAS test, persistence, passing an EL Civics additional assessment, job placement, admission to postsecondary education, and becoming a U.S. citizen.

San Juan Unified School District (SJUSD)

San Juan Adult Education's (SJAE) ESL program provides semester classes at Sunrise Tech Center (main campus), Encina High School, Howe Avenue Elementary School, Dyer-Kelly Elementary School, and Greer Elementary School. Leveled ESL classes ranging from Beginning Low to Intermediate High are offered at Sunrise Tech Center and Encina High School. At the three elementary schools, Multilevel Beginning classes are available to serve the parents of San Juan District's English learner students. Additionally, ESL off-site programs are primarily comprised of families of students enrolled in the San Juan K-12 system. The off-site, site-funded programs are offered at Howe Avenue Elementary School, Dyer-Kelly Elementary School, and Greer Elementary School.

In 2013-2014, the program served 937 students from the following 29 classes: seven Beginning Low/Literacy, six Beginning Low/High, three Multilevel Beginning, six Beginning High/Intermediate Low, two Intermediate High, one Beginning Low Listening/Speaking, two Multilevel Beginning High/Intermediate Conversation, one Writing, and one Citizenship. Beginning Low/Literacy and Beginning High represented 59% of all ESL classes offered. To accommodate students' life and work schedules, classes were offered in the morning, afternoon, and evening at Sunrise, the main campus, when possible. At Encina High School and the other off-site locations, classes were held during the daytime.

The ESL students are enrolled in the program after attending the two-hour student orientation session that is conducted weekly by an ESL student advisor or a classroom teacher (certified teachers). During the orientation session, the students learn about the schedule, types, length, and location of the ESL classes, campus and attendance policies, and other programs offered. On orientation day, students are administered multiple assessments (e.g., oral interview, grammar and writing test, CASAS Life Skills and Work Reading assessment) to determine class placement based on language proficiency. This enrollment process enables the advisor to welcome the students, assess needs, accurately place students, and plan their learning in order to achieve their goals.

ESL class enrollment was always full and at times some classes had long waiting lists. When other adult schools in the district closed, it left only the main facility to serve all the students in the area. The recent influx of refugees from Nepal, Iraq, and Afghanistan has caused a high demand for the ESL program at Encina. The majority of students need instruction at the lowest levels of ESL, Beginning Low/Literacy. Other local refugee agencies such as Opening Doors, International Refugee Committee, World Relief, and Bach Viet Association refer their refugee students to the SJAЕ program.

A great majority of the students in our program are low income. Some of them (35%) received government assistance (students enrolled in programs such as CalWorks, Refugee Assistance, Child Action), some worked as many as two or three part-time entry-level jobs, and some students (27%) are parents with children in our district. The students' educational background also varies: 10% did not complete 6th grade; 41% do not have a high school diploma; and 12% had acquired college or graduate degrees in their countries (some college years).

The ESL program's curriculum and course outlines emphasize the building of vocabulary knowledge and grammar through the integration of language skills while acquiring communicative skills of listening, speaking, reading, and writing. Functional grammar lessons focus on the use of contextualized vocabulary to enhance their communicative skills. Furthermore, classroom instruction integrates technology in language learning and the introduction of United States culture. Throughout the semester, student progress is measured through multiple formal and informal assessments, such as teacher-designed tests or quizzes.

CASAS Life Skills and Work Reading post-tests, English Literacy/Civics performance-based assessments, classroom observation, journal writing, oral presentations, and classroom projects represent multiple assessments and instructional feedback that are critical to help teachers with lesson planning to effectively meet students' needs. Students who demonstrate significant learning gains through various assessments and mastery of course content advance to higher class levels at the recommendation of classroom teachers or by advisor.

The CASAS Life Skills and Work Reading tests are given regularly throughout the year and scheduled after at least 40 to 50 hours of instruction. The EL Civics performance-based additional assessments are administered at the end of at least 30 hours of

instruction (e.g., job interview, calling to make an appointment, completing a school registration or job application form).

Adult education services have been enhanced with the Distance Learning program by providing more flexible learning experiences. The Distance Learning (DVD lending library) program serves students who are unable to attend class regularly due to work schedule, family obligations, or transportation situations. Others take advantage of the distance learning opportunities and take more classes in order to accelerate learning. Students can borrow English lessons on DVDs from the Distance Learning Library. Each DVD comes with workbooks that the teacher will review with the students when they return the DVD every week. The library is equipped with materials suitable for various language proficiency levels from Beginning Low/Literacy students (*Watch and Listen*) to Intermediate High (e.g., *Putting English to Work series, Accent the Positive, GED*, and Test of English as a Foreign Language (TOEFL)). Students can access a distance-learning library at Sunrise Tech Center, Howe Avenue, and Encina. Additional digital resources are also available on cable and online. In 2013-2014, 256 students participated in the Distance Learning program.

The program utilizes standards-based curricula and course outlines that were revised to better align with K-12 Common Core Standards, Career Technology Standards (College and Career Readiness Standards), CASAS Basic Reading Content Standards, and California State Standards. Instruction is in English only. Classroom learning and teaching are driven and expanded by the use of a student needs assessment survey to determine the EL Civics objectives and curricula (e.g., health care/ pharmacy/insurance, employment soft skills/getting a job, K-12 or higher education). Teachers utilize evidence-based teaching methods that promote student-centered classroom activities that encourage students to critically think and problem solve. Technology integration enhances student participation and learning. Students have access to computers in the Student Center and Computers on Wheels (COW).

To maintain the consistency of student placement, teachers are given a list of grammar functions to be covered in each class level. The ESL departments hold school assemblies and invite guest speakers from various local community agencies such as the student counselors at American River College and the Citrus Heights Police Department to talk to the students about their services. The ESL students at SJAЕ develop the skills and knowledge necessary to transition to college, training programs, and the workforce.

As a WIA title II funded agency, and to demonstrate its commitment to offer high-quality programs, SJAЕ has to ensure accountability (using various evaluation measures) to the funding agencies and our students (society at large). The ESL program uses various data to drive decisions and to help improve the quality of instruction (e.g., Using reports from CASAS test results, class schedule and offerings are based on identified student needs). Continuous program improvement efforts are emphasized in order for our programs to remain productive, feasible, and relevant.

The most recent data based on CASAS assessments, the 2012-2013 federal tables for Persister, show that learning gains were recorded at every level of ESL program: ESL Beginning Literacy 88.46%; ESL Low Beginning 93.94%; and ESL High Beginning 84.54%. The 2012-2013 Federal Table 4C Distance Learning shows that 49.56% of all enrolled students completed a level, with ESL Beginning Literacy 60% and ESL Low Beginning 60%. These results are consistent with past performance and demonstrate a continued commitment to improving adult and family literacy levels. ESL levels all exceeded state averages, especially ESL Beginning Low/High, where there was a 93.9% level completion. Students in the lowest ESL literacy levels achieved the highest educational gains. Three students gained their U.S. citizenship after attending our Citizenship classes in the spring of 2013.

The Accrediting Commission for Schools, WASC (Western Association of Schools and Colleges), has recognized the level of quality that SJAE has established and granted a six-year accreditation status as a result of our school's ongoing focus on and commitment to supporting continuous, high-quality student learning and school improvement.

The ESL department maintains a strong resource library, and staff members have attended conferences, workshops, webinars, in-services, and trainings. From time to time, teachers engage in informal conversations sharing students' learning progress or needs, successful classroom projects, and useful online resources for students' use or for teachers' lesson planning. In past home group meetings, teachers brainstormed and shared effective classroom activities, best practices, and other resources that helped improve quality of instruction. Teachers collaborate and discuss how to use the course outlines to measure students' outcomes by creating a checklist to measure course competencies. SJAE teachers must maintain professional duties that meet district standards by participating in professional evaluation conferences (Option A/B) with a program evaluator annually or every other year. Professional evaluation includes the completion of a professional growth portfolio (Plans to Achieve Student Progress) and formal and informal classroom observation.

In January 2014, there was a half day in-service, coordinated by San Juan's Article 24 Leadership Team, that covered instructional strategies using technology and soft skills. In April 2014, the program sent eight ESL teachers to attend an all-day Northern Regional CATESOL Conference in Sacramento. As part of California EL Civics Technology Plan (a requirement of EL Civics grant funding), the ESL staff participates in the annual Technology Integration Self-Assessment Survey conducted by OTAN (Outreach and Technical Assistance Network). The survey results are followed by individual professional development plans on which teachers may choose different strategies to improve certain competencies. ESL staff and administrators have attended and presented at District English Language Advisory Committee (DLAC). Some teachers have attended and presented at several different school sites' English Language Advisory Committee (ELAC) meetings. The distance learning lead teacher participated in the two-day Strategic Planning meeting.

The ESL department staff has an average of 15 years teaching experience in the program. More than half hold Master's degrees or Teachers of English to Speakers of Other Languages (TESOL) certificates. Some have taught English as a Foreign Language (EFL) in other countries, bringing a rich international teaching experience to the program.

The ESL department partners with community colleges, service agencies, churches, government programs, and employers to help students get jobs, housing, food, and other necessities, as well as to see that the community is well informed and that teachers are aware of all resources. The partnership between Howe Avenue Elementary and the Distance Learning Project was recognized by CASAS, in 2011, as a "Promising Practice" in the state of California. This partnership uses technology to provide education to parents in the school's Family Resource Center. It has been replicated at other sites and in other districts around the state. There is a collaborative relationship between Refugee Employment Social Services (RESS) and SJAE for a mutual referral system.

Twin Rivers Unified School District (TWUSD)

Twin Rivers Adult School (TWAS) offers English as a Second Language (ESL) courses for the local area. The ESL curriculum has been adapted over the years based on works such as the English-as-a-Second-Language Model Standards issued by the California Department of Education. The ESL curricular map is as follows: (1) Literacy—learning minimal speaking, reading and writing tasks including the alphabet, numbers, greetings, time, days, etc.; (2) Beginning Low ESL—learning very basic grammar and basic life skill phrases in areas such as housing, employment, and healthcare for rudimentary communication; (3) Beginning High ESL—learning skills needed to function effectively in familiar social and work situations including learning about cultural differences and using English to solve problems. Students can interact in most situations; and (4) Intermediate Low—Students develop expanded listening, speaking, reading and writing skills and an ability to access community services and interact with social institutions. Upon completion, students function satisfactorily in most real-life situations related to immediate needs and are prepared to enter Vocational English as a Second Language (VESL) programs where students refine language skills needed to succeed in career and technical training programs. ESL students have fulfilled the prerequisite to enter the Career Technical Education (CTE)/college program of their choice or go to work.

TRAS' ESL classes meet from 8:15 a.m. to 8:00 p.m. most days, allowing students up to 9 hours per day of instruction or 42 hours per week of instruction during the school year from around mid-August to around mid-June. An abbreviated 5-week summer schedule is offered during July.

The instructional schedule allows for the first post-test after 40 hours of instruction and then additional post-tests after another 70 hours or more of instruction. Class hours listed above are of more than sufficient intensity to make learning gains.

Washington Unified School District (WUSD)

ESL courses are divided into three different comprehensive levels: Reading & Grammar, intermediate, and advanced. We use an Entry Form when the student first comes in to complete the registration process. An Update Record provides important information about a learner's accomplishments in our program, including process, instructional level at the time of update, and goal attainment. ESL and Citizenship Prep courses take place in a classroom setting. Our classes have a physical capacity of approximately 24 students per class.

Students entering the program are not employed, and are characterized as being at a low instructional level and considered to come from a low-social disadvantage background.

Every subject implements the CASAS competencies addressing the essential life skills for students. Every student is able to demonstrate adequate progress on the standardized assessments (pre/post-tests) after completing 40 or more instructional hours. The citizenship class has been a huge success—ALL students who have attended the class became citizens, which opened the doors for their employment with the government, and allowed them to become voters in federal elections. In general, ESL classes play a very important role in helping students function in society as good citizens in everyday life. WUSD has received students' letters where students proclaim how wonderful the program was, and what tremendous help they received in the class.

The program offers a flexible schedule for all ESL students. ESL courses are offered in the morning and afternoon. High school courses are offered in the afternoon. This way, students whose work schedule is in the morning would be able to complete their education in the afternoon/evening. WUSD teachers implement CASAS competencies addressing essential skills for life and work.

CAERC Partners***Building Skills Partnership (BSP)***

Building Skills Partnership's student recruitment is conducted in collaboration with employers and the California janitors' union, the SEIU-USWW. The ESL and digital literacy courses currently offered at the Union Hall are open to all union members and their families free of charge. The student enrollment process consists of submitting a basic intake form and completing an oral English language assessment. In addition to Union Hall classes, BSP offers worksite vocational ESL courses, which are offered to the property service workers onsite during their work shift. Enrollment in these classes is also free of charge and consists of completing an intake form and language assessment as well as signing an agreement on the terms in which the class is offered. The agreement states that at least an 80% attendance rate is required to receive a certificate of completion.

As stated above, because BSP's core funding comes from a labor-management training fund, the organization is restricted to serving members of the SEIU-USWW covered by

the fund and their family members. Working in the shadows of night, 97% of the janitors BSP serves are immigrants from Latin America. 30% have no formal education beyond the 6th grade, and the majority (85%) have less than a high school education. Two thirds of the workforce are women, and 41% are over the age of 50. Despite cleaning some of the region's wealthiest corporate offices, all struggle to make ends meet as janitors earn an average of \$24,000 a year in California. In addition to their full-time janitorial positions, many hold second jobs or are primary childcare providers. Due to stagnating wages and sub-contracting, these workers face stark income inequality and lack of opportunity, which hurts both low-income Latino families and the region's economy.

In order to address these entrenched problems, BSP assists these low-income workers in improving their language skills and training. Barriers such as multiple jobs and lack of transportation or childcare often make it difficult for workers to access other community-based programs that offer education programs and services. But through its labor-management partnership model, BSP serves this hard-to-reach population by offering workers educational programs at convenient, familiar locations such as the Sacramento Union office or their worksites. 80% of BSP's participants have never taken classes at another adult education institution in the United States

BSP utilizes a variety of qualitative and quantitative metrics to evaluate program effectiveness. To measure learning gains, students are pre- and post-assessed using BSP's Oral Competency Assessment, which correlates to California's adult school levels. In addition, BSP closely monitors retention and graduation rates as these can be indicators of student satisfaction with the program and help direct resource allocation. BSP also collects feedback on program effectiveness from students and employer partners through satisfaction surveys. Finally, BSP collects anecdotal evidence and documents stories of individuals who have seen dramatic changes to their quality of life due to BSP's programs, such as a promotion, passing the citizenship test, and wage increases due to increased language ability.

BSP's ADVANCE Program achieves over 70% attendance and graduation rates and is able to improve janitors' oral communication skills by at least one level on the BEST-Plus national standardized test (equivalent to Adult school levels).

By providing convenient educational opportunities for workers at their worksite or union hall, BSP serves the "hardest-to-reach" adult learners. Most of these workers face multiple barriers to accessing learning opportunities offered by other educational institutions because they hold two jobs, are a primary childcare provider in their family, or lack a means of transportation to get to class. For this reason, 80% of BSP's participants have never taken classes at another adult education institution in the United States. BSP is able to get around these traditional barriers to access by bringing classes to workers at their worksite, at the beginning or end of the shift, and often on paid time.

While worksite education reaches workers who otherwise are unable to access other classes offered in their community, it also presents some challenges, particularly the

fact that classes are often multi-level with learners ranging from those who already speak and write English proficiently to those who struggle with basic literacy. For this reason, in addition to contracting instructors with extensive experience in vocational and multi-level instruction, BSP employs a variety of innovative techniques to ensure that its learners' goals are being met. For example, instruction is learner-centered, and BSP's vocational curriculum was designed with input from both janitorial employers and students to make it as relevant as possible.

In addition, BSP regularly engages volunteers in its classes who help support instruction to a particular level-based group of students or to an individual who is either an advanced or beginning outlier in the class. Finally, BSP is increasingly integrating technology (tablets and computers) into its ESL and citizenship classes, so students are able to simultaneously master a content area while improving their digital literacy skills. This allows workers to also practice the skills necessary to engage in "anytime, anywhere" learning through mobile devices.

BSP utilizes three main indicators to measure program effectiveness. First, by conducting a pre- and post-assessment of every student, BSP is able to capture both individual learning gains and analyze learning gains across the program. Second, BSP closely monitors retention and graduation rates as indicators of program effectiveness. Finally, BSP collects feedback about program effectiveness through surveys from students and employers at the end of a class.

BSP Instructors generally have over 10 years of experience teaching ESL and have extensive experience teaching low-literacy populations and in vocational settings. Many instructors (about 80%) have adult education teaching credentials and some (about 30%) have a Master's in TESOL or other related field.

Instructors participate in two intensive staff development trainings per year. Since classes are remote, BSP encourages additional collaboration between instructors by facilitating a virtual community through a listserv and other online tools. Finally, BSP's instructors are supported and coached by an Instruction/Program coordinator, who handles all of the behind-the-scenes logistics related to classes.

BSP's relevant, learner-centered instruction reaches "the hardest-to-reach" populations in our community. For this reason, an overwhelming majority (80%) of BSP's students have not accessed language or other adult basic education classes at another institution in the United States. BSP is particularly effective at retaining pre-literacy and low-literacy students who are often the first to drop out in more traditional educational settings.

California Human Development

California Human Development (CHD), in collaboration with SETA and the Galt Joint Union High School District (GHSD), provides Vocational English as a Second Language (VESL) instruction to individuals who are referred by SETA Job Coaches, CHD Farmworker Services Program Case Managers, and GHSD. Students, prior to entering

the class, are tested using the CASAS to determine language ability and develop an instruction plan to get them to the next level of English proficiency. Depending on the student's individual employment plan, they may continue on to a GED class, enter into occupational training, or opt to receive job search instruction and job referrals for job placement. CHD has been working with immigrant populations since 1967 and has had great success in preparing non-English speakers and those who are not English language proficient for entry-level jobs in occupations that offer them a higher standard of living. CHD's instructors are bilingual, and a high percentage of the staff speaks English and a second language.

El Dorado County Office of Education (EDCOE)

EDCOE provides ESL classes for a wide range of clients. Currently, students of Hispanic origin account for the greatest percentage, but there is also a large contingency of Russian students. ESL courses for immigrants are offered at two locations and utilize a direct instruction model. Classes are offered on Tuesdays from 3:30-5:00 p.m. at Schnell School and on Wednesdays from 6:30-8:00 p.m. at Green Valley School. Currently courses in citizenship and workforce preparation are not offered. Students interested in the program contact the adult education office where they are directed to the program teacher for enrollment.

The adult ESL program utilizes direct instruction and is developing a suite of online learning programs to enhance student progress by providing greater individualized instruction and pacing. Courses in citizenship and workforce preparation are needed.

To access student progress, EDCOE utilizes both summative and formative assessments including CELDT testing. Indicators for student achievement/course completion include students progressing to English fluency and individual assessments. Additional program evaluation protocols are currently being put into place as well as further development of our articulated professional development program aimed at supporting the adult education program. To date the program has been deemed effective by students gaining English proficiency. As a WASC-accredited program, measurements of persistence, student outcome data, and local need identifiers are being put in place for annual review with program improvement as the overarching goal.

EDCOE's program instructors for the Adult ESL classes are credentialed, experienced, and highly competent. There are many professional learning opportunities for program instructors, including Common Core workshops and seminars, Writing Across the Curriculum, and opportunities for enhanced software utilization. Opportunities for collaboration and planning time for program staff/instructors have been limited prior to the 2013-2014 year but have been expanded greatly this year to enhance the training and effectiveness.

Sacramento Employment and Training Agency (SETA)

Students are referred to SETA by service providers or the Sacramento County Department of Human Assistance. SETA staff verify eligibility for the program and refer students to Vocational English-as-a-Second Language (VESL) providers funded through the Refugee Social Services and Targeted Assistance Programs (federal programs with oversight by state Refugee Programs Branch, California Department of Social Services). Immigrants or refugees enrolled in the Sacramento Works Job Center system are referred by Job Center coaches for enrollment in WIA and CalWORKs funded VESL instruction provided by the Sacramento Works Training Centers.

Students served by this program are Refugees who have been in the U.S. for 5 years or less who are receiving Temporary Assistance to Needy Families or Refugee Cash Assistance from the Sacramento County Department of Human Assistance, or immigrants or refugees accessing WIA and CalWORKs-funded VESL through the Sacramento Works Training Centers.

Students are pre-tested using the BEST or CASAS tools. Progress is measured by increases in Student Performance Levels (SPL) or the CASAS. For refugees enrolled in RSS or TA-funded VESL, the indicator of student achievement is an increase in SPL to 3. Immigrants and refugees enrolled in WIA or CalWORKs-funded VESL through a Sacramento Works Training Center must post-test at a level sufficient to transition into employment, ABE/GED Prep, or High School Completion services. Assessment tools utilized are the BEST and CASAS. Frequency of assessment is dependent on student progress in VESL class on homework, quizzes, and tests.

For refugees enrolled in RSS and TA-funded VESL, the goal of the program is early employment, so all English-language instruction must be combined with case management, employability skills training, job placement assistance, and the provision of supportive services. The service providers funded by this program (listed below) are partners in the Sacramento Works Job and Training Center system (America's Job Center of California), and students are provided an orientation to the Job Centers as part of their VESL instruction. For immigrants and refugees accessing VESL through a Sacramento Works Training Center enrollment, case management/coaching services, as well as supportive services, are provided to ensure success.

Service providers are evaluated annually, and funding is based on performance. Performance outcomes for RSS/TA-funded VESL include Entered Employment and Retention Rates, Average Wage at Placement, and the percentage of cash aid clients either receiving a reduction in cash assistance or being terminated from cash assistance. Performance outcomes for students enrolled in WIA and CalWORKs-funded VESL with a Sacramento Works Training Center include Training Completion, Certificate/Credential, Entered Employment and Retention Rates, and the Average Earnings.

Quality indicators for RSS/TA-funded VESL are 55% entering employment, 65% retaining employment, 50% of cash aid clients either received a reduction in cash

assistance or were terminated from cash assistance, and an average wage at placement of \$9.75. Quality indicators for WIA and CalWORKs-funded VESL are 85% training completion, 55% entering employment, 79% retaining employment, and average earnings of \$12.93 per hour. All instructors must have a valid California Teaching Credential.

The focus on employment results in curriculum that is relevant to work. Many providers incorporate hands-on, work-related projects and materials into the curriculum. As mentioned previously, case management/coaching services are provided, *as well as the provision of supportive services to ensure success.*

SETA's Refugee Social Services and Targeted Assistance VESL providers include the following:

- Twin Rivers Unified School District (49 slots)
- Bach Viet Associations, Inc. (43 slots)
- Lao Family Community Development, Inc. (42 slots)
- Asian Resources, Inc. (79 slots)
- SOAR, Inc. (47 slots)

Sacramento Public Library

The Sacramento Public Library provides adult literacy programs. Adult learners schedule an appointment to complete a learner intake assessment with Adult Literacy staff. The assessment takes 60-90 minutes to complete. After the assessment is completed, adult learners are placed with a trained volunteer tutor. Because the program uses trained volunteer tutors, and not certified teachers, potential ESL/Citizenship adult learners must be able to communicate in at least a basic/beginning level in English.

Student progress is measured by periodic evaluations given by tutors, and by review of monthly tutor reports submitted by tutors. Upon enrollment, adult learners are also required to complete a "Roles & Goals" form, on which they specify personal learning goals they would like to achieve. Student progress is also evaluated by progress made on achieving these learner-set goals. Student achievement is indicated in a variety of ways, including satisfactory completion of a curriculum series, achievement of learner-set goals, and a portfolio review of student work. Because many of the adult learners have had negative experiences with assessments in the past, the Sacramento Public Library relies on learner-set goal achievement and student portfolio review as opposed to formal assessments in most cases. Assessment is done on an as-needed basis.

Adult Literacy programs in library settings offer several unique features that help address learner needs. First, the library setting is comfortable and non-threatening for many of our adult learners. Second, the one-to-one, relationship-based tutoring works well for many adult learners who are not comfortable in a classroom setting. Third, adult learners are able to specify the location and time at which they are available for tutoring, allowing for much more flexibility than in a classroom setting.

Each Adult Literacy program that is a member of California Library Literacy Services (CLLS) must comply with organizational values, which dictate to a large extent how services are delivered, and which help ensure program quality. Program effectiveness is measured by achievement of learner-set goals specified by the adult learner on the Roles & Goals form required by California Library Literacy Services (CLLS), successful completion of one or more curriculum series, and portfolio assessment of student work.

All services are delivered by trained volunteer tutors drawn from the community at large. Potential volunteer tutors attend an initial 8-hour training conducted by an Adult Literacy Supervisor. Ongoing in-service trainings are held bi-monthly to provide continuing education opportunities. All adult literacy tutors work on an individual basis, at the time and library location of their choice, so opportunities for collaboration and planning are limited. However, tutors do have the opportunity to collaborate with other volunteer tutors at the bi-monthly in-service meetings.

Program Area 3: Adults with Disabilities

CAERC Members

Elk Grove Unified School District

Elk Grove Adult and Community Education (EGACE) provides services for adults with disabilities through the Elk Grove Adult Community Training Center (EGACT) at two sites in Elk Grove. EGACT, a non-profit organization, provides services for approximately 160 adults with developmental and physical disabilities. Instruction focuses on independent living, basic literacy and numeracy, and job readiness skills. Many of EGACT's consumers are referred by Alta California Regional Center. Per the terms of EGUSD's agreement with EGACT, from 1991 through June 2009, EGACE earned apportionment from the students enrolled in EGACT's training program. In exchange, EGUSD paid EGACT an annual fee based on a formula tied to ADA. EGACT has used this fee to employ two teachers who help students/consumers develop their basic literacy and employment readiness skills.

After California shifted adult education funding from an apportionment basis to a block grant in 2008-09, and gave districts maximum flexibility to use adult education funds for instructional purposes, EGUSD and EGACT negotiated a new four-year contract that capped the fee payment to EGACT at the 2008-09 level of ADA. Even though EGUSD no longer earns apportionment for adult education students, the District entered into the new contract due to its long-standing relationship with EGACT and the income generated historically for the district because of the agreement. In 2013/14, approximately 23 consumers enrolled in an EGACE ABE class at the EGACT center.

EGUSD Table Notes: The data in Tables I.1A and 1.1B indicate the number of total enrollees in the ABE program at EGACT. However, the number of total enrollees does not reflect the number of students who attended 12 or more hours of class.

Sacramento City Unified School District

Sacramento City Unified School District (SCUSD) offers classes to adults with disabilities at one site. In 2013-14, 130 students were served which is a considerable decrease from the 392 that were served pre-flexibility. Adults with disabilities classes meet five days a week, six hours a day. Students currently pay \$50.00 per semester to enroll.

Instruction focuses on independent living, basic literacy and numeracy, job readiness, community access, and leisure time skills. There are seven classes. All of the students/consumers are referred by Alta California Regional Center. Students range in age from 18 to 80, with an average age of 43. 94.78% of the students enrolled are mentally retarded; other disabilities include cerebral palsy, epilepsy, and autism.

SCUSD is vendorized by Alta California Regional Center and receives \$48.83 each day a student attends. In 2013-2014 the total reimbursed was \$1,161,958.68.

SCUSD recognizes the need to accommodate student disabilities in other ways and works with students with disabilities to develop 504 plans in order to put accommodations in place.

San Juan Unified School District (SJUSD)

San Juan Adult Education (SJAE) does not currently provide specific education programs and services for adults with disabilities. At the end of the 2012-2013 school year, SJAE closed Orange Grove School for Adults following two years of transition to Alta California Regional services.

Prior to its closure, Orange Grove had a very unique program serving over 200 developmentally disabled adults on campus, and prior to “flex,” served another 250 disabled students in satellite programs throughout the community. The students, labeled developmentally disabled, functioned intellectually from the moderately to severely retarded range.

The Orange Grove campus served as a hub for satellite programs. One program was comprised of five classes operating under the umbrella of the Easter Seals Society and two classes operated in collaboration with United Cerebral Palsy Association (UCP). The five Easter Seals-based programs were varied in nature. The Access to Community Education & Integrated Training (Ace-It I & II) programs were Community Based Instructional (CBI) programs that served approximately 45 students each. The Functional Independent Living Skills (FILS) program served 45 developmentally disabled adult students. The Creative Adult Living (CAL) program served a maximum number of 16 multi-handicapped, non-ambulatory students. In addition, the Help To Recovery (HTR) program served up to 45 students recovering from various forms of head trauma.

The two UCP-centered programs were known as the South Area Adult Growth Experience (SAAGE) programs which were a collaboration between Adult Education and UCP and were “vendorized” by the Alta California Regional Center with grant support from the Department of Developmental Services (DDS). These two programs served over 60 developmentally disabled adults with a small staff-to-student ratio. The main focus of these two classes was personal growth in a community-based instructional environment.

The dedicated administration, teaching staff, and classified staff worked together as a team to provide an excellent level of programming and to meet the needs of each individual student. Most of the staff members were employed at the school for many years (with an average of 19.5 years at the site) and continued to enhance their education in order to constantly provide students with new and meaningful lessons and activities. There was also a large parent base that was involved in planning and determining the direction that the school took. Parents were invited to monthly meetings and encouraged to share their ideas at any time.

SJAE developed relationships with many outside businesses such as American River College, Special Olympics, Lions Clubs, and the Alpha Theta Zeta Sorority. There were several fundraisers held during the year. The proceeds enabled the school to purchase needed equipment and present special programs, all with the intention of enhancing student educational experiences.

To help keep students physically fit, Orange Grove offered a large after-school sports program. The students also participated in Special Olympics tournaments, which allowed them to travel and interact with other athletes from all over the state. Orange Grove provided programs that were innovative and creative. The school atmosphere was warm, nurturing, and encouraged the students to continually learn and grow.

Washington Unified School District

Washington Unified School District uses the same process for students with disabilities as all other students with the exception of allowing more time when completing assessments, seating arrangements, and modified curriculum. We use an Entry Form when the student first comes in to complete the registration process. An Update Record provides important information about a learner's accomplishments, including process, instructional level at the time of update, and goal attainment.

Washington Adult School (WAS) provides a positive environment for all students. This program has had students with active IEPs and/or 504s. We have a low percentage of students with disabilities. We accommodate students according to their needs the best way possible. Accommodations and modifications are made by every teacher in a classroom setting. Every subject implements the CASAS competencies addressing the essential life skills for students. Every student is able to demonstrate adequate progress on the standardized assessments (pre/post-tests) after completing 40 or more instructional hours.

Learners with special needs (literacy, physical, language, mental, emotional, etc.) need to build skills, and instructors need to make the material accessible and helpful for each learner. Learners who have trouble seeing, hearing, or completing more simple tasks (such as writing) sit near the front of the room and near others who are able to help. Printed materials with the concepts on them are available; therefore learners can be included in the discussions and do not have to worry about writing down every detail. Group dynamics are of a greater importance in this atmosphere. Learners are eager to help others, and therefore, will help themselves. The questions and assignments are modified to fit the needs and abilities of each learner, while still keeping the curricula rigorous and beneficial.

Students entering the program are seeking a high school diploma. Our Special Education staff has successfully supported students with any disability or any impairment. The staff has been able to maintain evaluations, recommendations, and proper documentation regarding the students' needs. This way, teachers have been able to better support students with any kind of disabilities.

CAERC Partners

El Dorado County Office of Education (EDCOE)

The focus of the EDCOE Adult Transition Program at the Pacific Street location is to prepare all young adults in the program for an independent to semi-independent adult lifestyle. Students are enrolled through an IEP referral process from their respective districts of residence. For this specific program, students must be between the ages of 18-22. They are required to have had an active IEP in place. Participants enrolled in the Adult Transition Program are treated as adults in all aspects of their day. The program day is individualized, and the students are expected to be active participants.

Student progress is measured against goals articulated in each student's IEP. Current assessment tools utilized include both formal and informal assessments and include psychometric evaluations and assessments. All learners within the program have paid working positions; the program makes frequent contacts with its business partners to work toward consistent goals for the learner.

EDCOE Special Education Department conducts a Program Quality Review yearly. EDCOE employs credentialed, experienced instructors who meet HQT status. Professional learning opportunities for program instructors include traditional workshops and seminars.

Sacramento Job Corps

The Sacramento Job Corps provides services for adults with disabilities. There is an orientation to Sacramento Job Corps every Thursday morning, 8:45 a.m. to 11:00 a.m. for clients 16 to 24 years of age. After the orientation, students are given an appointment to return with documents to move forward. Space depends upon trade availability and completion of background checks with other information verified. If paperwork indicates that they need accommodations, a meeting is set up with the Wellness Manager, Disability Coordinator, and Center Director to make sure accommodations are completed before the student's arrival at the center. If there is a disability document from a doctor, there is no age limit.

Job Corps is a two-year program; the average stay is between 9 to 13 months. If students do not have a high school diploma or GED, they can choose the one they want to obtain and staff assists the students through the program. If they choose to attend college or advanced training, students can stay in the program for three years, or with advanced training they can have up to a six-month extension. To obtain their H.S. diploma, students must complete their trade (considered the elected classes). Students can also obtain driver's licenses at the Center. If students have a high school diploma or GED they can be in their trade all day as long as they TABE out or have at least 11th grade reading and math. If not, they will continue having academic classes until they TABE out. They will be in academics for one week and then trade for one week on a rotation basis until they complete both. A Training Achievement Record (TAR) must be completed by students before completing their trade. The document is

signed off by both the instructor and student. Accommodations are in place and follow the students throughout the program. Students work at their own pace.

The Disability Coordinator at the center works with students who are identified with learning disabilities before starting the program, if possible. Accommodations are put in place for students with disabilities. Staff that teaches trade have vocational credentials. Academic instructors have teaching credentials in the subject that they are teaching.

Sacramento Employment and Training Agency (SETA)

The Sacramento Employment and Training Agency and its partner, Crossroads Diversified Services, operate programs specifically designed to assist people with disabilities in accessing employment services and obtaining meaningful careers. Both SETA and Crossroads Diversified are Employment Networks (ENs) and coordinate Social Security Administration (SSA) Ticket to Work (TTW) Programs, helping customers on SSI/SSDI transition toward long-term employment. SETA is the One Stop Operator for the America's Job Centers (AJCs) of California system for Sacramento County. Through these AJCs, referred to as the Sacramento Works Job Centers (SWJCs), SETA serves additional job seekers with disabilities who may not be enrolled in the Ticket to Work Program. Crossroads Diversified, a nonprofit agency, has provided education, training, and support to enhance employment opportunities for people with disabilities since 1977, and works in partnership with SETA as a Sacramento Works Training Center (SWTC.)

The U.S. Department of Labor (DOL) released a solicitation for applications for its Disability Employment Initiative (DEI) Grant Program. The DOL has allocated \$15 million in grant funds to expand the capacity of American Job Centers (AJCs) to improve employment outcomes of people with disabilities. DOL seeks to increase the participation of job seekers with disabilities in existing career pathways programs that are being successfully implemented in the public workforce system.

SETA was one of three Local Workforce Investment Areas (LWIAs) asked to join the California Employment Development Department (EDD) application to support job-driven approaches in career pathway programs that equip adults with disabilities with the skills, competencies, and credentials necessary to obtain in-demand jobs, increase earnings, and advance their careers. SETA staff prepared and submitted a proposal by the deadline of June 18, 2014, in the amount of \$600,000 to the EDD to provide participants with coaching services, development of career pathway plans, supported education and employment, supportive services, and job placement and retention services. The project will span a 42-month period.

The Sacramento DEI project goal is to significantly impact the workforce system, expand service delivery, facilitate systems change, and provide meaningful career pathway education, training, and employment opportunities to adults with disabilities.

Sacramento Public Library

The Sacramento Public Library offers literacy programs for adults with disabilities. Program participants are enrolled by agency staff on-site. The Adult Literacy Service at Sacramento Public Library currently maintains partnerships with 3 agencies serving developmentally delayed adults in 4 locations in Sacramento, Elk Grove, and Galt. Program participants at the various agencies have skill levels that range from those with extremely limited abilities (i.e., learning the alphabet, letters, and sounds) to those reading at approximately a 6th grade reading level.

Student progress is measured by periodic evaluations given by teachers and tutor, and by review of monthly reports submitted by tutors. Upon enrollment, program participants are also required to complete a "Roles & Goals" form, on which they specify personal learning goals they would like to achieve. Student progress is also evaluated by progress made on achieving these learner-set goals. Student achievement is indicated in a variety of ways, including satisfactory completion of a curriculum series, achievement of learner-set goals, and a portfolio review of student work. Because many adult learners have had negative experiences with assessments in the past, the Sacramento Public Library relies on learner-set goal achievement and student portfolio review as opposed to formal assessments in most cases. Assessment is done on an as-needed basis.

Adult learners at these agencies/sites are instructed in basic literacy skills by paid staff members and/or volunteers. The Adult Literacy Service provides initial and ongoing training for the instructors and provides curriculum, materials, and other resources.

Each Adult Literacy program which is a member of California Library Literacy Services (CLLS) must comply with organizational values, which dictate to a large extent how services are delivered, and which help ensure program quality. Program effectiveness is measured by achievement of learner-set goals specified by the adult learner on the Roles & Goals form required by California Library Literacy Services (CLLS), successful completion of one or more curriculum series, and portfolio assessment of student work.

The instructors are a combination of trained teachers and volunteers. Ongoing in-service trainings are held bi-monthly to provide continuing education opportunities. The adult literacy teachers have varying schedules, but have the opportunity to collaborate with other volunteer tutors at the bi-monthly in-service meetings.

Program Area 4: Career Technical Education

CAERC Members

Black Oak Mine School District [Not a member - now a partner]

Black Oak Mine School District offers career technical education (CTE) at Golden Sierra for adults in the local areas. Golden Sierra's CTE programs are open to all students regardless of race, color, ethnicity, national origin, ancestry, gender, sex, sexual orientation, physical disability, mental disability, or religion. Students in 11th and 12th grades are the primary focus for the short-term CTE programs. To enroll, Golden Sierra's counseling department meets with all 7th-11th grade students annually in order to assess their progress toward graduation and post-secondary education. Students are informed of new and current course offerings as well as each course's connection to the District's college and career readiness pathways.

Student progress is measured through a series of performance-based assessments that represent critical benchmarks in each course. Student achievement and course completion are measured by number of students receiving professional certification in a particular area (e.g., Solidworks Certification, Basic 40 Certification, etc.), and by number of students receiving college credit through articulation agreements with American River College. Assessment tools are contingent upon individual programs. Instructors are responsible for developing frequent formal and informal assessments to ensure that students are progressing toward course outcomes. Students are provided with a variety of enhancements including an upgraded advanced manufacturing lab, wood shop, and auto shop.

The basic program evaluation protocol is that all Golden Sierra Career Technical Education courses must provide students with certifiable skills that can be carried over into college or the workplace. A physical artifact must be presented to a student in order to certify the skills the student has gained in the course for proof of competency. Examples of acceptable artifacts include:

- Certificate showing completion of a capstone CTE/ROP course that specifically indicates the skills a student has demonstrated in the course
- Certification by an examination regulated by an outside entity
- College units received through articulation agreement with American River College

Golden Sierra quality indicators for its CTE programs are as follows:

- Internal
 - Student interest and enrollment
 - Student outcome data
 - Students completing capstone courses
 - Students receiving certification
 - Students receiving college credit

- Students matriculating into higher education or work place
- External
 - Advisory Boards
 - WASC
- Golden Sierra received a six-year WASC accreditation in May 2014.

Golden Sierra's CTE Department teachers have the following levels of education / experience:

- Engineering
 - BA w/ Industrial Arts Credential
 - 30+ years teaching
- Biomedical
 - BA w/ Biology Credential
 - 20+ years teaching
 - 10+ years in Bio-Tech Industry
- Construction
 - BA w/ Industrial Arts Credential
 - 30+ years teaching
- Auto
 - ROP Credential
 - 10+ years teaching
 - 10+ years in Auto Maintenance Industry
- Fire
 - ROP Credential
 - 10+ years teaching
 - 30+ years in Fire/Emergency Services

Golden Sierra's CTE teachers participate in a variety of professional learning opportunities including weekly meetings for one hour as well as on-site and district-sponsored professional development. Professional learning community opportunities include:

- Golden Sierra hosted a Geometry in Construction workshop to train the construction teacher and four math teachers. Several teachers from across the region and from other states also attended.
- PTLW – Introduction to Engineering Design Training (Folsom Lake College)
- PLTW Conference (Sacramento, CA)
- Manufacturing and Drafting Teachers Conference (Cal Poly, San Luis Obispo, CA)
- SB-70 Externship – Sierra Innotek (Auburn, CA)
- Site Visitations
- Ongoing partnerships through the CRANE consortium

Davis Joint Unified School District

In the past, Davis Adult and Community Education (DACE) had contracted with Boston Reed to provide CTE certificate programs in the areas of Pharmacy Technician and Clinical Medical Assisting. Earlier this year, Boston Reed discontinued these programs. DACE plans to offer a Pharmacy Technician program in the Fall of 2014. DACE is currently researching other CTE program opportunities.

Elk Grove Unified School District

Over the past several years, EGACE's fee-based career technical education (CTE) program has shown significant growth in both the correctional and non-correctional settings. Students in this program acquire the occupational and technical skills necessary to advance along a career pathway to either postsecondary training or unsubsidized employment. Performance targets include the completion of a capstone course, earning an industry-recognized credential, certificate, or degree.

Students enrolling in CTE programs participate in a one-on-one orientation with CTE department staff and in three subsequent advisory meetings throughout the year to discuss student progress and concerns and to address any potential barriers to completion of the program. Also working with CTE students is a part-time job developer who assists students with placement into externships and employment. EGACE currently has formal and informal agreements with thirteen regional employers for externships.

Students who do not qualify for funding through agencies such as SETA, DOR, and DHA, may have the option of an individualized self-payment plan. Included in the student fees are textbooks, materials, relevant equipment/supplies (e.g., stethoscope, blood pressure cuff, health screening, fingerprinting, cost of immunizations, backpacks, flash drives, scrubs, and certification and testing fees.)

SETA has been a long-time and invaluable workforce development partner for EGACE students, especially those students interested in enrolling in CTE programs. The mutual goal of SETA and EGACE is to provide comprehensive career training and educational opportunities that will enable low-skilled, under-educated adults to enter into the middle-skill jobs sector. Eligibility for funding through SETA is limited to adults who:

- Lack a high school diploma or GED certificate
- Are unemployed, or soon to be unemployed, due to economic downturn
- Have been unemployed or underemployed for an extended period of time because they lack sufficient work-readiness and/or academic skills required to be successful in high-demand occupations
- Are part of an at-risk population, such as veterans, individuals with disabilities, ex-offenders, or limited-English speakers
- Meet federal poverty income guidelines

SETA grant funding also enables EGACE to provide Universal One-Stop services to teenagers and young adults, ages 16-21, and Intensive services via case management to out-of-school youth, ages 18-21.

Through its partnership with Cosumnes River College, EGACE has developed articulation agreements for its Medical Terminology, Welding, and Landscaping courses. Students enrolled in the Welding and Landscaping courses at RCCC are eligible to earn college credits upon completion of course requirements as well as a passing grade of “B” or better on the final exam. RCCC CTE students are able to begin the registration for classes at CRC during their incarceration. With support from CRC staff, students are able to complete fee waivers and ensure they will be prepared to enroll for classes when they are released from custody.

The table below provides a broad overview of EGACE CTE programs.

Program	Certificate
Comprehensive Nurse Assistant	Completers are eligible to test with the State of CA to become a Certified Nurse Assistant
Home Health Aide	Completers are eligible to test with the State of CA to become a certified Home Health Aide
National Certified Medical Assistant	NCCT Medical Assistant Certificate
Medical Assistant Administrative	NCCT Medical Office Assistant Certificate
Medical Assistant with Billing & Coding	NCCT Insurance Coding Specialist Certificate
Billing & Coding Specialist	NCCT Insurance & Coding Specialist Certificate
Office Specialist	MS Word 2013 (MOS) Certificate upon completion of the program
Accounting Clerk	QuickBooks Certification through Certiport
Welding & Manufacturing Technologies (RCCC)	American Welding Society Certificate 3 credits through Los Rios Community College District
Computer-Aided Drafting (RCCC)	Certified Solid Works Associate certification EGACE Computer Applications Certificate
Computer Applications (RCCC)	EGACE Certificate of Completion & Computer Applications Certificate
Custodial Training (RCCC)	EGACE Certificate of Completion
Culinary Arts (RCCC)	EGACE Certificate of Completion
Cake Decorating (RCCC)	EGACE Certificate of Completion
Horticulture & Landscaping (RCCC)	EGACE Certificate of Completion

	3.5 credits through Los Rios Community College District
Personal Care Assistant (new in 2014/15)	EGACE Certificate of Completion

Also included in EGACE's CTE programs are multiple courses that can be taken separately as introductory or refresher courses, or as a requirement in a comprehensive training program. These courses include:

- Keyboarding
- Word 2013
- Excel 2013
- PowerPoint 2013
- Accounting Basics
- Accounting with Excel
- QuickBooks Pro
- Customer Service
- Career Development
- Medical Terminology & Anatomy and Physiology (Medical Terminology course articulates with that of CRC's Med Term course)
- Billing 1
- Billing 2 and Coding 2
- Records Management

To enroll in the program, potential students make initial contact with EGACE by phone, email, as a "walk-in," or through a referral from a supportive services agency such as the Department of Rehabilitation (DOR), Department of Human Assistance (DHA), or the Sacramento Employment Training Agency (SETA). Steps in the CTE enrollment process include:

- A one-on-one introductory/informational meeting between the potential student and the CTE resource teacher/academic advisor which includes:
 - Program and schedule information
 - Information regarding program fees and potential funding sources
- CASAS assessment testing in reading, math, and listening (if applicable)
- A second visit with the CTE resource teacher for final screening and advisement
- Referral to the EGACE training center for students who request funding assistance
- Establishment of a payment plan for private-pay students
- An all-student orientation to the program:
 - A meet-and-greet with school administrators and CTE faculty and staff
 - Students receive supplies and necessary forms required for the program in which they are enrolling: textbooks, scrubs, stethoscope, and blood pressure cuff, if applicable, flash drive, and a rolling backpack

In EGACE's correctional education programs at the Rio Cosumnes Correctional Center (RCCC), there are two systems in place for enrollment into ESL classes. Individuals in the lower security areas may send a request to EGACE faculty or staff requesting to take a class. Alternatively, the Sheriff's Department classification staff provides EGACE support staff with a list for orientation. The SST generates a list of students to attend three-hour testing and registration sessions, held weekly. Included in the weekly sessions is an overview of EGACE's programs and policies, registration forms, and CASAS Life and Work Reading computer-based/E-Test. Placement into classes occurs once the teacher meets with the Staff Services Technician to finalize the class roster and send the student a copy of his/her class schedule.

At the Sacramento Main Jail, EGACE distributes interest forms to all floors where classes are conducted. Inmates send their completed interest forms to the Education Office to indicate their interest in enrolling into classes. The EGACE Staff Services Technician creates a list of individuals requesting classes and submits it to the Sheriff's Department classification staff on a weekly basis. Individuals cleared for programming are placed on teachers' wait lists. As space becomes available, the teacher will select individuals from the list, based on the date their names were added to the list, for placement into an orientation. The orientation includes completing a registration form and placement testing (CASAS Life and Work Reading paper-based appraisal and test). Based on an individual's goals, needs, and test scores, the SST will determine into which class he/she will be enrolled.

The EGACE CTE program serves a diverse adult student population which includes:

- Dislocated workers
- Adults training for a new or more family-sustaining career
- Students referred to EGACE from SETA America's Job Centers/career centers and Sacramento Works Training Centers
- DHA/Cal Works and DOR clients
- Ex-offenders and adult students incarcerated at the Rio Cosumnes Correctional Center

EGACE analyzes and utilizes a variety of assessments to measure student progress toward achieving identified learning outcomes. CTE student achievement data is reviewed and discussed by staff at monthly department meetings. The Data, Accountability, and Evaluation (DAE) team meets monthly to review reports, and CTE teachers receive data reports regarding their classes. CASAS post-tests are administered after every 40 hours of instruction, and teachers use assessment results to target their instruction in order to improve student learning outcomes. Strategies for improving student outcomes are shared and discussed at monthly staff meetings. Faculty and staff use the following measures to determine CTE students' success:

- Percentage of industry-recognized certificates earned
- Percentage of students completing each course
- Percentage of students who complete work-based experience

- Percentage of students who obtain employment upon completion of a CTE program
- Percentage of students who obtain employment in the field in which they were trained
- CTE indicators of success: Students will acquire the occupational and technical skills necessary to advance along a career pathway to postsecondary education, training, or unsubsidized employment.

Support services are available for CTE students through EGACE's Workforce Investment Act, Title I (WIA I), and Sacramento Employment Training Agency (SETA) Youth Works program. EGACE is one of the eight WIA I Sacramento Works Training Centers for adults who lack sufficient work-readiness and/or academic skills. This training capacity expands opportunities to EGACE CTE students and provides outreach and awareness about EGACE career technical education programs to a broader community. For further assistance to students, EGACE has had long-time collaborative relationships with other support agencies, including the Department of Rehabilitation (DOR), Department of Human Assistance (DHA), and Sacramento Works America's Job Centers.

Books, equipment, and supplies required to pursue the course of study are included in the price of the registration fee for all students enrolled in EGACE CTE programs. For students enrolling in Allied Health training courses, fees include scrubs, background check, health screening, vaccinations, and the cost of certification examinations as required by each program. All students receive the EGACE Career Technical Institute Student Handbook and a "student start pack" of necessary supplies which includes a rolling backpack and flash drive.

CTE students receive ongoing progress evaluation reports, and they meet with their academic advisor/resource teacher at least three times per year to discuss and evaluate their progress and any barriers to success in the program. Students whose course completion requires work-based experience with an employer within their chosen field, work directly with an experienced job coach. Students requesting financial assistance may qualify for funding through the EGACE Sacramento Works Training Center. Those who do not qualify for outside funding have the option of working with the CTE advisor to establish a payment plan. Introductory and refresher courses are offered for students who do not meet the minimum prerequisites or requirements of a CTE program. Students may take a "refresher course" to fulfill requirements.

EGACE's priority is to maintain high-quality staff that is well-trained in current research-based adult education practices. EGACE hires teachers that possess specific skills, knowledge, and abilities, in addition to the Career Technical Education credentials, certifications, training, and experience that match the needs of EGACE's CTE program. All teachers hold valid CTE credentials for their subject area issued through the California Commission on Teacher Credentialing (CCTC). All hiring goes through EGUSD's Human Resources department, and staff are required to meet the district's guidelines before they are recommended to EGACE.

Faculty performance is evaluated on the basis of the California State Standards for the Teaching Profession (CSTPs). Certificated evaluations are scheduled in accordance with a calendar and timeline published annually by the EGUSD Human Resources department. Faculty members are generally evaluated every two years using a template and data-based questions that are targeted to assess effectiveness and improvement. The primary purpose of faculty evaluations is to assure improvement of job performance, thus improving the quality of education of ABE and ASE students as measured by better student outcomes. In addition to formal observations and evaluations, EGACE administrators also conduct informal, non-scheduled “walk-through” evaluations. Administrators work with teachers during evaluations to reflect on and provide examples of how to measure student outcomes.

Professional development is a priority within EGACE, and is a combination of both external input and internal processes. The administration budgets for monthly department meetings, pays for conferences, and/or provides release time for curriculum development. CTE faculty and staff meet monthly. EGACE CTE staff relies on key organizations such as the California Adult Literacy Professional Development Project (CALPRO) and the Outreach and Technical Assistance Network (OTAN) to stay abreast of current trends in adult education and identify program needs and changes. EGACE sends a significant number of instructional staff to the annual CASAS National Summer Institute. EGACE staff is also involved in local, state, and regional events of professional organizations such as the California Council for Adult Education (CCAEE).

EGUSD Table Notes: The data in Tables 1.1A and 1.1B indicates the number of total enrollees in the CTE program at EGACE; however, it does not indicate the total number of students who attended 12 or more hours of class.

Folsom Cordova Unified School District

Folsom Cordova Adult School (FCAS) provides career technical education courses for the Rancho Cordova community. Many of the students are low-income recipients, often with young children in the home. Students enter the program through the collaboration of FCAS and Folsom Cordova Community Partnership (FCCP). The students who qualified for these classes are sent by SETA and DHA. Students can also submit a registration form, or if not referred by SETA or DHA, they pay an out-of-pocket fee.

The program is structured with an individual case management process through FCCP. Students in this program have a dedicated case manager that ensures student are attending, making progress, soliciting teacher input, and are on track for completion. Indicators for student achievement include assignment completion, testing placement, testing for certifications, and job attainment. To assess for student progress, instructors utilize teacher-designed tests, attendance, class projects, homework, and presentations. A unique feature of the program is the extra support service provided to students with a “wrap around case management” which helps students resolve challenges, and support job development, job readiness, and soft skills. Students are also followed quarterly for one year to ensure employment retention which further

increases the success rate of completion. Indicators for program effectiveness include the number of students achieving proficiency, employment, and certificates.

All teachers in the program are highly qualified with credentials. CTE teachers have planning time, but PD is not currently applicable since there is only one teacher in this department.

Galt Joint Union High School District

Galt Adult Education offers a CTE program for Truck Driving. The program is a six-week course (300 hours) designed to prepare students for the California Motor Vehicle Class A Driver's License. Students who successfully complete this course will be ready to acquire work as a truck driver, delivery driver, or any other position requiring a Class A driver's license.

The Job Readiness Workshops are designed to prepare students to locate and apply for employment opportunities, perform job interviews, utilize on-the-job social skills, and understand employer expectations.

Career counseling and placement services focus on assisting students with career pathways and are available to all students. Job placement is provided to all students that successfully complete a vocational skills program.

Los Rios Community College District

The four Los Rios community colleges within the CAERC (American River College, Cosumnes River College, Folsom Lake College, and Sacramento City College) do not provide adult education level short-term career CTE programs with high employment potential. All Los Rios colleges do provide college-level CTE programs with high employment potential. Increased knowledge about adult CTE offerings within the consortium will provide opportunities to create better pathways to college CTE programs.

Sacramento City Unified School District

Sacramento City Unified School District (SCUSD) offers Accounting Specialist, Administrative Assistant, Auto Body Repair, CISCO KS1 Technology, Court Reporting, Heating, Ventilation and Air Conditioning, Medical Assistant, Nursing Assistant, Optometric Assistant/Dispensing Optician, Pharmacy Technician, and Vocational Nurse training at one site. In 2012-2013, 803 students were served which is a considerable decrease from the 7,931 that were served pre-flexibility. Career Technical Education (CTE) classes meet five days a week, six hours a day. Depending on the program, training takes from eight weeks to three years. Fees range from \$1,850 to \$20,500. Both Pell grants and Stafford loans are available to help defer the cost of the programs. SCUSD also partners with Sacramento Employment and Training Agency (SETA) and has a training center on site, which helps defer operational costs.

Students in this program acquire the occupational and technical skills necessary to advance along a career pathway to either postsecondary training or unsubsidized employment. Performance targets include earning an industry-recognized credential or certificate. Students enrolling in CTE programs participate in an orientation session with CTE department staff. At the conclusion of the orientation program, conducted each Wednesday morning, students are assessed with CASAS to ascertain that they have the basic skills to enroll in a CTE program. SCUSD currently has formal agreements with 68 regional employers for externships.

Students who do not qualify for funding through agencies such as SETA, Department of Rehabilitation (DOR), Department of Human Assistance (DHA), or the Employment Development Department (EDD) may have the option of Pell Grants or Stafford Loans.

Included in the student fees are textbooks, materials, and relevant equipment/supplies (e.g., stethoscope, blood pressure cuff, health screening, fingerprinting, cost of immunizations, backpacks, flash drives, scrubs, and certification and testing fees).

SETA has been a long-time and invaluable workforce development partner for SCUSD students, especially those students interested in enrolling in CTE programs. The mutual goal of SETA and SCUSD is to provide comprehensive career training and educational opportunities that will enable low-skilled, under-educated adults to enter into the middle-skill jobs sector.

Eligibility for funding through SETA is limited to adults who:

- Lack a high school diploma or GED certificate
- Are unemployed, or soon to be unemployed, due to economic downturn
- Have been unemployed or underemployed for an extended period of time because they lack sufficient work-readiness and/or academic skills required to be successful in high demand occupations
- Are part of an at-risk population, such as veterans, individuals with disabilities, ex-offenders, or limited-English speakers
- Meet federal poverty income guidelines.

SETA grant funding also enables EGACE to provide Universal One-Stop services to teenagers and young adults, ages 16-21 years of age and Intensive services via case management to out-of-school youth ages 18-21.

San Juan Unified School District

San Juan Adult Education (SJAE) offers CTE classes in business, office occupations, and allied health. 502 students were enrolled in 2013-14. SJAE is an educational provider for the following agencies, and the programs are listed on the *Eligible Service Providers List*:

- Sacramento Employment and Training Agency (SETA)
- Department of Rehabilitation

- Employment Development Department (EDD)
- Department of Human Assistance & Child Action
- American Association for Retired Persons (AARP)

Medical/Health Careers offer two certificate programs: Medical Assistant and Billing/Coding. The partnership with Boston Reed ended with the closure of that company. According to the U.S. Department of Labor, employment of medical assistants is projected to grow 29 percent from 2012 to 2022, much faster than the average for all occupations. As preventive medical services expand, physicians will hire more assistants to perform routine administrative and clinical duties, allowing the physicians to see more patients. The employment of health information technicians is projected to grow 22 percent from 2012 to 2022, much faster than the average for all occupations.

Office Occupations offer an Office Assistant certificate program and Small Business Operations like Quickbooks and Excel. The U.S. Department of Labor projects that employment of secretaries and administrative assistants is projected to grow 12 percent from 2012 to 2022, about as fast as the average for all occupations. Many job openings will result from the need to replace workers who leave the occupation. Those with a combination of work experience and computer skills should have the best job prospects.

The CTE course outlines were updated and rewritten to better align with K-12 Common Core Standards and Career Technology Standards. The College and Career Readiness Standards (CCR) developed by the U.S. Department of Education, Office of Vocational and Adult Education, focus on language arts and math standards. The updated course content standards, with the CCR anchor standards included, will help to shape curriculum and instructional practices and strengthen the link among adult education, postsecondary education, and the world of work.

The Career Technical Education (CTE) department staff meets informally to discuss industry trends they relate to students. The Advisory Committee will be comprised of community, education, and industry members. Career Technical Education (CTE) works with industry representatives to assure courses taught are relevant to industry standards. The CTE department hosts an Advisory Committee for review of curriculum, course outlines, and labor market trends annually, or more often as needed.

The CTE department has had numerous staff changes due to retirements, resignations and layoffs. The remaining, and new, staff meets informally to discuss industry trends as they relate to students. The Sacramento County Office of Education offers CTE workshops for teachers. Vendors like Certiport, Inc. offer free professional development opportunities for instructors in areas like Microsoft Office Specialist Certification. Staff has participated in Career Day Fairs, Health Fairs, and community events designed to connect with potential students and other industry educators.

Twin Rivers Unified School District

Twin Rivers Adult School will be terminating its final CTE class—Licensed Vocational Nurse (LVN) training—on July 27, 2014. Career Technical Education in Twin Rivers has been eliminated since funding was made sweepable and Pell funding compromised. Previous CTE programs included classes in Pharmacy Technician, Medical Assisting, Medical Coding, Business and Computers, Heating, Ventilation and Air Conditioning (HVAC), Construction, and Truck Driving.

CAERC Partners***California Human Development***

California Human Development (CHD) provides training in job readiness and computers. All students are assisted with job readiness instruction that includes workshops on how to fill out a job application, how to use a resume, how to interview successfully, and how to keep a job. In addition, because CHD works with a population who may be new to using technology to look for work, CHD includes as part of its program a short introduction to computers workshop and assistance in logging in and searching for employment using the Internet and job search web pages.

California Human Development also provides Career Technical Education/Vocational Training. CHD has been providing employment training through its Anthony Soto Employment Training Centers throughout northern California for more than 40 years. The CHD Galt Training Center is the newest location, currently in its second year of operation. The CHD Galt Training Center operates with approval from California's Bureau of Post Secondary Education, is one of SETA's Sacramento Works Training Centers, and is established in collaboration with the GHSD.

CHD currently offers training in truck driving and building construction and will be offering Welding and Health Careers in the near future. Instructors are proficient in the classroom, but most importantly have extensive experience in the skill and occupation that they teach. CHD prides itself in providing a "hands-on" approach to learning and classrooms, and instruction is designed to imitate the workplace. Truck Driving students are taught safety in the road and all the necessary instruction to successfully pass the truck driving test and obtain their commercial driving license. They are also taught how to be successful in their new career. Upon completion of the training, students receive a certificate of completion from the school. The class is 300 hours. Employment services are provided as part of this training.

The building construction class is provided in collaboration with Habitat for Humanity and includes a basic introduction to all the construction trades, including carpentry, electricity, plumbing, blue print reading, measuring, etc. This class provides students the opportunity to use what they've learned in the classroom outside in a worksite. The class includes a green building component, and students may participate in contract instruction from San Joaquin Delta College Weatherization program as well as receive instruction related to energy efficiency in construction, solar panels installation, and floor

installation. Students are introduced to the apprenticeship programs in the area and are encouraged to apply. The class is 660 hours, and students receive a certificate of completion at graduation. Employment services are provided as part of this training.

Sacramento Employment and Training Agency (SETA)

The Sacramento region is experiencing a skills gap in industries that are important to economic recovery, particularly in middle-skills jobs (those that require more than a high school diploma, but less than a four-year degree). Middle-skills jobs account for 47 percent of all jobs in the state. These are local, hands-on jobs that are less likely to be outsourced.

To respond to the needs of today's employers and unemployed/underemployed workers, SETA is increasing the WIA formula funding dedicated to Training Centers. SETA has developed an employer-driven blueprint that embraces all modes of career training. The Training Center approach links academics, relevant career-technical education, support services and real-world, work-based learning experiences supported by industry and community partners. A dependable pool of educated, trained, and available workers is critical to the successful functioning of the local economy.

A greater investment in direct training funds will arm the local work force with the practical skills required in the marketplace. In conjunction with local employers, educational industry-themed pathways in a wide range of fields have been developed for traditional and nontraditional students to enter the work force. Intense and varied training will lead to a certificate credential or associate's degree, or the skills or competencies needed for a specific job, occupation, or occupational group in one of the region's identified critical occupational clusters. These certifications and skills are necessary to support the sectors with the largest projected job growth in the next decade. By focusing on preparing customers for middle-skills jobs in the critical occupational clusters, SETA and SWI will provide opportunities for skills training in career pathways that will remain in high demand and will pay a self-sufficiency wage. Training will include Occupational Skills, On-the-Job Training/Subsidized Employment, customized training conducted with a commitment by an employer or a group of employers to employ trainees upon successful completion of the training, apprenticeships, and job readiness training focusing on an approved sector/cluster. Examples of current career pathway programs in critical occupational sectors are the Registered Nurse II Work force Initiative, Allied Health Career Pathways, and Power Pathways Utility Line Worker career pathway program.

Sacramento Job Corps

Job Corps is a federally-funded residential training and employment program administered by the U.S. Department of Labor. Job Corps provides comprehensive career development services to students including academic, career technical, social and independent living skills, career-readiness training, and support services. The program is intended to prepare income-eligible youth ages 16-24 to obtain and hold

gainful employment in their area of study to pursue further education or training, or satisfy entrance requirements for careers in the military.

The Sacramento Job Corps Center is located in the Freeport area of South Sacramento on the former campus of the California Highway Patrol Academy. The Center serves 800 residential and non-residential students annually and has excellent facilities for student living, academics, and career technical training and recreation activities. There is an orientation to Sacramento Job Corps every Thursday morning 8:45 a.m. to 11:00 a.m. This starts the process for a young person 16 to 24 years old. After the orientation, the student is given an appointment to return with documents to move forward. Space depends upon trade availability, completed background checks, and other information verified.

Sacramento Job Corps students can earn either a high school diploma or GED (if needed) and obtain career technical training/occupational certifications for entry-level jobs in the following areas:

- Heavy Equipment Operator
- Heavy Equipment Mechanic
- Ornamental Landscaping
- Cement Masonry
- Plastering
- Carpentry
- Heating, Ventilation & Air Conditioning (HVAC)
- Certified Medical Assistant
- Certified Nursing Assistant
- Medical Office Support
- Security Protective Services
- Pharmacy Technician (Off Center)

The Center's student graduates have excellent opportunities for jobs because of the beneficial linkages and partnerships established with the business, civic, and nonprofit community and employers throughout the City and County of Sacramento. Sacramento Job Corps' students are contributing members of the community by participating in, and assisting with, city-sponsored events, activities, special events and volunteer opportunities with youth senior citizens, and community-based organizations' assistance projects.

If paperwork indicates that they need accommodations, a meeting is set up with the Wellness Manager, Disability Coordinator, and Center Director to make sure accommodations are completed before arrival at the center. The Disability Coordinator works with students who are identified with learning disabilities before starting the program, if possible. Accommodations are put in place for students with disabilities. Staff that teaches trade have vocational credentials. Academic instructors have teaching credentials in the subject that they are teaching.

For more information about the Sacramento Job Corps Center, visit the website at sacramento.jobcorps.gov or via phone at (916) 394-0770.

Yolo County Office of Education (YCOE)

Yolo County Office of Education serves and partners with Davis, Esparto, Winters, Woodland, and Washington (West Sacramento) school districts. The YCOE operates several different programs including county Special Education, Alternative Education, Head Start/Early Head Start, Career Technical Education, College and Career Transitions, Foster Youth and Homeless Youth Services, and English Language Learner Services. Through the coordination of these programs YCOE has developed strong partnerships with Woodland Community College/YCCD, Yolo County Workforce Investment Board, Yolo County Department of Employment and Social Services, Yolo County Alcohol Drug and Mental Health, Yolo County Probation, Yolo County Sheriff's Department and Monroe Detention Center, and several businesses throughout our community.

YCOE has established braided funding from Federal, State, and local dollars that support short-term CTE programs for adults. Examples include the Certified Nursing Assistant program where students attend class for 5 weeks, complete 55 hours, and are prepared for the state certification exam. During the course students learn both through theory and hands-on clinical demonstration how to work as a CNA. The CNA program has a success rate of 98% passing the state certification, and 72% have become employed. Other students decide to continue their education and do not pursue a career at this time. YCOE coordinates short-term CTE programs in partnership with WCC in welding, alternative energies, and law enforcement. Students who successfully complete the short-term CTE programs have a higher transition rate to a 2-year or 4-year college as they have been introduced to college faculty and programs. Students from throughout the region attend the camp. Students in the short-term CTE programs have also been successful in obtaining employment. YCOE is working with Sacramento City Community College Deans in Davis and West Sacramento to implement similar short-term CTE programs.

YCOE operates the Einstein Education Center (EEC). EEC is a Western Association of Schools and Colleges (WASC) accredited alternative community school for students who want to complete their high school education at their own pace. Students at EEC are able to enroll from ages 16-19 and have until they are 22 to graduate. Students are successful at EEC due to the smaller learning environment, competency based program, and inclusion of career technical education, community service, and community college. Students who are not successful at EEC often transition to Woodland Adult Ed to complete their GED.

YCOE in partnership with Sacramento County Office of Education, Yolo County Probation, Yolo County Sheriff's Department, and the Yolo County Day Reporting Center have established a site-based GED prep program for AB109 clients and other clients on probation. The partnership is a new venture for YCOE for the 2014-15 school

year. Clients work with the Yolo County Library Literacy program and are tested for English and Math proficiency prior to being referred to the GED instructor.

In the past, YCOE had several courses for adults, but when ROP funds were put into a flexible category, the adult courses dwindled. Examples of prior courses include partnerships with Yolo County one-stop to offer computer application courses. Careers with Children, construction technology, and landscaping are examples of other courses. A GAP would be the elimination of funding to be able to offer additional short-term CTE courses for students.

Currently, YCOE also partners with the local emergency shelter to offer Serve-Safe training and certification in the shelter's industrial kitchen.

YCOE Educational Services information can be found at www.ycoe.org.

Apprenticeship: YCOE currently partners with Northern CA Construction and Training (NCCT) to refer students to their pre-apprenticeship program. They have locations in Sacramento, West Sacramento, and Woodland. The program assists students with learning the skills necessary to be a successful laborer. NCCT partners with the local 185 laborers union to place graduates with entry-level positions throughout the region. They also work with the pipefitters' and carpenters' unions. A major draw for students is free training, and often NCCT is able to work with the union to waive the enrollment fee. We do not operate apprenticeship programs but often partner to provide students with information and resources. Information about NCCT can be found at www.ncct.ws.

Program Area 5: Apprenticeships

CAERC Members

Sacramento City Unified School District

Sacramento City Unified School District (SCUSD) partners with two apprenticeship trades—California Fire Fighter Joint Apprenticeship Committee (CFFJAC) for firefighters and Western Electrical Contractors Association (WECA) for electricians. 248 students are enrolled in apprenticeship programs. The training takes place at the program sponsor’s training facility where students have access to tools of the trade for hands-on training, as well as classroom instruction. The adult education representative meets with each apprentice program throughout the year, visiting classrooms and observing students and instruction. Teachers are employees of the trades, not the District.

San Juan Unified School District

San Juan Adult Education (SJAE) partners with the following apprenticeship trades: Western Electrical Contractors Association (WECA), United Union of Roofers, Waterproofers and Allied Workers, and California Fire Fighter Joint Apprenticeship Committee (CFFJAC). 488 students are enrolled in apprenticeship programs. The training takes place at the program sponsor’s training facility where students have access to tools of the trade for hands-on training, as well as classroom instruction. The adult education representative meets with each apprentice program throughout the year, visiting classrooms and observing students and instruction. Teachers are employees of the trades, not the District.

The three apprentice programs use all of the Related Supplemental Instruction (RSI) hours assigned to SJAE:

- 2008-09 120,042 hours
- 2012-13 92,960 hours
- 2013-14 92,960 hours
- 2014-15 93,000 hours

SJAE has submitted a request to the Chancellor’s Office, California Community Colleges, Apprenticeship & Electrician Certification Programs that any excess RSI hours not used by other Local Educational Agencies (LEAs) be reassigned to SJAE if they become available. Two additional apprenticeship programs have pending requests that SJAE become their LEA.

CAERC Partners

Sacramento Employment and Training Agency (SETA)

On behalf of the Workforce Investment Boards in the region, SETA/SWI contacted the Sacramento Valley Apprenticeship Coordinators (Laborers Training and Retraining Trust Fund for Northern California, California Department of Education's CTE Leadership & Instructional Support Team, Joint Apprenticeship Committee for the Plumbing and Pipe Fitting Industry, the American River College Apprenticeship Coordinator, Ironworkers Apprenticeship and Training Program, Carpenters Training Committee, Sheet Metal Workers Apprenticeship & Training Committee, and Sacramento Area Electrical Training Center) and facilitated a meeting, which resulted in the adoption of an MOU to build better working relationships between Workforce Investment Boards and the Joint Apprenticeship Training Committees, create common policies and practices, share best practices, and focus training funds to prepare job seekers for high-demand jobs in the Construction sector.

Sacramento Job Corps

Job Corps is a federally-funded residential training and employment program administered by the U.S. Department of Labor. Job Corps provides comprehensive career development services to students including academic, career technical, social and independent living skills, career-readiness training, and support services. The program is intended to prepare income-eligible youth ages 16-24 to obtain and hold gainful employment in their area of study to pursue further education or training, or satisfy entrance requirements for careers in the military.

The Sacramento Job Corps Center is located in the Freeport area of South Sacramento on the former campus of the California Highway Patrol Academy. The Center serves 800 residential and non-residential students annually and has excellent facilities for student living, academics, and career technical training and recreation activities. There is an orientation to Sacramento Job Corps every Thursday morning 8:45 a.m. to 11:00 a.m. This starts the process for a young person 16 to 24 years old. After the orientation, students are given an appointment to return with documents to move forward. Space depends upon trade availability and completed background checks with other information verified.

Sacramento Job Corps students can earn either a high school diploma or GED (if needed) and obtain career technical training/occupational certifications for entry-level jobs in the following areas:

- Heavy Equipment Operator
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- Ornamental Landscaping
- Cement Masonry
- Plastering
- Carpentry

- Heating, Ventilation & Air Conditioning (HVAC)
- Certified Medical Assistant
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- Medical Office Support
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The Center's student graduates have excellent opportunities for jobs because of the beneficial linkages and partnerships established with the business, civic, and nonprofit community and employers throughout the City and County of Sacramento. Sacramento Job Corps' students are contributing members of the community by participating in, and assisting with, city-sponsored events and activities, special events, volunteer opportunities with youth and senior citizens, and community-based organizations' assistance projects.

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at this time. YCOE coordinates short-term CTE programs in partnership with WCC in welding, alternative energies, and law enforcement. Students who successfully complete the short-term CTE programs have a higher transition rate to a 2-year or 4-year college as they have been introduced to college faculty and programs. Students from throughout the region attend the camp. Students in the short-term CTE programs have also been successful in obtaining employment. YCOE is working with Sacramento City Community College Deans in Davis and West Sacramento to implement similar short-term CTE programs.

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Capital
Adult Education
Regional Consortium



APPENDIX B

Objective 2: *Current Needs*

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Program Area 1: Adult Basic Education (ABE) / Adult Secondary Education (ASE)

Elementary and secondary basic skills, including classes required for a high school diploma or high school equivalency certificate

CAERC Members

Center Joint Unified School District

Center Adult School (CAS) has not had the resources to serve all the students who request classes, the school has not done outreach since 2008. The school has not kept wait lists for High School diploma or High School Equivalency programs because 2014-2015 is the first year the school has had the resources to offer anything other than distance learning in this area. Calls to CAS from students seeking these programs have been frequent enough to warrant opening classes if the resources had existed. In 2014/2015 new federal grant funds are being utilized to open a small program to fill a portion of this need because students referred to other programs in the area report they are placed on wait lists, or lack the transportation to get to schools further from their homes.

The community served by Center Adult School (CAS) is comprised of individuals living at a higher than average poverty rate. CAS reviewed the CJUSD free and reduced lunch rate and the Census Bureau five year estimates 2008-2012 poverty data and, individuals on public assistance and the rate of unemployment for individuals age 16 and above. The total rate of students who qualify for free and reduced lunch in CJUSD as of January 2014 is 59%. The free and reduced lunch rate at the school site co-located with CAS is 75%. The poverty data by zip code is as follows:

- 95660: Below poverty- 7412 or 24% of population; 7% of population on public assistance; 14% unemployed, 95843: Below poverty 11,056 individuals or 24% of population; 4% of population on public assistance; 8% unemployed. In all three categories, the Hispanic or Latino population showed the highest rates of poverty reaching as high as 35 . In addition, 399 CJUSD K-12 students qualified as homeless under the McKinney Vento Act. This represents 9% of the student population.

According to CJUSD dropout rates and rates of graduation as well as U.S. Census Bureau data on education levels, there is a clear need for ASE in this community. From the 2008/2009 school year to the 2010-2011 school year, the district drop out rate has increased from 3% to 10%. The overall graduation rate is 80% leaving 20% without a High School Diploma or GED certificate. According to Census Bureau data for those lacking a high school diploma: 95660: 24%; 95662: 8%; and 95843: 9%.

As demonstrated by the fact these individuals did not complete a high school diploma in the K-12 system, greater support is needed to help them succeed as adults. Based on the lack of education, poverty level and unemployment level, these students lives are

often unstable and in crisis. It is not enough to just offer classes. These students need access to Family Resource Center referrals and supports to stabilize their families basic needs for housing, food, and health care; otherwise, they continue to be transient and drop out to try to address the ongoing series of personal and family crisis. These students also need individualized counseling and goal setting support to assist them in understanding the role of education in their lives and to maintain confidence in their ability to succeed.

Regional Data Sources

CJUSD is a suburban and semi-rural district of 4,500 students located at the Northeast corner of Sacramento County with most of the population living in the 95843 and 95662 zip codes. Within its boundaries is a development of low-income housing created through the Farm Home Loan project. In the vicinity of CAS are six rent controlled apartment complexes, and a large track of small rental homes previously U.S. Air Force base housing. The school is just .1 mile from the 95660 zip code, and draws students from this area since the closest adult program in that zip code is located near the northern border.

The economy of this area was hit very hard in 1996 with the closure of McClellan Air Force base, the largest employer in the area. Because of this, the area was already experiencing economic stress when the recent recession impacted the slow recovery taking place. There are no major regional employers in the area. The economy is diverse including low wage service jobs, small businesses, and small retail centers. The previous Air Force Base has attracted some regional offices and a variety of small businesses.

According to the U.S. Census Bureau 2012 five year estimates, 22,703 individuals age 16 and older lived in zip code 95660; in zip code 95843, 33,502 individuals of that age lived in zip code 95843. In 95660, 54.8% of these individuals were employed and in 95843, 62.% were employed. Total employed for the two zip codes was 31,421.

The economy of the area is reflected in the industries in which these people were employed. The largest number of people, 22%, were employed in the industry of Educational services, health care, and social assistance. The next largest number, 13% were employed in Retail trade. There were a negligible number of people employed in agriculture and only 2% employed in the information industry. The remaining employed individuals were evenly dispersed (between 6%-8% per industry) among Construction; Manufacturing; Wholesale Trade; Transportation, warehousing and utilities; Finance, insurance, and property rental/leasing; Arts, entertainment, recreation, accommodation, and food services; Other services except public administration; and Public administration. This clearly demonstrates both the diversity of the economic as well as the gap between the number of individuals of employable age and the number employed.

DJUSD has a high graduation rate with only a 2.4% dropout rate for all students. In the Hispanic subgroup, the dropout rate is a little higher at 4.9% and this achievement gap is an area of focus for the entire district including Adult Ed. Since we serve several communities surrounding the city of Davis who no longer have their own adult education programs (i.e. Winters, Dixon, and Esparto), it is also useful to consider the dropout rate for these neighboring districts as well. Dixon Unified School District, which is our primary feeder area for high school diploma students, has a dropout rate of 13.4%.

The Davis community has pockets of wealth and poverty with the majority of the community falling squarely into the middle and upper middle class, so for our purposes, it is most useful to look at the school with the highest percentage of poverty, Marguerite Montgomery. This school has 35% of students classified as English Learners and 49% of students are considered economically disadvantaged. This area of Davis has the greatest need for Adult Education services, but it has also been the most difficult for us to serve because of its geographical distance from where the majority of our classes are held in central Davis.

This points to a large gap in services since many of the parents at this school are immigrants who need to learn English and also are without a high school diploma. We have been in talks with the principal at this elementary school to try to find ways that we could better serve this community which often needs childcare if they are to attend classes and lacks reliable transportation to get to class. Without additional funding, we have been unable to find ways to expand our program to meet those needs.

Regional Data Sources

According to the most recent census data, Davis has a poverty rate of 26%, which is actually 81% higher than the national average. This is a misleading statistic, however, because the majority of Davis residents are university students and therefore are classified as “low income” due to their age and work status, but their families are not necessarily classified as low income. The unemployment rate in Davis is only 6.8%, but the unemployment rate in the surrounding county is 10.7% which indicates a need for job training and skill development.

Elk Grove Unified School District (EGUSD)

EGUSD serves the southern third of Sacramento County, which encompasses urban, suburban, and rural areas. According to five-year estimates by a nation-wide survey conducted by the U.S. Census Bureau, the estimated population for the area is 325,000. EGACE draws from the 320-mile EGUSD that covers all or part of 13 zip codes. The majority of EGACE students enrolled in adult basic education courses reside primarily in two south Sacramento zip code areas, 95823 and 95828, which include parts of the City of Sacramento and unincorporated Sacramento County. Educational services are also offered at the Rio Cosumnes Correctional Center and the Sacramento Main Jail.

The data below provides some general idea of the need of adult education services within zip code areas 95823 and 95828:

	95823	95828
Unemployment rate	18.8%	16.9%
Highest level of educational attainment below 9th grades (ages 25+)	12.46% (4,956)	10.60% (3,376)
Attended grades 9-12 but did not graduate	14.60% (5,806)	10.60% (3,376)
Below poverty level	29%	20.9%
Foreign born: not a U.S. citizen	19.5%	12.9% (7,406)

Sources: Community Link Capital Region zipatlas.com

Within the Elk Grove Unified School District, the census shows that of the population 25 years and older, 8.3% or 15,859 adults have less than a 9th grade education, and 7.2% or 13,743 people attended school between the 9th and 12th grades but did not graduate. Education Data Partnership data for 2012/13 shows a dropout rate in EGUSD of 6.6% or an estimated 311 students who left the 9-12 school system without a high school diploma, GED, or special education certificate of completion, and were not enrolled after the 4th year. The direct relationship between educational attainment and criminality is well-established. In *Linking Adults to Opportunity*, a report from the California Department of Education (CDE), a Brookings Institute publication is referenced, which states that there is a strong correlation between low-levels of education and criminal activity, with high school drop-outs five to eight more times likely to be incarcerated. The Correctional Education Association estimates that 65% of adult prisoners are functionally illiterate. Changes brought about Public Safety Realignment Law (AB 109), in which non-violent, non-serious, non-sex offenders were reassigned to local custody in county jails, has resulted in an increase in jail populations which has led to a greater demand for educational services for incarcerated adults.

Folsom Cordova Unified School District (FCUSD)

A huge reduction in wait list since last year due to openings of three additional classes. Now, the only wait list is in the evening and that is 9 people total. In 2008-2009, FCAS served 4,134 students with 85 courses in 14 programs. Faced with an approximately 80% reduction in revenue in 2010, due to budget cuts and Adult Ed's placement in Tier III flexibility, we needed to assess our community needs and redefine our priorities. Data from the American Community Survey and US Census showed that Rancho Cordova residents experience greater needs than the rest of Sacramento County: approximately 17% live below poverty level; nearly 14% receive public assistance/Food Stamps; 10% are unemployed; and 20% of those unemployed had less than a high school diploma. Approximately 17% of residents 18-24 years old and 14% of those 25

or older do not have a high school diploma. Over 25% of Rancho Cordova residents are foreign born of which 58%, over four times the county average; speak English less than very well. This data is supported by FCUSD internal data which shows 73% of students in Rancho Cordova elementary and secondary schools enrolled in the Free or Reduced Lunch Program and 23.6% are enrolled in English as a Second Language – ESL (FCAS WASC Mid-year report 2014).

Los Rios Community College District

Students within the consortium service area face a gap when they assess as unprepared for college credit, non-degree applicable basic skills courses in English reading, English writing, and mathematics, and either cannot find appropriate adult education courses to prepare them for college basic skills courses, or are not eligible for adult education courses because they have already completed a GED or high school diploma. Currently, no systematic, consistent, consortium-wide processes exist to align adult education basic skills curricula with college basic skills curricula, so that adult education students wishing to continue on to college have a clear pathway to follow. In addition, no coherent messaging on adult education pathways exists throughout the consortium area, so potential students may not know how to access basic skills educational opportunities appropriate to their levels of preparation.

Natomas Unified School District

The Natomas Unified School District is primarily located within the zip code boundaries of 95833 and 95834. According to the U.S. Census Bureau the estimated population within these two areas is 39,806 with the majority of residents living in the 95833 zip code area.

The following chart compiled using data provided by zipatlas.com indicates that there is a growing need to continue and expand adult education services in the NUSD:

	95833	95834
Unemployment rate	8.40%	6.98%
Ages 25 + that did not graduate from high school	17.17%	17.60%
Below poverty level	10.45%	13.21%
Foreign born: naturalized citizen	8.0%	15.03%
Foreign born: not a U.S. citizen	13.0%	12.17%

Source: zipatlas.com

The NUSD continues to make marked improvements in its high school dropout rate. Currently 2.1% of NUSD students fail to graduate with their cohorts, which is below the state average of 3.9% and Sacramento County's rate of 4.1%. Several factors can be

considered for the 17% of 25 and older residents that did not receive a high school diploma. These factors include the number of foreign-born residents and the recent changes brought about by the Public safety Realignment Law. Large numbers of non-violent prisoners have been released into California communities. According to the Correctional Education Association, high school drop-outs are five to eight times more likely to be incarcerated and an estimated 65% of adult prisoners are functionally illiterate.

Natomas Unified School District is the second most diverse district in the nation. The number of families who receive free or reduced lunch is slightly more than 50% of its approximately 13,500 students. Additionally, more than 50 languages are spoken and 15% of the students are identified as English Learners.

As indicated in the table below, the Natomas Unified Adult Education program is unable able to provide sufficient programs to meet the needs in the district. More adults request the program than the system is able to currently provide.

Class Title	Days	Times	# Students Currently in Attendance	# Students on Wait List
GED Preparation	T/TH	5:30 – 8:30 p.m.	30	25
ELS	T/TH	5:30 – 8:30 p.m.	32	35
High School Completion	T/TH	5:30 – 8:30 p.m.	25	41
ESL Family Literacy	M/W	8:30 – 10:30 p.m.	30	10
ESL Family Literacy	T/TH	8:30 – 10:30 p.m.	30	18
GED (Spanish)	T/TH	3:00 – 5:30 p.m.	14	0

In addition, currently, no systematic, consistent, consortium-wide processes exist to align adult education basic skills curricula with college basic skills curricula, so that adult education students wishing to continue on to college have a clear pathway to follow. Currently, no coherent messaging on adult education pathways exists throughout the consortium area; thus, potential students may not know how to access expanded educational opportunities appropriate to their levels of preparation.

Sacramento City Unified School District

There are no articulation agreements or alignment of courses or assessments between K-12 adult education programs and Los Rios Community College. To meet the growing demand for Adult Basic Education (ABE) funding needs to be reinstated so that adult education providers can expand course offerings. There is an increased demand but the Sacramento City Unified School District (SCUSD) is unable to meet the need. Pre-flexibility SCUSD was able to offer classes at elementary schools, middle schools, and high schools to meet the needs of parents in the District. Unfortunately we are no longer

able to offer these classes. If the achievement gap for our K-12 students is ever going to be addressed, the parents of the K-12 students must have educational opportunities that ABE can provide.

The majority of adult education students are unprepared to fully access the postsecondary education system (financial aid, registration, etc.) without assistance from an advisor or counselor. Current funding for adult education limits the ability to provide comprehensive counseling, advising, mentoring, administering, and career planning to assist students in meeting their postsecondary and employment goals. Adult education funding needs to be expanded to support this need.

There is a need for a comprehensive, robust data system to track student progress, analyze longitudinal data, and streamline programs and services. At this time, a state-wide data system for adult education does not exist. Ideally there would be a data tracking system between the K-12 adult program and the community colleges on the transitioned students.

San Juan Unified School District

San Juan Unified Adult School identified the following needs:

Need #1 Better access. There is a need to establish learning centers that are accessible to the neediest community members. School sites that are great distances from students' place of residence and/or work create obstacles for the neediest students to gain access to education. Distance learning can help fill this void. However, it cannot be assumed that these students have regular access to the internet. Educational institutions need to have means of providing students with the reliable internet access necessary to engage in online instruction.

Need #2 Transitional partnerships. There is a need to consistently support students as they transition into career technical training, college admission, or work. This should include career exploration using CDE websites and personal consultation with our academic counselor. There is a need to establish ongoing contact with the Los Rios Community College staff (counselors/faculty) so that we can facilitate the transition of our students toward higher learning in a seamless manner. Throughout this process, students need to be advised of the various supports available to them including financial aid, tutoring, counseling (academic and psychological), child care, and transportation.

Need #3 Social Services. Adult students are largely from the lower socio-economic level and consequently have a proportionately higher need for social services than the general public. Having social services housed at our school site would add to student success as the various social agencies could more easily collaborate to provide various levels of support needed which would ultimately lead to student success.

Need #4 Data tracking. Ideally there would be a tracking system between the K-12 adult program and the community colleges on the transitioned students. The K-12 adult program could act as a "safety net" for students who are struggling in the transition phase. Collaboration between faculty/counselors could aid in this process.

Regional Data Sources

In 2012-13, the high school graduation for San Juan Unified students was 80%. However, cohort rates for Hispanic/Latino students were 68% and African American was 65%. The drop out number of students was 441.

Twin Rivers Unified School District

The demographics of the community served by Twin Rivers Adult School, a school within the Twin Rivers Unified School District, show there is a continued need for elementary and secondary basic skills classes, including classes required for a high school diploma or high school equivalency certificate. Of the students who enrolled in classes covered by this program area during FY 2013/14, 86% had not earned a high school diploma in the US; 80% of them completed instruction only through the 11th grade; and 86% were 34 years old or less. The following are demographics of the Twin Rivers Unified School District and Twin Rivers Adult School. Also in this section, the number of students on wait lists are noted.

Statistics of the Twin Rivers Unified School District (TRUSD), from the District's Fact Sheet for FY 14/15):

- Enrollment—27,000 students, preschool through Adult Education
- 27% of the student population are English Learners
- 46 languages spoken

Student Demographics of the TRUSD:

- Hispanic/Latino, 43%
- Caucasian, 24%
- African American, 15%
- Asian, 9%
- Two or more races, 5%
- Pacific Islander, 2%
- Filipino, 1%
- Native American, 1%
- 83% of the students in preschool through 12th grade qualify for free or reduced lunches (FY 13/14).

Statistics of Twin Rivers Adult School, from the Demographic Summary compiled from the enrollment forms completed by this group of students during FY 13/14):

Highest Diploma in US # %

None	608	86%
GED	12	2%
HS Diploma	22	3%
Technical	11	2%
A. A./A.S.	1	0%
College	2	0%
Graduate	0	0%
Other Diploma	16	2%
N/A	32	5%
Total	704	

Highest Diploma Out of US # %

None	16	2%
GED	2	0%
HS Diploma	9	1%
Technical	0	0%
A. A./A.S.	1	0%
College	1	0%
Graduate	1	0%
Other Diploma	1	0%
N/A	673	96%
Total	704	

Highest School Year # %

Under 6	19	3%
6 - 8	23	3%
9 - 10	167	24%
11	359	51%
12	124	18%
13+	12	2%
N/A	0	0%
Total	704	

Ethnicity # %

Hispanic	280	40%
Not Hispanic	402	57%
N/A	22	3%
Total	704	

Race # %

White	320	42%
Asian	52	7%
Black	179	23%
Pacific	16	2%
Filipino	14	2%
Indian	27	4%
Alaskan	0	0%
N/A	155	20%
Total	763	

Native Language	#	%
English	499	71%
Spanish	141	20%
Vietnamese	0	0%
Chinese	6	1%
Hmong	12	2%
Cambodian	0	0%
Tagalog	1	0%
Korean	0	0%
Lao	5	1%
Russian	0	0%
Farsi	0	0%
Other	35	5%
N/A	5	1%
Total	704	

Age	#	%
Under 15	0	0%
15 - 17	12	2%
18 - 21	204	29%
22 - 24	127	18%
25 - 29	184	26%
30 - 34	78	11%
35 - 39	35	5%
40 - 44	27	4%
45 - 49	21	3%
50 - 54	11	2%
55 - 59	4	1%
60 - 64	1	0%
65 - 69	0	0%
70+	0	0%
N/A	0	0%
Total	704	

Twin Rivers Adult School—Student Wait Lists (as of September 9, 2014)

- High School Completion—Independent Study, 17 students
- High School Completion—Online, 6 students

TRAS has an open entry/open exit enrollment system and the wait list may change daily. At this time the wait list does not have many students on it because the 3:00 – 5:15 p.m. section of High School Completion has 72 students enrolled and the 5:30 – 7:45 p.m. section of High School Completion has 63 students enrolled. These particular classes are overenrolled because most students are enrolled as Independent Study or Online and attend class once per week.

Regional Data Sources

TRAS primarily serves the region covered by the Twin Rivers Unified School District, which includes the cities/communities of North Sacramento, Del Paso Heights, North Highlands, Foothill Farms, Rio Linda, and Elverta (zip codes 95838, 95660, 95815,

95842, 95843 and 95821). TRAS staff encourages its students to attend the adult facility that best fits their needs and educational and developmental expectations. TRAS has many students who come from both inside and outside of the Twin Rivers Unified School District's boundaries.

The following demographics from the American Community Survey, 2012 (Census Bureau web site), 1 year estimate for the Twin Rivers Unified School District (of which Twin Rivers Adult School is a part of) include the following: 53,000 households; 184,000 people; 27.1% of the people are foreign born persons; 48% reported that they did not speak English very well; 38% of the people age 25 or older did not have a high school diploma or equivalent; 20% of the people age 25 or older are dropouts and not enrolled in school; 28% of the people live in poverty; 23% had income of less than \$15,000 per year; and 40% are currently not in the labor force.

Washington Unified School District

Washington Adult School (WAS) has one teacher per core subject (Math, Science, English, Social Science, and ESL). There is an average of 20-25 seats per class. 90% of students who are seeking a high school diploma need Math and English. Last year, there was a waiting list of about 8-10 students seeking Math and English credits. If a student leaves or drops the course then someone else would replace that student. Due to the limit available seat in class, many students couldn't meet any of the Math and English credits they needed.

WAS recognizes the need to increase connections with other parts of the community including the public library and the West Sacramento branch but especially Sacramento City College. It is important to broaden WAS' ability to provide career resources for students as well as for growth in the area of career development. The school vision is not just to obtain a diploma, but to move the students forward into a more prosperous future. The student population tends to have a high need, often lack the guidance needed to propel them forward in attaining academic and career goals.

There is great need for continued and on the spot case management. Therefore, WAS has made an effort last current year to step up counseling services for students enrolled in Washington Adult School and have a counselor and clerical assistance available to students during all hours of operation. But, once again due to limited funding such action is not in place this year 2014-2015.

Regional Data Sources

The latest census information tells us that there is much need within West Sacramento as it relates to education and low socio-economics, which makes the success of Washington Adult School imperative to the community needs. Twenty percent of the population was born outside the United States. Thirty seven percent of the community members speak a language outside of English and 28 % indicate lack of English proficiency. The community is also below the state average in several other areas related to educational attainment.

Surveys from students that enroll in Washington Adult School show there is much need for greater education. About 69 % of the students entering the program are not employed, and 81 % of students entering the program are characterized as being at a low instructional level in language arts.

As of 2012-2013 the number of students enrolled in the program had declined considerably over the past few years as has the total number of students completing the program. Last year's data indicates that at least 33 % of students left the program before completion.

The immediate goal is to provide students who haven't graduated high school the opportunity to gain a diploma, which is the stated goal of at least 60 % of students, a majority of whom are between 18-24 years of age. However, more importantly WAS is providing instruction to students in order to move them to a point where they have readiness for their future academic and career opportunities. Unfortunately the number one deterrent to students in Washington Adult School completing the program is length of time to earn credits.

Furthermore, with the right funding, the first strategy will be to improve instructional practice and ensure staff uses the most effective research-based applications in standards-based learning activities. Planned collaboration of staff and integration of technology such as online coursework will directly involve teachers consistently, allow teachers to engage students in meaningful educational experiences and allow more time for individualized instructional opportunities. We expect both the quality and the quantity of standards-based skills to improve. The second strategy is for students in the program to receive a higher rate of case management. Last year 52 % of the students in the program achieved their educational result desired ranging from a diploma to entering post-secondary education. However, we know we can do better. Thus, each student will be placed on an individualized learning plan. In addition, WAS students will receive at least two additional hours per week after-school in career guidance. Research shows that collaboration with community and local institutions is linked to remarkable gains in student achievement.

The third strategy is to move more classes to include an online component. Currently there are not significant program barriers that prevent participation related to gender and ethnicity. However, there are substantial barriers to student participation in terms of the fact that many WAS students cannot find the time or place to participate in a physical space due to scheduling conflicts, lack of transportation, and distance from campus. In addition, WAS wants to create an online career center in order to help adult students increase access to collect labor market information to assist students in the use of career information materials; arrange visits to employers and college representatives and schedule employment opportunities for adult education students. This will help increase support services to students regarding careers and post-secondary education.

Because Washington Adult School is adjacent to the Yolo Educational Center, which includes an alternative high school, it shares the same administrator and has the benefits of the same partnerships within the community.

CAERC Partners

El Dorado County Office of Education

There is a substantial need for more Program 1 services in the EL Dorado County region. Possible indicators of need include:

- Currently the wait list for adults wish to enroll in the program is 4-6 months due to limited program capacity. As a result, there is a large population of adult learners who are unserved. It is also anticipated that even greater numbers of unserved students exist who are not even aware of the programs because the programs are not advertised beyond being noted on the EDCOE and Charter Alternative Websites. Advertisement would further increase the demand for additional program capacity.
- The numbers of children who qualify for free or reduced lunch for the 2013-2014 school year, as reported in the Oct. 2013 CBEDS, for the EDCOE programs are 488.
- According to statistics in the needs assessment from El Dorado Co. (https://www.edcgov.us/.../MCAH_2010-2014), 22% of residents do not have a HS diploma. Additionally, the rural nature of El Dorado County provides additional challenges for adults attempting to earn their HS diploma are limited, including transportation and access to high-speed internet.
- Although EDCOE has just opened a Pearson Vue Test Center, there are still limited opportunities for students to test because: 1.) the fact that there is only one test center in the entire county, 2.) the rural nature of our county, 3) the distance one could have to travel to test, and 4.) the fact that the test center is limited to only 10 computers. *The program could benefit from additional test sites throughout the county or the development of a mobile testing lab.*
- There is a need to consistently support students' transition into career technical training, college admission, or work. This should include career exploration, including using CDE websites and personal consultation with our academic counselor. There is a need to establish ongoing contact with the Los Rios Community College staff (counselors/faculty) so that EDCOE can facilitate the transition of our students toward higher learning in a seamless manner. Throughout this process, students need to be advised of the various supports available to them including financial aid, tutoring, counseling (academic and psychological), childcare, and transportation.
- Adult students are largely from the lower socio-economic level and consequently have a proportionately higher need for social services than the general public. Having social services housed at our school site would add to student success as the various social agencies could more easily collaborate to provide various levels of support needed which would ultimately lead to student success.

- Ideally, there would be a tracking system between the K-12 adult program and the community colleges on the transitioned students. The K-12 adult program could act as a safety net for students who are struggling in the transition phase. Collaboration between faculty/counselors could aid in this process.

Regional Data Sources

- According to statistics in the needs assessment from El Dorado Co. (https://www.edcgov.us/.../MCAH_2010-2014), 22% of residents do not have a HS diploma. Additionally, the rural nature of El Dorado County provides additional challenges for adults attempting to earn their HS diploma are limited, including transportation and access to high-speed internet.
- The median household income in El Dorado County is slightly higher than the remainder of CA. Industrial opportunities for males are dominated by the construction and agriculture professions and for females Construction, agriculture, and food service are the predominate employers. (http://www.city-data.com/county/El_Dorado_County-CA.html).
- The unemployment rate for the county is 7.2%, as reported by the State of California, and the percent of individuals living below the poverty rate is 8.1% (<http://quickfacts.census.gov/qfd/states/06/06017.html>).
- EDCOE believes that by providing additional services and program enhancements those numbers could see a reduction.

Outreach and Technical Assistance Network (OTAN)

Housed at the Sacramento County Office of Education, the Outreach and Technical Assistance Network (OTAN) is one of three California state leadership projects that support adult educators. OTAN is funded with federal money through a contract with the California Department of Education's Adult Education Office, and provides professional development and online resources to adult educators. In addition, OTAN offers support for technology integration and online collaboration, as well as assistance with implementation of distance learning. OTAN's constituents include adult education teachers and administrators at approximately 200 adult education agencies (including K-12 adult education, community colleges, literacy programs, and community-based organizations).

The academic year 2013/14 marks the sixth year that responsibility for distance learning in adult education has been assigned to OTAN. To provide perspective, In 2008/09, over 73,000 adult learners participated in distance learning, up from 56,000 students in 2007/08. In 2009/10, enrollment in distance learning decreased by 55 percent. The decrease was directly related to budget cuts resulting from 'flexed' funding. Flexed funding removed adult education as a categorical program and allowed school district administration to move funds previously earmarked for adult education to K-12. Although distance learning numbers decreased, there is still a need for professional development for distance educators as well as for the dissemination of research and information on the modality of distance learning. It is incumbent on California to heed

research findings and move adult distance learning in the direction of online/blended delivery.

Sacramento Employment and Training Agency

Sacramento Employment and Training Agency (SETA) has identified the following indicators of need:

- Enhanced support services for low-income students with barriers to ensure successful completion;
- Externships for teachers with employers;
- Internships for students to enhance hands-on learning;
- Connection between Adult Basic Skills and career pathways;
- Additional service providers throughout Sacramento County;
- Increase course offerings over the summer months; and
- Financial assistance to support transfer students to continue their education.

Sacramento Public Library

There is a growing need to support adults with low literacy in the region. The Adult Literacy Service only counts as waiting students those who have completed the intake assessment and are waiting to be matched with a tutor, or those who have scheduled an assessment. Students who have inquired about services but have not either scheduled or completed an assessment are not counted on the waiting lists. The lists below reflect students in the program service areas who have scheduled or completed an intake assessment.

- Student wait list for Adult Literacy: 31
- Student wait list for GED: 21
- Student wait list for Math: 1

In an effort to get an idea of the demand for services, during the months of April – June 2014, program staff tracked all inquiries for services, including basic literacy, Math, GED and ESL. During the 3-month period, there were 88 total inquiries and/or requests for service in the four program areas listed.

Program Area 2: Adult English Learners

Classes and courses for immigrants eligible for educational services in citizenship in English as a second language, and workforce preparation classes in basic skills

CAERC Members

Black Oak Mine Unified School District (BOMUSD) [BOMUSD is now a partner – no longer a member]

The Georgetown Divide, locally known as the Divide, is a geographically isolated area of 412 square miles in the California Foothills located 56 miles east of Sacramento. Nestled between the middle and southern forks of the American River, the Divide is home to 13,000 residents who reside primarily in the communities of Georgetown, Garden Valley, Cool, Greenwood, Pilot Hill, and Kelsey. The physical remoteness of the community provides numerous challenges to the local population who often need to balance the quiet of a rural setting with high poverty rates, high unemployment, and lack of access to services. Residents must accept that a trip to the Auburn or Placerville, the closest cities to the Divide, require a 20 – 50 minute drive over the steep and twisting roads of our local river canyons. Many Divide residents make this drive daily as they commute to their places of employment across the Sacramento area. Public transportation is not available to residents who lack suitable transportation to make these trips. Our remoteness has also placed limitations on law enforcement, which has attracted some residents who want low visibility as they cultivate their marijuana crops or meth operations. This combination of poverty, access to illegal drugs, and an absence of services have greatly contributed to the number of school-aged children living in at-risk environments.

Roughly 1,350 children are served by the Black Oak Mine Unified School District (referred to hereafter as the District) at eight sites that include the five sites targeted in this proposal: two K-6 schools (Georgetown and Northside), one K-5 school (Otter Creek), one K-8 school (American River Charter School), and one 7-8 junior high (Golden Sierra Junior High). Four of these five sites receive Title I funding to better support students coming from low-income families. In addition, 44.4% of the students attending these schools qualify for free and reduced meals based upon Federal Government guidelines. We suspect that these numbers are higher throughout our community as a portion of our population chooses not to participate in any form of government assistance.

Beginning with the economic downturn, our schools began to encounter more deeply rooted problems outside of school. Families in our community began to experience the loss of jobs and homes, while their children often brought the fear and uncertainty of these situations into our schools. The number of children and families in stressful economic situations quickly overwhelmed our existing counseling and mental health support structures. To date, the Divide Community is still struggling to recover from these difficult economic times. In a recent review of the labor force for El Dorado County, Georgetown and the surrounding areas maintain 13.8% unemployment

compared to 8.3% for El Dorado County as a whole. This unemployment rate is the highest of any community in the county.

Center Joint Unified School District (CJUSD)

In spite of the fact CJUSD has not done outreach for the past several years, the wait list for ESL classes has consistently contained twice as many students as can be accommodated. For example, the morning English class has a capacity of 30 students, but the wait list for that class typically includes 50 to 60 students' names.

The community served by Center Adult School (CAS) is diverse in languages and ethnicity. According to CJUSD 2013 data, twenty-one different home languages are spoken in this small area. The ethnicity breakdown for CJUSD is Amer. Indian-1.6% Asian-6.27%, Filipino-2.92%, Hispanic or Latino-23.16%, Pacific islander-1.10% Caucasion-40.20%, African American-9.36%, other-.15%, and multiple-15.69%. Based on U.S. Census Bureau estimates for 2008-2012, a significant number of families in this community were foreign born and speak a language other than English at home. The data by zip code is: 95660: 7,122 individuals foreign born; 36 % of these speak a language other than English at home. 95843: 1,208 foreign born, 36% speak a language other than English at home.

The community served by Center Adult School (CAS) is comprised of individuals living at a higher than average poverty rate. CAS reviewed the CJUSD free and reduced lunch rate and the Census Bureau five year estimates 2008-2012 poverty data and, individuals on public assistance and the rate of unemployment for individuals age 16 and above. The total rate of students who qualify for free and reduced lunch in CJUSD as of January 2014 is 59%. The free and reduced lunch rate at the school site co-located with CAS is 75%. The poverty data by zip code is as follows:

- 95660: Below poverty- 7412 or 24% of population; 7% of population on public assistance; 14% unemployed, 95843: Below poverty 11,056 individuals or 24% of population; 4% of population on public assistance; 8% unemployed. In all three categories, the Hispanic or Latino population showed the highest rates of poverty reaching as high as 35%. In addition, 399 CJUSD K-12 students qualified as homeless under the McKinney Vento Act. This represents 9% of the student population.

Because the students in this program area are not native to this country, they need additional counseling support to set realistic goals and access pathways to higher education and employment.

Regional Data Sources

CJUSD is a suburban and semi-rural district of 4500 students located at the Northeast corner of Sacramento County with most of the population living in the 95843 and 95662 zip codes. Within its boundaries is a development of low income housing created through the Farm Home Loan project. In the vicinity of CAS are six rent controlled

apartment complexes, and a large track of small rental homes previously U.S. Air Force base housing. The school is just .1 mile from the 95660 zip code, and draws students from this area since the closest adult program in that zip code is located near the northern border.

The economy of this area was hit very hard in 1996 with the closure of McClellan Air Force base, the largest employer in the area. Because of this, the area was already experiencing economic stress when the recent recession impacted the slow recovery taking place. There are no major regional employers in the area. The economy is diverse including low wage service jobs, small businesses, and small retail centers. The previous Air Force Base has attracted some regional offices and a variety of small businesses.

According to the U.S. Census Bureau 2012 five year estimates, 22,703 individuals age 16 and older lived in zip code 95660; in zip code 95843, 33,502 individuals of that age lived in zip code 95843. In 95660, 54.8% of these individuals were employed and in 95843, 62% were employed. Total employed for the two zip codes was 31,421.

The economy of the area is reflected in the industries in which these people were employed. The largest number of people, 22%, were employed in the industry of Educational services, health care, and social assistance. The next largest number, 13% were employed in Retail trade. There were a negligible number of people employed in agriculture and only 2% employed in the information industry. The remaining employed individuals were evenly dispersed (between 6%-8% per industry) among Construction; Manufacturing; Wholesale Trade; Transportation, warehousing and utilities; Finance, insurance, and property rental/leasing; Arts, entertainment, recreation, accommodation, and food services; Other services except public administration; and Public administration. This clearly demonstrates both the diversity of the economic opportunities as well as the gap between the number of individuals of employable age and the number employed.

Davis Joint Unified School District (DJUSD)

DJUSD has a high graduation rate with only a 2.4% dropout rate for all students. In the Hispanic subgroup, the dropout rate is a little higher at 4.9% and this achievement gap is an area of focus for the entire district including Adult Ed. Since DACE also serves several communities surrounding the city of Davis who no longer have their own adult education programs (i.e. Winters, Dixon, and Esparto), it is also useful to consider the dropout rate for these neighboring districts as well. Dixon Unified School District, which is our primary feeder area for high school diploma students, has a dropout rate of 13.4%.

The Davis community has pockets of wealth and poverty with the majority of the community falling squarely into the middle and upper middle class, so for our purposes, it is most useful to look at the school with the highest percentage of poverty, Marguerite Montgomery. This school has 35% of students classified as English Learners and 49% of students are considered economically disadvantaged. This area of Davis has the

greatest need for Adult Education services, but it has also been the most difficult for us to serve because of its geographical distance from where the majority of our classes are held in central Davis.

This points to a large gap in services since many of the parents at this school are immigrants who need to learn English and also are without a high school diploma. We have been in talks with the principal at this elementary school to try to find ways that we could better serve this community which often needs childcare if they are to attend classes and lacks reliable transportation to get to class. Without additional funding, we have been unable to find ways to expand our program to meet those needs.

Elk Grove Unified School District (EGUSD)

EGUSD serves the southern third of Sacramento County, which encompasses urban, suburban, and rural areas. According to five-year estimates by a nation-wide survey conducted by the U.S. Census Bureau, the estimated population for the area is 325,000. EGACE draws from the 320-mile EGUSD that covers all or part of 13 zip codes. The majority of EGACE students enrolled in English as a Second Language courses reside primarily in two south Sacramento zip code areas, 95823 and 95828, which include parts of the City of Sacramento and unincorporated Sacramento County. Educational services are also offered at the Rio Cosumnes Correctional Center and the Sacramento Main Jail.

The data below provides some general idea of the need of adult education services within zip code areas 95823 and 95828:

	95823	95828
Unemployment rate	18.8%	16.9%
Highest level of educational attainment below 9th grades (ages 25+)	12.46% (4,956)	10.60% (3,376)
Attended grades 9-12 but did not graduate	14.60% (5,806)	10.60% (3,376)
Below poverty level	29%	20.9%
Foreign born: not a U.S. citizen	19.5%	12.9%

Sources: Community Link Capital Region - zipatlas.com

Another need factor in the EGUSD community is the impact of immigration. Census data shows the number of foreign-born residents in the area range from 26% in EGUSD to 30% in the 95823 and 95828 zip codes. Of those who have a primary language different than English, 16% reside within EGUSD attendance boundaries, and at least 26% of those in the two zip code areas are identified as adults who “speak English less than ‘very well’”. Students enrolled in EGACE programs represent at least 28 different language groups.

Community Link Capital Region data shows the numbers of foreign-born residents in the area range from 26% in EGUSD to 30% in the 95823 and 95828 zip codes. Of those who have a primary language different than English, 16% reside within EGUSD attendance boundaries, and at least 26% of those in the two zip code areas are identified as adults who “speak English less than ‘very well’”. Students enrolled in EGACE programs represent at least 28 different language groups.

Folsom Cordova Unified School District (FCUSD)

Folsom Cordova Unified School District identified the following need: About 19 students are on wait list with continuous weekly adjustments from teachers and classroom expansions.

School districts’ K-12 English learner statistics

In 2008-2009, FCAS served 4,134 students with 85 courses in 14 programs. Faced with an approximately 80% reduction in revenue in 2010, due to budget cuts and Adult Ed’s placement in Tier III flexibility, we needed to assess our community needs and redefine our priorities. Data from the American Community Survey and US Census showed that Rancho Cordova residents experience greater needs than the rest of Sacramento County: approximately 17% live below poverty level; nearly 14% receive public assistance/Food Stamps; 10% are unemployed; and 20% of those unemployed had less than a high school diploma. Approximately 17% of residents 18-24 years old and 14% of those 25 or older do not have a high school diploma. Over 25% of Rancho Cordova residents are foreign born of which 58%, over four times the county average, speak English less than very well. This data is supported by FCUSD internal data which shows 73% of students in Rancho Cordova elementary and secondary schools enrolled in the Free or Reduced Lunch Program and 23.6% are enrolled in English as a Second Language (ESL) (FCAS WASC Mid-year report 2014).

The number of children who qualify for free or reduced lunch

In the FCUSD district there are 4,815 total students who receive free or reduced lunch.

Los Rios Community College District (LRCCD)

Students within the consortium service area face a gap when they assess as unprepared for college credit, non-degree applicable basic skills courses in ESL and either cannot find appropriate adult education courses to prepare them for the college ESL basic skills courses or are not eligible for the adult education courses because they have already completed a GED or US high school diploma. Currently, no systematic, consistent, consortium-wide processes exist to align adult education ESL basic skills curricula with college ESL basic skills curricula, so that adult education ESL students wishing to continue on to college have a clear pathway to follow. In addition, no coherent messaging on adult education ESL pathways exists within the consortium area, so potential students may not know how to access basic skills ESL opportunities appropriate to their levels of preparation.

Natomas Unified School District (NUSD)

The Natomas Unified School District is primarily located within the zip code boundaries of 95833 and 95834. According to the U.S. Census Bureau the estimated population within these two areas is 39,806 with the majority of residents living in the 95833 zip code area.

The following table, compiled using data provided by zipatlas.com, indicates that there is a growing need to continue and expand adult education services in the NUSD:

	95833	95834
Unemployment rate	8.40%	6.98%
Ages 25 + that did not graduate from high school	17.17%	17.60%
Below poverty level	10.45%	13.21%
Foreign born: naturalized citizen	8.0%	15.03%
Foreign born: not a U.S. citizen	13.0%	12.17%

Demographics

The Natomas Unified School District was named the second most diverse school district in the nation in a 2009 New York Times study. This diversity has added to the current demand for ESL classes and exceeds the NUSD ability to provide adult education services. This is also expressed through the number of applicants currently on waiting lists. Based on data provided by the California Department of Education, other indicators suggest a continued need for classes, and an expansion of ESL and basic adult education. During the 2013-14 school year approximately 15.2% of students in the NUSD were identified as English learners, and 50.1% of NUSD students qualify for free and reduced lunches.

Another challenge is the lack of systematic, consistent, consortium-wide processes to align adult education ESL basic skills curricula with college ESL basic skills curricula for adult education ESL students wishing to continue on to college have a clear pathway to follow. In addition, no coherent messaging on adult education ESL pathways exists within the consortium area, so potential students may not know how to access basic skills ESL opportunities appropriate to their levels of preparation.

Sacramento City Unified School District (SCUSD)

Currently, no systematic, consistent, consortium-wide processes exist to align adult education English as a Second Language (ESL) basic skills curricula with college ESL basic skills curricula, so that adult education ESL students wishing to continue on to college have a clear pathway to follow. In addition, no coherent messaging on adult education ESL pathways exists within the consortium area, so potential students may not know how to access basic skills ESL opportunities appropriate to their levels of preparation. Restored funding can help address the shortfall of resources to offer ESL skill-based classes designed specifically for English learners and immigrants (e.g., pronunciation, writing, reading, etc.).

There is a significant need for additional ESL classes in the Sacramento City Unified School District (SCUSD) in all language proficiency levels, particularly at the Beginning level where the need is the greatest. More funding is required so that adult education programs can expand the number of ESL course offerings. This gap is further heightened with the closing of three of the adult school campuses. This has drastically limited SCUSD's ability to serve all the potential ESL students especially those who are unable to attend daytime classes and prefer evening classes. ESL students also need additional basic literacy classes. Due to limited funding, SCUSD is no longer able to offer ESL classes at elementary, middle, and high school campuses to meet the needs of parents in the district. Increased funding would allow K-12 adult education programs to serve more ESL students. If the achievement gap for our K-12 students is ever going to be addressed, the parents of the K-12 students must have educational opportunities that ESL can provide.

San Juan Unified School District (SJUSD)

San Juan USD identified the following needs:

Need #1 Additional Classes: The summary data indicates a big need for English as a Second Language classes (at all levels, especially at the beginning levels) and that our program needs to continue serving the low-income adults with limited English in San Juan district (who may also have low educational backgrounds). If these adults are parents of students in our district, providing English instruction to these parents should be a must. Having parents who can communicate to their children and the teachers, can check on their children's school attendance or test results online, know what is going on at their children's schools or in their lives and learning, are able to provide a study environment at home to encourage learning at home or obtain help when their children need help with homework would probably help increase the number of students who stay in school and graduate. If those adults are workers in their productive years, providing English instruction would help them better themselves, attain more (higher) education, or get better jobs. The closing of our other adult school campus has limited our ability to serve more ESL students especially those who are unable to attend daytime classes (work schedule conflict) and need evening classes instead.

Need #2 Basic Literacy: There is a need to have a basic literacy class for ESL students who never attended any formal education in their home countries. These students need the lowest level of ESL instruction. They have no reading or writing skills whatsoever. At one point we had about 20 refugee students who needed this low level literacy class (they came as a group). Due to our funding limitation, we were not able to serve their needs.

Need #3 Older Teens: The program also needs to provide English instruction that focuses on knowledge of academic vocabulary and grammar, reading and writing skills to accommodate those young adults who attended high school in the US for a year or two and did not graduate due to the fact that they lack formal education in their home countries (they were placed in high school when they came to this country because of their age (mentioned in the narrative in objective #1)). These students demonstrate the ability to communicate orally but they usually write at beginning low/high levels. They do not benefit from attending regular ESL classes that focus more on contextualized life skills vocabulary, and at the same time they are not ready for a GED preparation class.

This kind of class (ESL/Pre-GED) will also benefit higher level ESL students who have no high school diplomas. Without a GED or high school diploma, these students will not be able to advance to higher education or possible better jobs in the future.

Need #4 Career Exploration: Students would benefit from 'bridge' classes to assist them to be more marketable as they seek employment. It would be beneficial to have an ESL Career Exploration class that focuses, for example, on learning about workplace (soft) skills, licensing requirements, job duties and responsibilities, workers' rights and responsibilities, safety at work, job benefits, work insurance, questions for various job interviews, functional grammar pertaining to workplace scenarios, vocabulary that is specifically related to students' desired occupation, and technology skills required for various jobs. Under the guidance of the teacher each student will choose a desired job to explore. As a classroom project the students will do a presentation regarding their desired job and they will be encouraged to do some volunteer work in the community (to get firsthand knowledge of the job). This class will help build students' self-confidence and introduce them to the job culture in the US. This class will also accommodate the immigrant professionals as well (those who were highly educated in their home countries, for example, doctors, dentists, lawyers, university professors). It will be an opportunity for them to explore other possibilities related to their academic/professional experience.

Need #5 Job Skills: ESL students have also asked about Career Technical Education classes, such as truck driving, medical assistant, nursing, manicurist, beautician, or hair stylist to name a few. It will be beneficial to have an ESL/Vocational class that focuses on, for example, building and developing the students' vocabulary (related to the job the student desires to learn), functional workplace grammar, pronunciation, and workplace technology.

Need #6 English Language Pronunciation: There is a need for Conversation and Pronunciation classes. Almost all our students (unless their spouses speak English only) speak their own native languages outside the classroom and when they are at home. These classes will provide more opportunity for them to practice their English and reduce their accents.

Need #7 Literacy: To serve the needs of students who have good listening/speaking skills in English (have lived in the US for over 10 or 15 years), but do not have the reading and writing skills. They need a grammar/writing class (they usually test at Beginning Low/High class). These students get frustrated with regular ESL classes that focus on students' mastery of life skills vocabulary and the improvement of their spoken English before reading and writing activities are introduced (for example, learn to call to make an appointment, to ask for directions, to call in sick). They came to our program after being told by their managers that they needed to improve their writing before they could get promoted to a higher position with higher pay at work.

Need #8 Technology: To have an ESL/Computer & Keyboarding class for our students to learn keyboarding and other technology skills such as word processing, email, texting, online search.

Regional Data Sources

San Juan Unified Adult Education (SJAE) serves a community that covers 75 square miles. Diversity is reflected in program and district goals, where 41 different languages are spoken. Adult education programs are offered at Sunrise Tech Center, Encina High School, and Family Resource Centers in various elementary schools and on SECC cable TV, broadcast throughout the county.

The most current data is that the number of English learners in the San Juan Unified School District had nearly doubled since the mid-1990s to 5,229 of the total enrollment of over 41,000 students. This doesn't include adult learners. Sacramento is one of the most diverse cities in the nation. Current student needs data has also been drawn from the US Department of Education National Assessment of Adult Literacy which estimates that 13% of adults in Sacramento County lack basic prose literacy skills; this number includes adults with limited English skills.

Our SJAE program located at Sunrise Tech Center has existed for several years. We serve English as a Second Language (ESL) from beginning to intermediate high, Adult Basic Education (ABE), GED, and High School Diploma students. These classes are always full and at times have waiting lists. When our other adult schools closed in the district, it left only our facility to serve all the students in an area covering 75 square miles. There is a high demand in all AEFLA programs and at all levels, but mostly at the lowest levels of both ESL and Adult Basic Education (ABE). We are currently serving approximately 300 CalWORKs students, and in addition, are currently serving approximately 800 students who identify themselves as receiving SSI, food stamps, are single parents, handicapped, low income, in rehabilitation, refugees, veterans, and

learning disabled among other similar categories. Approximately one-half of our current students identify themselves in a category which puts them at a disadvantage in society.

At one time during the 2013-14 program year, we had approximately 125 students on various ESL wait lists (for beginning low/high classes). In January 2014 (the beginning of our second semester) there were about 55 beginning low/literacy students on a class wait list at Encina. In order to accommodate them, the program added a new beginning low/literacy class.

The data for the greater Sacramento region suggests that a significant number of adults are unable to fulfill their personal goals to be employed, active members of their community, and effective family members because of limited literacy skills and language barriers. They are under- or unemployed due to these and other factors, such as family issues, legal concerns, and lack of soft skills (the “people skills” needed to keep a job). San Juan Adult Education’s courses are designed to assist students gain the basic English skills, technical skills, literacy skills and soft skills necessary to become self-supporting members of the community and to improve their family relationships

Twin Rivers Unified School District (TRUSD)

There is a tremendous need for more Program Area 2 services and programs to meet the growing demand and need in the community. The demographics of the community served by Twin Rivers Adult School, a school within the Twin Rivers Unified School District, show there is a continued need for classes and courses for educational services in citizenship and English as a second language and workforce preparation in basic skills. Of the 27,000 students enrolled in preschool through Adult Education classes within the Twin Rivers Unified School District, 27% of the population are English-learners and 46 different languages are spoken. Of the students who enrolled in classes covered by this program area during FY 2013/14, 21% were Hispanic, 78% were not Hispanic, 98% had a native language other than English and 84% were between the ages of 22 and 49. Detailed demographics of the Twin Rivers Unified School District and Twin Rivers Adult School are provided and the number of students currently on wait lists for the classes noted in this program area are detailed by teacher and by section.

Statistics of the Twin Rivers Unified School District (TRUSD), from the District’s Fact Sheet for FY 14/15):

- Enrollment—27,000 students, preschool through Adult Education
- 27% of the student population are English Learners
- 46 languages spoken

Student Demographics of the TRUSD:

- Hispanic/Latino, 43%
- Caucasian, 24%
- African American, 15%

- Asian, 9%
- Two or more races, 5%
- Pacific Islander, 2%
- Filipino, 1%
- Native American, 1%
- 83% of the students in preschool through 12th grade qualify for free or reduced lunches (FY 13/14).

Statistics of Twin Rivers Adult School, from the Demographic Summary compiled from the enrollment forms completed by this group of students during FY 13/14):

Highest Diploma in US # %

None	59	11%
GED	1	0%
HS Diploma	44	8%
Technical	8	2%
A. A./A.S.	4	1%
College	4	1%
Graduate	5	1%
Other Diploma	1	0%
N/A	395	76%
Total	521	

Highest Diploma out of US # %

None	61	12%
GED	7	1%
HS Diploma	210	40%
Technical	14	3%
A. A./A.S.	15	3%
College	55	11%
Graduate	28	5%
Other Diploma	4	1%
N/A	126	24%
Total	520	

Highest School Year # %

Under 6	26	5%
6 - 8	50	10%
9 - 10	112	22%
11	66	13%
12	126	24%
13+	141	27%
N/A	0	0%
Total	521	

Twin Rivers Adult School—Student Wait Lists (as of September 9, 2014) by teacher, by section

- ESL Beginning Low, 8:15 – 10:15, 10 students
- ESL Beginning High, 10:30 – 12:30, 16 students
- ESL Beginning Low/High, 1:00 – 3:00, 2 students
- ESL Beginning Low, 8:15 – 10:15, 33 students
- ESL Literacy, 10:30 – 12:30, 59 students
- ESL Beginning High, 1:00 – 3:00, 26 students
- ESL Beginning High, 8:15 – 10:15, 13 students
- ESL Beginning Low, 10:30 – 12:30, 19 students
- ESL Literacy/Beginning Low, 1:00 – 3:00, 31 students

Regional Data Sources

TRAS primarily serves the region covered by the Twin Rivers Unified School District, which includes the cities/communities of North Sacramento, Del Paso Heights, North Highlands, Foothill Farms, Rio Linda, and Elverta (zip codes 95838, 95660, 95815, 95842, 95843 and 95821). TRAS staff encourages its students to attend the adult facility that best fits their needs and educational and developmental expectations. TRAS has many students who come from both inside and outside of the Twin Rivers Unified School District's boundaries.

The following demographics from the American Community Survey, 2012 (Census Bureau web site), 1 year estimate for the Twin Rivers Unified School District (of which Twin Rivers Adult School is a part of) include the following: 53,000 households; 184,000 people; 27.1% of the people are foreign born persons; 48% reported that they did not speak English very well; 38% of the people age 25 or older did not have a high school diploma or equivalent; 20% of the people age 25 or older are dropouts and not enrolled in school; 28% of the people live in poverty; 23% had income of less than \$15,000 per year; and 40% are currently not in the labor force.

Washington Unified School District (WUSD)

ESL classes play a very important role in helping students function in the society as good citizens in everyday life. There is a high percentage of ESL participants whose primary language is Russian, Spanish, Farsi as many other. Resources and support are very limited in our program for this student population.

Last year, ESL classes also had a waiting list. Many students who wanted to improve their English language skills couldn't have the opportunity to participate and be part of one of our ESL courses (Intermediate/advance and beginning). There is a great demand of ESL courses in the evening. The program schedule runs from 9:00am until 3:00pm. There is a great need of evening ESL classes for those who work during regular day hours. Limited funding restricts hiring enough teachers to meet the growing demand to better support students build up on the skills they require to be successful in the community.

In addition, WUSD are in need of supporting those students who are under the “CALWORKS” program through the county of social services. CalWork students choose come to our program with the expectation that we are going to support them better by attending school more hours throughout the days. Unfortunately, WUSD have only one ESL teacher who teaches intermediate/advance and beginning level. Also, she is the same teacher for the Citizenship course that it is offer twice a week. Adding an additional ESL teacher to the program, WUSD would be able to better support this population of students. Offering more in-class instruction and offering different class time schedules to these students, the program can expand and enrollment could be greater. One of the goals is to increase the amount of hours WUSD can offer to English learners. Every year WUSD have students who seek evening ESL classes, unfortunately, WUSD has not been able to help them because the district does not have this type of program in place.

Regional Data Sources

There are no data sources in place for this student population. This is an area that needs a lot of improvement.

CAERC Partners

Building Skills Partnership

Classes for immigrants and working adults must be made more accessible and convenient as these learners face multiple barriers to accessing existing opportunities. Offering flexible class hours at non-traditional locations and at non-traditional times is imperative to serving these hard-to-reach populations. The fact that 80% of BSP’s learners have never taken a class at an adult school or community college suggests that there is a great unmet need in serving these learners.

Regional Data Sources

97% of the janitors BSP serves are foreign-born immigrants from Latin America with very limited English proficiency. 30% have no formal education beyond the 6th grade and the majority (85%) has less than a high school education. Two thirds of the workforce are women, and 41% are over the age of 50. All struggle to make ends meet, as janitors earn an average of \$24,000 a year in California. Most of their school-age children receive free or reduced-price lunch. On top of their full-time janitorial positions, many hold additional jobs or are a primary childcare provider. Due to stagnating wages and sub-contracting, these workers face stark income inequality and lack of opportunity, which negatively impacts both their families and the region’s economy.

El Dorado County Office of Education (EDCOE)

Currently the wait list for adults wish to enroll in the program is 4-6 months. EDCOE believes that we have a large population that goes unserved because of this fact.

During the 2013-2014 school year EDCOE served 63 K-12 English learners.

The numbers of children who qualify for free or reduced lunch for the 2013-2014 school year, as reported in the Oct. 2013 CBEDS, for the EDCOE programs are 488.

According to statistics in the needs assessment from El Dorado Co. (https://www.edcgov.us/.../MCAH_2010-2014), 22% of residents do not have a HS diploma. *Additionally, the rural nature of El Dorado County provides additional challenges for adults attempting to earn their HS diploma are limited, including transportation and access to high-speed internet.*

Currently the ESL program does not provide citizenship classes and could benefit from developing a curriculum designed for such as well as employment skills.

There is a need to have a basic literacy class for ESL students who never attended any formal education in their home countries. These students need the lowest level of ESL instruction. They have no reading or writing skills whatsoever.

Students would benefit from 'bridge' classes to assist them to be more marketable as they seek employment. It would be beneficial to have an ESL Career Exploration class that focuses, for example, on learning about workplace (soft) skills, licensing requirements, job duties and responsibilities, workers' rights and responsibilities, safety at work, job benefits, work insurance, questions for various job interviews, functional grammar pertaining to workplace scenarios, vocabulary that is specifically related to students' desired occupation, and technology skills required for various jobs. This class would also accommodate the immigrant professionals as well e.g., those who were highly educated in their home countries, for example, doctors, dentists, lawyers, university professors. It will be an opportunity for them to explore other possibilities related to their academic/professional experience.

ESL students have also asked about Career Technical Education classes, such as truck driving, medical assistant, nursing, manicurist, beautician, or hair stylist to name a few. It will be beneficial to have an ESL/Vocational class that focuses on, for example, building and developing the students' vocabulary (related to the job the student desires to learn), functional workplace grammar, pronunciation, and workplace technology.

Development of an ESL/Computer & Keyboarding class for our students to learn keyboarding and other technology skills such as word processing, email, texting, online search.

Regional Data Sources

According to statistics in the needs assessment from El Dorado Co. (https://www.edcgov.us/.../MCAH_2010-2014), 22% of residents do not have a HS diploma. *Additionally, the rural nature of El Dorado County provides additional challenges for adults attempting to earn their HS diploma are limited, including transportation and access to high-speed internet.*

The median household income in El Dorado County is slightly higher than the remainder of CA. Industrial opportunities for males are dominated by the construction and

agriculture professions and for females Construction, agriculture, and food service are the predominate employers. (http://www.city-data.com/county/El_Dorado_County-CA.html).

The unemployment rate for the county is 7.2%, as reported by the State of California, and the percent of individuals living below the poverty rate is 8.1% (<http://quickfacts.census.gov/qfd/states/06/06017.html>).

EDCOE believes that by providing additional services and program enhancements those numbers could see a reduction.

Sacramento ESL Program

We have no wait lists for our students. We have open enrollment for all students so there is a continual flow of students into our classes. Since SEESL is a relatively new educational provider, many potential students have not heard about us yet. We use some cost-effective advertising to bring more students.

According to *SCUSD 2009-2010 Facts at a Glance and SCUSD Assessment, Research & Evaluation 2007-2008*: “27% (of SCUSD students) are English Learners whose parents speak 44 languages. As parents’ literacy levels improve, children’s test scores improve.”

According to Brenda Padilla, M.S., Director of Nutrition Services, SCUSD, that district in 2012-2013 was “70% needy (free and reduced eligible) enrolled.

According to the Literacy Project Foundation (<http://literacyprojectfoundation.org/community/statistics/>):

1. According to the 2007 California Academic Performance Index, research show that 57% of students failed the California Standards test in English.
2. There are six million students in the California school system and 25% of those students are unable to perform basic reading skills.
3. There is a correlation between illiteracy and income at least in individual economic terms, in that literacy has payoffs and is a worthwhile investment. As the literacy rate doubles, so doubles the per capita income.
4. Regional Data Sources
5. According to <http://www.saclibrary.org/Services/Adult-Literacy/>
6. An estimated 230,000 adults in Sacramento County are in need of help to improve their reading and writing skills.
7. Of those adults who are unemployed, 75% have reading and writing difficulties.
8. According to the National Institute for Literacy, 20% of the adults in Sacramento County have difficulty with reading, writing, and computational skills necessary to function in everyday life.
9. According to the US Census Bureau (2008-2012), 38.6% of people living in Sacramento speak a language other than English at home, 22% are foreign born, and 18% do not have a high school diploma.

Sacramento Employment and Training Agency (SETA)

The Sacramento Employment and Training Agency indicated the following needs:

- Expanded provider enrollment capacity.
- Enhanced support services for low-income students with barriers to ensure successful completion
- Connection between Adult Basic Skills and career pathways
- Additional service providers throughout Sacramento County.
- Increase course offerings over the summer
- Financial assistance to support transfer students to continue their education
- Increase the number of bilingual instructors/teacher's aide
- Availability of a learning support for student (learning and study strategies)
- Help teachers expand their repertoire of teaching strategies

Regional Data Sources

Sacramento's unemployment rate for February 2014, as posted by the California Employment Development Department was 8.1%, which is down from 9.6% in February 2013. According to the Center for Strategic Economic Research (CSER), an economic research and consulting group specializing in applied research and strategy development in regional economics and economic development fields, March 2014 quarterly newsletter, California posted a 2.3 percent annual job growth in February 2014 and, although this rate of growth is slower than in 2013, it remains above the national average of 1.5 percent. The six-county Sacramento Region, however, is seeing slower annual job growth. This job growth pattern has moved the Region below both the statewide and national averages and increased the gap between neighboring regions that are all seeing job growth above the statewide average.

Since 2007, the SETA/Sacramento Works, Inc. (SWI) Board annually identifies occupational clusters that are critical to the regional economy and establishes a goal to target WIA funds to train a workforce to meet the demand of regional employers in these clusters. In April, 2013 CSER conducted a regional economic and workforce information analysis of industry and occupational trends, Critical Occupational Cluster trends, and the core business cluster trends to identify the industry sectors and occupational clusters in the region that are high growth, high demand, projecting skills shortages, are vital to the economy, and/or have a significant impact or multiplier effect on the overall economy. The core business clusters were derived from the research conducted for the Next Economy, the Capital Region Plan which aims to align regional economic development activities and mobilize private industry, government, academic and civic leadership to focus on a set of common strategies and actions to accelerate job creation and new investment in California's Capital Region with the goals of supporting innovation and entrepreneurship, diversifying the regional economy, and improving the business climate for economic growth. The SETA/SWI critical occupational clusters identified in this effort contained almost 611,000 jobs in 2012 and are expected to reach nearly 666,000 jobs by 2017, a growth rate of 9 percent. Administrative & Support Services is the largest cluster in the group with close to

292,000 jobs in 2012. This cluster is forecasted to add another 23,000 jobs through 2017, the largest increase among all of the clusters.

The highest rate of growth between 2012 and 2017 is expected in the Healthcare & Support Services cluster, which is forecasted to see job growth exceeding 17 percent. In addition to the clusters stated below, SWI has targeted training in the Clean Energy Technology sector.

It is the goal of the SETA/SWI to invest in occupational clusters that prepare job seekers for career pathways to middle and high skilled jobs that ensure upward mobility and self-sufficiency. SETA/SWI places a high priority on identifying and serving vulnerable populations who have barriers to employment and providing them with contextual career technical education, inclusive of basic skills remediation, which leads to credentials and degrees in occupations critical to the growth of the region.

Sacramento Public Library Authority

The Sacramento Public Library has 9 students on a wait list for ESL.

Program Area 3: Adult with Disabilities

Education programs for adults with disabilities CAERC Members

CAERC Members

Los Rios Community College District (LRCCD)

Los Rios colleges offer appropriate accommodations to disabled students to access and succeed in credit, non-degree applicable basic skills and college-level courses and programs. Disabled students who assess with appropriate accommodations as unprepared for college courses may be referred to adult education programs designed for adults with disabilities. The consortium needs to assess the adequacy of the available program placements to determine whether a gap exists, and if so how to address it and ensure consortium members know the proper referral processes to refer disabled students to adult education, college, and work opportunities.

Sacramento City Unified School District (SCUSD)

The consortium needs to assess the adequacy of the available program placements to determine whether a gap exists, and if so how to address it and ensure consortium members know the proper referral processes to refer disabled students to adult education, college, and work opportunities.

Quality, programs should be individualized, competency-based, age appropriate, and include life skills training to promote greater independence in a less restrictive lifestyle for adults with disabilities.

San Juan Unified School District (SJUSD)

San Juan USD identified the following needs:

Need #1 Restoration of Adults with Disabilities programming: Orange Grove School for Adults was closed at the end of the 2012-13 school year. This followed two years of transition to Alta California Regional services. The major focus of this program was to offer life skills training which emphasized achievement of greater independence and a less restrictive lifestyle. Quality instruction focused on the individual student's needs. The instruction was individualized, competency-based, age appropriate, and to the fullest extent possible took place in the natural environment of the community.

Need #2 Support for students with disabilities Academic and Career Technology Education and Community Education classes are open to persons with disabilities. Students with special needs are accommodated with appropriate services such as interpreters for hearing impaired students.

Regional Data Sources

About 57,000 residents in the four-county area receive monthly Social Security disability benefits, double the number from 15 years ago, new federal data show. Working-age adults in Sacramento are 40 percent more likely to be on disability than workers elsewhere in California.

Many of the same factors driving up disability rolls across the state are playing out in a more pronounced way here: an aging workforce; a rough economy; and expanded regulations regarding who is eligible.

The trend, which is also occurring nationally, encompasses the blind, deaf, physically handicapped and others with injuries and conditions traditionally associated with the Social Security disability program. But it also includes scores of aging baby boomers with myriad physical ailments, a growing number of people diagnosed with debilitating stress or mental illness, and an increasing number of people who cite chronic back pain.

Washington Unified School District (WUSD)

WUSD has very few learners with special needs or any kind of impairment. Last years, the district was able to assist five students who had an active IEP or 504. A special education teacher volunteered her time to work and maintain student IEP/504 active. WUSD adult education program would benefit from designated funding for this type of student support services.

The community needs a program that enhances life opportunities and choices of adults with disabilities. There is a need of a program in West Sacramento that can offer life skills training which emphasizes on employment exploration, job preparation, and community involvement opportunities. Having the right resources and funding, WUSD will be better positioned to support all students including students with disabilities or impairments.

Regional Data Sources

There are no data sources in place for this student population. This is an area that needs a lot of improvement.

CAERC Partners

Sacramento Employment and Training Agency (SETA)

The Sacramento Works/SETA career pathway programs are aligned with the Linked Learning approach of providing youth and adult job seekers the academic and technical skills, coupled with work-based learning activities and the support needed to succeed. Providing people with disabilities access to the career pathway strategy will increase their employment and academic attainment outcomes. Specifically, SETA will build upon our “cross-agency partnerships” with the academic and occupational skills training providers and the business community. For the past several years, SETA has been

engaged in various sector strategies to engage job seekers and employers in relevant and timely occupational skills training leading to sustainable employment. SETA is an active partner in the Sacramento regional Career Pathways Trust (CPT) grants and has incorporated this design into the WIA-funded youth program. These partners include two local school districts, the Sacramento County Office of Education, Los Rios Community College District, Sacramento Metro Chamber, Sacramento Works, Inc., organized labor, and many local employers.

SETA and Crossroads Diversified have developed a strategic approach to provide support to people with disabilities at any point in their career pathway and job search experience. Crossroads will use a supported education approach, providing intensive case management to people with disabilities to ensure the successful completion of career pathway education/training opportunities at Los Rios Community College campuses or other vocational training providers in the Sacramento region. Additionally, through the career pathway supported employment component, Crossroads will ensure people with disabilities a smooth transition from education into employment resulting in improved outcomes. Supported employment includes finding suitable employment, evaluating hours of operation, work shifts, safety, job duties, wages and benefits, negotiating reasonable accommodations and task assignments with employers, and providing onsite job coaching and shadowing to ensure the successful integration of clients into the workplace. The addition of this component will enhance existing services to customers with disabilities and result in a higher number of job placements and retentions.

Through the SWJC system, job seekers with disabilities access a comprehensive range of workforce development activities, strategic partnerships, tools and services that help to meet these needs including assessments, career coaching, labor market information, job search assistance, and education and skills training (including customized and on-the-job). With DEI funding, SETA will enhance access at SWJCs among people with disabilities, will be able to improve physical and program accessibility, build staff capacity, strengthen relationships with employers, and increase job placement opportunities for individuals with disabilities. Partners co-located at the SWJCs assist SETA staff in conducting outreach and providing services to customers who meet priority of service criteria such as veterans, individuals with disabilities, low-income individuals, at-risk youth, ex-offenders, and homeless individuals.

SETA's TTW Program includes additional services targeted towards assisting people with disabilities on SSI/SSDI who would like to find meaningful employment. Services include orientation sessions, alternative assessment and individualized work plan (IWP) tools (created in conjunction with SSA), job search assistance, and benefits planning. At the monthly TTW orientations, clients are oriented to the services available and are assessed for eligibility for the TTW Program, including basic requirements for participation and overall work readiness.

Program Area 4: Career Technical Education

Short-term career technical education programs with high employment potential

CAERC Members

Center Joint Unified School District (CJUSD)

In response to student needs, CJUSD has worked to expand opportunities in their comprehensive high school for students seeking short term career technical education. These include programs in Media Communication, Dispatcher Training, and a Pharmacy Tech program. Based on the poverty level of the district including the number of homeless students who need immediate employment, the exiting high school seniors need a smooth transition to a local adult school program to complete certification in these areas. This would lead to a quick transition to employment and interrupt the cycle of homelessness and poverty they have experienced in their families of origin.

The community served by Center Adult School (CAS) is comprised of individuals living at a higher than average poverty rate. CAS reviewed the CJUSD free and reduced lunch rate and the Census Bureau five year estimates 2008-2012 poverty data and, individuals on public assistance and the rate of unemployment for individuals age 16 and above. The total rate of students who qualify for free and reduced lunch in CJUSD as of January 2014 is 59%. The free and reduced lunch rate at the school site co-located with CAS is 75%. The poverty data by zip code is as follows:

- 95660: Below poverty- 7412 or 24% of population; 7% of population on public assistance; 14% unemployed, 95843: Below poverty 11,056 individuals or 24% of population; 4% of population on public assistance; 8% unemployed. In all three categories, the Hispanic or Latino population showed the highest rates of poverty reaching as high as 35% . In addition, 399 CJUSD K-12 students qualified as homeless under the McKinney Vento Act. This represents 9% of the student population.

Regional Data Sources

CJUSD is a suburban and semi-rural district of 4500 students located at the Northeast corner of Sacramento County with most of the population living in the 95843 and 95662 zip codes. Within its boundaries is a development of low income housing created through the Farm Home Loan project. In the vicinity of CAS are six rent controlled apartment complexes, and a large track of small rental homes previously U.S. Air Force base housing. The school is just .1mile from the 95660 zip code, and draws students from this area since the closest adult program in that zip code is located near the northern border.

The economy of this area was hit very hard in 1996 with the closure of McClellan Air Force base, the largest employer in the area. Because of this, the area was already

experiencing economic stress when the recent recession impacted the slow recovery taking place. There are no major regional employers in the area. The economy is diverse including low wage service jobs, small businesses, and small retail centers. The previous Air Force Base has attracted some regional offices and a variety of small businesses.

According to the U.S. Census Bureau 2012 five year estimates, 22,703 individuals age 16 and older lived in zip code 95660; in zip code 95843, 33,502 individuals of that age lived in zip code 95843. In 95660, 54.8% of these individuals were employed and in 95843, 62% were employed. Total employed for the two zip codes was 31,421.

The economy of the area is reflected in the industries in which these people were employed. The largest number of people, 22%, were employed in the industry of Educational services, health care, and social assistance. The next largest number, 13% were employed in Retail trade. There were a negligible number of people employed in agriculture and only 2% employed in the information industry. The remaining employed individuals were evenly dispersed (between 6%-8% per industry) among Construction; Manufacturing; Wholesale Trade; Transportation, warehousing and utilities; Finance, insurance, and property rental/leasing; Arts, entertainment, recreation, accommodation, and food services. This clearly demonstrates both the diversity of the economic as well as the gap between the number of individuals of employable age and the number employed.

Davis Joint Unified School District (DJUSD)

The biggest unmet need is funding for Career Technical training that would allow us to offer financial aid and reduced cost options for students who are unable to afford the tuition. Since we do not have our own physical plant, another area of unmet need is having a space where we could expand our CTE offerings including storage of necessary equipment and specialized tools. An example of this is our inability to offer a Certified Nursing Assistant program because of the need to have a Hoyer lift and other medical equipment in the room. Since the room that we are able to use is used for regular high school classes during the day, our ability to keep equipment in the room is limited. We currently have over 20 students on a waiting list for CNA in case we are able to find a way to offer this program in the future.

Elk Grove Unified School District (EGUSD)

EGUSD serves the southern third of Sacramento County, which encompasses urban, suburban, and rural areas. According to five-year estimates by a nation-wide survey conducted by the U.S. Census Bureau, the estimated population for the area is 325,000. EGACE draws from the 320-mile EGUSD that covers all or part of 13 zip codes. The majority of EGACE students enrolled in adult basic education courses reside primarily in two south Sacramento zip code areas, 95823 and 95828, which include parts of the City of Sacramento and unincorporated Sacramento County. Educational services are also offered at the Rio Cosumnes Correctional Center and the Sacramento Main Jail.

The data below provides some general idea of the need of adult education services within zip code areas 95823 and 95828:

	95823	95828
Unemployment rate	18.8%	16.9%
Highest level of educational attainment below 9th grades (ages 25+)	12.46% (4,956)	10.60% (3,376)
Attended grades 9-12 but did not graduate	14.60% (5,806)	10.60% (3,376)
Below poverty level	29%	20.9%
Foreign born: not a U.S. citizen	19.5%	12.9% (7,406)

Sources: Community Link Capital Region
zipatlas.com

In today's economy, workers are facing a much tighter labor market, and there is a "skills mismatch" between unemployed workers and available openings. The EGACE career technical education programs provide low-skilled, unemployed, or underemployed adults with the opportunities to gain skills obtained through education and training that result in industry-recognized certificates leading to a family sustaining career with opportunities for advancement.

Folsom Cordova Unified School District (FCUSD)

Folsom Cordova Unified School District has 10 people on wait list for computer instruction – Next set of classes in Jan. 2015.

School districts' K-12 English learner statistics

In 2008-2009, FCAS served 4,134 students with 85 courses in 14 programs. Faced with an approximately 80% reduction in revenue in 2010, due to budget cuts and Adult Ed's placement in Tier III flexibility, we needed to assess our community needs and redefine our priorities. Data from the American Community Survey and US Census showed that Rancho Cordova residents experience greater needs than the rest of Sacramento County: approximately 17% live below poverty level; nearly 14% receive public assistance/Food Stamps; 10% are unemployed; and 20% of those unemployed had less than a high school diploma. Approximately 17% of residents 18-24 years old and 14% of those 25 or older do not have a high school diploma. Over 25% of Rancho Cordova residents are foreign born of which 58%, over four times the county average, speak English less than very well. This data is supported by FCUSD internal data which shows 73% of students in Rancho Cordova elementary and secondary schools enrolled in the Free or Reduced Lunch Program and 23.6%

are enrolled in English as a Second Language (ESL) (FCAS WASC Mid-year report 2014)

The number of children who qualify for free or reduced lunch

In the FCUSD district there are 4,815 total students who receive free or reduced lunch (District data, 2014).

Regional Data Sources

RC is a major hub for employers in Sacramento County. It has a high poverty – surrounds many Title 1 schools, and a high Unemployment average in RC – Higher than the state average and county average; showing a low skill level of population.

Los Rios Community College District (LRCCD)

Los Rios colleges do not offer adult education-level short-term career technical education (CTE) programs. However, alignment between adult education CTE programs and college credit CTE programs needs to be explored, improved as necessary, and then communicated to interested students.

Natomas Unified School District (NUSD)

Natomas Adult Education does not currently provide career technical education programs. Natomas Unified Adult Education program is researching alternatives to offering adult education-level short-term career technical education (CTE) programs. However, alignment between adult education CTE programs and college credit CTE programs needs to be explored, improved as necessary, and then communicated to interested students.

Sacramento City Unified School District (SCUSD)

There is a need for consistent collaboration with workforce skills agencies, employers, adult education programs, and community colleges to clarify and define the necessary basic skills and training required in high-demand industries throughout the state. Most adult education students are not equipped to navigate programs to learn about skills required and the labor market information in careers in which they are interested. The adult education system needs a clear structure for long-term, follow-up activities to track student outcomes once students have completed training and entered employment. Funding for job placement coach/coordinator in adult education programs would enhance short-term Career Technical Education (CTE) programs and increase student success. Alignment between adult education CTE programs and college credit CTE programs needs to be explored.

There is a shortage of adults with middle skills when the state cut back on middle-skills training. Funding for middle-skills trainings needs to be reinstated and designated to rebuild CTE courses to meet this gap. Industry partnerships will be essential to ensure

quality programs and services. CTE students are more successful when they are able to learn in an externship related to their field of study.

Clear and articulated pathways between K-12 adult education programs and the community college classes are needed. K-12 adult education programs can provide entry skills needed to move into college-level CTE programs.

San Juan Unified School District (SJUSD)

San Juan USD identified the following needs:

Need #1 Funding for middle skills training: A shortage of people with middle-skill workers could develop because the state has cut back on the training of those skills. State budget cuts have drastically reduced funding to community colleges and adult education centers.

Need #2 Industry partnerships: CTE students do better when they are able to learn in an externship related to their field of study.

Need #3 Articulation to community college classes: Adult education programs can provide entry skills needed to move into college programs.

Need #4 Specialized CTE-related language programs: ESL students interested in gaining job skills need to learn the focused vocabulary of the workplace.

Regional Data Sources

Researchers found that while 38 percent of Californians had the education to perform middle-skilled jobs — jobs that required post-secondary education but not a four-year degree — a full 47 percent of jobs required those middle skills.

The report also showed that careers requiring education in science, technology, engineering and mathematics were growing much faster than the national average. This comes at a time when California is awarding 40 percent fewer degrees per 1,000 workers in science and math than the national average.

By 2018, according to the report, three out of every five California jobs will require some education beyond high school.

That same survey revealed that 57 percent of Sacramento-area health care employers had problems filling entry-level nursing positions at the height of the recession in 2009. And 78 percent of area health employers were having trouble filling entry-level medical imaging positions.

Nationwide, a 2012 Manpower survey found that 49 percent of U.S. employers report difficulties filling jobs, despite high unemployment, due to the skills gap.

About 2.7 million "middle-skill" jobs will be created in the state by 2016, according to the study by the Workforce Alliance, Skills2Compete and the California EDGE Campaign. Middle-skill jobs refer to those that require more than a high school diploma but less than a four-year college degree. They include jobs in construction, healthcare, law enforcement, and many other fields.

The report calculates that about half of all jobs in California fell into the middle-skill category in 2008, and predicts that about 43% of all job openings in the next seven years will be middle-skill. Low-skill jobs will account for a quarter of all job openings over the same time period, and high-skill jobs will make up 32% of openings.

CAERC Partners

El Dorado County Office of Education (EDCOE)

While there are currently no program offerings in this area the El Dorado County Office of Education is exploring developing partnerships with our local High School districts to utilize existing programs to enhance possible offerings via EDCOE's programs.

EDCOE has identified the following needs for future program development:

Funding for skills training and advanced certification. State budget cuts have drastically reduced funding to community colleges and adult education centers creating a shortage of middle-skill workers because the state has cut back on the training of those skills.

The need to develop industry partnerships- CTE students accelerate when they are able to learn in an externship related to their field of study.

To mirror our ESL offerings EDCOE would develop specialized CTE-related language programs ESL students interested in gaining job skills but who need to learn the focused vocabulary of the workplace.

Sacramento Employment and Training Agency (SETA)

The Sacramento Employment and Training Agency indicated the following needs:

- Expand provider enrollment capacity
- Lack of open-entry open exit training opportunities
- Lack of courses available in summer
- Hybrid coursework using technology to support teachers and making learning more flexible for students.
- Computer and Digital Literacy courses
- Additional employers to integrate classroom curriculum with academic/training related work experience

Regional Data Sources

Sacramento Works Strategic Plan - Economic and Workforce Analysis Sacramento's unemployment rate for February 2014, as posted by the California Employment Development Department was 8.1%, which is down from 9.6% in February 2013. According to the Center for Strategic Economic Research (CSER), an economic research and consulting group specializing in applied research and strategy development in regional economics and economic development fields, March 2014 quarterly newsletter, California posted a 2.3 percent annual job growth in February 2014 and, although this rate of growth is slower than in 2013, it remains above the national average of 1.5 percent. The six-county Sacramento Region, however, is seeing slower annual job growth. This job growth pattern has moved the Region below both the statewide and national averages and increased the gap between neighboring regions that are all seeing job growth above the statewide average.

Since 2007, the SETA/Sacramento Works, Inc. (SWI) Board annually identifies occupational clusters that are critical to the regional economy and establishes a goal to target WIA funds to train a workforce to meet the demand of regional employers in these clusters. In April, 2013 CSER conducted a regional economic and workforce information analysis of industry and occupational trends, Critical Occupational Cluster trends, and the core business cluster trends to identify the industry sectors and occupational clusters in the region that are high growth, high demand, projecting skills shortages, are vital to the economy, and/or have a significant impact or multiplier effect on the overall economy. The core business clusters were derived from the research conducted for the Next Economy, the Capital Region Plan which aims to align regional economic development activities and mobilize private industry, government, academic and civic leadership to focus on a set of common strategies and actions to accelerate job creation and new investment in California's Capital Region with the goals of supporting innovation and entrepreneurship, diversifying the regional economy, and improving the business climate for economic growth. The SETA/SWI critical occupational clusters identified in this effort contained almost 611,000 jobs in 2012 and are expected to reach nearly 666,000 jobs by 2017, a growth rate of 9 percent. Administrative & Support Services is the largest cluster in the group with close to 292,000 jobs in 2012. This cluster is forecasted to add another 23,000 jobs through 2017, the largest increase among all of the clusters.

The highest rate of growth between 2012 and 2017 is expected in the Healthcare & Support Services cluster, which is forecasted to see job growth exceeding 17 percent. In addition to the clusters stated below, SWI has targeted training in the Clean Energy Technology sector.

It is the goal of the SETA/SWI to invest in occupational clusters that prepare job seekers for career pathways to middle and high skilled jobs that ensure upward mobility and self-sufficiency. SETA/SWI places a high priority on identifying and serving vulnerable populations who have barriers to employment and providing them with contextual career technical education, inclusive of basic skills remediation, which leads to credentials and degrees in occupations critical to the growth of the region.

Yolo County Office of Education (YCOE)

YCOE CTE currently has a wait list for several of the CTE programs.

Program Area 5: Apprenticeship

CAERC Members

Los Rios Community College District (LRCCD)

American River College does not offer adult education-level apprenticeship programs. However, alignment between adult education apprenticeship preparation and college apprenticeship preparation needs to be explored, improved as necessary, and then communicated to interested students.

Sacramento City Unified School District (SCUSD)

The revival of the economy indicates that it is time to return the hours to their prior level and raise the Related and Supplemental Instruction (RSI) funding reimbursement. When the economy dropped in 2008, many pre-apprentice and apprentice programs closed or were reduced.

Many candidates fail to be accepted because they lack the basic skills required by the apprentice programs. Many employers offering apprentice programs also prefer candidates with some training rather than bringing in an entry-level apprentice. To ensure the quality of candidates, the need for basic and pre-apprenticeship skills must be addressed in the curriculum and defined pathways between programs needs to be articulated.

San Juan Unified School District (SJUSD)

San Juan Unified School District identified the following needs:

Need #1 Restore RSI hours: When the economy dropped in 2008, many apprentice programs closed or were reduced. The revival of the economy dictates that it is time to return the hours to their prior level and raise the RSI funding reimbursement.

Need #2 Pre-apprenticeship: These programs are a great way to start exploring careers middle skills trades. These programs offer an overview of each trade, the qualifications and skills needed for each trade and on-the-job training and related instruction. The programs also offer career-entry advice and emphasize the importance of succeeding in school and in the workforce.

Need #3 Quality of candidates: Many candidates fail to be accepted because they lack the basic skills required by the apprentice programs.

Need #4 Gender and race inequity: Many of the apprentice programs attract a narrow band of the population that is not representative of the community. Programs like the one offered by The CFFJAC emphasizes the value of recruiting well trained and qualified fire fighting personnel from the ranks of underrepresented and target groups. The program reaches out to all areas of society because fire fighters protect all members of society.

Need #5 Employer support: The employers need to offer more support and strategies for overcoming barriers such as the cost of program and lack of consistent employment demand.

Need #6 Open to new candidates: Many employers offering apprentice programs prefer candidates with some training rather than bringing in an entry-level apprentice.

Regional Data Sources

Analysis of Local Regional Economy:

There are 112 programs in the Sacramento region. There has been a steady decline in the numbers of enrolled apprentices since 2008.

2008	2009	2010	2011	2012
70,081	61,736	60,060	57,763	54,007

California Apprentices by Industry

- Services 3%
- Manufacturing 1%
- Construction 79%
- Public Administration 14%
- Utilities 3%

As some traditional jobs disappear, new high-tech and service jobs take their place, and California's apprentices are achieving a higher level of skills than ever before to earn a living in the global marketplace. However, the need for middle-skill jobs continues.

Occupations with above average earnings and with a majority of workers without a college degree cover many fields. Among them are construction managers, buyers and purchasing agents, lodging managers, appraisers, court reporters, various types of technicians, aircraft mechanics, police officers, and supervisors of police.

There has been job loss but several intermediate level occupations with good wages have increased substantially since 1986, including medical therapists (such as respiratory, recreational, and radiation therapists) increasing by 30 percent, carpenters (by 20 percent), heavy vehicle maintenance specialists (by 25 percent), and heating and air conditioning positions (by 21 percent).

CAERC Partners***El Dorado County Office of Education (EDCOE)***

While not currently offered, EDCOE is interested in development of programs for apprentices to build upon the short term CTE courses.

Many candidates fail to be accepted because they lack the basic skills required by the apprentice programs. EDCOE has identified the following needs for future program development:

Development of business partnerships to support robust apprentice programs. Further support from potential employers would be a program goal and could also be a funding source to help students overcome barriers such as the cost of the program, support to students within the program, and other related costs.

Pre-apprenticeship programs: These programs start the exploration of careers involving middle skills trades. These programs offer an overview of each trade, the qualifications and skills needed for each trade and on-the-job training and related instruction. The programs also offer career-entry advice and emphasize the importance of succeeding in school and in the workforce.

Sacramento Employment and Training Agency (SETA)

The Sacramento Employment and Training Agency indicated the following needs:

- Establish single points of contacts for WIBS and JATCS

LOS RIOS

COMMUNITY
COLLEGE
DISTRICT

STRATEGIC PLAN

2016–2021

Approved by the
Los Rios Board of Trustees

MAY 11, 2016

MISSION STATEMENT

The Los Rios Colleges provide a vibrant learning environment that empowers all students to achieve their educational and career goals.

VISION STATEMENT

To transform the lives of students and enhance the vitality of our region.

VALUES

Our Values guide and inspire how we manage the Los Rios District, interact with our students, colleagues and community, and establish programs that promote student success.

Students Are Our Highest Priority

Student Access: We are committed to providing educational opportunities that serve the needs of the greater Sacramento region's diverse population.

Student Success: We support our students' efforts to achieve success in their educational and career goals and as contributing members of society.

Lifelong Learning: We encourage a limitless spirit of openness and intellectual curiosity as enduring pursuits.

Student Support and Services: We promote a safe and supportive environment that serves the individual learning needs of all students.

Employees

Safe and Secure Work Environment: We embrace an accepting, inclusive and nurturing work environment that is free of threats and intimidation.

Professionalism: We encourage, promote and support the continuous professional development of all employees, acknowledging their unique contributions to creating a collegial workplace that is diverse in composition and thought.

Well-Being: We believe in a work-life balance and support the physical, mental and emotional well-being of our staff and faculty.

Community

Serving the Community: We address the cultural, economic and social needs of the region by building meaningful connections between our colleges and their communities.

Academic Excellence

Quality: We strive to deliver the highest quality programs, services and activities.

Academic Rigor: Los Rios' educational standards emphasize critical thinking and writing, analysis and excellence in educational experiences, stimulating faculty members to challenge themselves and their students in an atmosphere that inspires thoughtful teaching and learning.

Academic Integrity and Freedom: Los Rios is committed to academic integrity and embracing forthright, honest and ethical behavior.

Equity

Social Justice: We acknowledge and embrace our responsibility to empower underrepresented segments of our community and to ensure that all populations have the access, support and opportunities to succeed.

Diversity

Building Community: We recognize that diverse backgrounds and perspectives contribute to the Los Rios District's strength as a dynamic, inclusive educational community.

Relationships

Mutual Respect and Consideration: We believe effective working relationships are central to achieving our Mission and employ an interest-based approach to solving problems through collaboration, empathy, mutual respect and integrity.

Participatory Governance

Encouraging the Contributions of All Our Members: All members of the Los Rios community have the ability to contribute to our organizational success and are encouraged to do so.

Informed, Collaborative and Integrated Decision-Making: We value informed decisions made by people with diverse perspectives who are close to the issues.

Sustainability

Building a Culture of Sustainability: The Los Rios community is a wise steward for all its resources, protecting, preserving and nurturing its people, its environment, its property, its capital and its educational programs.

Innovation

Fostering Innovation and Responsible Risk-Taking: Los Rios supports and invests in change that increases the effectiveness of our programs, the productivity of our work and the successful outcomes of our students.

Integrity

The Highest Ethical Standards: Los Rios values integrity, transparency, accountability, honesty and professionalism, both in the workplace and the classroom.

GOALS

1. Establish effective pathways that optimize student access and success.
2. Ensure equitable academic achievement across all racial, ethnic, socioeconomic and gender groups.
3. Provide exemplary teaching and learning opportunities.
4. Lead the region in workforce development.
5. Foster an outstanding working and learning environment.

Goal 1: Establish effective pathways that optimize student access and success.

Indicators of Achievement:

1. Increase the student degree and certificate completion rate from 12% to 17% by 2021.
2. Increase the number of students who are transfer-ready by 5% by 2021.
3. Define and increase the number of clearly identified pathways by 25% by 2021.
4. Increase the percentage of full-time students from 30% to 35% by 2021.
5. Provide maximum access to enrollment based on annual state funding (TBD annually).

Strategies:

1. Inventory and evaluate existing pathways and identify opportunities for improvement, expansion and increased promotion to students.
2. Implement improved class scheduling system to better meet student needs.
3. Promote communication channels that increase awareness of course offerings, deadlines, services, programs, resources and events.
4. Monitor student progress and proactively engage with at-risk students prior to key milestones (first semester, 30 units, 70 units, etc.).
5. Develop a comprehensive recruitment and persistence plan to achieve enrollment goals.

Goal 2: Ensure equitable academic achievement across all racial, ethnic, socioeconomic and gender groups.

Indicators of Achievement:

1. Achieve 71% course success rate for each student group by 2021.
2. Achieve a 17% degree and certificate completion rate for each student group by 2021.
3. Achieve proportionality in transfer-ready preparation rates for each student group by 2021.
4. Recruit faculty, staff and administrators to reflect the demographics of the District's service area.
5. Increase enrollment rates among groups who are traditionally underrepresented in higher education within the District's service area.

Strategies:

1. Develop and use culturally relevant curriculum and instruction.
2. Address the disproportionate impact of assessment, placement and prerequisites.
3. Promote courageous conversations that address institutional barriers and systems of oppression.
4. Institute professional development programs that teach effective strategies for promoting inclusivity and social justice as well as mitigating bias inside and outside the classroom.
5. Increase recruitment outreach to diversify applicant pools.

Goal 3: Provide exemplary teaching and learning opportunities.

Indicators of Achievement:

1. Provide districtwide resources to ensure all new faculty have the opportunity to participate in a faculty academy at all four colleges by fall 2018.
2. Increase student course success from 68% to 71% by 2021.
3. Increase the number of students who say they feel “engagement with their learning experience” by 5% by 2021, as measured by the Community College Survey of Student Engagement.

Strategies:

1. Collaborate with faculty to develop a new faculty academy at each of the colleges.
2. Increase professional development opportunities related to teaching methods, equity, instructional technology, discipline-specific knowledge and student services.
3. Explore the personnel review and evaluation process to improve the effectiveness of mentoring, peer input and student evaluations.
4. Ensure that all classroom personnel, with a focus on new and adjunct faculty, have the necessary resources to engage in improvement of curriculum, teaching and learning.
5. Ensure each college has regular opportunities outside of FLEX to support the scholarship of teaching and learning.
6. Provide resources to enhance student learning outcomes, development and assessment.
7. Improve the assessment-for-placement process through diagnostic assessment, multiple measures and increased preparation prior to assessment.
8. Offer academic events, internships and other opportunities for teaching and learning outside the classroom.

Goal 4: Lead the region in workforce development.

Indicators of Achievement:

1. Increase the number of students who participate in work-based learning experiences in their areas of study by 15% by 2021.
2. Complete an enhanced industry alignment review of all CTE programs by 2021 to ensure the District is addressing regional workforce needs.
3. Increase the number of completers and skills builders who secure employment at a living wage by 10% by 2021.
4. Increase external funding by 50% by 2021 to support workforce and economic development.

Strategies:

1. Develop regional advisory committees by industry sector to inform the program development process.
2. Assess current CTE program offerings and align them with emerging and current regional industry needs.
3. Increase dual enrollment for CTE programs.
4. Expand work-based internships and learning opportunities by integrating these activities into CTE courses and programs.
5. Increase marketing of CTE programs to students, employers and community partners.
6. Increase support for CTE job placement services.

Goal 5: Foster an outstanding working and learning environment.

Indicators of Achievement:

1. Increase employee satisfaction by 5% as measured by the biennial District Employee Satisfaction Survey to be conducted in spring 2017, 2019 and 2021.
2. Increase the number of employees who participate in safety training programs by 25% by 2018.
3. Complete the implementation of the District's 2016 Five-Year Technology Plan by 2021.
4. Expand and enhance a comprehensive wellness program by 2018.
5. Produce an Annual Sustainability Report that highlights District efforts and results beginning in 2017.

Strategies:

1. Increase staff and manager participation in professional development activities.
2. Encourage broader participation in safety, health and wellness programs and explore developing employee incentives for engaging in health and wellness programs.
3. Support leadership and career pathways for interested employees by utilizing professional development inventories and assessment tools and identifying cross-training and mentorship opportunities.
4. Coordinate and communicate college sustainability efforts to further implement best practices across the District.
5. Complete and implement a District Technology Plan.
6. Streamline business processes, including appropriate use of technology to improve workforce efficiency and better serve students.
7. Foster positive and respectful relationships across all constituencies.
8. Maintain competitive salary and benefits packages for the District workforce.

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PLACER • SACRAMENTO • SUTTER • YOLO • YUBA

