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KEY FINDINGS

NEXT ECONOMY CLUSTER RESEARCH

Workforce Needs Assessment SACRAMENTO CAPITAL REGION



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Burris Service Group

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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

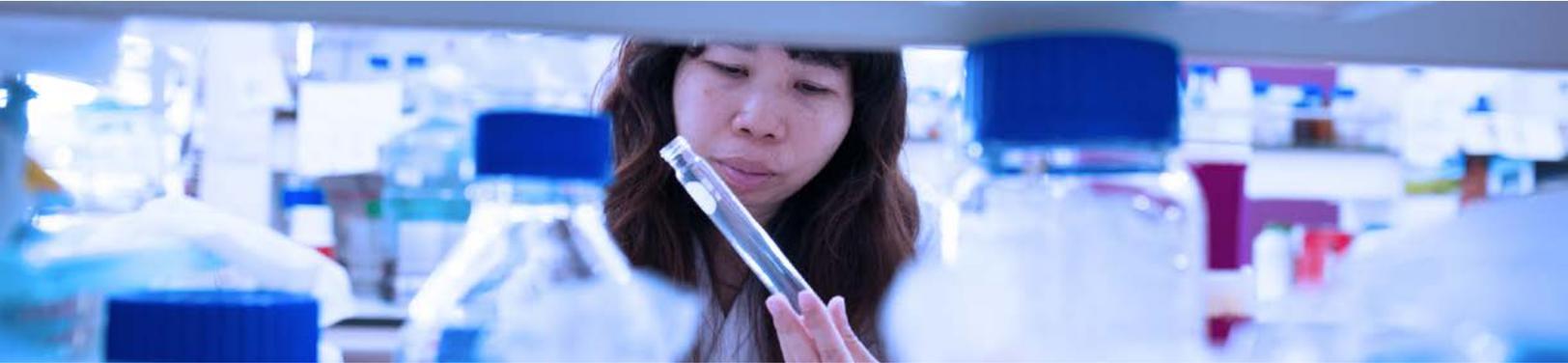
- **Advanced Manufacturing** is a process that integrates the coordinated use of information, automation, software, sensing and networking to improve the efficiency and reduce costs of manufacturing. Although advanced manufacturing methods may be utilized by any manufacturing industry, high use of these 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

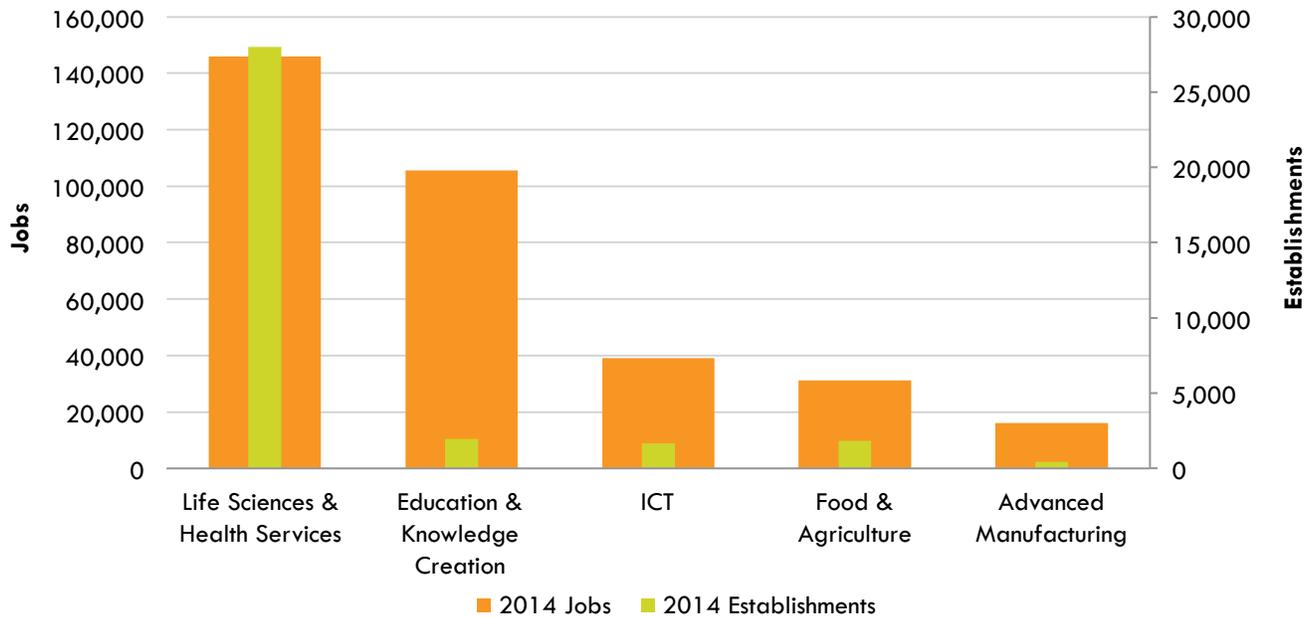
	2011	2014	2015	2011–2015 Change
Labor Force	1,115,000	1,122,400	1,132,100	17,100
Employment	977,700	1,038,400	1,057,200	79,500
Unemployment	137,300	84,000	75,000	-62,300
Unemployment Rate	12.3%	7.5%	6.62%	-5.68%

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.

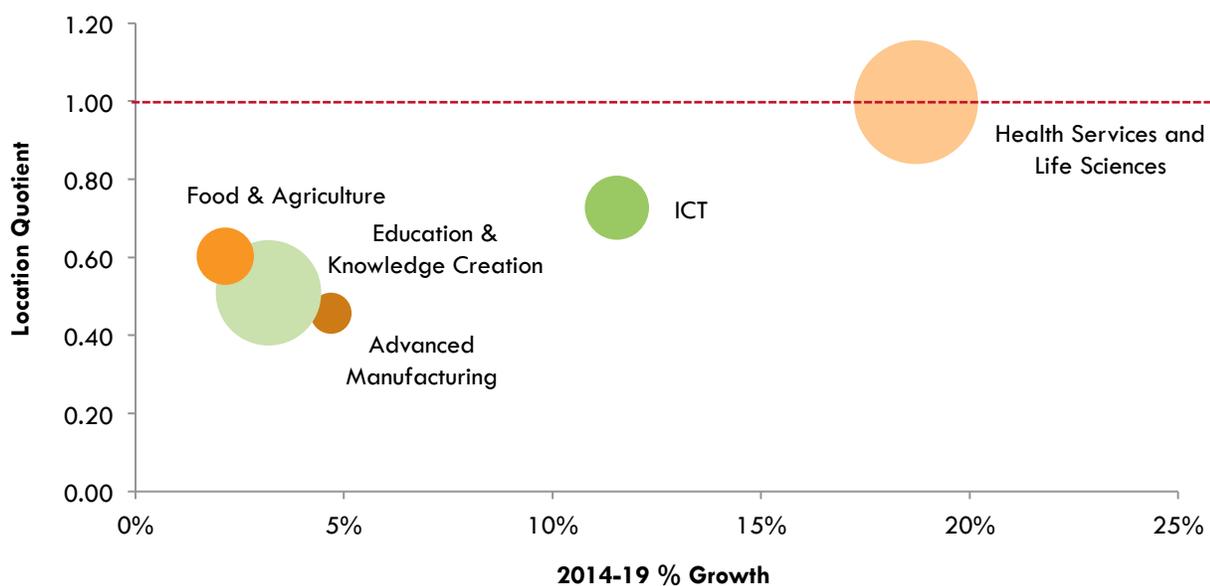
All of the clusters, except Life Sciences and Health Services, have a location quotient below 1, indicating a lower than average concentration of employment (Exhibit 3). The Health Services and Life Sciences cluster has a location quotient of 1.00, indicating average employment levels. Low to average 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

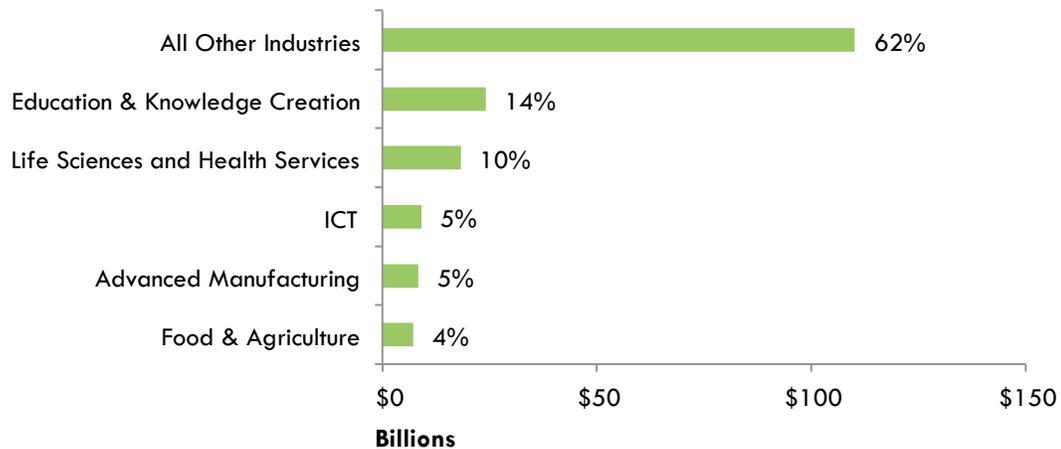


⁶ EMSI 2015.2

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	<p>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.</p>
Clean Economy	<p>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.</p>
Education & Knowledge Creation	<p>Optimistic hiring forecasts, increases in per-pupil spending and changing student enrollment projections are expected to influence demand for teachers and education support professions.</p>
Food & Agriculture	<p>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.</p>
Life Sciences & Health Services	<p>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.</p>
Information & Communication Technologies	<p>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.</p>

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.

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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 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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