valley vision

Community Inspired Solutions

Skills for a Ready Future Workforce

May 2021

Contributions

Valley Vision

For more than 25 years, Valley Vision has used research to help governments, businesses, foundations and community groups better understand the issues facing our region. We believe that knowing and understanding the facts is the best way to establish a common working foundation for collaborative problem-solving. To that end, Valley Vision conducts, produces and interprets research including scientific public opinion polls, focus groups, community needs assessments, best practice studies and other research tools to bring to light the information local leaders need to improve our communities.

Burning Glass Technologies

Burning Glass Technologies is an analytics software company delivering real-time data and job market analytics that empower policy makers, employers, workers, and educators to make data-driven decisions. The company's artificial intelligence technology analyzes hundreds of millions of job postings and real-life career transitions to provide insight into labor market patterns. This real-time strategic intelligence offers crucial insights, such as which jobs are most in demand, the specific skills employers need, and the career directions that offer the highest potential for workers. Based in Boston, Burning Glass is playing a growing role in informing the global conversation on education and the workforce, and in creating a labor market that works for everyone.

City of Sacramento COVID Relief

This project was made possible by the City of Sacramento COVID Relief funds. In May 2020, the City of Sacramento received Coronavirus Relief Funds (CRF) from passage of the federal government's CARES Act. Subsequently, the Sacramento City Council approved using CRF funds to help support the individuals and organizations who had suffered harm due to the crisis caused by the COVID-19 pandemic in several areas including workforce development and training. This project was funded to inform workforce development and training providers and priorities for those impacted.

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Background

Valley Vision has been examining **Future of Work** trends and their impact on the Capital Region for many years. In 2017, Valley Vision led a team of stakeholders to collaborate with the Brookings Institution on four key objectives: (1) create a collective framework for gauging economic success; (2) conduct research on the global competitiveness of the region; (3) offer goals and strategies for implementation; and (4) promote shared stakeholder agreement on economic prosperity. Brookings published Charting the Course to the Sacramento Region's Future Economic Prosperity. This report called out two key considerations for talent development to drive Sacramento toward its potential; the need to invest in digital skills training to both grow the pool of high skilled technical workers and expand the number of workers with basic digital skills, and the need to prepare and connect young workers, particularly young workers of color, to in-demand occupations and industries.

Subsequently, Valley Vision, in collaboration with the Centers of Excellence at Los Rios and funded by the Capital Region's four workforce boards, conducted additional research on the jobs at risk of automation in the Capital Region to develop layoff aversion strategies, Automation Risk for Jobs in the Capital Region. As the research concluded in March of 2020, our region and the world found itself in the midst of a global pandemic and experiencing mass layoffs. The occupations and demographics identified as most at risk in the report mirrored the individual and occupational job losses in our region, including the disproportionate impact on minority, younger and female residents.

In late 2020, through CARES funding from the City of Sacramento COVID Relief, Valley Vision partnered with Burning Glass Technologies to identify specific opportunities for upskilling and reskilling residents into positions paying similar or higher wages while reducing overall job loss risk due to technological advancement. Upskilling refers to teaching additional skills to enhance capabilities, whereas reskilling refers to training employees in a new occupation. The following white paper highlights the result of these efforts.

Overview

Beginning in March 2020, the Sacramento region, along with the rest of the nation, found itself roiled by the mass dislocation brought on by the pandemic. Valley Vision, embarked on research with our partners to provide the most up-to-date analysis of job posting data to inform rapid reskilling and upskilling of community members impacted by the pandemic.

This analysis sought to answer the question, where should resources be targeted to provide the most effective skills acquisition and training, especially to disproportionately impacted community members, to enhance and accelerate recovery from the pandemic.

Methodology

The research was conducted analyzing job posting data over a 12-month period. Employment and salary information was obtained from Occupational Employment Statistics (OES). The geographic region analyzed included the six counties of Sacramento, Yolo, El Dorado, Placer, Yuba and Sutter.

Key Findings

Recovery from the pandemic and future workforce development strategies need to be responsive to multiple factors including:

- **Meeting current and projected job needs**
- **Reducing future risk of automation/obsolescence**
- **Improving job quality (higher wages, benefits and career advancement opportunities)**
- **Improving equity for communities of color, women and underserved groups**

With these factors in mind, this analysis identified the greatest opportunities to upskill and reskill workers are distributed within three main skill categories: **Digital Skills, Soft/Social Emotional Skills, and Managerial Skills.**

To accelerate recovery of the region's most impacted workers into more resilient, higher paying occupations. More resilient occupations for this study are defined as occupations with a lower automation risk score, therefore, lower risk of obsolescence.

- **Invest in digital skills education, training and digital access** targeting underserved communities to ensure participation in the new economy by all residents.
- **Require and deepen soft skills training** to include lessons in cognition, change adaptation and self-awareness to meet the needs of the evolving future of work.
- **Invest in training for specialized managerial skills** including scheduling, budgeting and project management skills and/or on the job training in supervisory positions to gain general management skills to improve earnings potential for front line workers and protect against future automation risk.
- **Ensure workforce system partners are informed and integrated**, particularly those working with underserved populations, about workforce shifts and future of work trends; provide technical assistance and capacity building to ensure strategies are data informed and aligned to the full workforce development support ecosystem.
- **Provide funding and enable metrics for longer term workforce development activities** to ensure underserved populations receive the level and length of support needed to become self-sufficient.

Detail of Analysis

To begin the analysis, high risk occupations were grouped into three main categories: Food Preparation and Serving Related; Production and Maintenance, Retail Sales and Related, and Office and Administrative Support Occupations. Demographics were analyzed for the occupation groups highlighting the **disproportionate impact on female, minority and younger workers in our region.**

Higher risk occupations were predominantly female at 60%, minorities were specifically at higher risk with Hispanic workers most at risk. **Lower educational levels were also at risk, leveling out and becoming majority lower risk occupations at the attainment of a Bachelor's degree.** Additionally, younger workers were more at risk with **16 to 24 year olds having the highest percentage in high automation risk positions at 26%,** with 25- 34 year olds a close second at 23%. Within the six counties, **Placer has the highest percentage of postings that are high automation risk, while Sacramento has the largest number of high automation risk postings overall** due to its larger population.

Additional research was conducted to determine available positions within close proximity by skill requirements to determine opportunities to rapidly upskill or reskill. These destination occupations were required to have a reduced automation risk score and increased average earnings. In this analysis, three key skills emerged; **Budgeting, Planning and Management Skills**. Providing training in these key Managerial Skills demonstrates a **significant opportunity for front line workers to move up the career ladder, improve employability,** increase job quality and wages, as well as reduce automation risk. These skills are also highly transferable, offering the opportunity for workers to move across industries if needed or desired.

Female, minority and younger workers are most vulnerable to automation in the Capital region.

An analysis was then conducted of the highest overall requested skills across job postings, the top digital skills requested and the top digital skills by growth. The top overall skills requested across job postings resulted in the following skill categories.

Top Overall Skill Categories	
Communication Skills	29%
Customer Service	21%
Physical Abilities	18%
Organizational Skills	16%
Scheduling	14%
Detailed-Oriented	13%
Teamwork / Collaboration	12%
Computer Literacy	11%

In the category of **Digital Skills**, those most requested by employers in occupations without a Bachelor's degree requirement included **Microsoft Office, Microsoft Excel and Computer Literacy**. Microsoft Office (including Excel) was requested in 8.06% of these occupations with general computer literacy requested in 11% of jobs posted. Additional specific digital skill requests for occupations below a Bachelor's degree were relatively minimal (less than 2%) outside of occupations within the technology sector.

Occupations requiring a Bachelor's degree or above showed more significant digital skill requests, although most were still minimal (less than 5% of overall postings). The top five digital skills requested for occupations requiring a Bachelor's degree or above included Microsoft Office, SQL, Java, Software Development and JavaScript. **Across all education levels, Microsoft Office was the most requested specific digital skill for employment along with general computer literacy**.

Additional key takeaways from this portion of the research included:

- **Non-digital skills, particularly managerial and soft skills, are requested at much higher rates than digital skills**
- **Overall occupations requiring less than a Bachelor's degree are not digitally intensive** outside of specific positions within the Information, Communications and Technology industry sector
- Occupations within the Clerical and Administrative career cluster request digital skills the most frequently with **Microsoft Office Suite requested in over 25% of postings**
- **Computer Support User is a key occupation** when looking at the top growing digital skills
- Although demand for **digital skills was not a high proportion of what was identified,** all digital skills demonstrated a growth trajectory with basic digital literacy and Microsoft Office Suite requested most frequently for occupations requiring less than a Bachelor's degree

A tertiary analysis researched “good jobs” and the necessary skills to obtain them. A minimum threshold of $36,000 in annual income was applied to target occupations along with reduced automation risk and a minimum of 500 openings. Thirty occupations met the criteria and employ approximately 15% of the local workforce. The top skills requested in this “good jobs” category are the following:

Skill	Number of Occupations	Current Demand
Communication Skills	29	24,018
Teamwork / Collaboration	19	8,700
Organizational Skills	19	8,138
Scheduling	18	9,775
Physical Abilities	18	9,087
Detail-Oriented	17	7,762
Computer Literacy	15	8,352
Customer Service Skills	15	17,619
Problem Solving	15	7,857
Microsoft Excel	12	6,090
Microsoft Office	11	7,956
Management Skills	11	14,464
Budgeting	9	5,704
Repair	9	7,915
Planning	9	5,432
Building Effective Relationships	7	4,677
Troubleshooting	7	4,626
Patient Care	6	5,578
Cardiopulmonary Resuscitation (CPR)	6	4,176
Sales Skills	5	6,740

In this category, **Soft/Social-Emotional Skills** are the highest requested skills notably **Communication Skills, Teamwork/Collaboration, Organizational Skills, and Problem Solving.** Since interpersonal skills are relatively un-automatable, an increased emphasis on building and deepening skills training in these areas is highly valued by employers, increasing employability and creating a protective factor to prevent future layoffs and increased career opportunities. Additionally, **key managerial skills including Scheduling, Planning and general Management Skills** are often requested, further solidifying the value in managerial skills training as a recovery strategy. Digital skills are also frequently requested in these occupations highlighting the need for **Computer Literacy, Microsoft Excel and Microsoft Office** specific training.

Conclusion

In summary, this analysis points to **three key areas for targeted skills acquisition as a recovery and inclusive economic growth strategy for our region; investment in digital skills, expanding and deepening soft/social emotional skills training and investing in training in key managerial skills, particularly to provide transitions for frontline workers**. Additionally, workforce development strategies need to consider multiple factors in career coaching including current and projected job openings, automation risk of target careers, and job quality metrics including wages paid and career progression. Lastly, and perhaps most importantly, **higher education had the strongest correlation to insurance from the disruption of the pandemic**. The acceleration of change and automation requires **a strategy of lifelong learning to stay relevant in an ever changing world**. Whenever possible, career coaching should emphasize a continuum of learning to provide the greatest benefit to individual and family self-sufficiency and the greatest protection to market disruptions.

Valley Vision is committed to growing our regional talent pipeline to meet current and future workforce needs and advocating for access and onramps for all community members to gain key skills to ensure an equitable and prosperous region.

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