

Strong Workforce Program
Advanced Manufacturing and Transportation
Precision Manufacturing
Regional Workforce Advisory Meeting Proceedings
September 24, 2024
Hybrid

Introduction

The Los Rios Community College District, in partnership with Valley Vision and in collaboration with Sierra College, Yuba Community College District, and Lake Tahoe Community College, invests in Strong Workforce funding to organize and convene Regional Advisories. The objectives of the Regional Advisories are to build strong relationships between employers, educators, and the workforce that:

- Provide timely information on skills gaps and workforce needs, informing partners on major industry trend information;
- Improve the efficiency of the advisory process for educators and employers;
- Reflect a regional view of workforce needs and assets;
- Provide opportunities for systemic, ongoing engagement, including workforce partners in key industry sectors.

Regional Advisory meetings help inform decisions on needed investments and enhancements for Career Education (CE) programs to help fill the growing demand for middle-skill positions. This meeting proceedings report includes key findings, best practices, and minutes from the Fall 2024 Advanced Manufacturing and Transportation Regional Advisory meeting, which focused specifically on Advanced Manufacturing. This advisory was held in collaboration with the Greater Sacramento Economic Council and Sacramento Valley Manufacturing Alliance.

Valley Vision supports a robust talent pipeline through our multiple 21st Century Workforce initiatives. We prepare our regional workforce for the future by addressing skills gaps, advancing research, aligning efforts, and strengthening systems. Valley Vision's workforce development efforts are supported by the Sacramento Employment and Training Agency (SETA), Golden Sierra Workforce Development Board (WDB), North Central Counties Consortium, Yolo WDB, the City of Sacramento, local community college districts, and others.

The Strong Workforce program provides Career Education opportunities to increase social mobility and fuel regional economies with skilled workers.

Key Findings

- Electrical and mechanical technicians which are skilled in working with low-voltage electrical systems (under 480V) and have proficiency in troubleshooting and maintaining mechanical systems are in high demand. This skill set includes the ability to read PLC (Programmable Logic Controller) code. Knowledge of hydraulics and pneumatics is also highly valued.
- Traditional technician roles, such as CNC machine operators and programmers, remain in high demand. Employers highlighted the need for technicians to possess a broad knowledge base to troubleshoot and work with various types of equipment and control systems.
- There is a significant demand for technicians who are skilled in programming, maintaining, and troubleshooting issues with manufacturing equipment, robotic systems, and control mechanisms across various automation brands and control languages. The ability to integrate and maintain complex automated manufacturing cells is considered an essential skill set.
- Employers noted a significant shortage of technicians who are skilled in 6-axis robotic programming, a technique commonly used in manufacturing processes. This specialized skill set is more prevalent among European and Asian workers than in the United States. The ability to program and troubleshoot issues with these robotic systems has been identified as a critical gap that needs to be addressed to meet the industry's evolving demands.
- The discussion centered on the expected changes in various occupations and the necessary skills due to the rapid advancements in technology, particularly in AI and automation. Employers highlighted the potential benefits of AI applications in areas such as diagnostics, programming, and machine operations. Emphasis was placed on the importance of continuous education and training to adapt to the evolving skills needed to keep pace with these technological changes.
- Retention of talent is a major concern for employers, as many employees are prone to job-hopping instead of committing long-term. There has been a noticeable shift in workplace culture; previously, it was common for individuals to stay at one company for many years. Now, particularly younger workers tend to change jobs every one to two years. This high turnover complicates training and workforce development, which depend on stability.

Meeting Proceedings

Welcome and Introduction

Renee John, the Managing Director at Valley Vision, introduced the Advanced Manufacturing Advisory. The primary objective of this advisory is to enable education and training providers to understand the industry's needs, allowing them to tailor their programs accordingly. This initiative emphasizes the importance of hearing directly from employers to foster meaningful connections, share valuable labor market data, and highlight community college and local programs that align with industry demands. By collaborating closely with employers, the advisory aims to create pathways that enhance workforce readiness and support the growth of the advanced manufacturing sector.

John emphasized the need to improve collaboration between industry and education, recognizing their differing communication styles, while the advisories aim to enhance this partnership. She also introduced key participants: Nick Guptil from the Greater Sacramento Economic Council, who expounded on the council's role in attracting and expanding companies in the region, and Dean Peckham from the Sacramento Valley Manufacturing Alliance, who elaborated on the alliance's mission to address workforce needs and its partnerships with education and training providers. All three underscored the significance of these advisories in facilitating an open dialogue between employers and educators to ensure that the education and training system remains responsive to the evolving needs of the manufacturing industry in the region.

Labor Market Data

Ebony Benzing, Director of the North far North Greater Sacramento Center of Excellence for Labor Market Research, was introduced. The Center supports career education programs in California community colleges and creates sector profiles to comprehensively overview employment outlook, in-demand skills and occupations, and identify active employers within specific industry sectors. For this meeting, Benzing highlighted the [Advanced Manufacturing Sector Profile](#) the Center of Excellence compiled for the Sacramento region, providing data and insights to facilitate the development of relevant community college programs.

She emphasized the importance of obtaining industry input and feedback to ensure that the data and information provided to colleges align with the genuine needs of employers.

Employer Discussion

During the employer discussion, regional employers shared information about the current skill and labor demands in the Advanced Manufacturing industries. The panelists represented various employers from different manufacturing industries, including:

- Thomas Williams, President of Justified Performance
- Nick Bruno, President of Harris & Bruno International
- Tony Lopez, Vice President, Manufacturing & Logistics Services for Pride Industries
- Rajbir Sandhu, Maintenance Manager for Blue Diamond Growers
- Dan Hayes, President and CEO of Universal Custom Display
- Rob Sanger, Program Manager, Workforce Training & Operations, SEMI Foundation
- Anthony Serra, Executive Vice President, DMG MORI Manufacturing
- JP Singh, Owner, Omega Machine & Tool Inc.
- Mark Kaufman, Co-Founder, Senior Vice President, X-Bow Systems
- Simone Mulgaria, CEO, SIR Robotics
- Pete Reynen, General Manager, ACM Machining
- Jared Stutzman, Commercial Lines Broker, VSI Insurance Services
- Pawel Bordewicz, Abotech Precision Manufacturing

Skills and Occupations in High Demand

Industry experts shared information on the current high-demand skills and occupations in their respective businesses. Employers emphasized the need for electrical and mechanical technicians capable of working on low-voltage electrical systems (under 480V) and proficient in troubleshooting and maintaining mechanical systems. This includes reading PLC code and understanding hydraulics and pneumatics, as well as troubleshooting and maintaining various manufacturing equipment and control mechanisms.

The discussion then turned to the increasing demand for industrial automation technicians. Employers expressed the need for technicians skilled in programming and troubleshooting robotic systems that can work across different automation brands and control languages. The ability to integrate and maintain complex automated manufacturing cells was seen as an essential skill set.

Employers noted a significant shortage of technicians skilled in 6-axis robotic programming, which is widely used in manufacturing processes. More prevalent in European and Asian counterparts, this skill set is highly specialized in the US and much more difficult to find in employment candidates. The ability to program and troubleshoot robotic systems was identified as a key gap that needs to be addressed to meet the evolving demands of the industry.

Furthermore, employers discussed the expected changes in various occupations and the necessary skills due to rapid advancements in technology, especially in AI and automation. They highlighted the potential benefits of AI applications in areas like diagnostics, programming, and machine operations. It was emphasized that continuous education and training are essential to adapt to the evolving skills required to keep up with these technological changes.

In addition to the excitement about new technologies like robotics and automation, the employers stressed the continued importance of traditional technician roles, such as CNC machine operators and programmers. They emphasized that technicians need to have a broad knowledge base to troubleshoot and work across different types of equipment and control systems.

Challenges in Finding Qualified Candidates

Industry leaders are facing considerable challenges in finding qualified candidates for open positions. They expressed deep frustration over the lack of individuals with the right attitude and a genuine eagerness to learn. Many of these employers have observed that some younger candidates come to the table with inflated salary expectations that far exceed what entry-level positions offer.

Additionally, there is a noticeable reluctance among candidates to pursue "blue-collar" manufacturing jobs, despite these roles promising stable, well-paying careers. There's a growing consensus among employers that it is far more beneficial to hire individuals who possess a strong work ethic and a growth mindset, as opposed to focusing solely on technical skills, noting, the latter can be cultivated through proper training.

Employers also shared a preference for hiring entry-level workers who are new to the industry, believing that this can help build company loyalty and retention, as well as a shared commitment to the organization's goals. Retention of talent was a significant concern, as employers shared experiences of past employees tending to job-hop rather than committing to roles or companies long-term. Employers have noticed a shift in workplace culture, sharing that employees previously spent years at a single company. Still, now many, especially younger workers, change jobs every one to two years. This high turnover complicates training and workforce development, which require stability.

One employer highlighted that many believe switching companies is key for career advancement, but in the manufacturing sector, staying with an organization is seen as more valuable. Employers emphasize that the real challenge is finding candidates with the growth mindset, strong work ethic, and commitment to growth within the organization.

Successful Partnerships and the Importance of Collaboration

During the meeting, employers shared several examples of successful partnerships with education and training institutions. They discussed company-sponsored apprenticeship programs where employers provide funding that allows employees to attend community college programs like mechatronics or industrial automation. Additionally, dual enrollment programs were highlighted, allowing high school students to earn college credits and gain a head start on technical training. Proactive engagement between employers and educational institutions, such as hosting tours, guest lectures, and providing internship opportunities, was also emphasized. These partnerships are crucial as they help bridge the gap between what employers need and what the education system provides.

Participants underscored the need to strengthen collaboration and communication between industry and academia. They recognized that the "languages" of industry and education are often different, making it challenging to align curriculum and training with real-world needs. Providing real-time industry feedback was seen as essential for shaping the development of new programs, curricula, and equipment at the community college level. Ongoing dialogue and partnership were emphasized as key to ensuring the education and training system can adapt and be responsive to the evolving needs of the manufacturing sector.

Conclusion

At the conclusion of the advisory, faculty, and employers were encouraged to continue fostering collaboration to strengthen the pipeline into careers within the region's Advanced Manufacturing Industry. This partnership is crucial for aligning educational outcomes with industry needs, ensuring that graduates are well-prepared to enter the workforce.

A more detailed dive into the materials used during the event, along with a video recording of the event, are available [here](#). Comprehensive labor market data on the Advanced Manufacturing Sector compiled by the Center of Excellence for the Sacramento region can be found [here](#). Additionally, if you're interested in staying updated on the latest news, insights, and opportunities in the manufacturing sector, you can [sign up for our newsletter here](#). For more information about the report and labor market data provided, please contact:

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