

SKILLS INDEX

How public-private partnerships are helping to revitalize U.S. manufacturing

KEY TAKEAWAYS

- 1/ Manufacturing jobs are coming back to the United States, but companies are struggling to find enough qualified workers to fill open positions.
- 2/ To address this challenge, some manufacturers are forming public-private partnerships with local colleges and vocational programs to tailor curriculums to their specific needs.
- 3/ With the demand for qualified workers forecast to increase, such programs will need to be expanded to meeting the rising need for manufacturing talent.

Manufacturing has traditionally been a vital segment of the U.S. economy and a key path to the middle class for workers. After years of sending manufacturing jobs offshore, U.S. employers are increasingly bringing those jobs back home. Data collected by the Reshoring Initiative showed a 20-year trend reversing in 2014 as 10,000 more manufacturing jobs were “onshored” to the U.S. than were sent overseas by U.S. manufacturers.

This trend seems likely to continue due to a variety of factors: rising wages in what had been considered low-wage countries, supply chain and product quality issues, and environmental and reputational considerations. What’s more, many U.S. manufacturers are finding that it simply makes good business sense to produce goods nearer the consumer, and that bringing manufacturing back onshore reduces transportation costs while allowing them to respond more quickly to market trends.

But, as manufacturers bring jobs back to the United States, they face significant shortages of potential employees with the needed skills, particularly the skills necessary to compete effectively in the 21st-century manufacturing environment. Finding ways to close those skills gaps is critical not only to U.S. manufacturers' success but to the long-term prospects of keeping those new manufacturing jobs on U.S. soil into the future.

KEY SKILLS LACKING

Increasing the volume of products manufactured onshore, however, depends on finding the talent needed to staff the manufacturing facilities. A look at the Strayer@Work Skills Index shows a number of areas where available talent falls short of manufacturer's demand, including some areas critical to the success of today's manufacturers. For example, the index found a 31 percent gap in computer-aided design, a core skill for advanced manufacturing in the high-tech, automated facilities that are increasingly commonplace. Since technology offers a way for manufacturers to improve efficiency and production quality, candidates well-versed in advanced manufacturing techniques are critical.

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The index also detected a shortfall in qualified talent to spearhead and manage continuous improvement programs. The analysis identified gaps in creativity (34 percent), analysis (33 percent), cross-functional team leadership (29 percent), critical thinking (29 percent), Lean manufacturing (12 percent), and Six Sigma skills (11 percent). These skills, which are integral to senior management positions, are essential to keeping U.S. manufacturing competitive with global companies.

THE IMPORTANCE OF PARTNERSHIPS

One solution to the talent gaps confronting manufacturers are public-private partnerships between private-sector companies and educational institutions. In such arrangements, companies can work directly with the vocational schools to customize curriculums that enable workers to develop the skills needed for success in the modern workplace. While manufacturing apprenticeships can take from two to four years to complete, these thorough programs produce qualified graduates who can move directly into the workforce.

Boeing's efforts in Washington hint at the potential of such a strategy. The company anticipates adding 15,000 workers through the end of the decade to offset baby boomer retirements and meet manufacturing demand. As Boeing makes investments in upgrading its manufacturing facilities, it has formed such public-private partnerships with dozens of Puget Sound-area high schools, skill centers, and community and technical colleges to offer education focused on courses that prepare graduates to fill the high-wage, high-skill jobs the company has to offer now and in the future.

A number of states have recognized the value of establishing such partnerships. Indiana, for example, has connected manufacturers with not only its universities but also its vocational education system to provide the talent needed in cutting-edge manufacturing workplaces. The impact has enhanced the talent pool while also diversifying the state's economy. Indiana's effort includes a recognition that while a four-year college degree might not be the right path for everyone, skills training that can start as early as high school can prepare individuals for rewarding, long-term careers in a high-tech manufacturing setting.

More broadly, in 2014 the National Association of Manufacturers took steps to help close the skills gaps confronting its member companies. The initiative involves NAM's Manufacturing Institute and education technology firm EverFi, which have partnered to provide interactive digital learning opportunities in science, technology, engineering, mathematics (STEM), and other critical skills in schools across the country. The initiative aims to introduce students to the technical skills needed to be competitive in the evolving global economy while promoting growth in the U.S. manufacturing sector.

CLOSING THE GAP

The skills gap is real, and widely acknowledged by U.S. manufacturers. As the initial success of public-private partnerships between manufacturers and educational institutions has demonstrated, concerted efforts that identify the required skills and then craft a comprehensive and coordinated approach are producing qualified graduates. What's more, the benefits are real—manufacturers can meet their demand for talent, thereby strengthening the sector as whole. And more lucrative career paths are creating positive economic outcomes in communities throughout the country. The challenge will be to expand public-private partnerships and apprentice programs in order to accelerate the progress to date.