



FIELD SERVICE MANAGEMENT

# The Effect of the Skills Gap on the Labor Force

Part 1 of 2

**White Paper**

## WORKFORCE SHORTAGE

# THE EFFECT OF THE SKILLS GAP ON THE LABOR FORCE

February 2016 . Knowledge Brief . Part 1 of 2 . Workforce Challenges

This knowledge brief will discuss the impact of the skilled worker shortage in the United States. Its purpose is to provide insight into the causes of the talent shortage.



### THE SKILLS GAP AND THE AMERICAN LABOR FORCE

In the next decade, the world will witness the emergence of the first breakthrough technologies of the Fourth Industrial Revolution. By 2025, 10 percent of the population will be wearing clothes connected to the Internet. Five percent of consumer goods will be printed in 3D. Ten percent of the global gross domestic product will be stored on blockchain technology.

These predictions by 800 executives and experts from the information and communications technology sector, shared in the World Economic Forum's September 2015 Technology Tipping Points and Societal Impact report, were among the software and service megatrends identified that will shape the global community in the years to come.

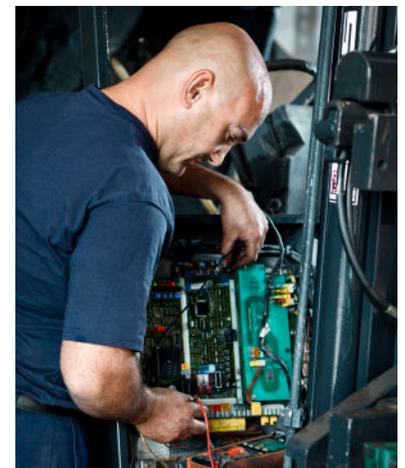
The impact of these technologies will also transform economic structures and the nature of work. While disruptive technology will result in lost jobs, emerging technologies will likely create new job opportunities. The first

three industrial revolutions displaced many workers due to mass production and automated processes; however, they also created the need for new job skill sets. According to the Centre for Research Innovation & Future Development, nine of the ten most in-demand jobs in 2012 did not even exist in 2003.

That future need for new worker skills only serves to highlight the current crisis taking place across the globe today—the skills gap and the ripple effect it is having on businesses worldwide. How can the millions of new jobs expected to be created in the coming decade be filled when there is an ever-expanding gap between the skill sets of the current labor force and the skills employers need in today's workforce landscape?

Take the manufacturing industry, for instance. It is one the hardest hit by the skills gap, with six out of every ten job openings today going unfilled. According to the 2015 Skills Gap Report by the Manufacturing Institute (MI) and Deloitte, only 1.4 million of the 3.4 million manufacturing jobs expected to open up over the next decade

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through retiring Baby Boomers and new job creation will likely find qualified applicants; 2 million jobs are projected to go unfilled. Based on those estimates, the skills gap in manufacturing is anticipated to more than triple between 2011 and 2025.

The talent shortage faced by many companies today reaches across all areas of their businesses, impacting productivity, employee morale and the ability to meet customer demand. And as new technologies emerge and the need for more workers increases, the crisis will reach critical levels. Businesses that do not develop workforce strategies now will not be able to successfully compete in the future.

As Klaus Schwab, Founder and Executive Chairman of the World Economic Forum stated in January 2016, “I am convinced of one thing—that in the future, talent, more than capital, will represent the critical factor of production.”

## CAUSES OF THE SKILLS GAP

To fully understand the impact of the talent shortage, one has to understand its genesis and why it has expanded so much during the last fifteen years. While the skills gap was first noted as far back as 1990 by the National Center on Education and the Economy, many were slow to realize the potential it had to impact businesses and the national economy. Today, experts identify three main causes that have contributed to its growth.

**The Baby Boomers.** Seventy-six million Americans were born between 1945 and 1964. Due to their sheer numbers, the median age of the U.S. workforce has steadily risen. The Bureau of Labor Statistics projects that by 2020, approximately 25 percent of the American workforce will be age 55 and older.

However, many of those Post-WWII children are now in their seventies,

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with millions more retiring at a rate of 10,000 per day. Approximately 2.7 million Baby Boomers (22 percent of existing workforce) will retire between 2015 and 2025, causing the labor force participation rate (the ratio between the labor force and the size of its cohort—in this case, the Baby Boomers) to understandably decline for the remainder of this decade and into the next.

One of the industries that will be hit hardest by retiring Baby Boomers is the oil and gas industry. Not only are these industry veterans taking their skills with them, but also their expertise on the job site. According to Elaine Cullen, President of Prima Consulting Services, it takes an average of eight to ten years to properly train workers in this field, a fact highlighted by a study on job safety. “From 2001 to 2010, 31 percent of all fatalities and catastrophic injuries happened in the first three months of employment,” said Cullen. “Sixty-six percent occurred in the first year of employment and 90 percent in the first five years.”

The construction industry is having its troubles with an aging workforce as well. The Associated General Contractors of America, the construction industry’s largest association, said results of its 2015 survey of 1,358 construction firms found 86 percent reporting difficulty filling jobs, the majority of those openings for carpenters, sheet-metal installers and concrete workers.

**Poor Perception of Skilled Trades.** For the last fifty years, the belief has been that college was the route to fulfilling careers and financial success. And while that may well have been true for some, for many graduates, a college education today results in a mountain of debt (currently more than \$1.3 trillion) and few job prospects (leading to higher unemployment rates). Still, the perception remains: college equates to high wages; trade skills equate to low wages.

The truth is, there is not quite the gap in salary disparity across the board between college graduates and skilled workers as some would believe. The National Association of Colleges and Employers (NACE) 2015 Salary Survey reported that average salaries for college graduates ranged from \$45,042 (humanities) to \$62,998

(engineering). Compare this with the National Association of Manufacturers 2014 report in which data revealed that the average manufacturing worker earned \$79,000. Other trade industries fare well, too. In its 2014 Occupational Employment and Wages report, the Bureau of Labor Statistics showed that the top 25 percent of construction workers earned from \$42,000 to \$60,000.

Where there does exist a disparity is in how the American public views skilled trades. While 90 percent believe that manufacturing is important to economic prosperity and 82 percent say they would support further investment in the manufacturing industry, according to the MI and Deloitte survey only 33 percent of parents would encourage their children to pursue degrees in manufacturing. What further confounds this statistic is the fact that given the option to create 1,000 new jobs in their local community, Americans ranked manufacturing as the No. 1 industry they would choose for those jobs.

**Failure of the Educational System.** Along with the poor perception of skilled trades is the lack of visibility for them in the educational system. While there has been an effort in recent years to put more emphasis on STEM (Science, Technology, Engineering and Math) subjects that are desperately needed in trade jobs such as the oil and gas industry, enrollments in technical colleges are dwindling.

From 2000 to 2012, enrollments at four-year colleges increased by 46.6 percent while two-year colleges, many of which offer technical degrees, increased by less than half that amount—only 20.6 percent. Additionally, the MI and Deloitte survey reported that since 2000 there has been a 40 percent decline in apprenticeships in the United States.

## CONCLUSION

It is estimated that the world will need 470 million new jobs by 2030. For businesses in many industries, the ability to understand the impact of the talent shortage will be critical to their success.

See Part 2 of this knowledge brief for information on the domino effect caused by the skills gap and what strategies companies can employ to combat the skills mismatch.

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