



Association for Manufacturing Excellence Whitepaper Series: Challenges Facing the Manufacturing Industry

In February 2012, the Association for Manufacturing Excellence (AME) released a whitepaper detailing three vital aspects of revitalizing manufacturing, one of North America's most critical sectors. The whitepaper—which references President Obama's plan to revive the industry, as well as some recent, astounding statistics—explains why manufacturing is so critical to economic growth, and determines that “Made in North America” is a priority, as Canada, Mexico and the U.S. are all dependent on one another.

In this three-part series, AME will explore the three aspects that manufacturing leaders, industry organizations and policy-makers must consider in order to strengthen manufacturing—the challenges facing not only manufacturers, but North America as a whole; examples of how companies and organizations are currently working toward a better future; and how we can all prepare for and execute a sustainable manufacturing industry. As the leader of the “Revitalization of Manufacturing” initiative, AME has set a goal to provide expert knowledge and awareness about how anyone and any company can help make this revitalization a reality.

The Challenges

America has a huge problem. It faces four major challenges on which its future depends and has been failing to meet them. In *That Used to Be Us, How America Fell Behind in the World It Invented and How We Can Come Back* by Thomas L. Friedman and Michael Mandelbaum, the authors analyze those challenges—globalization, the revolution in information technology, the nation's chronic deficits and its pattern of energy consumption.

In addition, the authors point out how America's educational system has not adapted to changed priorities around the world—the critical need for more math, physics, engineering and technical knowledge and skills in economic development. This has caused Americans to rapidly lose jobs, while more emphasis on these subjects in China, India and other countries has made America's competitors gain employment in manufacturing.

The National Association of Manufacturers' (NAM) Manufacturing Institute 2011 [Skills Gap](#) study states that 82 percent of manufacturers have a moderate or serious shortage of skilled production workers, and 5 percent of all manufacturing jobs—or 600,000 jobs—are open because there is no qualified talent. In addition, 2.7 million manufacturing employees are 55 years of age or older and likely to leave the labor force over the next 10 years. The growing shortage of skilled workers needed for North American manufacturers to sustain and grow the business are compounded by a 20 percent structural cost burden compared to our key trading partners as reflected in the [Structural Cost of Manufacturing](#) study.

To participate fully in society and the workplace, citizens will need powerful literacy abilities that until now have been achieved by only a small percentage of the population. Having a steady supply of highly skilled workers, scientists, researchers and engineers is seen as the top driver of the manufacturing competitiveness of nations and the standard of living of their people.

Students in the United States are trailing other industrialized nations as reported in the 2009 report of the Program for International Student Assessment. These results show America as being average in reading

and science, and below average in math. America's high school graduation rate ranks 19th in the world, while 40 years ago, we were number one.

Other factors contributed to the current situation and future of manufacturing jobs, and much can be attributed to laws and regulations that make it more difficult for manufacturers to meet foreign competition on level ground. Every new expense, whether it is to comply with new regulations, to fund government programs or to defend lawsuits and pay unwarranted claims, is a loss to the high-quality, job-generating capacity of manufacturing.

Next month, as part of AME's continuing whitepaper series, we will provide examples of how manufacturers and industry organizations are working toward a better future, both locally and for the overall industry.

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About the Association for Manufacturing Excellence

The Association for Manufacturing Excellence (AME) is the premier not-for-profit organization dedicated to the journey of continuous improvement and enterprise excellence. AME's membership is composed of a trusted network of volunteers who are committed to leveraging the practitioner-to-practitioner and company-to-company shared-learning experience. Through engaging workshops, seminars and plant tours, and industry-leading conferences, AME members are continually discovering and implementing new continuous improvement strategies and best practices. AME offers its members a multitude of valuable resources to help them stay abreast of current industry developments, and improve the skills, competitiveness, and overall success of their organizations. Join AME in leading the "Revitalization of Manufacturing." For more information, visit www.ame.org or email info@ame.org.