



Association for Manufacturing Excellence Whitepaper Series: Breathing New Life into Manufacturing

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.

The first part of our four-part series focused on the challenges facing not only manufacturers, but North America as a whole. In this installment, we explore various examples of how companies and industry organizations are currently working toward a better future.

Breathing New Life into Manufacturing

The public and private sectors must come together to build on the NAM study, [A Manufacturing Renaissance: Four Goals for Economic Growth](#), to revitalize the industry and grow the economy. The strategy calls for putting people, schools, businesses and the government to work; producing literate career-ready citizens capable of joining the workforce; and enabling manufacturers to once again lead the designing, building and exporting of quality products and services around the globe. The top three priorities for revitalizing manufacturing proposed by [National Council For Advanced Manufacturing](#) and its alliance partners are:

- Build a better educated and trained workforce
- Promote product and process innovation, as well as research and development
- Improve global competitiveness for companies

Each priority contains elements that must be considered in developing public policies that support the revitalization of the manufacturing sector, and policy-makers must consider these elements in shaping future public policy and legislation. Their goal should be to help public school systems and companies transform themselves to compete in more knowledge-intensive and information-fueled innovative processes, leading to more competitiveness by putting people back to work building things at home.

President Obama praised companies that are bringing manufacturing jobs back to the United States from abroad at a White House conference where he met with leaders of firms investing in South Carolina and other states. “I don't want the next generation of manufacturing jobs taking root in countries like China or Germany,” President Obama said. “I want them taking root in places like Michigan and Ohio and Virginia and North Carolina.”

The Association for Manufacturing Excellence (AME) has been leading the “Revitalization of Manufacturing” initiative, where AME, along with other organizations, has been reaching out to policy-makers nationwide, and encouraging them to join or develop efforts focusing on local and state job creation. It is imperative that policy-makers recognize the importance of an industry that has been the backbone of the North American economy. To date, AME has received more than 400 signatures of support from state and federal policy-makers, industry trade associations and operations executives representing manufacturers across North America.

Virginia was the first state to pledge its support for AME's initiative, and is also the top state named in CNBC's *Special Report: America's Top States for Business 2011*. The Commonwealth and its businesses have been actively engaged in promoting manufacturing excellence.

For example, the Virginia Economic Development Partnership conducts advanced manufacturing tours to showcase how the Commonwealth's business climate facilitates the industry's success. Highlights of the tour this year include Newport News Shipbuilding (NNS) and Germane Systems, both of which are active participants in supporting AME initiatives by opening their doors to share best practices during plant tours.

These companies also strive to individually foster a robust manufacturing environment within Virginia. Germane Systems, for instance, was selected as a tour site for AME's Annual International Conference in 2010. The company has been such an advocate for manufacturing excellence that the Virginia Deputy Secretary of Commerce and Trade, Carrie Cantrell, presented a letter from Governor Robert McDonnell that praised the company for its support of the revitalization of manufacturing within the state.

Over the years, NNS has benefited from its relationship with AME by sharing and adopting industry best practices, which accelerate its journey to achieve operational excellence. Even as the Navy, one of NNS' biggest customers, contemplates possible cuts to ship orders, NNS continues to move full-speed ahead with plans to hire thousands of workers in the next five years. By maintaining a highly skilled workforce and utilizing best practices, NNS can grow its business.

The Commonwealth recognizes that manufacturing drives technology, productivity and innovation across all industry sectors, and Governor McDonnell endorses the "Revitalization of Manufacturing" initiative, through which the collaborative sharing of best practices to make organizations more competitive will lead to the creation of countless new jobs.

AME is joining with its corporate members and other leading learning organizations to adopt these top three priorities for revitalizing manufacturing by engaging in reforming public education to produce career-ready citizens; establishing consortiums to help sustain and grow businesses through sharing technology and innovative ideas; reshoring (insourcing); and redeploying Training Within Industry (TWI) programs to train or retrain workers who have the ability to work in advanced manufacturing jobs, which will ultimately revitalize manufacturing and re-energize the economy.

Reforming Public Education

There are a number of ongoing initiatives by manufacturing organizations to help reform public education. The Manufacturing Institute's [Roadmap to Education Reform for Manufacturing](#) is a comprehensive blueprint for education reform. The public education system needs to provide a lifelong learning environment to nurture and sustain students and workers capable of new ways of thinking and learning to quickly adopt and master new skills. Schools and colleges need to provide a relevant curriculum and teaching styles to help students learn the basics and engage them in actively participating and learning.

To help address the public schools challenges, the American Productivity and Quality Center's (APQC) Education [North Star](#) program was launched in 1996 with the vision of utilizing the same strategies that had transformed businesses to enhance the U.S. education system. APQC helps school districts do more with less by transforming education through process and performance management, benchmarking and best practices to empower school districts to improve efficiency and effectiveness.

APQC Chairman C. Jackson Grayson, Jr. said he has a simple but difficult mission—to transform the entire education system—including state and federal governments, higher education and private schools. Grayson said there are two fundamental reasons for the long stagnation in public K-12 education. One, there exists an almost total focus on inputs and outcomes, and no focus on processes; and two, there is a failure to link accountability with improvement through processes. Their program continues to address public school challenges, keeping these two challenges in mind.

Another program, [Career Pathways](#), is a proven way to reach out to public schools. This program encourages students to consider a career in manufacturing, and help prepare them, by using the [Manufacturing Pathway Map](#). Career Pathways provides career readiness skills and more advanced knowledge of the same science, technology, engineering and math skills needed for college or jobs in advance manufacturing.

One organization, the International Dyslexia Association (IDA), helps students develop reading, language and writing abilities that are central to an education and allow individuals to be successful in today's global economy. In particular, IDA supports the newly developed Literacy Education for All, Results for the Nation (LEARN) Act. The LEARN Act benefits all students who are risk for literacy failure, and ultimately allows all students to become the educated, skilled workers needed for North America to become the world's leading manufacturing powerhouse.

Consortiums

Consortiums, or a group of like-minded individuals with the same mission, can help to breathe new life into manufacturing. Harvard Business School professor Michael Porter suggests that these industry "clusters" affect competition in three broad ways: "First, by increasing the productivity of companies based in the area; second, by driving the direction and pace of innovation, which underpins future productivity growth; and third, by stimulating the formation of new businesses, which expand and strengthen the cluster itself."

Consortium members participate in resolving problems such as the lack of a trained workforce, regulations and infrastructure for growing or having access to needed resources. Local companies, academic institutions, government agencies, and labor and learning organizations can band together to become more competitive and reap the benefits of learning about new technology and innovative ideas.

In the future, consortium members will need to become [vigorous learning enterprises](#) and embrace a new organizational model. They will need to learn how to deal with economic and ecological survivability, and there will be a need for a new way of thinking called "compression"—learning how to continue improving human quality of life while greatly reducing our consumption of energy and virgin raw material, and releasing no toxic chemicals into either air or water.

AME is a leading supporter of developing an industry network of consortiums. AME Northern Kentucky/Cincinnati Consortium is the first building block of the AME Consortia network, and the organizations plans to deploy at least 10 more in 2012. AME also has alliance partners, like the [Virginia Business Excellence Consortium](#), whose mission is to achieve business excellence through shared learning. Every year, AME bring consortiums from across North American together to share best practices, assist members in accelerating their collective learning and help launch new consortiums.

Next month, as part of AME's continuing whitepaper series, we will explore more examples of how companies and industry organizations are working toward a better future—specifically, through reshoring and Training Within Industry efforts. Look for this installment in mid-May.

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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.

