

# Becoming A Nation of Makers - Making Manufacturing Great Again!

By: [Glenn Marshall](#)



At the end of World War II, America had become the world's leading manufacturing powerhouse, accountable for 50 percent of the world's industrial production. Now, the U.S. produces only a fifth of the global manufacturing output.

The manufacturing sector can spark an economic recovery by restoring the confidence of the American people in their economic future and the country. America needs to return to its manufacturing roots to revive a growing middle class with high-paying jobs making the "American Dream" a reality, again!

## The Challenges

The American economy is experiencing the slowest post-recession recovery in 70 years, as reported by The Heritage Foundation. The unemployment rate for teenagers remained very high at 15.2 percent with over 95 million working age adults not working or even looking for a job at the end of November as reported by the Labor Department.

In an era in which education and innovation has never been more important for economic prosperity and success, the U.S. has fallen behind many other nations in educational and economic attainment and achievement.

## The Reshoring Initiative

U.S. companies are moving production back home, according to a survey from The Boston Consulting Group (BCG). Respondents predicted the U.S. would account for an average of 47 percent of their total production in five years, reflecting a seven percent increase in U.S. capacity.

BCG estimates that reshored production, along with rising exports, could create between 600,000 and 1 million direct manufacturing jobs by 2020. For every *manufacturing job* there are 3.4 full-time jobs created elsewhere in the United States to support manufacturers' efforts.

Reshoring is the practice of bringing manufacturing and services back to the U.S. from overseas — it is a fast and efficient way to strengthen the U.S. economy. By helping balance, the trade and budget deficits, reduces unemployment by creating good, well-paying jobs and fostering a skilled workforce.

The *Reshoring Initiative* led by its founder [Harry Moser](#) is focused on helping companies' shift collective thinking from believing offshoring is cheaper, to understanding local reduces the *total cost of ownership*. The Initiative does this by assisting manufacturers and suppliers in making informed buying decisions by providing data on the reshoring trends and analytical tools to make better strategic sourcing decisions.

## The Future of SMART Manufacturing

America needs to adopt a Smart Manufacturing strategy. It represents the integration of three key productivity factors: automation, operations information, and advanced analytics. These factors link

machines and equipment through open platforms and enable them to “think” – creating systems that are able to interact with one another, analyze data to predict failure, configure themselves and adapt to changes within the manufacturing process itself.

Some leading companies who are adopting this initiative are Rockwell Automation, Newport News Shipbuilding, Haas Automation, Autodesk, GE, Boeing and other innovative enterprises. They are demonstrating how to benefit from using *SMART Manufacturing* tools and integrated systems to work smarter not harder in the *Fourth Industrial Revolution*.

Smart Manufacturing offers unlimited potential, and it all begins with establishing what Rockwell Automation calls *The Connected Enterprise* as the foundation for achieving greater connectivity and information sharing.

Newport News Shipbuilding has been exploring *Augmented Reality* (AR) as a means to shift away from paper-based documentation in the work environment and addresses the challenges of training the next generation of shipbuilders. They call the project a “Drawingless Deckplate”.

The deployment of SMART manufacturing will require the modernization or construction of the next generation of “Smart Factories” to accelerate the reshoring trend and create entire new communities of very good, sustainable jobs that are “indirectly” necessary to support manufacturing.

### **The Way Forward**

Innovative leaders are joining with the Association for Manufacturing Excellence (AME), Digital Manufacturing and Design Innovation Institute, Manufacturing Institute, Reshoring Initiative, SME, Lean Frontiers, Learning First Alliance, SkillsUSA, Vocademy, and others to share best practices on SMART Manufacturing and the required new skill sets.

These forums are designed to align government, businesses, educational institutions, and the entire community in taking advantage of smart manufacturing outcomes. By addressing new ways to quickly close the growing skills gap and let these new skilled workers be empowered to earn their way into the middle class.

To remain competitive and retain its leadership role in the world economy, America needs to accelerate the deployment of “Smart Manufacturing” practices. These actions will enable companies and their employees to be more productivity and globally competitive in leading the way with a new manufacturing renaissance. Thus, “Making Manufacturing Great Again”!

*Glenn Marshall, Newport News Shipbuilding (retired) [Career Pathway](#) program in cooperation with the [Association for Manufacturing Excellence](#) and the [Reshoring Initiative](#) are focused on retaining and bring jobs back home by sharing best practices to close the nation’s skills gap and making organization more productivity for more information on these initiatives contact him at [marsh8279@aol.com](mailto:marsh8279@aol.com)*

