

Automation lifts the burdens on U.S. manufacturing

By John Engler

Manufacturers in the United States shoulder many burdens as they compete in the tough global marketplace, working to overcome wrong-headed government policies that add unnecessary costs to production.

Yet, all these challenges notwithstanding, the U.S. manufacturing sector remains the strongest in the world, setting new records for productivity year after year. How do we manage it?

Our not-so-secret salvation lies in human ingenuity, set loose by a free society and supported by education, as businesses embrace new management practices, technological innovation and pure creativity.

The Automation Federation embraces these strengths, which must always be emphasized if our economy is to stay vital.

The burdens placed on manufacturers are substantial and damaging. In 2006, the National Association of Manufacturing's research and education arm, the Manufacturing Institute, released a study, "The Escalating Cost Crisis." This report documented the 31.7 percent cost disadvantage faced by manufacturers in the United States compared to competitors in nine other major economies.

Energy costs, our broken system of civil justice, mandated employee benefits, excessive environmental regulation and high corporate taxes all place manufacturers in the United States in a tough competitive position—a 31.7 percent tougher position, in fact.

The NAM makes reducing these external costs a top priority from a policy standpoint, but the reality is they're beyond manufacturers' immediate power to fix. So employers accustomed to determining their own fates turn to areas they can control – their facilities, their practices, their supply chain, all shaped by automation.

We recently joined with the Manufacturing Extension Partnership (a program strongly supported by the NAM) and RSM McGladrey in sponsoring discussing with our small and medium-sized member companies on surviving in today's global value chain. Innovation quickly became the central topic.

Granted, innovation and automation are not always interchangeable terms, but they can be. Replace the word "innovation" with "automation" in the preliminary conclusion reached by our panelists, and you'll see what I mean:

"A focus on innovation can keep you from becoming a stagnant operator (incapable of improvement) or a commodity player (always under price pressures). This is especially true during a period when many markets (e.g., the defense industry and "green" products) have insatiable appetites for something new. It's a fact of manufacturing life that businesses, big and small, have embraced new ways of operating—for example, lean manufacturing on the plant floor—and tools and cultures of innovation for products and services."

Perhaps the clearest example is radio frequency identification, RFID, with the immediate application in inventory control now bringing economy-wide efficiencies. The NAM is active in shaping national RFID policy, trying to prevent unnecessary government barriers to its more widespread adoption.

Automation's impact is certainly unmistakable in my many visits to factory floors across the nation. At an Alabama auto plant, I watched an automated device run through the final steps of assembly and then gently close the car's trunk. No slamming there. In Indiana, one person guided machinery to attach bumpers; where once plastic and metal waste filled dumpsters, a small recycling bin serves.

This path of progress should run from the factory to the hospital. Addressing a conference on disease management recently, I highlighted information technology's potential in health care, and noted that automotive industry lives by ISO9001 standards, making accountability and interoperability guideposts. The health-care industry has a lot to learn from manufacturing, I suggested.

In all these technological advances, we see the new world of manufacturing, full of opportunity for future generations of highly skilled employees.

Skills are key. The lack of skilled employees is one of the most daunting challenges facing manufacturing, a problem we call "the skills gap." More than 80 percent of NAM members report difficulties in hiring employees with the necessary skills.

The response must be all-encompassing, the schools emphasizing math, science, logical thinking and, from the educators, accountability. We hear about "No Child Left Behind"; our goal should also be "No Child Without Skills." With technical training, doors open.

The private sector, too, bears responsibility, but it's that many have taken up willingly and with great energy. Our Manufacturing Institute is working with grassroots efforts all across the country, promoting a campaign, "Dream It. Do It," to encourage young people to pursue careers in manufacturing and to help them gain the skills they need to succeed.

The Automation Federation is to be congratulated, as well, for its continuing emphasis on workforce development. Your organization has willingly accepted the challenges posed by the rapidly changing, technology-dominated advanced economy that places a special emphasis on skilled employees.

In all these efforts, the NAM and your federation have discovered one important truth. Whether it's tackling misguided government policies or training the next generation of productive citizens, many hands make light work—especially if automation is there to help in the process.



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*The Dream It! Do It! program has a website:
<http://www.dreamit-doit.com/>*

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