Finding The Next Generation Of Manufacturers

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I want to invite you to go take a walk out onto your shop floor. Go ahead. What do you see?

For starters, you probably see engineering, fabrication and assembly cells, and some rather high-tech machinery used to support each of those functions.

You also see employees working in those cells, using their skills and years of experience to get the job done professionally and on time.

Notice anything else about your workforce? Some of them may be graying and soon preparing to retire. The age of your workforce represents a good opportunity for qualified younger employees to step in and launch their career. The problem you face is finding that young person.

The Skills Gap

All around the country there are manufacturing jobs that employers are looking to fill, but the problem stems from not enough skilled workers to fill them. So just how many jobs are open? According to *Businessweek.com*, there are more than 600,000 U.S. manufacturing jobs that remain unfilled due to a lack of trained workers. In fact, in the United States, technicians and skilled trades represent two of the top three most difficult job categories for manufacturers to fill.

With unemployment still somewhat high in this country, why aren’t people looking at manufacturing as a viable career choice? It starts with perception. I think many people have a negative view toward manufacturing: dirty jobs, tall smoke stacks and hot factories. While at one time that was true, those stereotypes are decades

old, and anyone who's been inside a manufacturing facility knows it's an environment filled with cutting-edge technology that requires skill and training to work. But that's part of the problem — people don't know what it's like because they've never been inside a plant. Those antiquated, negative perceptions are hampering the recruiting efforts of young people into the industry and they need to be changed.

Engaging Students

But just how do we go about changing that perception and getting young people energized about manufacturing? I'd say let's start engaging kids in grade school and emphasizing mathematics and science — the foundations they'll need to pursue a career in high-tech industries such as manufacturing, packaging, engineering and others. Organizations such as JumPPstart (www.pmmi.org [1]) and Project Lead The Way (www.pltw.org [2]) are helping to pilot these efforts.

JumPPstart is an initiative between PMMI member companies in Milwaukee and Minneapolis that aims to connect with area high school students to promote careers in the packaging and processing industries. The goal is to engage students, parents and school administrators to demonstrate career opportunities within the industry. In addition to Milwaukee and Minneapolis, the initiative will soon be taking root in Chicago.

Launched in 1997, Project Lead The Way is a non-profit organization that designs rigorous and innovative science, technology, engineering and mathematics curriculums to be taught in middle and high schools across the country.

Teachers at participating schools receive extra instruction and become certified to facilitate the curriculum. Today, more than 4,700 schools in all 50 states are offering Project Lead The Way courses. And the results seem to be paying dividends as, according to its website, students completing these classes are studying engineering and technology at five to 10 times the average rate of their peers. Furthermore, on average, about 80 percent of participating high school seniors said they plan to study engineering, technology or computer sciences in college, compared to the national average of 32 percent.

PMMI's Role

This issue is front and center of the Education and Workforce Development Committee at PMMI as well. Our mission is to ensure the strength and growth of the packaging and supply chain workforce. The strategies we're implementing to accomplish this include demonstrating all the career options available within the packaging industry; giving people a way to learn the skills that packaging companies are looking for; and providing programs that can serve membership and their employment challenges.

Just as programs like Project Lead The Way target students through high school, we've tailored our outreach efforts to include partnerships with both technical schools and traditional four-year colleges. One area of study that's gaining traction

with college students looking at a career in manufacturing or packaging is mechatronics engineering. Although it's a relatively new concept, mechatronics is a result of the changing landscape that engineers are facing in the workforce.

Mechatronics focuses on the design and production of automated equipment and combines mechanical, electrical, systems design, computer and control engineering — elements that nearly all packaging equipment contain. The advantage of studying this career field is that students gain hands-on experience with engineering disciplines such as pneumatics, hydraulics, electricity and the design and manufacturing process of mechanical parts. Students studying mechatronics can test and receive a PMMI certification in several disciplines within the field, including pneumatics, electricity, fluid, power and more.

Beyond the classroom, we give students enrolled in a PMMI-related course hands on exposure to the industry by inviting them to PACK EXPO. There, they participate in events like *The Amazing Packaging Race* and *PACK Solutions Challenge* — both of which test their engineering knowledge while serving as a great networking opportunity.

Another program we coordinate is called *How it's Packaged*, a summer tour in which a group of college students tour several PMMI-member companies in the Midwest and see the process from the inside out. I like to say we show kids how the Cheerios get inside the box — which is something they never even thought about. Since almost none of these kids have even been inside a packaging plant before, knowledge like this give them exposure in the real world of packaging.

There are many career opportunities with great chances for advancement just waiting to be filled within the packaging and manufacturing industries. But people need to have the right skills and qualifications to get them. That's why finding skilled labor is major concern with PMMI members. The solution isn't going to present itself overnight. We need to continue breaking down negative stereotypes about the industry and get young people excited about the possibilities. Organizations like Project Lead The Way are proving to be a great resource in getting kids interested in sciences and technology, and the partnerships PMMI has with post-secondary schools will soon begin closing the skills gap. Now is the time to be involved in packaging and manufacturing — we just have to package it the right way and get the word out.

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