RIGHT NOW THERE ARE AN ESTIMATED 30,000 UNFILLED MANUFACTURING JOBS IN ILLINOIS, AND AS THE SKILLS GAP WIDENS, THAT NUMBER WILL GROW

STORIES BY S.A. SWANSON

Local manufacturing encompasses a mind-boggling array of stuff, from Little League trophies to biopsy needles. But there's something manufacturers can't get from a production line, and it's what they need most—skilled workers.

Say "skills gap" to any manufacturer, and invariably they'll respond with the number 600,000. That's the gaping hole of unfilled jobs at U.S. manufacturers—for Illinois, estimates point to 30,000 unfilled jobs.

The talent shortfall carries serious consequences. In a Manufacturing Institute 2011 skills gap report surveying more than 1,100 U.S. manufacturers, 74 percent of respondents said a lack of skilled production workers was harming productivity or hindering their ability to expand operations.

That skills gap will widen. The Society of Manufacturing Engineers, based in Dearborn, Mich., predicts the number of unfilled manufacturing jobs will reach 3 million by 2015. Despite the dire outlook, some say there's a relatively simple way to
Bridging the gender divide

Programs aim to bring women to factory floor

Amid the modern equipment at many manufacturers, there’s a dynamic that seems a holdover of older times: namely, gender disparity on the factory floor.

When women do have manufacturing jobs, those positions are often low-skilled and low-paying, like assembly work. But some people in the industry are trying to address that imbalance. In doing so, they provide better career opportunities for women and expand the pipeline of skilled workers that manufacturers can tap into.

That’s certainly a goal for Jorgen Brower. She’s director of training services at Jane Addams Resource Corp. in Chicago, which has a free program that trains women for skilled manufacturing jobs. Now in its fourth year, the program has trained about 60 women as computer numerical control operators or welders. This allows women to shift from a minimum-wage job—at a manufacturer, retailer or elsewhere—into a career path with better pay. Trainees are often cash-strapped, so JARC helps them with support from another Chicago nonprofit, the Emergency Fund. For example, if a trainee’s car breaks down, the Emergency Fund will pay to fix it.

And yet JARC doesn’t exactly have a waiting list. “It’s actually hard for us to recruit for this program,” Ms. Brower says. “We send women out to companies where they walk the shop floor, and they come back to us and say, ‘I don’t know if I want to work there. I would be the only female.”

In the manufacturing industry, there’s plenty of buzz about grooming the next generation of workers at the high school level. But when schools offer that training, it’s not always a path that female students choose. That’s true at Wheeling High School, which started a manufacturing training program about two years ago. The number of students who have completed the program or are currently enrolled totals more than 50, but none is female.

Young women do pursue manufacturing careers at Austin Polytechnic Academy, but not with the frequency that Erica Swinney would like. She’s director of career and community programs at APA, a Chicago high school that prepares students for skilled manufacturing jobs. Since the school opened in 2007, more than half of the students have been female. That changed this year: Young women accounted for only 35 percent of the 193 students.

“T’m not sure why we had such a sudden drop in girls this year, but it is definitely a concern,” Ms. Swinney says.

There are encouraging developments at APA. In the most recent graduating class, all of the female students earned at least one national Institute for Metalworking Skills credential. Ms. Swinney notes that the first APA student to earn three NIMS credentials was a girl. Of the four successful job placements for graduating APA seniors this year, one is a young woman working in maintenance at Allied Die Casting Inc. In McHenry, What’s more, female students at APA tend to take on leadership roles. “We’re in the process of starting a student-owned manufacturing business in the school, and that initiative is mostly run by the girls,” Ms. Swinney says.

Building a better training program

To close the skills gap, manufacturers need to do more than make training widely available; they have to make it more effective. Some industry experts share lessons learned about training and improvements they would like to see.

It’s not just about the technical skills. Manufacturers want workers they can entrust with equipment worth hundreds of thousands of dollars, and they want those employees to mesh with the workplace culture. Jane Hazzard, global human resources director at Woodward Inc’s aircraft Turbine Systems business division in Rockford, says the company plans to do more training along those lines. Previously, employees would learn about the company’s values (contained in a document called the Woodward Constitution) during initial training. But that will change soon, Ms. Hazzard says. Every few months during the first year on the job, employees will discuss the company’s values with their supervisors—and how the company’s culture fits with its road map for the future.

Provide pre- and post-testing. To be strategic about spending dollars, it helps to understand what gaps employees need to fill. Not all companies do that, says Jeannine Kuntz, director of professional development at the Chicago-based Society of Manufacturing Engineers. “If you don’t do a pre-assessment, you could be wasting their time and training them in things they already know,” Ms. Kuntz says. “It’s also a mistake to assume that the employees need essential information during training.”

That’s why Ms. Kuntz urges manufacturers to do a post-training assessment.

Keep schools connected to 21st-century manufacturing. In addition to internships for students, many industry observers want to see “externships,” or program officers who spend a few weeks in a manufacturing facility. “We have to make sure that they’re teaching the processes and technologies that we’re using in manufacturing today,” says Jim Nelson, vice president of external affairs at the Illinois Manufacturers’ Association, who oversees that education policy initiatives. He has seen at least two Illinois communities of gifted training students on equipment that hasn’t been used by a manufacturer in 15 years. The situation prompted local manufacturers to pool funds and help purchase up-to-date equipment for one school. “That’s what it’s going to take, because schools have had their budgets cut,” Mr. Nelson says. “And we need to be sure that we’re training students for the jobs that exist today.”
Better schools means you can hire smarter employees.
Better tax rates means you can afford to keep them.

Report cards are out. Education Week ranked Arkansas 5th nationally, beating Mississippi, Tennessee and overall all U.S. averages in numerous categories measuring education quality and workforce readiness. And with dramatically lower property taxes and energy costs, you’ll never have to worry about keeping that high-rated workforce under your roof. Lower costs, better employees: No wonder more businesses are turning to West Memphis.

Manufacturing jobs sit empty as skills gap widens

MANUFACTURING from Page 21

defuse the sector’s talent bomb. Peter Cappelli, for one, likens manufacturers’ talent complaints to shopping for a car, not finding the vehicle you want within your budget—and then concluding there’s a car shortage. “If you want to get people into a particular field, you might start by paying them more,” says Mr. Cappelli, director of the Center for Human Resources at the University of Pennsylvania’s Wharton School. “Or make the training more attractive and easier to do.”

Entry-level wages for machineists in Illinois were $12.74 an hour in 2013, or $26,850 annually. The median, meanwhile, was $18,62, or $38,150 annually, according to the Illinois Department of Employment Security. By contrast, the average wage for a machinist 25 years ago was $12.08 an hour, according to a survey conducted in 1986 by the Illinois Manufacturers’ Association. Adjusted for inflation, that wage would be $25,531 today.

And for young people considering a career in manufacturing, recent employment trends could be discouraging. Manufacturing employment in the U.S. was down 594,800 in September, according to IDES. In 10 years, the figure was 795,100.

Filling the skills gap will become even more critical in coming years, as manufacturing equipment becomes more complex, requiring an even higher aptitude for math and computer skills.

And then, there’s the retirement problem.

“One of the largest manufacturers in the world is telling us that they’re going to lose 46 percent of their workforce in the next couple of years,” says Jeanne Kunz, SME’s director of professional development. Confidentiality prevents her from naming the company, she says, “but if I told you, it would scare you.”

To address the skills shortage, Ms. Kunz says she’s seeing manufacturers invest more in training. She acknowledges that there’s a shift from the economic boom at the end of the 20th century, when many companies cut training programs. “Now we’re kind of paying the price,” she says.

It’s possible that the retirement wave could have an upside, says Steve Ferrara, chief operating officer of BDO USA and a member of the Chicago-based accounting and consulting firm’s manufacturing industry group. He sees it as “an opportunity for innovation, because some of the older people are afraid of technology,” he says. “These kids today, they grow up with a computer in their crib.”

Of course, that opportunity hinges on the ability to sway tech-savvy youngsters toward careers in manufacturing. The sector has an image problem.

“You’re dealing with people whose great-uncle worked in manufacturing,” says Ms. Kunz. But it’s also a chance for companies to diversify their skill sets. “You have a decent pipeline of heads in the door,” she says. “These people are here now.”

THE NEXT STEP

Working with high schools

One company that hasn’t grappled with the skills gap—but will soon—is Woodward Inc., which designs and manufactures components for industries such as aerospace and energy.

Its 2013 sales were $1.7 billion, a 17 percent increase over 2010. Woodward is based in Fort Collins, Colo., but a large chunk of its aerospace business is based in the Rockford area. The unit employs about 1,500 in Loves Park and Rockton, and plans to double that number in the next 10 years. It’s building a $200 million facility in the area, which may be finished by the end of next year.

That’s of concern to June Hazzard, global human resources director at Woodward’s Aircraft Turbine Systems. Her business has found the staffers it needs so far via temporary agencies. “We kind of try before we buy, to see how they fit into our culture,” she says. Woodward has also hired some workers away from local businesses. But to help fill hundreds of new jobs in coming years, the business is taking a new tack, and local high schools will play a pivotal role.

“We’re not an employer that’s spent a lot of time in the school system to attract students directly to us,” Ms. Hazzard says. “So our approach is very much based on the fact that we believe most of our workforce will be coming to us directly out of high school.”

It’s not that Woodward lacks a presence in Rockford schools. For years, the company has financially supported schools’ robotics teams, often with Woodward engineers as coaches. But now, Woodward is working with local high schools to help them develop training curricula, giving them specific guidance on which skills would benefit students most.

When trying to attract the attention of teenagers, Ms. Hazzard knows it’s important to win over their parents, too.

“If we’re marketing to high school students, I need a document that’s plain and simple, with a QR code that links to our career site and also mentions Facebook and Twitter,” she says—but the flipside of that document needs to have more detailed information for parents, who may be less likely to scan a QR code with a smartphone.

To counter outdated notions of what it’s like to work in manufacturing, Woodward is rolling out an “employment rebranding” campaign designed to project an image that will appeal to potential employees.

Says Ms. Hazzard: “It’s about making sure people perceive this organization as up-and-coming and innovative.”
manufacturing, and their memory of manufacturing is of a shrinking industry,” says Michael Sloan, dean of agricultural and industrial technologies at Illinois Central College in East Peoria. At his school, calendar arts classes fill quickly, but that’s not the case for the one-month classes that give 100 hours of training to operate computer numerical control machines—even though local manufacturers have about 250 CNC jobs open. The school has trained two dozen CNC operators this year, an improvement looks more like a chasm. Many lack the basic math or computer aptitude required to operate more sophisticated machinery.

"In the past, a maintenance mechanic had a wrench, a hammer and a screwdriver," he says. "Today, if you’re talking about running or maintaining a machine, you have to know ratios. You have to be able to go into the computer and find what might be at fault in the program.

Last year, Nation Pizza spent about $200,000 on training, and received about $100,000 in reimbursement from the state Employee Training Investment Program, a subsidy launched in 2003 that reimburses manufacturers for up to 50 percent of training spending. But grants have dried up, says Mr. Alagia, especially from the state he says he hasn’t received any ETIP reimbursement for training costs this year.

That’s not a surprise. ETIP funds have shrunk to $8.9 million this fiscal year, from $12.5 million in fiscal 2010. For fiscal 2013, job-training funds available to the Illinois Department of Commerce and Economic Opportunity plummeted to $810,000. At Treleborg Sealing Solutions in Streamwood, managers have seen another, harder-to-measure cost of the skills gap: turnouts. Five years ago, Treleborg had three CNC machines; now it has three. In late 2011, it often spent up to six weeks trying to fill CNC positions. "It hurts the bottom line," says Kathy Keltis, human resources director. When positions went unfilled, other employees had to work six days a week, and fatigue set in. "When you work too many hours, you start to have quality issues and absenteeism," she says. In response, the company started an in-house CNC apprenticeship program in January, which is training 27 employees.

PACK SMARTER.

You spend hours figuring out how to save money on WHAT you ship. Want to save big on the materials you ship them with, too? For the Midwest's very best pricing, service & a FREE 230 pg catalog, call 866-584-6017

mb

Does your bank see you as a commodity?

Just because two companies make the same product doesn't mean they're the same. For over 100 years, our experienced professionals have taken the time to build relationships with Chicagoland companies of all kinds, and to provide them with smart financial solutions especially suited to them, not just someone like them.

Be treated better. Stop by a banking center, visit our website, or simply give us a call.

mb financial bank • mb means business®
1.888.I bank mb • mбанfinancial.com

Commercial Banking | Business Banking | Personal Banking | Wealth Management

At MB Financial Bank, we'll see you differently.

Member FDIC