Executive Insights

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The Smart Way to Prepare Your Workforce for Industry 4.0

Is automation the job killer that it's been made out to be in the past? Maybe not, according to L.E.K. Consulting's recent manufacturing survey. Automation is motivating the decision-makers we surveyed across seven manufacturing industries to actively invest in their workforce, and four out of five say they're preparing for an increase in automation technology.

What do we think is behind this shift? As the workforce undergoes generational changes precipitated by retiring baby boomers and a growing cohort of millennials in the workforce, factories are changing as well — evolving from the pre-automation plants of the past to the smart factories of the future.

This path to progress is exciting, to be sure, but it's paved with some challenges and uncertainties. Our survey uncovered a persistent theme: Manufacturers are worried about a skilled labor shortage. Workers running smart factories require digital fluency, technological savviness and data analytics know-how, to name a few such skills. These are capabilities that previous generations of manufacturing workers just didn't need and for which future generations may not be fully prepared.

What's the solution? We suggest taking a three-pronged approach, which we call "The Three Rs": retain, retrain and recruit.

First, look within. Retain and retrain current key workers, especially older ones with deep experience who will prove invaluable when transitioning the shop floor to an automated environment. Then look forward. Failing to plant seeds for the future recruitment of a digitally skilled manufacturing workforce will only undermine efforts to retain and retrain.

Where are the skilled workers?

Highly skilled roles enhance and maintain automated processes; machines simply can't run without the support and intervention of humans. At the same time, manufacturers continue to implement automated processes to increase productivity and maintain a competitive edge.

Upward of ten thousand baby boomers reach retirement age each day, and manufacturers, battling a negative image of their industry as low-tech and out-of-date, are up against stiff competition from the tech sector for younger workers.

Unfortunately, manufacturing companies are facing a confluence of factors that are making it harder to find these skilled employees. Upward of ten thousand baby boomers reach retirement age each day, according to AARP, and manufacturers, battling a negative image of their industry as low-tech and out-of-date, are up against stiff competition from the tech sector for

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younger workers. Furthermore, school curriculums lack focus on STEM subjects — leaving young adults underprepared for manufacturing jobs requiring proficiency in science, technology, engineering and math.

The Three Rs

As generational shifts affect the very core of how factories function and the demographics of the workers who run them, manufacturing executives can take action by retaining and retraining current employees and recruiting technologically adept, well-prepared employees for the future.

Retain

Downsizing isn't a priority for most of the manufacturers in our survey, even with the current uncertainties surrounding trade. And while recruiting new talent is key, it's crucial for manufacturing companies to take stock of their proprietary talent pool — particularly older, more experienced workers who are most familiar with the factory and have deep knowledge of the company and its culture. Once these employees walk out the door, so does their knowledge, gleaned through years of hands-on experience — experience they can share with a new generation of workers.

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So how do employers retain employees? As automation takes over lower-level tasks and the need for skilled labor increases, the industry is experiencing the need for higher average wages and improved benefits packages to help them meet the demand for skilled workers. Quality-of-life initiatives, such as flexible work schedules and generous paid leave time, keep employees engaged and happy on the job. Improvements to the workplace itself have proved successful for employers as well. Take BMW, for instance. The automaker has reconfigured production lines with its highly valued, older skilled workers in mind. Modifications include replacing floors, installing easier-to-read computer screens, outfitting workers with special shoes and allowing workers to sit instead of stand while working.

Retrain

Manufacturers should be both actively investing in their workforce through retraining efforts and upgrading employees' current skill sets so they can manage automated processes or take on "creative" jobs that are less likely to be replaced by automation. In addition, as automated tasks are phased in, simultaneously training existing workers with the incremental skills needed for higher-level jobs (e.g., data analysis, process improvement) can help mitigate the perceived threat of automation.

Manufacturing companies need to work with their local education and training institutions to establish sufficient focus on STEM subjects and other relevant curriculums that ensure young adults graduate with the skills necessary to get and retain quality, well-paying jobs.

Management and human resources should take an active role in this process, identifying high-potential employees with the education and training that would align with higher-skill positions, and identifying those individuals who are most likely to stay with the company over the long term.

Cross-training and apprenticeship models are ideal and can be refined to fit the current and future needs of the particular business. Some companies, for example, have used the exodus of baby boomers to their advantage, enlisting experienced employees nearing retirement to train younger workers. Employers have also found great success using pay incentive programs to encourage employees to learn new skills.

Recruit

Retaining and retraining alone can't solve the skilled labor challenge; with the fluid nature of technology, employing younger, tech-savvy workers is necessary for running a 21st-century manufacturing company. Staffing agencies, online job boards, external search firms, and partnerships with tech programs/schools and community colleges, among others, are popular recruitment methods. According to the ASQ 2018 Manufacturing Outlook Survey, 39% of companies have hired an agency to recruit candidates and 30% are working with local colleges.

Those avenues are examples of how to recruit successfully. But that doesn't solve the problem of not having a quality talent pool from which to recruit. From K-12 to college, schools aren't effectively preparing students for jobs, and many of the workers who do have jobs are falling behind. Lack of preparation occurs in areas ranging from basic employment skills such as problem-solving and teamwork to knowledge of STEM subjects.

Manufacturing companies (along with companies in other industries) need to work with their local education and training institutions to establish sufficient focus on STEM subjects and

other relevant curriculums that ensure young adults graduate with the skills necessary to get and retain quality, well-paying jobs. For instance, 3M invests in programs and initiatives to help increase interest and achievement in STEM, including the Discovery Education 3M Young Scientist Challenge. As part of this competition, scientists and innovators in grades 5 through 8 work directly with and are mentored by 3M scientists.

A job — not a pink-slip — creator

It's time to set aside the notion of automation as a job killer and focus on the challenge of having enough skilled workers to support the machines. Baby boomers will continue to leave the job market in droves — we can't change that. But the industry can change the younger generations' image of what may be seen as a lowbrow job to one of a high-tech profession. The industry can invest in multigenerational employee retention and retraining programs to strengthen and elevate in-house teams. Finally, manufacturing companies can deepen the prospective employee talent pool by working with educational institutions and training centers to ensure children, teens and young adults are prepared for jobs that require science, technology, education and math skills.

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