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Manufacturing's Labor Challenge: How Technology Can Train, Attract And Retain Workers



Prasad Akella Forbes Councils Member Forbes Technology Council COUNCIL POST | Membership (Fee-Based)

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 AI and video to empower manufacturing workers and optimize
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Despite the hype around manufacturing jobs that will be eliminated through automation, the majority of assembly tasks today—and for a long time to come—require the unique abilities of humans.

Still, manufacturers struggle to hire and retain workers, evidenced by job turnover rates that soared to nearly 40% in 2021 in the United States. It's not news to the leaders with whom I speak; they know something has to change.

This post offers perspectives on how manufacturers can harness technology innovation to change the revolving door model. We'll explore how new tech helps.

• Motivate people continuously, from before they come on board until they leave.

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• Train people continuously, reflecting the plant's evolution even as they uplift their own skills and value via cross-training.

• Create learning models that recognize that people learn in different ways, making skill acquisition accessible, sustainable and personal.

• Retain people through incentives and rewards that recognize their contributions.

Manufacturing's Labor Problem And Why Automation Cannot Fix It

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Working on a manufacturing production line used to be a path to a good middle-class life, but this is no longer the case. And the forecast for future generations seeking a career in manufacturing is not bright. A 2021 survey conducted by talent development platform Tallo found that only 3.5% of Generation-Z respondents expressed an interest in working in manufacturing.

Manufacturers are aware of the problem. They are also learning that while automation has benefits, it is not a panacea to the labor challenge. There are myriad tasks that simply can't be automated today because the technology doesn't yet exist. Human workers are still and will continue to be manufacturers' greatest assets. So while manufacturers know change is needed, they aren't sure where or how to begin.



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Investing in technology that aids workers in doing their jobs better is an effective way to stay competitive while simultaneously giving workers a path to a long, rewarding career. With technology that can accelerate every stage of the workforce building process—attracting, training and retaining workers—manufacturers reduce the obstacles presented by labor challenges.

Attracting Tomorrow's Labor Today



The Tallo survey found that 36.6% of Gen-Z respondents are interested in careers related to STEM. With innovative technologies such as robotics, AI and cloud computing as an integral part of the job description, manufacturers can set themselves apart from other industries and position themselves as compelling environments for the workforce of tomorrow.

From the workers' perspective, an employer investing in technology that augments their role rather than replaces them sends a positive message. These investments convey a future career path, opportunities to cultivate new skills and the potential for reward and recognition.

AI-Driven Training: Accessible, Collaborative And Continuous

Ideally, a training leader is dedicated to each employee, showing them the duties to perform, over time, following standardized work. In reality, due to demand pressures and low resources, training is done as fast and generically as possible.

When video-based systems for training are combined with artificial intelligence, manufacturers can use visual evidence of nonconformance to best practices to quickly identify areas that need improvement and opportunities to optimize processes. Built on standardized work instructions, these systems can identify when a task is performed out of sequence, missed or took an unusual amount of time to complete. Workers and management can then review footage and discover opportunities to learn and improve processes together.

Training must extend well beyond onboarding, especially since crosstrained employees are exponentially valuable to the manufacturer. Ongoing training for employees, alongside recognition of proper work, can drive satisfaction, feelings of accomplishment and, ultimately, pay increases and job security.

A Little Goes A Long Way: Retaining Employees

Motivating assembly workers can be challenging. Long shifts of repetitive, albeit important, detail-oriented work can be demoralizing, particularly when there is no mechanism to recognize consistent good work. Meanwhile, leadership positions are limited, and ultimately, placement is driven by the demand of the business as opposed to the desire of the employee.

But it is not impossible to provide incentives. Workers want to do a good job. They want to be valuable and seen as such by their team. When workers feel their concerns or suggestions for process improvements will be taken seriously, even if clear evidence is lacking, they are empowered to be a force for innovation and value creation that no automation could create.

Data can be an ally for workers in this respect, offering the "proof" needed to validate their recommendations. At my company, Drishti, a supervisor discovered that one worker was consistently beating his colleagues in cycle times without compromising quality after reviewing AI-created data.

Since the worker's job as a line associate required him to insert a rubber hose into a metal hole, he brought a little cup of soapy water to work every day, and before he completed the insertion, he dipped the

hose in the water, shaving a few seconds off every single cycle.

Because of this, the soapy water cup was placed on every station with that task and was written into the standardized work instructions.

Finding brilliant outliers like this individual is not easy, nor is detecting a few seconds in cycle time savings. In this case—and likely many more—paying attention to the data found the cycle time savings, which led to the discovery of the employee's "fix," making it possible to improve the process and give the employee recognition for a job well done.

Manufacturers who recognize the value that only humans can deliver and harness the power of innovations to radically change how they hire, train, retain and support their workers are much more likely to achieve the kind of efficiency and quality performance needed to set them apart in the race to build and sustain a workforce.

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