



**A STRONGER
STANDARD**

TECHNOLOGY TO BRIDGE THE SKILLS GAP

It has been over ten years since manufacturers started talking about a skills gap. Yet positions remain empty because companies are unable to attract workers.

Instead of waiting for the skills gap to be fixed by our education system or by stealing workers from each other to fill open positions, you can be part of the solution by changing your mindset. If you don't, you're at risk of missing the next evolution in manufacturing, and it will be difficult to play catch-up.

Applicants today either assume manufacturing is still an old-school job or that it has transformed into smart factories with jobs made easy from automation. Whichever industry, career path or job they choose, there is a general expectation that technology will augment their tasks and digital information will be available.

No matter where your company is at in your technology journey, manufacturing as a whole has to step up its game. With the endless job options the available workforce has today, when an applicant walks in the door, we owe it to our industry to be ready.

“ THERE IS AN EXPECTATION **THAT**
ALL JOBS WILL USE TECHNOLOGY.

The good news is that today's manufacturing can actually deliver what these new workers are looking for. Technology allows manufacturers to reduce tedious manual tasks through automation. Technology can retain legacy knowledge and present it in an interactive way for the next generation to learn skills for the job.



A technology change affects your workforce differently.

The goal is to capture the experience and knowledge that exists in the people you have today before it is gone. To successfully do this, we need to understand the impact technology has on two distinct groups:

CURRENT SKILLED EMPLOYEE THAT TEACHES AND WORKS WITH A NEW EMPLOYEE

- Expects the new employee will go through all of the trials they did to learn their skills over time.
- If the new employee doesn't it causes distrust and a lack of earned respect that is hard to overcome.
- Protects what they know instead of teaching what they know.

INCOMING NEW EMPLOYEE THAT NEEDS TO LEARN THE SKILLS

- Expects to have access to technology and automated equipment to help them learn new tasks and skills.
 - Does not have patience for being held back by continually asking for legacy knowledge.
 - Will not stay in a manual task they feel should be automated.
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Technology and process create new ways to systematize legacy knowledge.

The legacy knowledge and experience of your people was learned over many years. That process is in direct conflict with the expectations of incoming employees. Coupled with the average length of employment at a job in manufacturing going from 8 years for Baby Boomers to less than 2 years for Gen Z, companies need to change their training programs before the knowledge of your experienced people is gone.

Access to the Internet has changed how we learn. Most people are learning independently from others experience. How often have you watched a YouTube video to learn how to do something?

By creating opportunities for existing employees to save their knowledge it actually frees them from their current tasks instead of forever training the next new employee all over again. This simultaneously creates engaging ways to allow new hires to learn more independently.

Using technology to bridge the skills gap has impact.

When we're able to capture legacy knowledge, training new employees impacts your production and resources differently than it did before.

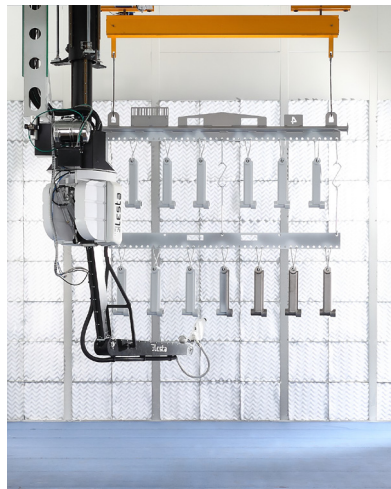
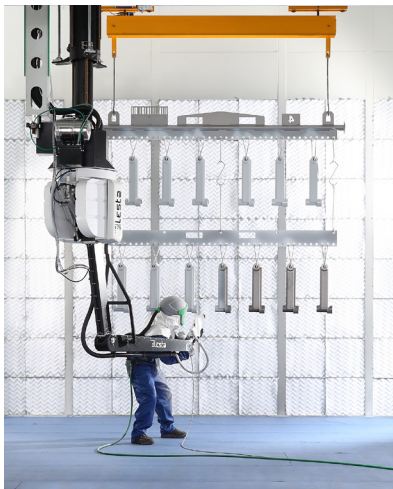
- 1** You don't have to take your skilled people out of production to retrain new hires over and over again.
- 2** New employees will feel empowered to be able to have the information to reference and use without bothering another employee.
- 3** Brings instant information and confirmation to employees that they did a job correctly. This instant gratification can be very engaging.
- 4** You're going to get an entry level person or new hire up to speed quicker because that is how they are used to learning.

Technology doesn't replace employees. It strengthens them.

Many industries have successfully integrated technology into their workflows. For example, some fast food restaurants and coffee shops have dashboards that practically gamify the customer seating and order fulfillment process. If they can do it, so can manufacturing.

At DeGeest Corporation, technology allows people to see the work they're accomplishing with touchscreens at every station to view job queues and bring about transparency. Instead of being told what to do, these screens provide real-time information and put decision-making in workers' hands to give them a feeling of empowerment.

Machine metrics allow people to see how long each machine is running, which helps to set and attain production goals. It's no longer about just punching in and punching out. Instead, information is presented in a way that results in people feeling good about what they're accomplishing. It's the difference between being engaged and being present.



Mirroring Human Movement

Your best painter "teaches" the robot how to paint a part in real time.

The robot records every gun angle, pre-set spray patterns, path speed, and technique.

Automate repetitive tasks to elevate skills.

Instead of the wear and tear on the body that comes from manual finishing, automation gives workers a chance to work with robots. Technology has become a desire, if not an expectation.

In the past, there was the belief that finishing automation only made sense for manufacturers such as automakers because a painting robot only needs to be programmed to paint a limited variety of parts.

Self-learning finishing robots, on the other hand, are for high mix production. A person "teaches" the robot how to paint a part in real time. The robot records every gun angle, pre-set spray patterns, path speed, and technique.

These movements and application equipment controls ultimately encompass the finisher's knowledge, which can then be replicated as a saved program on all future parts. This allows finishers to train the robot to be an extension of themselves, including all of their legacy knowledge of the part.

This process empowers teams to use their application knowledge to not just get through a day to day job, but create a career in which they can improve the quality and production of the entire system.

Say goodbye to repetitive tasks. Say hello to engaging challenges.

It's hard to have an engaged workforce if all they're doing is asking someone how to do everything or doing repetitive tasks. That's where technology comes into play.

When finishing parts, there are many complex processes. These unique processes are typically learned over time, and rely on part repetition and memory. Now the legacy knowledge of your parts can be saved in digital work instructions that automatically display for all workers to reference for each specific task.

Imagine what it would be like to have the process know-how of all of your parts saved and displayed for every step of hanging, masking, plugging, painting, assembly, and packaging. Instead of relying on legacy knowledge of each unique part and process, the information allows skilled employees to move to higher value areas of the department and can rely on entry level employees to follow the instructions that include the part specific knowledge needed for the task.

**“ WE NEED TO ALLOW
NEW HIRES TO LEARN
MORE INDEPENDANTLY.**

Derek DeGeest, President of DeGeest

Don't fear technology. Embrace it.

Manufacturers need to implement new technology to recruit and retain new talent. Those who sit on the sidelines will fall behind.

Embracing technology gives your employees the tools they need to get their work done efficiently. Embracing technology also helps new talent get up to speed quicker by growing their confidence. In doing so, these new team members will become better accepted by existing team members to create that all-important level of chemistry needed for a manufacturer to thrive.

So, the next time you hear about a skills gap, it may really be a technology gap that needs to be bridged. The more you embrace it, the quicker your path to success through rising production and employee retention and engagement. ■

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