

Guild



5 Quick-Hit Talent Trends and Insights in Manufacturing

How innovators are addressing skills gaps, frontline attrition, and Gen Z with new learning solutions

How can manufacturers meet the talent shortage and Industry 4.0?

The manufacturing industry is at a moment of transformation. Companies are adapting to Industry 4.0, investing in large-scale innovation with evolving technologies such as AI, digital simulation, robotics, 5G, and cloud computing. They need the right people with the right skills to drive their organizations forward.

Yet, there are [1.9 million jobs expected to go unfilled in manufacturing by 2033](#). The workforce is aging and retiring just as quickly as technology is advancing and reshaping product development.

These compounding talent challenges represent a moment of opportunity.

Leading employers in manufacturing are finding that scalable education combined with targeted skilling pathways is a potent strategy. These programs don't just attract, engage, and retain talent — they empower employees to build the skills needed now and in the future.

But how is this new approach uniquely suited to meet this moment in manufacturing? We lay out five talent insights and trends to help manufacturers consider the nuance and shape of the problem — and prioritize the solutions that can help them build an engaged and future-ready workforce.

Fast facts

75%

of manufacturing executives say attracting, retaining, and engaging a quality workforce is their [primary business challenge](#)

72%

of [surveyed](#) manufacturers report they are in the process of implementing Industry 4.0/Smart Factory initiatives

45%

Of manufacturers [turned down business](#) because they didn't have enough workers

40%

of manufacturing [skill needs will evolve](#) over the next five years, with a focus on digital skills and their impacts to leadership & durable skills

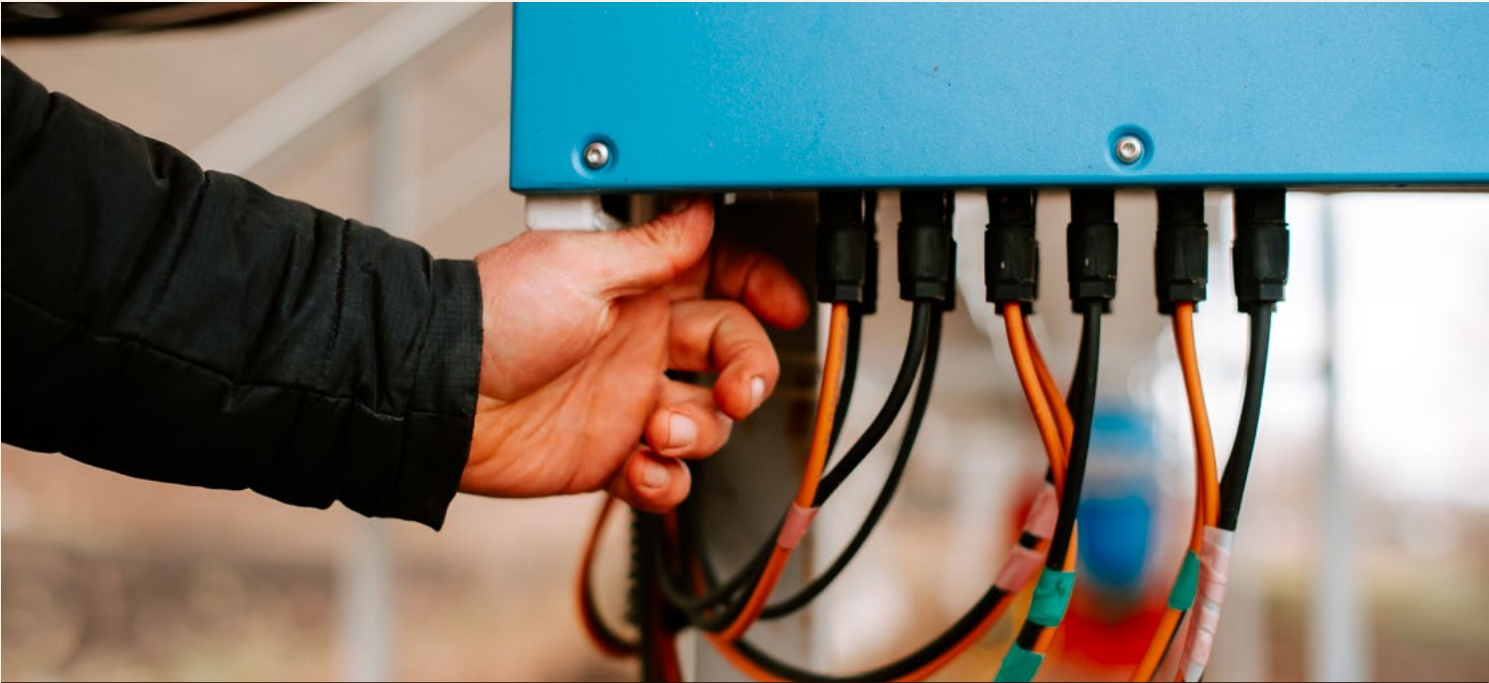
5 trends and insights on the skill and talent shortage

The shortage of talent and relevant skills in manufacturing isn't a new problem to employers, but the growth in U.S. manufacturing and rapid technological change is making the problem more urgent.

1. Gen Z isn't pursuing manufacturing as a career.

Younger generations don't see growth opportunities in the industry, and they don't recognize manufacturing as the innovative and tech-driven industry that it is.

And they're not the only ones. Despite the advent of Industry 4.0 and the myriad ways technology is changing the industry, surveys show that public perception of manufacturing careers is less than favorable. Career potential isn't part of the public image (even if it's part of your reality).



< 15%

of young adults ages 18-20 express interest in [pursuing a career in industrial work](#) due to concerns about issues such as promotion, flexibility, and safety

58%

of manufacturing survey respondents [think manufacturing offers limited career prospects](#)

71%

of manufacturing respondents said they would consider a future career if they see [clearer pathways for progression](#)

2. Frontline attrition is still a big and expensive problem.

Manufacturing jobs can be hard and physically demanding — it's no wonder employee retention has long been a pain point. The industry also has large frontline populations that tend to change jobs more often, as individuals are motivated to head out quickly to pursue higher wages or more attractive benefits.

High attrition causes big problems for production, safety, and morale — not to mention the high costs of lost productivity, recruitment, training, and beyond.



< 50%

of U.S. [manufacturing employees](#) plan to leave their current job.

\$52,000

lost annually from [frontline manufacturing employee departures](#)

\$20-40 B

lost due to [disengagement amongst](#) Gen Z workers costs US manufacturers

3. Experienced managers are aging out of the workforce.

And at a time they're most needed to train a younger generation and lead them through Industry 4.0 and the new technological implementations that come with it.

97%

of [surveyed manufacturing firms](#) say that they are very concerned about the “brain drain” from increased retirements

1/3

of manufacturing employees were over the age of 55 in 2022

4. Frontline managers in particular will be in high demand (and short supply).

The leadership brain drain is even more pronounced in the frontline workforce, which is set to grow larger in the coming years to support increased production.

62%

of manufacturers [expect to grow their frontlines](#) over the next year, and they will need more frontline managers to oversee a new generation of inexperienced employees

5. It's not just a labor shortage, it's a skills gap that's continuing to grow and evolve.

The technologies and tools fueling Industry 4.0 and Smart Factories are changing at a rapid clip: over the next five years, [40% of manufacturing skill needs will evolve.](#)

75%

increase in software and simulation skills, largely in technology-enabled [production roles](#)

40%

increase in specialized skills across technicians, engineers, and software developers [by 2032](#)

50%

increase in coding, data analytics, and statistics skills [by 2032](#)

Knowing the problem can point to the solutions: broad access to skilling, specific pathways, and career opportunity

If this is the size and shape of the talent and skill shortage — if Gen Z isn't interested in manufacturing, frontline workers aren't engaged, the brain drain of retiring managers is accelerating, and skill needs are changing fast — what's the solution?

Many employers have a number of strategies well underway, ranging from:

- Holistic benefits to enhance their employee value propositions
- Partnerships with local schools and community colleges
- Pre-leadership training, particularly for frontline populations
- Feedback and input initiatives to engage the frontline

It's a good start, but it's not going to be enough to meet the compounding challenges of an aging workforce and the Fourth Industrial Revolution.

A new vision to attract, retain, and develop talent

Fortunately, this is starting to change. Leading manufacturers are rethinking education and skilling by shifting their tuition reimbursement budgets and focusing their L&D efforts to take a multi-pronged approach that includes:

- Broad access to education and career opportunity
- A versatile array of learning offerings
- Targeted skilling to build talent for specific roles

Because they're anchored on career opportunity and access, these programs can be more powerful and scalable than traditional approaches. By providing career growth to younger talent and engaging the frontline with learning that works best for them, manufacturers can better attract and retain both groups while building the skills to meet this moment of massive technological transformation.

> 50%

of manufacturing employees are eager to reskill and upskill, with **over half** ready to acquire new skills to stay ahead in their careers.



Case Study

A leading manufacturer fuels career growth for the frontline

One company partnered with Guild to help frontline team members advance their careers by offering programs focused on leadership and durable skills such as managerial skills, digital fluency, and time management.

The outcomes were impressive: the program attracted new talent, and participants were more likely to stay at the company and advance.

82%

of those engaged with the program have done so in the first 30 days, indicating that the Guild program was a strong applicant driver.

86%

higher retention rate for participating frontline team members than non-engaged peers within one year

3x

More likely for labor worker learners to have been promoted after an enrollment compared to non-engaged team members

The hallmarks of a scalable learning solution that can meet the urgent demands of today and tomorrow

What do these new skilling and education programs look like, and what makes them unique? Here's what to look for to make sure they're built to meet the urgent talent demands of today and the evolving skill needs of tomorrow.

1. They build and demonstrate real career opportunity.

That happens with career pathways, which are curated for your organization and enabled by technology that illuminates the steps employees need to take to get to the desired end. Importantly, this is backed up with personalized coaching that can help employees stay on track and succeed through programs.

Put simply, make the career journey clear and concrete — and provide plenty of support along the way. Learning programs should be high-quality and proven to build real skills and expertise, not just provide content.

Solutions that demonstrate and prove the ability to create real career opportunity can help attract Gen Z, who are eager to find a job where they can grow. If you can start to show how a job in manufacturing has real potential for growth, you can start to shift public perception. (Just make sure to have the stories and data to back it up.)

Guild learners are 3.5x more likely to change jobs within their companies compared to their non-engaged peers*

*Guild's internal data over the last 12 months as of 07/01/2024 from employers who have provided the required data for at least 13 months post launch

2. They nurture foundational knowledge at scale.
Many of your frontline workers don't have a college degree — sometimes they haven't completed high school. Leading organizations are thinking bigger than specific technical skills and going back to basics by offering programs like high school completion, language learning, and college prep.

These kinds of programs are easily scaled, and focus on engaging, retaining, and growing the frontline workforce in particular. Workers who might not have had access to education can find the next step that works best for them.

3. They enable targeted pathways that can build specific skills for specific jobs. Manufacturers have a constant need for engineering skills, manufacturing knowledge, and technical skills. Your education program should include targeted, skill-specific programs to close acute skills gaps for specific employees.

With skills tailored to the groups that matter most for your business strategy, you can help:

Production Workers <i>Build a foundation and advance into operational, managerial, and technical roles</i>	Technicians <i>Develop applicable expertise and build digital and data skills</i>
Engineers <i>Drive technological developments and lead effectively</i>	Managers <i>Lead through organizational transformation and drive effectiveness</i>

4. They rapidly respond to evolving skills needed in the future.
Innovative learning solutions can help equip your workforce with the skills employees need to advance in the industry — as well as the skills your organization needs to grow in Industry 4.0, such as AI, smart manufacturing, machine learning, systems engineering, industrial processes, and more.

These can pair with durable skills, or foundational professional skills that improve performance and ensure employees can meaningfully engage with their work, peers, and managers, such as communication, decision-making, collaboration, and more.

And while durable skills are just that, durable, your skilling program should be poised to adapt quickly to changing technologies, systems, and labor market trends. The future will change, your organization's needs and priorities will change with it, so your programs should as well.

The two elements your skilling program should anchor on to remain agile are **data to drive decisions** and align learning investments with people and business goals, and **high-quality learning partners** proven to help employees build real skills and expertise. These should include different learning formats and styles to accommodate each employee along different timelines.

Build your future-ready workforce

The talent shortage and skill gaps that are transforming manufacturing demand a new approach to workforce development. To engage Gen Z and the frontline, and to build a range of technical and leadership skills, programs need to be versatile across a wide array of talent needs, designed for all employees, and anchored in a data-driven approach.

Innovative programs can engage a broader swath of your population, enhancing your employer value proposition and providing every worker the right next step to take in their career. As you engage and retain more top talent, you have more motivated employees eager to upskill and reskill. This builds the short-term talent you need today while better setting yourself up in the future.



Want to learn more about how your organization can take a new approach to skilling and education?

Visit guild.com/guild-for-manufacturing or start a conversation with one of our experts.

