



Competing for talent: Recasting perceptions of manufacturing

Manufacturers continue to bridge the perception gap and enhance the workforce experience

The Manufacturing Institute and Deloitte have embarked on their seventh study on Americans' perspectives of US manufacturing to understand the impact of outdated perceptions on manufacturing growth, how new job expectations and work culture are shaping the future workplace, the rising imperative to expand diversity and inclusion efforts in manufacturing and what measures manufacturers could take to solve the perception challenge while preparing their future workforce for success. To learn more, visit [Deloitte.com](https://www.deloitte.com).

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A call to action

THERE IS GOOD news to report in the Deloitte and The Manufacturing Institute 2022 Manufacturing Perception Study (hereafter referred to as “the study”). Compared with our 2017 study,¹ significantly more respondents believe that manufacturing jobs are innovative and more respondents are likely to encourage their child to pursue a career in the industry (figure 1).

Further, the pandemic has led to a new awareness of the critical nature of manufacturing in the United States and beyond. Many manufacturing teams were designated essential workers, partly due to the role they played in producing ventilators and PPE and keeping supply chains open (figure 2).



KEY TAKEAWAYS

Manufacturers are at a crossroads and have an opportunity in the wake of the pandemic to educate people unfamiliar with the benefits of a manufacturing career, while continuing to retain their postpandemic workforce.

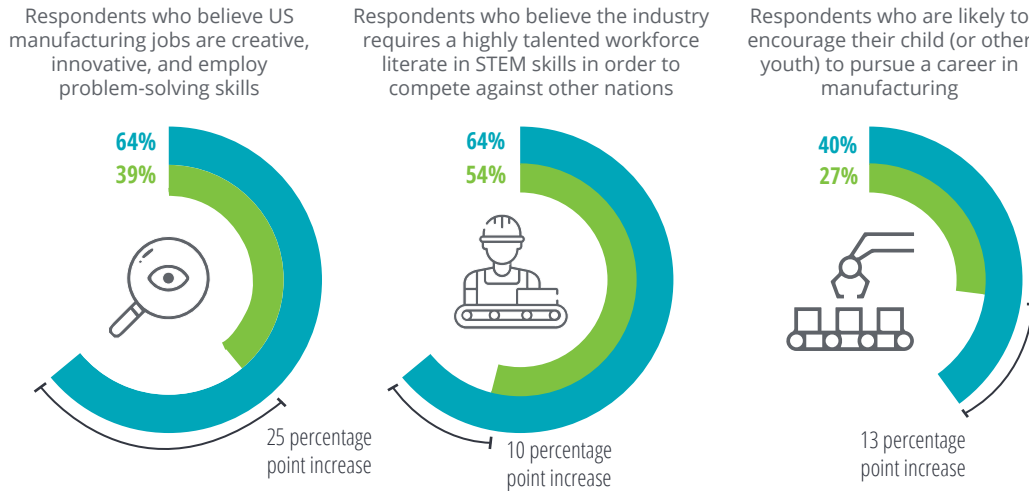
Key takeaways for manufacturers should include:

- **Addressing the perception problem:** Manufacturers are at an inflection point and can use the increased public awareness of the industry to emphasize manufacturing’s career opportunities and benefits, particularly to the public unfamiliar with the industry.
- **Promoting awareness:** The industry can amplify the increasingly high-tech nature of manufacturing as well as transferable skills and training.
- **Leveraging local presence:** Perception change starts at home, and local outreach continues to be effective in educating and attracting community members to manufacturing companies.
- **Attracting and retaining employees:** Companies can step up their initiatives to engage new employees, involve existing employees to retain them, and evolve the work and workplace in response to customer needs.

FIGURE 1

Perceptions about manufacturing jobs have improved among surveyed workforce since 2017 and parents are more likely to encourage the next generation to pursue a manufacturing career

■ 2021 ■ 2017



Source: Deloitte analysis of 2017 and 2022 US perception of manufacturing study data.

FIGURE 2

The COVID-19 pandemic response generated positive perceptions of manufacturing among the surveyed workforce

Manufacturing was **critical to the COVID-19 pandemic response** by producing PPE, ventilators, and other essential equipment and goods



Being “essential,” US manufacturers **helped sustain many jobs** during the pandemic



Perceptions of the **importance of US manufacturing have improved** as a result of the COVID-19 pandemic



US manufacturers took **appropriate action to prioritize workforce** safety during the COVID-19 pandemic



Source: Deloitte analysis of 2022 US perception of manufacturing study data.

Yet, amid the economywide workforce shortage, manufacturing companies continue to struggle to fill open positions. The study reveals a continued perception gap: Even as domestic manufacturing is viewed as increasingly important to the economy, public perceptions of manufacturing are not in line with the current reality. For instance, many Americans are not aware of the increasingly high-tech nature of manufacturing, which is improving employee productivity and providing cutting-edge, transferable skills.

This perception gap is likely contributing to the current shortage of applicants. According to the Q4

2021 Manufacturers' Outlook Survey, nearly 83% of manufacturers mentioned attracting and retaining a quality workforce as their top challenge.²

Similarly, almost 45% of manufacturers said that they had to turn down business opportunities because they did not have enough workers.³

In short, manufacturers find themselves waging a war for talent both globally and, more importantly, at the hyper-local level. This report highlights the perception gaps and suggests ways to possibly change these to align with the current realities of modern facilities, advanced technologies, and career mobility.

ABOUT THE 2022 MANUFACTURING PERCEPTION STUDY

Deloitte and The Manufacturing Institute have collaborated on a multiyear research initiative to better understand US perspectives on the manufacturing industry relative to other industries. On behalf of Deloitte and The Manufacturing Institute, an independent research company conducted two online surveys of US workforce and manufacturing executives in October and November 2021, respectively. The US workforce survey polled a nationally representative sample of more than 1,000 Americans spread across 50 states. This sample is further divided into two cohorts based on their familiarity with the manufacturing industry. The "familiar" cohort includes people who work or worked in manufacturing or have friends or family members working in manufacturing. The "unfamiliar" cohort either knows about the industry only from media sources or has no knowledge at all. The manufacturing executives survey polled 100+ director-level and above executives to compare their perspectives with the workforce findings. The study also included executive interviews with more than 15 leaders from manufacturing companies.

The age-old perception challenge

WHILE MANUFACTURING'S IMAGE has seen an improvement in recent years, there is still work to be done. Our analysis of the surveys points to three areas that appear to be contributing to the misperceptions:

- **Limited public awareness of the manufacturing career opportunity.** The study found that perceptions of respondents did not reflect the current level of technological advancement, benefits, and salary levels offered by manufacturers.
- **Rising competition for talent.** Many manufacturing companies are increasingly competing with other sectors for skilled labor. There is a perception among those surveyed that jobs in high-growth sectors, such as retail or services, offer better salaries and benefits, which indicates heightened competition in global markets as well as local communities.
- **Changing workforce expectations.** Expectations of work and the workplace have evolved over the past five years, with respondents reporting an increasing focus on well-being; purpose; diversity, equity, and inclusion (DEI); flexible schedules; and proximity of the workplace to one's home.

Limited public awareness of the manufacturing career opportunity

The study shows that those familiar with manufacturing have a more positive image of

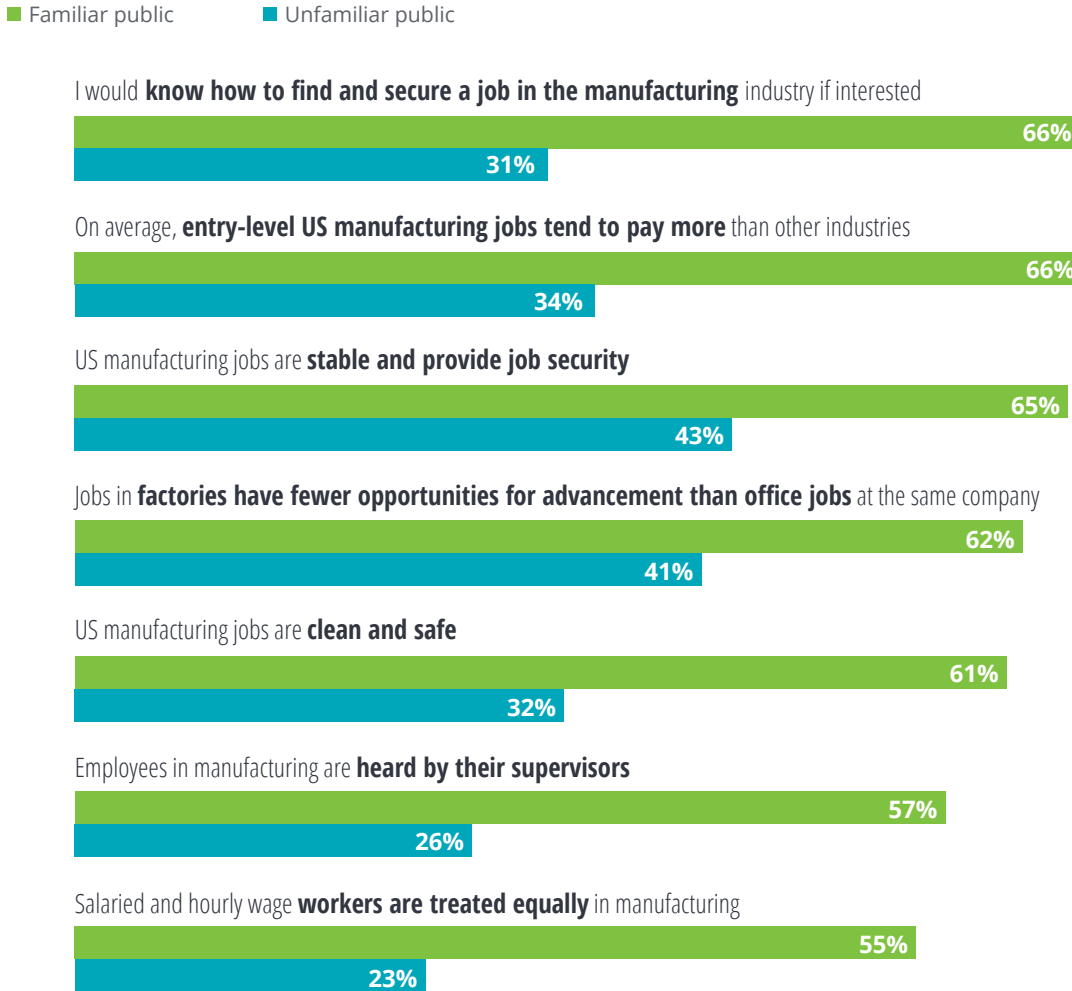


manufacturing work and workplace culture (figure 3). Another misperception exists among recent college graduates, who may not realize that a manufacturing career would offer them the opportunity to use their skills and build a career path.⁴

FIGURE 3

Familiarity with manufacturing matters for job consideration and impacts the industry’s perception

Perception of manufacturing jobs and workplace consideration based on familiarity level



Source: Deloitte analysis of 2022 US perception of manufacturing study data.

Limited public awareness can also undermine appreciation of the technological advances in the manufacturing industry. Manufacturing has historically been an engine for innovation: Manufacturers perform the majority (58%) of private sector research and development.⁵ Similarly, advanced manufacturing generates more than 85% of all US patents and employs most of the nation’s engineers.⁶

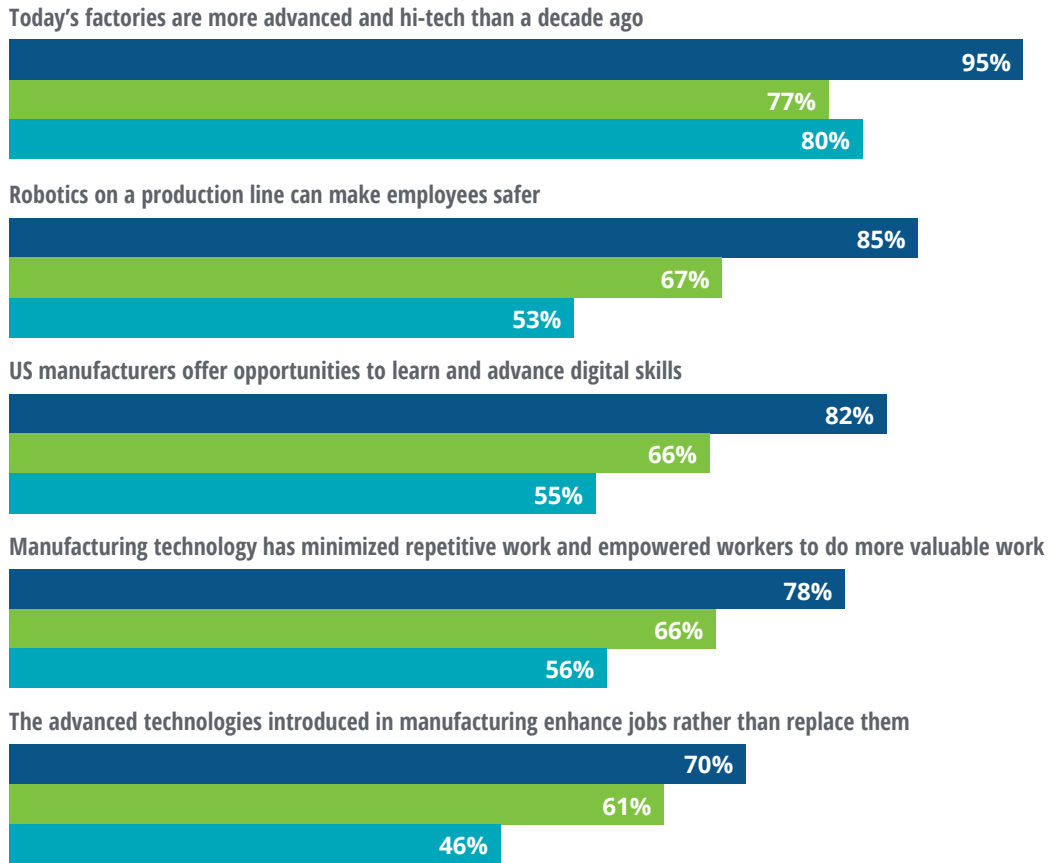
The study results also demonstrate that those unfamiliar with manufacturing have minimal awareness of how modern technology, such as robotics and artificial intelligence, can make jobs safer and allow employees to do more productive work (figure 4).

FIGURE 4

While there’s overall agreement that manufacturing is technologically advanced, manufacturers should reiterate that technology will enhance, rather than replace, jobs

Impact of technology on manufacturing jobs

■ Manufacturing executives ■ Familiar public ■ Unfamiliar public



Source: Deloitte analysis of 2022 US perception of manufacturing study data.

Rising competition for talent

Competition for talent is more intense in the current tight labor market, with firms strongly highlighting career opportunities and growth paths. But manufacturers face a double challenge. They are competing globally with well-known retail, service sector, and technology brands for skilled labor, particularly as these sectors have grown

rapidly in the wake of the pandemic due to changing consumer behavior. According to one executive interviewed, global companies compete directly when they are in nearby locations, increasing competition for local candidates. Simultaneously, many manufacturers continue to face competition for talent from local businesses, such as hotels and other service industry companies.

To combat this double threat, manufacturers may need to offer better wages and benefits and more flexible opportunities, among other options. Encouragingly, when comparing data on benefits and hourly wages, manufacturing compares better

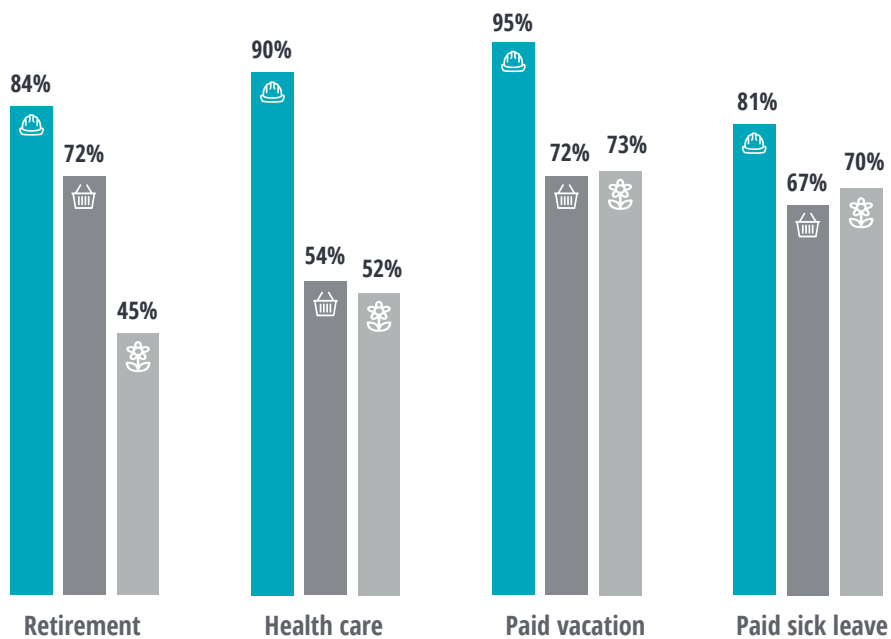
than retail and services in several aspects⁷ (figure 5). Further, data on the working population across industries shows that the tenure of manufacturing employees is among the highest when compared to other private sector industries.⁸

FIGURE 5

Manufacturing industry compared to retail and services

■ Manufacturing ■ Retail trade ■ Services

Percentage of private industry workers with access to benefits, 2021



Average hourly earnings (US\$), 2021



Source: Deloitte analysis of the Bureau of Labor Statistics data.

EXPANDING COMMUNITY OUTREACH AND ENGAGEMENT

To compete, outreach and engagement are typically necessary for manufacturers to build stronger familiarity with their brand name and to attract talent. One manager interviewed suggested local messaging has the greatest impact, and believed it's essential to tailor to the local markets. The study analysis indicates that workforce expectations are aligned with manufacturers' views on the best strategies to attract talent. These include offering internships or apprenticeships, certification or degree programs, and tours of manufacturing facilities for students (figure 6). One executive participating in our interview mentioned the importance of community open houses at its facility, such as those organized as a part of yearly National Manufacturing Day activities throughout the country. These can help next generation to better understand the work place and the job opportunities.

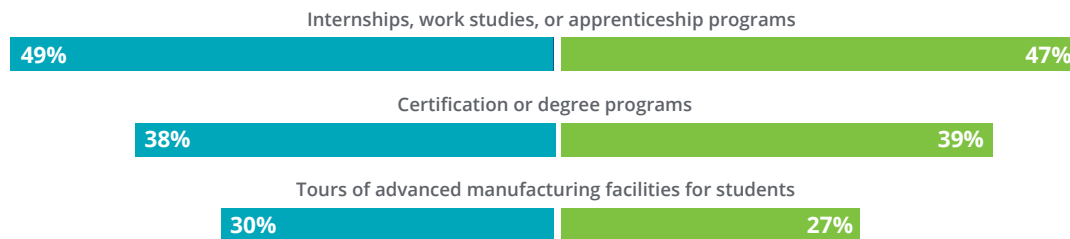
Other manufacturers have found that spending time in the community and working or donating at community events can improve visibility and brand familiarity, while giving back to the community. One executive attributed the increased number of job applicants to their company's community work during the pandemic. In addition to giving back to the community, these events and partnerships can be a good way to show and explain some of the products manufactured at the facility.

FIGURE 6

Manufacturers and general workforce view of internships, work programs, and apprenticeships are aligned, according to survey respondents

Most effective at increasing interest in manufacturing jobs

- Manufacturing executives (Manufacturing executive directors and above)
- US workforce surveyed (US public across industries)



Source: Deloitte analysis of 2022 US perception of manufacturing study data.

Changing workforce expectations

According to Deloitte’s State of the Consumer Tracker, the American public is more focused on well-being, versus 12 months ago.⁹ Nearly 50% of respondents in the Consumer Tracker showed a significant shift toward a greater emphasis on well-being. And 41% of respondents reported striving to

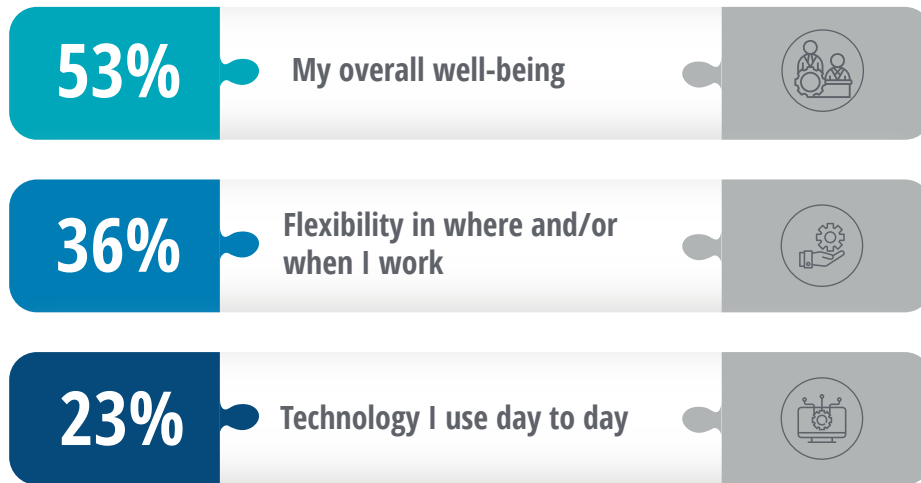
center more of their activity around their home than was true 12 months ago.

Our workforce survey analysis shows a similar trend (figure 7). To address this growing focus on well-being and preference for working from home, surveyed manufacturers are planning to offer extended time off, new working schedules, and enhanced parental leave to support their workforce.

FIGURE 7

Well-being, flexibility, and technology used increased in importance in the last year

Top three important factors among surveyed workforce to improve the work experience in the last year



Source: Deloitte analysis of 2022 US perception of manufacturing study data.

Elevating the workforce experience

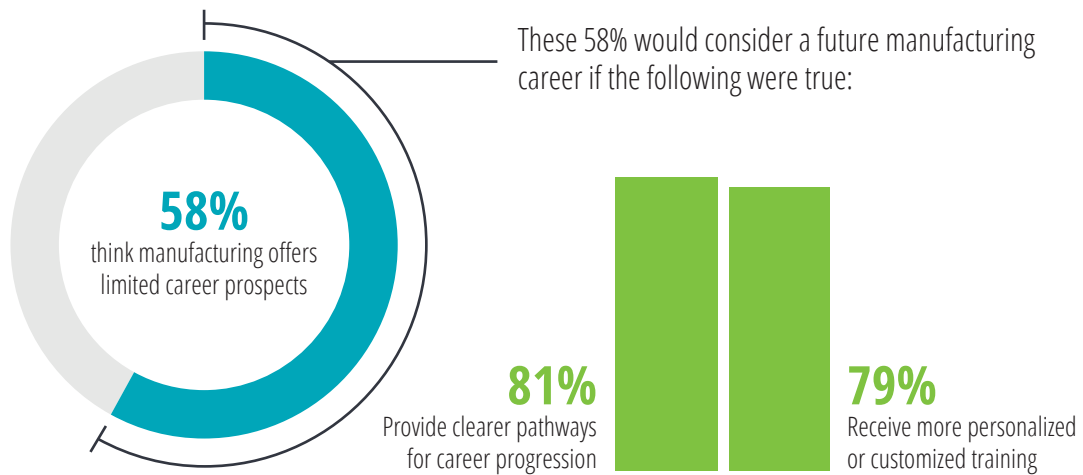
TO DRIVE THE desired business outcomes, manufacturers should focus on elevating the workforce experience as well as recasting perceptions of the industry. Opportunities for improvement range from promoting career growth, learning, and well-being to building the next generation of talent.

Promoting career growth and learning

Fifty-eight percent of those surveyed who were familiar with manufacturing responded that manufacturing jobs have limited career prospects. However, when asked if they would opt for a manufacturing job with customized training and a clearer pathway for career progression, eight out of 10 respondents answered yes (figure 8).

FIGURE 8

Respondents believe clarity on career progression and training programs heighten interest in manufacturing careers



Source: Deloitte analysis of 2022 US perception of manufacturing study data.

Manufacturers should further invest in upskilling programs and designing career development pathways. For example, they could help form a learning ecosystem by partnering with technical schools, universities, and local communities for specialized and niche skills. In fact, some manufacturing organizations are helping fund such upskilling programs and opportunities. One example is Federation for Advanced Manufacturing Education (FAME), a two-year educational program that offers professional development and technical training through a co-educational model where participants learn in school and on the job.¹⁰

Breaking the commuting barrier

Location is a fundamental consideration for workers when selecting a job opportunity. Surveyed manufacturing executives point out that hiring talent, especially younger employees, in rural areas can be particularly difficult. Accordingly, the majority of respondents in the study mentioned that manufacturing jobs are far from where they live. Indeed, Department of Commerce data suggest that counties with a high concentration of manufacturing are more likely to be in rural or micropolitan areas.¹¹ The survey findings indicate that in some cases, even with higher pay, manufacturers are finding it difficult to fill a position that requires a daily commute or relocation.

Some companies have tried to better match people with their preferred location, recognizing

it's easier to hire and retain employees when they don't have to relocate. Understanding that it would be impossible to completely avoid a daily commute, many manufacturers are looking at new shift work approaches such as three days with 12-hour shifts or four days with 10-hour shifts.¹² In addition, companies are offering employees opportunities to work from the nearest location to their home and to take advantage of fluid shift timings.¹³

Well-being/flexibility

Recognizing the importance flexibility plays in attracting and retaining talent, the majority of manufacturers in the study have implemented at least one program designed to elevate the workforce experience. And nearly half—47% of respondents—indicated they have taken actions to increase flexible work options for their employees, in part responding to growing care needs (figure 9). One factor pulling primary caretakers away from manufacturing throughout the pandemic has been child care.¹⁴ Flexibility became a significant issue as schools and child-care centers were closed, and parents had to juggle their jobs and child care. Such flexibility is challenging in essential industries where jobs must be performed onsite. Notably, among the many adjustments manufacturers have introduced, 8% of surveyed executives agreed that their organization included new or extended child-care options. The focus on flexibility is likely to continue moving forward, as employees have come to expect it.

FIGURE 9

Manufacturers have introduced increased options to elevate the work experience and encourage flexibility



Source: Deloitte analysis of 2022 US perception of manufacturing study data.

Manufacturers are also working to address well-being by transforming the physical working environment. Increased investments in this area include the actual physical space and the tools, equipment, and safety measures that are part of the work environment.

Mission/purpose

The study drew attention to the relevance of purpose-driven work and the value most employees place on connecting their work with their company's vision. According to one surveyed executive, the messaging on their company's mission and purpose seems more vital to today's recruits than ever before. Younger workers generally want to know that they are contributing positively to something bigger than themselves and that they are making a difference.

Analysis of our study results bear this out: Close to half of those surveyed who agreed that work is an integral part of the experience responded that alignment and adaptability of work to the company mission, values, and purpose are important to them. Further, several executives interviewed perceive that millennial and Generation Z workers are increasingly focused on climate issues and the environmental implications of manufacturing and appreciate company awareness of these issues.

Deloitte's analysis of employee testimonials confirms that having a purpose and making an impact are two influential factors contributing to job satisfaction and a sense of fulfillment. According to several executives surveyed, the pandemic has only strengthened this notion—people are proud to make products used by frontline workers.

DEI and belonging

As highlighted in our previous DEI research on the industry, manufacturing companies are increasingly focused on bolstering representation of women and other racially and ethnically diverse people in the workforce.¹⁵ They recognize that more diversity and balanced gender representation are likely to expand the available talent pool. Indeed, 84% of the surveyed manufacturing executives felt that their company is effective in fostering an equitable and inclusive environment for a new hire, but also acknowledge that more work needs to be done.

A successful DEI strategy entails that all workers across populations and identities are empowered to be their authentic self within the organization and feel safe, encouraged, and accepted within the work environment. Our study highlights employees' growing focus on DEI at the workplace—the ability to be their authentic self was selected as one of the most important factors by one-third of the surveyed workforce. Deloitte's recent research, [The equity imperative](#), explains ways to promote equity in the workplace, and shows that 67% of US job seekers report that a diverse workforce is important to them when considering a job offer.¹⁶

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Appealing to the next generation

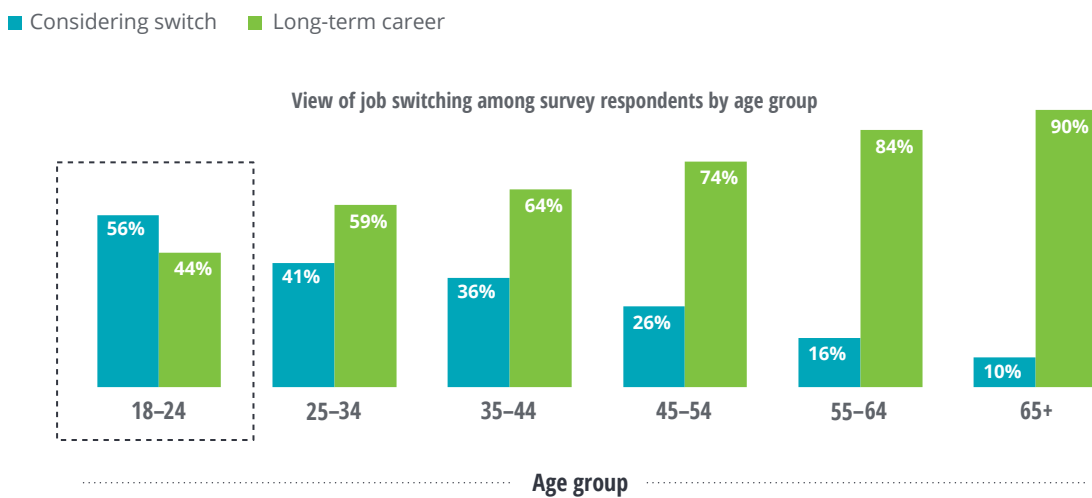
More than half of the 18–24-year-olds surveyed in our manufacturing perception study indicated they are looking to switch jobs (figure 10), which could increase the pool of potential recruits for manufacturers. This cohort is less excited about the prospect of a career in manufacturing,¹⁷ but flexibility and a focus on more digital and technical skills—for instance, the opportunity to work in a smart factory environment—are likely to make the industry more attractive to them.

However, survey data indicate a mismatch between advertising methods: The surveyed younger workforce is more receptive to social media/television and news, whereas manufacturers reported finding other media and recruiting tactics more effective (figure 11). Partnerships with local high schools can help educate students and parents about manufacturing career paths.

Additionally, this generation is the most ethnically and racially diverse generation in history.¹⁸ As such, having a robust DEI strategy that factors in an organization’s influence across workforce, marketplace, and society is another potential avenue for attracting younger workers.

FIGURE 10

Consideration of job switching is common among Generation Z and then tapers off



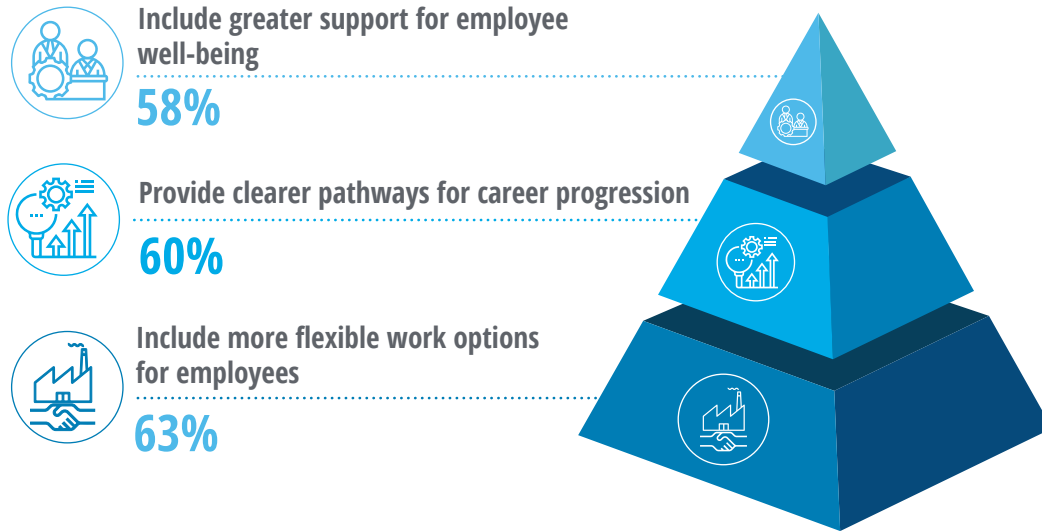
Source: Deloitte analysis of 2022 US perception of manufacturing study data.

FIGURE 11

Manufacturers should leverage social media more to attract the younger workforce in manufacturing

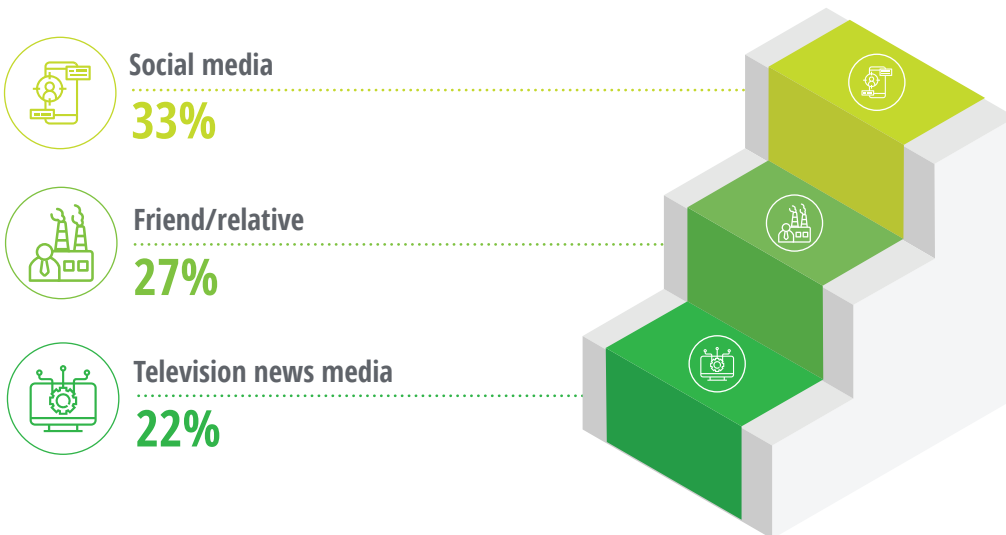
What matters to them?

Top three considerations for the younger generation to choose manufacturing jobs



How can you reach them?

Top three sources to influence their perception of work in the manufacturing industry



Source: Deloitte analysis of 2022 US perception of manufacturing study data.

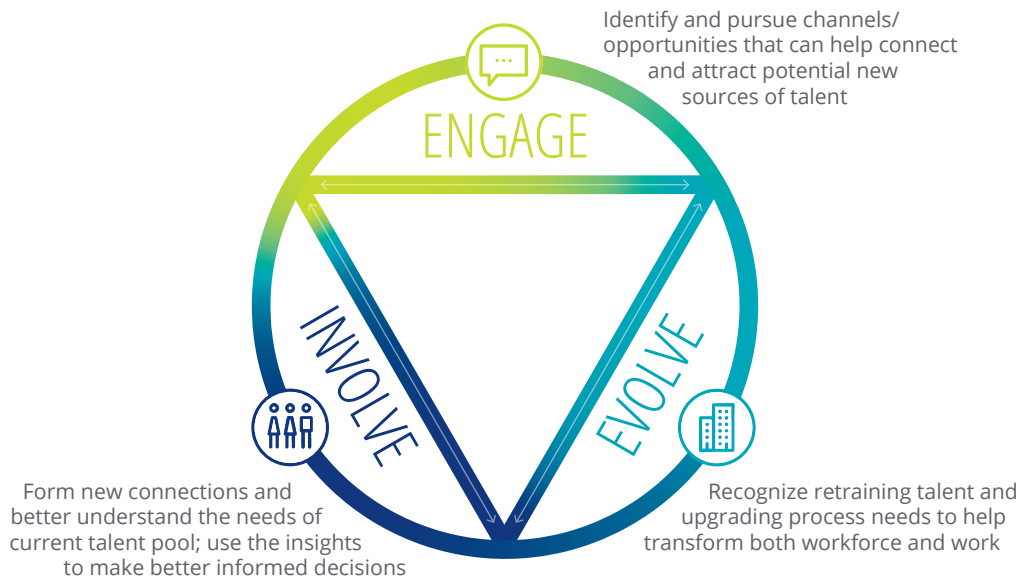
The path forward: Manufacturing as a talent magnet

SURVEY RESPONSES AND executive interviews highlighted innovative solutions to the challenges manufacturers face—mainly, attracting new employees, retaining current employees, and evolving the workplace to meet the workforce’s changing demands and expectations. As in our earlier research, we can

apply the framework of Engage, Involve, Evolve to bucket these initiatives (figure 12).¹⁹ These categories are designed to amplify the positive aspects of manufacturing’s current image to attract employees, while focusing on what should be considered to retain skilled and experienced employees.

FIGURE 12

A framework to address workforce challenges



Source: Paul Wellener et al., *Creating pathways for tomorrow's workforce today: Beyond reskilling in manufacturing*, Deloitte Insights, May 4, 2021.

Engage

- Sponsor internship and apprenticeship opportunities, as immersive, hands-on opportunities can deliver greater results than digital or media interaction
- Leverage social media more to advertise hiring events
- Revisit application policies by shortening the time for applications, background checks, and drug tests
- Utilize employee referrals by offering referral bonuses and reducing the processing time for referrals
- Increase visibility in the community and utilize local advertising more effectively
- Pilot innovation through onsite job fairs, and encourage walk-in applicants
- Proactively invest in sourcing a diverse talent pool by working with local educational institutions to develop open courses providing candidates with needed skills
- Cater outreach activities to specific demographics in a factory area, accommodating multiple languages
- Continue to communicate that salaries and benefits in manufacturing are competitive with those offered in retail and service industries

Involve

- Implement a buddy system for new employees to receive guidance from their colleagues

- Create specialized roles for retired/retiring employees to share their institutional knowledge with newer employees
- Continue programs that foster an inclusive environment in the workplace, whether in the office or shop floor
- Establish sponsorship programs and infrastructure for reverse mentorship, to connect successful, networked senior leaders with more junior colleagues
- Encourage returnships—maintain an open-door policy to pave the way for the workforce to re-enter the industry

Evolve

- Continue to boost efforts at scheduling flexibility, such as offering a compressed work week to balance well-being with work demands and providing options to take a day off during the work week
- Shift work to accommodate holidays and family obligations
- Realign both new and lateral roles for the workforce to explore a wide variety of growth opportunities
- Revise job titles, levels, and job descriptions to allow comparability so that employees can better see where other job opportunities exist across the company
- Continue to evaluate and address potential bias, unconscious or otherwise, in talent, succession planning, rewards, and performance management processes
- Continue to increase visibility regarding career path options and empower people managers to have career conversations with their reports

Endnotes

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