



# Balancing workforce and automation challenges in industrials and manufacturing

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The industrial and manufacturing workforce is undergoing significant changes in the midst of the Fourth Industrial Revolution (Industry 4.0).

As the use of automation (and even artificial intelligence) compounds in the sector, manufacturers require employees who can operate, maintain, and innovate within these advanced systems. With a workforce shortage and other supply challenges, there's an ongoing need for talent that can adapt to a shifting landscape quickly.

At the same time, recruitment continues to be a struggle for the sector, with many younger members of the workforce deprioritizing manual labor in pursuit of white-collar work.

An accelerated focus on automation has also brought about a shift in sourcing strategies, with many companies moving production capabilities closer to end clients, spending money on new manufacturing and distribution facilities in North America that are less dependent on human resources, giving greater flexibility to the business as well as improved returns.

Yet, largely as a result of supply chain disruptions, industrial and manufacturing companies have ramped up the automation of monotonous tasks in production and distribution areas to recoup costs — typically heavy labor-intensive areas first, followed by information technology (IT) applications and other back-office automation.

This dynamic creates some tension between companies that would look to implement additional automation for efficiencies and cost savings and the workforce's requirement for (often expensive and time-consuming) retraining and reskilling.

It's not just about replacing human workers with machines, but rather creating a collaborative environment where employees and leaders can leverage their unique strengths, enabled by technology, for increased productivity and efficiency.

Success will depend on how well companies can adapt and harness the potential of new technologies while maintaining workforce productivity in the long term.

## 6 recommended areas of focus

To respond to workforce changes, especially in relation to automation and AI, industrial and manufacturing leaders should focus on these six key areas. By focusing on these areas, industrial and manufacturing leaders can not only navigate the challenges presented by AI and automation but also seize the opportunities they offer.

- 1. Implement strategic change management:** Companies that don't strategically involve their employees in their automation journeys risk alienating their trusted staff. Forward-thinking leaders will focus on retraining while also deploying an intentional communication strategy so all staff feel a part of the process rather than a liability.
- 2. Embrace AI and automation:** It is critical for industrial and manufacturing leaders to understand and embrace the potential of AI and automation for increasing productivity and efficiency when used correctly. They should be integrated into business processes and strategies enterprisewide to maximize their potential.
- 3. Reskill and upskill the workforce:** Equipping employees with the necessary skills to work alongside AI and automated systems involves training and development in both technical skills, such as operating and maintaining automated systems, and soft skills, like problem-solving and adaptability, which are essential in this rapidly changing environment.
- 4. Redesign work processes:** AI and automation, by their very nature, necessitate the retooling and reimagining of core processes to be effective. This may involve redesigning roles and responsibilities to leverage the strengths of both human workers and AI, thereby creating a collaborative environment that emphasizes productivity.

- 5. Deploy a responsible AI strategy:** It's important to manage the implementation of any AI or automation technologies responsibly. Leaders must consider the ethical implications of AI, ensuring transparency in its use, and taking steps to mitigate any negative impacts on jobs and wages.
- 6. Promote innovation:** By encouraging an environment of open innovation where new ideas and approaches are welcomed and rewarded, companies can open themselves up to additional productivity and operational efficiencies. This might look like implementing an open innovation strategy, fostering collaboration between different teams, or holding regular brainstorming sessions to generate new ideas.

## Questions for leaders

If you're a leader in the industrial and manufacturing industry, there are several key questions you should be asking yourself when it comes to the ways you are managing and balancing workforce and automation requirements.

- **Adaptability:** How can our organization better adapt to the rapid technological changes that are shaping the future of the industrial and manufacturing sector?
- **Skills Gap:** Given the increasing importance of automation and digital tools, how can we address the skills gap in our workforce and ensure that our employees are equipped with the necessary skills to thrive in this new environment?
- **Collaboration:** How can we foster a culture of collaboration between human workers and automated systems, leveraging the unique strengths of both to increase productivity and efficiency?
- **Innovation:** What steps can we take to encourage innovation within our workforce, creating an environment where new ideas and approaches are welcomed and rewarded?

- Resilience: How can we build a more resilient supply chain that can withstand the disruptions that come with technological change and other external factors?
- Workforce Attraction: How can we attract a new generation of workers to our industry, demonstrating the exciting opportunities that exist within the realm of advanced manufacturing?
- Training and Development: How can we invest in training and development initiatives to prepare our employees for the future of work in the manufacturing industry?
- Future Planning: Are we thinking strategically about the future of our industry and making plans that not only respond to current trends but also anticipate future developments?
- Digital Transformation: How can we further integrate digital technologies into our operations to improve efficiency, productivity, and competitiveness?
- Sustainability: In line with global trends, how can we incorporate sustainable practices in our operations to not only meet regulatory requirements but also align with evolving customer and societal expectations?

Asking these questions will ensure that manufacturing leaders stay at the forefront of their industry, prepared to navigate the challenges and seize the opportunities presented by the changing workforce and the rise of automation.

## The Bottom Line

The task of balancing workforce and automation requirements in industrials and manufacturing is a delicate but necessary undertaking that requires strategic planning, collaboration, and innovative thinking. The future of the industry lies not in choosing between human labor and automated systems, but in finding the optimal blend of both. This synergy can spur productivity, drive cost efficiencies, and foster more resilient operations.

It's crucial to remember that automation isn't about replacing the workforce; rather, it's about augmenting human potential with machines' precision and consistency. By embracing this forward-thinking approach, businesses can navigate the complexities of the modern industrial landscape and position themselves for sustainable growth over the long term.

It's an exciting time for industrials and manufacturing, filled with opportunities for those ready to adapt and innovate. As we move forward, let us continue to champion the power of collaboration and the value of a diverse, skilled workforce that works in harmony with advanced automation technologies. The path won't always be easy, but the rewards — in terms of efficiency, profitability, and long-term viability — are well worth the effort.



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