Global manufacturing research report

The future of manufacturing: Embracing ESG, talent, and supply chain innovations

Executive summary

The manufacturing industry is on the brink of a transformative era, shaped by evolving approaches to sustainability and ESG integration, innovative supply chain strategies, and a renewed focus on talent dynamics. These trends are compelling manufacturers worldwide to navigate complex landscapes to remain competitive.

To better understand how these developments are influencing the future of the industry, IFS polled senior decision makers working in manufacturing. This report presents the findings and highlights the impact of these ongoing changes.

The research reveals that manufacturers are increasingly recognizing the importance of ESG, with 98% of decision-makers polled saying their firm was addressing or prioritizing it in some way. While ESG was once viewed as a compliance requirement, it has now become a strategic driver for operational improvement and the development of new business models.

According to KPMG's Global Industrial CEO Outlook, ESG initiatives are a top operational priority for 15% of manufacturing CEOs, alongside digitization and connectivity (22%). Notably, 71% of CEOs are willing to divest assets that dilute their organization's image in this area, underlining the strong link between ESG strategy and corporate portfolios.

However, our survey shows that 79% of manufacturers still lack a sound ESG strategy, although 39% are actively working on it. Despite these barriers, ESG is projected to positively impact brand reputation, customer attraction, and cost efficiencies, with digital leaders reporting greater success in reducing carbon footprints and optimizing resource usage.

Talent recruitment also remains a pressing concern for manufacturers. Intense competition from other industries, coupled with skills shortages and lingering negative perceptions of manufacturing jobs, has made attracting and retaining skilled workers increasingly difficult. To address this, manufacturers are implementing flexible work policies, promoting inclusive workplace cultures, investing in STEM education, and enhancing their employer branding.

At the same time, they are also transforming supply chain strategies to enhance resilience and sustainability. Nearly all manufacturers (98%) are rethinking their geographic approaches, with many moving from traditional offshoring to nearshoring; friend-shoring, or onshoring.

Such changes, combined with advanced digital tools, are enabling manufacturers to balance resilience, sustainability, and cost considerations effectively. By embracing ESG practices, investing in talent, and driving supply chain innovations, manufacturers can overcome today's challenges to position themselves as leaders in an increasingly dynamic and competitive market.

Introduction

As manufacturers confront the twin imperatives of sustainability and future-readiness, ESG integration, workforce challenges, and supply chain innovation are no longer just operational considerations - they have become strategic priorities. This report provides a forward-looking analysis of how manufacturers are addressing these challenges and opportunities, offering insights into the drivers of change shaping the industry's future.

Commissioned by IFS and conducted by Censuswide, this study draws on data from a global survey of 815 senior managers and executives in manufacturing organizations with a turnover exceeding £150 million, and highlights trends and strategies across the UK, North America, Europe, the Middle East, South and East Asia, and Australia. The research spans key sub-industries, including automotive, chemicals, food and beverage, high-tech, industrial manufacturing, and life sciences, providing a comprehensive view of the manufacturing landscape.

Key survey findings

1. ESG is a catalyst for positive change in manufacturing

98% of manufacturers acknowledge the importance of ESG factors.

68% are in the initial or developing stages of their ESG journey. Only 21% have fully integrated ESG activities into their business strategies.

2. Challenges in ESG reporting persist

Top obstacles:

- Data collection and management difficulties (34%).
- Regulatory uncertainty due to fast-changing global regulations (34%).
- Stakeholder engagement issues (33%).

3. Talent recruitment remains a significant challenge

Primary challenges include competition from other industries offering better wages and benefits (37% rank it in their top three); skills shortages, especially for emerging digital technologies (33%); market conditions affecting hiring capabilities (32%), and inability to offer competitive training programs (32%).

4. Adoption of diverse talent strategies grows

Strategies for the next 2-3 years include implementing flexible work policies (35% ranking it in their top three) and promoting inclusive and diverse workplace cultures (33%).

Other long-term initiatives include investing in STEM education and digital tools (33%) and enhancing employer branding and apprenticeship programmes (29%)

5. Supply chain strategies are evolving for resilience

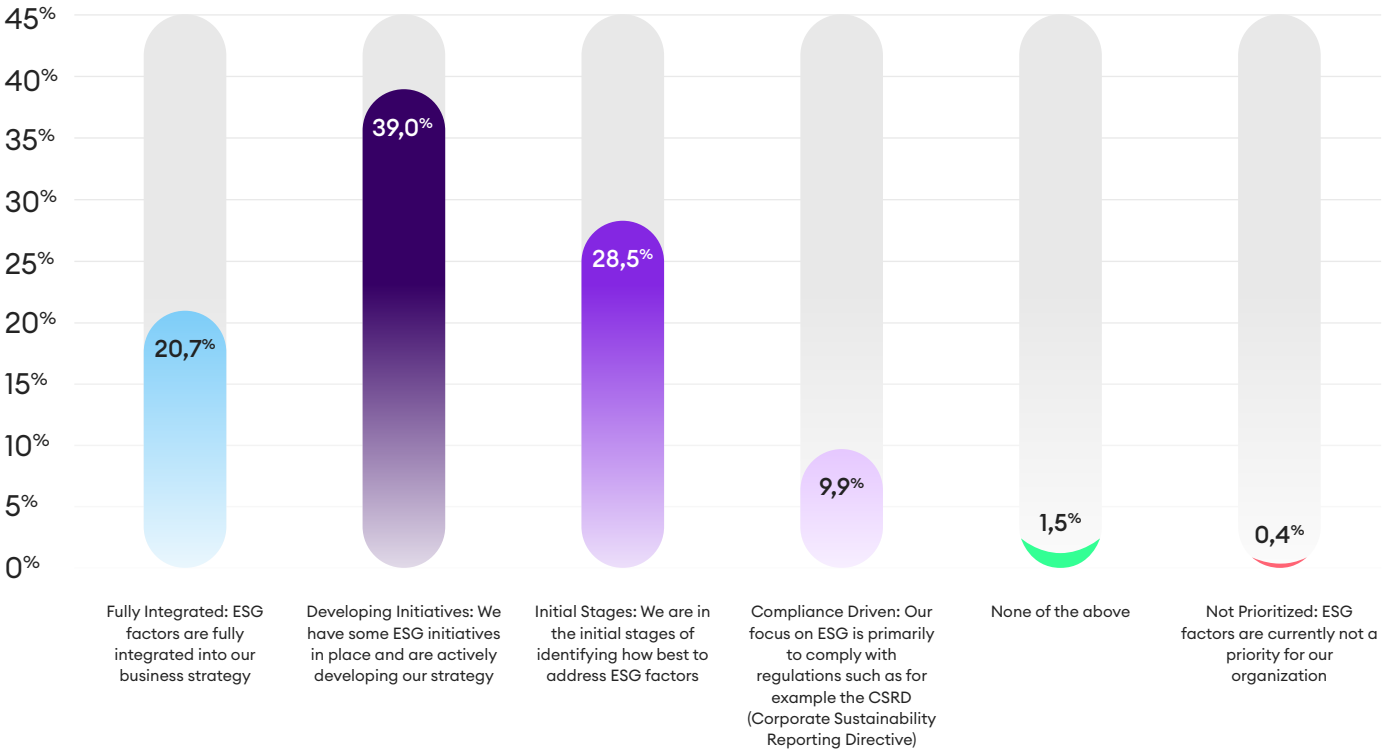
98% of manufacturers are considering geographic strategies to enhance supply chain resilience.

24% are primarily looking at nearshoring; 25% mainly considering friendshoring; and 24% focusing on onshoring in order to reduce risks.

ESG integration and sustainability

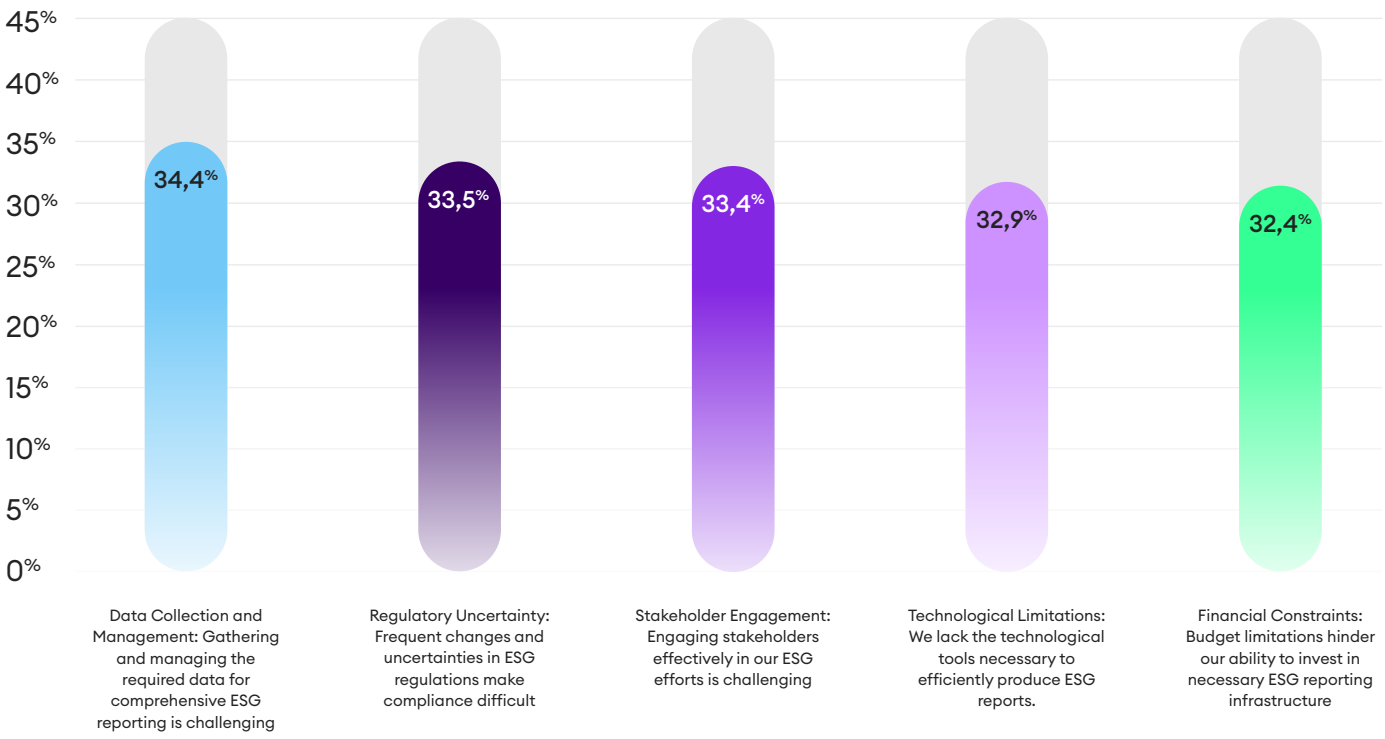
As they look to the future, manufacturers are increasingly recognising the importance of ESG as a strategic driver, with 98% acknowledging its significance. However, while ESG is moving beyond compliance to influence broader operational improvements and new business models, many organizations remain in the early stages of implementation. Currently, 68% of manufacturers are still formulating strategies, and only 21% have fully integrated ESG into their business operations.

How is your organization currently addressing ESG (Environmental, Social, Governance) factors in its operations? Please select the statement that best describes your organization's approach.



Despite its transformative potential, ESG implementation presents significant challenges. When it comes to ESG disclosure and reporting, data collection and management remain the most cited hurdles, affecting over a third (34%) of manufacturers. Additionally, 33% highlight stakeholder engagement as a barrier, emphasizing the need for organization-wide involvement in ESG efforts.

Which challenges do you face with respect to ESG disclosure and reporting? Select all that apply.



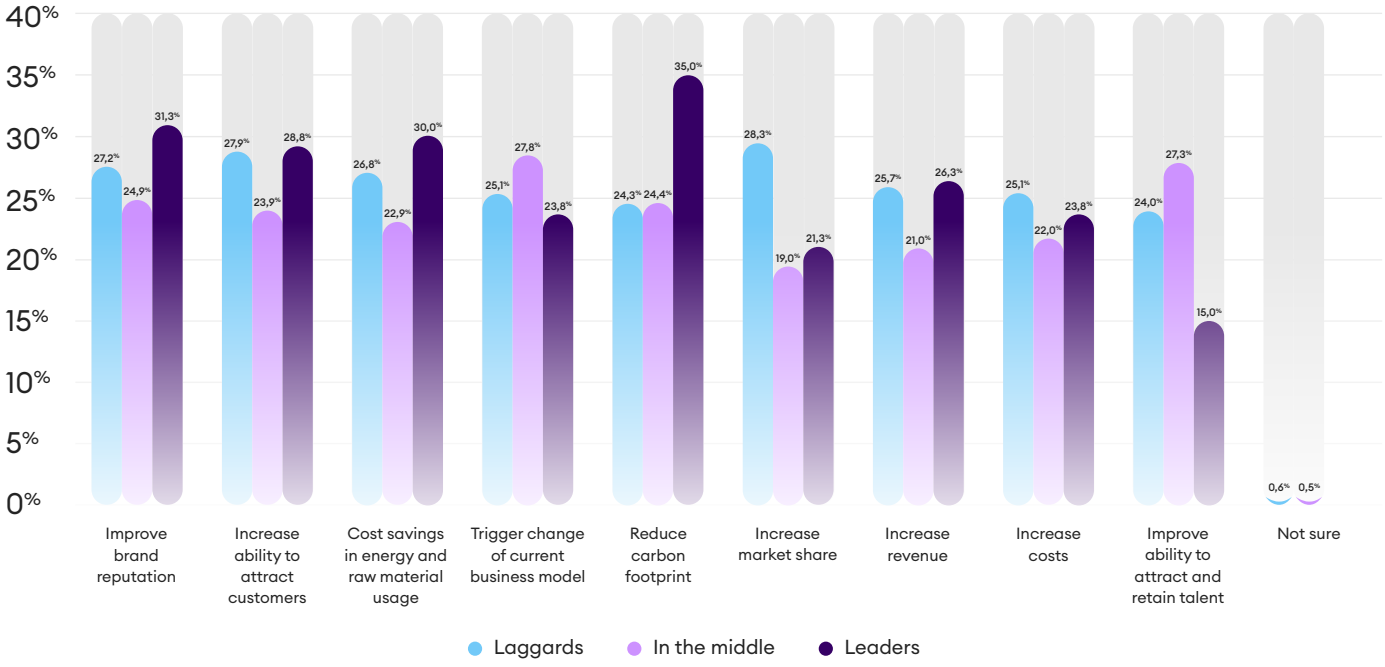
Over the next decade, ESG considerations are expected to transition from a compliance driven activity to a non-negotiable operational imperative. Companies that lead the way in reducing carbon footprints, achieving resource efficiencies, and driving circular business models, have the potential to deliver long-term competitive advantage.

"ESG is no longer a 'nice-to-have' - it's a fundamental component of a manufacturer's operational strategy," says Maggie Slowik, Global Industry Director for Manufacturing at IFS. "Those who integrate ESG deeply into their business models are not just enhancing their brand reputation; they are building resilient, future-proof organizations that can adapt to regulatory changes and shifting consumer demands."

Advanced technologies, such as AI, IoT, and robotics, will play a crucial role in achieving ESG goals. Automation and predictive analytics can optimize resource usage, reduce waste, and improve overall operational efficiency. Additionally, breakthroughs in energy storage and renewable energy technologies will further support sustainable operations, while developments in digital twins and simulation tools will enhance decision-making across the value chain.

Encouragingly, decision-makers anticipate ESG initiatives will yield tangible benefits over the next two to three years. Improving brand reputation (27%), increasing customer attraction (27%), and achieving cost savings through resource efficiencies (26%) are among the most cited impact areas. Digital leaders, in particular, stand out for their ability to leverage ESG to reduce carbon footprints (35%) and achieve cost efficiencies (30%).

Which challenges do you face with respect to ESG disclosure and reporting? Select all that apply.



However, to realize these benefits, manufacturers must adopt a future-focused mindset and integrate ESG considerations into all aspects of their operations. Collaboration across ecosystems, including partnerships with technology providers, academic institutions, and even competitors, will be essential in driving innovation and addressing shared challenges.

Talent recruitment and development

The future of manufacturing hinges on the ability to attract and develop a skilled workforce. According to a recent report by the World Economic Forum and Kearney, manufacturers estimate that 60% of the workforce requires training to address current skills gaps, yet only 23% believe the workforce will be equipped with the supply chain and operations skills they need by 2030.

As a finance decision-maker working for an industrial manufacturing organization in Switzerland, says “Human creativity and problem-solving abilities remain crucial for driving innovation within manufacturing.” Yet, talent recruitment remains a persistent challenge.

Manufacturers face stiff competition from other industries, with 37% of respondents in the IFS survey identifying better wages and benefits elsewhere as a primary obstacle. Skills shortages, particularly in emerging digital technologies, compound the issue, affecting 33% of respondents.

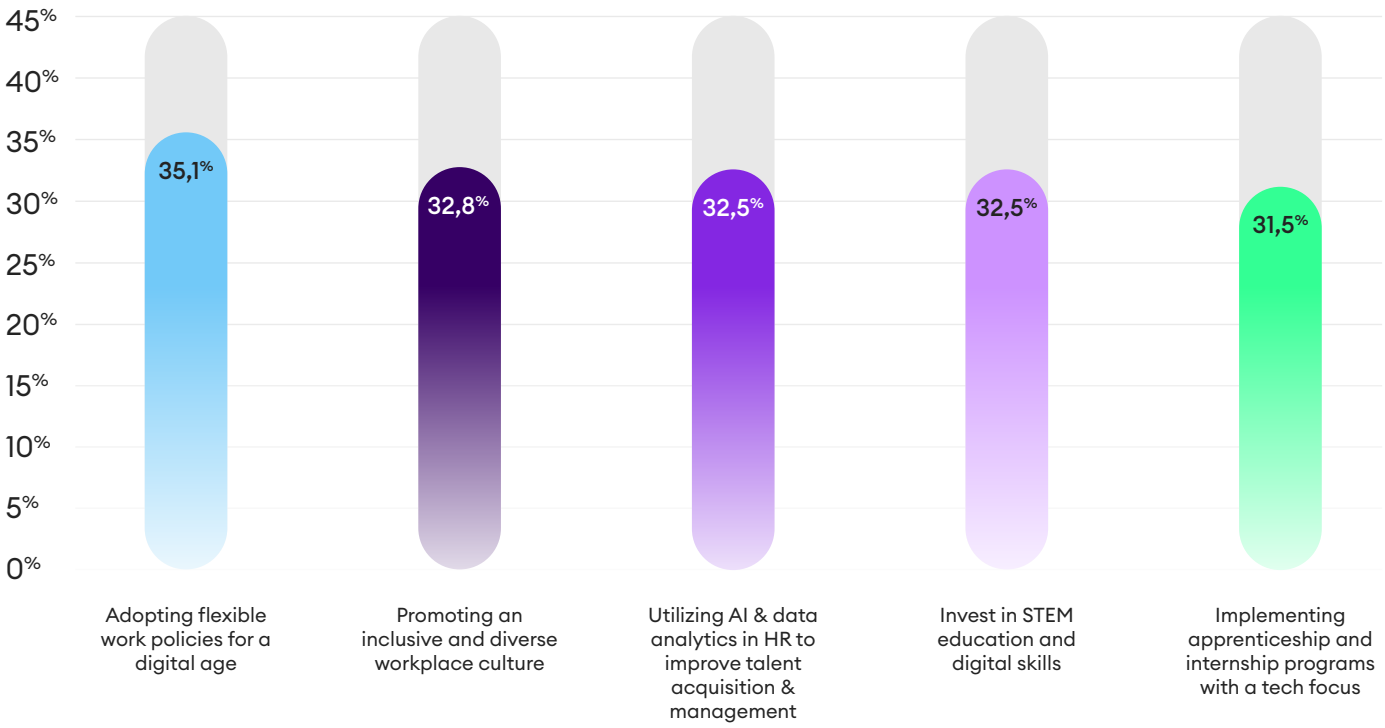
Negative perceptions of manufacturing jobs further exacerbate the problem. Prospective workers can view the industry as outdated or unsafe, creating additional hurdles for recruitment. Economic conditions also play a role, with 32% of manufacturers citing market challenges as a barrier to hiring.

“Attracting and retaining skilled talent is one of the most critical challenges facing manufacturers today," says Debra McCowan, Chief Human Resources Officer, IFS.

"Manufacturers need to create work environments that appeal to the next generation of workers, which means investing in skills development, flexible work policies, inclusive cultures, and continuous learning opportunities. By fostering a culture of innovation and growth, manufacturers can build a workforce that is equipped to meet future demands."

Encouragingly, manufacturers are adopting these strategies. Flexible work policies (35%) and inclusive workplace cultures (33%) are helping to attract diverse talent pools over the next 2-3 years, while investments in STEM education and employer branding are fostering a pipeline of skilled workers.

In the next 2-3 years, what key strategies is your organization implementing to attract and develop the talent needed for future manufacturing challenges? (Tick up to 3)

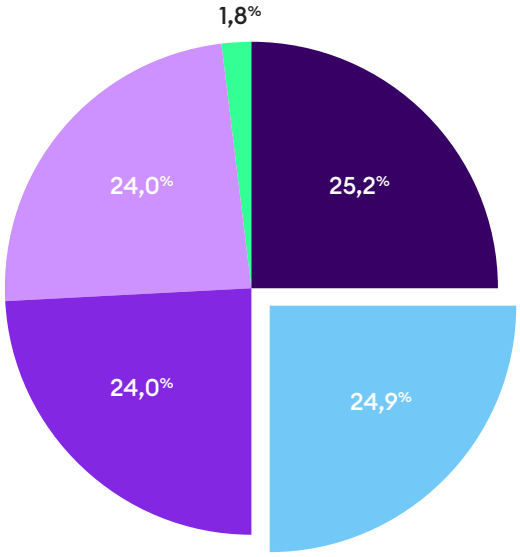


This will all be key in helping manufacturing fight off fierce competition from other industries and ensure that it has the right skills in place to effectively integrate emerging digital technologies.

Supply chain innovation and future trends

Supply chain resilience is emerging as a key area of focus for manufacturers, with nearly all respondents (98%) reevaluating their geographic strategies. In response to the vulnerabilities of long supply chains, companies are moving away from offshoring, often because they have realized their supply chains are too long and risk exposed, and toward nearshoring; friendshoring and onshoring, aiming to mitigate risks and enhance reliability.

Which of the following geographic strategies is your organization primarily considering in the next 2-3 years to optimize its supply chain resilience?



- Friendshoring: Moving or establishing manufacturing operations in politically friendly countries to ensure supply chain security and stability.
- Offshoring: Continuing or expanding manufacturing operations in countries with lower production costs
- Onshoring: Bringing manufacturing operations back to our home country
- Nearshoring: Relocating manufacturing operations to nearby countries to reduce transit times and costs
- Not considering geographic changes.

Supply chain decisions are increasingly balancing factors like lead times, quality, and carbon footprint alongside cost considerations. Digital leaders are adopting advanced tools such as scenario simulations to anticipate disruptions, while laggards rely on basic risk assessments, highlighting a widening gap in strategic approaches.

"Manufacturers know that traditional, linear supply chains are no longer sufficient in today's volatile environment," notes Andy Burton, Global Industry Director at IFS. "The shift toward localized, digitally connected supply chains allows companies to be more responsive, reduce risks, and maintain sustainability standards. By leveraging data-driven insights, manufacturers can adapt to disruptions while maintaining operational efficiency."

Looking further ahead, manufacturers see supply chain innovation as a pivotal driver of change. While 67% remain uncertain about key transformational forces over the next 5-10 years, those with insights identify advanced technologies such as AI, IoT, and automation as critical enablers of progress.

One business owner of a life sciences company in Sweden commented:

"Advanced analytics and AI will enable more accurate demand forecasting, reducing stockouts and overstocking."

Coupled with that, a member of the C-Suite working in industrial manufacturing in the Netherlands, commented:

"The integration of IoT in the supply chain will generate vast amounts of data. Advanced analytics and machine learning algorithms can process this data to provide actionable insights, enabling manufacturers to make informed decisions, forecast demand more accurately, and manage inventory levels effectively."

The imperative for immediate action

For manufacturers, the time to act is now. Delaying ESG integration, talent investment, or supply chain transformation risks obsolescence in an increasingly competitive environment. Immediate steps to address these challenges are essential for long-term success.

To move forward, manufacturers must develop clear roadmaps, set measurable goals, and foster a culture that embraces innovation. The latest smart technologies and approaches will certainly be at the heart of that, helping firms to drive efficiencies and gain an edge over their rivals. As one R&D executive working in industrial manufacturing in Singapore, said:

"AI and robotics can significantly expedite product development by shortening design iteration time, reducing prototyping efforts and improving safety science. This allows manufacturers to bring products to market faster and stay competitive."

Yet, these technological advances will not translate into business advantage for manufacturers without them having the right people in place to make the most of them. Strong leadership is essential to inspire teams and navigate the complexities of digital transformation.

Positioning for long-term success

To thrive in an ever-evolving manufacturing landscape, businesses must not only address today's challenges but also anticipate and adapt to emerging trends over the next five to ten years. Success in this new era will hinge on manufacturers' ability to integrate advanced technologies, embrace sustainability, and nurture talent in a way that aligns with their broader strategic goals.

Manufacturers must adopt a future-focused mindset, recognizing that ESG, talent, and supply chain innovation will remain central to the industry's evolution. Advanced technologies, such as AI, IoT, and robotics, will become even more critical enablers of innovation and efficiency. Automation and predictive analytics will redefine production processes, enabling manufacturers to achieve unprecedented levels of precision and scalability. Supply chains will also undergo significant transformation as manufacturers seek to address vulnerabilities and improve resilience.

The shift toward localized, digitally connected supply chains will redefine how companies manage inventory, meet demand, and maintain sustainability standards. Data-driven insights will allow for greater flexibility and responsiveness, ensuring manufacturers can adapt to disruptions while maintaining operational efficiency.

Workforce evolution will remain key for the manufacturing industry's future. As automation takes over routine tasks, the demand for advanced technical skills will grow. Manufacturers will need to invest heavily in reskilling and upskilling programs, fostering a workforce that is not only technically adept but also equipped with critical problem-solving and leadership capabilities.

Looking further ahead, collaboration across ecosystems will become increasingly important. Partnerships with technology providers, academic institutions, and even competitors will play a pivotal role in driving innovation and addressing shared challenges, such as sustainability and cybersecurity.

The next decade represents a defining moment for the manufacturing industry. By acting boldly and strategically today, manufacturers can shape a future in which they lead not only in profitability but also in sustainability, innovation, and societal impact. The future of manufacturing will belong to those who embrace these changes with vision, determination, and agility.

About IFS

IFS develops and delivers cloud enterprise software for companies around the world who manufacture and distribute goods, build and maintain assets, and manage service-focused operations. Within our single platform, our industry specific products are innately connected to a single data model and use embedded digital innovation so that our customers can be their best when it really matters to their customers – at the Moment of Service™. The industry expertise of our people and of our growing ecosystem, together with a commitment to deliver value at every single step, has made IFS a recognized leader and the most recommended supplier in our sector. Our global team of over 7,000 employees every day live our values of agility, trustworthiness and collaboration in how we support thousands of customers. Learn more about how our enterprise software solutions can help your business today at ifs.com

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