

Alithya 2026

Manufacturing Trends and Analysis Report

Industry Advancements and Challenges:

Success prompts optimism, despite
ongoing risks and obstacles



Alithya



Introduction

Manufacturers are entering a decisive phase of digital transformation where automation, data intelligence, and AI-enabled production models are rapidly becoming core operational strategies. The 2026 Alithya Manufacturing Trends and Analysis report uncovers how organizations are prioritizing new technologies, modernizing production environments, and preparing workforces for a digitally empowered future. The results highlight a sector focused on scaling proven capabilities, strengthening operational resilience, and driving measurable value realization from data-driven systems and AI-powered automation.

About the report

This report is based on a survey conducted across North America with more than 150 respondents representing a range of manufacturing subsectors and operational maturity profiles. Participants completed a structured assessment spanning business priorities, technology and automation strategy, digital and AI maturity, operational and workforce modernization, and barriers to scaling. The results provide a meaningful snapshot of manufacturing leaders' current outlook and readiness for the next three years.



Manufacturers are optimistic about their ability to adapt, yet clear obstacles remain.

Leaders cite capital costs, legacy system constraints, and workforce skill gaps as their most significant barriers.



Future-ready skills

including artificial intelligence and machine learning (AI/ML), cybersecurity, and advanced data analytics, are emerging as top workforce needs, signaling a sector preparing for a more technologically intensive operating environment.

The **ISM Manufacturing PMI index**, which tracks five core components: new orders, output/production, employment, supplier delivery times, and inventories, has been mostly **below 50% for the past two years**, indicating a shrinking sector and continuing challenges for manufacturers. Despite this, those responding to our survey are optimistic that

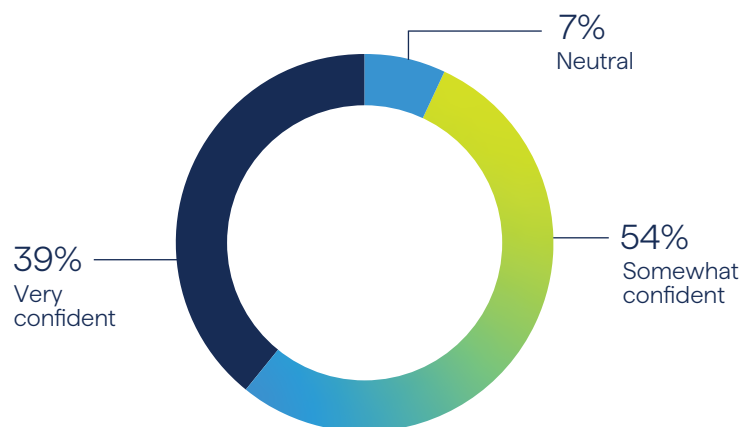
new technological advancements will allow opportunities for real impact on their business.



AI disruption and cybersecurity risks

are seen as the most underestimated forces shaping the industry's near-term future.

1 How confident are you in your organization's ability to adapt to market changes?



Summary of results

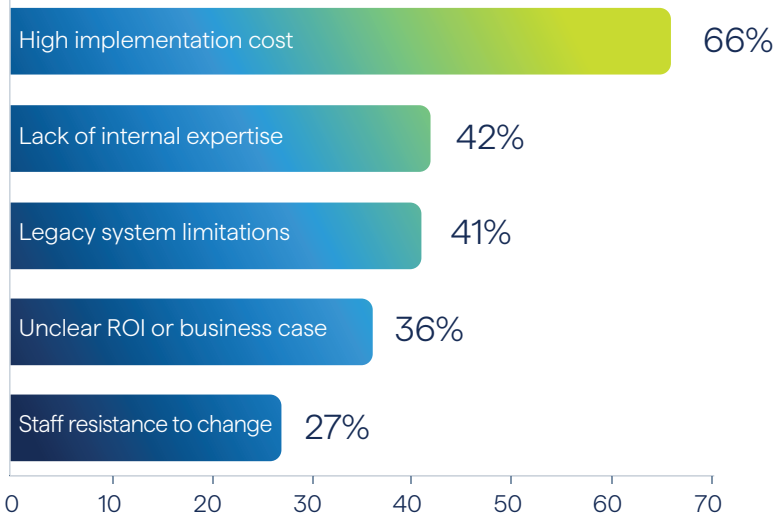
More than half of respondents report being somewhat confident in their organization's ability to adapt to market changes (54%), while 39% indicate they are very confident, suggesting strong overall self-perceived readiness and resilience across organizations. A smaller portion of respondents (7%) report a neutral stance. Overall, the results suggest that organizations largely feel prepared to respond to market shifts, with confidence levels skewing toward moderate to high rather than polarized extremes.

Industry analysis

Related research highlights that market adaptability increasingly hinges on digital maturity, data agility, and responsive operating models. Deloitte's 2025 Manufacturing Industry Outlook¹ finds that only 48% of manufacturers believe their operating model is agile enough to respond rapidly to market change, noting a lack of measured operational agility. Together, these reports suggest manufacturers believe they can adapt, but many have not yet fully built the operational, data, or talent foundations needed to do so rapidly and reliably.

2 What barriers are you facing in adopting advanced manufacturing technologies?

(Respondents were asked to select all that apply.)



Summary of results

Manufacturers face a multidimensional set of barriers to adopting advanced technologies, led by financial constraints, legacy system challenges, and workforce skill gaps. These barriers indicate that digital transformation in manufacturing is not simply a technological shift, but a structural and organizational one requiring sustained investment, modernization, and cultural change. The fact that 65.4% chose high implementation costs as the foremost barrier reflects the reality that while manufacturers want the benefits of advanced technologies, they face financial barriers that slow or prevent adoption.

Alithya's manufacturing experts agree that while clients do frequently express concerns about costs, further discussion often reveals that cost concerns go hand-in-hand with an unclear ROI, selected by 36% of respondents. Where there is clear business value, companies are willing to invest to achieve those goals.

Lack of internal expertise (42%), followed closely by legacy system limitations (41%) ranked as the second and third highest barriers creating integration challenges. Resistance to change (27%), while less common, remains a relevant factor.

Industry analysis

Skill shortages, or lack of internal expertise, identified by 42% of respondents, aligns with global reports indicating widespread capability gaps. The World Economic Forum² report notes that 74% of manufacturing companies report "acute" skill shortages when deploying new technologies. These constraints highlight the structural and competency-related barriers slowing transformation.

3 What is one disruptive force you feel the industry is underestimating?



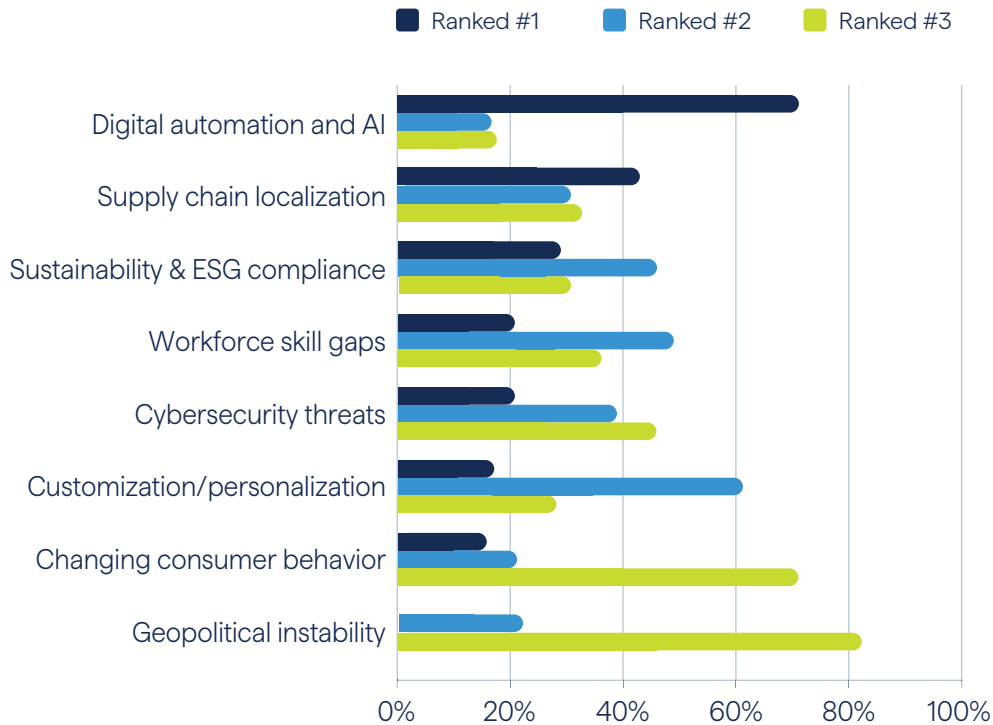
Summary of results

Many respondents believe that the most underestimated disruptive forces in manufacturing are AI disruption (38.0%) and cybersecurity threats (36.7%). These two categories combine for nearly three-quarters of responses, indicating a strong consensus that the industry may be ill-prepared for the scale or speed of these challenges. Environmental regulation (9.5%) and geopolitical instability (8.9%) also appear, but at much lower levels. Shifting consumer behavior (6.3%) is the least cited, suggesting many industry leaders may view demand disruption as less of a near-term threat. Overall, the data suggests manufacturers are most concerned about the underestimation of digital and risk-based forces.

Industry analysis

The World Economic Forum³ highlights that manufacturers are deploying AI agents at scale, yet many lack mature governance and risk-management frameworks, which increases vulnerability to unintended consequences. Simultaneously, IBM's X-Force 2025 Threat Intelligence Index⁴ confirms that manufacturing has been the most-targeted sector for cyberattacks..

4 Which strategic priorities or trends will most shape your business in the next three years?



Summary of results

The results show a strong emphasis on technology-led operational transformation, with digital automation and AI being overwhelmingly ranked first by 69% of respondents, far ahead of any other priority. Areas such as supply chain localization and sustainability/ESG receive modest first-rank focus but high second- and third-rank representation, suggesting they are important but less urgent. Capabilities tied to personalization and workforce development cluster in Rank 2, indicating organizations view them as enablers of future value rather than immediate priorities. Meanwhile, cybersecurity is broadly distributed across ranks, reflecting ongoing concern but not the same urgency as automation. Finally, geopolitical instability and changing consumer behavior are mainly ranked third, showing that external risks are recognized but not driving near-term strategy.

Summary of results

As Alithya's manufacturing experts observe, digital modernization, when implemented with strategic alignment and effective process integration, often results in measurable improvements in customer experience. As an example, manufacturers that adopt modern Contact Center as a Service (CCaaS) platforms may do so with the idea of reducing costs but have also reported improvements in customer satisfaction, attributable to faster response times and more consistent service delivery.

In addition, modern CCaaS can generate incremental revenue opportunities. Digital agents (such as AI chatbots) can be configured to identify upsell or cross-sell opportunities during customer interactions. Live agents can be trained to leverage contextual insights from digital systems, transforming service interactions into sales opportunities. For example, a credit or coupon offered as compensation for any service issue often leads to a new purchase beyond the value of the coupon. This holds true in both the B2B and B2C world, where customer experience and loyalty are important drivers of repeat revenue.

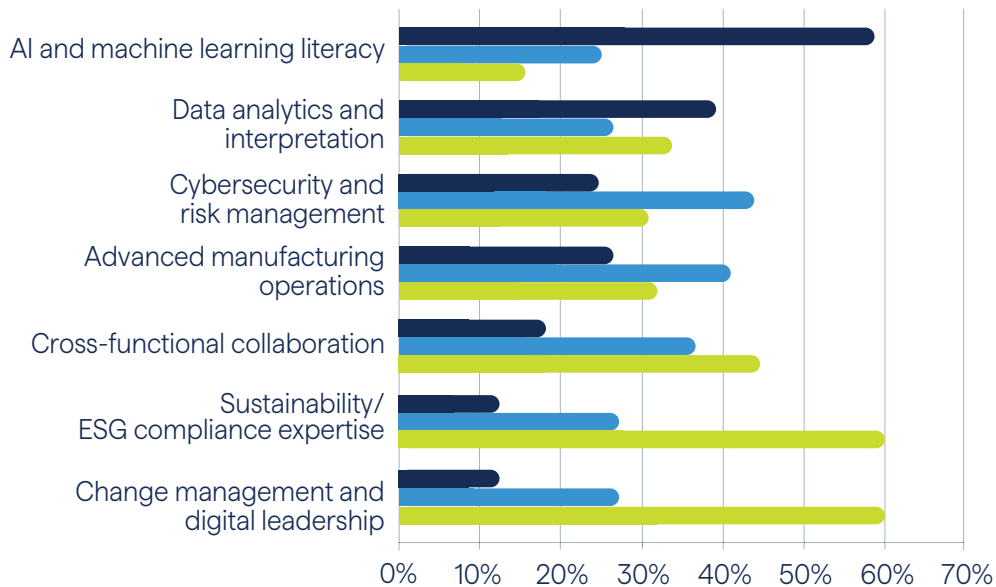
Industry analysis

According to the World Economic Forum⁵, more than 70% of industrial firms now rank digitalization as a top three strategic initiative. Firms integrating sustainability into their operations see a production cost reduction of up to 10–12% within one to two years. Manufacturers are driving digital and sustainable transformation to secure competitiveness, while also placing increasing emphasis on supply-chain flexibility and workforce readiness.

5 Which workforce skills do you think will be most critical to manufacturing within the next three years?

(Respondents were asked to select all that apply.)

Ranked #1 Ranked #2 Ranked #3



Summary of results

This chart shows how manufacturers prioritize the workforce skills they believe will be most critical over the next three years. Respondents who selected each skill ranked its importance from first to third, and the chart reflects the distribution of those rankings within each skill area.

AI and machine learning literacy and data analytics stand out as the highest-priority capabilities, receiving the strongest share of first-rank selections. Skills in advanced manufacturing operations and cybersecurity show a more balanced mix of rankings, indicating broad importance but slightly less urgency.

In contrast, skills such as change management, cross-functional collaboration, and sustainability/ESG expertise are more frequently ranked third, suggesting manufacturers view them as longer-term enablers rather than immediate gaps.



Overall, the chart highlights a clear focus on technical and analytical fluency as manufacturers advance deeper into AI and data-driven operations.

Alithya's manufacturing experts also noted that while AI and machine learning literacy are critical future workforce skills, they are not sufficient on their own. The greatest value is realized when these technical capabilities are combined with a strong understanding of the business, specifically how the organization differentiates itself in the marketplace and how day-to-day decisions affect cost, service, and profitability.

Employees must be able to apply AI and data insights within a business context. For example, if an employee notices a mess on the shop floor, the response should go beyond simply reporting it for cleanup. They should be equipped to ask deeper questions: What caused the issue? What processes or materials are impacted? Could this disrupt raw material availability, trigger rush reorders, lead to expedited shipping, or require overtime to meet customer deadlines?

Without this broader business awareness, small operational issues can quickly cascade into higher costs, reduced margins, and missed profitability targets. Understanding the business enables employees to ask the right questions, interpret AI-driven insights correctly, and take actions that support both operational efficiency and financial performance. In this sense, AI literacy delivers its true value only when paired with strong business knowledge and critical thinking.

Industry analysis

Recent global research reinforces the survey's findings. Updated insight from the World Economic Forum⁶ shows that digital acceleration is reshaping workforce requirements: 39% of today's skill sets are expected to become outdated by 2030, and 70% of employers now identify analytical thinking as a top skill need. Demands for AI and big-data capabilities continue to rise sharply. At the same time, 63% of employers cite skill gaps as a major barrier to business transformation, and 85% plan to prioritize workforce upskilling, with an estimated 59 out of every 100 workers requiring training by 2030. These findings validate the survey's signal: manufacturers must rapidly advance both digital and workforce capabilities to keep pace with accelerating technological and operational disruption.

Key Insights:

The manufacturing sector is confident yet realistic about the pressures ahead. Structural barriers, including costs, legacy systems, and skill shortages, persist. There is a strong sense that AI and cybersecurity risks remain underestimated. Workforce expectations echo these concerns, with leaders identifying AI/ML literacy and data analytics as the most critical capabilities for future competitiveness. While sustainability and ESG compliance expertise ranked near the bottom of the critical skills chart, respondents ranked sustainability and ESG integration as a high strategic priority over the next three years. This may indicate a perception that ESG skills are easier to outsource or integrate later or indicate prioritization of technical skills over regulatory expertise. Together, these findings portray an industry that sees opportunity for transformation but remains grounded in the challenges it must overcome.

Conclusion:

The survey results reveal a manufacturing sector that is aligned in its commitment to digital transformation yet still working through the structural and operational challenges of scaling advanced capabilities. While organizations are investing heavily in automation, AI, cloud, and analytics, realizing the full value of these technologies will require sustained focus on workforce skill development, data readiness, legacy-system modernization, and cross-enterprise integration. As manufacturers move beyond pilot successes toward broader deployment, their ability to strengthen these foundational enablers will determine the pace and impact of transformation in the years ahead.

Connect with our manufacturing transformation team to explore your next-stage roadmap.

Contact us

Alithya is your trusted advisor

We are trusted advisors who leverage AI and the latest technologies in our strategic consulting and digital transformation services. We help solve business challenges that enable our clients to unlock new opportunities, modernize processes, and gain efficiencies. We leverage a world-class team of passionate industry experts, AI-based IP solutions, the latest digital technologies, a solid understanding of mission critical business applications, and a partner ecosystem to accelerate results. We've built a foundation of success that includes a specialized global delivery network to provide end-to-end solutions.

Our team brings expertise across process, discrete, and mixed-mode manufacturing. We have deep industry experience in food and beverage, dairy, poultry, chemicals, pharmaceuticals, medical devices, industrial equipment, building materials, consumer goods, electronics, packaging, aerospace, and automotive. We partner with clients to assess market dynamics, uncover opportunities, and craft tailored technology strategies that drive sustainable growth and competitive advantage.

Strategic consulting

- AI and digital strategy
- Organization performance
- Cybersecurity
- Enterprise architecture
- Process intelligence
- Change management
- Program management services

Enterprise transformation

- ERP, SCM, EPM, CRM, HCM implementations
- Data and analytics
- GenAI and agentic AI
- Application modernization and integration
- Project operations
- Cloud infrastructure
- Custom applications development
- Control/software engineering

Business enablement

- Digital adoption and training
- Managed services
- Change enablement
- Quality engineering
- AI continuous improvement

The Alithya team

Local talent | Smart shoring | Agile squads

Our technology partners



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6. <https://www.weforum.org/publications/the-future-of-jobs-report-2025/> (World Economic Forum)