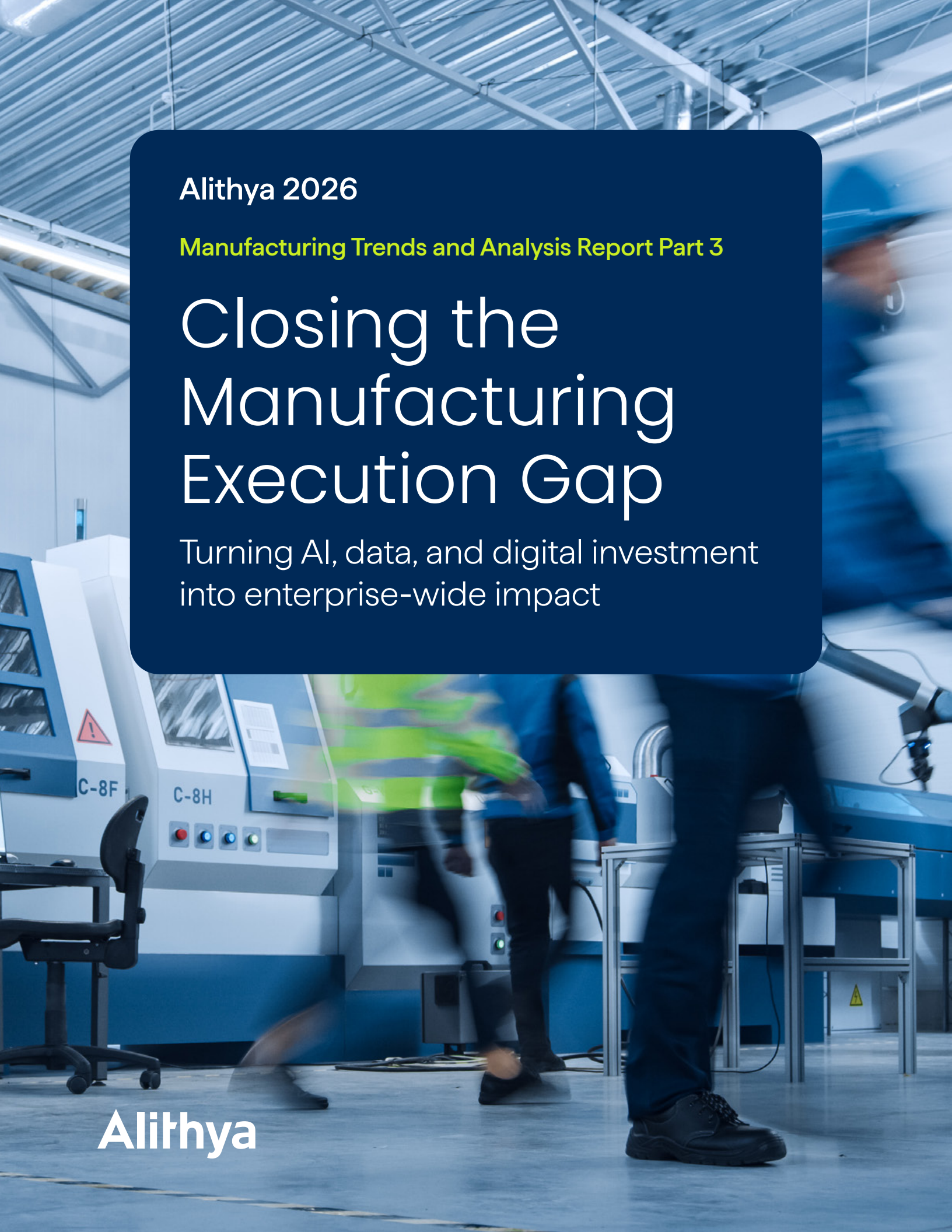


Alithya 2026

Manufacturing Trends and Analysis Report Part 3

Closing the Manufacturing Execution Gap

Turning AI, data, and digital investment into enterprise-wide impact

Alithya



Introduction

Manufacturers have made significant strides in digital transformation. Over the past several years, organizations have accelerated investments in data platforms, artificial intelligence, cybersecurity, and supply chain resilience in response to sustained disruption and increasing competitive pressure. Yet despite this progress, a critical challenge remains: **translating these investments into consistent, enterprise-wide operational impact**.

At Alithya, we see a growing disconnect across the manufacturing landscape—**a gap between digital ambition and operational execution**. While confidence in data infrastructure is high, cybersecurity capabilities are advancing, and AI adoption continues to expand, many organizations are still struggling to scale these capabilities beyond isolated initiatives. The issue is no longer whether manufacturers are investing in the right technologies. It is whether those technologies are being integrated into a cohesive operating model that drives measurable business outcomes.

Our 2026 Manufacturing Trends and Analysis Report highlights this divide. The data shows an industry actively investing in transformation yet often doing so in a fragmented way, where supply chain strategies, data initiatives, and technology platforms evolve independently rather than as part of a unified strategy. The result is incremental progress, not transformational change.

We believe the next phase of manufacturing will be defined by the ability to operationalize digital capabilities at scale. Organizations that succeed will move beyond modernization as a series of projects and instead align data, processes, and intelligence into an integrated, enterprise-wide model. Those who do not risk falling into a cycle of continued investment without proportional return.

As manufacturers move from adopting digital technologies to scaling them across the enterprise, the next challenge is achieving sustained operational and strategic impact. Parts One and Two of this report highlighted the industry's rapid progress in automation, AI, and data-driven capabilities. Part Three focuses on what it takes to turn that momentum into long-term value by strengthening workforce readiness, modernizing underlying systems, and establishing the governance, security, and operating models needed to support intelligent, connected manufacturing at scale.

This final installment focuses on the operating foundations manufacturers need to extend digital transformation across the enterprise: resilient supply chains, competitive data infrastructure, cybersecurity readiness, platform strategy, and priority technology investments. Together, these findings show that many manufacturers feel confident in their current capabilities, but the next stage of value creation will depend on connecting those capabilities into a governed, secure, and scalable operating model.

About the survey

The 2026 Alithya Manufacturing Trends and Analysis report is based on a survey conducted across North America with 158 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 useful snapshot of manufacturing leaders' current outlook and readiness for the next three years.

The report has been released in three parts. Part One, which focuses on industry advancements and challenges, can be downloaded here. Part Two, which focuses on digital transformation and AI maturity, can be downloaded here. Together, those earlier installments establish the context for Part Three's focus on operational readiness, platform strategy, and sustained execution.

We believe the next phase of manufacturing will be defined by the ability to operationalize digital capabilities at scale.



Alithya

Top takeaways

The Execution Gap

Across every dimension - supply chain, data, cybersecurity, and AI - the same pattern emerges: manufacturers are investing broadly, but often in disconnected ways. The result is a growing gap between digital capability and operational execution. Closing this gap will define the next generation of industry leaders.

Operational Status and Strategies

Operational confidence is strong, with manufacturers reporting positive assessments of data infrastructure and cybersecurity readiness. However, evolving cyber and AI-related risks indicate that foundational systems will require continued investment, governance, and reinforcement as operations become more connected.



Supply Chain Resilience

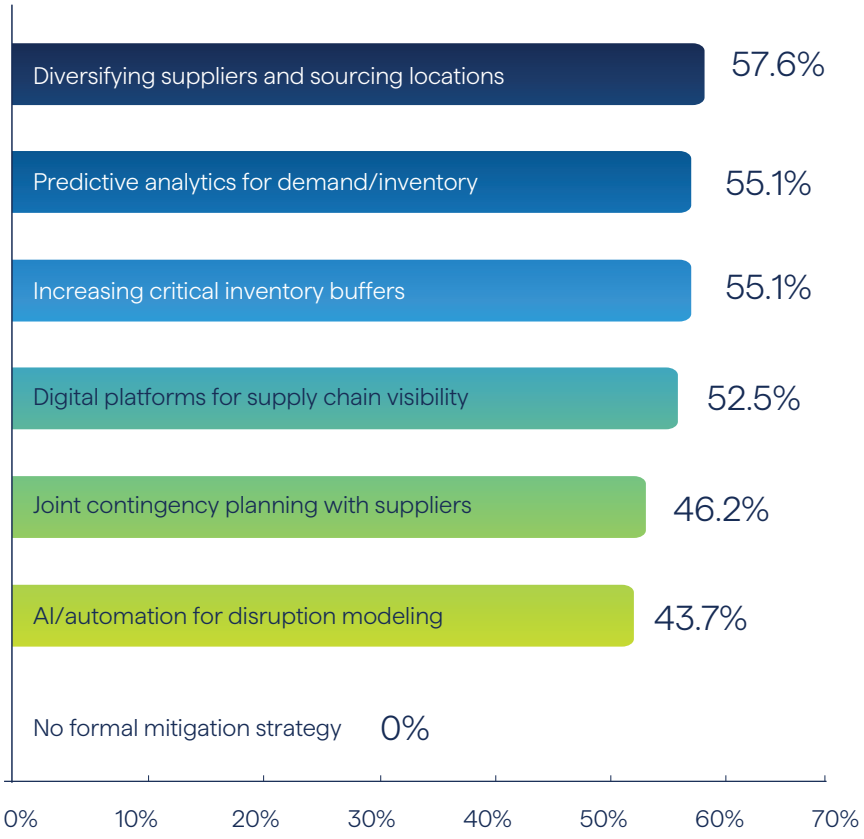
Supply chain preparedness varies across organizations, but most are actively building resilience through supplier diversification, predictive analytics, inventory strategies, visibility tools, and supplier contingency planning. The overall picture is one of organizations reinforcing core operational systems, as they prepare for more connected and data-driven operations.

Vendor Ecosystem

Technology strategies increasingly rely on multi-vendor ecosystems spanning ERP, cloud, and analytics platforms, while long-term investment priorities remain focused on automation, analytics, cloud computing, and AI/ML.

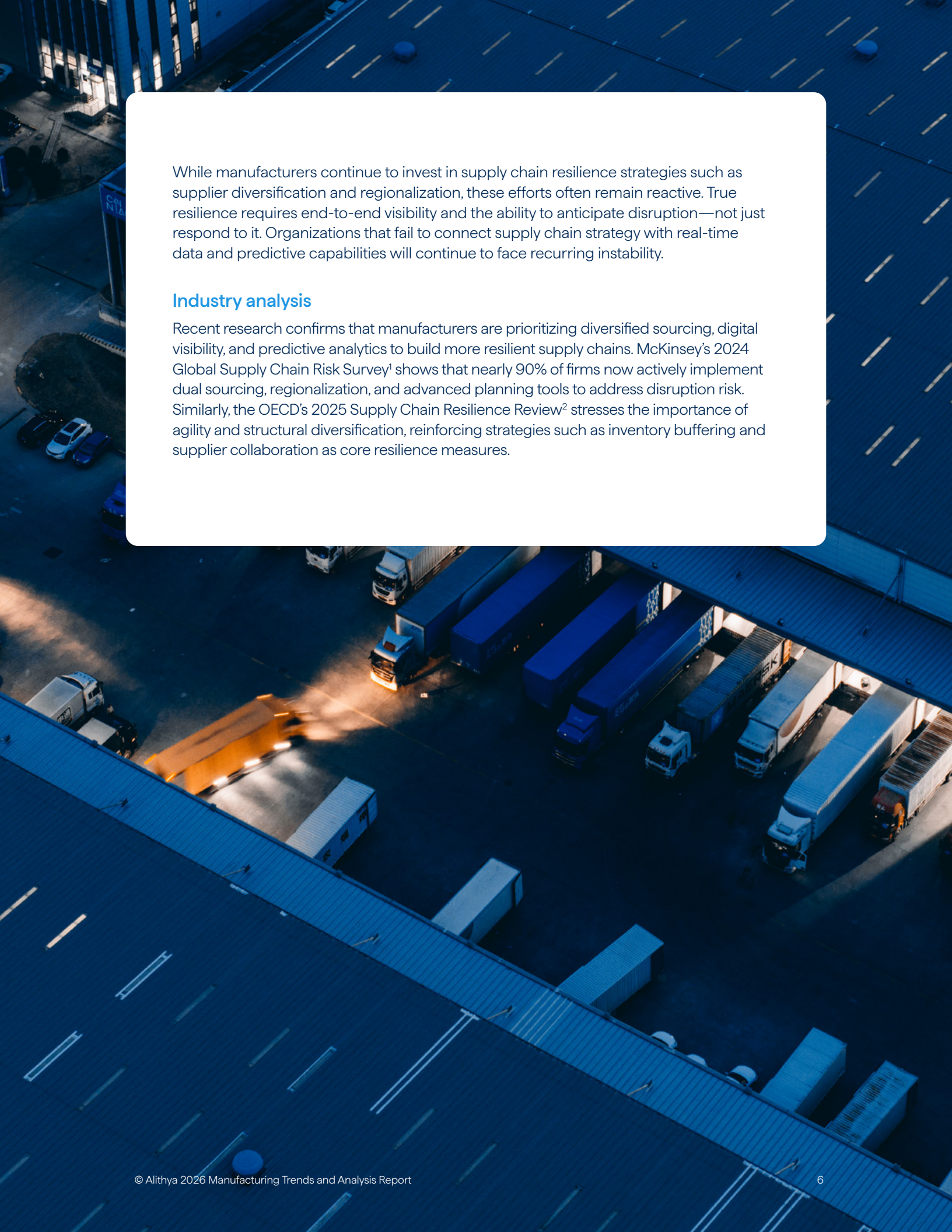
© Alithya 2026 Manufacturing Trends and Analysis Report

1 How is your organization preparing for supply chain disruptions? (Select all that apply)



Summary of results

Survey results reveal that manufacturers are deploying a wide range of strategies to prepare for supply chain disruptions. The most common response, selected by 57.6% of participants, is diversifying suppliers and sourcing locations, followed closely by predictive analytics and inventory buffering (both at 55.1%). Digital visibility tools and contingency planning with suppliers also feature prominently. Notably, AI and automation for disruption modeling are used by 43.7%, reflecting increasing digital maturity. Only 0.6% report having no formal strategy, suggesting that nearly all organizations are taking active steps to mitigate supply chain risk.



While manufacturers continue to invest in supply chain resilience strategies such as supplier diversification and regionalization, these efforts often remain reactive. True resilience requires end-to-end visibility and the ability to anticipate disruption—not just respond to it. Organizations that fail to connect supply chain strategy with real-time data and predictive capabilities will continue to face recurring instability.

Industry analysis

Recent research confirms that manufacturers are prioritizing diversified sourcing, digital visibility, and predictive analytics to build more resilient supply chains. McKinsey's 2024 Global Supply Chain Risk Survey[1] shows that nearly 90% of firms now actively implement dual sourcing, regionalization, and advanced planning tools to address disruption risk. Similarly, the OECD's 2025 Supply Chain Resilience Review[2] stresses the importance of agility and structural diversification, reinforcing strategies such as inventory buffering and supplier collaboration as core resilience measures.

2 How confident are you that your current data infrastructure supports competitiveness?



Summary of results

Manufacturers express a strong degree of confidence in their data infrastructure, with 86.7% of respondents reporting that they are either very confident (39.9%) or confident (46.8%) that their current data environment supports competitiveness. This points to a generally mature baseline, where most organizations believe their data foundations are sufficient to enable performance and growth. At the same time, 13.3% describe themselves as only somewhat confident, suggesting that while outright concern is minimal, a meaningful subset of manufacturers still face constraints that may hinder scalability, advanced analytics, or long-term competitiveness.

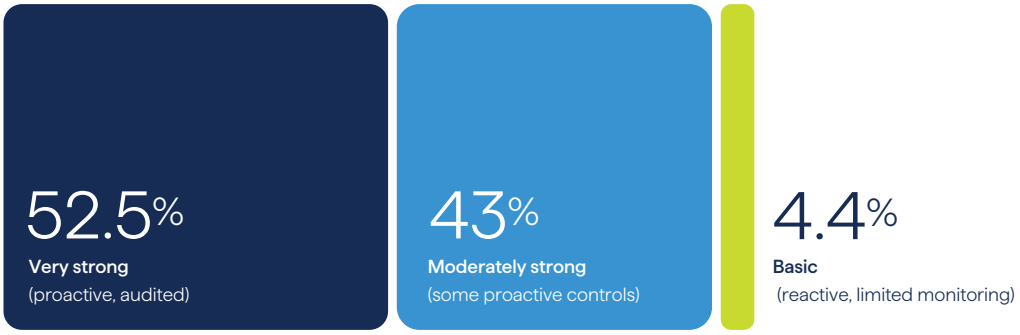
Despite high confidence in data infrastructure, many manufacturers are still operating with fragmented data environments. In practice, this confidence often reflects localized improvements rather than enterprise-wide integration. Without a unified data foundation, organizations will struggle to scale AI and advanced analytics beyond isolated use cases.

Industry analysis

Recent industry data confirms that manufacturers achieve the greatest gains when they move beyond isolated pilots and scale connected technologies enterprise-wide. According to the World Economic Forum 2025[3] analysis of over 1,000 real-world industrial transformations, firms combining AI, IoT, and automation outperform peers in productivity and operational resilience.

Many organizations report confidence in their data infrastructure, but real competitive value comes when that confidence is translated into optimized workflows and tightly integrated systems. The implication is clear: data readiness is not just an IT benchmark; it is a prerequisite for scalable, AI-enabled operations.

3 How would you rate your current cybersecurity readiness?



Summary of results

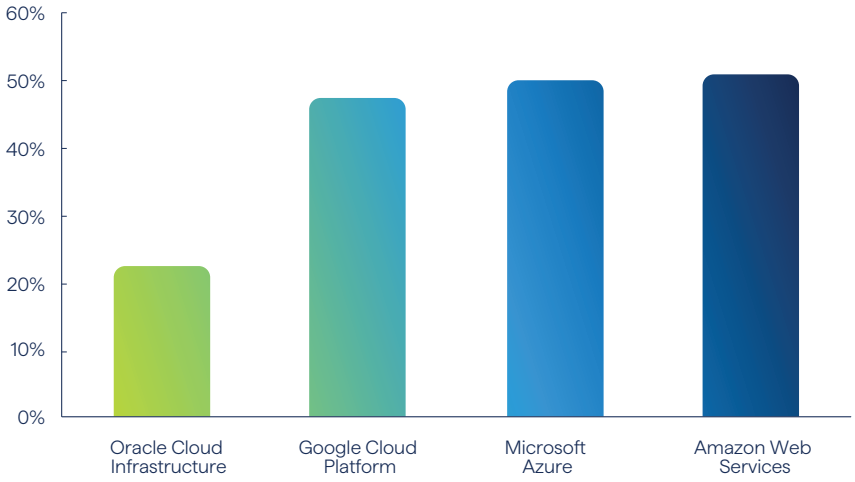
Over half (52.5%) of manufacturers report having a "very strong" cybersecurity posture, characterized by proactive measures and regular audits. A significant portion (43.0%) indicates they have "moderately strong" programs with some proactive controls in place. Only a small minority (4.4%) still operates with a basic, reactive security stance. These findings suggest that most manufacturers recognize the growing threat landscape and have moved toward more structured, forward-looking cybersecurity strategies.

Manufacturers are making meaningful progress in strengthening cybersecurity postures; however, many still treat cybersecurity as a technical function rather than an operational risk. As digital and physical systems become increasingly interconnected, cybersecurity must be embedded into core business operations to avoid becoming a critical point of failure.

Industry analysis

The survey findings align closely with industry-wide concern and investment in cybersecurity exposure in manufacturing. According to IBM's 2024 Cost of a Data Breach[4] report, the average cost of a data breach in the manufacturing sector reached $4.47 million, underscoring the importance of proactive cyber controls, regular audits, and incident-response readiness. The World Economic Forum[5] also stresses that, as manufacturers digitize and connect operations, cyber risks will intensify, placing security maturity at the center of Industry 4.0 resilience planning. In short, the data validates an industry-wide shift: most manufacturers are no longer reactive but are instead embedding cybersecurity as a critical business function.

4 Which cloud infrastructure platforms will play a key role in your manufacturing operations by 2026? (Select all that apply)



Summary of results

The cloud infrastructure results offer a clear signal. Amazon Web Services (50.6%), Microsoft Azure (50.0%), Google Cloud Platform (47.5%), and Oracle Cloud Infrastructure (22.2%) all appear in the data, indicating that manufacturers are preparing for a multi-cloud environment rather than a single-platform future. The relatively close results among AWS, Azure, and Google Cloud Platform suggest that manufacturers are relying on a mix of hyperscale providers to support analytics, AI, data integration, and operational modernization.

Alithya experts point out that Microsoft and Amazon have been the early leaders in scaling cloud infrastructures, while Oracle has been a fast follower, experiencing significant growth in the past year.

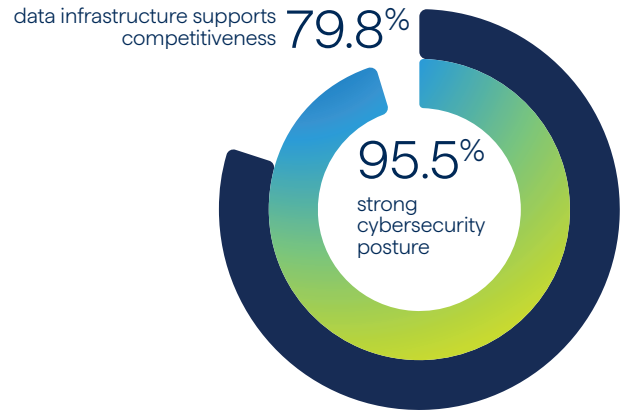
Overall, the data suggests a future landscape defined less by a single dominant vendor and more by multi-cloud, multi-platform strategies. Manufacturers appear to be prioritizing technology ecosystems that can integrate with existing operational environments, support data-driven decision-making, and provide the infrastructure needed to scale AI, analytics, and connected manufacturing capabilities.

Industry analysis

The survey findings are in line with recent industrial-technology research. Deloitte's 2025 Smart Manufacturing Survey[6] highlights that digitally mature manufacturers are embracing multi-vendor ecosystems, often combining cloud providers with enterprise software platforms to support automation, analytics, and agile operations.

Key Insights:

1. Operationally, manufacturers express strong confidence in their readiness while acknowledging areas are still in development. Nearly four in five (79.8%) report that their current data infrastructure supports competitiveness, and 95.5% describe their cybersecurity posture as strong or moderately strong. Yet, concerns about AI-related risks (as highlighted in Part 2 of this report) signal that this foundation will need to evolve as digital operations expand.



2. Supply chain preparedness shows greater variability, with responses split across proactive planning, partial readiness, and ongoing work to build resilience. Technology strategy is increasingly ecosystem-driven. Respondents expect cloud infrastructure platforms such as Microsoft Azure, Oracle Cloud, Amazon Web Services, and Google Cloud to play key roles in their operations.

3. The picture that emerges is one of organizations strengthening foundational systems while preparing for more interconnected, data-heavy, and digitally orchestrated operations.

Conclusion:

Manufacturers are entering a critical phase of transformation. The industry has moved beyond the question of whether to invest in digital capabilities. Today, the focus is on how to translate those investments into sustained operational and strategic value.

The findings from this report highlight a consistent theme: while progress is being made across supply chain resilience, data infrastructure, cybersecurity, and AI adoption, these efforts are often fragmented. Organizations are building capabilities but not always integrating them in a way that enables scale. This disconnect represents the defining challenge facing the manufacturing sector today.

At Alithya, we believe the next wave of industry leaders will be distinguished not by the breadth of their technology investments, but by their ability to operationalize those investments within a unified, intelligence-driven model. This means aligning data, systems, and processes to deliver real-time visibility, predictive insight, and coordinated execution across the enterprise.

Organizations that succeed will move beyond incremental improvements and unlock measurable gains in efficiency, resilience, and innovation. Those that do not risk remaining in a cycle of continuous investment without proportional return.

The path forward is clear: transformation must shift from isolated initiatives to integrated execution.

Alithya partners with manufacturing organizations to help close this gap, bringing together strategy, technology, and operational expertise to enable scalable, end-to-end transformation.

Because in today's manufacturing environment, adopting technology is no longer enough. **The ability to execute consistently and at scale is what defines leadership.**

Manufacturers are moving beyond adoption and focusing on the capabilities required to sustain digital and AI-driven transformation enterprise-wide. Success now depends on strengthening data foundations, modernizing legacy systems, upskilling the workforce, establishing mature cybersecurity frameworks, and connecting governance models to technology investment to measure operational value. As AI and automation become core to competitiveness, manufacturers that integrate these elements into a cohesive, future-ready operating model will be best positioned to lead the next era of intelligent manufacturing.

Contact us

Alithya is your trusted advisor

Alithya helps manufacturers accelerate transformation by aligning digital investment to measurable operational value—from automation roadmaps and AI-enabled use cases to workforce capability development and end-to-end data-integration frameworks. If your organization is ready to advance from digital adoption to scaled impact, our experts can help build the right strategy, operating model, and execution plan.

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

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

aws partner network

Microsoft Solutions Partner

ORACLE Partner

salesforce partner

© Alithya 2026 Manufacturing Trends and Analysis Report

Alithya

References

1. https://www.mckinsey.com/capabilities/operations/our-insights/supply-chain-risk-survey

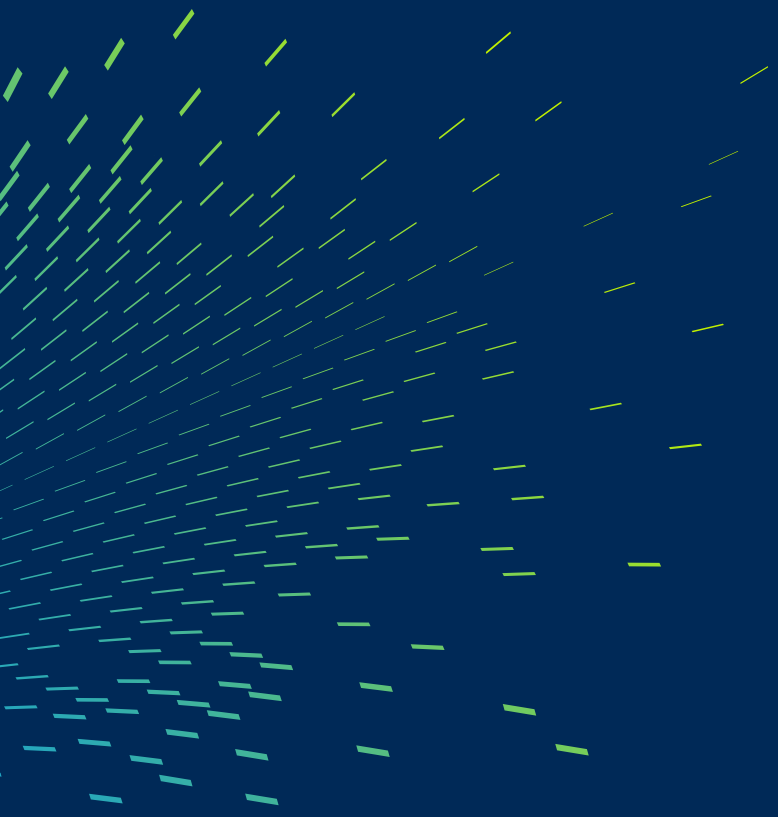
2. https://www.oecd.org/en/publications/2025/06/oecd-supply-chain-resilience-review_9930d256.html

3. https://www.weforum.org/stories/2025/10/takeaways-from-the-world-largest-dataset-industrial-transformation/

4. https://www.ibm.com/reports/data-breach

5. https://www.weforum.org/stories/2024/06/manufacturers-face-cyber-threats-cyber-resilience-culture/

6. https://www.deloitte.com/us/en/insights/industry/manufacturing-industrial-products/manufacturing-industry-outlook/2025.html



© Alithya 2026 Manufacturing Trends and Analysis Report

Alithya