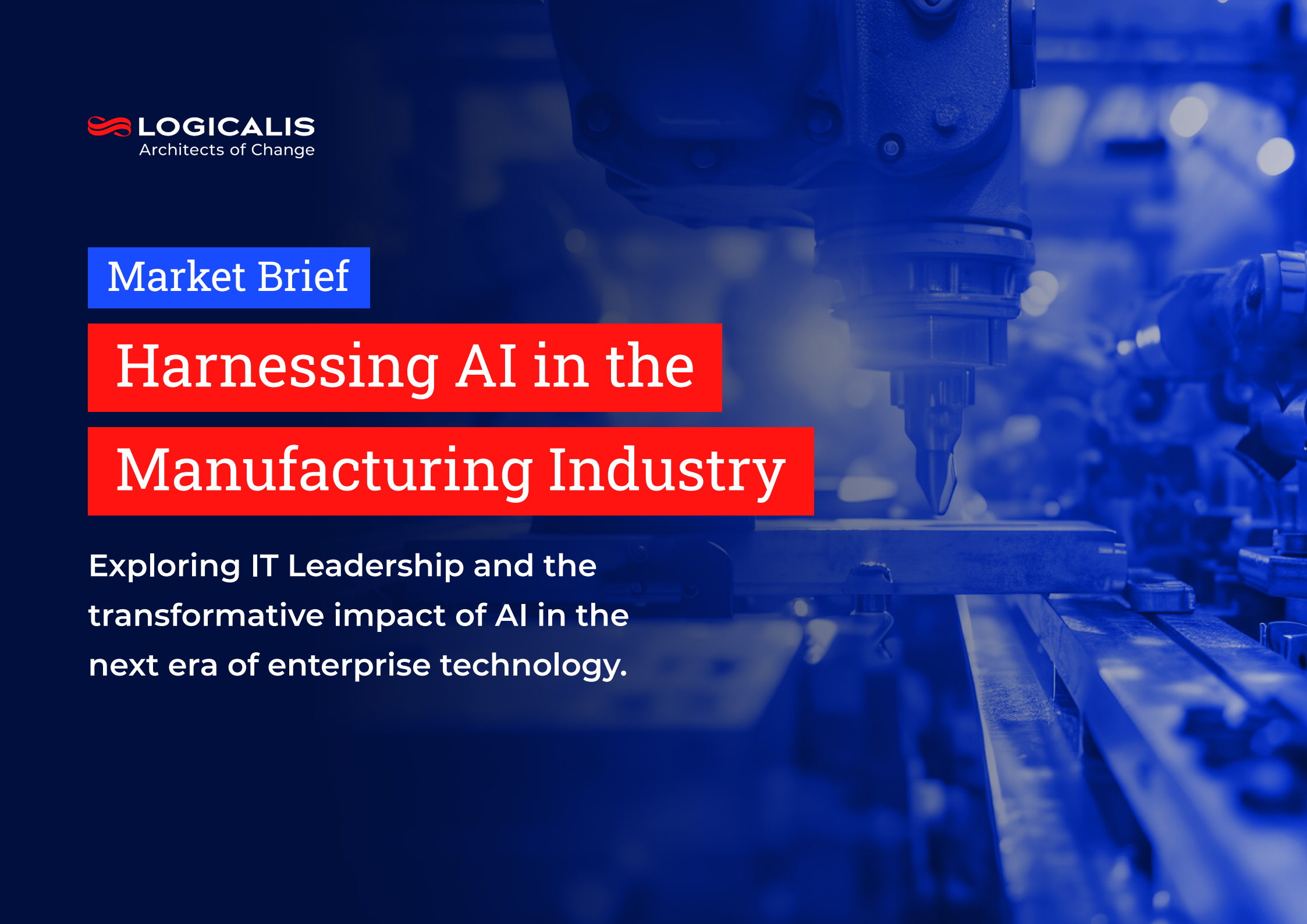
LOGICALIS
Architects of Change

Market Brief

Harnessing AI in the Manufacturing Industry

Exploring IT Leadership and the transformative impact of AI in the next era of enterprise technology.



Introduction

Industrial manufacturing isn't starting from scratch with AI—it already has momentum.

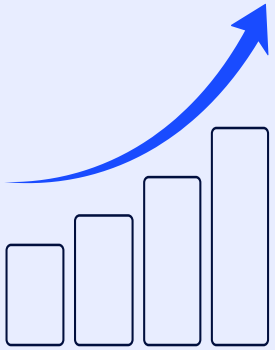
Having already digitised through Industry 4.0, manufacturers have connected equipment, integrated IoT, and turned data into usable insights. After years of working through the practical challenges of digital transformation, they're now applying those learnings to scale AI across the industry.

Investment in AI within the manufacturing sector is experiencing high growth, with the global manufacturing AI market projected to grow from roughly $43.6 billion in 2024 to over $153 billion by 2030. (IOT Analytics)

Global manufacturing AI spending projected to grow to **over $153 billion by 2030**.

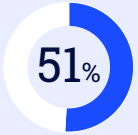
This Market Brief features insights from industry leaders and compelling research findings from the Logicalis Global CIO Report 2026, examining how manufacturing CIOs are shaping this new frontier: Setting vision, governing risk, building enterprise intelligence, and architecting a future powered by autonomous systems.

Setting the AI Agenda

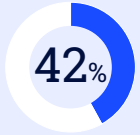


97%

of organisations report an **increase** in appetite for AI adoption over the past year.



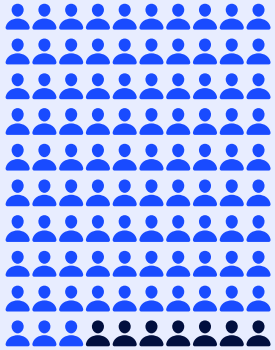
51% of CIOs cite innovation demands as the strongest driver for AI adoption.



42% say early proof-of-concept success has made them bolder in AI initiatives.

36% point to risk and compliance management as a key driver.

39% of CIOs believe AI adoption is moving too fast.



93%

say their organisation is **learning as they go**.

AI is advancing at a pace unlike previous waves of enterprise technology. What began as experimentation has become expectation.

Findings from the Logicalis Global CIO Report 2026 highlight a significant increase in enthusiasm for AI among manufacturing industry leaders, at 97%.

Innovation demands remain the strongest driver, cited by 51% of CIOs, but pressures around risk management and compliance (36%) and early proof of concept success (42%) have also acted as catalysts.

However, confidence in structures that support these decisions remains uneven. Over half of CIOs (55%) don't feel extremely confident that they have a coherent AI roadmap in place for the next 2-3 years.

There is still clear caution around the pace of change. While 39% believe AI implementation in their organisation is moving too quickly, 93% say their organisation is learning as it goes, despite the experience gained from Industry 4.0.

This combination of ambition and urgency places manufacturing CIOs at the centre of a new balancing act. The AI agenda is no longer about identifying opportunities alone, but about regulating speed in an environment where technology is advancing faster than organisational structures can comfortably absorb.

From Confidence to Capability

Across manufacturing, AI is already delivering value where data, ownership, and processes are well established, with the greatest impact seen in predictive analytics and forecasting at 66%.

Predictive analytics is taking centre stage, helping manufacturers move from reactive to proactive planning by using data to anticipate issues, reduce waste and downtime, improve quality, and optimise supply chains.

> **AI is already delivering real value in manufacturing—from predictive analytics to improved service and customer experience—but it's not yet embedded at scale. What we're seeing is a gap between where AI works and where it works consistently. Bridging that gap will define the next generation of manufacturing leaders.**
>
> Sarfaraz Khan, Sales Director Connectivity, Logicalis Germany

Manufacturing CIOs also cite AI is delivering impact in service delivery (43%) and improvements in customer experience (36%). As production lines become more complex and customer expectations rise, traditional methods are no longer enough to keep pace.

These are meaningful gains, in areas where value creation matters most, but what they don't yet show is consistency. AI is working, but it is not yet embedded, and this is where confidence begins to soften.

When CIOs consider their ability to move from pilots to organisational wide impact, over two-thirds are not strongly confident they can scale AI beyond pilots and proof of concepts (64%).

Over **two thirds** of CIOs don't strongly believe they can scale AI beyond pilots.

For industrial manufacturers, scaling AI can feel like a repeat of Industry 4.0—many of the same adoption hurdles reappear. What works in pilots often breaks down at scale—especially when auditability and regulation matter.

What the research suggests is that AI maturity is less about technology and more about organisational design. Scaling AI requires the same things that scale any enterprise capability: standardisation, governance, accountability and measurement.

Manufacturing CIOs point to the main blockers:

- **88%** cite regulatory and compliance concerns
- **92%** data challenges.
- **91%** lack of internal technical skills.
- **88%** organisational culture.

The State of AI Security

AI security in 2026 is shaped by the realities of its dual-use nature. While AI has been developed with the intention of advancing human capabilities, it has also been appropriated by adversaries to further their objectives. As highlighted in the Cisco State of AI Security 2026 report, "The tools we built to accelerate human potential have been successfully weaponised to accelerate adversarial objectives".

While AI aids fraud detection and compliance, it also expands cyberattack opportunities. Malicious use of deepfakes and automated phishing makes threats more frequent and complex. According to the Global CIO Report 2026, 64% of manufacturing organisations faced cybersecurity incidents last year, and 26% of CIOs now see AI as a major risk.

Operationally, security teams are already feeling the impact. 26% of CIOs say AI has created new security blind spots, and even more concerning is 35% report incident response times have worsened.

While teams grapple with AI-driven vulnerabilities, risks from a lack of AI governance are also emerging. 59% of CIOs admit to not feeling extremely confident they have full visibility of AI tools in use across their organisation, and two-thirds (67%) citing a lack of confidence that their organisation's AI governance model can keep pace. Even more revealing is 66% say employee AI training is insufficient and 47% say employees jeopardise data security through AI use. This is not failure of intent but a sign that AI governance is running ahead of institutional capacity.

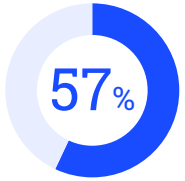
Remarkably, 65% of organisations have boosted their budgets for post-breach remediation and ransom payments, underscoring just how much more prepared they feel they must be as incidents seem almost unavoidable. Furthermore, while AI presents significant opportunities, the sentiment within manufacturing is cautious: 34% say they often wish AI had never been invented.

> **AI is a powerful force in cybersecurity, but without the right skills and governance, it can create more vulnerabilities than protection. CIOs have the challenging task of defending their organisations against AI-driven threats, but also from the risks posed by the very AI tools meant to safeguard them.**
>
> Bob Bailkoski, Global CEO of Logicalis Group

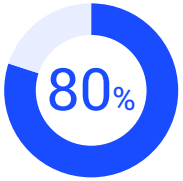
The Next Frontier

Generative AI is transforming design, production, maintenance, and supply chain operations across the manufacturing industry. Using large language models (LLMs) and domain-specific data, organisations can speed up innovation, minimise downtime, and improve efficiency.

However, interest is swiftly progressing beyond this point. 58% of manufacturing CIOs featured in the Global Logicalis report signalled a growing investment commitment to agentic AI over the coming year, shifting towards systems capable of autonomous action and decision-making with limited human involvement.



of CIOs rate their generative AI maturity as ahead of peers.



plan further investment within a year.

58%

of manufacturing CIOs plan to invest in agentic AI in the next 12 months.

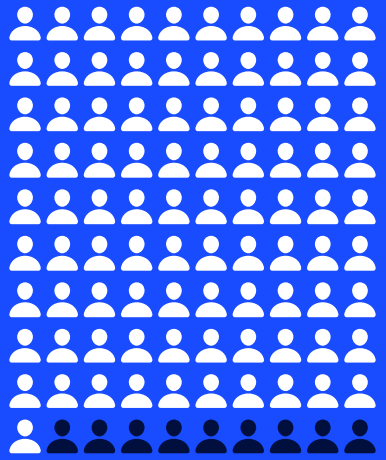
Many leading manufacturers now use agentic AI and are seeing measurable results. Automated visual anomaly detection has improved defect detection, autonomous routing and scheduling have boosted logistics efficiency and, in some cases, cut inventory and logistics costs by more than 20 percent, according to McKinsey, and intelligent workflow agents have reduced transaction cycle times from days to hours or minutes.

And it doesn't stop there. Quantum computing is already appearing on strategic roadmaps, with just over a third (32%) expecting it to impact existing business models within the next two years.

Adopting these latest AI technologies all have consequences for operating models. The growing reliance on Managed Service Providers (MSPs) reflects a recognition that few organisations can sustain the pace of change alone. Nearly all CIOs (91%) expect to use MSPs in the coming years.
For CIOs this demands a different kind of leadership. Less about transformation projects, more about institutional design. Less about deploying new tools, more about shaping environments in which autonomous systems, external partners and human teams can coexist without eroding accountability.

91%

of CIOs expect to use MSPs in the coming years.



Conclusion

AI is no longer a future consideration for manufacturing—it is becoming a defining capability for competitiveness, resilience and growth.

The organisations that will lead are not simply those that invest fastest, but those that pair ambition with governance, strengthen the foundations needed to scale, and build operating models that allow people, partners and intelligent systems to work together effectively.

These key principals will help manufacturing CIOs achieve their ambitions:

Build a clear AI roadmap with priority use cases, governance and executive ownership so adoption stays aligned to business goals and organisational capacity.

Strengthen the data, integration and operating foundations for scale by improving data quality, connecting plant and enterprise systems, and standardising the path from pilot to production.

Embed security, compliance and resilience into every AI initiative through better visibility, practical controls and stronger alignment across IT, OT and risk teams.

Invest in workforce training, leadership capability and measurable governance so employees use AI responsibly and the organisation scales with confidence.

Leverage Managed Service Providers (MSPs) to accelerate innovation and support the rapid pace of technological change, recognising the need for external expertise.

Further reading:

Read the full Logicalis Global CIO Report 2026 here.

A CEO perspective – discover insightful perspectives from our regional CEOs on the key findings of this year's CIO Report here.

LOGICALIS
Architects of Change

We are Architects of Change. We help organisations succeed in a digital-first world.

At Logicalis, we harness our collective technology expertise to help our clients build a blueprint for success, so they can deliver sustainable outcomes that matter.

www.logicalis.com