



WHITEPAPER

Outlook 2026: The Agentic Manufacturing Enterprise



Introduction:

Building the Future

Manufacturing leaders enter 2026 in an environment where resilience is mandatory and the margin for error is thinner than ever.

Economic and geopolitical forces continue to reshape the sector. Global trade conditions continue to shift with little warning, which has emerged as a top concern for more than three-quarters of manufacturers.¹ Supply networks are fragile. Input costs remain elevated. Skilled labor is scarce.

At the same time, there is a need to tackle deeper structural changes. Manufacturers must redesign sourcing in the face of global fragmentation, stay abreast of regulatory compliance, and meet energy transition and sustainability requirements – all while protecting margin.

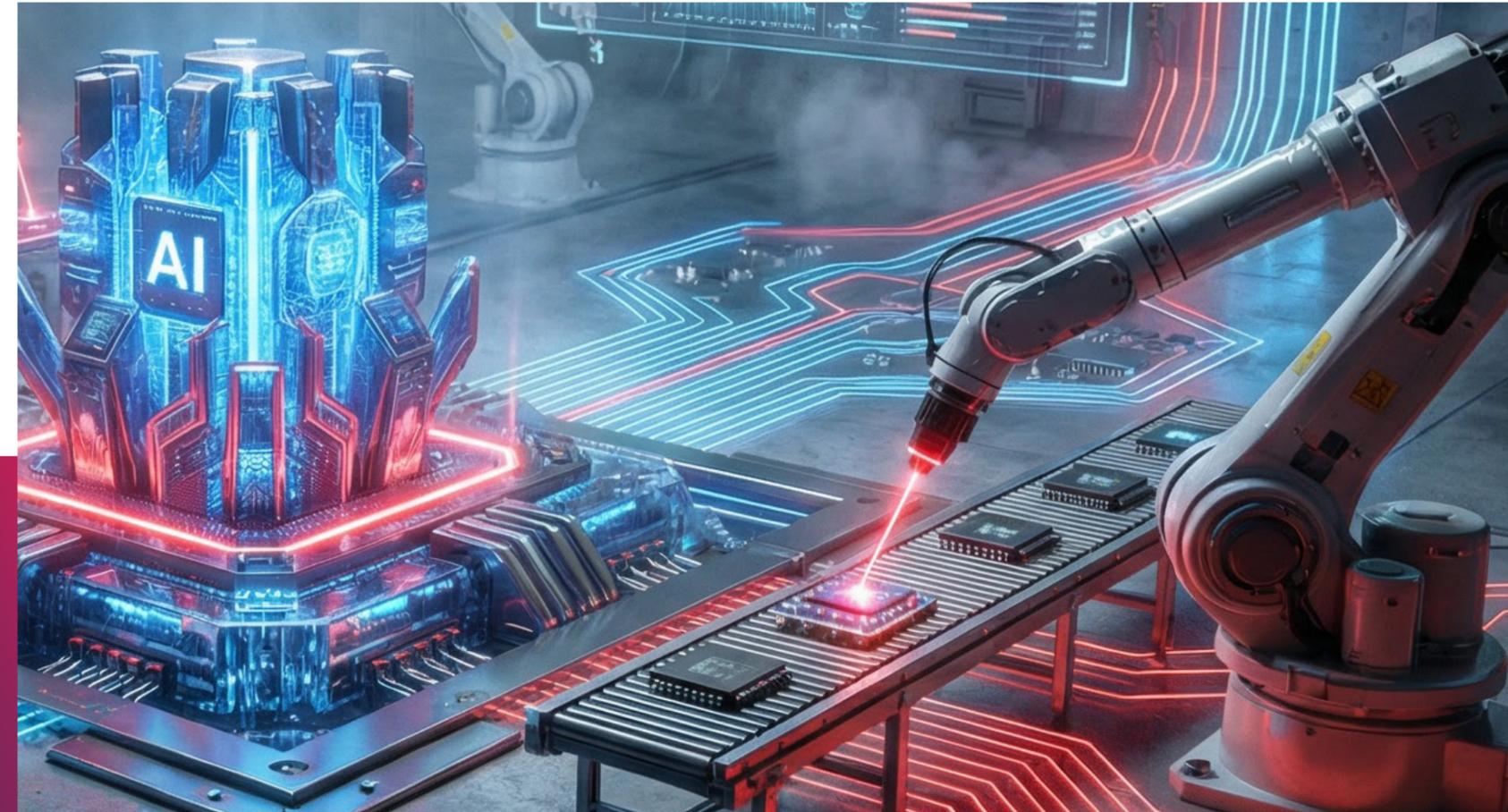
These pressures will intensify over the next year. Disruption is no longer

temporary, and operating models built for relative stability are now being tested by persistent volatility.

Customer expectations compound the strain. Buyers expect supply chain resilience, faster fulfillment, consistent quality, and greater transparency. Execution speed and cross-functional coordination have become primary levers of competitiveness.

In short, executives need the ability to do more with less, and to do it faster.

The Institute for Supply Management's manufacturing purchasing managers' index, tracking economic activity in the sector, contracted for 10 months of 2025, despite general growth in the US economy.²



¹ https://nam.org/wp-content/uploads/securepdfs/2025/09/NAM_Q3_2025_Outlook_Write_Up.pdf
² <https://www.ismworld.org/supply-management-news-and-reports/reports/ism-pmi-reports/pmi/november/>

The challenge is not a lack of data or digital investment. Manufacturers have deployed sensors, analytics, automation, and AI at scale. Yet outcomes often fall short. The root cause is a persistent gap between intelligence and execution.

Systems generate insights, alerts, and even recommendations. Digital tools inform action. But decisions still move through manual workflows, layered approvals, and functional silos, limiting response times and scale.

This gap between knowing and doing is becoming a competitive liability.

In 2026, manufacturers will need systems that do more than analyze conditions. They will need intelligence capable of acting in real time and coordinating decisions across the organization, adjusting its behavior as conditions evolve. And this will need to happen without relying on constant human orchestration.

That is the promise of agentic AI: systems that can perceive operational context, make decisions within defined constraints, and act autonomously across workflows. When deployed responsibly, agentic systems transform AI from a diagnostic tool into an operational capability.

Sutherland Point of View

Agentic AI represents an operating model shift rather than a technology upgrade. The next generation of manufacturing performance will not be driven by better dashboards or faster alerts, but by intelligence embedded directly into production and supply execution.

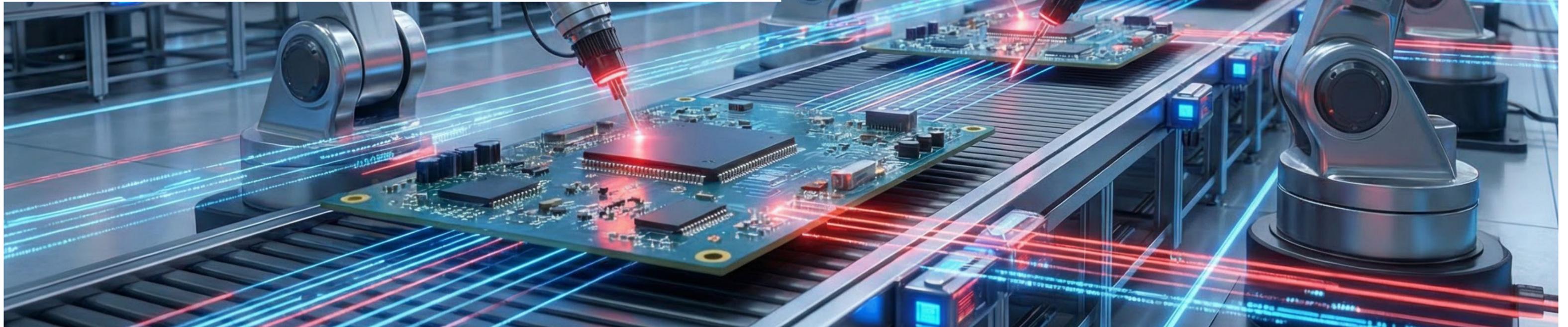
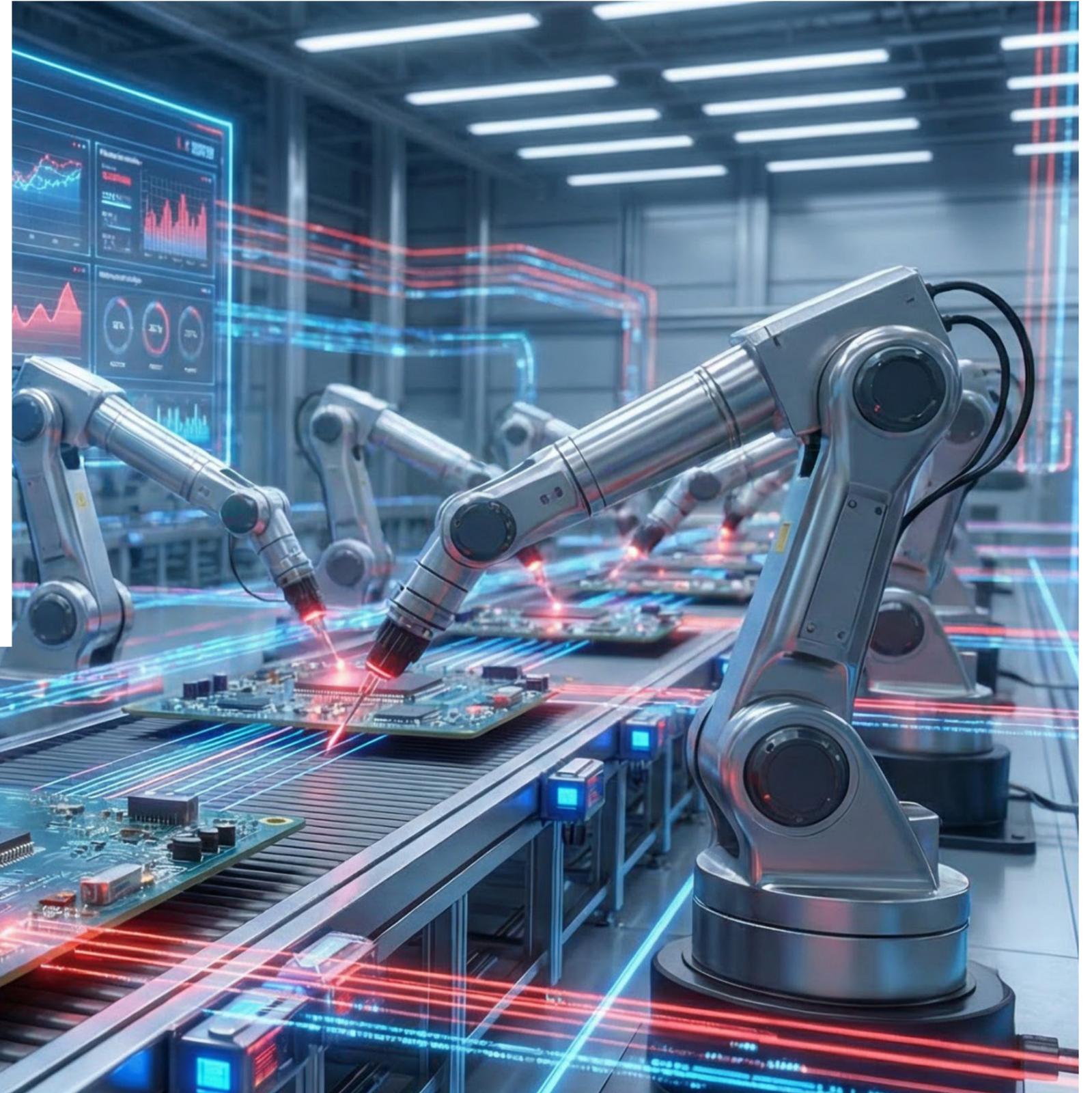
From our work across global manufacturing and industrial ecosystems, we see that sustainable advantage emerges when operations, supply planning, quality, finance, and partner coordination operate as a single adaptive system. Agentic manufacturers do not simply react to disruption; they absorb volatility and act decisively, with humans and AI working together by design to protect throughput, margin, and customer trust.



These capabilities are already within reach. Today, you can begin to integrate technologies that will:

- Manufacture goods while intelligently diagnosing and taking steps to fix their faults when they arise.
- Control inventory, considering the cost and availability of materials, as well as monitoring alternative options as supply conditions change.
- Orchestrate billing and customer service, eliminating revenue leakage and reducing total cost of ownership (TCO)

The following sections explore three areas where agentic AI can deliver meaningful impact and the steps leaders can take today to prepare.



Three Agentic Opportunities for Manufacturing

Opportunity 1: Autonomous Operations and Smart Production

The Challenge

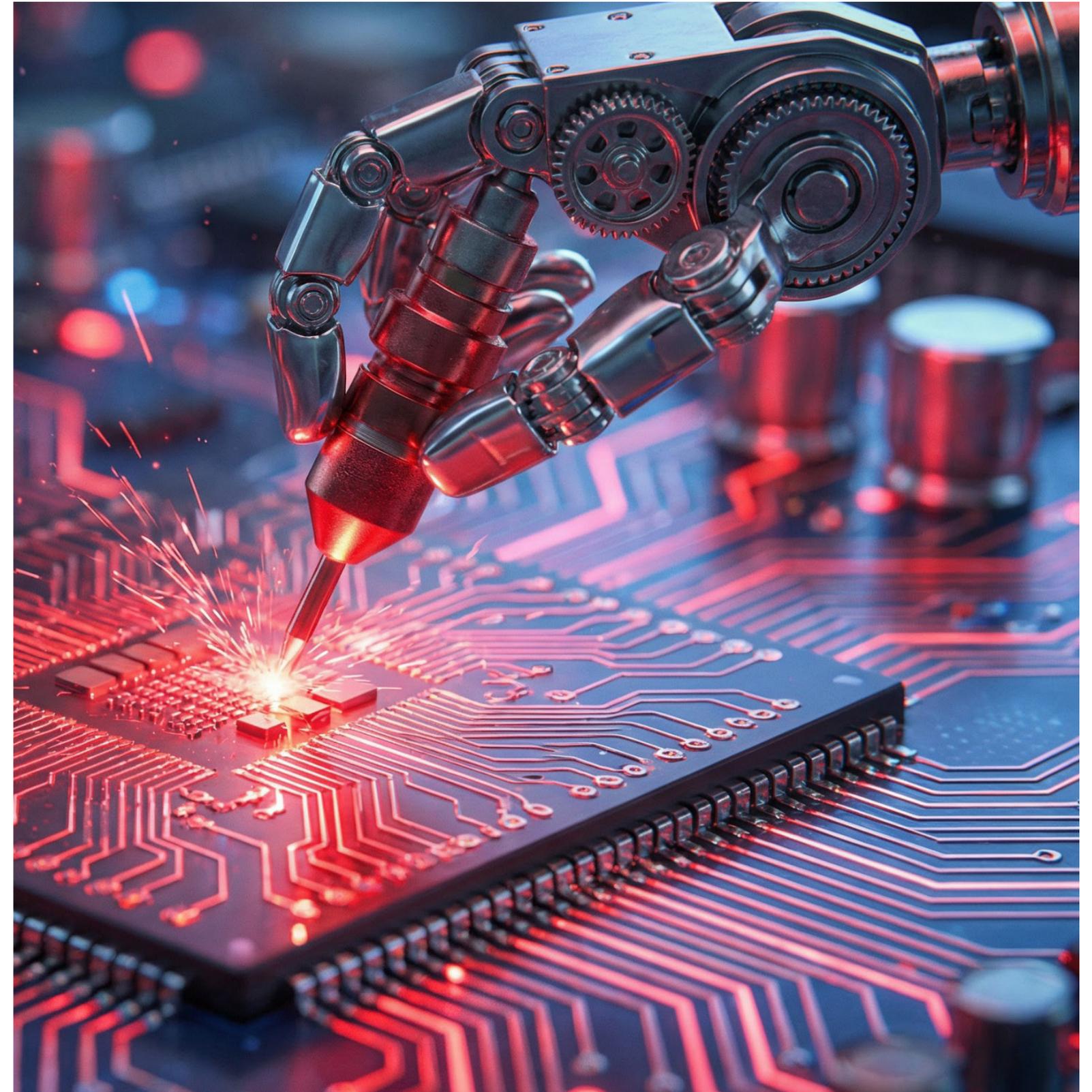
Manufacturing operations are becoming more complex, not less.

Plants are expected to handle greater product variety and increasingly smaller production runs across the board. Schedules change more often, even as expectations around uptime, quality, and cost remain unchanged. In many facilities, however, production is still constrained by inflexible systems and fragmented data.

Even where data is available, it often stops at the level of visibility. Dashboards display performance metrics, but execution still depends on manual coordination across teams.

If automation does exist, it is often narrowly scoped. Predictive maintenance tools flag potential failures but rely on human teams to interpret alerts and schedule interventions. Quality systems detect defects but do not always adjust upstream processes in response. Production planning tools generate schedules that quickly become obsolete when conditions change.

The result is latency between signal and response, as well as between insight and action. In volatile environments, that delay erodes throughput, increases downtime, and weakens resilience.



The Agentic AI Opportunity

Agentic AI introduces a different operating model for the shop floor, powering the shift from insight to action.

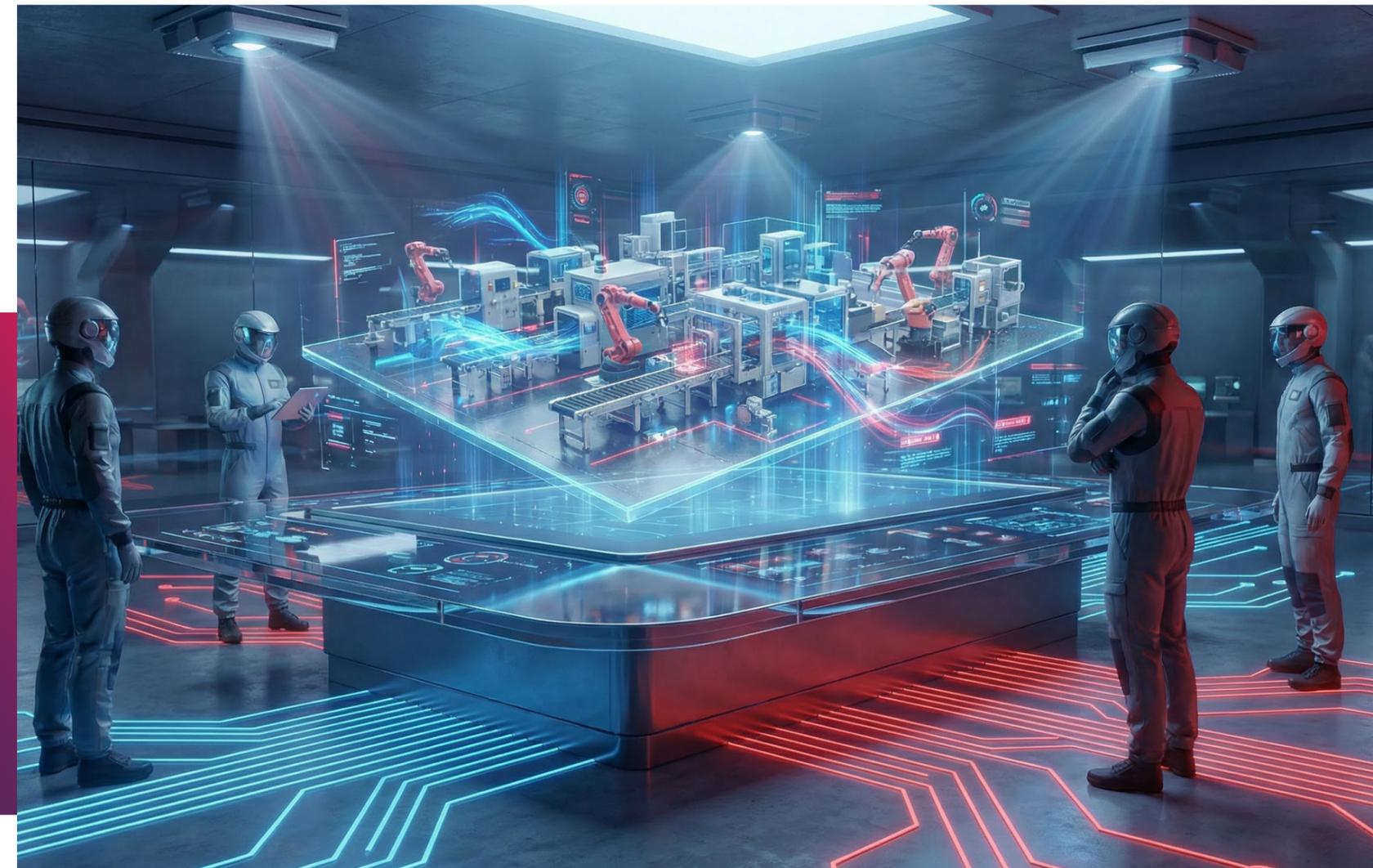
Instead of isolated tools supporting individual tasks, agentic systems embed intelligence directly into production processes. They monitor a variety of factors, from machine performance and quality signals, to demand changes in real time. When conditions change, they do not simply recommend action – they execute within predefined safety, quality, and policy boundaries.

In practice, this means production systems that do not just report issues but respond to them. Equipment that schedules its own maintenance based on risk and production priorities. Quality controls that adjust processes before defects

propagate. And production lines that reconfigure dynamically as demand shifts. Closed-loop execution replaces alert-driven escalation.

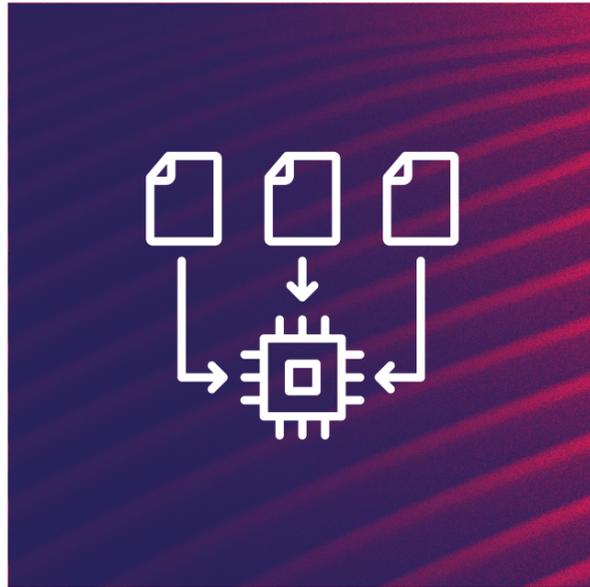
Over time, these systems learn from outcomes, steadily improving performance by increasing yield and minimizing downtime while reducing reliance on constant human oversight – ultimately allowing humans to focus on high-impact decisions rather than routine coordination.

For a leading consumer electricals manufacturer, deploying a digital supply chain platform to connect all operations into a single traceability ecosystem meant gaining real-time inventory visibility that improved efficiencies and quality compliance. It led to 100% automation of single-click re-orders.³



³ <https://www.sutherlandglobal.com/insights/case-study/digital-supply-chain>

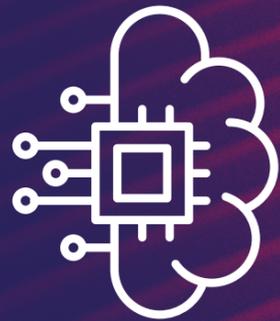
Practical Actions for Manufacturing Leaders



Strengthen operational data foundations. Ensure machines, sensors, and control systems generate reliable, standardized data that can be consumed in real time. Implement a **data engineering framework** to lay a modern data foundation that drives actionable intelligence.



Connect systems across the production lifecycle. Harness a **cloud-based IoT platform** to integrate systems, from manufacturing execution systems (MES) to maintenance and quality management systems (QMS). Modernized core platforms with end-to-end integration and interoperability will enable real-time tracking and proactive maintenance.



Turn manufacturing data into operational intelligence. Shift from production visibility to execution resilience. Apply **AI-driven analytics** to reveal patterns across operations and supply flows, supporting faster decisions and more predictable performance.



Embed human oversight by design. Define escalation paths and exception handling with a **human-in-the-loop approach**, ensuring autonomous decisions enhance safety, compliance, and performance without introducing unmanaged risk.

Opportunity 2: Intelligent Supply Chain and Inventory Orchestration

The Challenge

Manufacturing supply chains remain exposed to volatility at every layer. Ongoing geopolitical volatility and recurring transportation disruptions have made traditional planning models far less reliable. Input costs remain unpredictable, and demand rarely follows expected patterns.

Despite this, many manufacturers continue to plan through periodic forecasts and fixed inventory rules, relying on manual intervention when exceptions arise. In other words, the industry's go-to approach assumes stability between planning cycles. But that assumption no longer holds.

As a result, inventory buffers grow, working capital is constrained, and production plans are frequently reworked as conditions change. Disconnected data across the extended supply network further limits visibility and slows response times. When disruptions occur, teams often react too late or overcorrect, creating inefficiencies elsewhere in the network.

This reactive posture limits agility and makes it difficult to balance cost control with service reliability in an increasingly unpredictable environment.



The Agentic AI Opportunity

If volatility is structural, orchestration must be continuous.

Agentic AI shifts supply chains from episodic planning to real-time coordination. By integrating real-time demand signals, supplier performance data, logistics constraints, production capacity, and more, agentic systems can anticipate disruptions and adjust flows autonomously. These systems dynamically recalibrate inventory levels and production schedules as conditions evolve, without waiting for a formal planning cycle.

Over time, they learn which responses consistently reduce cost and risk while protecting service across the network. Rather than depending on fixed buffers, manufacturers build a more adaptive form of resilience. They can respond earlier to emerging issues and adjust plans intelligently to maintain continuity despite ongoing volatility.

The result is stronger service performance with less working capital tied up and a faster path to recovery after disruption.

Sutherland facilitated a supply-chain transformation for a global fast-moving consumer goods (FMCG) enterprise, reducing expiry losses by 3%, improving revenue by 2.8% and working capital by 3.4%.⁴



⁴ <https://www.sutherlandglobal.com/uk/insights/case-study/supply-chain-innovation>

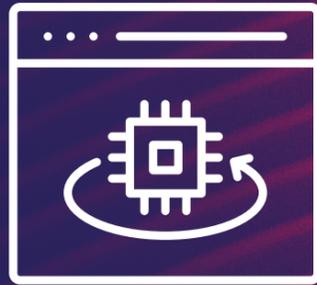
Practical Actions for Manufacturing Leaders



Improve end-to-end visibility. Invest in intelligent automation that integrates data across suppliers and logistics providers, as well as internal systems, for intuitive, real-time access.



Manage data effectively. Begin by identifying where critical supply and inventory data is fragmented across ERP systems, planning tools, warehouse platforms, supplier portals, and logistics providers. Eliminate data silos with a modernized cloud framework so that information is easily accessible and can be plugged into intelligent solutions.



Enable real-time decision loops. Design disruption-ready systems that react in real-time with dynamic scheduling, sourcing, and escalation. Ensure supply-chain decisions can trigger immediate execution across all areas, from procurement and production to logistics. Combine this with **digital assurance** to continuously validate that autonomous decisions adhere to regulatory requirements.



Align incentives and governance. Define policies that allow autonomous adjustments while maintaining commercial and compliance controls. Ensure performance metrics and accountability models are aligned so that automated decisions reinforce business objectives rather than conflict with them.

Opportunity 3: Intelligent Billing and Customer Experience

The Challenge

Revenue operations in manufacturing are becoming more complex – and more exposed.

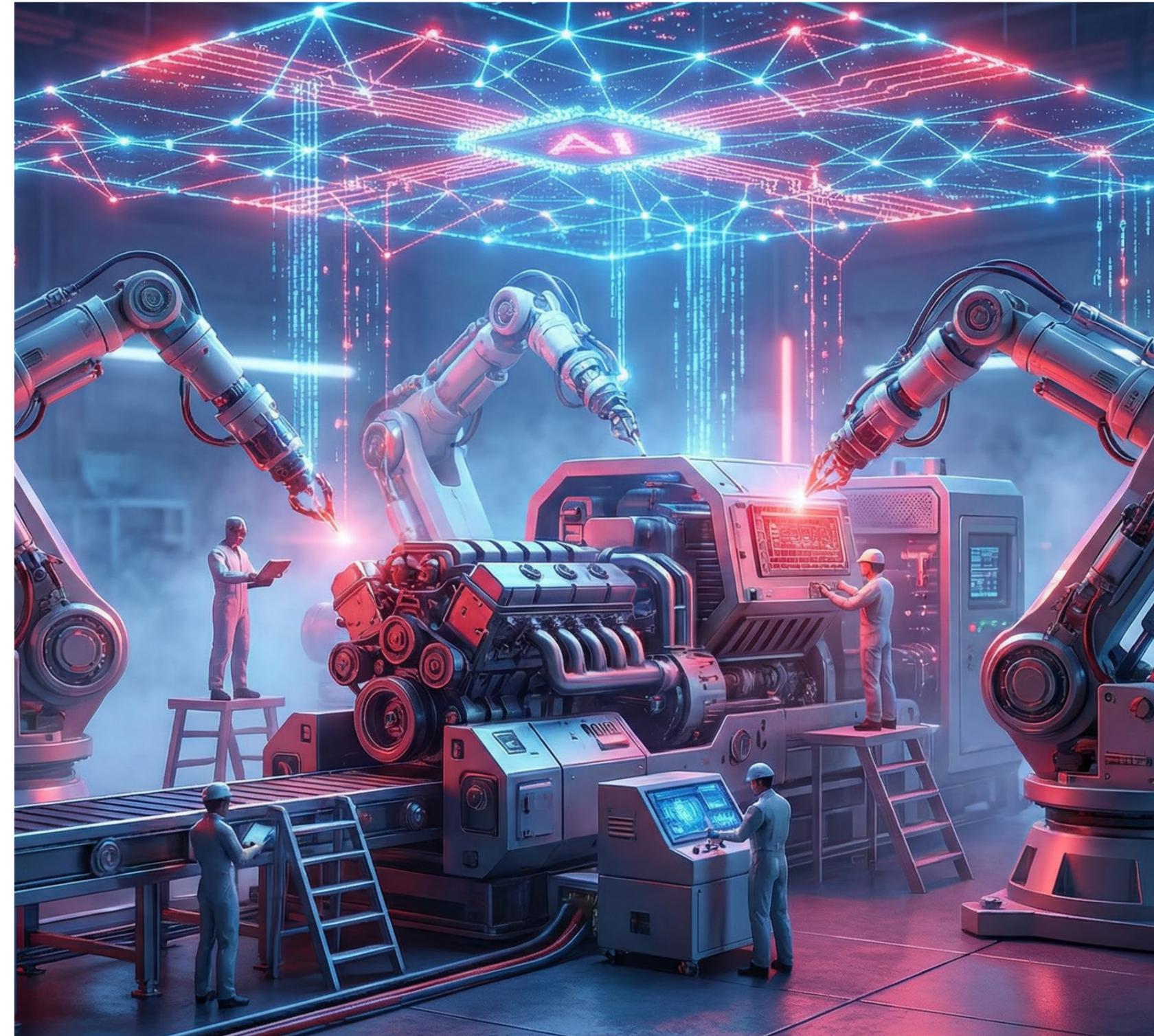
As product portfolios expand, pricing models evolve, and contractual terms grow more nuanced across regions, the margin for error in billing and service execution narrows. At the same time, volatility in supply and fulfillment directly affects what can be invoiced, when revenue can be recognized, and how customer commitments are honored.

Yet commercial operations are often disconnected from operational execution.

Invoices often draw from multiple systems – ERP, MES, logistics, pricing agreements, rebates, and service contracts – each with its own latency and logic. Fragmented or delayed data increases the likelihood of errors, which in turn disrupts payments and damage customer relationships.

Customer service teams face similar friction. Questions about orders or pricing often trigger manual investigation, forcing teams to piece together information from multiple systems. Even when automation exists, it tends to support isolated tasks such as generating invoices or logging tickets without resolving issues end to end.

This gap between insight and execution introduces friction across operations. It slows resolution and undermines both customer experience and revenue, pointing to a need for a more cohesive AI approach.



The Agentic AI Opportunity

Agentic AI introduces a new model for commercial operations in manufacturing.

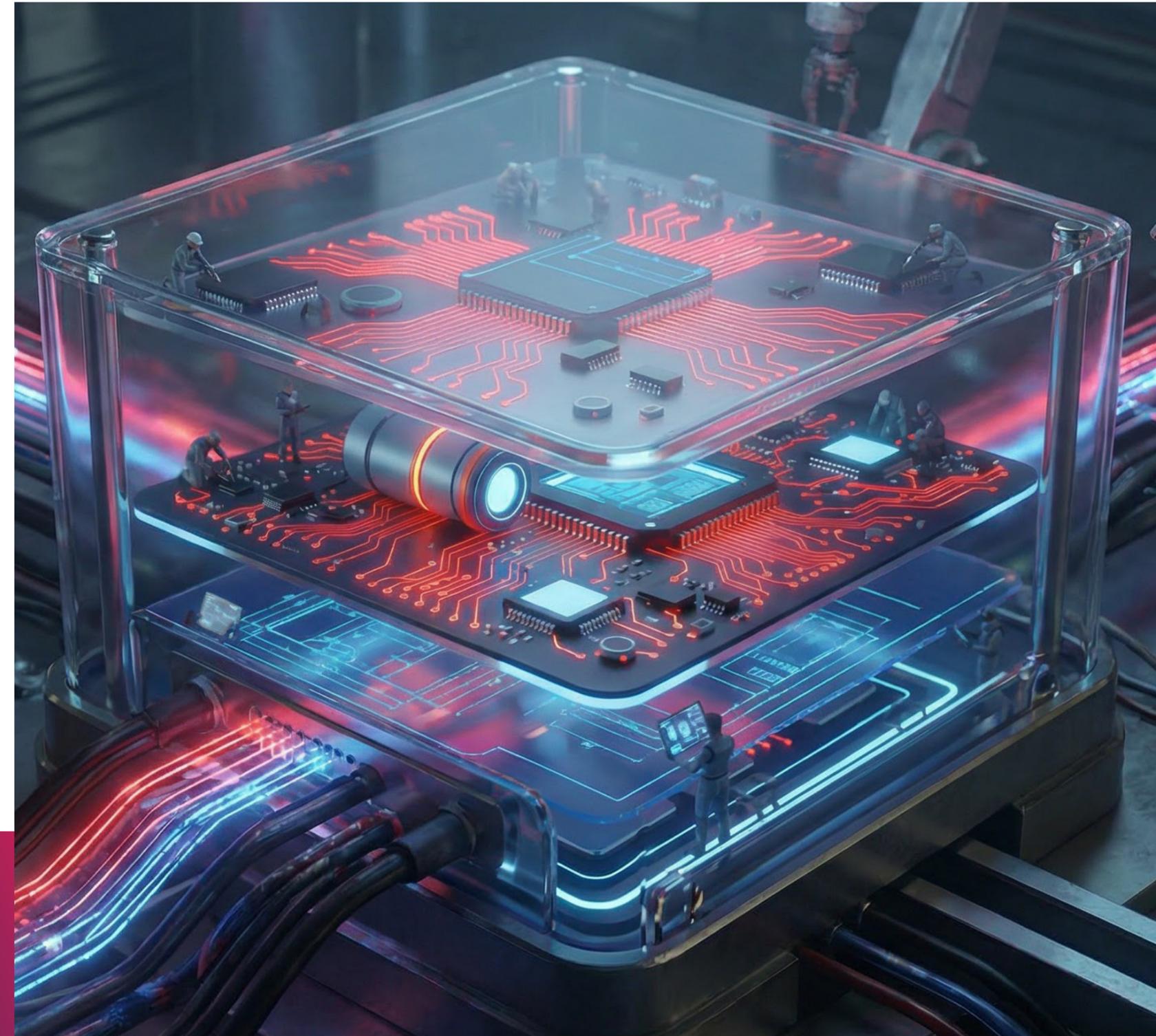
Instead of relying on static reports or rigid, rule-based automation, agentic systems take on a more active role. For this, it is key to step out of siloed AI initiatives and embed intelligence across end-to-end operations, allowing agents to operate as autonomous orchestrators, connecting commercial decisions to execution and customer interaction in real time.

They continuously monitor transaction data, contract terms, shipment status, and usage signals in real time. When discrepancies arise, agents trace the underlying cause and take corrective action within defined governance boundaries or escalating exceptions when strategic judgment is required.

In practice, this means billing systems that do not just generate invoices but validate them continuously. Service interactions become proactive rather than reactive. Commercial decisions are aligned with production and supply adjustments in real time.

As they learn from results, the systems reduce friction across revenue operations while improving cash flow and customer trust.

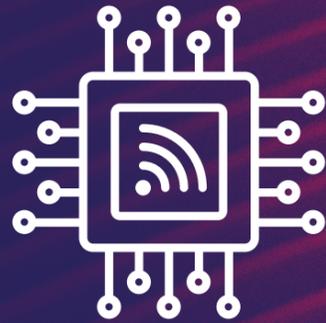
Sutherland partnered with a leading global sportswear brand to transform their e-billing, delivering 35% reduction in TCO and 3x faster purchase cycles.⁵



⁵ <https://www.sutherlandglobal.com/uk/insights/case-study/global-sportswear-manufacturer-streamlines-purchase-cycles-through-cloud-transformation>



Practical Actions for Manufacturing Leaders



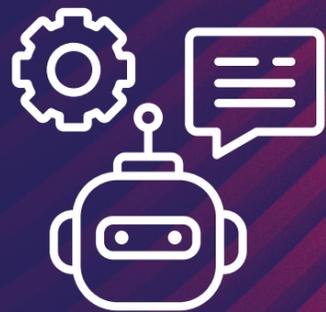
Unify commercial data sources. Create a single, trusted foundation for billing and customer interactions by integrating ERP, pricing, contracts, logistics, and service platforms.



Monitor IT capabilities proactively. Adopt monitoring and management platforms that make infrastructure performance visible in real time and detect incidents automatically, while ensuring service commitments are continuously tracked.



Assess business readiness. Conduct a survey of current capabilities and **digital maturity** to identify gaps and create a roadmap of opportunities where agentic solutions can deliver maximal ROI.



Build human oversight into workflows. Reskill front line teams to focus on high-impact decision making. Build **human-in-the-loop controls** for billing and service exceptions so automated actions enhance the customer experience without compromising transparency or governance.

The Road to the Agentic Manufacturing Enterprise

The transition to agentic manufacturing is already underway.

In every era of manufacturing transformation, the organizations that reimagined how value is created across manufacturing operations and delivered through execution gained a strategic edge. It is no different now. The distinction is that innovation isn't a new machine, production line, or sourcing strategy. It's a new mode of operating, where intelligence becomes operational and adaptive across every process.

Across the sector, early adopters are moving beyond pilot projects and isolated AI tools toward cohesive and comprehensive systems spanning the entire organization that can act, adapt, and learn at scale. The advantage they gain is not just efficiency. It is responsiveness and resilience in an increasingly and consistently volatile environment.

Agentic transformation does not happen overnight, and it cannot be purchased off the shelf. It is built by digitizing core capabilities and connecting systems that activate intelligence through carefully governed autonomy.

Manufacturers that invest in readiness today will be better positioned to navigate uncertainty tomorrow. Those that wait risk being constrained by systems that can see what is happening but cannot respond in time.

Agentic capability relies on the right foundational elements. Explore Outlook 2026: The Road to the Agentic Enterprise for the structures every organization needs in place.



Disruption is inevitable. Make it intentional.

Artificial Intelligence. Automation. Cloud Engineering. Advanced Analytics. For Enterprises, these are key factors of success. For us, they're our core expertise.

We work with global iconic brands. We bring them a unique value proposition through market-leading technologies and business process excellence. At the heart of it all is Digital Engineering Services – the foundation that powers rapid innovation and scalable business transformation.

We've created 363 unique and independent inventions, 250 of which are AI-based and rolled up under several patent grants in critical technologies. Leveraging our advanced products and platforms, we drive digital transformation at scale, optimize critical business operations, reinvent experiences, and pioneer new solutions, all provided through a seamless "as-a-service" model.

For each company, we provide new keys for their businesses, the people they work with, and the customers they serve. With proven strategies and agile execution, we don't just enable change – we engineer digital outcomes.

