

How to Lead Supply Chains Into the Autonomous Era

Build autonomous-ready operations, intelligence and workforces to compete in the next business era.



Supply chains must prepare for the autonomous business era

Supply chain leaders face mounting pressure to deliver immediate cost savings while navigating geopolitical uncertainty, changing customer expectations and rapidly evolving AI technologies. Success in this moment is not about implementing AI the fastest, the most or even the best. It's about preparing supply chains to compete in the autonomous business era while continuing to deliver results today.

The challenge is significant:

- Supply chains spend an average of \$24 million on AI.
- 34% of AI investments exceed budget.
- Legacy systems remain the No. 1 barrier to implementation.

This report explores the three capabilities supply chain leaders need to develop to prepare for the autonomous business era.

Gartner identified three capabilities that are critical for success:



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Capability 1

Developing autonomous-ready operations

Chief supply chain officers (CSCOs) have spent years operating supply chains through an automation mindset that optimizes predetermined tasks within stable environments. However, achieving transformational value from AI requires a shift toward an autonomous mindset built on adaptive workflows and dynamic decision making.

Implications

Organizations must balance two priorities:

- **Driving value today:** Use existing AI capabilities to improve efficiency and generate immediate business impact.
- **Preparing for tomorrow:** Reimagine workflows and create new sources of value enabled by autonomous operations.

Action

Prepare teams and operations for autonomy rather than focusing solely on being first to deploy AI. Balance investments between short-term optimization and long-term transformation.



Why it matters

More than eight in 10 supply chain executives expect autonomous business to dominate by 2030.



Automation mindset vs. autonomous mindset

Automation mindset



Autonomous mindset



Tasks

Rules

Data

Efficiency

Decisions

Guardrails

Data and judgment

Agility

Source: Gartner



Capability 2

Developing autonomous-ready intelligence

Implementing cutting-edge technology alone is not enough. Autonomous systems require context, governance and decision frameworks to operate effectively. Future-ready organizations build a decision stack, not just a technology stack.

Implications

A decision stack enables clarity, control and scalability for autonomous operations through four layers:

- Decision maps
- Guardrails
- Knowledge assets
- Data

Together, these layers help organizations codify institutional knowledge, establish governance controls and improve AI-driven decision quality.

Action

Map critical supply chain decisions, establish decision guardrails and capture institutional knowledge before scaling autonomous technologies.



Why it matters

AI agents and robots are expected to resolve up to 60% of supply chain disruptions without human intervention by 2031.



Build your decision stack to enable agentic AI in supply chain



Decision maps



Guardrails



Knowledge assets



Data

Source: Gartner



Capability 3

Developing an autonomous-ready workforce

Technology alone will not determine success in the autonomous era. Human roles must evolve alongside increasingly autonomous systems, requiring organizations to rethink how work is performed, how knowledge is applied and how talent is developed.

Implications

Organizations must prepare employees to transition from specialists to versatilists, who can operate across functions, collaborate with AI systems and focus on broader business outcomes. Future roles will place greater emphasis on decision making, orchestration and oversight rather than task execution alone.

Action

Redesign roles around human-AI collaboration, reduce context debt and develop workforce capabilities that support autonomy, flexibility and cross-functional problem solving.



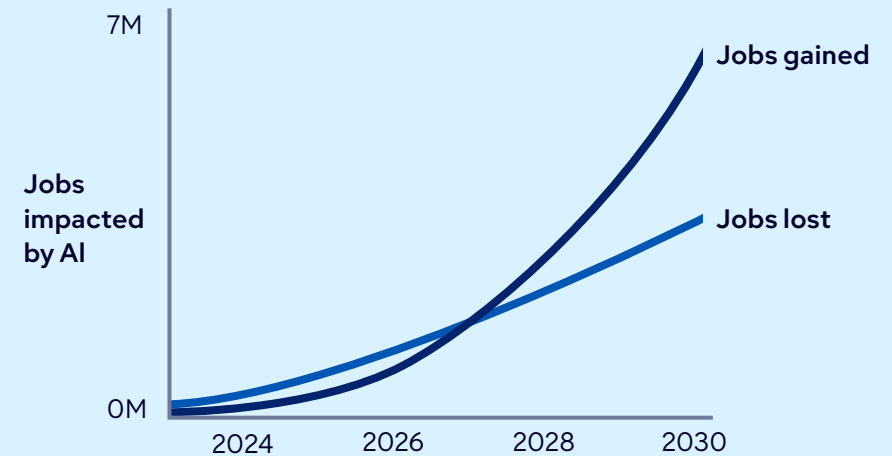
Why it matters

Contrary to widespread concern, Gartner predicts AI will create more jobs than it destroys in asset-intensive industries by 2030. Organizations that fail to develop workforce versatility risk significant capability gaps.



AI job impacts for asset-intensive industries

Running total, global (excluding China and India)



Source: Gartner

From automation to autonomy

The autonomous business era requires more than new technology. It requires organizations to rethink how they operate, how they make decisions and how their people work alongside intelligent systems.

Organizations that build autonomous-ready operations, autonomous-ready intelligence and autonomous-ready workforces will be better positioned to improve resilience, respond to disruption and create long-term competitive advantage.



The true measure of success is not adopting AI the fastest. It's developing the operations, intelligence and workforce capabilities needed to compete effectively in the autonomous business era.

Actionable, objective insights

Explore these additional complimentary resources and tools for supply chain leaders:

Report

Future of Supply Chain

Explore how top CSCOs will reshape supply chains for a machine-enabled future.

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