

Supply Chain Execution Digital Maturity

How do modern technologies enable an efficient, resilient, and sustainable supply chain through intelligent operations?



Travis Eide
Research Director,
Worldwide Global Supply Chain
Transportation and Global Trade, IDC



Table of Contents



CLICK BELOW TO NAVIGATE TO EACH SECTION IN THIS DOCUMENT.

In This InfoBrief	3	Supply Chain Intelligence Is Top of Mind for Logistics Leaders.....	10
Supply Chain Execution Maturity Model	4	Challenging Economic Conditions Are Not Hampering SC Technology Investments	11
Disconnected Legacy Systems Limit Proactive Supply Chain Execution	5	Advancing SC Execution Digital Maturity Is a Critical Enabler of Expanding Business Opportunities	12
Manual Tools and Processes Continue to Dominate SC Execution.....	6	Appendix: Supplemental Data	13
Comprehensive Visibility Forms the Foundation of Intelligent Operations.....	7	About the IDC Analyst	15
Analytics Capabilities Separate SC Execution Teams from Their Competition.....	8	Message from the Sponsor.....	16
A Digitally Enabled, Intelligent, and Synchronized Supply Chain.....	9		

In This InfoBrief

Organizations continue to focus on maturing digital capabilities that allow supply chain execution to contribute to their overall vision and to achieve distinct business objectives.

Ensuring resiliency while simultaneously enabling profitability and growth is supported with scalable digital solutions that make operations dynamic in the face of constant disruption and more efficient by optimizing physical assets across distributed geographies and global networks.

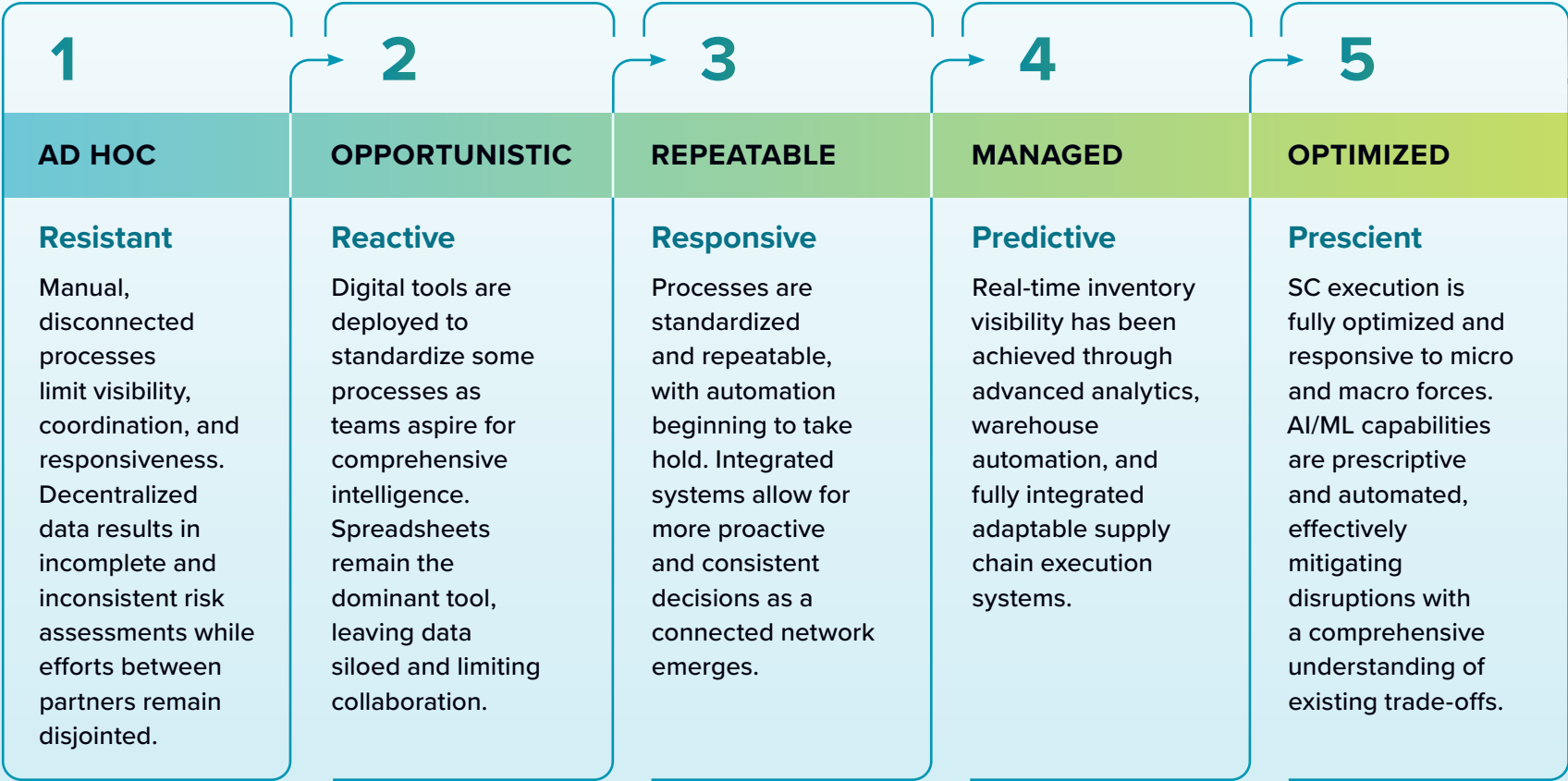
The data provided comes from a range of previous research by IDC, covering supply chain, technology, and organizational leadership perspectives. **The goal is to provide a clear, concise understanding of the stages of digital maturity across supply chain execution and actionable steps** that will allow teams to advance capabilities to enhance the value proposition that the supply chain can deliver for their businesses.

Supply Chain Execution Maturity Model

Digital transformation provides an opportunity for a fully integrated, data-driven supply chain model that is composable and enables collaboration across globally dispersed **distribution networks and partner ecosystems.**

IDC’s model defines the stages of digital maturity across the supply chain execution space.

Establishing how current capabilities compare to others across the industry and what practical next steps are required to advance provides a road map for organizations to generate a competitive advantage from supply chain activities.





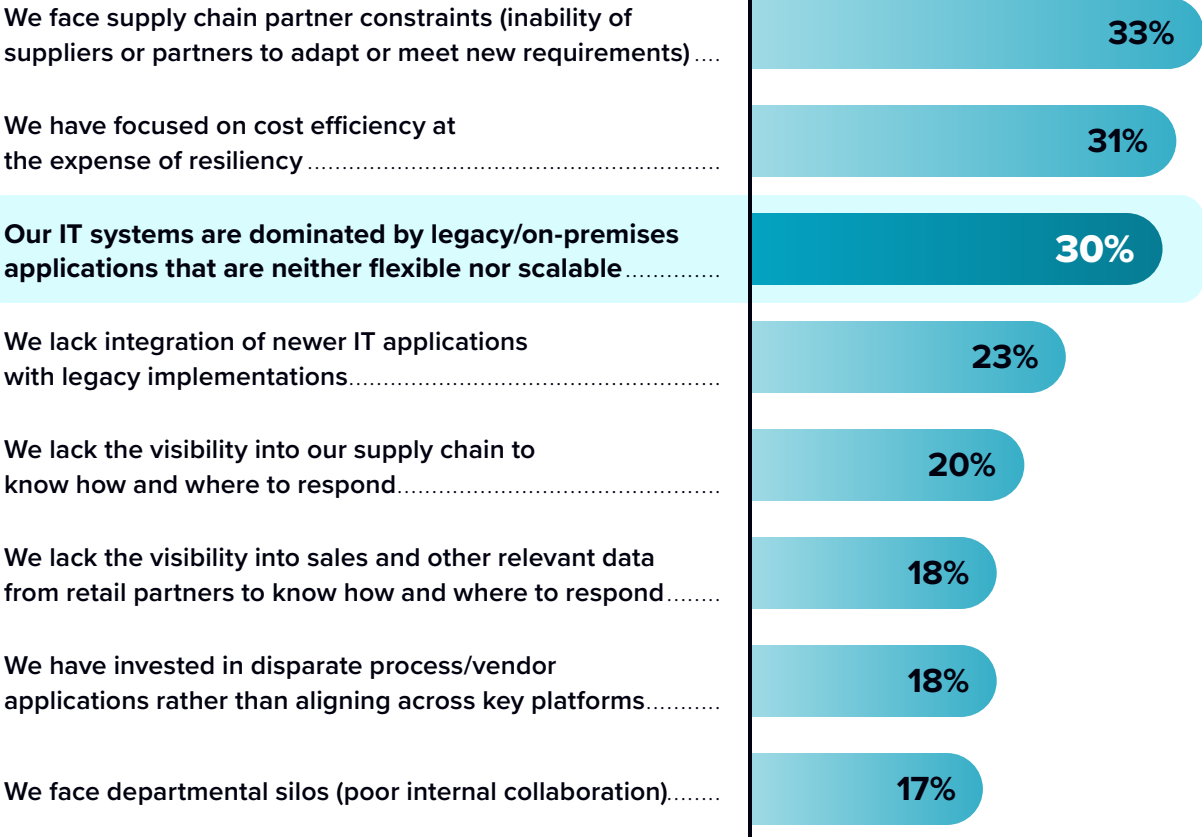
Disconnected Legacy Systems Limit Proactive Supply Chain Execution

- ▶ **Slow, siloed decisions** lead to sub-optimal outcomes and heavy reliance on recovery efforts (expedites) that are costly and carbon-intensive.
- ▶ **Missed opportunities and strained relationships** characterize this stage as teams struggle to work collaboratively.
- ▶ **A persistent lack of understanding of the trade-offs exists** between supply chain execution and how decisions impact other areas of the business.

NEXT STEPS:

- ▶ Initiate migration to cloud-based SaaS platforms to enable real-time visibility and collaboration.
- ▶ Implement comprehensive data governance and mapping protocols to ensure data integrity underpins efforts to initiate and measure progress.
- ▶ Cultivate transparency by developing a single source of truth from which organizational departments and SC partners can collaborate.

What has prevented your supply chain from responding more effectively to market changes/disruptions?



n = 255; Source: IDC's Global Supply Chain Survey, 2024



Manual Tools and Processes Continue to Dominate SC Execution

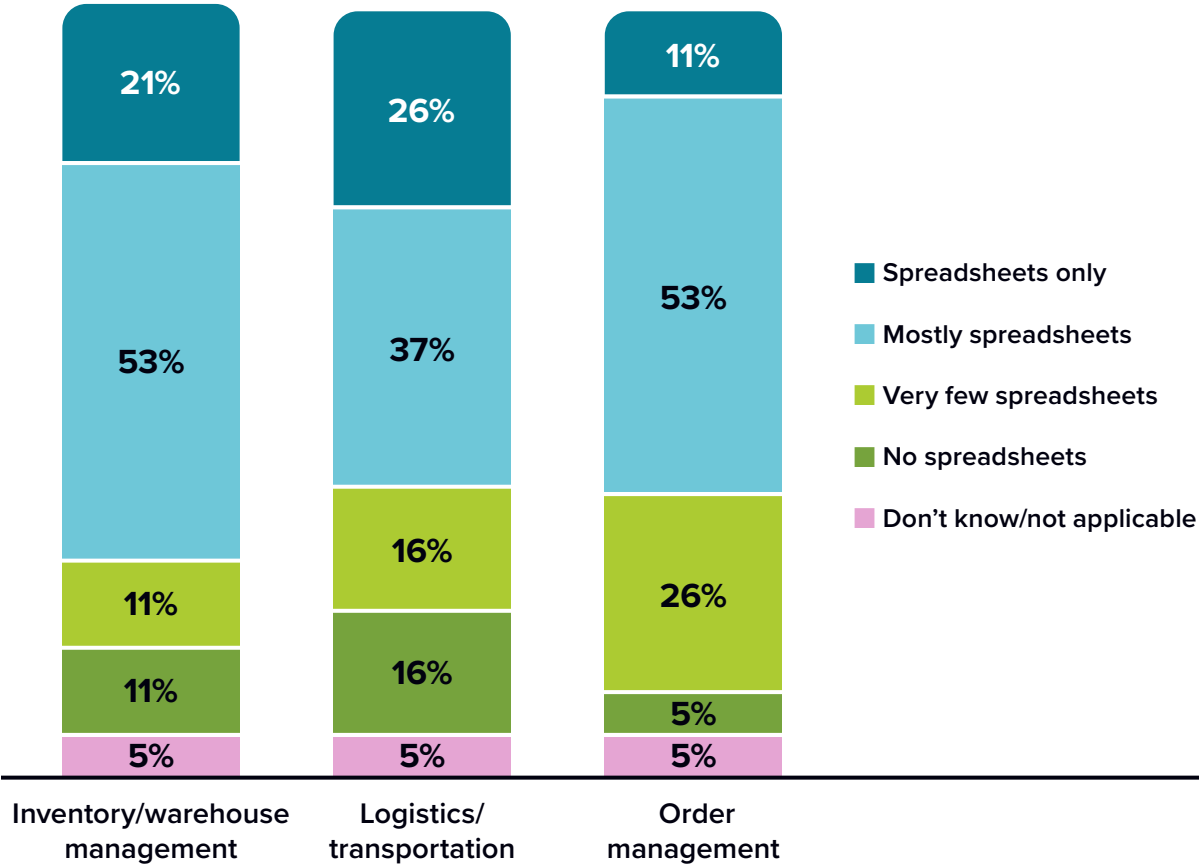
- **Standardized processes** begin to enable consistency across operational decisions.
- **Time to decision** remains slow, leading to missed opportunities resulting from the prominence of manual, disconnected tools across the SC execution space.
- **Limited integrations** restrict the ability to synchronize efforts within and across organizations.

NEXT STEPS:

- Holistically integrate data across the SC ecosystem and the macro environment in real time or as close to real time as possible.
- Generate an SC intelligence strategy that incentivizes collaboration and data sharing to align the efforts of SC execution partners.
- Enhance collaboration by cultivating transparency to break out of siloed decisions, opening the door to holistic SC management.

How are you using spreadsheets to support the following SCM processes?

For an accessible version of the data in this figure, see [Supplemental Data from Page 6](#) in the Appendix.



Note: Totals may not sum to 100% due to rounding. n = 255; Source: IDC's *Global Supply Chain Survey*, 2024



Comprehensive Visibility Forms the Foundation of Intelligent Operations

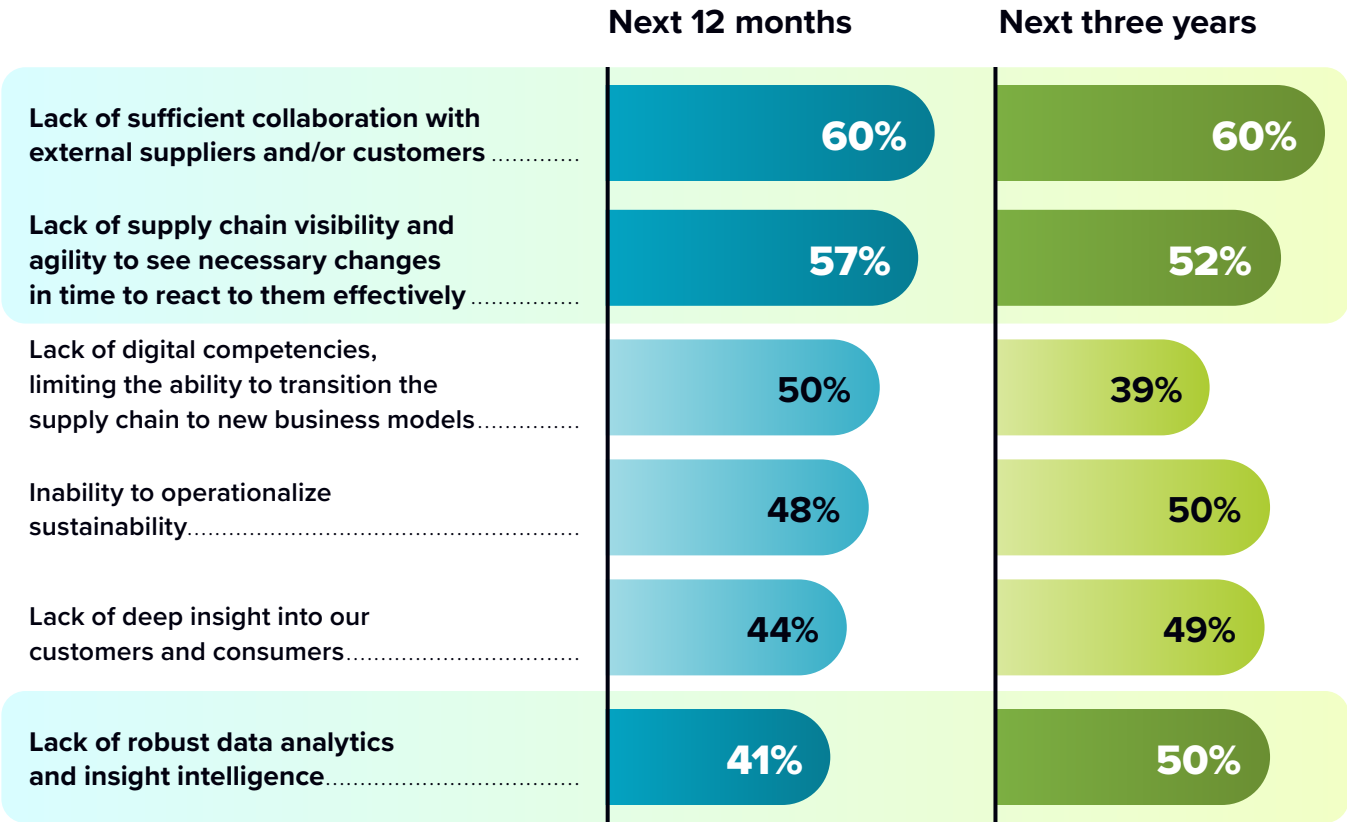
- ▶ **The beginnings of SC resiliency are established,** but tools are underutilized, with paper-based processes remaining common.
- ▶ **Gaps exist in visibility and between SC systems,** challenging the ability to effectively balance resilience with cost savings, safety, security, and sustainability.

NEXT STEPS:

- ▶ Drive AI/ML into operations to enable advanced scenario planning, enabled by predictive/prescriptive capabilities.
- ▶ Proactively manage and mitigate risks across operations, allowing teams to consistently secure resources through disruptive environments that strain resource availability.
- ▶ Digitize to recalibrate and streamline processes with modern technologies to establish a competitive advantage through supply chain execution.

As you think about the future of your supply chain, what current gaps are likely to be the most problematic if not addressed within the next 12 months? In three years?

For an accessible version of the data in this figure, see [Supplemental Data from Page 7](#) in the Appendix.



n = 255; Source: IDC's *Global Supply Chain Survey*, 2024



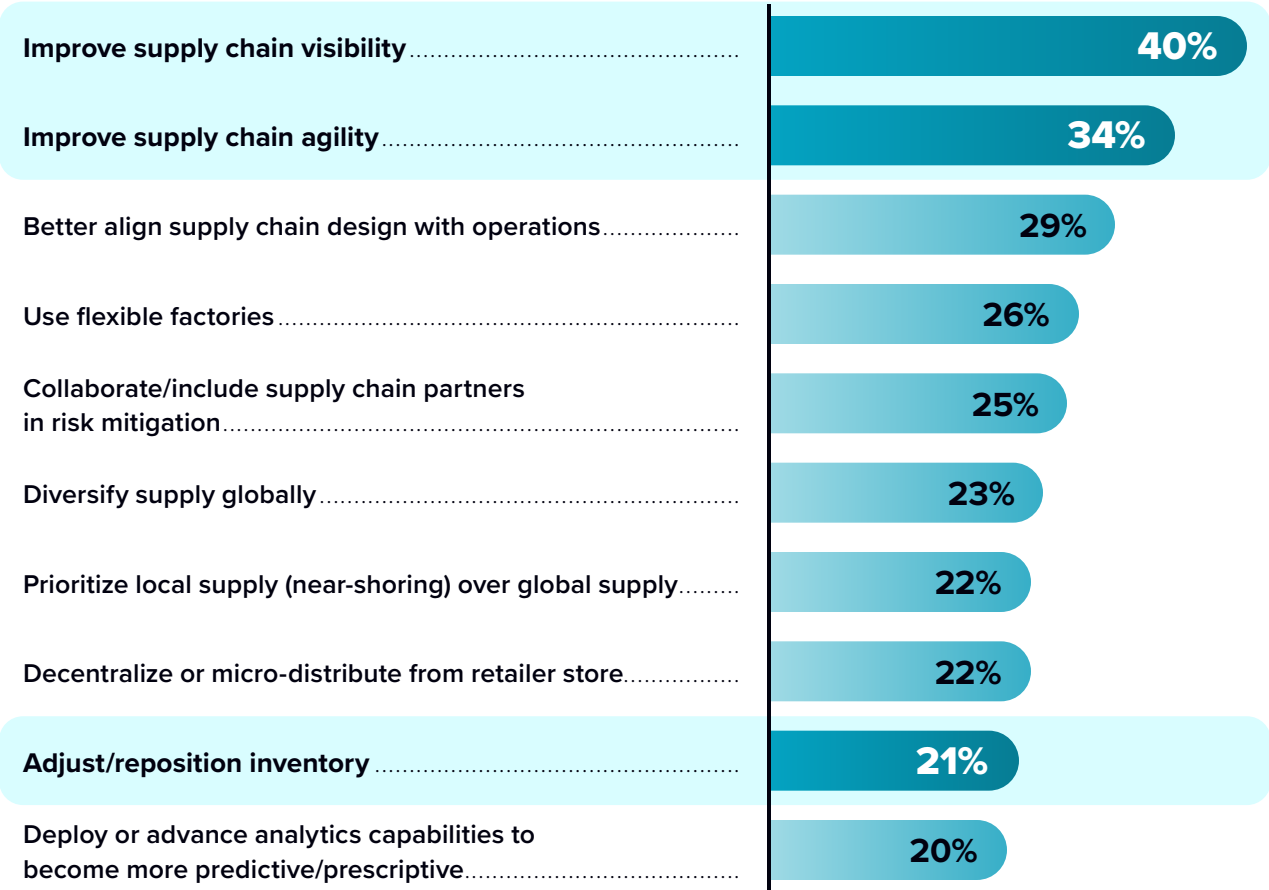
Analytics Capabilities Separate SC Execution Teams from Their Competition

- **Extensive visibility and the beginnings of orchestration capabilities** keep the enterprise in synch and begin to drive competitive advantage.
- **Predictive and prescriptive capabilities** allow operational teams to be agile in the face of disruption.
- **Cross-functional alignment** drives the adoption of digital competencies, allowing for the maximization of efficiencies without sacrificing resilience to most external disruptions.

NEXT STEPS:

- Enhance visibility to encompass the entirety of supply chain parameters.
- Fully integrate execution systems to autonomously mitigate risks and identify opportunities in a real-time environment.
- Solidify an ecosystem to enhance collaboration, strengthen partnerships, and deliver scalability that enables organizational growth and profitability.

What steps are you taking to mitigate risk in your supply chain?



n = 255; Source: IDC's Global Supply Chain Survey, 2024



A Digitally Enabled, Intelligent, and Synchronized Supply Chain

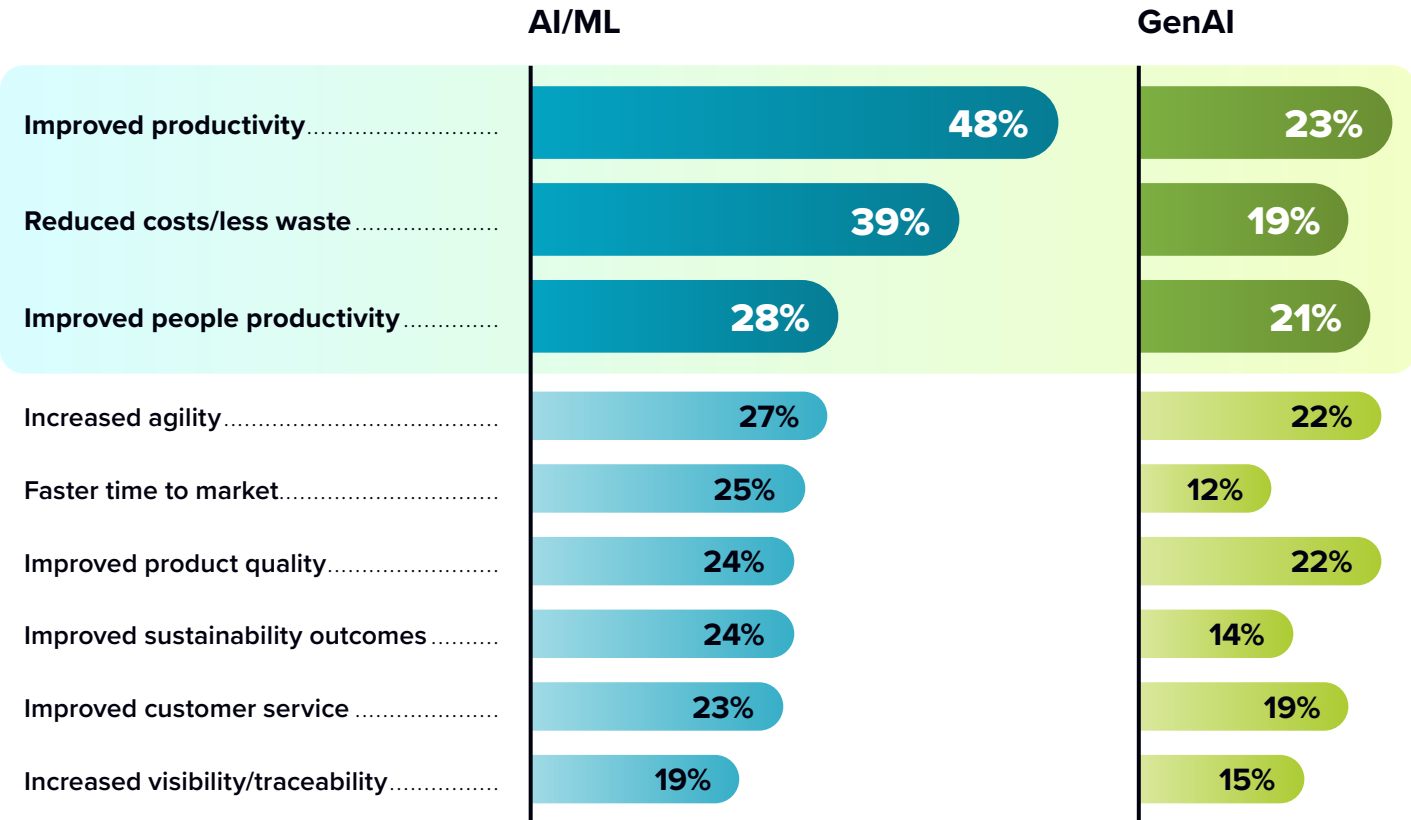
- ▶ **Comprehensive visibility and analytics** allow SC execution teams to be agile within all parameters.
- ▶ **Supply chain orchestration** provides predictive and prescriptive capabilities to anticipate and avoid disruptive events.
- ▶ **Cross-functional collaboration and advanced scenario planning** fully align SC planning and execution strategies.

NEXT STEPS:

- ▶ Maintain advanced AI/ML capabilities through use-case exploration and implementation where business value can be derived.
- ▶ Maintain market leader position by ensuring risk models and partner networks are managed dynamically to account for changing business requirements and evolving SC network dynamics.

What kinds of benefits have you seen from AI and/or generative AI (GenAI) deployments in your supply chain?

For an accessible version of the data in this figure, see [Supplemental Data from Page 9](#) in the Appendix.



n = 255; Source: IDC's *Global Supply Chain Survey*, 2024

Supply Chain Intelligence Is Top of Mind for Logistics Leaders



Establishing a road map to unlock the value hidden in organizational data is a top priority for supply chain leaders.



Enabling an ecosystem that supports collaboration is essential and a central focus for interorganizational teams tasked with delivering seamless supply chain execution.

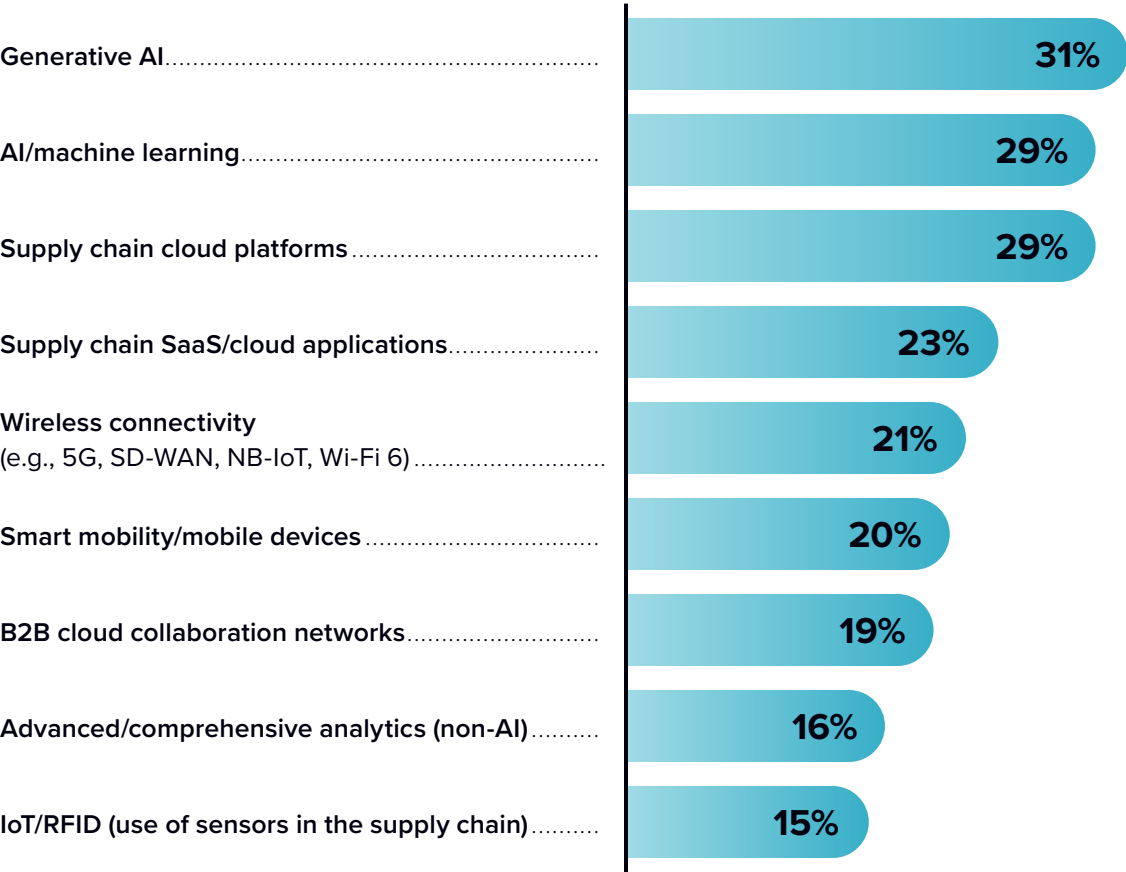


Technology investments that deliver timely and consistent data across operations help teams transform the operations from a reactive to a proactive approach.



Cloud migration enables real-time, holistic SC management and opens the door to AI/ML capabilities that deliver a continuous pipeline of actionable supply chain intelligence.

How important are the following technologies in your organization today?



n = 255; Source: IDC's Global Supply Chain Survey, 2024

Challenging Economic Conditions Are Not Hampering SC Technology Investments

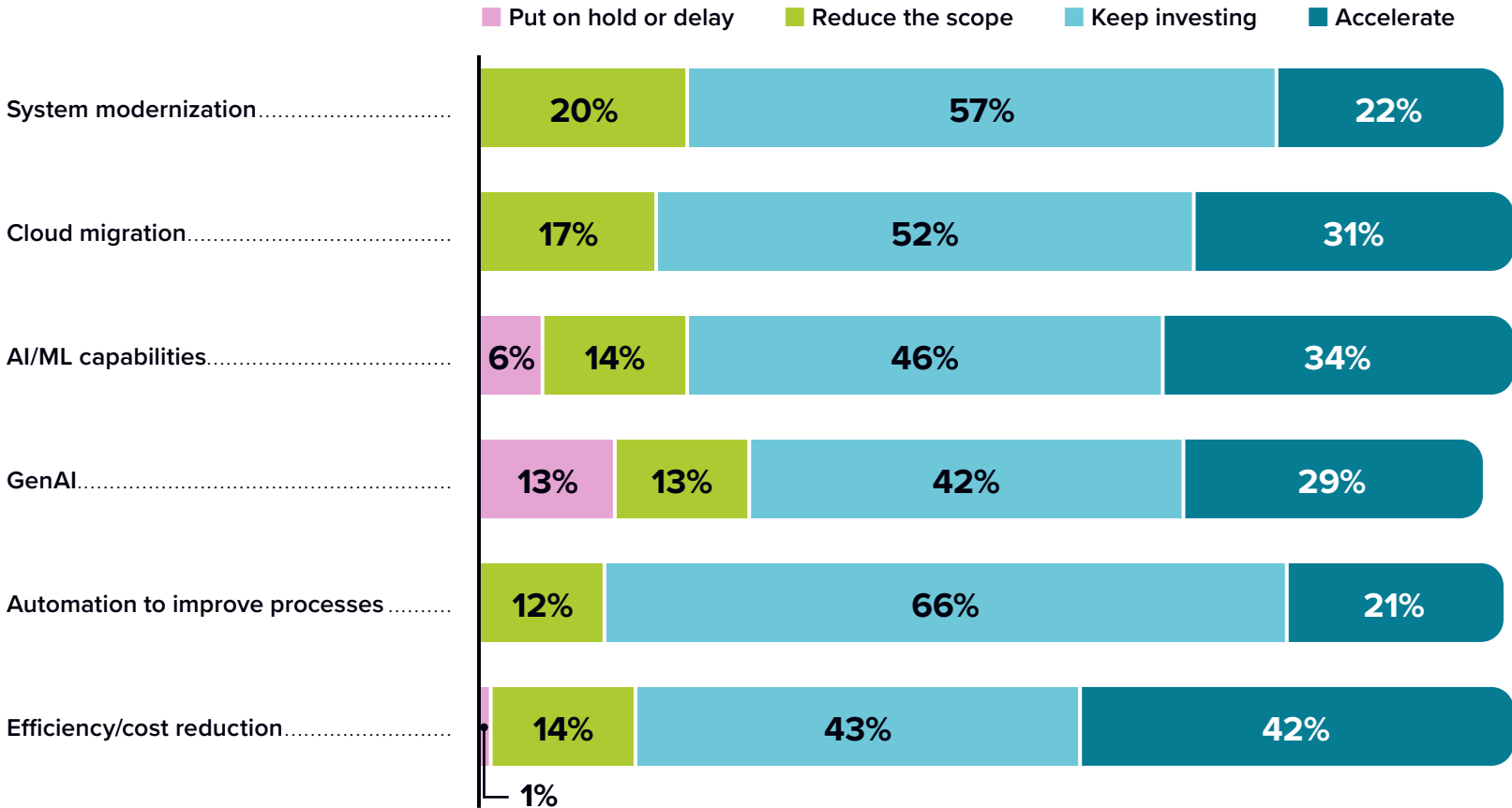
Persistent disruption has solidified the need for business leaders to advance digital capabilities across the supply chain space.

Businesses continue to express strong interest in supply chain technology investments that holistically integrate the disparate elements of supply chain execution with their business.

Supply chain visibility and intelligence generation are seen as key investment priorities that drive evidence-based decisions to better support business objectives across the supply chain ecosystem.

How would your organization prioritize the following investments in the context of difficult economic conditions?

For an accessible version of the data in this figure, see [Supplemental Data from Page 11](#) in the Appendix.



Note: Totals may not sum to 100% due to rounding. n = 37; Source: IDC's CIO Sentiment Survey, 2024

Advancing SC Execution Digital Maturity Is a Critical Enabler of Expanding Business Opportunities

Maturing capabilities allow teams to generate a competitive advantage from SC execution activities.

- ▶ **Provide the foundation of a connected network** that synchronizes supply chain functions and services through real-time visibility.

Prioritize data governance and mapping to establish baselines to initiate and measure the impact of supply chain intelligence.
- ▶ **Use advanced analytics and real-time insights.** SC composability is realized when a timely, comprehensive understanding of trade-offs exists and an interconnected, intelligent supply chain begins to emerge.
- ▶ **Be agile.** Inter-organizational teams must be ready to move swiftly on SC insights to capture opportunities in a fast-moving environment.
- ▶ **Enhance a culture of safety and security** through connected systems across SC operations.
- ▶ **Support growth and profitability initiatives** through optimization efforts that are balanced against serviceability and sustainability.
- ▶ **Deliver value through a synchronized SC team** that aligns planning and execution between global partners.

Appendix: Supplemental Data

The tables in this appendix provide accessible versions of the data for the complex figures in this document. Click “Return to original figure” below each table to get back to the original data figure.

SUPPLEMENTAL DATA FROM PAGE 6

How are you using spreadsheets to support the following SCM processes?

	Inventory/ Warehouse Management	Logistics/ Transportation	Order Management
Spreadsheets only	21%	26%	11%
Mostly spreadsheets	53%	37%	53%
Very few spreadsheets	11%	16%	26%
No spreadsheets	11%	16%	5%
Don't know/not applicable	5%	5%	5%

Note: Totals may not sum to 100% due to rounding. n = 255; Source: IDC's *Global Supply Chain Survey*, 2024

[Return to original figure](#)

SUPPLEMENTAL DATA FROM PAGE 7

As you think about the future of your supply chain, what current gaps are likely to be the most problematic if not addressed within the next 12 months? In three years?

	Next 12 Months	Next Three Years
Lack of sufficient collaboration with external suppliers and/or customers	60%	60%
Lack of supply chain visibility and agility to see necessary changes in time to react to them effectively	57%	52%
Lack of digital competencies, limiting the ability to transition the supply chain to new business models	50%	39%
Inability to operationalize sustainability	48%	50%
Lack of deep insight into our customers and consumers	44%	49%
Lack of robust data analytics and insight intelligence	41%	50%

n = 255; Source: IDC's *Global Supply Chain Survey*, 2024

[Return to original figure](#)

Appendix: Supplemental Data (continued)

SUPPLEMENTAL DATA FROM PAGE 9

What kinds of benefits have you seen from AI and/or GenAI deployments in your supply chain?

	AI/ML	GenAI
Improved productivity	48%	23%
Reduced costs/less waste	39%	19%
Improved people productivity	28%	21%
Increased agility	27%	22%
Faster time to market	25%	12%
Improved product quality	24%	22%
Improved sustainability outcomes	24%	14%
Improved customer service	23%	19%
Increased visibility/traceability	19%	15%

n = 255; Source: IDC's Global Supply Chain Survey, 2024

[Return to original figure](#)

SUPPLEMENTAL DATA FROM PAGE 11

How would your organization prioritize the following investments in the context of difficult economic conditions?

	Put on Hold or Delay	Reduce the Scope	Keep Investing	Accelerate
System modernization	0%	20%	57%	22%
Cloud migration	0%	17%	52%	31%
AI/ML capabilities	6%	14%	46%	34%
GenAI	13%	13%	42%	29%
Automation to improve processes	0%	12%	66%	21%
Efficiency/cost reduction	1%	14%	43%	42%

Note: Totals may not sum to 100% due to rounding. n = 37; Source: IDC's CIO Sentiment Survey, 2024

[Return to original figure](#)

About the IDC Analyst



Travis Eide
Research Director,
Worldwide Global Supply Chain
Transportation and Global Trade, IDC

Travis Eide is the research director of the IDC Worldwide Supply Chain Strategies Program, responsible for providing research, analysis and guidance on key business and IT issues pertaining to manufacturing, retail, and healthcare supply chains. He currently leads the Worldwide Supply Chain Strategies: Transportation, Logistics, and Global Trade Management practice, providing fact-based research, analysis and insight on best practices and the use of information technology to assist clients in improving their capabilities in these critical supply chain fulfillment areas. This practice specializes in advising clients on transportation management, route management, global trade management, driver compliance management software applications, and more, as well as 3PL, 4PL, full-truckload, and less-than-truckload services. Eide also covers the commercial transportation and 3PL industry.

[More about Travis Eide](#)

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IDC Research, Inc.
140 Kendrick Street, Building B, Needham, MA 02494, USA
T +1 508 872 8200

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