



Deliver Next-Generation Supply Chain Management, Intelligence, and Responsiveness



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In This InfoBrief

IDC, sponsored by Kinaxis, set out to understand what is driving change across the supply chain (SC), if orchestration can help, and what is supporting or hindering the adoption of orchestration tools to manage complexity, risk, and disruption.

The research comprises a quantitative survey conducted in late 2023 of over 1,800 SC decision makers from multiple geographies, industries, and functions. Special attention was paid to beliefs around end-to-end orchestration, control towers, and horizontal and vertical integration.

This InfoBrief provides a foundational view of supply chain orchestration (SCO) and showcases the key findings from this study.

Note: Totals may not sum to 100% due to rounding. n = 1,839; Source: IDC's Supply Chain Orchestration Thought Leadership Survey, December 2023

Key Regions

NORTH AMERICA	33%
USA	22%
Canada	11%
EMEA	33%
(Europe, Middle East, and Africa)	
UK	11%
Germany	11%
France	11%
ASIA/PACIFIC	34%
India	8%
Japan	9%
Australia	
Taiwan	8%

Key Verticals

MILIEACTUDING

MANUFACTURING	/4%
CPG	21%
(Consumer Packaged Goods)	
High Tech	15%
Automotive	14%
Aerospace and Defense	12%
Oil and Gas	6%
Chemicals	6%
ALL OTHERS	26%
Retail	15%
Life Sciences	12%





Why Focus on SCO?

Complexity



Responses to disruption and volatility have increased the complexity of SCs.

Latency/
Time to Respond



Volatility is rarely predictable, leading to slow response times, greater risk, and fewer options.

What Got Us Here Won't Get Us There



Legacy tools, processes, and skill sets are unable to handle the pressure of increasing requirements. Control Towers Have Not Delivered



Control towers are siloed point solutions that, despite promises, fail to drive SC-wide action.

Systems Thinking



Advances in integration are fueling a desire to optimize the whole rather than individual components.

Successful SCO balances the necessary processes with the right technology.

SC Orchestration IDC FutureScape Prediction

PREDICTION: IDC predicts that by 2028, **35**% of **G2000** companies will use **SCO** tools integrating key suppliers/customers and digital twin capabilities and improving supply chain responsiveness by 15%.

TRENDS:

- SC organizations have been on a maturity path toward SCO.
- To date, the focus has been mostly on control towers, which have failed to deliver on the promise of integrating end-to-end operations.
- Companies are still seeking the right orchestration solution to bring together end-to-end processes, intelligence, insights, and action.

IT IMPACTS:

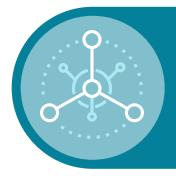
- Orchestration requires process mapping, developments in AI, and a unified front-end user interface to enable integration and rapid response.
- Developing and continuously training algorithms as well as supporting businesses in implementing and adopting them will be tracks of work.
- Orchestration tools need to consider the quality and availability of data.

GUIDANCE:

- Companies should prepare their workforces with the skills to train their own co-pilots.
 Training algorithms will be a valuable skill.
- Developing disciplined processes end to end will enable automation.
- Data will continue to matter and must be robust and clean.

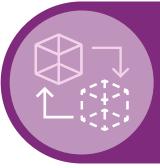


SCO Helpful Definitions



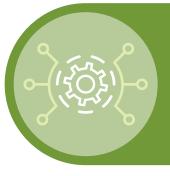
SUPPLY CHAIN ORCHESTRATION

The harmonization of critical SC components by interconnecting processes, resources, and activities across planning, execution, and oversight to drive efficiency and responsiveness from suppliers through end customers



DIGITAL TWIN

A digital representation of products and all SC processes and data (logistics, inventory, warehousing, demand plans, and forecasts)

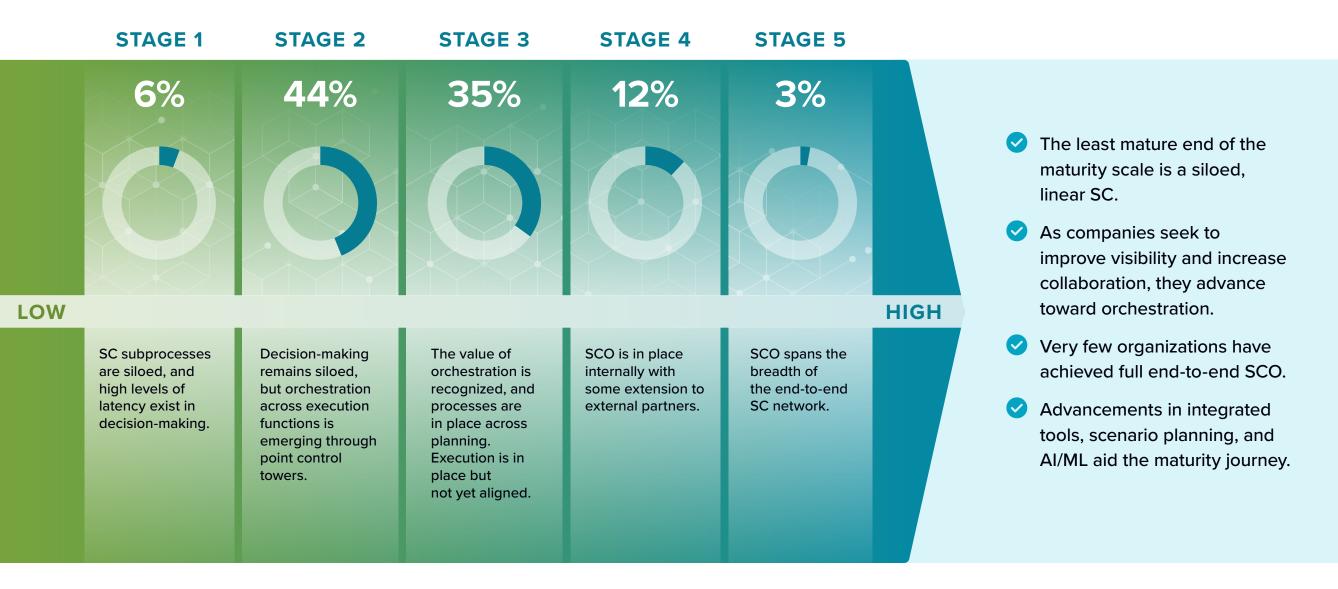


CONTROL TOWER

A tool that provides visibility and supports transactional decision-making; historically siloed and point solution focused, often around logistics



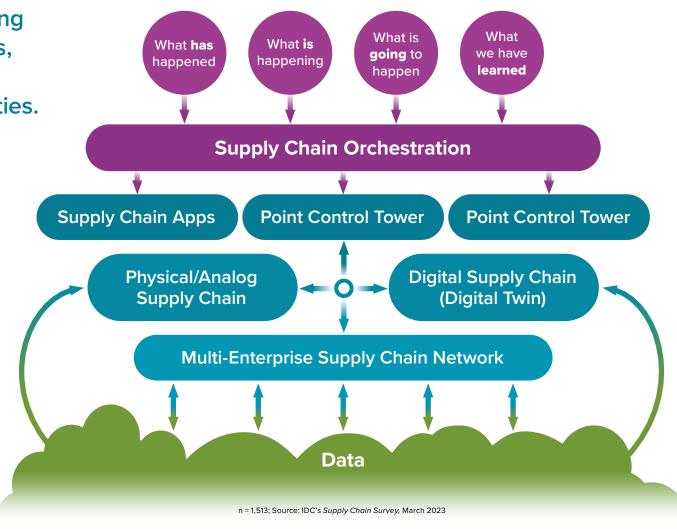
SCO Maturity Defined



Unlocking Orchestration: Integrating Scenario Planning with Digital Twins

SCO is essential to automate decision-making across the entire enterprise. For full benefits, new processes, integrating digital twins, and scenario planning are absolute necessities.

- Data integrates the end-to-end SC while tools, processes, and technology rapidly move from data to analytics to action.
- Modeling elements of the SC using a digital twin is essential to assessing the magnitude of risk and opportunity.
- Traditional control towers don't go away; they become components of end-to-end orchestration.





Key Survey Takeaways

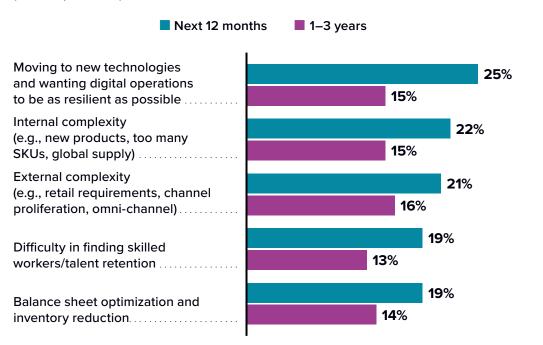
CURRENT STATE	DESIRED STATE
Response time to disruption is unsatisfactory	Faster responsiveness to support resilience and competitiveness
Reactions to volatility are driving increasing complexity	Enhanced visibility, earlier warning signals, and higher sophistication across planning and execution
Low level of orchestration maturity	Understanding of orchestration and how it supports ongoing transformation
SCs are becoming less of a competitive advantage	Using orchestration to improve responsiveness, efficiency, and intelligence
Questions on the tech road map for orchestration (e.g., fit, budget, competing priorities)	Understanding how orchestration solutions fit within existing tools, architecture, and road map

SC Complexity Is Driving the Opportunity for Change

In today's business world, SC performance is crucial. As companies continue to invest in solutions, end-to-end orchestration is emerging as the new path forward.

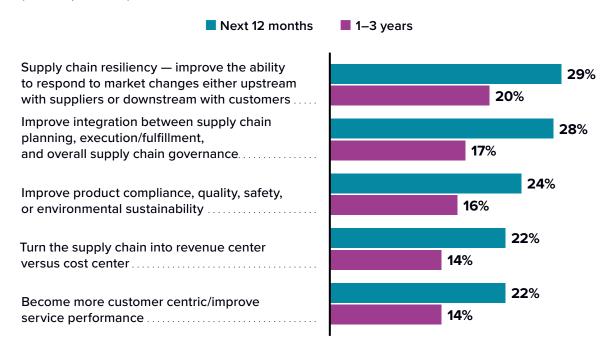
What are the top initiatives driving change in your overall business over the next 12 months and in 1–3 years?

(% of respondents)



What will be the top 3 priorities for your supply chain over the next 12 months and in the next 1–3 years?

(% of respondents)

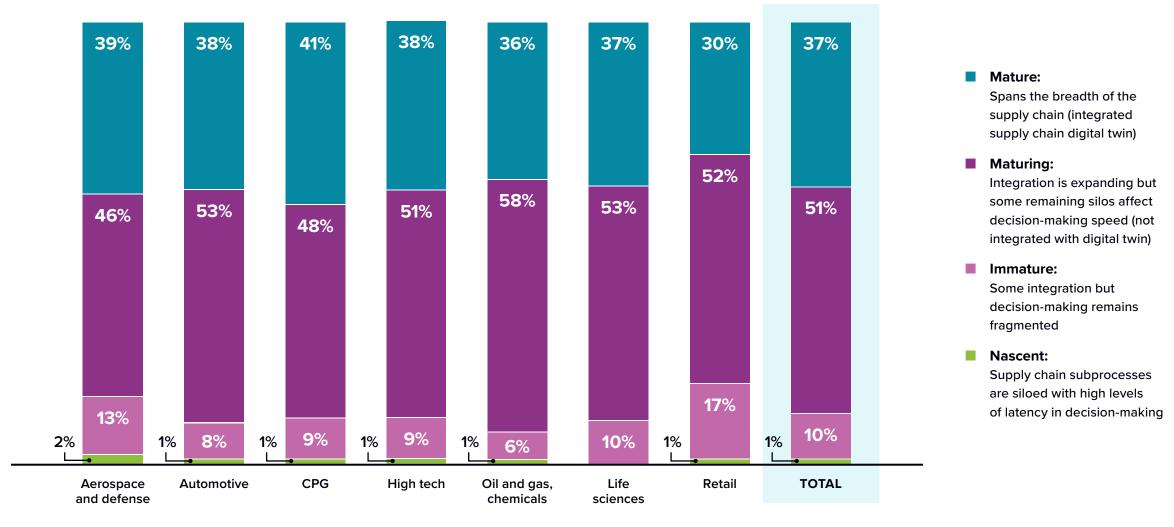


n = 1,839, Base = all respondents; Source: IDC's Source: Supply Chain Orchestration Thought Leadership Survey, December 2023 | For an accessible version of the data on this page, see Supplemental Data in the Appendix.



SCO Maturity

How mature do you believe your organization's SCO is?



Notes: Multiple dichotomous table; total will not sum to 100%. n = 1,839, Base = all respondents; Source: IDC's Supply Chain Orchestration Thought Leadership Survey, December 2023 | For an accessible version of the data on this page, see Supplemental Data in the Appendix.

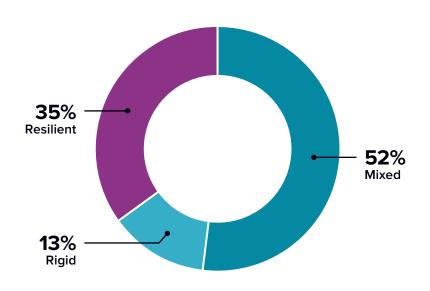


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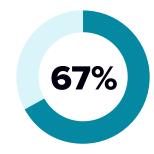
The Journey to End-to-End SCO: Global View

Despite recognizing the need for a holistic approach, companies are still investing in siloed functional improvements, leaving their SCs far from where they want them to be.

How would you characterize the ability to effectively respond to disruptions in the marketplace?



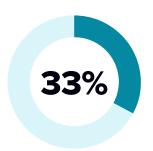
65% of respondents **do not believe** they've achieved resilience.



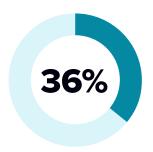
of companies report **not being** "**very satisfied**" with their **disruption response time**.



cannot respond to disruptions in 24 hours.



claim full integration across their end-to-end, multibusiness value chain.



can't claim integration across all enterprise systems.

n = 1,839, Base = all respondents; Source: IDC's Supply Chain Orchestration Thought Leadership Survey, December 2023

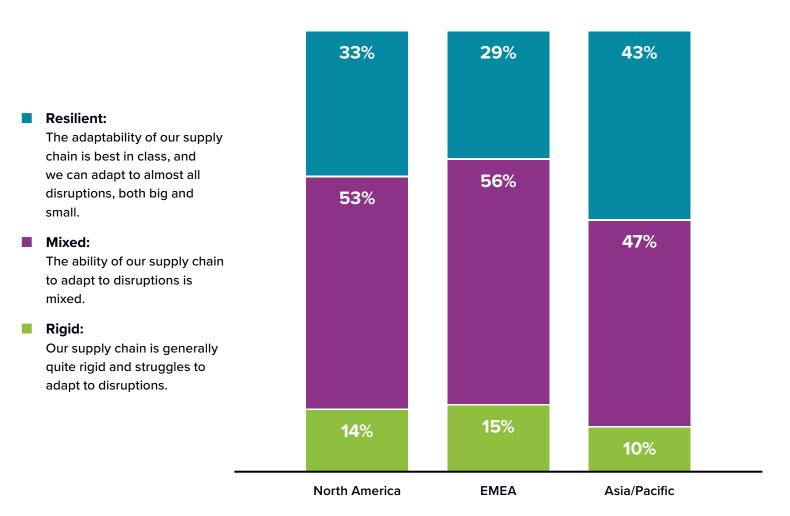
Average time to respond to external disruptions: **5 days**

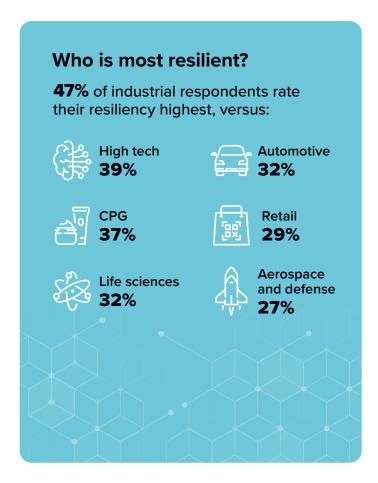


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The Journey to End-to-End SCO: Regional View

Resiliency Maturity by Geography

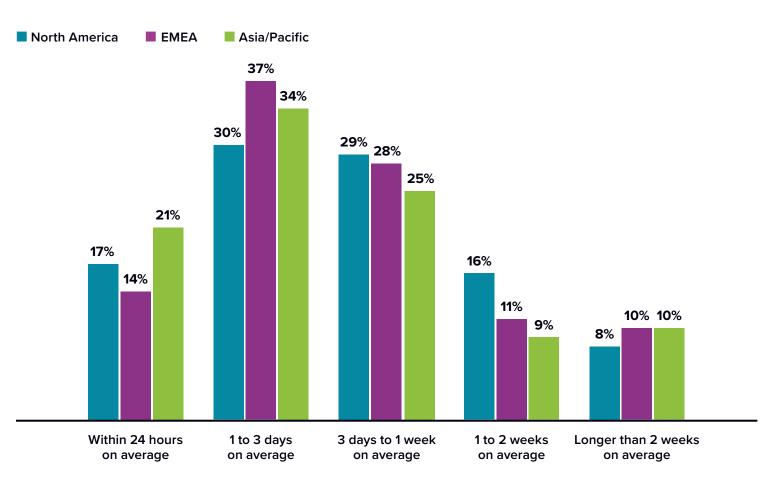


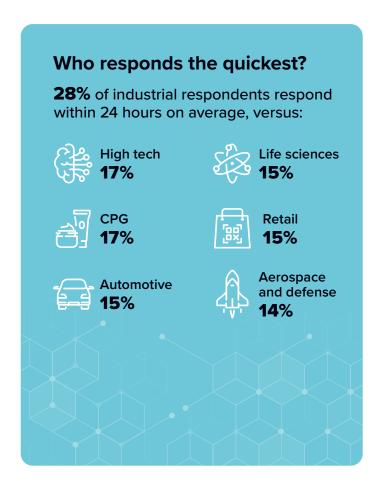




The Journey to End-to-End SCO: Regional View (continued)

Resiliency Time by Geography



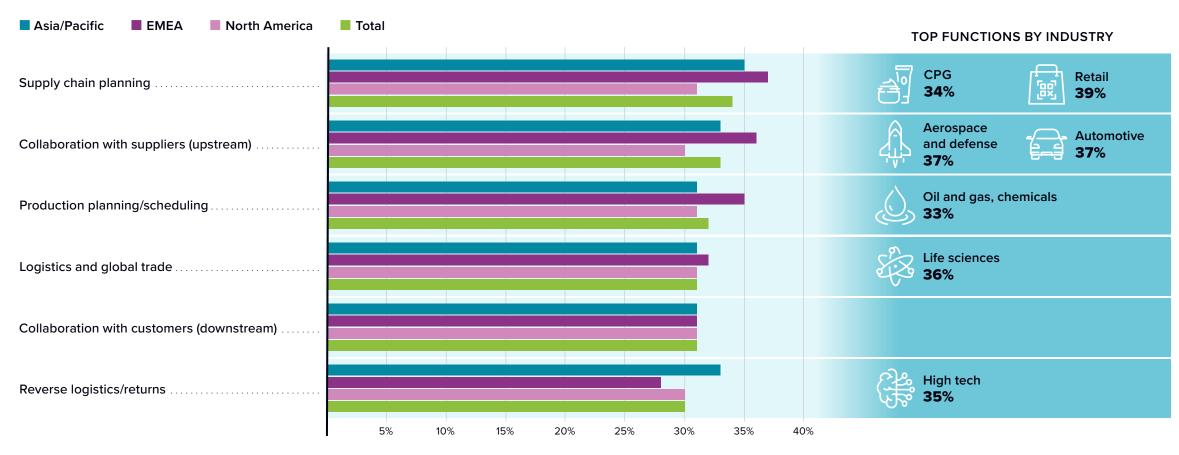




Point Control Towers Don't Lead to Orchestration

Organizations are using multiple point control towers to compensate for the lack of end-to-end orchestration. Connecting those disparate control towers alone won't lead to success.

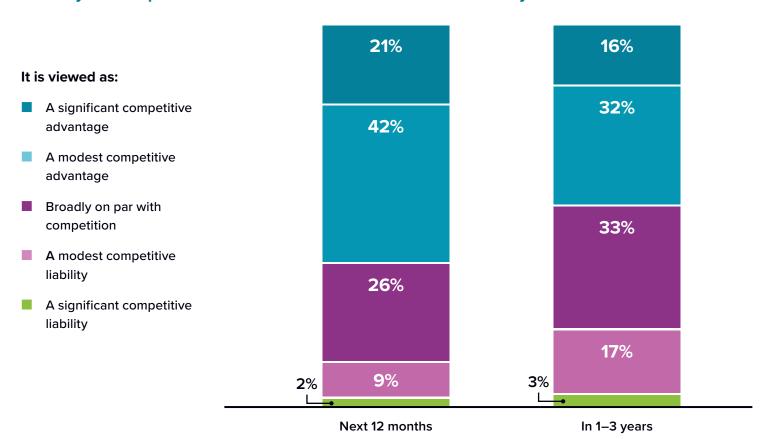
Are you using point control towers for any of the following specific supply chain functions?

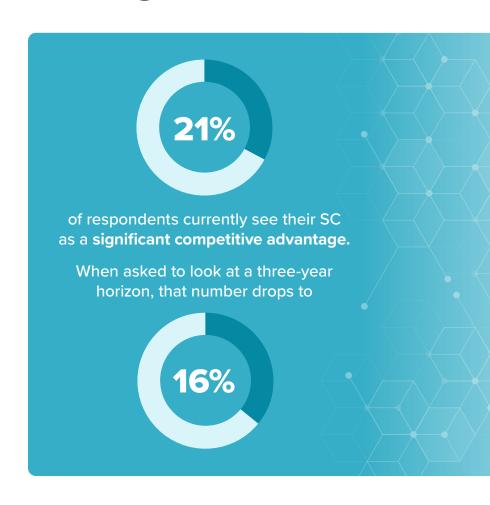




Resilience and Responsiveness Are Essential for Competitive Advantage

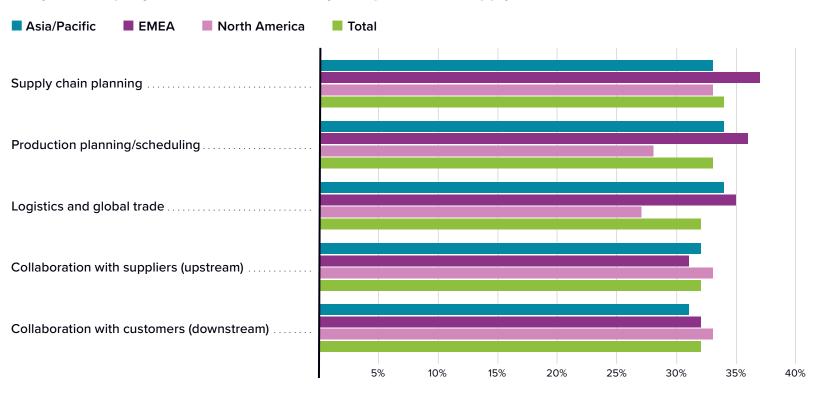
What role does your supply chain play in differentiating your organization versus your competition in the next 12 months and the next 1–3 years?

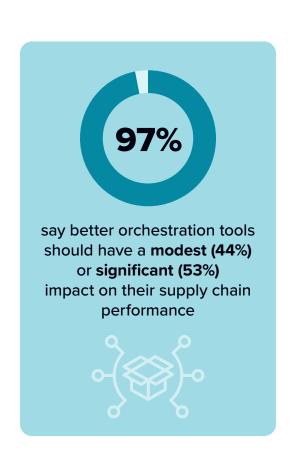




Nearly Everyone Believes in the Benefits of Orchestration

For your company, what would be the key components of supply chain orchestration?

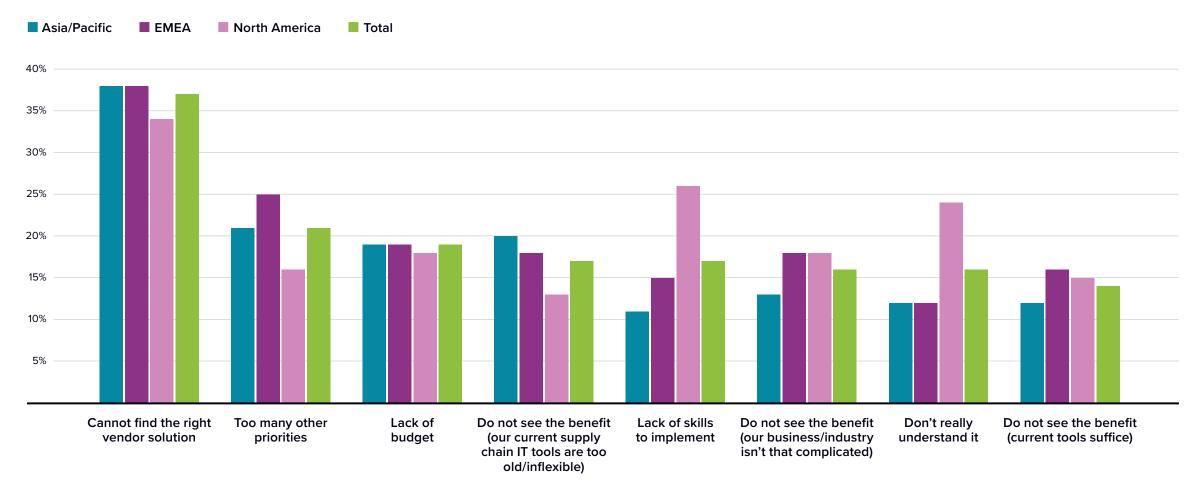






What's Standing in Your Way?

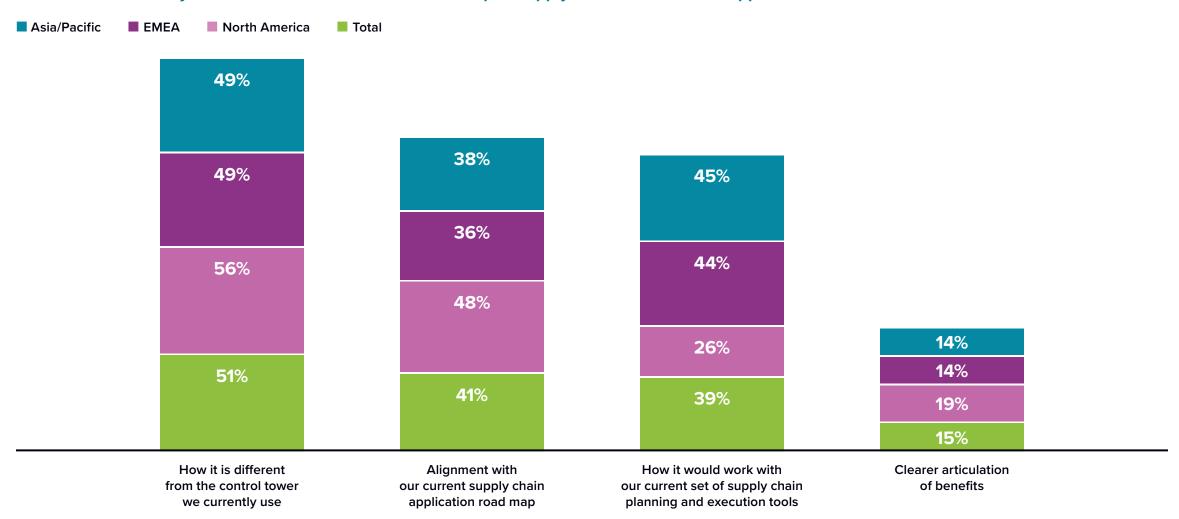
Companies cite challenges in finding the right partner, prioritization, and understanding to drive orchestration forward.





Gaining Clarity Before Adopting Orchestration

What information do you still need to decide whether to adopt a supply chain orchestration application?



Notes: Multiple dichotomous table; total will not sum to 100%. n = 1,839, Base = all respondents; Source: IDC's Supply Chain Orchestration Thought Leadership Survey, December 2023 | For an accessible version of the data on this page, see Supplemental Data in the Appendix.

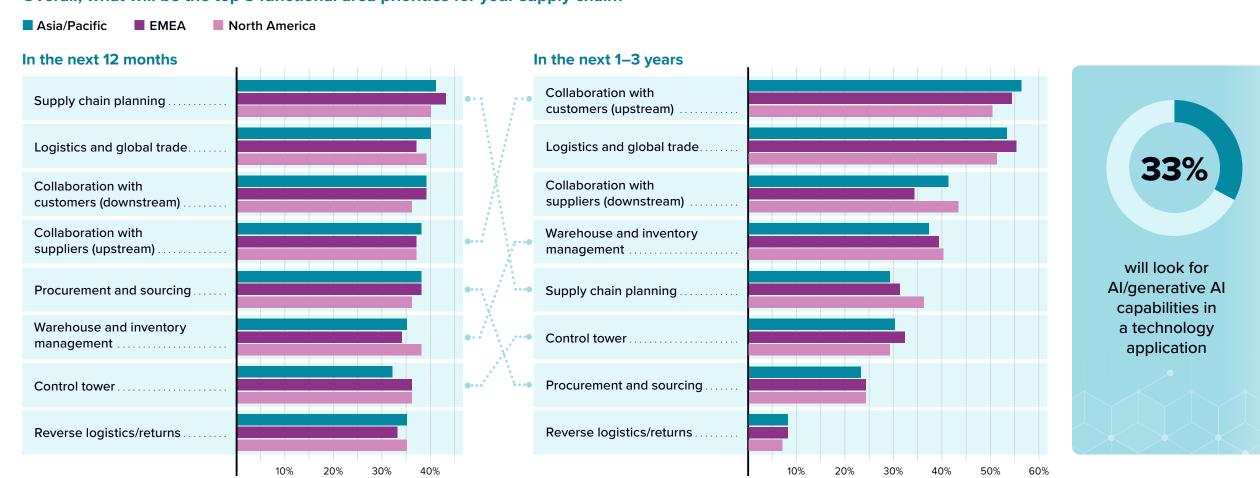


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SCO Is Already in Your Road Map

Companies are already investing in the areas needed for end-to-end orchestration.

Overall, what will be the top 3 functional area priorities for your supply chain?





Enablers for SCO

As with any broad initiative, simply picking an orchestration tool as a panacea is unlikely to lead to success. IDC recommends:

- Eliminating silos and enforcing collaboration, data standards, consensus processes, and clear roles
- Prioritizing AI/ML training, scenario modeling, and systems thinking to stay ahead
- Seeking trusted partners to support digital transformation and SCO
- Investing in a comprehensive approach and roadmap for SCO and embedding it into the corporate strategy to achieve success
- Ensuring the quality, integration, timeliness, and accessibility of data to prevent failure



Essential Guidance

Questions and Challenges to Consider on Your Journey to SCO



Consider cost: Advanced tools come at a cost. Businesses considering implementing orchestration tools need to consider the ROI for implementation as well as the organizational capacity to adopt them.



Data and integration: There is a reason data integration and quality are long-standing areas of focus. These are foundational elements for true SCO. If your company lags in this area, it may be worth addressing before attempting to progress along the maturity scale.



Variety of tools/maturity: Because control towers, visibility, and orchestration have been buzzwords for some time, many vendors are seeking to address business requirements. This means that a variety of solutions are coming to the market, each with their own pros and cons and varying levels of success. It's important to assess what each solutions delivers.



Business process maturity: Having well-defined business processes (including rules for exception, identification, and response) is another fundamental building block to achieve SCO. It is impossible — or at least ill advised — to attempt to automate and leverage orchestration tools without well-defined business processes.



Alignment of desired outcomes at an organizational/system level: Shifting an organization to holistic thinking will be required to give the right inputs for end-to-end orchestration tools and processes.



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 the tables to get back to the original data figures.

SUPPLEMENTAL DATA FROM PAGE 10

What are the top initiatives driving change in your overall business over the next 12 months and in 1–3 years? (% of respondents)

	Next 12 years	1–3 years
Moving to new technologies and wanting digital operations to be as resilient as possible	25%	15%
Internal complexity (e.g., new products, too many SKUs, global supply)	22%	15%
External complexity (e.g., retail requirements, channel proliferation, omni-channel)	21%	16%
Difficulty in finding skilled workers/talent retention	19%	13%
Balance sheet optimization and inventory reduction	19%	14%

Notes: Multiple dichotomous table; total will not sum to 100%. n = 1,839, Base = all respondents; Source: IDC's Supply Chain Orchestration Thought Leadership Survey, December 2023 (Continued next page)



SUPPLEMENTAL DATA FROM PAGE 10 (CONTINUED)

What will be the top 3 priorities for your supply chain over the next 12 months and in the next 1–3 years? (% of respondents)

	Next 12 years	1–3 years
Supply chain resiliency — improve the ability to respond to market changes either upstream with suppliers or downstream with customers	29%	20%
Improve integration between supply chain planning, execution/fulfillment, and overall supply chain governance	28%	17%
Improve product compliance, quality, safety, or environmental sustainability	24%	16%
Turn the supply chain into revenue center versus cost center	22%	14%
Become more customer centric/improve service performance	22%	14%

Notes: Multiple dichotomous table; total will not sum to 100%. n = 1,839, Base = all respondents; Source: IDC's Supply Chain Orchestration Thought Leadership Survey, December 2023

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SUPPLEMENTAL DATA FROM PAGE 11

How mature do you believe your organization's SCO is?

	Total	Aerospace and defense	Automotive	CPG	High Tech	Oil and gas, chemicals	Life sciences	Retail
Mature: Spans the breadth of the supply chain (integrated supply chain digital twin)	37%	39%	38%	41%	38%	36%	37%	30%
Maturing: Integration is expanding but some remaining silos affect decision-making speed (not integrated with digital twin)	51%	46%	53%	48%	51%	58%	53%	52%
Immature: Some integration but decision-making remains fragmented	10%	13%	8%	9%	9%	6%	10%	17%
Nascent: Supply chain subprocesses are siloed with high levels of latency in decision-making	1%	2%	1%	1%	1%	1%	0%	1%

Notes: Multiple dichotomous table; total will not sum to 100%. n = 1,839, Base = all respondents; Source: IDC's Supply Chain Orchestration Thought Leadership Survey, December 2023



SUPPLEMENTAL DATA FROM PAGE 13

Resiliency Maturity by Geography

	North America	EMEA	Asia/Pacific
Resilient: The adaptability of our supply chain is best in class, and we can adapt to almost all disruptions, both big and small.	33%	29%	43%
Mixed: The ability of our supply chain to adapt to disruptions is mixed.	53%	56%	47%
Rigid: Our supply chain is generally quite rigid and struggles to adapt to disruptions.	14%	15%	10%

Notes: Multiple dichotomous table; total will not sum to 100%. n = 1,839, Base = all respondents; Source: IDC's Supply Chain Orchestration Thought Leadership Survey, December 2023



SUPPLEMENTAL DATA FROM PAGE 14

Resiliency Time by Geography

	North America	EMEA	Asia/Pacific
Within 24 hours on average	17%	14%	21%
1 to 3 days on average	30%	37%	34%
3 days to 1 week on average	29%	28%	25%
1 to 2 weeks on average	16%	11%	9%
Longer than 2 weeks on average	8%	10%	10%

Notes: Multiple dichotomous table; total will not sum to 100%. n = 1,839, Base = all respondents; Source: IDC's Supply Chain Orchestration Thought Leadership Survey, December 2023



SUPPLEMENTAL DATA FROM PAGE 15

Are you using point control towers for any of the following specific supply chain functions?

	TOTAL	North America	EMEA	Asia/Pacific
Supply chain planning	35%	37%	31%	34%
Collaboration with suppliers (upstream)	33%	36%	30%	33%
Production planning/scheduling	31%	35%	31%	32%
Logistics and global trade	31%	32%	31%	31%
Collaboration with customers (downstream)	31%	31%	31%	31%
Reverse logistics/returns	33%	28%	30%	30%

Notes: Multiple dichotomous table; total will not sum to 100%. n = 1,839, Base = all respondents; Source: IDC's Supply Chain Orchestration Thought Leadership Survey, December 2023



SUPPLEMENTAL DATA FROM PAGE 16

Are you using point control towers for any of the following specific supply chain functions?

	Next 12 months	In 1–3 Years
It is viewed as a significant competitive advantage.	21%	16%
It is viewed as a modest competitive advantage.	42%	32%
It is viewed as broadly on par with competition.	26%	33%
It is viewed as a modest competitive liability.	9%	17%
It is viewed as a significant competitive liability.	2%	3%

Notes: Multiple dichotomous table; total will not sum to 100%. n = 1,839, Base = all respondents; Source: IDC's Supply Chain Orchestration Thought Leadership Survey, December 2023

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SUPPLEMENTAL DATA FROM PAGE 17

For your company, what would be the key components of supply chain orchestration?

	Asia/Pacific	EMEA	North America	TOTAL
Supply chain planning	33%	37%	33%	34%
Production planning/scheduling	34%	36%	28%	33%
Logistics and global trade	34%	35%	27%	32%
Collaboration with suppliers (upstream)	32%	31%	33%	32%
Collaboration with customers (downstream)	31%	32%	33%	32%

Notes: Multiple dichotomous table; total will not sum to 100%. n = 1,839, Base = all respondents; Source: IDC's Supply Chain Orchestration Thought Leadership Survey, December 2023



SUPPLEMENTAL DATA FROM PAGE 18

Companies cite challenges in finding the right partner, prioritization, and understanding to drive orchestration forward.

	Asia/Pacific	EMEA	North America	TOTAL
Cannot find the right vendor solution	38%	38%	34%	37%
Too many other priorities	21%	25%	16%	21%
Lack of budget	19%	19%	18%	19%
Do not see the benefit (our current supply chain IT tools are too old/inflexible)	20%	18%	13%	17%
Lack of skills to implement	11%	15%	26%	17%
Do not see the benefit (our business/industry isn't that complicated)	13%	18%	18%	16%
Don't really understand it	12%	12%	24%	16%
Do not see the benefit (current tools suffice)	12%	16%	15%	14%

Notes: Multiple dichotomous table; total will not sum to 100%. n = 1,839, Base = all respondents; Source: IDC's Supply Chain Orchestration Thought Leadership Survey, December 2023



SUPPLEMENTAL DATA FROM PAGE 19

What information do you still need to decide whether to adopt a supply chain orchestration application?

	Asia/Pacific	EMEA	North America	TOTAL
How it is different from the control tower we currently use	49%	49%	56%	51%
Alignment with our current supply chain application road map	38%	36%	48%	41%
How it would work with our current set of supply chain planning and execution tools	45%	44%	26%	39%
Clearer articulation of benefits	14%	14%	19%	15%

Notes: Multiple dichotomous table; total will not sum to 100%. n = 1,839, Base = all respondents; Source: IDC's Supply Chain Orchestration Thought Leadership Survey, December 2023

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SUPPLEMENTAL DATA FROM PAGE 20

Overall, what will be the top 3 functional area priorities for your supply chain in the next 12 months?

	Asia/Pacific	EMEA	North America
Supply chain planning	41%	43%	40%
Logistics and global trade	40%	37%	39%
Collaboration with customers (downstream)	39%	39%	36%
Collaboration with suppliers (upstream)	38%	37%	37%
Procurement and sourcing	38%	38%	36%
Warehouse and inventory management	35%	34%	38%
Control tower	32%	36%	36%
Reverse logistics/returns	35%	33%	35%

Notes: Multiple dichotomous table; total will not sum to 100%. n = 1,839, Base = all respondents; Source: IDC's Supply Chain Orchestration Thought Leadership Survey, December 2023

(Continue next page)



SUPPLEMENTAL DATA FROM PAGE 20 (CONTINUED)

Overall, what will be the top 3 functional area priorities for your supply chain in the next 12 months?

	Asia/Pacific	EMEA	North America
Collaboration with suppliers (upstream)	56%	54%	50%
Logistics and global trade	53%	55%	51%
Collaboration with customers (downstream)	41%	34%	43%
Warehouse and inventory management	37%	39%	40%
Supply chain planning	29%	31%	36%
Control tower	30%	32%	29%
Procurement and sourcing	23%	24%	24%
Reverse logistics/returns	8%	8%	7%

Notes: Multiple dichotomous table; total will not sum to 100%. n = 1,839, Base = all respondents; Source: IDC's Supply Chain Orchestration Thought Leadership Survey, December 2023



About the IDC Analysts



Eric Thompson
Research Director,
Global Supply Chain Planning, IDC

As a research director, Eric Thompson is a member of the IDC Worldwide Supply Chain Strategies Program. He is 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: Planning and Multi-Enterprise Networks 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 areas. This practice specializes in advising clients on supply chain demand planning, supply planning, sales and operations planning, and multi-enterprise supply chain networks.

More about Eric Thompson



Simon Ellis
Group Vice President,
Manufacturing and Supply Chain, IDC

As a program vice president, Simon Ellis is responsible for providing research, analysis, and guidance on key business and IT issues for manufacturers. He currently leads the supply chain strategies practices at IDC Manufacturing Insights, an IDC industry research company that addresses the current market gap by providing fact-based research and analysis on best practices and the use of IT to assist clients in improving their capabilities in critical process areas. Within the supply chain practice, Simon is directly responsible for research in the supply chain planning strategies practice while also managing the supply chain execution strategies practice. These supply chain practices specialize in advising clients on supply chain network design, sales and operations planning, global sourcing (profitable proximity and low-cost sourcing), transportation, logistics, and more. He also supports IDC Retail Insights IT strategies practices.

More about Simon Ellis

Message from the Sponsor KINGXIS®

Yesterday's techniques are no match for today's challenges.

Kinaxis® is a global leader in modern SC management. We serve SCs and the people who manage them in service of humanity. Our software is trusted by renowned global brands to provide the agility and predictability needed to navigate today's volatility and disruption. We combine our patented concurrency technique with a human-centered approach to Al to empower businesses of all sizes to orchestrate their end-to-end SC networks, from multi-year strategic planning to down-to-the-second execution and last-mile delivery.

Accelerating customer demands, technology advancements, and disruptions calls for a new approach to SC management. Kinaxis is the only platform that enables SCO across planning and execution to keep SCs instantly and continuously in sync.

Learn more about the power of orchestration



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