Advancements in AI can support making progress in resilient supply chains and efficiency gains.

Breaking Down Silos: The Path to Smarter, More Resilient Supply Chains

February 2025

Questions posed by: The Logic Factory
Answers by: Eric Thompson, Research Director, Global Supply Chain Planning

Q. How do you see companies working on breaking down silos, and do you believe supply chains really value end-to-end integration?

A. There is a consistent prioritization of capabilities to enhance visibility, integrated planning and execution, and tools, collaboration, and agility. IDC surveys of nearly 2,000 supply chain professionals showed the top 5 functional priorities are supply chain planning, better integration of planning and execution, sustainable operations, end-to-end track and trace, and end-to-end orchestration. Interestingly, I find that these same supply chain leaders say one of the top roadblocks to improved supply chain resiliency is internal collaboration. Those making the most progress are the ones focused on breaking down organizational silos and data silos. Aligning on measurements and KPIs requires process, data, and people alignment — and the integrated tools behind it. This holds true even for simple questions about what constitutes a unit, shipment, or sale.

As control towers, command centers, and cross-functional advanced analytics have progressed, the ability of a company to use such tools is limited or advanced by its ability to align processes and data with the progress of the tools.

Q. What are some key trends with regard to the future of planning — where are we going?

A. The topic of the day is the future of all forms of AI, including generative AI (GenAI) and large language model (LLM) tools in the supply chain. While many are placing bets on the AI space, deeper conversations with supply chain leaders reveal that they are unsure of the benefits, the next steps, and the return on investment. In IDC's 2024 *Supply Chain Survey,* AI shows up as the top technology for three years out. However, that may be an acknowledgment that respondents think AI is a big deal — and one they'll figure out in the future.

As we expand out from looking at specific use cases, some themes — and promising progress — are emerging:

» **Supply chain orchestration:** The link between planning and execution continues to grow, and the ability to sense disruptions and opportunities, respond with an insight-driven plan, and execute in a timely manner is promising to make supply chains more resilient.

» **Decision intelligence and support:** Whether via AI/ML or advanced analytics, companies are making gains in the tools and capabilities to support day-to-day operations and planning. Copilots, dashboards, what-if scenario modeling, optimization, and other support tools are aiding in analysis and management decision-making.

» **Automation:** Once decisions are made, routine processes, document management (e.g., PO/sales order (SO)/shipment changes), and exception management tasks are being automated.

These are but a few of the themes emerging as companies pursue fully integrated plans (e.g., finance, sales, planning, execution), more resilient supply chains, and continued efficiency gains.

Q. Speaking of collaboration and integration, how do you see companies focusing on transformation?

A. It's a great question because some companies are realizing they've been digitizing legacy processes. Even in a future vision where all tools and capabilities exist to be cross-functional, make what-if scenario modeling, and respond to disruption in real time, tools can't take organizations much further or faster than their processes and people are prepared for. There is a reason the old saying, "People, processes, tools," has lasted.

IDC believes that less than a quarter of supply chains have reached advanced stages of their resiliency maturity journey. If digital transformations implement old processes in new tools, they don't necessarily realize the intended value. To this end, companies are working diligently on internal collaboration to grow end-to-end planning, advancing not just toolsets but skill sets, and improving decision-making processes to support optimization, iterative supply network design, enterprisewide planning integration, and other things. IDC finds those that are introspective about internal opportunities for improvement get the most out of implementing new tools and capabilities.

Q. What progress is being made in integrating sustainability goals into operational reality?

A. When we look at our survey data and the conversations we're having with buyers, it seems there are different levels of transition in sustainable operations, just as there are in companies' digital transformations. Fewer than 25% of companies tell IDC they are prepared for Scope 1, 2, and 3 requirements — and we suspect some that say they are ready may be a bit optimistic. There doesn't seem to be consistency in the drivers of operationalizing sustainability either. Some see cost efficiency gains, some are concerned about regulations, and some are "doing it for the right reasons."

Regardless of the reason, IDC feels there are promising advancements in the optimization of tools and skill sets in both planning and network design. Supply chains are being used to optimize for cost, speed, inventory, resiliency, and other

factors. Optimizing for carbon footprint, use of energy, or consumption of precious resources will be a likely extension of these exercises. Advancements in AI, decision intelligence, scenario modeling, and cross-functional collaboration can support making progress in operationalizing sustainability.

Q. What are the pieces that tie all of this together?

A. As with anything worth doing, it's not a simple wave of the wand to achieve a fully integrated, deeply collaborative, highly intelligent, highly resilient, and optimized supply chain. The good news is that the advancements across mathematical AI, GenAI, analytics, data, and functional integration ensure some of the software is ready to achieve material advancements.

To leverage the power of the software takes talent and well-defined processes. I see companies that are building the muscles of process mapping, analytics, and decision-making to supercharge the realization of benefits from advanced software. These companies are making progress in resiliency as well. Whether through internal alignment or partnering with experts, the most productive digital transformations are not just about implementing new tools but bringing together functions and decision-makers in new ways.

About the Analyst

Eric Thompson, Research Director, Global Supply Chain Planning

As a research director, Eric Thompson is a member of IDC's 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: 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.

MESSAGE FROM THE SPONSOR

The Logic Factory (TLF) is a global supply chain planning and optimization consultancy dedicated to delivering impact and driving sustainable growth. Our mission is simple: empower companies to achieve lasting performance improvements and unlock tangible value. With customer value at the heart of every engagement, we identify what makes your business unique and craft a vision for greater efficiency. Specializing in data science, advanced planning, scheduling, and optimization, our team applies deep industry expertise to help meet operational and sustainability goals. Our focus on delivering business-driven results elevates supply chains to new levels of excellence by streamlining operations, reducing costs, and driving growth. We are with you every step of the way, from consultancy and project implementation to post-go-live support and services to ensure successful business (not just technical) implementation. From single sites to Fortune 500 leaders and world-recognized brands, at TLF, we build long-term partnerships founded on trust, collaboration, and shared success. Together, we turn complexity into clarity, adding decision intelligence for exceptional supply chain performance today and into the future.

IDC Custom Solutions

IDC Custom Solutions produced this publication. The opinion, analysis, and research results presented herein are drawn from more detailed research and analysis that IDC independently conducted and published, unless specific vendor sponsorship is noted. IDC Custom Solutions makes IDC content available in a wide range of formats for distribution by various companies. This IDC material is licensed for external use, and in no way does the use or publication of IDC research indicate IDC's endorsement of the sponsor's or licensee's products or strategies.

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications, and consumer technology markets. With more than 1,300 analysts worldwide, IDC offers global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries. IDC's analysis and insight helps IT professionals, business executives, and the investment community to make fact-based technology decisions and to achieve their key business objectives.