RESOURCES



# Inside the Rise of the Digital Supply Network: What Does the Future Hold for Supply Chains?



## Key Takeaways

- Pioneering supplier relationship management teams are pushing the envelope by leveraging digital supply networks to collaborate more closely and effectively with supplier partners than ever before.
- A new breed of collaborative, multienterprise applications will help supplier management teams overcome remaining obstacles and achieve the full benefits of digital supply networks.

Digital supply networks and collaborative, multienterprise applications have arrived—and they are fundamentally changing the way that manufacturers work with suppliers. But how did the world arrive at this critical juncture in the history of supplier relationship management? Let's take a quick journey through the modern history of the supply chain and see where it's headed in the future.

By enabling organizations to reach new levels of supply network collaboration, agility, and resilience in the face of disruptions, digital supply networks are poised to power the next stage in the evolution of supplier relationship

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management across all industries.

In the 1960's, a new management philosophy emerged toward the role and importance of the physical distribution of products. Initially, the scope was limited to the outbound movement of goods, but this focus expanded during the decade to include physical supply.

Purchasing began to emerge as a professional discipline, and engineers designed materials requirement planning (MRP) systems to handle ordering and scheduling of inventories. But there was no integrated view of the inbound movement of goods and physical distribution—and fragmentation and poor coordination of tasks frequently led to sub-optimization, inefficiencies, waste, and other problems.

During the 1980s, management began to focus on controlling the material flow, which resulted in tremendous reductions in inventory, but the focus remained within the four walls of an organization. In the 1990s, initial efforts toward functional integration began and led to a managerial focus on complete internal integration. The term "integrated logistics" was coined and organizations began to implement the first enterprise resource planning (ERP) systems, which extended MRP capabilities to include back-office functions like accounting and human resources. Benefits realized from these efforts included better customer service, reduced inventory, and lower operating costs.

At the turn of the century, the continued use of information systems enabled a more comprehensive integration. New supply chain management technology was created, allowing the integration and coordination not only of material flows, but also information and financial flows. Organizations began to invest increasingly more time and money to predict and control their extended supplier systems with a focus on value creation.

Around that time, the Supply Chain Operations Reference (SCOR) model was created to represent the reality of planning, sourcing, making, and delivering

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processes. However, management teams began to realize that changes occurring in the second and third tier of their supply network were often beyond their visibility and control. By 2010, supply chain and supplier relationship management leaders turned their focus to conceptually modelling the complex nature of the extended supply chain.



**Digital supply networks offer significant benefits—but challenges remain**

Pioneering companies today are pushing the envelope and building digital supply networks to create an always-on, always-connected, real-time and dynamically adaptive supply chains. By enabling organizations to reach new levels of supply network collaboration, agility, and resilience in the face of disruptions, digital supply networks are poised to power the next stage in the evolution of supplier relationship management across all industries.

With a digital supply network, digital network links replace expensive point-to-point integrations, data flows seamlessly across network members, and work processes can be tightly coordinated between network partners. Inventory levels, production and distribution process information, and demand and supply forecasts can be shared across the value chain of suppliers, manufacturers, wholesalers, and points of sale.

But significant challenges remain that continue to make it difficult for supplier management teams to achieve the full benefits of digital supply networks. For example, many supply chains remain largely linear, limiting visibility and the ability to make timely, coordinated decisions across networks of supplier partners. And the ability to share data across networks—so organizations can glean valuable collective intelligence—has been virtually nonexistent. Additional challenges include:

- Restricted data sharing
- Silos of “not visible” inventory excesses and shortfalls

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- Poor visibility and actionability related to out of specification (OOS) and on-time, in-full (OTIF) performance gaps across silos
- Fragmented planning processes
- Difficulties with end-to-end patient-centric supply chain orchestration
- Delayed partner responsiveness
- Significant cost and effort of building direct enterprise systems integrations with all supply chain members

What will it take for digital supply networks and supplier relationship management teams to reach their full potential? The answer is clear: Organizations require the transformative power to easily create multiple digital networks for different business processes—and to easily integrate across those networks to maximize business value and capitalize on collective intelligence.

Supplier relationship management teams also require a new breed of network-based and multienterprise business applications that drive innovation, cost reduction, and tight-knit collaboration with suppliers.

*In the next Agile Supply Chain Insights article, we'll walk through the five stages when making the transition from a traditional linear supply chain to a digital supply network that leverages the power of collective intelligence.*

Want to learn more? Schedule a demo to learn more about TraceLink's digital supply network technologies.

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