Many supply chains have been too slow to react and are still developing the foundational physical capabilities required to compete today — let alone develop, test, deploy and scale digital innovation effectively.

Supply chain leaders who achieve supply chain digital transformation successfully integrate well-established physical capabilities with emerging digital innovation.

By first developing the foundational supply chain capabilities and then incorporating proven business and technology innovations, leading supply chains are able to move beyond exploration to integration and optimization. These more-advanced capabilities provide the springboard for developing innovative ways of working, new business models and game-changing competitive advantages.

To achieve these ambitious goals and blend physical and digital capabilities, Gartner mapped out a three-step plan for supply chain digital transformation.
1 Embed supply chain in the digital ecosystem:

An organization’s digital ecosystem is a dynamic network of entities (people, businesses and things) interacting with each other through real-time integrated solutions to create and exchange sustainable value.

By leveraging technologies such as the Internet of Things (IoT) and big data, information is shared effectively across the digital ecosystem. These technologies can also inform decision making and drive efficiencies across the supply chain ecosystem.

Technology blurs boundaries between internal and external partners. To enable the execution of everyday supply chain processes in a digital ecosystem, supply chain leaders need to determine the role that digital technology plays, and validate and manage partners’ physical and digital requirements.

2 Implement autonomous supply chain:

Automation of processes has been a characteristic of supply chain for decades.

With the introduction and pervasiveness of artificial intelligence (AI), supply chains can introduce autonomous processes into their functions that augment — not replace — people. AI is expected to be able to progressively make a range of complex decisions, more autonomously (e.g., better predict demand, set inventory levels, reroute transportation, redesign the supply and distribution network).

Supply chain leaders need to ensure that their supply chains’ organizations are ready for digital business. This means becoming more informed about the application of digital technologies and the operating practices best suited to leverage them. They should also know how to align and deploy their expertise across workflows, rather than require business partners to come to them.

3 Synchronize with digital business:

Supply chain leaders can play a crucial role in identifying and addressing any gaps, obstacles or vulnerabilities in their organization’s response to the challenge of digital business and the delivery of customer value.

Synchronizing physical capabilities with digital ones builds resiliency in supply chains. Supply chain leaders, as a result, are better able to identify potential disruption within the supply chain ecosystem, mitigate those disruptions and minimize impacts to supply chain costs or service.

Key to synchronization are: Proactive risk mitigation, real-time asset optimization, autonomous operational responses, instant demand shaping and sensing, and proactive corporate social responsibility management.
About Gartner

Gartner is the world’s leading research and advisory company and a member of the S&P 500. We equip business leaders with indispensable insights, advice and tools to achieve their mission-critical priorities today and build the successful organizations of tomorrow.

Our unmatched combination of expert-led, practitioner-sourced and data-driven research steers clients toward the right decisions on the issues that matter most. We are a trusted advisor and an objective resource for more than 14,000 enterprises in more than 100 countries — across all major functions, in every industry and enterprise size.

Supply chain digital transformation: How Gartner can help

Digital is a key priority for most supply chain leaders, but fewer than half have defined or plan to implement a supply chain digital transformation roadmap that addresses both short-term improvements and a strategic long-term vision. Supply chain digital transformation is proven to drive growth, mitigate risk and optimize costs, but requires strong alignment between business and supply chain strategy to succeed. Gartner experts in supply chain digital transformation guide supply chain leaders in designing roadmaps for the future digital supply chain planning organization. Visit gartner.com to learn how we enable our 2,500+ supply chain leader clients with digital supply chain technology insights, advice, data and tools.