



Center for Board Effectiveness

On the board's agenda | US

Supply chain strategies: For many companies, the traditional balance is shifting

In the era of lean and just-in-time management approaches, many companies adopted supply chain strategies with a primary focus on cost and efficiency. With a formula for an effective supply chain focused on how to achieve the lowest cost with the highest level of efficiency, production facilities and suppliers of goods and services might be located virtually anywhere, as long as they could deliver to their critical customers on time at the agreed price. Supply chains, along with business strategies more broadly, became increasingly global.

In more recent years, an era in which low-probability, high-impact events have become more common, supply chains built around this formula have seen their share of challenges. Geopolitical tensions, war, increasingly severe weather, and a global pandemic, to name

a few, have disrupted the flow of goods and services in unexpected and unprecedented ways. In many companies, the scale and scope of disruption over the past few years has prompted new discussions about whether supply chain strategies should give more consideration to risk and resilience.

The global pandemic was a critical driver of this shift, as regional lockdowns, infrastructure constraints, and even closed borders quickly put the spotlight on the vulnerabilities of global supply chains. Further events, such as war in Ukraine, and increasing awareness of the concentration of critical commodities in a few geographies have accelerated the discussions. >

As these shutdowns and conflicts have led to significant disruption in supply chain operations, many companies are considering whether they could benefit from sourcing more goods from providers that are closer to their business operations and end markets or from providers that are located in countries where trade relationships are more stable and trustworthy. A more localized approach to sourcing could reduce the risks that are involved in long-distance transport across geographic borders, which may promote resilience in supply chains.

Many companies are engaged in discussions around questions such as:

- How can we get better visibility across the extended, end-to-end supply chain and the critical supplier networks on which the organization relies?
- How can we better sense, or even predict, supply chain risks so that they can be properly managed?
- What risks are most critical based on supply chain design and business strategy?
- How do we find the proper balance between resilience and efficiency when mitigating risks comes with extra cost?

These are the kind of questions that may be important to balancing risks as a way to promote resilience in supply chains, but the answers are not always easily attained.

Decisions, decisions

C-suite leaders may each have their own view of which criteria in supply chain management matter most. Finance leaders may focus most on reducing cost, while operational leaders may emphasize factors such as improving reliability, improving service, and optimizing assets. Some strategies and investments, such as digital supply chain solutions and automation, can enable companies to improve both resilience and efficiency simultaneously. However, some strategies, such as inventory investment and capacity investment, can cause tension between these two imperatives.

The board can have an important role in helping C-suite leaders arrive at an appropriate balance between efficiency and resilience for the factors that should be prioritized in transforming the company's supply chain strategy. For some companies, it may still be relevant to prioritize cost as a primary factor for where and how

to source critical resources. Companies whose business models are highly sensitive to even small shifts in commodity or raw material pricing may still place a great deal of importance on sourcing resources based on cost. In some cases, speed may be more important than cost, if customers value rapid availability of goods or services and are willing to pay more to obtain them, or if a company is focused on the threat of a low-cost competitor.

Based on more recent trends or events, some companies may look for indications that a particular product is produced at multiple locations to reduce dependence on a single location. Some companies may also find it important to consider factors such as whether goods are sourced with consciousness about fair labor practices or environmental sustainability.

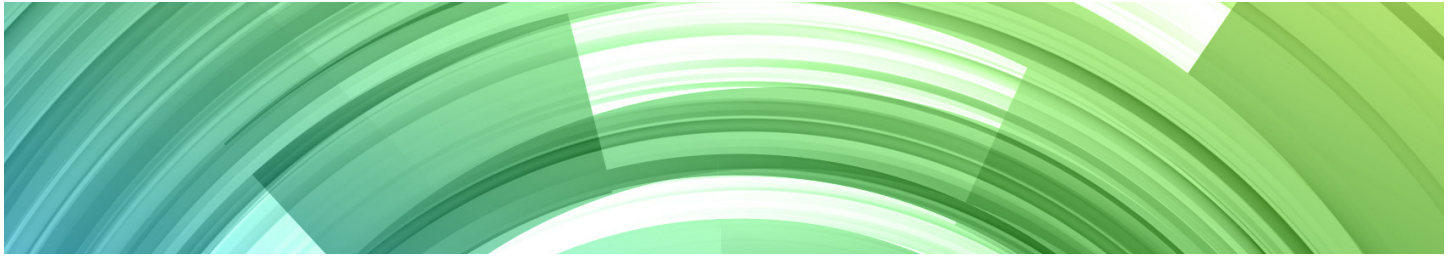
Some companies may also value transparency about a supplier base, perhaps as a differentiator in the criteria they will consider in arriving at a supplier decision, or perhaps because it will provide some other advantage, such as a pricing premium if the transparency enables greater resilience or increased certainty of supply.

Historic approaches for managing supply chain risks often focused on increasing inventory to provide a buffer against shocks in the supply chain ecosystem. Such buffers may protect against small shifts in an otherwise highly tuned inventory management process, but they may not offer enough protection for some of the true crisis events that are becoming more common. Further, C-suite leaders may resist sinking even more cash into increasing inventory, in part because there may be better uses for capital elsewhere in the business but also because it may increase the risk of expiration or obsolescence.

An alternative to increasing inventory is increasing production capacity, but this approach requires a capital commitment and lead time, and it carries additional risks about whether demand will be sufficient over time to justify the investment.

Yet another alternative is a multisourcing approach—purchasing a particular good from multiple suppliers instead of one or two. This can reduce the risk associated with a single supplier, but it may also reduce leverage. Companies may have more difficulty negotiating favorable pricing, and they may have less standing relative to other customers. If a company's spending becomes too fragmented across multiple suppliers, the company could become a high-priority customer to none of its vendors, which represents a different kind of threat to resilience. ➤





Digital as a solution

Given the delicacy of the balancing act and the complexity of the challenges, companies may need to deploy newer methods for making supply chain decisions. Digital technology increasingly is providing data and insights that give companies improved visibility into supply chain networks, which helps improve decision-making and agility in managing supply chain risks.

Many companies lack transparency into their supply chain ecosystems. According to Deloitte's [2022 Global third party risk management survey](#) of 1,309 respondents across 38 countries, only 36% indicated their companies have a high to very high capability to manage contingencies arising from global supply chain issues.¹ More than one-fifth (21%) said their companies have low or very low capability in this area, while the remaining 43% said the capability is moderate at best.²

Only one out of three respondents (34%) said their organizations use technology solutions to better understand the ecosystem of material third-party relationships, including where third parties operate.³ A similarly limited portion of respondents indicated they use tools such as risk intelligence or adverse media monitoring to monitor resilience and trends in real time (35%) or develop or maintain comprehensive exit strategies for material third-party arrangements (32%).⁴

These results are similar to those from Deloitte's [2021 survey of chief procurement officers](#), where only 26% of respondents said they felt they could predict risk in their first-tier suppliers, and only 15% said they had visibility into their second- and third-tier suppliers.⁵

The survey of chief procurement officers also identified some of the attributes of leading procurement officers to help identify capabilities and practices that promote supply chain agility. Among them: leading procurement officers prioritize data, both internal and external, to make fact-based decisions leveraging predictive analytics.⁶ Internal data might include master data capture and consumption, while external data could include market intelligence. These data-driven decisions can be used to identify both risks and opportunities.

Digital solutions in action

Digital technology can provide increased visibility and increased opportunity to manage supply chain risk in multiple ways. Digital supply networks leveraging advanced technologies such as the Internet of Things, artificial intelligence, robotics, and 5G can break down functional silos to help connect a complete supply network, which can enable real-time visibility, collaboration, agility, and optimization across supply ecosystems. Data and technology can help companies evaluate supply chain providers from multiple perspectives, including their capabilities, operational and financial performance, and compliance with contract obligations and relevant regulations.

Risk-sensing technologies can scan massive data sets—information generated or held within the organization as well as external data, such as open-source information—identifying signals that may indicate risk on the horizon. These technologies may help identify, for example, political shifts or environmental events that may suggest challenges could lie ahead for certain supply chain providers.

Digital twins of supply chain ecosystems can help C-suite leaders quickly sense the levels of risk that might be associated with breakdowns in specific areas of the supply chain. Using a digital twin, leaders can have an opportunity to consider a multitude of scenarios and identify plausible outcomes. For example, how would our operations be affected if a specific supplier went bankrupt, a certain shipping route became impassable, or a critical commodity price spiked?

Automation and robotics may also offer options for promoting resilience in supply chains. Companies can evaluate if there are certain manual tasks or processes in their supply chain ecosystem that could be automated using AI or robotics, potentially mitigating talent-related risks such as persistent labor shortfalls or those seen when entire manufacturing and production processes were shut down as a result of the pandemic.

For many companies, there are a number of production, logistics, and back-office functions that could be automated, and the return on investment for automating some of these functions may be shifting. Talent shortfalls are becoming more common, inflation is driving increasing wage rates, and the cost of technology solutions is coming down as they mature and adoption rates grow. ➤

1. Kristian Park, Danny Griffiths, and Sanjoy Sin, [Emerging Stronger: The rise of sustainable and resilient supply chains](#), Deloitte, 2022.

2. Ibid.

3. Ibid.

4. Ibid.

5. Jim Kilpatrick et al., [Agility: The antidote to complexity](#), Deloitte Insights, 2021.

6. Ibid.

Digital technology can also help companies factor environmental, social, and governance (ESG) considerations into their supply chain decisions. Digitally produced data can help inform decisions on reducing carbon footprints, conserving energy, sourcing hard-to-mine commodities, and managing a rapidly evolving regulatory landscape with respect to a wide variety of ESG matters. Digital technologies might also help companies understand and navigate sensitive geopolitical complexities when sourcing materials from jurisdictions where tensions or lack of trust are more common.

Using data and digital technology, companies can often improve their management of multiple supply chain risks, such as:

- **Sourcing risk**—Improved visibility can help companies more effectively and rapidly identify secondary suppliers should a shift be necessary. Companies may have an improved understanding of inventory, capacity, and alternative sources for critical goods and services.
- **Transport risk**—Potential bottlenecks with specific transport modes may be earlier and more easily identified, enabling companies to mitigate the possibility of delays by shifting how goods are transported, such as from truck to rail, or ship to air.
- **Facility risk**—Earlier warnings to factors that could lead to a particular facility becoming inoperable or overloaded with inventory can help enable an earlier response to pivot, such as securing local storage alternatives or shipping to different locations.
- **Distribution risk**—Deeper or earlier insight into demand shifts—for example from brick-and-mortar retail to e-commerce or vice versa—can help companies improve their ability to manage the flow of goods in a way that matches demand.

Part art, part science

The equation for an appropriate supply chain equilibrium is complicated. Data and technology can provide deeper insights into how to strike a balance, but human judgment is ultimately critical in making effective supply chain decisions.

The path to a new equation for supply chain management is an important balancing act for boards to understand and oversee. With its deep understanding of strategy and risk spanning the enterprise, boards are in the optimal position to hold C-suite leaders accountable for considering the company's mission and strategy and synchronizing a supply chain ecosystem that balances a multitude of sensitive factors.



Questions for the board to consider asking:

1. To what extent has the company's supply chain strategy been tested by recent events such as the pandemic, war in Ukraine, floods, wildfires, trade tensions, or other unforeseen events?
2. How effectively has the company pivoted and demonstrated resilience when facing supply chain challenges?
3. Does the company have an appropriate balance between efficiency and resilience while also meeting evolving customer requirements and ESG commitments to key stakeholders?
4. How should performance metrics, targets, and accountabilities evolve to reflect potentially shifting supply chain priorities?
5. How much visibility does the company have across the end-to-end supply chain? Does the company have the necessary level of integration and collaboration with its critical direct suppliers? How does visibility change with suppliers in the second, third, or fourth tiers of the supply chain?
6. What tools does the company use to improve supply chain visibility and to sense and respond to supply chain risks?
7. What investments could the company consider to improve supply chain management and position the company to thrive in the future?

Boards can also commit themselves to understanding the full scope of factors that are calibrated into the company's supply chain equilibrium so those factors can be considered as the board makes broader decisions that may affect supply chain dynamics. Demand cycles for many products and commodities are still in flux amid inflationary pressures that followed initial pandemic-driven disruptions. Capital allocation decisions and supply chain decisions may still be sensitive as uncertainty persists regarding the economy, geopolitical shifts, talent, and the effects of factors such as emerging viruses and extreme weather.

When approving capital allocation or investment decisions, boards can hold management responsible for providing data to support decisions and bring a broad, longer-range view to enterprise risk, considering global demand and supply indicators that represent risks and opportunities beyond the turbulence of the day. ➔



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