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Future-Proofing the Supply Chain

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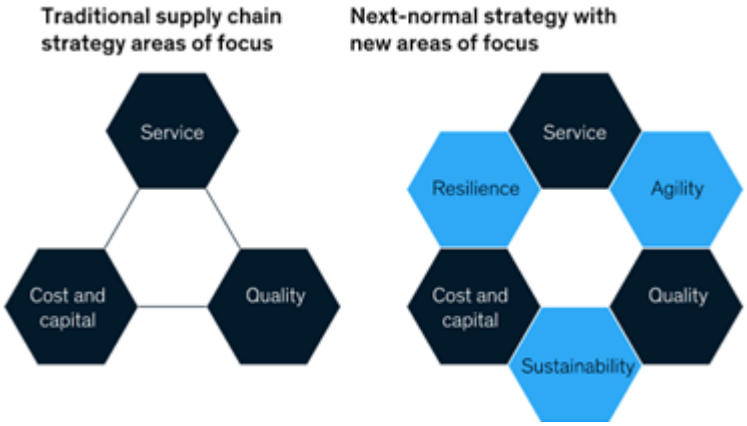
Futuristic supply chain officers now have a once-in-a-generation opportunity to future-proof their supply chains. This can be done by recognizing the three new priorities alongside the function's traditional objectives of cost/capital, quality, service and redesigning their supply chains accordingly.

The first of these new priorities, resilience, addresses the challenges that have made supply chain a widespread topic of conversation. The second, agility, will equip companies with the ability to meet rapidly evolving, and increasingly volatile, customer and consumer needs. The third, sustainability, recognizes the key role that supply chains will play in the transition to a clean and socially just economy.

Traditional vs. Futuristic Supply chain Focus Areas

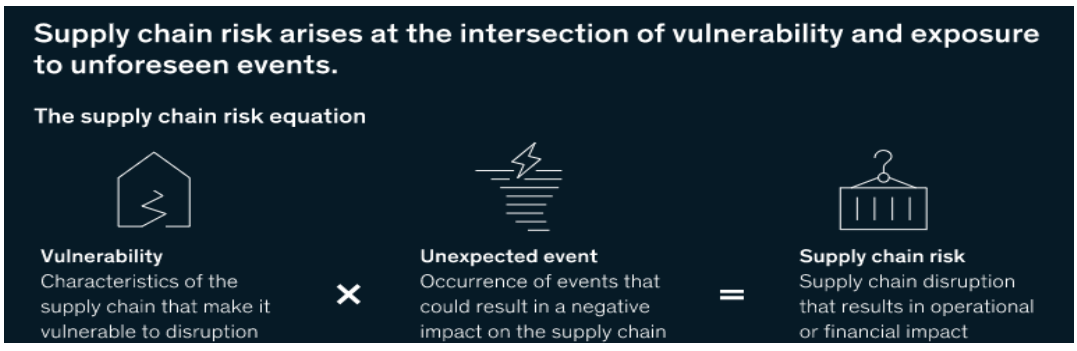


Supply chains have always been vulnerable to disruption. As per the research by reputable institutes it was found that, on average, companies experience a disruption of one to two months in duration of almost every 4 years.

Historical data also show that these costs are not inevitable. In 2011, Toyota suffered six months of reduced production following the devastating Tohoku earthquake and tsunami. But the carmaker revamped its production strategy, regionalized supply chains, and addressed supplier vulnerabilities. When another major earthquake hit Japan in April 2016, Toyota was able to resume production after only two weeks.

During the pandemic's early stages, sportswear maker Nike accelerated a supply chain technology program that used radio frequency identification (RFID) technology to track products flowing through outsourced manufacturing operations.

Supply chain risk manifests at the intersection of vulnerability and exposure to unforeseen events. The first step in mitigating that risk is a clear understanding of the organization's supply chain vulnerabilities. Each industry recognizes their challenges and accepts that it could impact the regular supply chain flow.



Increasing supply chain agility

Customer loyalty is no longer a given. During the COVID-19 pandemic, for example, 77 percent of US consumers changed stores, brands, or the way they shop. Much of that change was driven by necessity. People went online when they couldn't access their regular stores, and two-thirds said that lack of availability was the primary reason for switching brands. The big winners of the crisis were companies, often the largest players that could keep products flowing to their customers in a difficult operating environment.

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At the planning stage, for example, supply chain teams will need to work in a much more proactive way. As potential market opportunities are identified, the supply chain function can begin creating scenarios that are ready for implementation alongside the development of the new product or market offering. After launch, the use of advanced techniques for demand sensing and dynamic forecasting, aided by machine learning technologies, is set to become an essential part of day-to-day supply chain operations.

In supply chain execution, agility requires new capabilities and tools. Agile operations make extensive use of digital technologies in manufacturing, for example, and maximize the use of smart automation in both production and logistics settings. Unlike the rigid supply chain automation systems of the past, technologies such as collaborative robots and smart packaging machines are capable of faster changeovers and can handle a much wider range of products and shipment types.

The drive for agility may require companies to reassess make-versus-buy decisions. In downstream logistics, meanwhile, greater use of 3PLs may become the most cost-effective way to increase asset flexibility and proximity to customers.

Agile supply chains will also need skilled, flexible people. Accordingly, agile supply chains make use of agile teams and working methods, borrowing elements of the approach that have transformed flexibility, productivity, and quality in the software industry and beyond. Agile organizational principles are well-described elsewhere, but key elements of the approach include the use of tight-knit, cross-functional teams that work together to implement new concepts and solve difficult problems in short, incremental sprints. These principles are already gaining traction across a range of industries: one major consumer products manufacturer is using “flow to work” pools in its global support functions to dynamically allocate staff to projects, for example.

These new priorities of resilience, agility, and sustainability can’t be tacked on to existing supply chain setups. Realistically, they will need to be built in from the foundation and considered in every element of supply chain design, organization, and operation. For many companies, that will likely require a change in mindset from the top, with risk, agility, and sustainability KPIs considered alongside traditional ones focused on cost, capital usage, service, and quality. To excel in these six supply chain dimensions, workforce management and digital capabilities will be essential.

References

[1] McKinsey Capabilities & Operations
[2] Global Supply Chains in a Post-Pandemic World by Willy C. Shih
[3] A Normal Supply Chain? It’s ‘Unlikely’ in 2022 – New York Times
[4] Supply Chain Management Article Library – NC State University

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