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3 Ways to Drive Resilience From Supply Chain Planning



Introduction

According to the 2024 Gartner Board of Directors Survey, the top 3 constraints to growth over 2024-2025 include global or local recessions, long-term economic uncertainty and regulatory changes. Other disruptive events include mergers and acquisitions and internal organizational changes. In response to this new environment, supply chains have prioritized building resilience into planning over the past few years.

Unfortunately, experts predict that by 2026, 92% of companies will have failed to enable full end-to-end (E2E) resiliency in their supply chains. Despite understanding the importance of resiliency, most organizations fail to achieve it in their networks for all levels of uncertainty exposure.

A supply chain's resilience is based on its ability to avoid, absorb and recover from the business impact of uncertainty associated with disruptions. It must:

- Avoid disruptions impacting operations by sensing shifts in demand.
- Absorb the impact of disruptions by exploring network alternatives, like rescheduling production.
- Recover from disruptions faster by going back to its original planning state rather than starting from scratch.

In the 2023 Gartner Balancing Sustainability and Resilience Survey, 53% of organizations reported that their supply chains were impacted in service, cost or sales 50% of the time or more due to disruptions; 29% reported they were similarly impacted about 30% of the time.

From our 2022 Gartner Globalization Trends in Designing Supply Chain Networks Survey, we identified that many organizations try to achieve resilience in the face of disruptions and their impacts. For example:

- Some companies increased inventory buffers of key materials or finished goods.
- Half of organizations increased the number of locations in their supply chain network.
- Some organizations added new production capacity.
- Other organizations added new suppliers.

Supply chain planning leaders are employing a variety of strategies in isolation, some of them ending in redundant executions such as increased inventory. This has made supply chains complex, while offering little benefit in terms of increased resiliency. In the end, the more complex operations become, the more difficult and expensive it is to make them fully resilient.

This report outlines three areas that supply chain planning organizations must focus on to address the resiliency challenge:

- Change the planning approach.
- Enable digital scenario planning.
- Implement a risk management framework.

Change the planning approach

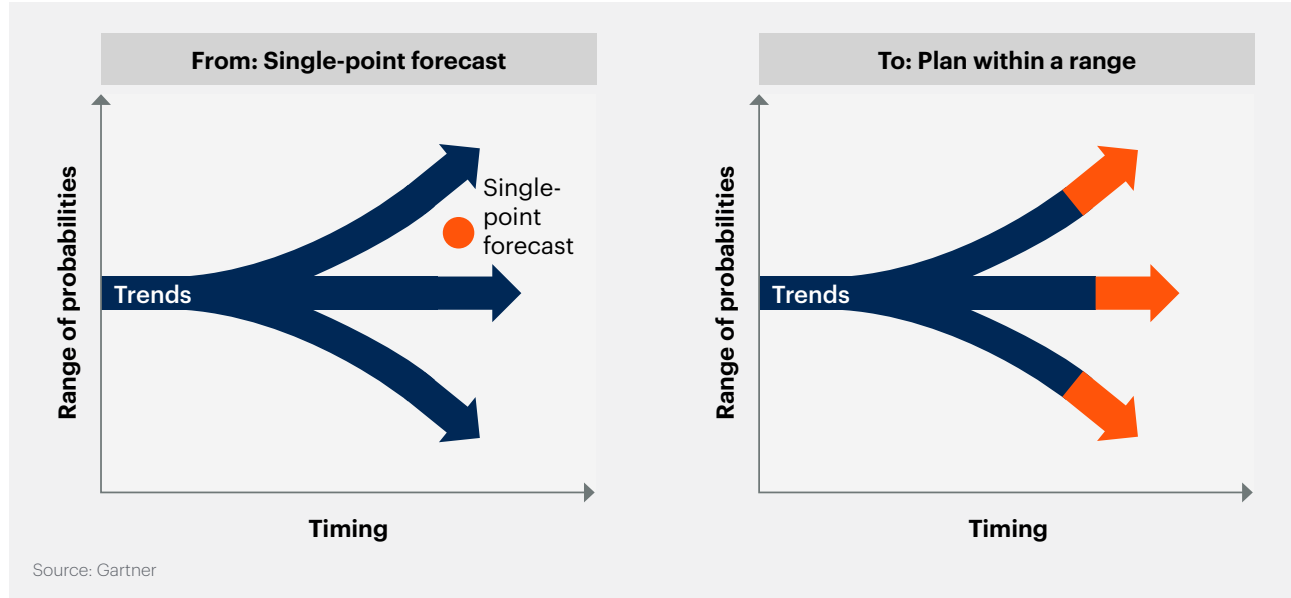
Historically, supply chain planning leaders have focused on accuracy and precision, typically using deterministic methods to devise a plan that relied on one precise number that the company would either hit or miss. Even when scenarios are being discussed in sales and operations planning (S&OP), the output remains a single-point forecast.

Supply chain planning leaders need to change the planning approach from a single-point forecast to a plan within a range (see Figure 1), known as probabilistic planning. Probabilistic planning tests and prepares for any number of potential forecasts to optimize decision making, time, resources and inventory. According to the 2023 Gartner Antifragile Supply Chain Management Survey, two years from now, the number of companies changing to a planning approach within a range of probabilities will grow 23%.

Developing probabilistic planning requires a cultural shift. Supply chain planning leaders must start to embrace uncertainty. That's because even within a range, reality will be a point within it, and the rest of the areas of the range will be wrong.

We suggest using S&OP meetings to talk about the risks and opportunities that the plan might face and identify which ones the organization will plan for. This will make up "the range," which will be the base plan and the possibilities that planning leaders are counting on occurring.

Figure 1. Change from a single-point forecast to a plan within a range
Illustrative



Enable digital scenario planning

To accomplish resiliency, supply chain planning leaders must implement dynamic digital scenario planning — a planning method that can capture all the changing circumstances and stress-test most of the assumption changes. Traditional scenario planning is inadequate for the world we live in and for our supply chains, as simultaneous changes in uncertainty types, interconnectivity and speed of change create amplified, intertwined impacts that are difficult to mitigate with simple, static strategies. Dynamic scenario planning can map all the variables and the relationships between them as events transpire. With digitalization, it is easier to organize data and sense shifts in that data as risks present themselves.

Three elements make digital scenario planning a must-have approach:

- 1. Amount of data.** Before it was just internal data that needed to be cleaned, organized and modeled. Now there is external data available, too, that can be used for better decision making.
- 2. Fixed value assumption.** We have assumed that variables had a constant value, either constantly right or constantly wrong. The reality is that variables have different values through time and in relation to other variables.
- 3. Parameters per variable.** With complexity rising, now there are multiple angles to look at things, not just revenue or profit.

Building scenarios with technology is critical to understand where trade-offs can be made and which possible actions to take before and while disruptions occur.

The 2023 Gartner Antifragile Supply Chain Management Survey found that within two years, 48% of organizations plan to go from having a one-number volume plan to having a policy plan derived from many scenarios (with volume ranges, thresholds and policies by time bucket).

Supply chain planning leaders should engage in conversations with the organization's leadership to explain what a supply chain advanced tool would mean to resilience and decision-making quality. These tools require a high level of investment. They involve changing the way supply chain planning operates while representing a massive transformation for the organization. That is why supply chain planning leaders need to first engage with leadership, show use cases where they would have benefited from dynamic scenario planning and pilot some of these use cases with a vendor. Once this is done, planning leaders need to work on the mindset of the organization and move it toward scenario visibility and discussion. This has to be done through consistent discussion of gaps and critical issues in the S&OP meetings. Options need to be visible — the better the inputs, the better the decision making.

Implement a risk management framework

Often decisions on risk are managed inconsistently within planning teams. The 2021 Gartner Supply Chain Risk and Resilience Survey revealed that for 57% of respondents, the most important area of improvement to supply chain risk management was to have a more clearly defined risk process and governance. The survey found that there's a 25% difference in the effectiveness of the business response when there is a risk process in place versus when there is not.

A risk committee (see Figure 2) needs to be in place and do the following:

- 1. Oversee supply chain risk** through monitoring assumptions in the S&OP and determine the potential impact of the uncertainty associated with each risk on supply chain performance.
- 2. Determine supply chain risk appetite** using probabilistic discussions.
- 3. Review emerging and materialized risks** in both S&OP and risk committee sessions.
- 4. Monitor effectiveness of risk response** in the risk committee sessions along with the leadership team.

Figure 2. Supply chain risk committee activities



The supply chain planning leader must engage the organization in the need for a risk committee and show the value of it with cases that could have been prevented if a better framework of discussion and monitoring was in place. Once approved as a concept, validate the participation of all areas (strategic and operational) at least in reviewing risks and response effectiveness. Define a framework for monitoring emerging and materialized risks with metrics and thresholds, discuss this at least monthly, and track the effectiveness with operational and financial metrics.

Once the risk committee is in place, supply chain planning must lead it within the proper business context, including both sides of the organization: the operational one with manufacturing, R&D and quality control, and the commercial side including finance and marketing.

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