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Coronavirus Requires Supply Chain Leaders to Adopt Enhanced Decision-Making Abilities

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Initiatives: Supply Chain Strategy, Leadership and Governance

Coronavirus is forcing chief supply chain officers to make extremely fast decisions with high levels of uncertainty to find workarounds for broken supply chain networks in China. This research outlines how CSCOs can use decision-making constraints to better respond to the impact from coronavirus.

Overview

Key Challenges

- Coronavirus, officially named COVID-19, has closed off many regions in China, including Wuhan, a major manufacturing and transportation hub, resulting in lost production and delayed shipments.

- More than 80% of supply chain professionals report that decisions made in response to disruptive change could be improved — either more accurate, faster or more cost-effective.

Recommendations

As a chief supply chain officer overseeing strategy and governance, you should:

- Develop a strategic response plan to put your company in the best position to respond to disruption by placing constraints on decision-making inputs such as people, information, time and escalations.

- Demonstrate constraints-based, decision-making successes to the C-level and identify how setting constraints can limit disruption from coronavirus.

Introduction

COVID-19 is caused by a member of the coronavirus family that’s related to the SARS and MERS viruses that have caused outbreaks in the past. COVID is short for coronavirus disease.
Coronavirus shows no sign of abating. As of 12 February 2020, the fast-spreading virus had killed more than 1,300 and infected more than 60,000 worldwide. As a result, supply chain organizations are seeking quick remedies to disruptions caused by a continued shutdown of key manufacturing and logistics hubs in China. Major production and transportation hubs are locked down by the Chinese government, including Wuhan, which accounts for 4% of China's total GDP.

Many companies report being impacted by the factory closures, including Tesla, which saw its market cap fall by 17% when it revealed that it was missing delivery dates in China because of closed plants. Aside from the auto industry, pharmaceutical, medical supplies and high-tech industries all have high-risk exposure, as production in many factories remained offline until at least February 10 or longer. When production resumes, there is no guarantee that logistics providers will have sufficient labor to move freight. In addition to labor constraints, transportation will be slowed further by overextended ports, rail hubs and air carriers.

Chief supply chain officers (CSCOs) must act quickly and decisively to respond to growing supply chain disruptions from the virus. Decision constraints — limits that are strategically applied on decision-making inputs such as time and people — can improve mitigative responses to events like a pandemic. Decision constraints purposefully prompt decision makers to respond faster, more accurately and efficiently to disruptive events than they normally would. They do this by placing limits on the number of people involved in the decision, time spent making the decision, the amount of information shared and limiting escalation. When a supply chain disruption occurs, placing constraints on decision making can be especially helpful to ensure a rapid and high-quality response.

Knowing what to constrain, where to apply constraints and when to constrain decision making can be difficult. This decision constraints impact matrix indicates, given the scenario, which input(s) will be the most impactful for supply chain leaders to constrain when responding to a disruptive event to achieve high decision quality (see Figure 1).

**Figure 1. Decision Constraints Impact Overview Matrix**
Analysis

Put Your Company in a Competitive Position to Counter Disruption by Placing Constraints on Decision Making

Disruptive changes to supply chains are more common than ever, and globalization has magnified the impact and visibility of these disruptions. According to Gartner’s 2019 Responding to Disruptive Changes Quantitative Initiative, more than three-quarters (76%) of supply chain professionals say disruptive changes have increased compared to three years ago. In addition, 72% agree that disruptions have become more impactful. Furthermore, disruptive changes are coming from new sources and at a more rapid pace, with coronavirus representing a prime example. At the start of 2020, planning for a pandemic wasn’t included in many supply chain playbooks. Within three weeks, the coronavirus event became a major source of disruption, as labor supplies plummeted and companies whizzed through safety stock and encountered product shortages and sourcing challenges. This was compounded by the Chinese New Year, when factories are closed for the holiday.

Supply chains must respond to coronavirus; however, many will struggle to do so quickly given the complexity of the decision-making environment. Large amounts of data, tools and involvement of
a large number of stakeholders can hamper the ability to respond to disruptive changes like coronavirus. As a result of the increased complexity, supply chains are beginning to feel the manifestation of bad decision-making behaviors — an indication that employees are struggling to make good decisions.

It’s becoming clear as to why that is. The actual decision-making environment is more complex, with more data, more complex tools and systems, and a tendency to involve more stakeholders than necessary. Gartner data indicates that most supply chain workers struggle in this environment, often feeling overwhelmed by all of the information they have access to when it comes to disruptive change-driven decisions. This can lead them to cherry-picking data points or delayed decision making (although the data we have is better than before).

These behaviors undermine decision quality. According to Gartner’s 2019 Responding to Disruptive Changes Quantitative Initiative, more than 80% of supply chain professionals report that decisions made in response to disruptive change could be improved — either more accurate, faster or more cost-effective.

However, there is a solution.

**New research from Gartner has found that placing constraints on decision-making inputs like people, information, time and escalations has the most significant impact on improving decision quality.**

Constraints in this context are not performance-limiting restrictions on a system. Instead, constraints are limits that are strategically applied on decision-making inputs. In this way, decision constraints can be leveraged to create better outcomes.

So, what does it mean to apply a decision constraint?

- **Time:** Limit time to gather information, deliberate in meetings and reach a decision.

- **Information data:** Limit the amount of data decision makers have to synthesize. Limiting information doesn’t necessarily mean helping the decision makers make sense of it but, rather, they limit the amount of time spent gathering and analyzing data. In addition, they limit who gets access because there is simply too much information supply chains have access to synthesize it all in these crucial time periods.

- **Escalations:** Limit formal and informal escalations.

- **People:** Limit the number involved and limit the number accountable.
CSCO’s interested in pursuing constraints-based decision making should consider the following steps:

- **Identify what decision inputs should be constrained** — Analyze past decisions to identify where constraints should be applied. One consumer products company conducts a decision-making root cause by studying decision inputs to identify those that create bottlenecks and then apply constraints specifically to those.

- **Set up decision constraints** — Design a decision-making process with defined constraints to make them repeatable and scalable when responding to disruptions.

### Demonstrate How Constraint-Based Decision Making Can Limit Disruption From Coronavirus and Other Disruptive Events

A majority of supply chain professionals (81%) agree that their mitigative responses would have been equally good while spending less resources and spending less time on deciding (see Figure 2). This suggests there is opportunity for supply chain leaders to improve decision-making efficiency. In order to ensure decision makers do not spend excessive time or resources, supply chain leaders can set up a decision-making framework for when disruptions occur. The framework can include guidance on who to involve, how much time to spend and what information to use. And it can speed time to response.

The framework should also take into consideration the financial impact of the decision to help determine the time resources (that is, a multimillion dollar risk associated with a decision should allow for more time to make that decision as opposed to a decision that could result in a $10,000 risk).

*Figure 2. Evaluation of Time and Resources Used in Mitigative Response*
When considering a constraints-based solutions, it's crucial to get the organization to embrace a new decision-making environment. Ensure staff feels comfortable with decision constrains by developing a transparent decision-making process, which enforces the use of constraints but has flexibility to adjust as needed.

For example, responding to the recent tariff dispute between the United States and China was the impetus for using constraints at Schneider Electric, where tariffs were likely to force a change in production location for a valued product line. Schneider's team anticipated reaching a decision would take 12 weeks, in part because of the time required to fully analyze and consider different scenarios. The team also anticipated that escalations would likely happen given the potential financial impact of the decision and the large group of people involved in high-impact decisions. The same principles could be applied to the disruption emanating from China because of coronavirus.

Recognizing the need to speed up the decision-making process without sacrificing decision quality, Schneider applied a series of decision constraints. For starters, time to decision was reduced by two-thirds — to four weeks. That had a cascading effect on information, such that only the information that could be prepared in that amount of time would be used to make decisions.

Schneider put a strict limit on escalations and assigned one individual to be responsible for ownership and the decision. By abiding by these limits, Schneider executed a successful response.
in half of the expected time.

With the need to respond to coronavirus disruption immediately, decision speed and quality are important. Look to decision constraints as an approach you can implement quickly to improve the quality of your mitigation response.

Evidence

**Gartner’s Decision Quality Study.** To understand how to improve decision-making quality in response to disruptions, our research involved quantitative analysis from a study of over 600 supply chain professionals and qualitative interviews with more than 60 chief supply chain officers.
This complimentary research is part of Gartner’s ongoing coverage of the business impact of the coronavirus (COVID-19).

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