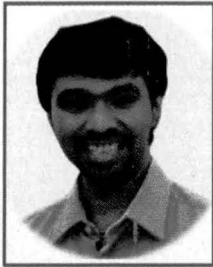


SUPPLY CHAIN RISK MANAGEMENT RESILIENCE & REBALANCING



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Abstract

Supply chain is a network and infrastructure among organizations that is required to produce and distribute a product or service. As organizations extend their operational and commercial footprints, managers are focusing on improving their ability to avoid supply chain risks and maintain a competitive advantage.

Supply chain disruptions is an unplanned and unanticipated event arising due to external and internal factors and these disruptions are increasingly costly. Organizations are experiencing increased supplier risk events due to extreme weather events, unplanned communication outages, supplier financial challenges, pandemic-induced lockdowns and cyberattacks, for example. The growth in cross-border flow of goods and services and in the number of partners in an organization's global supply chain ecosystem has also increased the complexity, making many organizations to focus on creating efficiencies and reducing costs. However, moving to leaner supply chains has made organizations fragile and more susceptible to the growing number of disruptions. As a result, organizations are restructuring or rebalancing supply chains to mitigate the risks of disruptions and to build resilience while increasing visibility and creating the need to balance new operating challenges. Failing to respond to supply chain risks by building adequate contingency plans puts organizations at a greater risk of potential failures and enhanced costs during disasters and other business interruptions.

TOUCH POINTS OF A SUPPLY CHAIN DISRUPTION

All the functional areas of an end-to-end supply chain — from raw materials procurement to product or service delivery (plan, source, make, deliver, customer service) — are potential touchpoints where disruptions can occur. Thus, ineffective management of a problem in any one link in the

chain can disrupt the entire supply chain, impacting both the operations of the supply chain and the production process these supply chains support.

IMPACT OF A SUPPLY CHAIN DISRUPTION

Financial impact of any of these disruptions, either alone or cumulatively, can be substantial.

When the business managers are unsure of their role in managing

supply chain disruption risk, these risks extend beyond financial impact, becoming more prevalent and expensive. Progressive management works closely with supply chain leaders to gain visibility into when and how resources move across the entire system. Risk managers act as advisors for supply chain managers, directing them to take an efficient approach to improve identification of supply risk sources and develop predictive risk management solutions

to improve risk readiness for potential breakdowns in supply chains.

IMPORTANT TERMS

Third-Party Risk: Third-party risk is any risk arising due to the use of external parties to assist or wholly perform activities necessary to the operations and strategy execution of the business. Third-party risk is a component of supply chain risk.

Time to Recovery (TTR): How long it will take to recover from a disruption.

Time to Survive (TTS): How long the company can continue to operate after disruption.

Order Cycle Time: Time from the receipt of an order from a customer to the receipt of the product by the customer.

Bullwhip Effect: Also known as “Whiplash Effect,” it is an observed phenomenon in forecast-driven distribution channels. The oscillating demand magnification upstream in a supply chain is reminiscent of a cracking whip.

KEY DRIVERS OF SUPPLY CHAIN RISK

Businesses need to understand the factors that can drive supply chain disruption. Some of the causes for supply chain disruption are:

Inefficient Third-party Supplier Management: The organization audits and reviews its third-party supplier on an ad hoc basis instead of following a regular cadence.

Suboptimal Back-up Continuity Management (BCM) and Disaster Recovery Plan: — The organization is underprepared to recover from situations such as equipment breakdown, economic trade regulations, labor fluctuations, Governmental and climate factors and the threat of terrorism.

Inadequate Operational Assessment and Planning: Current systems or processes are not equipped with the latest data to accurately

Heads of Managements should work with supply chain leaders to recognize supply chain failure points

predict customer demand.

Failure of Logistical Operations: Logistic challenges, such as warehouse adequacy, cargo damage and theft are identified at a later date, making it hard to control or address them.

The consequences of supply chain disruption incidents are more expansive than immediately apparent for an organization, as they impact the organization at several levels.

IMPLICATIONS OF SUPPLY CHAIN DISRUPTION INCIDENT

More than one in 10 organizations suffered losses of more than \$1 million due to supply chain disruptions during 2018-19 (selected this year to analyze trends of Pre-COVID levels of normal business scenarios), as per the analysis from an international survey result. However, the implications of supply chain disruption are not just financial but also strategic, operational and reputational.

Reputational: Hefty fines and burdensome penalties for vendors not complying with regulations, such as ethical requirements, loss or mismanagement of confidential data all can result in reputation loss for an organization.

Operational: Organizations might face operational losses due to loss of productivity, increased cost of working and missed opportunities due to unplanned shutdowns.

Financial: Organizations might face financial losses due to product replacement cost and/or increased costs due to missed milestones in product delivery.

Strategic: The disclosure or theft of intellectual property can delay a strategic initiative or undermine competitive advantage. Further, these risks can also cause reduction of market share due to delay in product delivery to customers and low switching costs.

Managements are in a unique position to improve supply chain disruption risk readiness for the organization by facilitating coordination among procurement, ground operational managers and other supply chain stakeholders. Heads of Managements should work with supply chain leaders to recognize supply chain failure points and their possible consequences. This can help heads of management identify a problem before it escalates.

RESILIENT RESPONSE TO SUPPLY CHAIN DISRUPTION

Consultants and Managements (C&Ms) should help the organization to evaluate the risks of rapidly shifting supply chain strategies and the organization’s ability to absorb and recover from a growing number of supply chain disruptions.

To review supply chain risks and help improve risk preparedness, C&Ms should verify whether their organization’s risk response plans adequately address the risk’s true root causes and consequences (see Figure 1). Further, once the root causes and consequences are recorded, C&Ms should review the control measures in place to minimize the consequences if the risk event were to occur. Additionally, C&Ms should provide recommendations to develop a robust and well-structured risk mitigation plan.

One way to guide supply chain leaders is by leveraging bow-tie diagrams. These diagrams illustrate the connections between risk events, their root causes and consequences by:

- © Visualizing a summary of plausible consequences that

could exist around a certain hazard

- ⊙ Displaying what measures an organization can take to control those consequences

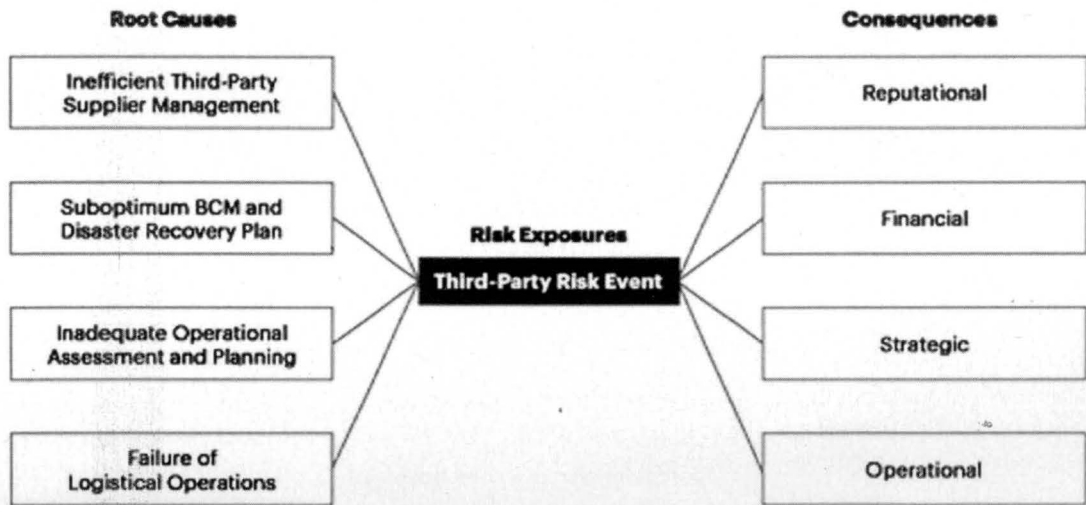
This analytical framework will help management verify their

risk-response plans adequately address the risk exposure's true root causes and consequences. Further, once root causes and consequences are recorded, management should work with supply chain leaders to put control measures in place to minimize the consequences if the risk event

occurs. This will help management to increase the overall risk readiness for the organization against supply chain disruption risks. Management can review the sample bow-tie diagram shown in Figure 1 to understand how to use bow-tie diagrams for their organizations.

FIGURE 1

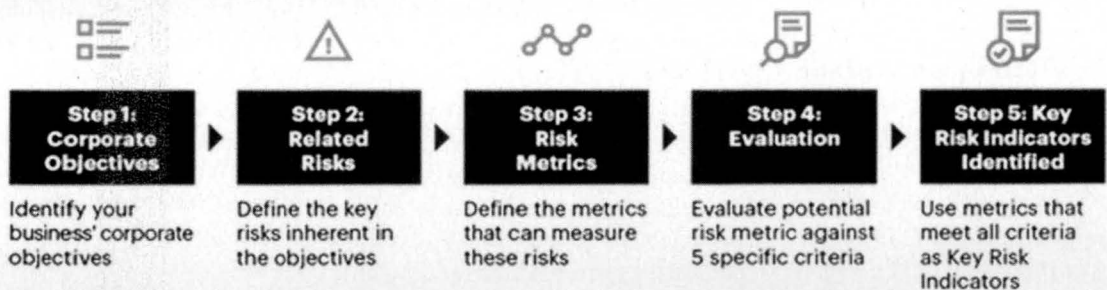
Supply Chain Disruption Risk Bow-Tie Diagram Illustrative



SUPPLY CHAIN RISK MANAGEMENT & RE-BALANCING

Risk and assurance functions use key risk indicators (KRIs) to track early signals of increasing risk exposure in various areas of the enterprise. While this is crucial to risk management, it can often be challenging.

KRI Identification Procedure



SOME COMMON SUPPLY CHAIN REVIEW ACTIVITIES FOR EFFECTIVE & EFFICIENT RE-BALANCING

- ⊙ **Review Supply Chain Contingency Plans:** Assess supplier contingency plans to ensure that the organization can quickly pivot to different sources for critical supplies in the event of external supply shocks. For supplies that have a sole source, ensure that contingency plans are in place and up to date. Assess clauses for unforeseeable circumstances and exclusions in critical supplier agreements.
- ⊙ **Assess Organizational Coordination on Supply Chain Processes:** Review measures the organization uses to enable communication across business units regarding the supply chain. Review assurance responsibilities of supply chain staff and other assurance providers to locate gaps in assurance or duplication of activities.
- ⊙ **Review Supplier Crisis Communication Protocols:** Assess how the supplier will communicate material

changes that may affect its risk profile, such as changes in ownership, structure or operations. Determine whether the organization has business continuity, teleworking or disaster recovery policies that would be useful to share with suppliers.

- ⊙ **Review Processes to Monitor Country-of-Origin Regulations:** Assess whether, and how, the organization determines the country of origin of materials used by suppliers (in particular, whether suppliers are complying with all country-of-origin requirements). Determine whether the business tracks trade or

geopolitical developments as they relate to supplier materials.

- ⊙ **Review the Supplier Renewal Process:** Review the supplier renewal process to determine how the organization decides to renew contracts with suppliers. Assess whether the organization uses standardized criteria or documents, such as supplier assessments, when evaluating whether to revise or renew supplier contracts.

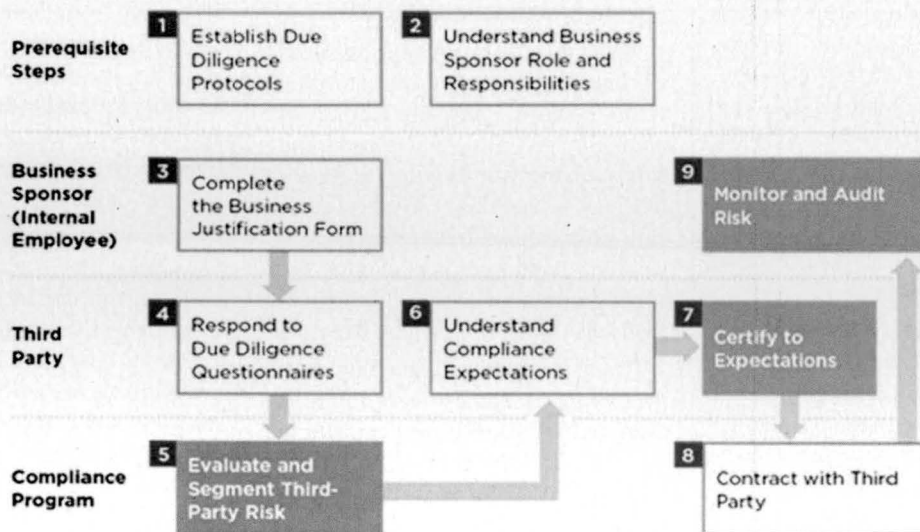
AN ILLUSTRATIVE EXAMPLE OF A SUPPLY CHAIN RISK MANAGEMENT PROCESS MAP & ASSESSMENT STEPS: THIRD-PARTY RISKS

Having seen that the most common

supply chain risk arises from the third parties that interact with the business and support the supply chain of any business, given below is a risk management process map for an illustrative reference.

Building the ethics and standards (e.g., prohibiting recruitment fees, "Do Not Source" lists for serious violators) into the third-party risk management process ensures that supply chain risks are addressed proactively instead of reactively. Prior to contracting with third parties, the managements should conduct thorough due diligence and certify to expectations and then regularly monitor and audit the suppliers (Figure 2).

Figure 2: Third-Party Risk Management Process Map



CONCLUSION

Supply chain disruption incidents can have financial, operational, reputational and strategic consequences for an organization. While the number, prevalence and cost of these incidents is rising, it is imperative for organizations to remain prepared to handle the growing risk.

Managements must work jointly with supply chain leaders to recognize supply chain failure points and their

possible consequences. This would help in identifying supply risk sources and develop predictive enterprise risk management to improve risk readiness for potential breakdowns in supply chains. **MA**

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