

STEPS FOR ROBUST CONTINGENCY PLANNING FOR A SUPPLY CHAIN

Abstract

As supply chain disruptions are a nearly inevitable reality, a robust supply chain contingency plan can help build businesses that are resilient to changing demand and supply conditions, environmental risks, and operational issues. Building a strong and diverse supplier network, transparent communication strategy, and putting risk mitigation strategies in place will help businesses navigate an uncertain economic environment and a rapidly evolving digital world.



The global supply chain crisis that raised its head during the COVID-19 lockdowns continues to be a matter of concern. The radical shift in demand, shortage of labour, geopolitical factors, and continued lockdowns in China at different stages, have all impacted supply chain continuity. That apart, natural or man-made disasters can severely impact the global supply chain. Several sectors including chemicals, automotive, mining and metals, semiconductors and technology

have been impacted due to supply chain disruptions. The pandemic underscored the fragility of the global supply chain network, where disruption in one link resulted in massive disruptions down the line, impacting consumers and industry growth. Businesses need to be prepared for catastrophic disruptions, and a supply chain contingency plan thus becomes necessary for smooth operations and meeting customer expectations.

Supply chain contingency planning

involves the analysis of possible disruptions and risks to the supply chain and the planned measures to mitigate these risks so that the supply chain is minimally impacted. This is necessary for a robust supply chain as well as overall risk management, as ignoring potential risks to the supply chain can have a disastrous effect on business operations, growth, and profitability. Let's take a look at some of the risks faced by modern-day businesses.

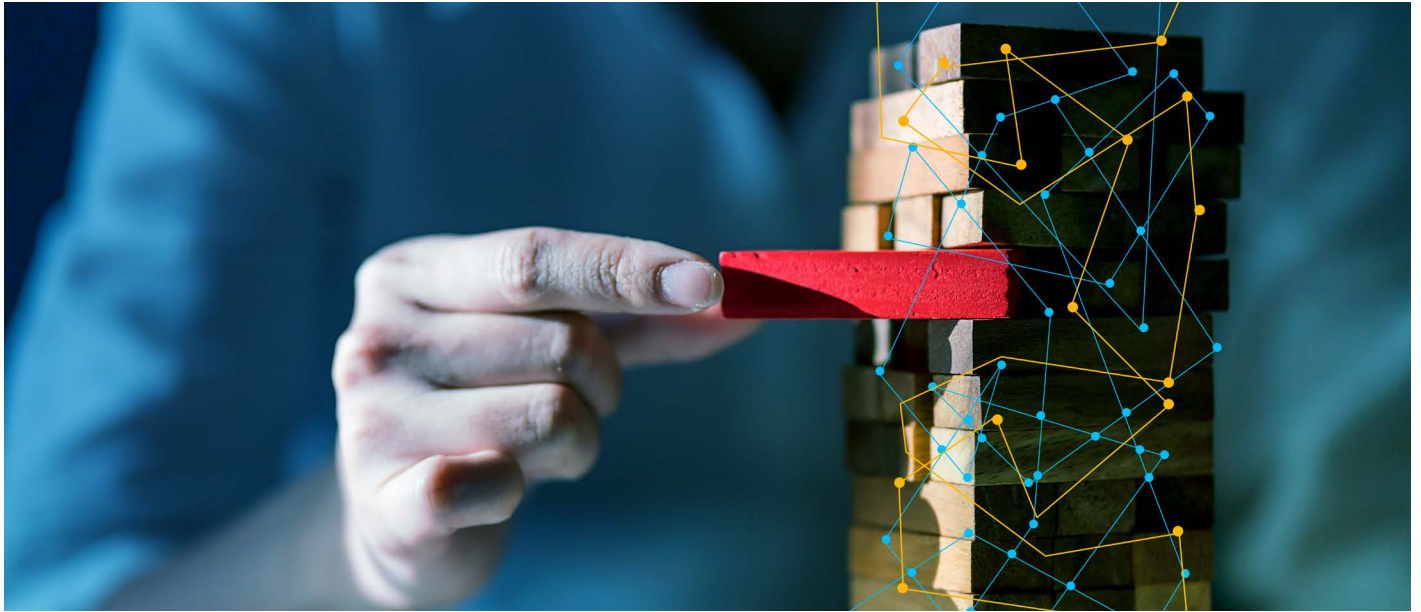
Top risks for supply chain management

Supply chains face both internal and external risks. External risks come from outside the business – these include demand and supply risks, environmental risks and business risks. An example is the Suez Canal blockage, in March 2021, which caused an unexpected supply chain disruption. The container ship Ever Given ran aground and blocked the canal most unexpectedly and caused a holdup of several hundreds of other container ships. This resulted in transport routes being changed, increased transportation time and cost, and increased lead times. Environmental risks such as natural

disasters or geopolitical factors such as the ongoing Russia-Ukraine conflict can cause supply chain disruptions. Erroneous predictions of product demand, and supply risks due to delays in the arrival of raw materials can result in supply chain issues. Changes in external entities that are part of the supply chain constitute business risks. For example, an acquisition of a supplier by another firm can result in sudden upheavals to processes that may impact the supply chain.

Internal risks to the supply chain constitute factors that are within the business. These include manufacturing risks, business risks,

planning and control risks, and mitigation and contingency risks. For example, when there is an issue with machinery at a manufacturing unit, it causes production delays, resulting in a disruption to the supply chain. Or, inadequate quality control could result in delays to the supply chain. Not having a supply chain contingency plan can cause massive supply chain disruptions. For instance, the persistent lockdowns in China have caused delays in manufacturing and logistics, resulting in a chip shortage worldwide.



How to minimise supply chain disruptions

In recent times, the significance of supply chain contingency planning has been realised, emphasising the need to reduce the effects of potential disruptions. A robust supply chain contingency plan helps to future-proof the organisation.

Get proactive with risk management: Businesses must evaluate their risk exposure comprehensively. This entails assessing suppliers for economic, political, and geographic risks. For example, the physical location of a supplier holds significant importance. If a supplier operates in an earthquake-prone region, it's prudent to have an alternative supplier in a different region to mitigate disruptions in the event of a disaster. To fortify your supply chain's resilience, diversify your supplier base.

By adhering to the PPRR framework for supply chain risk assessment (prevention, preparedness, response, and recovery), businesses can proactively identify and address potential risks. Ensure that contracts with third-party entities are robust and safeguard the company's interests in case supply chain disruptions occur. The contract terms should be fair to all stakeholders.

Develop a logistics contingency plan to effectively manage supply chain delays. Define the roles and responsibilities of employees in the event of a supply chain disruption, establish a crisis response plan, and conduct regular audits of logistics providers. Periodically review and update these risk mitigation measures and plans to align them with changes in the business environment and requirements.

Manage environment-induced risks: Of course, the most recent memory of the environmental impact on supply chains is the Coronavirus pandemic, which resulted in unprecedented lockdowns and complete disruption to the global supply chain. Using supply chain risk assessment strategies along with tools and technologies can help businesses identify the weakest points in the supply chain. For example, you can choose to source from multiple locations, thereby minimising the risk of disruption, in the event of one location having issues. As much of the world relied on China for manufacturing, the COVID-19 closure of borders and continued lockdowns in China underscored the importance of having suppliers in different parts of the world, as well as the

importance of local manufacturing.

Invest in cybersecurity and data protection: The digitisation of supply chains has helped to optimise operations and gain visibility, but it also leaves supply chains vulnerable to a variety of cyber threats. Internet of Things (IoT) devices can be hacked, and businesses also face threats from malware, ransomware and phishing attacks. Companies thus must establish compliance standards for all external parties, such as customers, suppliers and vendors, and also adhere to all regulatory requirements. Regular security audits must be conducted. There should be an access and authorisation matrix which clearly defines the roles that can access specific data and information, with audit trailing. Employees must be trained on cybersecurity protocols, data protection and privacy. Data backups and failover strategies should be planned. Companies must also invest in the required hardware and software infrastructure. For deployments on the cloud, or a hybrid cloud solution, the cloud provider must be evaluated for security, backups, recovery and failovers.

Manage inventory: Inventory levels are, of course, of critical importance when it comes to efficient supply chain management. Stockpiling inventory may not always be the best solution. Companies need to find a middle ground between keeping excess inventory and having sufficient stock in case of a major disruption. Additional strategies can be considered for disruption of critical components or products, for instance, nearshoring or reshoring manufacturing or shifting from a just-in-time to a just-in-case supply chain model, that allows you to maintain an inventory buffer, and have an excess production capacity.

Invest in digital transformation: Digitising the supply chain can give businesses the much-needed breadth and depth of supply

chain visibility. With the all-prevalent Artificial Intelligence (AI) and Machine Learning (ML) technologies, supply chains are powered by predictive insights, allowing businesses to anticipate any impending problems, and take proactive steps for risk mitigation. IoT devices can enable tracking in real-time, and smart sensors on warehouse equipment can inform staff of critical storage parameters such as temperature, humidity, and so on. Inventory can be optimised by using supply chain analytics that use historical and current data to arrive at suggestions for stock levels, and also predict future demand and trends.

Develop relationships: The supply chain ecosystem has multiple stakeholders, all of whom need to be updated consistently,

and sometimes in real-time. Cultivate strong supplier relationships by offering supplier development programs and collaborating with them. Take customers into confidence when you see emerging problems, and communicate with them transparently. Send out personalised emails, and communicate via social media, to develop customer relationships.

Supply chain contingency planning is necessary due to the innumerable disruptions that can occur in the supply chain. By maintaining strong supplier relationships, clear and transparent communication with customers and all involved parties, strong contractual agreements, and periodic risk assessments, companies can build a robust supply chain.

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