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Resilient Supply Chains

The "New-Normal" for Business Success

Executive Summary

Supply chain resilience has been a subject of keen interest for most organizations today. As the global pandemic continues to manifest itself into its potential size, it must be noted that the aftereffects of the same shall be seen for much longer than anticipated. On one hand, it is forcing organizations to embrace digital technologies and on the other, it has created severe cash-flow challenges.
The whitepaper presents a strategy that can help organizations plan for supply chain resilience in the long term while solving immediate and most pressing cash flow issues. As always, the superiority of the solution depends on the clarity of the problem and the same comes by performing a detailed study of the problems and classifying them based on their impact and duration.

A resilient supply chain does not compete with an efficient supply chain, they complement each other, and one cannot aim at having a resilient supply chain that is not efficient at the same time. The whitepaper also suggests that as a “New-Normal” gets created for the supply chains, there could be no better time to evaluate the potential vulnerabilities in the supply chain and systematically fix the same.

Overview

Supply chains, which form the core of all business and value creation operations in any organization- are perpetually vulnerable to risks and disruptions- both from internal or external factors. While most mature organizations already have robust risk mitigation strategies for supply chains risks, global pandemics like COVID-19, are one-off, black swan events that expose the vulnerability of the most robust and well-designed supply chains

Global supply chains have never been under more stress and the current situation has exposed multiple challenges in the existing supply chains like visibility, trust & transparency and lack of diversification - vulnerabilities which have always been procrastinated by organizations. As a result, more than 90% of fortune 1000 companies have experienced severe supply chain disruptions due to COVID-19[1].

It is important to note that, while the recovery scenarios would depend on the industry, the region of operations and other factors there is no better time than today, to re-assess the health of organization’s supply chain through short, medium and long terms strategies. That can help organizations to make their supply chains more robust and resilient.

[1] Source: Fortune Magazine | Link: https://fortune.com/2020/02/21/fortune-1000-coronavirus-china-supply-chain-impact/

What is supply chain resilience?

Supply chain resilience is the capacity of the supply chains to resist disruption by safeguarding itself through avoidance or containment as well as to recover from such disruptions with minimum impact or even gain advantage from disruptions. A highly resilient supply chain has a well-defined risk mitigation strategy and recovery capability for both internal and external risks

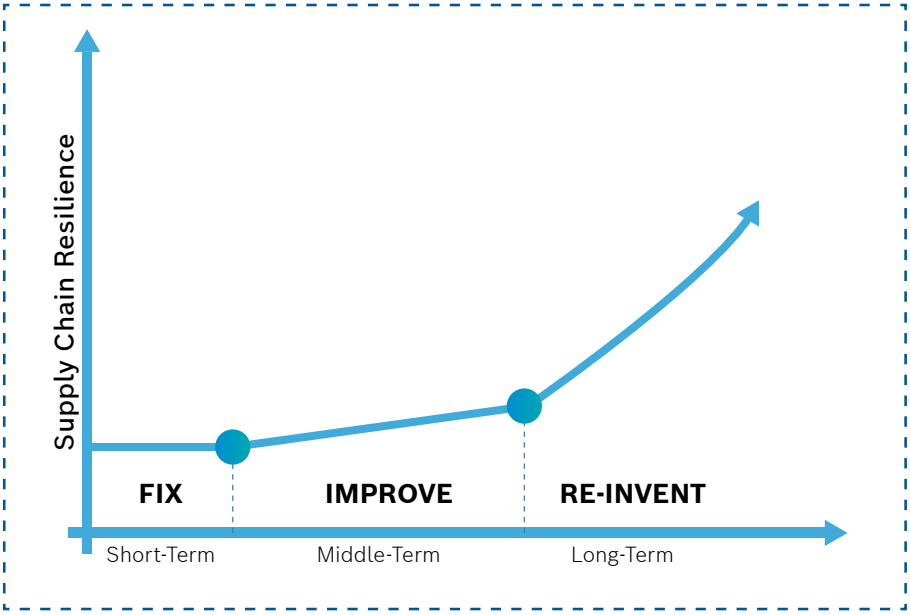
It is often misunderstood that organizations have to consider a trade-off between efficiency and resiliency when they plan their supply chains. However, in long-run, these two factors complement each other and provide significant cost savings while protecting top top-line erosion

In reality, COVID-19 has not created new problems in the supply chain but has only exposed the vulnerabilities that always existed. There is no better time than today for organizations to channelize their energies into performing a problem impact assessment study to learn how resilient their supply chains are, assess the level of investments required to solve the underlying issues and at the same time ensure that each action made towards solving the immediate problem is in the direction of improving supply chain resilience

"Fix-Improve-Reinvent" for supply chain resilience

Short-term problems are temporary and continue for a fixed period- (in current case: for the duration of the pandemic) and are therefore reversible. It could be one of your supplier being unable to uphold the delivery commitment, logistics or freight carrier being unable to deliver the products to you, unavailability of the workforce or government and regulatory changes as a response to the ongoing situation.

An organization's supply chain challenges due to COVID-19, as revealed during the impact assessment study may be bucketed into three broad categories based on their impact and duration: Short, Medium and Long-term impact



Due to diminishing demand and surge in logistics and transportation cost, most short-term supply chain challenges during COVID-19 are also accompanied by severe cash-flow challenges. Depending on the industry outlook and severity of the situation, the short term supply chain challenges may take 4 to 12 months for complete recovery. The Focus of solving problems with short term impact should be on ensuring business continuity. Data-driven decision making for fixing these problems can help reduce risks. Some examples being: Dashboards that use the existing supply chain data with an overlay of COVID-19 information can help build supply chain

intelligence by identifying potential disruptions in the supply chain, finding alternate suppliers (local sourcing) and determining the potential delays for shipments due to lockdown. Customized analytical models on the data can help perform scenario analysis for the impact on supply chain finance (inventory holding cost, logistics cost etc.) and augment the existing IT systems (like ERP, CRM etc.) to improve contingency planning for production, inventory holding, distribution etc. and thereby reduce the risk of stock-outs or over-production.

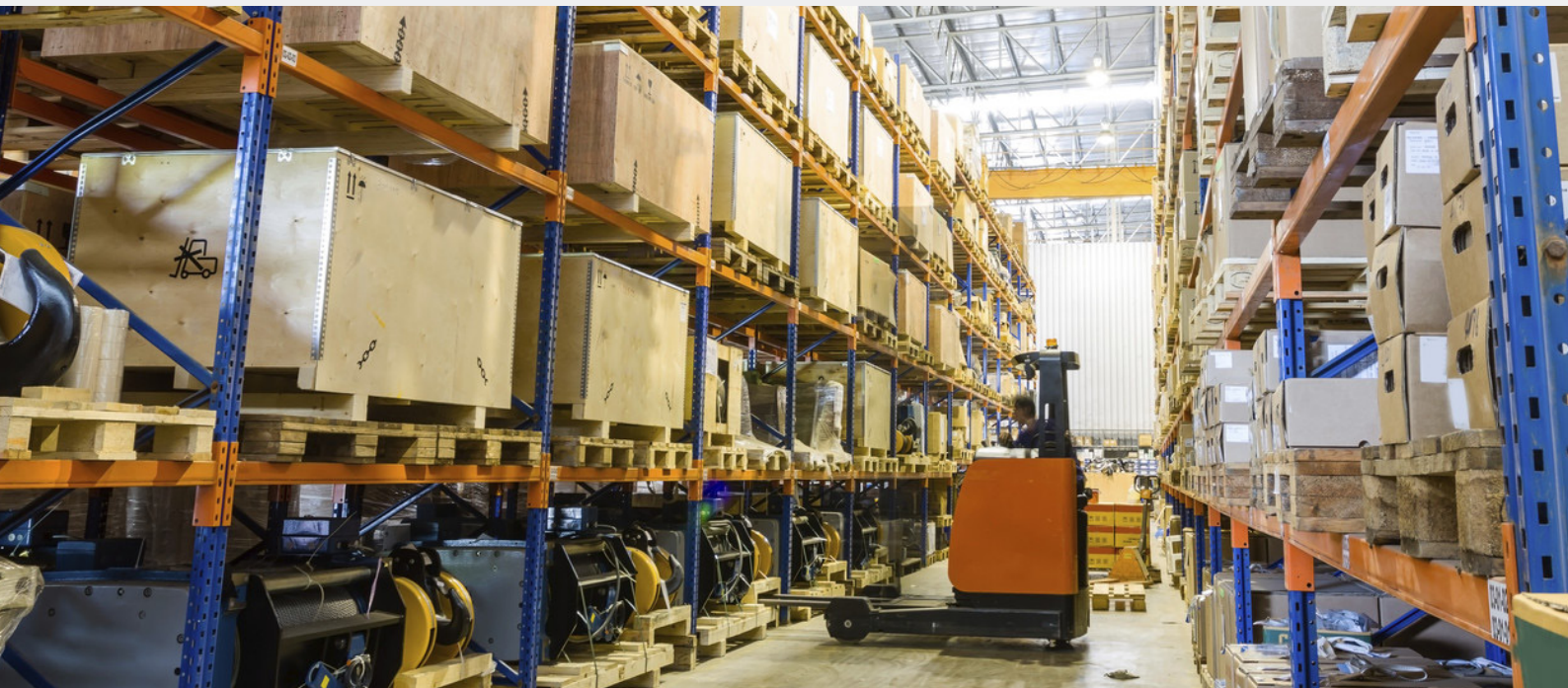
A swift and immediate "FIX-IT" approach is recommended for short-term problems

Medium-term problems are those that have been exposed by COVID-19 disruptions but also have the potential to outlive the immediate supply chain disruptions due to the pandemic. The duration of the impact of such issues may vary from 6 to 18 months depending on industry and region of operation. Problems with medium-term impact are mostly driven from the demand side. Some examples of medium-term problems include an increase in supply chain inventory holding, “Just-in-Time” inventory models put under stricter scrutiny with increased inventory cushions etc. Such problems also call for strategies that create more demand for the product and at the same time improve or digitize the existing supply chains to bring about efficiency and cost reduction. Advanced analytical models that can help predict demand signals better, point automation (leveraging IoT and AI) to bring about autonomy in supply chains and reduce human effort and cost would help ease the impact and are some examples of such solutions. The supply chain digitization brought about to address medium-term challenges should be strategic and well planned as they set the foundation to address the long-term impact and build resilience in the supply chains.

"Improve" the existing supply chains to tacke mid-term challanges

Finally, the problems with long-term impact are those that will form the basis of the “New-Normal”. Such problems having a long term impact may be driven either from the supply or demand side and require organizations to re-invent their supply chains. Organizations should focus on building resilience in the supply chain through trust and transparency, automating customer journeys, identifying new order fulfilment models like “Zero-Touch” service delivery etc. Long term supply chain resilience aims at making the supply chains more A.C.T.I.V.E (i.e. Automated, Connected, Transparent, Intelligent, Velocious and Efficient). The A.C.T.I.V.E model to build supply chain resilience relies on re-inventing supply chains by solving problems at the convergence of multiple new-age and emerging technologies (like AI, IoT, DLT etc.). A.C.T.I.V.E supply chains are more than digital supply chains, they are cornerstones for ensuring high supply chain autonomy.

"Re-Invent" the service delivery models to stay relevant and tackle long-term challenges

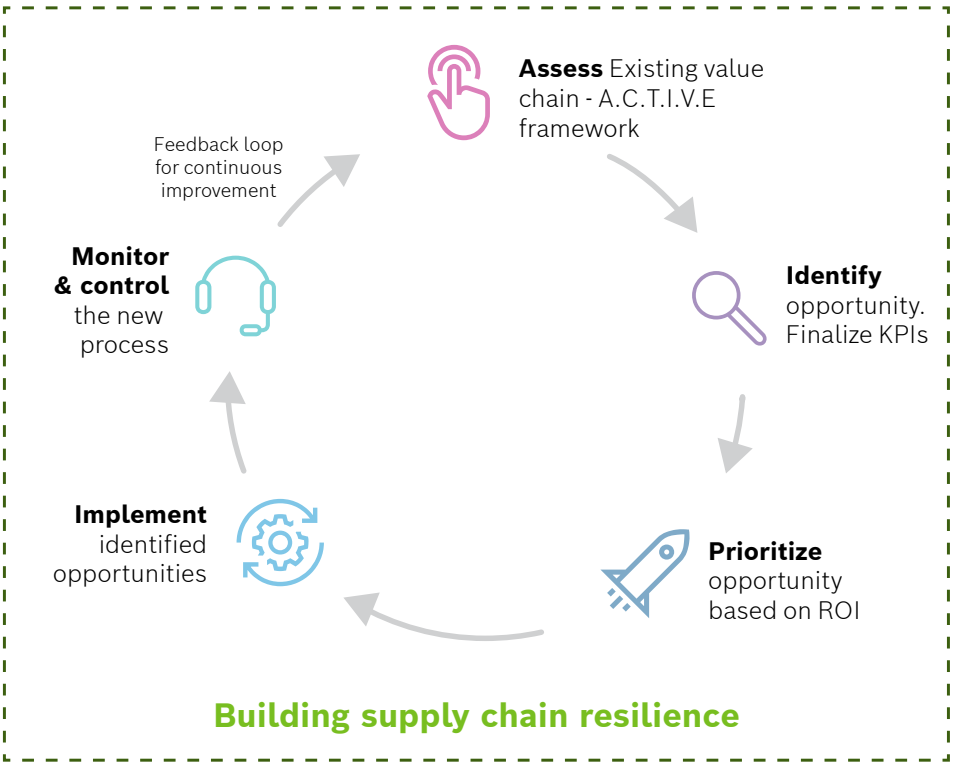


Focus on Resilience: The Supply Chain for New Times

At Bosch, we believe that supply chain resilience is a cycle of continuous improvement built on the foundation of digital-technologies. Our solutions follow a modular architecture approach to demonstrate quick outcomes and at the same time ensure optimum utilization of existing IT investments by the organization.

Business continuity Dashboards by Bosch offer a robust decision support system that uses data from the existing IT systems like ERP, vendor portal etc. with an overlay of COVID-19 data to identify potential supply chain risks. The dashboard also allows identification of alternate suppliers from supplier networks to ensure business continuity. Our proprietary analytical models can help identify the disruption probability for the inbound supply chain and its impact on the manufacturing and servicing of customer orders.

The dashboards prepare scenarios to identify the impact of a strategy on the supply chain financials. These scenarios can help make more informed decisions, especially for short term disruptions.



Bosch's sensor and services capability, coupled with our rich domain expertise of supply chain management helps our customers to identify and optimize their supply chain processes. Our product Trac360 (a solution to improve your supply chain inventory visibility and tracking capabilities) coupled with our data sciences capabilities has helped customers reduce their supply chain process-costs significantly.

Our blockchain-based solutions like TrueFood+ (Farm-to-Form track & trace and provenance for food), AutoTrace (automotive track & trace) and PharmaTrace (Track & Trace for drugs and pharmaceutical products) can help organizations in their journey towards creating more A.C.T.I.V.E supply chains. We suggest a 5 step process for organizations embarking on their journey towards am A.C.T.I.V.E supply chain. It is imperative to note that feedback and continuous improvement on the predefined KPIs is a very important to ensure supply chain resilience. These solutions operate on the concept of "Economy of Things" and solve the supply chain problems at the convergence of IoT, AI and DLT thereby providing significant cost efficiencies through automation of shared business processes.

The Way Forward

We believe that in times to come building supply chain resilience shall continue to remain as a core need for organizations to operate and ensure growth. There has been an undeniable push for resilience from the disruptions caused during the pandemic, but the impact for the same would be long-lived.

Those at the helm of driving digitization for large organizations should align the short and medium-term strategies and actions performed during these times with the long-term objectives and goal. The framework defined above can help organizations map their investments in supply chain modernization and ensure that every step (no matter how small) is taken in the direction of building supply chain resilience. Businesses with global supply chains should focus on resilience even more because that is the only way they can future-proof themselves from such unprecedented events.

The actions of today can help create a strong foundation for building the supply chains of the future, where resilience to such unprecedented events is built into the business models more efficiently.

About Authors

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Raghavendra is a Senior Business leader with Global experiences of working across Multiple domains and Functions including Strategy Development, Practice Building, Business development, Sales. He has a proven track record of consistently winning high levels of business with meticulous Strategy development to execution especially in new-age Digital technologies like Blockchain and AI.

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Chandan brings in 9+ years of rich experience in business transformation, strategy consulting and process re-engineering for supply chains. He has a proven track record of helping clients with digital transformations leveraging new-age technologies like Blockchain, IoT and AI.