Mitigating Supply Chain Disruptions



From the Silk Road to the *Via Salaria* to today's Internet, organizations around the world have long relied on complex and globe-spanning supply chains to obtain the goods and services they need to do business.

Yet the complexity of the modern global economy, the speed and competitiveness of commerce in the digital world, and the increasing variety and frequency of potentially disastrous disruptions has created a more challenging business environment than ever before.

To compete and thrive, both large and small businesses must develop and implement supply chain management policies that anticipate, rather than simply react to, disruptions.

Fortunately, businesses of all sizes can readily mitigate supply chain disruptions by using the right tools and a proactive approach.

Why Your Business Needs to Mitigate

Supply Chain Disruptions

Whether you're sourcing raw materials and components, goods for resale, or essential services, your supply chain is the lifeline your business depends upon for operational, competitive, and financial performance.

And in today's global economy—where threats like the COVID-19 coronavirus pandemic and natural disasters like the Amazon rainforest fire can cause far-reaching and immediate disruptions for the unprepared—major disruptions are rapidly becoming the norm, rather than the exception.

These disruptive events create "shockwaves" radiating out from the point of disruption.

For example, a natural disaster that shutters a single supplier's production plant responsible for an essential part used in a range of products will quickly lead to a potentially crippling lack of finished goods for sale.

Lead times increase; revenue drops. In the short term, a company without a contingency plan will find itself scrambling to either find a new supplier or somehow radically alter its product lines to use different parts.

In the long term, the drop in demand leads to layoffs and possibly closures. Without some kind of risk mitigation strategy in place to protect business continuity, the entire business could go from thriving to facing death by implosion in record time.

If this sounds unlikely, consider the case study exploring the supply chain crisis faced by both Nokia and Ericsson in March of 2000. A fire at the Royal Philips Electronics plant—a key supplier for both phone makers—damaged Philips' supply of computer chips essential to new cellular phones about to be launched by Nokia and Ericsson.

Nokia had a business continuity contingency plan in place, including backup suppliers and a modular approach to product design. Through swift action and a proactive approach, the company recovered quickly and avoided production loss, protecting financial performance.

In contrast, Ericsson did not have a plan in place (and, in fact, did not even have a

system in place to ensure key stakeholders were immediately notified of the disaster) and waited until the following month to take action.

Despite hurried and monumental efforts, the search for new suppliers created a chain reaction of supply chain disruption, generating a €400 million loss from which Ericsson simply couldn't recover.

Heavy reliance on key suppliers who are also single sources of supply, combined with a lack of risk management strategies to mitigate supply chain disruption, proved to be a recipe for disaster at other major corporations as well.

For example, the September 11th, 2001 terrorist attacks in the United States closed five Ford plants for days and cost the automaker more than half a billion dollars.

The 2011 Tohoku earthquake (and resulting tsunami) disrupted the supply chains of multiple corporate giants around the globe, to the tune of $210 billion in costs for Japan alone.

The two disasters sent companies that relied on both the Toyota model of "just-in-time" sourcing and production in Japan itself (heavily damaged by the disasters) into a tailspin, including Hewlett Packard and General Motors.

The lesson? An ounce of prevention, in the form of proactive supply chain risk management, is worth much more than a pound of cure—it may, in fact, be the difference between turning a profit and closing your doors.

> *The key to incorporating risk assessment and mitigation into your supply chain performance strategies lies in striking a balance between supply chain efficiency and effectiveness. For businesses big and small, this generally means thinking of efficiency as a function of effectiveness by focusing on supply chain resilience.*

Balancing Supply Chain Efficiency with Supply Chain Effectiveness

The need for effective supply chain risk management strategies isn't exactly a secret.

With so many potential threats to the average supply chain in play, procurement professionals at all levels recognize and understand the need to develop risk mitigation strategies that will keep their global supply chains, and therefore their businesses, running.

But the remit of the procurement function has long been focused on cost reductions and spend management efficiency, which complicates the issue because what is most efficient in a supply chain isn't always—or even often—what's most effective.

Low-cost management techniques like consolidating sources of supply and standardizing core components have short-term value, but create significant supply chain vulnerabilities when a disaster such as the Tohoku quake leaves you scrambling to find any suppliers at all, let alone cost effective ones.

Conversely, building a Swiss Army Knife-style supply chain with a costly cornucopia of contingency plans for every potentially disruptive event—regardless of how *probable* such events might be—could quickly beggar even the most profitable organization.

The key to incorporating risk assessment and mitigation into your supply chain performance strategies lies in striking a balance between supply chain efficiency *and* effectiveness.

For businesses big and small, this generally means thinking of efficiency as a function of effectiveness by focusing on supply chain resilience.

Best Practices for Mitigating Supply Chain Disruption

In a 2007 article on managing supply chain risk, the *International Journal of Logistics Research and Applications* reported that a 2003 study by the Computer Sciences Corporation revealed nearly half (43%) of companies surveyed were aware of their supply chain vulnerabilities, but *more* than half of those same companies had no documented contingency plans or management techniques in place to mitigate supply chain disruptions.

Taken alone, these numbers might seem alarming indeed.

But in a world that has since faced unprecedented terrorist attacks, devastating fires, hurricanes, and other natural disasters, the drawn-out drama (and economic fallout) of Brexit, and, of course, the coronavirus pandemic, companies are more invested than ever before in achieving effective supply chain risk management.

So how does one develop one of these hypothetically resilient supply chains, overflowing with proactive contingencies and flexible enough to preserve business continuity even when natural disasters, war, or pandemics set the economy on its ear?

There's no "one size fits all" solution, but in general, effectively managing supply chain risk while promoting supply chain resilience can be achieved by following a few key best practices.

1. Data Management and Analysis

In order to manage risk, you need to be able to see it. By collecting, centralizing, and organizing all your supplier performance, compliance, and relationship management data, you can perform essential risk assessments, identify supply chain vulnerabilities, and develop the supply chain risk management strategies that best serve your company's goals for operations management, innovation, and competitive advantage while protecting business continuity.

This data will prove invaluable in establishing and monitoring the vendor management key performance indicators (KPIs) you use to anticipate and mitigate potential disruptions while removing or replacing underperforming or high-risk vendors.

In addition, full and transparent supplier data can help you identify new opportunities for strategic partnerships with key suppliers, develop contingency plans and alternative sources, and secure better pricing and terms during negotiations to provide cost savings and build value.

2. Supply Chain Segmentation

One of the most effective ways to reduce supply chain risk is through segmentation.

Depending on your goals and risk tolerance, this might mean choosing suppliers

in areas with the lowest probable risk of civil unrest, or selecting alternative sources for suppliers located in areas with a high risk for natural disasters like hurricanes and wild fires.

For example, high-volume, low-margin products can be reliably and affordably sourced from multiple low-cost suppliers.

This keeps costs down and minimizes the potential impact of a disruptive event by ensuring alternative sources in the event any one (or even more than one) location is shut down or delayed.

For high-margin items, you can centralize and consolidate to whatever degree your risk management threshold will tolerate, provided you build in some flexibility to preserve resilience.

For example, Amazon.com stocks its far-flung and numerous distribution centers with its most popular items to hedge against both disaster and demand, while keeping high-ticket, slow-moving items in more central locations.

3. Supply Chain Regionalization

As the Tohoku disaster showed, drawing too heavily from any one region can prove disastrous or even fatal to supply chain health.

Regionalization allows companies to reduce their transportation and distribution costs through localized sourcing and production while still providing a measure of protection to surrounding areas as needed.

The COVID-19 pandemic has had a profound effect with regard to regionalization, particularly in Africa and Asia, where the need to secure food sources and medical supplies has led to initiatives such as a shared digital network to pool and serve demand and regional trade partnerships such as the Regional Comprehensive Economic Partnership (RCEP).

4. Develop Risk Management Strategies Focused on Overestimating Risk

While, as we've said, a "Swiss Army Knife" sourcing strategy that tries to anticipate and prevent all potential disruptions is itself disastrous.

But overestimating risk—while remembering not to focus on the probability of any one specific risk too closely—yields much better results than underestimating or ignoring it in favor of short-term cost savings.

Returning to the case study of Nokia and Ericsson, we see that while Ericsson managed to secure some short-term savings by consolidating its suppliers with a single source, the trade-off was absolute devastation when that single supplier couldn't meet Ericsson's needs.

In contrast, Nokia's approach, which didn't necessarily focus on the risk that one particular plant might catch fire but instead on the possibility of essential components being compromised, worked because the company's team developed contingencies like modular design and multiple backup suppliers into its risk management strategy.

This is an area where effective data management and analysis will prove invaluable, since you can factor in not just supply chain data, but market trends, industry patterns, and other external data sources when developing your contingencies.

5. Investing in Digital Supply Chain Management Tools

Before they worry about fine-tuning their approach to potential disruptions in their supply chain network, organizations serious about competing in the age of Big Data need the right tools to do so.

Tapping into the powerful performance and strategic enhancements offered by artificial intelligence (AI), centralized and cloud-based data management, process automation, and advanced data analysis makes it possible to gain control over your company's datasphere.

Choosing a comprehensive procurement solution such as PLANERGY, for example, makes it easy and intuitive to collect, manage, and analyze all your spend data, including supplier performance and compliance.

It gives you access to user-friendly dashboards that put powerful analytics at your fingertips, making it easy to extract actionable insights you can use to consolidate, expand, or otherwise refine your supply chain in real time.

You'll be able to review existing data to make more strategic decisions, improve your forecasts, and anticipate potential disruptions with greater accuracy. It provides your executive team with clear and accurate information they need to stress test your supply chain.

By doing so, they can identify and prioritize potential disruptions at the global, regional, and segment level to develop risk mitigation strategies with healthy overestimation of risk while still leveraging insights to streamline, regionalize, and diversify as needed for maximum value and savings.

Better still, streamlining and automating your processes frees your team to devote their time and talent to building strong supplier relationships, along with identifying and pursuing opportunities for partnerships that can lead to greater innovation and growth as well as a more flexible and resilient supply chain.

Mitigate Supply Chain Risk to Strengthen Your Business

Like a houseplant starved of water and nutrients, a business with a disrupted global supply chain will soon wither.

By developing effective supply chain risk mitigation strategies and investing in the digital tools you need to leverage them for maximum performance, you can ensure your company has a strong, flexible, and resilient supply chain.

You'll be able to secure the raw materials, goods, and services you need at the best prices and terms, when you need them—and gain the ability to adapt and overcome should disaster, disease, or other disruptions that threaten your business come to call.

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