
10EQS

WHITE PAPER

Improving Supply Chain Resilience

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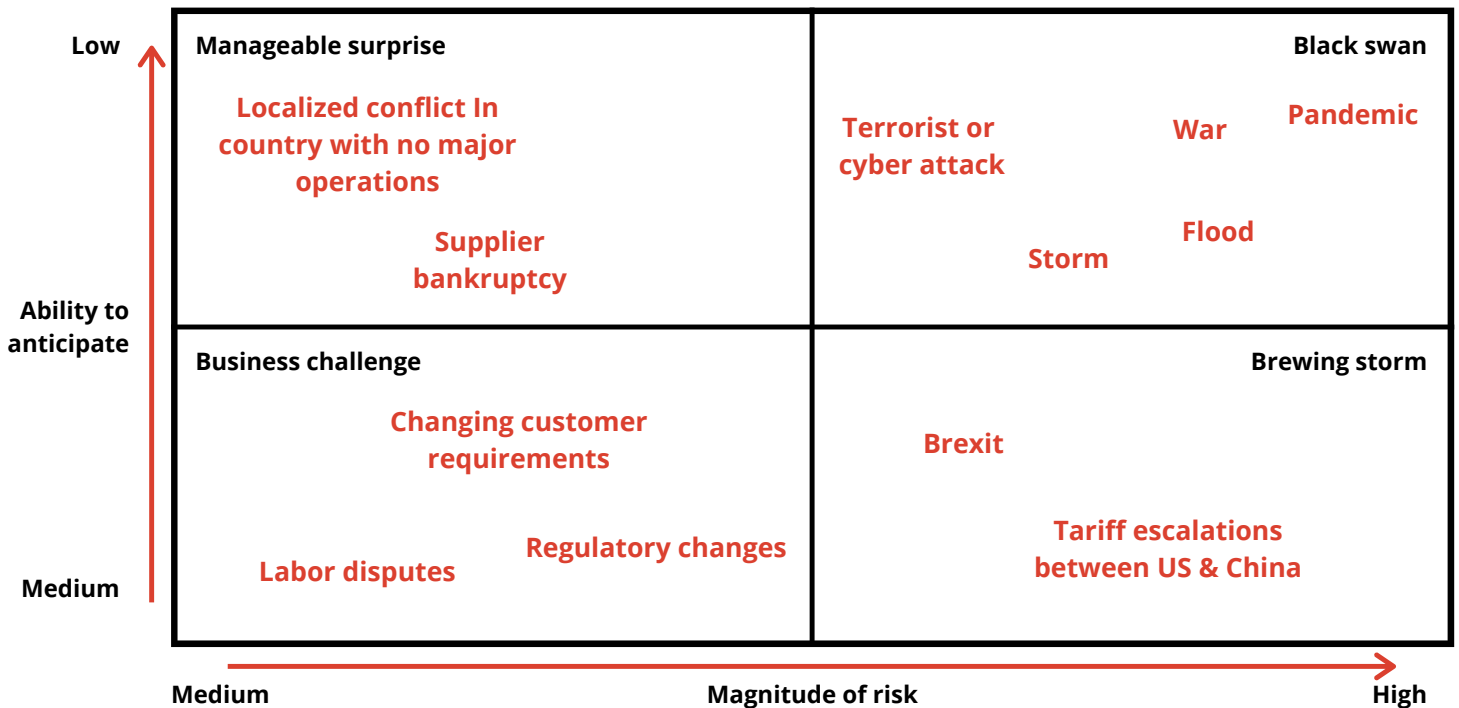
Global supply chains came to a screeching halt as the Coronavirus spread from Wuhan across the world. The pandemic impacted suppliers for five million companies, including 938 of the Fortune 1000, and cut off 7 of the 10 busiest shipping ports in the world.

53% of companies reported difficulty communicating with suppliers. Supply chain leaders scrambled to determine inventory levels, secure logistics capacity, and identify alternative suppliers.

Supply chains were falling apart.

In today's business environment, supply chains are more complex and vulnerable to disruptions. Each day supply chains are under the threat of disruption from rare occurrences such as natural disasters, political instability, terrorist attacks, or more frequent incidents like equipment failures, fires, and labor disputes.

Figure 1: Classification of Supply Chain Risks



Source: McKinsey & Company

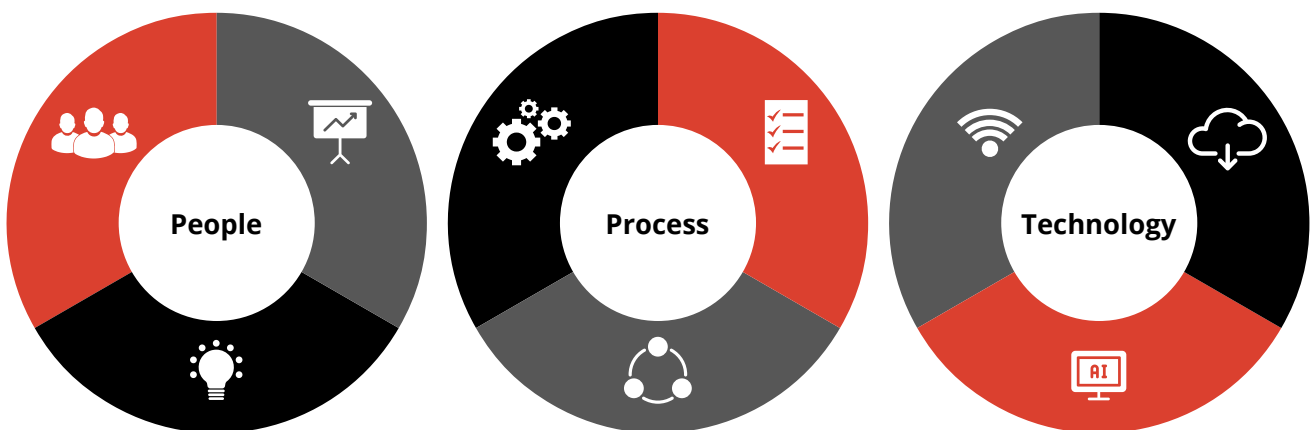
The Coronavirus, a rare black swan event, exposed some harsh realities.

Challenges to Supply Chain Resilience

It's impossible to alleviate all risks. Some companies perform better with risk mitigation and disruption response. Those companies have one thing in common: Supply Chain Resilience.

Supply chain resilience is not easy. It must fit the specific needs of each organization down to the product level. Resilience is a strategic approach to investments in people, process, and technology.

Figure 2: Strategic Investment Approach



Resilience involves organizational flexibility and redundancy. And, you'll face difficult investment decisions and trade-offs.

For example, depending on the product, some customers value speed over price or customization over standardization. Your leadership team must strike a balance between risk versus resilience.

23 Unique Definitions

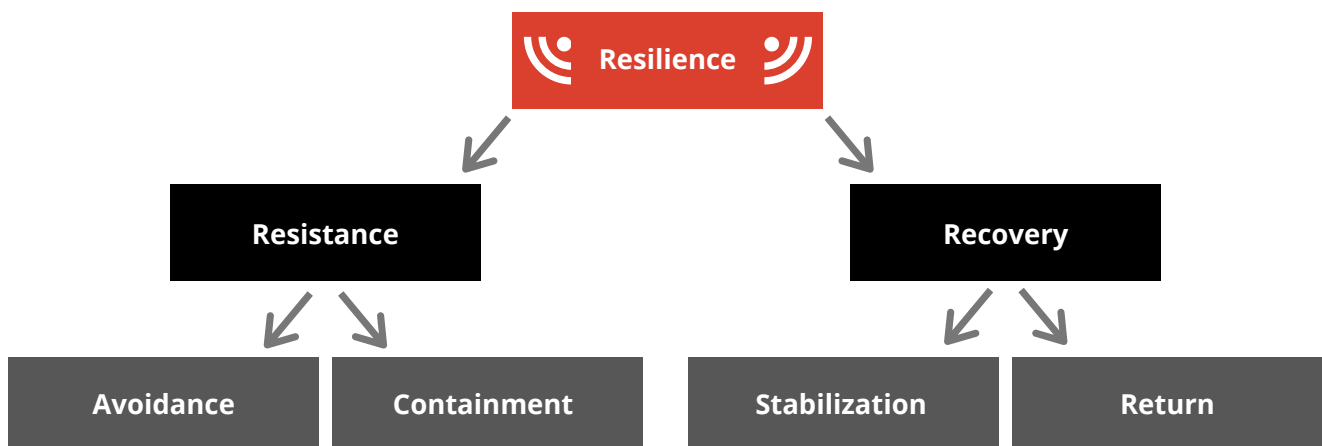
What is Supply Chain Resilience?

If you research supply chain resilience, you'll notice a distinct challenge. One academic research paper found 23 unique definitions. Each academic researcher, consulting company and operational expert has a different approach. All of them can back up their approach with data or case studies.

For this white paper, think of supply chain resilience as a company's capacity to predict, resist, and recover from a disruption.

More specifically, resistance capacity is the ability for a supply chain to minimize the impact of a disruption by avoiding and containing it. Recovery capacity is the ability for a supply chain to stabilize and operationally recover after a disruption.

Figure 3: Supply Chain Resilience



Source: Michigan State University

Improving Supply Chain Resilience

The goal of this white paper is to provide 8 specific categories you can evaluate to improve your supply chain resilience. Remember to view each category through the lens of people, process, and technology.

1

Supply Chain Visibility & Risk Monitoring

Resilience starts with mapping your supply chain from the origin of supply to the distribution of products.

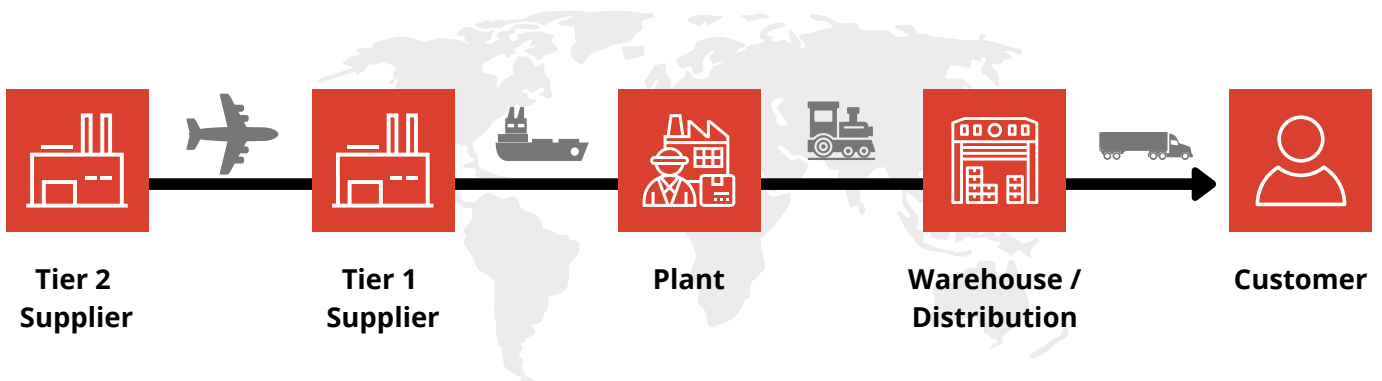
Your organization could have thousands of products, SKUs, or suppliers making visibility challenging to obtain. Most companies stop mapping at the Tier 1 supplier level.

Don't make this mistake.

Your suppliers' source materials from other suppliers that also have suppliers. You can't monitor and mitigate risk unless you have the right data and insights.

Once you've mapped your supply chain, you need a centralized platform to collect and analyze data. Plus, a process in place to limit the access and manipulation of data.

Figure 4: Risk Monitoring Platform



Think about it like creating a database with one version of the truth. And, having highly trained analysts in place to proactively manage events.

Luckily, technology providers, like [IBM](#) or [Celonis](#), offer solutions that leverage artificial intelligence to map supply chains and produce insights about potential risks.

2 Supplier Relationship Management

Your suppliers are your partners in resiliency. They're like the weather forecast or a tornado siren going off before the storm. They share vital information that helps you detect, resist, and recover from a disruption.

Resilience won't work without good supplier relationships and information-sharing agreements. Collaborate to ensure data privacy and protect their commercial activities. Give your suppliers an incentive to share their data.

As you gather supplier data, update your sales and operations plans (S&OP) with accurate demand forecasting to optimize production and distribution capacity.



3

Product Design

Product development teams can design resiliency in a product. You can design multiple products that share the same parts. Or, develop products with variable bills of material capable of accepting comparable components from multiple suppliers.



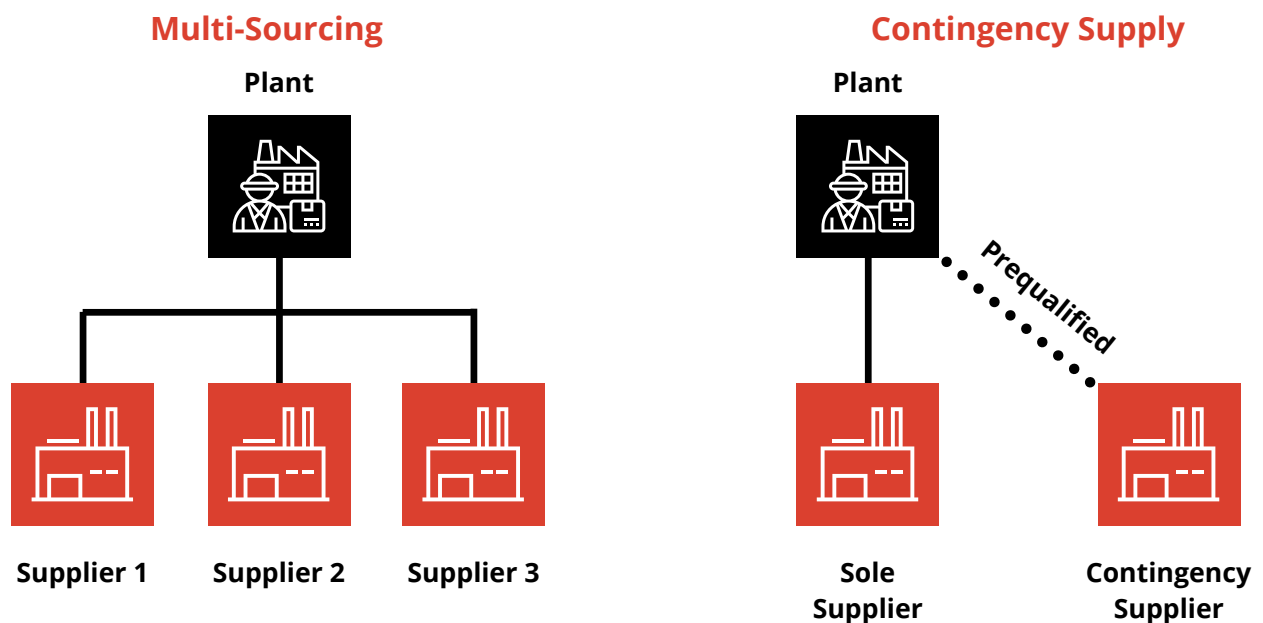
For example, consider a laptop web camera. In theory, the design could allow for different cameras produced by multiple suppliers. If one supplier experiences a disruption, then, an alternative camera from a different supplier is substituted.

4 Sourcing Strategy

Single sourcing has benefits but increases the risk and impact of a disruption. Sourcing from multiple suppliers can increase complexity but reduces risk by providing the flexibility to shift capacity.

As an alternative, you could pre-qualify contingency suppliers that can be activated if a current supplier shuts down.

Figure 5: Sourcing Options



CASE STUDY

Supplier Identification

A global advanced chemicals company needed support to identify and qualify new suppliers. 10EQS used an ecosystem approach to provide partnership recommendations and industry-wide insights.

Our team initially identified 35 potential suppliers. Then, they conducted an in-depth analysis to quantify the risk and attractiveness of each supplier. Based on the results, the team created a shortlist of 4 qualified suppliers.

Next, the team conducted extensive interviews with industry experts, consultants, and leaders from the supplier organizations.

Using primary and secondary research, the team triangulated the data to provide the client detailed supplier profiles, partnership recommendations, and industry-wide insights.

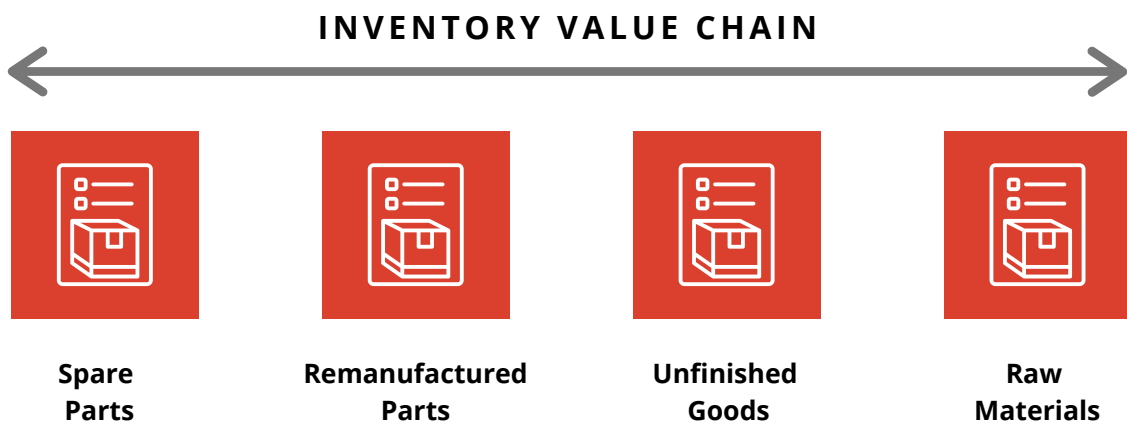
5 Inventory Management

Lean supply chains reduce waste by limiting inventory but put you at risk of running out of components during a disruption. Evaluate inventory levels for critical products and components.

Look across the value chain to include any remanufactured parts, spare parts, unfinished goods, and raw materials. Your dealers or distributors typically hold spare parts inventory. Could you buy it back? Assess their inventory levels as well.

Analyze your inventory to determine how long production could continue during a disruption. Consider protecting production with inventory buffers for your most critical parts.

Figure 6: Inventory Value Chain



6

Operational Security

Establishing cyber and physical security is a critical part of supply chain resiliency. Your products, inventory, and employees are vulnerable and a risk as they travel, sit in warehouses, or simply go to work.

What physical security protocols do you have in place to safeguard your employees?

Now, think about the digital assets across your supply chain. Consider a cyberattack targeting just your ERP system. How would that impact your organization? Your information technology department has the appropriate level of cybersecurity, right?

Consider these statistics from Hiscox Cyber Readiness Reports:

70% of 4,100 businesses indicated they were not prepared for a cyberattack ([2018](#))

65% of 5,400 professionals indicated experiencing cyber related issues in their supply chain in the past year ([2019](#))

7

Preparedness

According to an Institute of Supply Chain Management [survey](#), 44% of respondents do not have a plan to address supply disruptions from China, of which the majority have experienced disruption.

Coronavirus is a pandemic. It's a rare occurrence. But what about a cyberattack, flood, supplier bankruptcy, or labor disputes? Does your organization have a business continuity [plan](#) for any of the more common disruptions? How often do your business units train?

In the article, "How to Make a Business Continuity Plan" on [Yahoo Finance](#), Mark Henricks states that "A business continuity plan describes steps that will be taken to reduce loss, avoid damage, sustain production, and bounce back." It's the basic process of identifying threats and mitigating risks.

Support your supply chain resilience journey by creating a business continuity plan and developing realistic training programs.

As you build your business continuity plan and train for events, include your suppliers in the process. You'll continue to build relationships and ensure your suppliers are prepared.

8

Human Resources

Review your HR Strategy. No matter what process you implement or technology you purchase, your supply chain resiliency program will fail without the right people. You'll need to retain and attract top talent.

Train your employees to communicate and assess risk. And, empower them to make decisions to ensure safety and business continuity.

People are your most important asset. Invest wisely.



Supply chain resilience is a complicated process that touches the entire organization. Visibility beyond Tier 1 suppliers is the basic requirement of resilience.

Start there.

Once you've achieved visibility, evaluate other investments in people, process, and technology.

10EQS wishes all of you the best. Please remain safe and healthy. [Contact us](#) If there is anything we can do to support you, we're here to help.



Stewart Swayze is a seasoned strategy consultant with expertise in creating sales and marketing strategies to drive revenue growth. He holds an MBA with cross-functional operational and consultative experience at the C-Suite & executive levels.