



# Building Resilience

→ Logistics in an Uncertain World



When COVID-19 left supermarket shelves bare and hospitals scrambling to source personal protective equipment, it was a wake-up call to the fragility of our global supply chains.

The pandemic provided a perfect storm of border closures, workforce shortages, panic buying and fluctuating demand patterns – and businesses were largely unprepared for the far-reaching effect it would have on their logistics, suppliers and staff.

Now that we're in the pandemic recovery phase, many companies may be breathing a sigh of relief and planning for their return to 'business as usual'.

But in an increasingly volatile world of climate change, geopolitical instability, global trade disputes and more frequent cyberattacks, all signs point to major disruptions becoming the norm, not the once-in-a-generation exception.



**3.7 years**  
on average

Research by McKinsey found that **industries experience disruptions** lasting a month or more every 3.7 years on average, with shorter disruptions occurring even more frequently<sup>i</sup>.

While these impending threats might seem daunting, they also offer an opportunity for businesses to make the shift from defence to offence. By building logistics resilience – identifying and managing risks – before they occur – companies can better navigate disruptions, thereby maintaining operational continuity, customer satisfaction and competitive advantage.

## How Resilience Applies to Logistics

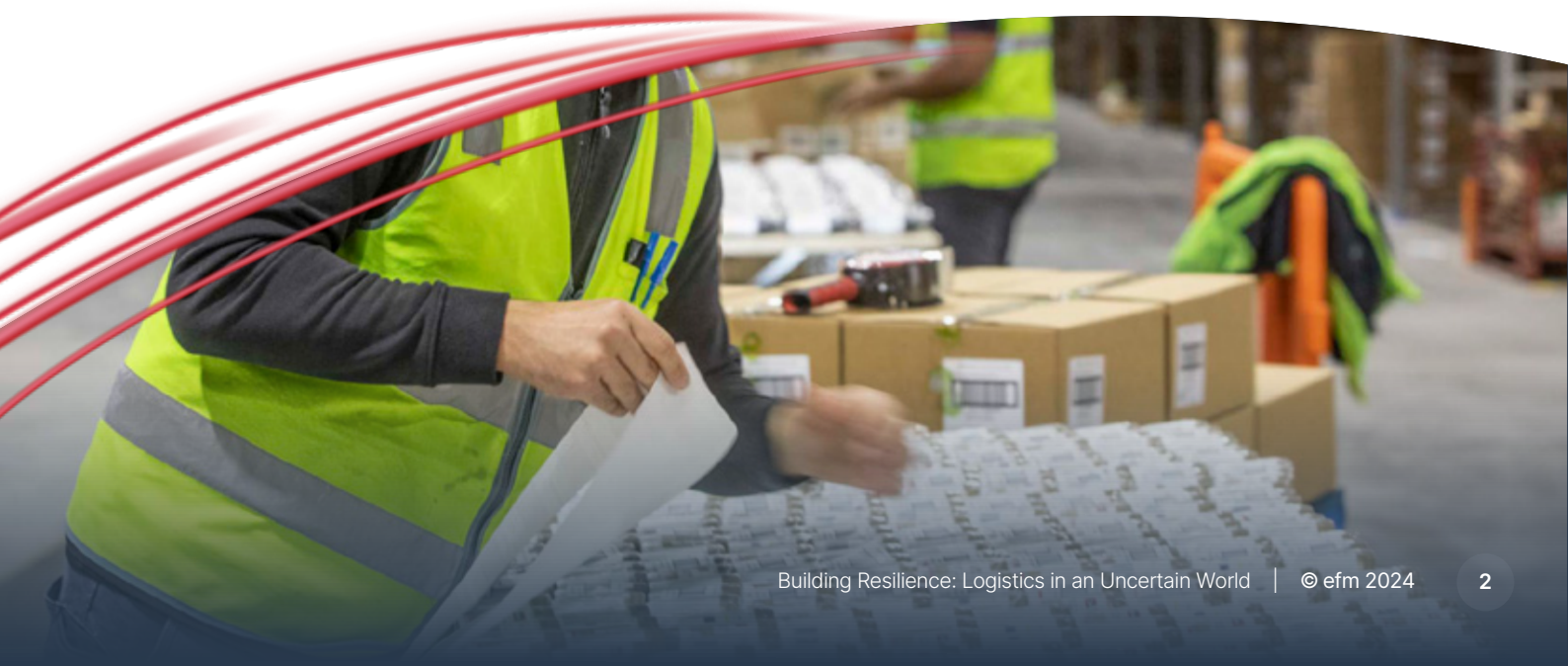
When we think of resilience, we might imagine bouncing back after failure, persevering through a difficult situation or learning to adapt to a major change. This notion of strength and adaptability in the face of challenges is often associated with personal growth – but it's just as important in logistics.

A resilient logistics operation is one that is able to mitigate most supply chain disruptions and greatly limit the impact of those that do occur – whether that's a pandemic, a natural disaster or an unexpected market trend. Resilience not only allows a business to respond with agility and flexibility, but also to forecast or anticipate future disruptions<sup>ii</sup>.

## Resilience is important across the entire supply chain but particularly in transportation, which can be especially vulnerable to external factors.

Imagine a scenario where a retailer's main delivery route is suddenly flooded. Thankfully, the company has a resilient logistics strategy in place that includes multiple transportation options, real-time tracking systems and a contingency plan for major road disruptions. The company is able to respond quickly, rerouting the shipment through an alternative path so that customers can still receive their orders within the delivery timeframe. The customer is left with a positive shopping experience and the company has avoided shipping delays, additional costs and reputational damage.

As this example shows, the benefits of logistics resilience can have a ripple effect throughout a business, leading to increased adaptability, cost-efficiency and customer satisfaction. This can mean more effective operations – even outside of times of crisis.





# Eight pillars of logistics resilience

There are certain factors that help organisations to enhance their ability to withstand disruptions and recover quickly when faced with unexpected challenges.

We have identified the following eight pillars as being critical for organisations to improve the resilience of their logistics.

## 1 Risk identification and assessment

This involves understanding the vulnerabilities in your logistics, from internal factors like outdated technology to external variables like natural disasters. Identifying, analysing and prioritising these risks allows you to develop strategies to mitigate their impact.

## 2 Visibility

Having a real-time view of the entire supply chain including suppliers, manufacturers and carriers gives you greater control when disruptions occur. It allows you to identify potential issues early and respond quickly.

## 3 Diversification

Logistics resilience embraces the principle of not putting all your eggs in one basket. To balance risk, it's important that your supply chain is not overly reliant on a single region, supplier, warehouse, carrier or mode of transport.

## 4 Collaboration and communication

Strong relationships with suppliers, logistics providers and other stakeholders means it's more likely that there will be a transparent flow of information and joint problem-solving when things go wrong.

## 5 Technology integration

Advanced technologies are now providing businesses with greater oversight of the supply chain and the ability to predict potential disruptions. Businesses are increasingly turning to automation to enhance scalability and flexibility, mitigate labour shortages, increase the speed of decision-making and improve efficiency.

## 6 Flexibility and agility

A responsive logistics operation is better equipped to absorb shocks and maintain operations during disruptions. This can include the ability to scale operations up or down, reallocate labour or change distribution strategies to meet shifting demands.

## 7 Strategic inventory management

This involves understanding the vulnerabilities in your logistics, from internal factors like outdated technology to external variables like natural disasters. Identifying, analysing and prioritising these risks allows you to develop strategies to mitigate their impact.

## 8 Continuous monitoring and learning

Resilience isn't a destination; it's an ongoing practice. To maintain a robust supply chain in the face of evolving challenges, it's important to continuously monitor the external environment, assess emerging risks and learn from past disruptions.

# Embracing the Lessons of COVID-19

Since the Toyota Production System popularised the concept in the mid 20th century, Lean Operations has gained significant popularity as a methodology to maximise efficiency and minimise waste in manufacturing processes.

In times of stability, strategies like 'just in time' manufacturing and inventory, minimal suppliers, and tightly scheduled operations meant greater efficiency, less complexity and reduced costs.

However, COVID-19 exposed just how vulnerable such modern supply chains are to disruption.

The University of Melbourne identified seven main categories of supply chain risks. All seven came into effect during the pandemic<sup>iii</sup>.

## Supply Chain Risks identified by The University of Melbourne:



### Macro risks

e.g. natural disasters, disease and major economic downturns



### Demand risks

e.g. surges or major drops in demand



### Manufacturing risks

e.g. staff shortages and poor working conditions



### Supply risks

e.g. having a small supply base



### Information risks

e.g. information delays and lack of transparency



### Transportation risks

e.g. disruptions to transport due to border closures

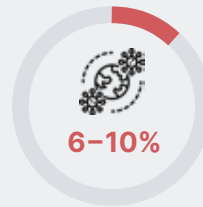


### Financial risks

e.g. fluctuations in exchange rates, wages and operational costs.

While businesses may have planned for some or all of these risks individually, it's a fair assumption that most were not prepared for multiple risks playing out concurrently. Being caught off-guard came at a significant price.

To better understand recent disruptions to global supply chains, the measures that firms are taking to build resilience, and the challenges that they are facing in doing so, The Economist surveyed 400 senior supply-chain and procurement executives across the US and Europe.



The survey found that **disruptions to the global supply chain** in 2020 cost businesses on average 6% – 10% of **annual revenue**.

On top of this was the reputational cost of failing to meet customer expectations through stock shortages and delayed deliveries<sup>iv</sup>.

But through the experience of grappling with unforeseen challenges and costs, a new risk-focused mindset is emerging. In the same survey by The Economist, 92% of respondents agreed that excess capacity and resilience in their company's supply chain is now more important than speed and efficiency. Research by McKinsey in 2020 reported that 93% of senior supply chain executives plan to increase resilience across their supply chain<sup>v</sup>.

With the impacts of the pandemic still fresh, now is the time to apply the lessons of COVID-19 to better prepare for future disruptions.

# An **Action Plan** for Logistics Resilience

Now more than ever, logistics managers must prioritise resilience by identifying their risks and developing a four-part resilience strategy, comprising Warehousing, Technology, Transportation and Operations.

The following strategies can help logistics managers build more robust and adaptable logistics solutions so they're equipped to thrive – not just survive – during a crisis.

## 1. Consider warehouse location

Having both central and local warehouses disperses risk across multiple locations and allows for greater flexibility in responding to disruptions and fluctuating market demands.



### ACTION PLAN

a)

#### Conduct a supply chain analysis

Evaluate the current supply chain structure, considering factors like customer locations, transport routes, and potential risks, like areas prone to disruptions.

b)

#### Assess options

Centralisation offers cost efficiency while local warehouses provide faster response times and risk distribution. Consider factors like transportation costs, lead times and demand patterns to determine where warehouses could be located to strike a strategic balance between cost, efficiency and risk mitigation.

c)

#### Rethink stock distribution

For enhanced resilience, consider centralising high-volume, low-urgency items while distributing time-sensitive or perishable goods to strategically located warehouses.

## 2. Leverage technology

It's vital that businesses invest in the tools to support resilience now and into the future. Advanced technologies can also enhance the performance of everyday logistics operations – from automating manual tasks to providing customers with better tracking information.



### ACTION PLAN

a)

#### Assess the current technology landscape

Evaluate existing technologies and identify gaps in visibility, data analysis and automation.

b)

#### Prioritise needs

Weigh up your logistics requirements against identified technology gaps to determine what to invest in and when. For example, artificial intelligence can analyse large volumes of data and predict potential disruptions, while cloud-based platforms can enhance coordination and collaboration across organisations.

c)

#### Facilitate up-take

With the introduction of any new technology, ensure logistics teams are trained in how to use it effectively. Foster a culture that encourages teams to leverage digital tools for better decision-making and proactive responses to disruptions.

### 3. Strengthen transportation

Fortifying transport networks and building stronger relationships with key supply chain partners are key strategies for ensuring continuity of operations amid disruption. A robust transport system can also increase the reliability and timeliness of deliveries, building customer trust and satisfaction.



#### ACTION PLAN

a)

##### Evaluate risks

Map out critical transport routes and assess the reliability of existing carrier partners. Identify potential risks associated with specific routes and carriers.

b)

##### Diversify

Introduce flexibility by diversifying modes of transport and establishing relationships with alternative suppliers to mitigate the risk of disruptions affecting specific routes or carriers.

c)

##### Build relationships

Foster open communication and transparent information with supply chain partners. This can facilitate better cooperation and support during a crisis.



## 4. Build operational flexibility

With the right planning, organisations can position themselves to respond and adapt swiftly to a wide range of disruptions.

### ACTION PLAN

a)

#### Develop agile operating procedures

Create operating procedures that allow for quick adaptation to changing conditions. Develop contingency plans for various disruption scenarios.

b)

#### Upskill workers

Cross-train the logistics team to perform multiple functions within the supply chain. This operational flexibility ensures that teams can quickly adapt to disruptions by reallocating resources as needed.

c)

#### Implement timely monitoring systems

Adopt real-time monitoring systems to track inventory levels and timely reporting of transportation progress. This visibility enables agile decision-making and rapid adjustments to operations during disruptions.





# Looking Ahead to the Future of Resilience

Although the peak of the COVID-19 disruption may be behind us, the need for logistics resilience remains paramount. In addition to the risk of potential future waves and variants of the virus, there are numerous emerging risk factors demanding our attention.

As you implement your Supply Chain Resilience Action Plan, remain nimble and continue to scan the environment and adapt as needed to emerging risks.

## Consider the following:



### Climate change

Increasing frequency and severity of extreme weather events can disrupt transportation networks, damage infrastructure, and lead to supply chain disruptions.



### Cybersecurity risks

The growing threat of cyberattacks, data breaches and ransomware targeting logistics networks and supply chain technologies can disrupt operations and compromise sensitive information.



### Geopolitical tensions

Trade disputes, geopolitical conflicts, and regulatory changes can result in disruptions to global supply chains, including tariffs, export restrictions and geopolitical instability affecting trade routes.



### Dependency on technology

As logistics operations become increasingly reliant on digital technologies for inventory management, transportation optimisation, and supply chain visibility, any disruptions or failures in technology infrastructure can lead to significant operational disruptions and downtime.



### Rise of e-commerce

Increased demand for last-mile delivery, volatility in demand and seasonality, inventory management challenges, pressure on transportation networks and rising customer expectations for fast and free shipping represent a significant threat to logistics resilience.



### Industrial action

Labour disputes and strikes within logistics and transportation sectors can disrupt operations, leading to delays in deliveries, increased costs and strained relationships between management and unions.

COVID-19 exposed vulnerabilities in global supply chains and organisational logistics operations which cannot be ignored.

By fortifying logistics against evolving threats, organisations can not only weather future storms but also emerge stronger, more agile, and better equipped to thrive in the dynamic and unpredictable business environment of the future.



For a complimentary analysis of your existing logistics solution, visit [efmlogistics.com.au/contact](https://efmlogistics.com.au/contact)

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## References

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- <sup>ii</sup>. <https://www.sap.com/australia/products/scm/integrated-business-planning/what-is-a-resilient-supply-chain.html>
- <sup>iii</sup>. <https://pursuit.unimelb.edu.au/articles/the-covid-19-shock-to-supply-chains>
- <sup>iv</sup>. [https://impact.economist.com/projects/the-cost-plus-world-of-supply-chains/images/articles/2021/the\\_business\\_costs\\_of\\_supply\\_chain\\_disruption\\_gep.pdf](https://impact.economist.com/projects/the-cost-plus-world-of-supply-chains/images/articles/2021/the_business_costs_of_supply_chain_disruption_gep.pdf)
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