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- Management consultant specialising in procurement and supply chain transformation
- 15 years of experience spanning both industry and consulting
- UK, Norway, Denmark, and Japan
- Schlumberger and Rolls-Royce, Deloitte, Strategy&/PwC
- · Operational insight and advisory expertise

## **Major Supply Chain Disruptions**

Cyberattacks (e.g. , Maersk 2017 , Colonial Pipeline 2021) Ransomware and IT

Ransomware and IT breaches caused major operational shutdowns and logistics delays.

### Semiconductor Shortage (2020-2023)

Triggered by pandemic shutdowns and surging demand, this bottleneck hit automotive, electronics, and defence sectors hard.

### Suez Canal Blockage (2021)

The Ever Given container ship blocked the canal for six days, halting around 12% of global trade.

#### Global Inventory Misalignment (2022-2023)

Over-ordering during the pandemic led to massive inventory gluts and warehousing issues.

#### Russia Ukraine War (2022ongoing)

Severely impacted energy, grain, and raw material supply chains across Europe and beyond.





















### US-China Trade Tensions (2018-2020)

Tariffs and export restrictions disrupted electronics, agriculture, and manufacturing supply chains.

#### COVID-19 Pandemic (2020-2022)

Global lockdowns, port closures, labour shortages, and demand shocks disrupted nearly every industry.

#### Natural Disasters (e.g. European Floods 2021, Hurricane Ida 2021)

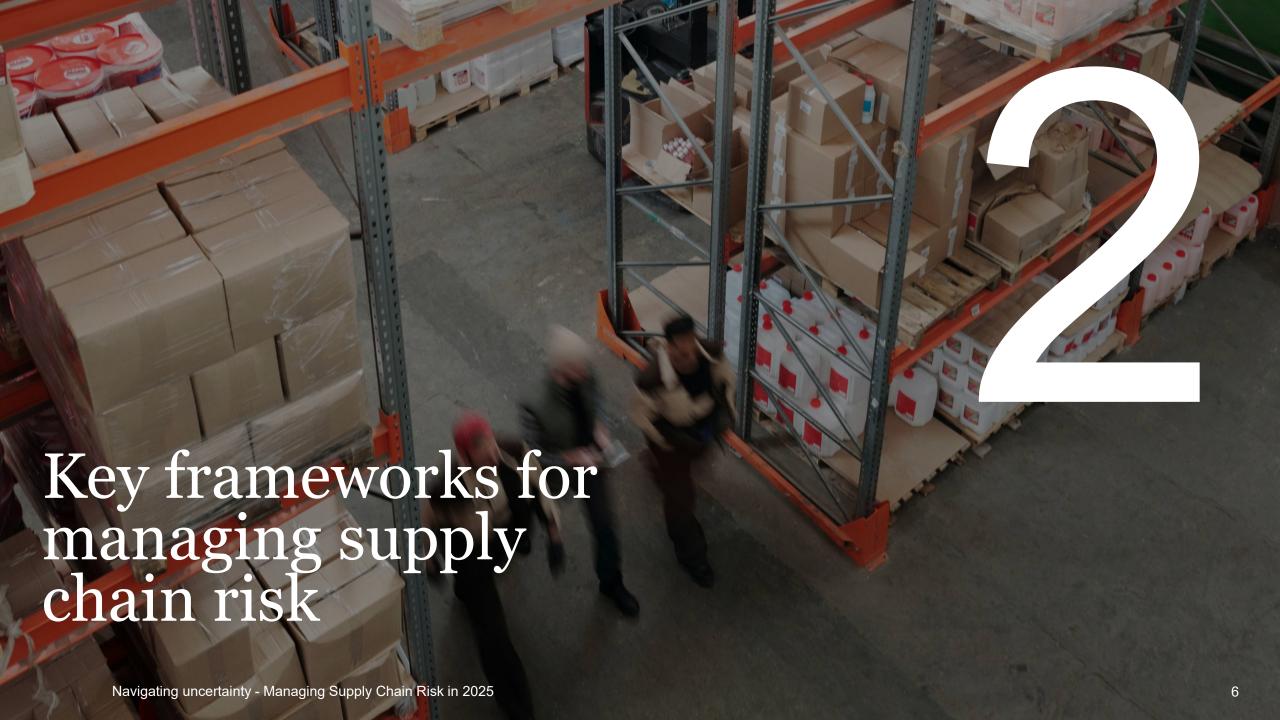
Regional disruptions to automotive, energy, and food supply chains.

### China's Zero-COVID Lockdowns (2022)

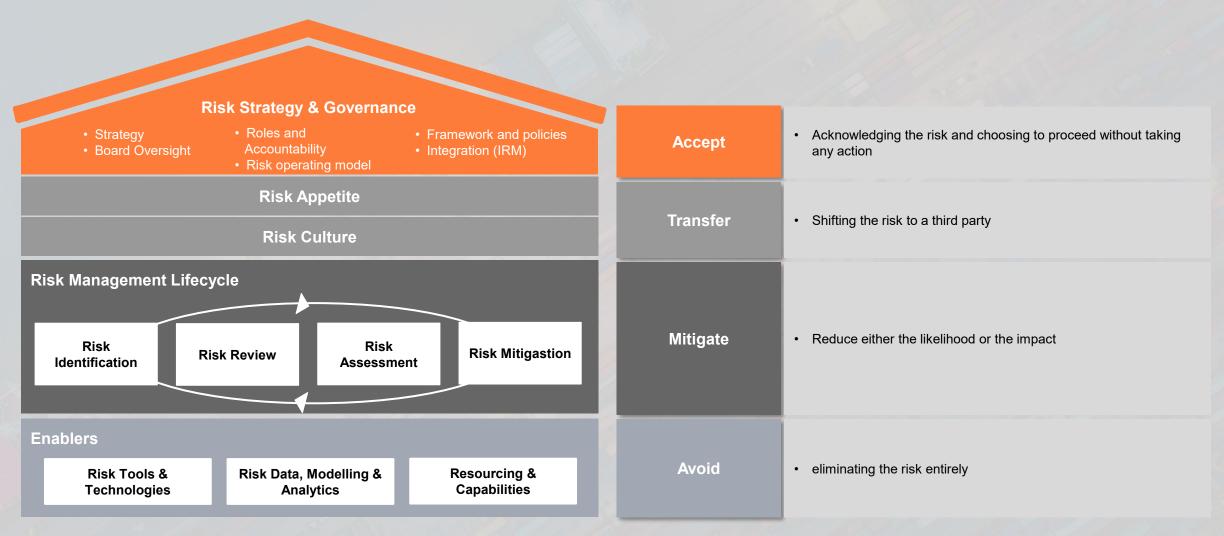
Factory and port closures in key manufacturing hubs like Shanghai and Shenzhen caused ripple effects worldwide.

### Red Sea Shipping Attacks (2023-2024)

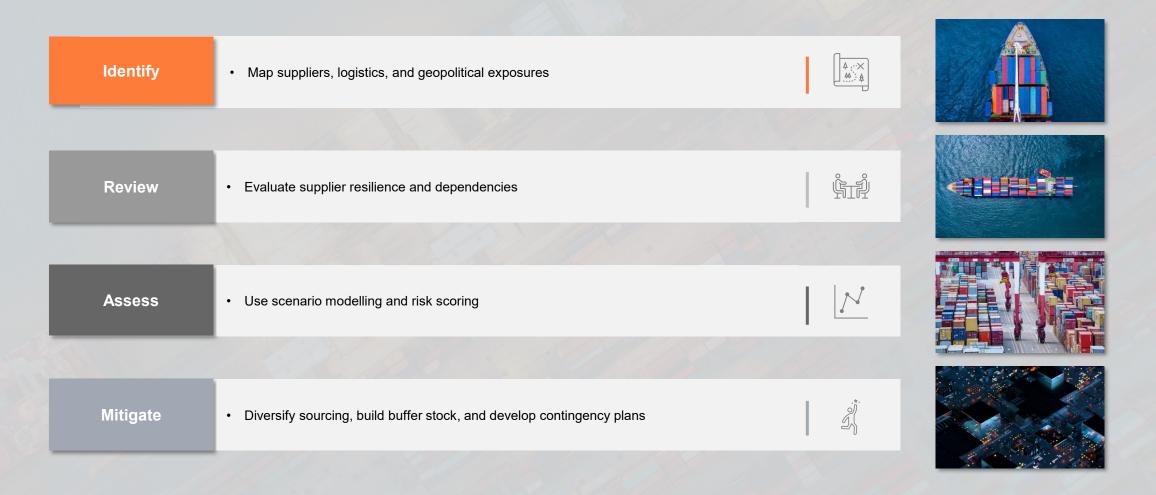
Missile strikes and piracy disrupted major shipping routes, increasing insurance costs and delays.



# Constructing the risk framework



## Navigating the risk lifecycle

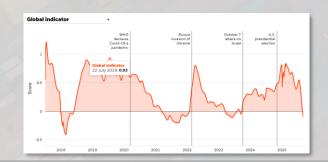


# Tools supporting supply chain risk management

# Geopolitical Risk Indices: Integrate external intelligence to anticipate disruptions

• By utilising internally or externally available monitoring tools, companies are able to more readily anticipate, prepare for, and absorb the shocks of global events. This involves supply chain and procurement strategies taking a hollisite view and becoming truly global in their perspective

Black Rock Geopolitical Risk Indicator



Supplier
Scorecards:
Track
performance,
risk exposure,
and compliance

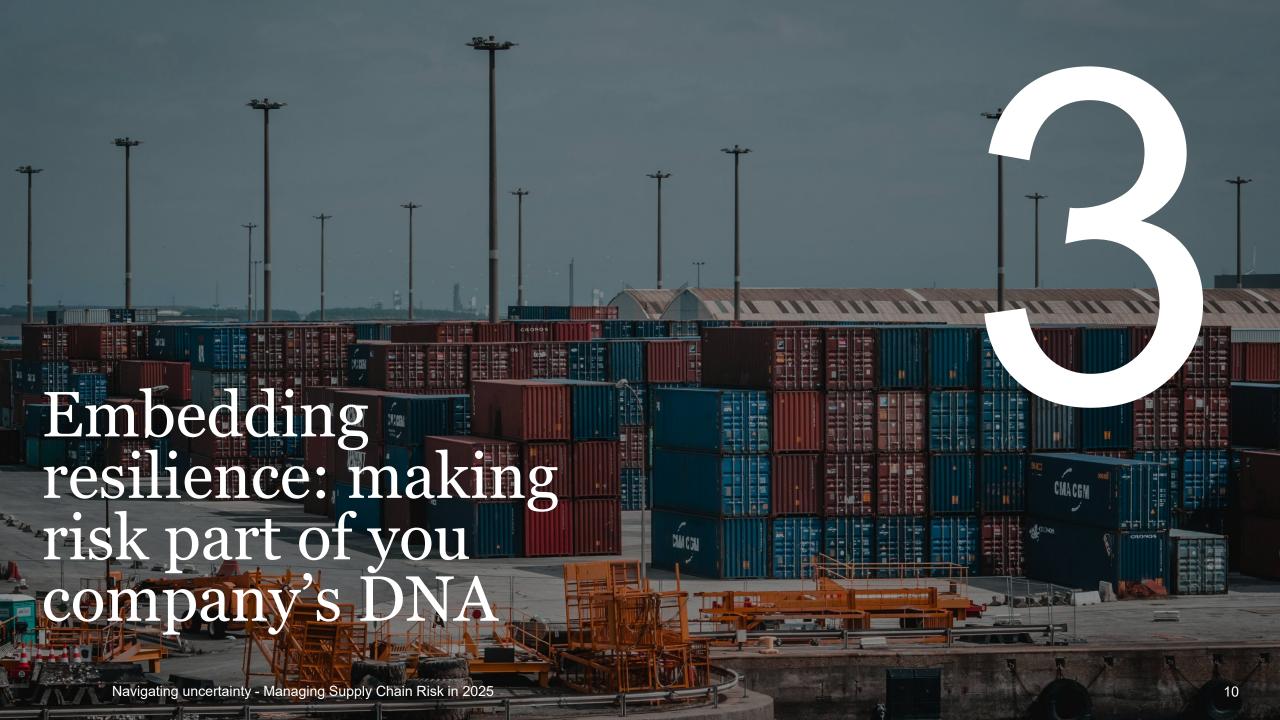
• Segmenting and classifying suppliers into tiers enables companies to better determine which to track at certain frequencies. Identifying what is important to track and building scoring matrices for the criteria support the use of supplier scorecards to track performance over time, implement corrective action if required and build a holistic supply chain portfolio overview on risk and performance

		Scoring (Highlight Score)				
		1				actions
Financial Competitiveness		'				'
Cost Trends	Compared to last year	Unacceptable	Marginal	Good	Excellent	
	Overall value relative to cost	Unacceptable	Marginal	Good	Excellent	
Quality & Delivery						_
Service Performance	Minutes outage and/or service	Unacceptable	Marginal	Good	Excellent	
	Product/Service Quality	Unacceptable	Marginal	Good	Excellent	
	Project Performance	Unacceptable	Marginal	Good	Excellent	
	End Solution and Timely resolution	Unacceptable	Marginal	Good	Excellent	
Relationship						
Innovation and Productivity	Cost-efficiencies and innovation	Unacceptable	Marginal	Good	Excellent	
	Resources, Flex, Compliance	Unacceptable	Marginal	Good	Excellent	
	Balance of trade	Unacceptable	Marginal	Good	Excellent	
	Satisfaction with Partnership	Unacceptable	Marginal	Good	Excellent	
Overall Score (out of 4):						

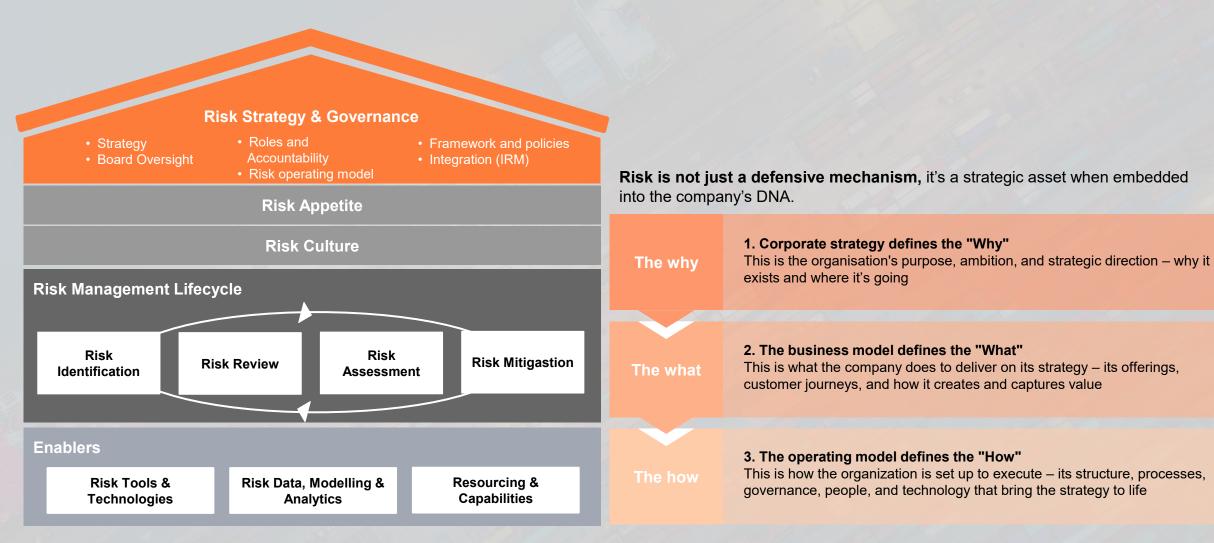
Control
Towers: Realtime dashboards
for monitoring
supply chain
health

 The supply chain control tower takes the accumulated data and information displays it in a user friendly way, visualising the performance and risk profile of the supply chain. By measuring performance, tracking risks, and driving corrective action, a robust supply chain is enabled





### Weaving risk into your DNA

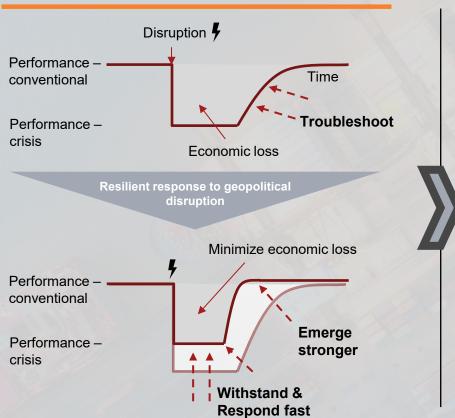


# Climbing the maturity ladder

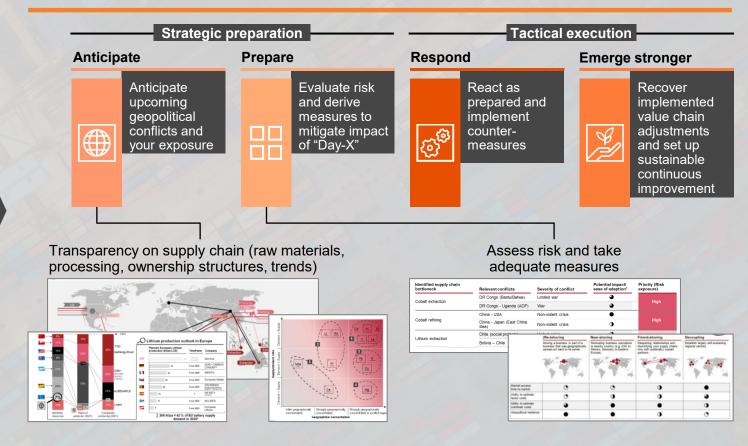
Level	Title	Description
1	Initial (Ad Hoc)	Risk management is informal and reactive. No formal processes; risks handled as they arise.
2	Basic (Repeatable)	Some structured processes exist. Risk registers, basic documentation, limited integration.
3	Defined (Structured)	Organisation-wide risk policies in place. Consistent processes, roles defined, regular assessments
4	Managed (Integrated)	Risk embedded in decision-making. Quantitative analysis, performance indicators, cross-functional collaboration.
5	Optimised (Transformational)	Risk drives strategy and innovation. Real-time monitoring, predictive analytics, continuous improvement.

### Resilience against geopolitical risks as a strategic priority

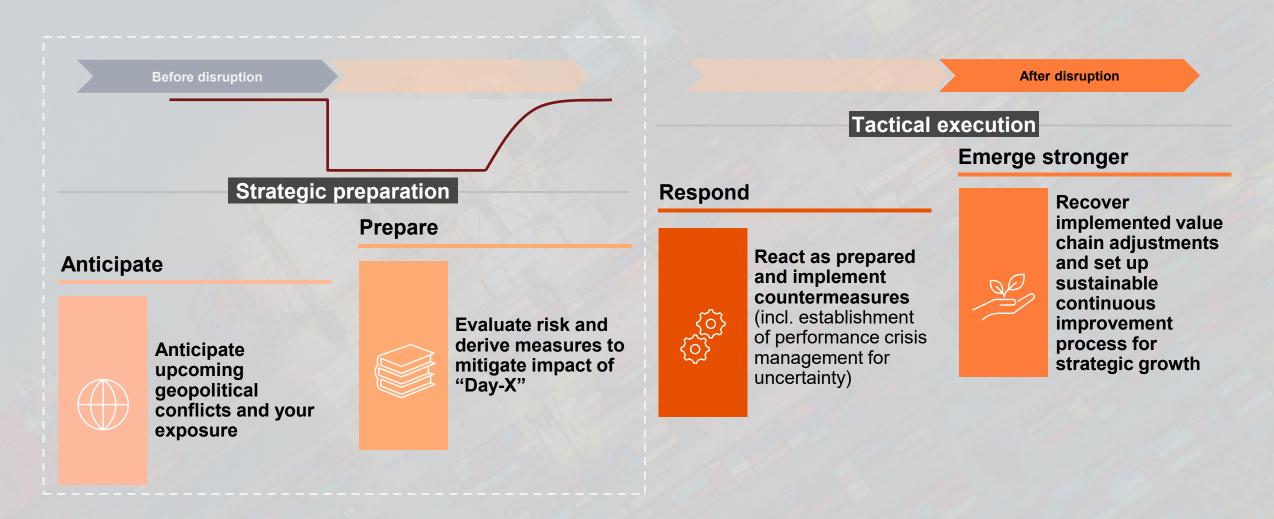
# Resilience is key to handle geopolitical disruptions



### Resilience can be achieved by a four-step approach with strategic preparation at the center



### Success stemming from preparation and clear execution





### House of Resilient Procurement

#### **Commercial / Tactical levers**

Long term commitments

Tactical Spot market demand management

Stock up on critical components

Volume consolidation

#### **Supply base levers**

**Vertical Integration** 

**Footprint** 

**Adjustments** 

sourcing

**Multi-channel** 

Value chain reconfiguration

#### **Product levers**

Design for sourcing

**Complexity reduction** 

Product standardization

Specification assessment

#### **Predictive forecasting levers**

Forecast excellence

**Integrated S&OP** 

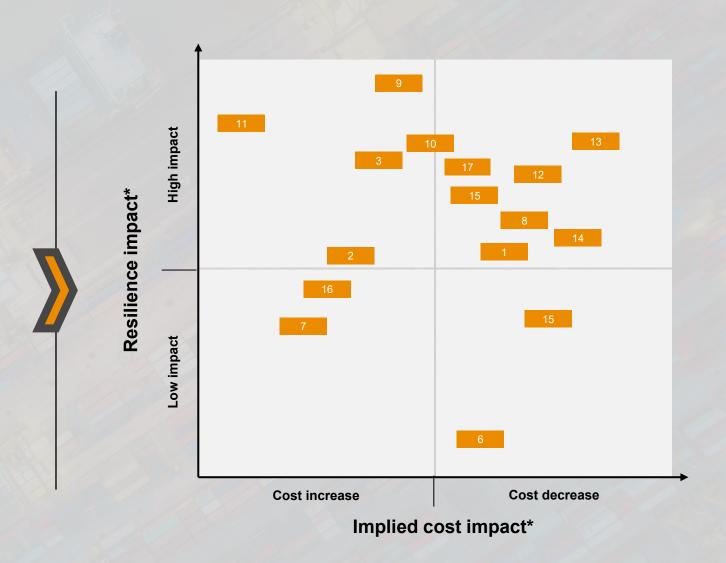
End-to-End visibility beyond tier-1

Supplier risk management

Supplier relationship management

### The cost vs value trade-off in creating resilience







### Toyota P-Valve Factory Fire



#### **Situation**

In February 1997, a fire broke out at the Aisin Seiki factory in Japan, which produced P-valves, a small but critical brake component used in nearly all Toyota vehicles. Aisin was the sole supplier of this part, and the fire threatened to halt Toyota's entire production line within days.

Toyota's supply chain was built on lean manufacturing and just-in-time (JIT) principles, meaning it held minimal inventory. The disruption exposed a major vulnerability in its supply network.



#### **Task**

#### Toyota needed to:

- Restore production of P-valves quickly to avoid a complete shutdown.
- Coordinate emergency manufacturing across its supplier network.
- Maintain trust and collaboration within its keiretsu, a tightly knit group of affiliated suppliers

#### Action

Toyota and Aisin mobilised their keiretsu network with remarkable speed:

- ➤ Over 200 suppliers volunteered to retool their production lines to manufacture P-valves, even if they had no prior experience with the part.
- Toyota engineers provided blueprints and technical support to help suppliers ramp up production.
- ➤ Aisin coordinated logistics and quality control across the network.
- ➤ The response was collaborative, decentralised, and trustbased, reflecting the strength of Toyota's long-term supplier relationships.



### Result

- Toyota resumed production within five days, avoiding a major shutdown.
- ✓ The incident became a benchmark in supply chain resilience and risk management.
- ✓ It highlighted the power of relational contracting, supplier trust, and network agility.
- ✓ Toyota later diversified its supplier base for critical components and strengthened its risk monitoring systems.

