

# The new normal for SCM

## Lecture 1

### Capstone: Future-proofing supply chains



Aalto University  
School of Business

Katri Kauppi

# What is the new normal for supply chains like?

What words would you use to describe the operating environment for supply chains in 2024 and beyond?

What kind of things are / should be emphasized in decision making?



This Photo by Unknown Author is licensed under [CC BY-SA](#)



**“There are decades when  
nothing happens and weeks  
when decades happen.”**

**Over several decades, strategic and operative decisions lead to lean and global supply chains that in the current world are (too?) vulnerable**

Low inventory  
across the chain –  
Just-in-time  
operations

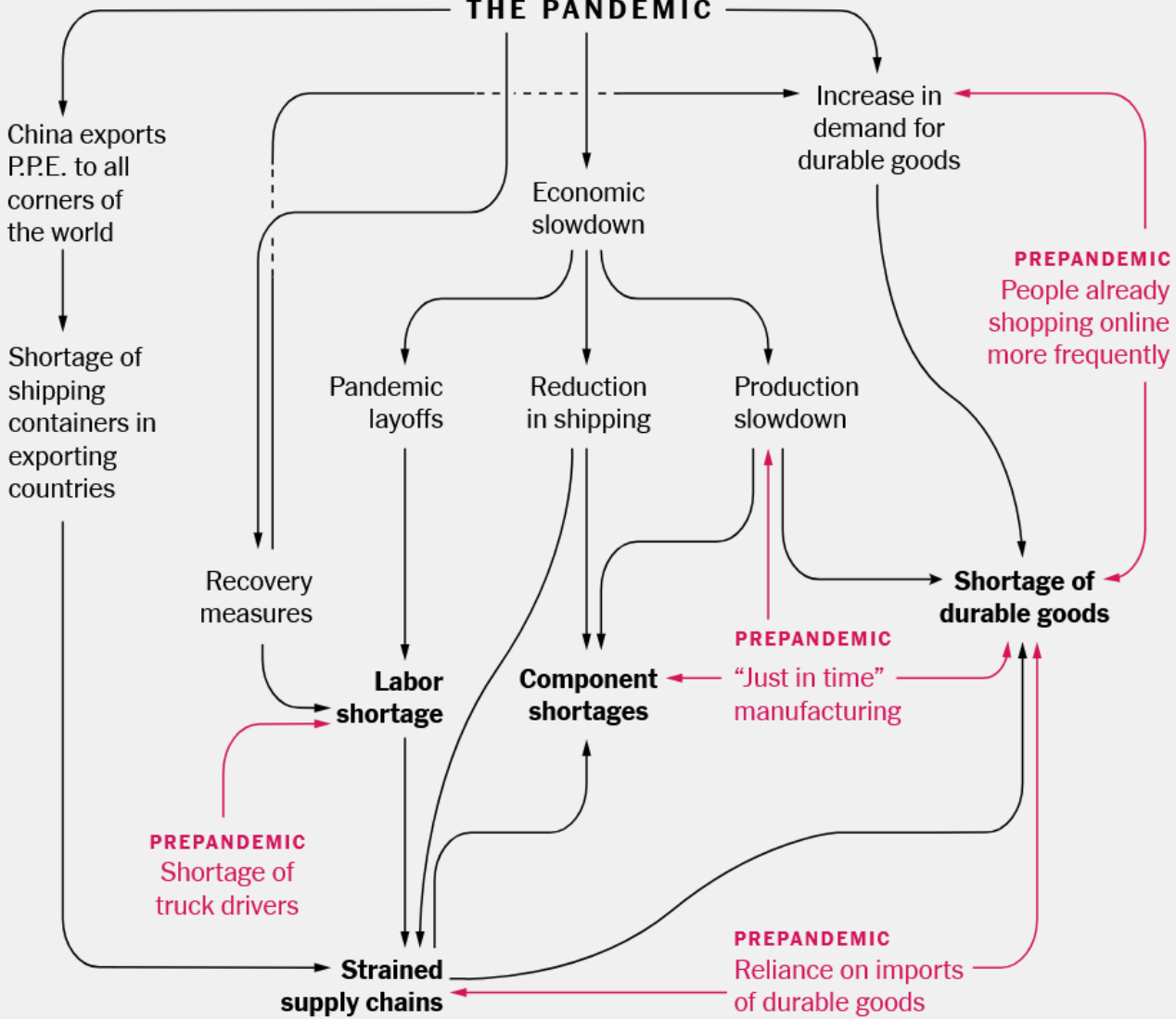
Outsourcing and  
low-cost country  
sourcing – long  
delivery chains

Supplier base  
concentration – no  
back-ups

Production  
specialization – long  
and complex chains  
behind any product

---

# THE PANDEMIC



The New York Times, 2021:  
How the Supply Chain Crisis Unfolded

**McKinsey Global Institute, 2020:  
Industrial supply chains should  
assume to experience 1 month or  
longer material disruptions approx.  
every 4 years, and to lose 42% of  
one year's EBITDA every decade”**

GEP Global Supply Chain Volatility  
Index

**-0.34** ↑

December 2023

Asia: -0.24 ↑

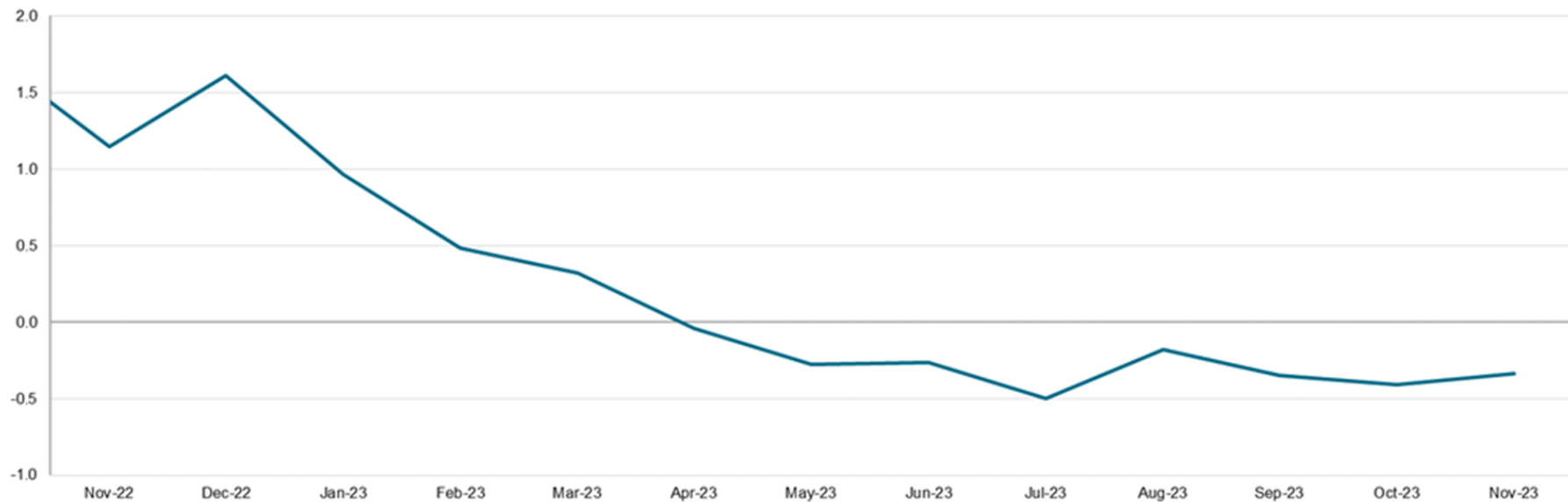
EU: -0.85 ↑

NA: -0.21 ↑

UK: -0.58 ↑

GEP Global Supply Chain Volatility Index

+ = stretched, - = underutilized capacity



# ANALYSIS: Supply Chains in 2024—Improved, But Still Vulnerable



**Denis Demblowski**  
Legal Analyst



News |

## Panama Canal restrictions show impact of climate change on supply chains

New restrictions will further reduce the number of ships allowed to cross the Panama Canal each day, highlighting concerns around both climate change and fragile supply chains.

Rachel Lawler | November 2, 2023

DEEP DIVE

## Suez Canal at risk: What shippers should know to mitigate disruption

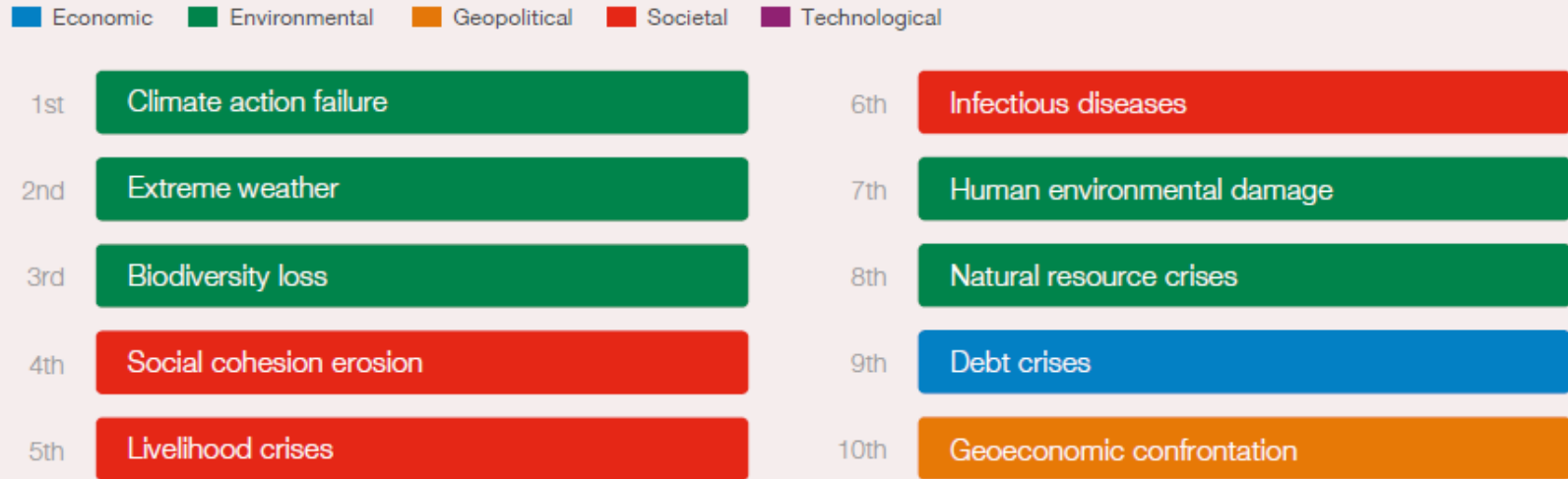
Using alternative routes like the Cape of Good Hope not only means longer transit times but higher freight costs. Here's what shipping experts had to say.

Published Dec. 22, 2023



FIGURE 1.3

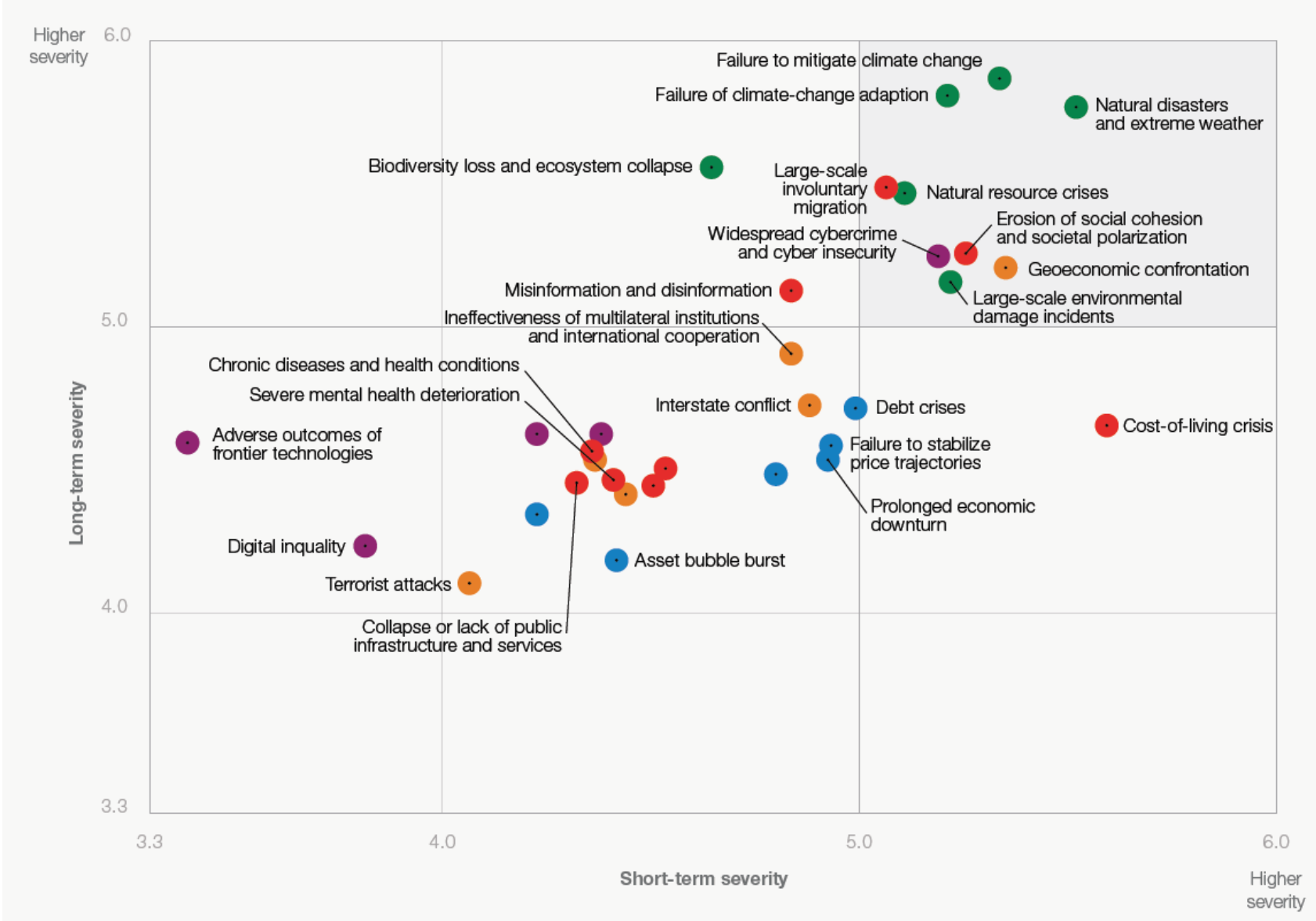
## “Identify the most severe risks on a global scale over the next 10 years”



Source: World Economic Forum Global Risks Perception Survey 2021-2022



# World Economic Forum: The Global Risks Report 2023 18th Edition



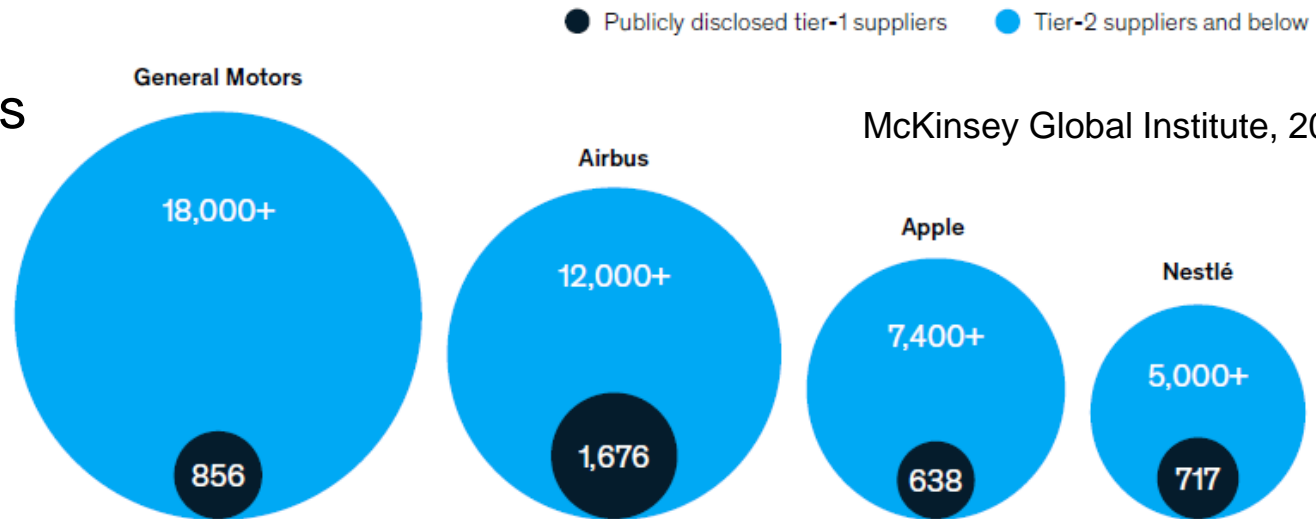
# Supply chains are complex and vulnerable networks

Few companies have visibility beyond tier 1

Most risks are beyond tier 1

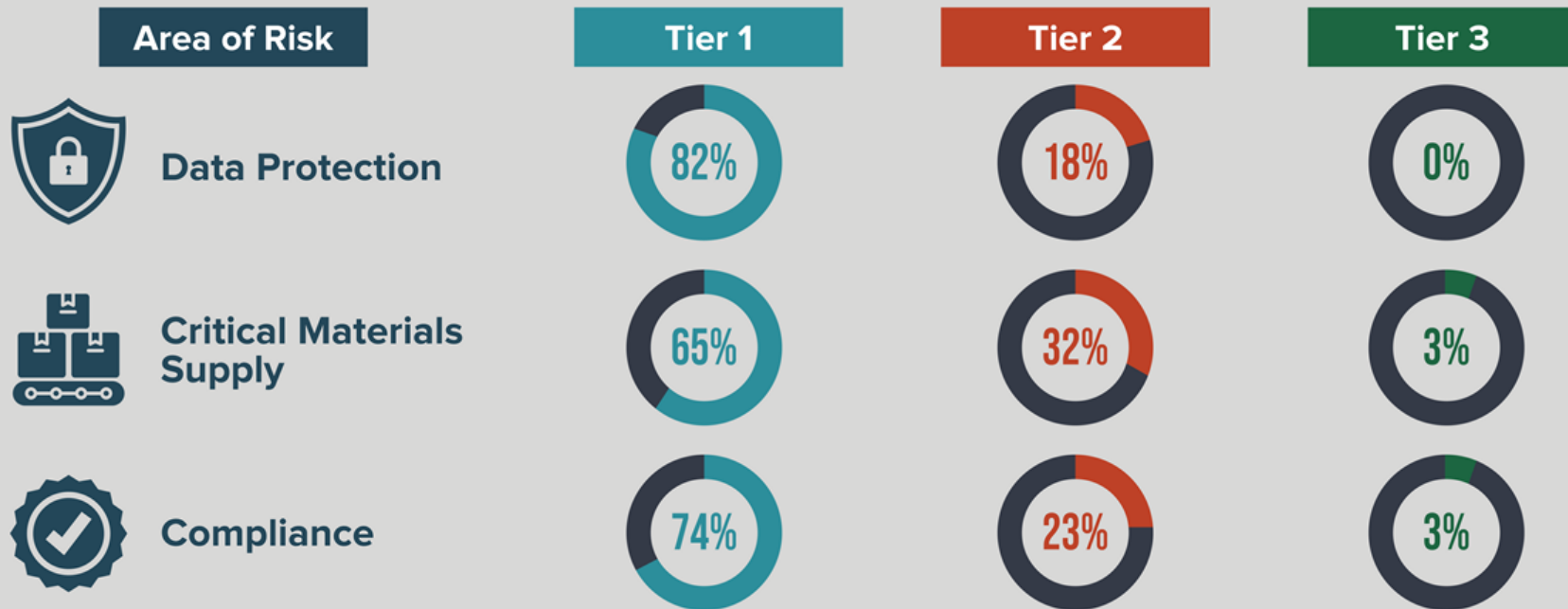
- Sustainability
- Lead time issues
- Geopolitical uncertainty

Beyond the first tier, companies rely on a network of thousands of suppliers



McKinsey Global Institute, 2022

## Percent of Companies Monitoring Risk for Tier 1, Tier 2, and Tier 3 Suppliers



Source: *Third Party Risk Transparency and Visibility, 2023*, CAPS Research.



Over half of executives said their organization is more concerned about supply chain visibility than last year



Most respondents consider the development of more supply chain visibility a top priority



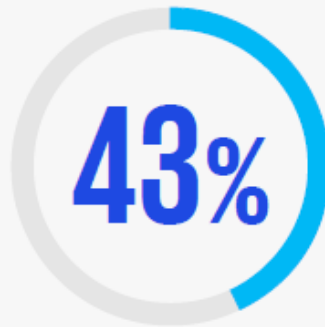
52% consider reducing the number of suppliers based in geopolitically unstable geographies as a top priority



87 percent now see visibility as critically important



53% consider sustainable sourcing a top priority



However 43% indicated they had no visibility, or were "largely unclear" about the performance of their Tier 1 suppliers

# Preparation makes the difference in a crisis

Source: Resilinc



## CASE STUDY:

How a Global Electronics Manufacturer Navigated the Pandemic With No Supply Chain Disruptions

## QUICK FACTS



650 suppliers mapped, down to tier-2



Precise location knowledge of 7,500 parts and materials



5 minutes to isolate which suppliers were impacted



12-months of supplies shipped prior to shutdown

# KPMG The future of supply chain report 2023

Over the next 12-18 months, SC managers see as most pressing challenges:

The rising costs for raw materials (71%)

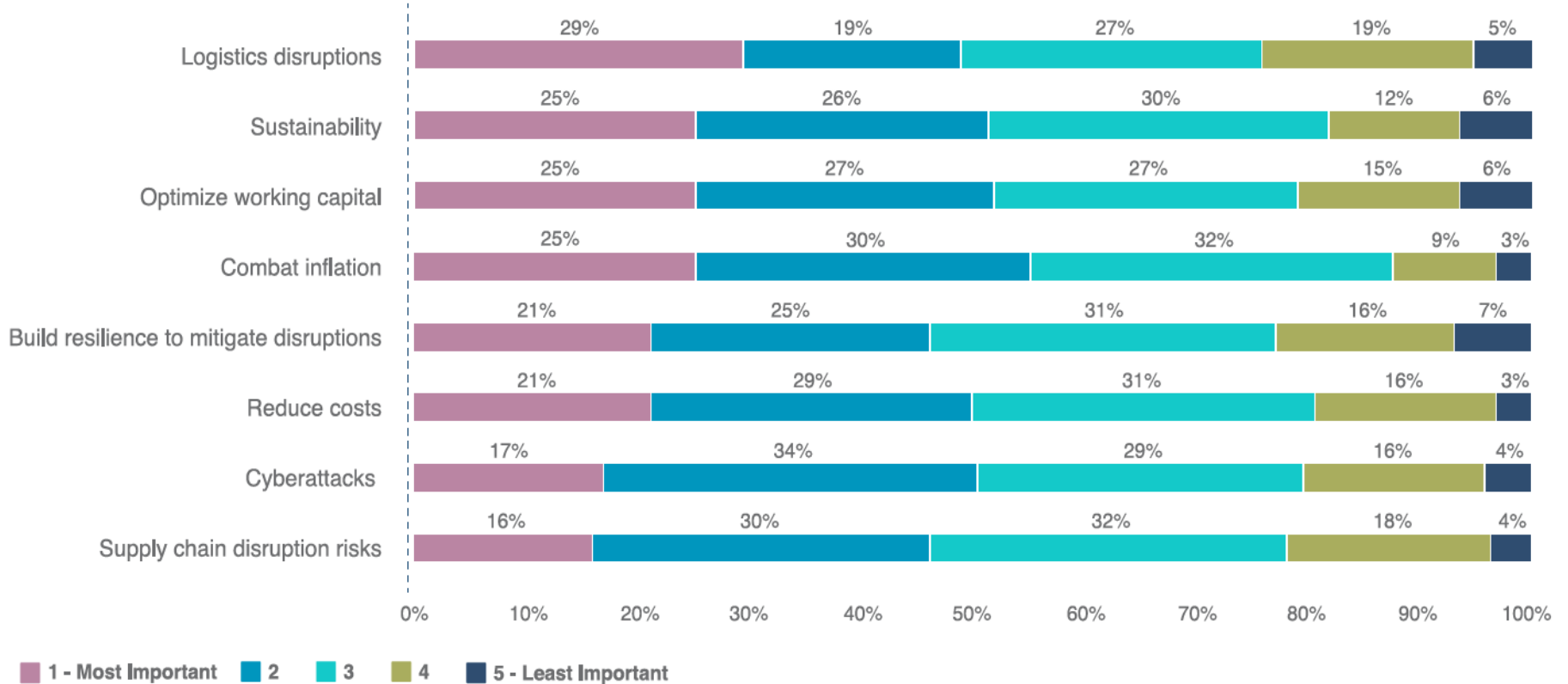
Upstream supply disruption (70%)

Meeting customer expectations for speed (67%)

Labor shortages (62%)

Rising freight cost (62%)

# Essential Focus Areas for Supply Chains



# The next big risk? Climate change

## Physical risks

- Acute risks from extreme weather events
- Chronic physical risks from changes in climate patterns

## Transition risks

- Policy and legal risks
- Technology risks
- Market risks

## Climate change will likely cause:

- Increased and more varied costs of inputs
- Delivery disruptions and delays
- Reduced input quality
- Increased uncertainty and magnitude of disruptions



# What may be some of the key changes needed for SCM?



**Reliable supply is the new price**



**Supply risk is the new financial risk**



**Acceleration of more diverse supply chains**



**Increased inventory and safety stock**



**Risk management becomes a priority action**

Priority #1: Certainty of supply under adverse conditions

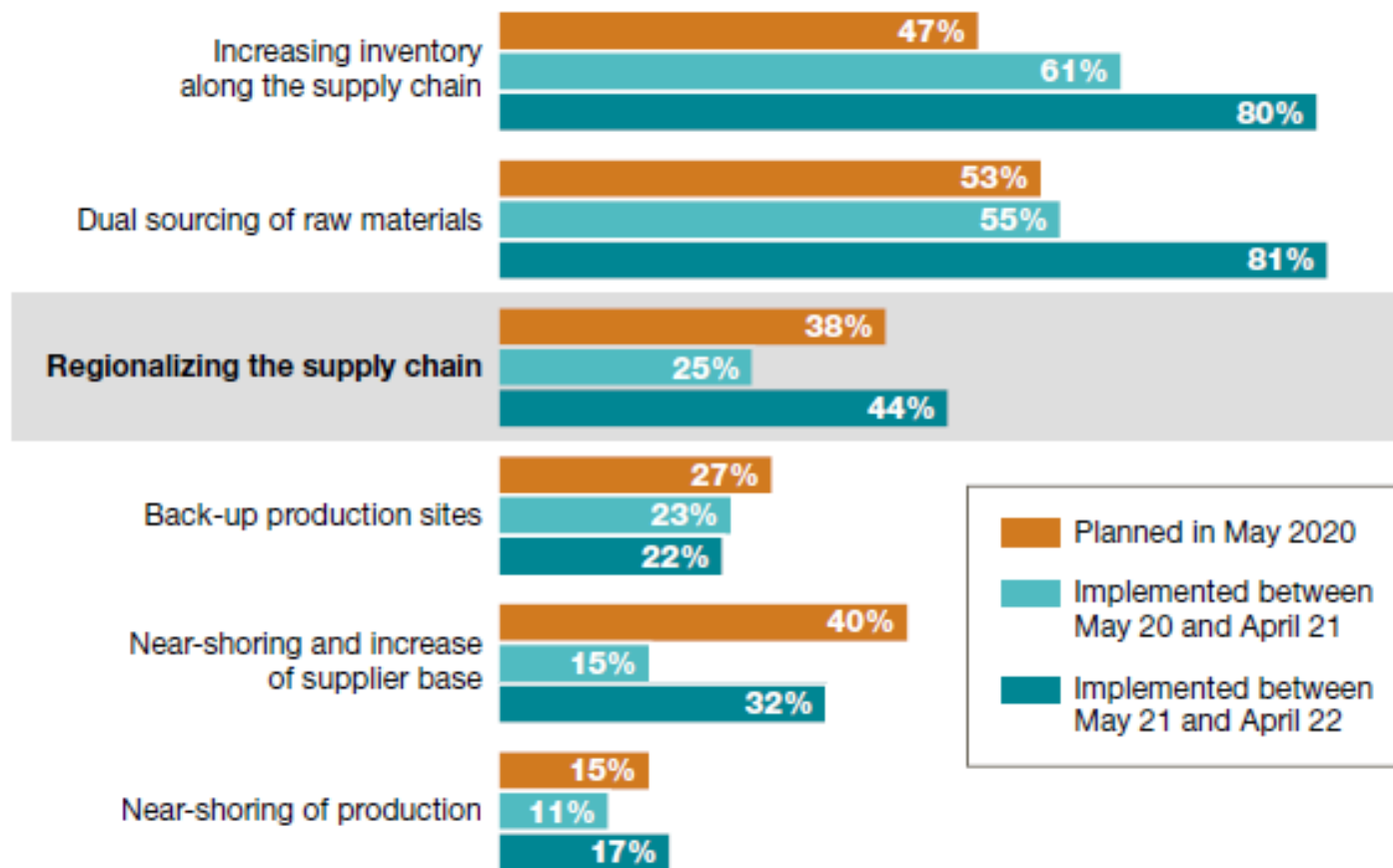
Priority #2: Efficiency under standard operating conditions



FIGURE 1

## Responses to increase supply chain resilience

(Planned and implemented actions, % of respondents)



APQC , 2022

Source: Source: McKinsey survey of global Supply Chain leaders (March 28-April 19, 2022, N=113)

# Is globalization dead?

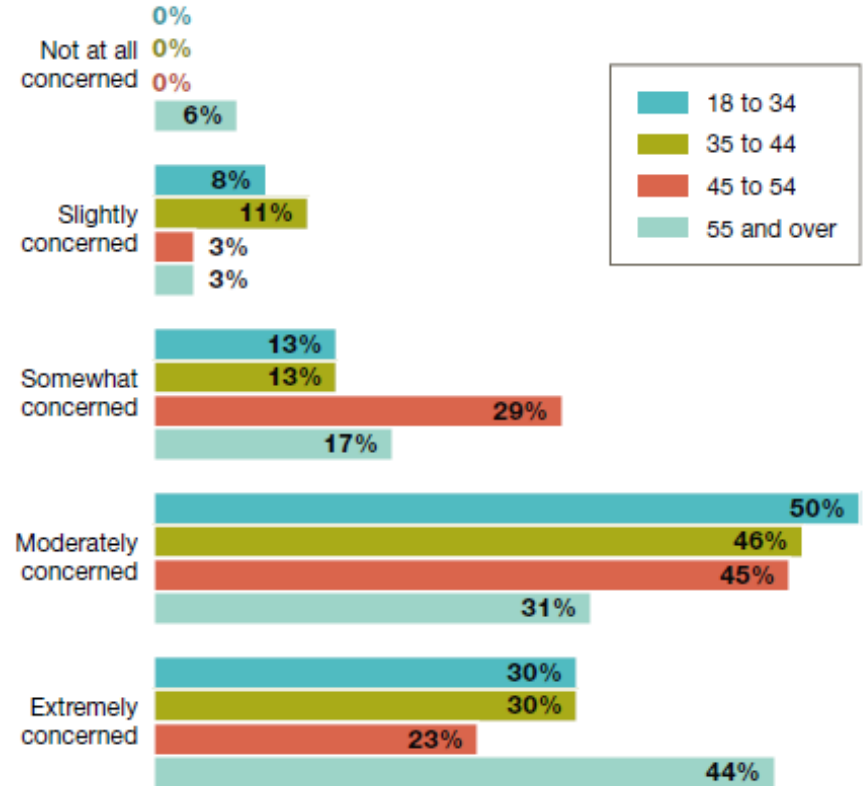
## Unlikely, because...

- Global production in different industries is highly clustered
- Local options are not always available – or they will still have a global supply chain behind them
- TCO still matters

**But globalization may look different in the future!**

FIGURE 4

## Supply chain pros' concern with future of global supply chains

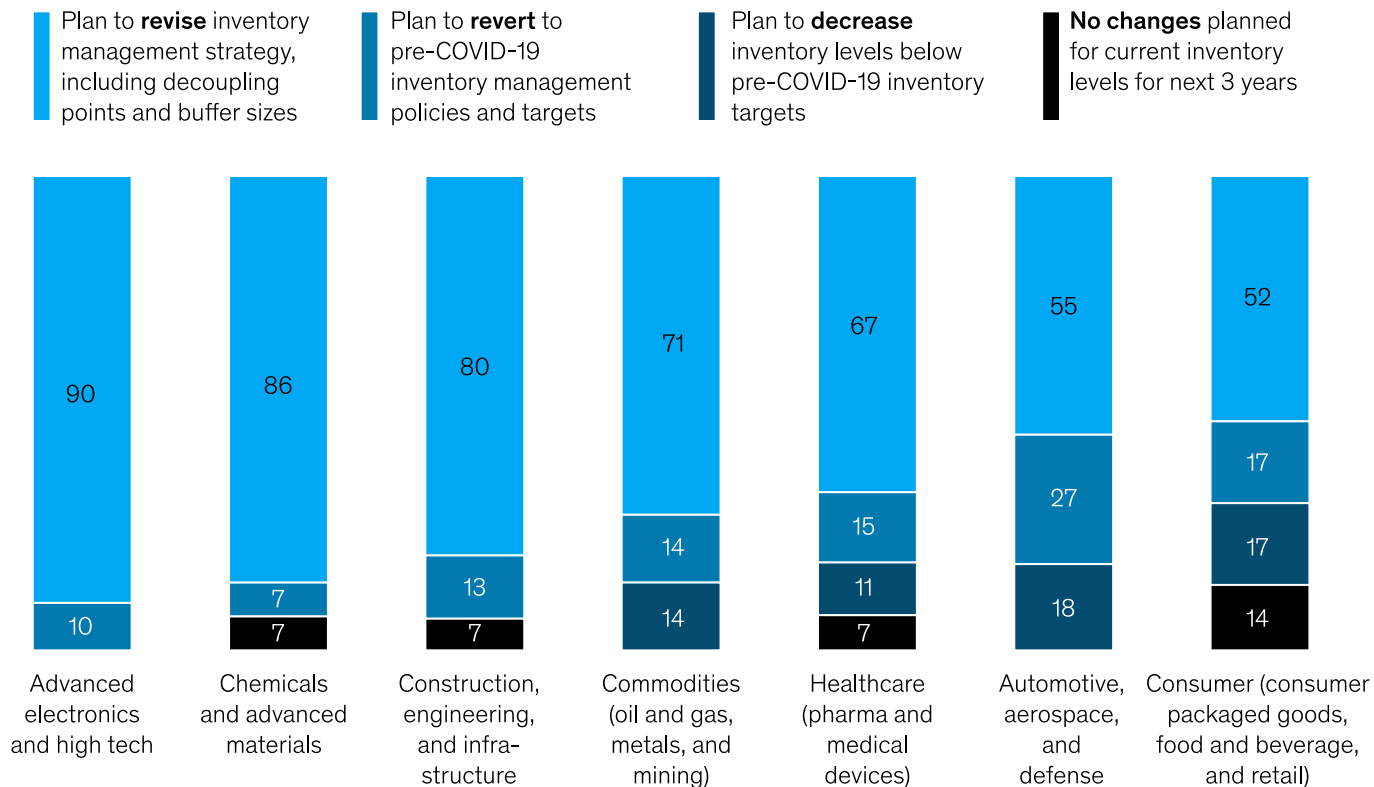


APQC , 2022

Source: APQC

# Most companies are planning significant changes to their inventory management strategies.

Inventory management evolution over the next 3 years,<sup>1</sup> % of respondents (n = 113)



**Remember that Lean / JIT is much more than just “no inventories”!**

**Increased inventories ≠ death of lean**

<sup>1</sup>Question: How do you envision your inventory management to evolve over the next 3 years?  
Source: McKinsey survey of global supply chain leaders, Mar 28–Apr 19, 2022

# Multi-objective balancing act

The traditional cost-quality-speed-flexibility trade-offs almost seem “too simple” nowadays

Supply chain managers must be balancing a multitude of objectives: cost and capital, quality and availability, resilience, sustainability, adaptability...

- Short term adaptability to current uncertainties
- AND long term reconfigurability and scenario planning

Diversify supplier  
network regionally

Build alternatives in  
logistics systems

Product and process  
design for resilience

Climate-proof  
physical  
infrastructure – and  
pick partners who do  
the same

Increase  
inventory/safety  
stock – pick the best  
place(s) in the chain  
for this!

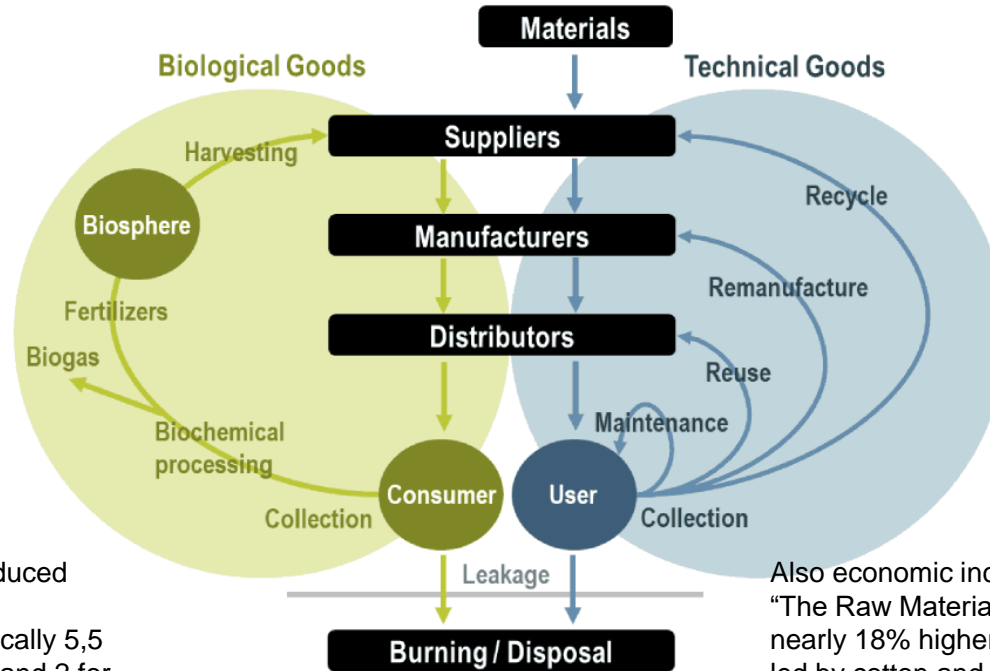
Multiple  
production/warehouse  
sites and  
multichannels

Financial  
management of the  
supply chain

# And everything should be circular too!

Also ensure social sustainability at every tier!

- No forced labour, no child labour, fair wages..



Also zero or significantly reduced emissions at every stage!  
(Scope 3 emissions are typically 5,5 times greater than Scope 1 and 2 for companies, BSR/2020)

Also economic incentive & need:  
“The Raw Material Price Index stands nearly 18% higher than a year ago, led by cotton and rubber prices. Raw material prices are expected to average 10% higher this year, compared to 2020, before stabilizing in 2022” (source: World Bank)

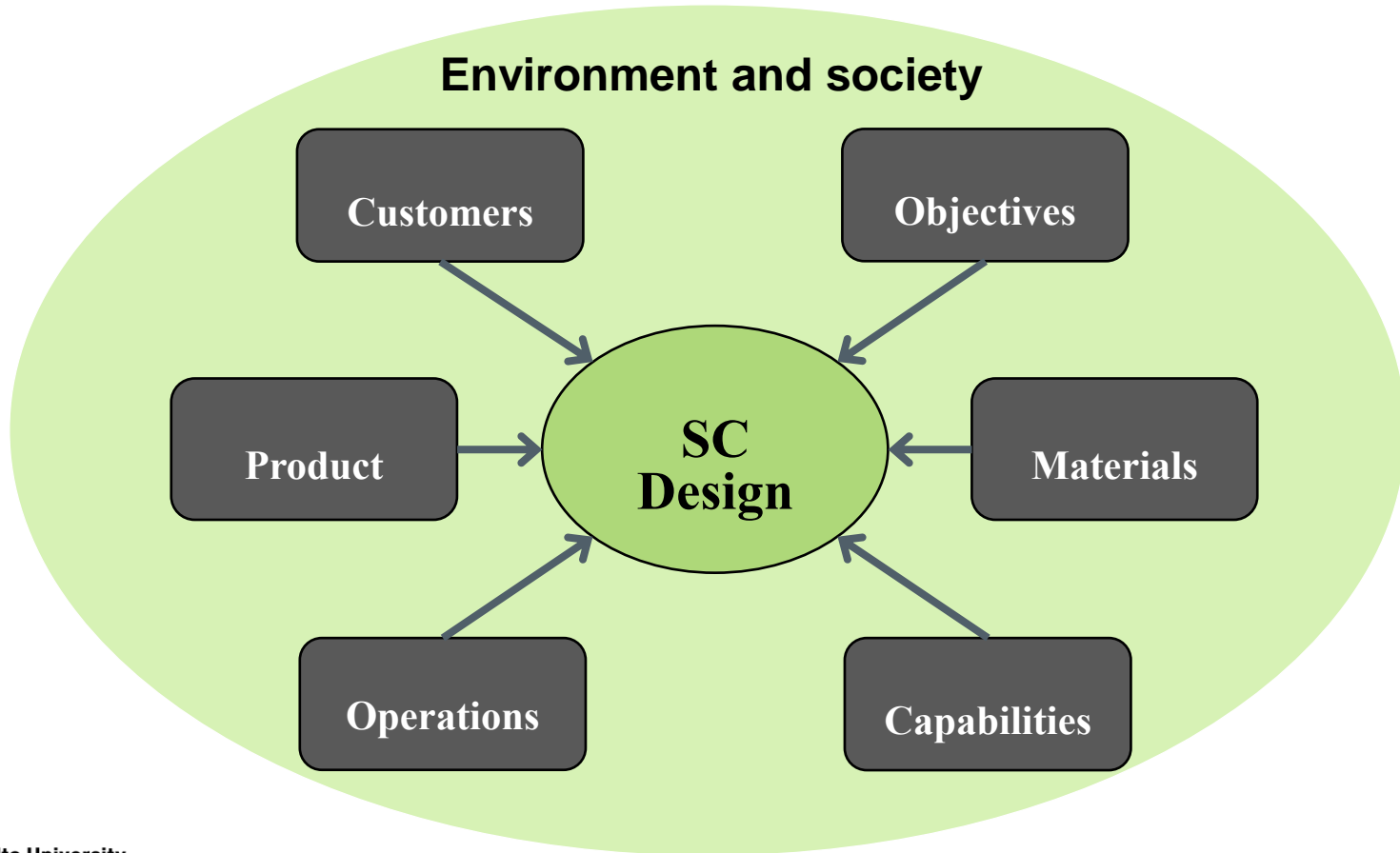
**It is not all about  
reacting to the  
external!!!**



**strategy**



# Supply chain design



# Strategy is what ultimately drives supply chain decision making

## Corporate strategy and functional strategies set the targets

- First understand what you want to achieve with your supply chain
- Take into account the uncertainties and trends in demand and supply
- Ensure that your supply chain and distribution network can deliver the intended strategic objectives in the environment they must operate in

**In the case workshops listen carefully to what the companies goals are!**

# Strategy is not constant

**Typically, the areas that need to be monitored are:**

- Strategic assumptions: The assumptions on which the strategy is based
- Strategic issues: The key trends that could significantly impact the strategy if they reach critical mass
- Strategic triggers: The events that challenge the strategy