

The new normal for SCM

Lecture 1

Capstone: Future-proofing supply chains



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What is the new normal for supply chains like?

What words would you use to describe the operating environment for supply chains in 2023 and beyond?

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



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If there's a 75% chance of high demand,
a 40% chance of a factory slowdown,
and a 50% chance of shipment delays,
what's the probability we'll go crazy
trying to come up with a forecast?





“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

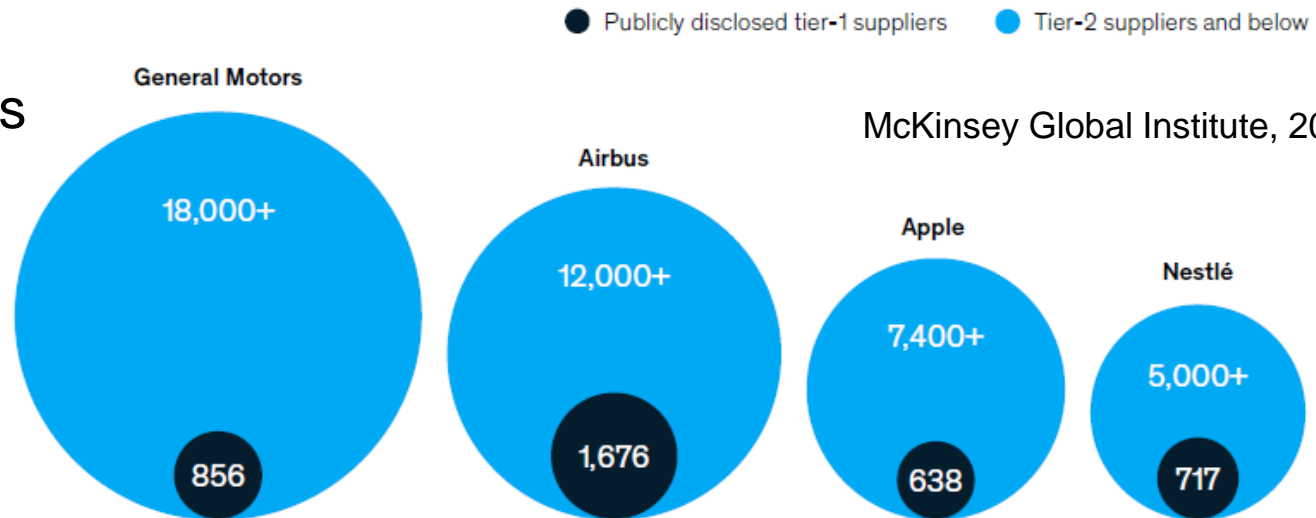
Supply chains are complex and vulnerable networks

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

THE PANDEMIC

China exports P.P.E. to all corners of the world

Shortage of shipping containers in exporting countries

Increase in demand for durable goods

Economic slowdown

PREPANDEMIC
People already shopping online more frequently

Pandemic layoffs

Reduction in shipping

Production slowdown

Recovery measures

Shortage of durable goods

Labor shortage

Component shortages

PREPANDEMIC
"Just in time" manufacturing

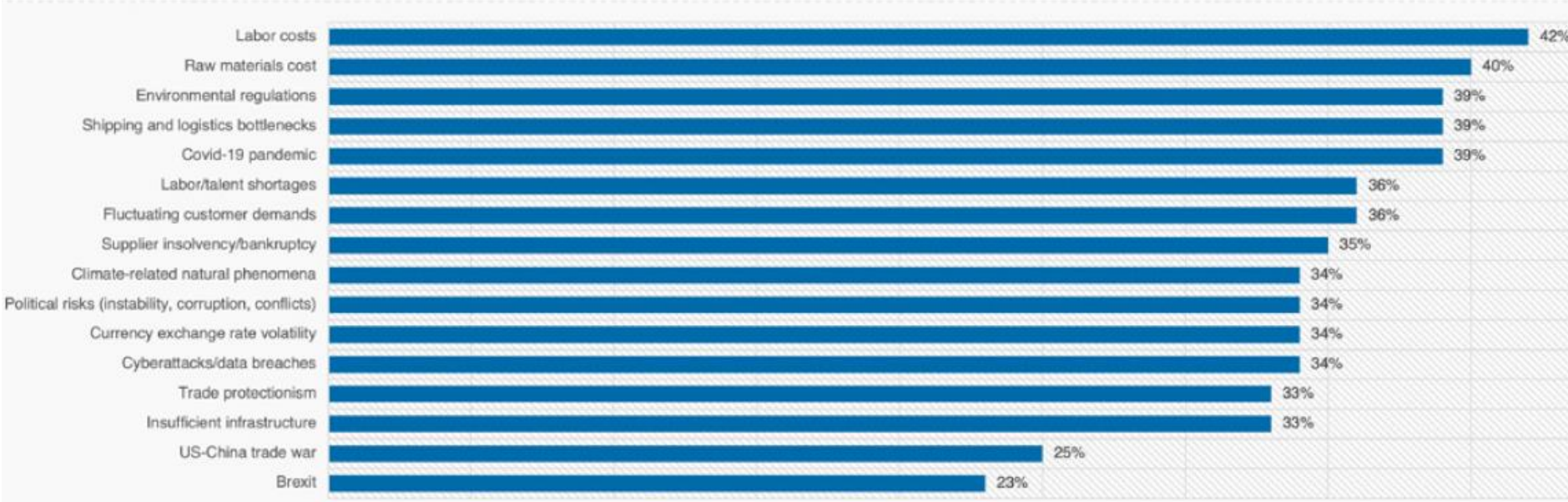
PREPANDEMIC
Shortage of truck drivers

Strained supply chains

PREPANDEMIC
Reliance on imports of durable goods

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

2. How do you expect the following to have a disruptive impact on your organization supply chain in 2022?
 Scale of 1-5, where 1 equals no disruptive impact and 5 equals a significant disruptive impact.

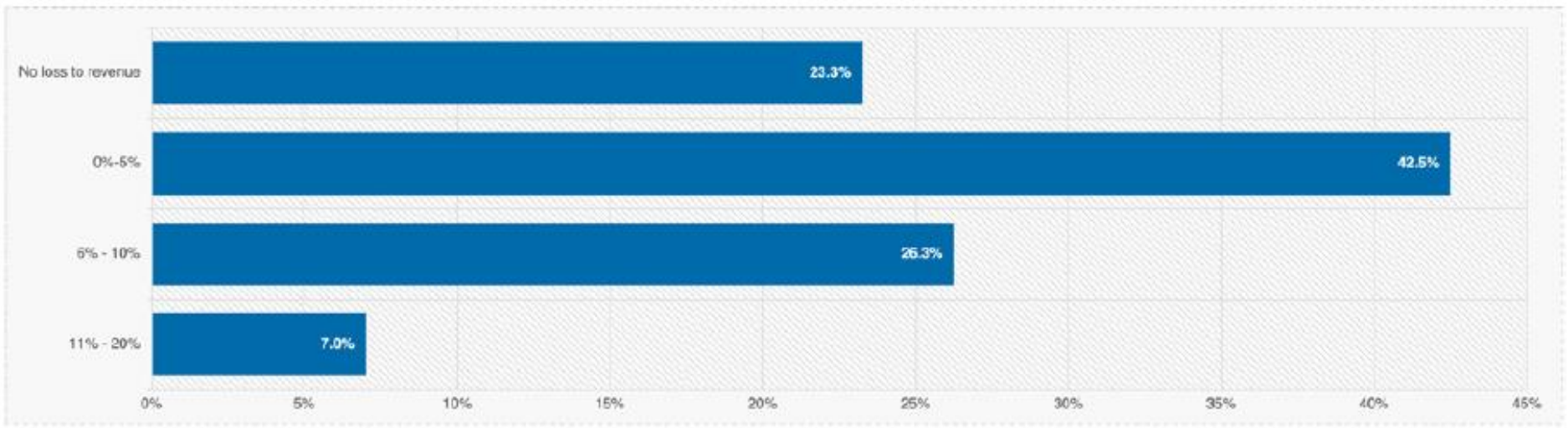


Source: Survey of C-suite & Dir., Global 2,000 Cos., by The Economist Jan.-Feb. 2022

75% OF COMPANIES EXPECT REVENUE LOSS AS A DIRECT RESULT OF SUPPLY CHAIN DISRUPTIONS

Q. What do you estimate, if any, to be the potential total loss to your organization's annual revenues as a result of supply chain disruptions in 2022?

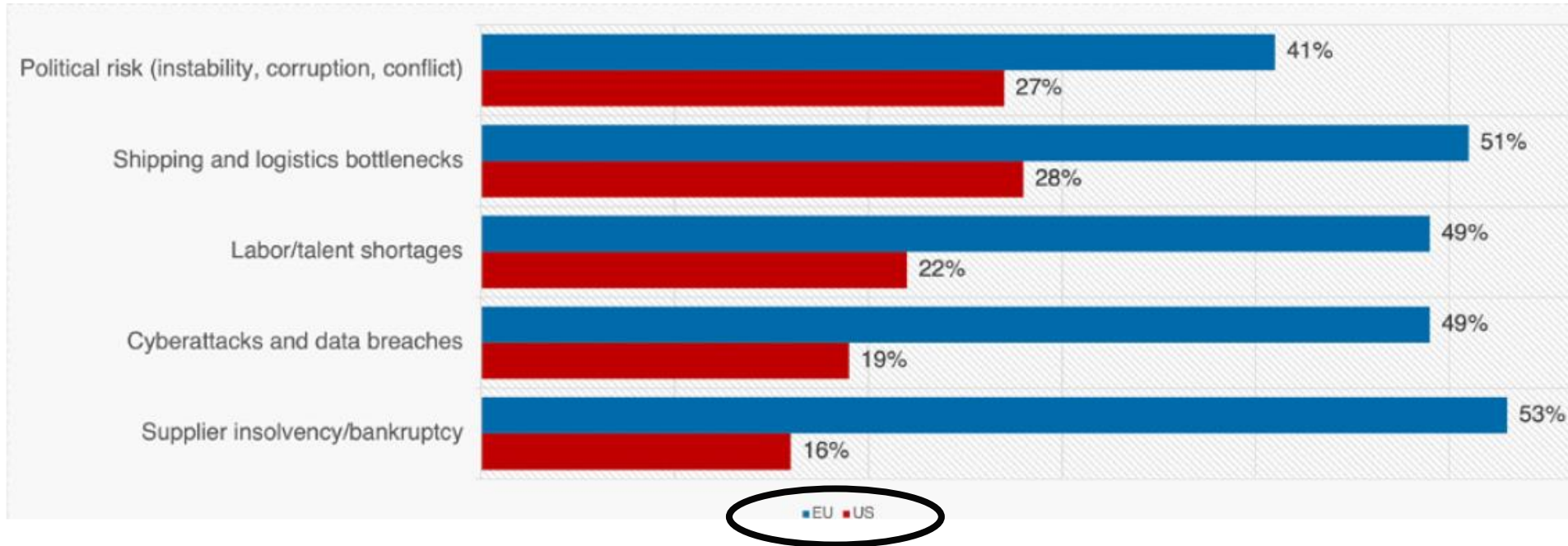
GEP 2022



Source: Survey of C-suite & Dir., Global 2,000 Cos., by The Economist Jan.-Feb. 2022

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"

EU companies have a much bleaker perception of their supply chain environment



Labour shortages in manufacturing and logistics

- A key driver towards increased automation and robotics?

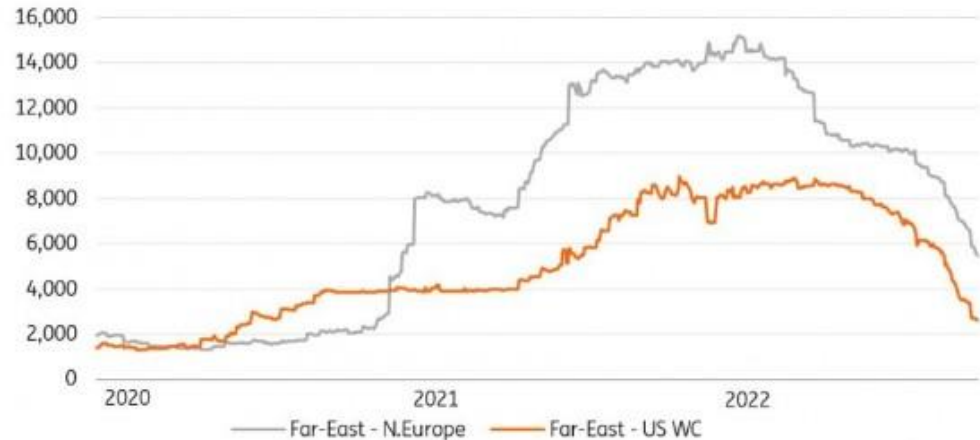
New wave of covid in China

- What is the impact on manufacturing output and port operations?

Container prices finally starting to normalize and chip shortage starting to ease...

Container spot rates on major trade lanes have plummeted

Development port-to-port containerised freight tariffs in \$ per FEU (40ft container)*



Source: Clarksons, ING Research, *last data point: 10/10

Is globalization dead?

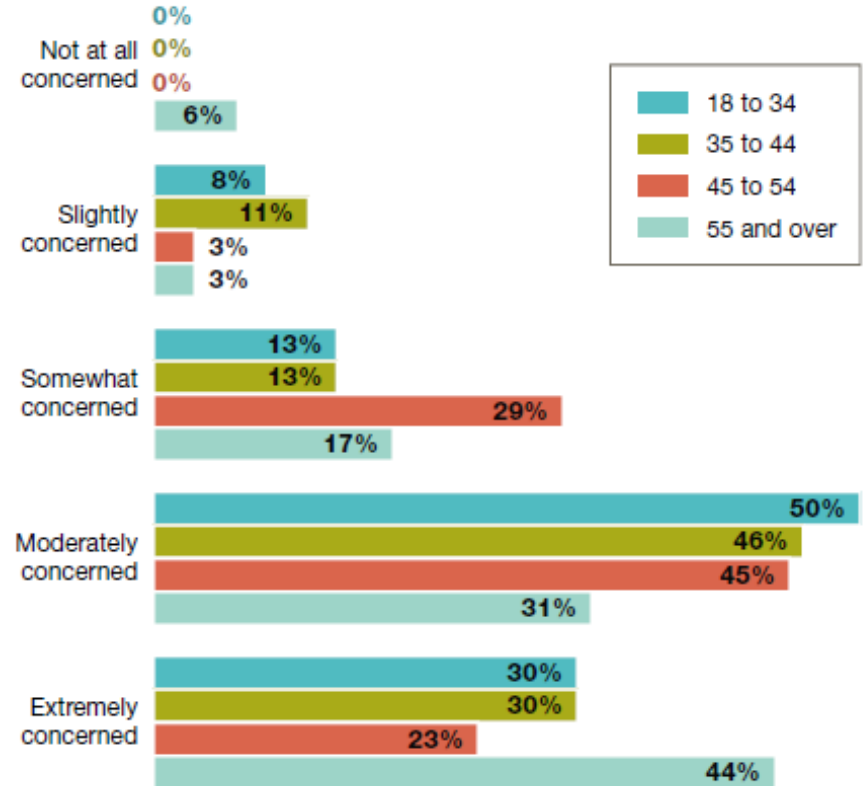
Unlikely, because...

- 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

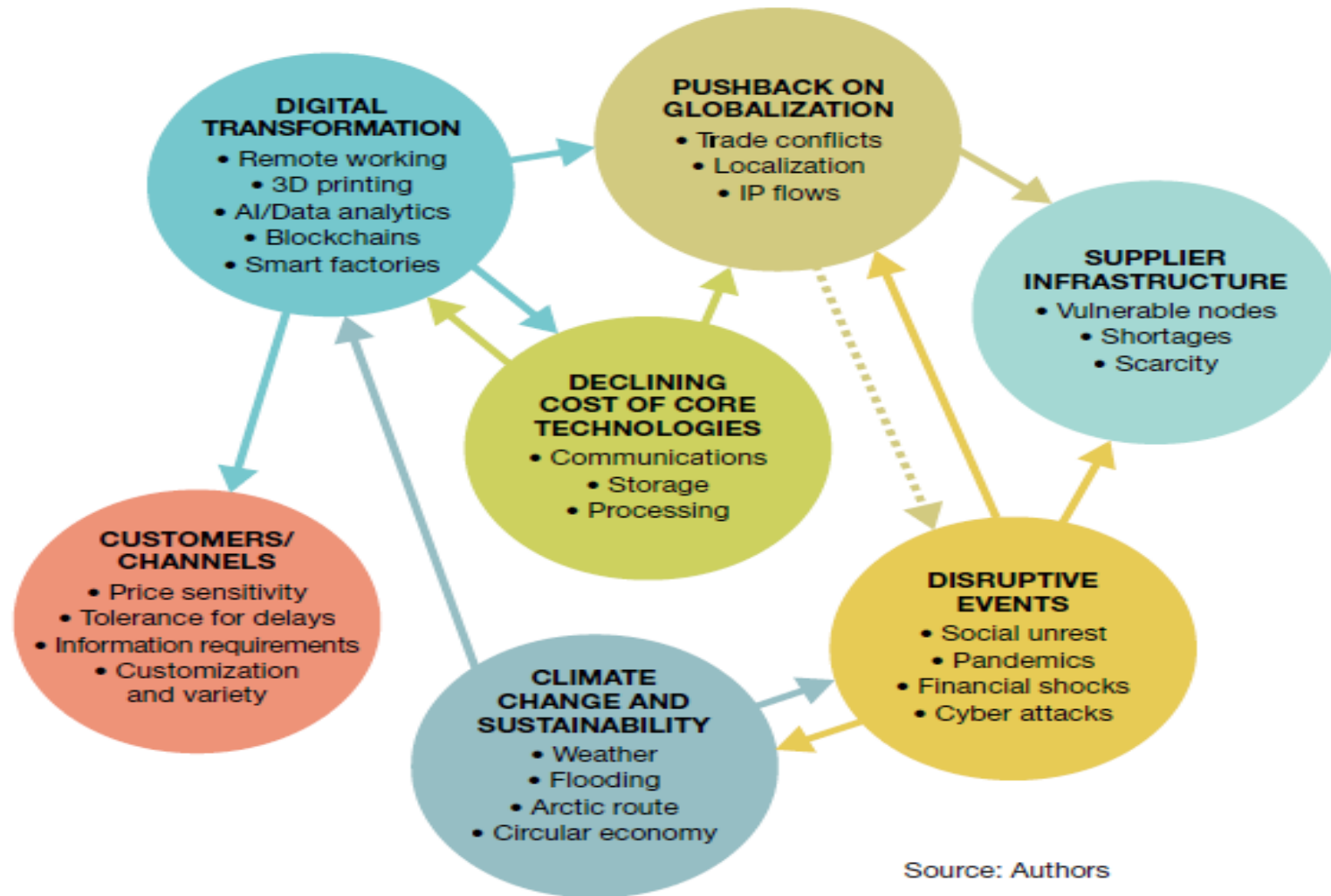


APQC , 2022

Source: APQC

FIGURE 1

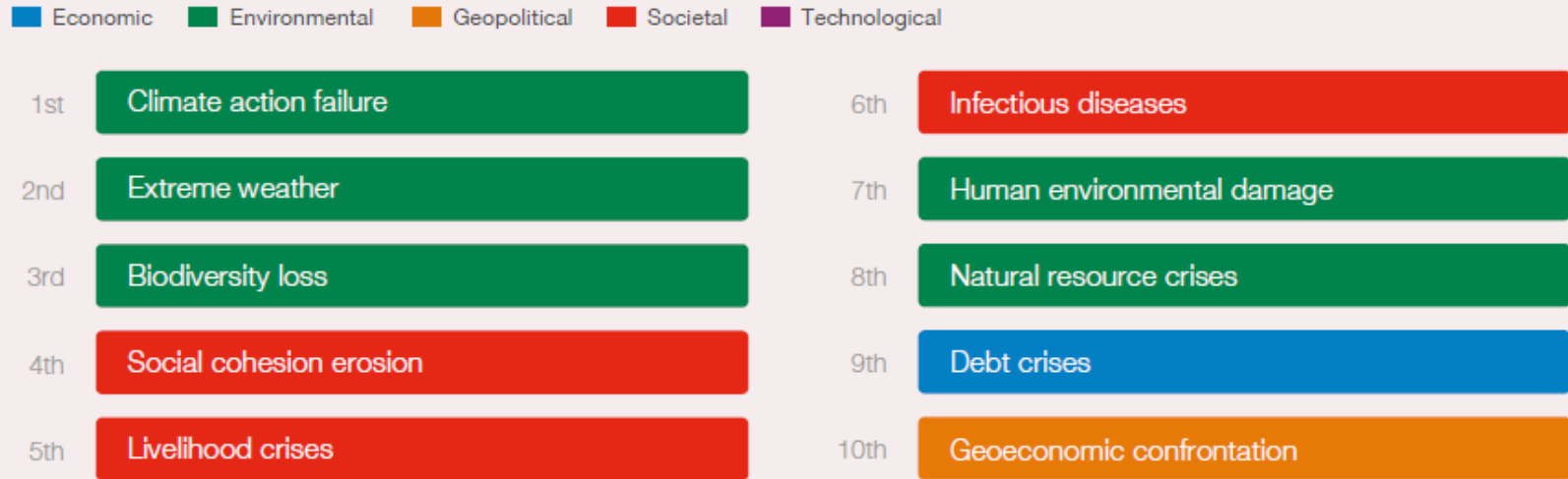
Zones of supply chain uncertainty



Source: Authors

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

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

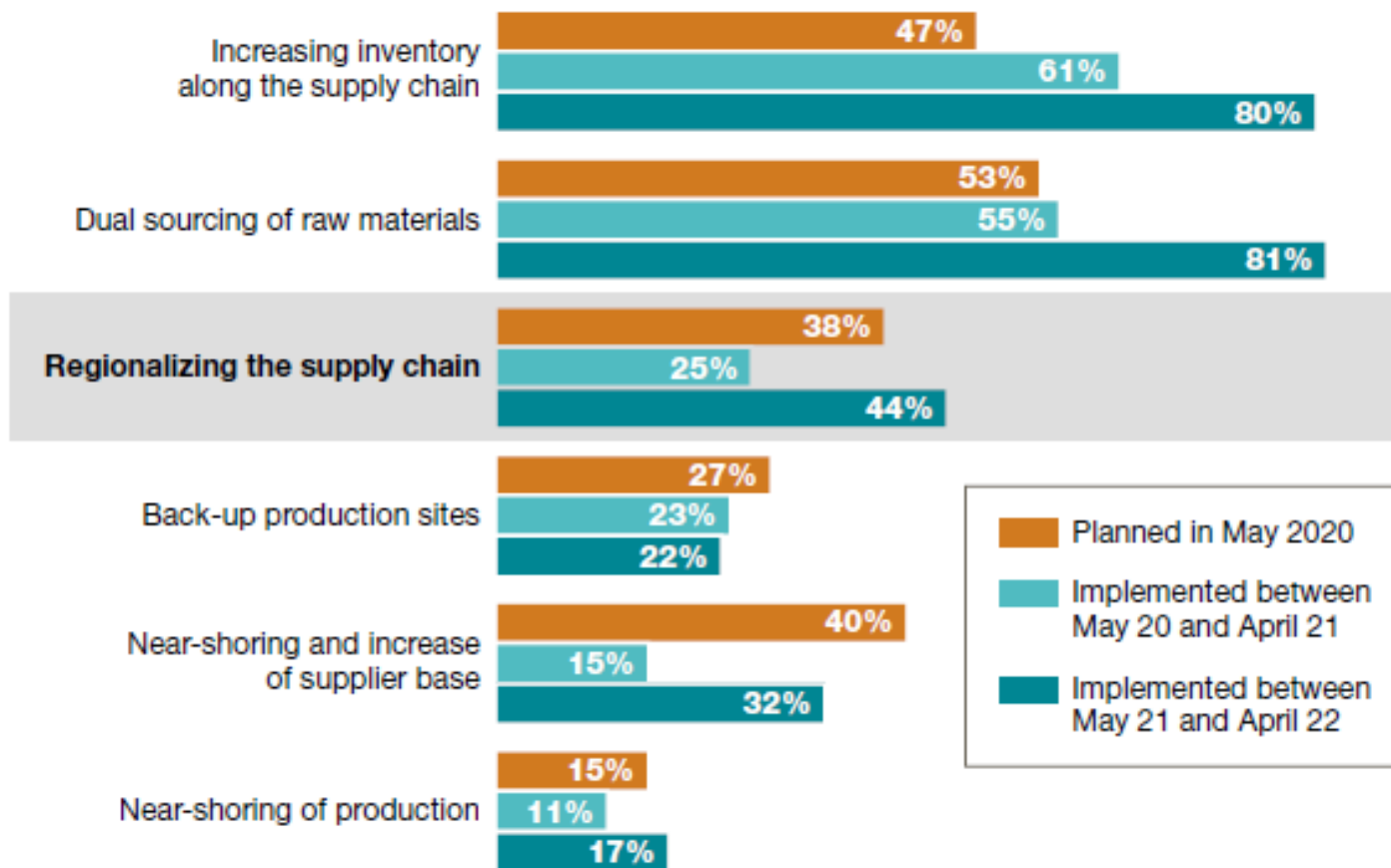
Priority #2: Efficiency under standard operating conditions



FIGURE 1

Responses to increase supply chain resilience

(Planned and implemented actions, % of respondents)

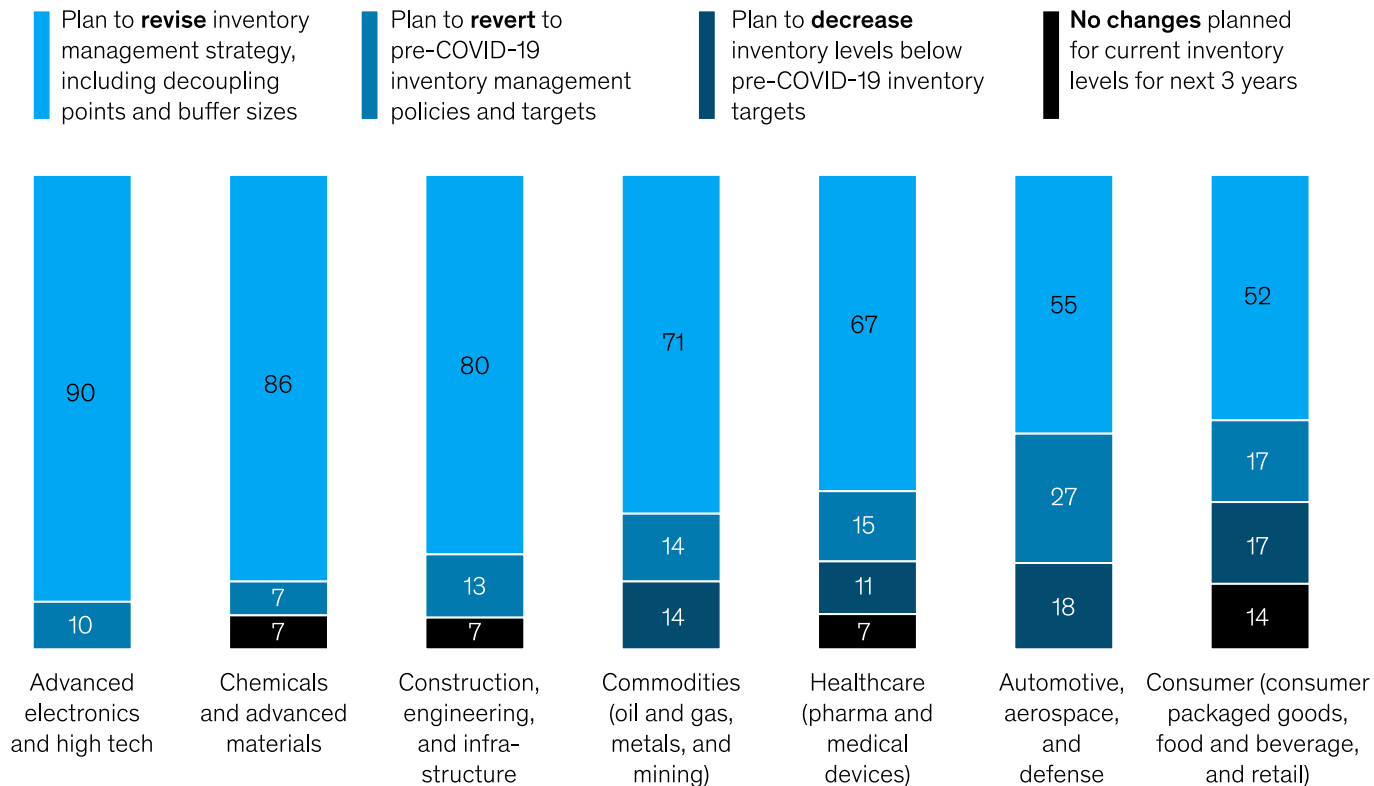


APQC , 2022

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

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

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



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

Increased inventories ≠ death of lean

¹Question: 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

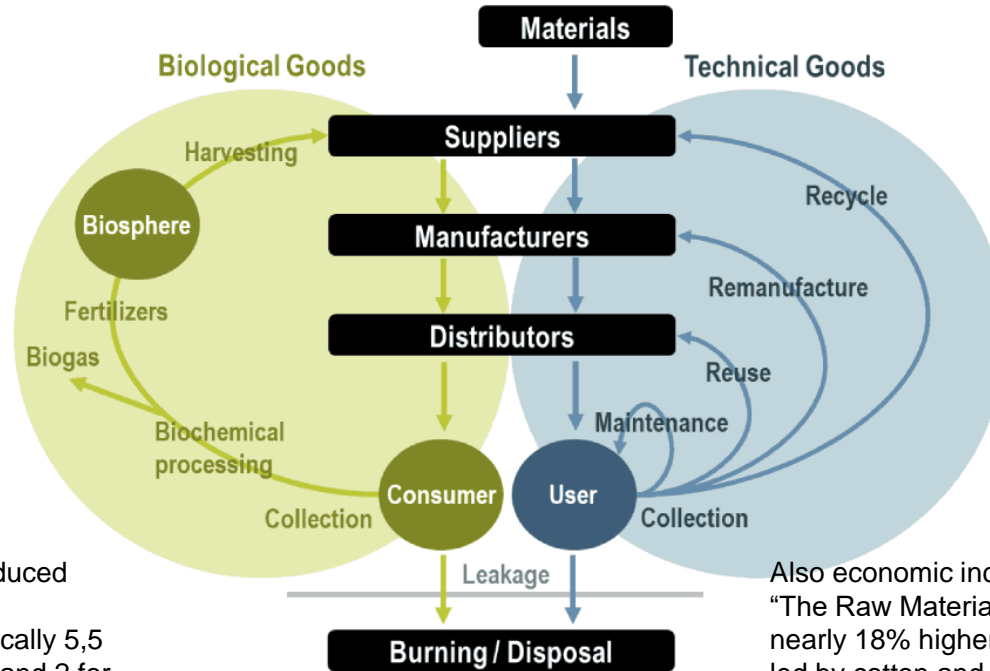
Supply chain managers must be balancing a multitude of objectives: cost and capital, quality and availability, resilience, sustainability, adaptability...

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

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)

2022 STATE OF GLOBAL SUPPLY CHAINS STUDY

KEY FINDINGS

GEP, 2022

- 1. New Normal:** 75% of companies expect revenue losses as a direct result of supply disruptions
- 2. Transformation:** Overwhelming — companies are now reinventing their supply networks
- 3. Top Concerns:** Mitigate supplier risk, labor cost & productivity
- 4. Unprepared for Scope 3:** Less than 1/3 of companies expect suppliers to address sustainability
- 5. Transformation:** Few companies have the required tools; significant investment in new solutions required

Diversify supplier
network regionally

Build alternatives in
logistics systems

Product 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