

Handling Supply Chain Risk Post Covid

July 6th 2020



GLOBAL SUPPLY CHAIN DIVERSIFICATION

Supply chain diversification away from a globalized model (mostly China) has been underway for some time and may accelerate after the pandemic

Diversification context

- Supply chain diversification away from China has been **underway for several years** as labor costs rise, but **hastened with the US trade war/ tariffs**
 - Diversification most evident for lower value-add parts of manufacturing, e.g. apparel/ electronics assembly
 - However, for high value-add parts and processes, China's supply chain ecosystem (e.g. capital, labor, know-how) built over several decades is hard to be substituted by other countries in the short-term
- COVID-19 outbreak has **increased awareness and may accelerate this trend**, as the risks of over-relying on a single country such as China become more evident
- Companies and global manufacturers are actively seeking to locate production sites closer to their key markets rather than having to deal with long and expensive supply chains.

Drivers for supply chain reshoring (from Global to local)

Existing drivers Pre-COVID



Rising operating costs

- Cost advantage vs. other low-cost countries (e.g. Vietnam, Thailand) has diminished after years of double-digit income growth



Geopolitical uncertainty

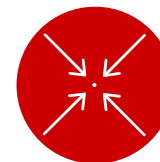
- Ongoing trade war with US and threat of tariffs has created significant uncertainty over cost and stability of using China in supply chains



International protectionist policies

- Other major developing markets (e.g. India, Brazil) are using policy to incentivize or require local manufacturing for full market access

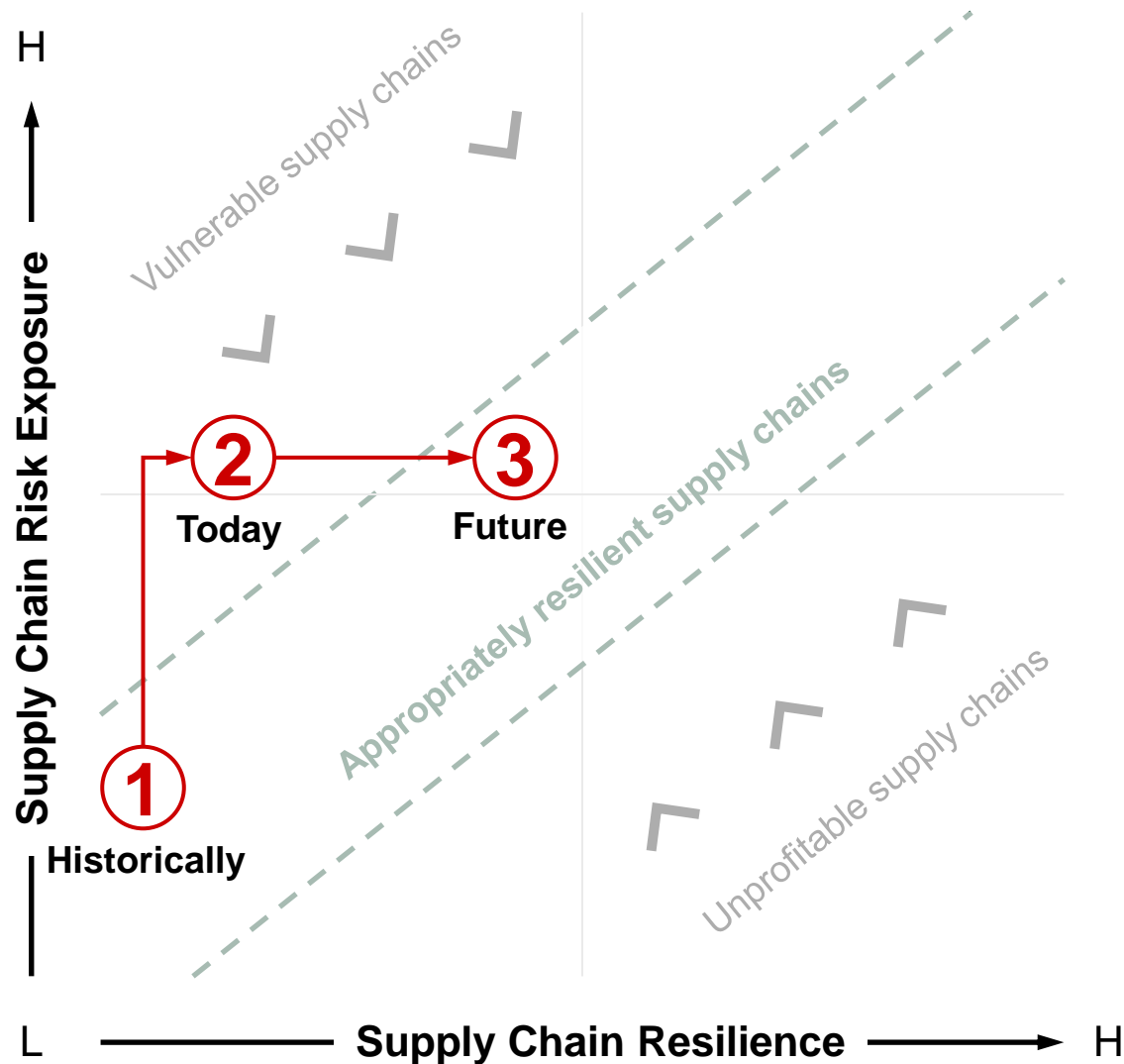
New driver Post- COVID-19



Single sourcing risk

- Coronavirus outbreak severely disrupted supply chains globally, more clearly exposing risk of overreliance on any one single country

Companies must proactively invest in supply chain resilience to balance increasing risk exposure



Commentary

- 1** Historically companies may have felt they had the **appropriate level** of risk exposure and resiliency
- 2** However, through a combination of choices made and external factors, supply chain **risk exposure is increasing**
 - While companies may have made **stable investments** to increase resiliency, they may not be sufficient
 - This is pushing once adequate supply chains into **vulnerable territory**
- 3** **Proactive investment** in appropriate levers is required to optimize supply chain resilience

Resilient supply chains feature five capabilities

Supply Chain Capabilities

1



Agile Network Structure

2



Digitize with secure plug & play technology

3



Connected visibility

4



Insight to action

5

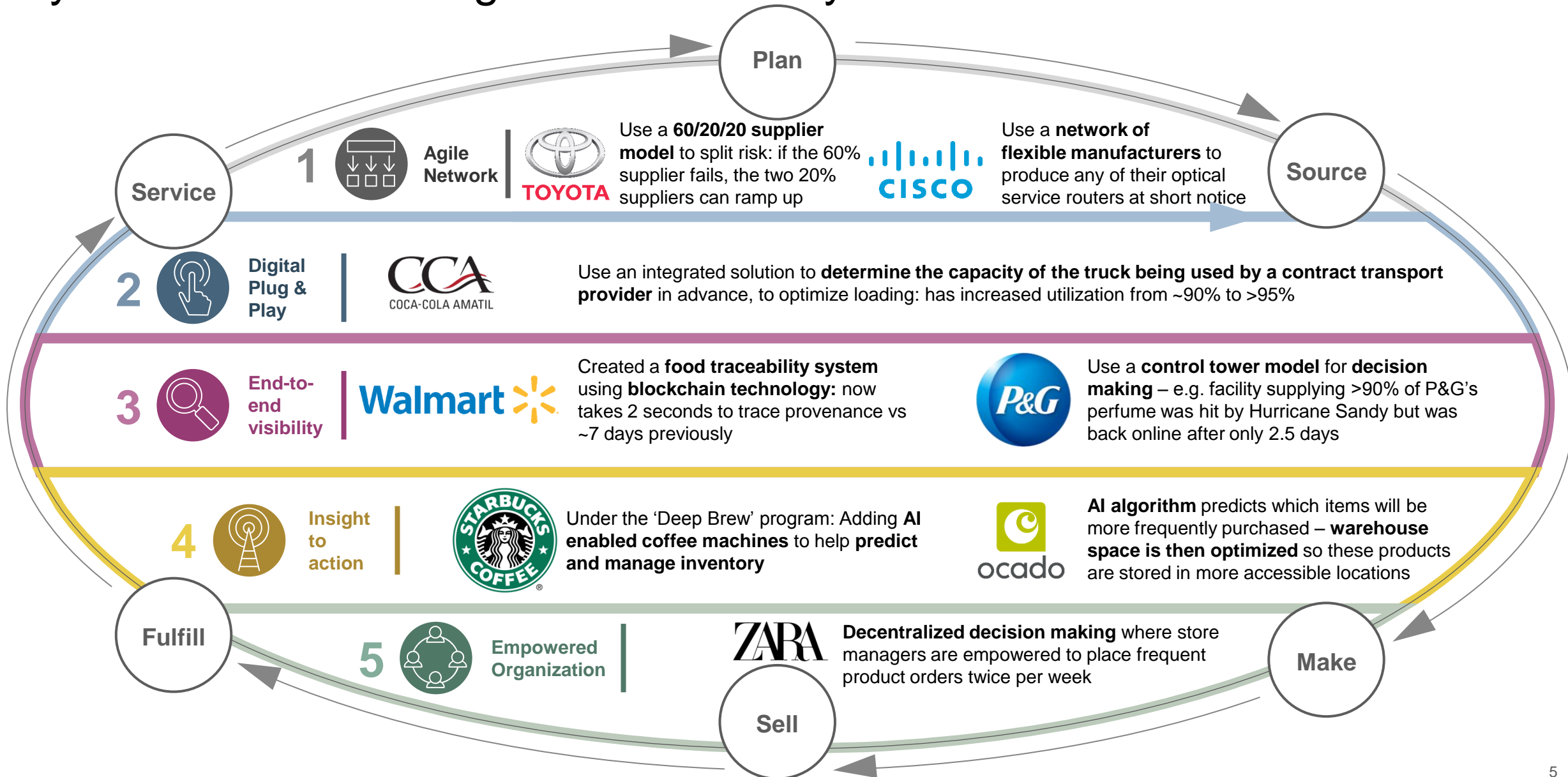


Empowered organization

Capability Description

- Flexible ecosystem of suppliers and partners, incl. ability to rapidly introduce new products
 - Alternative manufacturing and assembly nodes
 - Near-shoring and on-shoring
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- Cloud-based, light-weight supply chain
 - Plug and play interfaces
 - Collaborative tools enabling info-sharing and higher cybersecurity
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- Control-tower model for higher visibility
 - Real-time network via IoT and 5G
 - Blockchain to ensure provenance
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- Predictive and prescriptive analytics
 - Scenario simulation
 - Early warning detection
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- Decentralized decision making
 - Problem solving culture
 - Rapid recovery capabilities

Leading companies are acting decisively in response to the changing ecosystem and increasing level of volatility



Focus: Standing up a Control Tower can enable a step change in end-to-end visibility across supply chains

What is a Control Tower?

A Control Tower is a **decision-making platform** that enables a **real-time, integrated, and omniscient** supply chain through **end-to-end visibility and predictive / prescriptive analytics**

Main value propositions include:

End-to-end visibility with (near) real-time data

Predictive / prescriptive analytics enabled by **AI / ML**

Intuitive, actionable insights that enable decision-making

Enterprise-wide access for “**one source of truth**”

Cross-functional collaboration capabilities

