

## **COVID-19 Supply Chain Impact**

The shift to more technology-enabled resilient supply chains

Jim Kilpatrick, Global Supply Chain & Network Operations Leader, Deloitte  
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# Shifting Focus from Efficiency to Resilience

Supply chains have become highly sophisticated and vital to the competitiveness of many companies. But their interlinked, global nature also makes them increasingly vulnerable to a range of risks.

## Efficient Supply Chains



### Lean

Focus on operational excellence, supply chain optimization, and the elimination of waste (costs, materials / inventories, assets).



### Specialized

Establishing centers of excellence, shared services, and focused factories to improve efficiency and cost as a means of differentiation.



### Consolidated

Mergers and acquisitions, integration of operations, and leveraging economies of scale to improve cost and asset performance.



### Reactive

The ability to sense and respond to demand-side and supply-side events and disruptions to quickly re-plan and then align execution.



### Enterprise-focused

Focus on functional excellence within the company's supply chain, including direct (Tier 1) suppliers and customers.



## Resilient Supply Chains



### Agile

Supply chain design in consideration of geographic diversity, multi-sourcing, and capacity to respond to market and supply chain disruption.



### Flexible

The ability to quickly adapt to disruptions without significantly increasing operational costs.



### Collaborative

The ability to develop symbiotic and trust-based relationships with supply chain partners and other key strategic network participants.



### Predictive

The ability to predict issues across the extended supply chain and prescribe actions. Concurrent planning and execution.



### Network-focused

Focus on synchronization and optimization of the end-to-end (multi-tier) supply network, enabling coordinated actions and risk mitigation.

# 5 Fundamental Supply Chain Shifts

The supply chain challenges of the COVID-19 pandemic are causing many companies, and countries, to rethink potential supply chain models for the future with a view to technology-enabled resilience.



Resiliency versus efficiency trade-offs



Supply Network versus supply chain



Local/Regional versus global



Digital versus physical

- Physical-digital-physical loop
- IoT, sensors, scanners, edge and cloud computing, 5G and satellite
- Digital twins, advanced analytics, AI/ML, video and special analytics



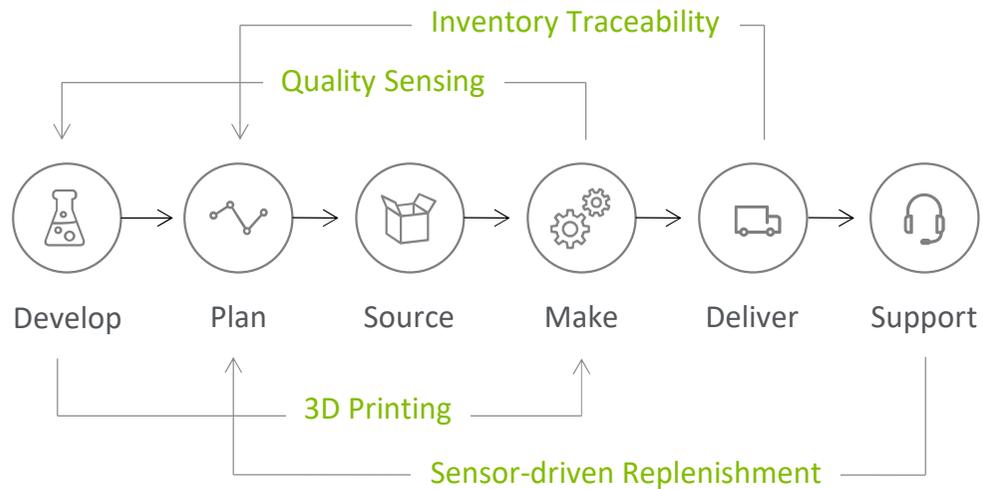
Automation versus labor

- Augment and replace human performance
- Robots, autonomous vehicles and drones, 3D Printing
- Cobots, AR/VR, visualization, robotic process automation (RPA)

# The Rise of the Digital Supply Network (“DSN”)

Traditional linear supply chains are transforming to dynamic networks, allowing for increased visibility, responsiveness, differentiation, and resilience.

## TRADITIONAL SUPPLY CHAIN



## DIGITAL SUPPLY NETWORK

