

# Supply Chain – Digital Twin

## A relevant innovation to SAP Supply Chain Management

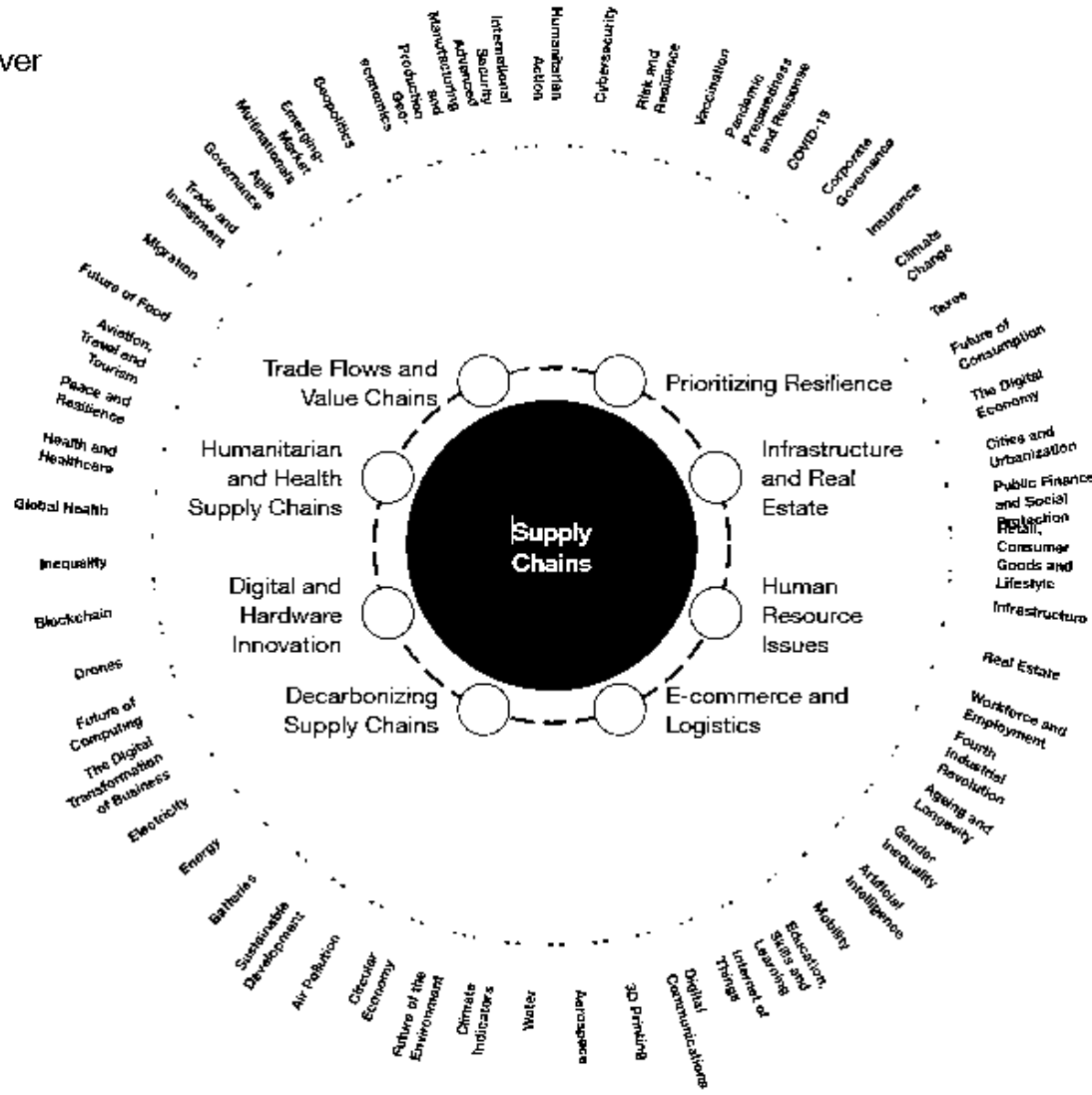
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# Introduction

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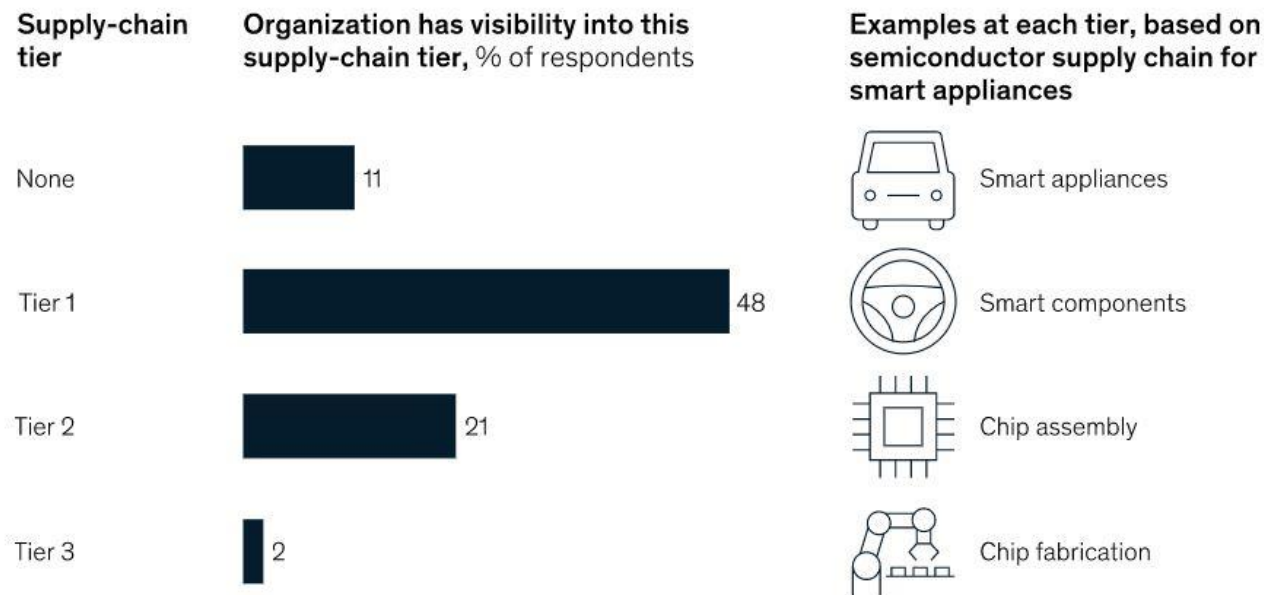


- Recent World's Economy report highlights the 8 megatrends in Supply Chain Management.
- Making supply Chains resilient is one of the topic of interest & necessity, both.

# Risk Management

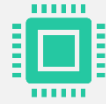
- Mckinsey states that actions taken for risk management of supply chain for any company is directly proportional to the maturity of their supply-chain risk-management capabilities.

**Only 2 percent of companies have visibility into their supply base beyond the second tier.**



# Building Resilient Supply Chain

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Bain & Co. has put forward some strategies to build resilient supply chain.  
Adaptability, Redundancy & Real-time feedback.



In Adaptability, focus is to make product flexible in terms of components.



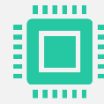
Redundancy, where company need to maintain inventory and purchase from multiple vendors.



Real-time feedback helps to monitor possible failure points in a supply chain via heat maps.

# Building Resilient Supply Chain

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Deloitte also put forward some strategies to build resilient Supply Chains.  
Just in time, Digital Twins & Digital Supply Chains



Time 's up for just-in-time



Digital Twin, Digital twin will help assess risks associated with Operations & Finances with respect to disruptions in the market.



Digital Supply Chain, can help us redesign the traditional supply chains into an integrated & connected supply chain by focusing on all tiers of suppliers.

## Trend “Supply Chain- Digital Twin”

- Embracing purpose-driven initiatives.
- Positive effects on the triple bottom-line — people, planet and profits.
- Digital twin will improve business resilience, brand reputation and financial value.



# Supply Chain – Digital Twins Success Stories



European Postal  
Company

One of the Biggest  
Car selling company  
in Germany.



Supply Chain-  
Digital Twins

German chemical  
and consumer  
goods company



Capital city port  
authority.



# Feasibility & Desirability - Use Cases:



## Long-Term Capacity Planning



Clients have not yet established a long-term capacity planning in logistics



Suffer painful bottleneck situations



Digital twin, current challenges can be resolved, and the network resilience can be improved



Customers can avoid logistics bottlenecks before they arise

## S&OP Process Support



Most supply plans originate from an S&OP process



Assumes unlimited logistics capacity and focuses on production asset capacities



Digital twin, verify the feasibility of supply plans and include logistics and supply chain costs in your final business plan



Customers can avoid logistics bottlenecks before they arise

## Warehouse and Distribution Tender Process



A warehouse and distribution tender process used to be a pen-and-paper approach



Limited to country-specific business units



Digital twin of the distribution network, helps evaluate multiple options, including cross-border impacts, and uncover hidden savings potentials



Start prior to a tender with setting up business cases and cost target ranges with senior management and include validating quotations in the digital replica.

# SAP & Digital Twin in supply chain (SC-DT)

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**Simulation model of real  
supply chain**



**SAP already working  
with Digital Twins  
technology**



**Already market leader in  
Analytics and Cloud**



**Cooperate Closely with  
Small/ Medium/ Big  
organizations**



# Conclusion

- Digital twins are today coming of age. Fueled by the confluence of progress in the internet of things, big data, cloud computing, open APIs, artificial intelligence, and virtual reality, once-static digital models and simulations can now truly come alive in real time to help predict future situations, the state of physical things, and even the world around us.
- Perhaps more important for logistics professionals to consider in the near term is not how to leverage digital twins for direct orchestration of supply chain operations, assets, and facilities but rather how to evolve the supply chain.
- SAP supply chain product portfolio holds great potential to integrate or launch separate product for SCM with digital twin.