



NACIONES UNIDAS
UNITED NATIONS



Strength of the logistic chains: main challenges and some thoughts

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**Why do we need to improve the logistics performance
and to strength the supply chains?**

- 1. Uncertainty... yes... but expectations are positive**
- 2. The future (time for action) is today**

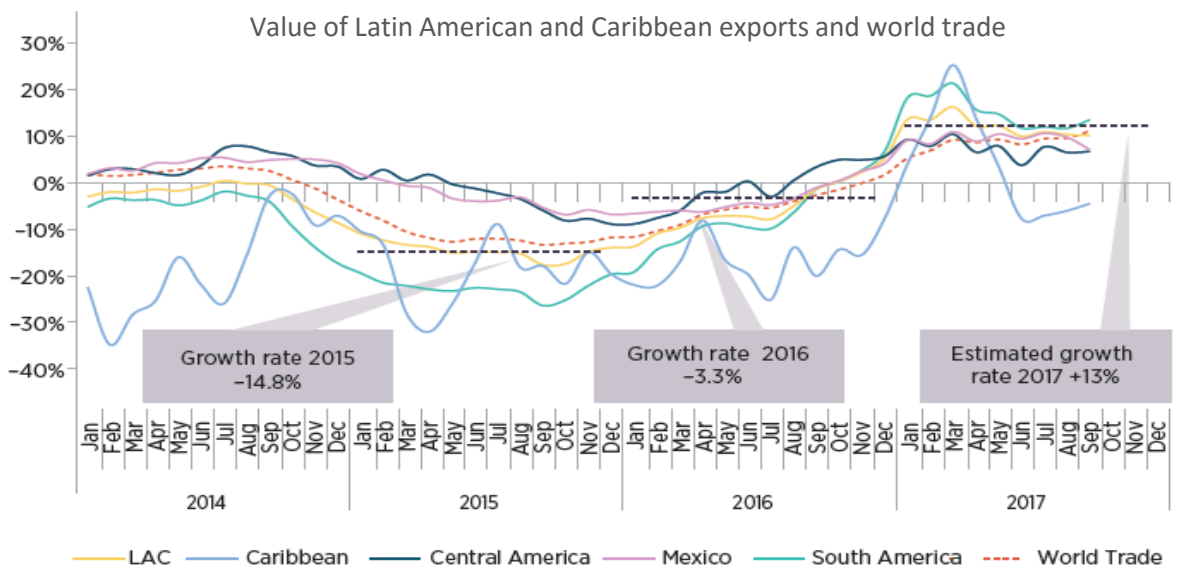


Trade

The global and regional trade had a recover, but the global context is uncertain.

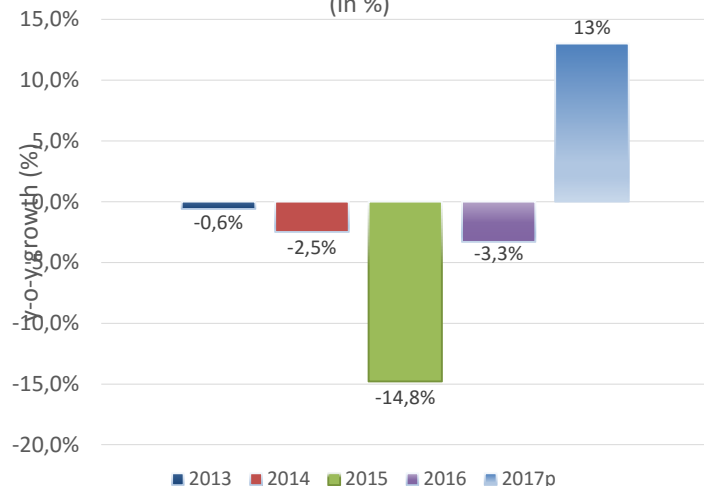
In the region of Latin America and the Caribbean (LAC), trade increases for the first time in 4 years ...but with the same old export model: basic products.

Value of Latin American and Caribbean exports and world trade



After a period of contraction, the value of total exports of goods of LAC increased at an estimated rate of 13% y-o-y%, reaching USD 985 billion.

Latin America and the Caribbean exports growth (in %)



Source: IDB Integration and Trade Sector with data from official sources and the Netherlands Bureau for Economic Policy Analysis (CPB) for world trade. Source: UN-ECLAC with data based on IADB Trade Trends 2018.

Note: LAC includes 18 Latin American countries: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Dominican Republic, Uruguay, and Venezuela; and 6 Caribbean countries: Barbados, Belize, Guyana, Jamaica, Suriname, and Trinidad and Tobago. World trade is calculated as the average of world exports and imports.



And the global economy moves...

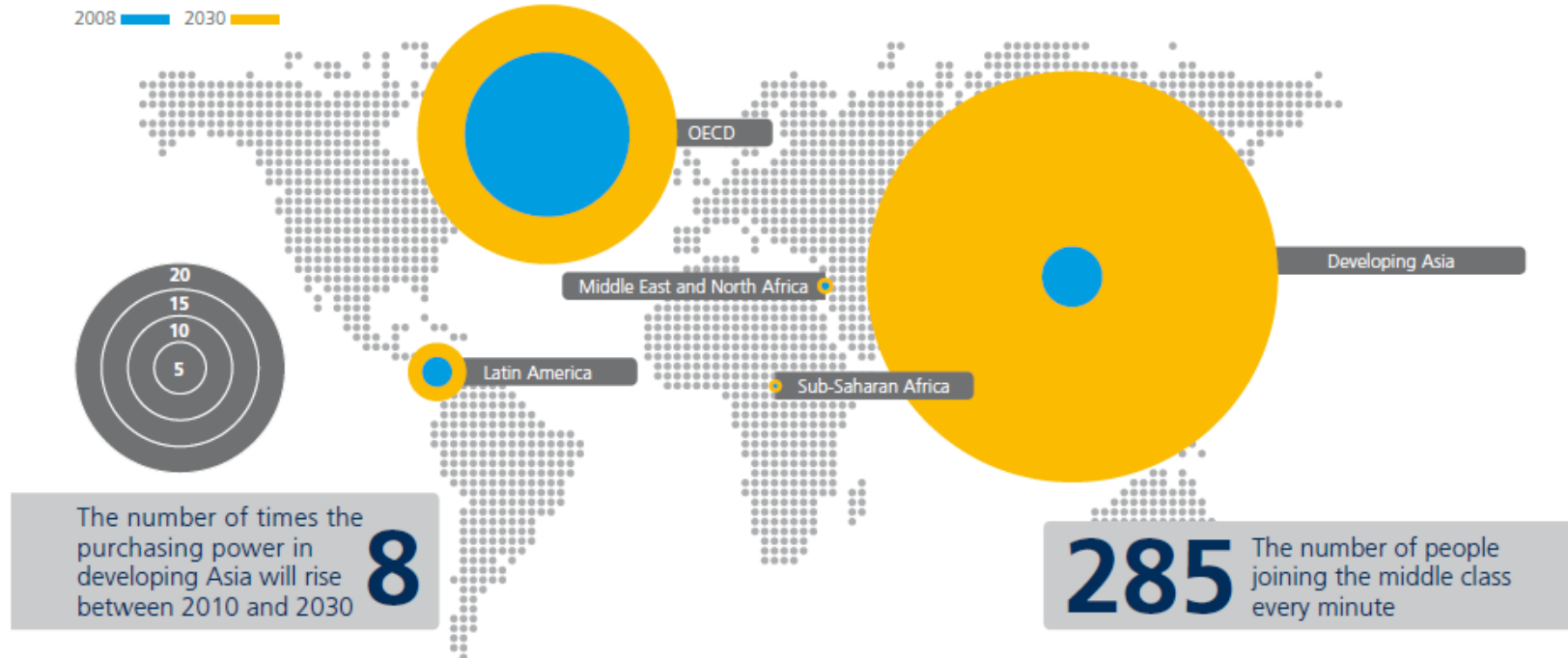


...to the East!





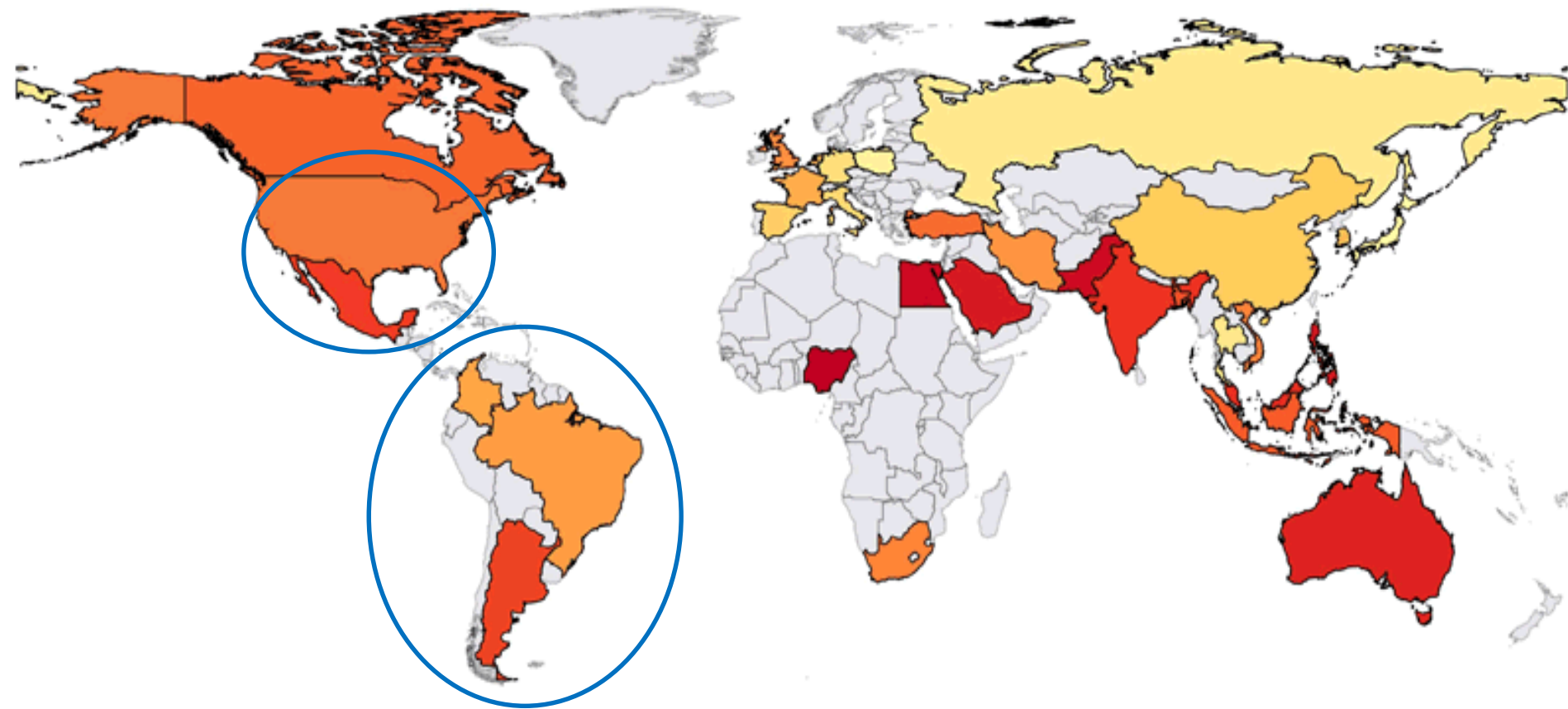
Consuming power leads to a increasing demand



Total annual expenditure (trillion \$2010 PPP)

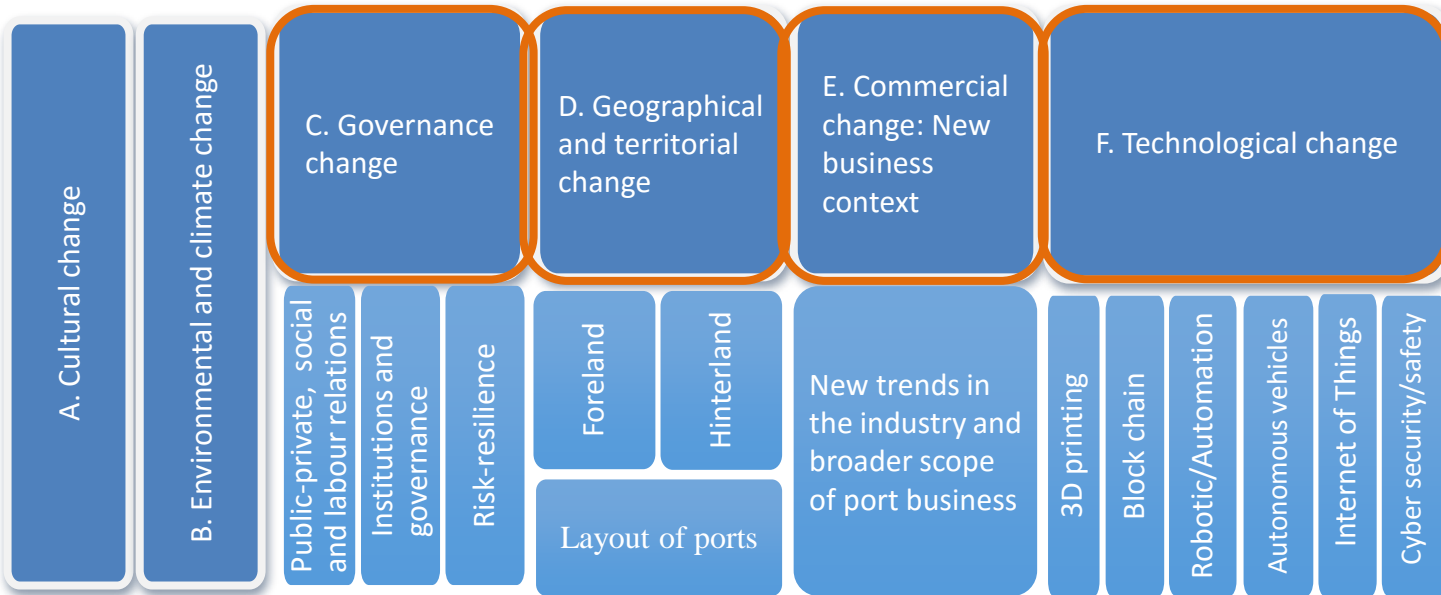


Scenario for 2050...





Keys: Change and innovation, and risks analysis

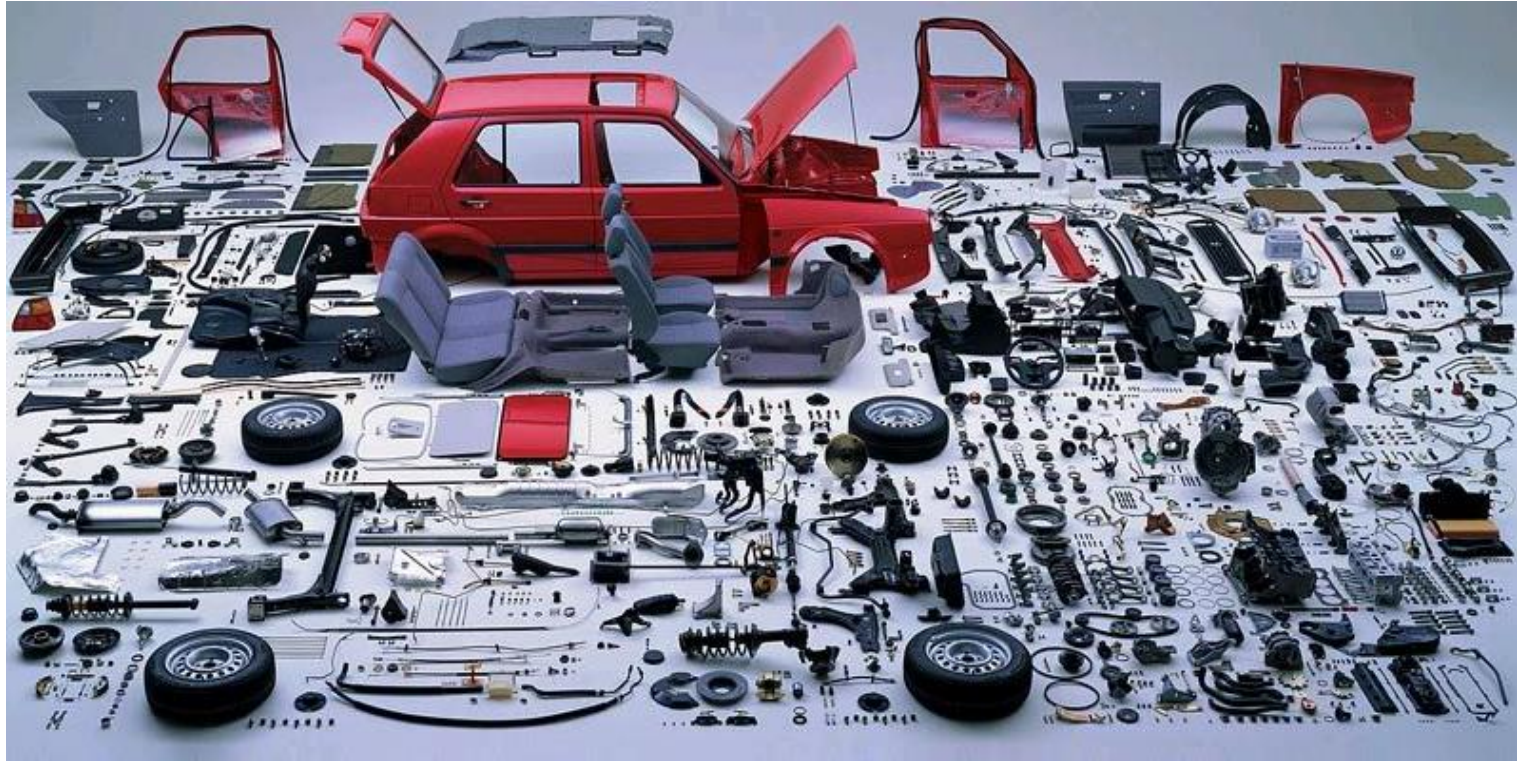


Efficiency and resilience



3D printing

“Digitalisation is not the goal, nor is autonomous shipping; these are tools and ways you might develop it. The goal is maritime transport systems that meet the needs of the next generation,” Stopford M.





Blockchain

The current situation demands collaboration, but to collaborate means sharing information. How to find a balance between them?

IBM | MAERSK

Transforming supply chains using **blockchain technology**

#ibmblockchain



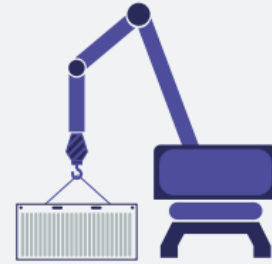
Blockchain—a shared, distributed ledger—can trace the container's path through the supply chain with exceptional transparency and security.



The flower grower readies the product for international shipment. Shipment information is added to the blockchain.



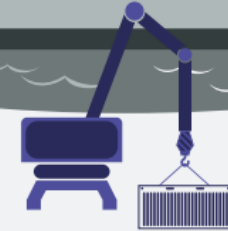
As the container awaits transfer to port, officials submit approvals electronically. Blockchain confirms the transaction and executes a smart contract, releasing the shipment.



The container is loaded onto the ship.



All parties have end-to-end visibility of the container's progress through the supply chain.



The container arrives at the destination port and clears customs.



Retailer receives the flowers on time and signs electronically. Information is relayed back to the blockchain.



Automation and robotics





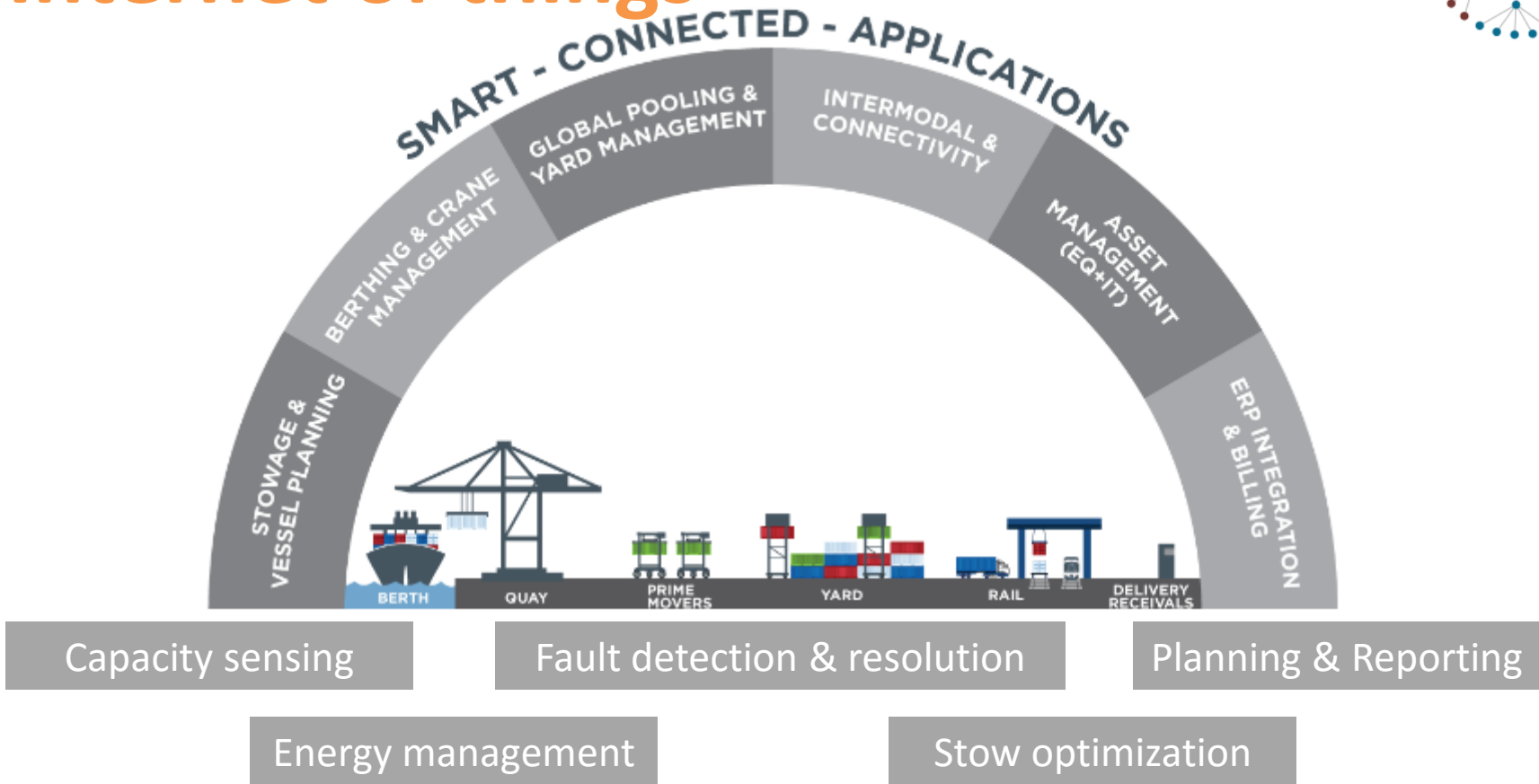
Autonomous vehicles



Image source: Port-Line, 2018.

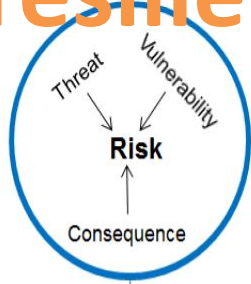


Internet of things



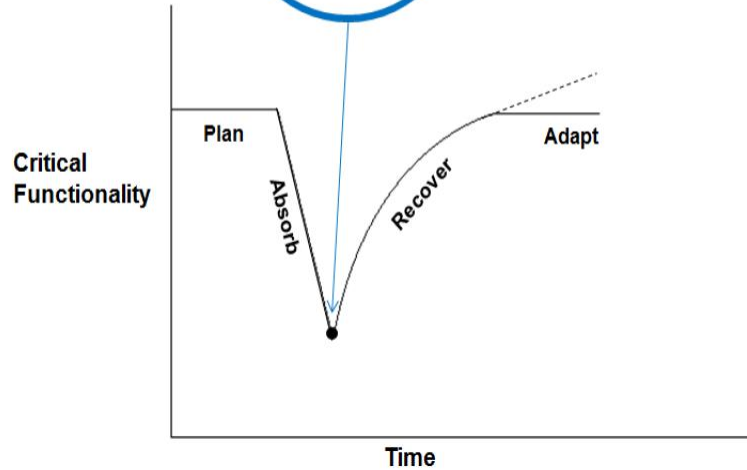


A resilient supply chain approach

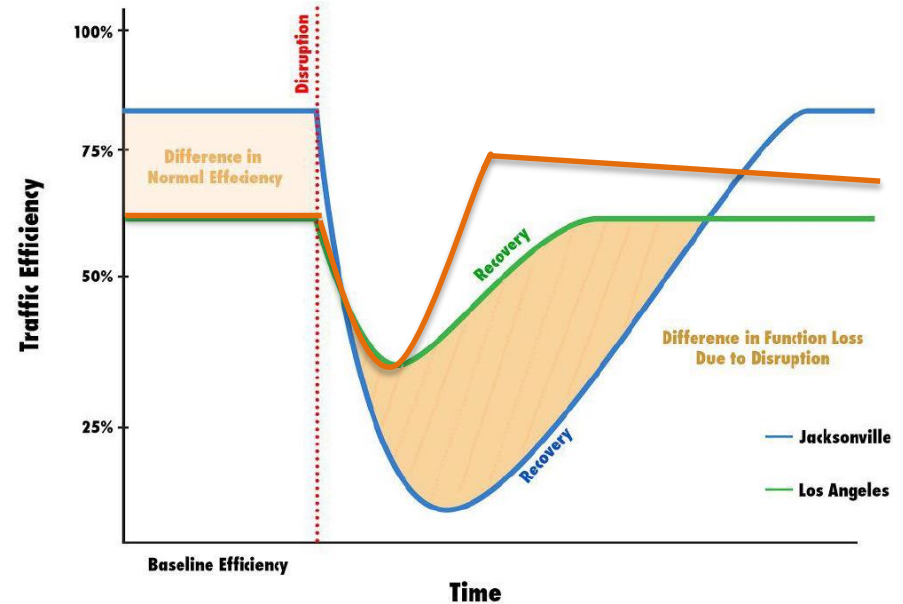


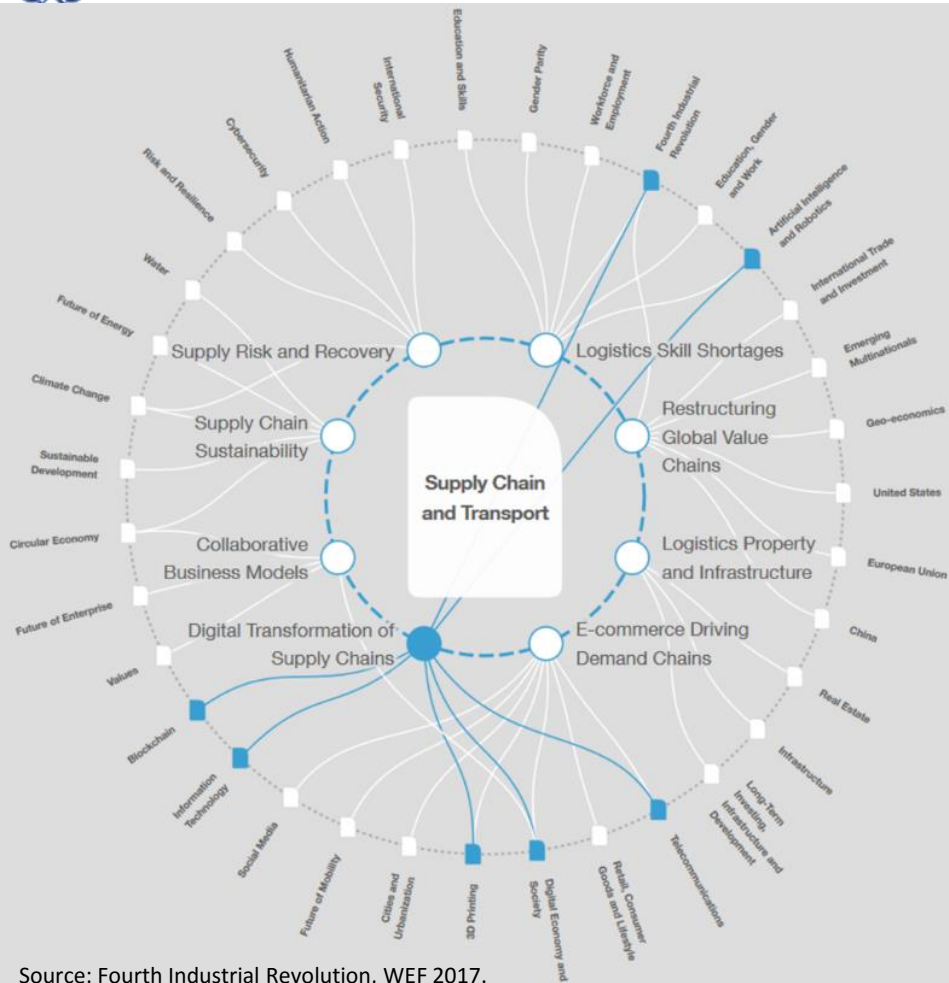
Risk Analysis

System Resilience



Comparative Performance of Traffic Networks With No Disruption Vs. Traffic Networks After Disruption





A resilient supply chain approach

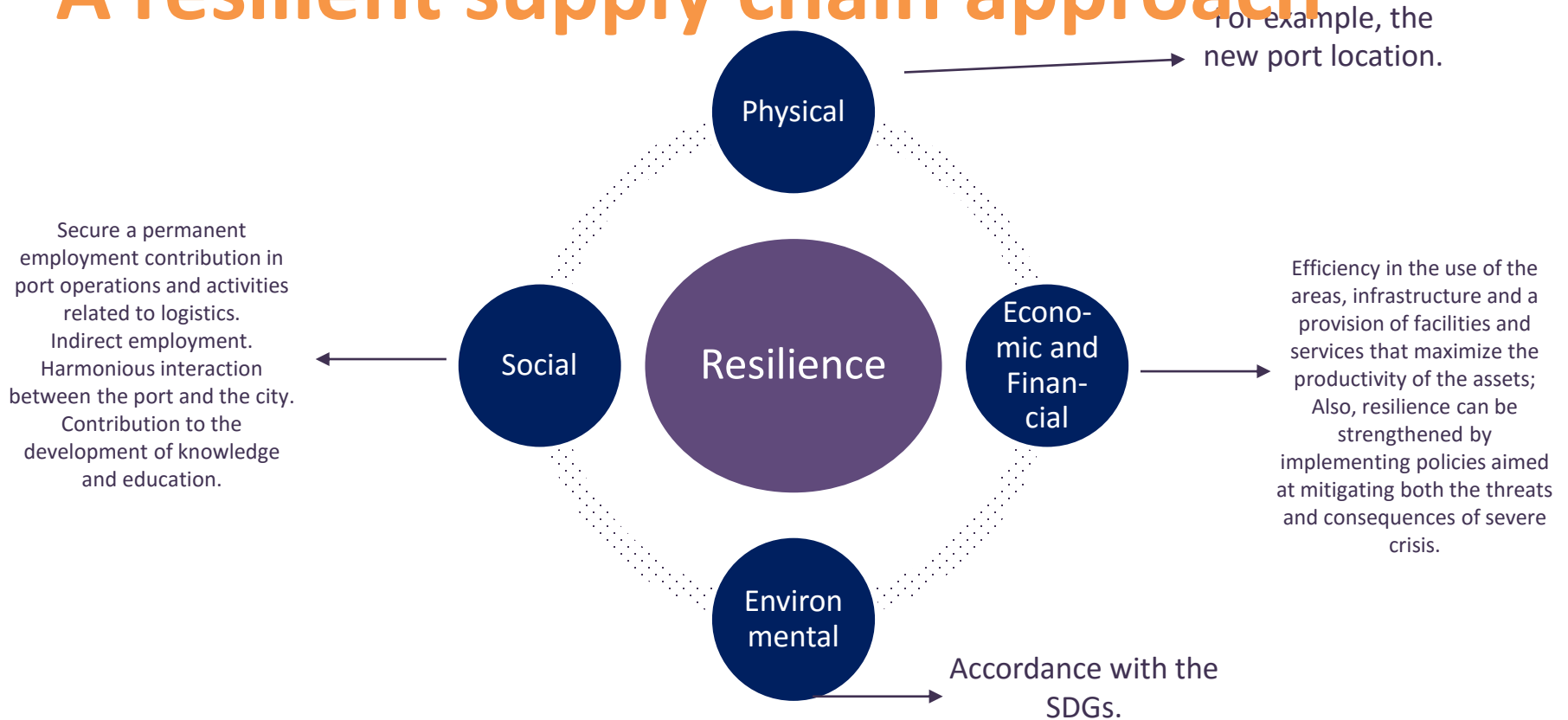
Applying a resilient approach in the supply chain management:

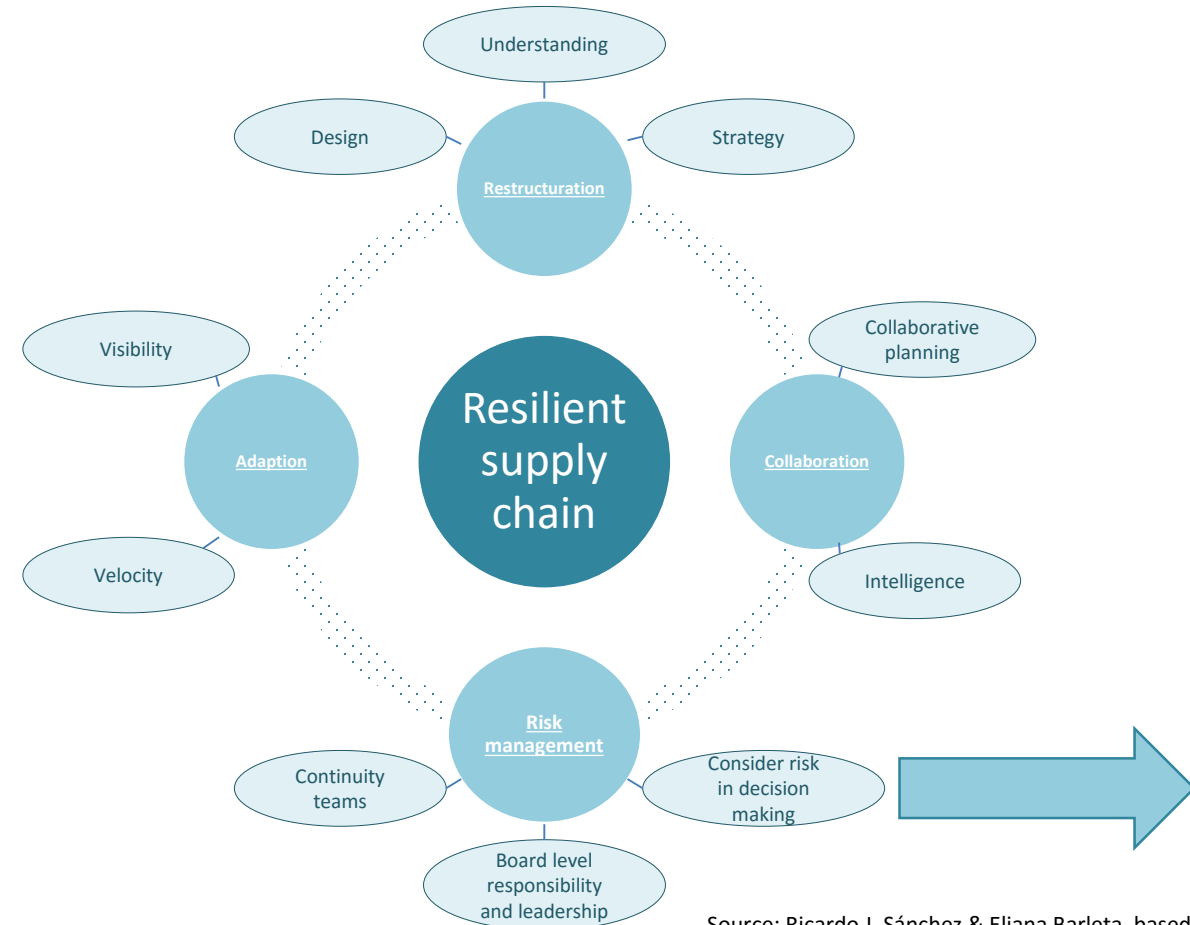
- ✓ **Restructuration** in the chain: it is essential to understand the needs of the chain, be aware of new technologies and trends to formulate a strategy
- ✓ **Collaboration** between parts
- ✓ **Risk management:** environmental, technology, geopolitical, demand risks must be taken into consideration and managed with leadership, understanding the complexity of the supply chain management
- ✓ **Adaption:** the world is moving fast, new technologies are created, new necessities arise, and consuming standards change. To remain in the game it is necessary to adapt

In summary....



A resilient supply chain approach



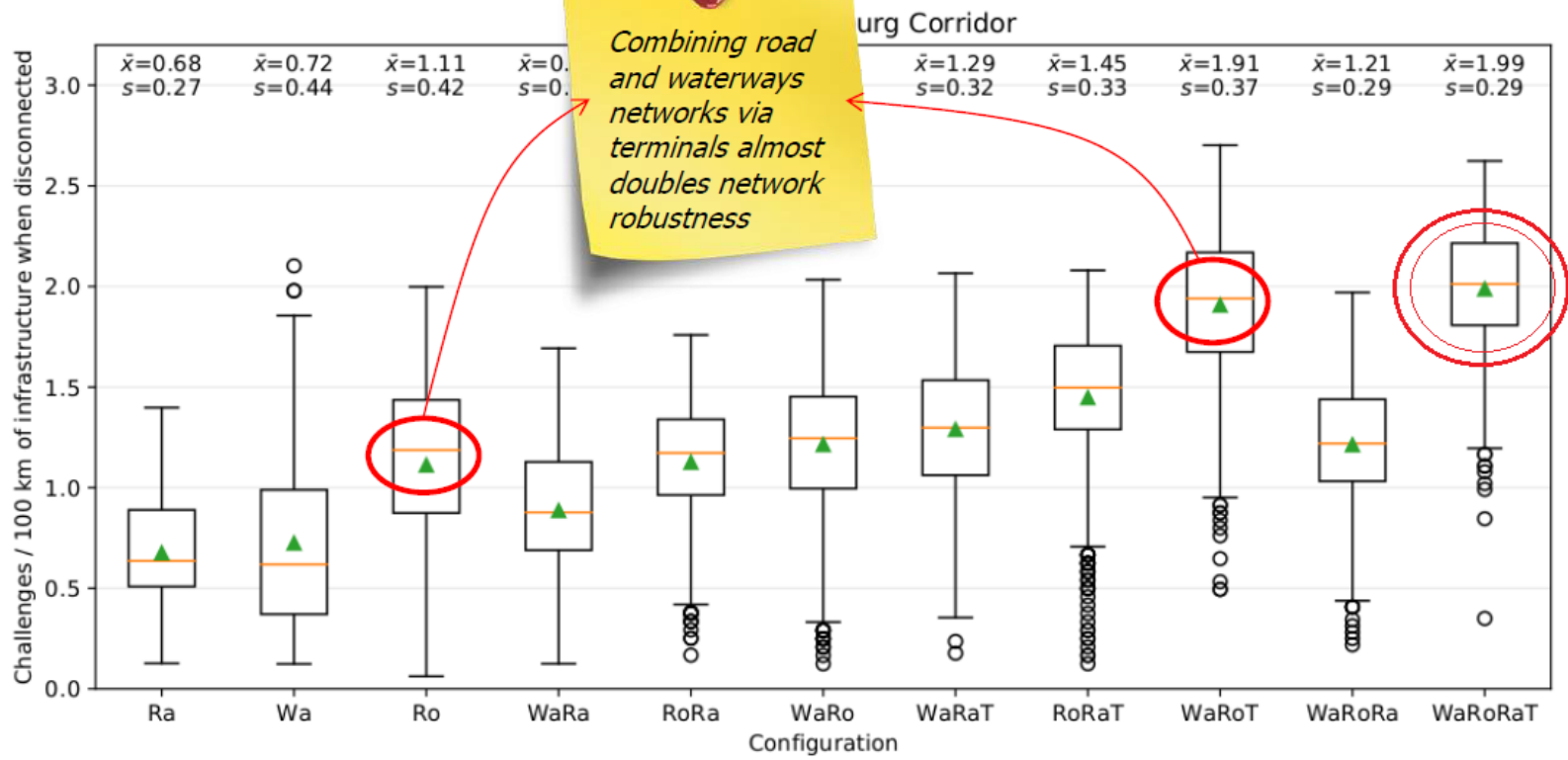


How to turn risks into opportunities:

- ✓ **Which are the risks?**
Demand, supply, operational, geopolitical, financial, technological, commodity, environmental and sustainability risks.
- ✓ **How to manage these risks?**
 - ✓ Understand the supply chain, what drives non value and customer value
 - ✓ Continuous improvement of the supply chain
 - ✓ Understand the sources of complexity
 - ✓ Manage the bottlenecks
 - ✓ Improve network visibility
 - ✓ Shorten lead-times
 - ✓ Focus on relationship management



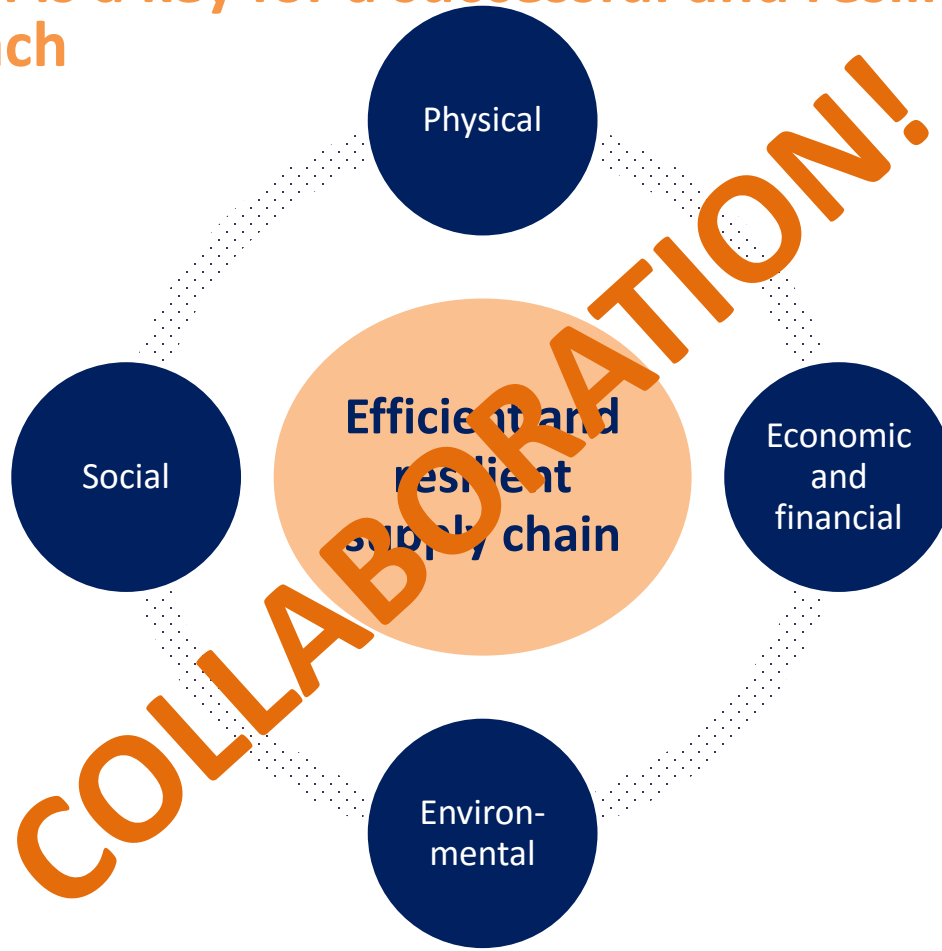
Network robustness



RA: Railways; Wa: Waterways; Ro: Roads; T: Terminals



Collaboration is a key for a successful and resilient supply chain approach



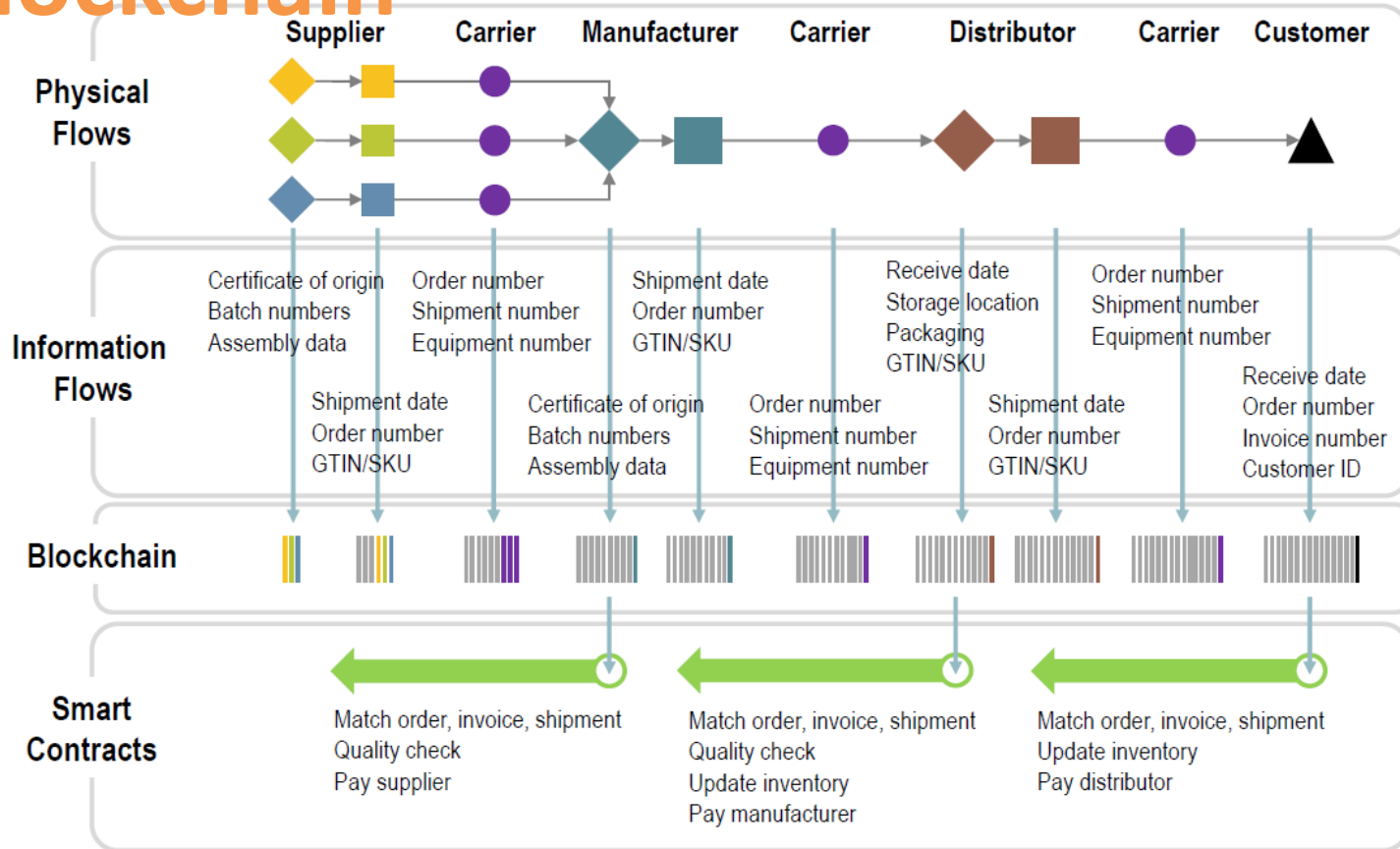


Information exchange is a key

- ✓ “Digital” economy is re-writing the rules of collaboration with new business models.
 - ✓ We need a business model where an online platform acts as coordinator of supply and demand information.
- ✓ Real-time business intelligence & predictive analysis needed for decision making.
- ✓ Firms in SCs do demonstrate willingness to share sensitive information related to risk.



Blockchain





Cyber security and safety

| | Cybercriminal legislation | Cybersecurity legislation | Cybersecurity training | LEGAL MEASURES | National CERT/CIRT/CSIRT | Government CERT/CIRT/CSIRT | Sectoral CERT/CIRT/CSIRT | Standards for organizations | Standards for professionals | Child online protection | TECHNICAL MEASURES | Strategy | Responsible agency | Cybersecurity metrics | ORGANIZATIONAL MEASURES | Standardization bodies | Cybersecurity good practices | R&D programmes | Public awareness campaigns | Professional training courses | Education programmes | Incentive mechanisms | Home-grown industry | CAPACITY BUILDING | Bilateral agreements | Multilateral agreements | International participation | Public-private partnerships | Inter-agency partnerships | COOPERATION | GCI |
|----------------------------------|---------------------------|---------------------------|------------------------|----------------|--------------------------|----------------------------|--------------------------|-----------------------------|-----------------------------|-------------------------|--------------------|----------|--------------------|-----------------------|-------------------------|------------------------|------------------------------|----------------|----------------------------|-------------------------------|----------------------|----------------------|---------------------|-------------------|----------------------|-------------------------|-----------------------------|-----------------------------|---------------------------|-------------|-----|
| Antigua and Barbuda | Red | Red | Red | Yellow | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | |
| Argentina | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Bahamas | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Barbados | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Belize | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Bolivia | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Brazil | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Canada | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Chile | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Colombia | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Costa Rica | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Cuba | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Dominica | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Dominican Republic | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Ecuador | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| El Salvador | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
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| Honduras | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Jamaica | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Mexico | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Nicaragua | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Panama | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Paraguay | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Peru | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Saint Kitts and Nevis | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Saint Lucia | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Saint Vincent and the Grenadines | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Suriname | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Trinidad and Tobago | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| United States of America | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Uruguay | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |
| Venezuela | Green | Green | Green | Yellow | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | |

Source: Global Security Index 2017, ITU. Note: The countries' level of commitment to every pillar and sub-pillars (green for high, yellow for medium, and red for low).



Thanks a lot!



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