

10 years of port co-innovation: how will the future maritime ecosystem look like?

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PORT CO-INNOVATION

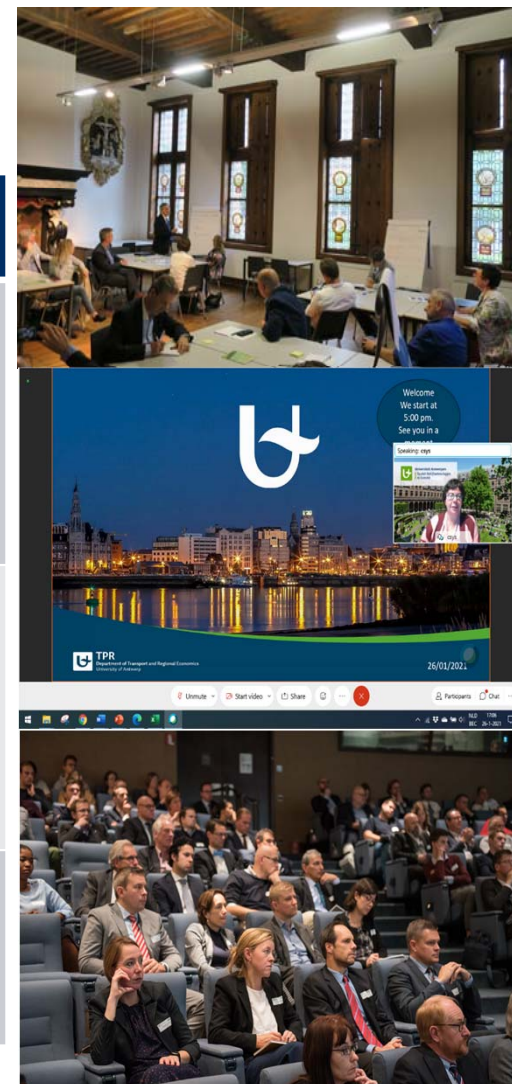


Starting from a definition

- Port. Co.innovation, a new form of innovation where the goal of the actors is:
 - to acquire new knowledge together
 - create new opportunities for collaboration within so-called "supply chains"

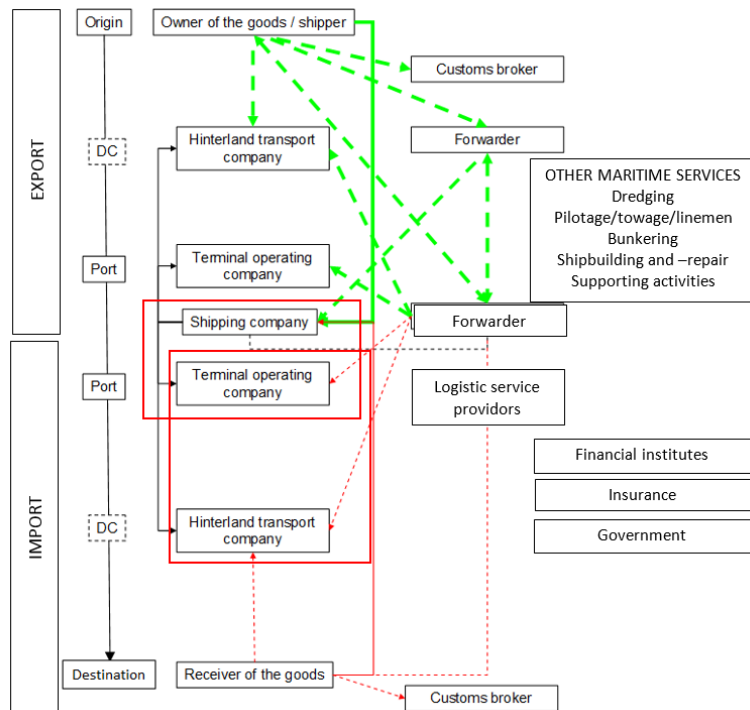
10 year of port co.innovation

BNP Paribas Fortis Port Co.Innovation Cafés/Happy hours/Shipping event	Findings
DEMOGRAPHIC CHANGES What can we learn from air transport? It's all about capacity! War for talents Economic risk Geopolitical risk	Flexible matching of demand and supply Aligning capacity along the chain Attracting sufficient and skilled labour Nearshoring as an option Regionalisation of trade flows
SUSTAINABILITY Modal/mental shift Customs Environmental risk Shipping events	Awareness and the right incentives Ethics and security in supply chains Climate: turning challenges into opportunities Competitive advantage directly linked with financial/environmental performance
DIGITIZING What can we learn from chemical industry? Data Technological risk	Digitalising data into a pipeline Sharing for competitiveness Digitalisation needs security!

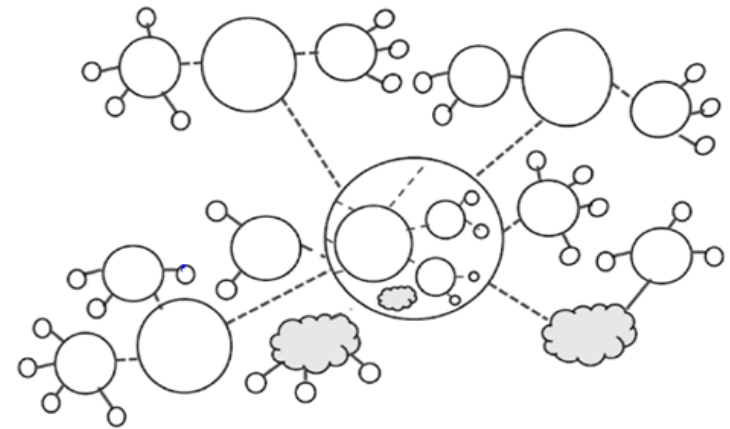


Research | From 'actor' to 'maritime chain thinking' ...

No longer optimal (i.e. the most efficient and the cheapest) > rethink existing maritime supply chain structures



Own compilation based on Meersman et al., 2010

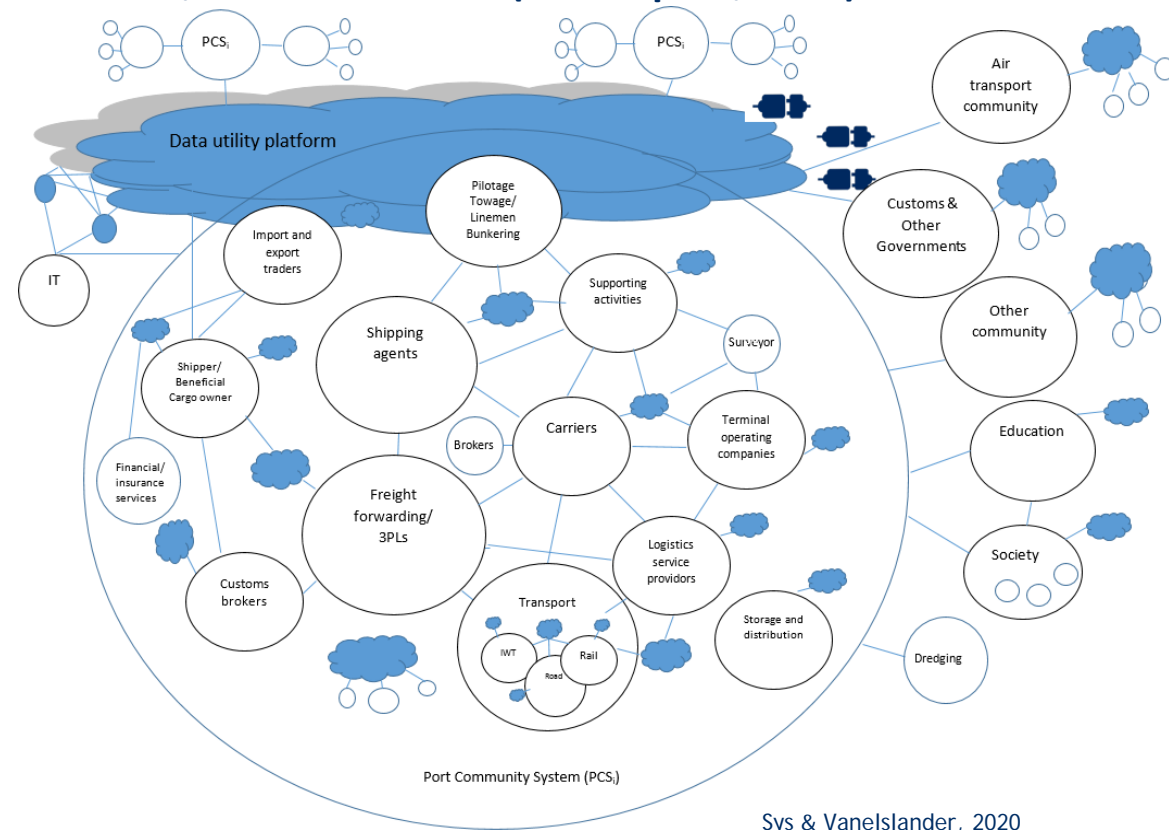
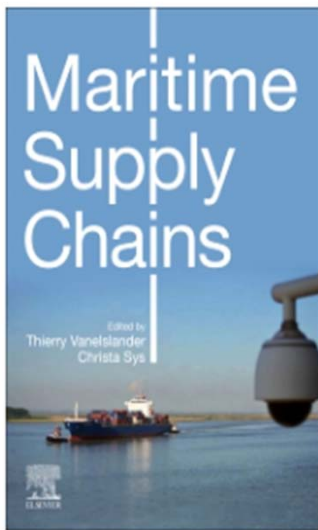


Millar (2015)

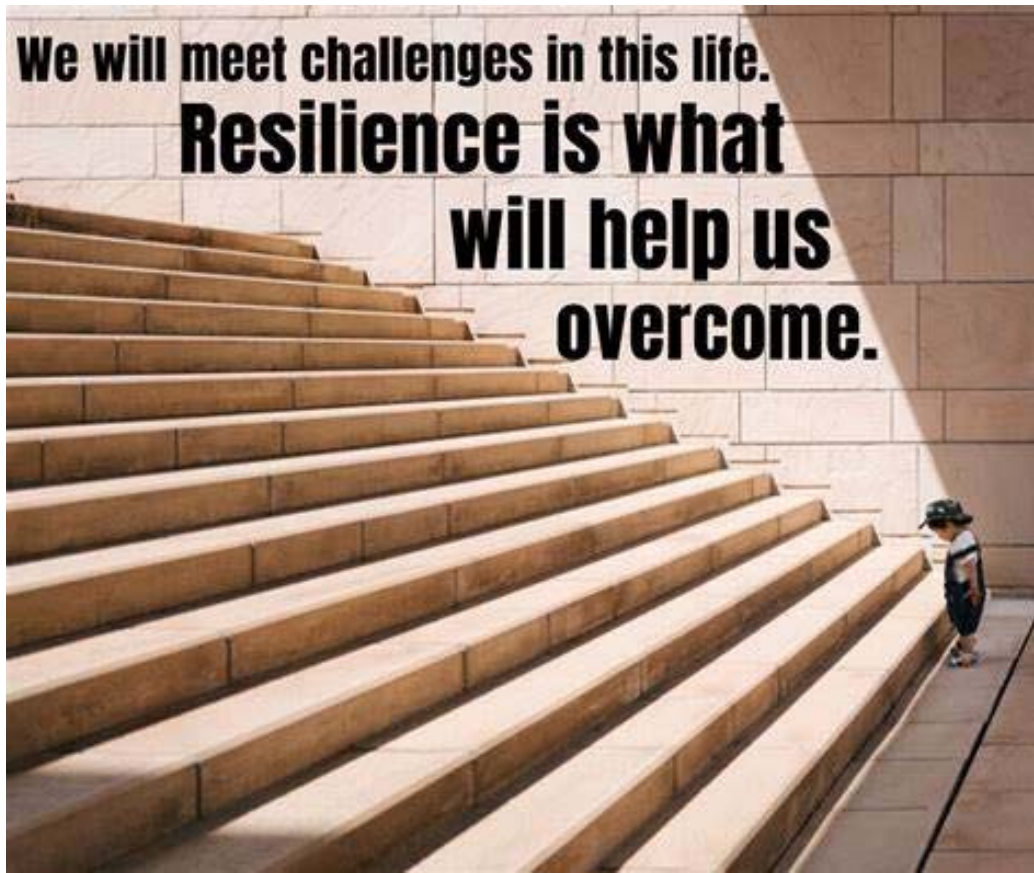
...to maritime supply chain network/ecosystem

the notion of networks as *'the products and information flows that travel within and between nodes in a variety of networks that link organizations, industries, and economies'*. (Christopher, 2016)

- Leverage the strength
- Create new opportunities for innovation



Theme of today: creating a resilient maritime ecosystem



Aim

- analyzing the most frequently encountered **problems** in maritime supply chains hampering the move towards network
- exploring **strategies** for preventing and overcoming them
- describing how actors involved in a maritime ecosystem can **benefit from economies of scale** (improving the efficiency), **scope and density**



Reshaping the maritime supply chain > ecosystem



DATA ISSUES

- Standardization
- Set-up update data governance, security and privacy models > open data directive EU2019/1024



REGULATION ISSUES

- Reduce level of uncertainty, create stability > policy maker
- Innovation support
- Bundling, pooling, clustering, sharing = norm



POLICY AND LEGAL ISSUES

- Incentivize the development of new innovative business model
- align policies
- Uniform scheme of external cost charging

Future of maritime ecosystem resilience

- **Creation of a sustainable/resilient maritime ecosystem: necessary, but not sufficient**
 - Knowledge of the complexity, including network competition
 - Knowledge of (nxtgen) ICT in the virtual chain
 - Reduction of bottlenecks hampering the evolution from collaboration processed to (maritime) supply network
 - Resilience of what/at what and who's cost?
- ➔ Long term vision/plan (priorities) > a conceptual framework for managing complex systems

Mega trends

DEMOGRAPHIC CHANGE

- An enormous **growth of the world population** (+/- 9 billion in 2050)
- By 2050, 70% of the population will live in cities (**urbanization**)
- **Redistribution of wealth** from the western world to the emerging countries



- Changed cost structure, also due to changed demand and supply patterns
- Consequences of climate change/**SUSTAINABILITY**
- Innovative (**DIGITAL**) solutions fit in (theoretically) perfectly

What are the CEOs worried about?



Demographic change

- Growing demand
- Increasing prices
- Increasing emissions
- Impact on the urbanization



War for talent

- Pandemic
- Appropriate and skilled people difficult to find
- Other forms of employing people (flexible)
- Telework (and convincing to come back to office)



Ethics

Panel 1



Sustainability

- Green deal
- Water utilization or waste
- Capacity need and solutions for this, such as building in height.
- Ports also starts to tackle nitrogen that comes along with maritime transport and start finding solutions for it.



Intermodality

- Modal shift
- Lag behind on synchromodality
- Silk road
- Real time tracking
- Mobility
- Autonomous transport



Security and safety

- Automation
- War on drugs
- ...

Panel 2



Technological innovation

- IoT, not yet a success
- Impact of AI
- Visibility
- Sharing knowledge/true cooperation
- (Adaptation) platform thinking
- digitalization



New business model

- A future for a 3PL
- Stock management

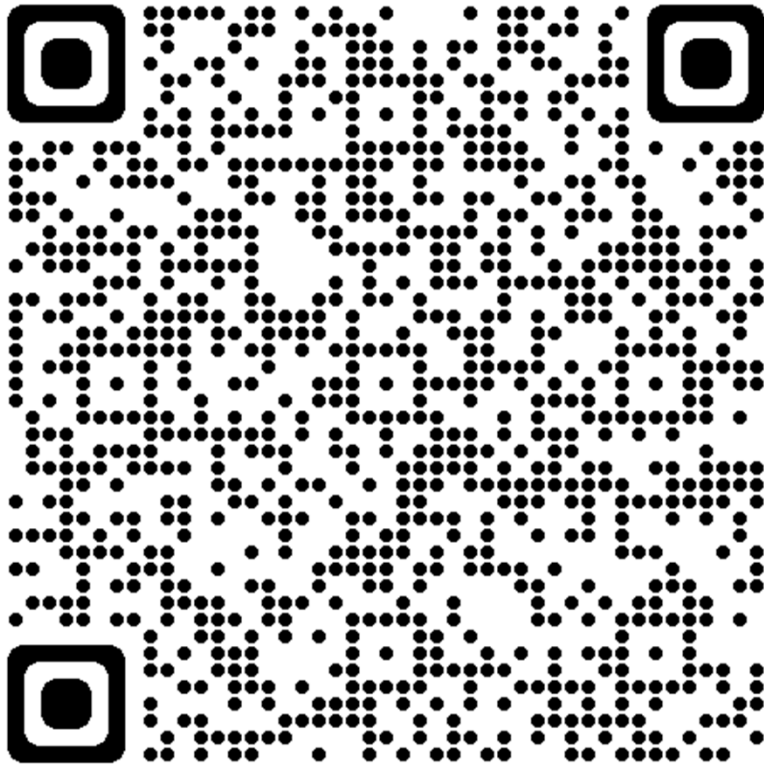


Legal

- Legislation/Regulation
- Data pipeline
- GDPR in combination with vaccine (passport)

Panel 3





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