Stakeholder roles in a Physical Internet

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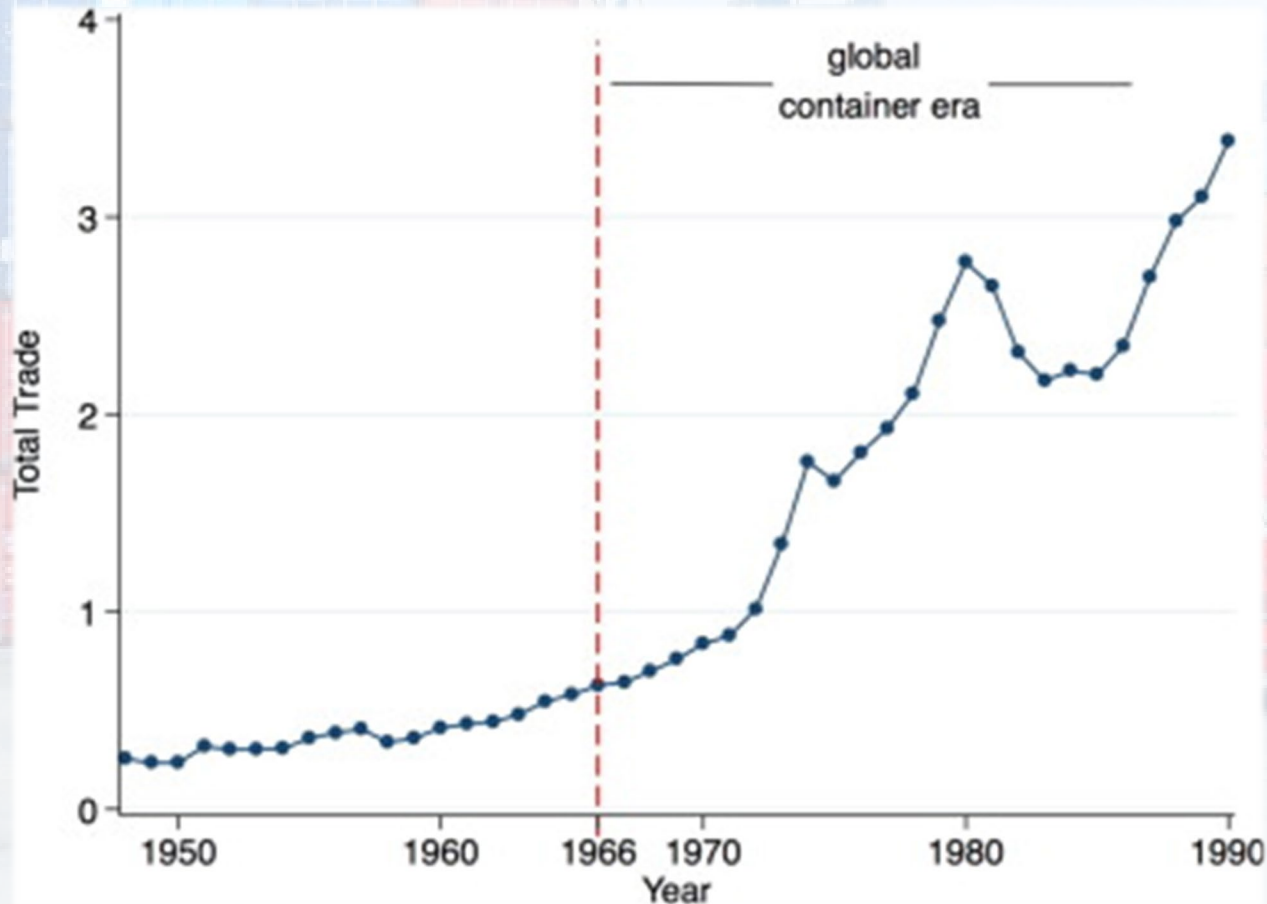Faculty of Economics and Business

University of Groningen

The traditional role of ports

- Important nodes in global supply chains

- Mechanized or even fully automated handling of standardized maritime containers

- Handle large numbers of containers at low cost per container
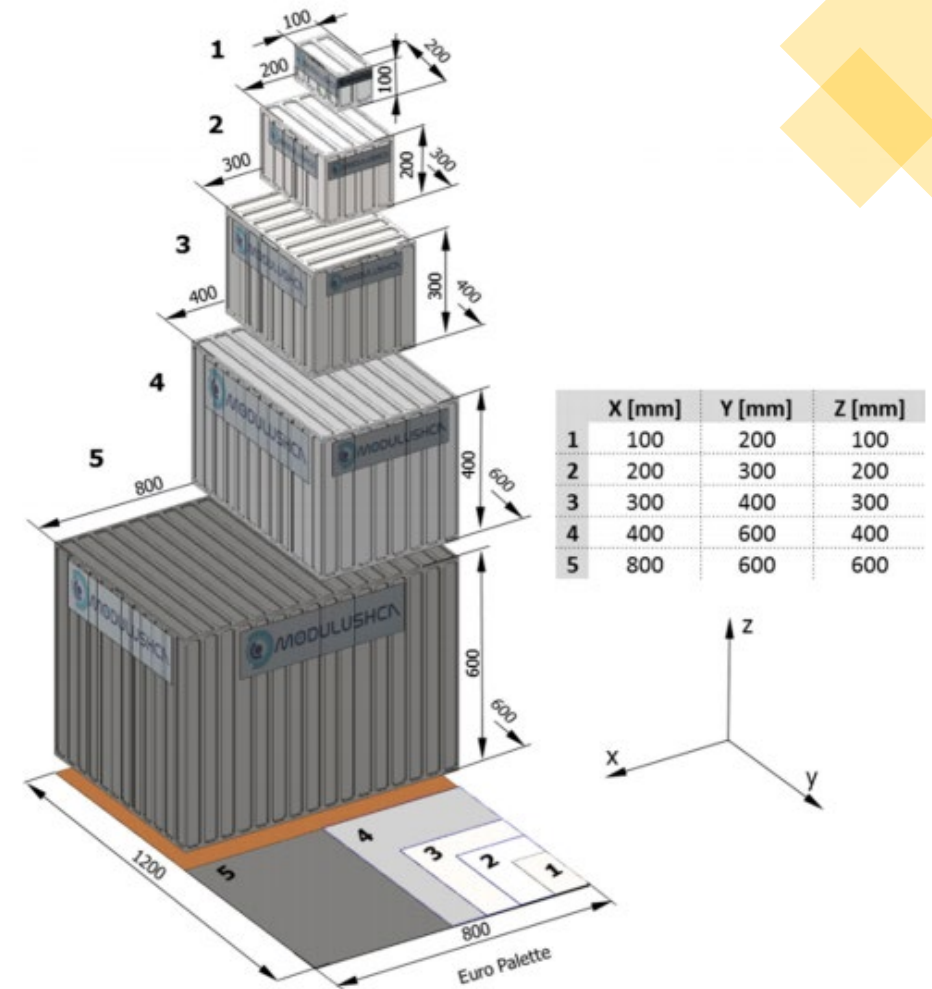
The traditional role of ports

Bernhofen, D.M., El-Sahli, Z. and Kneller, R., 2016. Estimating the effects of the container revolution on world trade. *Journal of International Economics, 98*, 36-50.
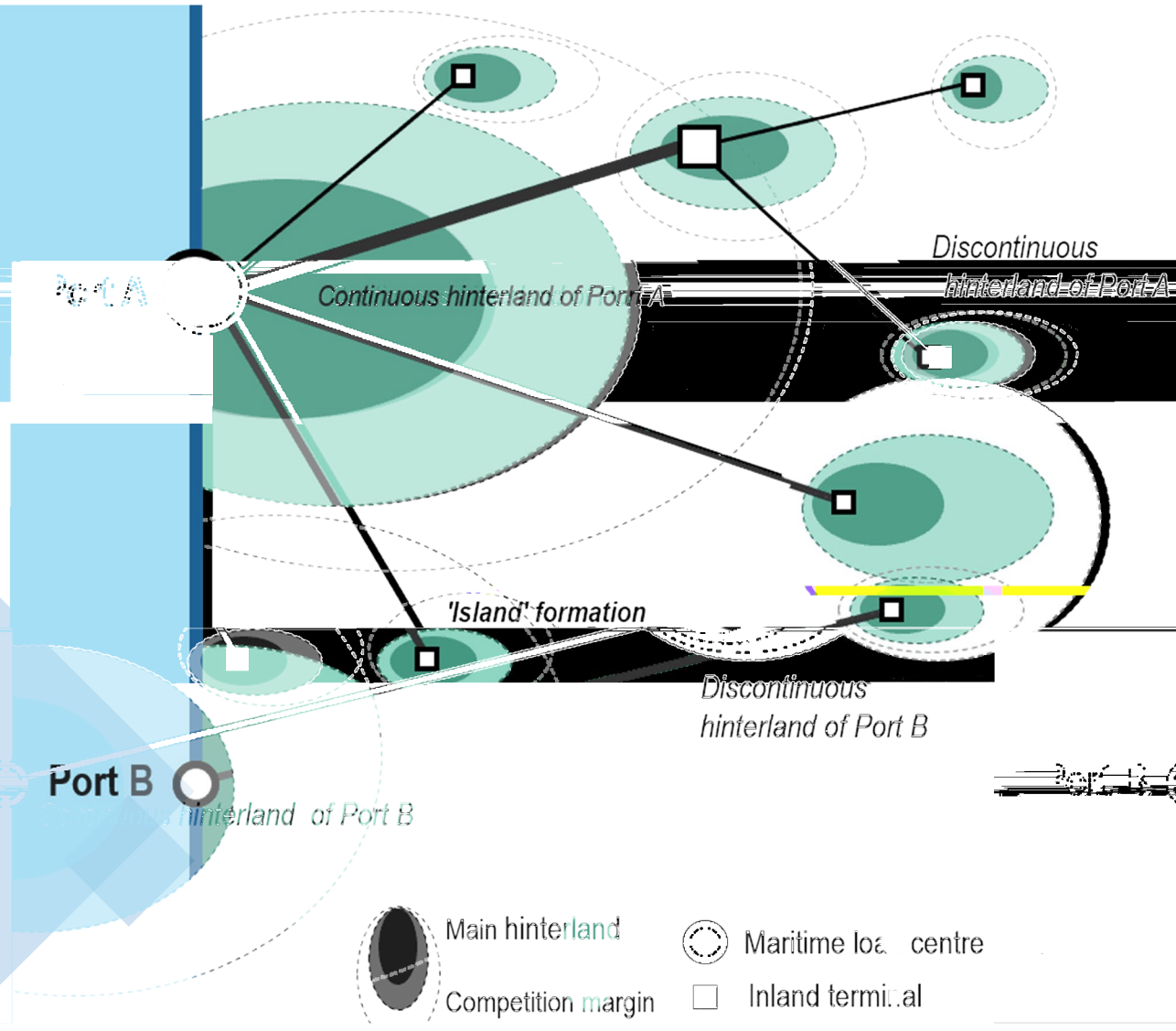
Changing roles in a Physical Internet

- Seaports: Facilitating handling of modular containers?

- How about the many other stakeholders in the hinterlands of ports?

	X [mm]	Y [mm]	Z [mm]
1	100	200	100
2	200	300	200
3	300	400	300
4	400	600	400
5	800	600	600

Landschützer, C., Ehrentraut, F., & Jodin, D. (2015). Containers for the Physical Internet: requirements and engineering design related to FMCG logistics. *Logistics Research*, *8*(1), 1-22.

The hinterland

Main hinterland
Competition margin
Maritime load centre
Inland terminal

- Physical transport of goods
  - Shipping companies
  - Road-freight carriers
  - Inland terminals
  - …
- Coordinating flows of goods
  - Logistics service providers
  - Freight forwarders
  - Logistics platforms
  - …
- Regulation
  - Customs agencies

Notteboom et al. (2021) *Port Economics, Management and Policy*. Routledge NY, USA.

Information technology

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