

THE 'INNOVATION ECOSYSTEM'; AN OFTEN UNDERVALUED DRIVER OF PORT COMPETITIVENESS

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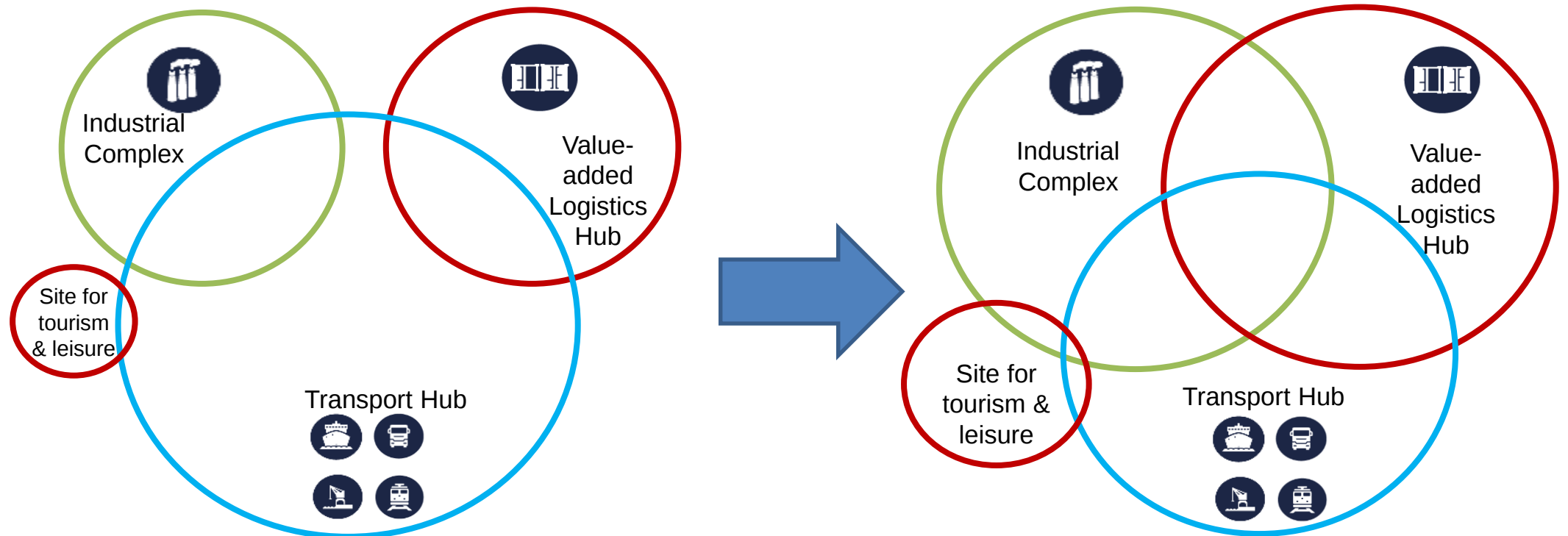


What is this?



The transformation of the port business ecosystem

Port ecosystems evolve away from mainly transport hubs and towards integrated industrial/logistics/leisure complexes.



The importance of 'ecosystem services'

Overall: focus on co-location & spatial synergies
-Identification & management of projects to create synergies.

-Open access liquid bulk pipelines
-Heath exchange (through pipelines)
-CO2 exchange (through pipelines)
-Industrial wastewater sewage
-Innovation, testing, education

-Cruise terminal, offices & leisure facilities.
-Cruise platform for interaction with lines & passengers

Site for tourism & leisure

Industrial Complex

Value-added Logistics Hub

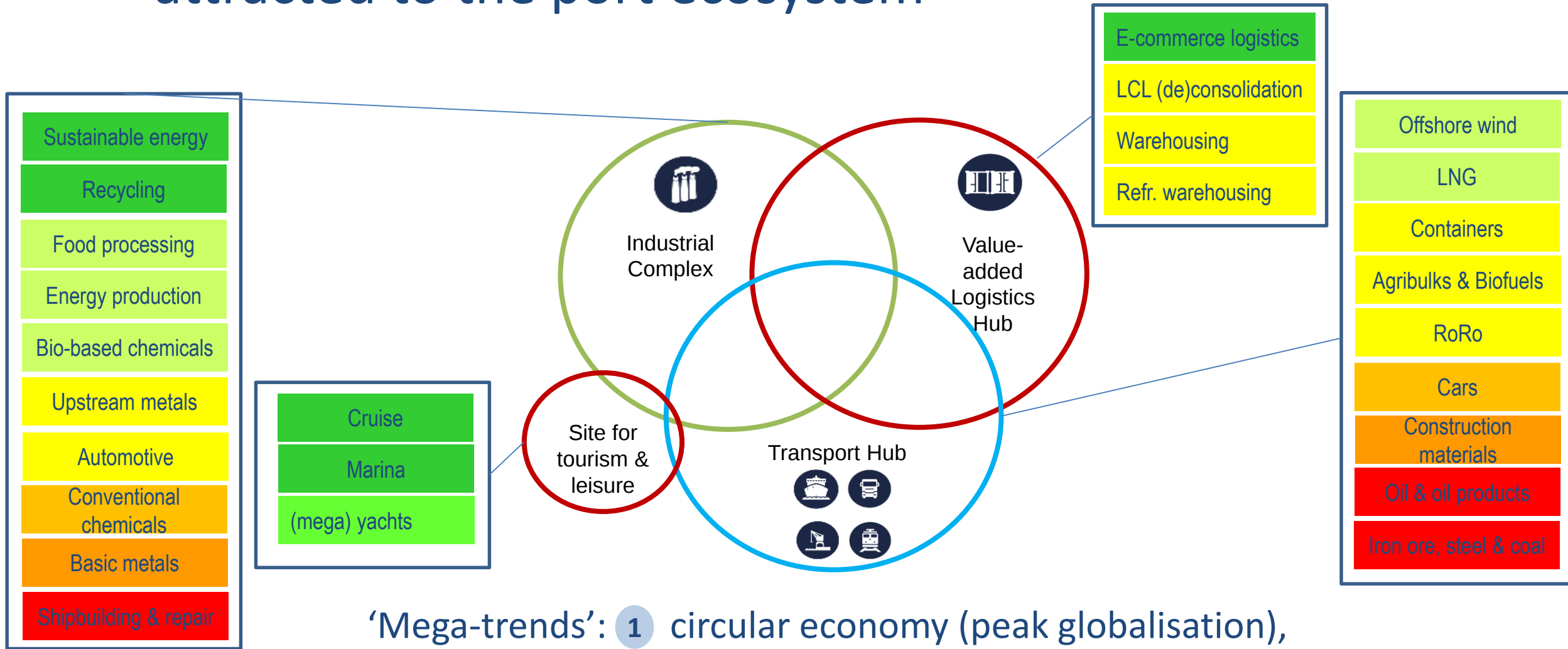
Transport Hub

-Inter terminal transport.
-Port community system
-Traffic management on port access highway -
Platooning matching platform.
-Call optimisation platform
-Truck parking

-Dedicated lane terminal(s) to logistics park.
-Park management (security, maintenance public spaces)



'Industry outlook' of industries that can be attracted to the port ecosystem



'Mega-trends': 1 circular economy (peak globalisation),
2 energy transition 3 digitalization 4 urbanization



The key governance transition: towards commercially driven port development companies

- Port development is the development of a business ecosystem/ cluster and can only effectively be done by a *commercial undertaking*,
- Whether that undertaking is publicly owned or privately owned is less relevant (e.g. PSA or DPW), in many ports valid case for government ownership.
- Reference industry: airports.
- The regulatory framework and port governance structures in the port industry worldwide are slowly but gradually evolving in this direction.



A shareholder policy for a state-owned PDC

Public Interest Domains	Value-Added of state-owned PDC vs Private PDC	Shareholder Policy Instruments
Investment in port development.	Stronger commitment to development of 'home port' from a wider societal perspective (creating social value next to private value)	Maximize the share of investments (or asset value) that can be made outside the 'home port'
Make investments with positive externalities	Stronger commitment to investments with positive externalities.	Indicate a minimum percentage for investments in innovation (e.g. 1.5% of turnover, as in the EU Lisbon treaty).
Decision-making where negative externalities are relevant	Stronger commitment to prevent / limit negative externalities.	Mandatory board discussion on environmental impact of all lease agreements above a certain size.
Land use planning & transfer	More cooperative approach to changing land use to urban functions.	Mandatory 5-yearly masterplan addressing potential transfer of land for urban functions.



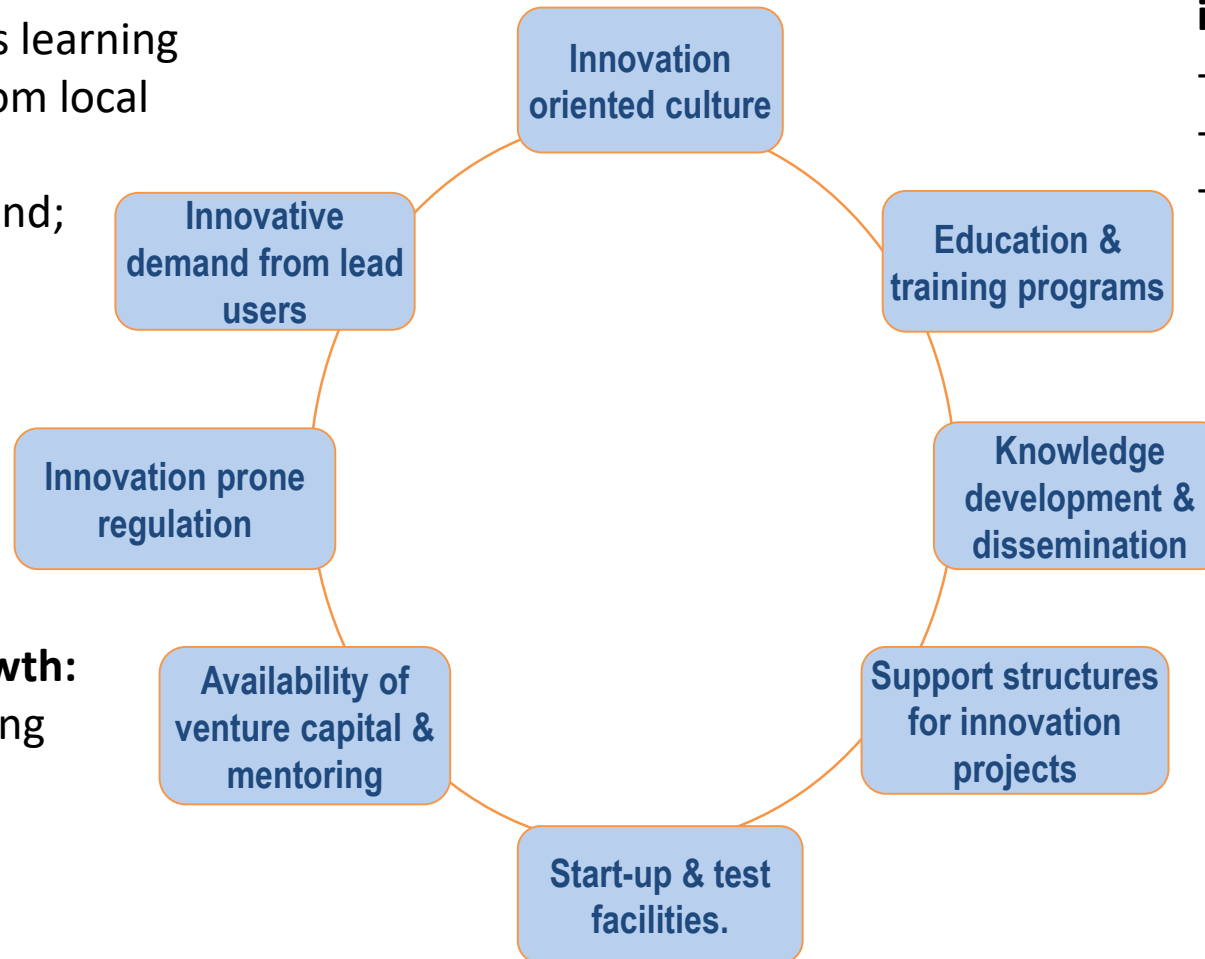
Integrated approach to innovation performance of the port complex: The innovation ecosystem

Pro-innovation institutional environment

- Risk-taking & failure as learning
- Innovative demand from local large firms
- Innovative gov't demand; innovation funding

Investing in talent & idea generation:

- research
- education
- talent development



New firm formation & growth:

- mentoring & networking
- piloting
- Venture capital

Idea to implementation (start-up or established firm):

- Support for innovation projects
- incubation



Some cases

- Rotterdam: Port XL & Smartport
- Marseille: CMA CGM incubator ZeBox
- Singapore: Pier 71 & MINT Fund
- Hamburg: ITS for trucks (city, VW, MAN, HHLA), Kühne Logistics University.
- Valencia: Valenciaport
- Valparaíso: HubGlobal



Some lessons learned

- Deep stakeholder involvement and support is critical.
- ‘Make it big’: without ambitious goals true commitment is unlikely.
- Develop lasting governance structures; a project-by project approach is unlikely to be successful.
- Acknowledge the need for significant funding from either government or donations (Hamburg, Hong Kong).
- Develop international ties.

PortEconomics

