

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

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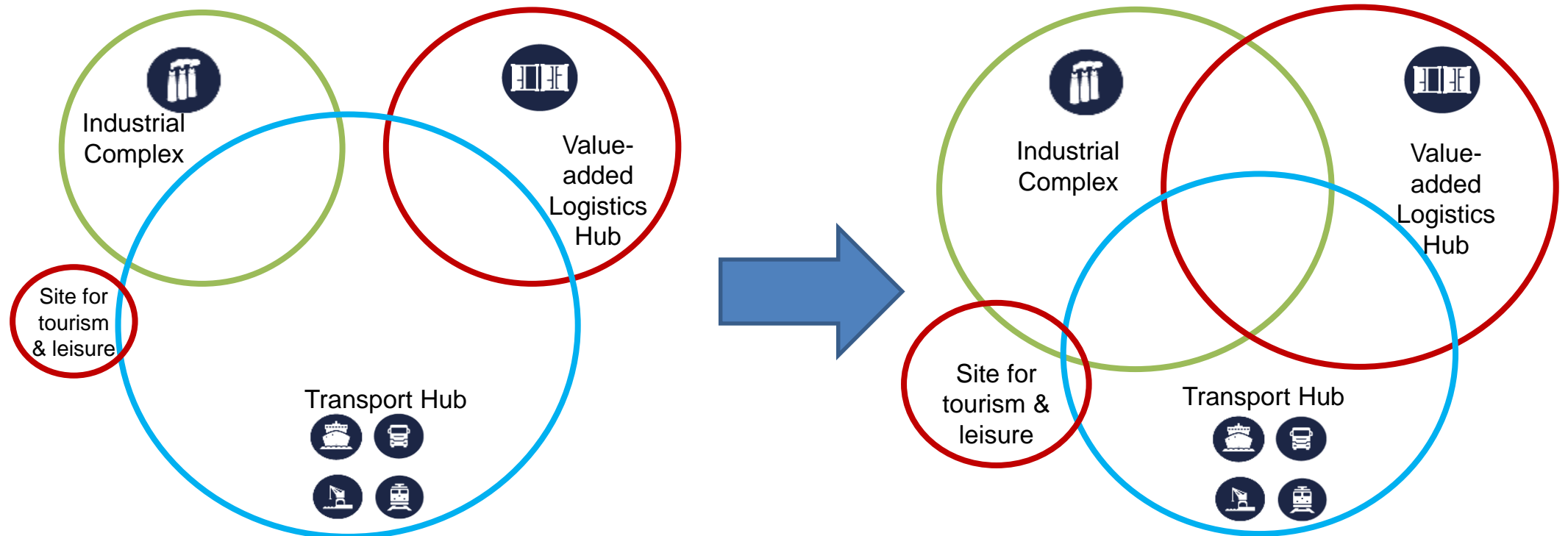


# What is this?



# 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

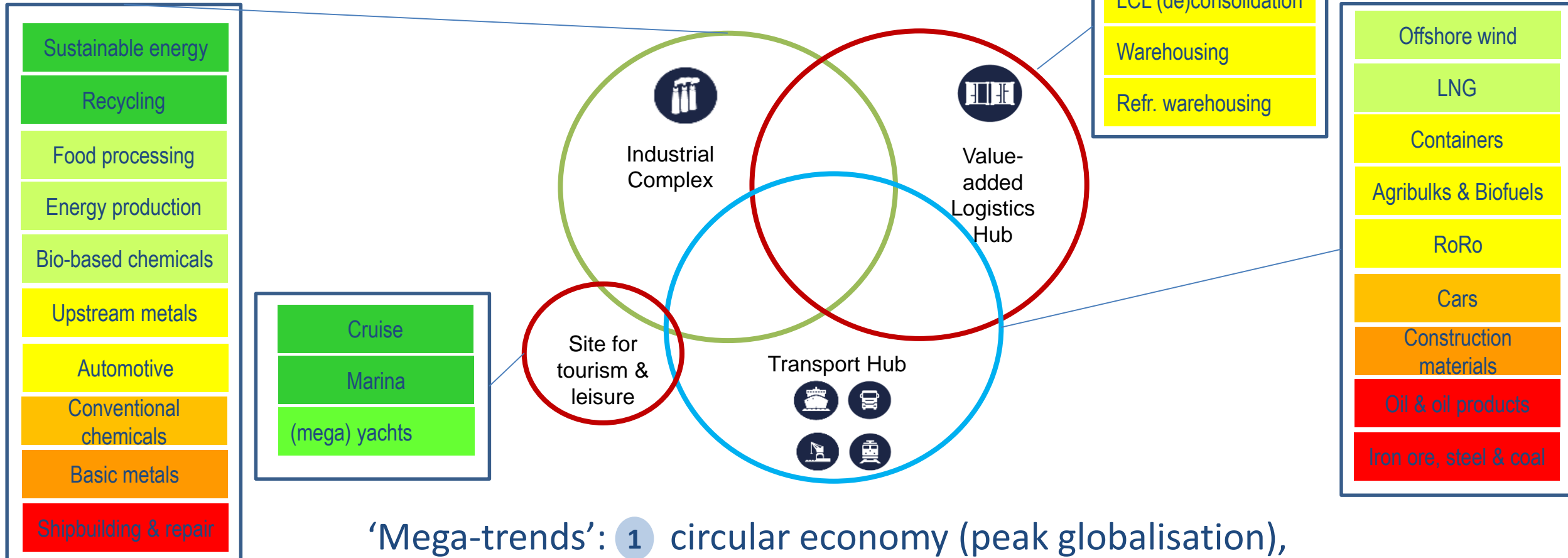


- Inter terminal transport.
- Port community system
- Traffic management on port access highway -
- Platooning matching platform.
- Call optimisation platform
- Truck parking

- 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.                         |



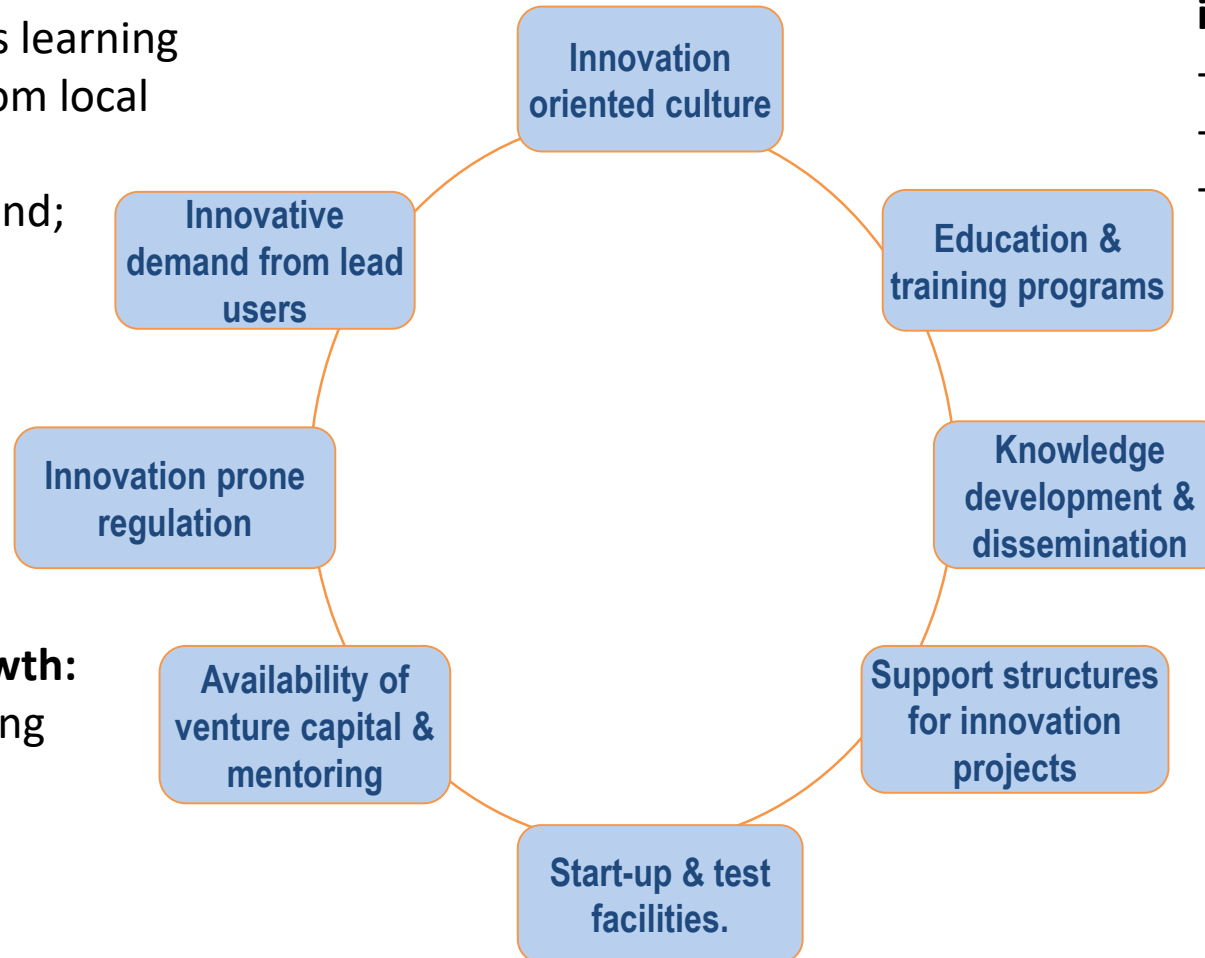
# Integrated approach to innovation performance of the port complex: The innovation ecosystem

## 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
- Valparaiso: 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.

