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
-Health 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

-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

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