

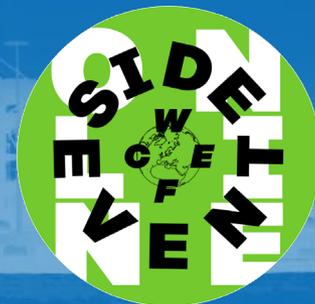


LOOP-Ports

Circular Economy Network of Ports



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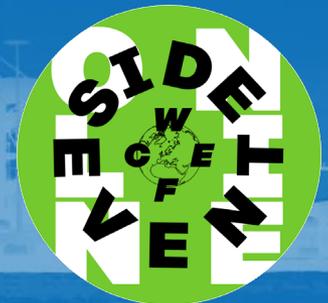
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Circular Economy Network of Ports

Tim C. McAloone – DTU



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Circular Economy Network of Ports (LOOP-Ports)

Innovation Recommendations for the EU Port Sector

Tim C. McAloone

Professor of Sustainable Product/Service-Systems



Technical University
of Denmark



Background report for this presentation



Before we start...

Empirical background and structure of innovation recommendations

Empirical background



Structure of recommendations: Relevant levers of change

- 1 Awareness and information regarding CE potential
- 2 Business models & market structure
- 3 Rules, policies, and regulatory instruments
- 4 Fiscal instruments, investment and funding
- 5 Technology, processes, design, standards and infrastructure
- 6 Collaboration inside the port and with other port stakeholders
- 7 Technical and non-technical knowledge, skills and capabilities

1

Innovation Recommendations regarding...

Awareness and information regarding CE potential

1. Broader dissemination of CE potential



Circular assets & equipment



Circular flows within ports



Ports & circular markets

2. Help to understand local CE potential for ports

- Self-assessment support
- Business cases of inspirational examples
- Explanation of drivers or benefits
- Involve knowledge institutions
- Engage third parties to explore synergies

3. Encourage, assist, trigger

- Actively involve individual ports and encourage networking

Business models:

1. Existing port business models often suitable to get started
2. Support as core activities and business models develop and shift

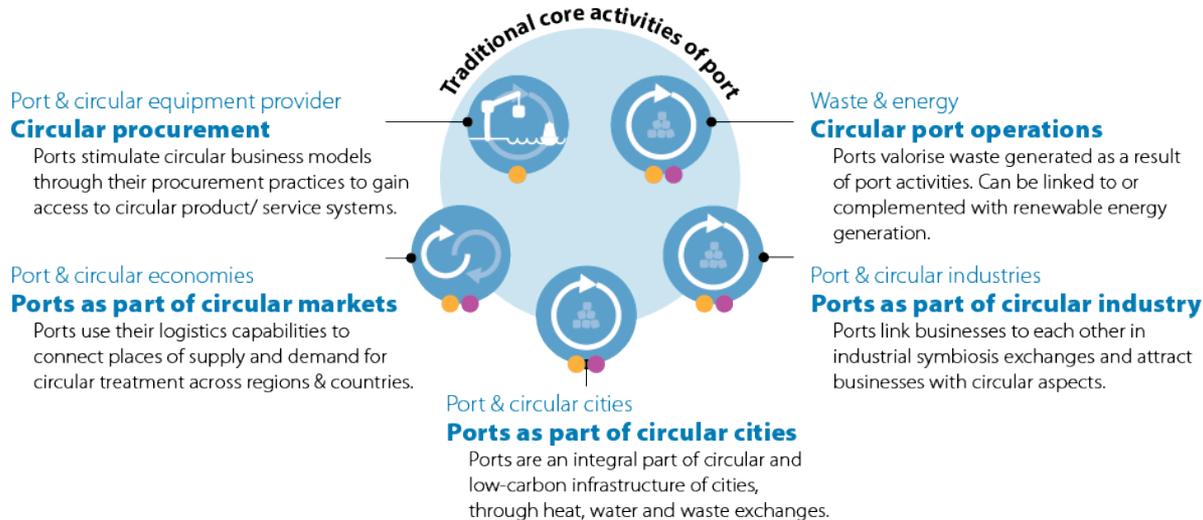
Market structure:

1. Include circularity requirements in tender documents
2. Support both industrial network and individual nodes

Roles of ports in stimulating circular business models and circular markets

● Ports enabling other industries to become more circular

● Ports adopting (aspects of) circular business models as part of their core activities



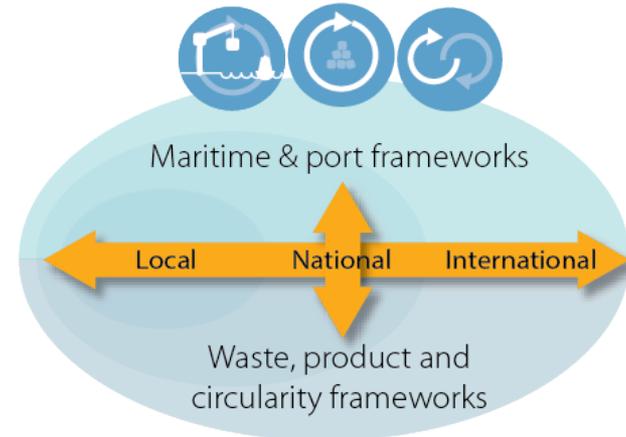


Innovation Recommendations regarding...

Rules, policies, and regulatory instruments

1. Integral assessment and development of policies and regulations
2. Reduce risks of sharing information
3. Allow for experimentation and local adaptation
4. Provide support to translate policies into local action
5. Provide support to translate technical and business knowledge to policy-makers
6. Empower ports (remove barriers)

Rules, policies, and regulatory instruments



1. Build capacity regarding fiscal instruments and incentives
2. Integral assessment and development of fiscal instruments and incentives
3. Provide support for ports to find funding
4. Scope funding bids to be in line with circular economy needs of ports

“Do we do this as a voluntary agreement or do we provide this infrastructure? You could do both, but we haven’t found our feet.”

“It’s excellent that we can apply for EU and national funds for pilot studies. That’s very important. Otherwise it’s too big of a step if you’re financing it completely by yourself.”



Innovation Recommendations regarding...
Technology, processes, design, standards and infrastructure

1. Share best practices for technology, eco-efficiency and circular economy
2. Support ports in identifying relevant new technologies and applications
3. Connect solution providers to ports in an early stage of development
4. Standards, indicators and certification



1. Make a start!
2. Co-create solutions with relevant stakeholders
3. Explore ways to actively engage citizens
4. Share best practices for assessing and communicating about CE projects



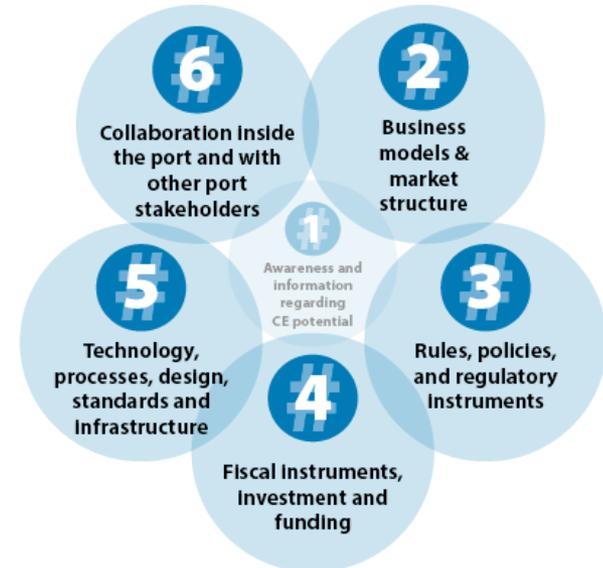
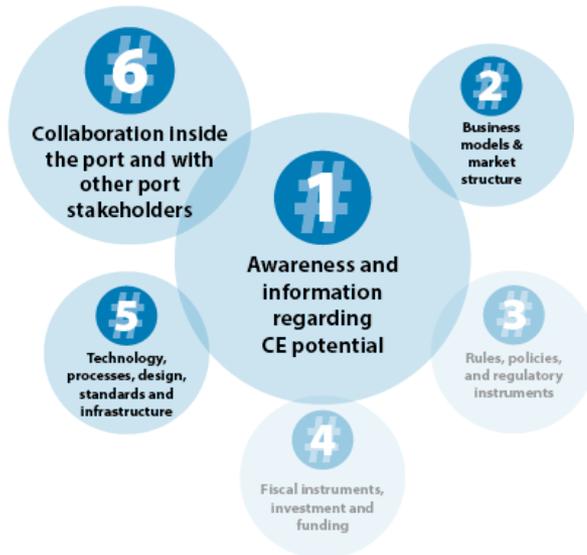
7 Innovation Recommendations regarding...
Technical and non-technical knowledge, skills and capabilities

For “CE newcomer” ports:

1. Develop introductory CE training

For “CE forerunner” ports:

1. Tailor training to specific projects
2. Use circularity lens within all business development activities



- Capture opportunities within existing port business models
- Expansion of existing business models or a shift in the core activities of the port.
- Establish good practice agreements.
- Maintain good relationships with the media.

Port Authorities

- Actively participate in collaboration and co-creation efforts.
- Test new technology solutions for ports in the early stage of development within ports

Companies in/around port

- Provide a means to understand the local potential for a port to work with CE.
- Develop standards, indicators and certification.

Knowledge Institutions

Recommendations for...

- Integral assessment and development of policies.
- Test and evaluate before scaling interventions
- Reduce risks of sharing information for companies
- Design policies that allow for experimentation and flexibility.
- Scope funding bids for the CE needs of ports.

Authorities /legislators

CE network of ports

- Disseminate a more rich understanding of the potential of CE more widely
- Provide support for translating technical and business knowledge to policy makers
- Share best practices
- Support ports in identifying relevant new technologies and applications.



All recommendations available in full report



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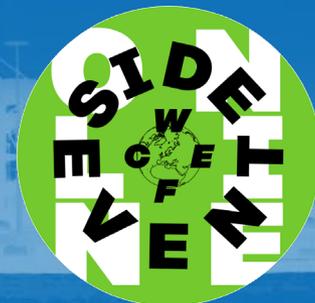


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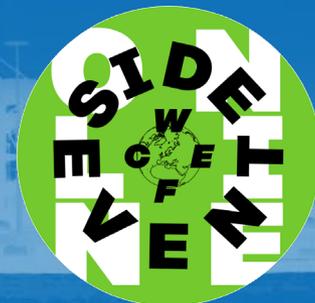
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THANK YOU!!



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