



Northern Maritime University
North Sea Region

Sustainable Innovation – challenges for maritime transport policy



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24th June 2009
Egmond, Netherlands

This project is part-financed by the European Regional Development Fund.
"Investing in the future by working together for a sustainable and competitive future"





Challenges

- The lifecycle of excessive consumerism and consumption has peaked
- The need for courage to implement structural changes and not only fight the symptoms in the economic, social and environmental spheres
- Understanding the falsity of belief in unlimited growth



Setting the scene

- *“The EU should become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion”*
(European Council, Lisbon, March 2000)
- The EU has articulated *“the particular need for an **all-embracing maritime policy** aimed at **developing a thriving maritime economy**, in an environmentally sustainable manner”*. In addition, it asserts that... *“Such a policy should be **supported by excellence in marine scientific research, technology and innovation**”*.



OVERVIEW: EU Strategic Goals

1. European Shipping in Globalised Markets
2. Human Resources, Seamanship and Maritime know-how
3. Quality Shipping as a Key Competitive Advantage
Five focus areas:
 - Improving environmental performance
 - Maritime transport safety
 - Maritime transport security
 - Maritime surveillance
 - Maritime transport as key element of EU energy security



OVERVIEW: EU Strategic Goals

4. Working Together on the International Scene
5. Short-Sea Shipping and Sea Transport
6. Europe as Leader in Maritime Research and Innovation





Innovation ...

- ... is tied to knowledge
- ... starts with knowledge
- ... elaborates that existing knowledge or generates new knowledge, and produces knowledge as the final outcome

Thus, knowledge is the engine of innovation



Sustainable innovation?

we ourselves

initiate, evaluate, accept or exterminate the
innovation processes

it is neither a linear development of success nor is it
continuous

**Innovation is a process that is based on the
competence of the human resource**

Innovation is not a guaranteed success



Maritime policy aims

- Improve the quality of related learning and innovation processes → quality-controlling effect on socially produced knowledge
- This should be a duty in the corporate governance function and for social and economic policy makers
- Examples: transparency and openness requirements in learning and innovation processes and practices found in political and economic systems



Maritime policy aims

- Transform our economies, in particular, from systems founded on a quantitative growth ethic to those aimed instead at qualitative development
- Development → more utility per unit of throughput

Do these two main policy streams converge?



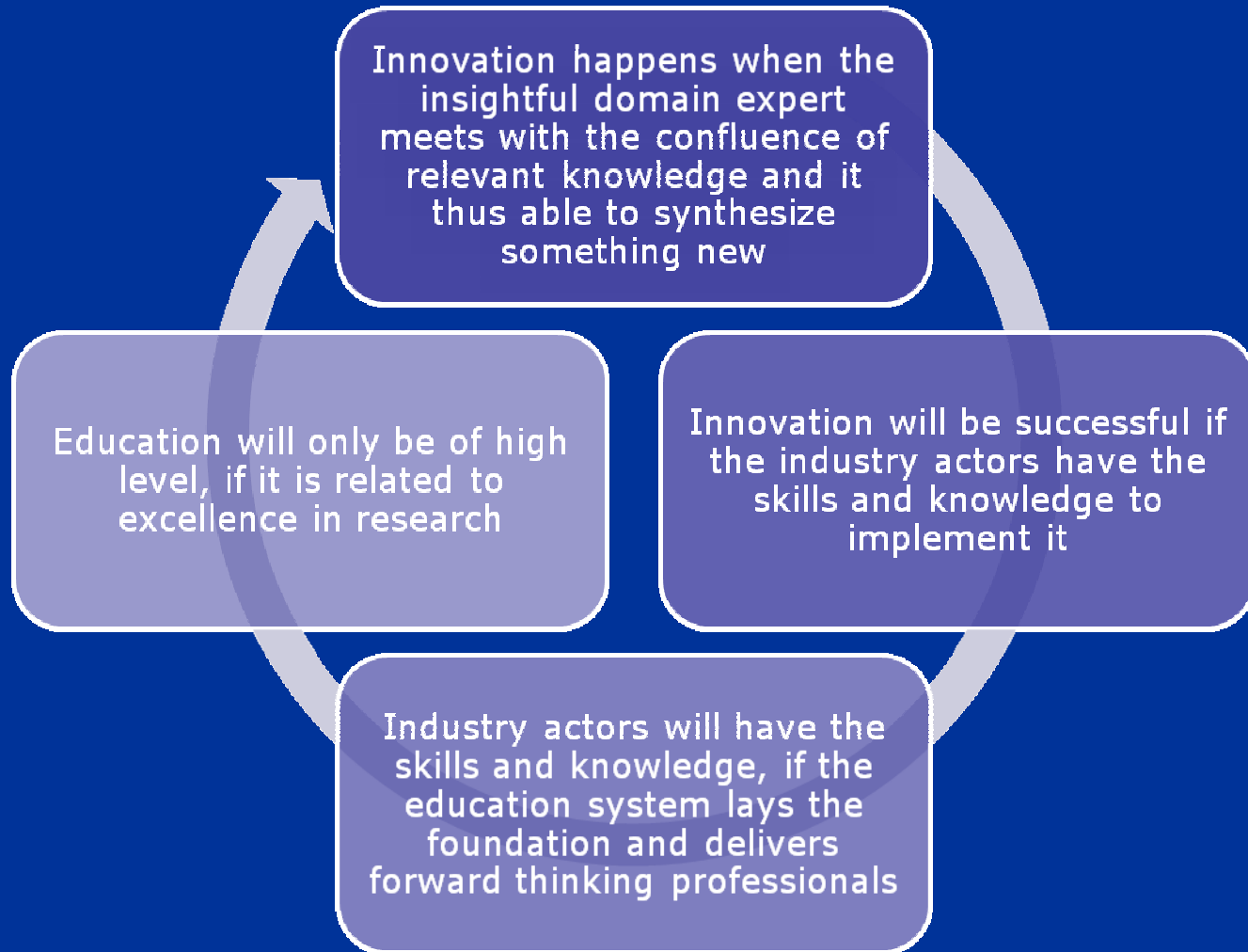
Policy making

- "*Justificationist*"
- Radical, growth-constraining intervention very likely dies on the bureaucratic or political vine long before (if ever) it makes its way into practice
- Aimed at fighting symptoms rather than causes

How can we manage to embrace the kind of learning, innovation, and knowledge outcomes required to enact truly *revolutionary* policy?



A Virtuous cycle





Challenge to sustainable innovation

- Multilayered and rather complex relationship between the maritime industry and the education sector
- Maritime education is currently traditional, nationally based, lacks true multidisciplinary
- Education serving diverse educational and research needs at a variety of levels

The ambitious goals espoused above are not explicitly reflected in the provision of maritime education



Investment in people and the division of labour

- Advanced technical and commercial knowledge
- Basic, but precisely defined, skill-sets

Higher education in particular plays a crucial role in reshaping and restructuring the social, economic and political institutions of a country, but cannot replace the value of practical knowledge.

Concurrently, rapid changes in the economic, social and environmental arenas demand quick and informed action on behalf of strategic decision makers in industry and also the policy sector.



Education and sustainable innovation

Executive Leadership

Skill development

Innovation Infrastructure

Network for Innovation Mentoring and Facilitation

Internal Promotion

internationalisation

quality

accessibility



Key questions

- How can existing, but fragmented, networks be organised into a flexible, proactive, multidisciplinary knowledge cluster?
- How can the generated knowledge centres (clusters) be disseminated to a wider audience?
- Beyond the general willingness to cooperate among scientists, is there a dynamic mechanism by which this cooperation is facilitated?



Requirements

- Development of strategic partnerships among
 - Europe's best business;
 - Research; and
 - Higher education actors
- ... to promote and co-ordinate innovation, research and higher education at the highest levels.
- However, maritime research and education should resist a tendency towards institutionalisation which, in the long term, will undermine innovation and its proactive character.



A challenge for policy

- Maritime education is about being competitive at a global scale and within a global environment
- Education for a globalised industry should not have borders, either national or European
- Research and education partnerships should be based on excellence, with EU policy and strategy supporting the establishment of strong networks and relationships and the building of long-term sustainable capabilities



FUTURE: Europe going forward

- Good chance to implement new ideas
- Sustainability in terms of economics, finance, environment and knowledge
- Appreciation of the dangers of credit-fuelled consumption
- Need for education excellence



A step towards sustainable innovation

- Excellence in research and education, as the fundament of innovation, can only be realised if we free our minds of preconceptions and borders; physical, national and intellectual
- Research and educational development should be centred on knowledge-based, networking clusters in which the mobilisation and facilitation of knowledge is a key element



Conclusion

- We have a capacity to not only innovate, but to *innovate innovation itself*
 - We have regularly created false, unsustainable, “self-destructive” innovations and policies to manage these innovations
 - The fix is in the learning system, not in our operational patterns of behaviour!
 - Our maritime policies should be crafted accordingly
- Delivering and maintaining **knowledge as a competitive advantage**



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Questions?

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