

**Project Office:**

Transport Research Institute  
Project Leader: Gordon Wilmsmeier  
Edinburgh Napier University, Merchiston Campus,  
Edinburgh EH10 5DT  
Telephone: +44 (0) 131 455 2951  
Fax: +44 (0) 131 455 2953  
Email: g.wilmsmeier@napier.ac.uk

Edinburgh, 22 September 2009

## Enhancing the innovation capacity of the European transport industry

*A response to the public consultation of the European Commission on the Future of Transport by the Northern Maritime University<sup>1</sup>, the academic network for innovative maritime education and R&D.*

### *Human Resources: Enabler for innovation in European transport*

Innovation is a key factor to tackle the numerous challenges identified by the EU Commission's Communication on "A sustainable future for transport: Towards an integrated, technology-led and user friendly system". According to the European Innovation Scoreboard (EIS), "the availability of high-skilled and educated people" is one of the most important drivers for innovation. Thus, there is significant demand for the offering of education and qualifications which enhance innovation capacity within the European transport sector by delivering multidisciplinary knowledge and skills to cope with growing transport and rising environmental challenges.

The relationship between the European transport industry and the education sector it draws upon is multilayered and rather complex, with the latter serving diverse educational and research needs at a variety of levels. Although advanced technical and commercial knowledge are important assets in the transport sector, there is also a fundamental need for workers with precisely defined skill-sets. Investment in people and the division of labour remain relevant issues for the transport industry. In a knowledge-based economy, 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. At the same time, 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.

---

<sup>1</sup> The "Northern Maritime University" (NMU) project is partly funded by the European Communities under the Interreg IVb North Sea Region Programme. The NMU is building up a transnational network of universities in the North Sea Region. The project's initial phase, until December 2010, will culminate with the launch of the Northern Maritime University. The partners include Transport Research Institute, Edinburgh Napier University, Kiel University of Applied Sciences, University of Applied Sciences Lübeck, Molde University College, Gothenburg University, Jacobs University, University of Southern Denmark, Swedish Environmental Institute (IVL), University of Applied Sciences Bremen and the private sector partner Pantrak, UK. (<http://nm-uni.eu/>)

The need for change in transport education is reinforced by reflecting upon and evaluating the outcomes of the Bologna process and Lisbon/Gothenburg strategy, the most salient of which include:

- The development of information and communication technologies providing new opportunities and possibilities of educational collaboration and cooperation at international level;
- The emergence of corporate educational provision through higher education institutions; and
- The development of borderless higher education.

The pivotal question is how can the diverse, dynamic, but somewhat ill-defined educational requirements of the transport industry be identified and acted upon by the educational sector in a coordinated and timely fashion and in a form that meets the EU's objectives for both education and transport policy.

### *Towards a flexible, proactive, multidisciplinary knowledge cluster*

The search for a response inevitably rests on three main pillars: quality, internationalisation and accessibility. For example, the maritime transport industry, as an essential component of the European transport system, has a constant demand for highly qualified personnel whether ashore or at sea. The maritime industry is probably the most global of all industries in terms of sourcing capital, human resources, services and cargoes. As a consequence of the industry's inherently international characteristics, maritime education must endeavour to maximise accessibility, either by educating, training and spreading knowledge wherever learners are located or by disseminating it in the most ubiquitous form. Against this background, multidisciplinary qualification offerings will benefit greatly from exploiting the diversity, complementarities and synergy that exist between maritime expertise and the content of academic programmes across Europe.

Expertise in specific aspects of the transport sector already exists at several centres of excellence housed within universities. This knowledge needs to be harnessed, connected and gathered within a common and lasting network of universities.

One of the fundamental questions is how existing, but fragmented, networks can be brought together to fuel knowledge synapses in flexible, proactive, multidisciplinary environments. While management literature acknowledges that small entities tend to be more flexible and innovative, a question remains over how the knowledge generated in these knowledge centres can be disseminated to a wider audience. There is a general willingness to cooperate among scientists, but is there a dynamic mechanism by which this cooperation is facilitated? What needs to be designed is some form of interface to provide access to the many and varied research centres and an improved accessibility for the industry and policy sector; further, funding opportunities for research need to be enhanced. One way forward is the formation 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. At the same time, however, transport research and education should resist a tendency towards institutionalisation which, in the long term, will undermine innovation and its proactive character.

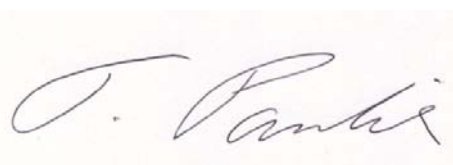
Transport education can only happen in conjunction with high level research. Transport research and education needs to become an integral element of the "European Higher Education Area", providing knowledge, education and training with a global outreach that is achieved within the context of the OECD/UNESCO Guidelines for Quality Provision in Cross-border Higher Education and which encompasses lifelong learning and certification, collective learning and multidisciplinary. European policies and strategies that are pursued post-Lisbon/Gothenburg must encourage effective co-operation within transport education, built on common interests and the input of all participants. A prerequisite, therefore, is the voluntary nature of the co-operation. Transnational cooperation cannot be artificially induced, but must grow organically and in a manner that cannot necessarily be standardised.

The NMU partners therefore call for a strategy that directly supports excellence in knowledge and education development through networks that are driven by 'champions'. These networks should create centres of excellence that are evaluated through their contribution towards future development of the maritime and port industry, and development in research, education and training.



**Gordon Wilmsmeier**

NMU Project Leader  
Transport Research Institute (TRI)  
Edinburgh Napier University  
Merchiston Campus  
Edinburgh EH10 5DT  
United Kingdom  
Tel. +44 (0) 131 455 2951  
Fax. +44 (0) 131 455 2953  
E.mail. g.wilmsmeier@napier.ac.uk  
www.tri-napier.org



**Thomas Pawlik**

NMU Partner  
University of Applied Sciences Kiel  
Institute for Supply Chain and Operations  
Management Faculty of Business Management  
Sokratesplatz 2, 24149  
Kiel  
Germany  
Tel. +49 (0) 431 210 3609  
Fax. +49 (0) 431 210 63609  
E-Mail: thomas.pawlik@fh-kiel.de

On behalf of the NMU Partnership

