



KOTKA MARITIME RESEARCH CENTRE: A new type of research centre advancing the competitiveness of maritime-related business and sustainable logistics

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Bordered by Russia and the Baltic Sea, South-East Finland is logistically one of the most important areas in Finland. Maritime transport has grown significantly increasing threats to the unique marine environment of the Gulf of Finland.

The City of Kotka established Kotka Maritime Research Centre (KMRC, www.merikotka.fi) in 2004 to develop the competitiveness of the transport and logistics sector in the area and on the other hand to improve maritime safety and minimize environmental effects of the growing traffic. Today KMRC is a 30-person and growing research centre based in Kotka.

KMRC seeks innovative approaches through interdisciplinary research. The centre was formed by combining the expertise of leading Finnish universities and research institutes in the fields of maritime transport and logistics, maritime safety and the marine environment. The centre is built around professorships from four universities: Helsinki University of Technology, Kymenlaakso University of Applied Sciences, University of Helsinki and University of Turku, Centre for Maritime Studies. Financing is provided by the City of Kotka, companies, national and EU research programmes and other sources.

Companies and organizations from the maritime sector are involved in a major role in the work of KMRC. The corporate group supports and helps focus the research. At the same time the companies take advantage of the latest research findings.

An important objective is to establish a competitive environment for business. KMRC studies transport flows of maritime traffic, port operations, transit traffic and also ICT solutions, as well as safety and environmental effects of transport chains.

There is a strong focus on environmentally sustainable shipping and port operations in KMRC's work. The centre's research aims at improving maritime safety and preventing accidents by developing risk assessment of maritime transport and safety of winter navigation. Research includes the

environmental effects of maritime transport (the effects of oil spills and hazardous substances, effects on fishing, endangered species and on recreational use, transport based emissions) and the state of the marine environment (eutrophication, multidisciplinary risk assessment).

KMRC has found its place in the research field in Finland and is broadening its international network. Collaboration with Russia and Estonia around the Gulf of Finland is regarded as the basis of the international co-operation.

Enhancing port related logistics - the Mobile Port project

An example of the many on-going projects at KMRC is the Mobile Port (MOPO) project. Mobile port is an initiative to enhance and improve port related logistics operations through new technologies. The idea is based on the internationally well-known port-community system concept that does not presently exist in Finland. This new interface (information center) connects sea ports and operators with each other and with dry ports and the border areas. The information centre increases information exchange and decreases traffic congestion, mistakes, accidents, damages and environmental harm.

The MOPO project will for the first time examine the big picture of port related operations from different perspectives. Information exchange between different bodies of the network is an essential factor for the overall efficiency of operations. Currently the multitude of port based bodies exchange information with each other without good knowledge of their partners' operations, priorities or challenges. The information center will help port based companies in their daily operations and it can be used to inform all bodies about disturbances. In practice the information centre can also be used as a border crossing queue system. In this case information about border-bound traffic can be transmitted to the border through the info center.

Mobile port is a 2.5-year project that started in September 2009 with a total budget of 800 000 Euros. The project is funded by ERDF/Tekes, Cursor Oy and by the companies Port of Kotka, Kymen Puhelin Oy, SE Mäkinen Oy, Steveco, Suomen 3C, TransPeltola Oy and VR Cargo. The broad support gives justification to the project idea's importance also from the business perspective.

The partners of the project are University of Turku, Centre for Maritime Studies, Kymenlaakso University of Applied Sciences, North European Logistics Institute, Lappeenranta University of Technology and Kotka Maritime Research Centre. ■