VISIONS

Visionary Concepts for Vessels and Floating Structures

Funding: European (6th RTD Framework Programme)
Duration: Apr 2005 - Mar 2009
Status: Complete with results
Total project cost: €5,000,000
EU contribution: €5,000,000

Call for proposal: FP6-2003-TRANSPORT-3
CORDIS RCN: 74947

Background & policy context:

Europe’s maritime industry has an impressive track record of being competitive with leading edge innovations. However, to defend this position in a globalizing world, long term market, society and technology challenges must be identified and tackled as early as possible. Most companies know fairly well how the next generation of products will look like, which they would offer in the coming years. They do invest today into the development of such products of tomorrow. But in the usual business environment there are often neither further resources nor focus to develop already future ideas for "the day after the day after tomorrow" as well and thus to identify market and R&D challenges early enough for market dominance.

The project has been implemented to organise a systematic, scenario-based, pre-competitive ‘think tank’ process to increase the number of ideas for potential products, validate them and identify possible necessary R&D efforts early enough to be prepared for future needs. The scenarios, which were input for the annual ‘ideas contest’ and which were created with the help of professional users, enable a link to business reality.

Objectives:

VISIONS had been created by major industry and science stakeholders of the European shipbuilding and maritime industry as a "Network of Excellence (NoE)" under the 6th Framework Program to establish a sustainable "over the horizon" view in the pre-competitive phase, with the main objectives:

- to strengthen the European scientific and technological capability to develop innovative concepts for the products of the future, by developing a mechanism which involves all shareholders and combines scientific excellence with market needs
- to contribute to the exploration of new market segments with a competitive advantage for European shipbuilders
- to contribute to the solution of medium and long term transport related problems, like the congestion of roads and cities, environmental and safety hazards
- to generate and assess more visionary concepts (potential products and projects for the next (5)-15 years) and thus to act as the sector's "periscope" beyond the today's and tomorrow's regular business and development horizon
- to activate the potential of young talents in pre-occupation stage for generating more visionary concepts
- to encourage scenario based thinking about future possibilities ("think tank")
- to facilitate a closer link between industry and academia and more industry-relevant challenges for research institutes and universities
- to foster an early identification of knowledge gaps and kick-off of respective R+D initiatives necessary for future challenges and step changes.

Methodology:
VISIONS has implemented an annual process (called “innovation loop”) for the definition, assessment and validation of visionary concepts for vessels and floating structures, structured in 5 Business Areas: Maritime Tourism / Leisure, Short Sea Shipping, Inland Shipping, Deep Sea Shipping, Floating Infrastructures and based on challenges, presented by 9 professional market and society scenarios per Business Area, which were generated within the VISIONS innovation loop process.

The annual process ('innovation loop') had the following elements:

- Creation of professional market and society scenarios by a dedicated scenario group including external key user interviews.
- A 'call for ideas' answering the scenario challenges to student teams from the European maritime industry. The best five to seven ideas were short-listed by the core partners and were further investigated.
- Evaluation of the short-listed tasks done according to identified tasks and by selected experts (tender process). Compilation of a comprehensive report per idea (including 'distance to market').
- Selection of three winners by a high-level industry jury, with an industry-sponsored contest award and the presentation of all ideas ('showcase').

The annual Call for Ideas, open for student teams of Europe’s Maritime Universities, asked to respond the challenging scenarios by a "Concept outline", a structured professional description of an idea. This was done without the expectation, that all engineering or commercial aspects of the ideas would already have been investigated thoroughly by the proposing team. The most interesting proposals, in total 25 nominated by the NoE partners, were subject to feasibility and engineering reviews performed by scientific experts of Europe’s Maritime Universities, who offered the required services in an annual tender process for 7 Expertise Fields:

- Market+Society Needs
- Technical Feasibility+Design
- Production Equipment+Systems
- Operation+Security
- Infrastructure+Logistics
- Safety+Environment.

Parent Programmes:
FP6-SUSTDEV-2 - Sustainable Surface Transport

Institute type: Public institution
Institute name: European Commission
Funding type: Public (EU)

Lead Organisation:

Cesa Asbl - Comite Des Associations Des Constructeurs De Navires Europeens

Address:  
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Organisation Website:  
http://www.cesa-shipbuilding.org

EU Contribution: €0

Partner Organisations:

Entwicklungszentrum Fuer Schiffstechnik Und Transportsysteme E.v.

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Organisation Website:  
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Key Results:

NoE VISIONS is by its nature not a "prototype" example of a "Network of Excellence" from the FP6 toolbox, since it is neither dealing with specific research disciplines or research infrastructure nor primarily linking individual researchers. It can be considered as a stimulus to facilitate pre-competitive
"think tank" type processes incorporating industry and maritime academia on a regular base, to facilitate the generation and assessment of more visionary "beyond the short and med term horizon" concepts in the maritime sector than available in the past.

VISIONS did indeed fulfil these expectations in several aspects:

- a regular annual idea generation process based on industry relevant input scenarios and using young talents of the European maritime universities has been established (today named VISIONS Olympics),

- a large number of scenario based visionary concepts has been and will be generated, assessed and presented to the industry, which is a remarkable step forward, especially for floating infrastructure projects,

- through the established close link to the WATERBORNE Technology Platform and the relevant industry and academia/research associations the established processes are contributing to a comprehensive early identification of long term R+D needs,

- tools for the effective management and good practice for execution of such processes have been developed and are established,

- industry awareness for the necessity to accept future challenges early has been created

- a closer link and more practice based dialogue and cooperation between the European maritime industry and the European maritime universities has been facilitated, the universities will be able to execute more "long term horizon" research and education based on industry relevant input.

Policy implications

Since the NoE VISIONS was focused on the creation of ideas and visionary concepts for future products, it was not expected that new standards would be developed directly by the network. However, it can be assumed that the VISIONS results are indirectly contributing to define future needs for standards, regulations and rules, which is an ongoing, continuing process.

NoE VISIONS has significantly contributed to foster a more systematic "over the horizon view" on upcoming markets and new product generations within the European maritime industry and research community, by connecting leading experts of the 5 business areas to evaluate the European needs and creating a batch of 45 scenarios, which can now also be used as starting point for ongoing further considerations. VISIONS has definitely kicked off and enhanced the holistic engagement in new tasks, in particular for floating infrastructures, but also in the business areas of short sea and inland shipping, in the European maritime industry and research community.

Documents:

- Activity Report IV final.pdf (Final report)

STRIA Roadmaps: Other specified

Transport mode: Multimodal transport

Transport sectors: Passenger transport, Freight transport

Transport policies: Safety/Security, Environmental/Emissions aspects, Societal/Economic issues

Geo-spatial type: Other