

Visions-Olympics - Publishable summary – Second Reporting Period

Building on the NoE VISIONS, the VISIONS-OLYMPICS project starts 01.09.2009 with the aim to increase the European competitive advantage by tapping into the unspoiled/unbiased creative minds of the young generation. It will:

- Offer out of the box concepts and ideas for the future of European maritime transport,
- Develop these ideas within an environment where purpose driven innovation is cultivated and performed in a risk free environment,
- Build bridges between universities and industry,
- Enhance the skills of future employees in a highly competitive environment,
- Offer targeted dissemination to industry.

The **Year 2010 Contest** has been launched and successfully carried out during the academic Year 2009/2010. After an in depth analysis of the European market and technological situation three thematic areas have been identified by a panel of Maritime Experts as:

- Research Area 1 (RA1): Transport challenges for offshore energy generation & conversion.
- Research Area 2 (RA2): Transport challenges for sustainable food generation from sea
- Research Area 3 (RA3): Sustainable waterborne transportation

On these 3 areas student teams have been called to submit their project ideas in two steps: Step 1 – Abstract submission (by January 2010); (2) Full project idea submission (by April 2010).

Results of the first submission round are:

- 136 students originally registered for the competition.
- The students are from 7 European countries plus 1 EU candidate country (Turkey).
- 10 Universities participated in the competition.
- 32 ideas were registered. 27 of the abstracts were finally accepted.
- 22 final projects were finally submitted by the time of the deadline which was the 31st of May 2010.
- Among those 22 projects ideas 6 were shortlisted for in depth experts evaluations.
- Building on the experts' analysis a High Level Jury of maritime personalities formed by 6 industrial and research representatives awarded the three winning ideas.
- The Award Ceremony is now foreseen on the 16th of June during the 2nd European Maritime Research and Innovation Policy Conference

The **Year 2011 Contest** has been launched and successfully carried out during the academic Year 2010/2011. After a in depth analysis of the European market and technological situation three thematic areas have been identified by a panel of Maritime Experts as:

Research Area 1 (RA1):

1. **Safety and Security:** 100% secure operations including
 - a. Improve safety utilising e-weather routing and avoiding
 - i. Collision
 - ii. Grounding

- iii. Fire
- iv. Capsizing
- v. Structural damage
- b. Improving Safety at sea

Research Area 2 (RA2):

- 2. **Sustainable logistics:** Reduce environmental impact improving logistics efficiency
 - a. 100% Container utilisation using satellite technology aiming to transportation without empty containers.
 - b. Improve environment while sailing
 - c. Reduce environmental impact increasing vessel-utilisation:
 - i. Multipurpose ship
 - ii. Flexibility regarding cargo
 - iii. Ship without ballast
 - iv. Incorporate upgradeability in ship design

Research Area 3 (RA3):

- 3. **Green Shipping:** Improve energy efficiency by 80% in operations
 - a. 0-Emission Ship utilising:
 - i. Smooth routing, JIT transportation
 - ii. “Learn from the best” e.g. from car industry, adapting procedures and technologies for reducing emissions.
 - iii. Friction less ship
 - iv. Improve environment while operating utilising:
 - 1. Carbon capture
 - 2. Plastics capture
 - 3. Improve “eutrophic Baltic” integrating treatment of ballast water.
 - b. Satellite enabled trim optimisation for better performance

On these 3 areas student teams have been called to submit their project ideas in two steps: Step 1 – Abstract submission (by February 2011); (2) Full project idea submission (by April 2011).

Results of the first submission round are:

- About 70 students originally registered for the competition.
- 5 countries participated.
- 7 Universities participated in the competition.
- 16 ideas were registered.
- 9 final projects were finally submitted by the time of the deadline which was the 30th of April 2011.
- Building on the experts’ analysis a High Level Jury of maritime personalities formed by 6 industrial and research representatives awarded the three winning ideas.
- The Award Ceremony took place during the TRA 2012 Conference, Athens April 2012.

In the meantime the project team started the process for the Academic Contest Year 2011/2012 which at the time of writing on going on the following research areas:

Research Area 1 (RA1):

- Offshore installations for the Marine Industry:** Offshore shipbuilding products and ships for maintaining, supplying and servicing the offshore installation such as:
Offshore wind, Aqua farming, Underwater mining , Garbage processing, Leisure
Etc.

Research Area 2 (RA2):

Alternative products for the Marine Industry: Alternative meaning substitution of conventional fossil fuels. In particular:

Alternative energy sources and converters, Alternative energy storage Alternative energy management, Energy efficiency