



# Sail into a sustainable future



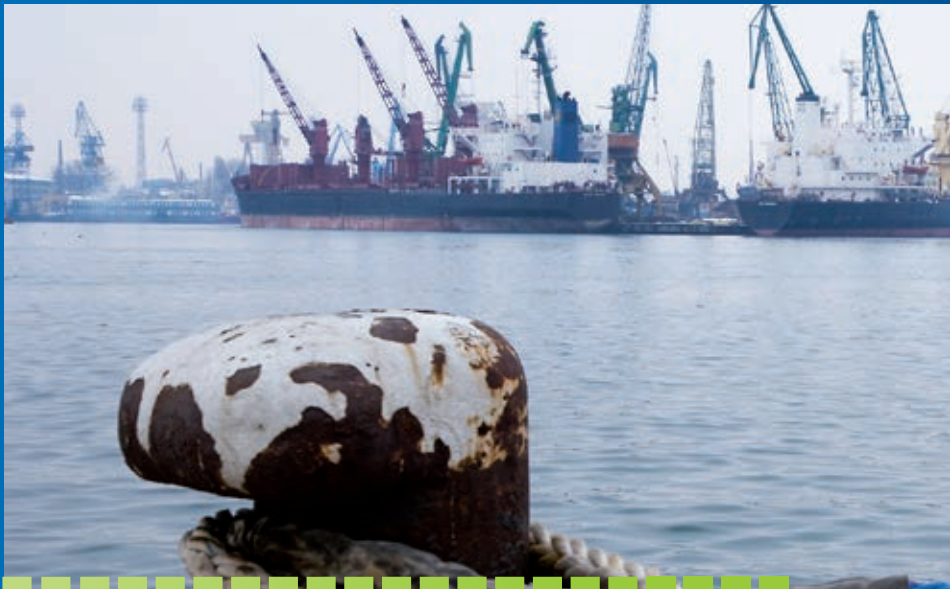
***Your roadmap to competitive freight sailing  
with zero emissions***

Oil prices rise, the environment suffers from pollution. Freight ships need different fuel systems to avoid this combination of problems. Hybrid ship engine concepts seem to have high potential for the future of freight sailing. The SAIL project aims to develop and test hybrid ship engine concepts which will lead to new business opportunities and a more sustainable future.

## Background

The North Sea Region is widely used for freight shipping. More than 500,000 people are employed in the North Sea shipping industry. Its seven large ports handle more than 1,000 million tons per year. However cargo shipping, using heavy fuel, is one of the main polluters in the North Sea. Commercial shipping worldwide is the third largest source of climate affecting toxic emissions, after industrial production and road traffic. For that reason a transition in the North Sea Region to decarbonisation is required of sea transport (see further information in EMSA).

With many new sustainable solutions in view, and a tradition for innovation and ambition, the North Sea Region seems to be an excellent (windy) living lab for developing and testing zero emission freight sailing solutions. Building an (almost) emission free freight ship today seems to



## *Your roadmap to competitive freight sailing with zero emissions*

- SAIL is an Interreg IVB North Sea Region Project with 17 partners from 7 countries around the North Sea.
- Leading vision and aim: Alternative propulsion systems for (freight) sailing - defined as 'hybrid sailing concepts' - have high potentials due to environment (global warming and pollution) and rising oil prices. Developing and testing hybrid sailing concepts, that will lead to more sustainability and new business opportunities.
- Project duration: from July 2012 to June 2015.
- Budget: € 3.4 million (50% EU funding, 50% cofinancing by partners).
- The partnership: Province of Fryslân (lead beneficiary), research institutes, universities and ship operators from The Netherlands, Germany, Sweden, Denmark, Belgium, United Kingdom and France have joined forces.



be possible. Alternative propulsion systems have high potential mentioned here as “hybrid sailing concepts”, including wings, kites, electricity, biofuel, a.o. Expertise and opportunities in hybrid sailing concepts is spread over different North Sea regions and needs to be gathered together, validated and improved. Also, the financial return on sustainable investments in the shipping market needs further research. Investment cycles now limit the capacity of innovation.

## Aims and objectives

- Capacity building in competitive economic and sustainable hybrid sailing concepts;
- Development and testing of living lab solutions and modeling tools in view of sustainable hybrid sailing concepts;
- Building of public and private body alliances in order to stimulate the implementation of sustainable hybrid sailing concepts after the project period;
- Steps to embed sustainable hybrid freight sailing in policy and legislation;
- Developing a Strategic Sustainable Sea Transport Plan containing scenario planning tools with Roadmaps till 2050, bearing zero emission sailing in mind;
- Communication and promotion of SAIL results to the wider community.



In short, SAIL aims to develop innovative, effective and efficient, sustainable transnational sailing solutions using less, or even no fossil fuels, bearing in mind future rising oil prices, climate change and logistic problems. SAIL thus contributes to other goals of other organizations.

After SAIL has ended, the follow up will be a SAIL consortium bringing sustainable and competitive North Sea shipping in practice. Also, an expert centre on 'competitive freight sailing with zero emissions' should be created. This should be a central point of the activities of the SAIL consortium and should manage SAIL outputs and results.

### **About SAIL**

From July 2012 to June 2015, 17 partners from 7 North Sea countries will work on this project to stimulate and facilitate the transition process towards a sustainable shipping sector with focus on zero emission freight sailing. It has a budget of € 3,4 million. The participating partners are the province of Fryslân, knowledge institutes, universities and ship operators from The Netherlands, Germany, Sweden, Denmark, Belgium, United Kingdom and France.



*Dyckstra Naval Architects*



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|--|---|
| 1 - Province of Fryslân                | 11 - Ameland Shipping                               |
| 3 - Plymouth University                | 12 - NHL Northern University<br>of applied sciences |
| 4 - Jade Hochschule                    | 13 - MARIN  |
| 5 - Helmholtz-Zentrum Geesthacht       | 14 - E&E consultant                                 |
| 6 - Aalborg University                 | 15 - Avel Vor Technology                            |
| 7 - North Sea Foundation               | 16 - Port of Oostende                               |
| 8 - Fairtransport Trading and Shipping | 17 - ECO Council                                    |
| 9 - Municipality of Harlingen          | 18 - World Maritime University                      |
| 10 - C-Job                             |   |

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