

**Day report final conference
Interreg IVB project SAIL
22 April 2015**

Location: Deltares, Delft as part of the 4th [Natural propulsion seminar](#) and the [Blue Week 2015](#).

Robbert van Hasselt, project manager of [SAIL](#) opens the conference on behalf of the [province of Fryslân](#) and thanks all guests to be present at this early hour.



Mrs Netelenbos, president of the [Royal Association of Netherlands Ship owners \(KVR\)](#)

Mrs Netelenbos welcomes all guests and introduces some facts of the KVR. This large association has 400 members and about 100 associate Members. 30.349 Employees are on board and on shore, 12 nautical institutes are involved with 2.500 students. This number is growing. The Maritime cluster earns about 3% of GDP and offers about 224.000 jobs. The Dutch fleet: strong in shortsea; 60% of all vessels.

Example of nowadays issues. Stena line owns a clean ferry, but pays a huge amount of taxes even though electricity is much less noisy. No tax is for oil ferries which produce a lot of noise. This is strange and seems not fair. Together with Marin we are working on zero emission in 2050.



What do you think of the Ecoliner? It needs seafarers and sails as an investment and the routes are limited routes. Financing is possible with a multi-year contact with a cargo shipper.

Conclusion: Some creativity is necessary, by crowd funding or establishment of an exploitation foundation. The Netherlands should be the showcase for the manufacturing industry! Sails are possible, however the competitive position in the market will make it difficult for Dutch ship owners to finance such an ambitious environmental freight sailing ship.

'I challenge you to find a solution'.

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Conclusions of SAIL's Work package 3 ENGINEERING



Jade Hochshule, Bernhard Schwarz-Röhr (Work package leader)

We need ships with sails to make shipping sustainable, to reduce emissions and to reduce fuel costs. Do you need a Crew of heroes or expert knowledge crowd to sail them? We already have lots of knowledge and experience exists and modern sailing ships are easy to operate. You don't need extra crew because the Ecoliner is a modern ship and can be sailed from the bridge.
A summary of the conclusions of work package 3 will follow.



MARIN, Rogier Eggers about Voyage simulations.

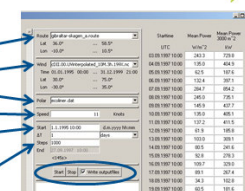
MARIN conducted voyage simulations for the Ecoliner based on hydrodynamic input from Dykstra Naval Architects and wind tunnel tests contracted by the SAIL project. This was complemented with seakeeping behaviour and engine performance to determine the operational performance on three routes along the European West coast, the North Sea and cross-Atlantic. Depending on the wind conditions per route, the results showed fuel savings between 10% and 40% compared to a conventional vessel (the same vessel without rig). It was found that some of the gains in wind propulsion are negated by (proportionally) increased losses in power generation. This requires attention. Optimisation of route and speed is important mainly for routes with adverse wind conditions.



Helmholz Geesthacht, Daniel Neumann

HZG took the simple approach: we studied 3 example routes for the Ecoliner. Gibraltar – Skagen, Oostende – Aberdeen and Rotterdam – Farör.
We developed a Wind database for desktop computer.

The Programme (II)



- choose
 - route
 - wind data
 - rigging
 - speed
 - start time
 - number of journeys

Comparison to detailed Voyage Simulations

<p>advantages</p> <ul style="list-style-type: none"> • compare different routes, riggings and speeds • fast run time • easy-to-use • available for desktop computer • non-commercial <p>→ good for first analysis of possible routes</p>	<p>disadvantages</p> <ul style="list-style-type: none"> • no fuel savings estimated • only wind data considered but not current and wave data • Does not replace detailed voyage simulations
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C-Job, Jelle Grijpstra.

C-Job tried to step in at the designing the concept and set up a Score matrix. We focused more on flettner rotor and turbo sails. Note: we based our research on the available information. We optimized the hull form and changed from 8000 to 5000 ton. It seems there are -no recent design data available, but maybe it is just not published. Our result is a larger and slender design, with a sharp front for more power savings. Read our findings in the factsheets Hybrid Shipping.

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Conclusions of SAIL's workpackage 4 ECONOMY

E+E Consultant, Antoine Bonduelle (work package leader)



It is no good, that I can smell the ships leaving the harbor. The draft version of the roadmap is available at this meeting. There is not a business plan yet. Results: The risks are just guess work, because there is no ship yet. We need a real live ship to measure. It is not that simple. The main barrier remains the split incentive between owners and user, because they have not the same interest. Roadmap: taking stock of the success of others. Example of wind: Subsidies were given to large companies to do research. Money was generally wasted, because all data was kept for them selves. Denmark handled this issue better on the early wind turbines issue, because they worked with several players and outcomes where shared. The industrial ecosystem (all actors such as designers, research, banking, operators) is more important than the technics. Read our draft version of the roadmap.

Conclusions of SAIL's Workpackage 5 POLICY AND LEGISLATION

North Sea Foundation, Eelco Leemans (work package leader)

Multipurpose ships all about sailing, transporting and educating.

The Ecoliner is an ambassador of European sustainability and should be operated soon.

North Sea Foundation has a close connection to the Clean Shipping Index and the IMO, therefore she will keep promoting the Ecoliner there. To meet ECA regulations the Ecoliner is an important step towards sustainability.



Conclusions of SAIL's Work package 6 PRIVATE PUBLIC ALLIANCES

Port of Oostende, Edo Donkers (work package leader) and Municipality of Harlingen, Eelco Last



People, Planet, Profit potential of Hybrid Shipping

- Desk study with Aalborg University
- Denmark: Green Ship Of The Future & Partnership For Cleaner Shipping
- The Netherlands: Platform Clean Shipping & Green Deal Ship Waste
- Belgium: PPP in development for hybridisation of maintenance vessels

(energy storage)

What has SAIL done

- Exploration of WASP concepts
- Gaining understanding of the mechanisms which apply to successful

WASP introduction: social, environmental and economical

- Calculations of potentials: economic data, wind potentials, etc.
- Focus on technical solutions
- Wind tunnel tests

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Market potentials

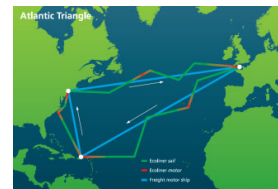
- Niche market
- Dry & liquid bulk, pulp, RORO (i.e. cars), people (cruises), par-
celing, project cargo
- Exposure = responsible shipping, but risk for consumer facing
markets
- Minimizing risk:
 - Escape strategy
 - Wide variety of applications, multipurpose
 - Reliable track record
 - No hidden costs



'Hybrid Shipping, not if, but when?'

Read more in the factsheets.

This presentations ends with a movie/animation of the Ecoliner, which concludes that the cost reduction of the Ecoliner is 35% in comparison with a conventional ship.



It is time to finish the project. In October 2012 we started this project with emission free shipped rum and we will finish the project with the same rum. Please take your SAIL water bottle and twist of the cup.



CHEERS!



North Sea Region, Carsten Westerholt:

Please register for the North Sea Conference 2015 in Assen, The Netherlands 16-18 June.

The new Programme was submitted on 29 October 2014

- 27 April – 30 June 2015: First call for applications – Expressions of Interests and Final Applications
- Shortly before the summer break: Programme approval
- November 2015: Steering Committee meeting No 1
- December 2015: Call 2 – Expression of Interest Updates and registration www.northsearegion.eu

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University of the south Pacific of Fiji islands, Alison Newell. For the Fiji islands with 330 islands (25,000 in the South Pacific) sailing is essential. All the transport is done by boats. Nowadays all ships are fossil fuel driven, this is strange because we have a long history of sailing. By colonization by Britain traditional ships were forbidden, so culture became heritage. This gave Britain the opportunity to control the movements. To get information about shipping, I need to go to Britain!
40% of the national budget is spent on fuels and 80% of the company costs of the operators is fuel. When a ship is out of fuel, of course sails are essential. A new problem is the problem with the coral, because of the big ships passing the islands.

“Oceania is vast, Oceania is expanding, Oceania is hospitable and generous, Oceania is humanity rising from the depths of brine and regions of fire deeper still, Oceania is us. We are the sea, we are the ocean, we must wake up to this ancient truth.” Epeli Hau’ofa, 1993

The EU was going to subsidize 3 new sailing ships for Fiji, but because of lower fuel prices they funded only one ship. This is a real pity. This project was similar to the SAIL project.

Key issue is not the technology sharing. Cultural pride is key to uptake of wind powered sea transport. Important is proof of concept, multi sectorial and collaboration.



Sjoerd Hupkes Wijnstra, environmental strategist at a large Dutch ship operating company is speaking on his own behalf about wind-hybrid transport opportunities from a ship owner’s perspective. Preconditions for uptake of wind-auxiliary propulsion. He starts with asking about the similarities between the catholic church and shipping companies: they survived for 2000 years, are conservative and rich. But shipping is fashion and the companies don’t realize that. He recognizes this statement.

For the last 100 years costs and pricing is dominating: You will win the competition if you have the lowest offer. But 50% of the operating costs is fuel and a 30% fuel reduction is huge and makes your ship very compatible. Conservative paid off for a very long time and they will go for short time profit. For instance it took them 25 years to make container shipping popular. So you need a long breath to be a first mover.

Some advice from Mr. Wijnstra for hybrid shipping:

- 5% reduction by stabilizer vin will only work at an optimum speed! This is an advantage for your sailing ships.
- Owning and managing ship owners are willing to invest in the ships. You should focus on that.
- Regulations are behind the facts and development. Accept it the way it is and find own route. Save your energy to fight the regulations and focus on the frontrunners
- Keep in mind that you might have to re-educate your crew. This costs money.
- Focus on the cost advantage. If the ship is not cost efficient, it will not going to happen.
- Adapt the ship to the trade. First the ship and then look for trade: is the wrong way around.
- Consider yourself to be conservative and realize it takes long time to change.

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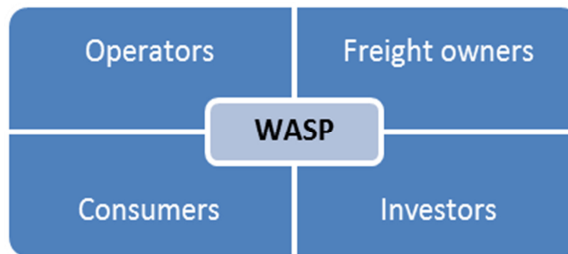


Jorne Langelaan founder of [Fairtransport cargo and shipping](#)

Fairtransport are expanding with a new ship this Summer. We know already that sailing cargo is viable! One of our shareholders is a retired economist. He invested in Treshombres and at the same time into a motor vessel. Now he wished he invested all his money in us, because the motor vessel company is bankrupted and TresHombres is paying out this year.

Improbattle

The final meeting was closed with a role playing game. All partners and guests got the chance to meet an operator, a freight owner of bananas, consumers like you and me and an investor in the cargo shipping business. What is their goal, motivation and what are they thinking about? Of course things are slightly different than you originally thought.



B.Feenstra