



Shipbuilding and leisure boatbuilding



# NAVIGATIONAL AIDS FOR SAIL/ENGINE-POWERED SHIPS

The OPERAH project involves developing fleet operational management tools based on the hybrid sail/engine system of propulsion. This system best responds to today's issues concerning reducing energy consumption and securing a more sustainable navy. The sail-powered method of propulsion has already proved its usefulness as an addition to the fossil fuel engine. Its main problem is the unpredictability of its power source, namely the wind. To tackle this issue, OPERAH is aiming to place on the market both tools for optimizing dual sail/engine propulsion and for navigational routing and analysis to provide operators with all the elements required for the optimum, costeffective use of a hybrid powered fleet of ships. Lastly, OPERAH intends to develop new organizational models incorporating the training required for this new type of navigation, which involves new technological tools and procedures for improving safety and energy performance in line with existing standards. OPERAH is targeting the passenger transport market for cruise ships such as Club Med II. a liner of 187 metres.

## **Partners**

## Companies

V.Ships France, Levallois-Perret [Project Developer] Jeumont Drives Systems, Étupes MaxSea International, Bidart Mer Agitée, La Forêt-Fouesnant Mer Forte, La Forêt-Fouesnant MTS, Montbéliard

#### Research center

UBO, Laboratoire STICC, Brest

## Funder

Financé sans aides publiques

### Labelisation

22/11/2013

## Overall budget

3 709 K€