



PT02_PDP1

Acquisition and Fitting of a Dynamic Position (DP) vessel equipped with marine surveying equipment

Nuno Lourenço
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The Framework:

EEA Financial Mechanism 2009-2014



Programme Area 1: Integrated Marine and Inland Water Management

Programme: Integrated Marine and Coastal Management

Objective: **Achieve Good environmental status** in European marine and coastal areas

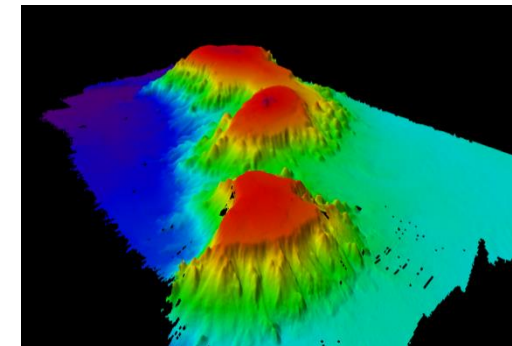
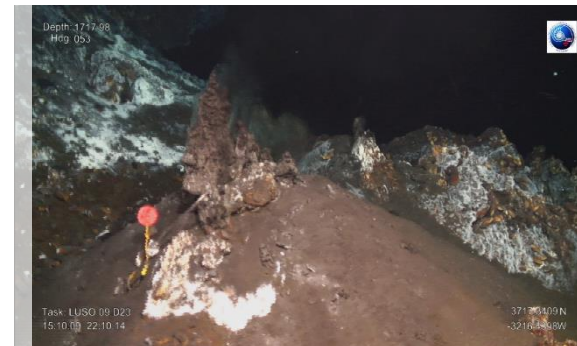
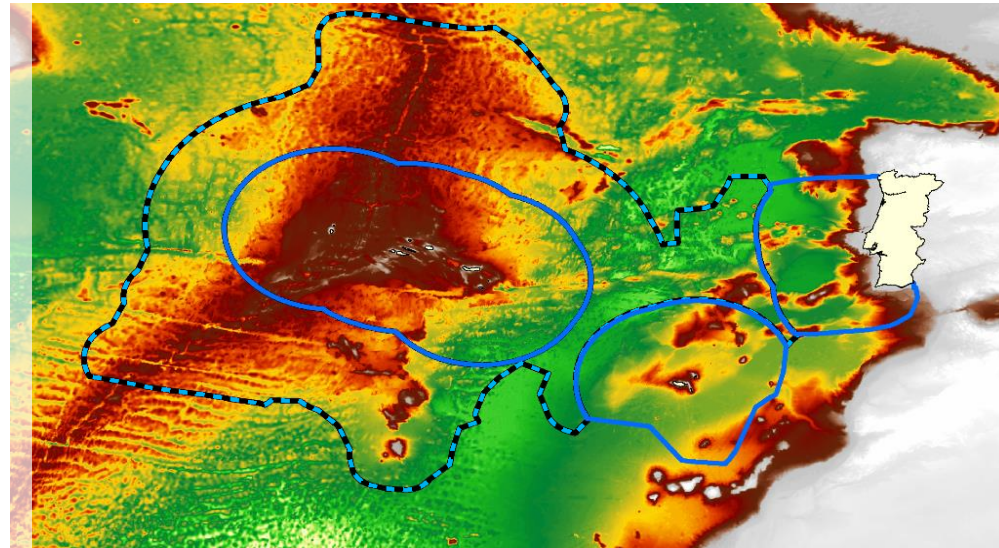
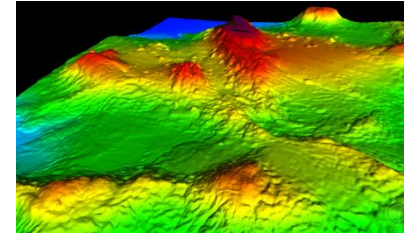
Expected Outcomes:

- Integrated management of marine resources
- **Improved monitoring of marine waters**
- **Increased capacity for assessing and predicting environmental status in marine waters**
- Increased awareness of and education in integrated marine management

Predefined Projects:

- 1) **Acquisition and fitting of a DP Vessel equipped with marine surveying equipment.**

PROJECT DRIVERS:



- Replace N/I Noruega and increase national capacity
- GES in all marine water (EU MSFD monitoring programs)
- Evaluation of living resources (EU DCF)
- Exploration of the deep and ultra-deep (NOS 2014-2020)
- Promote Knowledge based management (MSP)
- Exploration of non living resources and bioprospection

The Project:

- Budget ~12.9 M€ (11M€ EEA, 1.9 M€ National Budget)
- Project Promoter IPMA; Donor Project Partner: IMR (Norway)
- Two main development phases:
 - 1st phase: **Acquisition** of a vessel (international tender)
 - 2nd phase: **Refitting** of a vessel and fitting of scientific equipment (International tender)

Project status:

Budget execution: 9.5 M (74%)

- *Phase one: terminated*
- *Phase two: Ongoing. International tender for the refit issued (17th may)*

Phase one: vessel acquisition (international Tender)

- ❑ *On site inspections of proposed vessels (with IMR)*
- ❑ *Feasibility study for the conversion*
- ❑ *Technical Inspections of main engines, generators and shaft*



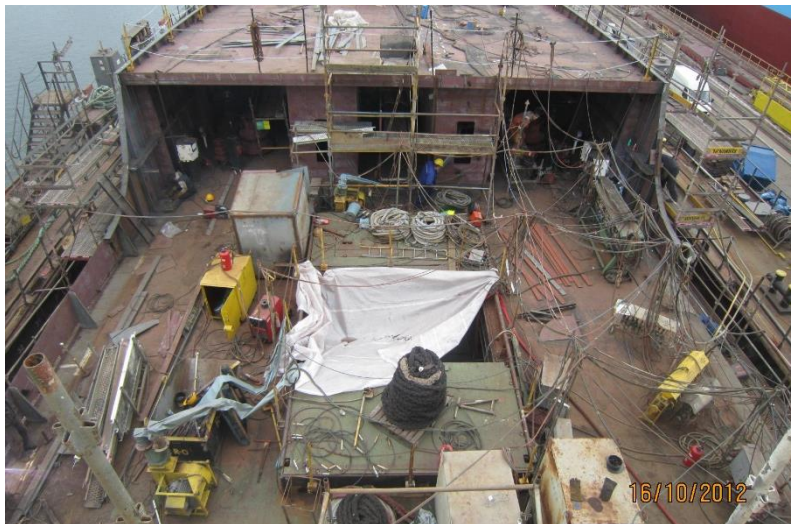
International Tender: Winning proposal

R/V Kommandor Calum (Hays Ships)

Now **N/I MAR PORTUGAL**



The Refit (2013):



The Project: Changing Paradigm

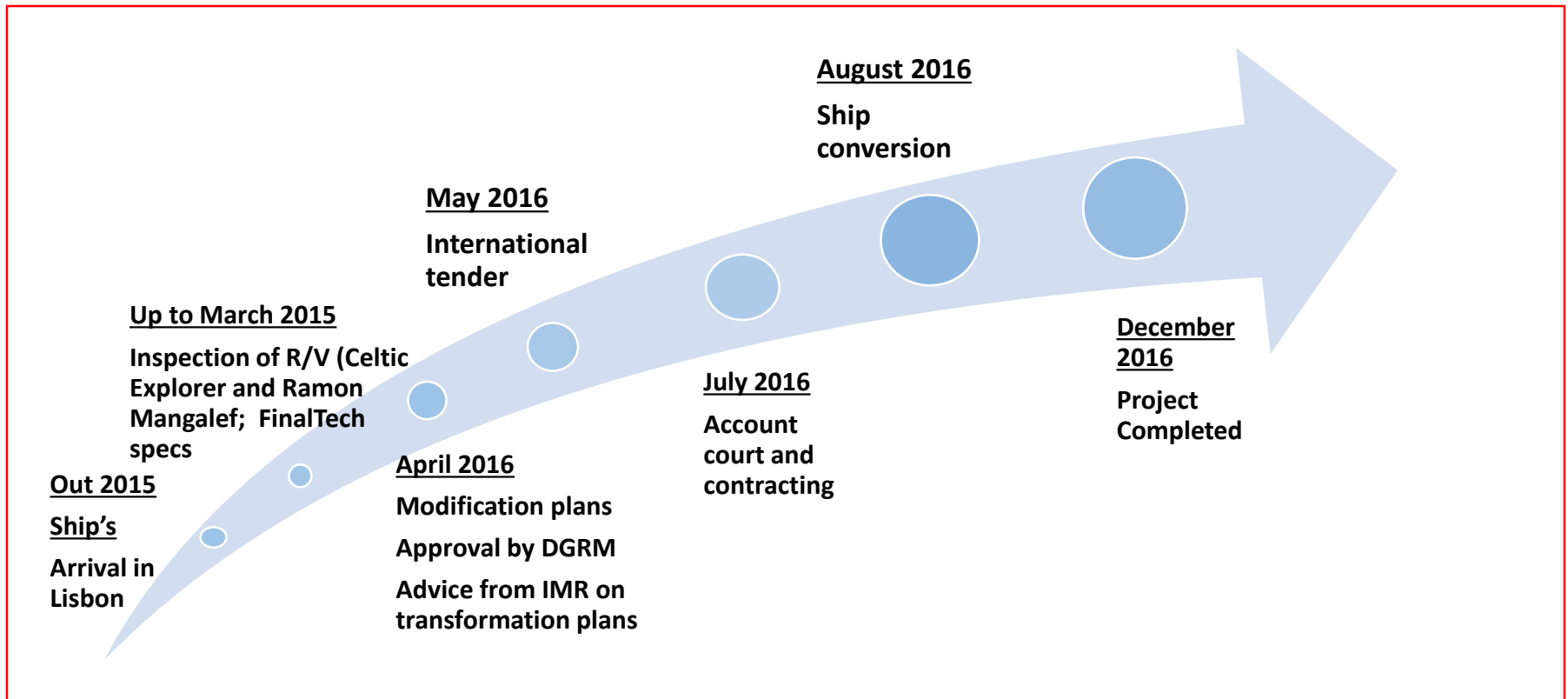
Key Concepts :

- **Multipurpose (i.e. one to many (one cruise -multiproject, multidisciplinary, multitask));**
- **Versatile management of working space (i.e.Adaptable to mission);**
- **From shallow (coastal) to ultra-deep (open ocean);**
- **High autonomy;**
- **High hotel capacity**
- **Low acquisition cost and low running costs**



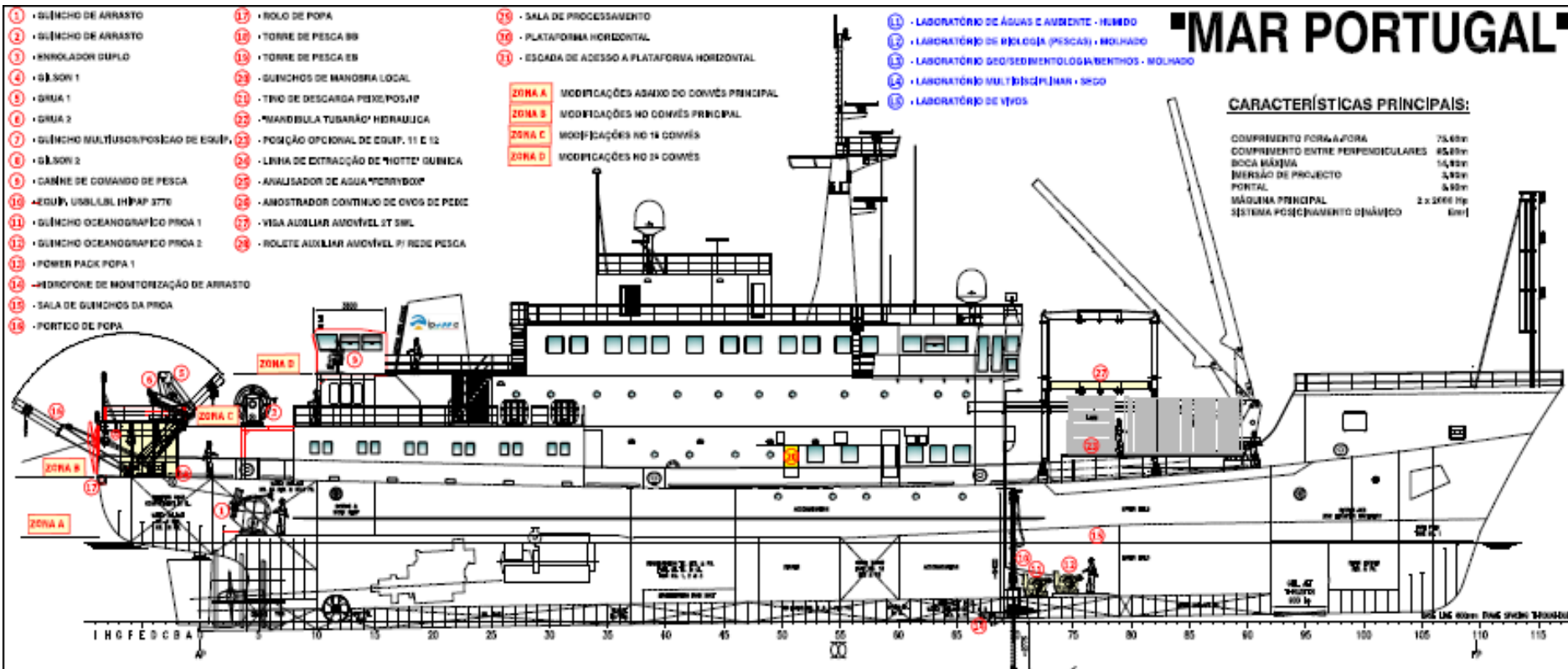
**Kommandor Calum:
Arrival in Lisbon
October 2015**

Phase 2 Timeline: Vessel Transformation



Phase 2: Vessel Transformation Plans

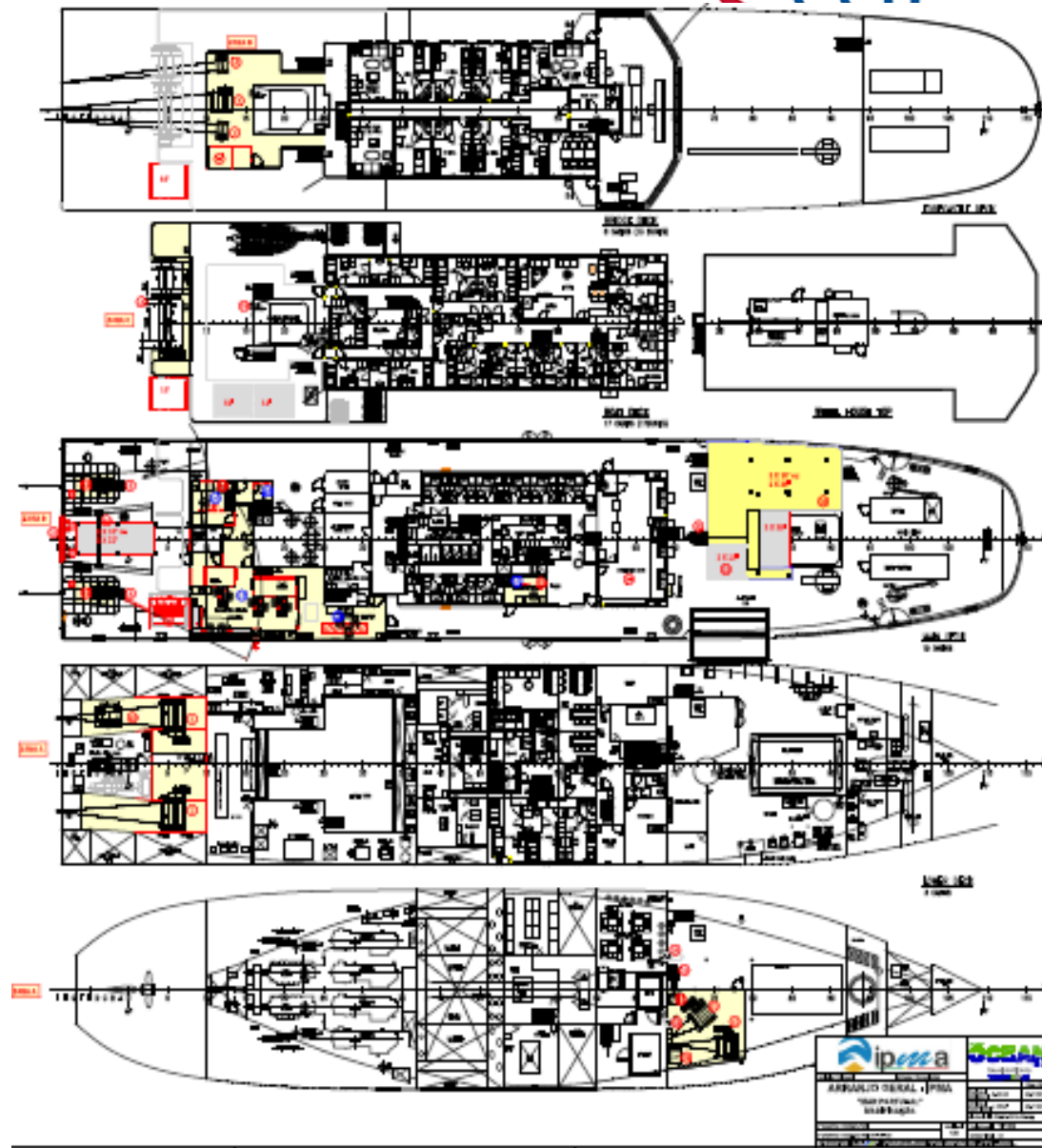
International Tender: Base price 2 M€



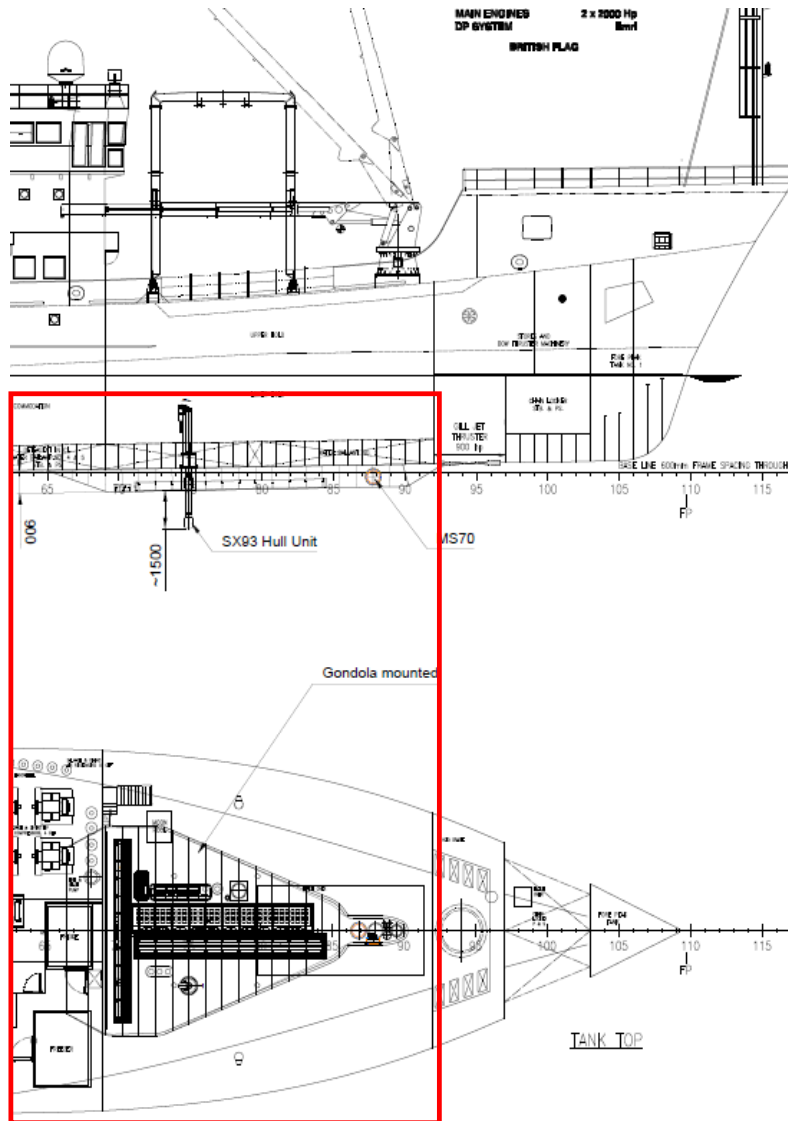
Phase 2: Vessel Transformation Plans

Main Transformations:

- A-Frame
- 2 Trawl winches
- 2 Gilson winches
- 2 cranes
- 3 netdrums
- Winch control room
- 5 lab spaces
- False deck (ROV Op's)
- 3 Hydrographic whiches
- (2 on bow and one multipurpose (stern))
- 2 deck extensions
- Moonpole hydraulic pole
- Sci Equipment**
- HIPAP100 (EMEPC)
- Ferrybox
- Scanmar or equivalent
- 20' lab (Creminer – UL)
- EK60 and shallow MB



The Future: Phase 3 (beyond the project)



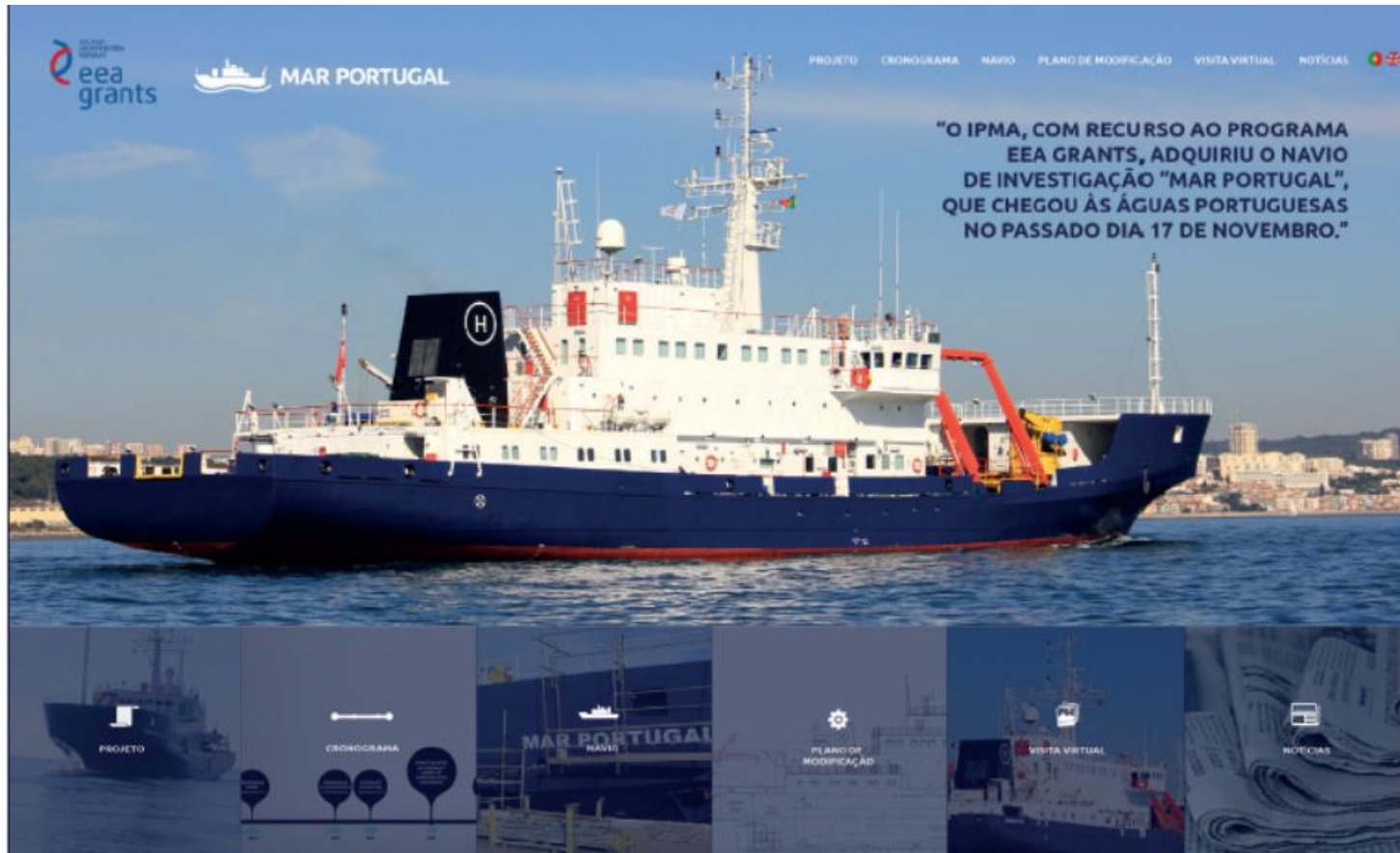
Hull Mountable Systems

Estimated Budget 3.5 to 5 M€

Equipment:

- Gondola Fitting
- Omnidirectional sonar
- Fisheries Multibeam
- EK80 or equivalent (5 frequencies)
- SBP
- Multibeam bathymetry
- ADCP?

NEW PROJECT WEBSITE (testing phase)



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Velocidade Máxima: 12 Nós
Comprimento: 75 metros
Largura: 15 metros
Calado: 4,5 metros
Investigadores e Equipas Técnicas: 30
Tonelagem Bruta: 500





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The Framework: Existing Capacity (or a tribute to NI Noruega)

- 1978 Norway financed acquisition of NI Noruega (trawling vessel, with focus on fisheries research);
- During a 37 years comission the NI Noruega, has served well the Portuguese Government and the Marine R&D community, collecting multidisciplinary data with emphasis on fisheries;
- Since its recovery in 2012 she has sailed between 130 and 155 days per year executing 100% of the Data Collection Framework (DCF) fisheries program;
- In 2014 she was used to a 3D high resolution MCS survey in the Tagus Delta.



However....

The Framework: The need of a new vessel



Despite its maintenance and upgrade since 2012 NI Noruega is largely an:

- **Outdated Vessel**
- **With Limited operational range**
- **With Limited depth range**
- **With Limited versatility; One on one (one cruise –one project)**

The Project: Phase one vessel acquisition



Original Vessel:

Boom and Mooring Vessel