

**Iceland**   
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Evento de Encerramento do Programa PT02

# Gestão Integrada das Águas Marinhas e Costeiras “Resultados Alcançados”

6 de dezembro - Lisboa

# Pre-Defined Project DP1

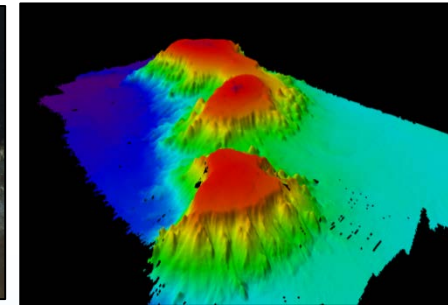
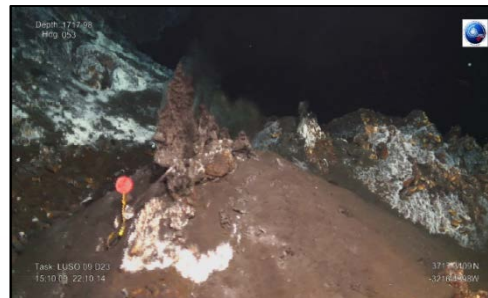
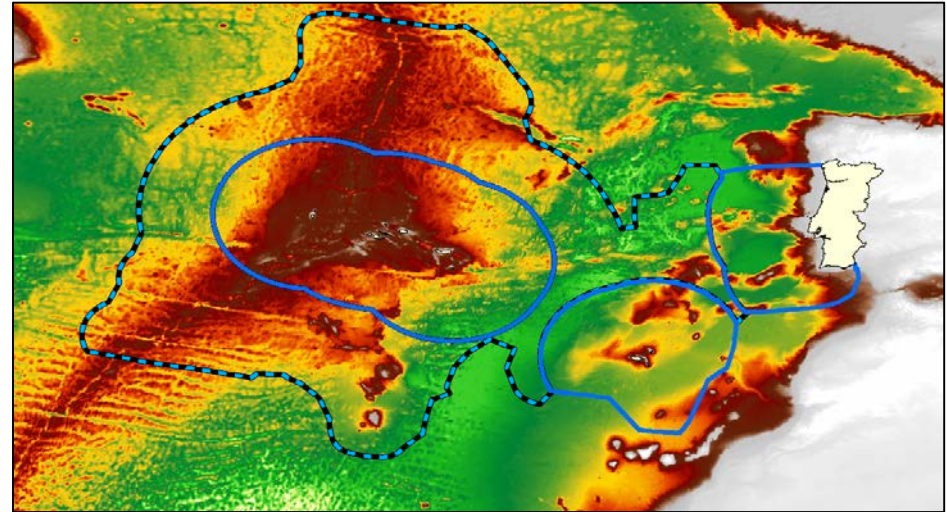
## Acquisition and Fitting of a Dynamic Position (DP) Vessel Equipped with Marine Surveying Equipment

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## Project drivers:

- Replace RV Noruega and increase national marine research capacity
- GES in all marine water (EU MSFD monitoring programs)
- Assess living resources (EU DCF); non living resources and bioprospection (NOS 2014-2020)
- Increase Marine Knowledge (MSP)
- Increase international cooperation (EU, EFTA and CPLP)
- Support National (AIR, Atlantic Observatory, EMSO-PT, OCEANTECH, amongst others) and international (Eurofleets 3) initiatives



## 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:

**Phase 1:** Acquisition of a vessel (International tender)

**Phase 2:** Refitting and fitting of a vessel equipped scientific equipment (International tender)

## Project Final Execution:

Budget execution: 12.2 M (94.5%)

**Phase 1:** terminated

**Phase 2:** Ongoing. Vessel is being terminated in Estaleiros de Peniche (ENP)



## Phase 1: Vessel acquisition

- .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

#### RV Kommandor Calum (Hays Ships)



Credits: Hays Ships

## The Refit (2013)

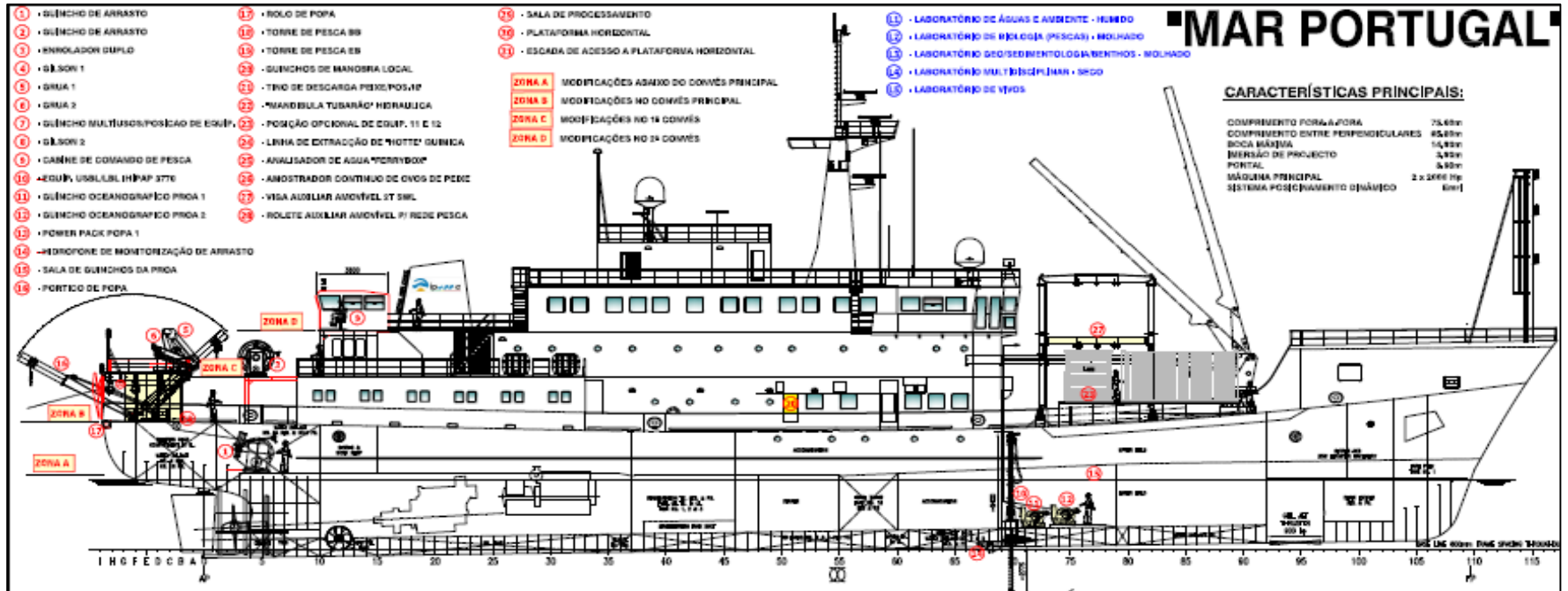


Credits: Hays Ships



## Phase 2: Vessel refit (2017)

### International tender: base price 2M€



1st International tender: 2016: no eligible applications

2nd international tender: nov2016

Contract awarded and into force 22nd march 2017

## Phase 2: Vessel refit (2017)

### Main Transformations

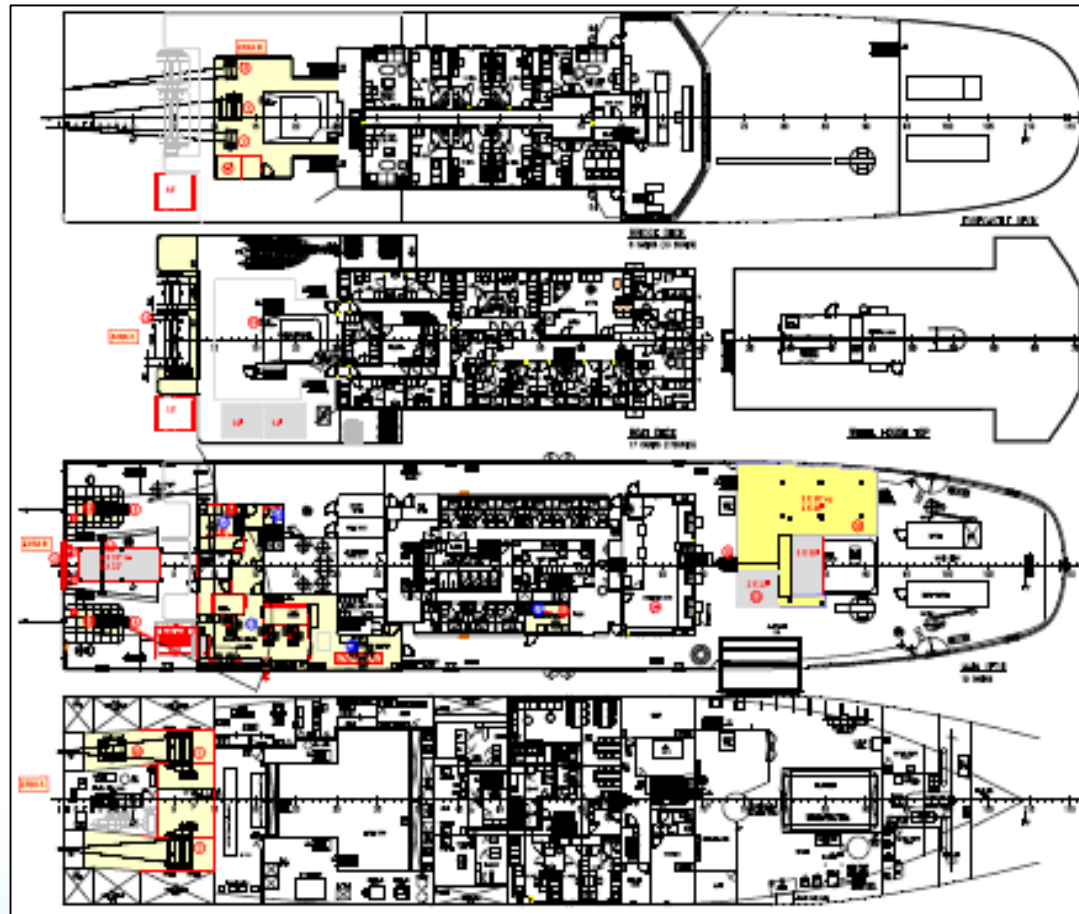
- A-Frame
- 2 Trawl winches
- 2 Gilson winches
- 2 cranes
- 2 netdrums
- 3 lab spaces
- False deck (ROV Op's)
- 2 deck extensions
- Moonpole hydraulic pole

### Sci Equipment

- HIPAP100 (EMEPC)
- Scanmar or equivalent
- 20' lab (Creminer – UL)

### Tasks:

- Designs approved by class
- Production drawings
- Solid works simulations
- Stability calculations (Class and portuguese administration)
- Shipyard works





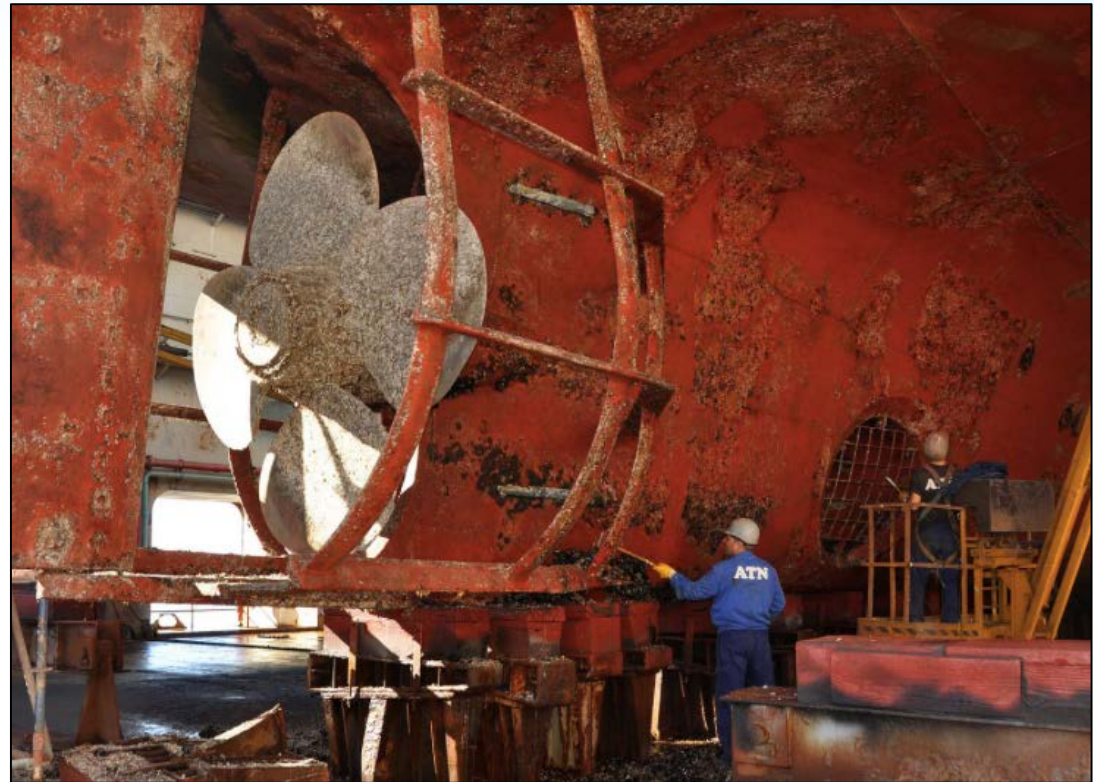
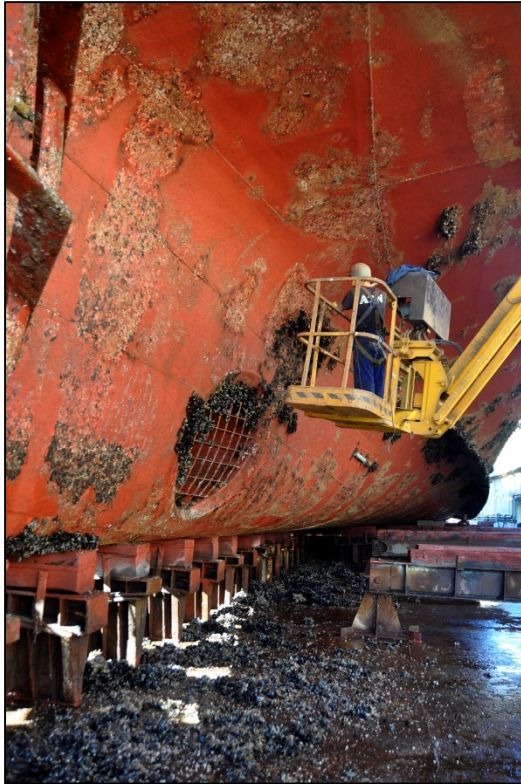
## Phase 2: Vessel refit (2017)

### Estaleiros Navais de Peniche and Metalships (Vigo)





## Phase 2: Vessel refit (2017)



- Hull Maintenance and painting
- Propeller maintenance
- Bottom valves maintenance

## Phase 2: Vessel refit (2017)



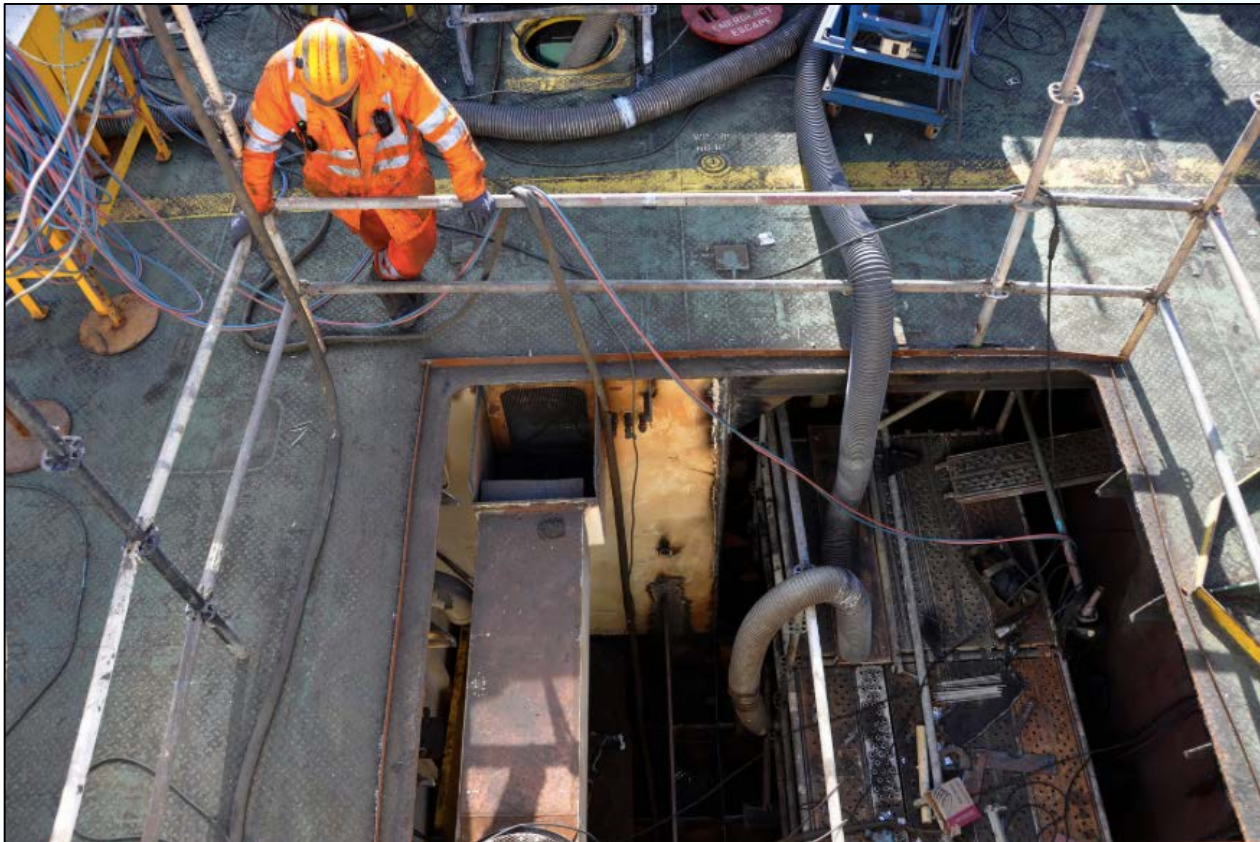


## Phase 2: Vessel refit (2017)



Winch and HPU supply (Ibercisa)

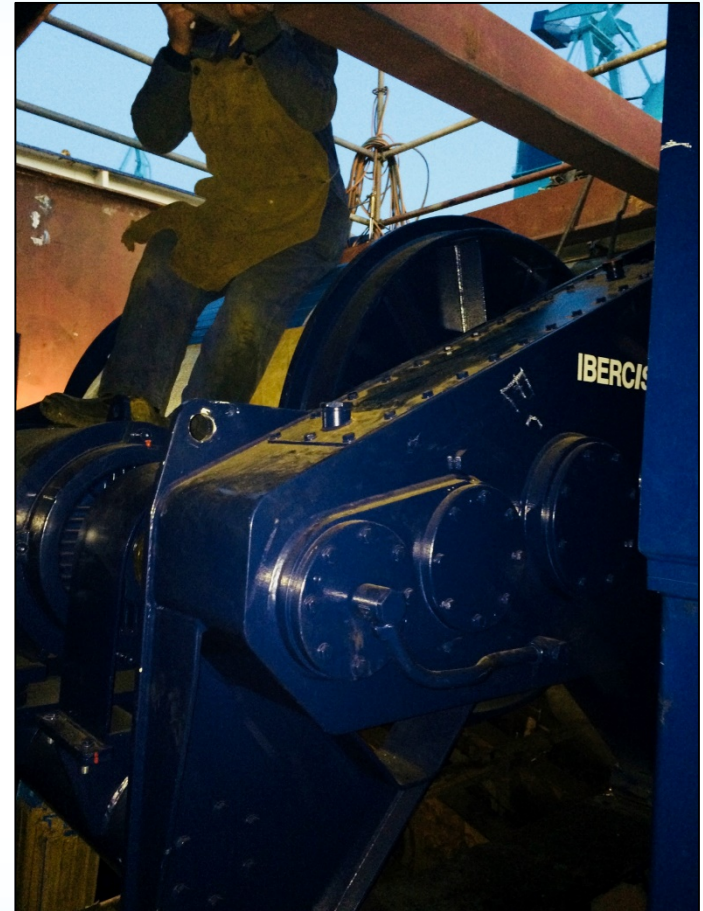
## Phase 2: Vessel refit (2017)



Trawl Winch fitting



## Phase 2: Vessel refit (2017)



Trawl Winch fitting



## Phase 2: Vessel refit (2017)





## Phase 2: Vessel refit (2017)



Fishing and multipurpose labs preparation

## Phase 2: Vessel refit (2017)

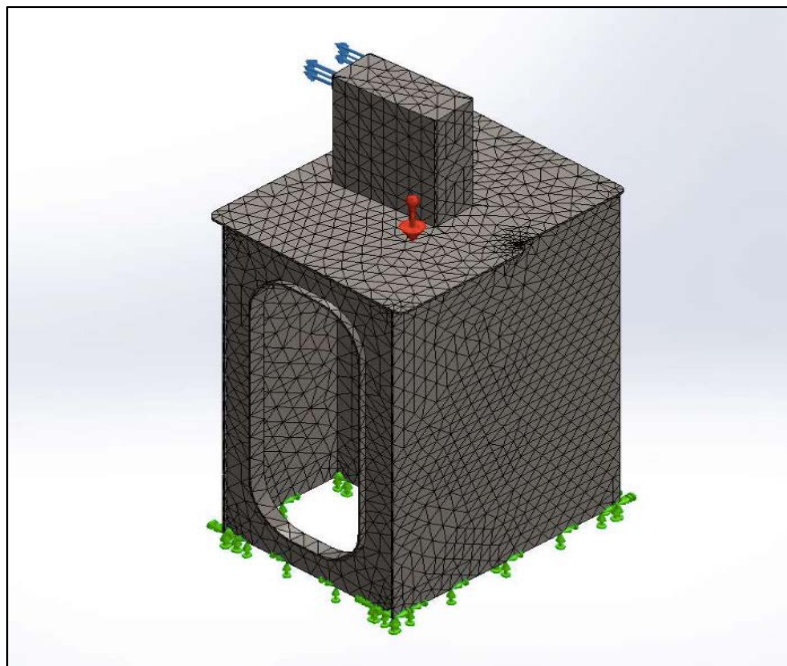
### Estaleiros Navais de Peniche



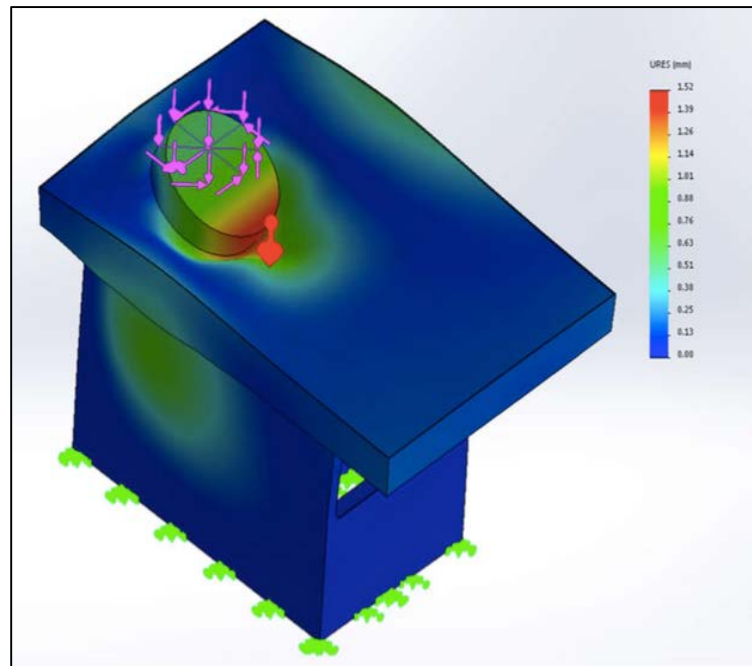


## Phase 2: Vessel refit (2017)

Solid works - modelação elementos finitos, das tensões provocadas pelos aparelhos de força

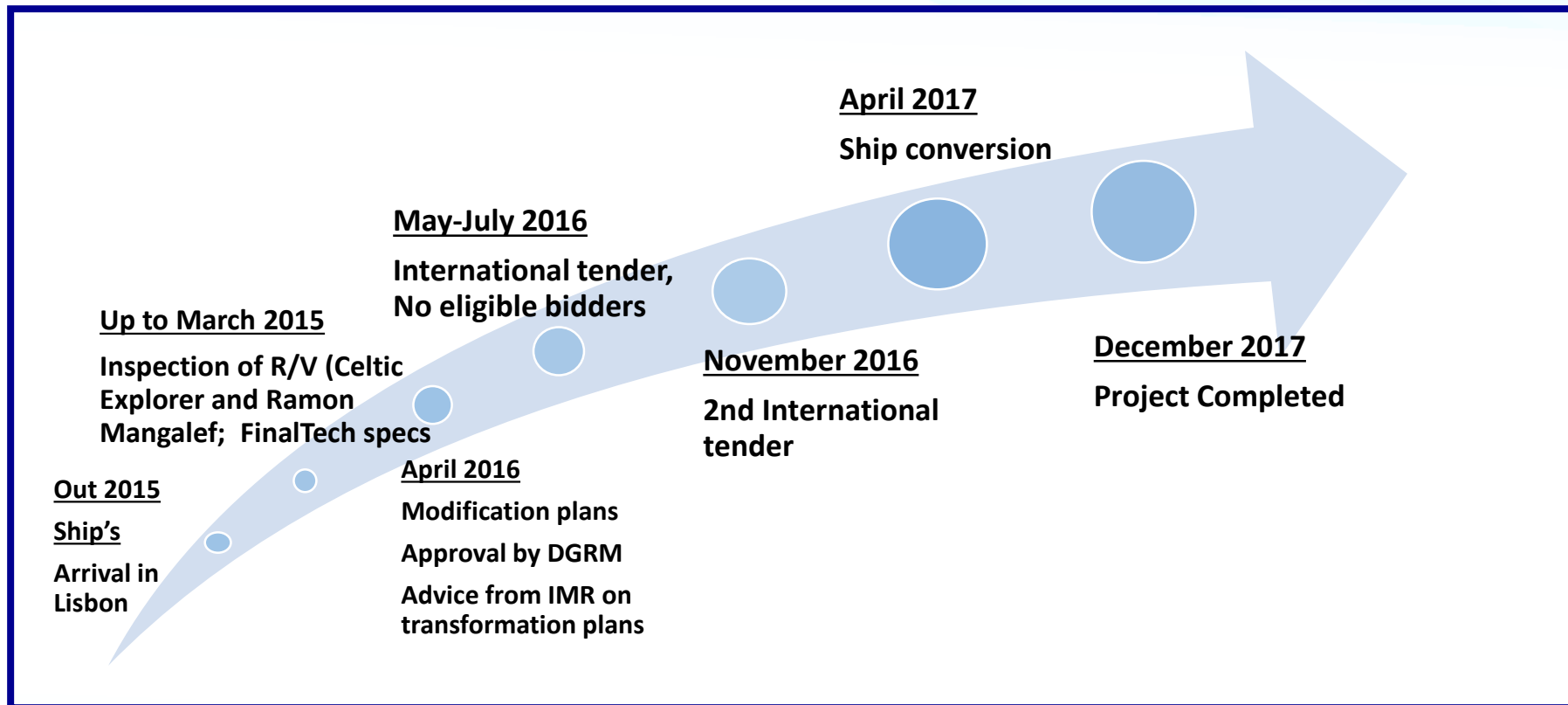


Gilson tower



Cranes supporting elements

## Phase 2: Timeline





## The Project: Changing Paradigm

### Key Concepts for the new vessel

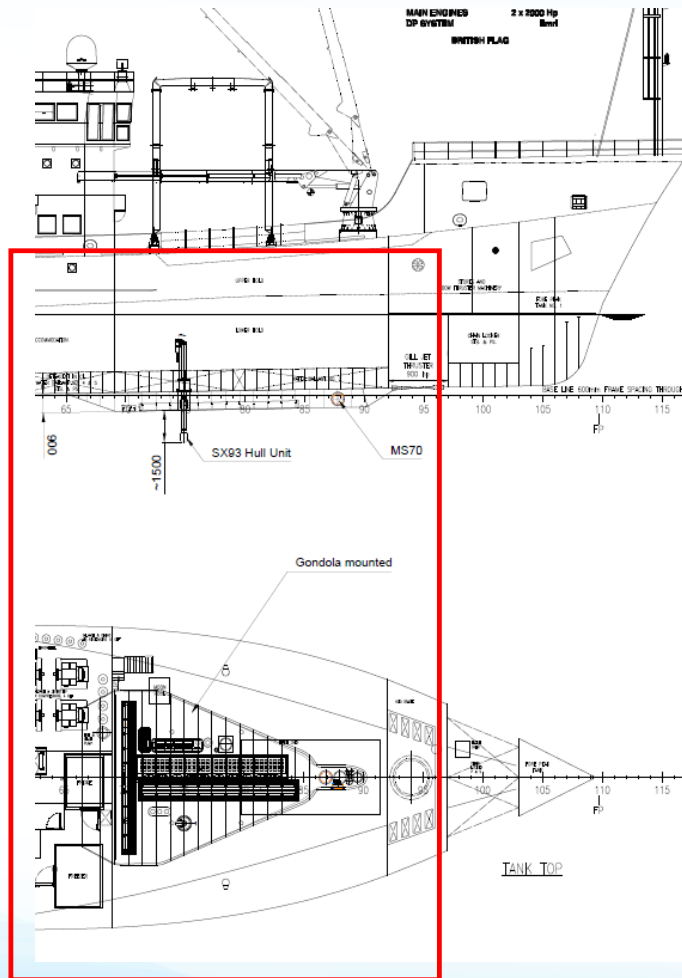
- Multipurpose (i.e. one to many: one cruise -multiproject, multidisciplinary, multitask);
- Versatile management of working space (i.e. adaptable to mission);
- From shallow (coastal) to ultra-deep (open ocean);
- High autonomy;
- High hotel capacity;
- Low acquisition cost and low running costs.

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## The Future: beyond the project



### Hull Mountable Systems

Possible predefined project EEA 2014-2020  
Estimated Budget: 2 M€

#### Equipment:

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

## RV Mar Portugal

**A new platform to conduct research on the Atlantic Ocean to the service of the national and international S&T community, contributing to increase scientific knowledge, leading to more informed policies and improving the management of the maritime space and its resources.**





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