



Research vessel "Mar Portugal"

Mafalda Carapuço | IPMA

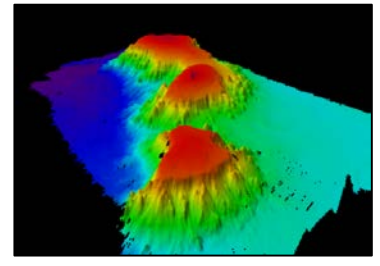
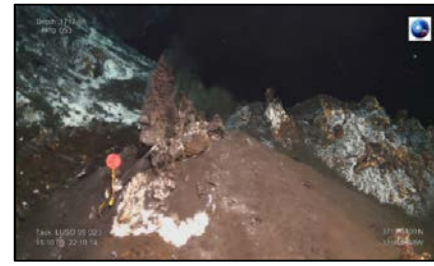
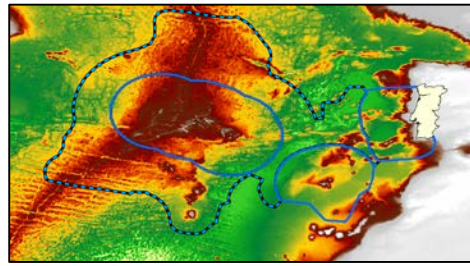
Coordinator of the Research Vessels Group

20th ERVO Annual Meeting

University of Malta, La Valletta | 12-14 June 2018

Project drivers

- ❖ Increase IPMA presence in the Ocean
- ❖ Assess living resources and non-living resources and bioprospection
- ❖ Increase international cooperation (EU, EFTA and CPLP)
- ❖ Support national and international initiatives (Atlantic Observatory, EMSO-PT, OCEANTECH, Eurofleets)



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 and low running costs

The project

- ❖ Budget ~12.9 M€ (11M€ EEA | 1.9 M€ National Budget)
- ❖ Project Promoter: IPMA (Portugal)
- ❖ Donor Project Partner: IMR (Norway)
- ❖ Two main development phases (two international tenders):

Phase 1: Acquisition of a vessel

Phase 2: Vessel refit

Phase 1: Acquisition of a vessel [concluded]

- ❖ 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)

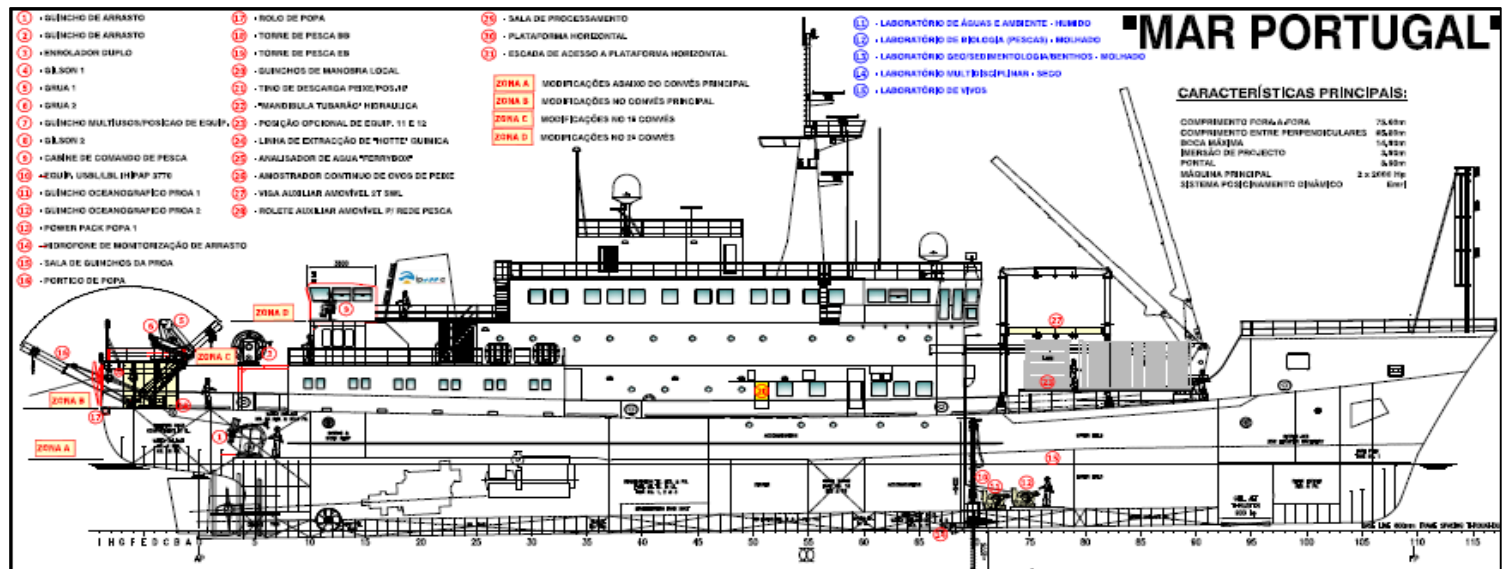


Phase 1: Acquisition of a vessel [concluded]

- ❖ Year 1986, refit 2012
- ❖ Length: 75; Beam: 15 m; Draft: 4.5 m
- ❖ Container capacity: 3x20´´ or 4 x10´´ Iso containers
- ❖ Endurance: 40 days
- ❖ Two four stroke engines and one independent azimuthal
- ❖ 4x400 KW Generator + 1 emergency generator
- ❖ Speed: 13/10 knts (Peak/transit)
- ❖ Seismic compressors
- ❖ Loyd's Register Class 100A1
- ❖ 10 T A Frame and a 30 T crane aft
- ❖ Moon Pool (1.2x1.2m)
- ❖ EMRI DP system (one azimuthal, one tunnel, one main)
- ❖ Accommodations: 45 pax (15 crew 30 Scientific and Technical)
- ❖ Sci facilities: Dry Lab, Wet lab, processing room, conference room
- ❖ Gym, sauna, cinema (dark room), lounge
- ❖ Workshop

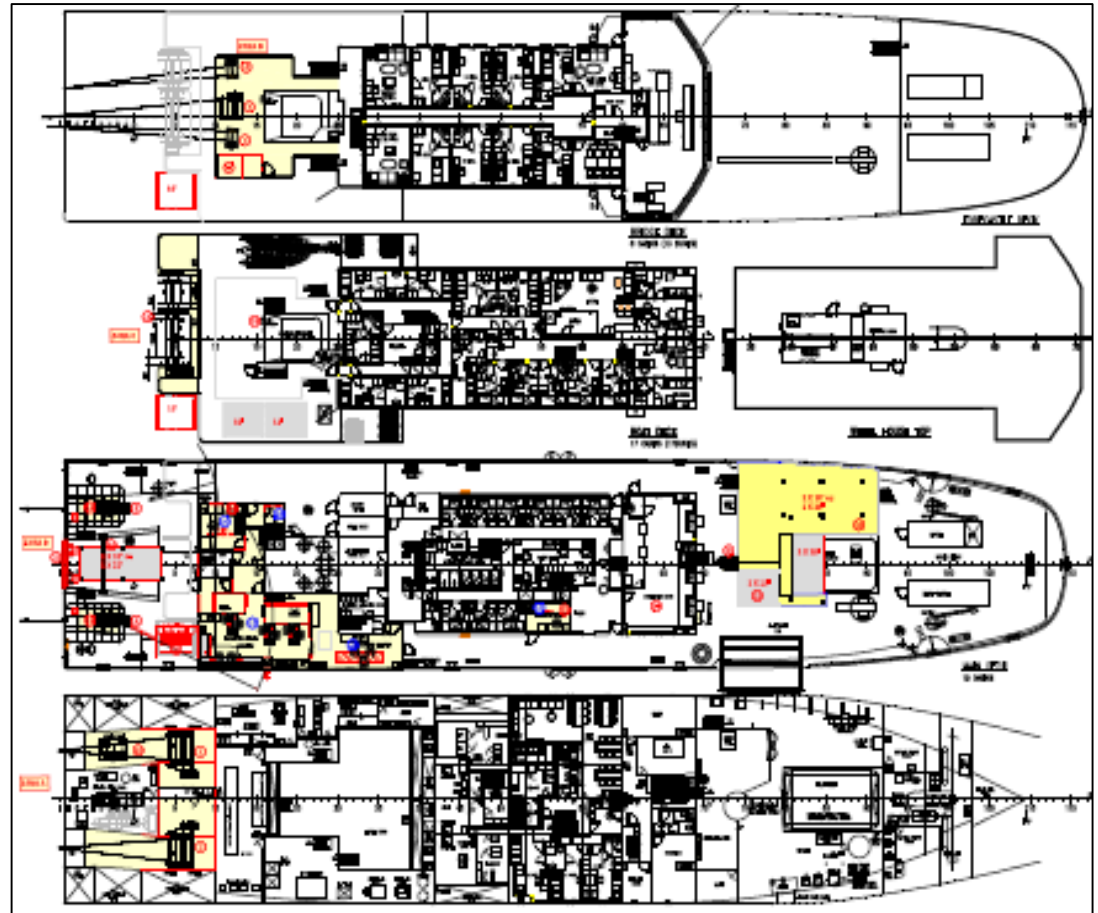
Phase 2: Vessel refit [on going]

- ❖ International tender: base price 2M€
- ❖ 1st International tender: no eligible applications
- ❖ 2nd international tender: November 2016
- ❖ Contract awarded and into force: March 2017



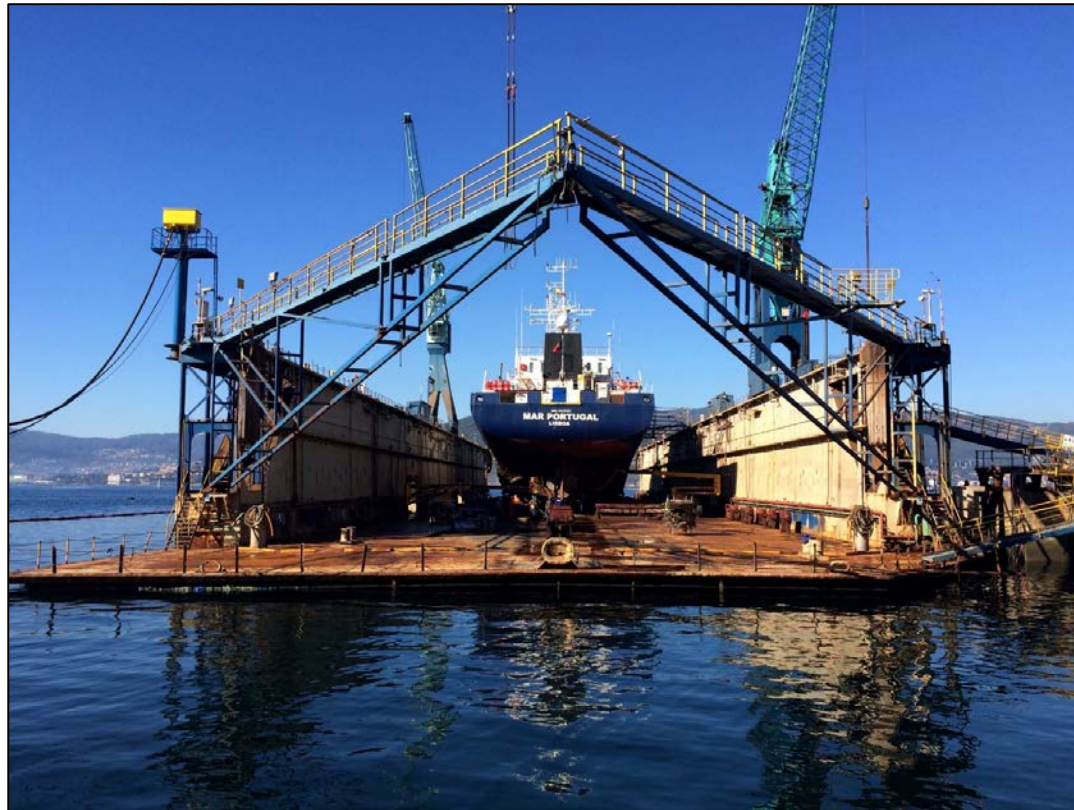
Phase 2: Vessel refit - main transformations

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



Phase 2: Vessel refit [2017-2018]

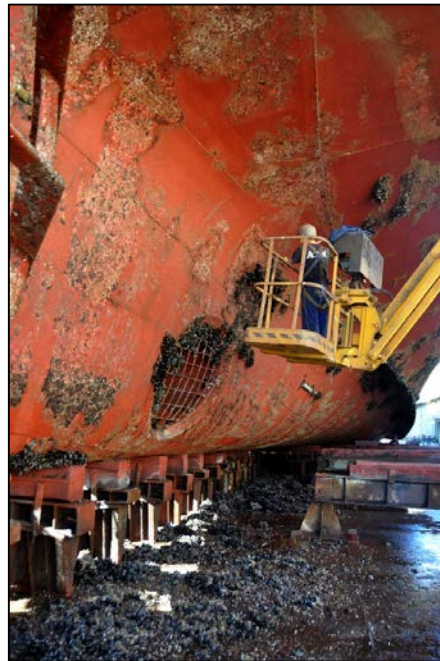
- ❖ Estaleiros Navais de Peniche (Portugal) and Metalships (Vigo)



Phase 2: Vessel refit [2017-2018]

Metalships (Vigo)

- ❖ Hull maintenance and painting
- ❖ Propeller maintenance



Phase 2: Vessel refit [2017-2018]

Metalships (Vigo)

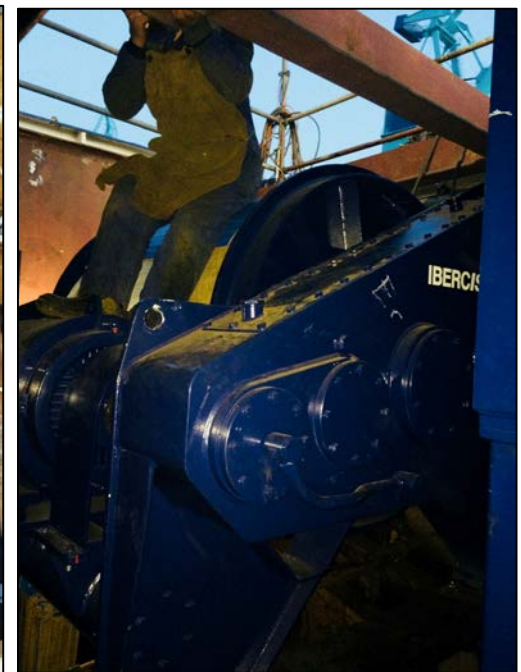
- ❖ Hull maintenance and painting
- ❖ Propeller maintenance



Phase 2: Vessel refit [2017-2018]

Metalships (Vigo)

- ❖ Trawl winch fitting



Phase 2: Vessel refit [2017-2018]

Estaleiros Navais de Peniche

- ❖ A-frame, netdrum and HPU installation (Ibercisa)
- ❖ Laboratories



The future

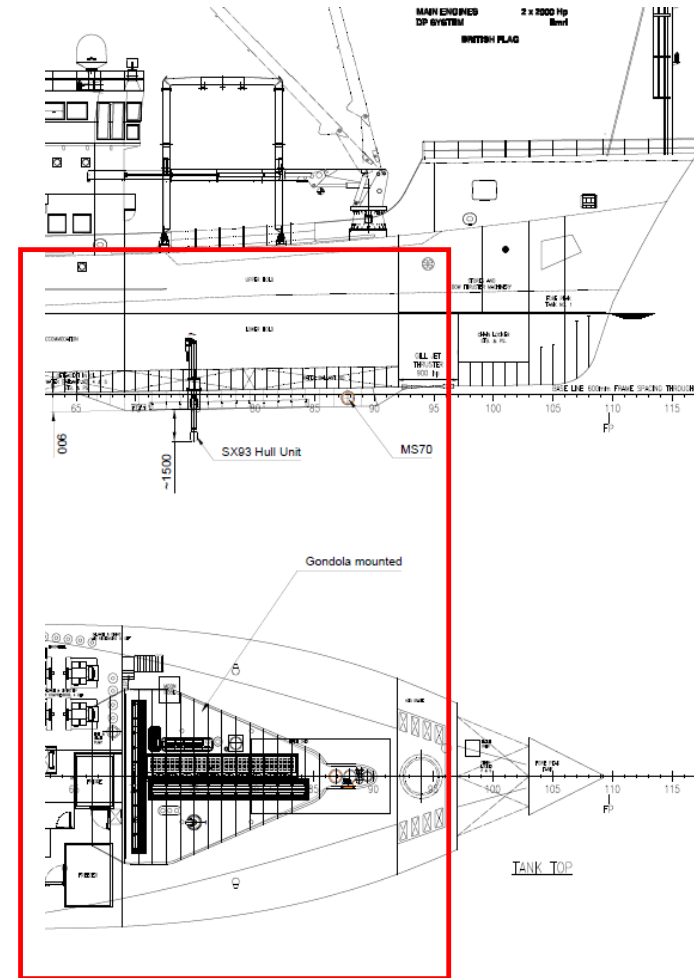
Hull mountable systems

Possible predefined project EEA 2014-2020

Estimated Budget: 2 M€

Equipment

- ❖ Gondola fitting
- ❖ Omnidirectional sonar
- ❖ EK80 or equivalent (5 frequencies)
- ❖ Multibeam bathymetry (maximize resolution down to 3500 km depth vs. maximize coverage at a lower resolution?)
- ❖ ADCP(?)





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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