

# **Towards an alliance of European research fleets**

Project Presentation, June 2009



# Eurofleets

## Towards an alliance of European research fleets

24 marine institutes, universities, foundations and SMEs, + 1 associated partner -from 16 European countries (Member States -4 recent ones- and associated countries- agree to propose together their research vessels, associated equipment, and their know how within the EUROFLEETS I3 project.

1 Ifremer, France

2 AWI, Germany

3 OGS, Italy

4 IEO, Spain

5 HCMR, Greece

6 NERC, U.K.

7 FCT, Portugal

8 MPIMM, Germany

9 CNR, Italy

10 IMS-METU, Turkey

11 GeoEcoMar, Romania

12 MI, Ireland

13 Imares, Netherlands

14 CSIC, Spain

15 RBINS-MUMM, Belgium

16 IOPAS, Poland

17 IPEV, France

18 IO-BAS, Bulgaria

19 MARUM, Germany

20 MARIS, Netherlands

21 EurOcean, Portugal

22 TUT, Estonia

23 VLIZ, Belgium

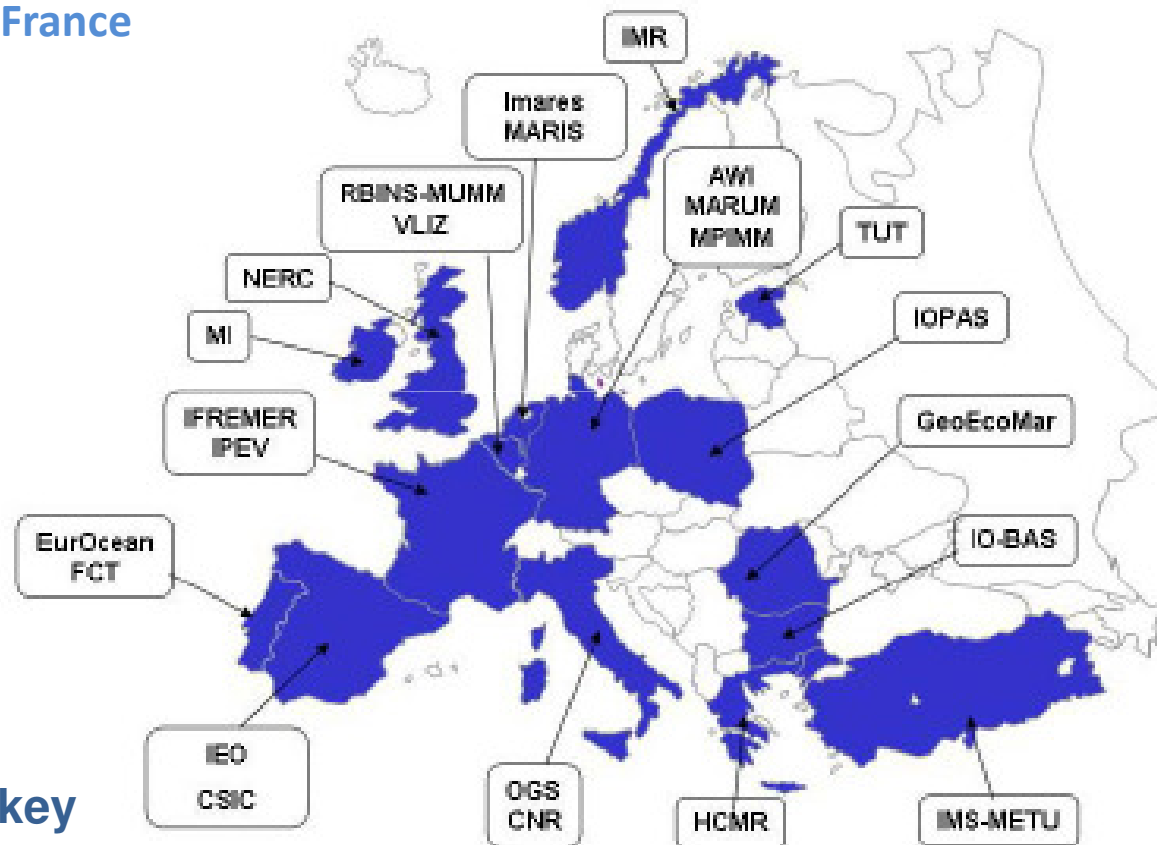
24 IMR, Norway



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EUROFLEETS Coordinator : Ifremer,  
France



A significant group of key marine research actors in Europe, covering all eco-regions



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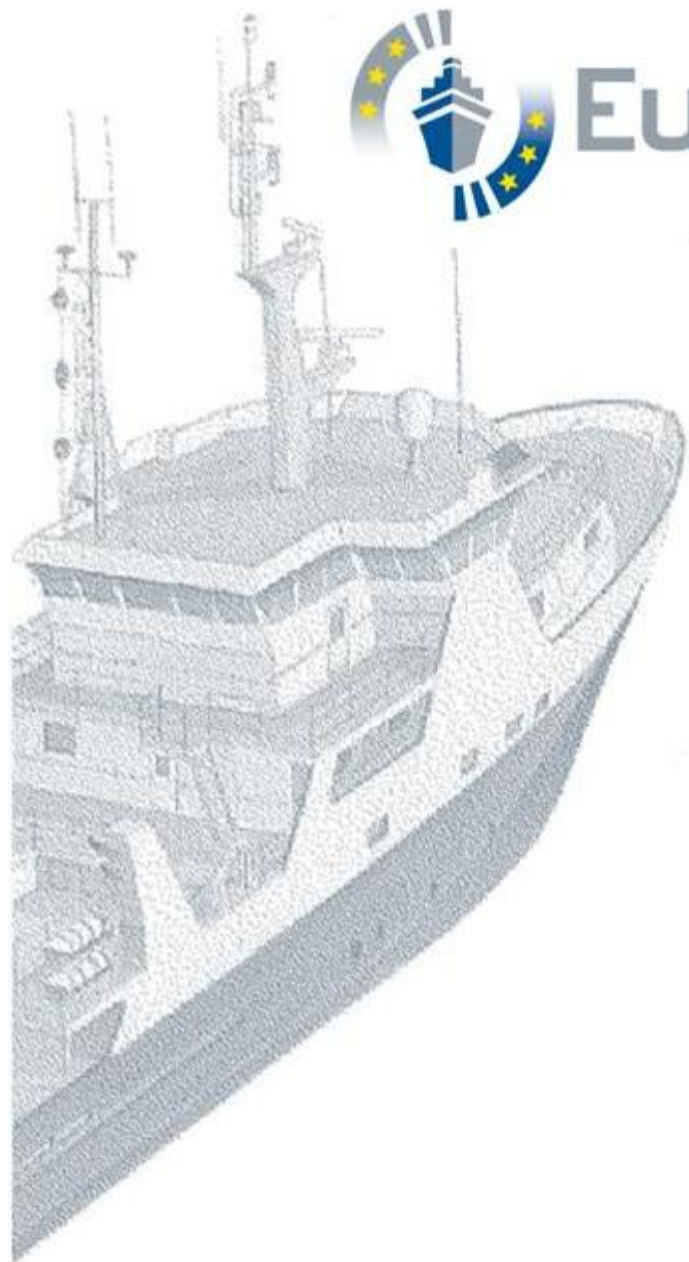
### Concepts and objectives :

Strategic importance for the marine research : despite the development of satellites and floats, research vessels and associated equipment are still irreplaceable in providing access to the sea water column and the sea floor, for monitoring, sampling, service of the seabed observatories that will play a key role in marine sciences in the future.

*« Marine research infrastructures represent an estimated 50% of the running costs » (Academy of Finland, 2003).*

### Coordination is worth :

Fragmentation, together with a lack of cohesion and strategic vision, is still an important weakness of the European marine research infrastructure.







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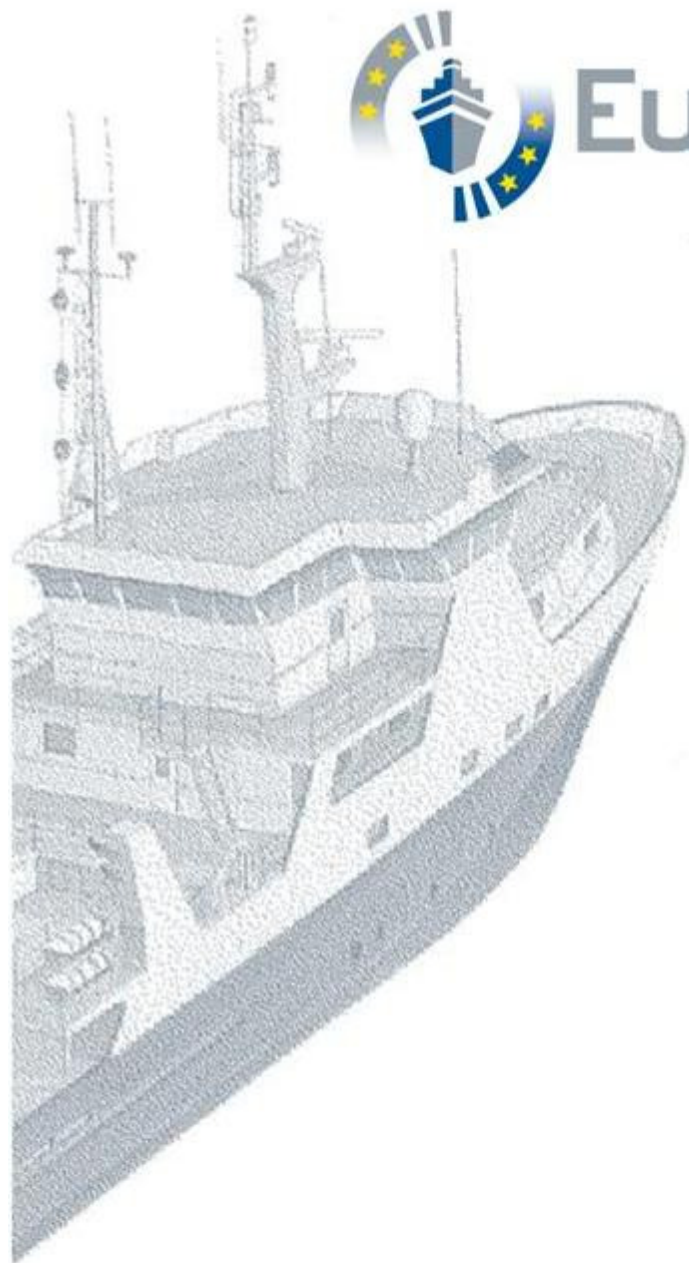
### Concepts and objectives :

#### A project in coherence with the EU policies :

Aberdeen Declaration - A New Deal for Marine and Maritime Science - 22<sup>nd</sup> June 2007 : « *Support for other key infrastructures, including for example ... research fleets which, because of their size and complexity, can only be operated and sustained on a partnership basis* »

Action Plan for a Maritime Policy (EC, Com1278/2,2007) proposes «*to take into consideration the need for supporting specialised infrastructures, research vessels, etc.*»

European Strategy Forum on Research Infrastructures (ESFRI): the EUROFLEETS consortium has the ambition to contribute to the concepts risen by the European Research Area and promoted by the ESFRI.





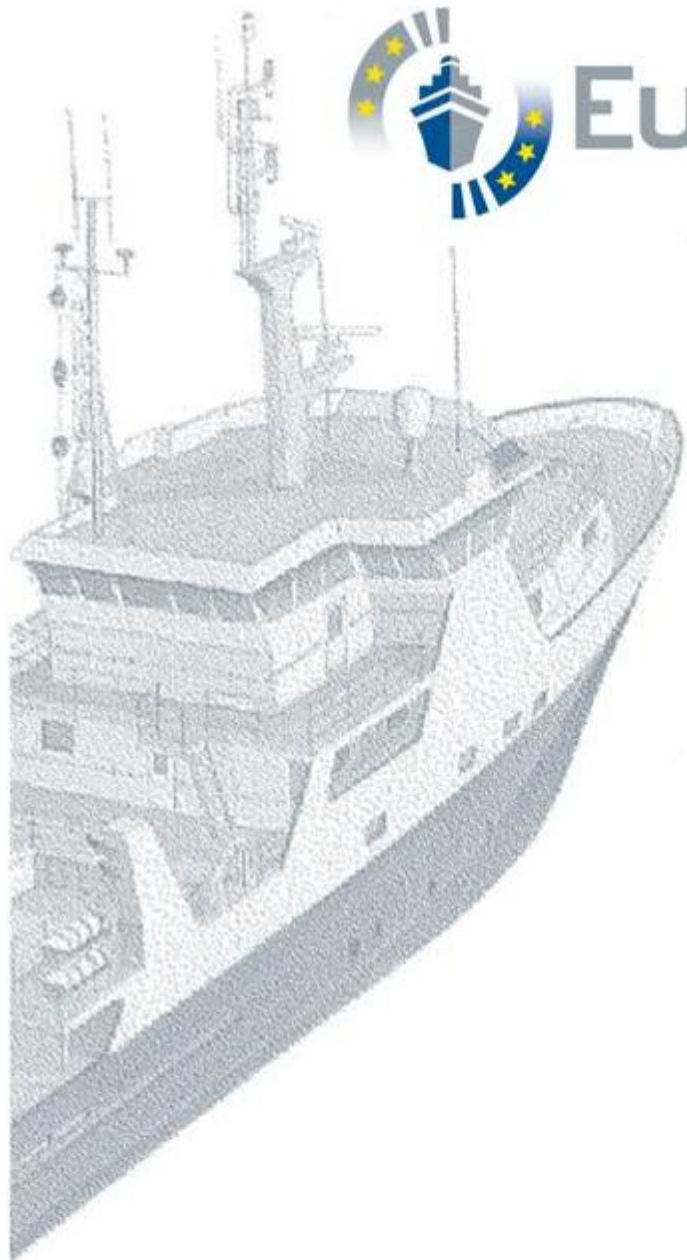
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### Concepts and objectives :

Based on the recommendations of the ESF-Marine Board Position Paper 10 : « *European Ocean Research Fleets – Towards a Common Strategy and Enhanced Use* » (March 2007), and developed in the frame of the MarinERA ERANet project (Oct. 2007), EUROFLEETS aims to :

- define a common strategic vision for European research fleets and associated heavy equipment (e.g. underwater vehicles as ROV and AUV);
- use more efficiently the existing European Ocean/Global and Regional fleets, and develop their interoperability capacities;
- facilitate a wider sharing of knowledge and technologies across fields and between academia and industry;



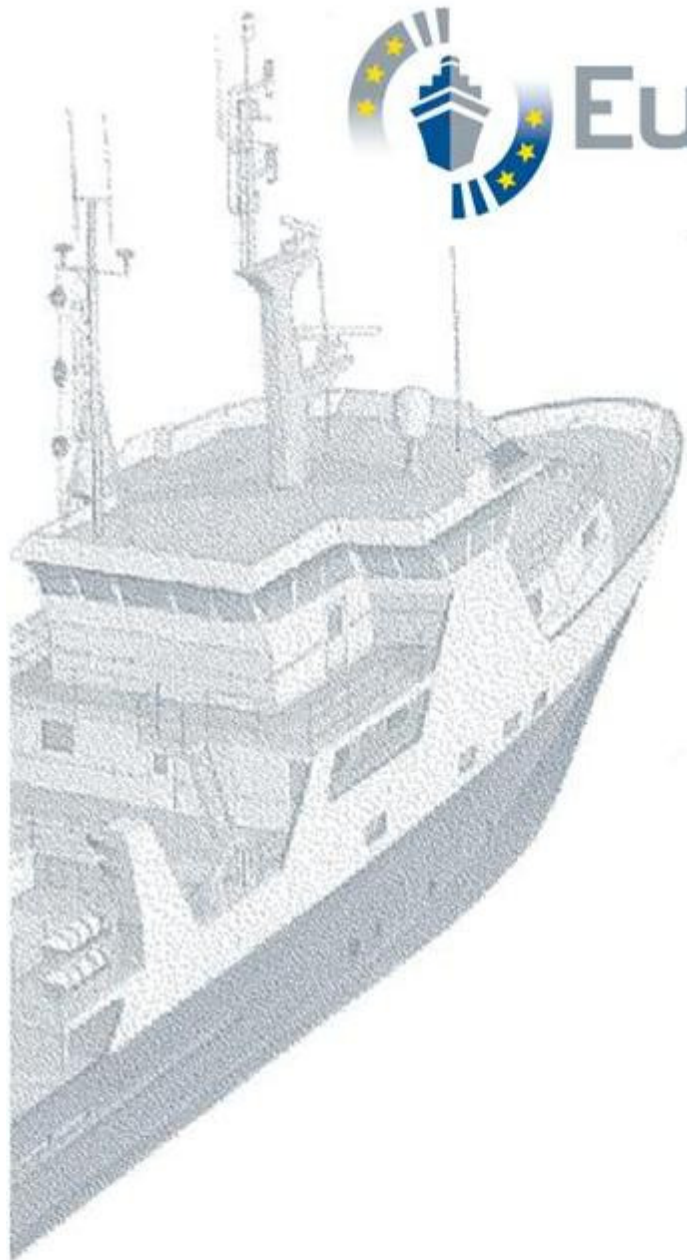


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### Concepts and objectives :

- promote greener and sustainable research vessel operations and eco-responsibility;
- open to all European researchers access to high performing research fleets on sole condition of scientific excellence;
- foster the coordinated and joint development of European fleets in terms of capacity and performances.



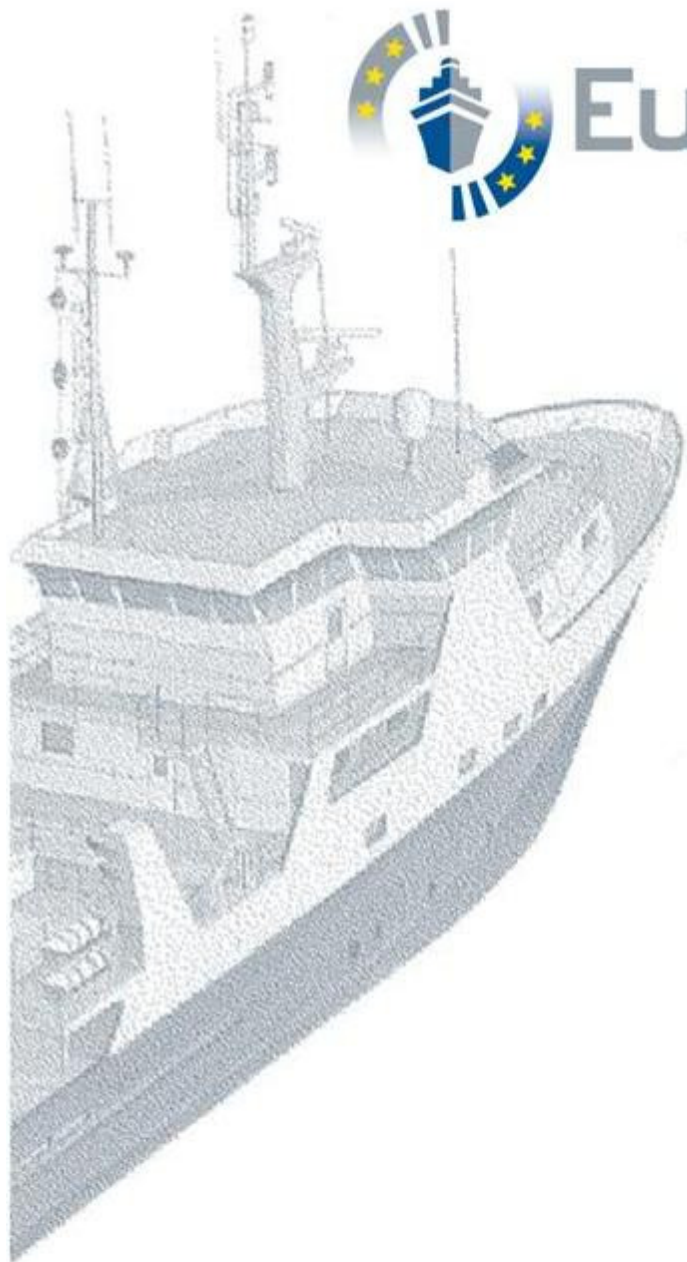


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### Planning underway:

- Proposal submission : 29 Feb. 2008
- A long negotiation period : June 2008 to March 2009,  
EC contribution : 7,2 M€ (-10% / original proposal)
- Grant Agreement : under finalisation
- Project starting date : 01 Sept. 09
- Kick-off meeting : 22, 23 & 24 Sept. 09 in Paris



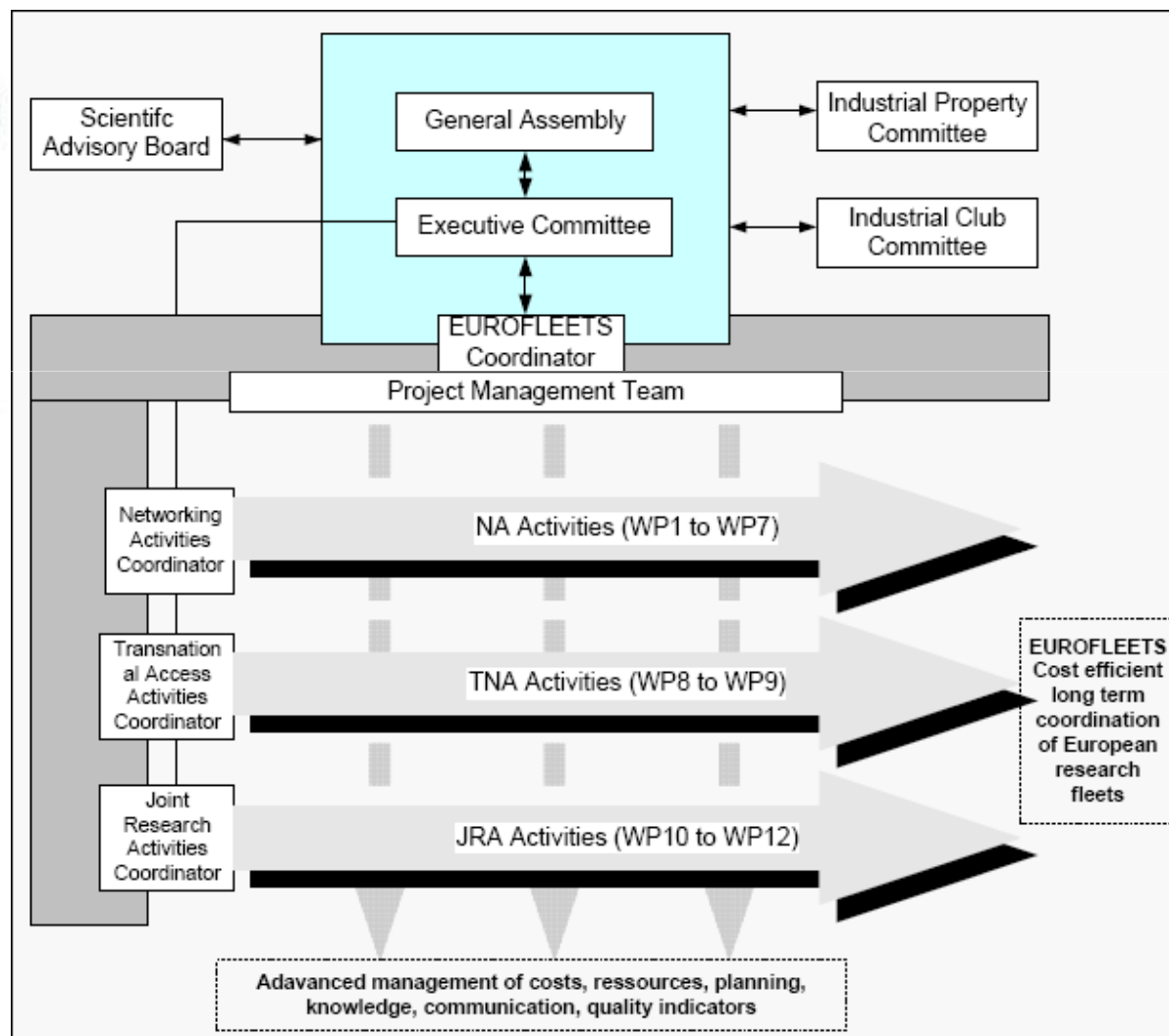




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### Project management :





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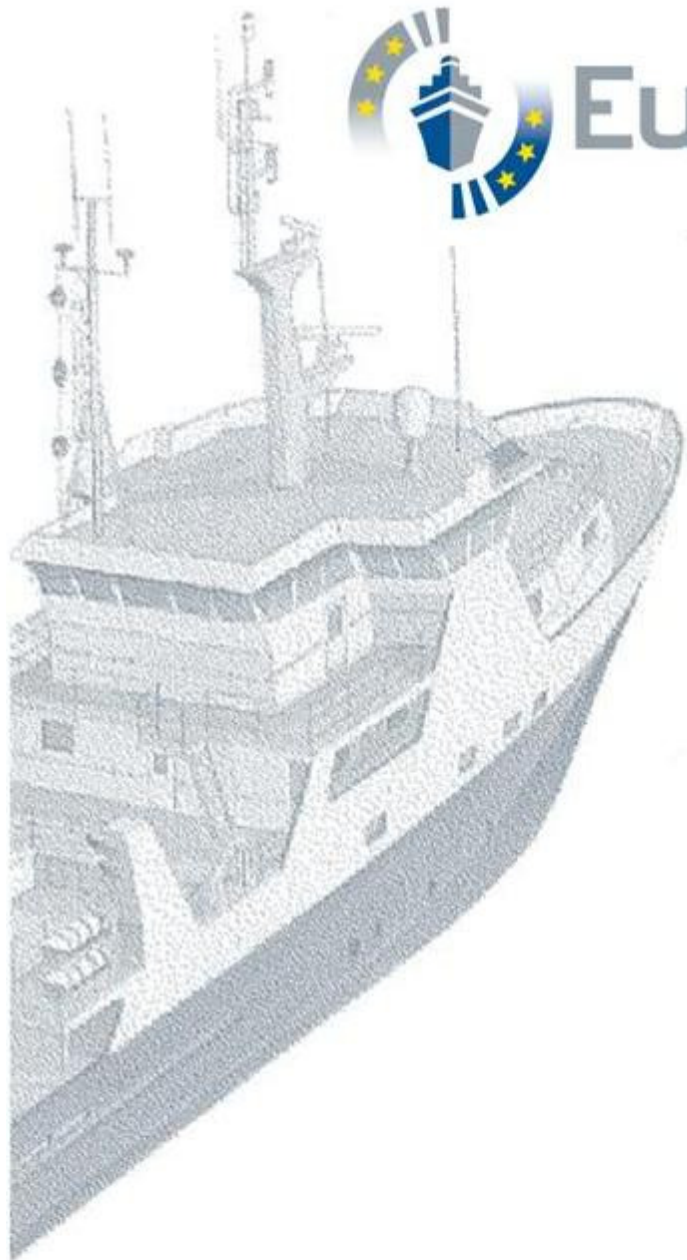
Networking Activities - NA (7 work packages) :

(Activity coordination : IMR, Norway)

WP1 : STRATEGIC COORDINATION VISION

(Leading partner IFREMER, France)

- fleets coordination group
- common procurement strategy
- long-lasting transnational access (*for post I3 funding*)
- innovative e-access generalisation





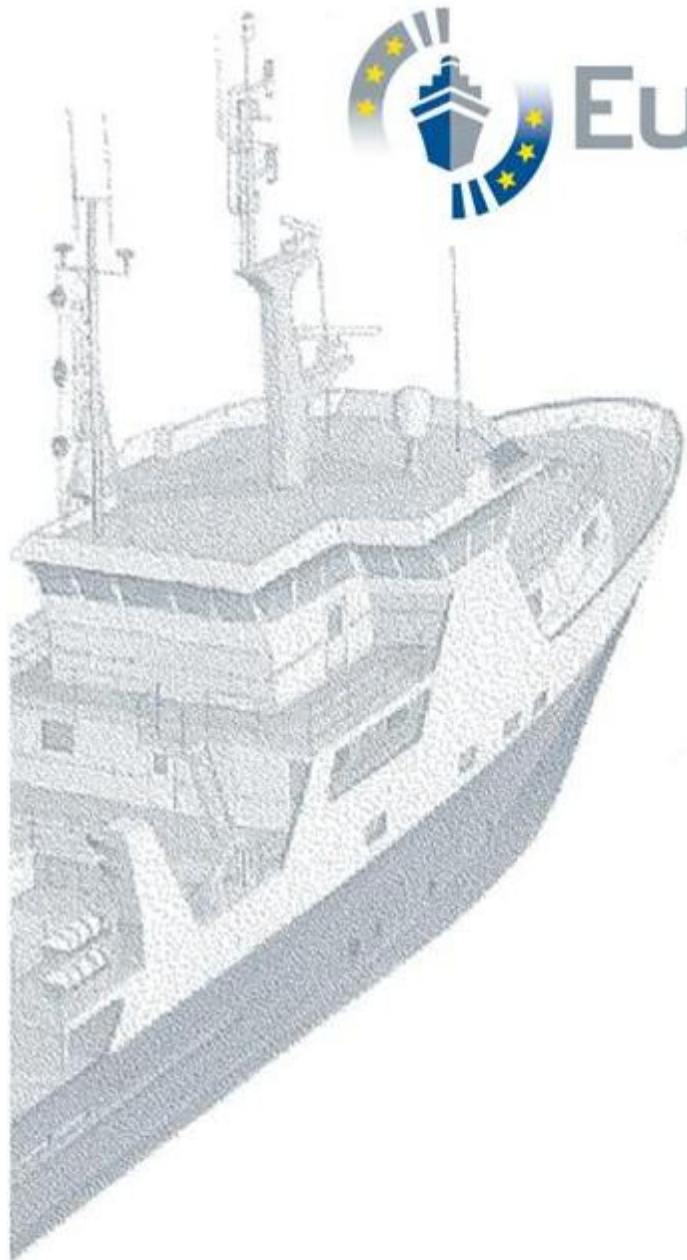
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### Networking Activities :

WP2 : VIRTUAL RESEARCH FLEET PLATFORM  
(Leading partner MARIS, Netherlands)

- EUROFLEETS integrated information portal development
- populating and maintaining the portal metadatabases with up-to-date information
- establishment of the European Virtual Infrastructure in Ocean Research (EVIOR)
- implementing a EUROFLEETS generic cruise planning system





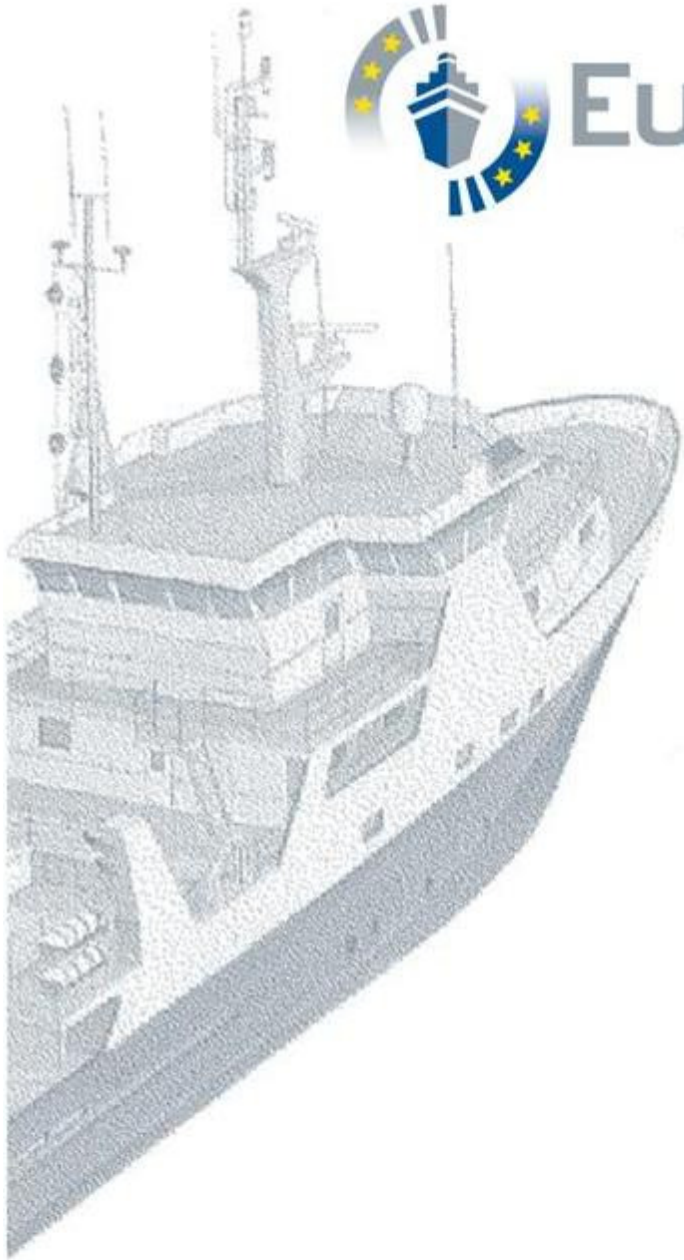
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### Networking Activities :

WP3 : ECO-RESPONSABILITY AND ECO-DESIGN  
FOR EXISTING AND NEW RESEARCH VESSELS  
(Leading partner NERC, U.K.)

- Research Vessel - Life Cycle Assessment
- Research Vessel Environmental Management Plan and System
- guidelines towards future new buildings and innovative eco-design for Regional research vessels







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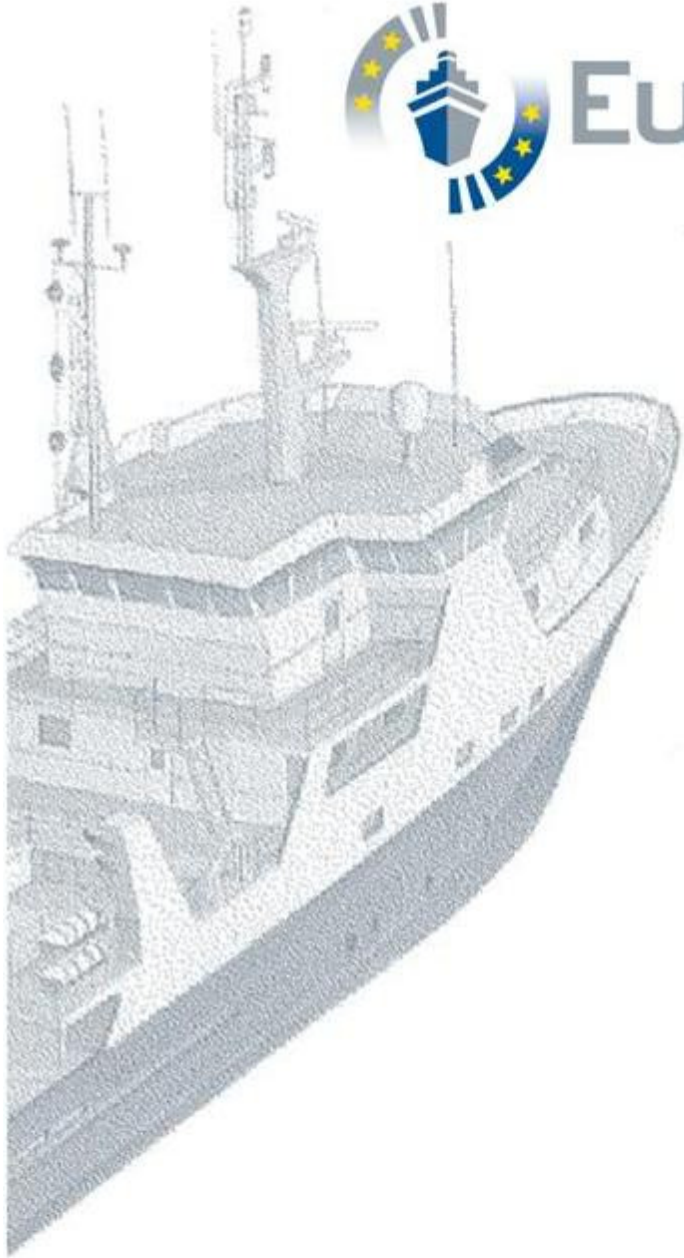
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### Networking Activities :

WP4 : OPERATIONAL ISSUES – CONTRIBUTION TO  
OPERATIONAL FLUIDITY WITHIN EUROPEAN  
RESEARCH FLEETS

(Leading partner CSIC, Spain)

- interoperability
- coordinated scheduling process
- vessel operation rapid response capabilities
- standardisation and harmonisation of procedures





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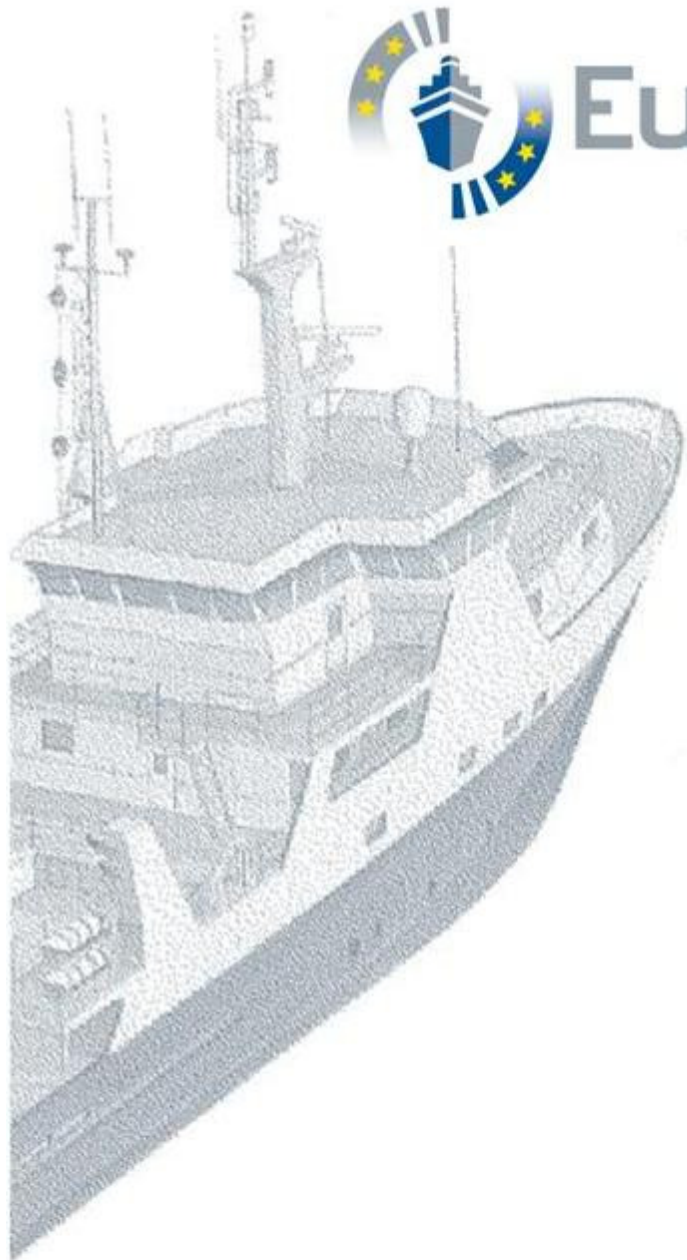
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### Networking Activities :

WP5 : EUROFLEETS SCIENTIFIC USER ACCESS  
MODALITY AND PEER REVIEW  
(Leading partner AWI, Germany)

This work package is devoted to the practical management of the three calls to be launched under the TNA activities : « Ocean » (TNA 1), « Regional 1 » and « Regional 2 » (TNA2)

- call preparation
- call implementation
- proposals for evaluation and selection
- selection of young scientists to be trained onboard European RVs





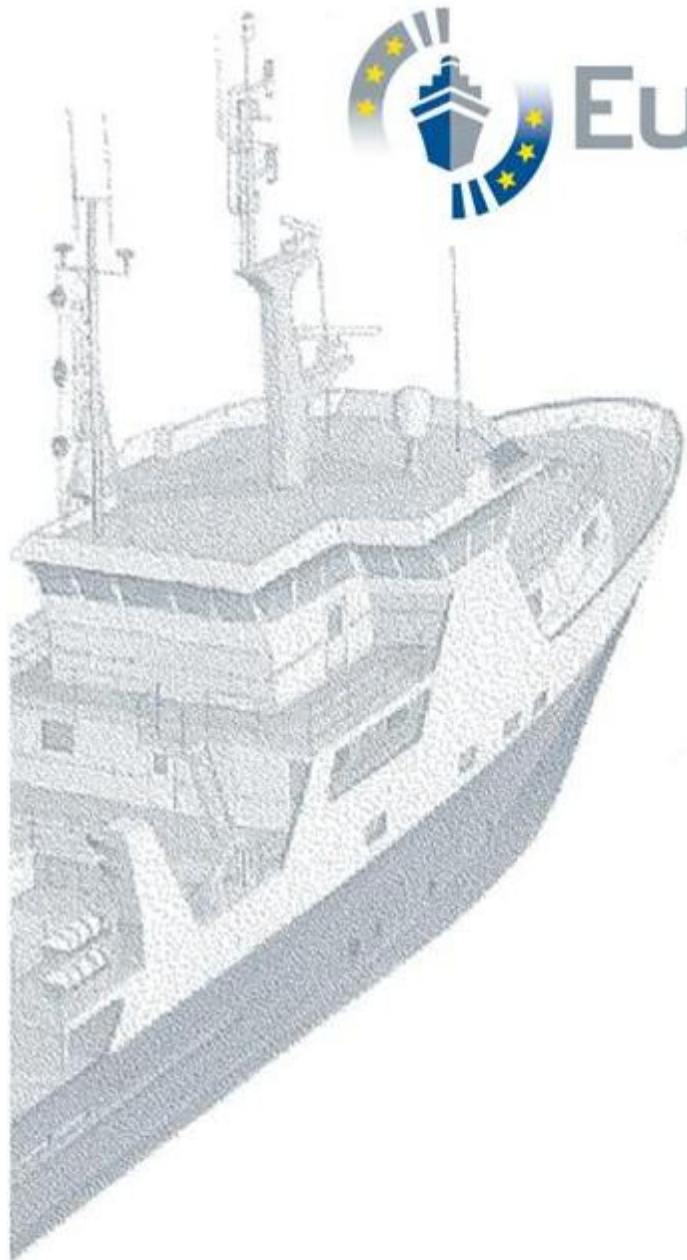
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### Networking Activities :

WP6 : ADVANCED TRAINING AND EDUCATION  
(Leading partner OGS, Italy)

- formation of European marine scientists and technicians
- transnational deployment teams
- internal training
- training cooperation with third countries
- education activities





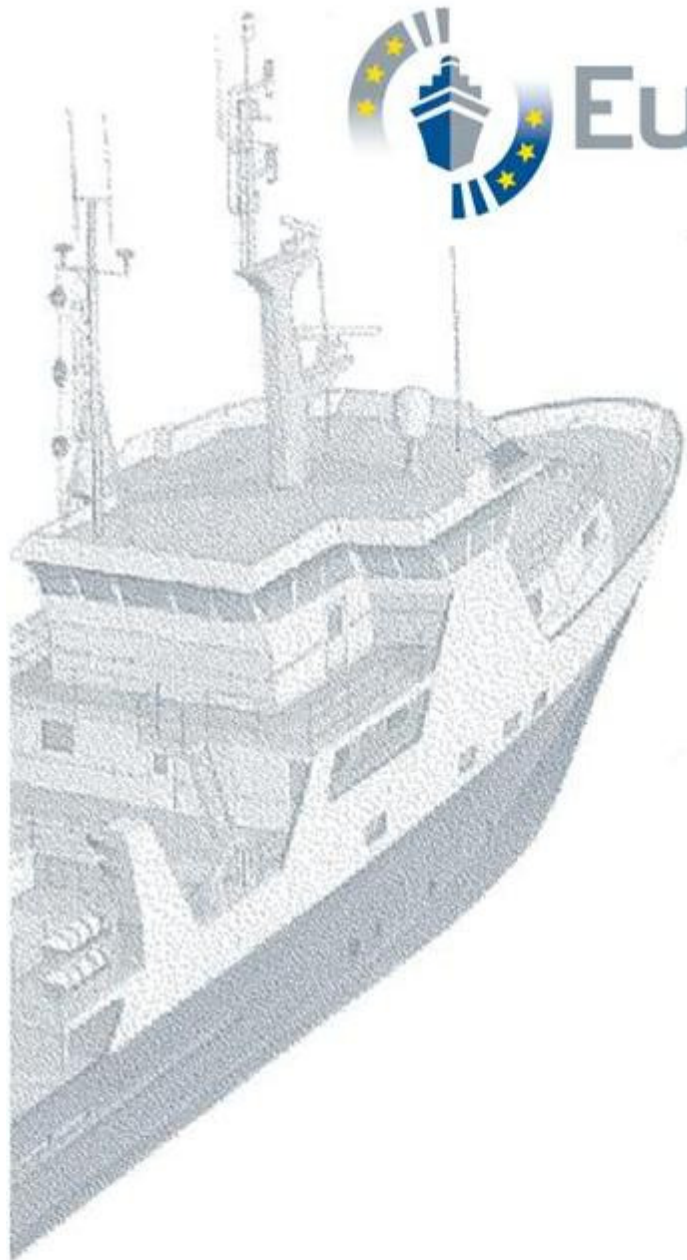
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### Networking Activities :

WP7 : DISSEMINATION AND EXPLOITATION  
(Leading partner EurOcean, Portugal)

- EUROFLEETS “Internet Hub”
- plan for dissemination and communication
- dissemination to the scientific community
- dissemination to industrials
- citizen awareness
- industrial property rights and exploitation of results







# Eurofleets

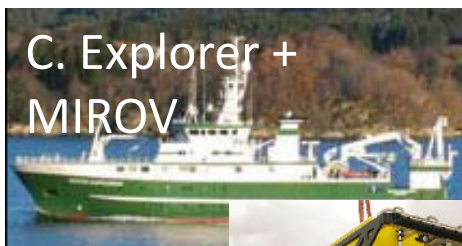
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Trans National Access - TNA

(Activity coordination : HCMR, Greece)

**WP8 : TNA1 Ocean and Global Research Vessels**  
(Leading partner Ifremer, France)

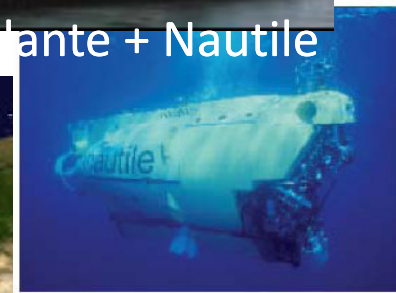
5 Ocean/Global RVs for Atlantic Ocean including polar seas & Indian Ocean, for about **66 days**



C. Explorer +  
MIROV



Atlantique + Nautille



Explora



Polarstern



Marion Dufresne





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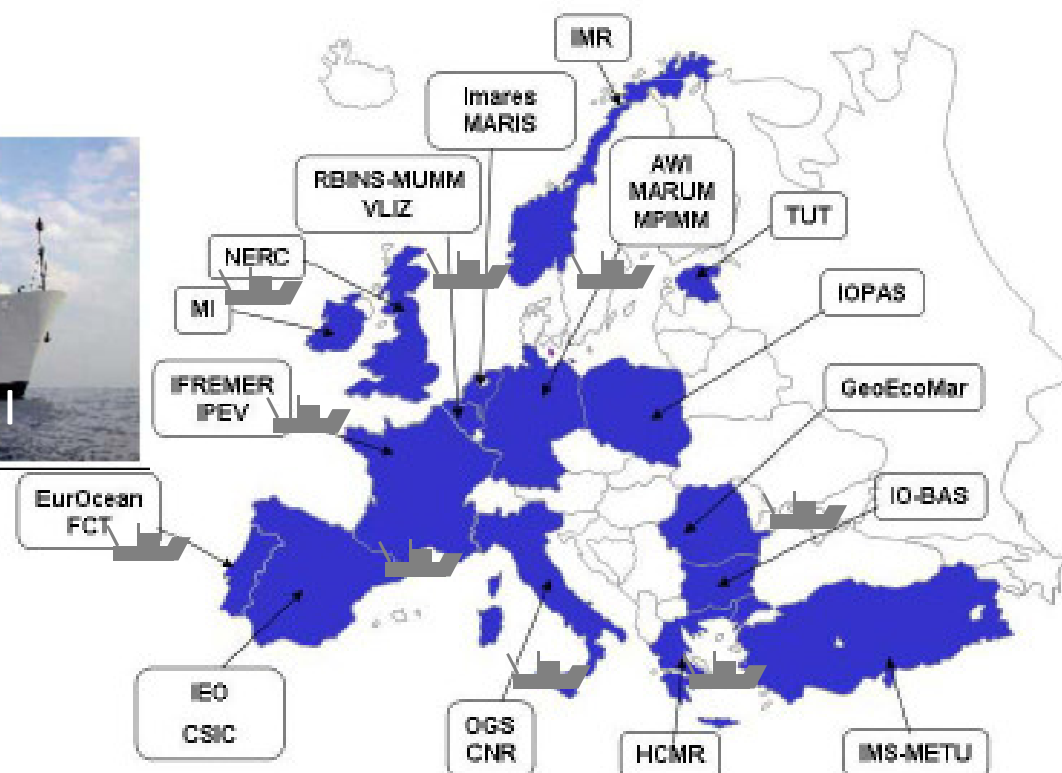
AWI : Heincke  
 IEO : IEO 114  
 HCMR : Aegeo (Thetis, Max Rover or Super Achille)  
 FCT : Dom Carlos I  
 CNR : Urania  
 IMS-METU : Bilim 2  
 GeoEcoMar : M. Nigrum  
 MI : Celtic Voyager  
 CSIC : Garcia del Cid  
 RBINS-MUMM : Belgica  
 IOPAS : Oceania  
 IO-BAS : Akademik  
 TUT : Salme

Trans National Access :

**WP9 : TNA2 Regional Research Vessels (Leading partner HCMR, Greece) >>> 13 Regional RVs covering all the European seas organised on a decentralised way, for about 110 days**



Dom Carlos I





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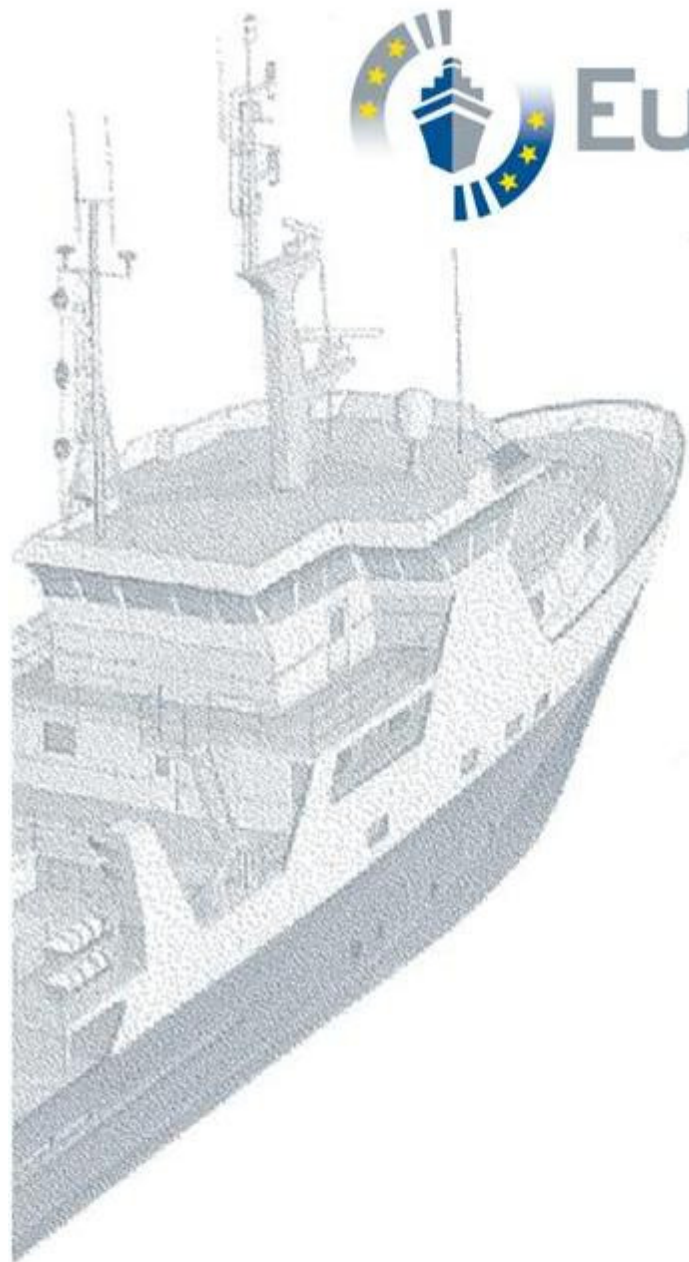
Joint Research Activities - JRA:

(Coordination of this Activity : MARUM, Germany)

WP10 : JRA1 UP TO DATE SOFTWARES TO  
FACILITATE TRANS NATIONAL ACCESS

(Leading partner Ifremer, France)

- general requirement
- Development of the software : calibration, processing and survey reporting tools, standardisation
- Acquisition, integration and visualisation of oceanographic and molecular data – the genomes mapserver application
- Acquisition/import/export to and from on shore data centres
- Evaluation/qualification







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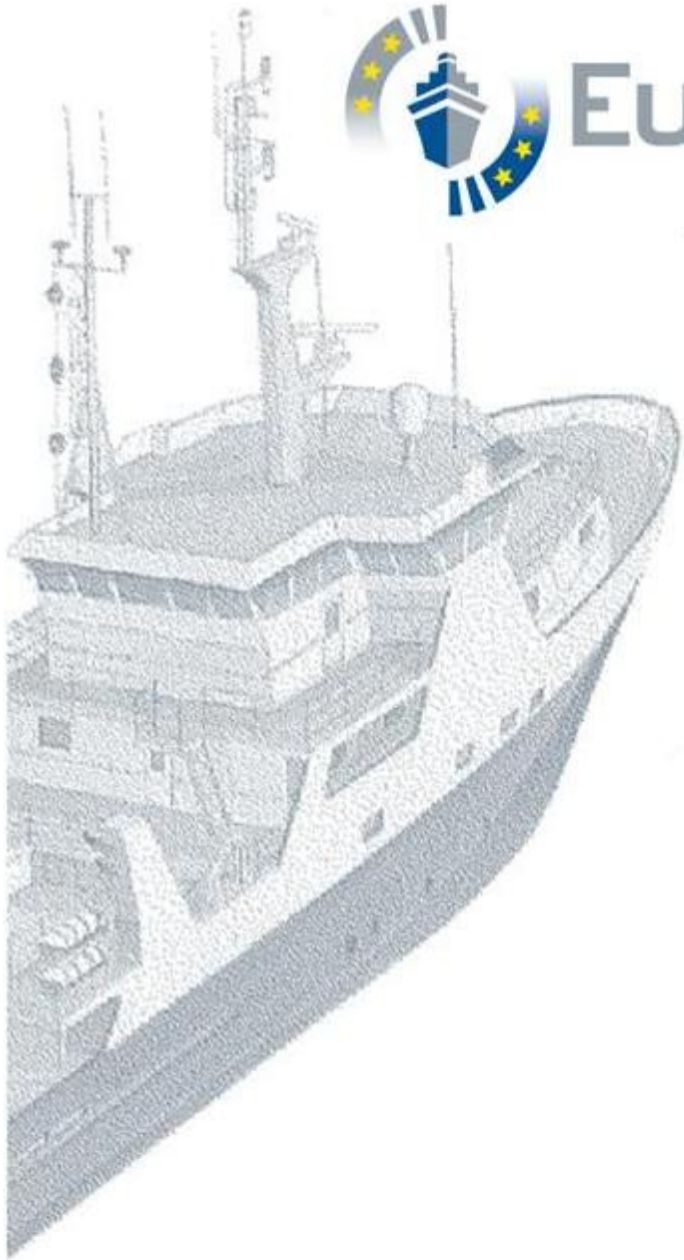
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### Joint Research Activities :

WP11 : JRA2 SHARED AND FLEXIBLE PAYLOADS FOR ROV, AUV & OBSERVATORIES and COMMON MISSION PLANNING TOOL

(Leading partner MARUM, Germany) :

- General requirement,
- 3D HDTV development,
- BGC (BioGeoChemical) Module Design,
- Design of event-driven, adaptive sampling techniques for stationary and mobile sensor networks – algorithms, software and controllers,
- Implementation of intelligent sampling on AUV, ROV and autonomous observatories),







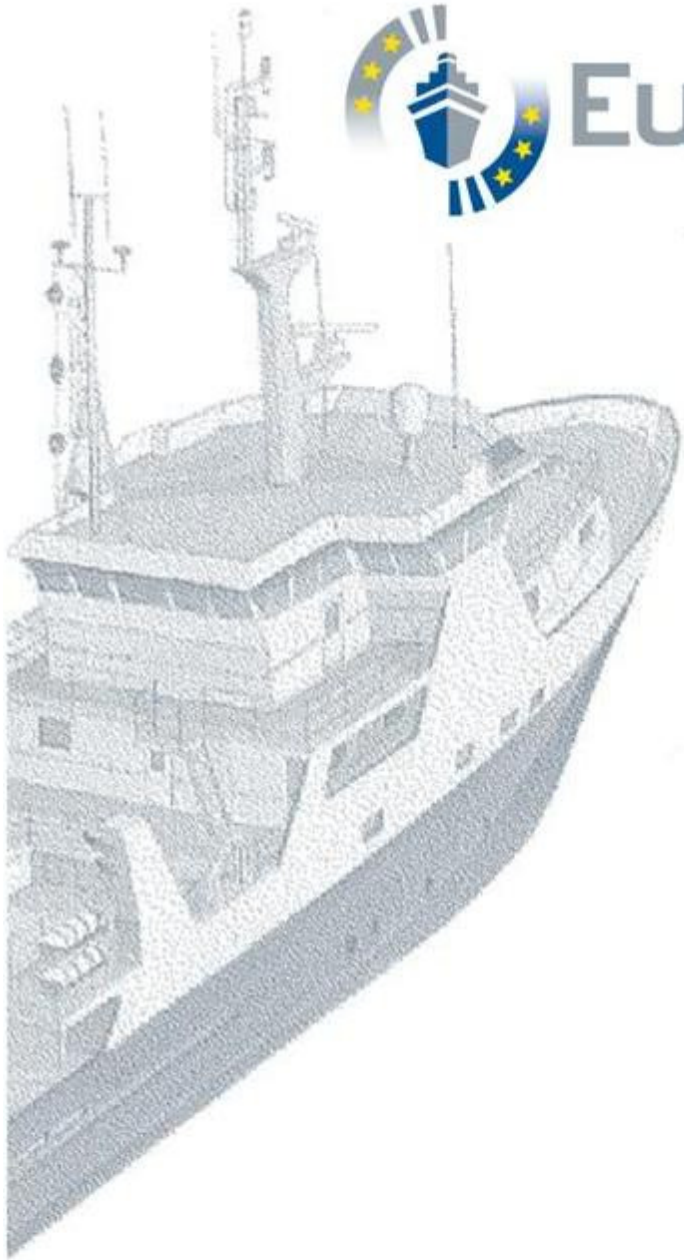
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### Joint Research Activities :

#### WP11 : JRA2

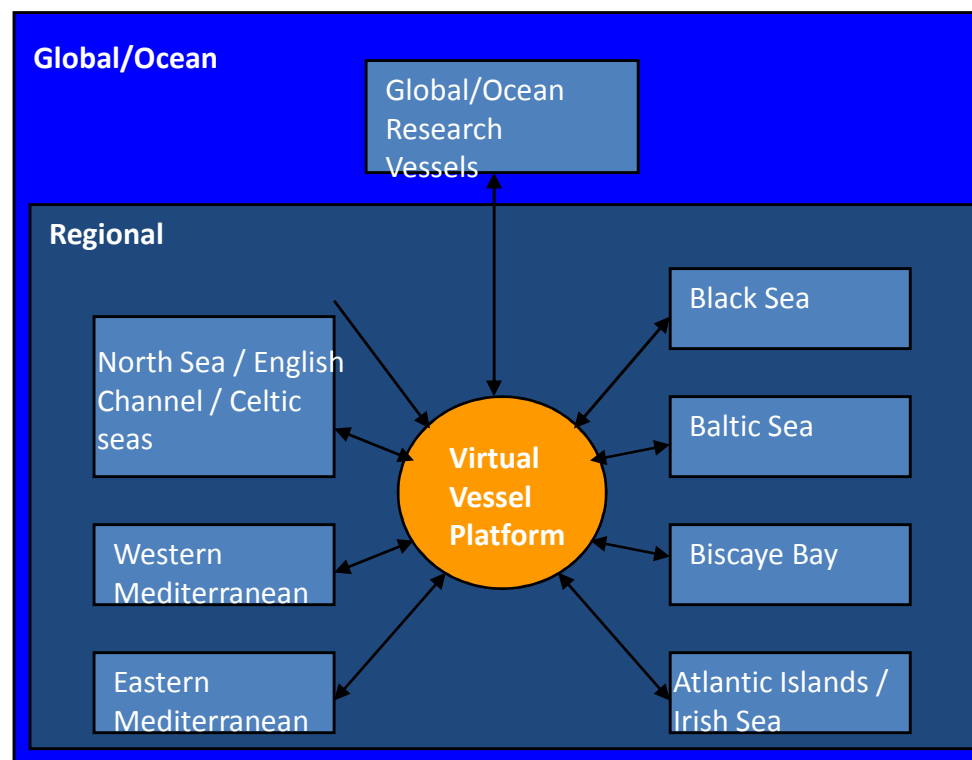
- ICASP (an *In situ* Chemical Analysis and Sampling Payload module) integration on AUV and ROV,
- BGC, 3D HDTV & ICASP modules test and validation,
- Interoperable Common Mission Programming Tool (CMPT) : specification, development and adaptation, tests and validation,
- Event-oriented task-planning,
- Dissemination and training



### Impacts :

Effective integration and long-term structuring impacts on research vessel coordination, for a cost-efficient marine research and quality of services :

- common investment strategy to avoid duplication
- transboundary scheduling of RV to increase days at sea
- widen access and joint scientific cruises
- interoperable equipment and data
- eco-design construction of new vessels





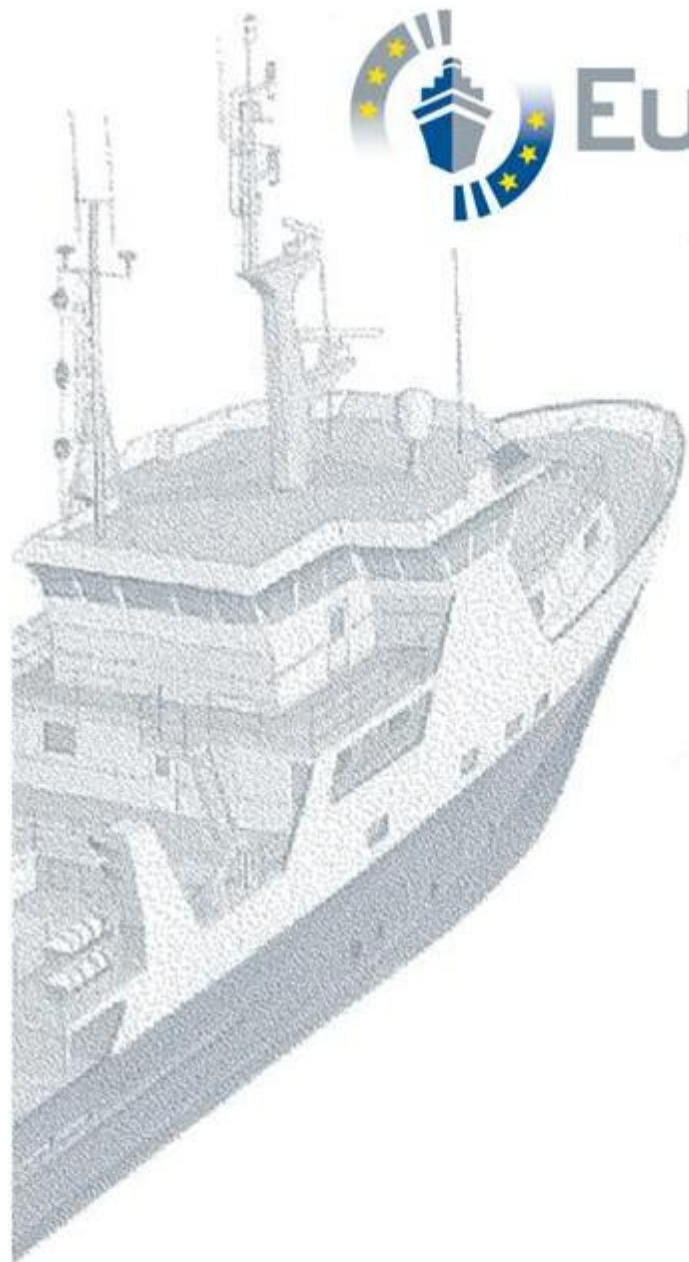
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### Impacts :

Complementary impacts :

- resolution of common technological issues,
- contribution to standards,
- training and education to improve new skills and expertise,
- contribution to European policies : Integrated Maritime Policy, Research Infrastructures, European Research Area,
- contribution to European competitiveness,
- dissemination of results, citizen awareness.





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### EUROFLEETS links with other European projects :

SeaDataNet (FP6 I3 project), for a standardised data management;

EsoNet / EMSO, for the service to seabed observatories

EURO-ARGO, for the service to profiler deployment and recovery

The future ERANet on marine research : SEAS-ERA proposal (submitted on 21st April 2009)

The future I3 on coastal observatories (INFRA Call 6 to be opened on July 2009)

