



# Cons.A.R. presentation

FP7 Brokerage Event  
London – 7-8 September  
2011



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# General information



*CONSorzio Armatori per la Ricerca  
Italian Shipowners Research Consortium*

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# Who's CONS.A.R.?

Cons.A.R.'s first and primary mission is to develop research studies and activities to promote technological development in the maritime sector, and to improve shipping methodologies, techniques and solutions for the optimisation of ship commercial, safety and pollution prevention performances.

Since 1997, Cons.A.R. has also developed training and upgrading courses (safety, new technologies, rules, management, etc.), specifically for the seamen (officers, ratings, etc.) as well as shore personnel engaged with its associated companies.

# Who's CONS.A.R.?

The synergy produced through the combination of different specialized activities (research, services, training), as well as the competences acquired over the years, have made Cons.A.R. successful and involved in many important European research projects. Some of the most important are: MASIS I; MASIS II; RO-RO Safety Stability; COMARPROP; MERMAID; WETS; HARDER; ROROPROB; EUROMTEC; VRSHIPS-ROPAX 2000; SEAROUTES; SAFECO, EMAS-SHIP, INMARE Coordination Action; FLAGSHIP IP.

Cons.A.R. is currently involved in the following EU funded projects: ARIADNA, RESPECT, AZIPILOT, Eco-REFITEC and UniMET.

# Skills and Expertise offered

Cons.a.r. has a deep knowledge of the Maritime sector and all relevant regulations and constraints.

The support of associated Shipping Companies allows to access a wide amount of specific and technical information about ships and their operations and skilled and experienced people. This cooperation also gives the possibility to have ships (and crew) available to be used as test beds for project's outcomes.

We also focus our interest on themes concerning the human factor into the shipping sector and training for maritime people.

# Potential way for exploitation

Due to the close contact with shipping industries and links with the market, Cons.a.r. could be also conceived as a **preferential way for the exploitation, use and potential market for the project's outcomes**, especially if connected with the improvement in efficiency, the greening of operations and the human factor.

# Associated shipping companies

Agostino Lauro	Atlantica di Navigazione
Carbofin	Coeclerici
Costa Crociere	D'Amato di Navigazione
D'Amico di Navigazione	Deiulemar Compagnia di Navigazione
F.Ili D'Amico Armatori	Montanari & Co.
Grimaldi Holding	Messina & Co.
Navigazione Montanari	Perseveranza
Rimorchiatori Riuniti Spezzini	TARROS
V-Ships	Deiulemar Shipping
VolaViaMare	Sopromar

**Confitarma**

## **SST.2012.4.1-1: Human element factor in shipping safety**

### *Topic of Level 1*

- Multi-disciplinary, human centred design optimization, including:
  - Framework for integrating human factors in ship design projects;
  - Tools and methodologies for integrating human factors in ship design projects and optimization

## **SST.2012.4.1-1: Human element factor in shipping safety (2)**

- Goal setting approaches for future application of complex human-centred systems, including:
  - development of error-free Human-Machine interfaces, e.g.in the context of the development of e-Navigation or e-maintenance/ e-diagnostics;
  - developments of principles for ensuring system resilience through people.

## **SST.2012.4.1-1: Human element factor in shipping safety (3)**

- Significance of management options and organizational factors:
  - preventing fatigue onboard;
  - roadmap for integrating training and crewing into prevention of human errors;
  - exploring development of safety culture and capabilities of human beings in the processes.
- Novel concepts for integrating human performance and physical capabilities with advanced technical means in risk-based inspection approaches.

## **SST.2012.4.1-1: Human element factor in shipping safety (4)**

- Operation, maintenance and intelligent evacuation concepts, including:
  - Research on the complexity of team operations in extreme environments (harsh weather conditions, heavy traffic in close areas, parallel or remotely controlled operations;
  - Research on productive leadership in vessel operations;
  - Novel concepts for integrating human performance and physical capabilities in risk-based inspection approaches;
  - Tools based on behavioural sciences for evacuation optimization;

## **SST.2012.4.1-1: Human element factor in shipping safety (5)**

- Managing the interfaces between land coordination and vessel operation;

Research of optimum risk and safety management in extreme environments

## **SST.2012.5.2-5: E-guided vessels: the 'autonomous' ship**

### *Topic of Level 2*

- Development of e-Maritime applications for autonomous operations, including integration with improved safe wireless ship-shore communication links;
- The evaluation of the feasibility and reliability of combined use of shore/satellite communication in view for autonomous operations;
- The development of concepts, methods and means for autonomous optimization of the ship's performance and operations (e.g. in respect to energy consumption, environmental issues, near land and port operations in manoeuvring;

## **SST.2012.5.2-5: E-guided vessels: the 'autonomous' ship (2)**

- The design of new ship functions systems for increased autonomy, in particular regarding those systems and functions necessary for monitoring, data collection, data transfer and onboard system maintenance and updating. Safety and legal issues will be considered;
- The development and validation of cost-effective concepts for predictive maintenance approaches;
- The development and validation of concept and systems for autonomous vessels in navigation channels aimed for short-sea shipping;
- The assessment of the proposed products and services, in legal (liability), safety and economic terms.

*Thank You for your attention*



**CONS.A.R.**