

**Gijón 2010**  
3<sup>rd</sup> European Maritime Day  
Stakeholder Conference



# **WATERBORNE TP**

The Coordinator of R&D for Maritime Transport in Europe

Presented by

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**WATERBORNE Secretariat - Brussels**

Community of European Shipyards' Associations (CESA) - Brussels

***Coordination and Best Practice for European Maritime Technological Platforms***

**WATERBORNE** is in the EC jargon  
a **Technology Platform**



## Scope of: **European Technology Platforms**

1. Provide a framework for the stakeholders, led by industry, to define research priorities and action plans;
2. Ensuring and adequate focus on research funding on high degree of industrial relevance areas;
3. Address technological challenges, step-changes, technology breakthrough.

**38 are the ETPs now active**

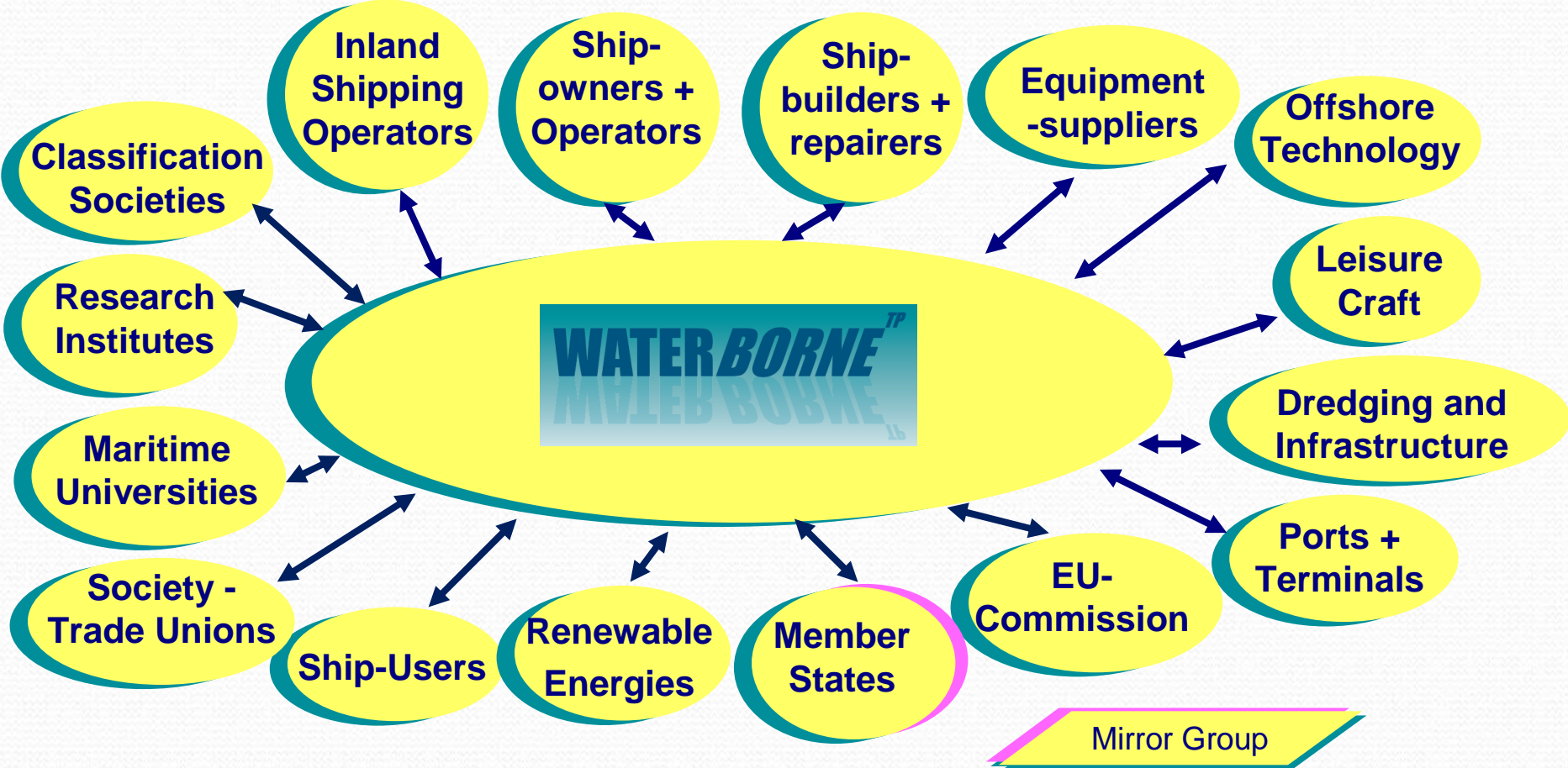


**WATERBORNE** <sup>TP</sup> is an initiative that came forth from the Maritime Industries Forum (MIF) and its R&D committee in 2005 and is making strident efforts to regularly update R&D requirements for European competitiveness, innovation and the meeting of regulations like safety and environment.

The stakeholders include EU associations covering deep and short sea shipping, inland waterways, yards, equipment manufacturers, marine leisure industry, research and university institutions, classification societies etc.

# ETP WATERBORNE

All the Stakeholders are involved

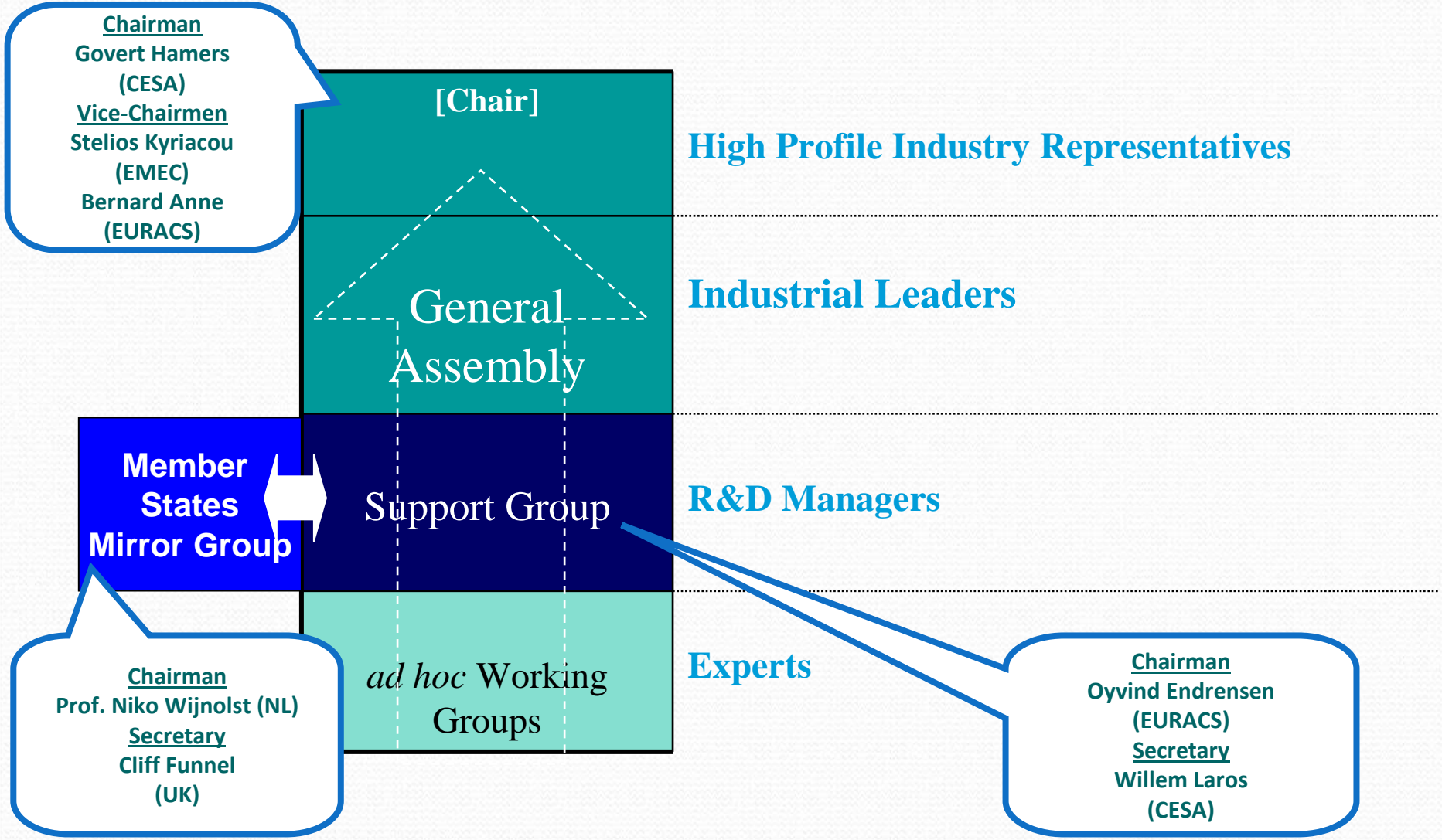






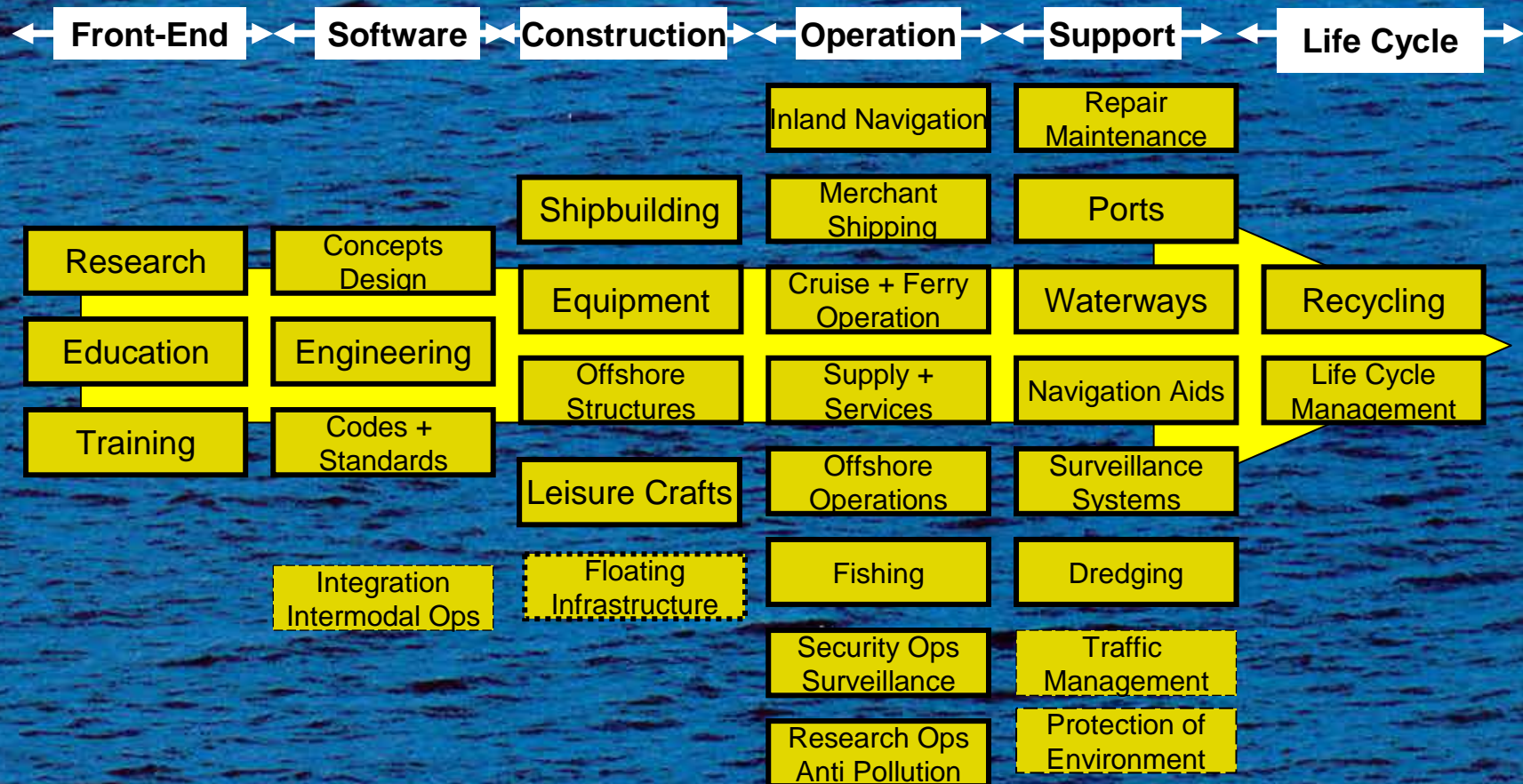
# ETP WATERBORNE Structure

Reliable „Bottom up“-Structure for Definition of R&D Policy





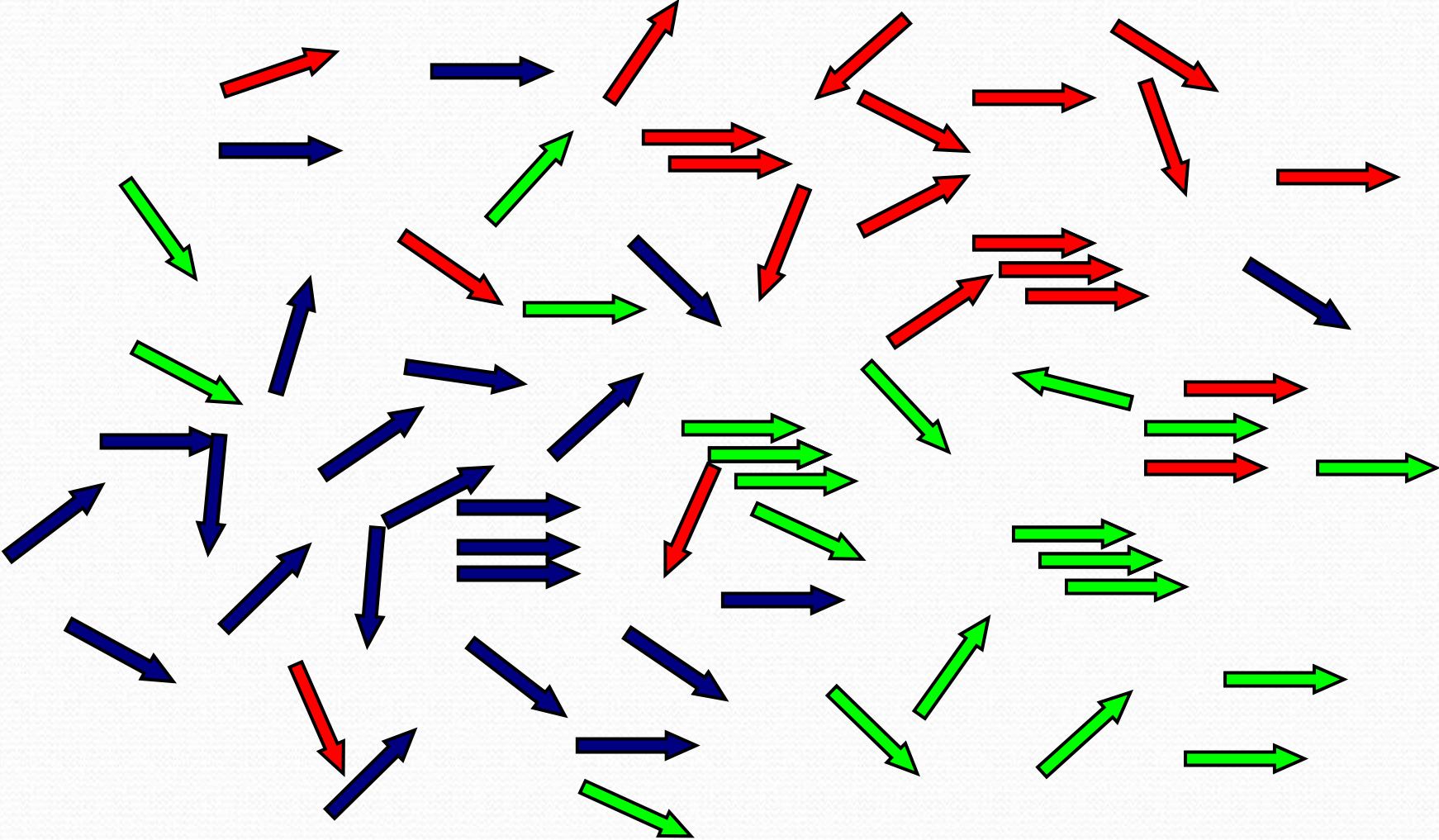
# Waterborne Transport and Operations - Complex Value Chains and extensive know-how Synergies





# ETP WATERBORNE

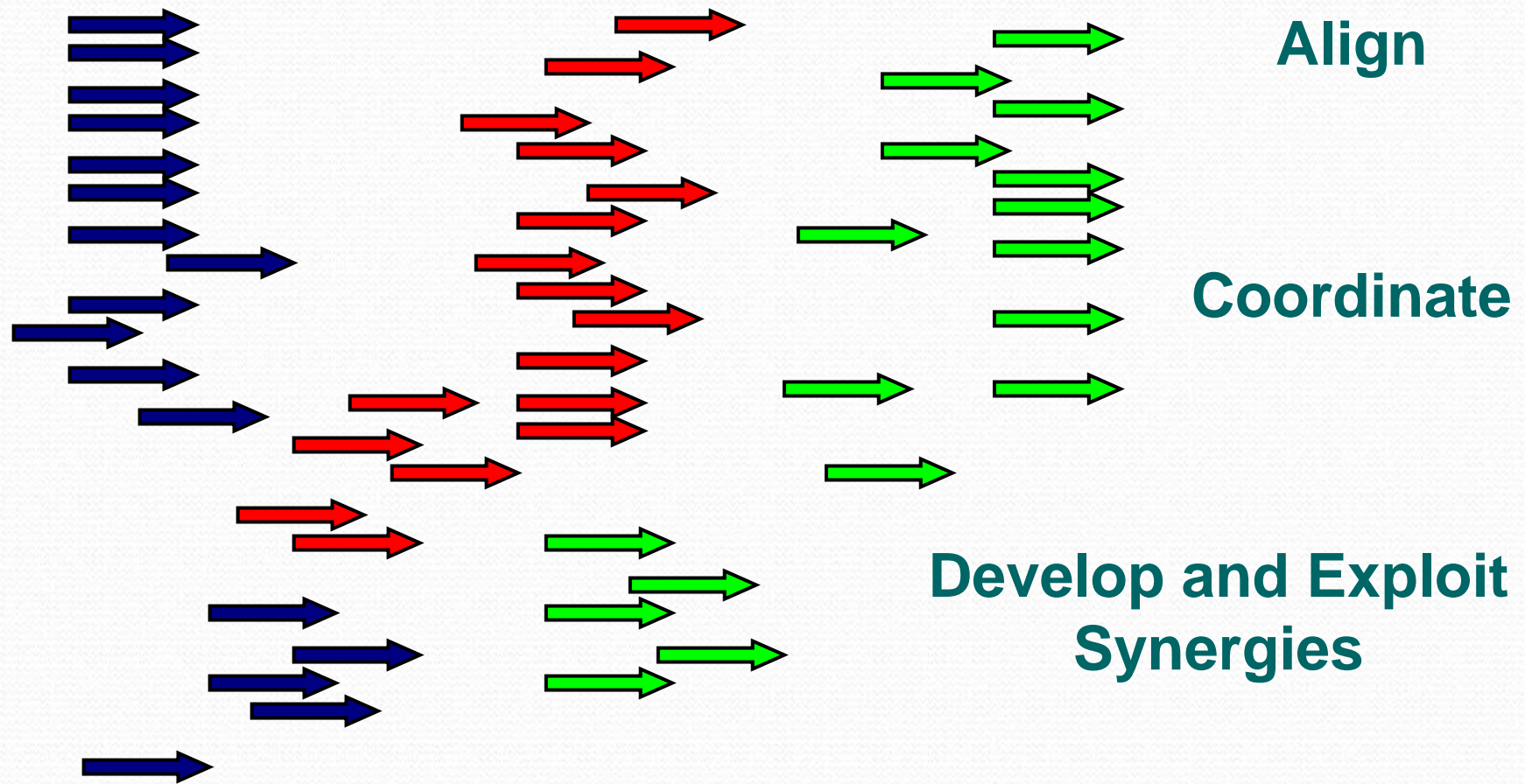
What is it seeking to do?





# ETP WATERBORNE

What is it seeking to do?



2005

## VISION 2020

Waterborne Transport & Operations  
A Key Asset for Europe's Development and Future



**WATERBORNE<sup>TP</sup>**

## STRATEGIC RESEARCH AGENDA

OVERVIEW

Waterborne Transport & Operations  
Key for Europe's Development and Future



**WATERBORNE<sup>TP</sup>**

2006

## STRATEGIC RESEARCH AGENDA

IMPLEMENTATION

Waterborne Transport & Operations  
Key for Europe's Development and Future

Executive Report 2007



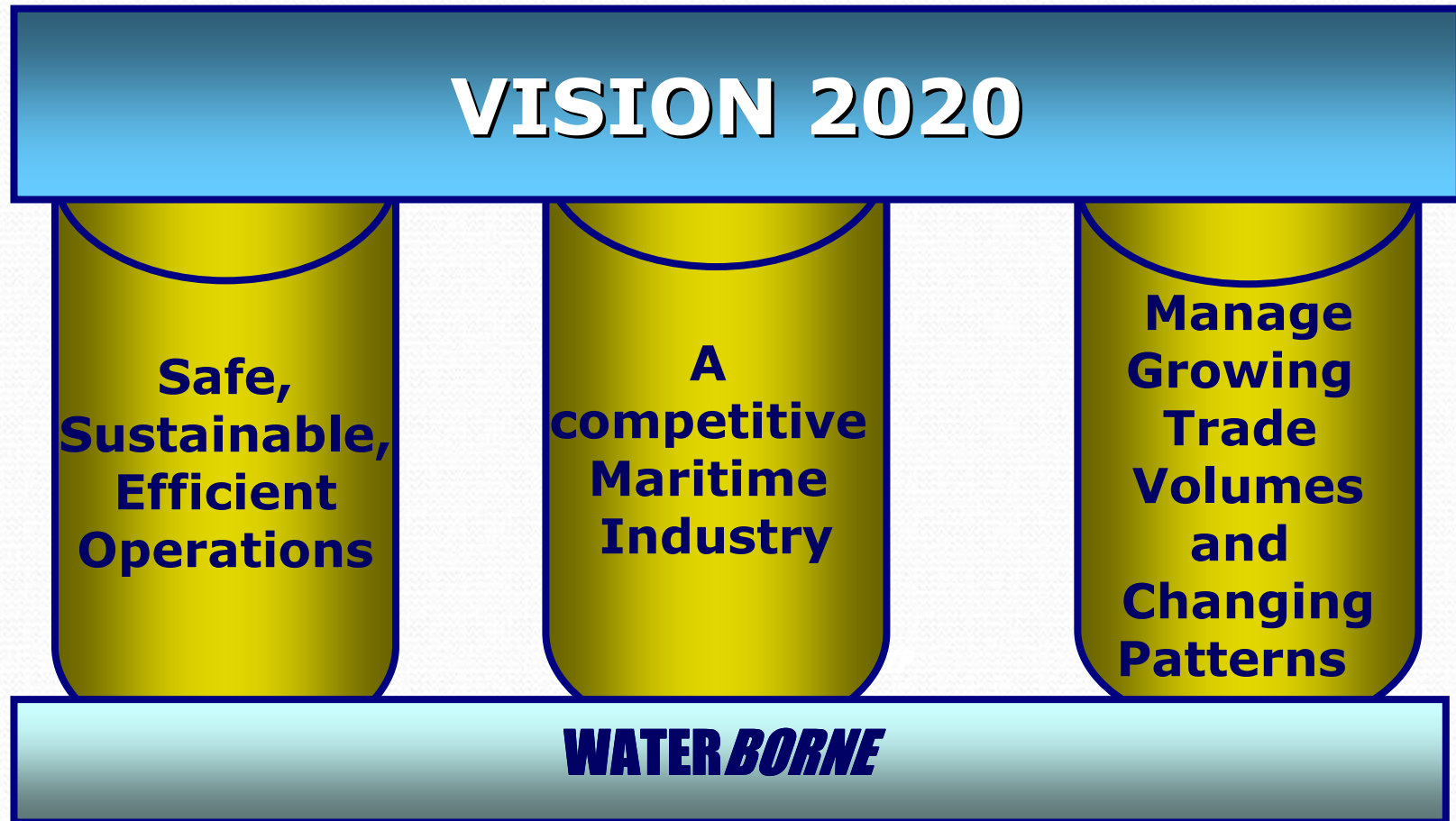
**WATERBORNE<sup>TP</sup>**  
WATERBORNE<sup>TP</sup>

2007/2008



Medium to Long Term Vision

3 "Pillars" have been defined:



# Results so far

## WATERBORNE Strategic Research Agenda (WSRA) Key Priorities (1)

- **Safe, sustainable and efficient waterborne transport**
  - ✓ Synergy of safety + security through Goal/Risk Based Design
  - ✓ Towards the „zero ship accidents“ target
  - ✓ The „crashworthy vessel“
  - ✓ „Low emission“ vessels and waterborne activities
  - ✓ Enhanced waterborne security
  
- **A competitive European waterborne industry**
  - ✓ Innovative vessels and floating structures
  - ✓ Tools for accelerated innovation
  - ✓ Next generation ship and yacht production processes
  - ✓ Effective waterborne operations
  - ✓ Technologies for new and extended marine operations
  - ✓ Enhanced sub sea capability



# Results so far

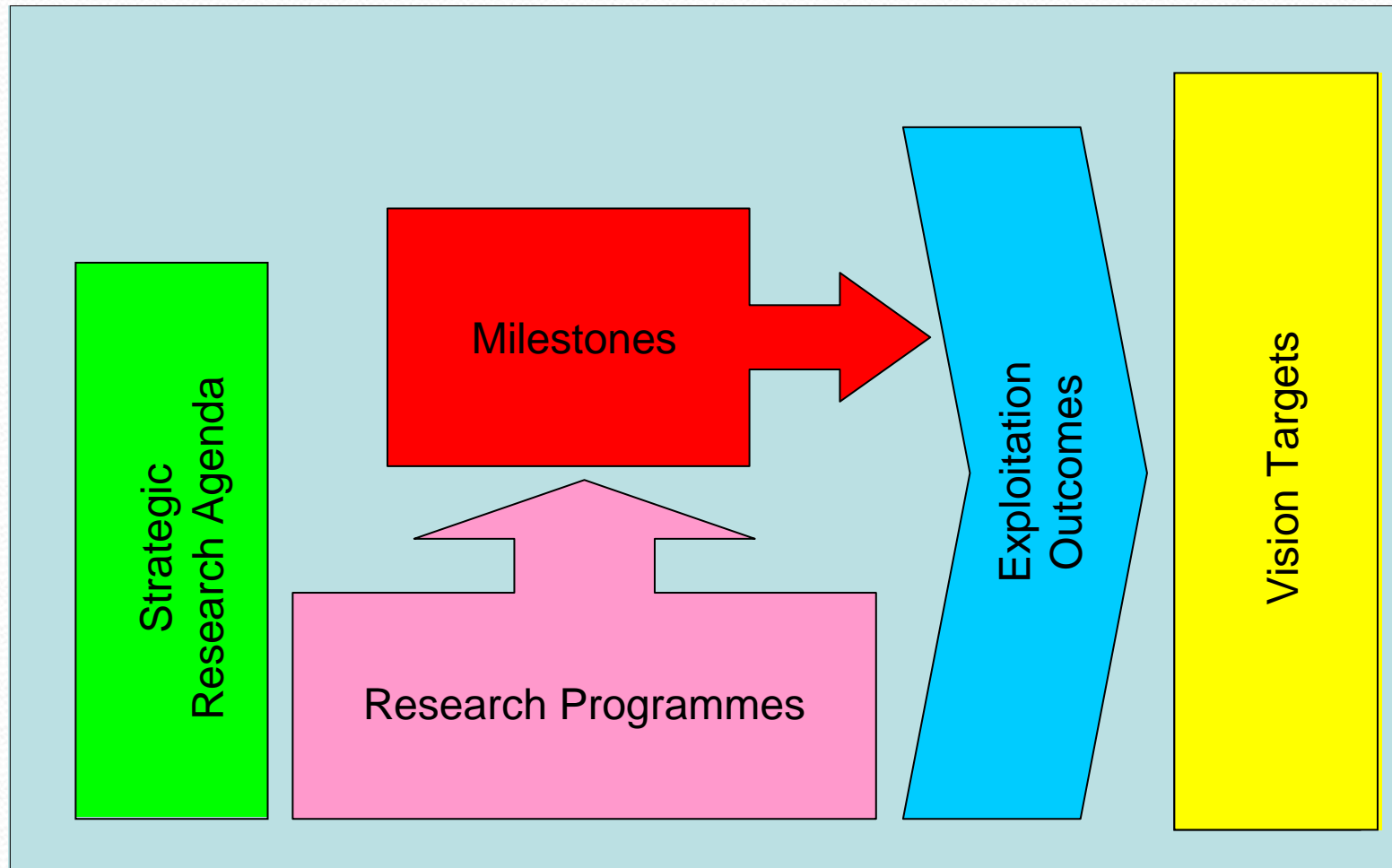
WSRA

## Key Priorities (2)

- **Manage growing trade volumes and changing patterns**
  - ✓ Faster planning and implementation of ports and infrastructure facilities
  - ✓ More effective ports and infrastructure
  - ✓ Intelligent Transport Support Technologies, Integrated ICT solutions
  - ✓ Traffic management strategies
  
- **Critical Enablers:**
  - Human Resources Base, Education and Training
  - Defending Intellectual Property (IPR)
  - Political Framework: Joint Initiatives and Level Playing Field

# WATERBORNE Implementation Route Map

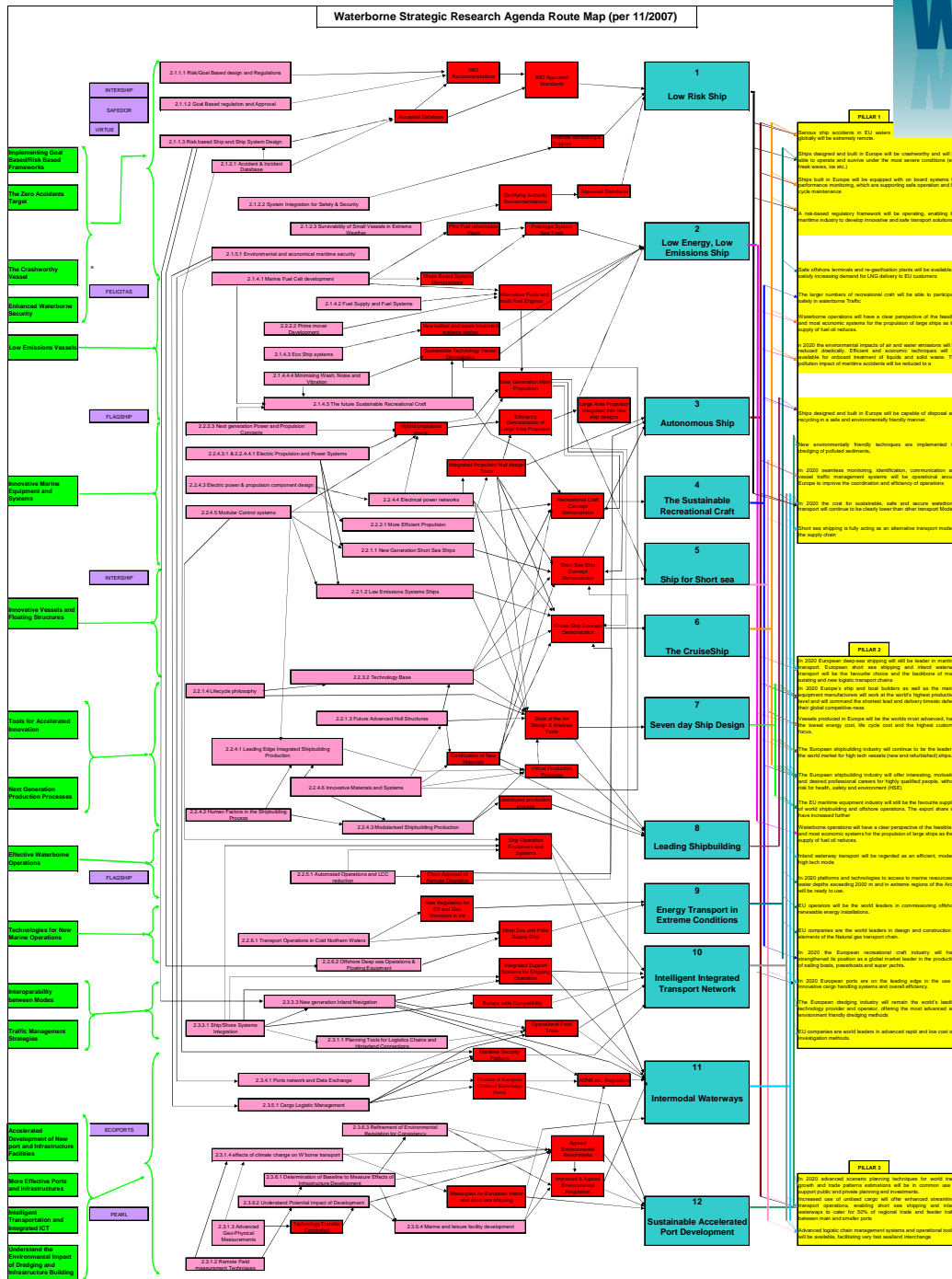
## Route Map Process Graphic





# WIRM

Waterborne Strategic Research Agenda Route Map (per 11/2007)



**PIILAR 1**

Without ship accidents in EU vessels that are not exceeding limits

Ships designed and built in Europe will be constructed and will be able to operate and survive under the most severe conditions (e.g. high waves etc.)

Ships built in Europe will be equipped with on board systems for performance monitoring, which are supporting safe operation and life cycle maintenance

All-based regulatory framework will be operating, enabling the maritime industry to develop innovative and safe transport solutions

Safe offshore terminals and transportation chains will be available to satisfy increasing demand for LNG delivery to EU customers

The larger numbers of recreational craft will be able to participate safely in waterborne traffic

Recreational craft will have a clear demonstration of the best and most economic systems for the production of large ships as the support of local jobs

By 2020 the environmental impacts of all on-water activities will be reduced drastically. EU-level and economic techniques will be available for optimal treatment of liquids and solid waste. The pollution impact of maritime accidents will be reduced to a minimum

Ships designed and built in Europe will be capable of disposal and recycling in a safe and environmentally friendly manner

New environmentally friendly techniques are implemented for the design of product assemblies

By 2020 seamless monitoring, identification, communication and vessel traffic management systems will be operational across Europe to improve the coordination and efficiency of operations

By 2020 the road for sustainable, safe and secure maritime transport will continue to be clearly lower than other transport modes in the supply chain

**PIILAR 2**

By 2020 European merchant shipping will be leader in marine transport. European short sea shipping and inland waterway transport will be the favorite choice and the backbone of manufacturing and the agri-food sector

By 2020 Europe's ship and boat builders as well as the marine equipment manufacturers will work at the world's highest production level and will command the highest and delivery systems related to their global competitiveness

Ships produced in Europe will be the world's most advanced, have the lowest energy cost, the cycle time and the highest customer focus

The European shipbuilding industry will continue to be the leader in the world market for high-tech vessels (new and refurbished ships)

The European shipbuilding industry will offer increasing, increasing high demand professional crews for highly qualified people, without risk for health, safety and environment (HSE)

The EU maritime equipment industry will still be the favorite supplier of world manufacturing and offshore operations. The report areas will have increased further

Recreational craft will have a clear competitive of the best and most economic systems for the production of large ships as the support of local jobs

Secure maritime transport will be regarded as an efficient, modern high-tech mode

By 2020 platforms and technologies to access to marine resources in deep depths exceeding 2000 m and in extreme regions of the Arctic will be ready to use

EU operators will be the world leaders in commissioning efficient renewable energy installations

EU companies are the world leaders in design and construction of transport of the highest sea transport chain

By 2020 the European recreational craft industry will have developed to become a global market leader in the production of sailing boats, powerboats and speed boats

By 2020 European ports are on the leading edge in the use of innovative design building systems and construction

The European shipbuilding industry will remain the world's leading technology provider and operator, offering the most advanced and innovative design building methods

EU companies are world leaders in advanced rapid and low cost port investigation methods

**PIILAR 3**

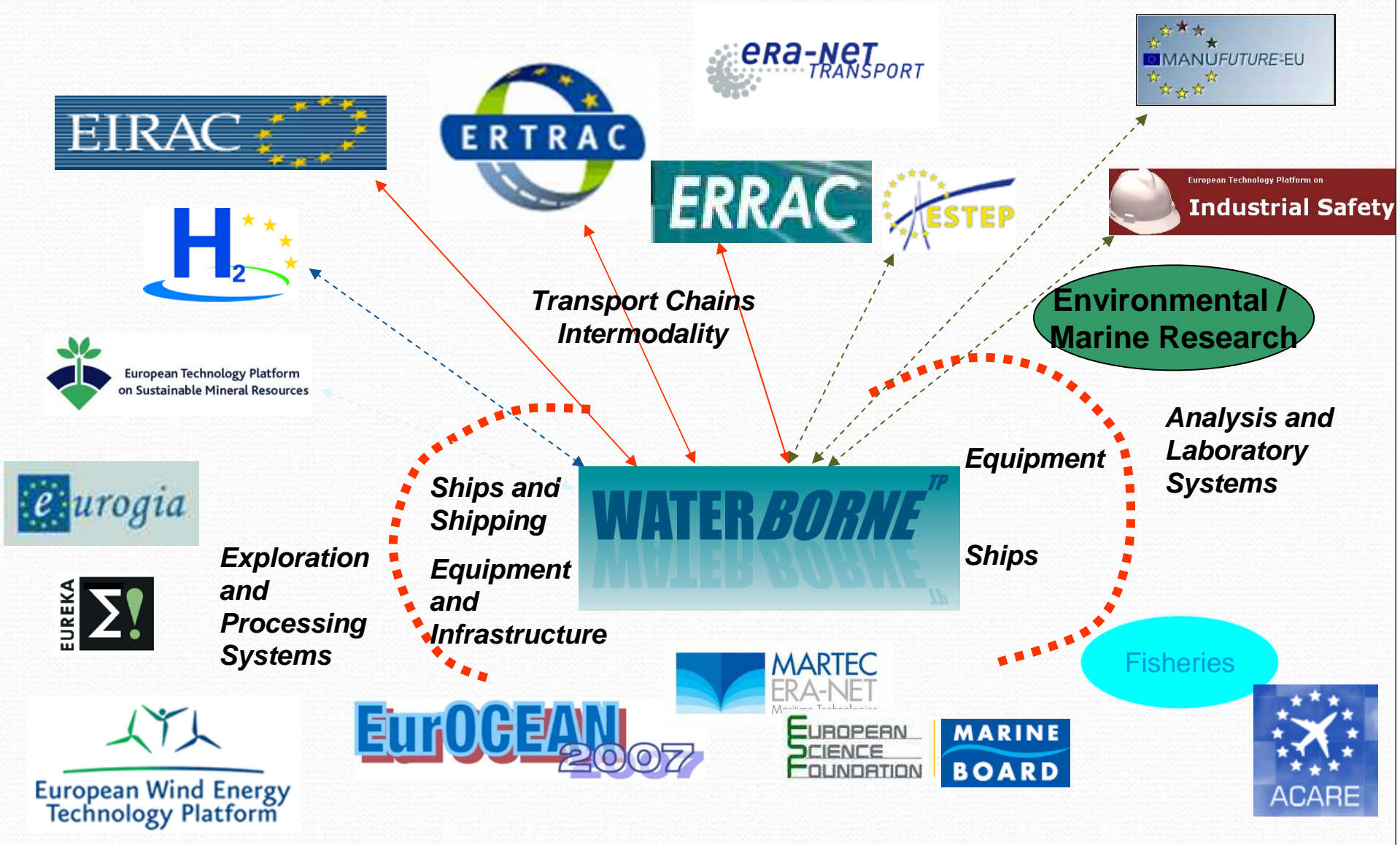
By 2020 advanced scenario planning techniques for world trade growth and trade patterns assessment will be in common use to be increased use of inland cargo will offer advanced international connectivity, reducing and the shipping rate while reducing emissions to about 50% of regional trade and trade routes between main and satellite ports

Advanced logistic chain management systems and operational tools will be available, facilitating very fast reloaded interchanges

# ETP WATERBORNE



Interfaces with other EU-RDI Science & Technology Areas:





## Key Strategical Issues:



- To develop, maintain and update the VISION, the SRA and the Implementation Plan;
- To coordinate European research strategy;
- To coordinate the National research programmes and align them to the EU;
- To establish a **consensus process** to determine the structure of the Calls under FP7;
- To expand the borders of the Maritime platforms beyond the Transport theme.

# Implementation monitoring



- As part of **CASMARE CA** an extensive report is under preparation to map the EU funded research projects against the WIRM to monitor the implementation process and to indentify eventually areas of the WIRM not yet covered by the funded projects;

## Mapping on Strategic Documents

Project Title	Acronym	Waterborne Vision Pillar	SRA Priority	WIRM Research Topic	WIRM Exploitation Outcomes
High efficiency hybrid drive trains for small and medium sized marine craft	HYMAR	Pillar 1 – Safe Sustainable and Efficient Waterborne Operations	2.1.4. Low Emissions Vessels and Waterborne Activities	2.1.4.3 Eco-Ship Systems	2 - Low Energy Low Emissions Ship
		Pillar 2 A Competitive European Maritime Industry	2.2.2 – Innovative Marine Equipment and Systems	2.1.4.4 Minimising Wash, Noise and Vibration	4 – The Sustainable Recreational Craft
			2.2.4 Next Generation Production Processes	2.1.4.5 The Future sustainable Recreational Craft	5 – Ship for Short Sea
			2.2.2.3. – Next Generation Power and Propulsion Concepts	8 – Leading Shipbuilding	
			2.2.4.3 Electric Power and Propulsion Component Design		

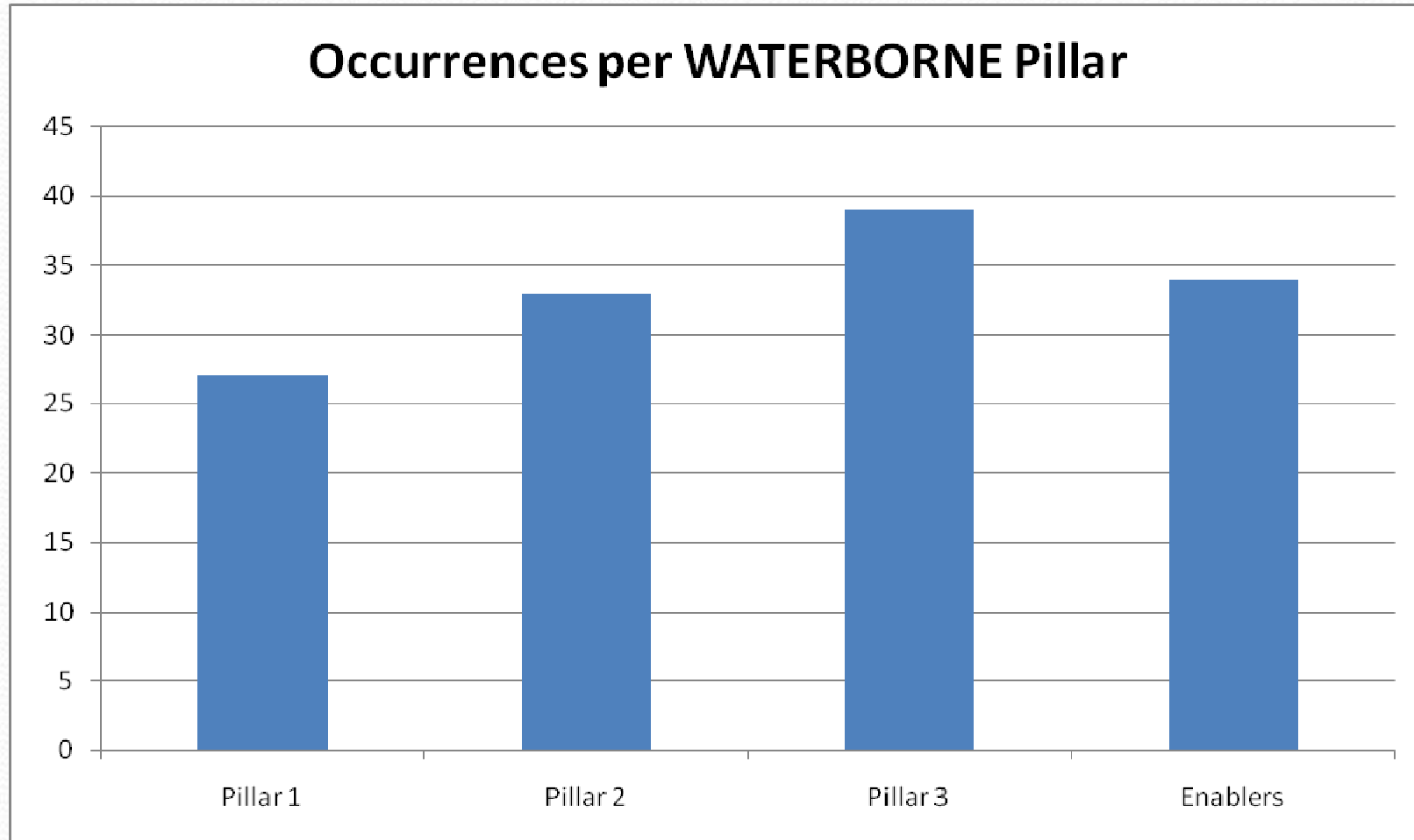


# Implementation monitoring



Projects mapped onto the WIRM Exploitation Outcomes	
Low Risk Ship	10
Low Energy, Low Emissions Ship	8
Autonomous Ship	3
The Sustainable Recreation Craft	2
Future Ship Designs for Short Sea Operation	5
The European Cruise Ship	7
Seven Day Ship Design	4
Leading Shipbuilding Technology	6
Energy Transport in Extreme Conditions	5
Intelligent Integrated Transport Network	8
Intermodal Waterways	10
Accelerated Sustainable Port Development	5
Horizontal - All	6

# Implementation monitoring





## Reinforce commitment member states

- As part of **CASMARE CA** a report on the monitoring of the National Program is under preparation;
- To assure a constant participation of Member States a number of initiative have been carried out locally;
- **WATERBORNE<sup>TP</sup>** direct participation in several events across Europe: Varna, Istanbul, Venice, Messina, LeHavre and Delft to raise the participation of Member States;

# Coordination of European Research Strategy



## Dialogue on Call 4 took place during past year

- Value of SST Topics around **20-25 Million €**;
- Value of Joint Call Topics “Ocean of Tomorrow” around **20 M€**  
(2 Large Integrated Project one focused on Mediterranean);

### Ideas:

- **Maritime Products for Renewable Energies (offshore wind)**
  - Vessels for installation and maintenance;
  - Large floating structures...
- **Green Retrofitting of existing ships**
- **Coastal Research Vessels**
- **Maritime Products for exploitation of the seas (in the context of mariculture, fuels, minerals)**



# Structure of the 4<sup>th</sup> Call



## Main Topics

- N. 1 Large Integrated Project on Marine Engines;
- N. 2 Focused Research Projects on Green Retrofitting;
- N. 2 Coordination Actions with Brazil and Russia;
- N. 1 Focused Research Project on Inland navigation;
- N. 1 Coordination Action to sustain the TP (*continuation of CASMARE*);
- N. 1 Integrated Project under Ocean of Tomorrow;
- N. 1 Coordination and support action for Mediterranean policy;
- .....

## Procedure to collect research topics for the 5<sup>th</sup> and 6<sup>th</sup> Calls

### Needs:

- To better structure and regulate the research inputs to be delivered to the DG RT&D for the Calls under FP7-Cooperation-Transport;
- To cover the **Sustainable Surface Transport (SST)**, **Ocean of Tomorrow** and **Horizontal Topics (TPT)**;
- To deliver the Topics' text earlier during 2010 (possibly before summer).

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To this end a **procedure** has been proposed and endorsed early this year.

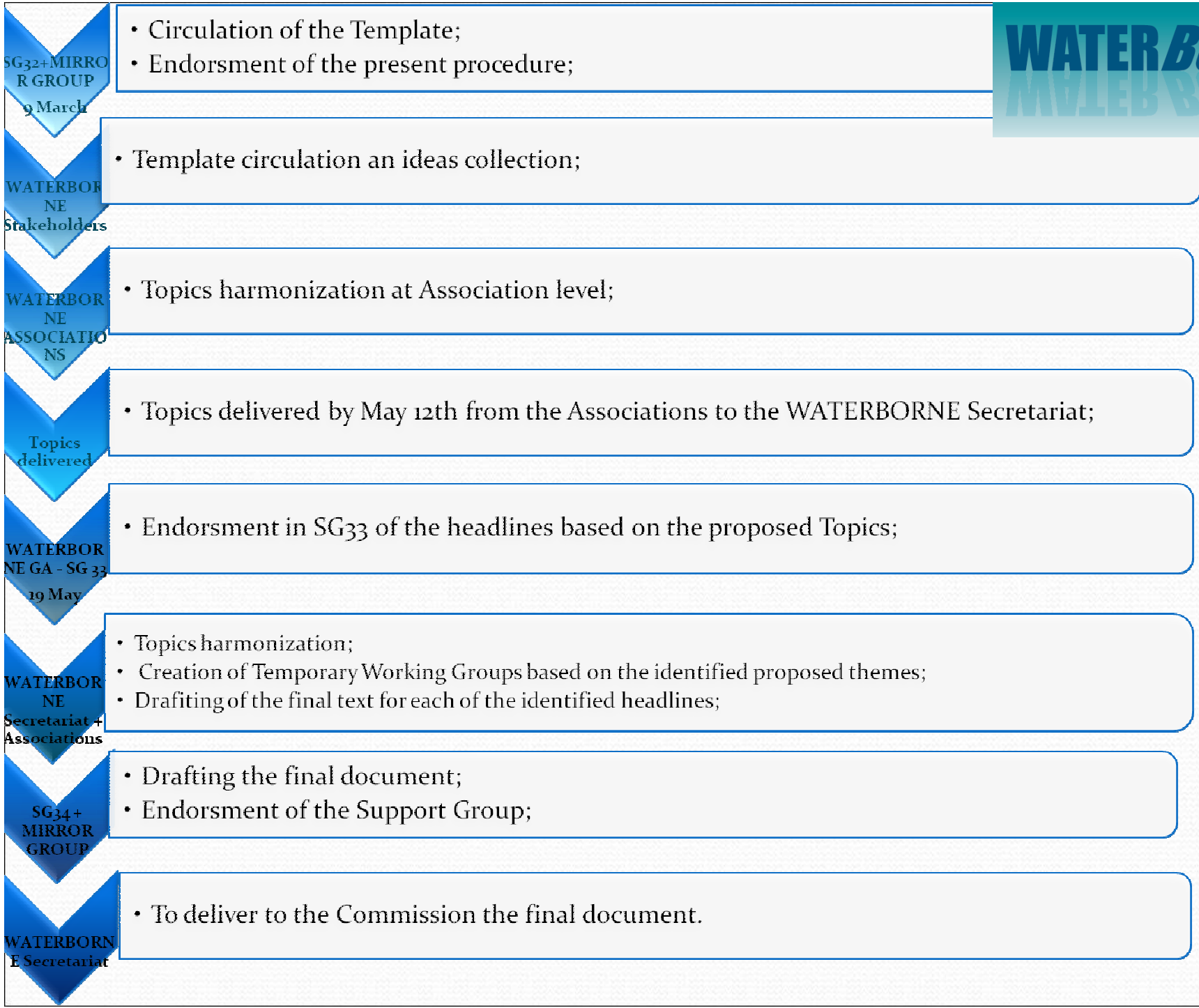
The Research Topics will be delivered to WATERBORNE<sup>TP</sup> only *via* the Associations.

The SG34+MIRROR GROUP on the 23<sup>rd</sup> June will be dedicated to the harmonization and drafting of the ideas.





**Scheme of the Procedure to deliver the Topics for the 5<sup>th</sup> (and 6<sup>th</sup>) Call under FP7**



## Marine/Maritime research cooperation

Full participation and commitment of WATERBORNE<sup>TP</sup> in the Marine/Maritime exercises:

1. EMAR<sup>2</sup>RES;

2. MARCOM+;

3. All Embracing Stakeholders Platform (DG MARE).



## FP8: Starting the Preparation

- FP8 will run from 2013;
- The structure of the Program very likely will be totally different from FP7;
- There will be no more a Transport Theme under Cooperation;
- The research will be organized along the “**Grand Challenges**” of the future ([see Lund Declaration](#));
- The first task is to identify the “**Grand Challenges**” of the future;
  - Suggestions have been already made, like: (1) global warming, (2) tightening supply of energy, (3) ageing societies, (4) pandemic and security, (5) water and food, (6) public health;
- Is there a Maritime one?

## Concluding Remarks (1/2)



- *Waterborne* TP is the R&D coordinator of the European Maritime Transport Community;
- *Waterborne* is the platform to discuss and launch new (larger) common initiatives, both marine and maritime;
- *Waterborne* includes the Member States, thus using more efficiently the tax-payer money for public funding of R&D;
- *Waterborne* provides an excellent opportunity to coordinate and monitor the use of European, National, Regional funds;



## Concluding Remarks (2/2)



- The actions on FP7 Calls are in place and constantly running driving the industry oriented research to enlarge the technical capabilities of the industry and fill the technological gaps;
- Areas of common interest between Waterborne, Marine Research and Science Community, other transport modes (ACARE, ERTRAC, ERRAC) as well with Fuels Cells and Hydrogen, TPWIND, MANUFUTURE and several other platforms;
- The Strategic documents of the WATERBORNE TP are living documents and under constant revision and update.



The background of the slide features a complex network of black scaffolding silhouettes against a blue background with yellow stars, resembling the European Union flag. The text 'WATERBORNE' is written in a large, bold, white, italicized sans-serif font, with 'TP' in a smaller, white, italicized sans-serif font as a superscript to the right.

**WATERBORNE<sup>TP</sup>**

**Thank you for your attention!**



## Contacts:

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