



ACCESSIBILITY & TRANSPORTS

Project nr 2008-1/049

duratiNet

Durable Transport Infrastructures in the Atlantic Area Network

Manuela Salta
Project Leader



European Union
European Regional Development Fund

Investing in our common future



ATLANTIC AREA
Transnational Programme



1ST Transnational Workshop
Lisboa- LNEC, 19th February 2009



Project CONTEXT



Annual freight value
 Road transport (in tonnes)
 > 20 m
 10-20 m
 5-10 m
 0-5 m
 Sea transport (in tonnes)
 > 20 m
 10-20 m
 0-10 m

EU strategic and priority action guidelines

- ▶ European Cohesion policy and Lisbon agenda
- ▶ European transport policy (EU Decision 884/2004/CE, 29 April 2004)

Trans-European Transport Networks(TEN-T)

Interoperability of european transport Networks

- ▶ Gothenburg (Kyoto protocol) agenda
- ▶ Environmental policy (6th EAP-EU 2002-2012)

- ▶ Strategic position of Atlantic Area to east-west connections and relevance
- ▶ Relevance of AA on maritime highways
- ▶ Intermodal transportation
- ▶ Reduction of environmental impact and to improve the energetic efficiency
- ▶ Infrastructures repair /rehabilitation needs



ATLANTIC AREA
Transnational Programme



Project CONTEXT



Transport Infrastructures Elements

- High number of structures with > 30 years with extensive needs on repair /rehabilitation
- Some repairs shown low performance
- Construction sustainability needs (energy and environment)



DURATINET PROJECT

The main goal of the project is to create the network of excellence DURATINET

- > to facilitate an efficient exchange and transfer of knowledge and
- > to promote the durability, safety and sustainability of transport infrastructures in the **Atlantic Area**,

turning these regions more attractive to live in, to work and for competitive business

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Priority 3 Improve accessibility and internal links
ACCESSIBILITY & TRANSPORTS

START

The project addresses both the accessibility issue and the intensification of inter-regional relationships in relation to the transport of passengers, and the consortium is willing to take on the role as THE strategic project for Accessibility.
Lead Partner: *Merryside Passenger Transport Authority and Executive, UK*
Partners: SP(1), FR(5), PT(4), UK(3)
Total Cost: 7.447.555,67 €
Allocated ERDF: 4.840.911,20 €

DURATINET

The main goal of the project is to create the network of excellence to facilitate an efficient exchange and transfer of knowledge, to promote the durability, safety and sustainability of transport infrastructures in the Atlantic Area, turning these regions more attractive to live in, to work and for competitive business.
Lead Partner: *Laboratório Nacional de Engenharia Civil (LNEC), PT*
Partners: SP(1), FR(5), UK(2), PT(4), UK(2)
Total Cost: 2.370.005 €
Allocated ERDF: 1.612.003 €

PROPOSSE

The overall objective of PROPOSSE is to promote short sea shipping as a real alternative to other means of transport of goods (like road) between SMEs from the interior and the ports of Awaraz, Gijón, Le Havre, Poole and Cork. This aim will be achieved by cooperation between ports and entities representing SMEs, and promoting regional development in regions outside the littoral.
Lead Partner: *Autoridad Portuaria de Gijón, SP*
Partners: SP(2), FR(1), UK(1), PT(2), UK(2)
Total Cost: 2.117.500 €
Allocated ERDF: 1.376.570 €

PRIORITY 3 - KEY FIGURES

Projects received: 3
Projects approved: 3

Distribution by Lead Partner



Distribution by Partner



Total ERDF

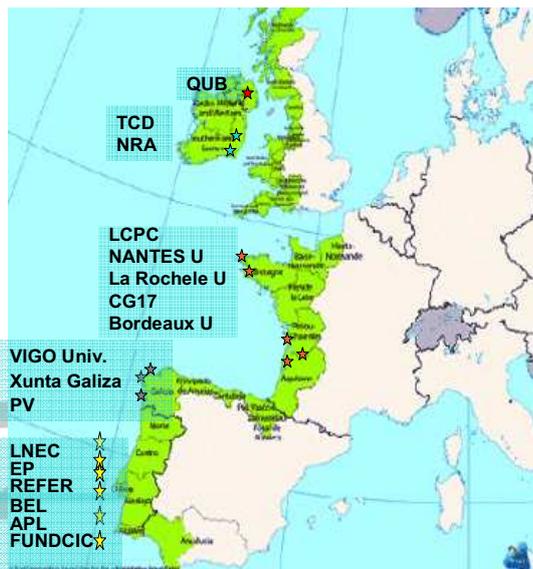
ERDF - 7.829.484,2 € allocated to priority 3

Joint Technical Secretariat Team

[Director]
Jean-Luc Fribé
[Financial and Operational Managers]
Isabel Moreira da Silva | Ismael Morán | Rebecca Bello
[Communication Assistants]
Carla Guimarães | Tânia Alfonso

Managing Authority

Paulo Gomes | Teresa Lameiras | Armindo Carvalho



PARTNERSHIP

17 Partners

- Portugal (6)
- Spain (3)
- France (5)
- Ireland (2)
- United Kingdom (1)





Atlantic Area Transnational Cooperation Program 2007-2013

PRIORITY 3. Improve the accessibility and internal links

OBJECTIVE 1. promote the interoperability between different transportation

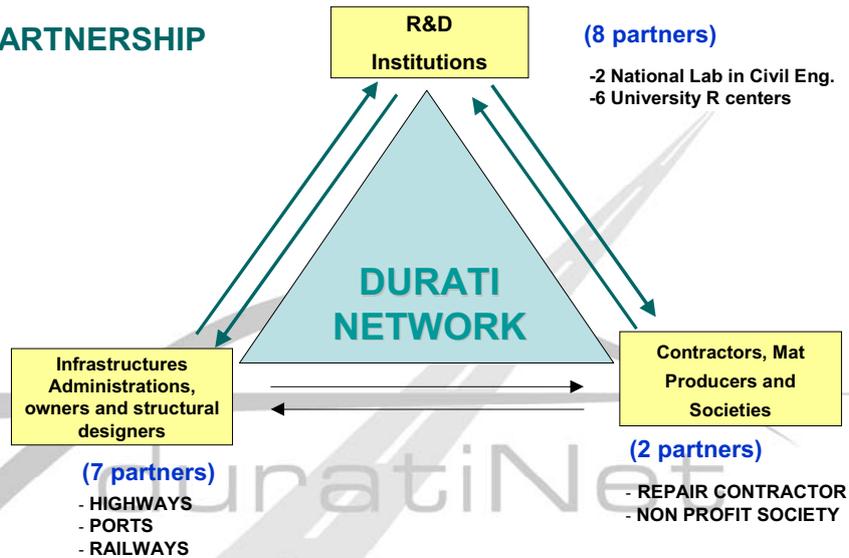
Project data:

TOTAL PROJECT COST- 2. 570 M€
TOTAL ELLIGIBLE COST-2. 480 M€
ERDF FUND (65%) -1. 612 M€

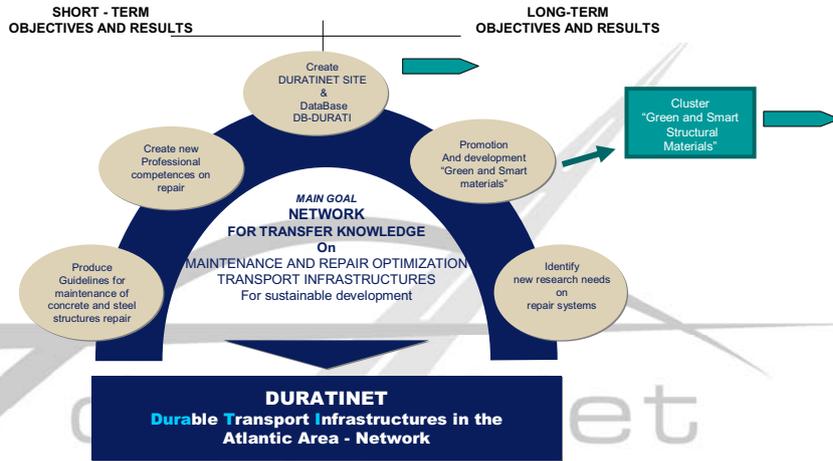
5 Countries PT,SP,FR,IR,UK
17 Partners



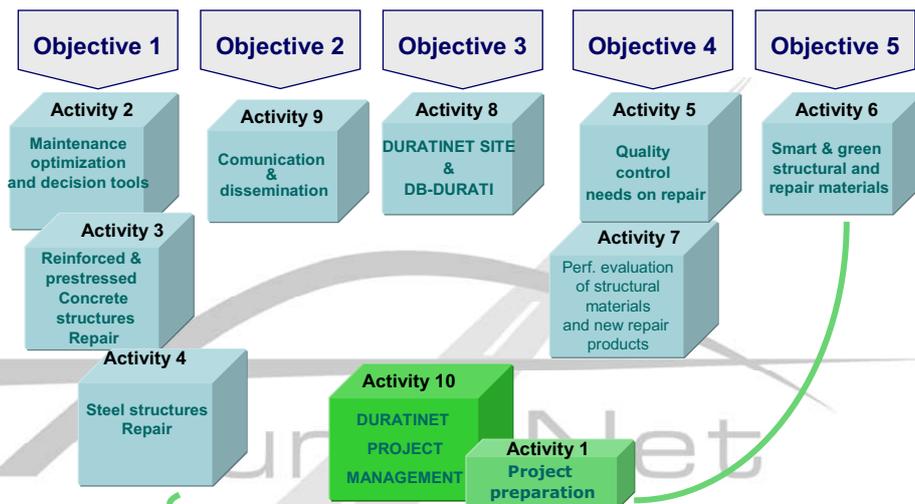
PARTNERSHIP



Project Objectives



PROJECT ACTIVITIES

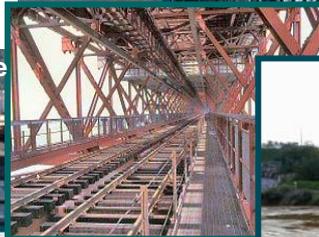




ACTIVITY 2

Maintenance optimization and decision tools

- Requirements for maintenance and repairs optimization
- Methodologies to support repair decisions



End-product



Activity 3

Reinforced and prestressed concrete structures maintenance

- > Durability requirements
- > Types and degradation mechanisms
- > Inspection and diagnosis
- > Prevention and service life modelling
- > Repair techniques and performance/cost/environmental im



End-product





ACTIVITY 4

Steel structures maintenance

- Durability requirements
- Damage mechanisms of steel
- Inspection and diagnosis, NDT
- Protection/ repairing

End-product

Steel structures
Guidelines
on repair



ACTIVITY 5

Quality control needs on repair systems

- Implications of harmonized standards on quality control at level of the contractors

- Implications of harmonized standards on quality control at level of materials producers



End-product:

Technical report

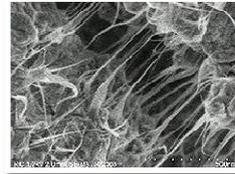




ACTIVITY 6

Smart & green structural and repair materials

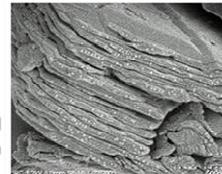
- √ Concrete with by-products and recycled aggregates
- √ Water solvents based coatings for steel protection
- √ Cement with nano particles and nanofibers (Carbon nanotubes)
- √ Nanomaterials with specific performance properties, Easy to clean/Self cleaning coatings and nanoproducts for porous materials



CARBON NANOTUBES FILLING THE CRACKS IN A CEMENTING COMPOSITE



CEMENTING NANOPARTICLES OBTAINED BY THE TECHNOLOGY OF "SOFT CHEMISTRY"



NANOLAYERS OF CALCIUM ALUMINATE



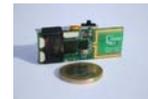
End-product:

State of the art reports

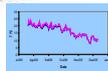


ACTIVITY 6

- √ On-line Monitoring wireless systems
- SMART STRUCTURES**



Wireless sensor network
Wireless data transmission



End-product:

State of the art reports





ACTIVITY 7

Performance evaluation of structural materials and new repair products

- Application de new products and systems
- Collecting materials data from natural exposure



ACTIVITY 8

Creation of DURATI Website with 3 domains

- > Domain for public access for dissemination of project activities and results
- > Domain (Web platform) for internal project work
- > Database DB-Durati with performance data of structural materials and materials repair for public access

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ACTIVITY 9

Project promotion , divulgation and dissemination actions

Organization of different type of events for
dissemination of project results and action

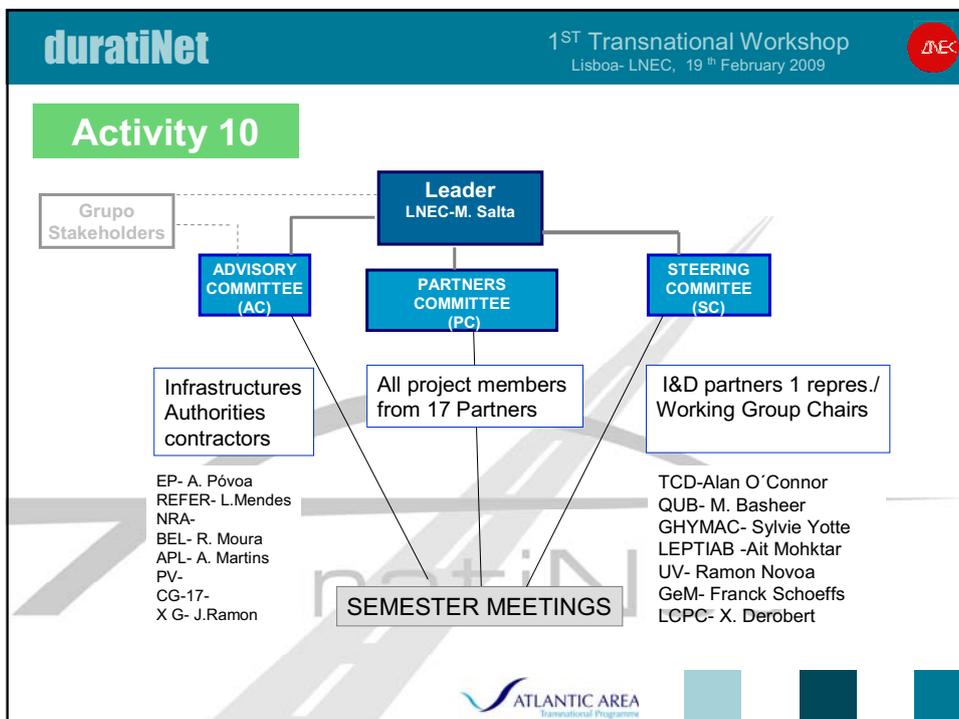
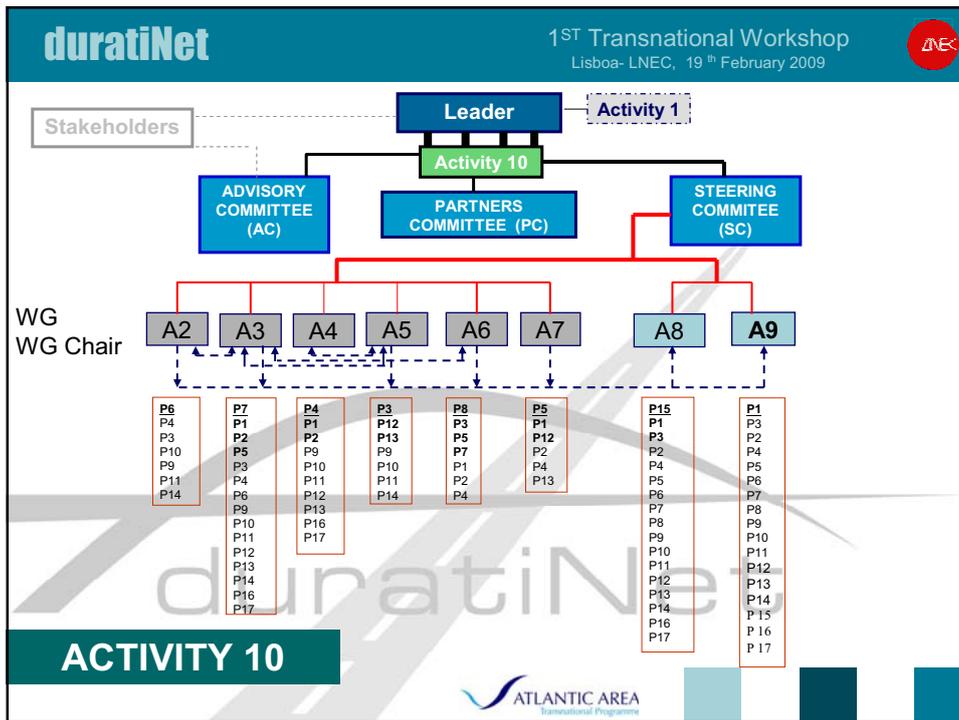
- > **Transnational Workshops for end-users**
- > **International Congress DURATINET+ MEDACHS10**
- > **Course on inspection techniques and diagnosis**
- > **Demonstration actions on repairs**



ACTIVITY 10

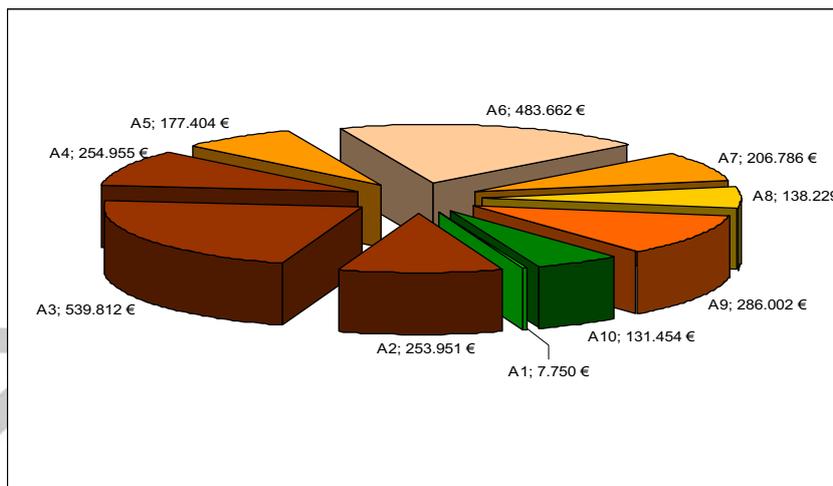
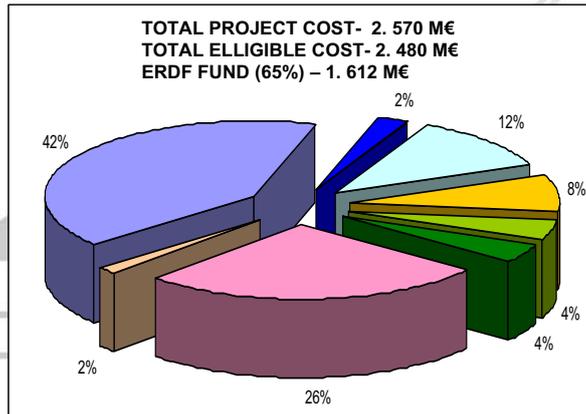
Project management Monitoring the proress of activities, project results and indicators

- **coordenation of management commitees SC, AC and PC**
- **administrative and finnancing project management**

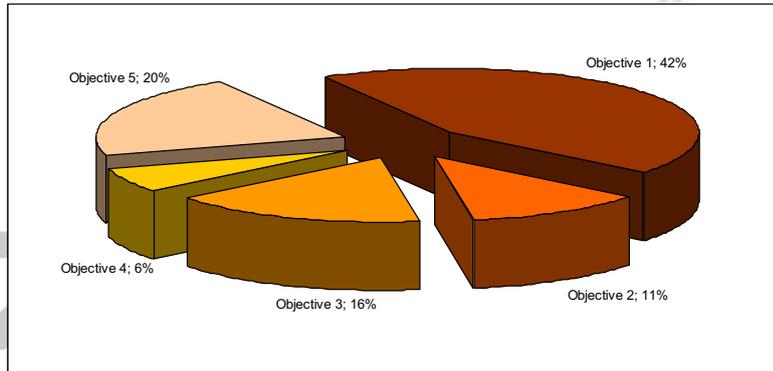




**TOTAL BUDGET
DISTRIBUTION BY ITEMS**



TOTAL BUDGET DISTRIBUTION BY OBJECTIVES



PROJECT RESULTS

> DIFFERENT KIND OF PUBLICATIONS

