



# REACT

Supporting Research on Climate Friendly Transport  
Coordination Action – 233984

REACT project is partially funded by the European Commission

## *Results from REACT project*

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*‘Carbon Aware Cities: A Multi-Disciplinary  
Approach to Low Carbon Transport Systems’*

*CATCH Final Conference  
Bristol 13<sup>th</sup> December 2011*

# Key Facts



- Duration: 24 months  
August 2009-July 2011
- Partnership:  
9 partners from 7 different countries
- Funding: co-financed by the EC
- Scheme: Coordination and Support Action ( Support Action)

# The consortium



Coventry University Enterprises Ltd ( coordinator), UK

Wuppertal Institute for Climate, Environment and Energy, Germany

Geolmaging Ltd , Cyprus

POLIEDRA, Centri di Conoscenza e Formazione del Politecnico di Milano , Italy

Arachni Ltd – Greece

University of Belgrade, Faculty of Transport and Traffic Engineering - Serbia

University of Rijeka, Faculty of Maritime Studies - Croatia

Cardiff University - UK

OIKON Ltd, Institute for applied Ecology - Croatia

# The aim



‘React’s project scope is to act as a driving force for coordinating, supporting and strengthening the RTD area on climate-friendly (i.e., low-carbon) transport and mobility so as to avoid spillage of funding resources and achieve integration of funding opportunities at European level, in relation to mitigation of greenhouse emissions from transport’

# REACT Objectives



- To share experiences among research program managers in the Member States, Associated States and EC, so as to create synergies and enhance collaboration.
- To improve synergies between Member States, Associated States and the EU RTD Agenda on climate-friendly transport and mobility by enhancing coordination of funded research initiatives among EC and national agencies.
- To articulate a long-term vision and a Strategic Future Agenda on climate-friendly transport
- To organize a set of focused dissemination activities that will enhance the impact of research outcomes from EC-funded initiatives.
- To develop a common set of indicators for the carbon impact of transport research

# Expected outcomes



- Monitor research activities at the national, EU and global levels, including the development of a common set of indicators for the carbon impact of transport research
- Contribute to the development of a European strategy on climate-friendly transport research funding
- Improve cooperation in setting up or updating transport RTD strategies by mutual information, exchange of experts and other suitable methods
- Improve synergies between Member States and EU RTD agendas
- Facilitate and enhance cooperation in the implementation of national and EU RTD strategies and programmes
- Develop a set of indicators for carbon impact
- Improve knowledge and understanding and facilitate the dissemination of information on RTD in Europe



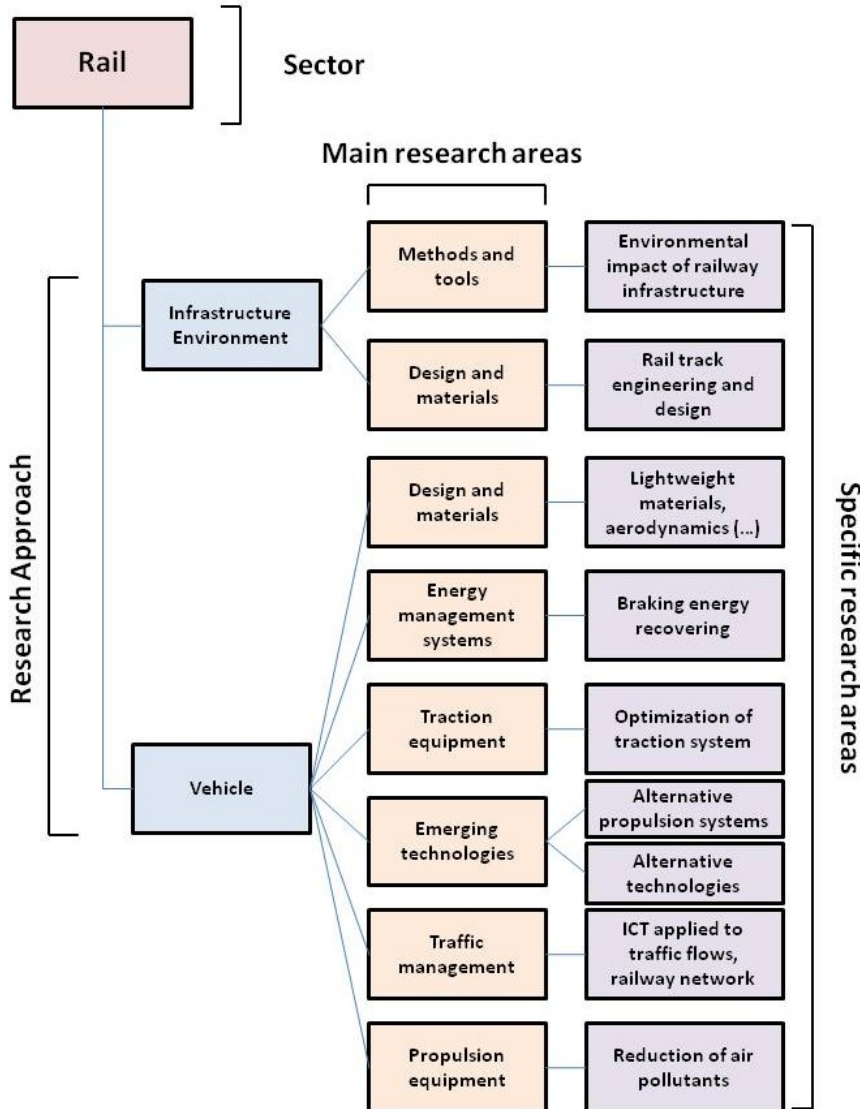
# REACT Strategic Research Agenda

- REACT's SRA contains the main research areas that fulfil the goal of climate- friendly transport chosen among all the research areas of the ETP's SRAs and from other international sources.

- The main research areas are classified according to:

- Engineering and ICT
- Planning, Social and Economy

# Elaboration of REACT SRA: general structure



## An example

- Each Sector provides different research approach;
- for each research approach, many main research areas are included;
- for each main research area, one or more specific research areas are listed

# Assessment of REACT SRA Criteria



The assessment of the REACT SRA Criteria has been articulated **with two different procedures:**

- **Expert consultation**, involving high profile experts and key-players in green transport, with the aim of collecting opinions on what is the state of the art of the research areas of the REACT SRA.
- **Open consultation**, a less detailed consultation but opened to a wider public.

# Elaboration of REACT SRA: expert consultation



## *Ranking of the specific research areas*

1. “Non conventional hybrid systems” (Road transport, Engineering and Information Technology);
2. “Non-motorized mobility planning” (Planning and systems, Planning, Social Sciences and Economics);
3. “Full electrical vehicles” (Road transport, Engineering and Information Technology);
4. “Hydrogen distribution infrastructure” (Road transport, Engineering and Information Technology);
5. “Vehicle energy management” (Road transport, Engineering and Information Technology);

# Elaboration of REACT SRA: expert consultation



## *Ranking of the specific research areas*

6. “Integration of Spatial Planning, Urban Planning, Transportation planning and Economic Policies” (Planning and systems, Planning, Social Sciences and Economics);
7. “Supply chain, route planning, avoidance of empty trips” (Planning and systems, Planning, Social Sciences and Economics);
8. “Public transports planning” (Planning and systems, Planning, Social Sciences and Economics);
9. “Airframe aerodynamics” (Aeronautics, Engineering and Information Technology);
10. “Design for environment and recycling” (Aeronautics, Engineering and Information Technology).



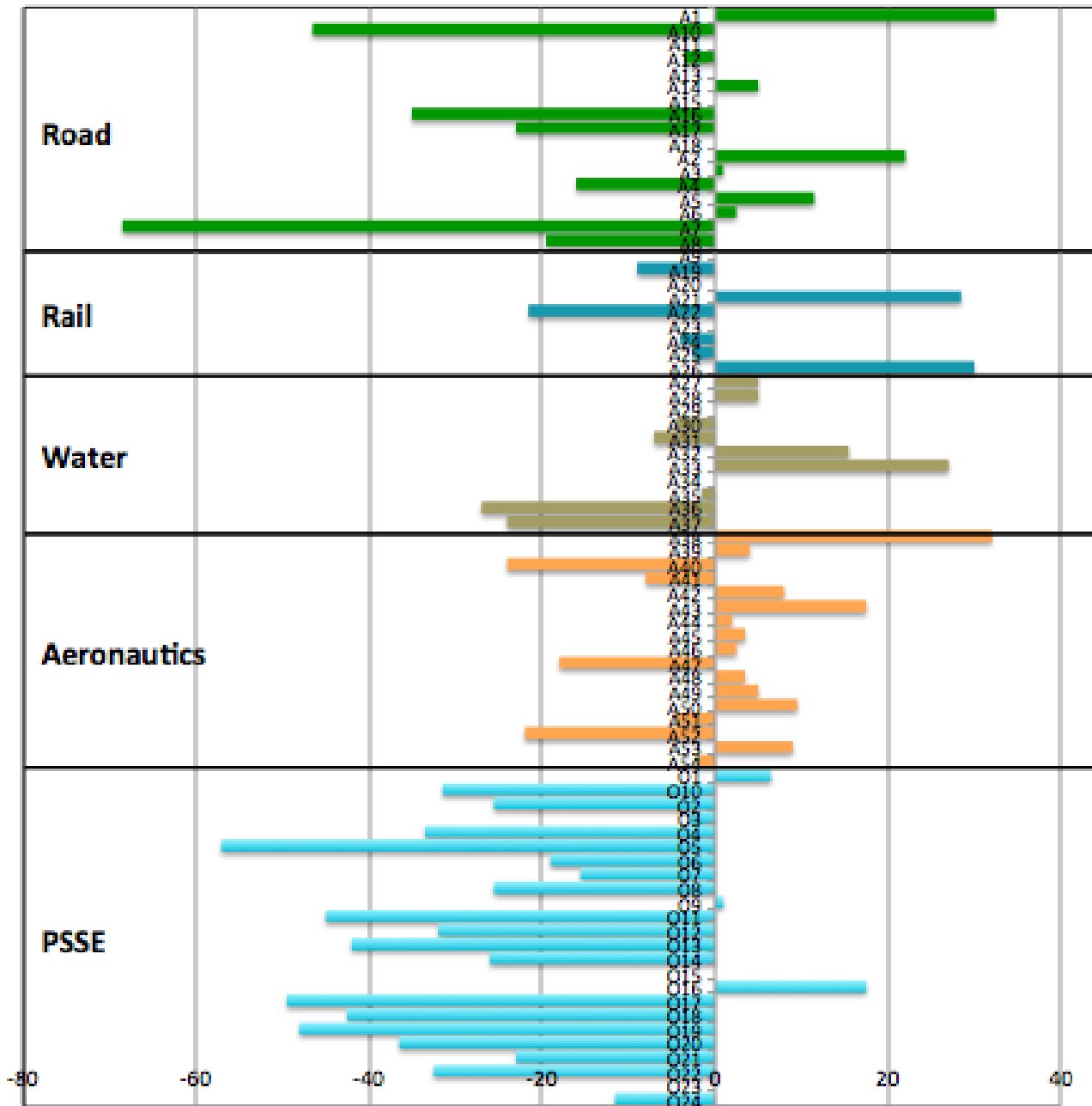
# Supporting the Public Funded Initiatives

1) Mapping the existing initiatives and programs. Database produced as part of research/analysis

- Total = 414 FP6 and 248 FP7 projects in the area of climate-friendly transport

2) Benchmarking funding procedures among EC-MS-AS : Applying benchmarking criteria to funding schemes

# Disparity in Funding vs. Expert Priority Rankings



*Difference in two ranking measures: (a) expert priorities for climate-friendly R&D and (b) amount of EC project funding during FP6 and FP7. Positive figures indicate funding is greater than experts' ranking; negative figures show where funding is lower than experts' rankings*

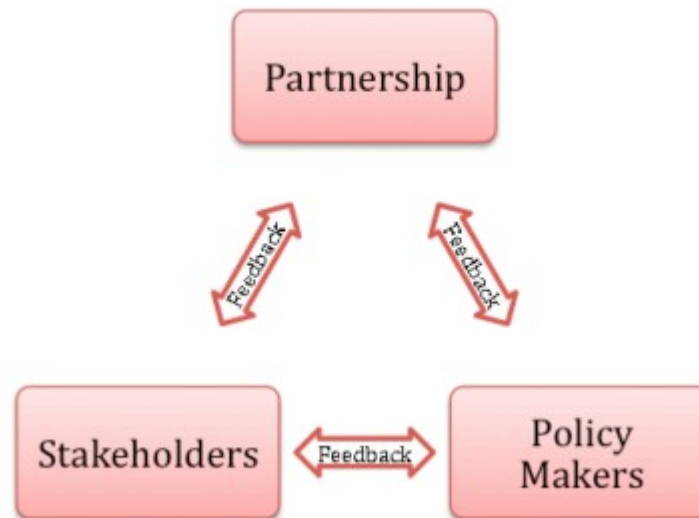


# Indicators for carbon impact

- A *common set of indicators for the carbon impact* of measures in the transport sector, is a tool which can contribute to the identification of the carbon reduction potentials of measures in the transport sector.
- Therefore a common set of indicators for carbon impact has been developed according to the following goals:
  1. Identify relevant indicators to assess carbon impact for the different types of measures and transport modes
  2. Develop formulae that combine these indicators for specific combinations of modes and measures
  3. Define the data requirements and suggest data sources
  4. Discuss the relevance of transport models and compare their eligibility for local policy makers
- a systematic indicator-based approach for CO<sub>2</sub> reduction potentials and impact assessment is developed and guidelines for data acquisition are provided

# REACT Exploitation of results plan

- Exploitation Plan of REACT project comprises all relevant activities and the impact on REACT partners' organizations
- Guide for the REACT Consortium partners but also to the research community how to use the REACT results



Relationship scheme of exploitation activities



# REACT Exploitation of results plan

REACT Exploitation Plan is composed by two main fold schemes:

- An integrated exploitation approach that combines the accumulative knowledge and expertise of the project partners acquired through project implementation;
- Partner specific Exploitation plan.

REACT partners are distinguished within two groups:

- **Commercial partners** - *exploitation aims at transferring REACT results into new services*
- **Academic partners** - *exploitation is mostly carried out by universities and research organizations and aims at increasing the visibility of research results, identifying research open questions and existing gaps*



# REACT Exploitation of results plan

## *Integrated Exploitation approach*

- The integrated Exploitation approach foresees two levels of impact:
  - the horizontal mainstreaming activities and
  - the vertical mainstreaming activities.
  
- In fact, stakeholders and policy makers are involved from the beginning and during the whole duration of the REACT project.



# REACT Exploitation of results plan

## *Integrated Exploitation approach*

Exploitable Knowledge	Exploitable services or measures	Sectors of application	Partners involved
Strategic research agenda	The stakeholders' contribution	Partners' internal organisation Research community, European Commission	All
Carbon Indicators	Benchmarking of existing tools and methodologies	Partners' internal organisation Research community, NGOs, European Commission	All
Funded Programmes & Initiatives	A list of funded initiatives	Partners' internal organisation Research community, Market (SME & Large companies), European Commission	All
Stakeholders' network	Database	Partners' internal organisation	All
Online dialogue tool	Forums	Partners' internal organisation Research community, European Commission	All



# REACT Exploitation of results plan

*Role of the partners*

## **Commercial partners**

### **Exploitation strategy 1**

*to bring the knowledge that is build up to large companies, to small innovative transport companies and to IT companies that provide IT systems, like intelligent transport systems that handle transport technologies*

#### **How:**

- maintains contact with the main stakeholders in transport,
- to give them opportunities to review the REACT findings and
- get their input on needs and points of view on the research and technology important issues



# REACT Exploitation of results plan

*Role of the partners*

## ***Commercial partners***

### **Exploitation strategy 2**

- REACT results will be transferred to the entities who is responsible for research for transport companies.
- The goal is to transfer gained knowledge to the further development of the current ICT support system of the REACT project and the development of product portfolio for companies

### **How:**

- knowledge transfer and
- technology transfer projects
- support for implementation of the new concepts and results.



# REACT Exploitation of results plan

## *Role of the partners*

### ***Commercial partners***

#### **Exploitation strategy 3**

- transfer of the acquired know-how to research and industry through targeted and customer-oriented consulting in form of tutorials, seminars, and to specific consulting contracts
- the expertise acquired for the procedure of articulating a strategic research agenda is an asset for further exploitation

#### **How:**

- development and expansion of the network of stakeholders, with intensive discussions on strategic issues in transport and transport research
- promotion of REACT results during transport info days
- Market Enablement actions, capitalising on the acquired, from the REACT project, know-how



# REACT Exploitation of results plan

*Role of the partners*

## ***Academic partners***

### **Exploitation strategy 4**

- to strengthen the expertise in the research field of evaluating the carbon impact of transport measures
- to apply the knowledge to the different fields of research on climate-friendly transport

### **How:**

- Conception of regional climate action plans
- Discussion of measures and policy instruments for climate-friendly transport
- Evaluation of single measures in the transport sector.



# REACT Exploitation of results plan

## *Role of the partners*

### ***Academic partners***

#### **Exploitation strategy 5**

- knowledge transfer and development of the targeted research area
- the goal of REACT's academic exploitation is not primarily on revenue streams, (although it can include those as well) but knowledge transfer and in general the ongoing development of a target research area
- Furthermore it is used to improve the quality of teaching.

#### **How:**

- Publishing of papers/white papers
- Submitting articles to journals or magazines
- Speaking at conferences
- Offering seminars and workshops
- **Doing workshops presentations.**



# REACT Exploitation of results plan

## *Role of the partners*

### ***Academic partners***

#### **Exploitation strategy 6**

- building the widest possible network of participatory institutions in the climate friendly transport research community
- establishing and sustaining such a community within the preservation area
- maintaining and development of relationships with institutions to keep their motivation and interest high in contributing to the growth of the community in the future
- developing specific project-related knowledge, transferring it to various audiences, and using it to improve teaching

#### **How:**

- participation in REACT results implementation and valorization to the research and educational duties.



# REACT Exploitation of results plan

## *Role of the partners*

### ***Academic partners***

#### **Exploitation strategy 7**

- seeking and developing specific project-related knowledge, using it to improve teaching.
- knowledge creation and diffusion
- advising the policy related organizations and the market, through the most innovative research results as REACT project

#### **How:**

- exploitation of the accumulated knowledge from the funding models per country
- publishing of papers.

# Conclusions



- The REACT project draws its main strength from networking with stakeholders.
- All results of the project are linked to and influenced directly by inputs from researchers, policy makers and industry players.
- The REACT project main deliverables – Strategic Research Agenda, Carbon Indicators and Funding Initiatives – are based on and formulated by the feedback of stakeholders, through their active and structured participation.



# Thank you for your attention

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