PROJECT COMPASS

Optimised CO-Modal PASenger Transport for Reducing Carbon Emissions

Funding: European (7th RTD Framework Programme)
Duration: Nov 2011 - Nov 2013
Status: Complete with results
Total project cost: €1,940,760
EU contribution: €1,499,945

Call for proposal: FP7-TPT-2011-RTD-1
CORDIS RCN: 100643

Background & policy context:
The motivation and the general objectives of this project were deeply rooted in the European Transport Policy (ETP) in the first decade of the 21st Century, looking towards the new challenges of the incoming second decade of the century. In particular, three topics were emphasised:

- challenges from the key socio-economic trends;
- challenges from environmental concerns, and;
- challenges from technological changes.

Objectives:

General Objectives:

- To provide an overall picture of the future travellers’ needs in the light of the key socio-economic trends;
- To analyse how Information Communication Technology (ICT) and Information Technology Services (ITS) applications can meet the new demands and promote the integration of multi-modal transport solutions, and
- To assess how these solutions can contribute to the de-carbonisation of transport activities.

In such a framework, the following objectives were also be addressed:

- the potentials of the ICTs and ITS applications to provide behavioural data and information to improve travel surveys and to foster harmonisation; and
- the validation of the ICT solutions with stakeholders rooted in the national contexts, due to the involvement in the project of TTS Italia, member of the National Network of ITS Associations coordinated by ERTICO.

Scientific and Technical Objectives:
The work carried out in COMPASS did not have to start from scratch, but built on a substantial body of knowledge on co-modal and intermodal passenger transport already available from past and current projects. In particular KITE, LINK, INTERCONNECT, HERMES, CLOSER and ORIGAMI and USEmobility. From this basis, COMPASS’s specific scientific and technological objectives were:

- to identify key trends (among others, demographic, societal, economical and policy) that will affect mobility now and in the future;
- to identify the mobility needs of current and future travellers;
- to identify the potential role of ICT in promoting co-modality and data collection;
- to identify the information required from data in order to properly understand mobility, to optimise a future co-modal transport system and to assess the impact of new solutions;
- to analyse existing surveys with regard to data available concerning long-distance, rural and urban...
travel;
• to identify solutions to improve behavioural data (from ICT or elsewhere) and needs and opportunities for harmonisation of the data collected, in particular in the various national surveys (this also includes new definitions of accessibility indicators); to identify and investigate ICT solutions to influence mobility patterns for long-distance, rural and urban travel towards increased co-modality;
• to develop business models that enable and promote these solutions in practice;
• to assess the pot

Methodology:

COMPASS comprised eight work packages, most consisting of two to four tasks. The work packages were:

• WP1 Consortium Management;
• WP2 Technical Management;
• WP3 Key Drivers;
• WP4 Travel Surveys;
• WP5 ICT Solutions;
• WP6 Assessment;
• WP7 Dissemination and Exploitation.

WP1, WP2 and WP7 are horizontal activities, which took place throughout the project. Project management comprises general co-ordination and management tasks as well as quality control. WP3, which kick-started the project, identified the key drivers behind future transport developments, namely key trends, such as socio-demographic trends, traveller needs and policy needs, as well as co-modal opportunities. WP4, which also started right at the beginning of the project, dealt with travel surveys and comprises five tasks. The first of which identified which information would ideally be needed from the travel surveys, the next three determine what information was actually available from surveys for long-distance, rural and urban travel, and the final one identified solutions for improving behavioural data (from ICT or elsewhere) and harmonisation needs and possibilities. WP5 identified and analysed ICT solutions for improving long-distance, rural and urban mobility and related business models. Finally, WP6 provided the assessment of the identified solutions. A framework for the assessment was developed and the effects of the solutions were identified at both local and European level, before final conclusions were drawn and recommendations made.

Parent Programmes:
FP7-TRANSPORT – Transport (Including Aeronautics) - Horizontal activities for implementation of the transport programme (TPT)

Institute type: Public institution
Institute name: The European Commission
Funding type: Public (EU)

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Key Results:

The purpose of the ‘Optimised co-modal passenger transport for reducing carbon emissions’ (COMPASS) project was to improve the planning and operation of the passenger transport network by enhancing co-modality. Co-modality refers to the use of the most suitable mode for a particular journey. This may involve intermodal or single-mode trips.

COMPASS provided an overall picture of travellers' future needs based on key socio-economic trends. Researchers examined existing information from previous EU-funded projects on transport journeys in Europe to determine key trends in mobility patterns based on current and future passenger requirements. Special attention was given to intelligent transport system (ITS) applications and the role of information and communication technologies (ICT) in the collection and management of data. The use of ICT and ITS applications also contributed to the removal of carbon from transport activities.

Six categories of ICT solutions with the potential to deliver seamless multimodal transport journeys were identified. They covered transportation management systems, traveller information systems, smart ticketing and tolling applications, vehicle-to-infrastructure (V2I) applications, vehicle-to-vehicle (V2V) applications and demand responsive transport (DRT) services. ICTs are the key elements for conveying up-to-the-minute information to passengers, enabling them to enjoy a seamless journey. They may include information on timetables, delays and interconnections, with smart ticketing facilitating the collection of data for passenger mobility surveys.

The COMPASS project used case studies to examine transport solutions at the local scale and assessed their impact on a European scale. This supports EU policy by identifying potential impacts of ICT applications in transport, and helps increase understanding of ICT solutions and their implementation in transport modes.

These solutions were studied for urban, rural and long-distance transport and a fact sheet was published online. An assessment framework was developed that included criteria for scoring different ICT applications. The framework was part of the 'Handbook of ICT solutions for improving co-modality in passenger transport'.

Work conducted by COMPASS will support the EU's commitment to make a significant contribution towards the 'Integration of passenger transport modes and travel information services'. The conclusions and recommendations drawn up by the project partners will

Strategy targets

Innovating for the future: technology and behaviour
Promoting more sustainable development

Documents:

- Project Presentation (Project presentation)

**STRIA Roadmaps:** Cooperative, connected and automated transport, Smart mobility and services

**Transport mode:** Multimodal transport

**Transport sectors:** Passenger transport, Freight transport

**Societal/Economic issues,**

**Transport policies:** Decarbonisation

**Geo-spatial type:** Other