Optimised Co-modal Passenger Transport for Reducing Carbon Emissions

Welcome to the COMPASS project, co-funded by the European Commission within the Seventh Framework Programme. The project started on 1st November 2011 and will run for 25 months. The project consortium comprises nine partners from six European countries.

Project Overview

The research to be undertaken in the COMPASS project will recommend solutions that will allow improvements to the planning and operation of the passenger transport network to enhance co-modality in transport thus contributing to the reduction of carbon emissions.

COMPASS aims to provide an overall picture of what travellers require from the transport system at the present time and what they will require in the future based on an investigation of key socio-economic trends. COMPASS will analyse how solutions based on ICT (information and computer technology) and ITS (intelligent transport systems) applications can meet the future demands identified, in particular to provide for the integration of multi-modal and co-modal transport solutions, and will then assess how these solutions can contribute to the de-carbonisation of transport activities.

In COMPASS co-modality is defined as "using the transport system so that a particular mode is used when it is the most appropriate one for a particular journey; this can involve multi-modal trips, but may also involve single-mode trips". Solutions for optimised co-modality will be identified and assessed, so that policy recommendations can be made.

Project Aims

COMPASS will look at the existing information available on passenger journeys in Europe, drawing extensively on work that has been undertaken in previous European-funded projects. Existing sources of information and data will be used to identify and describe the key trends in mobility patterns in the 21st century, based on current and future passenger needs. Existing sources of travel survey data will be exhaustively researched, with a particular focus on the role of ICT in data collection and management, and recommendations will be made on improving data collection in passenger transport so that future traveller needs can be better identified.

COMPASS will then identify ICT and ITS-based solutions that have the potential to improve co-modality in passenger transport and these potential solutions will be assessed through a number of case studies. This assessment will be based on a framework that emphasises the contribution of each solution to reduced carbon emissions. There will also be an investigation into how best to present solutions for improved co-modality to those stakeholders in transport operations and planning who will be responsible for their implementation, to ensure the best possible take-up of recommended solutions.

Finally COMPASS will derive conclusions and recommendations for national and EU transport policy and actions, and will disseminate the findings widely amongst policy makers and other stakeholders.
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Key Objectives of COMPASS

The key objectives of the COMPASS project are to:

- identify key trends (demographic, societal, economical, policy) that will affect mobility now and in the future and thus to identify the mobility needs of current and future travellers;
- identify the potential role of ICT in promoting co-modality and data collection;
- identify the information that would be needed from data (travel statistics and survey results) in order to properly understand mobility, to optimise a future co-modal transport system and to assess the impact of new solutions;
- analyse existing surveys to assess what data is available concerning long-distance, rural and urban travel;
- identify solutions to improve behavioural data availability (from ICT or elsewhere) and opportunities for harmonisation of the data collected, in particular in the various national surveys (this also includes new definitions of accessibility indicators);
- identify and investigate ICT and ITS solutions to influence mobility patterns for long-distance, rural and urban travel towards increased co-modality;
- develop business models that enable and promote these solutions in practice;
- assess the potential impact of the solutions identified both on local and on European level, in particular with regard to carbon emissions;
- develop general conclusions and provide recommendations for national and EU transport policy and actions.

September 2013 Update

As the end of the project approaches the COMPASS final conference is scheduled to take place in Rome on 13th November 2013. Members of the project consortium will present project results, focusing on ICT solutions for co-modality in passenger transport, and will seek feedback through discussion with conference attendees. Further information on the conference is available on the COMPASS website.

The key drivers website was established in July 2013. This presents the results of the COMPASS research activity to identify “key drivers”, the social, economic, environmental and technological trends that are expected to influence current and future mobility patterns across Europe. The key drivers website can be accessed via a link from the COMPASS homepage.

Draft versions of two public deliverables, D4.1, Transport demand related information overview on long-distance, rural and urban travel, and D4.2, The role of ICT in travel data collection, are available to download from the project website.

The main outputs of COMPASS, due at the end of the project, will be the Handbook of ICT solutions for improving co-modality in passenger transport (D5.1) and An assessment of the potential impact of ICT solutions on a co-modal transport system (D6.1).

Project Consortium

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