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Further information on EXTR@Web's editorial team for Thematic Research Summaries can be obtained from Annex III.

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Abbreviations and Acronyms Used

AG	High level Advisory Group (to the EXTR@Web project)
BG	Benchmark Group (associated with the EXTR@Web project)
CEEC	Central and Eastern European Country
DG TREN	EC Directorate-General for Energy and Transport
EC	European Commission
EFTA	European Free Trade Association (Norway, Iceland, Switzerland, Liechtenstein)
ERA	European Research Area (EU, EFTA and CEECs)
ETC	Electronic Toll Collection
EXTR@Web	Exploitation of Transport Research Results via the Web (DG TREN FP 5 Accompanying Measure project)
EU	European Union
FP 4 (5, etc)	EC Fourth (Fifth, etc) Framework Programme
ITS	Intelligent Transport Systems
PAG	Programme Analysis Group (part of EXTR@Web project)
RTD	Research and Technical Development
TEN-T	Trans-European Transport Network(s)
TERN	Trans-European Road Network (TEN-T for road)
TRKC	Transport Research Knowledge Centre; TRKC website at europa.eu.int/comm/transport/extra

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1. Introduction

This paper provides a structured guide to the results of Research and Technical Development (RTD) projects relating to **Long-distance Transport**, carried out in transport research programmes throughout the European Research Area (ERA).

It is one of a series of 30 papers. The numbering of papers refers to the outline of Deliverable D2.A "Thematic Structure and Definitions – all Themes", issued 05/03/2004.

Paper no.	Transport theme
D2.C-2.1	Passenger Transport
D2.C-2.2	Freight Transport
D2.C-2.3	Urban Transport
D2.C-2.4	Rural Transport
D2.C-2.5	Regional Transport
D2.C-2.6	Long-distance Transport
D2.C-2.7	EU Accession Issues
D2.C-3.1	Air Transport
D2.C-3.2	Rail Transport
D2.C-3.3	Road Transport
D2.C-3.4	Waterborne Transport
D2.C-3.5	Other Modes
D2.C-3.6	Intermodal Transport
D2.C-4.1	Economic Aspects
D2.C-4.2	Efficiency
D2.C-4.3	Equity and Accessibility
D2.C-4.4	Environmental Aspects
D2.C-4.5	User Aspects (incl. ergonomics, quality, choice and rights)
D2.C-4.6	Safety and Security
D2.C-5.1	Decision-support Tools
D2.C-5.2	Financing Tools
D2.C-5.3	Information and Awareness
D2.C-5.4	Infrastructure Provision (incl. TENs)
D2.C-5.5	Integration
D2.C-5.6	Intelligent Transport Systems
D2.C-5.7	Regulation / Deregulation
D2.C-5.8	Land Use Planning
D2.C-5.9	Transport Management
D2.C-5.10	Pricing and Taxation
D2.C-5.11	Vehicle Technology

Of the some 4500 projects from research programmes the Transport Research Knowledge Centre (TRKC) ultimately intends to consider, currently **14** of those already covered, deal (partly or fully) with the issues of **Long-distance Transport**.

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1.1 How to use this paper

You are recommended to use this paper to locate RTD results on sub-themes where you have a particular interest, rather than reading the paper from start to finish:

- Start in Section 2 to get an overview of the scope of the particular theme.
- Read Section 4 that summarises the findings for each sub-theme of interest to you.
- Consult Annex I to identify the individual projects, be they of European or national origin, relating to a particular sub-theme.
- If this is the first time you have used one of the series of thematic research summaries, it is strongly recommended that you read Annex II. This explains the background and purpose of the EXTR@Web project, and the basis upon which information in this document was selected and analysed.

The other sections of this paper can help you to gain an overall picture of the **Long-distance Transport** theme, associated policy issues and the background of project EXTR@Web.

The analysis in this paper is the responsibility of the EXTR@Web project team, and does not represent the official viewpoint of the European Commission.

1.2 The link to the Transport Research Knowledge Centre website

Further details on individual projects can be obtained from the Transport Research Knowledge Centre (TRKC) website at europa.eu.int/comm/transport/extra

The TRKC website includes summaries and full final reports of individual projects, as well as a variety of analyses, and publications prepared by the EXTR@Web project.

How to best use the online resource:

- The 'Projects & Analysis' section allows the user to specify a project-wide search on 'Publication date', 'Origin', 'Document type', 'Mode', 'Sector', 'Geographic area', 'Policy objective' and 'Tool', or any combination of these criteria.
- This may be complemented, or superseded, by the flexible 'Free text search'.
- On the query result screen, free text search criteria may be refined, as appropriate. Further tick boxes here allow limiting query results according to 'Project status' (five levels).
- Query results are presented in a table, which allows for sorting by column (click on relevant column header for alphanumerical sorting).
- Project specific summaries may include links to dedicated project homepages, or provide contact details of project responsables, where available.

It should be noted that the online Transport Research Knowledge Centre will be updated frequently, though dependent on input from project co-ordinators.

Other parts of the TRKC website cover transport research at Programme level, and expand on transport related issues, e.g. in the 'Links', 'Events', 'Glossary' and 'FAQs' sections.

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2. Scope of theme

2.1 Definition of theme

The **long-distance Transport** theme covers passenger and freight transport over considerable distances of about 100 kilometres or more. This definition implies that long haul excludes purely urban, rural and regional transport, independent of the means of transport.

Long-distance passenger transport comprises:

- Road and rail transport (car, motorcycle, coach, train), which is typically over distances of 100 to 400 km (but can of course be longer, especially for leisure purposes where users are more sensitive to price than journey time);
- air transport, which starts to become competitive with ground modes at distances of around 250km or more, although where high-speed rail services exist, this increases the distance at which air travel becomes more competitive;
- only limited waterborne transport (normally short sea ferry routes): this mode tends only to be used for short sections of long distance journeys where there is no land alternative, or to avoid a lengthy detour by land (other passenger transport by sea or inland waterway is restricted to pleasure cruises);
- for modes other than private car or motorcycle, long-distance trips usually require the use of local or regional transport networks to access and egress the long-distance mode.

Long-distance freight haulage comprises:

- The use of pipelines, inland waterways and coastal shipping (particularly for low-value, non-time-sensitive goods), as well as the modes mentioned above; and
- urban and regional freight distribution (pre-and end-haulage for origins/destinations not directly connected to major long distance terminals), which is normally up to about 50 km (more in rural areas), and is almost always by road.

Long distance transport is either interregional or international in nature, thus requiring co-operation between network and service operators in different regions (if they are not the same) and countries. Long-distance travel is made more difficult, time consuming or expensive due to issues like different information systems, pricing systems, national regulations, jurisdictions, technical standards and languages. Thus there is a close relationship between long-distance transport and interoperability.

Inevitably, there is overlap with the "Urban", "Rural" and "Regional" themes, as these networks are usually required to provide access to long-distance services, both for passenger and freight transport. Therefore intermodality, particularly in terms of interfaces with local/regional networks and services, is an important part of the long-distance theme.

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2.2 Topics included in theme

Specific topics included in the theme comprise:

- Infrastructure provision and management for air, rail, road and waterborne systems including terminals (passenger and freight) and interchanges between different systems and modes;
- scheduled and demand-driven public passenger transport, either by air, rail, road or waterborne, which may be either single mode or multimodal;
- individual motorised passenger transport by cars, vans, motorcycles; and
- freight transport by train, ship, barge, van, lorry, pipeline, aeroplane, etc.

All reflected transport means, modes and concepts are addressed in terms of planning, construction, operation, management, finance and harmonised legislation in order to ensure the best possible efficiency, safety, intermodality and to minimise environmental impacts.

All sustainability policy objectives and tools listed in the four-dimensional theme categorisation are relevant to long-distance transport.

The above summary of topics describes the principal breakdown of technical, organisational and managerial aspects that come under the theme, whereas Chapter 4 of this document reflects sub-themes according to actual priorities in transport research policy.

2.3 Significance of theme

In the light of increasing integration between European countries and globalisation in general, long-distance transport to, from and within Europe is becoming increasingly important. In particular the growth in air transport is a dynamic factor in the competitive development of Europe, while on the other hand its environmental impacts and the need to become part of intermodal transport chains is imminent.

The EU-15 states' external trade in 2002¹ amounted to more than 1,900 million tonnes of goods, largely transported via rail, road and sea shipping. Long-distance air transport – though with a relatively small overall market share (by volume) – is important in terms of the value of shipped freight, which accounts to more than 25% of the EU-15's external trade. Combined with considerable market share of high-speed rail links and airlines (hub and spoke networks, global alliances), the passenger sector demonstrates the need for modern and capable infrastructures.

For freight haulage over distances of more than 150 km, the current share¹ of road, rail and inland waterways for the EU-15 states is as follows (relative to figures for the entire mode):

- 23.5% of road traffic (reference year 2001);
- 53.2% of rail traffic (reference years 1994-2001);
- 31.2% of inland waterway traffic (reference years 1993-2001).

¹ 'EU Energy and Transport in Figures' – Statistical pocketbook 2003. European Commission, DG TREN in co-operation with Eurostat, 2003, Luxembourg

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However, it has to be noted that road dominates the Europe-wide freight long haul sector with an overall share of 88.4%, based on freight tonnes.

Passenger long-distance transport within the EU-15 – over distances of more than 250 km – is distributed among modes as follows:

- 71.2% road over distances between 250 and 500 km, and 35.1% above 500 km (individual car and bus combined);
- 17.6% rail over distances between 250 and 500 km, and 8.7% above 500 km;
- 7.7% air over distances between 250 and 500 km, and 53.2% above 500 km; and
- 1.7% waterborne above 250 km.

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3. Policy context

European policy objectives related to theme

As stated in the previous chapter, long-distance transport comprises air, waterborne and land transport over significant distances. While there are no explicit policy papers on a cross-cutting theme such as long-distance, looking at the particular transport modes reveals policy strategies that elaborate on the relevant objectives related to this theme.

With respect to the aviation sector, actions towards the goal of a Single European Sky are:

- Safety;
- airspace management;
- integration of military needs;
- systems and operations;
- framework for providers of air traffic control; and
- social aspects.

The key policy issue here lies in achieving improvements in three major categories:

- Harmonising the safe and efficient management of airspace across Europe;
- tackling rapidly growing bottlenecks at airports; and
- adapting human operators and users to new emerging technologies in the whole sector.

Further recent policy activities in the air sector relate to aspects such as:

- The work of the 'Airport Operations Programme Advisory Group';
- aviation training, aimed at improving management performance; and
- the effects of new EU regulations on slot management.

On the industrial side, European politics strongly support the competitiveness of airframers, engine manufacturers, suppliers and equipment specialists. In particular research into new composite materials for use in future efficient and more environmentally-friendly vehicles and next generation engine technology is among the key research objectives.

Finally, the European Commission has now been negotiating an 'Open Skies' treaty with the US since mid 2003 on the creation of a new transatlantic air transport agreement.

Waterborne transport already has a great importance in European trade, in particular, external trade where it represents 90%. The increasing demands of enlargement and the need for a sustainable and efficient transport system are a challenge for the coming years, where waterborne transport, in particular short-sea shipping, will have an important role.

The communication from the Gothenburg European Council in 2001 presented two policy objectives regarding improvements in transport systems:

- Disconnect the relation between transport demand and economic growth (known as 'decoupling'); and
- promote the growth in alternative means of transport (waterborne included) in order to allow modal shift from road transport.

Furthermore, the 2001 White Paper 'European transport policy for 2010: time to decide' defined several policy objectives and measures aiming to achieve higher levels of

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efficiency in transport, among them being increases in short-sea shipping and the use of inland waterways. Although short-sea shipping has increased almost 30% between 1990 and 1999 there are conditions for further growth and, for this purpose, increased intermodality and the 'motorways of the seas' are key elements of this strategy. According to this White Paper, short-sea shipping is viewed as a crucial for an efficient transport system in Europe. For this purpose, short-sea shipping will have to overcome some obstacles.

The following policy measures are aimed at increasing market share of waterborne transport, and short-sea shipping in particular:

- Overcoming the lack of public and private capital through the introduction of innovative policies on infrastructure charging, and more selective public funding focusing on major projects;
- improvements in intermodality that allow for competitive alternatives to road transport through the more efficient use of existing infrastructures;
- new legislation for the access to port services, and simplified rules for the operation of ports; and
- the establishment of a European Maritime Safety Agency which is set up to mitigate the risk of maritime accidents, marine pollution and the loss of human lives at sea.

Finally, the Marco Polo II programme targets the inception of 'Motorways of the Seas', namely those between France and Spain, as well as between Italy and Spain.

For the rail sector, the EU transport policy White Paper stressed three policy packages:

- Increasing competition within rail;
- promoting socially efficient competition between rail and other modes; and
- creation of new rail infrastructure.

The first railway package, adopted in 2001, already made provision for accounting separation of freight passenger and infrastructure, set the rules for infrastructure charges and provided a timetable for opening up the market for international freight services. Since then, agreement has been reached on a second railway package focusing on safety, interoperability and domestic freight services, which led to the adoption of a regulation and three further directives in spring 2004. A third railway package focusing on international passenger services and the licensing of international train drivers has, again in spring 2004, been presented.

The second railway package was presented by the Commission in early 2002 and contained five key legislative proposals:

- An amendment of the directive on the extension of infrastructure access rights to freight services within any Member State and accelerating the opening up of the market;
- a safety directive;
- a proposal for a regulation to create a European rail agency; and
- a recommendation on the COTIF arrangements for international traffic.

Policy relating to the promotion of socially efficient competition between rail and other modes falls into two areas:

- Infrastructure charging – relating to all modes; and
- fuel taxation – relating to road and to aviation.

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Policy relating to improving transport infrastructure falls into the three key areas of relevant actions, which are further set out in the White Paper's Action Programme:

- Revisions of the Trans-European Network;
- public funding for infrastructure; and
- linking user charges with infrastructure investment.

The above infrastructure policy is particularly relevant for road transport, which carries most of the passenger and freight traffic within the EU. Road safety is a key priority, although this affects long- and short-distance traffic alike. Policy priorities relating to the Trans-European Road Network (TERN) fall into two major groups.

Firstly, an EU priority is the elimination of bottlenecks on the TERN in order to relieve congestion (and thus increase efficiency and reduce pollution and accidents). This particularly involves completing links in:

- Peri-urban areas, where there is a need to separate long-distance transit traffic from urban commuter traffic by keeping the former on free-flowing motorways and expressways; and
- border areas, as the development of motorway networks in many parts of Europe has historically been nationally focused, leading to 'missing links' across borders – this is particularly the case where these borders are defined by natural obstacles such as mountains or water, and in cases with borders with New Member States and non-EU countries, due to the significant increase in road traffic across these borders since the fall of the iron curtain.

Secondly, a key aim of the TERN is to provide, as far as possible, a continuous level of service to the road user. Key European policy issues in this area (most of which relate to institutional issues and to ITS) are:

- To foster the deployment of interoperable electronic toll collection (ETC) systems between countries, so that long-distance users do not need to cope with separate systems and equipment. Recent trends in Europe have however been in the opposite direction, with several countries either having recently introduced or planning tolling for heavy vehicles, in some cases based on ETC only and requiring operators to fit a separate on-board unit for each country visited;
- to ensure that road network operators co-operate with their counterparts across borders to manage long-distance traffic – this involves formulating traffic management plans in case of incidents or closures and providing consistent and timely information to users on cross-border routes, preferably in a multilingual or language-independent (e.g. pictogram) format; and
- cross-border enforcement (linked to harmonised services, but also to safety and equal treatment of all citizens before the law) – for example, drivers in foreign-registered vehicles can often avoid penalties from automatic traffic enforcement cameras if they leave the country: police follow-up depends on bilateral agreements and is often not proceeded as the administrative effort is too great.

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4. Synthesis of findings from completed projects

Research projects contributing to the theme of **Long-distance Transport** can be broken down to the following sub-themes:

- Commercial air transport / airports;
- TEN-T / intermodal terminals;
- European high-speed rail network (passenger);
- sea shipping / shipping terminals;
- inland waterways and short-sea shipping;
- motorways – Trans-European Road Network (TERN); and
- EU enlargement.

You may wish to further consult the following Thematic Research Summaries that present research findings which are complementary to those covered in this paper:

- D2.C-2.1 Passenger Transport
- D2.C-2.2 Freight Transport
- D2.C-2.7 EU Accession Issues
- D2.C-3.1 Air Transport
- D2.C-3.2 Rail Transport
- D2.C-3.4 Waterborne Transport
- D2.C-3.6 Intermodal Transport

4.1 Commercial air transport / airports

4.1.1 Research objectives

In this area research objectives include:

- Devising environmental impact and certification criteria for aircraft;
- setting up a validation environment for the future European ATM system;
- analysing experimental data and models for improved aircraft lightning protection; and
- translating and elaborating set out Joint Aviation Requirements.

4.1.2 Main findings

None yet.

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4.2 TEN-T / intermodal terminals

4.2.1 Research objectives

In this area research objectives include:

- Developing a wider European transport policy information system.

4.2.2 Main findings

None yet.

4.3 European high-speed rail network (passenger)

4.3.1 Research objectives

No relevant projects for this sub-theme, yet.

4.3.2 Main findings

None yet.

4.4 Sea shipping / shipping terminals

4.4.1 Research objectives

No relevant projects for this sub-theme, yet.

4.4.2 Main findings

None yet.

4.5 Inland waterways and short-sea shipping

4.5.1 Research objectives

No relevant projects for this sub-theme, yet.

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4.5.2 Main findings

None yet.

4.6 Motorways – Trans-European Road Network (TERN)

4.6.1 Research objectives

In this area research objectives include:

- Developing a joint scheme for telematics application in South Western Europe;
- implementing transport telematics applications in the Central European region;
- co-ordinating and validating the deployment of advanced transport telematics in the Alpine region;
- devising a system of European road transport information services;
- implementing road telematics in Southern Europe;
- setting up a seamless travel and transport environment in the Western Isles of Europe; and
- implementing road traffic management in Northern Europe.

4.6.2 Main findings

None yet.

4.7 EU enlargement

4.7.1 Research objectives

In this area research objectives include:

- Co-ordinating and stimulating the application of novel ITS systems in Central and Eastern Europe.

4.7.2 Main findings

None yet.

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5. References

- [1] EXTR@Web project: 'Transport Research Knowledge Centre (TRKC) website' (europa.eu.int/comm/transport/extra), 2004, Brussels
- [2] Definition on short-sea shipping by the European Union. The European Short-sea Network at www.shortsea.info
- [3] 'EU Energy and Transport in Figures' – Statistical pocketbook 2003. European Commission, DG TREN in co-operation with Eurostat, 2003, Luxembourg [past issues of the pocketbook have been referenced as well]
- [4] Eurostat (2002): 'Statistics in Focus.' EU Transport and Energy, Brussels
- [5] 'European airline industry: from single market to world-wide challenges'; COM(99)182, CEC, 1999, Brussels
- [6] 'The development of short-sea shipping in Europe: a dynamic alternative in a sustainable transport chain', 2nd Progress Report; COM(99)317, CEC, 1999, Brussels
- [7] 'The creation of the single European sky'; COM(99)614, CEC, 1999, Brussels
- [8] 'The Common Transport Policy. Sustainable Mobility: Perspectives for the Future'; COM(98)716, CEC, 1998, Brussels
- [9] 'Trans-European rail freight freeways'; COM(97)242, CEC, 1997, Brussels
- [10] 'Green Paper on Sea Ports and Maritime Infrastructure'; COM(97)678, CEC, 1997, Brussels
- [11] 'Freeing Europe's Airspace', White paper; COM(96)57, CEC, 1996, Brussels
- [12] 'Towards a New Maritime Strategy', White Paper; COM(96)81, CEC, 1996, Brussels
- [13] 'The development of short sea shipping in Europe: perspectives and challenges'; COM(95)317, CEC, 1995, Brussels
- [14] 'A strategy for revitalising the Community's railways', White Paper; COM(96)421, CEC, 1996, Brussels

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Annex I: Contributing projects

Preface While this Annex lists all projects being relevant to the theme of **Long-distance Transport**, it should be noted that only priority 1 projects are presented with a section on "Key findings" and "Policy implications", respectively. For in-depth information on prioritisation and EXTR@Web's methodology for analysis, please refer to Annex II of this paper.

In 'Origin' column, use ISO 3166-1 country designators as follows:

Austria – AT; Belgium – BE; Bulgaria – BG; Cyprus – CY; Czech Republic – CZ; Denmark – DK; Estonia – EE; European – EU; Finland – FI; France – FR; Germany – DE; Greece – GR; Hungary – HU; Iceland – IS; International – INT; Ireland – IE; Italy – IT; Latvia – LV; Lithuania – LT; Luxembourg – LU; Malta – MT; Netherlands – NL; Norway – NO; Poland – PL; Portugal – PT; Romania – RO; Slovakia – SK; Slovenia – SI; Spain – ES; Sweden – SE; Switzerland – CH; United Kingdom – UK; Other countries – Oth

Theme: Long-distance Transport			Last update: 14 January 2005
Acronym	Project title (in English)	Origin	Research sub-theme(s)
Key findings / Policy implications / Project website or contact			
AEROCERT	Aircraft Environmental Impacts and Certification Criteria	EU	Commercial air transport / airports
<u>Key findings</u>			
<u>Policy implications</u>			
<u>Project website</u> www.nlr.nl/public/hosted-sites/aerocert/ACframes.htm			
ARTS	Advanced Road Telematics in the South West	EU	Motorways – Trans-European Road Network
<u>Project website</u> www.arts-mip.com			
AVENUE	An ATM Validation Environment for Use towards EATMS	EU	Commercial air transport / airports
<u>Project website</u> www.eurocontrol.be/ardep-arda/servlets/SVLT014?Proj=CEC084			
CENTRICO	Central European Region Transport Telematics Implementation Project	EU	Motorways – Trans-European Road Network
<u>Project website</u> www.centrico.org			

Theme: Long-distance Transport			Last update: 14 January 2005
Acronym	Project title (in English)	Origin	Research sub-theme(s)
Key findings / Policy implications / Project website or contact			
CONNECT	Co-ordination and Stimulation of Innovative ITS Activities in Central and East European Countries	EU	EU enlargement
<u>Project website</u> www.connect-project.org			
CORVETTE	Co-ordination and Validation of the deployment of advanced Transport Telematics in the Alpine area	EU	Motorways – Trans-European Road Network
<u>Project website</u> www.eu-corvette.com			
DATELINE	Design and Application of a Travel Survey for European Long-distance Trips Based on an International Network of Expertise	EU	
<u>Project website</u> www.ncl.ac.uk/dateline/			
ERTIS	European Road Transport Information Services	EU	Motorways – Trans-European Road Network
<u>Project website</u> (or contact) none			
ETIS-LINK	Thematic Network for European Transport Policy Information System Development	EU	TEN-T / intermodal terminals
<u>Project website</u> www.etis-link.info			
FULMEN	Analysis of Experimental Data and Models for Upgraded Lightning Protection Requirements	EU	Commercial air transport / airports
<u>Project contact</u> franck.uhlig@aeromatra.com			
JAR TEL	Joint Aviation Requirements: Translation and Elaboration of Legislation	EU	Commercial air transport / airports
<u>Project website</u> www.sofreavia.com/jartel/			

Theme: Long-distance Transport			Last update: 14 January 2005
Acronym	Project title (in English)	Origin	Research sub-theme(s)
Key findings / Policy implications / Project website or contact			
SERTI	Southern European Road Telematics Implementation	EU	Motorways – Trans-European Road Network
<u>Project website</u> www.serti-mip.com			
STREETWISE	Seamless Travel Environment for Efficient Transport in the Western Isles of Europe	EU	Motorways – Trans-European Road Network
<u>Project website</u> www.streetwise-info.org			
VIKING	Road Traffic Management Implementation in Northern Europe	EU	Motorways – Trans-European Road Network
<u>Project website</u> www.viking.ten-t.com			

Annex II: General information on the Transport Research Knowledge Centre and analysis process used

The Knowledge Centre's background

The EXTR@Web project – Exploitation of Transport Research Results via the Web – attempts to collect, structure, analyse and disseminate transport research results, covering not only EU supported but also nationally financed research in the European Research Area (ERA), as well as selected global transport RTD programmes and projects.

The EXTR@Web consortium has brought together eight main contractors to combine strong and in-depth technical knowledge of transport technology and of EU and national transport RTD programmes with solid communication and dissemination experience.

The current project's direct predecessor, EXTRA (a Fourth Framework Programme Transport RTD project), co-ordinated dissemination activities on the European level for the first time. While FP4 addressed transport research on a mode-by-mode basis, the current Fifth Framework Programme (FP5) focuses on generic themes that consequently reflect transport policy objectives.

The EXTR@Web project will provide support to research at European and national levels by building up and promoting an electronic hub. The key objectives are:

- To establish a comprehensive web-based Knowledge Centre, providing structured and timely access to both detailed and user-oriented summary information on transport research programmes and their results across Europe;
- to provide an electronic hub for inter-connecting European and national programmes and individual networks concerned with transport research into an easily navigable European network;
- to establish a common best practice scheme for the structure and content of the reporting of transport research results;
- to provide high-quality analytical outputs that are structured and tailored according to the type of stakeholder and medium; and
- to raise awareness of the new service, the implications of emerging results, and the wider opportunities under national research programmes across Europe as a whole.

EXTR@Web will provide a comprehensive pool of programme, project and results related information to users, principally in electronic format via the Internet. The approach is based on three main strokes of work covering:

- Monitoring, analysis and information preparation;
- website and electronic news service, the principal dissemination channels; and
- management of knowledge transfer, including dissemination by non-electronic means, and also the maintenance of a contact database and e-mail enquiry service and evaluation of the performance of EXTR@Web.

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Definition of transport research

For inclusion into the Transport Research Knowledge Centre, Transport research programmes and projects have to be within the definition of research and transport simultaneously. This will define the eligibility of projects.

Definition of research

General OECD definition:

"Creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of humanity, culture and society, and the use of this stock of knowledge to devise new applications."

Additional transport research criteria:

- Targeted – in line with transport policy aims, strategies and processes to solve the inherent problems for society.
- Accessible – a public activity, open to scrutiny by peers.
- Transferable – useful beyond the specific research project, applicable in principle to other researchers and research contexts as well as decision-makers in policy, industry and science.

Definition of transport

In order to clarify expectations from the Transport Research Knowledge Centre, and to ensure a common understanding of important terms, the Programme Analysis Group of EXTR@Web has come up with the following definition of transport.

- Transport is the means by which a person or material of any kind is passed from its origin to its destination.
- Transport comprises:
 - the transport users: passenger, business, freight;
 - the transport vehicles (full life cycle issues);
 - the transport infrastructure (full life cycle issues);
 - the transport system: the interaction of users, vehicles and infrastructure;
 - the impacts of transport: contribution to objectives, and hence to overall sustainability; and
 - the transport tools: methods and instruments to help ensure an effective contribution to the objectives.

Priorities of project coverage

Three priorities have been agreed to deal with the envisaged large number of European, national and international projects. With a view to the inevitable resource limitations of EXTR@Web, the outlined concept will allow for the efficient and consistent coverage of as many research projects as possible.

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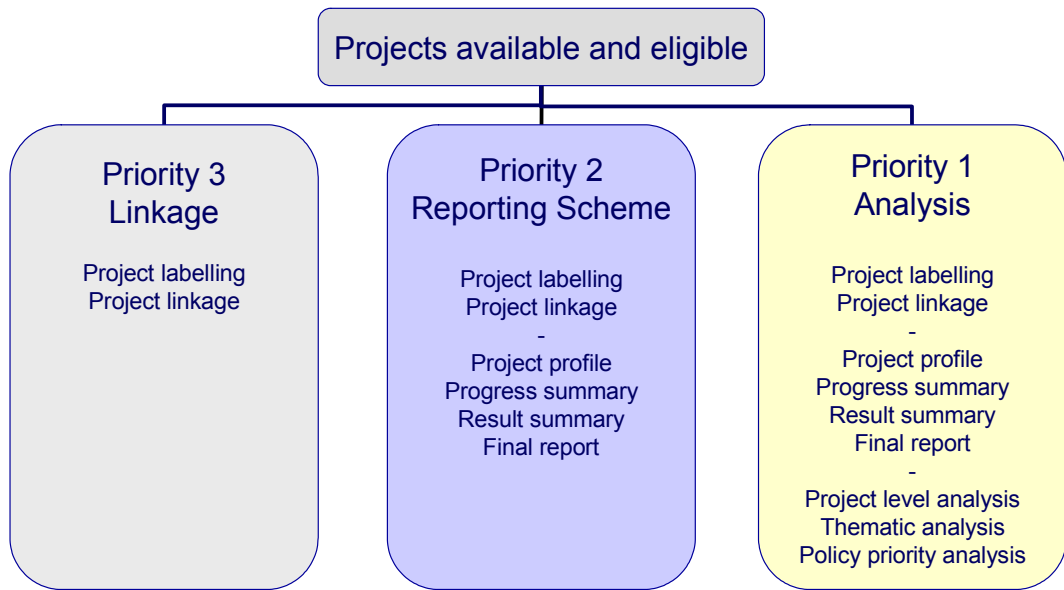


Figure 1: EXTR@Web's three priority levels of project coverage

In practical terms, the concept of priorities will result in the following particular coverage:

- Priority 3 – Every project within the TRKC will be listed with a web link and/or other contact details (linkage). For every project the most relevant themes out of 30 will be identified (labelling).
- Priority 2 – For a selected number of projects (medium to high priority) the Reporting Scheme will be applied (project profile, progress summary, result summary) and the final report will be made available.
- Priority 1 – Out of the selected number of projects above, the most important ones (high priority) will be chosen for analysis at the mentioned three levels:
 - Project level analysis
 - Thematic analysis
 - Policy priority analysis.

Three levels of analysis

Project level analysis

For European, national and international projects the following harmonized process was agreed:

- For each eligible project, the project co-ordinator will be requested to draft a Project Profile;
- the EXTR@Web consortium identifies, for each project all relevant themes (typically up to five), and provides the project linkage;
- for each eligible project, the project co-ordinator will be requested to draft the other elements of the reporting scheme – Progress Summary and Result Summary – due to the project progress and provides the final report;

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- projects with highest relevance and best available final results will be selected for analysis;
- for every such relevant theme within each project a short and concise paragraph – structured with bullet points as appropriate – will be written to present the key findings of the project in relation to the objectives of the theme; and
- this information will be searchable on the Knowledge Centre website.

Thematic analysis

The thematic analysis will exploit existing project level analysis. The consolidated project wise findings will be structured and analysed along 30 themes, which are fixed for the project life time and fed into annual Thematic Research Summaries and Annual Compendia.

The sequence of outputs will comprise an explanation of the overall structure, and regular reports treating national, European and international research in a comprehensive way (cf. Table 1).

Deliverable number	Title	Due date (tentative)
D2.A	"Thematic structure and definitions – all themes"	05/03/2004
D2.B	"European, national and international project database"; first issue covering European projects only	02/02/2004
D2.C	"First annual thematic research summary"; 30 vol.	10/12/2004
D2.D	"Second annual thematic research summary"; 30 vol.	31/07/2005
D2.E	"Third annual thematic research summary"; 30 vol.	31/07/2006

Table 1: The sequence of deliverables

Policy level analysis

Whilst the 30 themes are fixed, this type of analysis should give the flexibility to provide information on ad hoc policy priorities. Hence, policy level analysis will synthesize key findings of projects across combinations of themes. As an output, policy brochures shall be prepared depending on ad hoc requirements by DG TREN or by the high-level Advisory Group (AG).

Note.

As more information from completed research projects becomes available – during project EXTR@Web's life time – future versions of Annual Thematic Research Summaries, i.e. deliverables D2.D (in 2005) and D2.E (in 2006), may comprise a further chapter providing a summary of RTD achievements for the particular transport theme. Likewise, apparent gaps in current research schemes could be emphasized, that may require more focus and further political action.

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Annex III: Editorial team for Thematic Research Summaries

Please note that – in principle – all EXTR@Web partners and sub-contractors will be contributing to a particular Thematic Research Summary because all project level findings that are of some relevance to one of the 30 individual themes are presented in the comprehensive format of these papers.

The following summary of authors and peer reviewers is presented in alphabetical order while main author and peer reviewer of this paper are given on page i of the document.

Fabien Drevetton, ISIS; France

Mr Drevetton has an electrical engineering post-MSc degree, an MBA and over 8 years experience in Intelligent Transport Systems for road transport. He has been a senior engineer with ISIS since 2001, specialising in traffic control, motorway management, ITS standards development process and system architecture.

Co-author: Road

Peer review: Intelligent Transport Systems

Prof J Augusto Felício, Neptune – CEGE/ISEG; Portugal

Professor Felício, holding a PhD in management, is teaching graduate and post-graduate courses such as 'Maritime transport and port management' and 'Land transport and logistic management' at ISEG, School of Economics and Management (Technical University of Lisbon). His activities include participation in transport research where he has published several related articles and books.

Main author: Waterborne, Intelligent Transport Systems

Peer review: Transport Management

Dr Paul E Firmin, Institute for Transport Studies, University of Leeds (ITS); UK

Dr Firmin has 29 years of experience in transport planning and engineering, including local authority, consultancy and academia. His research specialities are: traffic management, survey design & analysis, traveller information systems; driver route choice behaviour and transport telematics. He is currently the MSc(Eng) degree programme leader and international student adviser at ITS, University of Leeds and teaches computing skills and traffic management.

Main author: Information and Awareness

Peer review: User Aspects

Dr Nils Gendner, Neptune – University of Bremen, Institut für Seeverkehrswirtschaft und Logistik; Germany

Dr Gendner has been working for more than four years at the University of Bremen, Institute of Shipping Economics and Logistics. His main topics include the analysis of processes, functions and data flows in shipping and within the rail sector. He contributes to ongoing efforts in intermodality by participating in several projects dealing with intermodal concepts and developments.

Main author: Intermodal, Integration

Peer review: Economic Aspects, Safety and Security

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Dipl.-Ing. Wolfgang Helmreich, Industriebetriebe-Betriebsgesellschaft mbH (IABG); Germany

Mr Helmreich is a civil engineer from the Technical University of Munich. He has more than 13 years experience with transport planning and infrastructure design in the rail, road and air sector, and sound knowledge of vehicle technologies. His expertise also includes project management, web publishing and dissemination skills. He joined IABG in 1999 as a senior transport consultant after working as project manager at several German engineering companies.

Main author: Long-distance, Air, User Aspects, Safety and Security

Peer review: Passenger, Freight, Road, Infrastructure Provision

Principal editor of all Thematic Research Summaries.

Cristina Ivan, Group of Independent Experts Ltd (GIE); Romania

Ms Ivan has a law degree and currently is a Master student in project management. Ever since 1998 she has participated in various projects financed by international donors in Romania. The main areas of her expertise cover: project management, drafting of environmental legislation, as well as the carrying out of awareness raising and dissemination activities, including those for the transport sector.

Main author: EU Accession Issues

Peer review: Environmental Aspects, Information and Awareness

Dr Ann Jopson, Institute for Transport Studies, University of Leeds (ITS); UK

Dr Jopson is a Research Fellow whose main interests and expertise lie in the areas of travel behaviour psychology, transport marketing and urban transport planning and policy, with particular emphasis on travel demand management through attitudinal and behavioural measures. Her PhD thesis was based on the role of psychology in reducing car use.

Main author: Environmental Aspects

Peer review: Urban

Dimitris Koryzis, Systems Planning & Management Consultants SA (Systema); Greece

Mr Koryzis is a production & management engineer from the Technical University of Crete and holds a MSc in Decision Sciences from Athens University of Economics & Business. He has more than 8 years experience as technical and managerial consultant for 30 European programmes in the transport sector (road, maritime and intermodal) as well as in research and innovation technology EC projects.

Main author: Financing Tools, Transport Management

Peer review: Waterborne, Intermodal, Decision-support Tools, Regulation/Deregulation

Dipl.-Ing. Ulrich Leiss, Industriebetriebe-Betriebsgesellschaft mbH (IABG); Germany

Mr Leiss is an aerospace engineer from the Technical University of Munich. His professional career includes 24 years experience with research, technical analyses, monitoring and managing national and European projects and programmes. These activities cover the areas aerospace, transport, energy and new technologies.

Main author: Other Modes, Vehicle Technology

Peer review: –

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Bryan Matthews, Institute for Transport Studies, University of Leeds (ITS); UK
 Mr Matthews has 9 years experience of transport research and project management in both consultancy and university settings. His research expertise is in transport policy analysis and transport economics. He has worked on a number of EU, UK DfT and Research Council projects. He also contributes to teaching activities, lecturing on Air Transport Systems and supervising student projects.

Main author: Rail

Peer review: Air, Pricing and Taxation

Prof Anthony D May, Institute for Transport Studies, University of Leeds (ITS); UK
 Professor May has over 35 years' experience in transport planning and traffic engineering. He has been a professor at Leeds since 1977, and has served as Head of the Department of Civil Engineering, Dean of the Faculty of Engineering, Pro-Vice Chancellor for Research and Director of the Institute for Transport Studies. He also has practical experience with the MVA consultancy and the GLC in London. His research specialities include: land use planning, traffic management, road pricing, sustainable urban transport, integrated transport and environmental impacts of transport.

Main author: –

Peer review: Integration

Batool Menaz, Institute for Transport Studies, University of Leeds (ITS); UK
 Ms Menaz is a transport economist from the University of Leeds. She has been involved in a number of various projects including research into transport pricing reform issues in air, road and rail for the IMPRINT-Europe thematic network project, and research for the UK Rail Research Centre looking at the alternative visions for the future of the British rail system.

Main author: Passenger, Equity and Accessibility, Regulation/Deregulation, Land Use Planning

Peer review: Efficiency

Steve Morello, ISIS; France

Mr Morello is the International Director for ISIS and has been based at the company's Lyon offices for 12 years. He has degrees in Mathematics, Journalism and Transport Economics and has been project director for a wide range of projects, including R&D, Intelligent Transport Systems, and horizontal support activities such as evaluation of projects. His key activities include evaluation and support services to TEN-T projects and ITS demonstration/deployment projects, and providing technical advice to DGTREN regarding financial support to Trans-European road and rail infrastructure and ITS projects.

Main author: –

Peer review: Financing Tools, Intelligent Transport Systems

Jean-Marc Morin, ISIS; France

Mr Morin has a civil engineering degree and over 17 years experience in ITS and also has extensive experience in the design and evaluation of traffic management systems and tools. His expertise also includes motorway traffic control, driver information systems, traffic simulation and forecast modelling, route guidance systems and incident detection and management. Before moving to ISIS in 1988 he was the research director at INRETS (the French Institute for Transport and Safety Research).

Main author: –

Peer review: Vehicle Technology

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Ignacio Rada Cotera, Neptune – IkerConsulting; Spain

Mr Rada Cotera is a lawyer from Deusto University in Bilbao, holding a diploma and certificate of European studies from Deusto and Saarland Universities, respectively. He has been working on EU projects since 2000. His main expertise is European commercial and regional policy, maritime transport and port affairs, legal aspects of international economic relations, urban planning, regional benchmarking and development.

Main author: Regional

Peer review: –

Dr Karsten Seidel, Neptune – European Networks and Cooperation; Belgium/Germany

Dr Seidel has graduated as economist and holds a PhD from the University of Bremen. He has been working on EU projects since 1988. His main expertise is in European industrial and regional policy, telecommunication research projects, maritime transport and port affairs, evaluation of technical aid, urban planning, regional benchmarking development.

Co-author: Regional

Peer review: –

Dr Paolo Delle Site, Università di Roma "La Sapienza", Dipartimento Idraulica Trasporti e Strade (DITS); Italy

Dr Delle Site holds an PhD, and is a senior research fellow at DITS, Transport Area, University of Rome "La Sapienza". He combines professional experience with research activities, the latter mainly being carried out within EC funded research projects. Related activities comprise urban transport planning, urban public transport design, transport project assessment, and policy analysis. His teaching activities include courses in transport planning. Furthermore, he is author of papers in Transportation Research Part A – Policy and Practice and in the European Journal of Transport and Infrastructure Research.

Main author: Freight, Urban, Rural, Economic Aspects, Efficiency, Decision-support Tools, Infrastructure Provision, Pricing and Taxation

Peer review: Rail, Other Modes, Equity and Accessibility, Land Use Planning

Andrew Winder, ISIS; France

Mr Winder is a transport planner with a BSc in transport management (Aston University, England) and over 12 years experience in consultancies and public transport authorities covering transport planning and policy, particularly at UK, French and Europe-wide levels. Since 1998 he has been a senior engineer at ISIS, responsible for a wide range of European projects focusing primarily on Trans-European Networks, ITS for road traffic management, urban and regional public transport and EU enlargement aspects.

Main author: Road

Peer review: Rural, Regional, Long-distance, EU Accession Issues, Intelligent Transport Systems, Vehicle Technology

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