EUROPEAN STUDIES – GENERAL FRAMEWORK

Background Developing and implementing a collaborative approach that includes all EU Countries is fundamental in supporting integrated road safety strategies, reduction of congestion on the Trans-European Road Network (TERN), as well as the improvement of environmental conditions. In order to guarantee European cooperation and co-ordination in ITS, considerable efforts have to be made to establish common frameworks for ITS deployment. The necessity to collect and evaluate research results on a European scale is the basis for defining precise answers to road safety problems.

For this reason, EasyWay has launched dedicated European Studies (ES) in six different fields for the period 2007-2009. These will support pilots, develop frameworks and deployment guidelines to improve the availability of accurate, relevant and timely data/information to support policy decisions and will be a platform for future projects. All member states have been invited to participate in the European Studies: platform for common discussions and initiatives with the private sector and other organisations. Each of the ES has started with the provision of a synthesis of existing work and available guidelines for service development within the domain. This synthesis is considered as a summary of the activities performed in MIP 1 (2001-2006) and provides a solid basis for the future tasks to be undertaken.

ES 1 – Europe-wide Traveller Information continuity and co-modality Many national and international information services on road and traffic conditions, including main cities, are discontinuous and not fully harmonised. They do not support inter- and co-modality as they are often mode specific. This can cause delays and costs for the European traveller and negative impact on the environment as the base for decisions before and during travel is not complete. The ES-1 on Traveller Information Services will:

- develop a common understanding of traveller information needs in a European context. Specific attention will be given to transport corridors, intermod interfaces and travel planning possibilities;
- support and guide the implementation of core traveller information services (which service levels are applied to which operating environment) defined by EasyWay;
- develop co-ordinated deployment guidelines for identified services;
- identify the need for regulations, directives and legislation that may be required;
- initiate and carry out experiments and pilot projects also develop a format for their co-ordination at a European level;
- clarify the role and responsibility of the private sector versus the public one for building and providing traveller information services. The situation is very different from one country to another. There is a need for a clear picture and to identify the partnerships with the actors that are not in EasyWay;
- identifying the minimum levels of service for traveller information services which are in line with the overall objectives of EasyWay. Depending on the considered network, a minimum level of service should be targeted for helping reducing congestion and accidents.

Moreover, the following issues, identified at the end of the TEMPO Programme, will also be addressed within the study:

- Consolidation and enhancement research in order to have an updated and prospective knowledge of user’s needs in the field of traveller information services.
- Market oriented requirements as a result of the availability of new services and technologies.

ES 2 – Europe-wide Traffic and Network Management and Co-modality Today’s traffic management systems cover national or local cross-border traffic problems with a coordinated approach among neighbouring Member States, but less in a Europe-wide network dimension. Also, various black spots in terms of capacity and road safety are not yet either covered or managed by the necessary harmonised state-of-the-art systems. Hence the development of international TM strategies and common approaches are needed to meet the requirements of traffic in the long distance corridors, with a particular attention to freight transport. The ES-2 on Traffic and Network Management will:

- create a common view of the performance of the European road transport system as a basis for identifying which are the key bottlenecks and black spots that need to be addressed in collaboration;
- define a set of core traffic management services and recommendations on their deployment (which traffic management measures are applicable to which operating environment);
- propose recommendations for service performance levels in relation to network/link/corridor role (operating environment);
- provide a plan for the deployment of traffic and network management measures in a Europe-wide context; and
- identify the need for regulations, directives and legislation that may be required;
- initiate experiments and pilot projects and develop a format for their co-ordination at a European level.

ES 3 – Freight and Logistics and Co-Mobility The movement of heavy goods vehicles (HGV) on the TERN is expected to double over the next ten years. Freight transport usually involves long distance travel across borders so it is very susceptible to traffic information services on large variations in parking availability, weight restrictions and dangerous/abnormal goods handling across all Europe. Moreover, HGVs are the main target for inter-modal and co-modal shifting, which more and more is becoming a priority.

This calls for a combined effort from Member States to address specific needs of freight in a harmonised manner, implementing similar-standard solutions at local and national levels, developing international services that reflect demand. A European strategy is needed to introduce measures and services which will reduce the impact from increased freight transport on the safety and mobility of the TERN. Sound and seamless European logistics plans and the facilitation of modal shift have key roles to play in achieving an integrated Europe-wide network for the transport of freight. The surveillance and management of sensitive cargoes...
also needs to be addressed on a European level to provide better and harmonised information, improved accessibility and administrative support for the safe and efficient transport of cargo such as hazardous goods and livestock. The **ES-3 on Freight and Logistics** will:

- develop a common understanding of freight transport information needs on a Europe-wide basis;
- define a set of core information and management services targeted for goods transport, with recommendations on their deployment (e.g. which service levels are applicable to which transport corridors and operating environments);
- develop deployment guidelines for these services;
- identify the need for regulations, directives and legislation that may be required;
- cooperate actively with the ES-1 and ES-2; and
- initiate and stimulate the development and behaviour of pilots.

**ES 4 – VMS Harmonisation: Mare Nostrum**

The growth of VMS density and coverage on the TERN and the slow answer on the part of international regulatory bodies (e.g., UNECE WP.1), has led to the use of VMS in local ‘language’ and non-standard signalling. This has been a first step towards real-time seamless information and has proven to be most effective, especially in critical points of the motorway network. The second step is to avoid a situation where the European traveller may not be able to understand information directly concerning his/her safety, re-routing and all the other potential improvements to the journey while driving simply because of language problems. The ES-4 group complements the work done by other instances such as CEN (focused on harmonisation of technical display parameters, hence tackling perception but not comprehension of VMS) or CEDR (FIVE, for example, recommends general design principles for VMS, without analyzing in detail the specific informative elements missing on each of the road/traffic situations that require harmonisation). A real, complete, harmonisation of VMS will improve safety and increase the efficiency of the road network, in particular for long distance transport. This is the main objective of the ES-4 which has already been active in the past years.

The Mare Nostrum work envisages the identification and development of specific informative elements (pictogram, alphanumeric codes) and message structures which are totally independent from local languages. ES-4 has already established important milestones through the delivery of important documents (notably the so-called **Working Book** and the forthcoming **ES-4 Guidelines**, dealing specifically with up to 47 road/traffic situations) which do not fail to acknowledge already existing VMS types and specific road situations. Progress has been possible also through the implementation of quasi-objective harmonisation procedures (e.g. empirical tests) with the main stakeholders involved. In this area, the ES-4/Mare Nostrum builds further on the results of the FIVE project and on its own recent activity. The **ES-4 on VMS harmonisation will**:

- analyse the background of local signing practices and the way towards a more uniform and international (shareable) way of signing;
- analyse driver attention to and understanding of different types of VMS message;
- analyse legal and administrative obstacles to Harmonised VMS deployment;
- analyse signing strategies, e.g. the effect of repeated signalling;
- develop a set of rules and recommendations for displays on VMS panels;
- develop deployment guidelines for VMS harmonisation and future deployments.

**ES 5 – DATEX II**

Without a common set of data exchange specifications, the objective of a seamless, interoperable exchange of traffic and travel information across boundaries, including national, urban, interurban, and institutional (road administration and service provider), will not be achievable. The aim is to support the deployment of efficient and harmonised data exchange network in Europe based on the development of DATEX II, the data exchange protocol thoroughly updated during the preceding MIP programme. DATEX II is today used by many actors in the field and usage will grow further. To ensure interoperability, acceptance and technical development of Datex II, EasyWay recognized their duty to care for the standard as an owner’s organisation. The Datex II community is open to all partners that wish to implement it and contribute to its success. The **ES-5 on DATEX II will**:

- carry out pilots at different levels using the DATEX II specifications;
- facilitate the deployment of DATEX II by providing support to the stakeholders that will implement DATEX II (migration or new implementation);
- maintain the DATEX II specification and manage its extension for all organisations (e.g. road authorities, service providers, traffic managers) that decide to use DATEX II as communication tool;
- provide input for the standardisation process.

**ES 6 – A European ITS Deployment Road Map**

The full potential of ITS will not be available until deployment follows a coordinated approach where e.g. the vehicle industry and the road managers work in parallel to develop and deploy systems and services. A co-ordinated approach aimed at the deployment of services rather than systems cannot be put into action immediately. Many questions remain, regarding which services shall be given priority (European Core services), how they shall be designed and under which conditions they shall be provided.

This is where the EasyWay ITS Deployment Road Map finds its place. The road map will provide deployment guidelines for a set of European ITS services to be deployed within the framework of EasyWay. Relevant stakeholder representatives to include in the road map definition will be organisations such as ERTICO, ASECAP, CEDR, IRU, UITP, ACEA, IRF, ECTA and POLIS as well as the European Commission and Member State representatives.

The EasyWay ITS deployment roadmap will be developed through several stages and will grow with the collaboration of the Expert Groups, who will bring in an added value through their expertise. In general, the concluding roadmap shall be understood as a description per service including:

- a description of the service, what is provided and where;
- barriers to be removed (need for legislation, standardisation etc.);
- a description of supporting infrastructure needed;
- a set of deployment guidelines including specifications, etc;
- a description of the organisational framework for the establishment and operation of the service;
- an agreement on the deployment of the service concerned, where time planning (based on milestones) and resource allocation is agreed through member state and Euro-regional work plans.
EasyWay is a project for harmonised Europe-wide Intelligent Transport Services deployment on the Trans-European Road Network.