European ITS Core Services

EASYWAY 2 - DEPLOYMENT GUIDELINES 2012

Deployment Guideline Introduction

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Preamble

EasyWay is a cooperation of road authorities and road operators from 27 European countries that have teamed up to unlock the benefits of cooperation and harmonisation in the deployment of Intelligent Transport Systems (ITS) on Europe's major road network. ITS as a technology is a known contributor to sustainable mobility in terms of improved safety, efficiency and reduced environmental impact. Nevertheless, fragmented deployment on a national level will fail to deliver seamless European services and will not contribute to a coherent European Transport network. The European Member States have consequently launched the EasyWay project together with the European Commission as a platform to harmonise their ITS deployments.

This document has been drafted by EasyWay as part of the set of documents containing the 2012 version of the EasyWay Deployment Guidelines (DG 2012). These guidelines have been developed by EasyWay experts and practitioners. They have undergone a thorough review by international domain experts in an intense peer review exercise and they have been validated by the participating Member State Partners of EasyWay in an extensive formal Member State consultation process, which finally led to their adoption as basis for all deployment activities in future EasyWay phases.

EasyWay as a project is not a standardisation body, nor does it have any power to legally constrain the Member State in their national deployment activities. It is therefore crucial to understand that these documents are neither technical standards, nor are they specifications as they would be required for such cases, e.g. as currently developed by the European Commission as their part of the implementation of the ITS Directive 2010/40/EU. But since a certain level of strictness in compliance is required to achieve the intended goal of the EasyWay Deployment Guidelines – harmonisation and interoperability in Europe – the guideline documents are written in a way that clearly defines criteria that deployments have to fulfil in order to claim overall compliance with the guideline.

Although not legally binding in any sense, compliance may be required for the eligibility of deployments in future ITS road projects co-funded by the European Commission. Deviation from compliance requirements may nevertheless be unavoidable in some cases and well justified. It is therefore expected that compliance statements may contain an explanation that justifies deviation in such cases. This is known as the "comply or explain" principle.

Although not standards themselves, the EasyWay DG2012 Deployment Guidelines in some cases do mention – and sometimes require – the use of such standards. This is the case in particular regarding the use of the CEN/TS 16157 series of technical specifications for data exchange ("DATEX II"). Although standardised data exchange interfaces are a powerful tool towards harmonised services in Europe, it must be understood that real world deployments have to fit into existing – and sometimes extensive – infrastructures and investment in these infrastructures must be protected. It is therefore important to note that the use of DATEX II mentioned below as a MUST is referred to implementation of "new" data exchange systems and not the utilisation of the existing ones, unless these latter affect harmonisation of deployments or interoperability of services.

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List of abbreviations

DG	Deployment Guideline
ESG	Expert and Study Group
EU	European Union
EWSC	EasyWay Steering Committee
F&L	Freight and Logistics
ICT	Information and Communication Technology
IT	Information Technology
ITS	Intelligent Transport Systems
MS	Member State
OE	Operating Environment
RFC 2119	Request For Comments 2119
SPB	Supervisory Programme Board
TCC	Traffic Control Centre
TCT	Technical Coordination Team
TEN	Trans European Network
TERN	Trans European Road Network
TIS	Traveller Information Services
TM	Traffic Management
TMS	Traffic Management Services

1 The EasyWay Project

The EasyWay project was established in response to the need for accelerated and co-ordinated ITS (Intelligent Transport Systems) deployment in Europe and the call for deployment of core European ITS services. The aim of the project, planned to run for the period 2007-2013 in response to the EU (European Union) ITS Action Plan and the Multi - Annual Programme of the TEN (Trans European Network) budget, is the coordinated deployment of European ITS services. This requirement is borne of the belief that the full potential of ITS will not be realised until the approach to deployment is harmonised across Europe.

The EasyWay project's overarching objectives for 2007 – 2009 on the TERN were for a:

- 4-6% target reduction in road accidents;
- 3-6% target reduction in congestion; and
- 1-3% target reduction of CO_2 emissions.

Overall, the initial evaluation shows that where services have been deployed, the benefits delivered are in line with the objectives set by the project.

Moving into EasyWay 2, the objectives for 2010-2012 are for:

- 4% less congestion,
- 4% less accidents; and
- 2% less emissions

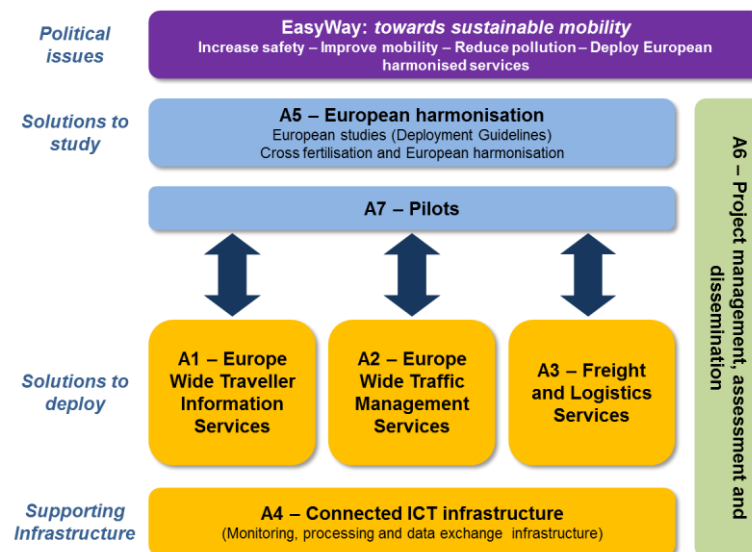Figure 1: Overview of EasyWay Activities

Deployment activities are one key objective of the EasyWay Project (represented by Figure 1). Regional work plans which focus on the needs of the specific regions and cross-border corridors in relation to the goals set out in the EasyWay Programme have been developed to carry out these activities and will be developed further in subsequent EasyWay phases.

2 The EasyWay Deployment Guidelines, Version 2012

2.1 Preliminary note

To assist and support the deployment activities six EasyWay Expert and Study Groups (ESGs) were tasked with the development of detailed Deployment Guidelines for ITS in their respective domains in order to promote the deployment of ITS services in Europe.

The main objective of the first iteration of EasyWay Deployment Guidelines was to capture and to make available the huge amount of national experience that has subsequently been utilised in projects across Europe. This step was reached in 2010 with the publication of the first generation of EasyWay Deployment Guidelines, Version 2010, which strongly supported service deployment in EasyWay by:

- making EasyWay actors in deployment aware of the experiences made in other parts of Europe

- activating synergy effects by using European best practice examples

- speeding up deployment by highlighting important and critical issues to look at

This best practice has successfully contributed to ITS deployments all over Europe. It is now possible to take the logical progression and begin to recommend those elements of service deployment that have proven their contribution through both the success of local deployments as well as the European added value of harmonised deployment for seamless and interoperable services. This step was started in 2011 through the elaboration and provision of a next generation of EasyWay deployment guidelines. These include a set of requirements and recommendations for service deployment which, first and foremost, address interoperability, continuity, common look & feel and assessment criteria for Europe-wide acceptance as crucial success factors which amplify and accelerate the ITS-harmonisation process.

The first draft of this set of 20 EasyWay Deployment Guidelines and supporting documents Version January 2012 is now available and ready for the EW Member State and external stakeholder consultation process. The structure of the EasyWay Deployment Guideline Set January 2012 is as follows:
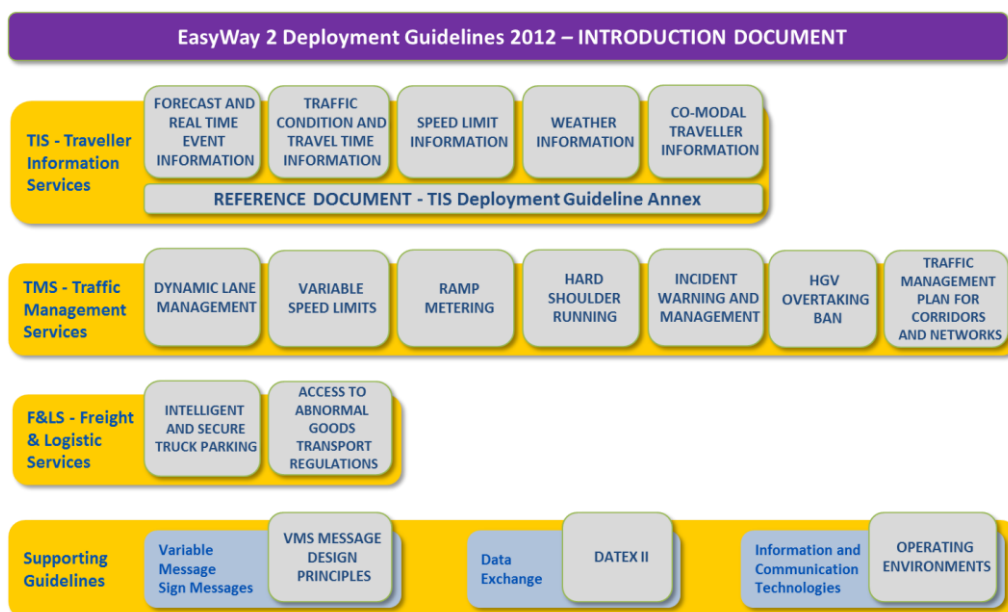

Figure 2: Set of EasyWay Deployment Guidelines, and Supporting Guidelines and Documents January 2012

2.2 The importance of the EasyWay Deployment Guidelines for the ITS Action Plan

On 16 December 2008, the European Commission took a major step towards the deployment and use of ITS in road transport. The ITS Action Plan adopted suggests a number of targeted measures and a proposal for a Directive laying down the framework for their implementation. ITS can significantly contribute to a cleaner, safer and more efficient transport system. The goal is to create the momentum necessary to speed up market penetration of rather mature ITS applications and services in Europe.

The ITS Action Plan states that "Examples of Intelligent Transport Systems applications in road transport include urban and motorway traffic management and control systems, electronic toll collection and route navigation. But until now there has been no similar coherent European framework for interconnection between road and the other transport modes." The EasyWay 1 programme 2007 – 2009 incorporated road operators and stakeholders from 21 EU member states and the EasyWay 2 proposal has increased this number to 24. The EasyWay 2 Deployment Guidelines will provide input to the EC for the realisation of the ITS Action Plan. However it should be noted that the target dates set within Action Areas 1 - 6 of the Action Plan may not be realised without the coordination of activities of both the EasyWay stakeholders and external parties such as private information providers.

In order to speed up coordinated ITS deployment, the Action Plan has been combined with a Directive to provide a legal framework. This has obligations for the Member States and specifications that will be defined by the Commission with the ITS Advisory Group. The Directive was approved by the Commission in July 2010 and published in the Official Journal of the European Union in August 2010.

2.3 The EasyWay ITS-Core Service Deployment Guidelines, Version Jan 2012

2.3.1 ESG 1 - Europe-wide Traveller Information Continuity & Co-modality

Ideally Traveller Information Services in the European dimension should provide continuity across neighbouring regions and between member states. However, currently these are often disjointed and non-continuous. The overarching purpose of the Guidelines is to facilitate the development of the existing provision of services to deliver a truly pan-European dimension, not just by combining the different services, but also by giving assurance to travellers by providing the expected level of ITS service and quality (Level of service and quality) across the TERN (Trans European Road Network).

ESG1 - "Europe-wide Traveller Information Continuity & Co-modality" has developed five deployment guidelines, plus a common deployment guideline reference document, to promote the concept of harmonised traveller information services throughout Europe. These documents will help guide deployments through the delivery phases of EasyWay 2 and beyond. They are living documents which will evolve over time and be updated to take on board developments in key aspects of deployment such as quality assurance. As future developments allow, these documents will also give additional guidance on which standards and levels of service should be applied to different road network operating environments.

Traveller Information Services are a key element of ITS deployment. They are designed to provide the European traveller with comprehensive real time traffic information allowing for well-informed travel decisions (pre-trip information) and during the journey (on-trip). They include real time information concerning the TERN (Trans European Road Network) as well as interfaces with peri-urban networks and other transport modes, especially in urban areas.

The relevance of different types of traffic information throughout a journey is shown in Figure 3.
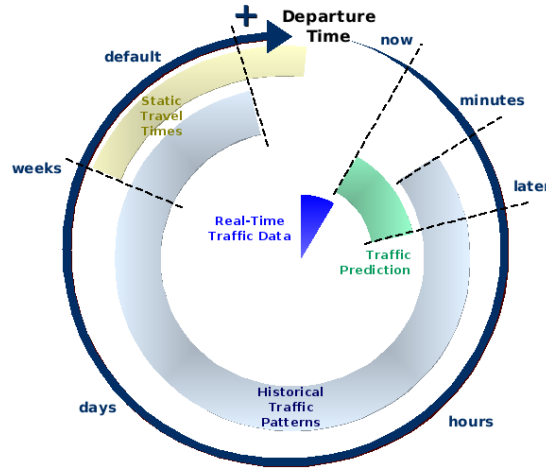

Figure 3: Traffic Information Clock

Previous work undertaken in EasyWay identified three areas where core services for traveller information which require harmonised deployment contribute to the aims and objectives outlined above. These are:

• Pre-trip traveller information services;

• On-trip traveller information services;

• Co-modal traveller information services.

Further to these Core Services, six Traveller Information Services were identified which transcend the pre-trip / on-trip boundary. These are classified by information content rather than by their position within the traveller's journey. The relationship between the Core European Services and the content based approach adopted in the TIS Guidelines DG02-07 are shown in the following figure:
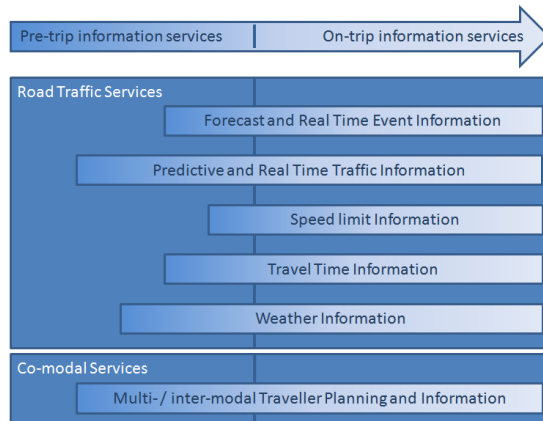
Figure 4: Relationship between the Core European Services and content based services

DG01 "TIS Reference Document" acts as a foundation and overview of the key issues which affects all five of these individual traveller information services. It illustrates the issues common to all services within traveller information and provides context for the content specific guidelines which refer to the five traveller information services outlined in Figure 4.

This document directs readers to consider the entire information chain when implementing TIS, references relevant projects and initiatives, and describes how TIS interact with other services. It is entitled DG01 and the individual technical documents are referred to as Guidelines DG02 to DG07. The DG01 "TIS Reference Document" forms an integral part of each individual Guideline DG02 to DG07 and users should consider them

jointly as one document (e.g. the Guideline for Weather Information incorporates TIS-DG06 and the TIS Reference Document).

2.3.2 ESG 2 – Europe-wide Traffic & Network Management & Co-modality

Traffic Management is defined as an overall plan of strategies and tactical actions for accommodating traffic flow in an efficient, effective and safe manner during recurrent and non-recurrent events on the transportation network.

In this context, the objectives of Traffic Management Services (TMS) are to provide real time guidance and control information to the European traveller and haulier, avoiding overload as well as detecting incidents and emergencies, and thus ensuring safe and efficient use of the available road network.

The Expert and Study Group on Traffic Management (ESG2 – TMS) deals with all aspects of Traffic Management related to the European road network at a strategic, tactical and operational level. It includes aspects of management, mobility, safety and security, thereby contributing to the main goals of EasyWay.

ESG2-TMS covers three core services:

• Sensitive road segments

• Traffic Management on corridors and networks

• Incident Management

The above include aspects such as safety, enforcement issues and data exchange. However the group covers these topics only insofar as they are directly related to the activity of road network operation and managing traffic.

Sensitive Road Segments

TMS-DG 01 Dynamic Lane Management

TMS-DG 02 Variable Speed Limits

TMS-DG 03 Ramp Metering

TMS-DG 04 Hard Shoulder Running

TMS-DG 06 HGV Overtaking Ban

Traffic Management on Corridors and Network

TMS-DG 07 Traffic Management Plans for Corridors and Networks

Incident Management

TMS-DG 08 Incident Warning & Management

Figure 5: TM Core Services and Deployment Guidelines

2.3.2.1 Management of Sensitive Road Segments (Core European Service)

A sensitive road segment is characterized by being local and subject to tactical actions. Typical examples are tunnels, bridges, road works, areas suffering from congestion, black spots and mountain passes. These roads are sensitive to congestion, safety, weather conditions and environmental factors.

The scope of the service is to ensure efficient traffic management actions to guarantee minimum levels of services. Key measures are:

• lane/ line control

• speed control

- ramp metering

- hard shoulder running

- incident warning and management.

<u>Service description</u>

This European Service provides harmonized traffic management to handle traffic on the main road network including urban and interurban interfaces in accordance with operational environment. There will be harmonized European Traffic Management services, including systems operation and interfaces, that are compliant with regulations and road operator policies in all Member states, e.g. the European and national rules for safety in tunnels.

2.3.2.2 Traffic Management on corridors and networks (Core European Service)

Strategic Traffic Management increases the performance of transport infrastructure by adding the potential of cross-border, network or multi-stakeholder co-operation. It defines the management of the European network and corridors, including cross-border aspects and multi-modal capacities, to allow for a more efficient use of the road network in Europe (and not restricting measures to country or local basis). Scope of service includes regional/national and cross-border plans and deployment. Traffic management has to be ensured at the technical and organisational levels. In specific cases requiring cross-border co-operation, several criteria have to be met and agreed upon between involved organisations.

<u>Service description</u>

This European Service provides strategies, plans and consequential physical deployments, at the regional and/or cross-border levels, for networks and key corridors on the TERN to handle a pre-defined scope of relevant traffic situations and events, including traffic incidents, weather, seasonal traffic, etc., and to control the real-time traffic through pre-defined measures. Traffic management plans contain pre-defined combinations of strategies and measures to cope with different traffic situations on the road network.

Service has to be ensured through the proper activation of information and control measures. These include equipment at the road-side, TCC levels and multi-modal capacities (technical readiness). There also needs to be agreement and collaboration between authorities to engage in co-ordinated operation according to pre-defined sets of strategies (organisational readiness).

For instance, thresholds for event notification, activation and de-activation on the basis the traffic situation have to be defined and agreed upon by the various stakeholders involved. This will ensure a common understanding and the co-ordinated deployment of traffic management measures at the regional and cross-border levels.

2.3.2.3 Incident Management (Core European Service)

This service defines and maps levels of service for the incident management process in terms of technical resources (detection cameras, control) and institutional capacities (legislation, responsibilities, agreements).

It relates to information on the quality of incident management service provision on the network.

<u>Service description</u>

This European Service provides access to information on incident management capacities on the TERN. To improve traffic flows and mitigate the negative impacts of incidents, effective incident management is required. Initially, there is a need to map the level of incident detection, notification, clearance, etc., in relation to each operational environment. The driver should know what level of service can be expected on the road.

To realise this service, quality levels and requirements for incident management need to be developed in a consistent manner in relation to various operational environments. Examples include times to detect an incident, reaction time for rescue services, clearance and notification.

2.3.3 ESG 3 – Freight & Logistics Services

The EasyWay Freight and Logistics domain focuses on actions where cooperation between the road authorities and operators, the road transport industry and related stakeholders has the potential to:

- improve the efficiency of road transport (e.g. less delays)

- reduce the negative impact of road transport

- support co-modality and contribute to intermodal services

- mitigate risks due to driver behaviour and transport tasks

- manage conflicts between freight transport and other types of vehicles

Previous work undertaken in EasyWay 1 identified two core services focused on intelligent truck parking which concentrate on the production and distribution of static and dynamic information on the situation of truck parking on important supra-regional roads for the observation of rest and driving periods, and on abnormal goods and dangerous goods transport concentrated on ensuring access to the necessary information and procedures regarding abnormal transports (regulations and the permit procedures, contact persons and country specific application forms for abnormal transports).

ESG 3 has developed two deployment guidelines to ensure that the road haulage company and the goods vehicle drivers have easy access to information on the European road network including related services, which make trucking more efficient, safer, more secure and more comfortable for the drivers. The overarching purpose of the Guidelines is to facilitate the development of existing service provision to deliver a truly pan-European dimension across the TERN (Trans European Road Network).

FL-DG01   Guidelines for Intelligent Truck Parking and Secure Truck Parking

FL-DG02   Guidelines for the Deployment of Access to Abnormal Goods Transports Regulations

These documents will help guide deployments through the delivery phases of EasyWay 2 and beyond. These are living documents which will evolve over time and be updated to take on board developments in key aspects of deployment such as quality assurance. As future developments allow, these documents will also give additional guidance on which standards and levels of service should be applied to different road network operating environments.

2.4 The EasyWay Supporting Deployment Guidelines, Version 2012

2.4.1 ESG 4 – Variable Message Signs

European Traffic Control Centres communicate important information concerning driver's safety and mobility using Variable Message Signs. Most of the informative elements of such messages are shown in national languages. This fact collides with a desire for superior integration and functionality within the TERN (and beyond). The main solution is changing the principles by which VMS are currently designed. The national language should not be the main one, but rather the international picture language of road signs. Pictograms, abstract alphanumeric, international abbreviations (then text) should be the protagonists. This is the compromise of EasyWay ESG4 since 2007.

This specific VMS language (named "Picto+") is being developed by ESG4. Currently, 14 countries participate and bring their know-how concerning VMS to ESG4 in order to identify the priority road/traffic situations that should be harmonised. Most of this knowledge is brought to an inventory of national practices (the Working Book). Some existing and new ideas (messages, pictograms) that could improve global communication with European drivers through VMS are then tested empirically. In this way, new "words" that do not exist yet in the 1968 Convention are coined. ESG4 brings these new rules and pictograms to UNECE's WP.1 and propose them

as new, needed, international communication tools. This is very important: we take into account the legal implications of European Member States linked to the 1968 Convention (UNECE).

Gradually, a grammar to compose the information displayed by VMS is being built and incorporated into two main Deployment Guidelines (DGs):

- **ESG4 DG01. General Principles of Design.** 33 VMS design principles build up a general structure for the composition of international messages. Embedded within such principles are important matters concerning functional human capabilities (i.e., memory, visual acuity) and best practice on VMS use (e.g., use of alternate VMS, flashing lights, and the like). The main informative elements (pictograms, abbreviations, alphanumeric, text) are globally considered and priorities for selecting, structuring, combining and using them are explained and fixed in written form.

- **ESG4 DG02. Specific Messages Recommended.** Learning 33 principles by heart and applying them for any specific road/traffic situation to any VMS is not easy. A more specific set of recommended messages is a very convenient aid. We know that some road/traffic situations are more common than others. DG02 presents the specific informative elements and final structure for a number of VMS, considering, in principle, the 5 main types of VMS (text only, pictogram-text, pictogram-pictogram-text, pictogram-text-pictogram, and full matrix). TCC operators may then open DG02 and select the correct message (according to DG01 recommendations, already embedded here). Although more situations will be incorporated into DG02, it is already a highly functional tool in terms of European VMS harmonisation.

2.4.2 ESG 5 – DATEX II

On October 5 2011, DATEX II was published as CEN/TS 16157 1-3. With this milestone reached there is now an acknowledged European Technical Specification for modelling and exchanging ITS-related information between many partners. DATEX II has been developed to provide a standardised way of communicating and exchanging traffic information between traffic centres, service providers, traffic operators and media partners. The specification provides a harmonised way of exchanging data across boundaries, at a system level, to enable better management of the European road network. DATEX II will play a strong role in the implementation of integrated ITS in Europe. DATEX II is at this time developed and maintained under the umbrella of the EasyWay project and is supported by the European Commission.

The DATEX II Deployment Guideline has been designed to describe the specific tasks of DATEX II in the framework of the EasyWay Deployment programme and the ITS directive. Other EasyWay Deployment Guidelines refer to DATEX II as a standard to be used and include information of the subset of data elements or classes to be used for a specific service (so-called profiles). All together, the guidelines form a comprehensive registry of the state of ITS development in Europe.

2.4.3 ESG 6 – ICT Infrastructure

The scope of EasyWay is to provide Core European Services to European road users. These services are harmonized in content and functionality, but also in their availability: The road users shall be able to expect availability of a certain service in a specific road environment. In order to provide a basis for the harmonization process EasyWay needs a tool to define such environments in an agreed manner. This tool is the Operating Environments – a set of pre-defined road environments combining physical layout of the road and network typology with traffic characteristics. In essence, EasyWay has agreed on a set of 18 pre-defined Operating Environments (OE) where each OE is a combination of three criteria:

- Physical characteristics – Motorways, other 3/4 lane roads or 2-lane roads

- Network typology – Corridor, Network, Link or Critical spot

- Traffic characteristics – Traffic flow and road safety situations (with optional additions)

The OE categories and guidance for their classification is detailed in the document "EasyWay Operating Environments".

3 The EasyWay harmonisation concept

3.1 Scope of harmonisation

The goal of EasyWay harmonisation is to create a European added value for the road users. ITS Services shall be equipped with features providing additional benefit for inter-regional and cross-border road users.

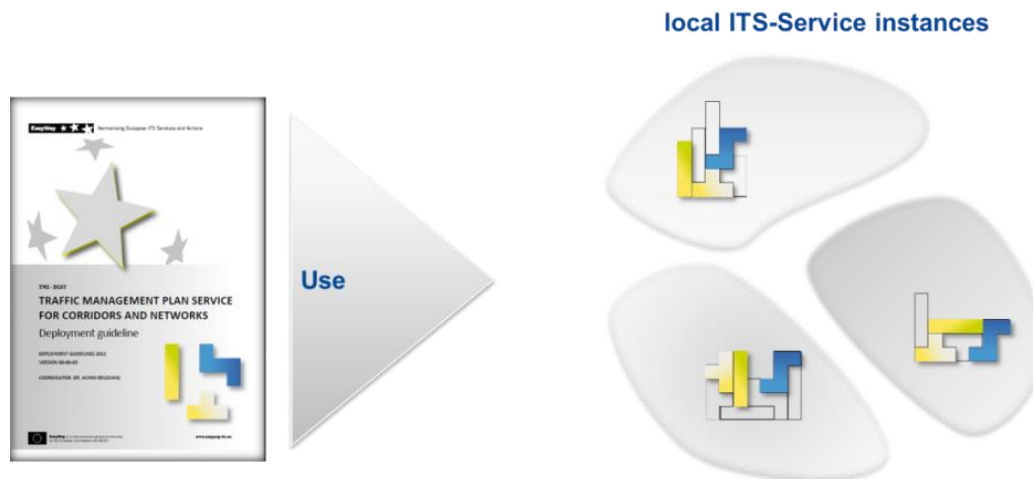The situation is represented in the following picture:

Figure 6: "European Added Value" features of local ITS-Service instances

It is not the task of EasyWay to deal with the specification of the internal details of ITS Services, e.g. to suit requirements for tendering of such systems. This would require a very extensive and time consuming harmonisation and standardisation approach, e.g. common European-wide system architecture for ITS services. Instead, the adjustment of existing specifications and ITS Service solutions which are already operational is limited to interfaces (interoperability) and quality characteristics (common look & feel, common assessment criteria).

The internal structure and design of these ITS service solutions is nevertheless also covered in the EasyWay Deployment Guidelines 2012 in Part B (Example of deployments), but Part B does not have the normative character of Part A. This is crucial since each modification (enlargement, modification, new procurement) of IT infrastructure must be based on existing (national) or market-available products (protection of investment).

3.2 Pillars of harmonisation

Based on a Pan-European accepted understanding of the nature and the benefit of each ITS-service, EasyWay European Added Value is generated through three main pillars, which are depicted in the following figure:
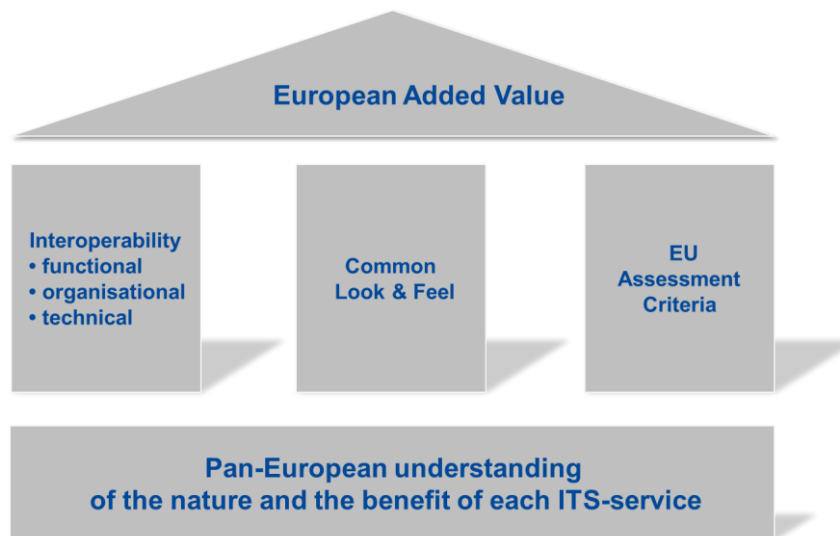
Figure 7: Fundament and pillars of EasyWay harmonisation

- **Interoperability** in terms of functional, organisational and technical features to harmonise cooperation and collaboration between different road operators and other third parties involved in the deployment and operation of an ITS-service

- **Common Look & Feel** to present ITS-services to the road user in a harmonized European way

- **European-wide accepted assessment criteria** to offer assessment against the background of harmonized level of service and operational environment criteria

3.3 The EasyWay deployment guideline 2012 structure

Following the EasyWay overall harmonisation concept, the build-up of EasyWay deployment 2012 consists of four parts, which may be depicted as follows:
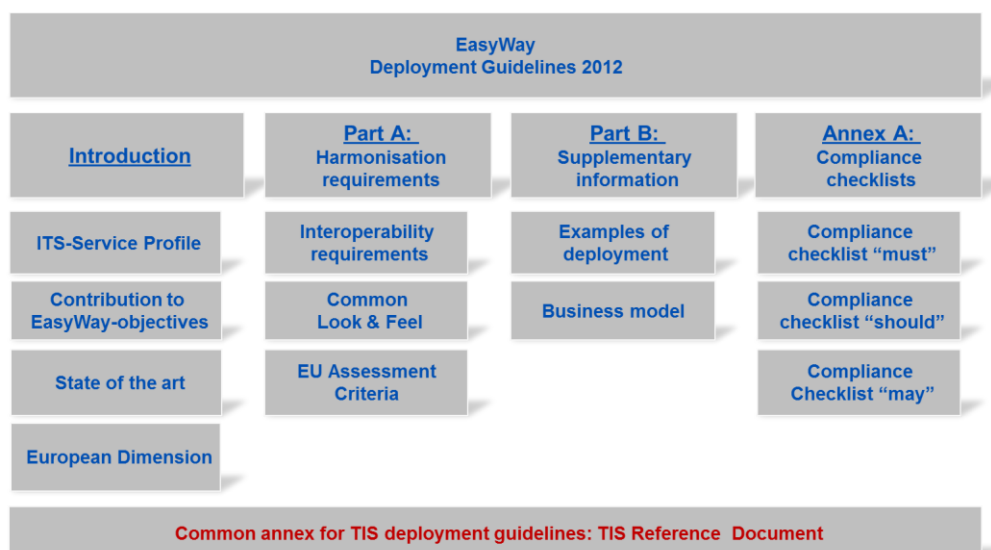

Figure 8: Build-up of EasyWay Deployment Guidelines 2012

The **Introduction** gives an overall explanation of the ITS service. "Semi-experts" (decision makers…) find all basic / general information about the particular ITS-service. The profile of this particular service compared to the other services is highlighted.

In Part A "Experts" (deployment, operation…) find requirements from the operator perspective (especially where operation involves several authorities). Part A should give answers to questions around what is needed for the harmonisation of core EasyWay ITS services:

- to ensure interoperability/continuity on the organisational and technical level with a similar neighbouring ITS-service provided by another organisation

- to present itself to the road user with a common harmonized European look and feel

- to offer assessment based on harmonised level of service and operational environment criteria

Part B includes optional features and additional information. In essence, these are given via examples of deployments, cost/benefit analysis, evaluation reports or similar means.

Annex A lists mandatory features required for ITS service harmonisation in the form of a table.

The TIS guidelines furthermore share a reference document that collects content that is common to all TIS guidelines.

3.4 Application of the EasyWay deployment guidelines 2012

3.4.1 Use of Language in Part A

As outlined, EasyWay deployment guidelines 2012 cover the recommendations and requirements that have - in terms of interoperability and common look & feel - proven to contribute to successful ITS-service harmonisation and have been agreed by the EasyWay partners as elements that should be part of all ITS-service deployments of particular services within the scope of EasyWay. Concrete features required for the harmonisation of such ITS-service deployments in a long to medium term are anchored in Part A - Harmonisation requirements.

For the purpose of the EasyWay Deployment Guidelines, the well-established provisions of the RFC 2119 (http://www.ietf.org/rfc/rfc2119.txt, (see (1)) are used, which specify the basic Internet standards:

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in RFC 2119.

An overview over the keywords, their meaning and the possible answers in the context of part A provides the following table.

Requirement wording	Meaning in RFC 2119	Meaning in EasyWay	Possible checklist answers
MUST (REQUIRED, SHALL)	the definition is an absolute requirement	there may exist insurmountable reasons to not fulfill (e.g. legal regulations…)	**fulfilled: yes** or **Fulfilled: no - explanation of insurmountable reasons**
MUST NOT (SHALL NOT)	the definition is an absolute prohibition		
SHOULD (RECOMMENDED)	there may exist valid reasons in particular circumstances to ignore a particular item, but the full implications must be understood and carefully weighed before choosing a different course.	The Definition is very close to a "MUST", "MUST NOT" Meaning in EasyWay conform to RFC 2119	**fulfilled: yes** or **Fulfilled: no - with explanation**
SHOULD NOT (NOT RECOMMENDED)	there may exist valid reasons in particular circumstances when the particular behavior is acceptable or even useful, but the full implications should be understood and the case carefully weighed before implementing any behavior described with this label		
MAY (OPTIONAL)	The item is truly optional. One deployment may choose to include the item because of particular local circumstances or because it is felt to deliver a special added value	Meaning in EasyWay conform to RFC 2119	**fulfilled: yes - with explanation** or **Fulfilled: no**

Table 1: Part A – requirement wording

3.4.2 The "Comply or explain" principle

Thus, the content of Part A is prescriptive by nature and EasyWay partners are expected to ensure that their ITS-service deployments are compliant to the specifications in this section. Wherever concrete circumstances in a project do not allow these recommendations to be fully followed, EasyWay partners are expected to provide a substantial explanation for the necessity for this deviation. This concept is known as the "comply or explain" principle.

There are two levels to address:

• the technical process – per requirement – to check compliance with MUST requirements in order to verify overall compliance of the deployment; these needs to be performed by experts and a deployment is compliant overall if it fulfils all MUST requirements, and all SHOULD requirements that are not fulfilled have been duly considered in the way described in RFC2119: "there may exist valid reasons in particular circumstances to ignore a particular item, but the full implications must be understood and carefully weighed before choosing a different course"

• the political/administrative/financial process to evaluate overall compliance of a deployment, following the EasyWay governance and the "comply or explain" principle, will be undertaken by, e.g., the End of Project Report (EPR) and is undertaken on the EasyWay administration level.

The interdependency between both is that if the technical, detailed check is done for all MUSTs and SHOULDs and all are fulfilled as described above (note this can include non-fulfilled SHOULDs with valid reasons), the overall assessment is "comply" and nothing more needs to be done regarding compliance with the Deployment Guideline. If the detailed assessment reveals unfulfilled MUSTs and/or unfulfilled SHOULDs without valid reasons, the overall assessment is "not comply" and this then needs to be explained more fully.

4 The EasyWay2 DG enhancement process

4.1 Guideline revision in 2011

The 2011 phase of the DG2012 enhancement process aimed at further developing the DG2010 version of the Deployment Guidelines and restructuring the documents in a way that makes a clear the distinction between different elements as follows:

- Introduction

- Binding elements (Part A)

- Additional informative content (Part B).

- Annexes (including requirements checklist)

Requirements – which form the essential content of Part A – are numbered and clearly distinguish the following categories:

- Functional

- Organisational

- Technical

- Common look & feel

- Level of Service vs. Operating Environment mapping

A first draft was subjected to an intensive Peer Review in October 2011, with more than 160 selected Peer Reviews from inside and outside EasyWay. By mid-December 2011 the documents were further developed according to the comments received and an internal quality check across all guidelines was completed by ESGs and TCT.

The overall timeline for this initial working period was met. Therefore, in mid-December EWSC decided to publish the full set of 20 EasyWay Deployment Guidelines and supporting documents for the EW Member states consultation process. These guidelines provide the basis for harmonised deployment of any combination of the EasyWay Core Services within the scope of the EasyWay programme. The relationship between services and guidelines is not directly one-to-one, since some services have substantial commonalities that make it preferable to specify them in a single document in order to avoid confusion and creating error prone redundancies between the guideline documents.

4.2 Formal Member State adoption in 2012

In December 2011, the draft version of the DG2012 set of EasyWay Deployment Guidelines were published on the EasyWay website (easyway-its.eu) and submitted to the ITS community. Since the EasyWay Deployment Guidelines are a unique effort to achieve harmonised ITS deployment in Europe, it was of utmost importance that all relevant stakeholders and authorities in each Member State were fully aware of the Deployment Guidelines and had adequate opportunity to comment on them and to influence their content. Therefore, the proposed process was deliberately designed to provide sufficient time for this crucial process with all EasyWay Member States in mind. The time schedule for this process is depicted in the following diagram.
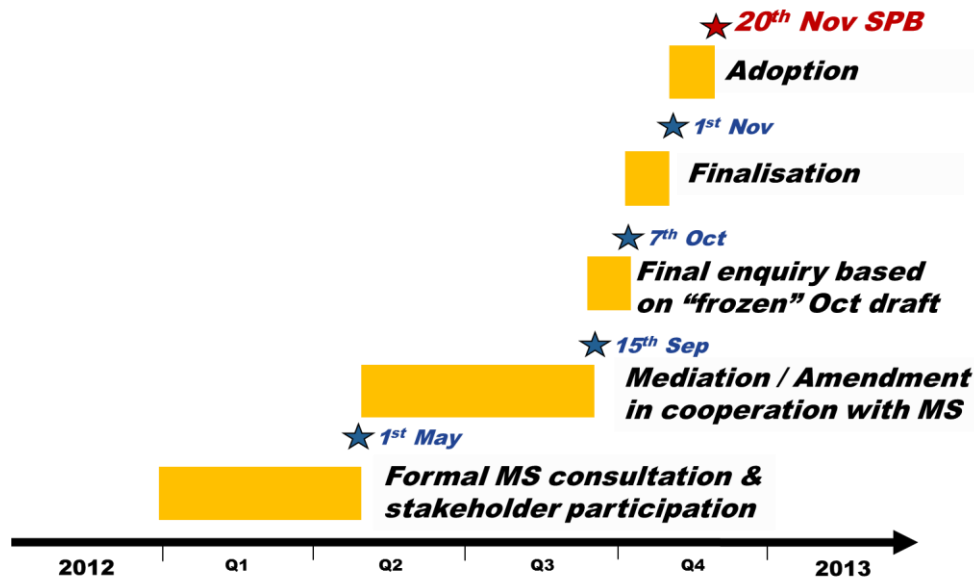
Figure 9: DG2012 process overview

4.2.1   Formal MS Consultation and external stakeholder participation phase

The initial Member State consultation period started in early January 2012 when the first official draft of the DG2012 set of Deployment Guidelines became publicly available. Four months were allocated in order to provide sufficient time for all necessary actions and to ensure full stakeholder consultation according to the corresponding national ITS architecture and corresponding roles and responsibilities inside the respective Member States. EW2 recognised that the Member States and external stakeholders needed this time to ensure that all required internal communication processes could be carried out with due diligence. EW2 provided comprehensive support for Member States to explain the EW2 Deployment Guideline enhancement process. The Members States were also provided with access to a dedicated section of the EasyWay website to provide further background information and support, including a helpdesk facility which Member States could draw upon in case they had any further questions or issues to resolve.

The task of the Member States was not to undertake another detailed review, as this had already been carried out in the extensive Peer Review period in 2011, but rather to provide clear feedback as to whether the binding elements for harmonisation – to be found Part A of each guideline – are acceptable for the Member State as requirements for service deployment. The focus of the Member States consultation, and thus the EW expectations to receive comments, was therefore is on the first two sections of the document – the introduction and Part A on harmonisation requirements. In essence, the Member States were expected to answer the main question:

Do you consider these guidelines to serve your objectives regarding harmonisation and interoperability of ITS deployments in your country?

Member States were also invited to comment on the informative elements of Part B and the annexes and also further examples for best practice that were collected from Member States and incorporated into Part B. All binding elements can be found in the DG checklist added as an annex.

4.2.2   Mediation / Amendment phase

The following period of work from May to mid-September 2012 is allocated to amend the January DG2012 documents according to the feedback received from the Member States and external stakeholders. Again, more than 4 month has been dedicated to this task to allow for intense cooperation with the Members States and external stakeholders in order to understand and harmonise their requirements and to validate the amendments based on this.

4.2.3   Formal adoption phase

Final enquiry (15 Sep - 7 Oct 2012)

The preliminary draft will be sent to the Member States for a last round of comments.

Finalisation of EasyWay2 Deployment Guidelines (8 Oct – 31 Oct 2012)

In this phase the Member States and EW experts will be actively working together to resolve all pending issues in a final round of amendments.

Adoption

The Member States then receive the final version of the Deployment Guidelines 2012 for adoption.

4.2.4   Publication

After formal approval, the final versions of the DG2012 set of EasyWay Deployment Guidelines will be published via the EasyWay website and will be available as a major reference framework for harmonised deployment of seamless and continuous ITS services in Europe!