MINISTRY OF INFRASTRUCTURE AND SPATIAL PLANNING
Infrastructure Directorate
Langusova 4, 1535 Ljubljana

Directive 2010/40/EU of the European Parliament and of the Council of 7 July 2010 on the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport (Article 17 (2))

INFORMATION
on national measures for the deployment of Intelligent Transport Systems in road transport in the Republic of Slovenia
2012–2017

Version 0.5 DRAFT
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Ljubljana, August 2012

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0 INTRODUCTION

The term 'Intelligent Transport Systems and Services' (ITS) is gradually replacing the terms 'electronic transport', 'smart roads' and 'smart vehicles'. The difference is that, with ITS, it is no longer merely about the 'electronics' that stand alongside a transport route (which could be road or rail) but also about vehicles themselves, with drivers being aware of the services. All this leads to a 'win-win situation' which takes in all factors in transport systems: users, administrators (operators, maintenance providers), local communities and ministries, manufacturers, developers and researchers. A general assessment could be that the system benefits everyone. Under the definition[1], ITS integrates telecommunications, electronics, information technology (telematics) and transport engineering in terms of the planning, design and management of transport systems. This integration leads to increased transport and physical safety and increased efficiency of transport systems for passengers and freight, with better use of natural resources and greater respect for the environment. For these purposes, ITS requires procedures, systems and equipment that facilitate data collection, communications, analyses and the distribution of information and data between moving entities, transport infrastructure and information technology applications.

0.1 CURRENT STATE OF DEVELOPMENT AND FUTURE PROSPECTS

ITS is already a current topic of discussion in Slovenia and will continue to be so. It makes cost-effective use of and supplements the existing transport infrastructure, largely without (or with only very minor) investment in new construction. Of course, being a fundamental part of transport infrastructure and an important factor in spatial planning and in regional and urban development, construction cannot be entirely replaced – if there is no infrastructure, or if it is in a very poor state, construction is the only solution.

ITS also removes certain historical barriers between various departments and professions (transport, internal affairs, finance, etc.), since immediate information transfer and access alleviates some of the organisational and communication problems that exist. In the past, the technologies and tools now available did not exist: the wireless digital communications network, the internet, localisation systems, AVLS (Automatic Vehicle Location Systems), AVI (Automatic Vehicle Identification), AEI (Automatic Equipment Identification), EDI (Electronic Data Interchange), databases, geographical information systems, and so on. We are seeing the development of these technologies in Slovenia as well, largely by systems integrators as well as developers and manufacturers of individual sub-system components. Of course, complete integration of these systems would require a confirmed national framework for the construction of systems – a 'national ITS architecture'. This architecture constitutes a single platform for the planning, design and integration of intelligent transport systems and services. A strategy to deploy these systems in Slovenia – at the national level as well as at the level of larger towns and cities and or conurbations – would be very welcome. The target points are chiefly Ljubljana and Maribor, these cities being located at the intersection of two European transport corridors. In this area, the European Commission has adopted an Action Plan for the Deployment of Intelligent Transport Systems in Europe, which was also adopted by Slovenia. A special European Directive (2010/40/EU), which is oriented primarily towards road transport, has also been adopted, as has a Directive relating to new interoperability of the rail system (2008/57/EU). The objective of both Directives is to improve the interoperability of transport systems.

[1] Definition from ITS-EduNet, which is a network of educational organisations in the field of ITS and also operates in Slovenia.

Recent trends are moving towards the definition and use of 'vehicle-to-vehicle' and vehicle-to-infrastructure' telecommunications links, where their deployment in the manner established at the end of the last century is still causing major problems. Member States are also placing very great emphasis on ITS education in all areas, since it is precisely a lack of knowledge that leads to slow integration and a lack of interoperability on the part of such systems. In Slovenia, for example, no special ITS study has yet been drawn up, although the situation is no better in other Member States. With regard to this, educational institutions in Slovenia have come together to form the ITS-Edunet network to tackle this problem. This network also includes a number of educational institutions that can be counted as among the pioneers in the development and deployment of ITS in Member States. The integration of institutions within S-ITS (Slovenian ITS Association), which provides continuous vocational education to its members, promotes the profession and provides information to the public, is also very important.

It is currently possible to conclude that the systems for transmitting transport information and information on the state of the roads are among the most commonly used systems, especially by drivers, since their stakeholders include the media, meaning that a great deal of information is available on them. The trends are moving towards multi-modal transport, i.e. the provision of information regardless of the mode of transport chosen. We should not overlook the protection, rescue and assistance system, which has seen quite a large amount of investment recently; we have in mind here the automatic emergency call system ('eCall'). For transport companies, systems for managing their vehicles are crucial; without these, companies engaged in logistics and transport services can no longer maintain their competitiveness. Motorway operators above all rely on traffic control and management systems – without lighting signalling equipment (traffic lights), traffic in larger towns and cities would be chaotic. A discussion should be started on the deployment and operation of an electronic road toll system, but this is not a current priority in the EU. Unfortunately, a great deal of investment is also required in controls of those who violate the regulations. The chapter on the deployment of ITS in rail transport has not yet been completed. This involves technical solutions for whose implementation a sectoral policy needs to be developed, with explanations given to the general public of why ITS is being deployed. The activities and plans are shown in detail in this report.

Despite a realisation that many of the intelligent transport systems and services already in place are being satisfactorily deployed, the fact remains that the solutions are largely national, regional and local in nature, with a fairly low level of cross-border cooperation and interoperability.

In order to address these problems, in 2008 the Commission adopted the Action Plan for the Deployment of Intelligent Transport Systems in Europe (ITS Action Plan). This was followed in 2010 by the adoption of ITS Directive 2010/40/EU of the European Parliament and of the Council as the legal framework for implementation of the plan.

With the Action Plan and the ITS Directive, the appropriate framework conditions have now been established for accelerated and more coordinated ITS deployment, including the policy priorities and a clear timeline.

0.2 DIRECTIVE 2010/40/EU AND ITS IMPLEMENTATION

In order to achieve the targets set out in the Action Plan for the Deployment of Intelligent Transport Systems in Europe, in July 2010 the European Commission adopted the ITS Directive (2010/40/EU), which came into force in August 2010.

It introduces four priority areas for which specifications and standards need to be formulated:

I. optimal use of road, traffic and travel data;

II. continuity of traffic and freight management in the context of ITS services

III. ITS road safety applications and services;

IV. linking the vehicle with the transport infrastructure.

The first two milestones which stem from the Directive upon the incorporation of its principles into the legal systems of Member States are: reports on the state of ITS with regard to the four priority areas in Member States; and the preparation of a working programme that outlines special objectives and a timeline of work containing intermediate milestones for implementation of the Directive.

0.3 REPORT

With this report, the Ministry of Infrastructure and Spatial Planning meets the second of the above obligations deriving from Article 17(2) of Directive 2010/40/EU and the implementing decision (C (2011) 4947 final).

The Directive and the implementing decision state that Member States shall compile information on the actions envisaged over the next five-year period in relation to the priority areas and the measures listed in Annex I to Directive 2010/40/EU.

The report was compiled by the Ministry of Infrastructure and Spatial Planning with the help of S-ITS (Slovenian ITS Association). Part of the material is taken from the internal material and publications of DARS d.d. and the
Slovenian Roads Agency.

1 BUSINESS MODEL AND FINANCING OF ITS IN SLOVENIA

1.1 ACTION PLAN FOR ITS DEPLOYMENT AND THE LEGAL FRAMEWORK FOR ITS

The area of intelligent transport systems and services, which is the subject of Directive 2010/40 EU, has not been legally regulated up to now. The Directive provides a framework for the deployment of intelligent transport systems in road transport and for interfaces with other modes of transport.

Under Article 18(1) of the Directive, Member States must bring into force the legal regulations and administrative provisions necessary for implementation of the Directive. The Roads Act (ZCes-1, OGRS, 109/210, 48/2012), and its amendments from this year, transpose the provisions of the Directive into Slovenian legislation and create a framework for the deployment of ITS in Slovenia.

The Directive empowers the European Commission to issue specifications as delegated acts. Member States are not obliged to deploy ITS on their territory; however, if they do, these systems and services must comply with the specifications. The aim of the act is to use the specifications drawn up by the Commission to develop legal effects under which one is obliged to act when deploying ITS measures. Directive 2010/40/EU is a framework guideline. Therefore, it does not contain obligations on the part of Member States to deploy ITS and does not, in essence, prescribe mandatory frameworks for possible deployment; rather, it merely draws attention to the specifications which the Commission will publish in the future. This means that, for now, Slovenia will not incur any costs by transposing the Directive into a national framework. Future costs will depend on the contents of individual specifications; as already mentioned, these specifications are currently not known, neither is it yet possible to foresee what they will be. Even after these specifications come into force, the minister responsible for transport will be able to decide whether their deployment within a national legal framework is feasible.

The Roads Act also regulates basic issues regarding the establishment of a National Traffic Control Centre (NTCC); this constitutes the start of operational procedures for its introduction by the planned deadline. The business model for ITS in Slovenia is being amended accordingly to take account of this. The Ministry of Infrastructure and Spatial Planning, the Slovenian Roads Agency and DARS, d.d. are responsible for implementation of the act.

1.2 FINANCING OF ITS IN SLOVENIA

Public infrastructure is financed mainly from central government or municipal funds and DARS d.d. funds (tolls), and partly also from European funds. In the area of ITS, the funds are earmarked chiefly for studies and design documentation, and less so for implementation itself. The private sector is showing a great deal of interest in this area, leading to the formation of public-private partnerships. The first such example of this in Slovenia is the ‘Public-private partnership for the upgrading and modernisation of road traffic automation in the City of Maribor’ project, which contains a favourable business model for both sides – the municipality and the Iskra Sistemi d.d. company. There is therefore undoubtedly a good

deal of interest in ITS.

In pursuing their interests, companies and individuals are themselves investing funds in their own and also standalone intelligent transport systems and services; in most cases, they are able to acquire the necessary public data free of charge.

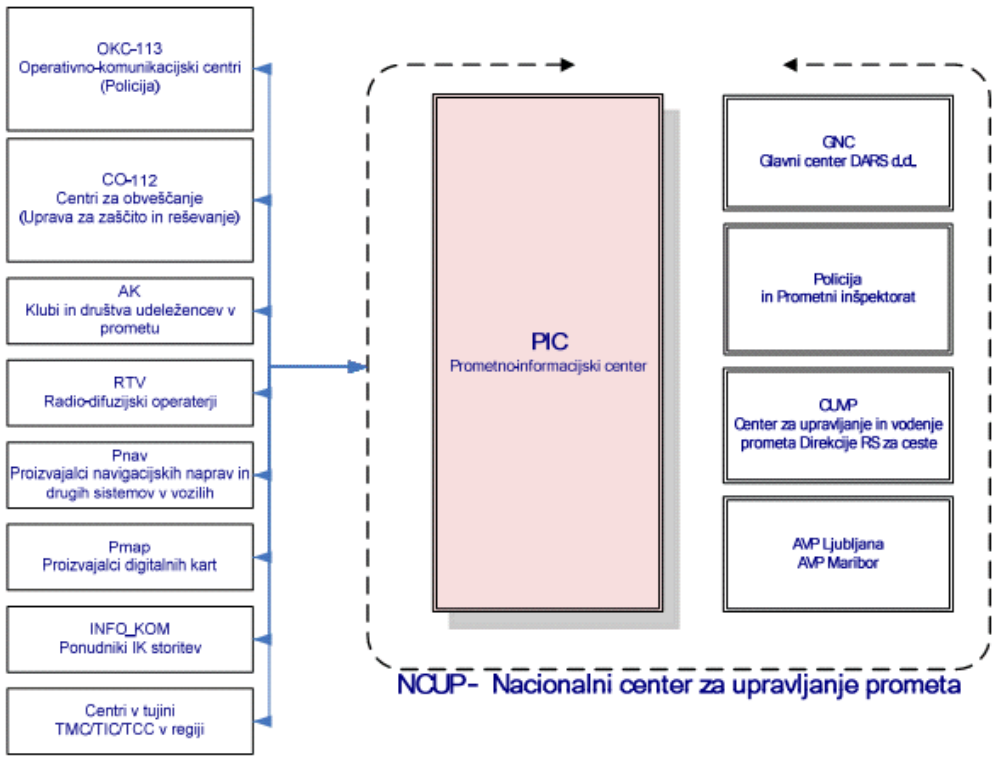
1.3 MAIN ITS PLAYERS/ENTITIES IN SLOVENIA

In addition to the Ministry of Infrastructure and Spatial Planning, which is responsible for transport and lays down rules on the operation of the NTCC and on the cooperation of entities involved in the implementation of its tasks and responsibilities, there are plans for the further participation of other line ministries and operators/concession-holders whose authorisations or tasks touch on the area of ITS in any way and are connected with Directive 2010/40/EU. These include all duty services in certain joint centres:

- the Police/Ministry of Internal Affairs (operational and communication centres – OCC);
- the Protection and Rescue Administration/Ministry of Defence (Notification Centres – NC);
- other control centres at the national, city or municipal (Ljubljana, Maribor) level.

An analysis of the existing situation is planned, as is a proposed streamlining of duty services to increase responsiveness by merging duty services, unifying the method of work and optimising providers.

Due regard must also be paid to municipalities in this regard, particularly the City of Ljubljana, which is also deploying ITS with some success, chiefly in public transport, traffic information, electronic payment systems, etc. Other municipalities, including Maribor, are following these trends, but without proper strategies, plans or ITS architecture.



OCC-113 Operational and communications centres (Police)

CO-112 Notification Centres (Protection and Rescue Administration)

AK
Clubs and associations of road users

RTV
Broadcast operators

Pnav
Producers of navigational equipment and other in-vehicle systems

Pmap
Producers of digital maps

INFO_KOM ICT service providers

Centres abroad
TMC/TIC/TCC in the region

PIC
Traffic Information Centre

GNC
Main DARS d.d. centre

Police and Transport Inspectorate

CUvP
Traffic Management and Control Centre of the Slovenian Roads Agency

Ljubljana Traffic Safety Agency
Maribor Traffic Safety Agency

NTCC – National Traffic Control Centre

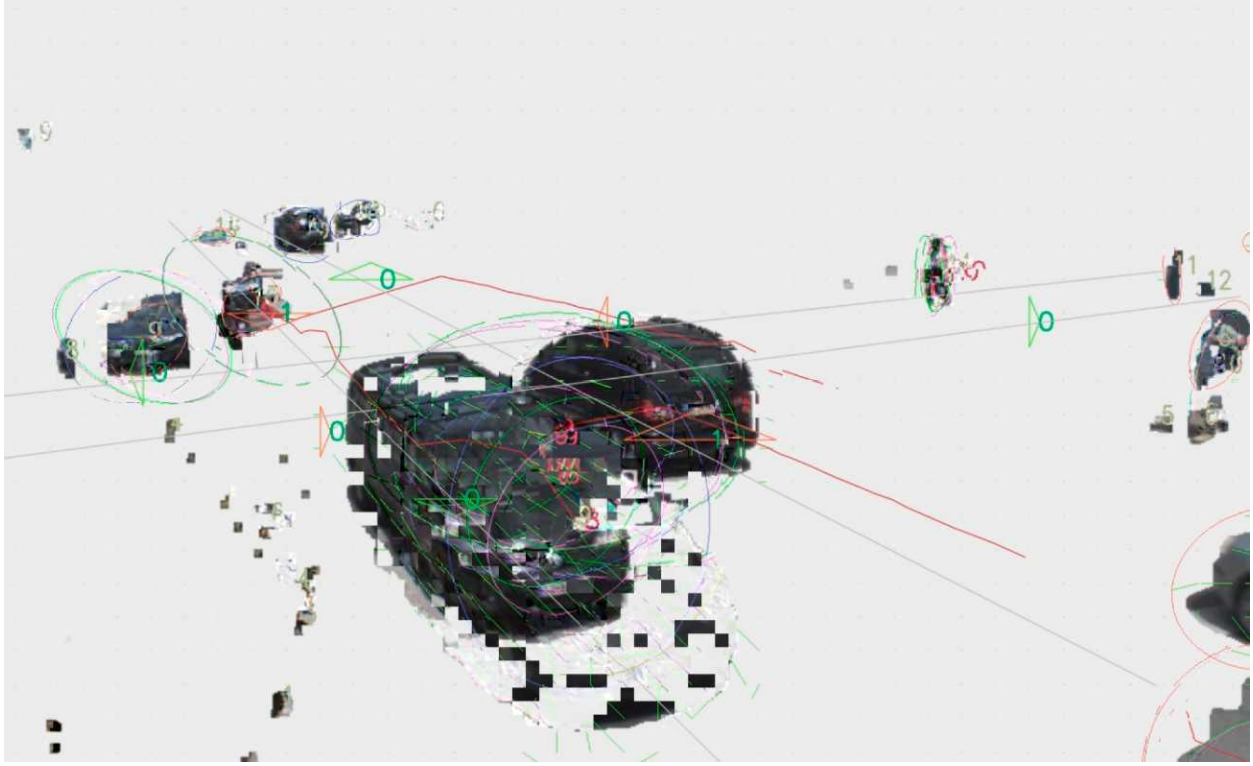
Figure 1: Organisation of road traffic control at the national level in Slovenia – plan

2 ACTIVITIES AND PROJECTS FOR THE FIVE-YEAR 2012-2017 PERIOD PURSUANT TO DIRECTIVE 2010/40/EU

2.1 I. OPTIMAL USE OF ROAD, TRAFFIC AND TRAVEL DATA

Priority area I: Optimal use of road, traffic and travel data

Activities connected with the optimal use of road, traffic and travel data	☒ Implemented	☒ Planned	☐ No plan
Responsible person in the administration	Boštjan Rigler, bostjan.rigler@gov.si Tel: +386 (1) 4788172 Bojan Žlender, bojan.zlender@gov.si Tel: +386 (1) 4788000 Dean Herenda, dean.herenda@gov.si, Tel: +386 (1) 4788212		
Comment	Activities connected with the optimal use of road, traffic and travel data have been carried out intensively in the last decade and are also planned for the future.		



Specifications and deployment plan for systems and services, and other initiatives			
MULTIMODAL TRAVEL INFORMATION SERVICES			
Project	Description	Responsible body	Status
Information portal for passengers in the IPT system	The passenger information portal will provide all residents of Slovenia with basic information on bus and train timetables and fares, and enable all users of the integrated transport system to plan their journeys. This type of information is not currently available to public transport users in Slovenia. The information will be accessible in a number of ways – online, by telephone and via mobile phone. The portal will be ready by February 2013. The portal will also be available in the English language in order to provide foreign nationals with information on public transport services. A call centre will be set up for provide information to passengers. The provision of these types of information to passengers is one of the improvements planned to the public transport system in Slovenia. The following tasks will be carried out for the requirements of the setting-up and operation of the information portal: the delivery and installation of hardware and software (servers, databases and a data-archiving operating system) at the operator's data centre; the installation of a module for the transmission of data on stations and stops, timetables, fares and routes by existing public transport system providers in Slovenia; the integration of all existing data; the installation of a data-maintenance module; the setting-up of a browser for users of information on public transport; the design of the web pages for the passenger information portal; the production of a module for the call centre, which will provide all information over the telephone; and the production of a module for accessing information via mobile phone.	Ministry of Infrastructure and Spatial Planning	2012: study 2013: implementation
Mobile IPT services	Upgrading of the IPT portal with mobile applications for buses and trains The service provides access to at least 'static' public transport information: timetable, transfer points, fares, etc.	Ministry of Infrastructure and Spatial	2014: implementation of services in Slovenia

		Planning	

REAL-TIME TRAVEL INFORMATION SERVICES			
Project	Description	Responsible body	Status
Real-time travel and dynamic timetables	Using satellite navigation or other technologies, and appropriate computer processing, the public transport tracking system enables passengers to see when a bus or train will arrive at a station or stop. The timetable can be appropriately readjusted to this, particularly in the event of delays at, for example, transfer points. The service is based on a system of public transport management and control run from a control centre (on a digital map, operation of vehicles on the route, etc.) with constant communication between vehicle and control centre. The outcome is an announcement of arrivals of vehicles at stops via SMS message or a mobile application, which also provides information in audio form. Dynamic timetable services also enable the viewing of bus arrivals at bus stops, which is not compulsory for this service. The project can also include other forms of passenger transport, such as car pooling.	Ministry of Infrastructure and Spatial Planning Operators Public transport	2013–14: studies 2013–17: implementation of services in Slovenia (suburban and urban passenger transport)
TCMS (traffic control and management system) and the upgrading of traffic management centres	The traffic control and management system (TCMS) consists of variable-message traffic information signs, traffic meters, a video surveillance system, environmental meters and road-user information systems. This system makes it easier for an operator to monitor traffic flows more efficiently, with monitoring managed from a regional control centre. Integration of the various DARS d.d. and Roads Agency into the NTCC is planned. The implementation of TCMS components alongside roads or facilities (tunnels, viaducts) provides the basis. The minimum quantity of infrastructure for TCMS may be restricted to traffic control using traffic meters and video-surveillance, depending on the parameters of potential danger and the requirements to provide information to users.	Ministry of Infrastructure and Spatial Planning DARS Roads Agency	2013: Strategy for deployment of the TCMS 2013–17: Upgrading of Ljubljana RCC with Ljubljana TCMS 2012–17: Upgrading of electrical equipment and hardware for tunnels
Traffic monitoring	Upgrading of traffic meters and video-surveillance in terms of continuous data capture and	DARS Slovenian	2014–2017: implementati

	condensing of information	Roads Agency	on

(Integration of traffic meters)	on traffic flows on long-distance roads (motorways, trunk roads, main roads) and main city radial roads.	Municipalities	or upgrading
Kažipot ('Signpost')	Maintenance and upgrading of the traffic information system for the provision of information on the state of national roads in terms of the faster exchange of standardised information outside the territory of Slovenia as well.	Ministry of Infrastructure and Spatial Planning DARS Slovenian Roads Agency	2012–17: maintenance and upgrading
eParkInfo	This service provides information to users on the locations and free capacities of car parks for motor vehicles. The service is based on a system of control of car parks and the transfer of information on free parking spaces, and allows the possibility of upgrading in terms of parking reservation.	Ministry of Infrastructure and Spatial Planning Operators of parking areas	2012: pilot project for video surveillance of motorway rest areas 2013–14: updated versions of studies, implementation of control 2014–15: provision of services on the national road network 2014–2017: provision of services in

			towns and cities
Platforms for the exchange of traffic information	Regional cooperation to set up a single platform for the exchange of traffic information. Since Slovenia is a small country and incidents on its roads affect neighbouring countries (and vice versa), specific measures are necessary to harmonise traffic management measures with intelligent transport systems along cross-border corridors.	Ministry of Infrastructure and Spatial Planning DARS	2012–16
AVAILABILITY OF ROAD, TRAFFIC AND TRANSPORT SERVICES DATA USED FOR DIGITAL MAPS			

Project	Description	Responsible body	Status
ITS Data Warehouse	The data acquired from various sources (regional traffic control and management centre, police, teams on the ground, other contractual participants, etc.) is designed and marked with attributes that describe the source of the data, the conditions under which the data was acquired and other information required to describe and interpret the data (so-called 'meta-data'). As part of the 'ITS Date Warehouse' system, data produced and required by ITS will be combined with data from other sources and archives with the aim of generating input data for (specific) local, regional or national requirements. A data warehouse search will provide flexible access to data (in a similar way to a web browser), where the user can enter the desired request and the system finds the relevant information on the basis of that request. It also allows filtering, sorting, aggregating and the implementation of other statistical operations in the data warehouse. The data will be attributive and graphic, or written in standardised GIS format for requirements relating to other relevant ITS services (e.g. RDS-TMC). The organisation or business model of data acquisition and updating, which will be amended as required, is very important. A further aim is for all data to be available from one place.	Ministry of Infrastructure and Spatial Planning DARS Roads Agency	2013–14: study 2014–17: implementation or upgrading
ROAD-SAFETY RELATED TRAFFIC INFORMATION PROVIDED FREE OF CHARGE			
Project	Description	Responsible body	Status

Emergency traffic events	Upgrading of the traffic information system for the provision of information on the state of national roads in terms of increased user safety: • (automatic) acquisition of information from other centres and users' associations (Notification Centres, Operational Communications Centres, etc.); • information on forecast events;	Ministry of Infrastructure and Spatial Planning DARS Roads Agency	2012–17: maintenance and upgrading

	• Harmonisation of the activities of different operators which affect road infrastructure; • RDS-TMC as a free-of-charge public service; • Deployment of DATEX, implementation of location boards, definition of relations between entities involved.		

2.2 II. CONTINUITY OF TRAFFIC AND FREIGHT MANAGEMENT IN THE CONTEXT OF ITS SERVICES

Priority area II: Continuity of traffic and freight management in the context of ITS services

Activities or projects concerned with continuity of traffic and freight management ITS services	☒ Implemented	☒ Planned	☐ No plan
Responsible person in the administration	Boštjan Rigler, bostjan.rigler@gov.si, Tel: +386 (1) 4788172 Dean Herenda, dean.herenda@gov.si, Tel: +386 (1) 4788212		
Comments	At the national level, because of the small size of the country, we are taking a cautious approach to the adoption of international solutions for services of this kind. Multimodal freight transport is well developed from the point of logistics operators on an international scale.		

Specifications and deployment plan for systems and services, and other initiatives			
ITS FRAMEWORK ARCHITECTURE			
Project	Description	Responsible body	Status
ITS Architecture V2	The results of SITSA-C are being upgraded in terms of the E-FRAME, which refers to multimodal transport, e-Call 112 and other ITS. As part of the project, the results are being translated into the Slovenian language and adapted to Slovenia's requirements accordingly.	Ministry of Infrastructure and Spatial Planning	2013–14
MANAGEMENT OF PASSENGER TRANSPORT ACROSS DIFFERENT MODES			
Project	Description	Responsible body	Status
Management of passenger transport in the Slovenian impact area	The integration of road and rail transport constitutes a major challenge in terms of passenger transport management, with the possibility of air transport being similarly integrated. This applies in particular to the exchange of traffic data and information to enable the management of traffic demand in the international context. The project will study the development of an appropriate organisational and legal framework, where the quality of the data and information exchange will play a key role. The roles and responsibilities of the entities involved, which must be determined, are very important.	Ministry of Infrastructure and Spatial Planning	2013–17: study

Formulation of a standard for the single electronic ticket	The formulation of a standard for the single electronic ticket will secure conditions for ensuring the interoperability of different electronic ticketing systems in Slovenia. For the moment, those operators in Slovenia that have introduced the electronic ticket use four different systems, and we can expect more to appear. The Slovenian government does not have a preference for any of the existing systems, but it is obliged to ensure their interoperability and examine the possibility of using other payment systems. This is important for the successful and efficient deployment of the single ticket. Based on a review of existing electronic near-field smartcard technologies, a review of electronic ticketing systems in the form of near-field smartcards, an analysis of the electronic and paper ticketing systems of Slovenian operators (carriers), an analysis of the technological possibilities of the electronic ticketing systems introduced in the form of near-field smartcards	Ministry of Infrastructure and Spatial Planning	2012: study 2013: pilot project 2014–15: implementation of services in Slovenia

	in Slovenia (technological providers), an analysis of the electronic ticketing system that uses near-field credit and bank smartcards, an analysis of the possibility of operating electronic ticketing in an environment in which electronic and paper tickets are in use alongside each other (transition period) and an evaluation of the single electronic ticket, a proposed public standard for the single electronic ticket using near-field smartcards in Slovenia was drawn up.		
MANAGEMENT OF FREIGHT ALONG TRANSPORT CORRIDORS			
Project	Description	Responsible body	Status
Freight traffic management	The management of freight traffic along transport corridors is a very complex and, owing primarily to the user costs associated with this type of transport, very sensitive area. The project must involve research into the possibility of setting up a system to determine the source-target matrix for freight transport in the Slovenian impact area or more widely in the EU area, regardless of the mode of transport selected and independently of the tracking technology.	Ministry of Infrastructure and Spatial Planning	2016–17: study
TRACKING AND TRACING OF FREIGHT ACROSS ALL MODES OF TRANSPORT (FREIGHT TRANSPORT LOGISTICS, eFREIGHT)			
Project	Description	Responsible body	Status
eFreight	The service of input of data on freight transport via a single national (or EU) gateway regardless of the mode of transport selected could also constitute an upgrading of the e-Freight or eCustoms gateway.	Ministry of Infrastructure and Spatial Planning	2014–15: study

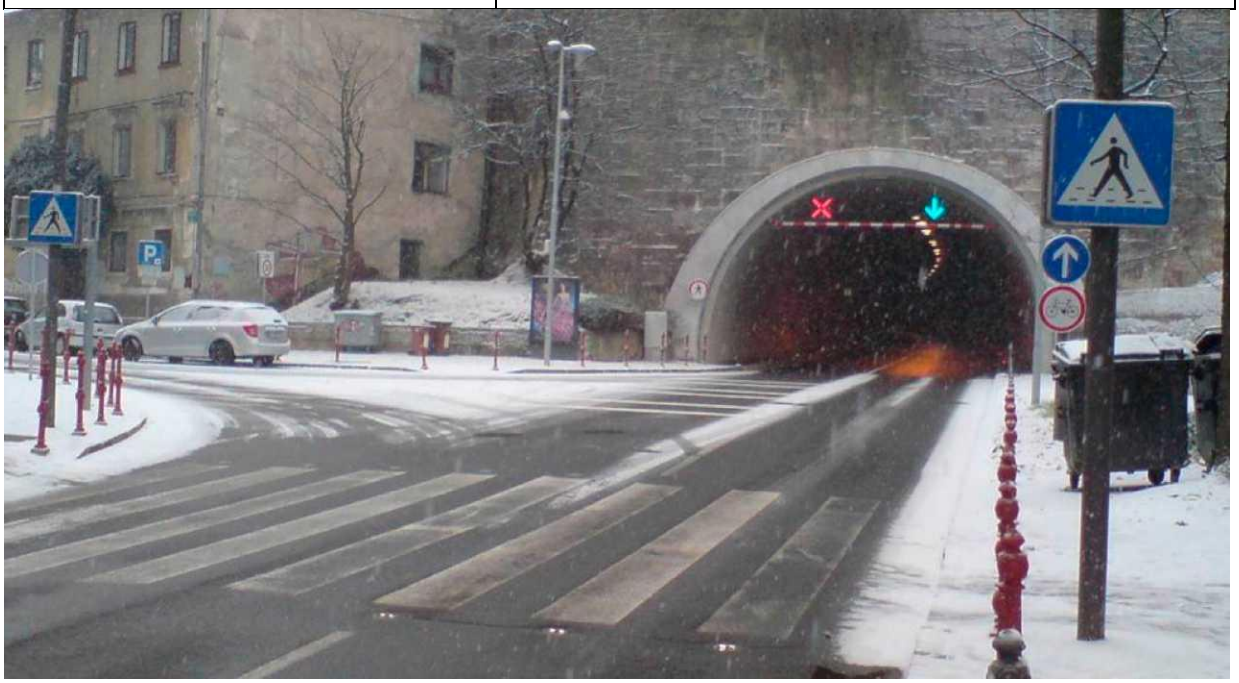
RFID in freight transport	RFID-based transport services. The concept of multimodal and cross-border traceability of intelligent vehicles and intelligent freight in RFID-based intelligent infrastructure is a draft concept of a trans-European information service of multimodal tracking of vehicles (intelligent vehicles) and freight (intelligent logistics units) based on the passage of passive or active RFID tags through antenna gateway systems in transport infrastructure (intelligent infrastructure).	Ministry of Infrastructure and Spatial Planning	2013–15: feasibility study and pilot project

	The user of the service can monitor the passage of vehicles and freight through virtual gateways (telecommunications infrastructure along the route) via real-time readings. This system enables the tracking of vehicles (cars, trailers, wagons) and logistics units (palettes, crates, containers, packages, documents, hazardous substances) through intermodal/multimodal intelligent infrastructure (intelligent corridor, intelligent motorway, intelligent railway). Freight identification is expected to use the standardised global identification keys of the GS1 group for electronic labelling and standard RFID solutions. The service is scalable and can be commenced with a trial involving the transport of hazardous substances and oversized freight and the transfer of data to the National Management and Notification Centre and a number of logistics centres, such as the Port of Koper.		
URBAN ITS ARCHITECTURE			
Project	Description	Responsible body	Status
Travel Card	Guidelines for the deployment of near-field smartcards in Slovenia for different urban transport services (e.g. bicycle hire).	Ministry of Infrastructure and Spatial Planning	2014–15: study 2016: pilot project

2.3 III. ITS APPLICATIONS IN THE FIELD OF ROAD SAFETY AND SECURITY

Priority area III: ITS applications in the field of road safety and security

Activities or projects concerned with ITS road safety and security applications	☒ Implemented	☒ Planned	☐ No plan
Responsible person in the administration	Boštjan Rigler, bostjan.rigler@gov.si, Tel: +386 (1) 4788172 Dean Herenda, dean.herenda@gov.si, Tel: +386 (1) 4788212 Darko But, urszr@urszr.si, Tel: +386 (1) 471 33 22		
Comments	The planning of ITS support systems for integration of the vehicle with traffic infrastructure and advanced systems for driver assistance or increasing safety will depend on internationally adopted solutions.		



Specifications and deployment plan for systems and services, and other initiatives			
AUTOMATIC EMERGENCY CALL			
Project	Description	Responsible body	Status
eKlic ('eCall')	In the area of eCall, we will continue to deploy new technologies that will allow text- and video-based emergency calls. We will also continue with preparations for the introduction of eCall in the future. A system has been introduced for showing caller location and storing 112 caller location data provided by telecommunications service providers. The system will be extended further to the collection of text- and video-based emergency calls, and other operators of public telecommunications service providers will be included. In addition to in-vehicle communications technologies, a communications infrastructure for receiving automatic calls is also required for operation of the eCall system. Infrastructure is provided for the interoperable 112 emergency number. Further solutions depend on international solutions.	Ministry of Defence, Administration of the Republic of Slovenia for Civil Protection and Disaster Relief (Ministry of Infrastructure and Spatial Planning, Ministry of the Interior, Police)	2013–14 study, pilot project 2014–15: implementation
INFORMATION SERVICES FOR SAFE AND SECURE PARKING AREAS FOR TRUCKS AND COMMERCIAL VEHICLES			
Project	Description	Responsible body	Status
ePark Reservation	Infrastructure for safe and secure parking areas is currently not available. Parking areas are gradually being equipped with video surveillance to increase security; this will continue as zones with access control based on ECS planning.	Ministry of Infrastructure and Spatial Planning, car park operators	2015–16: new versions of studies 2017: pilot project

SAFETY AND COMFORT OF VULNERABLE ROAD USERS			
Project	Description	Responsible body	Status
Smart crossings for pedestrians and cyclists	As part of the project, specifications must be determined for the Intelligent Traffic Light and Pedestrian Control system, which is equipped differently from the classic traffic-light-controlled crossing (a crossing request may also be placed by pressing a button), with detectors for vulnerable road users. Alongside this, button-pressure control can also be implemented. The specifications will be the result of experiences and be based primarily on an evaluation of the pilot project.	Ministry of Infrastructure and Spatial Planning Slovenian Roads Agency	2013–14: pilot project 2014–15: evaluation and specifications

2.4 IV. INTEGRATION OF THE VEHICLE WITH TRANSPORT INFRASTRUCTURE

Priority area IV: Integration of the vehicle with transport infrastructure

Activities or projects concerned with linking the vehicle with transport infrastructure	☒ Implemented	☒ Planned	☐ No plan
Responsible person in the administration	Dean Herenda, dean.herenda@gov.si, Tel: +386 (1) 4788212		
Comments	The planning of ITS support systems for integration of the vehicle with traffic infrastructure and advanced systems for driver assistance or increasing safety will depend on internationally adopted solutions.		
Specifications and deployment plan for systems and services, and other initiatives			
COOPERATIVE SYSTEMS (VEHICLE-VEHICLE, VEHICLE-INFRASTRUCTURE, INFRASTRUCTURE-INFRASTRUCTURE)			

Project	Description	Responsible body	Status
Telecommunications in transport	This project envisages the upgrading of the existing telecommunications infrastructure in terms of providing intelligent vehicle-infrastructure and infrastructure-infrastructure (road/rail) systems and services.	Ministry of Infrastructure and Spatial Planning	2012–17: upgrading

3 VISION OF THE FURTHER DEPLOYMENT OF INTELLIGENT TRANSPORT SYSTEMS AND SERVICES IN SLOVENIA AND THE EU

The properly harmonised development and deployment of intelligent transport systems and services requires time and a consistent approach.

In these times of economic crisis, ITS is a relatively cheap response to the needs of the future. In order to provide high-quality ITS services to end-users, an environment needs to be created in which existing and planned services are harmonised, with the agreed level of interoperability, within regions and within the Community. Services must also be designed, tested and deployed alongside technological standards, specifications and open interfaces at the trans-European level.

The activities of the entities involved (ministries, road and rail directorates or agencies, road operators, towns and cities, the private sector) must continue and accelerate, in a targeted way, the implementation of a properly harmonised trans-European road network to the benefit of the user/European citizen.

The definition of functional, organisational and technical specifications is as important as technical standardisation procedures.

For the definition and harmonisation of services, we see the EasyWay programme as a key platform and environment for competent transport ministries, other bodies, road operators and partners from practically all Member States to attempt to achieve the effective deployment of ITS in order to ensure uninterrupted ITS throughout the whole of Europe. Through the harmonisation of European ITS services, the EasyWay programme offers Member States access to a trans-European set of ITS services in such a way that they do not need to develop services themselves.

Possibilities for improving ITS deployment include:

1. The use and further development of the joint Deployment Guidelines developed within the context of the EasyWay programme is an option that runs alongside initiatives for the specification of services by the European Commission, which follows the ITS action plan and the timetable set out in the Directive. If this route is taken, ITS services will be developed in a more decisive and orderly manner and will enable Member States to avoid a situation in which every Member State has to develop its own framework for harmonisation of services.

2. Focus must also be placed on the selection of services. Projects must be set up along corridors and pilot projects implemented at the international level, particularly in the period after 2015.

3. The evolution of cooperative systems will have a strong impact on ITS development. The EasyWay programme provides an environment for assessing and determining the roles and responsibilities of road operators in connection with private sector stakeholders, and the programme should continue with this in mind.

4. Better integration of the secondary road network and multimodal solutions require the activation of additional resources and coordinated action to ensure uninterrupted services through urban and inter-urban transport networks.

4 SUMMARY OF THE INFORMATION

With this information based on the 2011 report, Slovenia is fulfilling its obligations to the request formulated in Article 17(2) of Directive 2010/40/EU and to the EC implementing Decision (C(2011)4947 final).

The report referred to in Article 17(1) of Directive 2010/40/EU, hereinafter referred to as 'the initial report', gives an overview of the current state of national activities and projects in the priority areas referred to in Article 2 of and in Annex I to Directive 2010/40/EU, while this information is meant as an overview of envisaged activities for the 2012–2017 period.

The report has been developed by the Ministry of Infrastructure and Spatial Planning, with the help of SITS (Slovenian ITS Association), and is based on the planned activities of DARS d.d, (Motorway Company of the Republic of Slovenia) and the Slovenian Roads Agency.