ITS report 2012

Reporting on national and regional ITS actions envisaged over the following five year period

Belgium

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1   Introduction

This ITS report is within the scope of requirements under Article 17(2) of the Directive 2010/40/EU, where Member States provide the Commission with information on the national ITS actions envisaged over the coming five year period. The report is drawn up according to guidelines 2011/453/EU for reporting by the Member States.

The report is composed of two parts: firstly the strategy and vision for ITS in Belgium, and secondly the national and regional ITS actions and activities envisaged for the deployment of ITS over the coming five year period. These are structured around the 4 priority areas as defined in Article 2 of the ITS Directive.

In Belgium several competences in the domain of road transport, road infrastructure and public transport by bus, tram and metro belong to the regions. Therefore, the federal, Flemish, Walloon and Brussels-Capital authorities are all in charge of the ITS activities on their own territories.

In Belgium the road infrastructure is a regional competence. The public bus, tram and metro transport also falls under regional competences. The railways fall within the competences of the federal government.   The technical specifications of vehicles for ITS (rules and requirements), traffic safety and traffic regulations, goods transport by road, the handling of personal data and market supervision are federal competences.

In view of coordinating the reporting at a Belgian level, an ITS steering committee was set up, with representatives from the federal ministries concerned and from the 3 regions: the Flemish Region, the Walloon Region and the Brussels-Capital Region. This report, consolidated by the Belgian Ministry for Mobility and Transport, was possible thanks to the cooperation of the relevant federal departments and all three regions.

This report gives an overview of both the federal and the regional activities in this particular area of interest: ITS. An overview of all the reported projects and activities is given in the table of contents.

2 National approach/strategy on the development and deployment of ITS and its main objectives

For the **<u>Belgian State</u>**, it is clear that ITS could make a key contribution to dealing with the four major challenges of road transport:

- *safer:* many applications could contribute to greater road safety (up to the self-steering ideal vehicle for zero accidents), as well as securing the vehicle against (load) theft and damage;
- *more fluid:* traffic information and traffic management and more efficient public transport, combined with intelligent charging, could reduce congestion;
- *more accessible:* firstly, people have easier access to data, such as the real time tracking of containers and multimodal journey planners, and secondly, the ITS applications offer a technical compensation for people with restricted mobility, which is very important in our ageing society;
- *greener:* although usually derived from other assets, ITS applications often contribute to helping the environment and everyday surroundings, including less congestion and energy-saving driving.

A well-supported deployment of ITS is conducive to sustainable economic growth, through the development of ICT businesses and the automotive industry, as well as in the more efficient operation of the logistics chain.

For uptake of ITS on a larger scale, a number of barriers must be addressed at the financial, technical and social levels (social acceptance and liability issue). The federal government therefore supports the announced efforts at the EU and UNECE levels to work out solutions and standards for these obstacles (refer to Action Area 5 for social barriers and to Action Area 6 for financial in the ITS Action Plan by the European Commission).

For the introduction of ITS on Belgian roads however, the federal government plays a limited role. Firstly there are the above-mentioned supra- or international organisations which have an important role in regulatory guidance. Secondly, the concrete realisation on the ground is relevant to the Belgian division of competences, whereby road infrastructure has been entrusted to the federal states (in this case the regions).

The Belgian state has to fulfil its obligations in the field of ITS using scarce means, taking into account the austerity policy. Nevertheless the State commits itself to implement as fully as possible all stipulations within its power, issued by the Commission on the basis of Directive 2010/40/EU. In this sense eCall is exemplary, as the federal government has been investing considerably in the quality of its services, to guarantee the highest possible level of quality for this new channel for emergency calls.

In **Flanders,** the implementation of Intelligent Transport Systems (ITS) is in full development. By focusing on these systems, the Flemish Government can manage traffic (in time and space), increase safety, improve services and traffic information and maintain effective enforcement. ITS offers road authorities the ability to handle small incidents and monitor speed and weight in motion. This allows police and emergency services to concentrate on their role in coordinating the handling of large emergencies and traffic enforcement.

For the deployment of ITS in the short term, the Flemish Government, putting into practice its Mobility Plan - Flanders emphasizes the development of roadside systems and incident management, both at the main and primary road network. In order to roll out ITS in a cost effective way to the underlying networks, the Flemish Government fully utilizes the potential of in-vehicle systems where through information, communication, navigation and localization technology, traffic is managed, routes optimized, etc. Interfaces with other transport modes (including public transport) are established and we are working on the development of high quality multi-modal transport and information services such as multi-modal journey planners and information services that provide a smooth information (door-to-door transport) to the user and this both before and during the trip, up-to-date information on the availability of different modes, the expected travel times and alternative routes (green routing).

In consultation with the private sector, the Flemish Government works on the development of integrated mobility services, offered directly into the vehicles by using state-of-the-art technology.

To manage traffic dynamically, we as Flemish Government continue to work on the development of regional traffic control centres that allow urban areas and their transport systems to be managed as a single entity, taking into account the current situation (congestion, viability problems, organization of major events, etc.). In consultation with local authorities we shall examine how this can best be done.

A well-performing traffic management requires an accurate picture of traffic conditions on the road and of its evolution. Therefore, further work is done on the development of a basic monitoring network for the collection of this data traffic. By making use of, amongst other, services based on floating car data, we fill the data gaps in a cost effective way, particularly in the underlying road networks. The Flemish Government centralizes the information collected through various channels, and thus succeeds in providing an accurate and complete picture of the current traffic situation. This forms the basis for accurate traffic information and for management of traffic flows.

Intelligent transport systems also facilitate improvements in logistics services through better and consistent information sharing between carriers, operators, shippers, terminals, etc. Therefore, the Flemish policy in goods transport emphasizes offering mode-neutral real-time information about the available infrastructure capacity, traffic flows, tracking and tracing of goods. Efforts are being made to develop this further up to the level of the load. By expanding the component of tracking and tracing to the level of monitoring the flow of goods, a more efficient operation and monitoring of the logistics chain becomes possible.

For some time there are many developments going on at vehicle level which focus on supporting the driver in the implementation of the traffic task (Advanced Driver Assistance Systems (ADAS)) or that decrease the accident severity (pre-crash sensing systems). To ensure a better environment, improved safety and smooth flow, we investigate the possibilities to introduce such systems.

This requires a number of important steps to be made before being able to benefit of these systems. ITS is often considered as a limiting factor for the road user because ITS wants to influence, affect, limit or even automate the behaviour of the traveller. Therefore, we are working on the stepwise increase of a broad societal support for systems that actively intervene and therefore often are experienced as a restriction of individual freedom, but also increase the safety of other road users. Also potential problems concerning the safeguarding of privacy need to be clarified.

Finally, it is important to the introduction of ITS systems to avoid fragmentation and to give the necessary attention to the compatibility, standardization and integration of different subsystems into one system. This is not only a task for the government, but also for the ITS market itself. Good cooperation between all stakeholders (governments at various levels of policy and administration, industry, research institutes, interest groups) is necessary. The European level ITS policy is of very high importance to achieve this harmonization.

ITS services for the roads in **Wallonia** are mainly developed and operated by public authorities: road administration (General Directorate for Roads and Buildings of the Public Service of Wallonia) and now from 2010, on behalf of the SOFICO.

The WHIST programme, which started in the mid-nineties is coordinated from PEREX, the Walloon traffic centre and is concentrated on the "structuring road network".

Main objectives for the next five years are in the field of traffic information, traffic management, support to freight and logistics and development of the traffic centre. The projects that will be implemented will be largely based on the recommendations formulated in the deployment guidelines elaborated by EasyWay.

The possibility to set up a public / private partnership for the installation and the maintenance of equipment is currently investigated. The study will determine which equipment will be included and the way forward for the next 10 years. The results will lead to the launching of a tender defining precise requests expressed in terms of level of service.

The Walloon Region also provides ITS services in the field of public transport, which are developed by the SRWT, the Walloon Regional Society of Transports.

The objective of those services are mainly to provide information to passengers, as well as its presentation and accessibility, to improve the quality of service for passengers, to develop

interoperability with other Belgian operators (STIB, De Lijn,...) and to continue to promote professional relations with the press.

The **« Région de Bruxelles-Capitale :: Brussels Hoofdstedelijk Gewest »** strategy for ITS and more generally for transportation is based on the "Plan régional de mobilité: Iris 2 - Mobiliteitsplan1". This plan develops a vision of sustainable mobility, notably, by combining several modes of transport.

To elaborate this policy, the « Région de Bruxelles-Capitale :: Brussels Hoofdstedelijk Gewest » is convinced, among others, that she has to facilitate the availability of real-time trip information to the user during his journey.

Easy access to trip information determines the ability to choose from different modes of transport.

The modal shift requires information and a clear view of how to use the public transport and other more active modes of transport.

This is the reason why The « Région de Bruxelles-Capitale :: Brussels Hoofdstedelijk Gewest » has decided to invest in intelligent transport systems which put information about the multimodal transport (http://www.bruxellesmobilite.irisnet.be/ :: http://www.mobielbrussel.irisnet.be/) and real-time traffic information at the disposal to the public, in order to maximise the use of road data as well as both traffic and travel data (IRMA and multimodal trip model).

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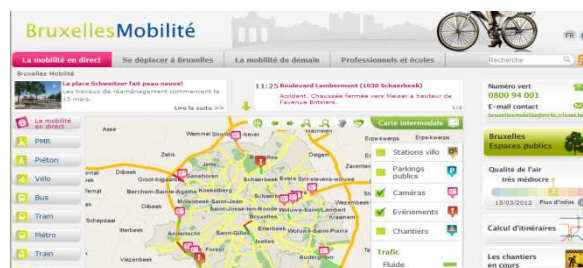
[1] *Iris 2: Plan de mobilité.* Bruxelles Mobilité – AED de la Région de Bruxelles-Capitale, Bruxelles 2011.

Furthermore, the « Région de Bruxelles-Capitale :: Brussels Hoofdstedelijk Gewest » works to improve the link between the vehicle and the transport infrastructure, with for example, prioritizing public transport at road intersections.

The deployment is also conditioned by the road hierarchy. The « Région de Bruxelles-Capitale :: Brussels Hoofdstedelijk Gewest » is in charge of 350 kilometres of roads which includes 15 kilometres of motorways and 15 kilometres of urban tunnels. The road network has a various number of functions in a complex urban context, not only for the mobility function.

3 Technical and legal framework applicable to the development and deployment of ITS

The technical framework is ideally placed at a higher level than the national framework (in particular EU and UNECE). The **Belgian government** actively contributes to the realisation of technical measures through substantial mobilisation of human and financial resources. As a small country, that is nonetheless centrally located and therefore with a lot of transit traffic, it has every interest in a cross-border operation of ITS.

For specific regulations on ITS, the Directive 2010/40/EU is naturally the starting point. This shall be transposed into Belgian law as soon as possible. The more concrete measures and actions are to be incorporated into the existing legislation, of which we have compiled a non-comprehensive list:

- Royal Decree of 15 March 1968 on general rules for technical requirements to be fulfilled by cars, their trailers, their components and their safety accessories;
- Royal Decree of 10 October 1974 on general rules for technical requirements to be fulfilled by mopeds, motorcycles, and their trailers;
- Law of 21 June 1985 on the technical requirements to be fulfilled by every vehicle for land transport, the components, as well as the safety accessories;
- Law of 16 March 1968 on the road traffic police;
- Royal Decree of 1 December 1975 on general regulations for the road traffic police and in the use of public highways;
- Law of 13 June 2005 on electronic communication;
- Law of 8 December 1992 on the protection of privacy in relation to the handling of personal data;
- Law of 6 April 2010 on market practices and consumer protection;
- Law of 15 September 2006 on the protection of economic competition (coordinated on 15 September 2006).

In **Flanders** the Directive 2010/40/EC on the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport will partly be transposed by a Decree of the Flemish Government that soon will be submitted to the Flemish Parliament for discussion.

The general rules for development and deployment of ITS services, based on the Directive 2010/40/UE, will soon be regulate by a decree in the **Walloon Region**.

In Wallonia, by the regional decree of 10 December 2009, the Walloon Parliament assigned to the public company Société régionale wallonne de Financement complémentaires des Infrastructures, in abbreviated form SOFICO, the responsibility of maintenance and operation of the structuring road network, made of the motorways and the main regional roads. This responsibility includes the implementation of projects in the field of Intelligent Transport Systems for road traffic. Nevertheless, General Directorate for Roads and Buildings of the Public Service of Wallonia continues to provide the technical support and to supervise the execution of the projects.

Traffic data produced by the road administration are available for free through an OTAP node, provided agreement on general conditions of use.

The technical framework is made up of several elements. The first one is that the « Région de Bruxelles-Capitale :: Brussels Hoofdstedelijk Gewest » has worked since 1996 in partnership with other Belgian Regions in the Euro-Region: CENTRICO for the EasyWay project.

Ongoing ITS projects within the **« Région de Bruxelles-Capitale :: Brussels Hoofdstedelijk Gewest »** most often conducted, have to be consistent with the Guidelines EasyWay 1 and 2. In fact, the subsidies that the « Région de Bruxelles-Capitale :: Brussels Hoofdstedelijk Gewest » receives from the European Commission have contributed to promote the ITS projects in the « Région de Bruxelles-Capitale :: Brussels Hoofdstedelijk Gewest » . Furthermore, the regular meetings between partners are a significant factor for the exchange of experience in ITS.

The second framework is the project « Enterprise Architecture » for the Mobility Center of "Bruxelles Mobilité :: Mobiel Brussel".

This project led to the creation of an "ITS Committee" within the public administration of "Bruxelles Mobilité:: Mobiel Brussel" for the coordination and the monitoring of ITS projects. Moreover, in the way of the project « Enterprise Architecture », the "Centre de Mobilité :: Mobiliteitscentrum" has projects for the informative architecture and technical architecture.

The third framework defines that the ITS installations have be consistent relative to the technical specifications in our public tenders.

The legal framework is also composed of 3 parts: the legal disposition for the deployment of ITS, the highway code and the dispositions regarding to the protection of privacy.

First, the directive 2010/40/UE of the 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 is an important. There are two transpositions: federal law establishing the framework for the deployment of ITS. There is also the regional law with the transposition of the directive 2010/40/UE on the framework for the deployment of intelligent transport systems in the field of road transport and for interfaces with other modes of transport. Those two laws are complement one to another.

4   ITS deployment activities

To make the introduction of ITS possible, the **federal government** plays an active role in facilitating and supporting:

- the European Council bodies where implementation of EGNOS/Galileo is handled;
- ETSC (European Transport Safety Council), to be able to learn from the experiences of other Member States and to ensure continuity of services;
- ITS Belgium, a platform where public and private actors meet to stimulate mobile solutions and traffic technology, in particular in six Action Areas, where a working group was set up for each;
- the ITS steering committee including representatives of the federal and regional governments (see introduction);
- the thematic consultative body referred to in (5).

As proof of its positive opinion on ITS, the federal government is willing to consider subsidy applications from private companies for study, research and communication in the area of ITS, within the limited budgetary space available. Within its competences the federal government takes its own initiative in these areas, amongst others promotion via TV broadcasts and websites.

In **Flanders**, one can note the following activities:

a) *European priority area I: Optimal use of road, traffic and travel data*
   Flanders public transport services works out new website with new rout planning opportunities with graphic improvements and new features.

   the provision of EU-wide multimodal travel information services
   By means of a license agreement data can be used by other providers of public transport by web services and with real-time info.
   - the provision of EU-wide real-time traffic information services
   - data and procedures for the provision, where possible, of road safety related minimum universal traffic information free of charge to users
   - Dynamic Traffic management
   - Hard shoulder running
   - Traffic Signs database
   - Travel information time services

b) *European priority area II: Continuity of traffic and freight management ITS services*
   - Implementation of DATEX II
   Flanders uses an OTAP protocol at the moment, which is a simplification of DATEX. It is a main priority to enrol out the DATEX II protocol in the future.
   - Open systems for Traffic Management Centres (TMC)

Flanders is now participating in a project for the definition of open systems for traffic management, led by Highways agency (HA) and Rijkswaterstaat (NL). This way Flanders is supporting the idea to come to a more competitive market with open standards, leading to more performant products.

- Access to abnormal goods transport regulation

Access to abnormal goods transport regulations is an information service where the user gets country-specific information on the vehicle regulations and permit application procedures, contact persons, and guidelines for completing application forms for abnormal transports.

- Traffic Management Plans for corridors and networks

Traffic Management Plan Service for Corridors and Networks means the elaboration, application and quality control of Traffic Management Plans (TMP) for the management of the European network and corridors, including multi-modal capacities to allow for a more efficient use of the road network in Europe (and not restricting measures to country or local level).

c) *European priority area III: ITS road safety and security applications*
- the provision of information and reservation services for safe and secure parking places for trucks and commercial vehicles
- ITS for enforcement e.a. Trajectspeedcontrole, Weight in motion, HGV distance control, HGV overtaking ban control…

d) *European priority area IV: Linking the vehicle with the transport infrastructure*
- Interactive intelligent traffic light control with short wave signals for priority vehicles and public transport (buses and tramways)

In **Wallonia**, deployment activities on the structuring road network are coordinated in the frame of the WHIST project, which is based on the following functionalities:

- data collection
- data processing, validation and
- dissemination of traffic information
- traffic management actions.

All these actions are coordinated at the level of Perex, the Walloon traffic centre.

For the public transport, the main services are developed in :

- the area of multimodal travel information services with the "Infotec.be" website, the TECxto service and the E-mailing service;
- the area of continuity of ITS services for the management of passenger transport across different modes of transport with the TEC IT EASY project;
- the area of the integration of ITS applications on an open in-vehicle platform with the Service Management and Real-Time Passenger Information.

The **« Région de Bruxelles-Capitale :: Brussels Hoofdstedelijk Gewest »** develops different collaborations with others levels of power: federal and European but also with the other Belgian regions. The aim is to install the ITS in the most coordinated and efficient way as possible.

Within the regional administration, a « Comité consultatif STI :: ITS-adviescomité » was created, which is in charge of the collaboration, coordination and promotion of ITS projects within the administration.

As well, at the Belgian coordination level, the « Région de Bruxelles-Capitale :: Brussels Hoofdstedelijk Gewest » participates in two ways. First of all, the "Centre de Mobilité - Mobiliteitcentrum" participates in the Euro-region: CENTRICO (with the two other regions) to represent Belgium. This project notably works to elaborate and apply the EasyWay Guidelines with European subsidies.

On the other hand, the Region is member of the « groupe de pilotage STI :: ITS-Stuurgroep » piloted by the Belgian Federal authorities. Inside of this group, there are representatives both from regions and federal authority and, one of the purposes is the transposition of the Directive 2010/40/UE.

Finally, the Region participates in "ITS Belgium" (http://itsbelgium.be/) activities to stimulate the dialogue between industries and public authorities.

5 National priority areas for actions and related measures

including an indication of how these are related to the priority areas laid down in article 2 of directive 2010/40/eu;

For the **<u>Belgian (federal) government</u>** there is only one priority area for the period 2012-2017, namely ***ITS applications for traffic safety and security***. Consequently priority area III of Directive 2010/40/EU is in application. The Belgian government is making an active contribution to each of the four parts listed in Appendix I of this Directive:

a) *eCall*
b) *provision of information services for safe and secure parking for lorries and company vehicles*
c) *provision of reservation services for safe and secure parking for lorries and company vehicles*

For more information on these three parts refer to (5). Actions b) and c) relate to the public sector, executed in cooperation with the regions.

d) *other actions: improvement of the safety equipment in vehicles and integration of advanced driving assistance systems*

In consultation with all stakeholders, including governments, the transport sector and mobility organisations, it was recommended in May 2011 for the equipment based on ITS applications to be moved up to 2015, with particular applications mentioned:

- a black box (EDR) that records a number of identifying features from the driving behaviour;
- a fatigue detection system that prevents the driver from falling asleep;
- distance detection system;
- ISA (Intelligent Speed Assistance systems): promoting the three forms of ISA systems.

While the Belgian government fully endorses these recommendations, it cannot carry out the measures itself. However it will continue its active role in the competent bodies of the EU and UNECE to continue in these systems to achieve the greatest possible number of vehicles and to the highest possible standard, i.e. taking account of negative side effects. Where ISA is concerned, the possibilities for own initiatives are examined, since support can be developed at a national level.

e) *additional part: strengthening of enforcement*

Although from a policy standpoint these measures are also situated in the traffic safety and security domain, they are placed within the framework of Directive 2010/40/EU

in priority area IV (coupling the vehicle to the transport infrastructure and in particular implementation of combined systems). This item partly requires the authority of the regional and local authorities.

Again with the agreement of all parties concerned, in May 2011 the importance of inspection in traffic safety was greatly emphasised. The most extensive are speed checks, which are used in automatic systems. Their number will increase and the checks will be dealt with in a more sophisticated way, such as average speed checks. Thanks to automatic number plate recognition, for instance, capacity will be increased and existing personnel will be deployed more efficiently. Further application and extension of the scope of the automatic devices will be examined.

Moreover, new measures will be developed to address repeat offenders as effectively as possible. Violations eligible for recidivism, such as radar detectors, will be given a more severe punishment. Also the ISA requirement and the use of black boxes will be investigated.

Finally, we mention that Belgium was one of the first countries to establish a legal framework for the "alcolock" (prior to starting a vehicle the operator must breathe into the handset and if an alcohol level over an agreed amount is detected, the vehicle will not start). During the period under consideration, implementation will be further facilitated and evaluated.

Priority areas for the region of **<u>Flanders</u>** are:

Mobility central:

A centrally organised service and the necessary software to optimally plan transport for people with limited mobility. Data provided in real-time by several parties (public transport providers De Lijn, TEC, MIVB, NMBS; taxi services and transport services for the less mobile) is going to be queried to determine the most cost efficient transport option. Subsequently travel advice or actual organizing of the trip is offered. GPS tracking is going to be used for a share of the vehicles. Financial settlement will be organized using the same software.

a) European priority area I: Optimal use of road, traffic and travel data

Flanders public transport services works out new website with new rout planning opportunities. There will be graphic improvements and new features, example: highly detailed cartographic information

- the provision of EU-wide multimodal travel information services
By means of a license agreement data can be used by other providers of public transport. This service will be applied by web services and will be extended with real-time info.

Flanders public transport services works inter alia a new website with new route planning opportunities out. There will be graphic improvements and new features, example: highly detailed cartographic information.

- the provision of EU-wide real-time traffic information services

Traffic information services are already widely deployed in Flanders. There is a public service (www.verkeerscentrum.be) as well as several private service providers active. The information is spread through different channels like VMS, Radio, RDS-TMC, internet, mobile internet and G3/GPRS. In order to be able to foresee information services for all of Europe, the public operator is foreseeing to implement DATEX II, so that service providers can use the information for distribution through their proper channels.

- data and procedures for the provision, where possible, of road safety related minimum universal traffic information free of charge to users

Already a lot of safety related information addressing drivers is distributed in Flanders, especially through VMS, Radio and RDS-TMC. Flanders is in favour of a European service in this area that can reach all European drivers in an accurate and safe way.

Flanders will further develop and enrol out measurement network, for the whole of the main network, to allow detection of safety related information. In addition floating car data is now considered as a potential source for the detection of abnormalities in the network.

- Dynamic Traffic management

The Dynamic Traffic Management Plan is an encompassing plan to implement a system for dynamic traffic management on highways in Flanders. It contains 3 types: base monitoring (equipment to follow up the actual traffic situation - loops and cameras), network management (infrastructure to inform and advise the road users about the traffic situation - VMS) and road section management (dynamic lane signalization).Basis monitoring for the areas around Ghent, Antwerp and Brussels has been implemented. The main motorways and ring roads ("Vlaamse Ruit") have the infrastructure for network management. In the following years the other important roads in Flanders will be equipped with VMS panels and other technologies. The main DTM plan is set to be implemented in 2015. It is clear that in the following years new technologies might be applied.

- Hard shoulder running

The first hard shoulder running lane in Flanders has been implemented in 2011 in Antwerp at the E313/E34 towards Ranst. An extensive evaluation has shown that this implementation was very successful in terms of reduction of structural congestion. It has been decided that hard shoulder running will be applied at two more locations in the near future, namely at, the E40/E314 from Brussels to Holsbeek and on the E19 from Antwerp to Sint-Job-In-'t-Goor.
In the further future more hard shoulder running lanes are considered possible.

- Traffic Signs database

The Traffic Sign Database contains all traffic signs and traffic lights located on paved roads in Flanders. Our aim is to provide this data to map makers and the navigational sector as a whole.

- Travel information time services

Travel time information services inform travellers (via their terminals or other equipment) about travel times on segments of the road network, complementary to the traffic situation, thus enabling travellers to optimize and better anticipate their journey ahead, both pre –trip and on-trip. Examples of user interfaces are roadside information panels (VMS), websites, radio's/TV's, mobile phones, navigation computers, etc.

a) *European priority area II: Continuity of traffic and freight management ITS services*

- Implementation of DATEX II

Flanders uses an OTAP protocol at the moment, which is a simplification of DATEX. It is a main priority to enrol out the DATEX II protocol in the future. By the use of DATEX II, we will be able to transfer traffic information to service operators and other traffic management centres in a harmonised European way.

- Open systems for Traffic Management Centres (TMC)

Traffic Management Plan Service for Corridors and Networks means the elaboration, application and quality control of Traffic Management Plans (TMP) for the management of the European network and corridors, including multi-modal capacities to allow for a more efficient use of the road network in Europe (and not restricting measures to country or local level). A TMP is the pre-defined allocation of a set of measures to a specific situation in order to control and guide traffic flows as well as to inform road-users in real-time and provide a consistent and timely service to the road user. Initial situations can be unforeseeable (incidents, accidents) or predictable (recurrent or non-recurrent events). The measures are always applied on a temporary basis.

- Access to abnormal goods transport regulation

Access to abnormal goods transport regulations is an information service where the user gets country-specific information on the vehicle regulations and permit application procedures, contact persons, and guidelines for completing application forms for abnormal transports.

In the future, this competence will be regionalized, so that services in this domain will be considered.

This service provides access to the necessary information and procedures regarding abnormal transports standardised for all European countries, in a language understandable to the haulier/applicant (English and the respective national languages), and in a time frame acceptable in modern logistics. In this service, both the necessary information and the contact details for the relevant authorities are easily accessible.

- Traffic Management Plans for corridors and networks

Traffic Management Plan Service for Corridors and Networks means the elaboration, application and quality control of Traffic Management Plans (TMP) for the management of the European network and corridors, including multi-modal capacities to allow for a more efficient use of the road network in Europe (and not restricting measures to country or local level). A TMP is the pre-defined allocation of a set of measures to a specific situation in order to control and guide traffic flows as well as to inform road-users in real-time and provide a consistent and timely service to the road user. Initial situations can be unforeseeable (incidents, accidents) or predictable (recurrent or non-recurrent events). The measures are always applied on a temporary basis.

b) European priority area III: ITS road safety and security applications

- the provision of information and reservation services for safe and secure parking places for trucks and commercial vehicles

The task of Intelligent Truck Parking is to optimise the use of the existing infrastructure in terms of parking facilities and to provide therewith relevant and suitable information to the European truck drivers, hauliers and service providers, and it is advised to integrate the "intelligent" aspect already in the planning of a new truck parking area.

There is a growing need for information provision to end-users as well as on optimal managed truck parking areas. Telematics systems should be used to accomplish both information provision and management.

In Flanders the service areas at motorways are generally equipped through long term concessions. The first step is to foresee all new concessions with the obligation to have intelligent truck parking within the service area. To speed up the process, in a second fase, we might consider adaptations of existing concessions

- ITS for enforcement e.a. Trajectspeedcontrole, Weight in motion, HGV distance control, HGV overtaking ban control…

HGV overtaking ban service: means to channel the heavy goods vehicles onto a single lane (slow lane). The heavy goods vehicles overtaking ban implementation is one of the traffic management measures allowing traffic managers and road operators to propose solutions for a better circulation on their network during peak periods. This traffic control measure constitutes one of the priority services to improve the cohabitation of heavy goods vehicles and private cars on networks with high traffic intensities.

Automated speed enforcement: monitors – for legal purposes - the compliance with speed limits at fixed spots or along road links by providing information identifying the vehicle (and optionally also the driver) not complying to the speed limit.

Automated signal enforcement: monitors – for legal purposes the compliance with red signal at signalised junctions and other locations by providing information identifying the vehicle (and optionally also the driver) not complying to the signals.

c) European priority area IV: Linking the vehicle with the transport infrastructure

- Interactive intelligent traffic light control with short wave signals for priority vehicles and public transport (buses and tramways)

Intelligent traffic lights can obtain a better flow of regular and public transport. By introducing a better detection and control system, the lights can become traffic dependent (also taking traffic from other roads into account) instead of vehicle dependent

Priority areas in **Wallonia** are :

a) Improvement of traffic information

Up to now, Perex has played a leading role in developing traffic information by implementing collection devices, by processing data and putting them available in Datex format, by providing information services.

For the future, Perex will concentrate on the provision of basic services and develop an open data policy for service providers. In order to improve the quality, special attention will be dedicated to equipment for data collection and for information provision.

Regarding traveller information, the improvement of existing partnership with the public broadcaster, the conclusion of new agreements and the participation in joint initiatives are different ways to develop co-modal and user oriented services.

b) Further implementation of traffic management services

In order to face recurrent congestion and safety problems, the implementation of traffic management services will be further deployed on critical motorway sections, including overtaking bans, variable speed limits, dynamic lane allocation and possibly hard shoulder running.

Investments made in the field of speed control will be pursued: fixed control devices at strategic points, mobile devices for road works and speed calculation based on plate recognition. Integration of the regional centre for the processing of offences resulting from breaking speed limits will be reinforced in the frame of a coordinate policy of traffic safety with the police.

The development of cooperative systems will be investigated, especially infrastructure to vehicles systems. Special attention will be given to initiatives taken at European level also involving external stakeholders (e.g. Amsterdam Group). Pilot experimentations will be lead on the motorway network.

c) Specific services for freight and logistics

Truck parking is a big challenge. Walloon road authorities want first to increase the security of drivers and goods on parking areas along the motorways. They also want to improve the availability of parking spaces by better occupation of the existing ones and by creation of new ones where possible.

According to an agreement between the Regions, a toll collection system will be introduced for trucks heavier than 3,5 T. This system will be based on GPRS communication and requires that every truck liable will be equipped with an on board unit. This will be an opportunity for the deployment of specific services for truck drivers and may be also for regulating truck traffic through tarification.

d) Traffic centre and data exchange

Equipment and systems in PEREX need to be updated in order to correspond with new standards for traffic centres. New architecture and new functionalities will be implemented for the central operating aid system in order to improve data acquisition and processing as well as the command of the equipment. Focus will be put on the link between traffic management and traffic information, the integration of new data sources and efficiency of support to the operators.

Traffic management plans, information exchange with other traffic centres in Belgium and in the neighbouring countries will be improved. Special attention will be dedicated to the provision of services on cross-border corridors, e.g. weather information, truck parking, traffic conditions,…

e) *Multimodal Travel information services*

Initiated and created in March 2004 by the SRWT for all TECs, the "www.infotec.be" site was the first in Belgium to make it possible to search for point-to-point journeys, including all Belgian public transport modes (SNCB, STIB, De Lijn and TEC) and walking. The site also publishes information about all forms of transport which provide an alternative to the motor car.

The project for redesigning the infotec.be (version 3.0) site consists of continuing improvement of :

- the information proposed ;
- the access to this information ;
- the presentation of it ;
- the services offered (by creating new functionalities).

It also consists of simplifying the upgrading of the site so that it is faster and more regular.

On 23 October 2009 the TEC Group also launched a customer information system by text messages, called « TECxto ». This service consists of informing TEC customers about disturbances on the lines.

f) *Continuity of traffic ITS services*

Since 2009, the TEC Group has been engaged in a comprehensive project for upgrading all of the different systems for collecting revenue from the traffic. Dubbed TEC IT EASY, this new contactless e-ticketing should allow them to better meet the challenges they face : providing an ever-growing clientele with mobility that is modern, efficient and tailored to their needs and their expectations.

For the TEC Group, the TEC IT EASY card represents a real opportunity to become better acquainted with the customers who travel on their network each day.

The systematisation of the contactless card and its mandatory validation on-board the bus or tram, linked with geolocation data, will enable TEC to gather numerous statistics on ticket sales, ridership on the lines and transfers.

The installation of new ticketing technology will be an opportunity to review their fares policy. In addition to this fares policy, TEC IT EASY also involves developing a new sales and distribution strategy.

g) ITS applications on an open in-vehicle platform

An AVL (Automatic Vehicles Location system) is implemented in 800 vehicles and it is foreseen to have the whole fleet equipped for end of this year. In a second step, a comprehensive Service Management and Information System will be developed based on new onboard computers currently being installed. A real-time information system will be developed. It will be available via the "infotec.be" website and it will be compatible with smart phones and other mobile communication devices. Those services tend to a better smoothness of TEC services as well as more accurate information to the customers via real-time information including unexpected perturbations.

For the priority areas defined in article 2 of the Directive 2010/40/UE, let's begin with the point I, Optimal use of road, traffic and travel data.

The **« Région de Bruxelles-Capitale :: Brussels Hoofdstedelijk Gewest »** has a traffic center: MOBIRIS, which manages in real-time the traffic on the regional road network.

Some ITS equipments are used like traffic cameras and counting loops, from which MOBIRIS collects data in real-time.

After that, information is directly transmitted to the media and via the web site: http://www.bruxellesmobilite.irisnet.be/ .- http://www.mobielbrussel.irisnet.be/

Therefore, users have instant access to real-time traffic information on the regional road network. There is also a project to work with open data to facilitate the transmission of information to all sorts of partners (public and private).

Furthermore, this constant surveillance increases the safety and the security on the regional road network.

Incidents are detected in real-time by the operators in MOBIRIS and they instantly contact emergency services and maintenance services. With regard to traffic management, operators have the possibility to close traffic lanes or complete tunnels.

Again, there are evolutions in the traffic control with the future installation of automatic detection incidents systems (AID) in the new NATO Tunnel, in the Leopold II Tunnel and in the Belliard Tunnel.

With regard to the link between vehicle and transport infrastructure, one of the most important project is VICOM which will increase the commercial speed of the public transport. This project uses prioritization of traffic lights for buses and trams.

Furthermore, with the increasing number of traffic cameras, the surveillance of traffics lights will be more effective. In term, this surveillance should be giving the capacity to operators in MOBIRIS to manage all traffic lights in the Brussels regional road network.