

**INITIAL REPORT ON THE CURRENT STATE OF NATIONAL ACTIVITIES
AND PROJECTS IN THE PRIORITY AREAS REFERRED TO IN ARTICLE 2
OF AND IN ANNEX I AS MANDATED BY ARTICLE 17 OF DIRECTIVE
2010/40/EU – MALTA**

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ACTION PLAN FOR THE DEPLOYMENT OF INTELLIGENT TRANSPORT SYSTEMS IN MALTA

This Initial Report is in accordance with Article 17(1) of Directive 2010/40/EU¹ and presents a brief general 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 the Directive 2010/40/EU², in Malta.

The report includes a description of the national activities and projects in each priority area as appropriate to Malta and deemed relevant by the Government of Malta. Where applicable, a description of the relevant initiatives, the respective objective, timescale, milestones, resources, lead stakeholder(s) and status are also included in accordance with the provisions of the Directive.

BACKGROUND

Malta is the smallest island state in the EU with a population of just over 400,000 people and a land area of 316kms². At its longest point³ it measures just 43km. Despite its small size, Malta has one of the highest car ownership rates in Europe with a total of 310,000 registered vehicles (740 per 1000 person) as at October 2011. During the last thirty years, car usage in Malta has increased beyond all expectations. This can be attributed to the increase in economic development, higher disposable income, low integration between land use and transport planning, complex demands for commuting and deteriorating public transport service.

For years patronage of the local public transport system has been steadily declining, from approximately 39.4 million in 1990, to 31.3 million in 2010. The public transport system simply failed to meet the expectations of commuters. The problem was exacerbated by the lack of investment in the service. However, in July 2011 a new Public Transport Service was introduced that saw the public transport operation being transferred to German-owned Arriva⁴ under a public service concession for 10 years, introducing several new transport routes and replacing the former mainly post-war era obsolete buses with modern Euro V vehicles.

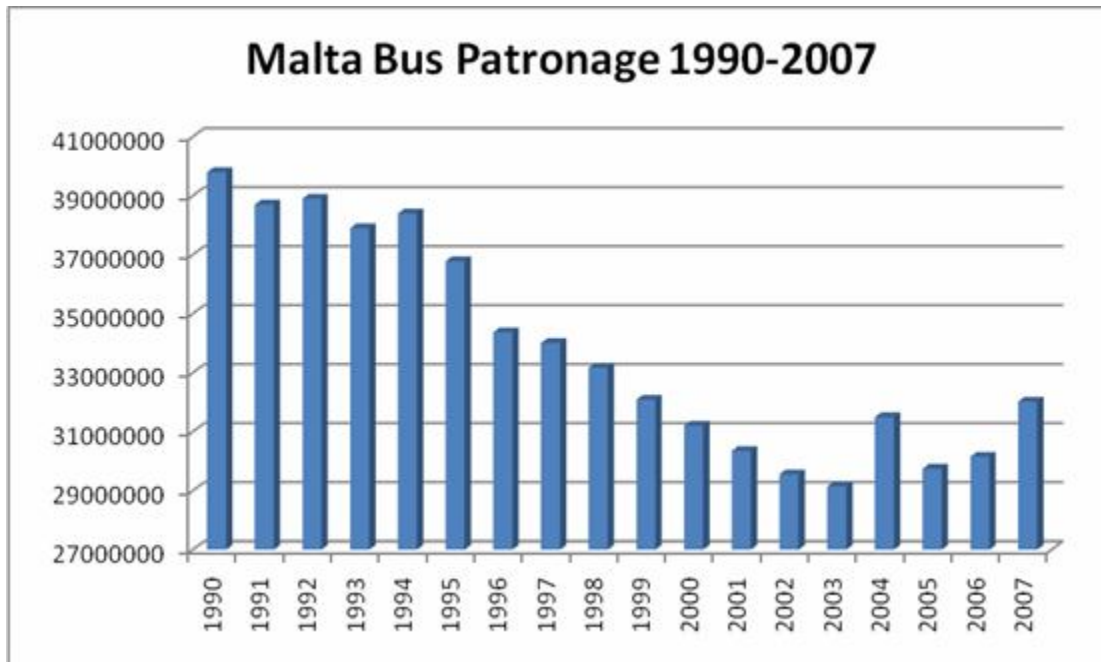
¹ “Member States shall submit to the Commission by 27 August 2011 a report on their national activities and projects regarding the priority areas” Article 17(1).

² The definition of the necessary requirements to make EU-wide real-time traffic information services accurate and available across borders to ITS users, based on:

- the availability and accessibility of existing and accurate road and real-time traffic data used for real-time traffic information to ITS service providers without prejudice to safety and transport management constraints,
- the facilitation of the electronic data exchange between the relevant public authorities and stakeholders and the relevant ITS service providers, across borders,
- the timely updating of available road and traffic data used for real-time traffic information by the relevant public authorities and stakeholders,
- the timely updating of real-time traffic information by the ITS service providers.

³ The maximum distance from the southern most tip of Malta and the northernmost point of Gozo

⁴ Local subsidiary Arriva Malta Ltd.



In the current global economic crisis, similar to many other EU Member States, Malta has a number challenges to face if it is to achieve stronger growth and increased employment.⁵ Clearly a transport system that satisfies the mobility needs of the Maltese economy and society is crucial to meet these aims.

In recent years a small number of transport projects have been undertaken, including some basic Intelligent Transport Systems (ITS) measures and components which were however implemented in a stand-alone and hence uncoordinated way. These measures were in the form of isolated traffic management infrastructures at main traffic junctions, pelican light installations, as well as a number of speed enforcement cameras serving also as a deterrent against abuse.

PREPARATION OF MALTA'S NATIONAL ITS ACTION PLAN

This report is part of Malta's preparation for a National ITS Action Plan⁶ with contributions and input from a wide consultation process that included (i) one-to-one meetings with the stakeholders (such as public actors, representative organisations, private individuals and the various transport operators) and also with law enforcement authorities and civil protection agencies; and (ii) local governments. It is also planned to hold an internet based questionnaire and, in addition, targeted discussions with existing stakeholders will be organized as part of the transposition of the Directive.

Malta's National ITS Action Plan will aim to accelerate and coordinate the deployment of Intelligent Transport Systems in road transport, including interfaces with other transport modes in Malta. The National ITS Action Plan will outline the priority areas for action that are applicable to Malta in the light of the country's geographical specificities.

⁵ EU 2020 and the Lisbon Treaty

⁶ The 5-year National ITS Action Plan is scheduled to be issued by August 2012

In accordance with the EU ITS Action Plan, Malta's National Action Plan will, for each area, include a set of specific actions and a clear timetable for deployment as well as the setting of a framework to define procedures and specifications in accordance with the envisaged directives.

In preparation of the National ITS Action Plan, during 2011 Transport Malta (TM)⁷ completed a stock-taking exercise of all the currently installed and operational ITS equipment, including both equipment operated by Transport Malta as well as that deployed by private operators. This should enable the mapping-out of the national 5-year ITS strategy as required by the ITS Directive which will help ensure that any future ITS deployment is in line with the provisions of the Directive and any related daughter Directives.⁸

To date, the infrastructure deployed on the main road network, including the TEN-T, arterial and distributor roads, was mostly made up of a number of isolated traffic-light enabled junctions at key traffic intersections. On a regional basis, the key ITS application was the Controlled Vehicular Access System (CVA) in Valletta through which road users are charged for the duration of time they spend in the capital city.

Simultaneously, Malta is also preparing for the transposition of the Directive into national law.

CURRENT ITS DEPLOYMENT

For the last two years, Transport Malta⁹ has been working on the preparation of a major ITS nationwide deployment of ITS. This will be the backbone for all future Intelligent Traffic Management Systems deployed in Malta and is expected to be rolled out over the coming three years.

The following two developments bring about the opportunity for Malta to re-think public transport and ITS deployment and to facilitate deployment of ITS infrastructure using the latest available technology. Being somewhat later than other EU member states in deploying ITS systems, Malta will be able to use the lessons learnt other Member States.

To Malta's advantage, ITS deployment is occurring at a time when ITS technology is undergoing rapid advances, including the need for all ITS systems to be interoperable in line with the Directive. This will facilitate ITS deployment in Malta even further. In this way, Malta will approach this directive in an integrated and horizontal manner using current EU standards and specifications, as intended by the directive itself.

CONTROLLED VEHICULAR ACCESS (CVA)

In 2004, the Government of Malta commissioned a team of experts to identify a number of measures and projects intended to address the accessibility of Valletta, the capital city of Malta

⁷ Transport Malta was established on 1 January 2010 as the national regulator for all modes of transport in Malta, including Land, Maritime and Aviation and subsumed the three organizations that previously addressed each mode of transport independently.

⁸ Vide EU Commission's roadmap and EU ITS Action Plan

⁹ Integrated Transport Strategy Directorate is the Directorate within Transport Malta responsible to manage the implementation of the ITS Framework Directive in Malta

and its suburb Floriana. The “Valletta Strategy” was published in 2005 and included a number of measures for consideration by Government. These included:

- i. the building of the first Park & Ride facility in Malta, outside Valletta
- ii. the replacement of the V-licence (which was an annual charge to access Valletta by car) with a pay-as-you-go system similar to the London Congestion Charge using Automatic Number Plate Recognition (ANPR) technology
- iii. the extension of the pedestrian area in the shopping and main historic streets of Valletta
- iv. the introduction of an electric mini cab service operating within the pre-determined boundaries of Valletta
- v. the introduction of sea ferries and water taxis linking the nearby towns and cities on both sides of the Grand Harbour
- vi. the deployment of high capacity vertical connections infrastructure to connect lower with upper and central Valletta

The Controlled Vehicular Access system was launched in May 2007 and makes use of Automatic Number Plate Reading (ANPR) technology and a dedicated camera system to monitor and photograph vehicles entering and exiting the CVA Valletta boundary. The system then automatically calculates the time the vehicle remained inside the assigned boundary and finally computes the fee due for access and parking based on tariffs issued by Transport Malta. Although bills are regularly sent by post, vehicle owners have the possibility to check their CVA account status by either contacting the CVA helpdesk centre or by logging into the relevant section on this site.

ITS Deployment in the CVA

The Valletta CVA Automatic Number Plate Recognition (ANPR) sub system monitors all the entry and exit points from the city, totalling over 14 locations with over 23 cameras. The system components monitor the sites using specialized infra red illuminating cameras and interpret the number plates of the vehicles passing the camera’s field of view. On an annual basis the system captures between 12 and 14 million vehicles entering and exiting the zone.

This interpreted data is supplied to the imaging database on the imaging server at the CVA Head Office for manual verification (if necessary) and further processing. Each camera covers a field of view of approximately 1.5m and multiple cameras are utilized at several sites to ensure effective coverage.

On the other hand the Billing System automatically calculates the amounts to every registered owner of a vehicle that accesses the Charging Zones, based on the time in and time out of the respective zone. These charges are based on all the data retrieved from the imaging database. The rates and rules used for the access fee calculation are inputted by the Contracting Authority and can be updated easily depending on requirements. A history of all rates and rules ever used together with the applicable range of dates is kept automatically to aid in revising changes to the access fees over time.

Different rates and rules can also be used according to type of vehicles and according to the time of the day, day of week and whether it is a public holiday or not. Additionally particular periods during the year may also be treated differently, depending upon the access charge fee settings indicated by the Contracting Authority. Every Charging Zone can also have different rates and rules together with transit rules by adjoining Charging Zones. Special sub-zones within the

Charging Zone can also be set up as indicated by the Contracting Authority. The system automatically registers a number of exemptions which are already fed into the system including; residency exemptions, ad-hoc exemptions (one off for a short period), special needs/disability exemptions, medical and administrative exemptions, public transport exemptions (related to public transport vehicles) and time based exemptions (based on specific time ranges)

Future developments

Transport Malta is in the process of procuring a number of automatic mechanical bollards which are designed to control access to certain areas of Valletta. Traffic flows (mainly intended for the goods delivery and services vehicles and in some areas also applicable to transport vehicles such as that concerned with the Valletta Park and Ride site, will be regulated in a number of designated areas. In Valletta, the Authority is in the process of deploying a further 28 mechanical bollards to allow selective traffic access and between 19-22 CCTV cameras.

PUBLIC TRANSPORT INFRASTRUCTURE

As from 3 July 2011, an important turning point for public land transport in Malta was achieved, with the introduction of a totally new scheduled public bus transport system for the provision of related services and fulfilment of the respective public service obligations. This new service is being operated by the multinational bus company Arriva following an EU-wide competitive tendering process. Together with the development of road infrastructure, this new public transport service is an integral part of the national strategy for modal shift which is based on policies aimed at restraining unnecessary car use on the one hand whilst promoting use of public transport and other sustainable modes of internal transport on the other

The new public transport service has seen the deployment of the latest Euro V engines and hybrid electric bus fleet, and this will mean that the new fleet has significantly reduced emissions by public transport services. This is combined with a matrix network of termini and interchanges designed to facilitate nationwide accessibility. The buses are also designed for easier access to partially impaired person and persons with pushchairs.

The core operating system of this Public Transport System includes a number of ITS related components that are listed below.

ITS Deployment in Public Transport

Intelligent Public Passenger Transport Information System

The new public bus transport operator is providing a modern public information system for scheduled public transport users. This major development in ITS deployment in Malta contrasts with the previous scheduled bus service operator which had no ability to provide real-time information to users.

ITS-Enabled Public Transport Buses

All buses are equipped with an integrated CCTV system for enforcement purposes. This is coupled with an on-board visual and audible information system to advise users of the next bus-stop as well as the final destination.

All of the bus fleet is equipped with tracking devices which are linked to the operator's central control room as well as to Transport Malta's Control Centre for control and enforcement purposes.

Automated Passenger Counting System

Moreover, to keep track of passenger movements on the public transport network, all of the public transport bus fleet is equipped with an Automated Passenger Counting System (APC).

The hardware is comprised of a sensor bar installed above each door which provides real time detection of the number of passengers boarding and alighting from the bus, providing the operator with information on the capacity status of the service enabling it to fine tune and improve the service by deploying extra services where required so as to improve the overall efficiency of the service.

Automatic Vehicle Monitoring System

The Automatic Vehicle Monitoring System (AVL) is used to monitor all timetabled bus services and is designed to ensure maximum operating efficiency. The AVL also allows the operator to follow its buses and to effectively plan services with respect to unforeseen events such as emergency road closures, traffic accidents or even breakdown of buses.

Each bus is equipped with a GPS locator and communication device which tracks every bus. Using geographic information systems (GIS), the application constantly updates vehicle location to the service control centre. This also provides input for the RTPI (see below) for passengers at the bus termini and interchanges.

Real Time Passenger Information – RTPI

The central control room system allows operational staff to provide an interactive input into any of the RTPI passenger displays as and when required. Other important messages concerning route and other network updates can also be delivered to these in-bus electronic signs.

Park & Ride

The status of the Park & Ride (P&R) sites is monitored throughout their opening hours, and motorists are advised of actual availability of car parking spaces through variable message signs on the approaches to the sites.

Future developments

As part of the public transport reform the contracted operator is also expected to provide an SMS based system which will allow passengers to obtain specific information through their mobile phone based on the bus geo-location and scheduling times.

It is envisaged that the data from the public transport system be fed to the Intelligent Traffic Management System (ITMS) control hub so as to be able to address any increase in traffic congestion and therefore manage public transport journey times.

It is currently too early to plan further actions and the operator needs to allow the current system to settle before implementing further ITS actions.

INTELLIGENT TRAFFIC MANAGEMENT SYSTEM (ITMS)

The MODUS¹⁰ project consists of four main deliverables. These include the construction of ITS-enabled bus interchanges; a further ITS-enabled Park & Ride facility; ITS-enabled Bus Priority Measures and a state of the art Intelligent Traffic Management System (ITMS). This ITMS includes the deployment of on-road CCTV cameras and Variable Message Signs, as well as the upgrade of a number of critical traffic junctions that will now be ITS enabled. The deployment of the ITMS will oversee and manage traffic on Malta's major arterial road network including TEN-T network road sections.

In addition, the ITMS component comprises of a central control room and data central hub, where all the respective land transport data in Malta can be captured, stored, processed and disseminated accordingly.

The MODUS project is the core phase of a concrete ITS deployment plan and its total value is in the region of €10 million. MODUS includes the construction and deployment of a number of measures most of which are intended to bring about a modal shift from the use of the private passenger car to the use of public transport.

The project is made up of two pillars; the first directly affecting public transport and therefore contributing to the improvement of public transport infrastructure; while the second pillar addresses traffic management applications and installation of the latest road management hardware on key parts of the road network. The public transport ITS enabled measures are the following:

First Pillar: Infrastructure to Vehicle Communications (I2V and V2I):

- ITS-enabled Bus Interchanges
- ITS-enabled Park and Ride Facility
- ITS-enabled Bus Priority Measure.

Second Pillar: Traffic Congestion and Urban Traffic Management and Control (UTMC):

- State of the Art Central Control Room
- On road infrastructure

¹⁰ MODUS: Encouraging Modal Shift, has been submitted for funding under ERDF 2007-2013

ITS Deployment in the ITMS

ITS-enabled Bus Interchanges

This component includes the building of five ITS-enabled bus interchanges. The main aim of these bus interchanges is to improve the safety and effectiveness of the key junctions on the new bus network matrix, making the public transport more attractive to users, including persons with reduced mobility. There are other infrastructure measures outside the scope of the MODUS project and these include the re-design of the old Valletta central bus station into a downsized regional one as well as other regional termini and bus interchanges which are ITS-enabled. The work on these regional hubs has now been completed and they are fully operational while ITS installations are currently being deployed.

ITS-enabled Park & Ride

This is one of three Park & Ride (P&R) installations nation-wide. The Marsa P&R incorporates a main Bus Interchange operating within the Southern region of Malta. It also connects the South to the North of Malta and will be an important link in the overall bus network.

The operator of the P&R sites has the obligation to deploy ITS related infrastructure on approach roads leading to the P&R facilities advising drivers as to parking availability. This is intended to avoid unnecessary traffic congestion on the roads in the vicinity of the respective P&R facilities.

ITS-enabled Bus Priority Measures

The Bus Priority Measures designate a part of the road to be exclusively used by public transport vehicles as separate from other parts being used by general traffic. This is designed to reduce the susceptibility of the public transport system to general traffic levels and disruptions.

This will allow optimal timetabling so as to maximize the efficiency of the public transport system. All of Priority Measures are ITS-enabled and some of them will provide priority to public transport by allowing the public transport buses to take unusual directions (for example across the general flow), or in preference to other types of traffic (for example to get ahead of general traffic where separate road space is not possible).

These bus corridors will be equipped with Automatic Number Plate Recognition (ANPR) technology at bus gates so that the system will recognize the buses from other vehicular traffic and activate accordingly.

Intelligent Traffic Management System

The Intelligent Traffic Management System (ITMS) will allow Transport Malta to improve traffic management and will also ensure that the disruptions to public transport are kept to a minimum. This project also includes the building of a central hub and data centre where visual and electronic data regarding events on the road network is gathered and relayed by various means to road users.

Besides the control centre, the ITMS includes 27 intelligent Closed Circuit Cameras (CCTV) placed in strategic locations on the road network for traffic monitoring and in other critical road sections that affect public transportation and monitoring equipment plus related software applications. The ITMS also includes 33 Electronic Variable Message Signs (VMSs) in designated areas which are used to advise road users of problems on the road network ahead.

Using an Urban Traffic Management Control System (UTMC), the on-road traffic signals use semi-automated (with central control override functionality) at eight main intersections on the TEN-T and arterial roads. Other ICT enabled infrastructure include pedestrian activated pelican crossings at various location across the islands.

Future developments

Since the system is still being deployed future developments are yet to be considered.

However these may include such options as interfacing the hub with all other data gathering systems, including the AVL system, the CVA system, the taxi operators system and any other data that might be collected in the future from any land-transport based activity.

TM will also be looking into the possibility of having a full Geographic Information System (GIS) incorporated in the system where, at any point in time, all road and street closures will be indicated. This will greatly improve traffic management and congestion and may well serve as the central repository for this data. The ITMS may also be designed to capture environmental & accident data.

It is expected that further CCTV cameras and VMS will also be deployed in strategic road junctions, including those that do not form part of the current arterial and distributor roads network but are considered important to reduce urban congestion. It is expected that these will be deployed in phases and as funds become available.

FULL ELECTRIC VEHICLES

Another important development was the awarding of EU funds for a demonstration project under the LIFE+ action, titled **DemoEV**, where TM and the Ministry of Resources and Rural Affairs (responsible for Climate Change) will be demonstrating the use of the latest Full Electric Vehicles and the use of the respective EV charging infrastructure around Malta and Gozo.

ITS Deployment in DemoEV

This project will also be used to demonstrate how ITS can be applied in the area of charging facilities for electric powered motor vehicles. In this project 100 public smart charging and smart parking points will be deployed across Malta and Gozo and will also be connected through a link to the data hub in the ITMS. Through this hub TM will be able to monitor the performance of the vehicles as well as their charging status. Since these will be integrated into a smart payment system, the use of pre-paid cards and other payment mechanisms will be available, as well as the possibility for the development of open systems and protocols to allow easier development of relevant applications by third parties.

Under the DemoEV project, TM will also demonstrate the availability of goods being transported by Full Electric Vehicles rather than conventional ICE-propelled vehicles and the relevant data from these vehicles and the private FEVs referred to above will contribute to the enrichment of the data available in the ITMS.

Future developments

As the system is still quite new, future developments are still being considered.

ITS ENABLED PUBLIC TAXI & MONITORING SYSTEM (PTM)

Malta does not have any vehicle manufacturing enterprises, so in-vehicle ITS deployment of peripherals and on-board nomadic devices will only be available to users in Malta once such types of devices are provided at source as part of a vehicle's standard installation or else when such devices are available as an add-on installation for existing vehicles.

Another measure that Malta is undertaking to improve road safety and security for land transport passengers, is the ITS enabled public Taxi Service.

ITS Deployment in the PTM System

The latest regulations for public taxi services oblige all operators to deploy a number of ITS based devices in their vehicle including:

- a taximeter with, amongst others, such facilities as printing of fiscal receipts and acceptance of payments through the use of credit debit cards, as well as tools providing means for driver recognition;
- tracking devices, including transmission of tracking data via GPRS, as well as transmission of such data as ignition status, speed of vehicle and also the ability of a 24x7 automatic real-time retrieval of data through Transport Malta's central data hub;
- on-board CCTV camera with clear image capture capability, day and night. The camera will be capable to trigger the start of automatic recording upon a change of the taximeter's operating system, or the opening of doors, the activation of the emergency button as well as upon acceleration or deceleration at levels higher than the preset limits.
- two way-communications system capable of operating over the GSM network to allow TM to audible communicate with the driver through a normal telephone line
- emergency buttons accessible to each of the passengers and the driver that would trigger the CCTV camera and transmit a distress signal to the control centre.

Through this system TM is also able to obtain real-time information on speed and motion of the vehicles that provides further informative data on road traffic conditions, apart from allowing enforcement activities to be carried out.

Future developments

It is planned that all taxis will be retro-fitted by the end of 2011. As the system is still quite new, future developments are still being considered Transport Malta will see the outcome and efficiency of the system before planning other initiatives in this regard.

FUTURE ITS DEPLOYMENT

Malta plans a number of future deployments subject to funding resources being made available both either national and EU sources or a combination of both. These include the following:

e-Call – Emergency Call

Transport Malta is following closely the development of the eCall (emergency call) system and Malta is committed to put the eCall system in place once the respective Directives / Regulations

come into force. In view that the implementation process shall involve a number of stakeholders the Government of Malta has already set up and convened an inter-ministerial committee to oversee the eCall implementation process.

Green Transport Hubs

Malta will also be examining the setting up of “Green Transport Hubs” to promote ITS enabled car sharing initiatives and the break up of bulk for transport of goods (logistics hubs) in congested urban centres including historical centres where resort to advanced ITS technology and applications is essential to bring around such measures, particularly in the case of the distribution of goods that require efficient and cost effective multi-modal logistic chains.

In addition, Malta will also be examining the possibility of applying new and effective concepts when it comes to innovative ITS enabled solutions in such areas as for example Car-Sharing. Malta will be assessing the possibility of participating in EU funded research and demonstration projects for purposes of implement such measures.

Smart Parking, Smart Charging and Smart Parking Meters

Malta, through Transport Malta, is currently reviewing and drawing up its national Parking Policy and is examining whether the concept of smart parking meters and smart charging including smart charging of Full Electric Vehicles can be efficiently included in this policy.

Air Quality Monitoring Systems

Monitoring the air quality at specific heavily-congested locations is important as a tool to assist Malta in devising plans and measures to mitigate pollution levels. These tools will allow TM to take the necessary steps to promote such efforts through the provision of localised data and/or through the provision of advise to the users of such high air-pollution areas, possibly allowing for the adjustment of traffic light timings to improve traffic flows.

Real Time Travel Information Systems

The type of projects referred to earlier involve Real-time Traffic and Travel Information (RTTI) services that may be typically available due to the proliferation of nomadic in-vehicle navigation systems and mobile telephony services.

Malta plans to deploy a transport information platform that is able to receive real time traffic management information from various sources as well as being able to interface with other traffic control, transport management and information/data systems, including maritime and aviation data. Such a system will act as middleware validating and synchronising all the data provided by the other systems that feed into the central hub. The system will be able to publish this information in real-time to travellers and general transport users via web or mobile applications.

This ITS infrastructure will be deployed in the main bus termini as well as in the proximity of seaports and airports for the provision of multi-modal real time data information for travellers. Stand alone information kiosks in urban centres or pedestrianized zones can also be used to offer travel information in real time.

Road Side Enforcement / Driver Information

Increased awareness of over speeding by drivers will be assisted through the deployment of on-road ITS applications in the form of electronic speed signs. These applications will supplement enforcement measures already in place.

PRIORITY AREAS FOR ACTION AND RELATED MEASURES

The Communication from the Commission identified six priority areas which were suggested to be built upon on input which came from public and private stakeholders.

ACTION AREA 1: OPTIMAL USE OF ROAD, TRAFFIC AND TRAVEL DATA

ITS applications rely on an accurate knowledge of both the characteristics of the road network and the traffic regulations applicable (e.g. one way streets and speed limits). While in the past the bulk of this knowledge was provided by authorities, there is a trend towards the increased utilisation of commercially-available sources of such information.

Where road safety is at stake it is essential that this information is validated and made available to all players on a fair and equitable basis, in view of the need to ensure a safe and orderly management of traffic. This applies, in particular, to digital mapping, including its inherent processes for data collection, validation and timely updating.

Similar considerations apply to the provision of (real-time) traffic and travel information services. Specific issues include the notion of “universal traffic messages”, i.e. the type of messages to be provided free of charge to all road users as a public information service, the consistency of the information between the various sources, and the need to comply with prescriptions imposed by network management operations.

The following actions are proposed:

Action 1.2	Malta – Implementation status
<p>Definition of procedures for the provision of EU-wide real time traffic and travel information services, addressing notably the following aspects:</p> <p>provision of traffic information services by the private sector provision of traffic regulation data by the transport authorities guaranteed access by public authorities to safety-related information collected by private companies guaranteed access by private companies to relevant public data</p>	<p>Awaiting respective procedures for the provision of EU-wide real time traffic and travel information services from the Commission.</p> <p>Transport Malta will be putting in place a data hub linking all the data streams from public and private operations into its system.</p> <p>Planned to be fully operational by 2013</p>
Action 1.3	Malta – Implementation status

Optimisation of the collection and provision of road data and traffic circulation plans, traffic regulations and recommended routes (in particular for heavy goods vehicles)	Same as in 1.2. TM will be working on drawing up circulation plans on to GIS. These will be integrated in the ITMS Central Data Hub.
Action 1.4	Malta – Implementation status
Definition of specifications for data and procedures for the free provision of minimum universal traffic information services (including definition of the repository of messages to be provided)	Awaiting action from the EU Commission on this action upon which action will be taken to implement.
Action 1.5	Malta – Implementation status
Promotion of the development of national multimodal door-to-door journey planners , taking due account of public transport alternatives, and their interconnection across Europe	Planned to conduct an impact assessment and the drawing up of national journey planners between 2012 and 2013. Subsequent development and deployment is to be considered.

ACTION AREA 2: CONTINUITY OF TRAFFIC AND FREIGHT MANAGEMENT ITS SERVICES ON EUROPEAN TRANSPORT CORRIDORS AND IN CONURBATIONS

The following actions are proposed:

Action 2.1	Malta – Implementation status
Definition of a set of common procedures and specifications to ensure the continuity of ITS services for passenger and freight in transport corridors and in urban/interurban regions. This work should include benchmarking and standardisation on door-to-door information flows, interfaces, traffic management and travel planning, and, in particular, event and emergency planning	<p>Awaiting from the EU Commission for the definition of a set of procedures and specifications.</p> <p>Emergency planning will be completed by end 2013.</p> <p>Information flows. Interfaces, traffic management and travel planning will be drawn up by 2014.</p>
Action 2.2	Malta – Implementation status
Identification of ITS services to be deployed in support of freight transport (eFreight) and development of appropriate measures to progress from concept to realisation. Particular attention will be given to applications for goods tracking and tracing using state-of-the-art technologies such as RFID and EGNOS/Galileo-based location devices	<p>Awaiting further communication from the Commission on this Action. Malta is already applying similar ITS mobile devices on the public passenger transport service and in new taxi vehicles.</p> <p>Plans are to enter into consultations with stake holders employed in the transport of goods once this action is more defined</p>
Action 2.3	Malta – Implementation status
Support for the wider deployment of an updated multimodal European ITS Framework architecture for intelligent transport systems and definition of an ITS framework architecture for urban transport mobility , including an integrated approach for travel planning, transport demand, traffic management, emergency management, road pricing, and the use of parking and public transport facilities	<p>Awaiting report and way forward/recommendations from the Commission Experts Groups.</p> <p>With respect to parking, Malta is currently reviewing its car parking policy and this will be dealt with once the outcome of this policy is known.</p> <p>Smart parking incorporating smart FEV charging infrastructure is being considered in the light of the up-coming deployment of Full Electric Vehicles.</p> <p>The action for the provision of safe and secure parking facilities for freight</p>

	forwarders is not applicable to Malta due to the maximum distance that any operator can travel from its base is less than 50km.
Action 2.4	Malta – Implementation status
Implementation of the interoperability of electronic road toll systems	Malta does not operate electronic toll systems

ACTION AREA 3: ROAD SAFETY AND SECURITY

ITS-based road safety and security applications have proved their effectiveness, but the overall benefit for society depends on the scale of their deployment. Issues that require additional attention include designing a safe Human Machine Interface (HMI) (using the work done on the “European Statement of Principles”), integrating nomadic devices and ensuring the safety of vulnerable road users (such as the elderly).

Efforts to promote best practices in these areas are therefore crucial to address these issues. Transport systems may also be under security threats. Transport security, especially the need to protect travellers and transport workers and to secure transport facilities and assets, must be taken into account without jeopardising efficient and effective transport operations.

The following actions are proposed:

Action 3.1	Malta – Implementation status
Promotion of deployment of advanced driver assistance systems and safety and security related ITS systems, including their installation in new vehicles (via type approval) and, if relevant, their retrofitting in used ones	<p>This is not applicable to Malta since there are no car manufacturers set up in Malta and thus have little control over this action.</p> <p>The action for the provision of safe and secure parking facilities for freight forwarders is not applicable to Malta due to the maximum distance that any operator can travel from its base is less than 50km.</p>
Action 3.2	Malta – Implementation status
Support the Implementation Platform for the harmonized introduction of pan-European eCall , including awareness campaigns, upgrading Public Service Access Points' infrastructures and an assessment of the need for regulation.	<p>An inter-ministerial working committee in preparation for the eventual directive / regulation has already been established.</p> <p>The committee is made up of representatives from the law enforcement and civil protection agencies as well as the Malta Communications Authority.</p> <p>Malta is signatory to the eCall MoU.</p>
Action 3.3	Malta – Implementation status
Development of a regulatory framework on a safe on-board Human-Machine-Interface and the integration of nomadic devices, building on the European Statement of Principle on safe and efficient in-vehicle information and communication	<p>Malta has no related industry and therefore has limited capacity to influence market developments. Malta will wait further communications from the Commission on this action.</p>

systems	
Action 3.4	Malta – Implementation status
Development of appropriate measures including best practice guidelines concerning the impact of ITS applications and services on the safety and comfort of vulnerable road users	In the context of what has been stated earlier in this report, Malta will undertake necessary measures and will incorporate best practices for the safety and comfort of vulnerable road users.
Action 3.5	Malta – Implementation status
Development of appropriate measures including best practice guidelines on secure parking places for trucks and commercial vehicles and on telematic parking and reservation systems	The action for the provision of safe and secure parking facilities for freight forwarders is not applicable to Malta due to the short distances travelled.

ACTION AREA 4: INTEGRATION OF THE VEHICLE INTO THE TRANSPORT INFRASTRUCTURE

The use of ITS components or systems is stipulated in several existing or planned legal acts and voluntary agreements applicable to commercial or private vehicles. Examples include the provisions on the transport of dangerous goods and live animals, digital tachograph³⁰, electronic toll collection and eCall. So far most of these acts and agreements have evolved independently of each other, so there has been little synergy even when needs are the same.

A streamlining and integration of these applications within a coherent, open-system architecture could yield better efficiency and usability, reduced costs and enhanced extensibility, enabling a “plug and play” integration of future new or upgraded applications such as those in nomadic devices and those utilising GNSS services for advanced positioning and timing. This open system architecture would be embodied in an open in-vehicle platform, guaranteeing interoperability/interconnection with infrastructure systems and facilities. With this modular approach, additional functionalities could be integrated later for in-vehicle safety and safe HMI, personal mobility, logistics support and access to multimodal information and possibly electronic vehicle identification.

This platform should be introduced in commercial vehicles first. Positive feedback from these applications would help speed up the uptake of integrated ITS applications in private vehicles, therefore stimulating a Europe-wide market for original and after-market in-vehicle products and services. The development of cooperative systems, based on an exchange of information and communication between vehicles and with the road infrastructure, is also progressing rapidly, and needs to be further promoted.

The following actions are proposed:

Action 4.1	Malta – Implementation status
Adoption of an open in-vehicle platform architecture for the provision of ITS services and applications, including standard interfaces. The outcome of this activity would then be submitted to the relevant standardisation bodies.	Malta will await further communication from the EU Commission on this Action

Action 4.2	Malta – Implementation status
Development and evaluation of cooperative systems in view of the definition of a harmonised approach; assessment of deployment strategies, including investments in intelligent	Malta will await further communication from the Commission on this Action

infrastructure	
Action 4.3	Malta – Implementation status
Definition of specifications for infrastructure-to-infrastructure (I2I), vehicle-to- infrastructure (V2I) and vehicle-to-vehicle (V2V) communication in co-operative systems	Malta will await further communication from the Commission on this Action with respect to V2I and for I2I. With respect for V2V, Malta does not have any car manufacturing industry set up on its territory.
Action 4.4	Malta – Implementation status
Definition of a mandate for the European Standardisation Organisations to develop harmonized standards for ITS implementation, in particular regarding cooperative systems.	Malta will await further communication from the Commission on this Action.

ACTION AREA 5: DATA SECURITY AND PROTECTION, AND LIABILITY ISSUES

The handling of data (notably personal and financial data) in ITS applications raises a number of issues, as citizens' data protection rights are at stake. At the same time, data integrity, confidentiality and availability must be ensured for all parties involved, especially citizens.

Finally, the use of ITS applications creates additional requirements in terms of liability. These issues can be a major barrier to wide market penetration of some ITS services if citizens' rights are not shown to be fully protected.

The following actions are proposed:

Action 5.1	Malta – Implementation status
Assess the security and personal data protection aspects related to the handling of data in ITS applications and services and propose measures in full compliance with Community legislation.	Malta will await additional communication from the EU Commission on this action.
Action 5.2	Malta – Implementation status
Address the liability issues pertaining to the use of ITS applications and notably in vehicle safety systems	Malta will await additional communication from the EU Commission on this action and include it in the transposition of the ITS Directive into national law.

ACTION AREA 6: EUROPEAN ITS COOPERATION AND COORDINATION

Coordinated deployment of ITS in the EU calls for intensive and effective cooperation between all parties involved at European level, ideally leading to rapprochement on deployment requirements, better synchronisation of deployment activities and avoidance of national and proprietary silo solutions that constitute barriers to European integration. Dissemination of the best available knowledge as to the costs and benefits of ITS projects from a full life-cycle perspective and feedback on relevant experience are needed to support informed investment decisions by public authorities across Europe.

To make EU-wide deployment a reality, agreements on common assessment methods and uniform tools for decision support are therefore crucial. Such coordinated deployment of ITS throughout Europe also requires greater involvement of cities and regional authorities, notably at urban and at inter-urban level. Guidance and technical support should be provided to facilitate and underpin consensus building and decision-making processes.

Finally, the implementation of the measures in this Action Plan will call for an adequate governance structure. Member States should aim at reaching agreement on a common ITS agenda and on methods to proceed from plans to coordinated implementation, for example by way of concerted investments or harmonization initiatives.

The following actions are proposed:

Action 6.1	Malta – Implementation status
Proposal for a legal framework for European coordination on the Europe-wide deployment of ITS	Malta is currently drafting the necessary legal framework for the transposition of the ITS Directive. In the meantime, Malta will wait for further communication from the Commission on this action concerning a proposal for more coordination between Member States.

Action 6.2	Malta – Implementation status
Development of a decision-support toolkit for investment decisions in ITS applications and services. This should include a quantified evaluation of the economic, social, financial and operational impact and cover aspects such as user acceptance, life-cycle cost/ benefit as well as the identification and evaluation of best practice for facilities procurement and deployment	Malta will await for further communication from the Commission on this action.

Action 6.3	Malta – Implementation status
Development of guidelines for the public funding from both EU (e.g. TEN-T and Structural Funds) and national sources of ITS facilities and services based on an assessment of their economic, social and operational value	Malta will await for further communication from the Commission on this action. Malta is of the opinion that related funding for ITS deployment under existing mechanisms such as EasyWay needs to be increased.
Action 6.4	Malta – Implementation status
Set-up of a specific ITS collaboration platform between Member States and regional/ local governments to promote ITS initiatives in the area of urban mobility	Malta plans to establish a platform by 2013.