Ireland: ITS Actions 2012 – 2017

A report on activities envisaged for the deployment of ITS in Ireland prepared under Article 17.2 of Directive 2010/40/EU

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PART ONE - ENVIRONMENT

Introduction

Ireland finds itself in the same position as many other countries where common assumptions about national trends and developments have been disrupted by the economic changes of the last number of years. It is difficult therefore to be accurate particularly with regard to future scenarios, however some background information on Ireland follows.

Population

The current population of Ireland is 4.6 million including half a million people over 65 years of age. 62% of the population live in urban areas. Under the majority of future scenarios the Irish Central Statistics Office projections see the population exceeding 5m by 2016[1] however recent migratory trends make prediction difficult. Nonetheless, the Irish population is increasing and like many European populations it is also aging.
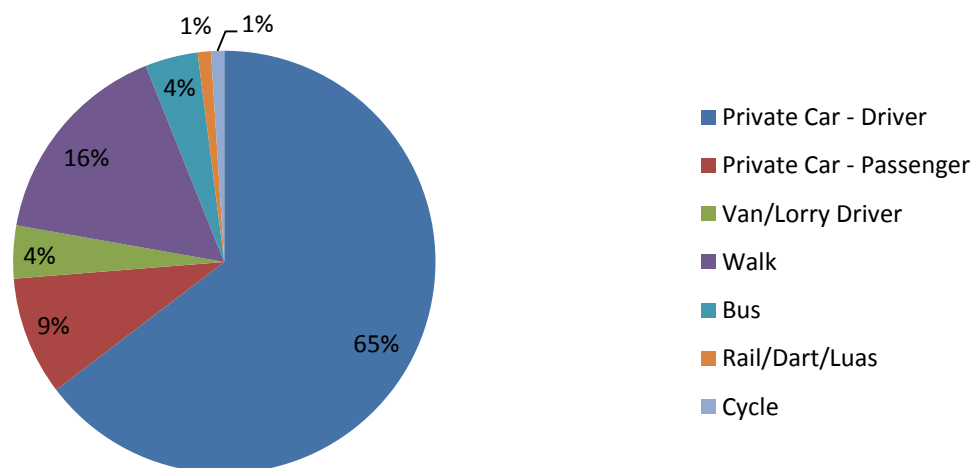
Travel statistics

There are approximately 2.4 million vehicles in Ireland. In the last number of years the number of new registrations has decreased dramatically although a slight increase was shown in 2011.

Irish vehicles drove 43 billion kilometres in total in 2010. Three quarters of these kilometres were driven by private cars. Irish private cars drove on average 16,962 kilometres in 2010.

Pilot National Travel Survey (NTS) 2009[2]

The sampled population made an average of 17 journeys, travelled a distance of 221 kilometres and spent 6 hours 43 minutes travelling per week.

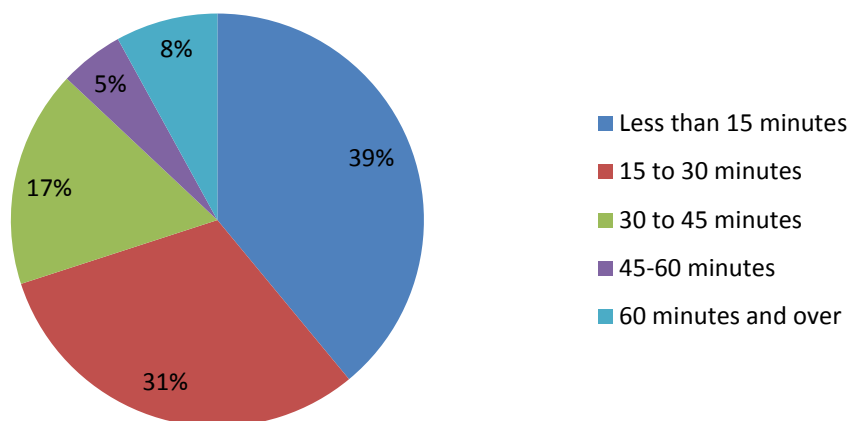### *Percentage Distribution of Journeys by Mode of Travel*

Pie chart legend:
- Private Car - Driver: 65%
- Private Car - Passenger: 9%
- Van/Lorry Driver: 4%
- Walk: 16%
- Bus: 4%
- Rail/Dart/Luas: 1%
- Cycle: 1%

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[1] CSO 2008 p26
[2] CSO 2009 p8 - 10

Percentage Distribution of Journeys by Duration

Legend:
- Less than 15 minutes
- 15 to 30 minutes
- 30 to 45 minutes
- 45-60 minutes
- 60 minutes and over

Average Journey Distance, Duration and Speed by Mode of Travel

Mode	Distance	Duration	Speed
	Kilometres	*Minutes*	*Kilometres per hour*
Private Car - Driver	14	23	32
Private Care – Passenger	18	27	32
Van/Lorry and Other	22	28	39
Walk	2	17	7
Bus	14	43	18
Rail/Dart/Luas	26	51	25
Cycle	5	25	13
All modes	**13**	**24**	**27**

Rail

There are 2400km of heavy rail in Ireland. Online booking and seat reservation is available.

Road Safety

Ireland's road safety record has been improving consistently over the last number of years despite a large increase in the number of vehicles on the roads. Since the Road Safety Strategy 2007 to 2012 was introduced road deaths have dropped by 50%.

Freight

The road network is also important for the transport of goods. In 2011 Irish registered vehicles accounted for:

Tonnes – kilometres (million)	Tonnes Carried (thousand)	Vehicle Kilometres million)
9,941	110,260	1,338

The main types of transport activity by group of goods and main use of vehicles were:

	Tonne-km (million)	Tonnes carried (thousand)
Products of agriculture, forestry & fishing	1,190	12,272
Quarry products, metal ores & peat	877	25,465
Foodstuffs	2,578	20,482

Source : CSO Transport Omnibus 2011

Research

Ireland is in many respects an ideal test-bed for emerging technologies due to its size and modern infrastructure. Ireland is well known for having a solid ICT base which includes top-class research facilities such as the IBM Smarter Cities Technology Centre. This centre was established in Dublin last year and conducts research in water, energy, transportation, city fabric, risk, exascale computing and marine environments.

Policy Context

Ireland has a long history of deploying ITS with a particular focus in the urban regions. After a decade of extensive road building to create Ireland's motorway network, Ireland has relatively recently began to focus on the deployment of ITS on the motorway network. One of the major benefits of ITS, namely to facilitate the more effective and efficient use of existing road and public transport assets, is all the more compelling in the current economic environment. ITS also supports the core policy of modal shift. The delivery of real time public transport related information such as real time passenger information and multi-modal journey planners through smart phone applications and the internet are facilitating this.

The merger between the Railway Procurement Agency (which is responsible for the operation of the "LUAS" light rail systems in Dublin among other things) and the National Roads Authority will enable greater policy co-ordination between modes of surface transport.

Certain major infrastructural projects such as the rail link between Dublin city centre and Dublin airport have been suspended for the foreseeable future due to current funding restraints. These restraints have radically changed the future landscape of travel in Ireland and transport policy is faced with the need to rethink the movement of goods and people to maximise the effectiveness of what is already in place. For this reason, ITS will play a greater role in supporting and delivering transport policy development.

Apart from its importance in direct employment ITS can also be seen as an effective way to improve competitiveness in the transport sector which can have a positive impact on the competitiveness of the wider enterprise sectors. Separately, the ITS sector is an emerging sector with the potential to create and sustain further jobs and increase economic activity in its own right. The development of strong companies in this sector can facilitate the export of ITS systems and services to improve safety, reduce emissions and increase competitiveness in other EU countries and worldwide.

Enterprise Ireland[3] is working on commercialising and internationalising ITS technology from Irish companies such as sensors and controls in conventional vehicles, technology to monitor road congestion, and road lighting solutions.

In its policy statement on growth and employment in the green economy *Delivering Our Green Potential* the Irish Government recognises the potential for intelligent transport systems to reduce the environmental impact of the transport network

Ireland supports the work of the European Union on ITS in the form of the ITS Action Plan, ITS Directive and other EU initiatives such as the EETS Directive. Ireland is also an active participant in Europe-wide initiatives such as EasyWay and Polis.

The Department of Transport, Tourism and Sport has written this report under article 17.2 of the ITS Directive with the assistance of a number of agencies and organisations including:

- the Department of Communications, Energy and Natural Resources
- the Department of Jobs, Enterprise and Innovation
- an Garda Síochána (Ireland's National Police Service)
- ITS Ireland
- the National Roads Authority
- the National Transport Authority
- the Road Safety Authority
- the Railway Procurement Agency
- Irish Rail

This report gives regard to the Commission implementing decision of 13th July 2011 adopting guidelines for reporting by the Member States under the ITS Directive.

This report is structured as follows: Chapter 1 gives a description of the strategic context of ITS corresponding to (a) in the guidelines; Chapter 2 describes the technical and legal framework for ITS corresponding to (b) in the guidelines; Chapter 3 describes envisaged actions arranged by ITS Directive priority area corresponding to (c) and (d) in the guidelines and finally Chapter 4 describes implementation structures and corresponds to (e) in the guidelines.

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[3] Enterprise Ireland is the government organisation responsible for the development and growth of Irish enterprises in world markets

Chapter 1 - Description of the national approach on the development and deployment of ITS, including its main objectives

The Department of Transport, Tourism and Sport in Ireland's overall vision for transport includes the priorities to develop and implement a realistic, affordable and deliverable plan to maintain and upgrade roads and public transport infrastructure; to encourage modal shift by improving the public transport experience through initiatives like integrated ticketing, upgraded interchanges, enhanced bus stop facilities, real-time passenger information, safe cycling and attractive walking and to build on recent success in reducing road fatalities and injuries. ITS will have a significant role to play in achieving these policy objectives.

Ireland does not currently have a separate strategy on ITS. ITS has nonetheless been incorporated in other transport and travel related strategies such as *Smarter Travel – A Sustainable Transport Future* covering the years 2009 – 2020. *Smarter Travel*'s main aims are to reduce the demand for travel and to increase the availability of alternatives to private transport while also improving the fuel efficiency of all motorised transport. Many of the actions in this strategy require ITS to support such as Action 12 with measures to improve bus services through a more radical management of bus priority, the use of smart card technology and real time passenger information; Action 24 which focuses on a national travel information portal and Action 30 which envisages the deployment of incident management technologies.

It is important to co-ordinate all ITS initiatives to ensure that for example avoidable problems with interoperability are not inadvertently being created. The working group behind this report is an example of this co-ordination effort as is the work of ITS Ireland. The hosting of the 9th ITS European Congress in Dublin next year will also help consolidate inter-organisational cohesion as well as gain public attention and recognition of Irish achievements in the ITS arena.

ITS is in the main developed and implemented in Ireland in the public sector by national and local authorities as set out below.

The **Department of Transport, Tourism and Sport** has overall responsibility for the development of transport policy in Ireland.

The **National Roads Authority's** primary function, under the Roads Act 1993, is to secure the provision of a safe and efficient network of National roads. It has overall responsibility for the planning and supervision of construction and maintenance works on these roads including ITS.

The **National Transport Authority's** role can be divided between its national remit and its remit within the Greater Dublin Area as follows:

Nationally: licensing bus routes ; entering into contracts for the provision of public transport services; providing funding for specified bus and rail travel services that are considered necessary for economic or social reasons; regulating the small public service vehicle sector; promoting an integrated public transport network; implementing integrated ticketing, fares and information schemes.

Greater Dublin Area: preparation and regular review of a transportation strategy; adoption of an integrated implementation plan and a strategic traffic management plan; financing the construction of public transport infrastructure; promoting an integrated public transport network; implementing integrated ticketing, fares and information schemes and regulating fares and encouraging increased public transport use.

The **Railway Procurement Agency's** role is to secure the provision of, or to provide, light railway and metro infrastructure.

The **Road Safety Authority's** function is to save lives and prevent injuries by reducing the number and severity of collisions on the road. This is achieved through a number of initiatives such as providing education, developing standards, undertaking research and engaging in enforcement activities.

Local Authorities - There are 29 county councils, 5 borough and 5 city councils in Ireland. These have responsibility for the day to day management of transport in their areas and certain responsibilities and powers with regard to developing transport infrastructure.

There are also a number of private entities that deliver ITS related services. Examples include RTE and AA Roadwatch which disseminates free traffic and travel information.

Ireland is a peripheral EU Member State and except for a small amount of traffic from our ports to Northern Ireland it is not a transit country. On the motorway and primary road network there is a lack of congestion compared to many EU states. In recent years Ireland has an excellent road safety record and has reduced the number of deaths on Irish roads year on year since 2005. While the development of standards and specifications is to be welcomed and will be supported by Ireland where feasible the particularity of the Irish transport landscape is such that national resources must be focussed on specific national needs at this time.

Chapter 2 - Description of the technical and legal framework applicable to the development and deployment of ITS

The ITS regulatory environment in Ireland is made up of primary and secondary legislation. Consideration should also be given to various strategies and plans. There also exist industry standards and agreements. The NRA manages a website for standards - http://nrastandards.nra.ie/

Main sources primary and secondary legislation
- The ITS Directive
- The EETS Directive
- The Roads Acts
- The Road Traffic Acts
- The Dublin Transport Authority Act
- Transport (Railway Infrastructure) Act
- The Traffic Signs Manual

Guidelines and strategies
- The EU ITS Action Plan
- The National Spatial Strategy
- Smarter Travel
- The National Cycle Policy
- Delivering Our Green Potential
- Regional, city and local policies e.g. Cork Area Strategic Plan, Mid-West Area Strategic Plan
- NRA guidelines for variable message signs
- The Road Safety Strategy (a new Strategy is currently in development)

Standards

For a list of standards being used in Ireland please see Ireland's report under article 17.1 of the ITS Directive Annex 2.

PART TWO - ENVISAGED ACTIONS

Chapter 3 - Description of ITS envisaged actions in the context of the Directive priority areas for actions and related measures

This chapter has been divided into thematic sections covering public transport, sustainability, data, research, traffic control, road management and tolling along with some miscellaneous actions.

Each action has been associated with the priority area(s) it is linked to:

1.   Optimal use of road, traffic and travel data
2.   Continuity of traffic and freight management ITS services
3.   ITS road safety and security applications
4.   Linking the vehicle with the transport infrastructure

Public transport

Project title	Leap card scheme
Priority Area(s)	1 & 2
Project region	GDA initially, then nationally and possibly including Northern Ireland
Objectives and description	A smart card based system that provides a common payment method for users of public transport in the greater Dublin region. Following deployment in Dublin, it is planned to extend this system to the rest of the State and eventually to all Island travel
Sponsor	National Transport Authority
Lead organisation	Local Authorities
Project status	Phase 1 completed – Pay As You Go operations
Envisaged actions 2012 - 17	Phase2 - Tax-saver and other time based products - Introduction of mobile phone applications to support smart ticketing - Introduction of contactless bank cards for smart ticketing - New user groups (students, concessionaries, etc) - Scoping for integrated fare facility

Project title	All Ireland Public Transport Journey Planner
Priority Area(s)	1 & 2
Project region	The island of Ireland
Objectives and description	Online public transport and mapping service. This service will feature on the Transport For Ireland and Translink.co.uk websites, as well as smartphone apps. It will provide seamless, integrated passenger information for all trips on the island of Ireland.
Sponsor	NA
Lead organisation	National Transport Authority
Project status	Awaiting Translink's Northern Ireland Journey Planner project completion, expected February 2013
Envisaged actions 2012 - 17	Integration of the 2 systems – Q1 2013

Project title	Public Transport Route maps
Priority Area(s)	1 & 2
Project region	National
Objectives and description	Online mapping service. This service will feature on the Transport For Ireland website. Displays maps of all public transport services in Ireland on a dynamic map. Artwork for printed maps at bus shelters.
Sponsor	NTA
Lead organisation	NTA
Project status	Technical requirements drafted – Oct 2012 Order due to be placed in November-2012 Rollout by end Q1 2013
Envisaged actions 2012 - 17	Wireframes and technical requirements Oct – Nov 2012 Commencement of development December 2012 Integration with National Journey Planner and Cycle Planner Q1 2013

Project title	Real Time Passenger Information
Priority Area(s)	1
Project region	National Project
Objectives and description	Provision of real time passenger information via road-side displays and web application. A Web services API will also make the data available to 3rd Parties, when the data has been tested and validated.
Sponsor	National Transport Authority
Lead organisation	Dublin City Council & other local authorities and transport providers
Project status	Core system in operation, rollout to 417 bus stops in Greater Dublin area and 47 bus stops in Cork complete
Envisaged actions 2012 – 17	2012 - Bilingual multi-city multi-operator Website and Android and iPhone Application - The release of the Web services API will also make the data available to 3rd Parties. - Installation of 20 signs in Galway, 20 in Limerick and 10 in Waterford - Installation of multi-stop displays at transport interchanges and major destinations such as hospitals - Consideration of further roll out of signs in Greater Dublin Area and in other towns in Ireland - Linkage of real time information to the national journey planner - Exploration other technological avenues for the data as may occur - Collaboration with Irish Rail on their real time information systems

Project title	Centralised Bus Priority Project
Priority Area(s)	1 & 2
Project region	GDA
Objectives and description	To provide a centralised means of providing Public Transport Priority for both Bus and Tram operations
Sponsor	NTA
Lead organisation	Local Authorities
Project status	Pre-commission
Envisaged actions 2012 - 17	2013 System commissioned and put into operation on main bus corridors

Sustainability

Project title	Shared Bicycle Schemes
Priority Area(s)	2
Project region	Dublin, Cork, Galway, and Limerick
Objectives and description	Building on the success of the Dublin City Bicycle Scheme, expanding the system to other regional cities.
Sponsor	NTA
Lead organisation	NTA
Project status	Planning/Design Stage
Envisaged actions 2012 - 17	Additional scheme deployments through 2013.

Project title	Intelligent Bicycle Traffic Priority Systems
Priority Area(s)	2
Project region	South Dublin County Council
Objectives and description	South Dublin County Council is researching the market of current vehicle/bicycle detection systems. It is envisaged to carry out a pilot scheme to investigate the feasibility of bicycle priority at traffic signals at a strategic bicycle active junction.
Sponsor	NTA
Lead organisation	South Dublin County Council
Project status	Conceptual Stage
Envisaged actions 2012 - 17	Research/Pilot Scheme due to start in quarter 2 of 2013

Project title	Cycle Route Planner
Priority Area(s)	1 & 2
Project region	GDA
Objectives and description	Online cycle routing and mapping service. This service will feature on the Transport For Ireland website. It will integrate with the National Journey Planner to provide information about trips which involve riding a bicycle to public transport or taking a bicycle onto public transport.
Sponsor	NA
Lead organisation	NTA
Project status	Technical requirements drafted - Oct 2012 Order due to be placed towards end 2012 Rollout by end Q2 2013
Envisaged actions 2012 - 17	Wireframes and technical requirements Oct - Nov 2012 Commence development December 2012 Integration with National Journey Planner Q2 2013

Data

Project title	National ITS Architecture
Priority Area(s)	1
Project region	National and International
Objectives and description	The development of a "cross-the-board" set of ITS standards for Ireland drawing upon European and international best practice
Sponsor	NA
Lead organisation	National Roads Authority
Project status	Proposal in Process
Envisaged actions 2012 – 17	- 2013 – DMRB – ITS Infrastructure - 2014 – DMRB – ITS Device Installation - 2013-2017 – Operational Standardisation - 2013-2017 – ITS data and communication standardisation

Project title	DATEX II roll out
Priority Area(s)	1
Project region	National
Objectives and description	To utilise the European traffic data exchange protocol (DATEX II) as a national standard for the provision and exchange of traffic data between third parties.
Sponsor	
Lead organisation	National Roads Authority
Project status	Proposal in Process
Envisaged actions 2012 – 17	2013-2014 - Implementation of data exchange agreements with third parties (local authorities, traffic information providers, other transport authorities etc) for the sharing of traffic related data in real-time.

Project title	OPEN DATA / SmartCities
Priority Area(s)	1
Project region	GDA
Objectives and description	Enable re-use of publicly available data
Sponsor	NTA
Lead organisation	4 GDA local authorities
Project status	Commenced www.Dublinked.ie datastore
Envisaged actions 2012 - 17	Enhancement, expansion
Context	Open Data Initiative

Project title	Web-based Traffic Information Services
Priority Area(s)	1
Project region	National
Objectives and description	The enhancement and development of web-based services for the provision of personalised travel and traffic information to the road user in real time.
Sponsor	NA
Lead organisation	National Roads Authority
Project status	Proposal in Process
Envisaged actions 2012 – 17	- 2013 – the redevelopment of www.nratraffic.ie - 2013 – the development of a complimentary app and interfaces with other complimentary systems and devices - 2014-2015 – integration with the national journey planner system

Project title	Major Interurban Routes– Monitoring Deployment
Priority Area(s)	1
Project region	National
Objectives and description	To deploy roadside traffic monitoring devices along each Major Interurban route.
Sponsor	NA
Lead organisation	National Roads Authority
Project status	Planning in Process
Envisaged actions 2012 – 17	Phased deployment between 2012 and 2014 deploying around 100-150 monitoring devices
Context	Monitoring devices (e.g., Bluetooth, ANPR, MVD) will be deployed at appropriate intervals along each MIU in order to ascertain real time journey time information for the entire route.

Project title	National Journey Time Management System
Priority Area(s)	1
Project region	National
Objectives and description	To develop or commission a single national journey time management system (JTMS) that can receive data from multiple sources and so process and disseminate sectional journey times in real-time
Sponsor	NA
Lead organisation	National Roads Authority
Project status	Proposal in Process
Envisaged actions 2012 – 17	- 2013 – development of a specification - 2014 – tender and procurement of a single generic JTMS
Context	Journey times can be calculated using a multiple of different sources (ANPR, Bluetooth, MVD etc). Each device tends to have its own (sometimes proprietary) instation/ JTMS to calculate journey times. It is more practical and efficient to have a single non-proprietary open system

Project title	Automatic Number Plate Registration Deployment
Priority Area(s)	1
Project region	South Dublin County Council administrative area/East coast of Ireland
Objectives and description	Journey time information disseminated to the public via website and SMS services.
Sponsor	NTA
Lead organisation	South Dublin County Council
Project status	83 ANPR camera have been installed in 25 locations across the South Dublinc County Council area
Envisaged actions 2012 - 17	Further deployment of cameras in 2013-14. It is envisaged to concentrate the majority of future ANPR deployment on the road network in neighbouring Local Authority areas with an emphasis on the major ports and airports. This will develop the system from a local system to a regional journey time system for the greater Dublin Area.
Context	Level of deployment depending on funding and collaboration between local authorities

Project title	Motorised-Traffic counting
Priority Area(s)	1 & 2
Project region	Local level multiple areas
Objectives and description	Monitoring traffic flow to facilitate better congestion control and traffic management
Sponsor	NTA
Lead organisation	Local Authorities
Project status	Ongoing
Envisaged actions 2012 - 17	Expansion of existing systems provision where needed regional level co-ordination

Project title	Non-motorised-traffic counting
Priority Area(s)	1 & 2
Project region	Local level multiple locations
Objectives and description	To collect data on pedestrian and bicycle movements for evaluation and planning purposes
Sponsor	NTA
Lead organisation	Local Authorities
Project status	Ongoing
Envisaged actions 2012 - 17	Expansion of monitoring points

Project title	Weather Information Systems - Enhancements
Priority Area(s)	1
Project region	National
Objectives and description	The enhancement of the existing weather information system to provide more personalised information to the road user in real time.
Sponsor	NA
Lead organisation	National Roads Authority
Project status	Proposal in Process
Envisaged actions 2012 – 17	2013 – enhancement of the existing system

Research

Project title	International Project Participation
Priority Area(s)	1, 2, 3 & 4
Project region	International
Objectives and description	To continue participation in European projects
Sponsor	NA
Lead organisation	National Roads Authority
Project status	Proposal in Process
Envisaged actions 2012 – 17	- 2013-2015 – Participation in projects arising from ITS call in November 2012 - Application to other European funding streams - Participation in Five Nations Network Operators forum

Traffic control

Project title	Motorway Traffic Control Centre Development
Priority Area(s)	1
Project region	National
Objectives and description	The development of a short-term programme to expand the current Motorway Traffic Control Centre
Sponsor	NA
Lead organisation	National Roads Authority
Project status	Proposal in Process
Envisaged actions 2012 – 17	- 2013 – development of business case - 2013 -2014 – expansion of MTCC

Project title	Upgrade of Regional Traffic Control Centre
Priority Area(s)	1 & 2
Project region	Greater Dublin Area
Objectives and description	To update systems and provide better traffic Management and provision for dealing with emergency operations i.e. weather related events. Ensure speedier and better response to any incidents or emergencies that arise.
Sponsor	NA
Lead organisation	Dublin City Council
Project status	Work to commence Q1 2013
Envisaged actions 2012 - 17	Q1 and Q2 to implement and commission new systems and upgrade existing facilities.

Project title	Regional Traffic Management
Priority Area(s)	1 & 2
Project region	GDA
Objectives and description	To effectively integrate the existing surface transport and traffic systems and centres, to facilitate management of corridors at a regional level, with multi-modal objectives, contingency and maintenance arrangements
Sponsor	NA
Lead organisation	NTA
Project status	Scoping
Envisaged actions 2012 - 17	Study and follow up on recommendations. Funding dependant.
Context	The NTA Strategic Traffic Management Plan will coordinate tactical and operational issues within the GDA across the various agencies.

Project title	M50 Motorway - Demand Management Programme
Priority Area(s)	1 & 2
Project region	Dublin
Objectives and description	To deploy an integrated package of measures to facilitate better management of demand on the M50 corridor and to protect the traffic capacity provided by the recent M50 Motorway Upgrade Scheme.
Sponsor	NA
Lead organisation	National Roads Authority
Project status	Planning in Process
Envisaged actions 2012 – 17	- Deployment of additional ITS equipment to facilitate variable speed/flow control - 2015 - Deployment of additional ITS equipment to facilitate more responsive incident management procedures - 2015 - Expansion of existing single tolling point to multi-point tolling system to provide more balanced user charging regime to influencing demand - 2016 - Introduction of supporting travel planning initiatives to enable motorists plan their journeys for less congested periods - 2015

Project title	Urban/ Interurban Interfaces and deployment
Priority Area(s)	2
Project region	Cork/ Limerick, Galway
Objectives and description	To develop deployment strategies outside and approaching the major urban centres in Ireland (excluding Dublin) whilst developing suitable interfaces with the urban traffic authorities and the Motorway Traffic Control Centre
Sponsor	NA
Lead organisation	National Roads Authority
Project status	Proposal in Process
Envisaged actions 2012 – 17	- 2013 – propose deployment plans and interfaces - 2014-2017 – deployment and interface arrangements
Context	Deployment and interface arrangements will draw upon the experiences of those in Dublin.

Project Title	Expansion of the functionality and the geographic coverage of existing urban traffic control systems and provide where needed regional level co-ordination
Priority Area(s)	1 & 2
Project Region	Local level multiple locations
Objectives and description	To expand or update or install urban traffic control systems
Sponsor	NTA
Lead organisation	Local Authorities
Project Status	Ongoing
Envisaged actions 2012 - 17	Expansion or upgrading at certain locations with enabling or enhancing bus priority a common feature

Project title	Major Inter Urban Roads – Variable Message Signs Deployment
Priority Area(s)	1
Project region	National
Objectives and description	To deploy roadside Variable Message Signs approaching every interchange along the Major Interurban routes in order to provide relevant, accurate and timely information to road users.
Sponsor	NA
Lead organisation	National Roads Authority
Project status	Planning in Process
Envisaged actions 2012 – 17	Phased deployment between 2013 and 2015 deploying up to 200 VMS
Context	The cost of installing fibre optic communications along the MIU network will be a significant constraint on the amount and type of ITS deployments that can be undertaken.

Project title	Ghost Driver Signs
Priority Area(s)	1 & 3
Project region	National
Objectives and description	Using ITS as a means to advise motorists of vehicles driving in the wrong direction on the motorway network.
Sponsor	NRA
Lead organisation	NRA
Project status	Pilot schemes deployed. Currently under evaluation for effectiveness.
Envisaged actions 2012 - 17	Results of evaluation may lead to increased deployment.

Project title	Dynamic Warning Signs
Priority Area(s)	1
Project region	Local level multiple locations
Objectives and description	To better control urban traffic in sensitive areas
Sponsor	NTA
Lead organisation	Local Authorities
Project status	Under development
Envisaged actions 2012 - 17	Roll out of further signs at multiple locations coupled with an effectiveness review

Project Title	CCTV Cameras
Priority Area(s)	1
Project Region	Local level multiple locations
Objectives and description	Installation of CCTV camera at key locations and linkage to Traffic Management Control Centres
Sponsor	NA
Lead organisation	Local authorities
Project Status	Ongoing
Envisaged actions 2012 - 17	Expansion of CCTV monitoring and further co-ordination of same.

Project title	Traffic Signal Optimisation
Priority Area(s)	1 & 2
Project region	National
Objectives and description	Installation of UTC, Adaptive Control and MOVA (Microprocessor Optimised Vehicle Actuation) at a number of signalised junctions throughout the country.
Sponsor	NTA
Lead organisation	Various local authorities including Cork City Council and Cork County Council
Project status	Continuous and dependant on funding
Envisaged actions 2012 - 17	Local Authorities will continue to deploy technology and systems to effectively operate their traffic signal systems
Context	The NTA Strategic Traffic Management Plan will coordinate tactical and operational issues within the GDA across the various agencies

Project title	PGMS (Parking Guidance Management System)
Priority Area(s)	1 & 2
Project region	All Major Cities
Objectives and description	To implement parking guidance systems incorporating traffic and parking information messages
Sponsor	NTA
Lead organisation	Various Local Authorities
Project status	Several are completed and in operation (Dublin, Cork, Limerick, Waterford, Kilkenny, and Newbridge) while others are planned (Galway).
Envisaged actions 2012 - 17	Expansion of schemes as required.

Road management

Project title	Road asset monitoring
Priority Area(s)	1
Project region	National
Objectives and description	To develop a central national road management system (involving GIS) focussing on road works licencing, pavement management and speed limits initially
Sponsor	DTTAS
Lead organisation	Local Government Management Agency
Project status	Under development
Envisaged actions 2012 - 17	DTTAS is developing a central and shared road management system using Open Source Technology to gain efficiencies in the Road Management Arena. Initial focus is on Pavement Management and Road Works Licencing (to support a Government Decision) as well as Speed Limits.
Context	This will be used to support other ITS Deployment projects such as Intelligent Speed Adoption (ISA).

Project title	Intelligent Street Lighting
Priority Area(s)	3 & 4
Project region	National
Objectives and description	Deploy public lighting on a needs basis by using technology to in an effective manner to reduce capital, operational and maintenance costs.
Sponsor	NRA
Lead organisation	NRA
Project status	Several pilot schemes are in operation and currently being evaluated.
Envisaged actions 2012 - 17	Continue to evaluate leading to a more expansive deployment.

Tolling

Project title	Interoperability Management Services Provider
Priority Area(s)	2
Project region	National and International
Objectives and description	Upgrade of National Electronic Toll Collection (ETC) Interoperability Transaction Clearing hub to provide next-generation National interoperability services and to facilitate European Electronic Toll Service (EETS)
Sponsor	NA
Lead organisation	National Roads Authority
Project status	Procurement in Process
Envisaged actions 2012 – 17	- Upgrade of existing National Interoperability Transaction Hub - Upgrade to facilitate data exchange with EETS Service Providers

Project title	Toll System Renewals and Upgrades
Priority Area(s)	2
Project region	National
Objectives and description	Renewal and upgrade of tolling systems to avail of technology advances and to comply with requirements of EETS Directive.
Sponsor	National Roads Authority
Lead organisation	Toll chargers
Project status	Planning in Process
Envisaged actions 2012 – 17	- Upgrade of existing system to be EN 15509 compliant (EETS standard) - Upgrade systems to avail of technology advances / replace components that have reached end of life, 2013 – 2017

Miscellaneous actions

Project title	Electric Vehicle Infrastructure
Priority Area(s)	1 & 4
Project region	National
Objectives and description	Develop national network of public charging points.
Sponsor	ESB - eCars
Lead organisation	ESB - eCars
Project status	Currently in deployment
Envisaged actions 2012 - 17	Continued deployment.

Project title	National ITS Strategy
Priority Area(s)	1, 2, 3 & 4
Project region	National
Objectives and description	To facilitate the co-ordination of ITS deployment in Ireland
Sponsor	DTTAS
Lead organisation	DTTAS
Project status	Consultation to begin June 2013
Envisaged actions 2012 - 17	Completed Q2 2014

Project title	ITS Strategy for GDA
Priority Area(s)	1, 2, 3 & 4
Project region	GDA
Objectives and description	To provide framework for future investment in ITS in GDA
Sponsor	NTA
Lead organisation	NTA, NRA, DTTAS
Project status	Scoping stage only
Envisaged actions 2012 - 17	Draft strategy, building on ITS inventory report for GDA 2010
Context	The Strategy will address (i) legacy (ii) procurement (iii) resourcing and maintenance (iv) data management (v) investment priorities (vi) compliance with ITS Directive

PART THREE - IMPLEMENTATION STRUCTURES

Chapter 4 - The implementation environment of the envisaged actions

Instruments
Authorities and agencies directly
Authorities and agencies via contracts
Authorities via different instruments such as PPPs and other newer forms of public /private co-operation
Private sector directly within the current regulatory framework
European-level structures such as EasyWay and POLIS

Resources
There is no specific and segregated national ITS budget. Agencies and Authorities fund ITS actions from their overall allocated resources in accordance with policy goals. Public private partnerships and other forms of public private financial collaborations have been and continue to be a significant part of the funding landscape. Ireland will continue to put European funding to good use by its participation in EU led initiatives aiming to deliver pan-European projects.

Consultation and active stakeholders
The national inter-agency/inter-departmental working group under the aegis of DTTAS including representatives from industry which provided the content of this report.
The DTTAS is a member of ERTICO – ITS Europe and participants in its meetings and initiatives.
The NRA is a member of the Stockholm group on EETS and an active participant in EasyWay.
The NTA is an active participant in POLIS.
ITS Ireland is an independent non-profit public/private sector partnership and is active in a number of EU wide programmes and initiatives such as *i*Mobility and the Network of ITS National Associations.

Milestones
The 9th ITS European Congress which will take place in Dublin on the 4-7th June 2013
The delivery of EETS compliance in 2013.
The Luas BXD line which will link the Red and Green lines and link the city centre to a major new third level educational campus in the North of the city.
Priority actions specifications completion 2012-2014.
Potential EasyWay proposal for the November ITS call.
Horizon 2020 call for projects.

Monitoring
Monitoring frameworks are built into *Smarter Travel* requiring reports every two years. Otherwise monitoring takes place in the context of normal business planning and annual reporting.

Under Article 17.3 of the ITS Directive DTTAS is next due to report to the Commission on 27th August 2014.

GLOSSARY

ANPR	Automatic Number Plate Recognition
AUTC	Automated Urban Traffic Control
AVL	Automatic Vehicle Location
CCMA	County and City Managers Association
CCTV	Closed Circuit Television
DTTAS	Department of Transport, Tourism and Sport
GDA	Greater Dublin Area (the area comprising Dublin City Council, Fingal County Council, Dun Laoghaire-Rathdown County Council, South Dublin County Council administrative areas and the counties of Kildare, Meath and Wicklow)
GSM	Global System for Mobile Communications
LGMA	Local Government Management Agency
MIU	Major Interurban (road)
MOVA	Microprocessor Optimised Vehicle Actuation
NIJP	National Interoperable Journey Planner
NRA	National Roads Authority
NTA	National Transport Authority
PGMS	Parking Guidance Management System
PGS	Parking Guidance Signs
RTPI	Real Time Passenger Information
SCATS	Sydney Coordinated Adaptive Traffic System
SCOOT	Split Cycle Offset Optimisation Technique
VMS	Variable Message Sign
DMRB	Design Manual for Roads and Bridges

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