Ireland's ITS Report

April 2025

Directive 2010/40/EU Implementation Report 2024
Ireland

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1. INTRODUCTION

1.1. General overview of the national activities and projects

Including national Intelligent Transport Services ('ITS') legislation or strategies, or both

This report sets out the activities and projects in Ireland regarding the priority areas under Directive 2010/40/EU as amended on the framework for the deployment of Intelligent Transport Systems (ITS) in the field of road transport and for interfaces with other modes of transport.

The report has been prepared by the Department of Transport, with input from Transport Infrastructure Ireland (TII), the National Transport Authority (NTA), the Local Government Management Agency (LGMA) and the following local authorities:

- Dublin City Council
- South Dublin County Council
- Fingal County Council
- Dun Laoghaire Rathdown County Council
- Kildare County Council
- Cork City Council
- Limerick City and County Council
- Galway City Council
- Waterford City and County Council

A new entity has been established, FMCI (Future Mobiiltiy Campus Ireland) which will provide support in this area, including for CAV.

A draft CAV Strategy is in development by the Department of Transport. We are progressing to testing and the implementation of level 2 and the rollout of level 2 vehicles in Ireland. Testing for level 3 will be happening when level 2 are already deployed. As level 3 is being deployed we will likely be allowing level 4 testing. We are looking to implement participation in larger scale testing including cross-border.

The Department is currently reviewing and updating the implementation of the ITS Directive in Ireland. It is proposed that work on a National ITS strategy will commence in 2026.

The report covers the period from 2023 to the present, in line with Article 17.3 of the ITS Directive.

1.2. General progress since 2023

Summary of progress since previous report:

TRANSPORT INFRASTRUCTURE IRELAND (TII)

National ITS Strategy

A draft ITS strategy is currently nearing completion by TII. It will look to set out the principles of its approach, the strategic themes, and recommendations and tactical focus for successful implementation The strategy looks to address how 'Key Enablers' are identified, covering both physical and digital elements associated with ITS; and the introduction of a 'Service Level' approach

to the delivery of ITS, that links technology deployments to the outcomes achievable for both TII and the travelling public alike. A draft CAV Strategy is also in development by TII.

General TII Progress on ITS

MetroLink will comprise a high-capacity, high-frequency, modern and efficient metro railway, with 16 new stations running from Swords to Charlemont. The alignment will link Dublin Airport, Irish Rail, DART, Dublin Bus and Luas services and create a fully integrated public transport network for the Greater Dublin Area (GDA). As well as linking major transport hubs, MetroLink will connect key destinations including Ballymun, the Mater Hospital, the Rotunda Hospital, Dublin City University (DCU) and Trinity College Dublin (TCD). Much of the 18.8km route will run underground, an exciting innovation for Irish public transport. Metrolink Tender design is ongoing and due to complete at the end of 2025. Technical requirement specifications are currently being drafted. Specifically for CCTV, this includes CCTV coverage at stations, onboard and along the route. An integrated and resilient 5G radio system is specified to permit real time viewing and incident management from the control centres (Operational Control Centre, Back-Up Operational Control Centre, Depot Control Centre, Station Operating Rooms).

The Luas Cross City light rail project to connect the existing Luas lines in Dublin is now in operation. As part of this project active improvements took place in the technology employed in control, stations and rolling stock.

TII has developed protocols to allow for the provision of traffic data (including VMS settings and travel times) to the NAP. TII has embarked on a project to deploy an integrated package of measures (referred to as eMOS – "enhancing Motorway Operation Services") involving the construction of a new Motorway Operations Control Centre, significant deployment of ITS equipment on the M50 Dublin Ring Road and the implementation of a new Network Intelligence and Management System to control all ITS equipment deployed on the Motorway network.

The enhancing Motorway Operations Services (eMOS) programme of works has beeen undertaken on the M50 to introduce variable speed limits and lane control sign (Red-X). eMOS includes the deployment of ITS equipment (Variable Message Signs, Lane Control Signs, ANPR and CCTV), the development of a new ATMS and an upgrade to the Operations Centre. As part of eMOS the C-Roads Ireland C-ITS pilot was also undertaken.

The objectives of these works are:

- Reduce the adverse impact of future traffic growth on the level of service provided by the M50 Dublin Ring Road which forms part of the core TEN-T network.

- Ensure that the operation and management of M50 traffic is undertaken in line with international best practice to reduce the impact of congestion and the level of disruption resulting from incidents on the M50 while enhancing journey time reliability.

- Maintain the safety record for road users and those who work on the M50. This is in addition to the wider motorway and high-speed dual carriageway network as traffic volumes continue to grow.

- Enable TII and emergency responders to implement an integrated and co-ordinated response to traffic conditions.

- Improve the dissemination of information to road users to provide enhanced awareness of incidents, events and road works.

- Implement appropriate technological solutions to support the operation of Ireland's high-speed road network.

- Implement a Cooperative ITS pilot (C-Roads Platform – details referenced below)

The deployment of the ITS equipment and the development of the new ATMS[1] (called NIMS[2]) both began in 2020. All ITS equipment is now installed on the M50. NIMS is being delivered in stages. Currently the system controls the new signs on the M50 motorway with expansion to the control of existing signs across the network due to be complete by the end of the year.

The national legislation required to undertake the management of the road network via the lane control signs has been drafted and is expected to be made law in 2025.

National Transport Authority (NTA)

<u>Enhancements to Travel Information Systems and Services (TISS)</u>

In March 2023 NTA launched a new centralised Travel Information Systems and Services (TISS), which included the provision of a new national multi-modal journey planning system (mobile app and website) covering all modes of public transport and including the provision of Real Time Passenger Information (RTPI). Since its launch the mobile app (called "TFI Live") has been downloaded over 1.3m times. The solution also produces data for all public transport services which the NTA makes available as open data, published via the National Access Point (NAP) at https://data.gov.ie This data includes National Public Transport Access Nodes (NaPTAN) dataset, the National Public Transport Gazetteer (NPTG) for Ireland, Public Transport Infrastructure dataset, GTFS schedule files and GTFS-Real Time information. During 2024 a number of minor enhancements were made to the core solution underpinning the TFI Live system.

New Automated Vehicle Location System

In 2023 NTA completed a public procurement competition to secure a supplier for a single on-bus Automated Vehicle Location (AVL) system in order to consolidate and centralise the provision of RTPI information which is provided to the new national multi-modal journey planning system (mobile app and website), and which is also displayed on the on-street display signs at bus stops around the country. The design of the solution, which will replace five separate AVL systems with a single centralised modern system that produces consistent data feeds as well as providing better predictions of bus arrivals for RTPI, addition of passenger counting systems, and will offer cost efficiencies across the whole system (one back office rather than five, and one that can be further expanded) was significantly progressed during 2024 and implementation will commence in 2025.

Upgraded Displays and New Displays Procurement

In 2023 the NTA completed a procurement competition to appoint a supplier of on-street display RTPI signs, including additional options such as battery powered displays and displays that can be incorporated into new bus stops. During 2024 the first batch of these new RTPI signs were deployed at bus stops across Ireland to test their resilience and reliability. As NTA and partners (i.e. Local Government Authorities) upgrade and/or install new bus stops, these signs will be considered for installation.

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[1] Active Traffic Management System (ATMS).
[2] Network Intelligence and Management System (NIMS).

NeTEx[3]

The NTA has progressed a project on behalf of the Department of Transport covering the creation of a NeTEx profile for Ireland and the development of a NeTEx export interface. The first version of the profile was published in October 2021. Further work on the profile has been paused pending completion of the new Automated Vehicle Location System project.

Further detail is provided in Section 2.1.3 of the report.

Local Government Management Agency (LGMA)

Roads management Office

This shared service operates as a resource for the 31 road authorities and serves to coordinate activities in the areas of technology, standards, best-practice and policy.

Monitoring of road opening license applications

The MapRoad Roadworks Licensing system is operational in all 31 local authorities. Additional modules of the system include:

- Works block management
- Automated processing of license applications subject to condition
- Development of a mobile workforce solution for recording incidence of defect or breach of conditions

List new tools since 2023

- KPIs introduced for road opening reinstatements and inspections

Road Asset Management

- New module to manage the active travel (walking & cycling) network infrastructure.
- Additional tools to record new works and maintenance engineering detail and costings.
- New module to record public lighting stock and survey detail as part of the LED retrofit

List new tools since 2023

- New tools for recording traffic counts
- Addition of active travel infrastructure and projects to the road schedule inventory
- Addition of Open Street Map data as vector (WFS) layers
- National Transport Authority (NTA) and Transport Infrastructure Ireland (TII) included as stakeholders of the system
- Spatial layer of public lighting incorporated into asset management system
- Mobile App to gather information on fatal/serious collisions
- Procuring data for research on speed and traffic information

Zero Emissions Vehicles Ireland

Zero Emission Vehicles Ireland (ZEVI) is a dedicated Office within the Department of Transport, charged with supporting consumers, the public sector and businesses to continue to make the

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[3] NeTEx is a CEN Technical Standard for exchanging Public Transport schedules, fares and related passenger information data (see Netex.ie) .

switch to zero emission vehicles. The Office leads on the delivery of Ireland's ambitious targets under Ireland's Climate Action Plan 2023 to have an expected 30% of our private car fleet switched to electric by 2030. ZEVI has four pillars of focus including: Policy & Legislation, Infrastructure, Stakeholder Engagement & Communication and Vehicles. Specifically in respect of the ITS Directive, ZEVI's Draft Strategy for Data Concerning Electric Vehicles Recharging Infrastructure contemplates (Chapter 5) both the ITS and AFIR data requirements. A key output of the Strategy is that ZEVI (with Transport Infrastructure Ireland) are delivering a national Data Exchange Platform (DXP) to provide free and unrestricted access to Charge Point Operator (CPO) and Mobility Service Provider data on publicly accessible recharging and refuelling points. The Platform will provide integrated access to static and dynamic data from all CPOs (initially) via the National Access Point (NAP).

The benefits of the system are:

- Enhanced EV Infrastructure: Centralises data from all CPOs, supporting a cohesive, accessible network of EV charging points across the country.
- Alignment with EU Standards: Supports Ireland in meeting EU requirements, ensuring compliance with EU-wide standards for alternative fuels infrastructure.
- Supports National Climate Goals: Facilitates the transition to sustainable transport by improving EV accessibility and reliability, which aligns with Ireland's carbon reduction commitments.
- Allows for Data-Driven Planning: Provides robust, real-time data insights to inform national EV infrastructure development, optimise resource allocation, and improve future planning.

The DXP will go live in 2025.

Dublin City Council

- The SCATS traffic control system and related ITS systems in Dublin City Council has been deemed an essential service by the Department of Transport and so falls under the NIS 1 + 2 directives.
- The SCATS Traffic control system has continued to be expanded as it now has the ability to connect up to 1245 apative controllers simultaneously.
- The SCATS system has now had the cornerstone software to provide better graphic capability and provision of CITS services added to its functionaility with a migration path to this platform underway.
- The EU Interreg project BE-PROACT still in progress with a number of European partners including Rijkswaterstadt, this aims to be able to maintain our ITS infrastructure by adopting a more pro active approach to maintenance based on deep analysis of the fault records.
- Dublin City Council Bus Priority systems DPTIMS has been upgraded to now include feeds from Dublin Bus and the Go Ahead bus fleets including scheduling information.
- The next generation AVL project is underway with design work on the next generation DPTIMS system underway and a whole series of specification changes being undertaken.
- The HGV permit on line management system has now been successfully migrated to a brand new software platform from the 2007 version.

- THE DCC asset and fault management system has been successfully installed at a number of other locations, including to manage all of the TII motorway and road asset ITS infrastructure and provide the automatic fault notification, and providing the asset and fault management for Dublin Fire Brigade. This system continues to be enhabced and data from this system is being analysed as part of the BE_PROACT project.

South Dublin County Council

Since 2020, South Dublin County Council (SDCC) has been actively enhancing ITS infrastructure through several key initiatives:

- Urban Traffic Control (UTC) Cloud Deployment: SDCC has been progressively installing UTC cloud-based systems on traffic light controllers to improve traffic flow and facilitate seamless communication between controllers. This modernisation enhances real-time monitoring and adaptive signal control, leading to reduced congestion and improved journey times.
- Micro Smart Detector Deployment: To enhance data collection and inform future mobility planning, SDCC has installed Micro Smart Detectors at four key locations. These detectors collect critical traffic data, which is shared with the NTA. The insights gained from this data will contribute to more efficient and data-driven urban planning and transport management strategies.
- Stakeholder Engagement: SDCC remains actively engaged with key stakeholders, including:
- **National Transport Authority (NTA)** – to ensure alignment with national transport objectives and funding opportunities.
- **Transport Infrastructure Ireland (TII)** – for integration with national road and traffic management strategies.
- **Luas (Transdev Dublin Light Rail)** – to coordinate traffic signals with tram operations and improve multimodal transport efficiency.
- **Department of Transport** – for policy alignment and regulatory compliance.

Through these initiatives, SDCC continues to play a proactive role in advancing Intelligent Transport Systems, contributing to a more efficient, sustainable, and integrated transport network in South Dublin.

Dún Laoghaire-Rathdown County Council (DLRCC)

Over the last four years (since 2020) 26 new sites have been added to the SCATS system and 57 sites have been upgraded or added to the SCATS system that were previously standalone sites /junctions. It is anticipated with the number of new developments, Bus Connect and Active Travel project being rolled out in DLR, the number of sites connected to the SCATS system will increase at a similar or higher rate for the next five years.

Cork City Council

Cork City Council has a ten-year ITS Policy for the city, aligned with the Cork Metropolitan Transport Strategy (CMATS), which defines four primary themes for concentration as follows:

The four key themes help to deliver on the CMATS principles, including those that address safety, efficiency, sustainability, and connectivity.

The ITS Strategy document which was completed in 2023 develops these four key themes for future ITS initiatives across 11 key strategic objectives outlining the need for investment of circa €108 million.

The council recognises that current ITS infrastructure needs significant investment to fully support all mobility modes in the city. This investment is needed not just for capital projects, but also for ongoing maintenance and to meet future service expectations.

A notable step in delivering these strategic objectives is the recent recruitment by Cork City Council of an ITS data analyst in 2024. The role is crucial in supporting ITS Services and developing the use of intelligent data collection and use. The data analyst will be instrucmental in:

- Understanding Active Travel Patterns: Analysing data related to cycling and pedestrian movements to identify areas of high demand, bottlenecks, and opportunities for improvement.
- Monitoring Performance: Tracking the usage and effectiveness of active travel initiatives to ensure they are meeting their goals and identify areas for further development.
- Integrating with Public Transport: Exploring how data can be used to better integrate active travel with public transportation, creating a seamless and attractive multimodal system.

By combining strategic planning with data-driven insights, Cork City Council aims to create a more robust and user-friendly multi modal network, encouraging sustainable transportation choices and contributing to a healthier and more livable city.

Limerick City and County Council

Limerick City & County Council (LC&CC) has continued to utilise ITS on the metropolitan transport network. This report identifies the ITS related activities undertaken by LC&CC for the years 2023-2025 and includes reference to some schemes which are intended to be implemented in the future. It should be noted that the ITS activities described in this report are confined to the Limerick Metropolitan Area only and does not include the wider Limerick County Area, this is consistent with the approach agreed for the 2023 report.

It should also be noted that there is additional ITS infrastructure and systems deployed across the Limerick Metropolitan Area which is outside the control of LC&CC and for which LC&CC do not hold data. These have been excluded from this report. Those that are not included are:

- Public Transport Real Time Passenger Information;
- Bus Éireann systems and data;
- Irish Rail systems and data;
- Regional Bike Share scheme;
- Port of Foynes information;
- Limerick Docks information;
- N18 / M7 PPP scheme;
- RSA Road Accident Statistics.

This report identifies the budgeted spending of LC&CC for each of the years in question. As LC&CC currently have numerous ITS hardware and software in place, a significant volume of ITS spending relates to the maintenance and upkeep of equipment and systems already in-situ. The spending on ITS undertaken by LC&CC broadly falls under the following headings:

- Adaptive Urban Traffic Control (AUTC);
- Parking Guidance Systems;
- Variable Message Signage;
- e-Parking;
- Closed Circuit Television (CCTV);
- Driver Feedback Signage
- Vehicle Access Control
- Active Travel Schemes

1.3. Contact information

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2. MAIN PROJECTS, ACTIVITIES AND INITIATIVES

2.1. Priority area I. Information and mobility ITS services

2.1.1. *Description of the main national activities and projects*

Description of the relevant initiatives, their objective, timescale, milestones, resources, lead stakeholder(s) and status:

Transport Infrastructure Ireland

Project/Activities	Description
DATEX II roll out	**Partners:** DoT, TII, NTA Following the initial rollout of DATEX II (the European traffic data exchange protocol) as a national standard for the provision and exchange of traffic data between third parties, this has continued to be applied as the data transfer protocol to new projects. **Status:** Completed, operational for existing data transfer operations, ongoing for new data exchanges with third parties
Weigh in Motion Data Integration	**Partners:** TII This project will integrate Weigh in Motion (WIM) data into TII's Network Operations. WIM sites will collect weight information on the vehicles on the road network. In addition to five existing sites, TII are investing in ten new WIM sites. The WIM Data Integration project will transform the vast quantities of data that will be gathered into actionable insights which can be used to inform the management of TII's road network. TII are making this data available to relevant stakeholders to inform a safe and sustainable approach to infrastructure design, asset management and protection. The project has four main parts which are detailed below. **Data Management Solution:** Data ingestion, data management and data cleansing infrastructure are being developed to store and process the WIM data. **Operational Analytics:** Analytics to support the ongoing operation of the WIM sites, including the ongoing assessment of the Contractor's Service Levels. **Traffic Loading Analytics:** Comprehensive suite of user friendly, easily accessible dashboards with key traffic loading metrics which will inform a safer and more sustainable approach to infrastructure design, asset management and protection on TII's road network. Dashboards to be shared with multiple different stakeholder groups including Department of Transport, An Garda Síochána and Road Safety Authority. **Status:** Ongoing

OPEN DATA / SmartCities	**Partners:** DoT, TII, NTA, Local Authorities
	Site: www.Dublinked.ie, data.gov.ie, data.tii.ie, www.corkparking.ie
	This important initiative, in line with the eGov Strategy 2012 and the Re- Use of Public Sector Information Directive 2003, included in the 2014 Progress Report has continued to be developed and expanded throughout the 2014 to 2017 period. The initial portal (207 Data Sets, 60 transport), focusing on information supplied by the four local authorities and the National Transport Authority in the Greater Dublin Area, has been supplemented by a national open data portal data.gov.ie (5328 data sets, 349 transport) and other portals such as data.tii.ie (25 data sets).
	Public Sector organisations are examining and cataloguing the information they collect to increase the amount of data that can be published online.
	Organisations such as TII now provide portals to their own data stores to publish multiple datasets in areas such as Intelligent Transport Systems, Road Safety, Light Rail, Network Operations and Traffic Data.
	Local authorities such as Cork City Council, are engaging in actively opening up their data. In collaboration with Cork Institute of Technology, Cork City Council have provided access to real-time data on the availability of parking in the multi- storey car parks and Park'n'Ride facilities. The data can be accessed via www.corkparking.ie on the Cork Smart Gateway at data.corkcity.ie/dataset/parking in addition to other datasets. The datasets are shared across multiple portals allowing easy access to the data.
	Status: Complete, operational, being developed
Real-Time Journey Information	**Partners:** TII, Local Authorities
	TII continue to plan and deploy different Real-Time Journey Information technology on the network. These include upgrading the existing deployments, such as on the M50, renewal and upgrade of existing devices, such as the M1, and new dense deployments, such as the N40 in Cork.
	Journey time info is provided via VMS, the website tii.traffic.ie and the DatexII feed. Incident info is provided via VMS and the website and will be added to the DatexII feed later this year.
	The travel times provided by TII on data.gov.ie provide free flow and normal expected travel times for the TEN-T Core motorways: M1, M50, M7, M9 and TEN-T comprehensive M6 and M4.
	Additional Variable message signs deployed since 2020 on the M50 improve the information that is relayed to motorists in regard safety

	related events. The source for the data includes CCTV, notification by members of the public via telephone, and notification from incident response staff. Indications are provided by ANPR data, Inductive loop data and data from weather stations.
	Several other deployments are planned, for the Major Inter Urban Routes as part of the TII ITS Implementation plan, to supplement the existing Real Time Journey Information devices and provide greater granularity in the data that is provided to traveling public.
	Status: on going
Average Speed Enforcement Pilot on the M7	**Partners: TII** The implementation of ANPR cameras and specialized software for an average speed enforcement trial along the M7 serves a crucial purpose. The primary objective of this initiative is to enhance the safety measures at a particular location that has frequently experienced weather-related and micro-climate events, primarily hailstorms. These events have unfortunately led to a rise in the frequency of collisions within this area. Conceived as a pilot project, its core focus was to evaluate the system's performance and gauge its effectiveness in elevating safety standards. On the significant date of April 25, 2022, a pioneering mainline Average Speed Safety Camera system was successfully launched along a 9km stretch of the M7, specifically between Junction 26 and Junction 27. This innovative system operates in both eastbound and westbound directions, thereby encompassing a substantial area of travel. **Status**: Complete, operational
Dunkettle Advanced (DKA) ITS Deployment	**Partners:** TII, Cork County Council The deployment of ITS equipment on as part of the Dunkettle Advanced works focus' on the road network adjacent to the Jack Lynch Tunnel in Cork. The aim of the project was to implement an ITS scheme that will support an effective and real-time monitored road, while ensuring the protection of its strategic core function. For the DKA scheme there was focus on identifying overheight vehicles which may be heading for the Jack lynch Tunnel & safely diverting them away from the Tunnel without disrupting traffic. The project also aims to support the management and the mitigation of the safety and reliability impacts that result from the current congested conditions around the Dunkettle Interchange, which are currently threatening the strategic function of the road network in the area whilst also providing information to motorists regarding the Construction work being undertaken on the new Dunkettle Interchange. Moreover, managing the capacity in a physical constrained road network around the Jack Lynch Tunnel will be fundamental to tackle the Cork's forecasted population growth in the coming years and its consequent future traffic demand.

	The deployment of ITS equipment on the DKA scheme is focused on the three following priorities:
	- Allow the **traffic management** and strategic management of the road infrastructure; - Implement a robust network of **Incident Detection** on the that will improve road safety, lower response times and chock-wave impacts on the road infrastructure; - Allow the provision of **real-time road network information**, that allows the management of construction works, diversions and permits informed decisions by users when facing congestion, incidents, weather adversities, road closures and other situations. - Identify Overheight vehicles which are heading for the Jack Lynch Tunnel **Status**: ongoing
Dunketlle interchange	**Partners:** TII This project will see the installation of ITS equipment in and around a newly constructed Interchange in the vicinity of the Jack Lynch Tunnel in Cork City. The ITS equipment being installed includes Variable message signs in the Form of Strategic message signs, Tactical message signs and Lane Control Signals. In addition to VMS PTZ CCTV cameras, Journey Time ANPR cameras, Traffic Monitoring Units and Over height Vehicle Detection systems are being installed. To support the closure of the Jack Lynch Tunnel, automatic barriers and supporting Wig Wags and Traffic Signals are being installed. To provide communications to the Motorway Operations Control Centre (MOCC), Fibre Optic cabling is being installed to connect each piece of equipment to the MOCC via the Tunnel Management Build at the Jack Lynch Tunnel. The provision of this ITS equipment will allow the MOCC operators to manage the road network more efficiently whilst allowing the road users to make informed decisions about their journey. **Status:** Ongoing
Communications Infrastructure for ITS	**Partners:** TII TII are engaged in the development of their ITS Communications Infrastructure under a number of headings: Infrastructure Improvement– TII is engaged in a programme of upgrade of telecommunications ducting in the road verge to bring them up to a standard that is appropriate for the installation of fibre optic cable. This involves infilling of gaps

	of the ducting on the network and testing and repair of existing ducting. • Fibre Optic Roll Out – TII continues to roll out fibre optic cable for dense ITS deployments, such as the N40 Project, and developing their current fibre deployment, such as the M50 and M1. TII, as part of their 5 year ITS Implementation Plan, are also planning the deployment of fibre optic cable on the Major Inter Urban routes for both ITS and C-ITS deployments. • Wireless Deployments – Where appropriate TII are continuing to roll out wireless and cellular technology to reach last mile and remote devices, such as CCTV, Traffic Monitoring Units, ANPR, VMS, etc **Status:** ongoing
National ITS Architecture	**Partners:** DoT, TII, NTA TII is currently developing its overall data strategy and architecture which will incorporate their ITS data. This will define how data/information is retrieved, stored, secured, shared and disseminated, such as through the Open Data Portal. (LINK: https://data.tii.ie/) *Status: Ongoing*
Major Inter-Urban ITS projects	**Partners:** TII TII are developing their 5 year ITS Strategy and accompanying ITS Implementation Plan. The primary focus of these are on the Major Inter Urban Routes, to tie in with the Dublin and Cork Regional deployments. The strategy aims to deliver varying service levels across the network, based on defined criteria (e.g. Weather Events, AADT, Accidents, etc). These service levels focus on Monitoring, Provision of Information, and Control. To facilitate these service levels requires different device deployments, including: • Deployment of road VMS approaching interchanges, incidents of frequent weather events, areas of high AADT. • CCTV at key interchanges and high AADT • ANPR journey time across the MIU network • Supplementing the existing Traffic Monitoring Units • Weather detection devices • Fibre optic and wireless communications **Status:** ongoing
Upgrade and Coordination of Traffic Management Centres	**Partners:** DoT, TII, Local Authorities All Traffic Management Centres in Ireland undergo continuous upgrade, be it to facilities, systems or interconnectivity. These updates/upgrades are undertaken to provide better traffic management and provision for dealing with emergency operations, ensure speedier and better response to any incidents or emergencies that arise and enhancing service provisions to other

	authorities across the regions and country. TII's Motorway Operations Control Centre was completed at the end of 2019. The main control room features a 3m-high, 15m-wide, 4.2-million-pixel video wall, which displays real-time feeds from the motorway CCTV camera network. It allows motorway and tunnel operators to spot developing incidents, enlarge views of incidents as they occur, and study CCTV images in detail before making decisions. In 2023, transition from the legacy Traffic Management system to the new Network Intelligence & Management System will continue. This allows for increasing levels of functionality and number of services that will be required presently and in the coming years. Variable speed limits continue to be deployed on a phased basis, currently between Junction 4 to Junction 12 on the M50, and also Junction 3 – 4 southbound., with the use of Cautionary Speed Limits. The primary legislation was passed in June 2023 for the display of regulatory speed limits and Red X Lane control. **Status:** Ongoing

Local Government Management Agency

Delivery of a nationally standard and consistent asset management and road opening licensing system across the entire public road network. The system is centrally hosted and records information on public road network asset, condition and structural performance of the network as well as location and management of road openings arising from statutory undertaker works.

Two key agencies have been added to the userbase for the asset management system. The National Transport Authority and Transport Infrastructure Ireland are budget holders for key strategic projects on active travel and national roads.

South Dublin County Council (SDCC)

South Dublin County Council (SDCC) has been actively contributing to national Intelligent Transport Systems (ITS) initiatives aimed at optimizing road, traffic, and travel data. The key projects and initiatives include:

Urban Traffic Control (UTC) Cloud-Based System:

- **Objective**: Enhance traffic flow and communication between traffic signal controllers to improve real-time management.
- **Timescale**: Ongoing implementation since 2022, with further expansions planned for 2025.
- **Milestones**:
- Initial deployment at key junctions (2022-2024).
- Expansion of cloud-based coordination to all UTC Traffic Light Controllers completed in 2024.
- **Resources**: SDCC internal traffic management team.
- **Lead Stakeholder(s):** SDCC, National Transport Authority (NTA).
- **Status**: Actively operational at multiple sites, with additional deployments planned.

Micro Smart Detector Deployment:

- **Objective**: Improve data collection for traffic movement analysis and future transport planning.
- **Timescale**: Deployed in 2023, with further assessments and possible expansions in 2025.
- **Milestones:**
- Installation at four strategic locations (2023).
- Data-sharing with NTA (2023).
- **Resources**: SDCC, NTA funding, ITS technology providers.
- **Lead Stakeholder(s):** SDCC, NTA.
- **Status**: Fully operational and actively contributing data for future planning.

Kildare County Council

KCC implements remote monitoring within the Traffic Management Centre for signalised junctions in both urban and rural environments along with:

- CCTV cameras for traffic management purposes; and

- Provision of Driver Speed Information Feed Back Signs

Cork City Council

ITS Strategy Implementation Update (milestones dependent on funding)

1. Cork City Council Road Lighting upgrade project (milestones dependent on funding)

2. Pedestrian demand harmonisation

3. ITS Maintenace contract

4. Bus Service Improvements project (5 years)

5. EV Charging Infrastructure Strategy implementation (5 years)

Limerick City and County Council

Maintence of existing infrastructure and signals inherited from Active Travel schemes.

Adaptive Urban Traffic Control

Limerick City and County Council operate an Adaptive Urban Traffic Control system since 2003. This system includes both SCOOT traffic control and MOVA controlled junctions covering a large portion of the metropolitan road network. The system components also include UTC, Fault Management, Remote Management and bus priority. These systems are managed from a dedicated Traffic Management Centre. There are approximately 70+ no. traffic signal controllers connected to the LC&CC urban traffic control system (for control, monitoring or both). Each of these sites gathers data in relation to traffic volumes and can provide congestion and incident detection capabilities.

Additionally, there are 20 no. MOVA controlled traffic signal junctions on the metropolitan network. These sites also gather data from the road network including traffic volumes, congestion and incident detection. The AUTC server was upgraded in 2020, UTC-UX Server, this will need to be upgraded again to a cloud server where upgrades can be applied more readily.

The AUTC relies on a communication network to provide control centre to site and site-to-site communications. This network has been upgraded to a digital system. LC&CC has undertaken a programme to upgrade the communications network to fibre optic cable where possible and this is currently under review.

LC&CC's old RMS (Remote Monitoring Service) system is aging and is being replaced with STRATOS, we are upgrading this on a site by site basis, based on funding available. This involves the use of newer IOT Jasper spec SIMs which is replacing 3G Network SIMs which is no longer being supported. Approximately 40+ sites need to be upgraded with 10 planned for this year, this is a combination of old and new sites.

<u>CCTV</u>

Limerick City & County Council's metropolitan area CCTV system is linked to the AUTC system. There are approximately 32 no. ITS related CCTV cameras deployed on the metropolitan network. Due to General Data Protection Regulations LC&CC cannot access any footage from these cameras, this is expected to remain the case until legislation is enacted to allow this use of CCTV Cameras.

<u>Parking Guidance System and Variable Message Signage</u>

A parking guidance system within Limerick city centre was developed and installed in 2012. This comprises static, semi-static and fully variable message signs (VMS). There are approximately 27 no. semi-static parking guidance signs currently deployed. There are also approximately 10 no. VMS deployed on the network. These are primarily located on the approaches to the city centre. As 3G network is no longer supported and these signs cannot be upgraded, new investment is required for the signs and the server in order for this system to be operable again.

<u>E-Parking</u>

The Limerick City e-Parking initiative, currently has approximately 45,000 customers. The system permits parking to be purchased over the phone or through a mobile application. All on-street parking spaces within the metropolitan area are payable via e-parking which equates to approximately 4,169 spaces. Currently, approximately 73% of LC&CC parking transactions are performed through an e-parking phone application.

In addition to this, approximately 5,264 (privately operated) off-street parking spaces are also within the system. A pre-booking facility is also available for motorists to book and pay for parking in advance. It is expected that the number of off-street parking facilities served by this system will extend over the coming years.

<u>Driver Feedback Signage</u>

Driver feedback signs have been deployed by LC&CC in approximately 20 locations within the metropolitan area. These signs record vehicular speed and display a message to the driver of the vehicle indicating their speed or compliance with speed limits. These signs also record the speeds of each vehicle detected.

2.1.2. *Progress since 2023*

<u>Description of progress in the area since 2023</u>:

Local Government Management Agency

Systems can record more engineering detail on the maintenance and improvement works carried out on the public road network and works carried out on the national road network are now catered for in the system.

A new module is catering for the addition of the active travel network to the database of public roads

The RMO shared service is undertaking a procurement exercise to make traffic and speed data available to local authorities for use in the management of the public road network.

South Dublin County Council

Since 2023, SDCC has made significant advancements in the collection and utilisation of road and traffic data:

- **Deployment of Cloud-Based UTC Systems** has improved real-time coordination of traffic signals, reducing congestion and improving journey times.

- **Micro Smart Detectors Installed at Four Locations** now provide critical traffic data, supporting future development and planning.

- **Enhanced Stakeholder Collaboration** with NTA, TII, and other agencies has improved the efficiency of data-sharing mechanisms.

SDCC remains committed to leveraging ITS solutions to optimise traffic management, improve road safety, and support sustainable transport planning in line with national and EU directives.

Kildare County Council

Increase in infrastructure as follows:

- Monitored Signalised Junctions from 95-98 sites
- Monitored Signalised Pedestrian Crossings from 136-140 sites
- 115 CCTV monitoring sites with upgrading of software and communication network; and
- Driver Feed Back Signs. Adaptive Urban Traffic Control

Cork City Council

ITS Strategy Implementation Update

Since the last report in 2023, the ITS section has made significant strides in advancing its key strategies, building upon the foundation laid since 2020. These advancements are driven by a multi-faceted approach encompassing collaboration, adoption of new technologies, upskilling existing staff, and strategic recruitment which has enabled progress across several critical areas:

Strategy A Ensuring safe and equitable use of the Road Network

1   Pedestrian demand harmonisation

Since 2023, the city has undertaken a significant number of upgrades to improve active travel and pedestrian safety. Two distinct projects, each impacting approximately 50 junctions, have been implemented. The first project focused on enhancing cycling infrastructure, with the installation of cycle detection and/or counting equipment at approximately 50 junctions. This data collection could be utilised to inform future planning/development of cycling routes and facilities. Separately, another set of approximately 50 junctions has seen improvements aimed at pedestrian safety, specifically the installation of audio tactile push button facilities and other crossing enhancements. These upgrades are designed to make roadways safer and more accessible for all pedestrians, especially those with visual impairments. While these projects are distinct, both contribute to the city's broader goal of creating a more walkable, cyclable, and inclusive urban environment. These combined upgrades across approximately 100 junctions since 2023 demonstrate the city's commitment to prioritising active travel and pedestrian safety.

These improvements are important steps towards creating a more sustainable and people- friendly city. By making it easier and safer to walk and cycle, we can encourage more people to choose these modes of transport, which will help to reduce traffic congestion, air pollution, and greenhouse gas emissions.

2   ITS Maintenace contract

In 2024, Cork City council and the ITS Section initiated a new comprehensive Maintenance contract designed to significantly enhance ITS infrastructure. This contract addresses a key challenge: the modernisation of on-street equipment, a substantial portion of which has reached the end of its operational life. This new agreement, covering both planned and reactive maintenance along with related services, will play a vital role in achieving the objectives outlined in Cork City's 10-year ITS Strategy. It provides a structured approach to upgrading the City's aging assets, improving the overall resilience of equipment, and enhancing operational safety. This investment in infrastructure will ensure more reliable service, minimise disruptions and support the long-term goals of the ITS section.

This new comprehensive maintenance contract, will be instrumental in several key areas over the coming years:

- Accelerated Progress on 10-Year ITS Strategy: The contract directly supports the strategy's objectives by providing the resources necessary to systematically upgrade on- street equipment. This will accelerate progress towards achieving long-term strategic goals.
- Addressing Life-Expired Inventory: Much of our inventory is currently beyond its lifespan, this contract provides a structured approach to replacing and upgrading these outdated assets. This will improve reliability, reduce downtime, and enhance the overall performance of the ITS infrastructure.
- Enhanced Equipment Resilience: The combination of planned preventative maintenance and responsive reactive maintenance will increase the resilience of our ITS equipment. This will minimise disruptions, improve service availability, and contribute to a more robust and reliable system.
- Improved Operational Safety: Upgrading life-expired equipment and implementing a comprehensive maintenance regime will significantly improve the safety of operations. This will reduce the risk of accidents, protect personnel, and ensure a safer environment for all.

Strategy B Intelligent Data Collection and Use, Digital Infrastructure, - Data as an Asset: The addition of a Data Analyst has been pivotal, enabling us to leverage data more effectively. This new expertise is being applied to refine data collection methods, optimise our digital infrastructure, and fully realise the value of data as a strategic asset.

Strategy C Create a Collaborative Test Environment for Technology Evaluation: The ITS Section has actively participated on many applications for European projects to strengthen knowledge of best practice but to also offer the certain sites as sand boxes for future implementation of ITS solutions.

Strategy D - Making Data Work for All: We are actively collaborating with numerous stakeholders in a collaborative approach to provide a mobility dashboard which will provide internal data-driven insights inform future decisions on the network.

Strategy E - A Comms Network that is Fit for Purpose: Substantial infrastructure improvements have been implemented, including expanding our fibre network and upgrading communication devices. These enhancements provide better redundancy, flexibility, and ultimately a more efficient and multi-modal approach to managing our junctions. This, in turn, facilitates quicker responses from our traffic control center.

Strategy F - Positioning ITS at the centre of Sustainable: We have moved all assets to a new asset management system where all faults are now also managed under one system over their lifetime.

Strategy G Positioning Cork for Emerging Mobility: We are collorborating with regional gateway sities to strengthen a consistenct approach to ITS but also to collaborate by mutal agreement on service improvements.

1. Bus Service Improvements

In 2024, Cork City Council signed a Memorandum of understanding with Limerick City and County in collorborating in adaptive urban traffic control to seek to deply technology and techniques to improvement Bus service times in the city. This project is subject to support by the NTA to ensure a dedicated staffing resource is provided to prioritise this ITS objective over the next 10 years.

2   EV Charging Strategy

In 2024, Cork city Council adopted through Council their EV public charging infrastrucuture strategy document and the implementation is subject to resourcing by ZEVI to commence in 2025.

Strategy H Positioning **ITS at the centre of Sustainable mobility**

Cork City Council Road Lighting upgrade project

Significant progress has been made in modernising public lighting and reducing energy consumption. A total of 3,071 LED lanterns were installed in 2024, contributing to a substantial overall increase in LED coverage.   At the end of 2024, 70.30% of the network utilised LED lanterns, an 11.90% increase from the end of 2023. This ongoing transition has resulted in a remarkable reduction in both energy usage and CO2 emissions.

Here's a breakdown of the key achievements: LED Lantern Installations:

2022: 2,858 installations

2023: 3,547 installations

2024: 3,071 installations

LED Coverage: 70.30% of the network at the end of 2024 (11.90% increase from end of 2023) Energy Consumption Reduction (CCC): Decreased by 13.5%, from 7,130 MWhrs in 2023 to

6,166 MWhrs in 2024.

Average Billable Wattage Reduction (CCC): Decreased by 8.87%, from 73.70 watts per lantern to 64.93 watts per lantern.

Overall Impact:

Total wattage reduction: 155,065 watts

CO2 emissions reduction: 512,320 kg

This positive trend is the result of continued investment in LED upgrades

Limerick City and County Council

Adaptive Urban Traffic Control

Five new MOVA controlled traffic signal junctions were installed on the regional road network in the metropolitan area.

Subject to funding, end of life UTC is upgraded which includes traffic signal controller upgrades and revalidation of individual sites and cells.

All analogue communication network equipment has been replaced with digital systems. The Remote Monitoring Service (RMS) via sim cards is being phased out, it is still operational at present and the sim card service provided has changed from Vodafone to Three. As works allow, extension of the fibre optic network is carried out subject to funding and almost 90% completed in the City Centre in the Central Business District area.

Annual maintenance, upgrade and replacement of Traffic Signal Control and its equipment comprises a significant amount of the maintenance works. The number of traffic controlled sites within the metropolitan area requires continued maintenance and preventative maintenance.

- LC&CC have also provided traffic signal equipment replacement at a number of sites. As deployed equipment reaches its end of life state, replacement equipment is provided as necessary but this is subject to funding being available. Additional funding is currently required to allow the replacement equipment of end of life equipment.

- Three traffic signal junctions upgraded at:

Dublin Rd. / Park Rd.

Rhebogue Rd. / Park Rd.

Pa Healy Rd. / Park Rd.

Bus detection is currently linked to the UTC system using loops. Limerick City & County Council will rebuild the bus detection system at selected locations of the Metropolitan Area subject to Bus Connects, Active Travel and the bus fleet. Two sites selected for bus detection trial, Shannon St. / Henry St. and Newtownmahon / Mulgrave St.

E-Parking

E-parking is currently in use for 4,169 on-street parking spaces in Limerick Metropolitan Area, as well as spaces 17 off-street car parks in the city. Approximately 73% of parking transactions are currently carried out via e-parking.

LC&CC have deployed Ireland's first real time system for locating and navigating to accessible parking spaces. Users of the Limerick e-Parking service can use the system to locate accessible parking and when used in conjunction with an Apple Carplay vehicle entertainment system, the service provides real time navigation to the nearest accessible space. This is achieved by the use of parking sensors at each parking space.

6 No. electrical vehicle charging sites (12 spaces in total) have been provided, these also have been fitted with parking sensors.

LC&CC have engaged two service providers of the e-Parking system (back-end system and transaction and court service processing).

An additional cost is incurred per annum for operations and maintenance of e-parking systems, including the upgrade of handheld and radio systems.

Noise is monitored by Limerick City & County Council's Environmental Department https://www.limerick.ie/council/services/environment/environmental-control/noise-nuisance .

Bicycle parking is currently not monitored by U.T.C. , one on-street bicycle stand was monitored by CCTV but this can no longer be used for this purpose in accordance with GDPR. There are three secure bicycle storage locations: Michael St, Cecil St., Sarsfield St.

The bike share scheme launched in 2014 continues to operate under Transport for Ireland (TFI). As this is part of a nationwide project which is operated by the NTA, the cost was not borne by Limerick City & County Council.

2.1.3. *Delegated Regulation (EU) 2017/1926 on the provision of EU-wide multimodal travel information services (priority action a)*

<u>Progress made in terms of the accessibility, exchange and reuse of the travel and traffic data types set out in the Annex:</u>

National Transport Authority

During 2023 the NTA's GTFS feeds were continuously updated to reflect the changes to public transport services and infrastructure (e.g. stops and stations).

New Travel Information Systems and Services (TISS)

In March 2023 NTA launched a new centralised Travel Information Systems and Services (TISS), which included the provision of a new national multi-modal journey planning system (mobile app and website) covering all modes of public transport and including Real Time Passenger Information (RTPI). Since launch the mobile app (called "TFI Live") has been downloaded over 1.3m times. During 2024 minor enhancements were made to the core solution. Future enhancements are likely to see the inclusion of bike share schemes and other mobility providers as well as an update to the user interface.

New Automatic Vehicle Location (AVL) System

In 2023 NTA completed a public procurement competition to secure a supplier for a single on-bus Automated Vehicle Location (AVL) system in order to consolidate and centralise the provision of RTPI information which is provided to the new national multi-modal journey planning system (mobile app and website), and which is also displayed on the on-street display signs at bus stops around the country. The design of the solution, which will replace five separate AVL systems with a single centralised modern system that produces consistent data feeds as well as providing better predictions of bus arrivals for RTPI, addition of passenger counting systems, and will offer cost efficiencies across the whole system (one back office rather than five, and one that can be further expanded) was significantly progressed during 2024. This included preparatory works on hundreds of buses (e.g. wiring improvements) to prepare for the installation of the new AVL hardware as well as conducting implementation workgroups with each of the participating bus operating companies. Installation of the new AVL devices on buses will commence in 2025.

Upgraded Displays and New Displays Procurement

In 2023 the NTA completed a procurement competition to appoint a supplier of on-street display RTPI signs, including additional options such as battery powered displays and displays that can be incorporated into new bus stops. During 2024 the first batch of these new RTPI signs were deployed at bus stops across Ireland and it is expected that during 2025 additional displays will be deployed as part of a nationwide project to improve bus stop infrastructure.

In parallel with the implementation of the new TFI Live app, NTA has added additional data managers to validate and improve the accuracy of the data that is published on the NAP.

South Dublin County Council

South Dublin County Council (SDCC) is actively working on improving accessibility and the exchange of relevant traffic and travel data. Currently, data related to real-time traffic signal operations, pedestrian crossings, and roadworks are collected and shared with relevant stakeholders. Integration with the National Transport Authority (NTA) and Transport Infrastructure Ireland (TII) is ongoing to enhance multimodal travel information services.

Limerick City and County Council

2023: Second phase of sensors to detect occupancy of disabled bays/parking spaces in Limerick City

<u>Geographical scope of the data set out in the Annex accessible via the national access point, and their quality, including the criteria used to define this quality and the means used to monitor it:</u>

South Dublin County Council

The data provided covers the South Dublin administrative area, with key datasets including real-time traffic signal information, and pedestrian crossing data. Data quality is ensured through continuous monitoring via our traffic management systems and periodic validation against field conditions. Quality criteria include data accuracy, update frequency, and system reliability. Monitoring is carried out using asset management tools and traffic control systems.

<u>Linking of travel information services:</u>

South Dublin County Council

SDCC is collaborating with the NTA and TII to integrate travel data into national platforms, ensuring seamless information sharing across multiple transport modes. Existing data feeds are being reviewed to ensure compatibility with national systems.

Limerick City and County Council

Working with Automatic Vehicle Location (AVL) working group set up with Limerick City and County council Traffic Section and An garda Siochana for large scale events e.g. sporting, concerts and parades. Two sites selected for bus detection trial, Shannon St. / Henry St. and Newtownmahon / Mulgrave St.

<u>Results of the assessment of compliance referred to in Article 9</u>:

South Dublin County Council

As part of national efforts, SDCC aligns with the guidelines set regarding compliance with EU regulations. Compliance assessment is coordinated at the national level, and SDCC provides relevant data to support this process.

<u>Where relevant, a description of changes to the national or common access point</u>:

South Dublin County Council

At present, SDCC does not directly manage a national access point but contributes data through existing transport hubs managed by the TII.

<u>Additional information (e.g. have mobility DCAT-AP or other metadata catalogues been implemented?)</u>:

National Transport Authority

Ireland's Open Data Portal, located at: https://data.gov.ie, serves as the National Access Point (NAP). This National Access Point serves each of the Delegated Regulations.

The Open Data Portal is hosted by the Irish Department of Public Expenditure and Reform and has been continuously updated. The NTA publishes 15 transport related datasets on the portal, 6 of which are available via APIs.

Included in these datasets is the Irish profile NeTEx and information about public transport services and infrastructure in Ireland, including GTFS real-time arrivals and departures (see below for more details), National Public Transport Access Nodes (NaPTAN) dataset containing detailed information of all public bus stops in the Republic of Ireland, as well as transport operator schedules (timetable data).

The full list of NTA datasets is as follows:

- National Public Transport Access Nodes (NaPTAN)
- Operator GTFS Schedule files
- Realtime Passenger Information (GTFSR)
- Transport Operator VDV 452 Data
- National Public Transport Gazetteer (NPTG)
- Public Transport Infrastructure Management System (PTIMS)
- Cycletrack & Buslane Survey Greater Dublin Area
- GDA Cycle Network Survey
- Greater Dublin Area Cycle Infrastructure
- Projected Cycle Lanes
- Cycle Counters
- Netex - Irish Profile
- THA24 - Passenger Journeys by Public Transport
- Public Transport Schedules and Stops

- Rural Transport Routes

South Dublin County Council

SDCC continues to enhance its traffic management systems to align with best practices in multimodal travel information services.

Information on the progress made since 2023:

Local Government Management Agency

The public road schedule is available on OpenData platform. It is refreshed annually.

Local authority roadworks programmes are made available to utility and telecommunications operators annually

2.1.4.   Reporting obligation under Delegated Regulation (EU) 2022/670 on the provision of EU-wide real-time traffic information services (priority action b)

Progress made in terms of the accessibility, exchange and reuse of the data types set out in the Annex:

Transport Infrastructure Ireland

A National Access Point (NAP) has been facilitated through Ireland's Open Data Portal. This can be found at https://data.gov.ie/data. The site has a Transport section and a number of contributors. Of direct relevance to ITS is data from Transport Infrastructure Ireland (TII), National Transport Authority (NTA), and Local Authorities.

South Dublin County Council

SDCC continues to improve the accessibility, exchange, and integration of real-time traffic data in collaboration with key stakeholders such as the National Transport Authority (NTA), Transport Infrastructure Ireland (TII), and Luas (Transdev). Our real-time data includes:

- **Traffic signals and junction operations** – live data from SDCC's Urban Traffic Control (UTC) system.
- **Bus Services** – Working on integration of bus priority measures on existing Traffic Signals
- **Luas Operations** – Coordination of traffic signals with Luas movements where applicable.

Geographical scope of the data accessible via the National Access Point, changes to the primary road network and to the data content of real-time traffic information services and their quality, including the criteria used to define this quality and the means used to monitor it:

South Dublin County Council

Quality Criteria:

- Data accuracy and reliability are maintained through continuous monitoring of traffic signals and road conditions.
- System validation is conducted via field inspections and automated fault detection in our UTC system.
- Real-time updates on disruptions (e.g., roadworks, incidents) are communicated through SDCC's internal systems and national platforms.

Monitoring Methods:

- Automated Performance Monitoring – Traffic signal controllers generate alerts for faults or unusual traffic patterns.

- Manual Review – Traffic management staff oversee live CCTV and data feeds to validate reported issues.

Results of the assessment of compliance referred to in Article 12 with the requirements set out in Articles 3 to 11:

South Dublin County Council

Where applicable SDCC provides data that supports national compliance efforts coordinated by TII and the NTA.

Where relevant, a description of changes to the national or common access point:

South Dublin County Council

No direct changes have been made by SDCC; however, we continue to provide traffic signal, roadworks, and updates to national platforms.

Additional information (e.g. what data types are being provided? Have mobilityDCAT-AP or other metadata catalogues been implemented? Are quality requirements being checked?):

South Dublin County Council

Data reliability is checked through automated alerts, manual verification, and ongoing system enhancements.

2.1.5. Reporting obligation under Delegated Regulation (EU) No 886/2013 on data and procedures for the provision, where possible, of road safety-related minimum universal traffic information free of charge to users (priority action c)

Kildare County Council

Any manual traffic management count data gathered is available free of charge. No requests have been made for data.

2.2. Priority area II. Travel, transport and traffic management ITS services

2.2.1. *Description of the main national activities and projects*

Description of the relevant initiatives, their objective, timescale, milestones, resources, lead stakeholder(s) and status:

Transport Infrastructure Ireland

Project/Activities	Description
Interoperable System for Electronic Tolling (Interoperability Management Platform)	**Partners:** TII The Interoperability Management Platform (IMP) facilitates tolling interoperability in Ireland. Its continues to perform this function which also facilitates automation of the Disability Tolling Exemption Scheme through which exemptions from toll payments are provided to eligible drivers of specially adapted vehicles.function has been extended during this period and has been a key component in the delivery of 2 new Irish initiatives such as the 'Low Emission's Vehicle Toll Incentive' (LEVTI) and the 'Disability Toll Exemption Scheme (DTES) (referenced under "Other initiatives"). These initiatives would not have been possible without the interoperability technical and contractual frameworks that are currently in place. Other works that have been undertaken is the creation of an IMSP Data lake, which pseudo anonymises toll interoperability data for ongoing archiving and is then made available for various research and analytics initiatives that are currently underway. The transition from the old IMSP (2nd generation interoperability platform) to the new IMP (3rd generation interoperability platform) was completed in February 2023, following a procurement and implementation project on behalf of Transport Infrastructure Ireland. The new platform includes certain enhancements, including compatibility with EFC standards and enabling of ANPR transactions, thus facilitating closer compliance with EETS. **Status:** Complete, Operational
Toll System Renewals and Upgrades	**Partners:** TII, DCC, PPP companies There continue to be 11 toll chargers and 4 toll service providers in Ireland, with ongoing enquiries from EETS Providers looking to join the market. The various road operators continue to manage and operate their own roads and operations according to their own contract restraints / requirements. Transport Infrastructure Ireland (TII) are responsible for the M50 and Dublin Tunnel toll systems. The operations of both systems has been outsourced. The procurement and implementation of a new (2nd generation) M50 toll operation

	TII are undertaking a significant upgrade / replacement of the Dublin Tunnel toll systems, with the implementation of a New Tolling System enabling the pre-classification and identification of vehicles approaching the toll barriers currently underway following earlier phases of optioneering, design and procurement. Gantries with toll equipment will be located in advance of the toll barriers such that exempt and pre-paid vehicles will be identified and the barrier will lift automatically. This will mean that such vehicles will not have to slow down or stop while the barrier will stay down for vehicles for which a toll payment is due. This project is planned to be complete in Autumn 2024. Separate to the TII related systems, various PPP companies have upgraded their backoffice systems and some Roadside Equipment in accordance with their own maintenance plans. **Status:** ongoing
CCTV Cameras	**Partners:** TII, Local Authorities A number of projects have provided the expansion of CCTV coverage of the transport networks including the installation of CCTV camera at key locations and linkage to Traffic Management Control Centres. The CCTV is used to monitor the traffic network, manage incidents and in certain authorities to monitor bus stop and bus lane usage for enforcement purposes. The upgrade of the CCTV control system has been undertaken. **Status:** Complete, Operational, and being developed
M50 Motorway - demand management Programme	TII have embarked on a project to deploy an integrated package of measures involving the construction of a new Motorway Operations Control Centre, significant deployment of ITS equipment on the M50 Dublin Ring Road and the implementation of a new Network Intelligence and Management System (NIMS) to control all ITS equipment deployed on the national road network. Procurement of circa 440 Advanced Matrix Indicator signs, 65 Variable Message Signs, 50 CCTV cameras and other ancillary equipment was completed. A separate procurement for the NIMS was similarly advanced in parallel. **Status:** Complete, Operational, and being developed
Disability Toll Exemption Scheme (DTES)	**Partners:** TII, Disability Driver Association of Ireland, Irish Wheelchair Association The Disability Toll Exemption Scheme (DTES) is a centralised national scheme in Ireland, enabling efficient management of toll exemption for modified vehicles under the tax exemption, (for people with disabilities). It started in 2018 and following significant stakeholder engagement over a period of 18 months, the scheme launched in February 2020, rectifying a longstanding issue for toll users and toll chargers.

	With this project, TII introduced a national card operator who manages toll exemption cards for drivers that owns a modified vehicles under the tax exemption scheme. This project required the management of multiple stakeholders including: all the national toll road operators, Disability Driver Association of Ireland, Irish Wheelchair Association, TII, the Interoperability Management Service Provider (IMP) and TII's legal representatives. **Link:** https://dtes.ie/ **Status:** Completed and ongoing
Low Emission Vehicle Toll Incentive (LEVTI) scheme	**Partners:** TII, toll road operators and service providers, DoT, SEAI The LEVTI scheme was launched in July 2018, to incentivise the use of Electric Vehicles. The scheme provides toll discounts/rebates for battery electric, and plug-in hybrid vehicles. The Scheme refunds vary depending on the toll collection location, the toll transaction time and day, the eligible vehicle type (e.g. BEV, PHEV, FCEV) and class (i.e. private, light goods vehicle, SPSV and HDV). This project required the management of multiple stakeholders including: all the national toll road operators, all national toll service providers (i.e. toll tag providers), DoT, SEAI, TII, the Interoperability Management Service Provider (IMSP) and TII's legal representatives. It is a project funded by DoT and every year DoT secured funding to support this EV scheme. The tolling Scheme is administrated by Transport Infrastructure Ireland (TII) on behalf of DoT. **Link:** https://etoll.ie/low-emissions-vehicle-toll-incentive/ **Status:** Completed and ongoing
Dublin Tunnel Tolling System Replacement	**Partners: TII, Egis Road and Tunnel Operations Ireland Ltd, Indra sistemas** A new hybrid tolling system that combines free-flow tolling technology with a conventional tolling barriered system to provide for enhanced traffic flows, increased automation and enhanced customer experience was introduced at the Dublin Tunnel toll plaza in 2024. **Status: Complete**

Dublin City Council

Provision of a new Regional Control Centre for the Dublin area. A major project is underway by Dublin City Council and with funding from the NTA to set up a new Traffic Management centre for the Dublin Region. This facility will be co located with the GARDA control centre and will allow for multiple agencies to work together on major planned events, crisis unplanned events with close copoeration between DCC, An Garda Siochana and emergency services such as the Dublin Fire Brigade. This location is also being equiped to act as the new Local Cocordination Centre for the Dublin Fire Brigade in a major emergency plan situration.

This centre will have multiple data feeds for Traffic management and monitoring, close interaction with public transport information and will have the facilities to best manage the number and scale of roadworks planned fro public transport projects over the next number of years.

It is planned that this centre will be fully functioning in early 2026.

In tandem with this project a major revision of the CCTV system in DCC is underway with the intention to procure a new and up to date Video management system, to allow for better security, easier sharing of information in a managed fashion and a system which is more NIS2 compliant from a cyber security point of view.

South Dublin County Council

SDCC is actively involved in the implementation and enhancement of Intelligent Transport Systems (ITS) to improve traffic management within the county. Key initiatives include:

1. Traffic Management System Upgrades

- **Objective:** Enhance real-time traffic monitoring and signal optimisation.
- **Timescale:** Ongoing, with phased implementation.
- **Milestones:** Upgrades to traffic signal controllers, improved data analytics, and integration with national transport platforms.
- **Resources:** Funded through SDCC and National Transport Authority (NTA),
- **Lead Stakeholder(s):** SDCC Traffic Section, in coordination with NTA and TII.
- **Status:** Continuous improvement through adaptive traffic control and remote monitoring.

2. Expansion of Traffic Data and ITS Infrastructure

- **Objective:** Enhance traffic flow analysis through real-time data collection and integration.
- **Timescale:** Ongoing.
- **Milestones:** Deployment of additional traffic monitoring sensors, CCTV expansion
- **Resources:** SDCC budget and external funding sources.
- **Lead Stakeholder(s):** SDCC Traffic Section.
- **Status:** Gradual implementation, with priority locations identified

Limerick City and Couny Council

Vehicle Access Control

LC&CC operate a vehicle access control system which provides access to pedestrianized streets for appropriate services while restricting access to non-essential services. The system records which commercial vehicles access the area, the times and frequency of use.

Adaptive Urban Traffic Control (AUTC)

Traffic Management within the Limerick Metropolitan Area is managed through the LC&CC AUTC system. This has been addressed in Section 2.1 above including annual spending undertaken.

Freight

The central area of Limerick City is unsuitable for heavy goods traffic and should be restricted to only those vehicles of a suitable size with an origin or destination in the centre. The Limerick Shannon Metropolitan Area Transport Strategy (LSMATS) proposes further consideration of restriction of the movement of HGVs within the existing urban footprint of Limerick City and Suburbs.

Measure FDS1 of LSMATS states:

HGV Restrictions: *It is the intention of the NTA and the local authorities to*

- *Identify specific lorry routes and/or time restrictions, to reduce peak-time HGV movements through Limerick City and neighbourhoods.*

MEASURE FDS3 of LSMATS states:

Regional Freight Strategy: *It is the intention of the NTA, Southern Regional Assembly and the local authorities to:*

- *Support the development of a Regional Freight Strategy to accelerate the decarbonisation of the freight sector, integrate smart technologies in logistics management and reinforce the important role that the strategic rail and road network play in efficiently moving freight.*

Measure FDS4 of LSMATS states:

Delivery and Servicing Strategy: *It is the intention of the NTA and the local authorities to:*

- *Reduce the amount of 'last mile trips' being made by motorised vehicles;*

- *Facilitate the transition to zero-emission delivery vehicles such as cargo bikes, solar powered and electric vehicles;*

- *to support and secure the delivery of consolidation centres and break bulk facilities, which will facilitate smaller vehicles delivering to Limerick City Centre and other major town centres; and*

- *Support local 'Click and Collect' facilities where appropriate to minimise trips to individual homes and workplaces.*

2.2.2. Progress since 2023

Description of progress in the area since 2023 :

South Dublin County Council

Since 2023, SDCC has made significant advancements in traffic and freight management through ITS initiatives:

- **Traffic Signal Optimisation** – Remote monitoring and adjustment of traffic signals to improve flow and reduce congestion.

- **ITS Integration with NTA & TII** – Improved data-sharing agreements for enhanced traffic management coordination.

- **Real-Time Traffic Monitoring** – Expansion of CCTV and vehicle detection technologies.

- **Public Transport Priority Measures** – In congestion with NTA to develop Implementation of bus priority signals at key junctions.

- **Improved Incident Management** – Faster response times through real-time data analytics and coordination with emergency services.

Limerick City and County Council

Vehicle Access Control

LC&CC operate a vehicle access control system which provides access to pedestrianized streets for appropriate services while restricting access to non-essential services. The system records which commercial vehicles access the area, the times and frequency of use. The

spending undertaken by LC&CC during 2023-2025 (€25,000 per annum) is related to maintenance of existing hardware and software and street apparatus.

No additional pedestrianised streets or retractable bollards have been installed in the city centre since 2014, however if further streets were to be pedestrianised and retractable bollards installed, the cost of maintenance would likely increase.

2.3. Priority area III. Road safety and security ITS services

2.3.1. *Description of the main national activities and projects*

Description of the relevant initiatives, their objective, timescale, milestones, resources, lead stakeholder(s) and status:

Transport Infrastrucutre Ireland

Project/Activities	Description
Variable Message Signs	**Partners:** TII, Local Authorities Variable Message Signs are provided on the road network to allow for relevant, accurate and timely communication of information on the status of the network and to highlight Road Safety issues. The ITS Strategy looks to define the requirements for both tactical and strategic VMS signs to be located on the network. This will align to the Level of Service provision defined within the ITS Strategy. **Status:** operational and being developed
VMS Message Policy	**Partners:** TII and Road Operators In 2019 TII established and continues to coordinate a "VMS Message Policy User Group" with internal stakeholders and road operators. This aims to develop a comprehensive message sign policy for National Roads in order to provide harmonised and consistent messaging across the national VMS network. The main influencers of the policy are operational experience, reference from other EU countries, the EasyWay guidelines and the Traffic Signs Manual. **Status:** ongoing, foreseen March 2025

M17/ M18 weather information VMS project	**Partners:** TII
	Following the opening of the M18, TII has monitored weather events affecting the road, in particular hail events that impact on road safety. Further to these observations TII has enhanced the density of the previously built VMS structures with "Strategic VMS", plus some supplementary "Tactical VMS" on the M6 (the intersecting motorway) to allow for advanced notification of weather events to road users. This project is being developed in accordance with the TII ITS Strategy and Implementation Plan **Status:** Complete
Dynamic Warning and Speed Activated Speed Signs	**Partners:** DoT, TII, NTA, Local Authorities To better control traffic in sensitive areas and areas with an accident history, a number of schemes have been rolled out to provide Dynamic Warning (DWS) (including School Warning Signs) and Speed Activated signs. These signs monitor vehicular speed and display a message to the driver of the vehicle indicating their speed or compliance with speed limits. Many of the Speed Activated signs now facilitate the recording of vehicle numbers and speeds. This data is communicated wirelessly to the appropriate authority. Since 2019, TII is developing Standardisation Specifications for future designs of DWS that will be part of the DWS deployment process binding TII and Local authorities. The development of these "standardisation specifications" aim at: providing a consistency of design; facilitate faster deployments and provide cost certainty, while at the same time enhancing maintenance efficiency with the standardisation of parts. Also a Deer management pilot study on the N77 was adopted, with 8 locations of Vehicle Activated signs concretely being deployed. The supplementary signs are radar activated and comply with European requirements for EMC and Radio Spectrum Emissions and shall not interfere with outside electronic devices. The signs also utilize LED's to illuminate when activated by radar by approaching vehicle. **Status:** Complete, operational and being developed
Upgrade internal CCTV on Luas light rail	**Partners:** TII To improve security and incident management of the light rail fleet the internal CCTV was upgraded and enables real-time remote viewing of CCTV images from the internal cameras. The original project successfully upgraded the onboard CCTV system on the Red Line fleet. The Green line fleet is now partially upgraded to a similar digital CCTV system was part of the Vehicle Extension Contract, and the whole fleet is scheduled to be

	upgraded by Q1 2021. Additionally, new trams purchased since 2018 has come with the modern CCTV system installed.
	A trial for remote viewing of on-board CCTV was successfully completed, and a project to roll out this solution to Red Line trams is being considered.
	Status: Ongoing
Upgrade of Luas stop CCTV	**Partners:** TII
	Following the successful upgrading of an analogue camera to internet protocol (IP) on a pilot project, all new cameras provided as part of the LCC extension project are IP-based, using the same software platform.
	LCC CCTV cameras (Bosch Silverlight) were successfully installed (during the period of 2017-2019) and are offering superior performance to the older analogue models.
	Analog cameras will be replaced by digital versions as part of asset renewals, although at present the analogue devices are operating well.
	Status: Ongoing
Metrolink	**Partners: TII**
	MetroLink will comprise a high-capacity, high-frequency, modern and efficient metro railway, with 16 new stations running from Swords to Charlemont. The alignment will link Dublin Airport, Irish Rail, DART, Dublin Bus and Luas services and create a fully integrated public transport network for the Greater Dublin Area (GDA).
	As well as linking major transport hubs, MetroLink will connect key destinations including Ballymun, the Mater Hospital, the Rotunda Hospital, Dublin City University (DCU) and Trinity College Dublin (TCD). Much of the 18.8km route will run underground, an exciting innovation for Irish public transport.
	When operations commence there will be trains every three minutes during peak periods. This can rise to a service every 90/100 seconds by 2060 if required. The system will be capable of carrying up to 20,000 passengers per hour in each direction. For comparison, current Luas Green Line services can carry circa 9,000 passengers per direction per hour.
	When completed passengers will be able travel from Swords to Dublin city centre in approximately 25 minutes and it is estimated that MetroLink will carry up to 53 million passengers annually.
	Metrolink Tender design is ongoing and due to complete at the end of 2025. Technical requirement specifications are currently being drafted. Specifically for CCTV, this includes CCTV coverage at stations, onboard and along the route. An integrated and

	resilient 5G radio system is specified to permit real time viewing and incident management from the control centres (Operational Control Centre, Back-Up Operational Control Centre, Depot Control Centre, Station Operating Rooms **Status: Tender preparation**
Luas Central Transmission Network replacement	**Partners: TII** To fully support and enable the Luas SRAR (Systems Renewal and Resilience) project works, the existing Luas Central Transmission Network (CTN) was replaced with an upgraded network transmission solution. The replacement of the Luas Central Transmission Network was a significant upgrade aimed at modernizing and improving the resilience of the Luas system's core infrastructure and enhancing the overall operational performance by improving data transmission efficiency, network performance, and reliability. The new Central transmission network (CTN) introduced a state-of-the-art redundant solution, ensuring high availability and fault tolerance. This system is built around four core nodes, strategically located in two depot locations, connected via an ultra-fast 40 Gbps speed. This setup provides enhanced resilience by preventing single points of failure and ensuring continuous operation in the event of an outage at one location. These replacement works significantly improve data transmission efficiency, network performance, and reliability for Luas operations. The scope of work included replacing all existing Luas Stop, Substation and Depot network switches with modern, high-capacity Network Switches capable of handling increased data loads, additionally as part of these works was the replacement of over 50,000 meters of backbone Fiber optic cables to support the upgraded transmission speeds and ensure seamless communication across the network. These improvements will enhance the overall performance, safety, and efficiency of the Luas transport system in the coming years. **Status: Completed 2024**
Automatic Fare Collection System (AFCS) Back-office upgrade and resilience works	**Partners: TII** To ensure Luas Automatic Fare Collection System (AFCS) operation was supported into the future, the existing end of life Luas AFCS back-office was replaced with an upgraded AFCS back-office solution that mirrored current operation capabilities. To support operational resilience and business continuity, the upgrade was enhanced by a secondary fully redundant secondary back office system located in another part of the Luas system which provides seamless operational support in the event that the primary AFCS back office is un available.

	The solution also leaned on Industry best practises in software development, information security and Payment Card Industry Data Security Standards (PCIDSS) in delivery. **Status: Completed 2024**
Luas Systems Renewals and Resilience	**Partners: TII** The aim of TII's Luas SRAR (Systems Renewals and Resilience) project was to replace and upgrade the aging Luas Central Control Systems (CCS) installed in 2009. The new Luas CCS solution consists of three Operation Rooms, two technical rooms, a main Control Room, all strategically located around the Luas system. A key component of this upgrade was the provision of much needed system resilience by way of three Operation Rooms, two technical rooms, a main Control Room, all strategically located around the Luas system. This system resilience enabled full operational and system redundancy and satisfied Luas system operation availability requirements. These improvements will enhance the overall performance, safety, and efficiency of the Luas transport system. **Status: Complete 2024**
M50	**Partners:** TII The deployment of ITS equipment on the M50 to implement Variable Speed limits and lane control signalling along with a new system to control the equipment aims to reduce the number of incidents, better inform road users about ongoing incidents, and improve safety for those attending incidents. Since 2020 all of the signage (larger VMS and smaller above lane control signals) has been installed. The national legislation to enable the enhanced management of the road network has also been drafted and is expected to be implemented later in 2025. **Status: Complete**
Deployment of ITS Equipment on the M7/N7 on the approach to M50 to facilitate incident detection.	**Partners:** TII This project is part of MERIDIAN EU CEF funded project and will run between 2022 and 2025. The main ain is to deploy an ITS scheme on M7/N7, radial route to M50 (Dublin), that will improve road safety and traffic management on this section of road. The project will entail the deployment of new ITS equipment that will provide crucial information to road users and enable TII to efficiently operate the key national primary road and motorway sections of the national primary road network between junction 1 on the N7 and junction 11 on the M7. The Scheme is 32km in total (12km Motorway, 20km National Road).

	Aims and Objectives:
	• Enhanced safety through more effective traffic management for road users and construction and maintenance personnel;
	• Supporting sustainable growth in the national economy by improving the efficiency of the major traffic route into and out of Dublin from the south of the country;
	• Improved air quality by empowering road users and operators with information to make informed, evidence-based decisions, thereby reducing congestion and emissions
	• Resilience and optimisation of operations through:
	    • Faster incident detection;
	    • Better information on which to base interventions;
	    • Raising the level of underlying roadside technology and functionality to support enhanced control strategies;
	    • Faster recovery of the network.
	    • Supporting the C-ITS Ireland Pilot and advances in connected and autonomous vehicle (CAV) technology.

	Status: ongoing

South Dublin County Council

SDCC has been actively engaged in the implementation of Intelligent Transport Systems (ITS) to enhance road safety and security. The following project is one of the key initiatives:

Smart Micro with Detection and Data at 4 Locations

- Objective: To install Smart Micro ITS systems equipped with traffic detection capabilities and data collection tools, improving real-time traffic management and road safety.

- Timescale: Completed in 2023.

- Milestones:

    o Identification and selection of four key locations.

    o Installation of Smart Micro systems with sensors and detection technologies.

    o Integration of collected data into SDCC traffic management platforms.

- Resources: SDCC's budget, NTA funding support.

- Lead Stakeholder(s): SDCC Traffic Section, in collaboration with NTA and TII.

- Status: The system is operational, and real-time traffic data is being actively monitored for improved decision-making and traffic flow management.

Dún Laoghaire-Rathdown County Council (DLRCC)

The Council has 69 Speed Alert Signs (which inform road users of their actual speed using a colour digital display). The signs are normally located in residential areas where there is a concern with excessive speed. The data is used to quantify the speeds and the data is used to determine if the concerns are real or perceived. The signs are solar powered and can therefore be moved without the cost of providing a cabled power supply.

Limerick City and County Council

LC&CC utilise a range of ITS solutions to improve road safety across the metropolitan road network.

The deployment of driver feedback signage (DFS) is primarily a road safety initiative. DFS has been demonstrated to reduce the average speed of vehicles along the road sections where it has been deployed.

The CCTV system was manned by Limerick City & County Council and was used for management of the traffic on the road network and bus stop and bus lane monitoring. Approximately 50% of the loading bays in the central business district was covered by CCTV, however this data cannot now be accessed until legislation is enacted which will allow such usage. An Garda Síochána had access to the CCTV system when it was operational.

The VMS, DFS and CCTV projects, including spending undertaken by LC&CC have been described in section 2.1 above.

2.3.2. *Progress since 2023*

Description of progress in the area since 2023:

South Dublin County Council

Since 2023, SDCC has made considerable progress in road safety and security through ITS initiatives:

- **Smart Micro Installations:** We have installed Smart Micro systems at four locations across SDCC, enabling traffic monitoring, data analysis, and more effective traffic management.

- **Data Utilisation:** Real-time data collected from these systems is now being used to monitor traffic conditions and adjust traffic signals accordingly.

- **Enhanced Safety:** The information gathered has led to targeted actions on improving road safety, such as optimizing signal timings at busy junctions and identifying congestion hotspots.

- **Continuous Monitoring and Improvement:** The project is under continuous evaluation to assess the effectiveness of the Smart Micro systems, with plans to expand to additional locations based on the results.

Dún Laoghaire-Rathdown County Council (DLRCC)

The Council's traffic signals maintenance contractor provides 1-2 additional Speed Alert Signs per year. Since 2017, the Council has started using sockets for the signs, so they can be installed at a particular location, moved to another location and reinstalled at the original location at little cost.

Limerick City and County Council

Funding currently from the NTA has been given to the Active Travel initiative which has aided in the upgrade of existing sites and the addition of new sites.

2.3.3. *112 eCall (priority action d - Delegated Regulation (EU) No 305/2013)*

Information on any changes regarding the national eCall PSAPs infrastructure and the authorities that are competent for assessing the conformity of the operations of the eCall PSAPs:

South Dublin County Council

Regarding the 112 eCall system, SDCC has continued to support the national rollout and integration of eCall Public Safety Answering Points (PSAPs):

- Competent Authorities for Assessing eCall PSAP Operations: The National Emergency Operations Centre (NEOC) is the body responsible for evaluating the compliance of eCall PSAP operations at a national level.

Additional information:

South Dublin County Council

SDCC continues to prioritise ITS road safety and security applications, including the installation and use of Smart Micro systems, to improve traffic safety and operations. Our ongoing efforts will focus on expanding ITS capabilities and further enhancing public safety.

2.3.4.   Reporting obligation under Delegated Regulation (EU) No 886/2013 on data and procedures for the provision, where possible, of road safety-related minimum universal traffic information free of charge to users (priority action c)

Progress made in implementing the information service, including the criteria used to define its level of quality and the means used to monitor its quality:

South Dublin County Council

SDCC continues to contribute to the provision of road safety-related traffic information by integrating Urban Traffic Control (UTC) cloud-based systems into our traffic light infrastructure. This allows for improved real-time traffic monitoring and data sharing with relevant stakeholders.

- The quality of information is defined by:

- **Accuracy and Timeliness:** Ensuring road safety data is updated promptly and reflects real-time conditions.

- **Coverage:** Focusing on key arterial routes and high-traffic areas within the county.

- **Accessibility:** Sharing relevant information where required with the National Transport Authority (NTA), Transport Infrastructure Ireland (TII), and other transport agencies for public dissemination.

- **Quality** is monitored through system diagnostics, traffic flow analysis, and stakeholder feedback to maintain high data reliability.

Results of the assessment of compliance with the requirements set out in Articles 3 to 8 of Delegated Regulation (EU) No 886/2013:

South Dublin County Council

SDCC ensures compliance with the provision, collection, and sharing of safety-related traffic information as follows:

- **Article 3 (Data Collection):** Safety-related traffic data, including incidents, roadworks, and adverse weather conditions, is sourced from traffic signal controllers, and public reports.

- **Article 4 (Data Provision):** Relevant safety information is made available to transport authorities.

- **Article 5 (Quality Standards):** SDCC follows best practices in data accuracy, reliability, and timely updates in coordination with national agencies.

- **Article 6 (Access and Sharing):** Data is shared through SDCC's existing traffic management network and provided to NTA and TII for integration into national systems where required.

- **Article 7 (User Accessibility):** Information is made accessible to the public through online platforms.

- **Article 8 (Stakeholder Cooperation):** SDCC actively engages with NTA, TII, the Department of Transport, and other local authorities to enhance data-sharing mechanisms.

<u>Where relevant, a description of changes to the national access point:</u>

No changes have occurred with the National Access Point (NAP) during the period in question. However a review is underway as to the future and functioning of the NAP to ensure it is fit for purpose and aligns with NAPs in other member states.

<u>Additional information (e.g. sources of data used for the provision of safety-related traffic information):</u>

South Dublin County Council

SDCC's data sources for safety-related traffic information include:

> **Urban Traffic Control (UTC) Systems –** Cloud-based traffic light monitoring.

> **Micro Smart Detectors –** Installed at key locations for real-time traffic analysis.

SDCC remain committed to enhancing road safety-related traffic information and welcome any further discussions or clarifications on this matter.

2.3.5.   Reporting obligation under Delegated Regulation (EU) No 885/2013 on the provision of information services for safe and secure parking places for trucks and commercial vehicles (priority action e)

South Dublin County Council

SDCC does not manage designated parking spaces specifically allocated for trucks and commercial vehicles within the county. These are primarily located in areas with high commercial activity, such as industrial zones and near transport hubs operated by private companies.

Dún Laoghaire-Rathdown County Council (DLRCC)

As per previous Progress Reports, the Council does not provide safe and secure parking for HGVs. There are extensive 3-tonne vehicle bans in residential areas of the County. Since the ending of the ferry service to Dún Laoghaire, the volume of HGVs is reduced. While recognising their importance to the economic life of the county, HGVs are a low priority in the urban area, in line with the hierarchy in the Design Manual for Urban Roads and Streets.

Limerick City and County Council

Limerick City and County Council does not provide secure parking facilities for trucks and commercial vehicles. This may be offered by private entreprises. LCCC does provide approximately 90 loading bays in city centre areas which vary in size.

Percentage of parking places registered in the information service:

South Dublin County Council

At present, SDCC does not have truck parking spaces registered in a national or EU-wide information service. Truck Parking spaces in SDCC is operated by private companies.

Percentage of parking places providing dynamic information on the availability of parking spaces and the priority zones:

South Dublin County Council

Currently, no dynamic information services are available for truck parking spaces in SDCC.

Additional information: (e.g. has a national access point been set up to provide truck parking data? Does this include dynamic data? What is the source of data (public / private)? Are the data published on the European Access Point for Truck Parking hosted by DG MOVE? If not, is there any intention to do so in future?)

South Dublin County Council

- **National Access Point for Truck Parking Data:** At present, there is no established national access point for truck parking data manage by SDCC.

- **Dynamic Data:** SDCC does not provide dynamic data on truck parking availability.

- **Source of Data:**. SDCC does not provide data on truck parking availability.

- **Publication on European Access Point for Truck Parking Hosted by DG MOVE:** Currently, SDCC does not publish truck parking data on the European Access Point for Truck Parking. In SDCC road network, TII is responsible authority for M4, M7 and M50.

- **Future Plans:**

SDCC will work with national stakeholders to ensure that we align with the European regulations and contribute to the wider network of truck parking information services.

Limerick City and County Scoil

Small pilot currently being undertaken by LCCC Transport Strategy Section.

2.4. Priority area IV. ITS services for cooperative, connected and automated mobility

2.4.1. *Description of the main national activities and projects*

Description of the relevant initiatives, their objective, timescale, milestones, resources, lead stakeholder(s) and status: in particular, provide information on the C-ITS deployment initiatives and their technical specifications.

Transport Infrastructure Ireland

Project/Activities	Description
C-ITS C-Roads Ireland Pilot	**Partners:** TII, EU C-Roads Platform, DoT, Dublin City Council (DCC), Road Safety Authority (RSA), Enterprise Ireland (EI), Industrial Development Authority (IDA), Mobile Network Operators, Car Manufacturers and Road Operators The C-Roads Ireland C-ITS pilot is underway. The Action is funded via the CEF by CINEA with the Department of Transport the beneficiary and Transport Infrastructure Ireland the Implementing

	Body.
	The overall aim of the C-Roads Ireland C-ITS pilot is to deploy, trial and evaluate Day-1 and future C-ITS services. The pilot will include development of services to align with Irish priorities, whilst recognising relevant standards and regulation. The pilot will test and evaluate C-ITS services on the Irish Roads Network (5 sections), predominantly on the Irish TEN-T network and a strategic route approaching (motorways: M1, M50, M7, M8, M18) and within Dublin City. The pilot will consider how the wider Cooperative, Connected and Automated Mobility (CCAM) model supports C-ITS and wider CCAM considerations. The objectives of the Irish C-Roads national pilot is as follows: • Deploy a national C-ITS pilot and understand the issues associated with developing, delivering and operating C-ITS services, • Understand how C-ITS infrastructure and service provision may be scaled to include all Day 1 and Day 1+ services, • Test, validate and evaluate the impact of the piloted C-ITS services to understand how this may affect the network and operations and when scaled to higher levels of penetration, • Evaluate the impact of C-ITS from a technological, safety, efficiency and compliance perspective and using established guidance from the C-Roads Working Groups, wider European guidance and agreed national approaches, • Develop an understanding of the opportunities and limitations of system interoperability, and network operations considering the policy, regulations and standards requirements for C-ITS • To enable Ireland's road operators and industry partners to improve their knowledge of future disruptive technologies, and provide a meaningful contribution to the EU knowledge management group/s • To support and drive industry involvement which will accelerate C-ITS service development and deployment and support the development of a hybrid network which is fit for the future, and • Deliver test & evaluation data and information that can be used to develop a business case for permanent and wider deployment and inform the operating model for C-ITS Services. This data would be considered with the evaluation of data from other C-Roads trials. Having an approved procurement strategy enabled work to commence on the preparation of a C-ITS specification, where the scope of works included the site design, supply, installation, testing and commissioning of ITS-G5 roadside units (RSUs) on the M50 and M1 motorways. A C-ITS service specification has been prepared that defines both

	physical and system related infrastructure dependencies (to inform the C-ITS equipment specification outlined above and the central station specification outlined below). The service specification defined the operational requirements of each service, e.g. transmission, triggers and data requirements - the output from this analysis has informed the development an operational plan.
	In parallel with the above, work has been undertaken to define minimum functional requirements for the C-ITS central station (C-ITS-S). These requirements have captured a broader specification for a new traffic management system that Transport Infrastructure Ireland are committed to procure.
	Since 2020 equipment has been procured and tested (ongoing). The installation of C-ITS Road Side Units is underway and the various communications links between the C-ITS Central Station, Road Side Units, and On Board Units has been demonstrated. The C-Roads Harmonised C-ITS Specifications (2.0) are being used.
	Initially due to finish by December 2023 it was completed in December 2024.
	Status: complete
Deployment of C-ITS Equipment at approaches to Jack Lynch Tunnel (N40/M8/N25/N8).	**Partners:** TII Transport Infrastructure Ireland (TII) is currently embarking on an extensive C-ITS deployment in Cork city, co-funded by the EU through the Meridian programme. The main philosophy of the C-ITS is to **allow for traditional ITS roadside infrastructure and incident detection systems and on-board vehicular systems to work together cooperatively** through ITS-G5 (IEEE-802.11p) communication to provide a range of C-ITS services and use cases to the road user. Thereafter, it is intended to build on the deployment to develop a roadmap to include all Day 1 and Day 1+ services.
	The C-ITS services envisaged for this deployment are: • In-Vehicle Signage • Hazardous Location Notification • Road Works Warning • Probe Vehicle Data
	The aims of the C-ITS network are to improve mobility (reduce congestion), improve road safety, improve incident management through information dissemination to public and key transport role players for better decision making and transport management, as well as reducing vehicle emission.
	This current deployment will present an opportunity to evaluate effectiveness of C-ITS technologies with a view for possible further

	deployment to improve traffic management and efficiency through real time information dissemination and vehicle data collection. **Status: Ongoing**
Deployment of C-ITS Equipment the M7/N7 on the approach to M50.	**Partners:** TII This activity is part of MERIDIAN EU CEF funded project and will run between 2022 and 2025. The main ain is to deploy an ITS scheme on M7/N7, radial route to M50 (Dublin), that will improve road safety and traffic management on this section of road. The core principle of Cooperative ITS (C-ITS) is to enable traditional roadside ITS infrastructure, incident detection systems, and onboard vehicular systems to work together seamlessly. Using ITS-G5 (IEEE 802.11p) communication, these systems will deliver a range of C-ITS services and use cases to road users. The deployment will also serve as a foundation for expanding the network to include all Day 1 and Day 1+ services in the future. The objectives of the C-ITS network include improving mobility by reducing congestion, enhancing road safety, and optimizing incident management through efficient information dissemination to the public and key transport stakeholders. Additionally, the system aims to support better decision-making in transport management while contributing to reduced vehicle emissions. As part of this initiative, 39 C-ITS Roadside Units (RSUs) will be deployed to establish connectivity between infrastructure and vehicles along the corridor, covering the section between Junction 1 on the N7 and Junction 11 on the M7. The total scheme spans 32 km—comprising 12 km of motorway and 20 km of national road—helping to achieve the outlined objectives. **Status: Ongoing**

South Dublin County Council

South Dublin County Council (SDCC) acknowledges that Transport Infrastructure Ireland (TII) is the responsible authority for C-ITS (Cooperative Intelligent Transport Systems) deployment on the national road network. SDCC will coordinate and provide input as required to support the implementation of C-ITS initiatives within the county.

Key aspects of SDCC's involvement include:

- Where required Collaboration with TII to facilitate data-sharing and ensure alignment with local traffic management systems.

- Where required Supporting TII the deployment of C-ITS infrastructure at relevant urban and regional road junctions within SDCC's jurisdiction.

2.4.2. Progress since 2023

Description of progress in the area since 2023 :

South Dublin County Council

SDCC will continue to work towards broader C-ITS deployment in collaboration with national stakeholders, focusing on enhancing vehicle-to-infrastructure communication and supporting future smart city and mobility initiatives.

2.5. Availability and accessibility via NAPs of data types listed in Annex III to Directive 2010/40/EU

Calculation principles:

* For static information: based on length divided by total length in kilometres. The total length is the length of the network on which underlying information exists, e.g. speed limits apply (almost) everywhere, but access conditions for tunnels apply only to (the length of) tunnel sections.

** For dynamic/temporary information: availability of data refers to the ability to make the data available and accessible in a machine-readable format on a certain percentage of the network, whenever the underlying information exists / appears, based on the length of the network with this capability divided by total length in kilometres.

2.5.1. Data relating to the provision of EU-wide road traffic information and navigation services

Data type	Geographical coverage	% of geographical scope where data type is available		Comments
1. Data relating to the provision of EU-wide road traffic information and navigation services:				
1.1 Category: Static and dynamic traffic regulations, where applicable, concerning:				
1.1.1 Subcategory: - access conditions for tunnels - access conditions for bridges - speed limits - overtaking bans on heavy goods vehicles	The trans-European *core* network for roads	access conditions for tunnels*	*0%* *[Note: if more relevant, possibility to provide the number and % of tunnels]*	-
		access conditions for bridges*	*0%* *[Note: if more relevant, possibility*	-

Data type	Geographical coverage	% of geographical scope where data type is available		Comments
- weight/length/width/height restrictions			*to provide the number and % of bridges]*	
		speed limits*	*0%*	-
		overtaking bans on heavy goods vehicles*	*0%*	-
		weight/length/width/height restrictions*	*0%*	-
	The comprehensive trans-European network for roads, other motorways and sections of primary roads, where the total annual average daily traffic is more than 8 500 vehicles, and all roads in the cities at the centre of each Urban Node (if applicable limited to > 7 000 vehicles/day)	access conditions for tunnels*	*0%*	-
		access conditions for bridges*	*0%*	-
		speed limits*	*5%*	*Two local authorities in urban nodes have data listed but data no longer functional*
		overtaking bans on heavy goods vehicles*	*0%*	-
		weight/length/width/height restrictions*	*0%*	-

Data type	Geographical coverage	% of geographical scope where data type is available		Comments
Subcategory: - one-way streets	*Road infrastructure in the cities at the centre of each Urban Node*	one-way streets*	*0%* *[Note: if relevant, possibility to also provide in addition the number and % of cities able to supply such data]*	-
Subcategory: - freight delivery regulations	*Road infrastructure in the cities at the centre of each Urban Node*	freight delivery regulations*	*0%* *[Note: if relevant, possibility to also provide in addition the number and % of cities able to supply such data]*	-
Subcategory: - direction of travel on reversable lanes	*The core and comprehensive trans-European network for roads, other motorways and sections of primary roads, where the total annual average daily traffic is more than 8 500 vehicles, and all roads in the cities at the centre of each Urban Node (if applicable limited to > 7 000 vehicles/day)*	direction of travel on reversable lanes*	*n/a*	*No reversible lane facilities in Ireland.*

Data type	Geographical coverage	% of geographical scope where data type is available		Comments
Subcategory: - traffic circulations plans	*The core and comprehensive trans-European network for roads, other motorways and sections of primary roads, where the total annual average daily traffic is more than 8 500 vehicles, and all roads in the cities at the centre of each Urban Node (if applicable limited to > 7 000 vehicles/day)*	traffic circulations plans*	*0%* *[Note: if the network length is impossible to calculate, possibility to provide the number and % of traffic circulation plans]*	-
Subcategory: - permanent access restrictions	*The core and comprehensive trans-European network for roads, other motorways and sections of primary roads, where the total annual average daily traffic is more than 8 500 vehicles, and all roads in the cities at the centre of each Urban Node (if applicable limited to > 7 000 vehicles/day)*	permanent access restrictions*	*0%*	-
Subcategory: - boundaries of restrictions, prohibitions or obligations with zonal validity, current access status and conditions for circulation in regulated traffic zones	*The core and comprehensive trans-European network for roads, other motorways and sections of primary roads, where the total annual average daily traffic is more than 8 500 vehicles, and all roads in the cities at the centre of each Urban Node (if applicable limited to > 7 000 vehicles/day)*	boundaries of restrictions, prohibitions or obligations with zonal validity, current access status and conditions for circulation in regulated traffic zones*	*0%* *[Note: if the network length is impossible to calculate, possibility to provide the number and % of boundaries of restrictions, prohibitions, etc.]*	-

Data type	Geographical coverage	% of geographical scope where data type is available		Comments
1.2 Types of data on the state of the network:				
Subcategory: - road closures - lane closures - roadworks	*The trans-European core network for roads*	road closures**	*0%*	-
		lane closures**	*0%*	-
		roadworks**	*0%*	-
	The comprehensive trans-European network for roads	road closures**	*0%*	-
		lane closures**	*0%*	-
		roadworks**	*0%*	-
Subcategory: - temporary traffic management measures	*The trans-European core and comprehensive network for roads*	temporary traffic management measures**	*0%*	-

2.5.2.   Data relating to information and reservation services for safe and secure parking places for trucks and commercial vehicles

Data type	**Geographical coverage**	**% of parking places for which data are available**		**Comments**
2. Data relating to information and reservation services for safe and secure parking places for trucks and commercial vehicles:				
Category: static data *Subcategory:* - static data related to the parking areas - information on safety and equipment of the parking area	*The trans-European core network for roads*	static data related to the parking areas	*n/a*	*Per Delegated Regulation (EU) 885/2013, Ireland has not designated any areas where conditions require the deployment of information services on safe and secure parking places.*
		information on safety and equipment of the parking area	*n/a*	*As above*
	The comprehensive trans-European network for roads	static data related to the parking areas	*n/a*	*As above*
		information on safety and equipment of the parking area	*n/a*	*As above*

Category: dynamic data Subcategory: - dynamic data on availability of parking places including whether a parking is: full, closed or number of free places which are available.	The trans-European core and comprehensive network for roads	dynamic data on availability of parking places including whether a parking is: full, closed or number of free places which are available.	*n/a*	As above

2.5.3.   Data on detected road safety-related events or conditions relating to road safety-related minimum universal traffic information

Data type	Geographical coverage	% of geographical scope where data type is available		Comments
3. Data on detected road safety-related events or conditions relating to road-safety-related minimum universal traffic information:				
Category: dynamic data *Subcategory:* - temporary slippery road - animal, people, obstacles, debris on the road - unprotected accident area - short-term roadworks - wrong-way driver - unmanaged blockage of a road	*The core and comprehensive trans-European network for roads and other motorways not included in that network*	temporary slippery road**	*0%*	-
		animal, people, obstacles, debris on the road**	*0%*	-
		unprotected accident area**	*0%*	-
		short-term road works**	*0%*	-
		wrong-way driver**	*0%*	-
		unmanaged blockage of a road**	*0%*	-

| Subcategory:

-reduced visibility

- exceptional weather conditions | *The core and comprehensive trans-European network for roads and other motorways not included in that network* | reduced visibility** | *0%* | - |
| | | exceptional weather conditions** | *0%* | - |

2.5.4.   Static multimodal traffic data for EU-wide multimodal travel information services

*** Where possible, provide figures per scheduled transport mode, referred to in the Annex to Delegated Regulation (EU) 2017/1926 (such as air, rail including high-speed rail, conventional rail, light rail, cableways, long-distance coach, maritime including ferry, inland waterways, metro, tram, bus, trolley-bus)

Data type	Geographical coverage	% of nodes where data are available for the scheduled transport mode		Comments
4. Static multimodal traffic data for EU-wide multimodal travel information services:				
Category Location of identified access nodes for all scheduled modes, including information on accessibility of access nodes and paths within an interchange (such as existence of lifts, escalators)	*Urban nodes as defined in Article 3, point (p), of Regulation (EU) No 1315/2013 and listed in that Regulation, including those administered by the cities*	Location of identified access nodes for all scheduled modes, including information on accessibility of access nodes and paths within an interchange (such as existence of lifts, escalators)***	Rail: 100% Tram: 100% Bus 100% Ferries 100%	All access node data is published in accordance to NaPTAN specification and is regularly updated. Data published does not contain information on accessibility of access nodes or paths within an interchange

	The entire transport network of the Union	Location of identified access nodes for all scheduled modes, including information on accessibility of access nodes and paths within an interchange (such as existence of lifts, escalators)***	Rail: 100% Tram: 100% Bus 100% Ferries 100%	All access node data is published in accordance to NaPTAN specification and is regularly updated. Data published does not contain information on accessibility of access nodes or paths within an interchange

2.6. **Availability of services listed in Annex IV to Directive 2010/40/EU**

2.6.1.   Road safety-related minimum universal traffic information services

Service	Geographical coverage	% geographical scope covered
Road safety-related minimum universal traffic information (SRTI) service	The *core and comprehensive* trans-European network for roads	**0%**

2.7. **Other initiatives / highlights**

2.7.1.   Description of other national initiatives / highlights and projects not covered in priority areas 1 to 4:

<u>Description of the relevant initiatives, their objective, timescale, milestones, resources, lead stakeholder(s) and status:</u>

South Dublin County Council

SDCC is involved in a variety of initiatives that complement the national transport and traffic infrastructure goals but fall outside the specific priority areas outlined in the EU regulations.

Relevant Initiatives:

- **Smart City Initiatives:** SDCC is committed to supporting the development of smart city solutions that integrate advanced technology to improve urban mobility, traffic management, and environmental sustainability.

  - **Objective:** Enhance citywide traffic management, improve data-driven decision-making.

  - **Timescale:** Ongoing

  - **Milestones:** Key milestones include the deployment of smart traffic sensors at major intersections.

  - **Resources:** Funded through a combination of local budget allocations and NTA.

  - **Lead Stakeholder(s):** SDCC, in collaboration with NTA

  - **Status:** On going.

- **Pedestrian and Cyclist Safety Initiatives:** As part of SDCC's ongoing commitment to sustainable transport, the council has launched a series of pedestrian and cyclist safety projects, including improved crossing facilities, dedicated cycle lanes, and safer pedestrian zones.

  - **Objective:** Enhance safety for pedestrians and cyclists, encourage active travel, and reduce traffic-related accidents.

- o **Timescale:** Continuous, with ongoing projects and planned future developments.
- o **Milestones:** Significant projects have been completed in busy urban areas and key commuter routes.
- o **Resources:** Local and national funding, including from the National Transport Authority (NTA).
- o **Lead Stakeholder(s):** SDCC and NTA.
- o **Status:** Several key safety projects have been delivered, with more planned for future phases.

Galway City Council

Intelligent Transport Systems (ITS) and technologies allow transport modes to communicate with each other and the wider environment, providing integrated transport solutions and enhanced experiences for transport customers. Smarter Mobility and ITS will be incorporated into Transport Strategy measures to support infrastructure proposals and to further improve the transport network by maximising efficiency and capacity. Expansion of the existing city Urban Traffic Control UTC network is critical, as well as using ITS to manage parking efficiently, improve wayfinding around the city, upgrade street lighting, improve and upgrade junctions and allow the city to leverage future developments in Smarter Mobility.

Local Authorities, supported by the National Transport Authority, will continue to adopt Smarter Mobility and ITS as a means of improving the overall transport experience in Galway, building on existing initiatives such as the Urban Transport Management Centre. The UTMC forms the hub for urban traffic control in the city together with the Parking Guidance System (PGS), Variable Message Signs (VMS), CCTV and fault monitoring system.

Smarter Mobility policies and ITS will be used to support and 'future-proof' proposed infrastructure, implement changes and add value to the operation of the transport network by maximising efficiency and ensuring the optium performance of the entire network.

Smarter Mobility and ITS proposals have been developed based on a number of overact=rching principles aimed at encouragine sustainable transport use, improving accessibility and permeability to and within the city, maximising safety, managing transport capacity and developing support infrastructure to a high standard and resilience.

Waterford City and County Council

Parking Guidance System (PGS) and VMS system Upgrade

In 2009, a Parking Guidance System (PGS) was developed and installed in Waterford City Centre. This system comprises static, semi-static, and fully Variable Message Signs (VMS) to assist with parking management. However, the existing PGI-VMS system has become outdated and has reached the end of its operational life.

Planned Upgrade Programme

Waterford City & County Council (WCCC) has developed a five-year upgrade programme to modernize the system, ensuring a fully functional and annually maintained infrastructure. This initiative aims to improve efficiency, enhance user experience, and integrate the latest technological advancements.

Project Implementation

WCCC has engaged with a contractor to facilitate the upgrade of Variable Message Signage in Waterford City. The upgrade will be carried out in three phases:

Phase 1: Upgrade of four VMS signs and initiation of an annual maintenance contract – €136,888.00 (Phase 1 was completed in January 2025).

- **Phase 2:** Integration of all carpark parking information by installation of loop detection systems, and related infrastructure enhancements to feed into VMS signage. This includes: installation of wireless bidirectional vehicle detection sensors, solar-powered repeater units, wireless communication routers, and a hardware upgrade for web capability. And also implementation of the Parkinglogix-Web Director System, API development, and integration, along with cloud access for remote data hosting and management.

  – €63,975.00.

Phase 3: Replacement of all Category B and Category C signs – €214,800.00.

The total budget allocated for the three-phase upgrade is **€388,663.00** with an additional yearly maintenance cost to be determined.

Expected Benefits

The upgraded VMS system will play a crucial role in reducing congestion by providing real-time updates on parking, traffic conditions, road closures, bridge ligts and accidents. This will enhance traffic flow, improve public safety, and contribute to the overall efficiency of Waterford City's transport network.

2.7.2.   Progress since 2023

<u>Description of progress in the area since 2023</u> :

South Dublin Couny Council

Since 2023, SDCC has made considerable progress across various projects aimed at improving traffic and transport infrastructure:

- **Smart City Projects:** SDCC has expanded its smart city initiatives by deploying traffic sensors and upgrading data management systems. These initiatives have significantly enhanced SDCC's ability to manage congestion, optimise traffic flow, and ensure safety across the county.

- **Sustainable Transport Projects:** Following the National Sustainable Mobility Policy, SDCC has implemented numerous pedestrian and cycling improvements. These include the completion of several high-priority cycle lanes and footpaths, which have enhanced active travel options and safety for non-motorized road users.

- **Public Engagement:** SDCC has worked closely with local communities to engage residents in transportation planning, particularly regarding changes to infrastructure that affect pedestrian and cyclist safety. This feedback has been invaluable in guiding the prioritisation of projects.

SDCC plans to continue expanding its smart city initiatives, focusing on further integration of data-driven solutions for traffic management. We will also continue to work on enhancing sustainable mobility options and ensuring that public transport, cycling, and walking are prioritised in the county's infrastructure planning.

Cork City Council

ITS Mobility Dashboard

The Mobility Dashboard project, a pilot initiative developed internally by Cork City Council in collaboration with the National Transport Authority (NTA), continues to progress. As previously reported, this dashboard aims to track transport mobility in Cork City centre, promote sustainable and active travel, reduce car dependency, and improve public transport connectivity. The system utilises FLIR and Smart Micro equipment for cycle detection, along with data sources including the MRI API for pedestrian data and data collectors for cycle data. The secure, fibre-connected server and Microsoft Power BI platform provide the foundation for data visualisation and analysis.

While the dashboard is demonstrating promising results, it is currently in the validation stage. As such, reports are not yet being distributed to stakeholders. The addition of a Data Analyst to our team has been invaluable in this phase, allowing us to rigorously test and refine the data and ensure the accuracy and reliability of the information the dashboard produces. We are confident that the ongoing work will lead to a robust and valuable tool in the near future.

3. KEY PERFORMANCE INDICATORS (KPIS)

KPIs will be reported separately by type of road network / transport network and nodes (where appropriate).

3.1. Deployment KPIs

3.1.1. Information-gathering infrastructures / equipment (road KPI)

Figures to be provided by type of network.

Figures to be provided by type of services, and where relevant by distinguishing between fixed and mobile equipment.

KPIs to be calculated by type of network.

- <u>Length of road network type / road sections (in km) equipped with information-gathering infrastructures and the total length of this same road network type (in km):</u>

Transport Infrastrucutre Ireland

Figures to be provided	Road Network	KPI
Figures to be provided by type of network/zone. KPI to be calculated by type of network/zone (when relevant). Figures to distinguish fixed and mobile equipment. - not distinguished in Ireland	Length of road network type/road sections (in km) equipped with information gathering infrastructures Total length of this same road network type (in km)	KPI = (kilometres of road network type equipped with information gathering infrastructures / total kilometres of same road network type) x 100

Network/Part of Network	Information Gathering Infrastructures	
Main Corridor	347 / 347	100
Core TEN-T	499 / 499	100
Comprehensive TEN-T	1701 / 1701	100
Motorways	65 / 65	100
Other Sections	3032 / 3032	100

- KPI = (kilometres of road network type equipped with information-gathering infrastructures / total kilometres of same road network type) x 100

South Dublin County Council

88 km of Network equipped with information gathering infrastructure. SDCC National Secondary, Regional and Local Roads Network = 959km

KPI - 9.17%

Dún Laoghaire-Rathdown County Council (DLRCC)

Road Network Type: Urban Area 135km.

Equipment Type: Fixed Equipment 90km.

KPI - 90km/135kmx100 = 66%

Limerick City and County Council

Total Length of National road network: 17.3 km

Length of National road network equipped with information gathering infrastructures: 0.74km

Total Length of Regional road network: 93.8km

Length of Regional road network equipped with information gathering infrastructures: 33.4km

KPI – 30.73%

3.1.2.   Incident detection (road KPI)

Figures to be provided by type of network.

KPI to be calculated by type of network.

- Length of road network type / road sections (in km) equipped with ITS to detect incident and the total length of this same road network type (in km):

- KPI = (kilometres of road network type equipped with ITS to detect incident / total kilometres of same road network type) x 100

Transport Infrastrucutre Ireland

National Roads (responsiblity of TII)	
Main North Sea-Mediterranean Corridor (M1/M50/M7/M8**)** (This forms part of the Core TEN-T Network)	347
Core TEN-T Network	499
Comprehensive TEN-T Network	1701
Motorways (Not Part of TEN-T)	65
Other Sections	3032
Total	5297

Figures to be provided	Road Network	KPI
Figures to be provided by type of network/zone. KPI to be calculated by type of network/zone (when relevant). *Figures to distinguish fixed and mobile equipment. - not distinguished in Ireland*	Length of road network type/road sections (in km) equipped with ITS to detect Incident Total length of this same road network type (in km)	KPI = (kilometres of road network type equipped with ITS to detect Incident / total kilometres of same road network type) x 100

Network/Part of Network	Incident Detection	
National Roads		
Main Corridor	204 / 347	59
Core TEN-T	204 / 499	41
Comprehensive TEN-T	60 / 1701	4
Motorways	50 / 65	77
Other Sections	0 / 3032	0

South Dublin County Council

95 CCTV cameras providing traffic and incident detection and 62km of Network covered.

KPI = (kilometres of road network type equipped with ITS to detect incident / total kilometres of same road network type) x 100 - 6.5%

Cork City Council

National Primary = 27 sites/67km

Other routes= 18 sites/850km

Dún Laoghaire-Rathdown County Council (DLRCC)

Road Network Type: Urban Area

2km/135km x 100 = 46% [KPI]

3.1.3.   Traffic management and traffic control measures (road KPI)

Figures to be provided by type of network.

KPI to be calculated by type of network.

- <u>Length of road network type / road sections (in km) covered by traffic management and traffic control measures and the total length of this same road network type (in km):</u>

- <u>KPI</u> = (kilometres of road network type covered by traffic management and traffic control measures / total kilometres of same road network type) x 100

Transport Infrastrucutre Ireland

Figures to be provided	Road Network	KPI
Figures to be provided by type of network/zone. KPI to be calculated by type of network/zone (when relevant). *Figures to distinguish fixed and mobile equipment. - not distinguished in Ireland*	Length of road network type/road sections (in km) covered by traffic management and traffic control measures Total length of this same road network type (in km)	KPI = (kilometres of road network type covered by traffic management and traffic control measures / total kilometres of same road network type) x 100

Network/Part of Network	Incident Detection	
National Roads		
Main Corridor	37 / 347	10
Core TEN-T	5 / 499	1
Comprehensive TEN-T	1.5 / 1701	0
Motorways	0 / 65	0
Other Sections	2.5 / 3032	0

South Dublin County Council

480 KM of Network

51%

Kildare County Council

- Approximately 10% of over-all Network is Urban Zone = 240KM (Newbridge 10km Naas 5km, Maynooth 10km have Urban Traffic Control employed with the Urban Area Section
- 25/240 X 100 = 10.42% No change since 2023.

Galway City Council

National Primary = 9 sites / 24km. Other Routes = 100 sites / 301km

Cork City Council

Cork City Council ITS infrastructure, as of 2023, consists of the following inventory:

- 367 traffic signal sites
- 42 Zebra Crossing
- 17 Automatic bollards for Street Pedestrianisation

    National Primary = 67 sites/67km

    Other routes = 359 sites/850km

3.1.4. Cooperative-ITS services and applications (road KPI)

Figures to be provided by type of network.

KPI to be calculated by type of network.

- <u>Length of road network type / road sections (in km) covered by C-ITS services or applications and the total length of this same road network type (in km):</u>

- <u>KPI</u> = (kilometres of road network type covered by C-ITS services or applications / total kilometres of same road network type) x 100

Transport Infrastrucutre Ireland

Figures to be provided	Road Network	KPI
Figures to be provided by type of network/zone. KPI to be calculated by type of network/zone (when relevant). *Figures to distinguish fixed and mobile equipment. - not distinguished in Ireland*	Length of road network type/road sections (in km) covered by Cooperative-ITS services and applications Total length of this same road network type (in km)	KPI = (kilometres of road network type covered by Cooperative-ITS services and applications / total kilometres of same road network type) x 100

Network/Part of Network	Incident Detection	
National Roads		
Main Corridor	3 / 347	1
Core TEN-T	0 / 499	0
Comprehensive TEN-T	0 / 1701	0
Motorways	0 / 65	0
Other Sections	0 / 3032	0

3.1.5. Real-time traffic information (road KPI)

Figures to be provided by type of network.

KPI to be calculated by type of network.

- <u>Length of road network type / road sections (in km) with provision of real-time traffic information services and total length of this same road network type (in km):</u>

- <u>KPI</u> = (kilometres of road network type with provision of real-time traffic information services / total kilometres of same road network type) x 100

Transport Infrastrucutre Ireland

Figures to be provided	Road Network	KPI
Figures to be provided by type of network/zone. KPI to be calculated by type of network/zone (when relevant). *Figures to distinguish fixed and mobile equipment. - not distinguished in Ireland*	Length of road network type/road sections (in km) equipped with the provision of real-time traffic information (in km) Total length of this same road network type (in km)	KPI = (kilometres of road network type equipped with the provision of real-time traffic information (in km) / total kilometres of same road network type) x 100

Network/Part of Network	Incident Detection	
National Roads		
Main Corridor	272 / 347	78
Core TEN-T	372 / 499	75
Comprehensive TEN-T	243 / 1701	14
Motorways	50 / 65	77
Other Sections	0 / 3032	0

Dún Laoghaire-Rathdown County Council (DLRCC)

- *Road Network Type: Urban Area*
- *14.1km/135kmx100 = 10.4%*

Cork City Council

- National Primary=25 sites/67km
- Other routes= 23 sites/850km

3.1.6. Dynamic travel information (multimodal KPI)

Figures to be provided by type of network / node.

KPI to be calculated by type of network / node (where relevant); if relevant, indicate the proportion of services accessible to passengers with reduced mobility, orientation and/or communication.

- Length of transport network type (in km) with provision of dynamic travel information services and total length of this same transport network type (in km):
  Number of transport nodes (e.g. rail or bus stations) covered by dynamic travel information services and total number of the same transport nodes:
- KPI = (kilometres of transport network type with provision of dynamic travel information services / total kilometres of same transport network type) x 100
  KPI = (number of transport nodes with provision of dynamic travel information services / total number of same transport nodes) x 100

- **Transport Infrastructure Ireland**

Figures to be provided	Road Network	KPI
Figures to be provided by type of network / zone / node. KPI to be calculated by type of network / zone / node (when relevant), and if relevant indicate the proportion of services accessible to passengers with reduced mobility, orientation and/or communication.	Length of **transport network type** (in km) with provision of dynamic travel information services (in km) Total length of this same road network type (in km)	KPI = (kilometres of transport network type with provision of dynamic travel information services / total kilometres of same transport network type) x 100

Network/Part of Network	Real-time Traffic Information (per network km)	
ROAD		
Dún Laoghaire-Rathdown County Council		
RAIL		
Luas Light Rail Network (excl. Luas Cross City)	42.5 / 42.5	100
Iarnród Éireann Rail Network		

	Number of **transport nodes** (e.g. rail or bus stations) covered by dynamic travel information services Total number of the same transport nodes	KPI = (number of transport nodes with provision of dynamic travel information services / total number of same transport nodes) x 100

Network/Part of Network	Real-time Traffic Information (per transport node)	
ROAD		
Bus stops Greater Dublin Area, regional and rural cities (Cork, Limerick, Galway)		
RAIL		
Luas (excl. Luas Cross City)	67 / 67	100
Railway Stations		

National Transport Authority

Figures to be provided by type of network / zone / node. KPI to be calculated by type of network / zone / node (when relevant), and if relevant indicate the proportion of services accessible to passengers with reduced mobility, orientation and/or communication.	Length of transport network type (in km) with provision of dynamic travel information services (in km) Total length of this same road network type (in km)	KPI = (kilometres of transport network type with provision of dynamic travel information services / total kilometres of same transport network type) x 100
Network/Part of Network	**Real-time Traffic Information (per network km)**	
RAIL:		
Luas Light Rail Network	44.5 / 44.5	100
Iarnród Éireann Rail Network	2400/2400	100

	Number of transport nodes (e.g. rail or bus stations) covered by dynamic travel information services Total number of the same transport nodes	KPI = (number of transport nodes with provision of dynamic travel information services / total number of same transport nodes) x 100
Network/Part of Network	**Real-time Traffic Information (per transport node)**	
ROAD:		
Bus stops (primarily in Greater Dublin Area and regional cities (Cork, Limerick, Galway))	738 / 13454	5.5
RAIL:		
Luas Light Rail Network	67 / 67	100
Iarnród Éireann Rail Stations	147/147	100

National Multi-Modal Journey Planner ("TFI Live")

Door to door public transport journey planning service provided via mobile apps and websites. The National multi-modal Journey Planner has all-island coverage and features information on journeys on buses, trams, trains, walking, taxis, ferries to the islands. The planner includes information on all licensed / contracted surface public transport services operating on the island

of Ireland. The app also provides real-time arrival/departure information where this data is available.

Coverage

- Dublin Commuter Rail System: 100% coverage

- Cork Suburban Rail System: 100% coverage

- National Inter-city Rail System: 100% coverage

- Dublin Light Rail System: 100% coverage

- Cork Metropolitan Area Bus System: 100% coverage

- Limerick Metropolitan Bus System: 100% coverage

- Galway Metropolitan Bus System: 100% coverage

Dún Laoghaire-Rathdown County Council (DLRCC)

- *Road Network Type: Urban Areas/ Secondary Road Network*

- *3km/135kmx100 = 2.2%*

3.1.7. Freight information (multimodal if possible or road KPI)

Figures to be provided by type of network / node.

KPI to be calculated by type of network / node (where relevant); if relevant, indicate the proportion of services accessible to passengers with reduced mobility, orientation and/or communication.

- <u>Length of road network type / road sections (in km) with provision of freight information services and total length of this same road network type (in km):</u>

  - Length of road network with provision of freight information services: **0 km**

  - Total length of same road network type: **2,163 km (Core & Comprehensive TEN-T Network)**

- <u>Number of freight nodes (e.g. ports, logistics platforms) covered by freight information services and total number of the same freight nodes:</u>

  - Number of freight nodes with provision of freight information services: **0**

  - Total number of freight nodes: **8 TEN-T nodes (includes the two TEN-T airports with significant freight traffic [Dublin and Shannon] and all six TEN-T maritime ports [Cork, Dublin, Galway, Rosslare Europort, Shannon Foynes and Waterford])**

- <u>KPI</u> = (kilometres of road network type with provision of freight information services / total kilometres of same road network type) x 100   **0%**

- KPI = (number of freight nodes with provision of freight information services / total number of same freight nodes) x 100 **0%**

3.2. Benefit KPIs

3.2.1. *Change in travel time (road KPI)*

Figures to be provided also include vehicle.km for the route / area considered.

KPI = ((travel time before ITS implementation or improvement – travel time after ITS implementation or improvement) / travel time before ITS implementation or improvement) x 100

Transport Infrastructure Ireland

The change in travel time before and after the implementation of ITS is not captured.

Changes in travel time are difficult to determine reliably. ITS is mainly implemented in places with rising traffic volumes which lead to increased journey times, so that the impact of ITS is not exactly measurable or comparable over time.

3.2.2. *Change in the number of road crashes resulting in deaths or injuries (road KPI)*

If possible, a distinction can be made between crashes resulting in deaths, serious injuries or slight injuries.

Figures to be provided also include vehicle.km for the route / area considered.

- Number of road crashes resulting in deaths or injuries before ITS implementation or improvement:

- Number of road crashes resulting in deaths or injuries after ITS implementation or improvement:

3.2.3. *Change in traffic-CO2 emissions (road KPI)*

Please specify routes / areas where ITS has been implemented or improved. The length along or area within which the change in CO2 emissions is calculated shall be long or wide enough to be representative.

KPI = ((traffic-CO2 emissions before ITS implementation or improvement – traffic-CO2 emissions after implementation or improvement) / traffic-CO2 emissions before ITS implementation or improvement) x 100

3.3. Financial KPIs

ITS includes any types of systems and services together.

Annual public* investment in road ITS (as % of total transport infrastructure investments):

South Dublin County Council

10% (budget upgrade/improvements of existing traffic control equipments)

Kildare County Council

Annual investment in road ITS (as a % of total transport infrastructure investments): The total capital investment is €450,000 per annum. Based on an annual budget of approximately €55,000,000, ITS <0.01%

Galway City Council

€25,000/€16,673,000 = 0.15%

Cork City Council

Annual investment in road ITS (as a % of total transport infrastructure investments):

ITS capital investment/Adopted Roads & Transportation Budget for 2024 across the network

Total: €1,300,000/€109,727,100 = 0.01%

Annual public* operating and maintenance costs of road ITS (in euro per kilometre of network covered):

Where possible, please provide the same figures for private investments and costs.

The calculation of financial ITS KPIs includes any types of systems and services altogether.

Annual investment in road ITS (as a % of total transport infrastructure investments):

Transport Infrastructure Ireland

Annual investment in road ITS (as % of total infrastructure investment)	2023	2024
Transport Infrastructure Ireland – National Roads	6,924,490 €	7,488,688 €

TII, responsible for the National Road Network, only provides figures for absolute annual investment in road ITS, not as a percentage of total infrastructure investment.
TII's Annual Investment in ITS is based on annual programmes so it fluctuates year-on-year.

Annual operating & maintenance costs of road ITS (in euros per kilometre of network covered):

Transport Infrastructure Ireland

Annual Operating and Maintenance costs of road ITS (€/km of network covered)	2023	2024
Transport Infrastructure Ireland – National Roads		
Total O&M costs	2,192,399 €	2,233,760 €
O&M Costs for Main/Core/Comprehensive TEN-T Network (2200 km)	996.54 €/km	1,015.35 €/km
O&M Costs for total road network (5296 km)	413.97 €/km	421.78 €/km

National Transport Authority

Annual investment in public transport ITS (as % of total infrastructure investment)	2020	2021	2022	2023	2024
NTA – ITS Spending	€0.2m	€1.0m	€1.1m	€0.8m	€6.35m
NTA – Total Infrastructure Investment	€410.1m	€719.3m	€805.1m	€894.3m	€1,006m
NTA - ITS Spending as % of Total Infrastructure	.05%	.14%	.14%	.09%	.6%

South Dublin County Council

€1,087,00 (budget for maintenance of traffic control equipments)

Galway City Council

€1,088,000 / 325km = €3,347/km

Cork City Council

Annual operating & maintenance costs of road ITS (in euros per kilometre of network covered):

ITS operating and maintenance costs: €2,163,300/919.5km = €2,352/km across the network

Dún Laoghaire-Rathdown County Council (DLRCC)

- **For 2024:**
    - Salaries (incl. PRSI, mileage etc.): €179,000
    - ITS Spend on traffic management: €364,000
    - Operation & Maintenance Costs/km: €445,000 (€6,444 per km)

        (Total Annual Spend on O & M €988,000)

Kildare County Council

- Annual operating & maintenance costs of road ITS (in euros per kilometre of network covered): The total operating & maintenance costs is €950,000 per annum and there is a total length of 2,400km, ITS €400 per km/annum.

    * public administrations or publicly-owned entities

Where possible, please provide the same figures for private investments and costs.

ANNEX II

Key performance indicators (KPIs)

<table>
<tr><th></th><th>KPI name</th><th>Geographical scope</th><th>Timeline</th></tr>
<tr><td rowspan="15">Deployment KPIs</td><td rowspan="3">Information-gathering infrastructures / equipment (road KPI)</td><td>Core, extended and comprehensive TEN-T (without urban nodes) + motorways</td><td>Mandatory in 2025</td></tr>
<tr><td>Urban nodes from TEN-T + primary roads</td><td>Mandatory in 2028 (voluntary before)</td></tr>
<tr><td>Entire road network</td><td>Additional KPI to be provided on voluntary basis</td></tr>
<tr><td rowspan="3">Incident detection (road KPI)</td><td>Core, extended and comprehensive TEN-T (without urban nodes) + motorways</td><td>Mandatory in 2025</td></tr>
<tr><td>Urban nodes from TEN-T + primary roads</td><td>Mandatory in 2028 (voluntary before)</td></tr>
<tr><td>Entire road network</td><td>Additional KPI to be provided on voluntary basis</td></tr>
<tr><td rowspan="3">Traffic management and traffic control measures (road KPI)</td><td>Core, extended and comprehensive TEN-T (without urban nodes) + motorways</td><td>Mandatory in 2025</td></tr>
<tr><td>Urban nodes from TEN-T + primary roads</td><td>Mandatory in 2028 (voluntary before)</td></tr>
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<tr><td rowspan="3">Cooperative-ITS services and applications (road KPI)</td><td>Core, extended and comprehensive TEN-T (without urban nodes) + motorways</td><td>Mandatory in 2025</td></tr>
<tr><td>Urban nodes from TEN-T + primary roads</td><td>Mandatory in 2028 (voluntary before)</td></tr>
<tr><td>Entire road network</td><td>Additional KPI to be provided on voluntary basis</td></tr>
<tr><td rowspan="2">Real-time traffic information (road KPI)</td><td>Core, extended and comprehensive TEN-T (without urban nodes) + motorways</td><td>Mandatory in 2025</td></tr>
<tr><td>Urban nodes from TEN-T + primary roads</td><td>Mandatory in 2028 (voluntary before)</td></tr>
</table>

		Entire road network	Additional KPI to be provided on voluntary basis
	Dynamic travel information (multimodal KPI)	Core, extended and comprehensive TEN-T (without urban nodes) + motorways	Mandatory in 2025
		Urban nodes from TEN-T + transport nodes + primary roads	Mandatory in 2028 (voluntary before)
		Entire transport network	Additional KPI to be provided on voluntary basis
	Freight information (multimodal if possible or road KPI)	Core, extended and comprehensive TEN-T (without urban nodes) + motorways	Mandatory in 2025
		Urban nodes from TEN-T + transport nodes + primary roads	Mandatory in 2028 (voluntary before)
		Entire transport network	Additional KPI to be provided on voluntary basis
Benefit KPIs	Change in travel time (road KPI)	Core, extended and comprehensive TEN-T + motorways	Mandatory in 2028 (voluntary before)
	Change in the number of road crashes resulting in deaths or injuries (road KPI)	Core, extended and comprehensive TEN-T + motorways	Mandatory in 2028 (voluntary before)
	Changes in traffic-CO2 emissions (road KPI)	Core, extended and comprehensive TEN-T + motorways	Mandatory in 2028 (voluntary before)
Financial KPIs	Annual public investment in road ITS *(+ figures for private investments where possible)*	Core, extended and comprehensive TEN-T (without urban nodes) + motorways	Mandatory in 2025
		Urban nodes from TEN-T + primary roads	Mandatory in 2028 (voluntary before)
		Entire road network	Additional KPI to be provided on voluntary basis
	Annual public operating and maintenance costs of road ITS *(+ figures for private costs where possible)*	Core, extended and comprehensive TEN-T (without urban nodes) + motorways	Mandatory in 2025
		Urban nodes from TEN-T + primary roads	Mandatory in 2028 (voluntary before)
		Entire road network	Additional KPI to be provided on voluntary basis