



Brussels, 11.11.2024  
C(2024) 7744 final

**COMMISSION IMPLEMENTING DECISION**

**of 11.11.2024**

**laying down the template including key performance indicators for reporting by the  
Member States under Directive 2010/40/EU of the European Parliament and of the  
Council**

# COMMISSION IMPLEMENTING DECISION

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## laying down the template including key performance indicators for reporting by the Member States under Directive 2010/40/EU of the European Parliament and of the Council

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2010/40/EU of the European Parliament and of the Council of 7 July 2010 on the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport<sup>1</sup>, and in particular Article 17(2) thereof,

Whereas:

- (1) Article 17 of Directive 2010/40/EU requires Member States to submit to the Commission by 21 March 2025 a report on the implementation of that Directive and of the delegated acts adopted on the basis thereof and empowers the Commission to lay down the template for such a report. As regards the delegated acts, Commission Delegated Regulations (EU) No 305/2013<sup>2</sup>, (EU) No 885/2013<sup>3</sup>, (EU) No 886/2013<sup>4</sup>, (EU) 2015/962<sup>5</sup>, (EU) 2017/1926<sup>6</sup> and (EU) 2022/670<sup>7</sup> have been adopted. Delegated Regulation (EU) 2022/670 is to repeal Regulation (EU) 2015/962 as from 1 January

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<sup>1</sup> OJ L 207, 6.8.2010, p. 1, ELI: <http://data.europa.eu/eli/dir/2010/40/oj>.

<sup>2</sup> Commission Delegated Regulation (EU) No 305/2013 of 26 November 2012 supplementing Directive 2010/40/EU of the European Parliament and of the Council with regard to the harmonised provision for an interoperable EU-wide eCall (OJ L 91, 3.4.2013, p. 1, ELI: [http://data.europa.eu/eli/reg\\_del/2013/305/oj](http://data.europa.eu/eli/reg_del/2013/305/oj)).

<sup>3</sup> Commission Delegated Regulation (EU) No 885/2013 of 15 May 2013 supplementing ITS Directive 2010/40/EU of the European Parliament and of the Council with regard to the provision of information services for safe and secure parking places for trucks and commercial vehicles (OJ L 247, 18.9.2013, p. 1, ELI: [http://data.europa.eu/eli/reg\\_del/2013/885/oj](http://data.europa.eu/eli/reg_del/2013/885/oj)).

<sup>4</sup> Commission Delegated Regulation (EU) No 886/2013 of 15 May 2013 supplementing Directive 2010/40/EU of the European Parliament and of the Council with regard to data and procedures for the provision, where possible, of road safety-related minimum universal traffic information free of charge to users (OJ L 247, 18.9.2013, p. 6, ELI: [http://data.europa.eu/eli/reg\\_del/2013/886/oj](http://data.europa.eu/eli/reg_del/2013/886/oj)).

<sup>5</sup> Commission Delegated Regulation (EU) 2015/962 of 18 December 2014 supplementing Directive 2010/40/EU of the European Parliament and of the Council with regard to the provision of EU-wide real-time traffic information services (OJ L 157, 23.6.2015, p. 21, ELI: [http://data.europa.eu/eli/reg\\_del/2015/962/oj](http://data.europa.eu/eli/reg_del/2015/962/oj)).

<sup>6</sup> Commission Delegated Regulation (EU) 2017/1926 of 31 May 2017 supplementing Directive 2010/40/EU of the European Parliament and of the Council with regard to the provision of EU-wide multimodal travel information services (OJ L 272, 21.10.2017, p. 1, ELI: [http://data.europa.eu/eli/reg\\_del/2017/1926/oj](http://data.europa.eu/eli/reg_del/2017/1926/oj)).

<sup>7</sup> Commission Delegated Regulation (EU) 2022/670 of 2 February 2022 supplementing Directive 2010/40/EU of the European Parliament and of the Council with regard to the provision of EU-wide real-time traffic information services (OJ L 122, 25.4.2022, p. 1, ELI: [http://data.europa.eu/eli/reg\\_del/2022/670/oj](http://data.europa.eu/eli/reg_del/2022/670/oj)).

2025, and therefore the template should only refer to Delegated Regulation (EU) 2022/670.

- (2) In accordance with Article 17(1) of Directive 2010/40/EU, the report is to specify the Member State's main national activities and projects regarding the priority areas and the geographical availability of data and services listed in Annex III and IV to that Directive. In accordance with Article 17(2) of Directive 2010/40/EU, the report is to distinguish between the mandatory or additional nature of the KPIs. That distinction should be based on the geographical scope of the KPIs and the timeline of the reporting.
- (3) Furthermore, Article 17(3) of Directive 2010/40/EU requires Member States to report every three years following the initial report on the progress made in the implementation of that Directive and of the delegated and implementing acts adopted on the basis thereof. The template should therefore apply to the initial and subsequent progress reports.
- (4) In order to provide the Commission with high-level policy information, the report should give an insight into the availability and accessibility over time of data types listed in Annex III to Directive 2010/40/EU and should be based on informed estimates in round figures.
- (5) Also with a view to providing high-level policy information, the KPIs should give an insight into the deployment and impact of ITS equipment and services in the Union over time. For benefit KPIs, that assess the impact of ITS services on travel time, road crashes and CO2 emissions, the goal is to obtain robust reference values, based on enough good samples. This would allow prudent extrapolation due to the limitations of the calculations of these KPIs, the impact of ITS being sometimes difficult to isolate from the impact of other measures.
- (6) Commission Implementing Decision 2011/453/EU<sup>8</sup> established non-binding guidelines for reporting by the Member States under Directive 2010/40/EU. Considering the nature and extent of the changes required under Article 17 of Directive 2010/40/EU, in particular the mandatory nature of the template and its content, including KPIs, Implementing Decision 2011/453/EU should be repealed.
- (7) The measures provided for in this Decision are in accordance with the opinion of the European ITS Committee,

HAS ADOPTED THIS DECISION:

#### *Article 1*

The template for the initial and progress reports including the key performance indicators, referred to in Article 17 of Directive 2010/40/EU, is set out in Annex I.

The mandatory or additional nature of the key performance indicators, depending on the geographical scope and the timeline, is set out in Annex II.

#### *Article 2*

Implementing Decision 2011/453/EU is repealed.

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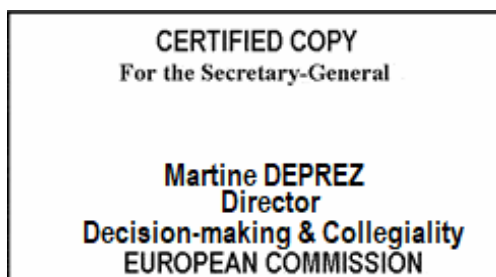
<sup>8</sup> Commission Implementing Decision 2011/453/EU of 13 July 2011 adopting guidelines for reporting by the Member States under Directive 2010/40/EU of the European Parliament and of the Council (OJ L 193, 23.7.2011, p. 48, ELI: [http://data.europa.eu/eli/dec\\_impl/2011/453/oj](http://data.europa.eu/eli/dec_impl/2011/453/oj)).

*Article 3*

This Decision is addressed to the Member States.

Done at Brussels, 11.11.2024

*For the Commission*  
*Wopke HOEKSTRA*  
*Member of the Commission*





Brussels, 11.11.2024  
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ANNEXES 1 to 2

**ANNEXES**

**to the**

**COMMISSION IMPLEMENTING DECISION**

**laying down the template including key performance indicators for reporting by the  
Member States under Directive 2010/40/EU of the European Parliament and of the  
Council**

**ANNEX I**

**Template for the initial report and progress reports**

**Directive 2010/40/EU  
Implementation Report 20XX  
*Country\_name***

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*Date*

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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

### 1.2. General progress since [year of previous report]

Summary of progress since previous report:

### 1.3. Contact information

## 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:

#### 2.1.2. Progress since [year of previous report]

Description of progress in the area since [year of previous report]:

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

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

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:

Linking of travel information services:

Results of the assessment of compliance referred to in Article 9:

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

Additional information (e.g. have mobilityDCAT-AP or other metadata catalogues been implemented?):



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:

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:

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

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

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

**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:

2.2.2. *Progress since [year of previous report]*

Description of progress in the area since [year of previous report]:

**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:

2.3.2. *Progress since [year of previous report]*

Description of progress in the area since [year of previous report]:

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:

Additional information:

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:

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

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

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

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)*

Number of different parking places and parking spaces on their territory:

Percentage of parking places registered in the information service:

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

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?)

**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.

*2.4.2. Progress since [year of previous report]*

Description of progress in the area since [year of previous report]:

## 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
<i>1. Data relating to the provision of EU-wide road traffic information and navigation services:</i>				
<i>1.1 Category: Static and dynamic traffic regulations, where applicable, concerning:</i>				
<i>1.1.1 Subcategory:</i> - access conditions for tunnels - access conditions for bridges - speed limits - overtaking bans on heavy goods vehicles - weight/length/width/height restrictions	The trans-European <i>core</i> network for roads	access conditions for tunnels*	%	
			<i>[Note: if more relevant, possibility to provide the number and % of tunnels]</i>	
		access conditions for bridges*	%	

			<i>[Note: if more relevant, possibility to provide the number and % of bridges]</i>	
		speed limits*	%	
		overtaking bans on heavy goods vehicles*	%	
		weight/length/width/height restrictions*	%	
	<i>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 &gt; 7 000 vehicles/day)</i>	access conditions for tunnels*	%	
		access conditions for bridges*	%	
		speed limits*	%	
		overtaking bans on heavy goods vehicles*	%	
		weight/length/width/height restrictions*	%	
<i>Subcategory:</i> - one-way streets	<i>Road infrastructure in the cities at the centre of each Urban Node</i>	one-way streets*	%  <i>[Note: if relevant, possibility</i>	

			<i>to also provide in addition the number and % of cities able to supply such data]</i>	
<i>Subcategory:</i> - freight delivery regulations	<i>Road infrastructure in the cities at the centre of each Urban Node</i>	freight delivery regulations*	% <i>[Note: if relevant, possibility to also provide in addition the number and % of cities able to supply such data]</i>	
<i>Subcategory:</i> - direction of travel on reversible lanes	<i>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 &gt; 7 000 vehicles/day)</i>	direction of travel on reversible lanes*	%	
<i>Subcategory:</i> - traffic circulations plans	<i>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</i>	traffic circulations plans*	% <i>[Note: if the network</i>	

	<i>roads in the cities at the centre of each Urban Node (if applicable limited to &gt; 7 000 vehicles/day)</i>		<i>length is impossible to calculate, possibility to provide the number and % of traffic circulation plans]</i>	
<i>Subcategory:</i> - permanent access restrictions	<i>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 &gt; 7 000 vehicles/day)</i>	permanent access restrictions*	%	
<i>Subcategory:</i> - boundaries of restrictions, prohibitions or obligations with zonal validity, current access status and conditions for circulation in regulated traffic zones	<i>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 &gt; 7 000 vehicles/day)</i>	boundaries of restrictions, prohibitions or obligations with zonal validity, current access status and conditions for circulation in regulated traffic zones*	% <i>[Note: if the network length is impossible to calculate, possibility to provide the number and % of boundaries of restrictions, prohibitions,</i>	

			<i>etc.]</i>	
<b>1.2 Types of data on the state of the network:</b>				
<i>Subcategory:</i> - road closures - lane closures - roadworks	<i>The trans-European core network for roads</i>	road closures**	%	
		lane closures**	%	
		roadworks**	%	
	<i>The comprehensive trans-European network for roads</i>	road closures**	%	
		lane closures**	%	
		roadworks**	%	
<i>Subcategory:</i> - temporary traffic management measures	<i>The trans-European core and comprehensive network for roads</i>	temporary traffic management measures**	%	

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
<b>2. Data relating to information and reservation services for safe and secure parking places for trucks and commercial vehicles:</b>				
<i>Category: static data</i>	<i>The trans-European core network for roads</i>	static data related to the	%	



<i>Subcategory:</i> - static data related to the parking areas - information on safety and equipment of the parking area		parking areas		
		information on safety and equipment of the parking area	%	
	<i>The comprehensive trans-European network for roads</i>	static data related to the parking areas	%	
		information on safety and equipment of the parking area	%	
<i>Category: dynamic data</i> <i>Subcategory:</i> - dynamic data on availability of parking places including whether a parking is: full, closed or number of free places which are available.	<i>The trans-European core and comprehensive network for roads</i>	dynamic data on availability of parking places including whether a parking is: full, closed or number of free places which are available.	%	

### 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
<i>3. Data on detected road safety-related events or conditions relating to road-safety-related minimum universal traffic information:</i>			

<i>Category: dynamic data</i> <i>Subcategory:</i> - temporary slippery road - animal, people, obstacles, debris on the road - unprotected accident area - short-term roadworks - wrong-way driver - unmanaged blockage of a road	<i>The core and comprehensive trans-European network for roads and other motorways not included in that network</i>	temporary slippery road**	%	
		animal, people, obstacles, debris on the road**	%	
		unprotected accident area**	%	
		short-term road works**	%	
		wrong-way driver**	%	
		unmanaged blockage of a road**	%	
<i>Subcategory:</i> -reduced visibility - exceptional weather conditions	<i>The core and comprehensive trans-European network for roads and other motorways not included in that network</i>	reduced visibility**	%	
		exceptional weather conditions**	%	

#### 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
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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)	<i>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</i>	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)***	%
	<i>The entire transport network of the Union</i>	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)***	%

## 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 <i>core and comprehensive</i> trans-European network for roads	%

## 2.7. Other initiatives / highlights

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

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

### 2.7.2. Progress since [year of previous report]

Description of progress in the area since [year of previous report]:

## 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.*

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

#### 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):
- $\text{KPI} = (\text{kilometres of road network type equipped with ITS to detect incident} / \text{total kilometres of same road network type}) \times 100$

### *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.*

- 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):
- $\text{KPI} = (\text{kilometres of road network type covered by traffic management and traffic control measures} / \text{total kilometres of same road network type}) \times 100$

### *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.*

- 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):
- $\text{KPI} = (\text{kilometres of road network type covered by C-ITS services or applications} / \text{total kilometres of same road network type}) \times 100$

### *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.*

- 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):
- $\text{KPI} = (\text{kilometres of road network type with provision of real-time traffic information services} / \text{total kilometres of same road network type}) \times 100$

### *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:
- $KPI = (\text{kilometres of transport network type with provision of dynamic travel information services} / \text{total kilometres of same transport network type}) \times 100$
- $KPI = (\text{number of transport nodes with provision of dynamic travel information services} / \text{total number of same transport nodes}) \times 100$

### 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.*

- 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):
- Number of freight nodes (e.g. ports, logistics platforms) covered by freight information services and total number of the same freight nodes:
- $KPI = (\text{kilometres of road network type with provision of freight information services} / \text{total kilometres of same road network type}) \times 100$
- $KPI = (\text{number of freight nodes with provision of freight information services} / \text{total number of same freight nodes}) \times 100$

## 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.*

$KPI = ((\text{travel time before ITS implementation or improvement} - \text{travel time after ITS implementation or improvement}) / \text{travel time before ITS implementation or improvement}) \times 100$

### 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):

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

*\* public administrations or publicly-owned entities*

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

## ANNEX II

### Key performance indicators (KPIs)

	<b>KPI name</b>	<b>Geographical scope</b>	<b>Timeline</b>
<b>Deployment KPIs</b>	Information-gathering infrastructures / equipment (road KPI)	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
	Incident detection (road KPI)	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
	Traffic management and traffic control measures (road KPI)	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
	Cooperative-ITS services and applications (road KPI)	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
	Real-time traffic information (road KPI)	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



	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
<b>Benefit KPIs</b>	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)
<b>Financial KPIs</b>	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