



**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**

(Text with EEA relevance)

Article 1

Subject matter and scope

1. This Directive establishes a framework in support of the coordinated and coherent deployment and use of Intelligent Transport Systems (ITS) within the Union, in particular across the borders between the Member States, and sets out the general conditions necessary for that purpose.
2. This Directive provides for the development of specifications for actions within the priority areas referred to in Article 2, as well as for the development, where appropriate, of necessary standards.
3. This Directive shall apply to ITS applications and services in the field of road transport and to their interfaces with other modes of transport without prejudice to matters concerning national security or necessary in the interest of defence.

Article 2

Priority areas

1. For the purpose of this Directive the following shall constitute priority areas for the development and use of specifications and standards:
 - I. Optimal use of road, traffic and travel data,
 - II. Continuity of traffic and freight management ITS services,
 - III. ITS road safety and security applications,
 - IV. Linking the vehicle with the transport infrastructure.
2. The scope of the priority areas is specified in Annex I.

Article 3

Priority actions

Within the priority areas the following shall constitute priority actions for the development and use of specifications and standards, as set out in Annex I:

- (a) the provision of EU-wide multimodal travel information services;

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- (b) the provision of EU-wide real-time traffic information services;
- (c) data and procedures for the provision, where possible, of road safety related minimum universal traffic information free of charge to users;
- (d) the harmonised provision for an interoperable EU-wide eCall;
- (e) the provision of information services for safe and secure parking places for trucks and commercial vehicles;
- (f) the provision of reservation services for safe and secure parking places for trucks and commercial vehicles.

*Article 4***Definitions**

For the purposes of this Directive, the following definitions shall apply:

- (1) ‘Intelligent Transport Systems’ or ‘ITS’ means systems in which information and communication technologies are applied in the field of road transport, including infrastructure, vehicles and users, and in traffic management and mobility management, as well as for interfaces with other modes of transport;
- (2) ‘interoperability’ means the capacity of systems and the underlying business processes to exchange data and to share information and knowledge;
- (3) ‘ITS application’ means an operational instrument for the application of ITS;
- (4) ‘ITS service’ means the provision of an ITS application through a well-defined organisational and operational framework with the aim of contributing to user safety, efficiency, comfort and/or to facilitate or support transport and travel operations;
- (5) ‘ITS service provider’ means any provider of an ITS service, whether public or private;
- (6) ‘ITS user’ means any user of ITS applications or services including travellers, vulnerable road users, road transport infrastructure users and operators, fleet managers and operators of emergency services;
- (7) ‘vulnerable road users’ means non-motorised road users, such as pedestrians and cyclists as well as motor-cyclists and persons with disabilities or reduced mobility and orientation;
- (8) ‘nomadic device’ means a portable communication or information device that can be brought inside the vehicle to support the driving task and/or the transport operations;

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- (9) ‘platform’ means an on-board or off-board unit enabling the deployment, provision, exploitation and integration of ITS applications and services;
- (10) ‘architecture’ means the conceptual design that defines the structure, behaviour and integration of a given system in its surrounding context;
- (11) ‘interface’ means a facility between systems which provides the media through which they can connect and interact;
- (12) ‘compatibility’ means the general ability of a device or system to work with another device or system without modification;
- (13) ‘continuity of services’ means the ability to ensure seamless services on transport networks across the Union;
- (14) ‘road data’ means data on road infrastructure characteristics, including fixed traffic signs or their regulatory safety attributes;
- (15) ‘traffic data’ means historic and real-time data on road traffic characteristics;
- (16) ‘travel data’ means basic data such as public transport timetables and tariffs, necessary to provide multi-modal travel information before and during the trip to facilitate travel planning, booking and adaptation;
- (17) ‘specification’ means a binding measure laying down provisions containing requirements, procedures or any other relevant rules;
- (18) ‘standard’ means standard as defined in Article 1(6) of Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations ⁽¹⁾.

*Article 5***Deployment of ITS**

1. Member States shall take the necessary measures to ensure that the specifications adopted by the Commission in accordance with Article 6 are applied to ITS applications and services, when these are deployed, in accordance with the principles in Annex II. This is without prejudice to the right of each Member State to decide on its deployment of such applications and services on its territory. This right is without prejudice to any legislative act adopted under the second subparagraph of Article 6(2).

2. Member States shall also make efforts to cooperate in respect of the priority areas, insofar as no specifications have been adopted.

⁽¹⁾ OJ L 204, 21.7.1998, p. 37.



Article 6

Specifications

1. The Commission shall first adopt the specifications necessary to ensure the compatibility, interoperability and continuity for the deployment and operational use of ITS for the priority actions.

2. The Commission shall aim at adopting specifications for one or more of the priority actions by 27 February 2013.

At the latest 12 months after the adoption of the necessary specifications for a priority action, the Commission shall, where appropriate, after conducting an impact assessment including a cost-benefit analysis, present a proposal to the European Parliament and the Council in accordance with Article 294 of the TFEU on the deployment of that priority action.

3. Once the necessary specifications for the priority actions have been adopted, the Commission shall adopt specifications ensuring compatibility, interoperability and continuity for the deployment and operational use of ITS for other actions in the priority areas.

4. Where relevant, and depending on the area covered by the specification, the specification shall include one or more of the following types of provisions:

- (a) functional provisions that describe the roles of the various stakeholders and the information flow between them;
- (b) technical provisions that provide for the technical means to fulfil the functional provisions;
- (c) organisational provisions that describe the procedural obligations of the various stakeholders;
- (d) service provisions that describe the various levels of services and their content for ITS applications and services.

5. Without prejudice to the procedures under Directive 98/34/EC the specifications shall, where appropriate, stipulate the conditions in which Member States may, after notification to the Commission, establish additional rules for the provision of ITS services on all or part of their territory, provided that those rules do not hinder interoperability.

6. The specifications shall, where appropriate, be based on any standards referred to in Article 8.

The specifications shall, as appropriate, provide for conformity assessment in accordance with Decision No 768/2008/EC.

The specifications shall comply with the principles set out in Annex II.

7. The Commission shall conduct an impact assessment including a cost-benefit analysis prior to the adoption of the specifications.

*Article 7***Delegated acts**

1. The Commission may adopt delegated acts in accordance with Article 290 of the TFEU as regards specifications. When adopting such delegated acts the Commission shall act in accordance with the relevant provisions of this Directive, in particular Article 6 and Annex II.
2. A separate delegated act shall be adopted for each of the priority actions.
3. For the delegated acts referred to in this Article, the procedure set out in Articles 12, 13 and 14 shall apply.

*Article 8***Standards**

1. The necessary standards to provide for interoperability, compatibility and continuity for the deployment and operational use of ITS shall be developed in the priority areas and for the priority actions. To that effect, the Commission, after having consulted the Committee referred to in Article 15, shall request the relevant standardisation bodies in accordance with the procedure laid down in Directive 98/34/EC to make every necessary effort to adopt these standards rapidly.
2. When issuing a mandate to the standardisation bodies, the principles set out in Annex II shall be observed as well as any functional provision included in a specification adopted in accordance with Article 6.

*Article 9***Non-binding measures**

The Commission may adopt guidelines and other non-binding measures to facilitate Member States' cooperation relating to the priority areas in accordance with the advisory procedure referred to in Article 15(2).

*Article 10***Rules on privacy, security and re-use of information**

1. Member States shall ensure that the processing of personal data in the context of the operation of ITS applications and services is carried out in accordance with Union rules protecting fundamental rights and freedoms of individuals, in particular Directive 95/46/EC and Directive 2002/58/EC.
2. In particular, Member States shall ensure that personal data are protected against misuse, including unlawful access, alteration or loss.
3. Without prejudice to paragraph 1, in order to ensure privacy, the use of anonymous data shall be encouraged, where appropriate, for the performance of the ITS applications and services.

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Without prejudice to Directive 95/46/EC personal data shall only be processed insofar as such processing is necessary for the performance of ITS applications and services.

4. With regard to the application of Directive 95/46/EC and in particular where special categories of personal data are involved, Member States shall also ensure that the provisions on consent to the processing of such personal data are respected.

5. Directive 2003/98/EC shall apply.

*Article 11***Rules on liability**

Member States shall ensure that issues related to liability, concerning the deployment and use of ITS applications and services set out in specifications adopted in accordance with Article 6, are addressed in accordance with Union law, including in particular Council Directive 85/374/EEC of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products ⁽¹⁾ as well as relevant national legislation.

▼M1*Article 12***Exercise of the delegation**

1. The power to adopt delegated acts is conferred on the Commission subject to the conditions laid down in this Article.

2. The power to adopt delegated acts referred to in Article 7 shall be conferred on the Commission for a period of five years from 27 August 2017. The Commission shall draw up a report in respect of the delegation of power not later than nine months before the end of the five-year period. The delegation of power shall be tacitly extended for periods of an identical duration, unless the European Parliament or the Council opposes such extension not later than three months before the end of each period.

3. The delegation of power referred to in Article 7 may be revoked at any time by the European Parliament or by the Council. A decision to revoke shall put an end to the delegation of the power specified in that decision. It shall take effect the day following the publication of the decision in the *Official Journal of the European Union* or at a later date specified therein. It shall not affect the validity of any delegated acts already in force.

4. Before adopting a delegated act, the Commission shall consult experts designated by each Member State in accordance with the principles laid down in the Interinstitutional Agreement of 13 April 2016 on Better Law-Making.

5. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.

6. A delegated act adopted pursuant to Article 7 shall enter into force only if no objection has been expressed either by the European Parliament or by the Council within a period of two months of notification of that act to the European Parliament and the Council or if,

⁽¹⁾ OJ L 210, 7.8.1985, p. 29.

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before the expiry of that period, the European Parliament and the Council have both informed the Commission that they will not object. That period shall be extended by two months at the initiative of the European Parliament or of the Council.

▼B*Article 15***Committee procedure**

1. The Commission shall be assisted by the European ITS Committee (EIC).
2. Where reference is made to this paragraph, Article 3 and Article 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.

*Article 16***European ITS Advisory Group**

The Commission shall establish a European ITS Advisory Group to advise it on business and technical aspects of the deployment and use of ITS in the Union. The group shall be composed of high level representatives from relevant ITS service providers, associations of users, transport and facilities operators, manufacturing industry, social partners, professional associations, local authorities and other relevant fora.

*Article 17***Reporting**

1. Member States shall submit to the Commission by 27 August 2011 a report on their national activities and projects regarding the priority areas.
2. Member States shall provide the Commission by 27 August 2012 with information on national ITS actions envisaged over the following five year period.

Guidelines for reporting by the Member States shall be adopted in accordance with the advisory procedure referred to in Article 15(2).

3. Following the initial report, Member States shall report every three years on the progress made in the deployment of the actions referred to in paragraph 1.
4. The Commission shall submit a report every three years to the European Parliament and to the Council on the progress made for the implementation of this Directive. The report shall be accompanied by an analysis on the functioning and implementation, including the financial resources used and needed, of Articles 5 to 11 and Article 16, and shall assess the need to amend this Directive, where appropriate.

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5. In accordance with the advisory procedure referred to in Article 15(2), the Commission shall adopt a working program by 27 February 2011. The working programme shall include objectives and dates for its implementation every year and if necessary shall propose the necessary adaptations.

The Commission shall update the working programme related to the actions under Article 6(3) by 10 January 2019 and before each subsequent five-year extension of the power to adopt delegated acts in accordance with Article 12(2).

▼ B*Article 18***Transposition**

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 27 February 2012.

When Member States adopt those provisions, they shall contain a reference to this Directive or shall be accompanied by such reference on the occasion of their official publication. The methods of making such reference, and its wording, shall be laid down by Member States.

2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

*Article 19***Entry into force**

This Directive shall enter into force on the 20th day following its publication in the *Official Journal of the European Union*.

*Article 20***Addressees**

This Directive is addressed to the Member States.

*ANNEX I***PRIORITY AREAS AND ACTIONS**

(as referred to in Articles 2 and 3)

— Priority area I: Optimal use of road, traffic and travel data

The specifications and standards for an optimal use of road, traffic and travel data shall include the following:

1. Specifications for priority action (a)

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

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

2. Specifications for priority action (b)

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

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

3. Specifications for priority actions (a) and (b)

- 3.1. The definition of the necessary requirements for the collection by relevant public authorities and/or, where relevant, by the private sector

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of road and traffic data (i.e. traffic circulation plans, traffic regulations and recommended routes, notably for heavy goods vehicles) and for their provisioning to ITS service providers, based on:

- the availability, to ITS service providers, of existing road and traffic data (i.e. traffic circulation plans, traffic regulations and recommended routes) collected by the relevant public authorities and/or the private sector,
- the facilitation of the electronic data exchange between the relevant public authorities and the ITS service providers,
- the timely updating, by the relevant public authorities and/or, where relevant, the private sector, of road and traffic data (i.e. traffic circulation plans, traffic regulations and recommended routes),
- the timely updating, by the ITS service providers, of the ITS services and applications using these road and traffic data.

3.2. The definition of the necessary requirements to make road, traffic and transport services data used for digital maps accurate and available, where possible, to digital map producers and service providers, based on:

- the availability of existing road and traffic data used for digital maps to digital map producers and service providers,
- the facilitation of the electronic data exchange between the relevant public authorities and stakeholders and the private digital map producers and service providers,
- the timely updating of road and traffic data for digital maps by the relevant public authorities and stakeholders,
- the timely updating of the digital maps by the digital map producers and service providers.

4. Specifications for priority action (c)

The definition of minimum requirements, for road safety related ‘universal traffic information’ provided, where possible, free of charge to all users, as well as their minimum content, based on:

- the identification and use of a standardised list of safety related traffic events (‘universal traffic messages’) which should be communicated to ITS users free of charge,
- The compatibility and the integration of ‘universal traffic messages’ into ITS services for real-time traffic and multimodal travel information.

— **Priority area II: Continuity of traffic and freight management ITS services**

The specifications and standards for the continuity and interoperability of traffic and freight management services, in particular on the TEN-T network, shall include the following:

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1. Specifications for other actions
 - 1.1. The definition of the necessary measures to develop an EU ITS Framework Architecture, addressing specifically ITS-related interoperability, continuity of services and multi-modality aspects, including for example multimodal interoperable ticketing, within which Member States and their competent authorities in cooperation with the private sector can develop their own ITS architecture for mobility at national, regional or local level.
 - 1.2. The definition of the minimum necessary requirements for the continuity of ITS services, in particular for cross-border services, for the management of passenger transport across different modes of transport, based on:
 - the facilitation of the electronic exchange for traffic data and information across borders, and where appropriate, regions, or between urban and inter-urban areas between the relevant traffic information/control centres and different stakeholders,
 - the use of standardised information flows or traffic interfaces between the relevant traffic information/control centres and different stakeholders.
 - 1.3. The definition of the minimum necessary requirements for the continuity of ITS services for the management of freight along transport corridors and across different modes of transport, based on:
 - the facilitation of the electronic exchange for traffic data and information across borders, and where appropriate, regions, or between urban and inter-urban areas between the relevant traffic information/control centres and different stakeholders,
 - the use of standardised information flows or traffic interfaces between the relevant traffic information/control centres and different stakeholders.
 - 1.4. The definition of the necessary measures in the realisation of ITS applications (notably the tracking and tracing of freight along its journey and across modes of transport) for freight transport logistics (eFreight), based on:
 - the availability of relevant ITS technologies to and their use by ITS application developers,
 - the integration of positioning results in the traffic management tools and centres.
 - 1.5. The definition of the necessary interfaces to ensure interoperability and compatibility between the urban ITS architecture and the European ITS architecture based on:
 - the availability of public transport, travel planning, transport demand, traffic data and parking data to urban control centres and service providers,
 - the facilitation of the electronic data exchange between the different urban control centres and service providers for public or private transport and through all possible modes of transport,
 - the integration of all relevant data and information in a single architecture.

▼B**— Priority area III: ITS road safety and security applications**

The specifications and standards for ITS road safety and security applications shall include the following:

1. Specifications for priority action (d)

The definition of the necessary measures for the harmonised provision of an interoperable EU-wide eCall, including:

- the availability of the required in-vehicle ITS data to be exchanged,
- the availability of the necessary equipment in the emergency call response centres receiving the data emitted from the vehicles,
- the facilitation of the electronic data exchange between the vehicles and the emergency call response centres.

2. Specifications for priority action (e)

The definition of the necessary measures to provide ITS based information services for safe and secure parking places for trucks and commercial vehicles, in particular in service and rest areas on roads, based on:

- the availability of the road parking information to users,
- the facilitation of the electronic data exchange between road parking sites, centres and vehicles.

3. Specifications for priority action (f)

The definition of the necessary measures to provide ITS based reservation services for safe and secure parking places for trucks and commercial vehicles based on:

- the availability of the road parking information to users,
- the facilitation of the electronic data exchange between road parking sites, centres and vehicles,
- the integration of relevant ITS technologies in both vehicles and road parking facilities to update the information on available parking space for reservation purposes.

4. Specifications for other actions

- 4.1. The definition of the necessary measures to support the safety of road users with respect to their on-board Human-Machine-Interface and the use of nomadic devices to support the driving task and/or the transport operation, as well as the security of the in-vehicle communications.
- 4.2. The definition of the necessary measures to improve the safety and comfort of vulnerable road users for all relevant ITS applications.
- 4.3. The definition of necessary measures to integrate advanced driver support information systems into vehicles and road infrastructure which fall outside the scope of Directives 2007/46/EC, 2002/24/EC and 2003/37/EC.

▼B**— Priority area IV: Linking the vehicle with the transport infrastructure**

The specifications and standards for linking vehicles with the transport infrastructure shall include the following:

1. Specifications for other actions
 - 1.1. The definition of necessary measures to integrate different ITS applications on an open in-vehicle platform, based on:
 - the identification of functional requirements of existing or planned ITS applications,
 - the definition of an open-system architecture which defines the functionalities and interfaces necessary for the interoperability/interconnection with infrastructure systems and facilities,
 - the integration of future new or upgraded ITS applications in a ‘plug and play’ manner into an open in-vehicle platform,
 - the use of a standardisation process for the adoption of the architecture, and the open in-vehicle specifications.
 - 1.2. The definition of necessary measures to further progress the development and implementation of cooperative (vehicle-vehicle, vehicle-infrastructure, infrastructure-infrastructure) systems, based on:
 - the facilitation of the exchange of data or information between vehicles, infrastructures and between vehicle and infrastructure,
 - the availability of the relevant data or information to be exchanged to the respective vehicle or road infrastructure parties,
 - the use of a standardised message format for the exchange of data or information between the vehicle and the infrastructure,
 - the definition of a communication infrastructure for data or information exchange between vehicles, infrastructures and between vehicle and infrastructure,
 - the use of standardisation processes to adopt the respective architectures.

*ANNEX II*

PRINCIPLES FOR SPECIFICATIONS AND DEPLOYMENT OF ITS

(as referred to in Articles 5, 6 and 8)

The adoption of specifications, the issuing of mandates for standards and the selection and deployment of ITS applications and services shall be based upon an evaluation of needs involving all relevant stakeholders, and shall comply with the following principles. These measures shall:

- (a) **Be effective** – make a tangible contribution towards solving the key challenges affecting road transportation in Europe (e.g. reducing congestion, lowering of emissions, improving energy efficiency, attaining higher levels of safety and security including vulnerable road users);
- (b) **Be cost-efficient** – optimise the ratio of costs in relation to output with regard to meeting objectives;
- (c) **Be proportionate** – provide, where appropriate, for different levels of achievable service quality and deployment, taking into account the local, regional, national and European specificities;
- (d) **Support continuity of services** – ensure seamless services across the Union, in particular on the trans-European network, and where possible at its external borders, when ITS services are deployed. Continuity of services should be ensured at a level adapted to the characteristics of the transport networks linking countries with countries, and where appropriate, regions with regions and cities with rural areas;
- (e) **Deliver interoperability** – ensure that systems and the underlying business processes have the capacity to exchange data and to share information and knowledge to enable effective ITS service delivery;
- (f) **Support backward compatibility** – ensure, where appropriate, the capability for ITS systems to work with existing systems that share a common purpose, without hindering the development of new technologies;
- (g) **Respect existing national infrastructure and network characteristics** – take into account the inherent differences in the transport network characteristics, in particular in the sizes of the traffic volumes and in road weather conditions;
- (h) **Promote equality of access** – do not impede or discriminate against access to ITS applications and services by vulnerable road users;
- (i) **Support maturity** – demonstrate, after appropriate risk assessment, the robustness of innovative ITS systems, through a sufficient level of technical development and operational exploitation;
- (j) **Deliver quality of timing and positioning** – use of satellite-based infrastructures, or any technology providing equivalent levels of precision for the purposes of ITS applications and services that require global, continuous, accurate and guaranteed timing and positioning services;
- (k) **Facilitate inter-modality** – take into account the coordination of various modes of transport, where appropriate, when deploying ITS;
- (l) **Respect coherence** – take into account existing Union rules, policies and activities which are relevant in the field of ITS, in particular in the field of standardisation.