
This briefing is one in a series of implementation appraisals produced by the European Parliamentary Research Service (EPRS) on the operation of existing EU legislation in practice. Each briefing focuses on a specific EU law that is likely to be amended or reviewed, as envisaged in the European Commission's annual work programme. Implementation appraisals aim at providing a succinct overview of publicly available material on the implementation, application and effectiveness to date of specific EU law, drawing on input from EU institutions and bodies, as well as external organisations. They are provided by the Ex-Post Evaluation Unit of EPRS to assist parliamentary committees in their consideration of new European Commission proposals, once tabled.

SUMMARY

Free movement of people and goods is a fundamental freedom of the EU and its single market. The pandemic has shown, meanwhile, that a well-functioning single market and a coordinated approach to connectivity and transport activity is essential to overcome any crisis and strengthen the EU's strategic autonomy and resilience. Accounting for about 5% of EU GDP and employing more than 10 million people in Europe, the transport system is critical to European businesses and global supply chains. Transport is not without costs to society, however, resulting in greenhouse gas (GHG) and pollutant emissions, noise, road accidents and congestion.

The need to carry out a radical transformation of the EU transport system – in order to make it more sustainable, more competitive globally and more resistant to any future shocks – therefore seems more pressing than ever. To this end, the 2019 European Green Deal (EGD) called for the shift to sustainable and smart mobility to be accelerated, including a 90% reduction in transport emissions by 2050 in order to achieve the EU's 2050 climate neutrality objective. Similarly, the 2020 EU strategy for sustainable and smart mobility considered the need for the EU transport sector to slash its emissions and become more sustainable as the most serious challenge facing the sector today.

In this transformation, digital technologies, including intelligent transport systems (ITS), are expected to play an important role. ITS applications and services (such as journey planners, travel information services, intelligent message signs and traffic lights, safety applications and traffic management) can help make transport safer, more efficient and more sustainable. In road transport, ITS are currently regulated under Directive 2010/40/EU on the framework for the deployment of intelligent transport systems in the field of road transport and for interfaces with other modes of transport (the 'ITS Directive') and its delegated regulations. An ex-post evaluation of the current legal framework, presented in 2019, considered ITS deployment and use as insufficient and identified a clear need for further action on interoperability, cooperation mechanisms and data sharing. The Commission plans to present a proposal for revision of the ITS Directive, including its delegated regulation on real-time traffic information, at the end of 2021.
1. Background

The briefing examines the implementation of Directive 2010/40/EU on the framework for the deployment of intelligent transport systems in the field of road transport and for interfaces with other modes of transport – referred to as the ‘ITS Directive’) with a view to the upcoming European Commission proposal for its revision. The Commission proposal, to be accompanied by an impact assessment, is expected in the fourth quarter of 2021.¹

Transport in the EU today

Transport is fundamental to the EU’s economy and society. It connects people, cities, countries and economies, fostering growth and employment. As the second-largest area of expenditure for European households, the transport sector today contributes 5 % to EU gross domestic product (GDP) and directly employs around 10 million workers.² The pandemic has clearly shown the importance of a well-functioning single market and a coordinated European approach in the transport sector. At the same time, transport is a major source of environmental pressures in Europe, now representing as much as a quarter of the EU’s total greenhouse gas (GHG) emissions, most of which are generated by road transport.³ While GHG emissions have generally been decreasing in the EU, GHG emissions in transport have increased over time. Transport is also a main cause of noise, air and water pollution, and biodiversity loss. In road transport, traffic congestion and road deaths⁴ are major challenges to be tackled.

Evolution of EU transport policy over time

While EU transport policy initially focused on the completion of the internal transport market and boosting cross-border transport infrastructure, a shift towards making the EU’s transport system more efficient and sustainable can be noticed since early 2000.⁵ Further to the adoption of the Paris Agreement⁶ in 2015, the 2019 European Green Deal (EGD)⁷ called for the shift to sustainable and smart mobility to be stepped up. It stated, in particular, that in order to achieve the EU’s 2050 climate neutrality objective, a 90 % reduction in transport emissions was needed by 2050 and that road, rail, aviation, and waterborne transport would all have to contribute to the reduction. The 2020 sustainable and smart mobility strategy reiterated the need for the EU transport sector to reduce its emissions significantly and to become more sustainable, suggesting a range of measures to achieve more sustainable, smarter and resilient mobility in the EU.⁸

Digitalisation as a driver of transport sector transformation

Although numerous measures and policy instruments are needed to achieve the transformation of the EU transport sector, which is projected to grow,⁹ further digitalisation and data will play a critical role in this context. Digital technologies have developed rapidly over the past decades and are increasingly being introduced in transport. ITS apply information and communication technologies (ICT) to all modes of (passenger and freight) transport. ITS applications and services include, for example, journey planners, travel information services, intelligent message signs and traffic lights, safety applications (automatic 112 calls, advanced cruise control), traffic management and more.

ITS can significantly improve road safety, traffic efficiency and comfort, by helping transport users to adapt to the traffic situation. They also serve to increase the use of multimodality options and improve travel and traffic management. Through more efficient use of transport infrastructure, smoother transport flows and the facilitation of multimodality, meanwhile, ITS help to reduce the negative environmental externalities of transport (in particular air pollutant and CO₂ emissions). In line with the EGD, they enable the shift towards more efficient and environmental-friendly transport modes. Increasingly, transport services are operating in a cooperative environment with communication between drivers and road infrastructure. These cooperative intelligent transport systems (C-ITS) are intended to allow road users and traffic managers to share and use information, thereby improving safety and reducing congestion.
Harmonising ITS deployment in EU road transport

For over 40 years, there have been a number of activities in the area of ITS in Europe, focusing, albeit often in an uncoordinated and fragmented manner, on specific areas (such as clean and energy-efficient transport, road congestion and urban mobility).

In 2008, in order to avoid a patchwork of ITS applications and services, the Commission adopted an action plan on intelligent transport systems,10 laying down six priority areas to accelerate and coordinate the deployment and use of ITS in road transport, including interfaces with other transport modes. The action plan was accompanied by a proposal for a directive on ITS.

The ITS Directive11 was adopted in 2010. The main objective of the directive was to accelerate the deployment and use of innovative transport technologies and ITS services across Europe. In the years following its adoption, the directive was supplemented by five delegated regulations (each of which set the specifications for one of the directive’s priority actions, necessary to ensure the compatibility, interoperability and continuity of the respective services).

Ex-post evaluation and revision of the EU legal framework for ITS

In October 2019, the Commission published an ex-post evaluation of the ITS Directive, a report on the implementation of the ITS Directive and an analysis of the Member States’ 2014 and 2017 ITS reports. While recognising that the deployment and technological evolution of ITS had been significantly greater since 2010, the ex-post evaluation concluded that there remained a clear need for further action on interoperability, cooperation and data sharing to enable seamless, continuous ITS services across the EU. In the European data strategy published in February 2020, the Commission therefore announced the revision of the ITS Directive, including its delegated regulations, and the intention to establish in 2020 a stronger coordination mechanism between the national access points (NAPs) established under the ITS Directive. Under the 2021 Commission work programme, the Commission planned to present its revised proposal for the ITS Directive (including a multimodal ticketing initiative) in the third quarter of 2021; this was slightly postponed to the fourth quarter of 2021.

As highlighted in the Commission’s inception impact assessment (IIA)12 of October 2020, the deployment of ITS infrastructure and services among Member States still often remained restricted to a limited geographical scope and was not continuous. According to the IIA, the EU specifications adopted through delegated acts were focused more on data-enabling services than on the deployment of services itself. This had resulted in less effective ITS deployment and prevented ITS from developing its full potential to improve the functioning of the transport system and associated benefits. The IIA identified three key problem drivers: 1) a lack of interoperability and continuity of applications, systems and services; 2) a lack of concertation and effective cooperation among stakeholders; and 3) unresolved issues as to the availability and sharing of data supporting ITS services.

According to the IIA, the directive and its delegated regulations were already helping – at least to some extent – to address these problem drivers and recent implementation of a new working programme for the directive had begun. However, the present specifications addressed only the accessibility of existing data, while not yet addressing the availability (i.e. existence in machine-readable format) of key data on the whole network. Data availability was, however, important to support new services such as advanced driving assistance systems (e.g. intelligent speed assistance). In addition, the IIA highlighted that new ITS themes and challenges were emerging, such as connected and automated mobility and mobility platforms (e.g. mobility as a service – MaaS),13 and insufficient cooperation between private and public stakeholders (e.g. for traffic management). More efficient and sustainable multi-modal transport solutions – in particular between long-distance and last mile connections in urban nodes – needed more attention.14 The IIA found that the pandemic had had a significant impact on transport demand and use. With mobility demand increasing again and the operational capacity of public transport possibly constrained, improved
information exchange through further digitalisation would remain key to addressing the negative externalities and resilience of the transport system.

As a consequence, the **general objective** of the upcoming **revision of the ITS Directive** is to **increase the deployment and operational use of ITS services** across the EU. Enhanced ITS deployment is expected to improve the functioning of the road transport system including its interfaces with other modes and to reduce the negative external effects of road transport. The **specific objectives** of the revision are:

1. to increase interoperability and cross-border continuity of ITS applications, systems and services;
2. to establish effective coordination and monitoring mechanisms between all ITS stakeholders;
3. to solve issues relating to the availability and sharing of data that support ITS services.

The continued deployment of ITS is expected to contribute to a number of EU priorities and strategies including, besides the EGD and the sustainable and smart mobility strategy, the energy union, the digital single market, and the EU strategies for low emission mobility, and cooperative intelligent transport systems and automated mobility. In the action plan accompanying the sustainable and smart mobility strategy, the Commission also announced other initiatives relating to the ITS Directive: first, to develop a common European mobility data space and establish a stronger coordination mechanism for the NAPs established under the ITS Directive; second, to adapt the eCall legal framework to new telecommunications technologies; and finally, to revise some of the delegated regulations adopted under the ITS Directive.15

**The Intelligent Transport Systems Directive: An overview of current legislation, transposition and review clauses**

Directive 2010/40/EU (the ‘ITS Directive’) establishes a framework to support the coordinated and coherent deployment and use of interoperable and seamless ITS services, while leaving Member States the freedom to decide which applications and services to invest in. In order to achieve this objective, the directive provides for the development of specifications for actions within the priority areas referred to in Article 2 (see below), as well as for the development of necessary standards. These specifications are to be adopted in the form of delegated acts. Although ITS are used in all modes of transport, the ITS Directive applies to ITS applications and services for road transport (including infrastructure, vehicles, users, traffic and mobility management), and for interfaces with other modes of transport (for example, multimodal journey planners combining road and rail travel, and ticketing and payment services across all transport modes).

The directive entered into force in August 2010. The Member States had to comply with the requirements laid down in the directive by 27 February 2012. Article 17(4) requires the Commission to submit a report every three years on progress made in implementing the directive. The report must also assess the need to amend the directive where appropriate.16

In Article 2 (and Annex I), the directive sets out four 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; and
- IV. links between vehicles and the transport infrastructure.

Within these priority areas, Article 3 lays down six priority actions, as follows:

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

Under Article 17 of the directive, the Commission was required to develop a working programme with objectives and timelines. In order to address the compatibility, interoperability and continuity of ITS solutions across the EU, it also had to adopt specifications in the four priority areas, starting with the six priority actions, as identified in Articles 2 and 3, and Annex I of the directive (Article 6).

Accordingly, the Commission, in February 2011, adopted its first ‘working programme for 2011-2015’.17 This working programme focused mainly on the adoption of specifications for the priority actions under the directive (in addition to the creation of the European ITS Advisory Group and the adoption of reporting guidelines). In line with this working programme, five delegated regulations have in the meantime been adopted, on: 1) the provision of road-safety related universal traffic information free of charge for users; 2) the provision of real-time traffic information; 3) the provision of multimodal travel information; 3) the eCall emergency system; and 4) intelligent truck parking.18 In particular, they require the Member States to set up and manage NAPs (to facilitate access to relevant data, collected and stored by different public or private operators and service providers).

Once all specifications for the priority actions had been adopted in May 2017, the Commission presented, in December 2018, an updated working programme19 for 2018-2022, shifting the focus to other actions in the priority areas. The updated working programme provides a description and indicative timeline for each activity in the four priority areas of the directive.

After preparatory work on specifications for C-ITS (priority area IV of the ITS Directive) to improve road safety by enabling vehicles to communicate with each other and with the infrastructure, in March 2019 the Commission tabled a delegated regulation. While this was approved by the European Parliament in April 2019, it did not enter into force because the Council objected. While the Commission wished to rely only on Wi-Fi technology for short-range communications, other parties wanted cellular technologies included.

The following sections provide an overview of findings on the implementation of the directive in the context of its upcoming revision.

2. EU-level reports, evaluations and studies


In 2017, the Commission launched an ex-post evaluation of the ITS Directive, resulting in the presentation of an evaluation report20 in October 2019. In order to gather the views of stakeholders and the general public on the functioning of the directive, the evaluation started with a public consultation from May to July 2017.21 In addition, the Commission carried out targeted stakeholder consultations and interviews, and contracted a support study.22 The evaluation also took into account a 2019 implementation report and an analysis of the Member States’ progress reports of 2014 and 2017. In view of the ITS Directive’s forthcoming revision, the Commission ran another public consultation from November 2020 to February 2021.23 In addition, two public workshops were held (in November 2020 and January 2021 respectively) on the impact assessment underpinning the directive’s revision.24

The ex-post evaluation covered the full scope of the directive, including the delegated acts adopted under the directive, the directive’s working programme, the guidelines for reporting, and the functioning of the ITS Committee and ITS Advisory Group.25 Moreover, it took into consideration relevant aspects of the ITS action plan and of standards and non-binding measures aimed at facilitating the deployment of ITS in road transport. The evaluation assessed the implementation of the ITS Directive in all 28 Member States between 2008 and 2017. The purpose of the evaluation was
to analyse the actual performance of this legislative framework in achieving its key objectives and to assess if it remained fit for purpose.

In line with the Better Regulation Guidelines, it assessed the performance of the directive against the evaluation criteria of: 1) relevance (i.e. whether the current legislative framework remained suitable to address existing shortcomings in ITS deployment and whether it still responded to the needs of all relevant stakeholders); 2) effectiveness (i.e. whether the expected effects had materialised and, in particular, whether the directive contributed to the deployment and use of continuous ITS services across the EU and, ultimately, to improving the functioning of the road transport system); 3) efficiency (i.e. an estimation of the costs of implementing the actions under the directive for different stakeholders and whether they were proportionate to the benefits); 4) coherence (internal – such as the consistency of objectives, gaps or overlaps between the directive and its delegated acts – and external, such as coherence with current ITS deployment and other relevant EU interventions and policies); 5) EU added value (i.e. whether action at EU level was most appropriate).

In terms of relevance, the evaluation found that the ITS Directive remained a relevant tool to address 1) the lack of coordination in ITS deployment across the EU, and 2) slow, risky and non-cost effective ITS deployment, as the use of ITS was increasing but was still not contributing fully to the improvement of the road transport system. It identified a clear need for further action on interoperability, cooperation mechanisms and data sharing to enable seamless, continuous ITS services across the EU. While the scope of the ITS directive was still considered relevant, a number of areas might require additional attention (such as connected, cooperative and automated mobility, cybersecurity, privacy and data protection, and ITS in urban areas, freight and public transport). Although the delegated acts adopted under the directive were in principle also considered still relevant, the Commission noted that it was still too early to assess their relevance in a comprehensive manner as their actual implementation had started only recently.

As to the directive’s effectiveness, the evaluation found that the ITS Directive had had a generally positive impact on the deployment of ITS across the EU. However, as the directive was only in the early stages of implementation, the resulting lack of evidence made it difficult to assess the extent to which it had contributed to improving the continuity of ITS services across the EU and to reducing negative externalities of road transport. Moreover, it was difficult to disentangle the impacts of the directive from that of other policies implemented at EU, Member State and local level.

In terms of progress in implementing the directive, the evaluation acknowledged the adoption of delegated acts for most (five out of six) priority actions (which appeared to have led to increased interoperability and, in some cases, continuity of ITS services across Member States) as well as the establishment of NAPs – which formed the backbone of the digital ITS infrastructure – in many Member States. In this context, however, the evaluation deplored the relatively low use of NAPs and the limited number of interoperable ITS services deployed. Increased deployment of such services was happening mainly in the context of cross-border corridors and pilot projects funded under the Connecting Europe Facility (CEF) and other EU funds supporting trans-European transport networks (TEN-T). The framework provided by the ITS Directive was nevertheless identified as a clear enabler of interoperability and continuity across these corridors/projects (which in turn could provide the NAPs with additional data that could be reused to deploy additional ITS services).

Finally, the evaluation stated that the directive’s effectiveness had been influenced by a number of factors including, on the positive side, enhanced coordination and cooperation with Member States and stakeholders through ITS coordination mechanisms. Negative factors were, in particular, the limited availability of financial resources after the 2008 financial crisis, low awareness of ITS services among some authorities and limited capacity to implement them, delayed investment due to the fast evolution of ITS technologies (with stakeholders waiting for more advanced services with clearer benefits to become available, especially for applications where the main benefits were externalities, and a large part of the benefits were thus not gained by the investor) and a certain reluctance to share data (for instance by transport operators who did not want to provide digital platforms with access to their data, fearing that the latter would replace the traditional transport operators’ ticketing distribution systems and gain undue market power).
With a view to the directive’s efficiency, the evaluation stated that the early stage of deployment of ITS made it difficult to quantify certain aspects of the costs for operators and other stakeholders affected, while costs for the Commission and national authorities were easier to quantify. Also, as the benefits of ITS could not be quantified (yet), it was not possible to assess whether the costs observed were proportionate to the benefits. Nevertheless, the evaluation indicated that stakeholders generally considered the costs to be proportionate and expected the benefits to outweigh the costs at least in the long term. As to the cost-effectiveness of reporting obligations under the ITS Directive and the delegated regulations, the lack of comparability between Member State reports appeared to be the most significant remaining issue (as this was an obstacle to comprehensive monitoring). The reporting process under the directive and the delegated regulations should therefore be further streamlined.

In terms of coherence, the evaluation concluded that the ITS Directive and its delegated acts were, in general, internally coherent. However, the frequency and timing of reporting obligations were not currently aligned, as mentioned, and the consistency of terminology used in different pieces of legislation needed continuous attention. With a view to other EU policies and relevant legislation, the directive was considered to be coherent and contributing to some extent to their achievement. Moving forward towards connected, cooperative and automated mobility, the evaluation expected that there would be even more interdependence between the directive and other legislation, with specific attention to be paid to the coherence between the various instruments, while avoiding unnecessary red tape.

As to the directive’s European added value, the evaluation considered the ITS Directive to have led, overall, to EU-wide positive results. Action at national level would likely not have addressed the key problem of incoherent, inconsistent and fragmented development of ITS across the EU. According to the evaluation, this was also the case for international mechanisms and structures in place (such as the UNECE or ISO), as they could not be considered sufficient to ensure a comprehensive EU-wide approach in the way that is provided by the ITS Directive. A repeal of the directive would possibly slow down ITS deployment and risk increased divergence and fragmentation. In addition, if the ITS Directive were repealed, specifications would remain unchanged without a clear way to evolve, becoming outdated in the rapidly evolving area that is ITS.

European Commission report on the implementation of the ITS Directive (October 2019)

In October 2019, the Commission published, together with the ex-post evaluation, a report on the implementation of the ITS Directive as well as an accompanying analysis of Member States’ reports. Further to the first implementation report adopted in 2014, this second report assessed the progress made in implementing the directive since the first report. Based on the Member States’ 2014 and 2017 reports, the Commission concluded, in particular, that:

- the six priority actions of the ITS Directive had been fully addressed and new activities under the directive had started (such as in the area of C-ITS);
- most Member States were actively implementing the specifications underpinning the deployment of ITS services; in particular, NAPs had been or were in the process of being deployed, while operational tools supporting the accessibility of ITS data had been or were being developed; however, there was a need for better coordination in this context, involving all Member States and covering all specifications;
- new ITS themes and challenges were emerging (such as connected and automated mobility and MaaS), with the question of availability of data on the whole road transport network – beyond data accessibility – possibly becoming more significant. This was the case, in particular, for key data types corresponding to the rules on usage of the infrastructure (such as traffic regulations) which were crucial for services such as intelligent speed assistance (ISA) or automated driving, for the whole road transport network. This issue ought to be studied to assess the need for further action.
It is worth noting also that, in terms of financial resources used and needed, the implementation report stated that, while there was more information available compared with the 2014 report, the costs relating to implementing the specifications were very often difficult to isolate from the general costs of the deployment and operation of ITS services and ITS physical infrastructures, which might prove to be much higher.33

As to Member States’ reporting (important for the monitoring of ITS deployment across Europe), the analysis accompanying the implementation report found that inconsistencies between the progress reports submitted by the Member States remained. According to the analysis, this was due mainly to the fact that the new common reporting template proposed by the Commission had been used by fewer than half of the Member States, and that Member States’ input regarding the key performance indicators (KPIs) on deployment, benefits and financial aspects was rather limited.34

3. European Parliament position / MEPs' questions

Resolutions of the European Parliament

In the current term, Parliament has so far not adopted any specific resolutions on intelligent transport systems. In the previous term, however, Parliament adopted several resolutions relating to this topic. In a resolution on the European strategy on cooperative intelligent transport systems,35 adopted in March 2018, Parliament welcomed the related Commission communication and called for the introduction of interoperable C-ITS services throughout Europe without delay. In this context, Parliament highlighted the need for a clear legal framework to support the deployment of C-ITS and welcomed a future delegated act under the ITS Directive to ensure the continuity of services, deliver interoperability and support backward compatibility. Moreover, it reiterated the key role of connected and automated vehicles, C-ITS and new technologies in meeting climate targets, and the need to ensure that their development and deployment complied fully with and supported the decarbonisation of the transport system.

It also welcomed the use of C-ITS as a means to improve traffic efficiency, lower fuel consumption, reduce the impact of road transport on the environment, and optimise the use of urban infrastructure. Furthermore, Parliament stressed the importance of applying EU legislation on privacy and data protection to C-ITS, and of high standards of cybersecurity in preventing hacking and cyber-attacks in all Member States, not least in view of the critical nature of the security of C-ITS communications. Besides more research and fact-finding on C-ITS, Parliament called for the creation of a truly multimodal transport system, integrating all modes of transport into a single mobility service. Similarly, in a resolution on the future of mobility in the EU,36 adopted in September 2018, Parliament stressed that mobility was increasingly regarded as a service and that expanded seamless multimodal door-to-door transport should therefore be made possible on a cross-border basis.

In order to allow for the adoption of further specifications under the directive, in 2017 Parliament approved the extension of the Commission’s power to adopt delegated acts for an additional period of five years (starting from 27 August 2017). In the same year, Parliament adopted a resolution on the EU strategy for low-emission mobility,37 considering that ITS, platooning and autonomous and connected vehicles could constitute an important asset in improving the efficiency of both individual and commercial transport in the road, rail, maritime and air sectors. This echoed Parliament’s support for ITS expressed in earlier resolutions adopted in 2016, September and December 2015, and 2012.38

Written questions

Written question by Marian-Jean Marinescu (EPP, Romania), 5 February 2020

This written question was put in the context of the Council’s objection to the Commission proposal for a delegated regulation on C-ITS in July 2019. Considering that vehicle-to-anything (V2X) communication was essential for C-ITS, the Member asked about the Commission’s plans to reshape the deployment of C-ITS in the EU (mentioning the issue of technology neutrality). Moreover, he
inquired whether, in the Commission’s future initiatives for sustainable and smart mobility, it would ensure a level playing-field between different technologies available on the market and how it would support and finance digital innovation for connected and automated mobility to maintain the EU’s global competitiveness.

**Answer given by Ms Vălean on behalf of the European Commission, 2 July 2020**

In its answer, the Commission referred to the delegated regulation it had adopted to accelerate EU-wide deployment of C-ITS pointing out that interoperability was essential to improve road safety and traffic efficiency for all road users, as without it, vehicles equipped with C-ITS would not be able to understand each other, and accidents that could otherwise have been avoided, would still happen. The Commission was of the view that it had taken a balanced and forward-looking approach to add new services and technologies through revisions of the delegated regulation. Moreover, it recalled that its 5G action plan, aimed at enabling new services, including in transport, was complementary to existing deployment based on ITS-G5 (the hybrid communication model). The Commission would continue to support Member States and industry primarily through funding, coordinating activities and playing a central role in the C-ITS trust system. Further action on ITS had been announced in the European data strategy and further support for cooperative, connected and automated mobility was being prepared under Horizon Europe and CEF.

**Written question by Alessia Maria Mosca (S&D, Italy) and István Ujhelyi (S&D, Hungary), 27 September 2018**

The question was put in the context of the ‘third mobility package’, when the Commission was about to adopt specifications on C-ITS including vehicle-to-vehicle and vehicle-to-infrastructure communication. The Members underlined that for such safety communication to be effective, all vehicles needed to ‘speak the same language’ (and thus to use the same technology in a consistent manner, as recognised in an earlier Parliament resolution on C-ITS). In this context, they asked the Commission to confirm that the future delegated act would clearly specify that ITS-G5, a dedicated road safety technology to be rolled out in the EU in 2019, would be the standard for safety communication technology.

**Answer given by Ms Bulc on behalf of the European Commission, 19 November 2018**

The Commission replied that the delegated regulation on C-ITS it was preparing aimed to ensure secure and trusted communications and interoperability of messages for safety-related and traffic management services. In order to achieve interoperability of C-ITS communication technologies across the EU, EU-wide technical specifications, to be laid down in the delegated act, were required (as they would ensure that EU standards were applied consistently). This was particularly important with a view to rapidly evolving technology and significant public and private investment in development and testing of these technologies. The delegated act would provide for a hybrid communication approach, combining complementary and mature technologies (ITS-G5 for short-range and 3G/4G for long-range communications).

**Written question by Pavel Telička (ALDE, Czechia), 10 February 2016**

The Member asked about the follow-up of the public consultation that was organised from September to December 2015 with a view to developing specifications related to EU-wide multimodal travel information services (MMTIPS). Fully subscribing to the Commission’s assessment that the current multimodal information services across the EU lacked interoperability and were fragmented, the Member wanted to know when the results of the public consultation would be published, whether the Commission envisaged any other impact assessment on the provision of MMTIPS and what would be the follow-up to this public consultation.

**Answer given by Ms Bulc on behalf of the European Commission, 13 April 2016**

In its reply, the Commission stated that the findings of the overall stakeholder consultation would be consolidated in the supporting study final report (expected to be published in April 2016). While no impact assessment was required for the adoption of specifications for priority actions under Article 5 of the ITS Directive, the final report would include a cost-benefit analysis. The Commission expected to adopt a delegated regulation by the end of 2016.
4. Council of the EU

In their Council conclusions on the Commission’s sustainable and smart mobility strategy, adopted on 3 June 2021, EU transport ministers stressed that digitalisation and the promotion of innovation in green technologies were key driving forces behind the long-term global competitiveness of the EU transport system. They also recalled the importance of research and innovation activities to reinforce the sustainability, digitalisation and resilience of the transport and mobility system. Research and innovation efforts in cooperative connected and automated mobility should cover all transport modes in a manner that resulted in improvements in transport safety and efficiency, reduced congestion and contributed to climate and environment objectives while also fostering interoperability and data protection at the stage of deployment, and providing for inclusive, accessible and affordable use cases.

Moreover, transport ministers called for the adoption of an initiative on an EU mobility data space, to ensure fair, reliable and secure access to and interoperability of data for improved transport efficiency, as well as to promote seamless multimodal transportation for passengers and freight, while also aiming for interoperability of data with other related data spaces. In this context, the development of ITS should continue to be based on a broad set of electronic communication technologies, such as mobile and Wi-Fi technologies, as well as strategically critical services and infrastructure, such as Galileo and EGNOS.

5. European Court of Auditors (ECA)

In a 2020 special report on sustainable urban mobility in the EU, the ECA examined whether EU support had contributed to the development of more sustainable urban mobility options and if cities had progressed since the European Commission’s 2013 urban mobility package. While sustainable urban mobility is one of the main challenges for cities in the EU and between 2014 and 2020 the EU earmarked €16.5 billion to improve urban mobility (including through intelligent transport systems), the auditors found no sign that EU cities were fundamentally changing their approaches, with no clear trend of shifting urban traffic to more environmentally-friendly and sustainable modes of transport. Moreover, in a 2018 landscape review on the challenges to be addressed in the EU transport sector, the ECA identified automation, digitalisation and shared mobility as rapidly expanding trends. Together, they had the potential to make transport systems more efficient, thus improving road safety, reducing environmental impacts and easing congestion. Intelligent transport management systems were an intrinsic part of the future of transport in the EU.

6. European Economic and Social Committee (EESC)

The EESC has recently expressed its opinion on the digitalisation of the EU transport, including ITS, on several occasions. In July 2017, the EESC adopted an opinion on the digitalisation and robotisation of transport on policymaking. In the EESC’s view, the digitalisation and robotisation of transport generated countless benefits (such as better accessibility, greater efficiency, improved traffic safety and reduced emissions), but also raised social concerns – first and foremost, threats to citizens’ privacy and job losses – that needed to be addressed by EU policymakers. Moreover, action was needed in relation to the transport system itself where an advanced digital infrastructure needed to be developed. In order to spur innovation, an enabling business environment had to be created so that European manufacturing and service industries would seize opportunities and possibly gain a competitive edge. The EESC also considered, among other things, that journey-planning facilities needed to be provided, together with pricing incentives, to encourage consumers to make environmentally-friendly choices.

In its opinion on cooperative ITS, adopted in May 2017, the EESC welcomed the European strategy on C-ITS as an important milestone towards the development of C-ITS and, ultimately, automated mobility. It stressed, in particular, the importance of privacy and data protection, common standards and cross-border interoperability, leaving room, however, for local and/or company specific solutions when implementing the strategy. Also, equally high security standards in all Member States were considered to be crucial in reducing the risk of cyber-attacks. As to the future
deployment of automated vehicles and the related effects on the workforce, the EESC recommended starting a social dialogue at an early stage.

7. European Committee of the Regions (CoR)

In July 2021, the CoR adopted an opinion on the smart and sustainable mobility strategy. In this opinion, the CoR recognised the importance of MaaS for many cities and regions, as it would enable them to promote door-to-door transport. It therefore suggested that the revision of the ITS Directive should focus on multimodal tickets and integrated information about all possible types or combinations of transport. In an opinion on C-ITS of October 2017, the Committee believed that, as a building block for automated transport, MaaS and door-to-door transport, C-ITS could also contribute to social inclusion. Moreover, it called on the Commission to develop a communication programme to win public support. When further developing EU C-ITS policy, cities and regions should be closely involved at each stage. The CoR also noted that interoperability required not only measures in the area of ICT, but also changes to physical infrastructure, calling on the Commission to inform local and regional authorities about changes envisaged in good time.

ENDNOTES

1 While the revision was announced for Q3 2021 under the Commission’s 2021 work programme (p.1, Annex I, point 4 (h)), it was due in Q4 at the time of drafting.
2 See EU Science Hub.
3 Road transport is responsible for the highest proportion of overall transport GHG emissions (around 71 % in 2018), but this is expected to decrease as road transport decarbonises faster than the other transport modes. Further details: EEA.
4 According to the 2021 European Mobility Atlas (Heinrich-Böll-Stiftung, p. 32), a total of 25 058 people died in road deaths in 2018 in the EU, including 5 180 pedestrians and 2 160 cyclists. The total in 2019 was 22 800.
6 Paris Agreement.
8 See the sustainable and smart mobility strategy and its accompanying action plan.
9 Passenger transport activity is projected to grow by 35 % during the 2015-2050 period. Freight traffic for inland modes is expected to grow faster at 53 % by 2050 (see 2020 communication ‘A European strategy for data’ (p. 28); and the 2018 in-depth analysis in support of Commission communication COM(2018) 773 ‘A Clean Planet for all: A European long-term strategic vision for a prosperous, modern, competitive and climate neutral economy’.
11 Directive 2010/40/EU of the European Parliament and the Council on the framework for the deployment of intelligent transport systems in the field of road transport and for interfaces with other modes of transport.
12 Inception Impact Assessment, October 2019, European Commission.
13 Mobility as a service (MaaS) relies on digital platforms that integrate end-to-end trip planning, booking, electronic ticketing, and payment services across all modes of (public or private) transportation, rather than having to book and pay for each transport mode separately. MaaS platforms enable users to plan and book door-to-door trips using a single app (see 2017 Deloitte review, MaaS alliance).
14 See 2019 policy brief (European University Institute, Florence) on multimodal ticketing and payment systems (i.e. the purchase of tickets for different transport modes by passengers in one go) as an important enabling condition for multimodal door-to-door mobility.
15 By end of 2021, the European Commission plans to propose (besides the revision of the ITS Directive) a revision of Delegated Regulation 2015/962 on real-time traffic information services. A revision of Delegated Regulation 2017/1926 on multimodal travel information service is scheduled for 2022, while Delegated Regulation 305/2013 on eCall will be revised as soon as all technical elements were available.
16 Under Article 17(4), the Commission must submit a report every three years to the European Parliament and to the Council on the progress made for the implementation of the directive. The report must 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 must assess the need to amend the directive.
17 Commission decision concerning the adoption of the working programme on the implementation of Directive 2010/40/EU, February 2011.
18 Commission Delegated Regulation (EU) No 305/2013 on harmonised provision for an interoperable EU-wide eCall; Commission Delegated Regulation (EU) No 885/2013 on provision of information services for safe and secure parking places for trucks and commercial vehicles; Commission 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; Commission Delegated Regulation (EU) 2015/962 on provision of EU-wide real-time traffic information services; and Commission Delegated Regulation (EU) 2017/1926 on provision of EU-wide multimodal travel information services.


A detailed analysis can be found in Annex A of the support study.


EC public consultation, November 2020 - February 2021.


The ITS Committee (Article 15) acts as an advisory body giving opinions on the draft standardisation requests as well as drafts of guidelines and other non-binding measures. The ITS Advisory Group (Article 16), composed of high level representatives from relevant ITS stakeholders, advises the Commission on business and technical aspects of the deployment and use of ITS in the EU.

Better regulation guidelines and toolbox.

Only five out of six priority actions have been addressed in delegated acts. After consultations with Member States experts and key stakeholders, it was concluded that there was no need for specifications and standards on reservation of parking areas (priority action (f)).

For further details, see 2021 EPRS pre-legislative synthesis briefing, Yann-Sven Rittelmeyer and Marketa Pape.


Analysis of Member States' reports accompanying the report on the implementation of Directive 2010/40/EU, European Commission, October 2019.


See also: A European strategy on Cooperative Intelligent Transport Systems, a milestone towards cooperative, connected and automated mobility, November 2016, European Commission.

For details on the costs of the implementation of the ITS Directive, see the ex-post evaluation support study, pp. 58-65.

According to the analysis of the Member States report (p. 20), only 13 national reports used the common reporting template and around 40 % of the Member States (plus Norray) provided figures for KPIs, at least partially (p. 40).


European data spaces.

Special report No 06/2020 ‘Sustainable urban mobility in the EU: No substantial improvement is possible without Member States’ commitment’, March 2020, European Court of Auditors.

Landscape review No 09/2018 ‘Towards a successful transport sector in the EU: Challenges to be addressed’, December 2018, European Court of Auditors.


Opinion ‘Cooperative intelligent transport systems’, May 2017, European Economic and Social Committee.

Opinion ‘Sustainable and smart mobility strategy’, July 2021, Committee of the Regions.

Opinion ‘A European strategy on cooperative intelligent transport systems’, October 2017, Committee of the Regions.

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