

Position Paper

EU Public Consultation on the Revision of the Directive on Intelligent Transport Systems

2nd February 2021

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As Germany's digital association, aiming at fostering a smart and sustainable future for Europe, Bitkom drafted the following paper as a contribution to the EU's consultation on the ITS Directive.

General Remarks

Bitkom welcomes the revision of the ITS Directive and the EU Commission's intention to accelerate the deployment of smart, multimodal and sustainable mobility. The digitisation of transport infrastructures and mobility services offers manifold opportunities, which are, at present, not being exploited to the full. Therefore, we advocate for establishing a harmonised, technology-neutral regulatory framework, stimulating innovation and market-based technology choices.

However, considering the ongoing debate about technology neutrality in the context of intelligent transport systems, it is necessary to clarify the terminology "ITS" (Intelligent Transport Systems) and "C-ITS" (Cooperative Intelligent Transport Systems) used in this context in order to clear up the discussions. ITS, on the one hand, aims at providing intelligent mobility and traffic management services. C-ITS, on the other hand, refers to the cooperation between specific ITS sub-systems (e.g. vehicle-to-vehicle or vehicle-2-infrastructure). Both, ITS and C-ITS allow users and traffic operators to share information and use it to coordinate their actions or detect conditions such as road weather.

In our view, C-ITS can be based on various technology approaches, such as short-range and long-range communication or others using different technologies. The EU Data Task Force is a good example for applied technology neutrality.

Technology neutrality should primarily relate to higher levels, without however abandoning it on lower levels. Especially on higher levels, technology neutrality can serve as a catalyst for faster market penetration of C-ITS technologies. Based on this approach, new and evolving technologies can consequently also be taken into account (e.g. computer vision). Interoperability between different technologies should be achieved to the maximum extent that is both technically possible and economically reasonable at the time of deployment, so not to hinder the introduction of new or evolved technologies.

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(C-)ITS Deployment

In order to reach its full potential, particular attention should be given to the coordinated deployment of cross-border ITS services to maintain the geographical continuity of such services throughout the EU. Such an enabling environment will be conducive to the rapid deployment of C-ITS by vehicle manufacturers and road authorities, delivering upon the EU road safety and climate neutrality goals.

One important goal to make progress in ITS deployment is to successfully conclude the talks on the topic in the EU Data Task Force. Since the already existing CCAM Group focuses on long term issues, Bitkom also suggests **establishing a permanent industry driven group of experts** (e.g. named “ITS Operations Task Force”) **with a clear mandate to quickly resolve points of disagreement regarding communication technologies** (e.g. electronic break light, the issue being network-based or back-end-based, long range vs. short range communication) and standard compliance. With regard to currently available technologies, all use cases should accordingly be (re-)evaluated by the European Commission. An essential share of socio-economic benefits can be derived from use cases that are enabled and/or supported by Vehicle-to-Network (V2N) communications along with Vehicle-to-Vehicle (V2V), Vehicle-to-Infrastructure (V2I) and Vehicle-to-Pedestrian (V2P) connectivity. In addition to safety gains (reducing road accidents including vulnerable road users), these will produce more efficient transport, predictable travel time with minimal traffic congestion and will improve environmental footprint.

In this context, the group should always be alert to the difference between safety relevant and non-safety relevant applications. After all, the group should at all times ensure a consensus-based approach and pay due regard to the need for coordination within the industry.

Ultimately, in the spirit of a high ambition level, the Commission should set clear goals to reach a timely and extensive digitisation of the infrastructure, the establishment of mobility as a service and data sharing. Ambitious goals will, most notably, help to move on from small, singular projects to long-lasting structures.

Preserve Technology Neutrality, Increase interoperability and Cross-Border Continuity of ITS Applications, Systems, and Services

In today's context of fast-paced innovation where different V2X technologies coexist, interoperability standards should focus as much as possible on the service-level (as opposed to radio-level), and non-discriminatory requirements between existing technologies as long as interoperability of applications are ensured.

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The revised ITS rules should and be based on objective KPIs (e.g. decreased incidents for safety, reduced pollution levels for the environment, increased throughput for traffic efficiency etc.) while avoiding mandated technical specifications and should avoid requiring a specific technology implementation. Technical details such as standards, specifications, and communication system profiles, including those required to ensure interoperability, should be adopted by European standards developing organisations (SDOs).

By having interoperable, EU-wide solutions rather than fragmented ones, there is a strong potential for network effects and efficiency gains. Individual ITS services can be more easily integrated into combined service offerings, making the ITS market broader and more widely available. Our understanding is that this will inevitably lead to the emergence of a genuine EU-wide ITS services market.

Problems related to interoperability, can be addressed in the following way: Particular attention should be given to applying well established IoT methodologies e.g. web services, machine-readable interface descriptions etc, to assure EU-wide continuity. The extra benefit of hybrid communication should be considered in the review, where the long-range part does not require low latency to provide a benefit. For mid-range latency covered by direct communication-based applications the remaining interoperability problems can be innovatively solved. These issues could be well addressed by the suggested “ITS Operations Task Force” mentioned in the above.

A framework (e.g. of regulatory nature, binding guidelines, financial funding, or a mix of these measures), that binds applications to current and upcoming backward compatible technology releases, would provide a basis for interoperability and continuity of service. The above mentioned technology neutrality allows to maintain backward compatible technology releases and with that a market driven evolution of (C-)ITS systems. Such framework would also need to incorporate an evolution path that would allow the existence of multiple technologies offering the same services for the time of a defined transition period in case new communication technologies prevail in the future.

With regard to the digitisation of the transport infrastructure, digital twins of the relevant physical elements should be created in order to provide road users with relevant transport-data. The data’s reliability is crucial in this matter. Nevertheless, it should be avoided to ask for liability of this information, as this raises a high barrier of digitalization of the traffic infrastructure. In order to achieve a speedy implementation of digital twins, there are some key area of action to be considered¹: Firstly, digitisation should start with

¹ Cf. German National Platform Future of Mobility, WG 3, Digitalisation for the mobility sector: Fourth interim report, Recommendations for the Digitisation of Transport Infrastructure. URL: <https://www.plattform-zukunft-mobilitaet.de/wp-content/uploads/2020/12/20201210-NPM-Bericht-AG3-DVI-final.pdf> [as of 27.01.2021].

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static elements of the transport infrastructure, the available transport-relevant data including their digital images as well as the provision of data via web-enabled interfaces. Secondly, existing traffic light systems, variable message signs, parking guidance systems and level crossings should be enabled to digitally send their dynamic data to traffic management. Building sites and road works are to be digitally mapped as promptly as possible. Funding for new traffic infrastructure, expansions or upgrades are to be tied to digital requirements. In terms of the technical implementation, more specific profiles for the digitisation of transport infrastructure need to be developed, based on already specified standards for data models. As the availability of movement data from transport users is critical for more efficient traffic management, ensuring their legal use and compliance with basic data protection standards is key. Finally, interoperability and technology neutrality principles are key for the realisation of a digital twin in a striving and growing ecosystem.

Data sharing

Vehicle manufacturers invest heavily in data sharing models such as but not limited to safety. From the envisaged regulatory framework, it is without question that vehicle data sharing should not be mandated. Considering that business models are nascent and evolving, sharing such vehicle data should remain on a purely voluntary basis and in the framework of commercial contracts between vehicle manufacturers and other actors of the value chain. Any mandatory requirements would inevitably hamper the availability and the quality of services in Europe; it would ultimately be detrimental to customers' acceptance. Today, the main focus should be put on improving G2B data sharing, and notably regarding mobility related data. Beyond availability, data accessibility should not be overlooked in any legislative framework. In any case, a lack of respective monetization possibilities will result in a loss of competitive advantage for the European automotive value chain.

It needs to be pointed out, that the consideration of data privacy needs further attention. In addition to the bilateral commercial agreements between consumers and manufacturers (e.g. automotive OEMs), any sharing extends the original scope of this agreement out of control of the original data processor. This can only be mitigated by a consistent definition of necessary anonymisation and pseudonymisation measures for the shared data.

In regard to the availability and sharing of data supporting the ITS services, it should be left to the market players (data providers) to determine what data are best suited for given use case and event. Innovation between vehicle and infrastructure provider brands is paramount and the full potential of the data economy is being activated by all vehicle manufacturers. Data availability does not equal mandated data sharing. Also, vehicle

manufacturers should be put on a level playing field with other relevant data providers in the private industry.

On mandatory provision of dynamic data listed in the Annex of Delegated Regulation 2017/1926:

- We only passed one year of full implementation of Regulation 2017/1926. While most Member States have established a National Access Point (NAP), the implementation is not yet complete across the EU and the lessons learned are not mature yet. A stable legal framework is necessary for all stakeholders prior to any legislative initiative.
- A consistent legal definition of real-time status information is needed. The definition of real-time data is currently being discussed in different regulatory contexts such as the Revision of Passenger Rights as well as within the TAP TSI Regulation, which sets out common technical standards for the EU-wide exchange of rail transport data.² Sharing different types of “real-time status information” in different regulatory contexts risks leading to inconsistent information for the final customer.
- Many stakeholders already provide customers with access to dynamic data. The provision of additional data, apart from data required to the fulfilment of legal obligations, should rely on a voluntary and incentive-based approach.
- The EU Data Strategy and EU Strategy on Sustainable and Smart Transport both mention a common European mobility data space to facilitate access, pooling and sharing of data. It is not yet clear how the NAP will fit into the European mobility data space. It seems logical to wait with the ITS-Revision until more details of the European mobility space (expected 2021) are decided. Public transport operators will also soon have to follow the requirements of the PSI (Open Date) directive. Further, Germany is developing a mobility data room (expected to feed into the EU mobility data space) on a voluntary basis. The Commission should bear in mind such data regulations and initiatives, also on a national level, before any new sector-specific initiative on data sharing is being considered.
- Finally, the principle of sovereignty for dynamic data should be respected. Dynamic data is a business asset for many companies. As such it is already being

² Background: Besides the real-time status information from the operational side (where the train is at this moment), there is the real-time status information (“Prognosedaten”) used by the train. The latter uses e.g. expected disruptions to estimate the “real” arrival/departure time of trains, not only at stations, but also e.g. at rail crossings which what is finally relevant for the customer.

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shared based on commercial arrangements, in line with economic and business considerations.

With regard to new data types, especially dynamic data related to how busy a vehicle is:

- This data does not always exist in all vehicles without a mandatory reservation of seats (e.g. public transport, regional trains), or when they do exist are based on predictive data models which are extremely costly to develop. Such data is strategic information for competitors, e.g. air, bus, carsharing operators.
- Railway operators have developed their own information systems for indicating the capacity of the train.

Investments

Connected and automated transport requires significant cooperation, on top of investments, between the private and public sector, without prescribing a specific technology implementation, while at the same time ensuring interoperability. Investments in smart infrastructure can be ensured by stimulating synergies of mobile network infrastructure and intelligent road infrastructure (e.g. RSUs) along with cohesive funding mechanisms (e.g. Connecting Europe Facility). Investments in infrastructure must be subordinated to the condition of interoperability. Intelligent traffic monitoring, management and control on TEN-T and other important transport corridors should be an EU-wide priority, as it will enhance road safety and improve both transportation system efficiency and sustainability. We believe that road authorities and public road operators should make available high-quality road and traffic data to improve its accessibility, exchange, re-use and update.

Bitkom represents more than 2,700 companies of the digital economy, including 2,000 direct members. Through IT- and communication services alone, our members generate a domestic annual turnover of 190 billion Euros, including 50 billion Euros in exports. The members of Bitkom employ more than 2 million people in Germany. Among these members are 1,000 small and medium-sized businesses, over 500 startups and almost all global players. They offer a wide range of software technologies, IT-services, and telecommunications or internet services, produce hardware and consumer electronics, operate in the digital media sector or are in other ways affiliated with the digital economy. 80 percent of the members' headquarters are located in Germany with an additional 8 percent both in the EU and the USA, as well as 4 percent in other regions of the world. Bitkom promotes the digital transformation of the German economy, as well as of German society at large, enabling citizens to benefit from digitalisation. A strong European digital policy and a fully integrated digital single market are at the heart of Bitkom's concerns, as well as establishing Germany as a key driver of digital change in Europe and globally.