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Railway Interoperability and Safety Committee

Working document

Draft Commission Implementing Regulation

on a technical specification relating to the telematics subsystem of the rail system in the European Union for interoperability of data sharing in rail transport and repealing Regulations (EU) No 454/2011 and (EU) No 1305/2014

Brussels, XXX
[...] (2025) XXX draft

COMMISSION IMPLEMENTING REGULATION (EU) .../...

of XXX

on a technical specification relating to the telematics subsystem of the rail system in the European Union for interoperability of data sharing in rail transport and repealing Regulations (EU) No 454/2011 and (EU) No 1305/2014

(Text with EEA relevance)

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COMMISSION IMPLEMENTING REGULATION (EU) .../...

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on a technical specification relating to the telematics subsystem of the rail system in the European Union for interoperability of data sharing in rail transport and repealing Regulations (EU) No 454/2011 and (EU) No 1305/2014

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

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

Having regard to Directive (EU) 2016/797 of the European Parliament and of the Council of 11 May 2016 on the interoperability of the rail system within the European Union¹, and in particular Article 5(11) thereof,

Whereas:

- (1) Point 1(b), third indent, of Annex II to Directive (EU) 2016/797 lists ‘telematics applications for passenger and freight services’ as a subsystem of the rail system that is described in point 2.6 of that Annex. Points 1.6.2 and 2.7 of Annex III to that Directive set out the essential requirements for that subsystem.
- (2) The technical specifications that apply to the ‘telematics applications for passenger and freight services’ subsystem are currently set out in Commission Regulation (EU) No 454/2011², which relates to telematics applications for passenger services (‘TAP TSI’), and Commission Regulation (EU) No 1305/2014³, which relates to telematics applications for the freight subsystem (‘TAF TSI’). Pursuant to Commission Delegated Decision (EU) 2017/1474⁴, those two regulations are to be revised on the basis of a coherent set of objectives, which the Commission is to integrate into one technical specification for interoperability (‘TSI’), in order to take into account open source and open data architecture requirements, facilitate the emergence of through-ticketing, integrated ticketing and multimodal travel information and reservation systems, improve the performance of rail freight, facilitate logistics and operations of combined and multi-modal transport, include data that is to be exchanged with safety related applications and allow the European Union Agency for Railways (‘the

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¹ OJ L 138, 26.5.2016, p. 44, ELI: <http://data.europa.eu/eli/dir/2016/797/oj>.

² Commission Regulation (EU) No 454/2011 of 5 May 2011 on the technical specification for interoperability relating to the subsystem ‘telematics applications for passenger services’ of the trans-European rail system (OJ L 123, 12.5.2011, p. 11, ELI: <http://data.europa.eu/eli/reg/2011/454/oj>).

³ Commission Regulation (EU) No 1305/2014 of 11 December 2014 on the technical specification for interoperability relating to the telematics applications for freight subsystem of the rail system in the European Union (OJ L 356, 12.12.2014, p. 438, ELI: <http://data.europa.eu/eli/reg/2014/1305/oj>).

⁴ Commission Delegated Decision (EU) 2017/1474 of 8 June 2017 supplementing Directive (EU) 2016/797 of the European Parliament and of the Council with regard to specific objectives for the drafting, adoption and review of technical specifications for interoperability (OJ L 210, 15.8.2017, p. 5, ELI: http://data.europa.eu/eli/dec_del/2017/1474/oj).

Agency’) to assess the compliance of telematics applications against the requirement of the TSIs.

- (3) Taking into account the relevant recommendations of the Agency⁵, it is necessary to set out common technical and functional requirements for digital information sharing through interoperable data for rail passenger and rail freight services. Those requirements should meet the changing needs of the rail sector and support the implementation of Union legislation in the single European rail area⁶ and the trans-European transport network (TEN-T)⁷, such as rail safety⁸, network capacity management and network information⁹, intermodal and multimodal digital information¹⁰, paperless freight transport¹¹, rail passenger rights¹² or reservation systems for integrated ticketing.
- (4) This Regulation should cover information systems and data sharing protocols between data holders, on the one hand, and data recipients or data users, on the other, that are governed by the horizontal Union rules set out in Regulation (EU) 2023/2854 of the European Parliament and of the Council¹³, in particular its Chapters III, IV, V and IX, and Regulation (EU) 2022/868 of the European Parliament and of the Council¹⁴ with adaptations necessary for the concepts and processes relating to the telematics subsystem.
- (5) Rail related processes falling within the scope of this Regulation should cover capacity and traffic management, the management of connections between trains and with other modes of transport, train preparation, the management of freight wagons and their load

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⁵ The recommendation of the Agency of 25 January 2022 on TAP TSI, and the recommendation of the Agency of 27 January 2022 on TAF TSI.

⁶ Directive 2012/34/EU of the European Parliament and of the Council of 21 November 2012 establishing a single European railway area (recast) (OJ L 343, 14.12.2012, p. 32, ELI: <http://data.europa.eu/eli/dir/2012/34/oj>).

⁷ Regulation (EU) 2024/1679 of the European Parliament and of the Council of 13 June 2024 on Union guidelines for the development of the trans-European transport network, amending Regulations (EU) 2021/1153 and (EU) No 913/2010 and repealing Regulation (EU) No 1315/2013 (OJ L, 2024/1679, 28.6.2024, ELI: <http://data.europa.eu/eli/reg/2024/1679/oj>).

⁸ Directive (EU) 2016/798 of the European Parliament and of the Council of 11 May 2016 on railway safety (recast) (OJ L 138, 26.5.2016, p. 102, ELI: <http://data.europa.eu/eli/dir/2016/798/oj>).

⁹ Commission Implementing Regulation (EU) 2017/2177 of 22 November 2017 on access to service facilities and rail-related services (OJ L 307, 23.11.2017, p. 1, ELI: http://data.europa.eu/eli/reg_impl/2017/2177/oj).

¹⁰ Commission Delegated Regulation (EU) 2017/1926 of 31 May 2017 supplementing Directive 2010/40/EU of the European Parliament and of the Council with regard to the provision of EU-wide multimodal travel information services (OJ L 272, 21.10.2017, p. 1, ELI: http://data.europa.eu/eli/reg_del/2017/1926/oj).

¹¹ Regulation (EU) 2020/1056 of the European Parliament and of the Council of 15 July 2020 on electronic freight transport information (OJ L 249, 31.7.2020, p. 33, ELI: <http://data.europa.eu/eli/reg/2020/1056/oj>).

¹² Regulation (EU) 2021/782 of the European Parliament and of the Council of 29 April 2021 on rail passengers’ rights and obligations (recast) (OJ L 172, 17.5.2021, p. 1, ELI: <http://data.europa.eu/eli/reg/2021/782/oj>).

¹³ Regulation (EU) 2023/2854 of the European Parliament and of the Council of 13 December 2023 on harmonised rules on fair access to and use of data and amending Regulation (EU) 2017/2394 and Directive (EU) 2020/1828 (Data Act) (OJ L, 2023/2854, 22.12.2023, ELI: <http://data.europa.eu/eli/reg/2023/2854/oj>).

¹⁴ Regulation (EU) 2022/868 of the European Parliament and of the Council of 30 May 2022 on European data governance (Data Governance Act) (OJ L 152, 3.6.2022, p. 1, ELI: <http://data.europa.eu/eli/reg/2022/868/oj>).

as well as the production of accompanying electronic freight documents and rail ticketing including the issuing of tickets across operators and modes of transport as well as rail passenger travel information. As a result, the definition of telematics stakeholders should include not only the rail infrastructure managers and railway undertakings but also other stakeholders that carry out tasks which are part of those rail related processes.

- (6) To ensure clear responsibilities in ticketing processes, it is necessary to specify that a railway undertaking or ticket vendor, as defined in Article 3, point (5), of Regulation (EU) 2021/782 of the European Parliament and of the Council¹⁵, may have one or more of the following roles: ‘distributor’ or ‘retailer’ of rail products, or ‘issuer’ of rail tickets. Relations between those entities should be subject to contracts which may fall under Union or national legislation, including competition law and horizontal rules on data sharing. Those contracts should include provisions on the interoperable solution agreed between the railway undertaking and the distributor involved in availability check and reservation of rail products. As regards the distribution of rail products, this Regulation should specify the interoperable solutions that are applicable on the basis of contractual provisions. The ERA Technical Document B.5¹⁶ issued by the Agency should list the currently most used solutions, namely 2 TAP TSI legacy solutions, OSDM and OMSA.
- (7) In accordance with Article 23(2) of Regulation (EU) 2016/796 and under the process of Article 5 of Directive (EU) 2016/797, any technical document issued or amended by the Agency becomes mandatory where its corresponding baseline is referenced in Appendix C of this Regulation. The same applies where a European standard referred to in Regulation (EU) No 1025/2012 of the European Parliament and of the Council¹⁷ replaces a technical document a new baseline should be incorporated in the Appendix C of this Regulation under the same process.
- (8) The Agency should establish, publish and apply a transparent and comprehensive change control management procedure in accordance with Article 23(2) of Regulation (EU) 2016/796 to maintain technical documents and implement error corrections, minor and maintenance releases identifying applicable updates.
- (9) To develop the competitiveness of rail transport and to remove technical barriers, notably through the digitalisation of rail related processes, this Regulation should take into account the proposals made in the Ministerial Declaration ‘Rail freight corridors to boost international rail freight’¹⁸ endorsed by the Member States, Switzerland and

¹⁵ Regulation (EU) 2021/782 of the European Parliament and of the Council of 29 April 2021 on rail passengers’ rights and obligations (OJ L 172, 17.5.2021, p. 1, ELI: <http://data.europa.eu/eli/reg/2021/782/oj>).

¹⁶ Solutions specified in the ERA technical document B.5:

- A1: TAP TSI legacy binary messages-based API;
- A2: TAP TSI legacy XML/SOAP-based API;
- B1: The Open Sales and Distribution Model (OSDM) JSON/REST based API;
- B2: The Transmodel (EN12896) and JSON/REST based Open Mobility Sales API (OMSA).

¹⁷ Regulation (EU) No 1025/2012 of the European Parliament and of the Council of 25 October 2012 on European standardisation, amending Council Directives 89/686/EEC and 93/15/EEC and Directives 94/9/EC, 94/25/EC, 95/16/EC, 97/23/EC, 98/34/EC, 2004/22/EC, 2007/23/EC, 2009/23/EC and 2009/105/EC of the European Parliament and of the Council and repealing Council Decision 87/95/EEC and Decision No 1673/2006/EC of the European Parliament and of the Council (OJ L 316, 14.11.2012, p. 12, ELI: <http://data.europa.eu/eli/reg/2012/1025/oj>).

¹⁸ <https://data.consilium.europa.eu/doc/document/ST-10306-2016-INIT/en/pdf>.

Norway on 21 June 2016 in Rotterdam. In line with those proposals, it is therefore appropriate to lay down rules on data sharing within the logistic chain, including terminals and intermodal transport operators, on sharing up-to-date and forecast information about the movements of trains and the status of freight wagons and their load to make rail freight transport more attractive and to better align intermodal logistics processes, and to harmonise safety and operational rules. Those rules should apply to telematics stakeholders having contractual obligations to carry out the rail related processes in the scope of this Regulation or those having an operational responsibility in those processes. A telematics stakeholder may have an operational responsibility that does not result directly from a contractual obligation. For example, where train traffic information impacts different railway undertakings operating trains on the same network and their service providers or different rail transport services on that network and associated service providers.

- (10) To ensure the proportionality of the rules on data sharing with operators of service facilities, this Regulation should cover only station managers and the multimodal freight terminals of the trans-European transport network (rail-road terminal, maritime ports, inland ports). To ensure consistency between the European frameworks applicable to the trans-European transport network and the single European railway area for the purposes of this Regulation, the operators of multimodal freight terminals should be considered as operators of service facilities that are offering services which are necessary for operating a freight rail transport service and whose service facilities are listed in point (2), subpoints (b), (c), (d) and (g), of Annex II to Directive 2012/34/EU.
- (11) To facilitate access by Union, national, regional and local authorities to data shared through telematics applications, this Regulation should provide corresponding obligations for free of charge and direct access to raw data. However, upon transparent and proportionate requests in terms of their scope and level of detail, additional data-related services for the development and production of European official statistics should be ensured on a sustainable basis and according to fair, clear, predictable and proportionate rules, in line with the Union's fundamental rights framework, and in accordance with the principle of cost-effectiveness and are not to entail excessive burdens on economic operators as laid down in Article 338(2) of the Treaty on the Functioning of the European Union (TFEU) and Articles 17a to 17g and 23 of Regulation (EC) No 223/2009 of the European Parliament and of the Council¹⁹.
- (12) The operation of trains throughout the single European railway area requires seamless access to and interconnection with the information and communication systems used by the stakeholders involved in accordance with the latest technical developments and should cater for testing of innovation.
- (13) The Commission's guidelines on recommended standard licences, datasets and charging for the re-use of documents²⁰ identify Creative Commons ('CC') licences as a recommended standard for open licences. CC licences are developed by a non-profit

¹⁹ Regulation (EC) No 223/2009 of the European Parliament and of the Council of 11 March 2009 on European statistics and repealing Regulation (EC, Euratom) No 1101/2008 of the European Parliament and of the Council on the transmission of data subject to statistical confidentiality to the Statistical Office of the European Communities, Council Regulation (EC) No 322/97 on Community Statistics, and Council Decision 89/382/EEC, Euratom establishing a Committee on the Statistical Programmes of the European Communities (OJ L 87, 31.3.2009, p. 164, ELI: <http://data.europa.eu/eli/reg/2009/223/oj>).

²⁰ OJ C 240, 24.7.2014, p. 1.

organisation and have become a leading licensing solution for public information across the world. It is therefore appropriate to refer to the most recent version of the CC licence suite, namely CC 4.0. To allow for additional arrangements due to ad hoc specificities of the data available for use, it should also be possible to use a standard open licence established by the data holder that is equivalent to the CC licence suite, as long as associated arrangements do not restrict the possibilities for reusing the data. It should also be possible to use a standard open licence equivalent to the CC licence suite, under fair, reasonable and non-discriminatory licencing terms and conditions subject to the relevant horizontal Union rules set out in Chapters III, IV, V and IX of Regulation (EU) 2023/2854.

- (14) In order to facilitate the reuse of reference data managed by the Agency, the Agency should use the European Union Public Licence ('EUPL') version 1.2 set out in Commission Implementing Decision (EU) 2017/863²¹.
- (15) Free access to information disseminated for public use is a fundamental right. Restricted availability of digital information on existing rail transport services and routes, such as train traffic and timetable including conditions of carriage and connection times between access nodes, hinders potential customers from making informed decisions on their preferred transport options as well as the development of innovative applications or machine learning methods that may be integrated into artificial intelligence. Therefore, that digital information (raw data) should be available online for reuse in accordance with relevant access conditions set out under standard open licences in the TSI established by this Regulation. However, information about train operations subject to security measures, such as the transport of dangerous goods or for armed forces and commercial data relating to the identification of the goods transported should be protected and therefore not disclosed to the public. Personal data relating to the identification of business and associated owner may be considered by a freight railway undertaking as either commercially sensitive or crucial information for market visibility and should upon request be protected. To ensure maximum impact of information on rail transport services and to facilitate its use, that digital information should be available for reuse with minimal legal restrictions and free-of-charge. It should also be machine-readable, provided by application programming interfaces ('APIs') and, where relevant, provided as bulk download. To protect the data holder, it is important to ensure that users of publicly available data about freight rail transport services are traceable. That would allow for appropriate action in the event of alleged misuse beyond the standard access conditions set out in this TSI under standard open licences. Where commercial products derived from additional data processing services applied to publicly available data are offered – either by the data holder without affecting the public availability of that data or by users subject to the data holder's licensing terms – non-discriminatory and reasonable compensation may be required for such services in accordance with the horizontal Union rules laid down in Article 9 of Regulation (EU) 2023/2854.
- (16) Information relating to passenger rail transport services is mostly public under Union or national law. Therefore, technical conditions should be set for telematics stakeholders holding such information to grant access for use to the respective data sets.

²¹ Commission Implementing Decision (EU) 2017/863 of 18 May 2017 updating the open source software licence EUPL to further facilitate the sharing and reuse of software developed by public administrations (OJ L 128, 19.5.2017, p. 59, ELI: http://data.europa.eu/eli/dec_impl/2017/863/oj).

- (17) Urban nodes, as defined in Article 3, point (6), of Regulation (EU) 2024/1679, play an important role in the TEN-T network as starting points or destinations ('first and last mile') and are points of transfer within or between different passenger transport modes. Access to transport and travel information should reduce the detrimental effect of capacity bottlenecks and insufficient network connectivity. To encourage the combination of transport services, access nodes in one or more urban nodes may be grouped in one or more meta stations and digital information for journey planning, namely the timetable of passenger rail transport services and associated conditions of carriage, and the minimum connection time between different access nodes, should be publicly available online for use under standard open licences.
- (18) To enable the telematics stakeholders concerned to provide passengers with information in accordance with Regulation (EU) 2021/782 and to allow ticket vendors to easily compare the rail products that are proposed to them by railway undertakings, it is necessary that national access points serve as reliable sources of information in the case of complaints and trusted points of access to accurate, complete, and up-to-date rail travel and traffic data based on data quality requirements specified in accordance with Article 8(1) of Delegated Regulation (EU) 2017/1926 and applied by the data holder.
- (19) Horizontal Union rules on terms and conditions for business-to-business data sharing are set out in Chapters III, IV and IX of Regulation (EU) 2023/2854. As a consequence, any fees and charges for data sharing and access to data for use, or the use of telematics applications as APIs and web user interfaces, or the access for use to reference data pursuant to this Regulation should be reasonable and proportionate to the legitimate costs incurred for setting up, maintaining and using such APIs, web user interfaces or reference data.
- (20) Horizontal essential requirements for interoperability of data, data sharing mechanisms and services, common European data spaces, data processing services, and for smart contracts executing data sharing agreements are laid down in Chapter VIII of Regulation (EU) 2023/2854. To help the rail sector meet those horizontal requirements and bring about a common European mobility data space which is interoperable with other European data spaces, a common central repository creating a single source of reference data and common Ontology for the Union rail system should be established and published through the EU Open Data Portal to cover the data necessary to implement this Regulation. That repository should be based on an open data architecture and provide significant benefits for discoverability, accessibility, ease of collaboration, consistency and flexibility within rail data management. As system authority for telematics applications of the Union rail system, the Agency should be responsible pursuant to Article 23, paragraphs 1 and 3, of Regulation (EU) 2016/796 of the European Parliament and of the Council²², for the management of that repository and for the reference data necessary to share data in accordance with this Regulation. An appropriate transition period should be ensured to bring together data from the databases managed jointly by infrastructure managers or by a group of railway undertakings.

²² Regulation (EU) 2016/796 of the European Parliament and of the Council of 11 May 2016 on the European Union Agency for Railways and repealing Regulation (EC) No 881/2004 (OJ L 138, 26.5.2016, p. 1 ; ELI: <http://data.europa.eu/eli/reg/2016/796/oj>).

- (21) Regulations (EU) 2016/679²³ and (EU) 2018/1725²⁴ of the European Parliament and of the Council apply in the context of processing of personal data in the application of this Regulation. Therefore, telematics stakeholders should use a single reference identifier when identifying their organisation and role in rail-related processes. That identifier may constitute or be associated with personal data within the meaning of Article 4, point (1), of Regulation (EU) 2016/679 and Article 3, point (1), of Regulation (EU) 2018/1725.
- (22) Network-specific data requirements (such as parameters or identifiers that are part of messages or messages specific to a network) used or intended to be used for data sharing as part of the deployment of the telematics subsystem or any national legal provision requiring their existence, should be justified by the technical characteristics of the network and should not hinder the transparent and non-discriminatory application of capacity and traffic management processes.
- (23) To update the specifications referenced in this Regulation, the Agency should establish, publish and apply a change control management procedure pursuant to Articles 5(9) and 23(2) of Regulation (EU) 2016/796. To ensure a coordinated development of telematics applications and monitor their deployment in the Union pursuant to Article 23, paragraphs 1 and 4, of Regulation (EU) 2016/796, the Agency should identify updates for these specifications and where relevant propose implementation dates for their application.
- (24) A framework should be established for railway undertakings sharing roles and responsibilities for the operation of a direct train across one or more networks to ensure consistent data sharing throughout the whole service.
- (25) For the digitalisation of multi-network processes to be fit for the delivery of the single European railway area, telematics applications for interoperable data sharing should be based on standardise APIs and web user interfaces. The interfaces between those tools and users should comply with the minimum rules on ergonomics and health protection.
- (26) To facilitate digital access to data sharing systems for capacity management, train preparation, and train traffic management, one infrastructure manager in each Member State could act as single point of contact, in particular in relation to multi-network processes.
- (27) To ensure fair competition between railway undertakings and to guarantee full transparency and non-discriminatory access to their service facilities pursuant to Article 13 of Directive 2012/34/EU of the European Parliament and of the Council²⁵,

²³ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) (OJ L 119, 4.5.2016, p. 1, ELI: <http://data.europa.eu/eli/reg/2016/679/oj>).

²⁴ Regulation (EU) 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC (OJ L 295, 21.11.2018, p. 39, ELI: <http://data.europa.eu/eli/reg/2018/1725/oj>).

²⁵ Directive 2012/34/EU of the European Parliament and of the Council of 21 November 2012 establishing a single European railway area (recast) (OJ L 343, 14.12.2012, p. 32, ELI: <http://data.europa.eu/eli/dir/2012/34/oj>).

station managers should establish the default minimum time for passengers to connect the access nodes of different passenger transport services.

- (28) To set out the strategy for the application of this Regulation pursuant to Article 4(3), point (h), of Directive (EU) 2016/797, including the provisions applicable to the existing subsystem and the stages to be completed for a gradual transition to a target subsystem pursuant to point (f) of that Article, a timescale and the gradual milestones pursuant to Article 4(4) of that Directive should be established.
- (29) To assist the Commission pursuant to Article 23(4) of Regulation (EU) 2016/796 in monitoring the deployment of telematics applications in accordance with this Regulation, the Agency should automate the digital collection information from telematics stakeholders on their implementation plans and the status of implementation of this Regulation and publish figures aggregated at national and Union level. Reporting obligations should be limited to key telematics stakeholders and to the monitoring of implementation until compliance with the requirements of this Regulation is achieved.
- (30) To facilitate the monitoring of the deployment of telematics applications in accordance with this Regulation and enable follow-up actions based on the result of an evaluation by the Agency, this Regulation should allow the Agency, as the system authority for telematics, to assess the compliance of telematics applications against this Regulation, in relation to the data shared through them, in case of doubt or complaints and based on a self-declaration of telematics stakeholders. To that end, the Agency should develop web applications enabling telematics stakeholders to automate their self-declaration of compliance based on the testing procedures specified in this Regulation and to notify the corresponding results to the Agency.
- (31) To support the enforcement of other Union acts for which this TSI set out harmonised specifications for the use of digital means, digital communication technologies and accessible formats necessary to comply with those acts, an evaluation by the Agency may be required by relevant national bodies such as national safety authorities as defined in Article 3, point (7), of Directive (EU) 2016/798 of the European Parliament and of the Council²⁶ in relation to operational communications, regulatory bodies as referred to in Section 4 of Directive 2012/34/EU in relation to the transparent and non-discriminatory application of capacity and traffic management processes and the minimum access package laid down in point 1 of Annex II to that Directive, enforcement bodies as referred to in Chapter VII of Regulation (EU) 2021/782 in relation to rail passenger travel information, and competent authorities as referred to in Article 9 of Commission Delegated Regulation (EU) 2017/1926²⁷ in relation to travel and traffic data shared via national access points.
- (32) To support the advancement of the TSI set up by this Regulation, by the Agency, the Commission should entrust the Agency pursuant to Article 40(2) of Regulation (EU) 2016/796 with the task of promoting innovation that aims at improving the use of new information technologies, timetable information and tracking and tracing systems.

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²⁶ Directive (EU) 2016/798 of the European Parliament and of the Council of 11 May 2016 on railway safety (OJ L 138, 26.5.2016, p. 102, ELI: <http://data.europa.eu/eli/dir/2016/798/oj>).

²⁷ Commission Delegated Regulation (EU) 2017/1926 of 31 May 2017 supplementing Directive 2010/40/EU of the European Parliament and of the Council with regard to the provision of EU-wide multimodal travel information services (OJ L 272, 21.10.2017, p. 1, ELI: http://data.europa.eu/eli/reg_del/2017/1926/oj).

- (33) To facilitate a coordinated and coherent implementation of this Regulation at national and Union level, national contact points ('NCP'), established pursuant to Article 5(3) of Regulation (EU) No 1305/2014 and Article 6 of Regulation (EU) No 454/2011, should support the Agency. To allow a coherent implementation between freight and passenger services, the tasks of the NCP should be undertaken by one single entity. An infrastructure manager may be tasked with acting as the NCP, where necessary in cooperation with other entities providing specific expertise.
- (34) Information on passenger rail transport services related to access nodes for multimodal purposes is to be available in accordance with Commission Delegated Regulation (EU) 2017/1926. To ensure consistency of that information with a single source of reference data at Union level, data holders should consistently use reference data such as location codes assigned by the Agency when providing access to data via national access points. To that effect, the NCP should facilitate interaction between national telematics stakeholders and the Member States, which are responsible for setting up national access points. Article 4(1)(b) and Article 5(1)(b) of Commission Delegated Regulation (EU) 2017/1926 refer to the technical specifications to be applied for rail passenger transport services. To ensure a coherent implementation of these specifications based on interoperable formats and protocols in a multimodal context by data holders involved in rail-related processes, this TSI should set out harmonised specifications to be applied by data holders in relation to passenger rail transport services. However, additional terms and conditions for direct access to and commercial use of data by distributors and retailers may be agreed with railway undertakings on a contractual basis taking into account applicable legal provisions.
- (35) To ensure the digitalisation of passenger travel information and tickets in accordance with Regulation (EU) 2021/782, this TSI should set out harmonised specifications for the use of appropriate digital means, digital communication technologies and accessible formats.
- (36) The Agency, acting as the system authority for telematics applications pursuant to Article 23 of Regulation (EU) 2016/796, is to coordinate the development of telematics applications, manage change requests and system versions and monitor the deployment of telematics applications through relevant working parties established pursuant to Chapter 2 of that Regulation.
- (37) Since certain terms reflecting the structure of the data shared are widely accepted and used in one technical language, such terms in the Annex should remain in that widely accepted technical language used for coding in telematics applications.
- (38) To fulfil the specific essential requirement safety for the telematics subsystem set out in point 2.7.4 of Annex III to Directive (EU) 2016/797, this Regulation should identify the functions relevant for the safety of operations. Basic level of integrity and dependability are defined in this Regulation. Without prejudice to the requirements applicable to the control-command and signalling subsystem, additional levels should be applicable to digital systems subject to this Regulation where data is intended to be used for the safety of operations. Where these levels have not yet been harmonised at Union level, they should be identified as an open point pursuant to Article 4(6) of Directive (EU) 2016/797. Until harmonisation is achieved, any additional levels intended to be applied by stakeholders should be assessed and established, and may be implemented through mutual agreement, without creating obstacles to access the single European railway area.

- (39) This Regulation should be aligned with other TSIs developed pursuant to Directive (EU) 2016/797, in particular with Commission Implementing Regulation (EU) 2019/773 for operation and traffic management ('OPE TSI')²⁸, Commission Implementing Regulation (EU) 2023/1695 regarding control-command and signalling ('CCS TSI')²⁹, Commission Regulation (EU) No 1300/2014 regarding persons with disabilities and persons with reduced mobility ('PRM TSI')³⁰, Commission Regulation (EU) No 1304/2014 regarding rolling-stock noise ('NOI TSI')³¹, Commission Regulation (EU) No 1301/2014³² regarding the energy subsystem ('ENE TSI'), and Commission Regulation (EU) No 1302/2014³³ ('Loc&Pas TSI') regarding locomotives and passenger rolling-stock.
- (40) Point 4.2.3.3.2 of the Annex to Implementing Regulation (EU) 2019/773 ('OPE TSI') requires the railway undertaking to inform the infrastructure manager when a train is ready for access to the network. Currently, that requirement is implemented in different ways depending on infrastructure characteristics (for example, Railway Mobile Radio (RMR) systems, ETCS L2, dedicated interlocking at departure point, dedicated telematics message). Point 4.2.4 of Annex I to Implementing Regulation (EU) 2023/1695 ('CCS TSI') sets out requirements for mobile communication functions for railways (RMR), which for GSM-R Voice and operational communication applications mandate the application of system requirements specification referenced in index [33] of Appendix A to that Annex. Those requirements specify the dialling code to be used for 'train ready' and 'train not ready' respectively. Point 4.2.2 of Annex I to Implementing Regulation (EU) 2023/1695 ('CCS TSI') sets out requirements for on-board ETCS functionalities, which for the 'Start of mission' procedure in ETCS L2 are defined in the system requirements specification referenced as index [4] referred to in the Appendix A to that Annex. For the purposes of this Regulation, those options for communicating on train readiness should be limited and harmonised.

²⁸ Commission Implementing Regulation (EU) 2019/773 of 16 May 2019 on the technical specification for interoperability relating to the operation and traffic management subsystem of the rail system within the European Union and repealing Decision 2012/757/EU (OJ L 139I, 27.5.2019, p. 5, ELI: http://data.europa.eu/eli/reg_impl/2019/773/oj).

²⁹ Commission Implementing Regulation (EU) 2023/1695 of 10 August 2023 on the technical specification for interoperability relating to the control-command and signalling subsystems of the rail system in the European Union and repealing Regulation (EU) 2016/919 (OJ L 222, 8.9.2023, p. 380, ELI: http://data.europa.eu/eli/reg_impl/2023/1695/oj).

³⁰ Commission Regulation (EU) No 1300/2014 of 18 November 2014 on the technical specifications for interoperability relating to accessibility of the Union's rail system for persons with disabilities and persons with reduced mobility (OJ L 356, 12.12.2014, p. 110, ELI: <http://data.europa.eu/eli/reg/2014/1300/oj>).

³¹ Commission Regulation (EU) No 1304/2014 of 26 November 2014 on the technical specification for interoperability relating to the subsystem 'rolling stock — noise' amending Decision 2008/232/EC and repealing Decision 2011/229/EU (OJ L 356, 12.12.2014, p. 421, ELI: <http://data.europa.eu/eli/reg/2014/1304/oj>).

³² Commission Regulation (EU) No 1301/2014 of 18 November 2014 on the technical specifications for interoperability relating to the energy subsystem of the rail system in the Union (OJ L 356, 12.12.2014, p. 179, ELI: <http://data.europa.eu/eli/reg/2014/1301/oj>).

³³ Commission Regulation (EU) No 1302/2014 of 18 November 2014 concerning a technical specification for interoperability relating to the rolling stock — locomotives and passenger rolling stock subsystem of the rail system in the European Union (OJ L 356, 12.12.2014, p. 228, ELI: <http://data.europa.eu/eli/reg/2014/1302/oj>).

- (41) Article 4(1) of Implementing Regulation (EU) 2019/777 requires infrastructure managers to publish in the register of infrastructure (the ‘RINF’) referred to in Article 49 of Directive (EU) 2016/797 the values of the parameters of its railway network as soon as such data becomes available. Points 4.2.1.2.2 and 4.8.1 of the Annex to Implementing Regulation (EU) 2019/773 (‘OPE TSI’) require infrastructure managers to publish in the RINF any changes to the nominal infrastructure characteristics, whenever such information becomes available and affects the operation of train on the network, including permanent or temporary restrictions and modifications. As set out in the point (8) of Annex VII to Directive 2012/34/EU, such information covers speed restrictions, axle load, train length, traction, or structure gauge included in capacity restrictions. Any temporary change to the nominal value of a network parameter, resulting from such restrictions or modifications, is to be published in the RINF as a temporary value, along with the validity dates associated with that restriction or modification.
- (42) To allow for sufficient return on investments of projects which aim to implement the telematics subsystem in accordance with Regulations (EU) No 454/2011 and (EU) No 1305/2014 and which, on the date of entry into force of this Regulation, are at an advanced stage of development within the meaning of Article 2, point (23), of Directive (EU) 2016/797, it is necessary to set an appropriate transitional period for corresponding telematics stakeholders to comply with this Regulation, without prejudice to Article 7(1), point (a), of that Directive.
- (43) To support the digitalisation of rail related processes within rail freight service facilities and to facilitate a gradual and timely implementation of interoperable data sharing by their operators, it is necessary to set an appropriate transitional period to allow operators of rail freight service facilities to comply with this Regulation, unless they are excluded from the scope of Directive (EU) 2016/797 in accordance with Article 1(4) of that Directive.
- (44) To facilitate a gradual and timely deployment of the technical tools to be provided by the Agency for the coordinated development of telematics applications in the Union and the management of their specifications, the date of application of this Regulation should be deferred in relation to the delivery by the Agency of those tools.
- (45) Regulations (EU) No 454/2011 and (EU) No 1305/2014 should therefore be repealed.
- (46) The European Data Protection Supervisor was consulted in accordance with Article 42(1) of Regulation (EU) 2018/1725 and delivered an opinion on 28 April 2025³⁴.
- (47) The measures provided for in this Regulation are in accordance with the opinion of the committee referred to in Article 51 of Directive (EU) 2016/797,

³⁴ European Data Protection Supervisor’s opinion C2025-0228.

HAS ADOPTED THIS REGULATION:

Chapter 1

General provisions

Article 1

Subject matter

This Regulation lays down common, specific and interface requirements for the interoperability of data sharing in rail transport by establishing a technical specification for interoperability (TSI) relating to the ‘telematics applications for passenger and freight services’ subsystem of the rail system in the Union, as set out in the Annex.

Article 2

Scope

1. This Regulation applies to ‘telematics applications for passenger and freight services’ referred to in point 1(b), third indent, of Annex II to Directive (EU) 2016/797 and described in point 2.6 of that Annex, with respect to the following processes:
 - (a) as regards both freight and passenger rail transport services:
 - (i) capacity management;
 - (ii) train preparation;
 - (iii) traffic management;
 - (b) as regards freight rail transport services only: management of freight wagons and their load;
 - (c) as regards passenger rail transport services only:
 - (i) rail ticketing;
 - (ii) rail passenger travel information.
2. This Regulation applies to the Union rail system as defined in Article 2, point (1), of Directive (EU) 2016/797.
3. This Regulation does not apply to rail transport services leaving or entering the Union to or from a third country which are not subject to similar rules under an international agreement. However, telematics stakeholders may apply alternative measures between the border and the border station designated for cross-border operations.

Article 3

Definitions

For the purposes of this Regulation, the following definitions apply:

- (1) ‘data’ means a machine-readable representation of acts, facts or information and any compilation of such acts, facts or information intended to be shared in a harmonised and structured format;
- (2) ‘data sharing’ means the provision of data by a data holder to a data recipient for the purpose of the joint or individual use of such data, directly or through an

intermediary, for example under open or commercial licences subject to a fee or free of charge;

- (3) 'rail ticketing' means the process comprising at least one of the following for passenger rail transport services:
 - (a) the digital presentation of passenger rail transport services for journey planning;
 - (b) the digital checking of the availability or the digital reservation of corresponding rail products for sales;
 - (c) the digital issuing and control of tickets;
 - (d) the digital handling of after sale processes;
- (4) 'rail product' means a tailored service in relation to a passenger rail transport service linked to a tariff;
- (5) 'ticket' means a ticket as defined in Article 3, point (7), of Regulation (EU) 2021/782;
- (6) 'reservation' means a reservation as defined in Article 3, point (8), of Regulation (EU) 2021/782;
- (7) 'rail transport service' means a scheduled service for carriage by rail between a point of departure and a point of arrival and covers transport services for goods, passengers, luggage, bicycles or cars, and tailored transport arrangements, as well as passenger assistance including services for re-routing and journey continuation;
- (8) 'operator of rail freight service facility' means operators of service facilities as defined in Article 3, point (12), of Directive 2012/34/EU, that provide services necessary for operating a freight rail transport service and whose service facilities are listed in point (2), subpoints (b), (c), (d) and (g), of Annex II to Directive 2012/34/EU and are connected to the trans-European transport network as specified in Annex II to Regulation (EU) 2024/1679, limited to the multimodal freight terminals identified pursuant to Article 36 of that Regulation;
- (9) 'telematics stakeholder' means the following data holders or data recipients whose activities entail the use of telematics applications for passenger and freight services':
 - (a) railway undertakings;
 - (b) infrastructure managers;
 - (c) station managers;
 - (d) operators of rail freight service facilities;
 - (e) intermodal transport operators;
 - (f) applicants for railway infrastructure capacity or capacity in service facilities;
 - (g) bodies responsible for allocating infrastructure capacity or capacity in service facilities;
 - (h) railway undertakings, or ticket vendors as defined in Article 3, point (5), of Regulation (EU) 2021/782, where those undertakings or vendors act as either a retailer, a distributor, an issuer, or a combination of two or more of those roles, in the processes referred to in Article 2(1), point (c);

- (i) entities in charge of maintenance as defined Article 3, point (20), of Directive (EU) 2016/798;
 - (j) third-party service providers that either have an operational responsibility in the functioning of the rail system or in supporting the delivery of passenger or freight rail transport services, or that are contracted to monitor the movements of trains or the flow of passengers or goods;
 - (k) freight customers;
 - (l) holders of a freight transport contract relating to a specific train or to a specific type of rail transport service;
 - (m) non-commercial third-party information aggregators that provide independent, non-discriminatory, publicly available data relating to rail transport services;
 - (n) any other entity that is involved in the operation of telematics applications, in relation to the elements of the subsystem referred to in point 2.6 of Annex II to Directive (EU) 2016/797;
- (10) ‘Union bodies’ means Union bodies as defined in Article 2, point (27), of Regulation (EU) 2023/2854;
 - (11) ‘public sector body’ means public sector body as defined in Article 2, point (28), of Regulation (EU) 2023/2854;
 - (12) ‘data holder’ means a natural or legal person that has the right to use or an obligation to produce and make available data;
 - (13) ‘data recipient’ means a natural or legal person that has the right to access the data produced and made available by the data holder under specified access conditions for use;
 - (14) ‘access to data’ means the right to consult the data with or without control over it, distinctively from other rights and obligations relating to its use for non-commercial or commercial purposes;
 - (15) ‘national access point’ means a national access point within the meaning of Article 3 of Commission Delegated Regulation (EU) 2017/1926;
 - (16) ‘ERA Ontology’ means a technical document issued by the Agency pursuant to Article 4(8) of Directive (EU) 2016/797, setting out human-readable and machine-readable data definitions and presentations and the associated quality and accuracy requirements for data elements of the Union rail system;
 - (17) ‘data element’ means a field, value, or attribute of the data shared, which is structured in a consistent manner with the overall protocol used for data sharing and carries essential information that contributes to the meaning and purpose of the data shared, enabling data sharing between systems, applications or organisations;
 - (18) ‘reference data’ means a data set of standardised and interoperable single identifiers to be used as a basis for data sharing in a specific domain;
 - (19) ‘metadata’ means metadata as defined in Article 2, point (2), of Regulation (EU) 2023/2854;
 - (20) ‘multi-network process’ means a process that is affected by the operation of a rail transport service across two or more networks managed by different infrastructure managers or operators of rail freight service facilities;

- (21) ‘direct rail transport service’ means a rail transport service that may include intermediate commercial stops between its origin and destination but does not involve any transfer of passengers or freight between trains;
- (22) ‘application programming interface’ or ‘API’ means a set of functions, procedures, definitions and protocols for interoperable data sharing between telematics applications;
- (23) ‘station manager’ means a station manager as defined in Article 3, point (3), of Regulation (EU) 2021/782;
- (24) ‘minimum connection time’ means the minimum amount of time that is sufficient for a passenger to connect between the access nodes of two consecutive passenger transport services included in a journey;
- (25) ‘person with disabilities’ and ‘person with reduced mobility’ means a person with disabilities and person with reduced mobility as defined in point 2.2 of the Annex to Commission Regulation (EU) No 1300/2014³⁵ (‘PRM TSI’);
- (26) ‘journey’ means an end-to-end trip of a passenger or a load that can include multiple legs;
- (27) ‘public departure time’ means the boarding time limit for passengers, that is the point in time when access to the train, platform or station is closed in preparation for departure and after which passengers are no longer allowed to board and that takes into account the time that may be required for the check-in of passengers, bicycles, or luggage;
- (28) ‘public arrival time’ means the alighting time for passengers, that is the point in time when the doors of the train are opened at the destination platform or terminal and disembarkation is allowed for passengers;
- (29) ‘working timetable’ means working timetable as defined in Article 3, point (28), of Directive 2012/34/EU that is used for capacity and traffic management as referred to in Section 2 of the Annex to this Regulation;
- (30) ‘meta station’ means a group of stations within a functional urban area, including one or more urban nodes listed in Annex II to Regulation (EU) 2024/1679, that may extend across multiple Member States and where distinct stations can be reached by connecting urban transport modes and urban transport services, whether scheduled or unscheduled;
- (31) ‘access node’ means access node as defined in Article 2, point (25), of Delegated Regulation (EU) 2017/1926;
- (32) ‘applicant’ means applicant as defined in Article 3, point (19), of Directive 2012/34/EU;
- (33) ‘passenger timetable’ means the date and time of passenger rail transport services operated as a commercial service by a railway undertaking during a given time interval that are used in the context of rail ticketing and rail passenger travel information referred to in Section 4 of the Annex;

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³⁵ Commission Regulation (EU) No 1300/2014 of 18 November 2014 on the technical specifications for interoperability relating to accessibility of the Union’s rail system for persons with disabilities and persons with reduced mobility (OJ L 356, 12.12.2014, p. 110, ELI: <http://data.europa.eu/eli/reg/2014/1300/oj>).

- (34) ‘shunting movement’ means shunting movements as defined in Table 1 of the Annex to Implementing Regulation (EU) 2019/773 (‘OPE TSI’);
- (35) ‘freight customer’ means the entity that has issued the consignment information to the relevant freight railway undertaking and which may be a logistics service provider, an intermodal transport operator, a freight forwarder, a fleet manager of empty wagons, or where relevant the data holder, that has concluded a contract of carriage covering transport services for goods;
- (36) ‘intermodal transport operator’ means an entity that organises freight transport services connecting two or more freight terminals with more than one transport mode;
- (37) ‘consignment note’ means a transport document referred to in Article 6 of Council Regulation No 11³⁶;
- (38) ‘distributor’ means an entity that, deriving from contractual provisions, has:
- (a) the technical capacity to combine one or more rail products from one or more railway undertakings, for the purpose of supplying them to an issuer or a retailer;
 - (b) rights to operate without an initial query to the attributing systems of those undertakings in relation to the rail products referred to in point (a);
 - (c) autonomous rights to check the availability of price for each of the services that is part of the combined rail products referred to in point (a);
- (39) ‘journey planner’ means a search engine used to find an optimal journey based on defined criteria set out by its user;
- (40) ‘issuer’ means an entity that has the legal and technical capacity, deriving from contractual provisions, to issue, for a retailer, a ticket on which the parties to the contract of carriage are indicated;
- (41) ‘attributing system’ means the railway undertaking’s digital system that hosts the online catalogue of individual rail transport services and that enables distributors to check the availability of those services and make reservations;
- (42) ‘retailer’ means an entity that:
- (a) has the legal and technical capacity, deriving from contractual provisions, to combine, or combine and sell, one or more rail products made available to it by one or more distributors;
 - (b) obtains access to the rail products referred to in point (a) after submitting an initial request to the distributors involved;
 - (c) sells the rail products referred to in point (a), where relevant, but without autonomous rights to amend the content of those rail products or conditions of the offers set out by distributors;
 - (d) is permitted to apply fees or reductions to the offers set out by distributors;

³⁶ Council Regulation No 11 concerning the abolition of discrimination in transport rates and conditions, in implementation of Article 79(3) of the Treaty establishing the European Economic Community (OJ 52, 16.8.1960, p. 1121, ELI: <http://data.europa.eu/eli/reg/1960/11/oj>).

- (43) ‘tariff’ means the aggregated data established by a railway undertaking, or, where relevant, by the data holder, that provides all relevant details of a tariff, including the rail transport service price due by a distributor to the railway undertaking and the associated attributes and conditions;
- (44) ‘offer’ means the aggregated data established by a distributor combining applicable tariffs that include the rail product price due by the retailer to the distributor and which may vary from the price set out by the railway undertaking due to the application of automated pricing rules, discounts or other commercial conditions;
- (45) ‘yielded price’ means the price associated to a tariff resulting from the application of an algorithm based on variables, referred to as the yielding rule;
- (46) ‘ticket control organisation’ or ‘TCO’ means an organisation empowered to inspect passenger tickets, including at platform access doors;
- (47) ‘data quality’ means the degree of fitness for use at which the characteristics of data satisfy the stated and implied level of accuracy, completeness, consistency, timeliness and uniqueness of datasets, and create actionable insights for other users under specified conditions.

Chapter 2

General rules and principles

Article 4

Data sharing between telematics stakeholders and rights to access data

1. Where telematics stakeholders involved in the same rail transport services and related processes referred to in Article 2(1) have rights or obligations deriving from legal or contractual provisions for those processes, they shall grant each other access for use or share the data specified in the Annex that are necessary to carry out those processes.

Except for the processes referred to in Article 2(1), point (c)(i), the rights and obligations referred to in the first subparagraph may also result from the operational responsibility in those processes, of any entity involved.

2. Upon reasoned request of the Commission, a Union body or a public sector body, telematics stakeholders that hold data specified in the Annex shall grant free of charge direct access to specific raw data for one of the following purposes:
 - (a) the monitoring of the establishment of the single European rail area or the trans-European transport network;
 - (b) the development of rail interoperability and safety in the Union;
 - (c) the monitoring or auditing of the flow of passengers or freight in the Union.

Article 5

Access to train traffic data and train composition data

1. In addition to the obligations set out in Article 4 of this Regulation, each infrastructure manager or, where relevant, an operator of rail freight service facilities shall grant telematics stakeholders pursuant to Article 4(1) access via a common Union web user interface (‘web UI’) in the area of traffic management referred to in Article 14(5) of this Regulation, and as part of the minimum access package laid

down in point 1 of Annex II to Directive 2012/34/EU, to the following raw data in accordance with the specifications and access conditions set out in Annex:

- (a) working timetable data, referred to in point 2.3.10 of the Annex to this Regulation, generated by the infrastructure managers or, where relevant, the data holder;
 - (b) train traffic data, referred to in point 2.6 of the Annex to this Regulation, generated by the infrastructure managers as holders of that data;
 - (c) train composition data, referred to in point 2.5.1 of the Annex to this Regulation, received from railway undertakings as holders of that data;
 - (d) historic record of train data, referred to in point 2.7 of the Annex to this Regulation.
2. Access to the data referred to in paragraph 1 shall be public and free of charge via a publicly accessible common Union web UI.
 3. Paragraph 2 shall not apply to transport of dangerous goods subject to the provisions of Directive 2008/68/EC of the European Parliament and of the Council³⁷.
 4. In the case of freight rail transport services, paragraph 2 shall only apply where a freight railway undertaking chooses to disclose the data referred to in paragraph 1 in respect of some or all of its transport services on a voluntary basis.
 5. The common Union web UI referred to in paragraph 1 shall ensure an automated implementation of the access restrictions and limitations referred to in this Article as specified by the data holder.
 6. The provisions of this Article shall neither apply to rail transport services for the armed forces nor to other rail transport services subject to security measures adopted by a Member State where such services are operated.

Article 6

Access to data for journey planning of passenger rail transport services and to tariff data

1. Each passenger railway undertaking, or, where relevant, the competent authority as defined in Article 2, point (b), of Regulation (EC) No 1370/2007 of the European Parliament and of the Council³⁸, or the data holder, shall grant public and free of charge access to data specified in points 4.2.1 and 4.4 of the Annex regarding the passenger timetable of the rail transport service that it operates and for corresponding conditions of carriage, respectively.

Access shall be granted at least via the national access points in accordance with the specifications and access conditions set out in the Annex.

2. Each station manager, or, where relevant, the infrastructure manager or another entity designated by one of them or by the Member State, as data holder, shall grant

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³⁷ Directive 2008/68/EC of the European Parliament and of the Council of 24 September 2008 on the inland transport of dangerous goods (OJ L 260, 30.9.2008, p. 13, ELI: <http://data.europa.eu/eli/dir/2008/68/oj>).

³⁸ Regulation (EC) No 1370/2007 of the European Parliament and of the Council of 23 October 2007 on public passenger transport services by rail and by road and repealing Council Regulations (EEC) Nos 1191/69 and 1107/70 (OJ L 315, 3.12.2007, p. 1, ELI: <http://data.europa.eu/eli/reg/2007/1370/oj>).

public and free of charge access to data specified in point 4.2.2 of the Annex regarding connection times between access nodes.

Access shall be granted at least via the national access points in accordance with the specifications and access conditions set out in the Annex.

3. Where a passenger railway undertaking, or where relevant the data holder, has rights or obligations deriving from contractual provisions to grant access to its tariff data that access shall be granted to all its tariffs at least via the national access points in accordance with the specifications and access conditions set out in point 4.3 of the Annex.

Additional terms and conditions for direct access to and commercial use of that data may be agreed on a contractual basis.

4. Where a distributor has rights or obligations deriving from contractual provisions to access availability and reservation data of the rail products of a passenger railway undertaking, including for yielded prices, that access shall be granted by that railway undertaking at least through a direct connection to its attributing system in accordance with the specifications set out in point 4.5 of the Annex.

Additional terms and conditions for direct access to and use of that data shall be agreed on a contractual basis.

5. This Article shall apply in addition to the obligations set out in Article 4.

Article 7 ***Cybersecurity and data format***

1. Telematics stakeholders, Union bodies and public sector bodies involved in the implementation of this Regulation shall be identified through a single identifier of their organisation assigned and validated in accordance with Article 9.
2. Where a telematics stakeholder shares and grants access to data pursuant to this Regulation, it shall ensure that the communication networks and protocols, systems, interfaces or databases it uses comply with the cybersecurity measures set out in point 1.3 of the Annex.
3. Where a telematics stakeholder shares and grants access to data pursuant to this Regulation, it shall comply with the semantics specified in the data catalogue elements as subsets of the ERA Ontology and the data sequence referred to in point 1.4 of the Annex.
4. The Agency shall ensure that the ERA Ontology and associated specific data catalogue elements reflect regulatory and technical developments affecting the Union rail system.

Article 8 ***Common central repository and reference data***

1. The Agency shall maintain a common central repository as a single source of common Union rail data for telematics. The repository shall be made available to the public and shall store all the following information:
 - (a) metadata and associated specific data catalogue elements, that are referred to in point 1.4 of the Annex as a subset of the ERA Ontology, specifying the content and the structure of the data;

- (b) a list of certification authorities for public key infrastructure ('PKI') established in accordance with the requirements set out in point 1.3 of the Annex;
 - (c) common reference data, referred to in Article 9, managed by the Agency;
 - (d) a link to access the source of freight specific reference data, referred to in point 3.3 of the Annex, managed by the rail sector.
2. The Agency shall enable any telematics stakeholder to subscribe to automated notifications regarding any update to the information associated with the common central repository.
 3. A telematics stakeholder may replicate for its own operational use the data available in the common central repository.
 4. The Agency and each telematics stakeholder responsible for common reference data in accordance with points 1.2, and 4.8 of the Annex shall take the following steps:
 - (a) make publicly available and free of charge their reference data for reuse in accordance with the specifications and access conditions set out in the Annex, as well as the service level conditions applied to the availability and accessibility of corresponding repository;
 - (b) manage assignment, maintenance and storage of, and access to, their reference data in a transparent, fair, reasonable, and non-discriminatory manner.

Article 9
Governance of common reference data

1. The Agency shall provide telematics stakeholders with web applications to allow them to submit requests for the assignment of codes and the updating of associated data elements.
The Agency shall define and publish a user manual describing the different functions of the web applications.
2. The Agency shall define, publish and apply the procedures for managing requests to assign codes and update of associated data elements, including associated language arrangements in accordance with Article 74 of Regulation (EU) 2016/796 and deadlines. That manual shall provide guidance to telematics stakeholders for the submission of requests.
3. The Agency shall manage and assign common reference data in the form of single reference identifiers ('codes'), used or intended to be used by telematics stakeholders in respect of the processes referred to in Article 2 (1) to identify the following data elements:
 - (a) entities ('organisation codes') involved in data sharing in accordance with acts adopted pursuant to Directive (EU) 2016/797 or Directive (EU) 2016/798 or Directive 2012/34/EU of the European Parliament and of the Council, referred to in point 1.2.1 of the Annex;
 - (b) geographical points ('location codes') referred to in point 1.2.2 of the Annex;
 - (c) ticketing aspects ('code lists for ticketing') referred to in point 4.8 of the Annex.

4. A telematics stakeholder shall submit to the Agency requests for the assignment of codes. The request shall be in accordance with the specifications for common reference data set out in point 1.2 of the Annex.
5. Where a telematics stakeholder submits a request for the assignment of a code for a location in the Union that is outside of the scope of the Union's rail network referred to in Annex I, point 1, of Directive (EU) 2016/797, the Agency shall assign a location code as a virtual extension of the rail network ('virtual location code') in the following cases:
 - (a) where the location is used by transport services that replace rail transport services temporarily;
 - (b) where the location is used by transport services sold as rail transport services that are not operated by railway undertakings;
 - (c) where the location is considered a meta station.
6. The Agency shall ensure that the position of the location codes assigned is specified in relation to the relevant infrastructure data available in the register of the railway infrastructure (the 'RINF') referred to in Article 49 of Directive (EU) 2016/797 and store them.
7. By [\[Publication Office: date of entry into force + 6 months\]](#), each infrastructure manager and each operator of rail freight service facilities, or another competent entity established in the Union designated by either, shall specify the position of the location codes, assigned to them before the entry into force of this Regulation, relative to the relevant infrastructure data available in the RINF.
8. Where, for passenger rail transport services, a telematics stakeholder refers to an access node or a data holder via national access points, it shall use the common reference data managed and assigned by the Agency pursuant this Article as European identifiers ('EU-Ids').

Article 10 ***Data quality***

1. The Agency and each telematics stakeholder shall ensure that their reference data comply with the data quality criteria and nominal values set out in point 1.5 of the Annex and meet an appropriate level of integrity and reliability.
2. Where a telematics stakeholder shares or grants access to data pursuant to this Regulation, it shall ensure that that data meets an appropriate level of integrity and reliability and contains the reference data referred to in paragraph 1. It shall also endeavour to comply with the nominal values set out in point 1.5 of the Annex with a margin of tolerance of 5% for each of the data quality criteria set out in that point.
3. Each telematics stakeholder shall ensure that data replicated from the common central repository preserves the same quality level.
4. Where a telematics stakeholder shares or grants access to data pursuant to this Regulation, it shall perform quality assurance checks. Any deficiencies identified in the data quality shall be corrected as soon as possible.
5. Each telematics stakeholder shall establish processes for recurrent quality assurance checks against each of the data quality criteria, for at least a selection of routes and locations of reference.

Article 11
Network-specific data requirements

1. The Agency shall establish and publish a template to collect non harmonised data requirements applied or intended to be applied by telematics stakeholders, as part of the change control management procedure referred to in Article 12(1).
2. By [Publication Office: date of entry into force + 9 months], each infrastructure manager shall share with the Agency, as part of the change control management procedure referred to in Article 12(1), the network-specific data requirements it applies or intends to apply and a justification thereof using the template referred to in paragraph 1.

Each Member State shall ensure that infrastructure managers under its responsibility comply with the provisions set out in the first subparagraph.

3. As part of the change control management procedure referred to in Article 12(1) of this Regulation and based on the information collected, the Agency shall, where justified, update the corresponding harmonised specifications referenced in Appendix C of the Annex to this Regulation or recommend to the Commission, pursuant to Article 4(a) of Regulation (EU) 2016/796, the integration of specific cases as part of Section 5 of the Annex to this Regulation.
4. Telematics stakeholders shall only apply data requirements that are harmonised pursuant to this Regulation or listed as a specific case.

Article 12
Updates to referenced specifications

1. The Agency shall establish, publish and apply a change control management procedure to update and maintain the harmonised specifications referenced in Appendix C of the Annex.
2. Where the Agency issues opinions pursuant to Article 10, paragraphs 2 and 3, or Article 19(1), point (d), of Regulation (EU) 2016/796 identifying changes constituting acceptable means of compliance, it shall, where relevant, propose implementation dates for their application.
3. The Agency shall keep Member States informed of its activities pursuant to paragraph 2 of this Article through the committee referred to in Article 51(1) of Directive (EU) 2016/797.

Article 13
Lead railway undertaking

1. Where a direct rail transport service is operated or intended to be operated by several railway undertakings, those undertakings shall designate one of them, or another competent entity established in the Union, to be a lead railway undertaking, for the entire service for the following tasks that are part of the processes referred to in Article 2(1):
 - (a) integrating consistently the identification number of the train ('reference train identifier') with other object identifiers in accordance with the specifications set out in point 2.1 of the Annex;

- (b) coordinating the railway undertakings and other applicants involved in relation to capacity management in accordance with the specifications set out in point 2.3 of the Annex;
 - (c) aggregating passenger timetable data for that service, in accordance with the specifications set out in point 4.2 of the Annex, where it differs from the working timetable;
 - (d) monitoring the movement of freight wagons and their load, in accordance with the specifications set out in point 3.2 of the Annex;
 - (e) integrating and sharing consignment note data in case of a freight service and act as a single point of contact for that service, in accordance with the specifications set out in point 3.1.1 of the Annex.
2. The railway undertakings referred to in paragraph 1 may distribute the tasks referred to in paragraph 1 or part of them to more than one undertaking or competent entity, each acting as the lead railway undertaking in relation to one or more tasks it is responsible for.
 3. Where a direct rail transport service, with or without intermediate stops, is operated or intended to be operated by a single railway undertaking, that undertaking shall be the lead railway undertaking.
 4. A lead railway undertaking responsible for the tasks referred to in paragraph 1, shall act as single point of contact for ensuring the consistency and the integration of the data that is shared or made accessible pursuant to this Regulation by the relevant data holders.

Article 14
Telematics applications for data sharing

1. Where a telematics stakeholder shares or grants access to data pursuant to this Regulation, it shall use a telematics application. That application shall be based on an application programming interface ('API') for machine-to-machine data sharing or a web user interface ('web UI') for human-to-machine data sharing which access is provided for use by another telematics stakeholder as an alternative.
2. Each telematics stakeholder shall ensure that the telematics applications it uses or to which it provides access for use comply with the specifications set out in point 1.7 of the Annex and ensures non-discriminatory data sharing.
3. Two or more telematics stakeholders may jointly use or jointly provide access for use to one telematics application.
4. In the areas of capacity management, train preparation and traffic management, each infrastructure manager shall both use an API and provide access for use to web UIs for its network as part of the minimum access package laid down in point 1 of Annex II to Directive 2012/34/EU.

Where there is more than one infrastructure manager in a Member State, that Member State may require those infrastructure managers to jointly use such an API and jointly provide access for use to web UIs for their networks. In that case, the Member State concerned shall appoint one infrastructure manager responsible for the joint deployment of those telematics applications.

The API and web UIs referred to in the first subparagraph of this paragraph may also be the common Union applications required for multi-network processes pursuant to paragraph 5.

5. For multi-network processes in the areas of capacity management, train preparation and traffic management:
 - (a) infrastructure managers shall jointly use a common Union API and jointly provide access for use to common Union web UIs;
 - (b) operators of rail freight service facilities may jointly use a common Union API and jointly provide access for use to common Union web UIs.
6. In the area of the management of freight wagons and their load, freight railway undertakings may jointly use a common Union API and provide access for use to common Union web UIs.

Article 15

Connection time and passenger information in stations

1. Each station manager, or where relevant the infrastructure manager or another entity designated by one of them, or by the Member State, as the data holder, shall, for the stations under its responsibility, establish in a neutral and non-discriminatory manner, the following minimum connection times in accordance with the requirements set out in point 4.2.2.1 of the Annex and where relevant in cooperation with other station or infrastructure managers:
 - (a) the minimum connection time between access nodes of:
 - (i) different passenger rail transport services within the station;
 - (ii) different passenger rail transport services of different stations that are part of the same meta station;
 - (iii) different passenger rail transport services and other relevant scheduled passenger transport services that may be connected;
 - (b) the minimum connection times referred to in point (a) adapted to:
 - (i) persons with disabilities and persons with reduced mobility;
 - (ii) a passenger transporting a bicycle.
2. Each station manager, or where relevant the infrastructure manager or the data holder, shall, for the stations under its responsibility, define the applicable means to connect transport services and gather information on the additional time that may be requested as part of the conditions of carriage by a railway undertaking or public authorities for the check-in of passengers, bicycles, or luggage, and include the information thereof in the minimum connection time.
3. Each station manager, or where relevant the infrastructure manager or the data holder, shall, for the stations under its responsibility, establish in a neutral and non-discriminatory manner, the most appropriate information system to be installed in the station to provide integrated train traffic and train composition rail passenger information in the station area in accordance with the requirements set out in point 4.7.1 of the Annex.
4. For the purposes of paragraphs 1, 2 and 3 of this Article, passenger railway undertakings, passenger organisations, station managers, infrastructure managers

and, where appropriate, the competent authority as defined in Article 2, point (b), of Regulation (EC) No 1370/2007, or where relevant the data holder, shall cooperate with a station manager, or where relevant an infrastructure manager or the data holder, upon request of any of the latter three.

Chapter 3

Implementation

Article 16

Implementation deadlines

1. Each telematics stakeholder shall ensure that any new telematics applications it deploys after the entry into force of this Regulation comply with this Regulation.
2. For its existing telematics applications, each telematics stakeholder shall follow the milestones set out in Appendix G of the Annex to ensure that those applications and the data shared or made accessible through them comply with this Regulation as regards the processes referred to in Article 2(1) and carried out in relation to the working timetables for the year 2030 that apply from 9 December 2029.
3. For the purposes of paragraph 2, operators of rail freight service facilities shall benefit from an additional transitional period of 12 months.
4. Operators of service facilities listed in point (2) of Annex II to Directive 2012/34/EU not referred to in other paragraphs of this Article may choose to apply this Regulation on a voluntary basis.
5. Where the planning or the implementation of the telematics subsystem in accordance with Regulations (EU) No 454/2011 or (EU) No 1305/2014 has reached a point where its compliance with this Regulation may compromise the viability of the putting into service of that subsystem, the deadlines set out in paragraphs 2 and 3 may be extended by 12 months.

Article 17

Implementation monitoring

1. The Agency shall provide a web application supporting telematics stakeholders' reporting. That web application shall enable automated data import from telematics applications used by telematics stakeholders to support their implementation reporting.
2. Until proof of compliance of their telematics applications is provided pursuant to Article 18, telematics stakeholders shall report to the Agency, using the automated web application referred to in paragraph 1, setting out in an accurate and transparent manner the status of their implementation and their implementation plans to meet the milestones set out in Appendix G of the Annex, in accordance with the following conditions:
 - (a) no later than [\[Publication Office: date of entry into force + 18 months\]](#), each infrastructure manager shall report in the following areas:
 - (i) capacity management;
 - (ii) train preparation;
 - (iii) traffic management;

- (b) no later than [\[Publication Office: date of entry into force + 24 months\]](#):
 - (i) each freight railway undertaking shall report in the areas of train preparation and the management of freight wagons and their load;
 - (ii) each operator of rail freight service facilities shall report in the area of traffic management;
 - (iii) each station manager shall report in the area of rail ticketing and rail passenger travel information;
 - (iv) each passenger railway undertaking shall report in the areas of train preparation, rail ticketing and rail passenger travel information.
- 3. Telematics stakeholders shall coordinate their efforts in drawing up their implementation plans. Each Member State shall support national coordination or delegate the task to the national contact point.
- 4. The Agency shall publish aggregated figures about the status of the implementation and the implementation plans per Member State and at Union level, linked to the network size for infrastructure managers and to market share of railway undertakings expressed as tonnes/km and passengers/km, respectively.

Article 18

Compliance assessment

1. The Agency shall provide a web application enabling telematics stakeholders to automatically self-assess individual messages.
The Agency shall publish a user manual describing the different functions of the web applications.
2. Each telematics stakeholder subject to reporting obligations pursuant to Article 17 shall self-assess the compliance of its telematics applications only in relation to the data shared using the web application referred to in paragraph 1 before the implementation deadlines set out in Article 16. Individual messages self-assessed shall comply with the testing procedure set out in point 1.6 of the Annex and Appendix D.1 thereto.
3. Where self-assessment results are positive, the web application referred to in paragraph 1 shall automatically perform all the following functions:
 - (a) issue an evidence-based declaration providing to the self-assessed telematics stakeholder and to the Agency a presumption of compliance of self-assessed messages and associated telematics applications with the provisions of this Regulation;
 - (b) compile the relevant information associated with this self-assessment as set out in point 1 of Appendix D.1 to the Annex;
 - (c) generate and publish a list of telematics applications which are presumed to be compliant.
4. Where a telematics application has received a positive compliance assessment delivered and published by the Agency before the date of entry into force of this Regulation, such an assessment shall remain valid unless changes are made to it.
5. Changes to a telematics application shall be self-assessed where such changes have an impact on any of the following matters:

- (a) the data elements, data structure or sequence to be shared pursuant to Article 7(3);
 - (b) the implementation of a new or updated API or web UI;
 - (c) cybersecurity measures pursuant to Article 7(2).
6. In the case a justified alleged non-compliance of a telematics application used by a telematic stakeholder, or where there is justified doubt, the Agency shall, on its own initiative or upon request of the Commission, a Union body, a public sector body or a telematics stakeholder, evaluate the correctness of the self-assessment based on the relevant information compiled pursuant to paragraph 3(b) and in accordance with the testing procedure set out in Appendix D.2.
7. The Agency shall inform the requesting entity and the telematics stakeholder using the telematics applications evaluated of the result, of its evaluation that may be used for follow-up actions, including enforcement by a national safety authority as defined in Article 3, point (7), of Directive (EU) 2016/798, or other national authorities responsible for the implementation of this Regulation.
8. The Agency shall also evaluate the correctness of the self-assessment on the basis of the information compiled in accordance with paragraph 3(b) for projects of telematics applications where an application for Union financial support has been submitted.

Upon request, the Agency may also perform such evaluation for projects not subject to Union financial support as a service pursuant to Article 64(2), point (d), and Article 80(2), point (c), of Regulation (EU) 2016/796.
9. The Agency shall set out, publish and apply the procedures and deadlines to evaluate the correctness of the self-assessment for the purposes of paragraphs 6, 7 and 8.

Article 19 ***Innovative solutions***

1. Where a telematics stakeholder intends to use an innovative solution for a telematics application not envisaged by this Regulation, it shall submit the technical file associated with the proposed innovative solution to the Commission for analysis and declare how the interoperability of interfaces with other compliant telematics stakeholders can be ensured. The Commission shall request the opinion of the Agency pursuant to Article 10(2) of Regulation (EU) 2016/796 on the proposed innovative solution.
2. Where the Agency's opinion is negative, the innovative solution proposed cannot be applied.
3. Where the Agency's opinion is positive, the appropriate functional and interface specification and the testing procedure to allow the use of such innovative solution shall be developed and may subsequently be included as part of the revision process laid down in Article 5 of Directive (EU) 2016/797.
4. In addition to paragraph 3, the Agency may consider in its positive opinion that the innovative solution constitutes an acceptable means of compliance pursuant to Article 6(3) of Directive (EU) 2016/797. In that case, that positive opinion may be used to assess the compliance of the innovative solution with this Regulation.

Article 20
National contact point

1. Member States shall designate a national contact point ('NCP'), independent from railway undertakings or other applicants, among the representatives of either a public sector body or an infrastructure manager and ensure appropriate resources.
2. Where a Member State decides to appoint different actors in relation to the processes referred to in Article 2(1) and the tasks referred to in paragraph 3 of this Article, the designated NCP shall ensure coordination of those actors at national level and remains the single point of contact for the Agency, the Commission, and other relevant organisations.
3. The NCP shall carry out the following tasks:
 - (a) act as Member State representative in the working party referred to in Article 22, cooperate with the Agency and other NCPs, and share with the working party relevant operational views and issues reported by telematics stakeholders in a transparent and non-discriminatory manner;
 - (b) collect relevant market shares and contact details of telematics stakeholders covered by Article 17, and share them with the Agency;
 - (c) facilitate contacts between Member States, telematics stakeholders at national level, the Agency, the Commission, and other relevant organisations;
 - (d) support a coordinated implementation of the provisions of this Regulation by facilitating:
 - (i) return of experience and exchange of best practices among telematics stakeholders at national level, as well as at Union level in the working party referred to in Article 22;
 - (ii) coordination of infrastructure managers' implementation plans and consultation of other telematics stakeholders through the rail sector representative bodies listed by the Commission pursuant to Article 38(4) of Regulation (EU) 2016/796;
 - (iii) integration of prospective telematics stakeholders informing them about the applicable framework.
4. By [\[Publication Office: date of entry into force + 9 months\]](#), each Member State shall communicate to the Agency the details of the designated NCP. The Agency shall publish those details.

Article 21
Cooperation and coordination

1. Infrastructure managers shall cooperate within the European network of infrastructure managers, referred to in Article 7f of Directive 2012/34/EU and in consultation with operators of rail freight service facilities, railway undertakings and other telematics stakeholders to coordinate the following:
 - (a) the development of common sector specifications for a common Union API and common Union web user interfaces referred to in Article 14(5), point (a), of this Regulation;

- (b) their implementation plans at Union level and the consultation with other telematics stakeholders active at national level with the support of national contact points.
- 2. Freight railway undertakings shall cooperate on the development of a common sector specification for a common Union API and common Union web user interfaces referred to in Article 14(6).
- 3. Operators of rail freight service facilities shall cooperate on the development of a common sector specification for a common Union API and common Union web user interfaces referred to in Article 14(5), point (b).
- 4. By 30 September 2027, infrastructure managers, freight railway undertakings and operators of rail freight service facilities shall deliver within the process managed by the Agency referred in Article 5 of Directive (EU) 2016/797 their respective common sector specifications resulting from their tasks under paragraphs 1, 2 and 3 of this Article taking into account the work of the Europe's Rail Joint Undertaking established in Title IV of Council Regulation (EU) 2021/2085³⁹.

Article 22

ERA working party on telematics

The working party or parties established by the Agency pursuant to Chapter 2 of Regulation (EU) 2016/796 shall assist the Agency in applying and further developing the functional and technical specifications set out in this Regulation, in particular in the following tasks of the Agency:

- (a) ensure relevant coordination and cooperation of telematics stakeholders to guarantee implementation and application of this Regulation;
- (b) ensure cooperation of national contact points at Union level and harmonised and coordinated implementation of their tasks across the Union;
- (c) monitor the quality of the common reference data referred to in Article 9(3);
- (d) develop and maintain the user manual referred to in Article 9(1), second subparagraph and the procedure referred to in Article 9(2) for submitting requests for the assignment of reference codes;
- (e) harmonise, where relevant, the network-specific data requirements referred in accordance with Article 11(3);
- (f) develop and maintain the procedure referred to in Article 12(1) and maintain the harmonised specifications issued by the Agency in accordance with Article 12;
- (g) provide guidance for the development of sector specifications supporting the update of harmonised specifications referred to in Articles 12 and 21;
- (h) design, implement, maintain and ensure the automation of data import supporting the reporting obligations referred to in Article 17;

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³⁹ Council Regulation (EU) 2021/2085 of 19 November 2021 establishing the Joint Undertakings under Horizon Europe and repealing Regulations (EC) No 219/2007, (EU) No 557/2014, (EU) No 558/2014, (EU) No 559/2014, (EU) No 560/2014, (EU) No 561/2014 and (EU) No 642/2014 (OJ L 427, 30.11.2021, p. 17, ELI: <http://data.europa.eu/eli/reg/2021/2085/oj>)

- (i) maintain the testing procedures referred to in point 1.6 of the Annex and Appendix D.1 thereto;
- (j) implement future developments of this Regulation referred to in Article 23;
- (k) facilitate exchange between and collect best practices from telematics stakeholders at Union level;
- (l) reflect on the need for follow-up action by the Agency, the Commission, or the Member States, where relevant;
- (m) shape and contribute to the implementation of follow-up actions to the feedback provided by the working parties;
- (n) identify and prepare strategic topics related to the digitalisation of the rail system with an impact on the subsystem telematics applications for discussion in a wider policy context;
- (o) report to the Commission pursuant to Article 24.

Article 23 ***Future developments***

By 31 December 2028, the Agency shall make, taking into account the work of the Europe's Rail Joint Undertaking established in Title IV of Regulation (EU) 2021/2085 and the common specifications referred to in Article 21(4) of this Regulation, a recommendation to the Commission pursuant to Article 19(1), point (a), of Regulation (EU) 2016/796 for the update of the functional and technical specifications laid down in this Regulation with the following objectives and conduct on an impact assessment for that recommendation pursuant to Article 8 of Regulation (EU) 2016/796:

- (a) reflecting regulatory and technical developments affecting the rail system;
- (b) converting the list of specific data requirements based on positively assessed national rules referred to in Article 11(5) of this Regulation into harmonised specifications, specific cases, or open point as appropriate;
- (c) closing the list of open points in Appendix B of the Annex to this Regulation;
- (d) updating the references to the specifications referred to in Article 12 of this Regulation;
- (e) as part of the technical specifications referenced in Appendix C to the Annex to this Regulation, ensuring appropriate and backward compatible transition from technical documents referenced in this Regulation and other specifications compatible and interoperable with those documents to relevant European standards referred to in Regulation (EU) No 1025/2012.

Chapter 4 **Transitional and final provisions**

Article 24 ***Report***

1. The report submitted by the Agency pursuant to Article 35(4) of Regulation (EU) 2016/796 shall include an analysis of the effectiveness of this Regulation and the

progress made towards achieving interoperability of the telematics subsystem of the Union rail system.

2. Reporting on implementation shall be based on information collected by the Agency pursuant to Article 17 of this Regulation.
3. For the purposes of Article 40(2) of Regulation (EU) 2016/796, the Agency shall publish an overview of Union-funded projects and its analysis of innovative outputs relating to the provisions of this Regulation, as well as its proposals for follow-up action necessary to ensure the coordinated development corresponding applications in the Union and a harmonised and coordinated implementation.

Article 25

Repeal

1. Regulations (EU) No 454/2011 and (EU) No 1305/2014 are repealed.
2. References to the repealed Regulations shall be construed as references to this Regulation.

Article 26

Transitional measures

Until the Agency provides the web applications referred to in Article 9(1), it shall assign codes through existing databases managed jointly by infrastructure managers, or by operators of rail freight service facilities or by a group of railway undertakings. For that purpose, the stakeholders managing those databases shall grant the Agency access to those databases for use.

Article 27

Entry into force and application

1. This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.
2. The following Articles shall apply from [Publication Office: date of entry into force + 6 months]:
 - (a) Article 8(1), points (a), (c) and (d), and Article 8(2);
 - (b) Article 9(2);
 - (c) Article 11(1);
 - (d) Article 12(1).
3. Article 9(3) to (6) shall apply from 15 March 2026.
4. The following Articles shall apply from [Publication Office: date of entry into force + 12 months]:
 - (a) Article 8(1)(b);
 - (b) Article 9(1);
 - (c) Article 17(1);
 - (d) Article 18.

5. This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels,

*For the Commission
The President
Ursula von der Leyen*