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Light Impact Assessment

TAF TSI 2022 Revision

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Contents

1. Context and problem definition

1.1. Problem and problem drivers

Within the context of the 2022 revision of the Technical Specifications for Interoperability ('TSI'), a package of legislative actions aimed at updating the framework for rail interoperability, the Agency is addressing the following set of change requests ('CRs') following the process described by Commission Delegated Decision (EU) 2017/1474: CR296, CR317, CR325, CR326, CR333, CR365, CR366, CR368, CR370, CR382, CR399, CR429, CR438 and CR439.

The main problem to be analysed in this impact assessment is a recommendation by the Agency as per Art. 5 of Directive (EU) 2016/797 aimed at amending Commission Implementing Regulation (EU) 1305/2014 and related following amending regulations for the Telematics Applications for Freight ('TAF'). The CRs considered in this recommendations are mostly enhancements proposed by industry representatives which touch multiple aspects of the TAF messages, parameters, processes and actors. A generic assessment of each CR is provided in Annex 1 using a table that allows readers to have an overall summary of the CRs and of their envisaged benefits. Some CRs relevant for TAF but also for TAP (CR325, CR368, CR370, CR 382, CR399, CR439 and they have been addressed in this report only.

1.2. Evidence of the problem

Evidence of the problem is provided by the details submitted by requestors of the CR in the ERA's CCM Clearquest database https://ccm.era.europa.eu/cqweb/. Each CR has unique identifiers and the full set of information about description, field of application, requestor, etc. can be easily retrieved from the database. The full set of CR in scope is available also in Annex 1.

1.3. Baseline scenario

The baseline scenario is the current version of the TAF-TSI Regulation which does not consider the proposed enhancements and error corrections brought by the batch of CRs under analysis.

1.4. Main assumptions

For all CRs in scope, this impact assessment is based on the information provided by requestors in terms of context and description of the benefits and on Agency's staff expert opinion with regards to the magnitude of the impacts the CRs may generate and the relevant transition regimes if applicable. Details are available in Annex 1.

1.5. Stakeholders affected

Railway undertakings (RU)	☒	Member States (MS)	☐
Infrastructure managers (IM)	☒	Third Countries (TC)	☒
Suppliers (SU)	☒	National safety authorities (NSA)	☐
Keepers (KE)	☒	European Commission (EC)	☐
Entity Managing the Change (EMC)	☐	European Union Agency for Railways (ERA)	☒
Notified Bodies (NoBo)	☐	Citizens living nearby railway tracks	☐
Associations (AS)	☐	Persons with reduced mobility (PRM)	☐
Shippers (SH)	☒	Passengers	☐
Ticket vendors	☐	Other (ports, terminals for rail freight) (OT)	☒

Beside the traditional rail and institutional stakeholders usually involved in TAF-TSI, some CRs in scope impacts shippers, port authorities and terminal operators since the aim is to extend the exchange of TAF messages to rail-related stakeholders part of the logistics value chain. Suppliers are rather identified as the providers of IT products and services used in TAF TSI. Third countries include in general stakeholders, mostly RUs, not based in the EU/EEA and associated countries.

The geographical scope is the entire EU rail freight industry within the scope of the TAF TSI Regulation. One CR impacts also third countries due to the nature of the enhancement relevant for rail stakeholders having rail transport connections from/to CIS and Asia.

1.6. Subsidiarity and proportionality

This revision of the TAF TSI is in application of Commission Delegated Decision (EU) 2017/1474 which mandates action at EU level. The revision envisaged is a recurrent process and for the integrity of the legal framework, EU action is recommended in order to ensure uniform application of the TAF TSI across the Union.

2. Objectives

2.1. Specific objectives

The specific objective of the TAF TSI revision is to incorporate a number of enhancements and error corrections in order to make telematic applications for freight up-to-date and extend the scope of users across the logistics value chain, especially maritime and multi-modal stakeholders.

3. Options

3.1. List of options

Beside the baseline scenario, only one option can be considered which is the implementation of the full set of CRs in scope. In fact, given the CRs only relate to enhancements and error corrections proposed by the industry and by ERA staff without opposition by relevant stakeholders, no other options have been considered.

4. Impacts of the options

4.1. Qualitative analysis

Stakeholder assessment

As described in 3.1, Option 0 (Baseline) is the as-is situation of not implementing the batch of CRs in scope of this IA. Option 1 is the only alternative option analysed and below a general qualitative description of costs is available in order to provide an overview of the impact of implementing the CRs. Further details on the CRs and of the benefits envisaged for each CR are presented in Annex 1.

Option 0 (Baseline)			
Category of stakeholder	*Impact type*	*Description*	*Overall Impact*
RU	Positive	No effort required to adapt systems and messaging of TAF TSI.	Very negative
	Negative	Risk of non-compliance with new legal requirements and policies, no updates to new IT developments, loss of business potential and low quality of services due to lack of message exchanges with maritime and logistics players.	
IM	Positive	No effort required to adapt systems and messaging of TAF TSI.	Very negative
	Negative	Risk of non-compliance with new legal requirements and policies, no updates to new IT developments, loss of business potential, service quality and lower potential for rail freight services due to lack of message exchanges with maritime and logistics players.	
SU	Positive	No effort required to adapt products for systems and messaging of TAF TSI including inclusion of legacy systems of non-rail stakeholders.	Rather negative
	Negative	Loss of business due to not growing demand for products and services from rail and especially non-rail stakeholders.	
KE	Positive	No effort required to adapt systems and messaging of TAF TSI.	Rather negative
	Negative	Loss of business due to lower attractiveness of rail freight for new traffic flows resulting from better integration and service quality with non-rail stakeholders.	
SH	Positive	No effort required to adapt systems and messaging of TAF TSI.	Very negative
	Negative	Loss of new business potential and improved service quality due to lower attractiveness of rail freight for new traffic flows resulting from better integration and communication with non-rail stakeholders.	
TC	Positive	No effort required to adapt systems and messaging of TAF TSI.	Very negative
	Negative	Continuation of low service quality with unnecessary stops at EU borders for exchange of consignment notes and no timely communication of delays and trains position.	
ERA	Positive	None	Neutral
	Negative	ERA will not be be able to ensure the enhanced CCM, Implementation Monitoring, Compliance checking and reference files functions from TAF TSI. With that ERA is not in the position to safeguarding the real implementation and operation of the TAF TSI.	
OT	Positive	No effort required to adapt systems and messaging of TAF TSI.	Very negative
	Negative	Loss of business potential and low quality of services due to lack of message exchanges with maritime and logistics players.	

Option 1			
Category of stakeholder	*Impact type*	*Description*	*Overall Impact*
RU	Positive	Implementation of new legal requirements, innovations, better service quality and high potential of new business thanks to integration of maritime and logistics players into the TAF TSI messaging resulting in higher rail freight traffic.	Very positive
	Negative	One-off investments required in order to incorporate the CRs in scope into the IT systems, TAF processes and interfaces. However, transition regime is to be defined and relevant changes may happen at the time when IT systems reach anyway end of life cycle.	
IM	Positive	Implementation of new legal requirements, innovations, better service quality and high potential of new business thanks to integration of maritime and logistics players into the TAF TSI messaging resulting in higher rail freight traffic.	Very positive
	Negative	One-off investments required in order to incorporate the CRs in scope into the IT systems, TAF processes and interfaces. However, transition regime is to be defined and relevant changes may happen at the time when IT systems reach anyway end of life cycle.	
SU	Positive	New demand for products and services from RUs, IMs and especially maritime and logistics stakeholders that need to invest in their IT systems.	Very positive
	Negative	Some investments needed in R&D in order to adapt products offering to the CRs in scope and to the new stakeholders included in the TAF TSI scope.	
KE	Positive	Better integration of maritime and logistics player can result in an increase of demand as well as better information on localisation of assets.	Rather positive
	Negative	One-off investments required in order to incorporate the CRs in scope into the IT systems, TAF processes and interfaces. However, transition regime is to be defined and relevant changes may happen at the time when IT systems reach anyway end of life cycle.	
	Negative	Some coordination effort needed during the transition period to implement the CRs.	
SH	Positive	Improved quality and timely delivery of shipments thanks to better integration of rail freight across the logistics value chain and potential for new business.	Very positive
	Negative	One-off investments required in order to incorporate the CRs in scope into the IT systems, TAF processes and interfaces. However, transition regime is to be defined and relevant changes may happen at the time when IT systems reach anyway end of life cycle.	
TC	Positive	Improved service quality with less unnecessary stops at EU borders for exchange of consignment notes and timely communication of delays and trains position.	Very positive
	Negative	One-off investments required in order to incorporate the CRs in scope into the IT systems, TAF processes and interfaces. Investments limited to stakeholders that perform freight traffic across EU borders. However, transition regime is to be defined and relevant changes may happen at the time when IT systems reach anyway end of life cycle.	
ERA	Positive	ERA will be able to ensure the CCM, Implementation Monitoring, Compliance checking and reference files functions from TAF TSI. With that ERA is safeguarding the real implementation and operation of the TAF TSI.	Very positive
	Negative	None.	
OT	Positive	Better service quality and high potential of new business thanks to integration of maritime and logistics players into the TAF TSI messaging resulting in higher rail freight traffic.	Very positive

	Negative	One-off investments required in order to incorporate the CRs in scope into the IT systems, TAF processes and interfaces of ports, terminals etc. willing to get integrated into TAF TSI. However, transition regime is to be defined and relevant changes may happen at the time when IT systems reach anyway end of life cycle.	

Cost assessment

At current stage, a cost assessment for the complete set of CRs is not possible due to lack of data. However, a transition scheme (national implementation plan) will be introduced to keep costs for on-going implementation projects to a minimum and a timeframe for implementation of the CRs will be set into the master plan. However, as a general description, the costs envisaged to implement the CRs are mostly related to IT staff and consultants as well as software, hardware and data centers/cloud platforms costs related to building, maintaining or re-designing enterprise-wide and so-called back-office systems of relevant companies. It is also important to mention that, given TAF TSI is now linking a large number of actors, synchronisation between IT systems via designated connectors, testing and frequent IT stakeholder meetings are additional costs to envisage. Eventually, the stakeholders involved in TAF will need to redesign their operational production processes to cope with the CRs.

5.   Monitoring and evaluation

5.1. Monitoring indicators

The uptake and level of compliance of TAF TSI is regularly monitored by the RU/IM Telematics Joint Sector Group (JSG) as well as by the Agency in its biennial Report on Safety and Interoperability and in its Implementation Cooperation Group (ICG). This monitoring is a recurrent activity which will include also the CRs in scope once they will become mandatory.

6.   Sources and methodology

6.1. Sources

Desk research	☐	Interviews	☐
ERA database	☒	Meetings	☒
External database	☐	Survey	☐

Sources used for this IA included the ERA's CCM Clearquest database where submitters of CRs provided a description of issues and benefits as well as meetings with ERA experts that provided further details on benefits and, where applicable, transition regimes for CR.

6.2. Methodology

Given the large scope of the CRs, an overall assessment of impacts is a difficult exercise while at the same time a detailed analysis of CRs in individual impact assessments would generate an unnecessary burden. Therefore, this impact assessment is covering in its scope the entire batch of CRs relevant for the 2022 revision of the TAF-TSI. For this reason, compared to the standard template, a simplified structure for the IA has been used but details per CR especially on the benefits envisaged are available in Annex 1.

Annex 1.   Summary of Change Requests and expected benefits

CR Number	Title	Description	Application scope / Stakeholders impacted	Operational scope	Benefits envisaged	CR Type
TSI_C000 00317	Link real multimodal time data and train data	Enabling in the nearer future to link Real time data and train data (Train position, New Identifiers such as unique Train ID, Train Composition, Wagons, ILU, and e-ETA) to enhance tracking and tracing, connect to terminals and multimodal environment in general to the very last mile.	Entire EU rail freight network falling under the scope of the TAF TSI Regulation.	All message exchanges	Ports, terminal facilities and combined transport operators can be better included into the TAF message exchange.	Enhance ment
TSI_C000 00325	Evaluation of merging TAF and TAP TSIs	Enabling in the near future to merge TAF/TAP TSI (if possible) to ensure consistency in the RU/IM annexes of the legal text and increased benefit per group of TAF/TAP functions (such as RU/IM communication, RU/RU functions etc) per group of TAF/TAP stakeholders due to easier implementation. The clearer basic parameters are an enabler but for the time being TAF and TAP remain separate TSIs.	Entire EU rail passenger/fr eight network falling under the scope of the TAF/TAP TSI Regulation.	All message exchanges (with link to TAP TSI)	Ambiguities, contradictions for shared Basic parameters with TAP TSI will be cleaned up. Implementers will have to follow only one source of provisions.	Enhance ment
TSI_C000 00326	Take into account the development of standardised communication methods	Enabling in the near future to take into account the development of standardised communication methods and protocols, as well as standardised data exchange systems. This CR helps the use of newly developed communication methods including alternative communication technologies instead of the Common Interface (CI), provided there is a specific agreement between involved parties aligned with the CI specifications.	Entire EU rail passenger/fr eight network falling under the scope of the TAF/TAP TSI Regulation.	All message exchanges (with link to TAP TSI)	Other commication methods and standards are allowed in order to exchange TAF messages. This benefits primarily stakeholders active in combined/intermodal transport, transport with third countries as well as small new entrants in the rail freight business which can rely on legacy or other systems without investing in heavy IT processes and solutions.	Enhance ment

CR Number	Title	Description	Application scope / Stakeholders impacted	Operational scope	Benefits envisaged	CR Type
TSI_C000 00333	Take into account open source and open data architecture requirements	The affected TSIs shall take into account open source and open data architecture requirements enabling the enhanced and realiable information gathering for the various TAF stakeholders.	Entire EU rail freight network falling under the scope of the TAF TSI Regulation.	All message exchanges	Provisions for the Common Interface development and operation will be clearer (under the precondition that these will be transferred in CCM into the TD Annex 2 Appendix E)	Enhance ment
TSI_C000 00365	Inclusion of reference to CIM/SMGS consignment note in chapter 4.2.1.1	A new interface provision between CIM and SMGS, based on a common consignment note in paper and electronic format elaborated by CIT https://www.cit-rail.org/en/freight-traffic/cim-smgs/ has been added. Currently there are unnecessay long stops at EU - Asia/CIS borders and double entries for consignment notes. When a rail transport goes to a 3rd country (e.g. Asia and CIS) then the European CIM consignment note is insufficient because of different legal and technical regimes.	Entire EU rail freight network falling under the scope of the TAF TSI Regulation with connection to rail transport from/to CIS/Asia.	Consignment order message exchange	Common e-consignment note can be used when transport goes to / comes from OSJD/CIS countries. No re-entering of data at EU border will be needed: less waiting times, no double entries for data. By applying this CR, the information exchange between European and non-European rail actors will increase and the cost and waiting times at borders will decrease.	Enhance ment
TSI_C000 00366	Implementation of the conclusions of the ERA report on Facilitation of combined transport (FCT)	This CR corresponds to an action no. 39 of the Digital rail and Green freight TSI revision package (2022 revision) with regard to the TAF TSI. It introduces modified TAF Basic Parameters and new Appendix IV) in conjunction with other CRs. The main source is a report on the facilitation of combined transport published by the Agency in September 2018. It includes the analysis of the current situation of the Combined Transport and proposes concrete solutions for improvement. The proposed solutions include a description of their interfaces and the appropriate mainstream processes to implement them in telematics.	Entire EU rail freight network falling under the scope of the TAF TSI Regulation.	All message exchanges	Better information flow in the TAF eco system for combined transport operators which was until now not the case. The quality and thresholds for arrival estimation computings will be better documented and standardized in the legal text and in the messages.	Enhance ment

CR Number	Title	Description	Application scope / Stakeholders impacted	Operational scope	Benefits envisaged	CR Type
TSI_C000 00368	Implementation reporting from 2022	This CR aims at changing the way TAF and TAP implementation reporting will gradually improve from 2022 through new provisions. Implementation rules and its follow up (including enhanced NCP task description) will be more transparent for the rail sector and for ERA. Moreover, this new way of reporting will be based on real IT systems operational figures as opposed to today's reporting on implementation activities.	Entire EU rail passenger/freight network falling under the scope of the TAF/TAP TSI Regulation.	Implementation monitoring (with link to TAP TSI)	Improved reporting channels and clearer role of NCPs' tasks for better implementation monitoring. ERA will be then be able to better provide updated overviews and advice alongside the NCP.	Enhancement
TSI_C000 00370	NCP role update - Appendix III	The aim of this CR is to clarify the role and responsibilities of the so called TAF/TAP National Contact Points which play a very important role in each country for the TAF/TAP implementation and its monitoring.	Entire EU rail passenger/freight network falling under the scope of the TAF/TAP TSI Regulation.	Implementation monitoring, NCP tasks (with link to TAP TSI)	Implementation rules and its follow up (including enhanced NCP task description) will be more transparent for the rail sector and for ERA.	Enhancement
TSI_C000 00382	Revision of TAF and TAP glossaries	Some of the TAF /AP Glossary Items are updated since they were not clear enough / outdated / missing thus slowing down implementation speed. Glossary Items with different proposed priorities have been reviewed and updated by adding precisions / new features from the revised TAF TSI. To enhance the readability of the Glossary for the sake of the TSI implementation, some items have been reviewed during the revision of the TAF TSI.	Entire EU rail passenger/freight network falling under the scope of the TAF/TAP TSI Regulation.	Glossary (with link to TAP TSI)	These revised glossary items lead to better understanding of TAF/TAP provision for the TAF/TAP implementer users community.	Enhancement

CR Number	Title	Description	Application scope / Stakeholders impacted	Operational scope	Benefits envisaged	CR Type
TSI_C000 00399	Incorporation of various political rail freight and passenger related declarations into TAF and TAP TSI revision	The TAF 2022 revision WP agreed that the political declarations of Rotterdam, later Berlin and lately Passau shall be taken into account in conjunction as a package. The Rotterdam 2016 declration was already included in TAF revision 2018-2019. The TAP revision WP agreed to put relevant elements from the Passau and IRP (International Rail Platform) declarations into the TAP 2022 revision. These declarations support the development of European rail freight transport and its digitalization. Through this approach they build a key pillar for the successful TAF implementation and operation helping the rail sector to better react to the customers' demands and to better trace/track the customers' consignments.	Entire EU rail passenger/freight network falling under the scope of the TAF/TAP TSI Regulation.	All message exchanges (with link to TAP TSI)	Consideration of political declarations aiming at opening further the rail freight market and giving more priority to high quality and customer-oriented rail services which will give value proposal to the entire society.	Enhance ment
TSI_C000 00429	Sharing of BPs related to Consignment Order, Train Composition, Wagon Movement	According to the decision during TAF Revision WP on 23/02/2021 this CR supersedes CRs 289 to 295 in the TAF Revision CCM Tool. The main aim is to give enhanced access to transport and operation information to the port authorities for Consignment Order, Train Composition, Wagon / Train Movement.	Entire EU rail freight network falling under the scope of the TAF TSI Regulation.	TAF TSI basic parameters related to Consignment Order message, Train Composition message, Wagon Movement message exchanges	Ports, terminal facilities can be included into the TAF message exchange. Until now this was not the case.	Enhance ment

CR Number	Title	Description	Application scope / Stakeholders impacted	Operational scope	Benefits envisaged	CR Type
TSI_C000 00438	Reference from chapter 4.2.1.2 'Consignment orders' to eFTI Regulation	The multi-modal common eFTI data set shall take account of the data requirements as already mandated by the TAF TSI. Additional or conflicting requirements of the multi-modal common eFTI data set would create additional costs for the railway sector as consignments, journey legs etc are quite different across the different transport sectors (air, maritime, rail and road). In order to facilitate compliance, a reference to the relevant eFTI Regulation (EU) 2020/1056 has been added whereby should competent authorities request information, these shall be made available as a subset of the Consignment Order Message.	Entire EU rail freight network falling under the scope of the TAF TSI Regulation.	Consignment order message exchange	Exchange TAF messages with other modes of transport using the provisions of the eFTI Regulation. This is until now not the case in TAF. Should competent authorities request eFTI use, the use of a subset of the consignment order message will ensure compatibility with TAF and mitigate high implementation costs for the rail sector.	Enhance ment
TSI_C000 00439	Description of the new objects identifiers in TAF and TAP TSIs	Currently the train is identified by the OTN (Operational Train Number) but this identifier is not necessarily identical over the entire journey and can change during the travel legs of the train. In addition trains and paths are identified by the same OTN although the objects train and path are different. Confusion of the objects train and path leads to misunderstanding and complex processes in planning and in operation. It is in fact difficulty to track and trace the train on the complete journey. This CR will give a generic and commonly understandable / usable identifier for the train which is - *known at both sides of borders, interchange and handover points* - *shared between RU, IM and clients.* Therefore the solution envisaged, developed by the sector during the TRID Pilot Programme 2017-2020, includes the creation of five objects (train, route, path request, path,	Entire EU rail passenger/freight network falling under the scope of the TAF/TAP TSI Regulation.	Planning and Operation processes (with link to TAP TSI)	Identification of trains can be done without ambiguity at bordes by using the identifiers thus facilitating hand over at borders and more effective communication between RUs, IMs and shippers.	Enhance ment

CR Number	Title	Description	Application scope / Stakeholders impacted	Operational scope	Benefits envisaged	CR Type
		case) with the links between them ensured by the unique and stable 'ReferenceTRID'. The OTN continues to be used as attribute of the object Path and the commercial train number is not impacted.				