EUROPEAN UNION AGENCY FOR RAILWAYS

Making the railway system
work better for society.

Light Impact Assessment

TAP TSI 2022 Revision

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Document History

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0.1	21/09/2021	First draft
0.2	24/09/2021	Final draft
0.3	27/09/2021	Review by ERA telematics team

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'): CR314, CR320, CR323, CR363, CR364, CR432. The review process is in line with Commission Delegated Decision (EU) 2017/1474.

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) 454/2011 and related following amending regulations for the Telematics Applications for Passengers ('TAP'). The CRs considered in this recommendations are enhancements which touch multiple aspects of the TAP 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 TAP but also for TAF (CR325, CR368, CR370, CR 382, CR399, CR439), have been addressed in the light impact assessment for the TAF TSI 2022 Revision.

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 TAP-TSI Regulation which does not consider the proposed enhancements 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 but no specific assumptions were used in the analysis.

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 (PAX)	☒
Ticket vendors (B2B)	☒	Ticket vendors (travel agents, tour operators) (B2C)	☒

The traditional rail and ticketing stakeholders involved in TAP TSI will be affected alongside the passengers. Suppliers are rather identified as the providers of IT products and services used in TAP TSI. Ticket vendors

include Global Distribution System (GDS) companies which are usually intermediaries between the carriers and the point of sale to the passengers. Third countries include in general stakeholders, mostly RUs, not based in the EU/EEA and associated countries. Persons with reduced mobility are passengers, but they are indicated separately from the 'passengers' category given a specific CR of interest for them.

The geographical scope is the entire EU rail passenger industry within the scope of the TAP TSI Regulation.

1.6. Subsidiarity and proportionality

This revision of the TAP TSI is in application of Commission Delegated Decision (EU) 2017/1474 which mandates action at EU level. The revision envisaged is a recurrent process for the integrity of the legal framework and for compliance with the latest EU legislation, such as Regulation (EU) 2021/782 on rail passenger rights. EU action is recommended in order to ensure uniform application of the TAP TSI across the Union.

2. Objectives

2.1. Specific objectives

The specific objective of this TAP TSI revision is to incorporate a number of enhancements in order to make telematic applications for passenger up-to-date and compliant with revised legal provisions from Regulation (EU) 2021/782 on rail passenger rights. The revision of the TAP TSI had to take into account as well the requirements from the 2022 revision package "Green freight and Digital rail"

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, the CRs only relate to enhancements and to allow the implementation of the revised EU passenger rights Regulation. No other options have been assessed given that new obligations from a basic EU legal act cannot be disregarded or put into question.

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 TAP TSI.	Very negative
	Negative	Risk of non-compliance with new EU legal requirements, difficulty in handling provision of services to passengers, bookings and effective ticket controls.	
IM	Positive	No effort required to adapt systems and messaging of TAP TSI.	Rather negative
	Negative	Risk of non-compliance with new EU legal requirements with regards to real-time data on trains running and PRM accessibility.	
SU	Positive	No effort required to adapt products for systems and messaging of TAP 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.	
Ticket vendor (B2B)	Positive	No effort required to adapt systems and messaging of TAP TSI.	Very negative
	Negative	Loss of business due to lack of reliable information made available to passengers on train run, connections, handling of complaints and PRM accessibility.	
PRM	Positive	None.	Very negative
	Negative	Lack of reliable and easily information on accessibility.	
PAX	Positive	None.	Very negative
	Negative	Lack of comprehensive, easily accessible and complete offer of rail tickets by RUs, travel agents, tour operators. No real-time data easily communicated about train run and connections. Complicated processes for submitting complaints.	
TC	Positive	No effort required to adapt systems and messaging of TAP TSI.	Rather negative
	Negative	Lack of connectivity with EU entities and passengers for ticketing and data exchange or cut off from message exchanges.	
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 TAP TSI. With that ERA is not in the position to safeguarding the real implementation and operation of the TAP TSI.	
Ticket vendor (B2C)	Positive	No effort required to adapt systems and messaging of TAP TSI.	Very negative
	Negative	Loss of business due to lack of reliable information made available to passengers on train run and connections also real-time, handling of complaints and PRM accessibility.	

Option 1			
Category of stakeholder	*Impact type*	*Description*	*Overall Impact*
RU	Positive	Implementation of new EU legal requirements, better service to passengers for PRM accessibility and travel information, more effective ticket controls avoiding frauds.	Very positive
	Negative	One-off investments required in order to incorporate the CRs in scope into the IT systems, TAP 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 and better service to PRM.	Rather positive
	Negative	One-off investments required in order to incorporate the CRs in scope into the IT systems, TAP 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 ticketing-related 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 receivers of TAP TSI messages.	
Ticket vendor (B2B)	Positive	More convincing offer of rail tickets thanks to the availability of reliable information on train run and connections also real-time, handling of complaints and PRM accessibility.	Very positive
	Negative	One-off investments required in order to incorporate the CRs in scope into the IT systems, TAP 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.	
PRM	Positive	Better and easily accessible information on accessibility made available by the provider of tickets/RU.	Very positive
	Negative	None.	
PAX	Positive	Comprehensive, easily accessible and complete offer of rail tickets by RUs, travel agents, tour operators. Real-time data easily communicated about train run and connections. Simplified processes for submitting complaints.	Very positive
	Negative	None.	
TC	Positive	Better integration with EU entities and passengers for ticketing and data exchange, better cooperation possibilities to offer through tickets with EU RUs.	Very positive
	Negative	One-off investments required in order to incorporate the CRs in scope into the IT systems, TAP processes and interfaces. Investments limited to stakeholders that wish to cooperate for passenger 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 TAP TSI. With that ERA is safeguarding the real implementation and operation of the TAP TSI.	Very positive
	Negative	None.	
Ticket vendor (B2C)	Positive	More convincing offer of rail tickets thanks to the availability of reliable information on train run and connections also real-time, handling of complaints and PRM accessibility.	Very positive
	Negative	One-off investments required in order to incorporate the CRs in scope into the IT systems, TAP 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. | |

Cost assessment

At the current stage, a cost assessment for the complete set of CRs is not possible due to lack of data. However, a transition scheme (company specific-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. For companies that have not submitted a company specific master plan, the deadline 7 June 2023 applies. For CR432 however, the revised passenger rights Regulation mandates specific deadlines for implementation.

For new TAP implementation projects, the introduced changes are not expected to cause significant costs for the implementers. In the case of CR432, should certain costs arise for RUs, the revised passenger rights Regulation allows RUs to charge a reasonable and proportionate financial compensation.

5. Monitoring and evaluation

5.1. Monitoring indicators

The uptake and level of compliance of TAP TSI is regularly monitored by the RU/IM Telematics Joint Sector Group (JSG) and as well as by the Agency in its TAP TSI Implementation Cooperation Group (ICG). The results are published in the annual report about the implementation progress of the TAP TSI on the website of the Agency. Results of the report are included as well in the biennial Report on Safety and Interoperability. 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 TAP-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
TSI_C000 00314	Incorporation of the requirements for accessibility for PRM in TAP TSI	Triggered by Commission Regulation (EU) 2019/772, a reference to a specific NeTEx profile for the exchange of accessibility data is added to the basic parameter 4.2.6.2 in order to support the inclusion of information relevant for PRM accessibility of train stations.	Entire EU passenger rail network falling under the scope of the TAP TSI	All message exchanges for retail communication	The information for PRM can be provided in a standardised manner to allow a consistent information to the passengers. This exchange of accessbility data is made between the station manager and the railway undertakings and ticket vendors. RU`s and TV`s have to inform the passengers by using these data.
TSI_C000 00320	Take into account the industry-driven Full Service Model initiative - B2B platform for ticketing	A reference to new technical document B.13 has been added to basic parameter 4.2.9.1 and 4.2.9.2 in order to support additional reservation interfaces. The existing technical documents for bookings will continue to remain in the TAP TSI.	Entire EU passenger rail network falling under the scope of the TAP TSI Large impact	All message exchanges for retail communication	A booking interface – previously called Full Service Model initiative, now renamed to Online-sales and distribution model (OSDM) is a reservation interface intended to allow the booking of any rail ticket in EU. The interface has to be implemented by the railway undertakings and the ticket vendors. OSDM will be one of the options additional to the existing booking interfaces at TAP TSI to book rail tickets.
TSI_C000 00323	Interface needed to submit passenger complaints	A reference to new technical document B.13 has been added to basic parameter 4.2.12.2 in order to support the submission of complaints according to the rail passenger rights Regulation (e.g. delays, reimbursements).	Entire EU passenger rail network falling under the scope of the TAP TSI	All message exchanges for retail communication	An interface, allowing the electronic submission of complaints according to the rail passenger rigths regulation, will facilitate the processing of passenger complaints. The interface has to be implemented by the railway undertakings and the ticket vendors.
TSI_C000 00363	Closing of the open point	A new basic parameter 4.2.12.1 is added with reference to technical document B14 in order to close the open point on	Entire EU passenger	All message exchanges	Interoperable check of rail tickets, both paper and electronic ones. This new basic

CR Number	Title	Description	Application scope / Stakeholders impacted	Operational scope	Benefits envisaged
	"Standard for European exchange of ticket control and ticket status modification data"	"Standard for European exchange of ticket control and ticket status modification data" to facilitate the setup of the electronic ticketing. This ensures, that the data exchange between the ticket and the issuer of the ticket can be established, for ticket checks, sales and after sales processes.	rail network falling under the scope of the TAP TSI Large impact	for retail communication	parameters allows to exchange data between RUs, TVs and store information in databases once tickets have been checked/stamped. This avoids fraudulent second use of tickets, undue reimbursement of travels actually incurred. The implementation has to be done by the railway undertakings and the ticket vendors.
TSI_C000 00364	Review of the TAP TSI application guides	The application guides of the TAP TSI is reviewed to take into account the modified TSI after incorporation of the CRs in scope.	Entire EU passenger rail network falling under the scope of the TAP TSI	N/A	The application guides are up-to-date with latest changes in the TSI at the benefit of users.
TSI_C000 00432[1]	Provision of real-time data according to the revised rail passenger rights regulation	The revised legal provision from Regulation (EU) 2021/782 on rail passenger rights mandates in article 10 that ticket vendors and travel agents have access to real-time data and traffic and travel information. In order to implement the new legal framework, new recipients of TAP TSI messages related to real-time data on	Entire EU passenger rail network falling under the scope of the TAP TSI	Real-time messages on trains running/communication.	Better information for the customers about real-time events during the trip, such as disruptions, delays, cancellations, connections, etc by enlarging the scope of information provision of operational real-time data to ticket vendors and tour operators. They can have the access to the same data as the railway undertakings and

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[1] In May 2021 CER requested a Full Impact Assessment for this CR but the Agency decided instead to perform this Light Impact Assessment given that this CR is just an implementation of a new mandatory legal requirement resulting from the new rail passenger rights Regulation (EU) 2021/782. No alternative options are to be assessed or quantified as new the TSI has to simply make implementation of the new Regulation possible.
The new Regulation provides that real-time data provided by IMs/station managers are exchanged, in case on the basis of a contract, with all interested ticket vendors and travel agents regardless if they signed ticket sales agreements with RUs. Should the data exchange from RUs/IMs incurr certain implementation costs, RUs/IMs are allowed to charge recipients a reasonable fee. CER/EIM/UNIFE/EUTT do not support this CR and the sector proposal will be included into the recommendation alongside the ERA proposal.

CR Number	Title	Description	Application scope / Stakeholders impacted	Operational scope	Benefits envisaged
		train running are added, such as ticket vendors and travel agents/tour operators.			infrastructure managers. They can then better inform passengers who purchased the tickets through them and provided personal contact details upon purchase of the ticket. No new standards or technical solutions are to be developed as the TAP TSI already allows the appropriate technical means to ensure data exchange.