EUROPEAN UNION AGENCY FOR RAILWAYS

Making the railway system
work better for society.

FINAL REPORT 006REC1128 TO THE RECOMMENDATION

OF

THE EUROPEAN UNION AGENCY FOR RAILWAYS

ON

Revision 2020-22 of the Commission Implementing Regulation (EU) 2021/541 of 26 March 2021 amending Regulation (EU) No 1305/2014 concerning the technical specification for interoperability relating to the telematics applications for freight

Disclaimer:

The present document is a non-legally binding report of the European Union Agency for Railways. It does not represent the view of other EU institutions and bodies, and is without prejudice to the decision-making processes foreseen by the applicable EU legislation. Furthermore, a binding interpretation of EU law is the sole competence of the Court of Justice of the European Union.

Contents

1. Executive summary

This is the final report of the European Union Agency for Railways (the Agency) accompanying the recommendation 006REC1128 on the revision of the Technical Specification for Interoperability "Telematics applications for freight" (the TAF TSI)[1]. This report records the achieved results of the relevant working party (WP).

In 2010, the European Railway Agency received a mandate to review the TSI 'telematics applications for freight' subsystem in accordance with Article 6(1) of Directive 2008/57/EC. The mandate was given by the decision (EC) C(2010)2576 final.

In 2016, the European Union adopted Directive (EU) 2016/797[2]. Pursuant to its Article 5 (2), "*the Commission shall request that the Agency draft TSIs and amendments thereto and make the relevant recommendations to the Commission.*".

With its letter of 24th of January 2020, the European Commission requested the Agency for "recommendations to the Commission pursuant to Article 5 paragraph 2 of the interoperability Directive (EU) 2016/797 – Digital rail and Green freight TSI revision package (2022 revision)". The request contains a list of actions concerning the revision of (among the others) the TAF TSI.

The working party started the discussions on the revision of the TAF TSI with a kick-off meeting on 22nd of September 2020. The main topics for the discussion were:

- Merge (more accurately restructuration) of the TAF and TAP TSIs,
- Prioritisation of the WP deliverables,
- Glossary,
- Inclusion of the CIM/SMGS consignment note;

The working party has finished its discussions on 26th of November 2021 and provided a recommendation about the revision of the TAF TSI. The recommendation is hereby submitted to the European Commission as well as published in parallel on the website of the Agency.

The work of the working party included processing of the outcome of the public consultation open during the period between 1st of August 2021 and 31st of October 2021.

While delivering its recommendation in timely manner, the working party also pointed out areas where the work shall continue:

- Standardised communication methods
- Short term temporary infrastructure restriction
- Cybersecurity
- CIM/SMGS consignment note
- GNSS tracking of trains / wagons / containers

Those subjects were taken on board by the Agency and added to the new container Change Request no. 440, aggregating all not solved topics for the next TAF TSI revision.

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[1] 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 and repealing the Regulation (EC) No 62/2006 Text with EEA relevance as amended by Commission Implementing Regulations (EU) 2018/278, 2019/778 and 2021/541

[2] 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 Union as amended

2. Introduction

This report contains the results of the work which lasted over a year on the revision of the Commission Implementing Regulation (EU) 2021/541 of 26 March 2021 amending Regulation (EU) No 1305/2014 concerning the technical specification for interoperability relating to the telematics applications for freight. It provides background information about the revised draft TSI, which is attached as Annex to this report.

The working party had 8 meetings (in addition to the kick off meeting) and agreed on a final proposal for recommendation of the revised TAF TSI. This number of meetings includes two additional meetings: 1st joint meeting with the TAP TSI Revision WP in November 2020 (organised ad-hoc as a result of ongoing discussions), in order to ensure timely closure of the working party task and a 2nd one also additional joint meeting, one year later concluded necessary to process results of the consultations.

Figure 1 TAF TSI revision timeline

The total number of Change Requests logged in the Change Control Management tool and processed by the Working Party was 18.

Figure 2 TAF TSI Revision Change Requests statistics

18 TAF TSI Revision Change Requests

Postponed, 1

Superseded, 5

Adopted, 12
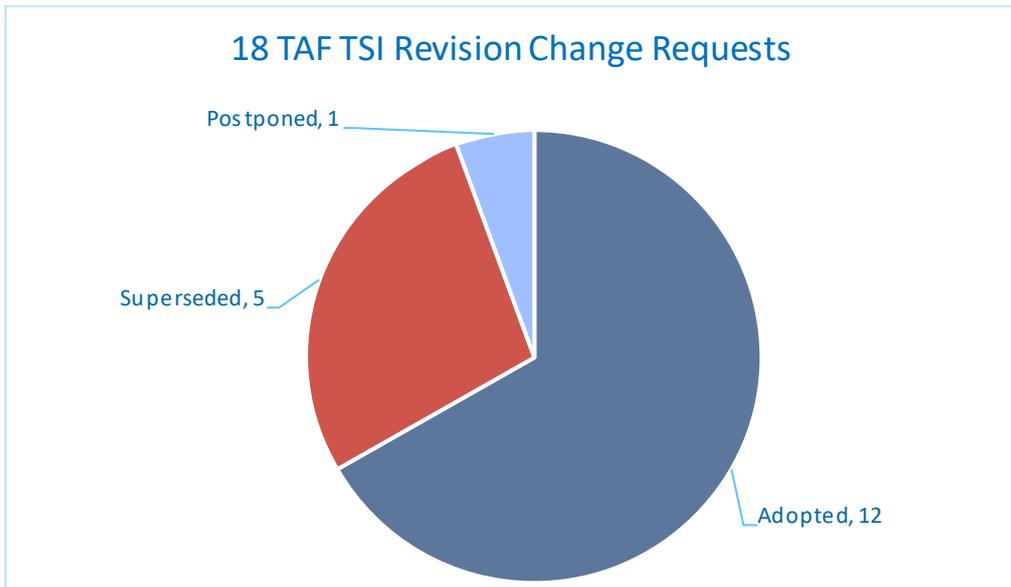
2.1. Legal basis

The legal basis for the revision of the TAF TSI is based on the following documents:

- 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
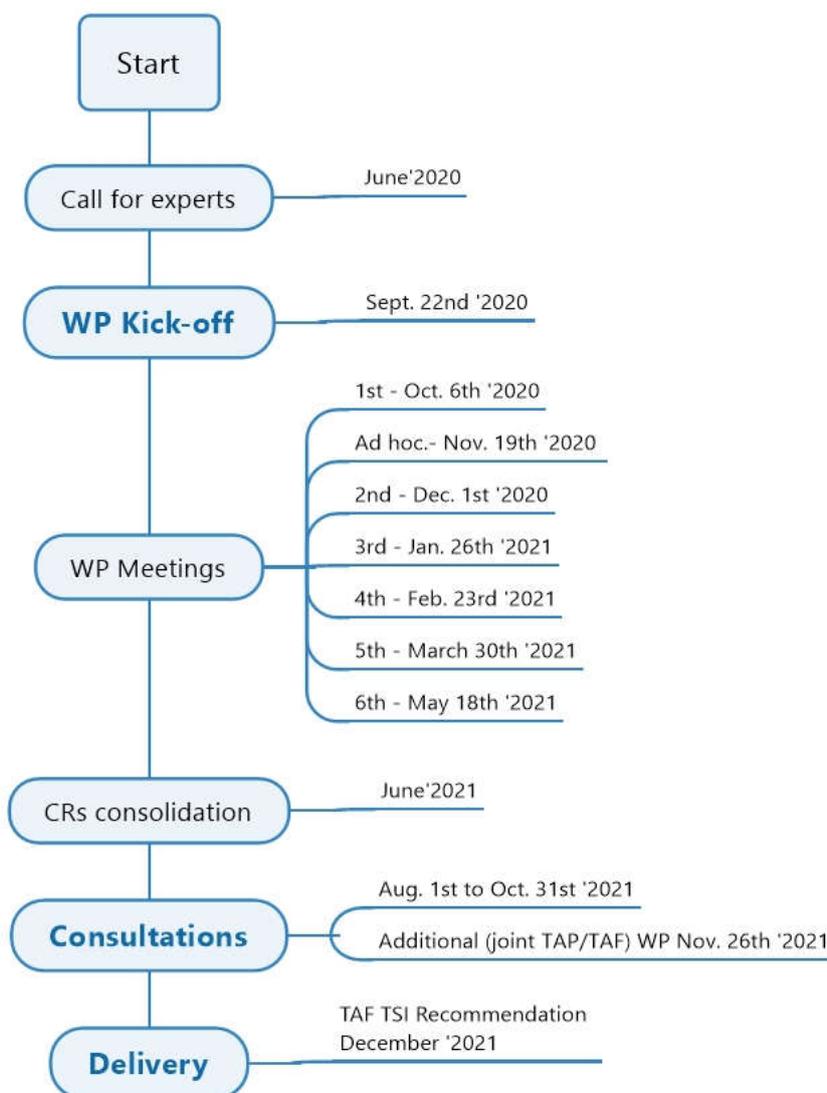- Directive (EU) 2016/797 of the European Parliament and of the Council of 11 May 2016 on the interoperability of the rail system within the European Union as amended
- Commission Regulation (EU) No 1305/2014 of 11 December 2014 on the technical specification for interoperability relating to the subsystem 'telematics applications for freight services' of the rail system in the European Union. Amended by Commission Implementing Regulations (EU) 2018/278, 2019/778 and 2021/541.
- 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, Article 13
- The European Commission's letter to the Agency of 24th of January 2020 with a "Request for recommendations to the Commission pursuant to Article 5 paragraph 2 of the interoperability Directive (EU) 2016/797 – Digital rail and Green freight TSI revision package (2022 revision)"

The delegated decision (EU) 2017/1474 defined in detail the closure of the following topics during the revision of the TAF TSI:

- Regulation (EU) No 1305/2014 ('TAF TSI') shall be revised in order to simplify the procedure for the update of its technical baseline in accordance with the TAF TSI Change Control Management process referred to in Section 7.2 of the Annex to that Regulation.
- The content and structure of messages defined in the TAF TSI in relation to exchange of wagons and train composition shall be revised and, where appropriate, simplified.
- The content and structure of messages defined in the TAF TSI in relation to combined or multi-modal transport shall be revised and, where they are not available, they shall be developed in order to facilitate logistics and operations.
- Where appropriate, the TAF TSI shall include data which shall be exchanged with safety related applications.
- The links between the TAF TSI databases and the tools used to improve the performance of rail freight shall be reviewed.
- The TAF TSI shall allow the Agency to assess the compliance of the IT tools deployed by the European rail sector with the TSI requirements.
- The TAF TSI shall not impose requirements on railway undertakings, which could constitute a barrier for the digitalisation of railways.

Those objectives were already addressed by the previous revision of the TAF TSI at ERA and incorporated in the Agency Recommendation 006REC1128 delivered on the 9th of September 2020. The TAF TSI published on 26th of March 2021 in the EU Official Journal is based on the content of this recommendation. Current TAF TSI revision project initiated right away in September 2020 inherits only few of those points which were intended for continuation, but most of all it addresses the new set of objectives determined by the "Digital rail and Green freight TSI revision package (2022 revision)". The package given by the European Commission includes among the others the actions on the Agency and the TAF TSI Revision Working Party:

- The content and structure of messages defined in the TAF TSI in relation to combined or multi-modal transport shall be revised and, where they are not available, they shall be developed in order to facilitate logistics and operations.
- Where appropriate, the TAF TSI shall include data which shall be exchanged with safety related applications.

- The links between the TAF TSI databases and the tools used to improve the performance of rail freight shall be reviewed.
- The TAF TSI shall not impose requirements on railway undertakings, which could constitute a barrier for the digitalization of railways.

2.2.   Purpose and Scope

The TAF TSI was drafted between 2010 and 2013. It was adopted as Commission Regulation (EU) 1305/2014 on 12 December 2014. Furthermore due to the developments in the rail sector, especially concerning the railway freight business and their monitored implementation, the content of some parts of the Regulation was specified with the Agency Recommendation 006REC1128 delivered on 9th September 2020. The current revision is triggered by the "Digital rail and Green freight TSI revision package" (2022 revision) and aims at the following EU goals:

- European Green Deal,
- economy that works for people,
- Europe fit for the digital age and
- stronger Europe in the world.

EC proposed two pillars to tackle the above goals are:

1. Digital rail

    a. Enhance information flows for freight and passengers

    b. multimodal exchange of information

    c. real time data and advanced communication

2. Green freight

    a. more efficient freight (addressing points from ERA CT report 2018 and Issues Log Book)

    b. simplify and improve requirements on rail vehicles with a particular focus on freight

    c. Support the uptake of environmental friendly technologies relevant for freight

For detailed list of changes see chapter 5.

2.3.   Objectives

The main objectives of the project is the revision of the TAF TSI to incorporate changes – based on above topics – in the legal text.

3. Workgroups

3.1. Setup of the project

The project was structured in several phases. The first phase was the discussion between the European Commission and the Agency in autumn 2019 about the TSI revision package 2022. At this stage the key principles of the revision of all TSIs were defined. No further specific obligations were created for the TAF TSI revision.

The discussion between EC and the Agency resulted in an official letter [3] from EC on 24th of January 2020. The letter contains a list of actions concerning the TSI revision, including those applicable for the TAF TSI.

Based on the list of actions of this letter the Agency's telematics team drafted the Terms of reference (ToR) and submitted the document on 20th of April 2020 to the management for internal approval. The ToR for the TAF TSI revision were changed in June 2020 into a service plan to be approved by the service owner 'service standards. It was decided to reuse the already existing project reference 006REC1128. For a better identification of the differences between the subsequent recommendations, the version number V2.0 has been introduced. The Service plan was approved by the head of sector on 11th of June 2020. Based on this decision the "Call for experts for the working party "Revision of the TAF TSI" has been launched

The content of the Terms of Reference and Project Plan can be summarised along the following key principles:

Background	TAF revision actions determinants are the following:
	- Digital rail and Green freight TSI revision package (2022 revision) (.xlsx file "Digital rail and Green freight TSI revision package2022-Baseline_Final.xlsx").
	- Elaborated in the frame of the previous TAF revision project 006REC1128, available in the Agency Extranet.
	- Elaborated in the frame of the previous TAF revision project 006REC1128 and based on the "Study on the opportunities to evolve TAF TSI to exploit synergies with e-enhanced multimodal logistics" from Circle – HaCon for DG MOVE. Report available in the Agency Extranet.
Purpose	To address i) the Digital rail and Green freight TSI revision package (2022 revision) from DG MOVE and ii) the topics Elaborated in the frame of the previous TAF revision project 006REC1128.
Project objective	"facilitate better access to tracking data for customers, combined or multi-modal transport." (SPD 2020, Activity 1, Objective 2.3)
Interfaces and dependencies with other projects	There is an interface with: - TAF revision 2018/20 - TAP revision 2020/21 - TAP/TAF CCM - TWG Cyber - TWG Combined Transport - TWG Freight - DLTF - CEF financed ELETA 2 project - JSG pilot project - S2R

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[3] "Request for recommendations to the Commission pursuant to Article 5 paragraph 2 of the interoperability Directive (EU) 2016/797 – Digital rail and Green freight TSI revision package (2022 revision)"

	- ITSS Above Study of Circle - Hacon
Internal Decision Making	• The internal decisions will be submitted to the project owner for validation.
External Decision Making	The ERA working group "TAF Implementation Cooperation 2020 - 2021" will be consulted in the decision making process.

3.2.   Setup of the working party

A working party for the revision of the TAF TSI has been established by the Agency.

For the appointment of the experts for the working party, the Agency has prepared a call for experts and submitted to the organisations competent in the field concerned and the National Safety Authorities (NSAs) of the European Economic Area and Switzerland in June 2020. The Agency has received from them until August 2020 the contact details of the appointed speakers and deputy speakers for the working party.

The working party has been composed of the following organisations and speakers:

Table 1: appointed Speakers Organisations for the working party

Organisation's Name
Community of European Railway and Infrastructure Companies (CER)
European Commission (EC)
European Rail Infrastructure Managers (EIM)
European Rail Supply Industry Association (UNIFE)
European Sea Ports Organisation (ESPO)
Hitrail
Intergovernmental Organisation for International Carriage by Rail (OTIF)
International Union for Road-Rail Combined Transport (UIRR)
International Union of Wagon Keepers (UIP)
NSA Austria
NSA Czech Republic
NSA Finland
NSA Germany
NSA Poland
NSA Slovakia
NSA Slovenia
NSA Sweden
NSA Switzerland
Rail Net Europe (RNE)
RailData

| Shift2Rail Joint Undertaking (S2R) |
| The International Association of Public Transport (UITP) |

The composition of the working party changed during the project as described in the following table.

Stakeholder / NSA	Originally appointed Speaker	Replaced by
EC	Carlo De Grandis	Wawrzyniec Perschke
The International Association of Public Transport (UITP)		Fares Goucha

4. Working methods

The Agency is chairing, managing and coordinating the WP for the revision of the TAF TSI. The Agency applies relevant internal procedures and guidelines (e.g. procedure on issuing a recommendation or guide for drafting TSIs).

To facilitate exchange of documents, an extranet workspace of the project was established at: https://extranet.era.europa.eu/TAF_REV[4]. This workspace is accessible for the members of the working party, their deputies and all members of the Agency involved in this discussion.

The representative organisations were required to ensure continuity of their representative members for the duration of the WP. Whenever possible, the representative members were required to express their organisation's position in advance of the WP meetings through written methods, such as commenting on the draft documents or the draft minutes of the WP meetings.

In order to achieve a common and agreed position of their organisation, the members should have shared pre- and post- meeting information within their organisations. The organisations were expected to facilitate the internal exchange of opinions and the elaboration of their position, for instance through 'mirror groups'.

The text of the recommendation – based on the current state of the discussion – was always available to the members of the working party through the TAF TSI revision working party extranet.

4.1. Handling Change Requests

Furthermore the Agency has set-up a management tool for the management of the changes of the TAF TSI legal text and the supporting technical documents. For this purpose the Agency has modified the tool for the change control management of the TAF/TAP TSI technical documents and made this tool available on the Agency's-website https://ccm.era.europa.eu/cqweb/ in the database TSI_C. In this tool all topics concerning the changes, requested for the TAF TSI revision were logged and published to the working party. All proposed changes were discussed in the working party and the status of the change requests have be changed according to the decisions in the working party.

Dynamic growth in 2020/21 in the critical 4th Railway Package related actions such as Vehicle Authorisation, Safety Certification and ERTMS Trackside Approval result in substantial move of Agency resources assigned to the TAF. Nonetheless, the Agency kept strong commitment to fulfil its TAF TSI revision mandate. As a necessary mitigation measure the TAF TSI revision project established the prioritisation of changes in order to:

- explicitly indicate and value the rail sector needs,

- secure high value deliverables of adequate quality,

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[4] https://eraeuropaeu.sharepoint.com/sites/TAF_REV from 2021/12/17

- support drafting the mid-term work plan,

The project was also open during its duration to any adaptations of the input TSI 2022 package should they arrive in order to further secure both qualitative as well as quantitative value of its deliverables.

4.2.   Meetings of the working party

The working party had the following meetings:

Meeting	Date
TAF TSI Revision working party Kick-off	22nd of September 2020
1st meeting TAF TSI Revision working party	6th of October 2020
Ad-hoc joint meeting TAF/TAP TSI Revision working parties	19th of November 2020
2nd meeting TAF TSI Revision working party	1st of December 2020
3rd meeting TAF TSI Revision working party	26th of January 2021
4th meeting TAF TSI Revision working party	23rd of February 2021
5th meeting TAF TSI Revision working party	30th of March 2021
6th meeting TAF TSI Revision working party	18th of May 2021
Joint additional TAP/TAF Revision working party for the treatment of Social Consultation's results	26th of November 2021

The participation in the meetings of the TAF TSI revision working party:

Table 2: Working party meetings participation

Stakeholder / NSA	Kick off	1st	Ad-hoc	2nd	3rd	4th	5th	6th	Additional
NSA Austria	Y	Y	Y		Y	Y	Y	Y	
NSA Czech Republic	Y				Y		Y	Y	Y
NSA Finland	Y	Y	Y	Y	Y	Y	Y	Y	Y
NSA Germany		Y	Y	Y	Y	Y	Y		Y
NSA Poland	Y	Y	Y	Y		Y			
NSA Slovakia									
NSA Slovenia		Y			Y				
NSA Sweden	Y	Y							
NSA Switzerland		Y	Y		Y	Y	Y	Y	
CER	Y	Y	Y	Y	Y	Y	Y	Y	Y
EC	Y	Y			Y	Y			Y
EIM	Y	Y	Y	Y	Y	Y	Y	Y	Y
ESPO	Y			Y	Y	Y			
Hitrail	Y		Y	Y	Y	Y	Y	Y	
OTIF	Y	Y	Y	Y	Y	Y	Y	Y	
RailData	Y	Y		Y	Y	Y	Y	Y	
RNE	Y	Y	Y	Y	Y	Y	Y	Y	Y
S2R	Y	Y	Y						
UIP	Y	Y		Y	Y	Y	Y	Y	
UIRR	Y	Y	Y	Y			Y	Y	
UITP									
UNIFE	Y	Y	Y	Y	Y	Y	Y	Y	Y

The working party has been very active and proposing as well written proposals concerning the topics of the revision of the TAF TSI.

5.   Main aspects covered

Based on the project plan for the revision of the TAF TSI, the working party focused on the following points:

1. Merge (more accurately restructuration) of the TAF and TAP TSIs
2. Prioritisation of the WP deliveries,
3. Glossary
4. Inclusion of the CIM/SMGS consignment note

5.1.   Input documents

For the revision of the TAF TSI the following input documents were taken into account:

- Commission regulation (EU) No 1305/2014
- Regulation (EC) No (EU) 2016/796
- Commission Delegated DecisionCOMMISSION DELEGATED DECISION (EU) 2017/1474
- Digital rail and Green freight TSI revision package (2022 revision)

5.2.   Update of the Sections of the Annex of the TSI

The following changes of the legal text, concerning the revision of the basic parameters linked to the RU/IM-communication in TAP TSI introduction articles, have been logged in the change control tool for the TAF TSI revision and were adopted by the Working Party:

Change#	Headline
TSI_C00000370	NCP role update - Appendix III

In addition the part has been impacted by social consultations.

5.2.1.   TSI_C00000370 - NCP role update - Appendix III

At its meeting on 29th of May 2020 the previous TAF TSI Revision WP concluded as follows: The Agency to create the new Change Request (CR) for the next TAF TSI revision on adding the phrase (in the TSI Appendix III): ""Put the railways players in contact with the system authority and with European groups developing TAF TSI in order to solve those concerns and views". The CR updates accordingly also the corresponding "Article 5 Implementation".

5.2.2.   Social consultations

The key question addressed in the social consultation was how the National allocation entities are appointed, and which tasks should be assigned to them. This is especially important, when the National Allocation Entity (NAE) has to allocate location codes for Railway Undertakings/Infrastructure Managers (RU/IM) communication and codes for the retail locations in the TAP TSI. ERA explained that there should be "a" National allocation entity per member state, distributing – if needed – the allocation tasks to specific entities for RU/IM and or retail code allocation. This would facilitate the unique code allocation for RU/IM and retail codes.

CER and several NCPs argued that the code allocations for RU/IM and retail location codes are too different and should be separated. Additionally, needed retail location codes for bus stations or ferries have no link to locations on the railway network and cannot be allocated with their primary location code (PLC).

The following was proposed by the Working Party: "Each Member State shall ensure that **one or more** National Allocation Entit(ies) are appointed to be responsible for allocating unique location codes for each reference database and notifying all involved reference databases (e.g. Central Reference Database (CRD),

Retail Reference Database (RRD)) of the update." vs. "Each Member State shall ensure that **a** National Allocation Entity is appointed to be responsible for allocating unique location codes for each reference database and notifying all involved reference databases (e.g. Central Reference Database (CRD), Retail Reference Database (RRD)) of the update."

Current text ("a National Allocation Entity is appointed…") is not perceived by the WP as preventing the MS decision to appoint appropriate body or bodies according to specific need.

5.3. Update of the Annex I, chapter 2 (subsystem definition and scope)

The following changes of the legal text, concerning the revision of the basic parameters concerning the RU/IM-communication in TAP TSI chapter 2, have been logged in the change control tool for the TAF TSI revision and adopted by the Working Party:

Table 3: changes concerning the revision of TAP TSI chapter 2 (subsystem definition and scope)

Change#	Headline
TSI_C00000325	Evaluation of merging TAF and TAP TSIs

5.3.1. TSI_C00000325 - Evaluation of merging TAF and TAP.

The TAF and TAP TSIs must enable in the nearer future to be merged (if possible) to ensure consistency in the RU/IM annexes. Impacted chapters resulting from the TAP and TAF TSI merge evaluations were:

- 2.1 Function within the scope of the TSI

- 2.2 Functions outside the scope of the TSI

- 2.3 Overview of the subsystem description

5.4. Update of the Annex I, chapter 3

5.4.1. Social consultations

Reference (e.g. Art, §)	Reviewer	Reviewer's Comments, Questions, Proposals	Proposal for the correction or justification for the rejection
3.3	JSG	*The reference to chapter 4.2.9, 4.2.10 and 4.2.11 should be incremented to 4.2.10, 4.2.11 and 4.2.12.*	

5.5. Update of the Annex I, chapter 4 (RU/IM basic parameters)

The following changes of the legal text, concerning the revision of the basic parameters concerning the RU/IM-communication in chapter 4 of the Annex of the TAF TSI, have been logged in the change control tool for the TAF TSI revision and adopted by the Working Party:

Table 4: changes concerning the revision of TAP TSI chapter 4 (RU/IM basic parameters)

Change#	Headline
TSI_C00000325	Evaluation of merging TAF and TAP TSIs
TSI_C00000439	Description of the new objects identifiers in TAF and TAP TSIs
TSI_C00000429	Sharing of BPs related to Consignment Order, Train Composition, Wagon Movement
TSI_C00000365	Inclusion of reference to CIM / SMGS consignment note in chapter 4.2.1.1

Change#	Headline
TSI_C00000438	Reference from chapter 4.2.1.2 'Consignment orders' to eFTI Regulation
TSI_C00000317	Link real multimodal time data and train data

In addition the part has been impacted by social consultations.

5.5.1.   TSI_C00000325 - Evaluation of merging TAF and TAP.

Following works of the previous TAF & TAP Revision projects on harmonization of the common RU/IM functions, current TAF /TAP revision projects picked up the task to restructure the TSI's in order to remove redundancies and facilitate the change control, simplify interpretations and ease implementation and operational efforts. Generally speaking the following was agreed by the Working Party:

1. split of the Telematics Subsystem between two TSIs: first typically B2B regulation focused on planning and operation, second dealing with the retail requirements & passenger rights fulfillments.
2. agreed split determines also the split of the Passenger part of the Telematics subsystem between those two TSIs since most but not all common operational aspects would be then covered in a single TSI. Select operational aspects vital from the point of view of passenger rights regulation would remain in the TAP.
3. at the end impact on the TAF side in terms of technical scope is negligible since redundancies removed were on the TAP side.

Further details on the CR are available in the corresponding report on TAP TSI Revision[5] Ch. 5.2.4. It was approved anyway in the TAF TSI WP meeting on 18th May 2021 that for each basic parameter, if there are specific requirements of the TAP TSI to be taken into account (e.g. specific actors, specific data elements to be shared),

a) Each TAP TSI basic parameter with specific requirements of the TAP TSI has been kept in the TSI or

b) Any other basic parameter has been replaced by a simple reference to the TAF TSI

For the case 2a) the following basic parameters have been kept in the TAP TSI, by using phrases as close as possible to the corresponding ones in the TAF TSI, but respecting the specific requirements of the TAP TSI:

- 4.2.17. Train preparation

- 4.2.18. Train running information and Train running forecast

- 4.2.19. Service disruption information

- 4.2.21. Various reference files and databases

- 4.2.22. Electronic transmission of documents

- 4.2.23.5. Central repository

For the case 2b) the content of the following basic parameters has been replaced by a simple reference to the TAF TSI:

- 4.2.16. Path Request and path allocation

- 4.2.23.1. General architecture

- 4.2.23.2. Network and Security

- 4.2.23.3. Protocols

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[5] FINAL REPORT ERA-REC-122 TO THE RECOMMENDATION OF THE EUROPEAN UNION AGENCY FOR RAILWAYS on Revision 2020-22 of the regulation (EU) 454/2011 concerning the technical specification for interoperability relating to the telematics applications for passengers (ERA-REC-122 V 2.0.)

- 4.2.23.4. Encryption

- 4.2.23.6. Common interface for RU/IM communication

- 4.4. Operating rules

- 4.5. Maintenance rules

- 4.6 Professional qualifications

- 4.7 Health and safety conditions

- 5. INTEROPERABILITY CONSTITUENTS.

5.5.2.   TSI_C00000439 - Description of the new object identifiers in TAF and TAP TSIs.

The TAF TSI has introduced new object identifiers to identify the train unambiguously from the planning until operation. These identifiers allow as well the identification of the train if operating cross-border, including the changes on the timetable during the usual yearly timetable. The path planning is affected as well.

For these identifiers a new basic parameter has been introduced in the TAP TSI: 4.2.15. Objects Identifiers

5.5.3.   TSI_C00000429 - Sharing of BPs related to Consignment Order, Train Composition, Wagon Movement

This is a Change Request consolidating superseded Change Requests submitted by ESPO (European Sea Ports Organisation).

Public railway networks within ports often exceeds the idea of a single shunting yard with connected private sidings. Port rail infrastructure consists typically of i) public rail infrastructure, serving the entire port entity (port terminal) and ii) private sidings, serving i.e. as loading tracks for seaport terminals (intermodal terminals or bulk terminals).

Especially in larger ports, rail operations frequently consist not only of shunting, but also of mainline-like, path-based operations. Mainline trains frequently contain wagon groups for multiple loading points/container terminals, thus requiring shunting (Hamburg example: 2-3 groups within one train).

In order to maximize efficient usage of the track infrastructure, the port terminal manager often centrally assigns track capacity for the different RU purposes. As a lot of shunting can take place the port trackwork, track usage tracking is frequently based at wagon level.

The extend of overall rail operations, especially in larger ports, frequently mandates usage of port-wide IT systems ("Rail Port Community System") for rail infrastructure usage planning & management, communication and data exchange between roles. This type of system is typically centrally managed by the port management entity (port terminal actor).

The user base comprises many, if not all rail transport stakeholders within the port area, including shunting RU or loading points. There is huge benefit for the local (port) stakeholders to use the community system to share information in real time with all involved parties and to maintain only data channel.

In the TAF TSI recommendation as agreed by the RISC end 2020, the Port Authority, as IM, is already involved in the data exchange related to path details, Train Ready, Train Running Information and Forecast, Train Service Disruption, or WIMO (as optional basic parameter).

The access to other relevant information is also provided via the paragraph on 'Rotterdam declaration' in introduction of chapter 4.2.

Three remaining types of information are still needed by the Port Authority (as terminal manager or service facility operator): consignment order, train composition and wagon movement.

The aim of this CR is to update the TAF TSI in order to provide the information to the Port Authority.

It is approved by the Telematics JSG and ESPO.

According to the decision during TAF TSI Revision WP on 23rd of February 2021 this CR supersedes the following Change Requests in the TAF Revision CCM Tool:

- TSI_C00000289 - Chapter 4.2 update on data exchange
- TSI_C00000290 - Chapter 4.2.1.2 update on Consignment order data exchange
- TSI_C00000291 - Chapter 4.2.3.3 update on Train Ready message exchange
- TSI_C00000292 - Chapter 4.2.4.2 update on Train Running Forecast message exchang
- TSI_C00000293 - Chapter 4.2.5.2 update on Train Running Interruption message exchange
- TSI_C00000294 - Chapters 4.2.7.2; 4.2.7.3; 4.2.7.4; 4.2.7.5; 4.2.7.6; 4.2.7.7; 4.2.7.8 - update on Wagon Movement messages exchange
- TSI_C00000295 - Chapter 4.2.10.2 update on (optional) Wagon and Intermodal unit Operational Database - list of Authorised entities

5.5.4. TSI_C00000365 - Inclusion of reference to CIM / SMGS consignment note in section 4.2.1.1

When a rail transport goes to a 3rd country (Asia and CIS) then the European CIM consignment note is insufficient because of different legal and technical regimes.

CIT has elaborated common CIM/SMGS consignment note on paper and in electronic format: https://www.cit-rail.org/en/freight-traffic/cim-smgs/

The CR, originally submitted by the Agency proposes inclusion of reference to CIM / SMGS consignment note in chapter 4.3.1.1.

5.5.5. TSI_C00000438 - 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.

Title of chapter 4.2.1.2 is changed to 'Consignment Order message' and wording is improved.

The following sentence is added referring to the eFTI Regulation 2020/1056:

'Upon request of competent authorities, regulatory information for the purpose of Regulation (EU) 2020/1056 shall be made available as a subset of the Consignment Order Message.'

The eFTI Regulation applies to delegated or implementing acts of the Interoperability Directive (EU) 2016/797 for regulatory information. This requirement should be fulfilled by data of the TAF TSI Consignment Order Message.

5.5.6. TSI_C00000317 - Link real multimodal time data and train data

The TAF TSI must enable 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.

The CR introduces the following modifications:

- Chapter 4.2.4.2 – Train Running Forecast message

The sentence 'The train running forecast message must give the forecast time for agreed forecast point.' Is completed by :

'The train running forecast message must give the forecast time for agreed forecast point <u>and it should be possible for the recipient of the information to assess its accuracy and reliability, for freight trains, according, to the methodology as set out in Appendix IV</u>.'

- Chapter 4.2.6.2 – ETI/ETA calculation

The following sentence is added :

'<u>For any ETA, ETI, or TETA which is computed and shared with stakeholders, it should be possible for the recipient of the information to assess the accuracy and the reliability of the provided estimates, according to the methodology as set out in Appendix IV</u>.'

- New *Appendix IV Accuracy of train running forecast and wagon ETI/ETA information* is added in TAF TSI.

5.5.7. Social consultations

Reference (e.g. Art, §)	Reviewer	Reviewer's Comments, Questions, Proposals	Proposal for the correction or justification for the rejection
4.2.2.2	JSG	*Add a footnote to quote the title of the eFTI Regulation (EU) 2020/1056.*	
4.2.7.1	JSG	*The database on "trip plan" is no longer in TAF TSI core text. Proposal to delete the mention. The wagon or Intermodal unit related information exchange and updating are essentially supported by storage of '~~trip plans~~' and 'wagon movements' (Chapter 4.2.10.2: Other Databases).*	The trip plans are insided the Consignment Order Message (ConsignmentOrderMessage/COMS/COM/Wagons/WagonNumberFreight; ConsignmentOrderMessage/COMS/COM/AcceptancePoint; ConsignmentOrderMessage/COMS/COM/DeliveryPoint; ConsignmentOrderMessage/COMS/COM/Routing/RouteSection). *The wagon or Intermodal unit related information exchange and updating are essentially supported by storage of 'trip plans' and 'wagon movements' (<u>Chapters: 4.2.2.1 Customer Consignment Note; 4.2.2.2. Consignment order message and 4.2.8 Wagon Movement 4.2.10.2: Other Databases</u>).*
4.2.7.1	JSG	*The reference to chapter 4.2.6 and 4.2.7 should be incremented to 4.2.7 and 4.2.8.*	
4.2.8.4 4.2.8.5	JSG	*The reference to chapter 4.2.4 should be incremented to 4.2.5.*	

4.3.5	JSG-CSG by EIM	In line "TrainRunningInformation", the reference to TAF TSI should be completed as follow: 4.2.5.3 Train running information and Train Delay Cause message Also, all references (numbering and title) to TAP TSI should be reviewed and aligned with TAP TSI:2022 as described in ERA-REC-122	Also TAP no. 19
4.5	JSG	*The reference to chapter 4.2.10.3 should be incremented to 4.2.11.53*	

5.6. Revision of the Annex I, chapter 7 – Implementation

The following changes of the legal text, concerning the revision of the basic parameters concerning the RU/IM-communication in TAF TSI chapter 7, have been logged in the change control tool for the TAF TSI revision and adopted by the Working Party:

Table 5: changes concerning the revision of TAF TSI chapter 7 (Implementation)

Change#	Headline
TSI_C00000325	Evaluation of merging TAF and TAP TSIs
TSI_C00000368	Implementation reporting from 2022

In addition the part has been impacted by social consultations.

In addition this recommendation incorporates the part ("Specific case") not included in the works of the current TAF TSI Revision Working Party – see further details ch. 6.4 Specific case.

5.6.1. TSI_C00000325 - Evaluation of merging TAF and TAP TSIs

See 5.3.1.

5.6.2. TSI_C00000368 - Implementation reporting from 2022

Current TAF and TAP implementation monitoring reporting will end by 2021 – according to the respective Master Plans. Since 2013 detailed state of the art for TAF / TAP implementation was generated and permanently updated (with strengths and weaknesses).

After implementation monitoring ("Phase 2 – Development" in the TAF/TAP TSI) the European Rail Sector, NCPs, EC and the Agency should start the monitoring of the "deployment in operation" ("Phase 3 – Deployment" in the TAF/TAP TSIs).

- TAF RU-RU, TAF / TAP RU-IM, TAF WK and TAF Retail functions
- KPIs replace DI% based reporting
- starting from 2022

5.6.3. Social consultations

Reference (e.g. Art, §)	Reviewer	Reviewer's Comments, Questions, Proposals	Proposal for the correction or justification for the rejection

| 7.1(b) | JSG/CSG | The date of implementation for stakeholders without individual master plan is fixed by ERA to 07/06/2023, corresponding to the application date of rail Passenger Rights Regulation (EU) 2021/782.
The logic of this date is understood concerning rail PRR requirements but :
• Rail PRR mentions already this date. Thus, repeating it for rail PRR requirements described in TAP TSI brings no added value as the rail PRR is mandatory in any case.
• It applies also to RU/IM BPs non linked to rail PRR, some of them involving IMs, e.g. BP 4.2.16 (Path request and path allocation) or BP 4.2.17.1 (Train ready). Such decision was taken by the TAF Revision WP.
In addition, during the TAP Revision WP (1st of June 2021) it was NOT agreed/decided that the individual master plan will be published by ERA
The paragraph in TAF TSI and TAP TSI must be aligned by using the TAF TSI wording ensuring consistency of requirements for RU/IM communication described in TAF TSI, but also referenced in TAP TSI.
If text should be changed in TAP TSI compared to TAF TSI text, request for a joint TAF & TAP WP meeting dedicated to the revision of the TSI text related to 'Development of the system'.
Also, "master plan" should be replaced by "TAF/TAP implementation reporting as described in 7.1(c)". Today, the implementation reporting is the tool for stakeholders to update their masterplan, also fostering the participation to the reporting, the implementation reporting could be used by stakeholders to create their master plan for those with any.
Revised text should be as follow:
7.1(b) Development of the system
All railway stakeholders concerned shall deploy the system following their individual ~~master plan~~ TAF/TAP implementation reporting as described in 7.1(c) ~~or, if no individual master plan has been submitted, until 7 June 2023. The individual master plan shall be published on the website of the Agency.~~ | 7.1(b) Development of the system
All railway stakeholders concerned shall deploy the system following the Master Plan published at the public website of the Agency

agreed in conjunction with additional comment to the 7.1c adding to the list of tasks of the ICG:

The ICG is made responsible for:
(...) - establishing and updating the Master Plan published at the public website of the Agency |
| Section 7 | NCP Spain | This TSI concerns the subsystem telematics applications for freight/passenger. | There is no mistake - both parts of the subsystem telematics applications are concerned by this TSI since several basic parameters of |

			the current TAP TSI have been moved to this one. Consequently they apply to the passenger RU/IM communication.
Section 7.1 (c)	AESF (Spanish NSA)	*The monitoring of the deployment and operation is managed by the ERA TAF and TAP Implementation Cooperation Group (ICG). Is this figure (TAF & TAP ICG) responsible for the monitoring of the deployment and operation of TAP TSI? In TAP TSI 'document' appears 'TAP ICG for Retail related implementation'. Both figures have the same composition. In case they are the same we propose to harmonise the denomination in both TSIs (TAF & TAP). Same comment in public consultation to TAF TSI (#2).*	Response through the answer to the sector comment no. 20.
Section 7.2.2 (1)	AESF (Spanish NSA)	*…of Regulation (EU) 2016/796, or via the ~~TAF TSI Steering Committee~~ **Telematics Advisory Committee**.*	Replacement of Stering Commitee by the The Telematics Advisory Commitee did not aim at removing the corresponding body submitter role in the Change Management Process.

5.7.   New Annex II

The new Annex is introduced to cover open points resulting from works of the TAF TSI Revision Working Party.

Table 6: changes concerning the revision of TAP TSI Appendix II (Glossary)

Change#	*Headline*
TSI_C00000366	Implementation of the conclusions of the ERA report on Facilitation of combined transport (FCT)

5.7.1.   TSI_C00000333 - Implementation of the conclusions of the ERA report on Facilitation of combined transport (FCT)

The change request enables sharing the Intermodal Loading Unit (ILU) data in the ILU Reference Database and for implementation requires the database specification approved at the TAF TSI Change Control Board. Current state of works reported at the TAF TSI Revision Working Party as well as the TAF TSI CCM Working Party points out at the target approval of the corresponding technical document in May 2022. Such target date represents delay compared to the originally foreseen November 2021. In that case the TAF TSI revision Working Party decided at its meeting on 26th of November 2021 to propose the topic as an open point. On the other hand the Agency is committed to update the current recommendation and accompanying report closing the open point as soon as the required milestone is confirmed, likely in June 2022. As so no need for an open point would remain.

5.8.   Revision of Appendix II - Glossary

The following changes of the legal text, concerning the revision of the basic parameters concerning the RU/IM-communication in TAF TSI Appendix II, have been logged in the change control tool for the TAF TSI revision and adopted by the Working Party:

Table 7: changes concerning the revision of TAP TSI Appendix II (Glossary)

Change#	Headline
TSI_C00000382	Revision of TAF and TAP glossaries

In addition the part has been impacted by social consultations.

5.8.1.   TSI_C00000382 - Revision of TAF and TAP glossaries

These changes were discussed at the meetings of the TAF TSI revision working party. The WP took special care to align these TAF glossary items with those in the TAP TSI.

The revision of the glossary has been prepared by a working party of JSG and UNIFE. The existing glossaries for the TAF and TAP TSI have been evaluated in this group and divided into items into 4 categories:

- 1st forwarded to TEG for opinions

- 2nd not used in TAF

- 3rd to check due to inconsistencies or doubts,

- 4th proposals for deletions or changes

The final results have been presented in the working party on 18 May 2021. The working party agreed with the changes and agreed further to leave up to ERA decision if there's a need to define additional items such as PLC (Primary Location Codes) & RLC (Retail Location Codes) in the glossary.

5.8.2.   Social consultations

Reviewer	Reviewer's Comments, Questions, Proposals	Proposal for the correction or justification for the rejection
ANSFISA (NSA IT as NCP IT)	*The term "National Allocation Entity (NAE)" is missing: since NAE is defined in the draft TAP TSI, it should be useful to add a definition of each NAE (see also comment n°1).*	
JSG	*Competent authority:* *Add reference to article 3(3) of the eFTI Regulation (EU) 2020/1056 which refers to the origin of the definition.*	
JSG	*Regulatory information:* *Add reference to article 3(1) of Regulation (EU) 2020/1056 which refers to the origin of the definition.*	
JSG	*Definition of NAE is missing. Include the definition in TAF and TAP as proposed by the sector Reference Files TEG, a little bit different than the definition in TAP recommendation.* *The National Allocation Entity (NAE) ensures the uniqueness of location codes within a country.*	Agreed to update the TAF glossary. The ~~The~~ **A** National Allocation Entity (NAE) allocates ~~Primary~~ Location Codes and maintains a list of unique location codes within a country.

			To be further elaborated with ERA legal department.
JSG	Update the definition of Primary Location Code *Primary Location Codes (PLCs) identify locations on a railway network.* ~~**The Infrastructure Manager owning the railway network manages the PLCs.**~~ *These are normally important locations, where trains start, end, stop, run through or change line.* **A Primary location is identified by a single and unique Primary Location Code.**		See updated TAP proposal - no. 66.
JSG	Add a definition of Subsidiary Location Code as it is quoted in the core text. **A Subsidiary Location must be linked to, and be part of a single Primary Location. It may specify in a more detailed way a point, attributes or an usage of Primary location. A Subsidiary Location is identified by a unique Subsidiary Location Code.**		See updated TAP proposal - no. 67.

5.9. Revision of Appendix III - NCP

The following changes of the legal text, concerning the revision of the basic parameters concerning the RU/IM-communication in TAF TSI Appendix III, have been logged in the change control tool for the TAF TSI revision and adopted by the Working Party:

Table 8: changes concerning the revision of TAF TSI Appendix III (NCP)

Change#	*Headline*
TSI_C00000370	NCP role update - Appendix III

In addition the part has been impacted by social consultations.

5.9.1. TSI_C00000370 - NCP role update - Appendix III

At its meeting on 29th of May 2020 the previous TAF TSI Revision WP concluded as follows: The Agency to create the new CR for the next TAF TSI revision on adding the phrase: ""Put the railways players in contact with the system authority and with European groups developing TAF TSI in order to solve those concerns and views".

5.9.2. Social consultations

| Appendix III, point (6) | ANSFISA (NSA IT as NCP IT) | *"Work with the Member State to ensure that **a** National Allocation Entity is appointed".* How do many NAEs have to be appointed? Only one? This sentence is not consistent with "Implementation 4".* | Current text is not perceived by the WP as preventing the MS decision to appoint more than one NAE. However, Agency will elaborate if it would be useful that adding "… one or more National Allocation Entities" and propose accordingly in the Recommendation. |

5.10. New Appendix IV – NCP Accuracy of train running forecast and wagon ETI/ETA information

The following changes of the legal text, concerning the revision of the basic parameters concerning the RU/IM-communication in the new TAF TSI Appendix IV, have been logged in the change control tool for the TAF TSI revision and adopted by the Working Party:

Table 9: changes concerning the new TAF TSI Appendix IV

Change#	Headline
TSI_C00000317	Link real multimodal time data and train data

5.10.1. TSI_C00000317 - Link real multimodal time data and train data

See 5.5.6.

6. To attention of the European Commission

6.1. Annex II Open points

See 5.7

6.2. Change Request TSI_C00000333 - Take into account open source and open data architecture requirements

In the frame of the CR the Working Party agreed to simplify and generalize the legal provisions of the section 4.2.11.5 Common Interface, at the same time imposing corresponding update of the technical specification (Technical Document 104). Current state of works reported at the TAF TSI Revision Working Party as well as the TAF TSI CCM Working Party points out at the target approval of the corresponding technical document in May 2022. Such target date represents delay compared to the originally foreseen November 2021. In that case the TAF TSI revision Working Party decided at its meeting on 26th of November 2021 to return to the original shape of the TSI text until the new technical specifications are approved by the TAF TSI CCM board. On the other hand the Agency is committed to update the current recommendation and accompanying report as soon as the required milestone is confirmed, likely in June 2022.

6.3. Deployment

Telematics applications for passenger and freight services subsystem has been considered a functional area, similarly to the operation and traffic management and maintenance. Implementation is regulated by the TSI chapter 7 involving defining Master Plans and reporting implementation levels.

As the implementation levels rise over the years, there can be also observed certain structural areas in the TAF / TAP data space, shaping up as cornerstones of interoperability. 2021 amendment[6] of the TAF TSI introduced a voluntary assessment of compliance. The core subsystem characteristics review which could eventually lead to reconsidering its currently purely functional classification has not been tackled however.

Further discussion how the TAF (and TAP) contributes to the European freight (but also passenger) sustainable mobility goals includes inevitably a need of further boost of implementation levels especially in the cross border context. It can be then in such discussion observed context of eventually – defining certain interoperable structures and looking if and even how those may become subject of interoperability related verification on a mandatory rather, then voluntary basis – following the example of the TSIs in structural area. Whether such consideration is a distant one or not it can't be determined at the moment, but the Agency,

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[6] Commission Implementing Regulation (EU) 2021/541 of 26 March 2021 amending Regulation (EU) No 1305/2014 as regard the simplification and improvement of data calculation and exchange and the update of the Change Control Management process

following the encouraging dialogue between the Railway Sector and the European Commission commits the topic to be included in the future container Change Request no. 440.

The Agency also points out that the current recommendation locates establishing and updating of the TAF TSI implementation Master Plan within the remit of the TAF TSI Implementation Cooperation Group. See the social consultation feedback ch. 5.6.3 on the TSI ch. 7.1(b).

6.4. Specific case

This recommendation incorporates a proposal of the ch. 7.3 Specific Case, as a measure proposed in the in the Agency Opinion ERA/OPI/2020-14. The measure supports subsystem migration from the 4-letter numeric to the 4-letter-alphanumeric format of the company code. Measure is a part of the corresponding impact assessment. Further detail in the related Agency opinion[7].

7. Consultations

According to the internal procedures for the drafting of recommendations, a social consultation had to be performed to inform the freight customers, social partners and OTIF about the results of the revision of the TAF TSI. For this purpose a dedicated website[8] including a functional mailbox[9] has been made available by the Agency, where the drafted TAF TSI version from 1st of August 2021, containing all agreed changes until this date, has been made available to the public.

The consultation was published between 1st of August and 31st of October 2021 on the website of the agency. The organisations were asked to provide their opinion concerning the revised TAF TSI to ERA.

ERA has received until 31st of October 2021 feedback from the following organisations:

- AESF (Spanish NSA)
- ANSFISA (NSA IT as NCP IT)
- JSG
- JSG/CSG
- JSG-CSG by EIM
- NCP Spain
- OTIF (UK)

For all received comments proposals the Agency has created corresponding proposals for the correction or justification for the rejection. The proposals were processed at the additional Joint TAF/TAP Revision Working Parties meeting on 26th of November 2021. Results are covered in the chapter 5.

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[7] OPINION ERA/OPI/2020-14 OF THE EUROPEAN UNION AGENCY FOR RAILWAYS for THE EUROPEAN COMMISSION regarding Change of company code to 4-letter-alphanumeric format. Available at : https://www.era.europa.eu/library/opinions-and-technical-advices_en#opinion1222

[8] https://www.era.europa.eu/library/consultations_en#consultation1387

[9] 006REC1128@era.europa.eu

Annex 1.   Economic impact assessment

See "Light Impact Assessment TAF TSI 2022 Revision" Version 0.6, 07/10/2021

Annex 2.   Definitions and abbreviations

Table 10: Table of definitions

Definition	Description
Agency	The European Railway Agency (ERA) such as established by the Regulation (EU) 2016/796 repealing (EC) No 881/2004 of the European Parliament and of the Council of 29 April 2004.

Table 11: Table of abbreviations

Abbreviation	Description
CCM	Change control management
CIM/SMGS	Uniform Rules concerning the Contract of International Carriage of Goods by Rail (Appendix B to COTIF) (CIM) / Agreement on International Freight Traffic by Rail (SMGS)
CER	Community of European Railway and Infrastructure Companies
CIT	International rail transport committee
CR	Change Request
CRD	Central Reference Database
EC	European Commission
EIM	European Rail Infrastructure Managers
ERA	European Agency for Railways (also referred to as Agency)
GNSS	Global Navigation Satellite System
IA	Impact assessment
IM	Infrastructure Manager
NCP	National Contact Point
RI	Railway indicator
RISC	Rail Interoperability and Safety Committee
RNE	Rail Net Europe
RU	Railway Undertaking
SM	Station manager
SO	Strategic objective
TAF	Telematics Applications for Freight
TAP	Telematics Applications for Passengers
TEN	Trans European Network
ToR	Terms of Reference
TSI	Technical Specification for Interoperability
UIC	Union Internationale des Chemins de fer
UIP	International Union of Wagon Keepers

Abbreviation	Description
UNIFE	Association of the European Rail Industry
WK	Wagon Keepers
WP	Working Party organised by ERA

Annex 3.   Reference documents

Table 12 : Table of reference documents

N°	Title	Reference	Version
[1]	Consultations - Comment Sheet of ANSFISA (NSA IT as NCP IT)	"TEM REC 003 Comment sheet TAF - NCP IT"	29/10/2021
[2]	Consultations - Comment Sheet of Agencia Estatal de Seguridad Ferroviaria (AESF)	"TAF TSI_public consultation_NSA ES"	28/09/2021
[3]	Consultations - Comment Sheet of Community of European Railway and Infrastructure Companies (CER) / Joint Sector Group (JSG)	"TEM REC 003 Comment sheet_TAF_JSG_(21-10-2021)_v0.1"	21/10/2021
[4]	Consultations - Comment Sheet of Joint Sector Group (JSG) by European Infrastructure Managers (EIM)	"TEM REC 003 Comment sheet_TAF_JSG by EIM_(28-10-2021) v0.2"	31/10/2021
[5]	Consultations - Comment Sheet of Intergovernmental Organisation for International Carriage by Rail (OTIF) member United Kingdom	"006REC1128 - TEM REC 003 TAF TSI Comments (United Kingdom)"	22/10/2021

Annex 4.   Reference legislation

Table 13 : Table of reference legislation

N°	Title
[1]	Directive (EU) 2016/797 of the European Parliament and of the Council of 11 May 2016 on the interoperability of the rail system (Recast) as amended by Directive (EU) 2020/700
[2]	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
[3]	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
[4]	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 and repealing the Regulation (EC) No 62/2006 Text with EEA relevance as amended by Commission Implementing Regulations (EU) 2018/278, 2019/778 and 2021/541

N°	Title
[5]	Commission Implementing Regulation (EU) 2019/778 of 16 May 2019 amending Regulation (EU) No 1305/2014 as regards Change Control Management
[6]	Commission Implementing Regulation (EU) 2021/541 of 26 March 2021 amending Regulation (EU) No 1305/2014 as regard the simplification and improvement of data calculation and exchange and the update of the Change Control Management process