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Report

7th status report about the implementation progress of the TAP TSI (2020)

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Document History

Version	*Date*	*Comments*
0.1	08/03/2021	1st draft for the presentation at the TAP TSI cooperation group
0.2	09/03/2021	Updated chapters 4.2.2.18 – 4.2.2.20
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Acronyms

Table 1: Table of abbreviations

Acronyms	Definition
API	Application programming interface
CEF	Connecting Europe Facility
CER	Community of European Railway and Infrastructure Companies
CRD	Central reference database
CSG	Common support group
DI	Degree of Implementation
EC	European Commission
EIM	European Rail Infrastructure Managers
ERA	European Union Agency for Railways (also referred to as Agency)
GIS	Geographical Information system
IM	Infrastructure Manager
INEA	Innovation and Networks Executive Agency
MCT	Minimum connecting time
JSG	Joint Sector Group (sector cluster in charge of following TAF Implementation)
NCP	National Contact Point
PM^2	Official Project Management Methodology of the European Commission
RISC	Rail Interoperability and Safety Committee
RNE	Rail Net Europe
RU	Railway Undertaking
SM	Station Manager
TAP	Telematics applications for passengers
TAF	Telematics Applications for Freight
TSGA	TAP TSI Services Governance Association
TSI	Technical Specification for Interoperability
TV	Ticket vendor
UIC	Union Internationale des Chemins de fer
UNIFE	Association of the European Rail Industry

Reference documents

Table 2: Table of reference documents

Ref. N°	Title	Reference	Version
(1)	TAP TSI ANNEX B.62 TAP MASTER PLAN	TAP TSI Master Plan	06.12.2013
(2)	TAP TSI consolidated Master Plan		28.04.2013
(3)	NOTE TO ERA EXECUTIVE DIRECTOR: Assessment of TAP TSI implementation by the European Railway Agency	Ares(2015)5967753	21.12.2015

Reference legislation

Table 3: Table of reference legislation

Ref. N°	Document Reference	Title	Last Issue
[1]	Directive 2008/57/EC	Interoperability of the rail system	17.06.2008
[2]	TAP TSI Regulation No 454/2011	Commission Regulation (EU) No 454/2011 of 11 May 2011 on the technical specification for interoperability relating to the telematics applications for passenger's subsystem of the rail system in the European Union	11.05.2011
[3]	Regulation (EU) 2016/796	REGULATION (EU) No 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	11.05.2016
[4]	Directive (EU) 2016/797	Directive of the European Parliament and of the Council of 11 May 2016 on the interoperability of the rail system within the European Union	11.05.2016
[5]	CEF Regulation	Regulation (EU) No 1316/2013 of the European Parliament and of the Council of 11 December 2013 establishing the Connecting Europe Facility, amending Regulation (EU) No 913/2010 and repealing Regulations (EC) No 680/2007 and (EC) No 67/2010	11.12.2013

1   ABSTRACT

The report shows the implementation progress in 2020 of the TAP TSI implementation in the European rail sector. The actors of the European rail sector – subject to the implementation of the TAP TSI – have to implement this TSI in accordance with the Master Plan and to report about the implementation progress in the co-operation group for the TAP TSI implementation. The affected actors are the railway undertakings, the infrastructure managers and the ticket vendors. Furthermore, there is a common organisation – the TAP TSI Services Governance Association (TSGA) – responsible for the reporting of the implementation progress of the regulatory functions of the TAP TSI.

Furthermore, this report contains the reporting about a subset of the TAP TSI basic parameters for retail functions, mainly for the reservation, ticketing, tariffs/fares and timetables. The subset of these retail functions has been agreed in the TAP TSI co-operation group on 17 October 2017.

To evaluate the current degree of implementation for every function, the data provided is compared to the baseline defined in the TAP TSI Master Plan (1) (TAP TSI Technical document B.62) created to implement the TAP TSI [2] regulation delivered by the European Rail Sector in 2012.

The monitoring of the implementation takes as baseline:

1. The TAP TSI Master Plan for the regulatory functions, the TAP TSI technical document B.62. The TAP-TSI Master Plan (1) was submitted to the DG MOVE on 11th May 2012. This Master Plan contains the milestones for the set-up of the regulatory functions of the TAP TSI, such as the governance and the set-up of the TAP TSI architecture. The target dates were set during the drafting of this document by the European rail sector in TAP TSI phase 1. These functions have to be implemented and governed by the European Rail sector together with the ticket vendors.

2. The consolidated Master Plan – the implementation of the individual TAP TSI functions by the railway undertakings, the ticket vendors and the infrastructure managers – has been submitted by the European rail sector on 28th April 2013. A total of 40 companies, RUs, IMs and groups – representing a total of over 70 licensed railways - have submitted their plans in time for the consolidation exercise performed by the TAP TSI project team between January and April 2013. The target dates are based on the corresponding TAP-TSI function to be implemented and they were set when 80% or more of the respondents indicated a final implementation.

The following key findings per TAP TSI regulatory function can be highlighted:

- The TAP TSI governance body has been set-up and the TSGA is established since 2016, staffed and operational
- The setup of the TAP TSI architecture is in place, comprising:
    - the setup of the TAP TSI registry
    - the setup of the TAP TSI Retail reference database
    - the setup of the TAP TSI Data quality tool

The 7th report contains as well the implementation report of the individual railway undertakings about the implementation progress of the following TAP TSI retail functions:

Table 4: TAP TSI retail functions of the 7th reporting session

Activity	TAP TSI basic parameter	Responsible
8.1 Sending request to agreed RU`s in B5 format	TAP BP 4.2.9.1	RU, TV
8.2 Answering reservation requests from agreed RU`s and agreed 3rd parties in B5 format	TAP BP 4.2.9.2	RU

8.3 Sending reservation requests for bicycle carriage to agreed RU`s in B5 format	TAP BP 4.2.7.2	RU, TV
8.4 Answering reservation requests for bicycle carriage from agreed RU`s and agreed 3rd parties in B5 format	TAP BP 4.2.7.3	RU
8.5 Sending reservation requests for car carriage to agreed RU`s in B5 format	TAP BP 4.2.8.2	RU, TV
8.6 Answering reservation requests for car carriage from agreed RU`s and agreed 3rd parties in B5 format	TAP BP 4.2.8.3	RU
9.1 Issuing value paper tickets for international and foreign sales in B6 format	TAP BP 4.2.11.1	RU, TV
9.2 Accepting value paper tickets for international and foreign sales in B6 format	TAP BP 4.2.11.1	RU
9.1 Issuing home printed tickets for international and foreign sales in B7 format	TAP BP 4.2.11.2	RU, TV
9.2 Accepting home printed tickets for international and foreign sales in B7 format	TAP BP 4.2.11.2	RU
10.1 Sending PRM assistance reservation requests via IT communication to agreed RU`s, IM's and SM's in B10 format	TAP BP 4.2.6.2	RU, TV
10.2 Answering PRM assistance reservation requests via IT-communication from agreed RU`s and agreed 3rd parties in B10 format	TAP BP 4.2.3	RU
Exchange of timetable data in B4 format	TAP BP 4.2.1	RU
Exchange of NRT tariff/fare data in B1 format	TAP BP 4.2.2	RU
Exchange of IRT tariff/fare data in B2 format	TAP BP 4.2.2	RU
Exchange of special tariff/fare data in B3 format	TAP BP 4.2.2	RU
Delivery of timetable data, tariff data to TSGA	TAP TSI TD B.60	RU
Registration at TSGA	TAP TSI TD B.60	RU, TV
Subscription for timetable data, tariff data, public keys at TSGA	TAP TSI TD B.60	RU, TV

2   Introduction

This 7th Status Report is delivered in accordance with Commission Regulation (EU) No 454/2011 of 11 May 2011 on the Technical Specification for Interoperability relating to the Telematics Applications for Passenger subsystem of the rail system in the European Union [2].

In particular, Article 23 of Regulation EC 2016/796 [2] attributes to the European Railway Agency the task to assist the European Commission in the implementation of the Community legislation and oversee the implementation of the Regulation to determine whether the agreed objectives and deadlines have been achieved. ERA has the task to provide an assessment report to the TAP TSI steering committee referred to in Section 7.3 of the TAP TSI. Furthermore, the European Commission (EC) issued a letter on 21.12.2015 (2) describing the tasks expected to be carried out by the Agency for the Assessment of TAP TSI [2] implementation.

On this basis, the Agency launched on 31st May 2016 the Co-operation Group for the Implementation of Telematics Applications for passengers. The Co-operation Group performs the following tasks:

- To assess the reports from the sector (companies, NCPs and RBs) about the TAP TSI [2] implementation.
- To compare the data received with the content of the TAP TSI Master Plan [1] and assess the progress of implementation to determine whether the objectives pursued and deadlines have been achieved.
- To use Key Performance Indicators (KPIs) previously agreed between the Agency and the Rail Sector to assess the evolution of the deployment of the system and report twice per year to the European Commission and to the TAP TSI Steering Committee.
- To perform a dissemination campaign to NCPs and assist them to follow-up the TAP TSI [2] implementation at national level.

All these activities are performed in close cooperation with the different stakeholders, who will provide implementation reports.

2.1   Reporting structure

The reporting takes into account the different reporting procedures, depending on the nature of the information to be reported and the responsibilities for the implementation of the TAP TSI. There are 4 different reporting streams – reporting procedures for certain business areas of the regulation - in the TAP TSI reporting:

1. The reporting about the implementation of the **conditions of carriage** by the individual passenger railway undertakings
2. The reporting about the implementation of the **regulatory functions** by the TAP TSI governance body (TSGA)
3. The reporting about the implementation of the **retail functions** by the individual passenger railway undertakings and the ticket vendors
4. The implementation of the **RU/IM-functions** by the individual passenger railway undertakings

 "Conditions of carriage" means the implementation of the publication of the conditions of carriage and certain accessibility conditions by the railway undertakings. This obligation is specified in the TAP TSI basic parameters 4.2.4, 4.2.5, 4.2.7, 4.2.6 and 4.2.8. The basic parameter had to be implemented 6 months after the publication of the TAP TSI, means until the 11.11.2011.

"Regulatory functions" means those functions which cover the central functions of the TAP TSI and have to be implemented by the TAP TSI governance body (TSGA). Those functions are – beside of the setup of the TAP TSI governance - the TAP TSI architecture including registry, the retail reference database and the data

quality tool. The functionalities are specified in the TAP TSI technical document B.60[1] and have to be implemented by the TSGA.

"Retail functions" means those functions which cover functions such as timetable data exchange, tariff data exchange or fulfilment and have to be implemented individually by the passenger railway undertakings and the ticket vendors. These functions are described in TAP TSI chapter 4 and have to be implemented following the TAP TSI Master Plan[2].

"RU/IM functions" are those functions for planning and booking of train paths and information during the operation and the functions related to "information in the stations" and "information on-board". They have to be implemented by the railway undertakings, infrastructure managers according to the TAP TSI Master Plan.

The following table shows an overview about the different reporting streams for the TAP TSI.

Table 5: Reporting streams for TAP TSI

	Conditions of Carriage	Regulatory functions	Retail basic parameters	RU/IM basic parameters
TAP TSI Basic parameter	4.2.4.1, 4.2.5.1, 4.2.7.1, 4.2.6.1, 4.2.8.1	TAP TSI chapter 7.3	Remaining TAP TSI functions	4.2.15, 4.2.16, 4.2.17
Implementation plan specified in	TAP TSI regulation 454/2011	TAP TSI Technical document B.62	TAP TSI Master Plan	TAP TSI Master Plan
Implementation date	11.11.2011	31.10.2014	Milestones according TAP TSI Master Plan	Milestones according TAP TSI Master Plan
Who has to implement the function(s)	Passenger railway undertakings	TSGA	Passenger railway undertakings, ticket vendors	Infrastructure managers, railway undertakings
Who has to report to ERA	None (data will be collected automatically by the Agency)	TSGA	RU's via Common support group (CSG), ticket vendors via ETTSA/ECTAA	RU's, IM's via Joint sector group (JSG)
Publication by	ERA			
Report	Report about the implementation of the conditions for carriage	Status report for the TAP TSI retail functions		Status report for the TAF TSI functions
Report frequency	Annual			

2.2 Reporting procedures

As shown in the Table 5 there are four different reporting streams in place. Each stream has a different procedure for the reporting, including the involved actors, the procedure and the scope. These differences have to be respected in the reporting for the TAP TSI implementation progress.

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[1] http://www.era.europa.eu/Document-Register/Documents/ERA_Technical_Document_TAP_B_60_FINAL.pdf
[2] http://www.era.europa.eu/Document-Register/Documents/20130428_TAP%20Master%20Plan%20Delivery_final.pdf

2.2.1 Reporting for the conditions of carriage

Reporting of the implementation of the conditions of carriage is done by ERA. Once per year, ERA is checking the websites of passenger railway undertakings across EU, analysing conditions of carriage and the accessibility conditions. ERA uses the list of passenger railway undertakings for the reporting which has been delivered by the NCP's of the member states or which are publicly known. The report is delivered by ERA once per year to the European Commission.

2.2.2 Reporting for the regulatory functions

The reporting procedure (workflow) for regulatory functions is shown at the following picture:
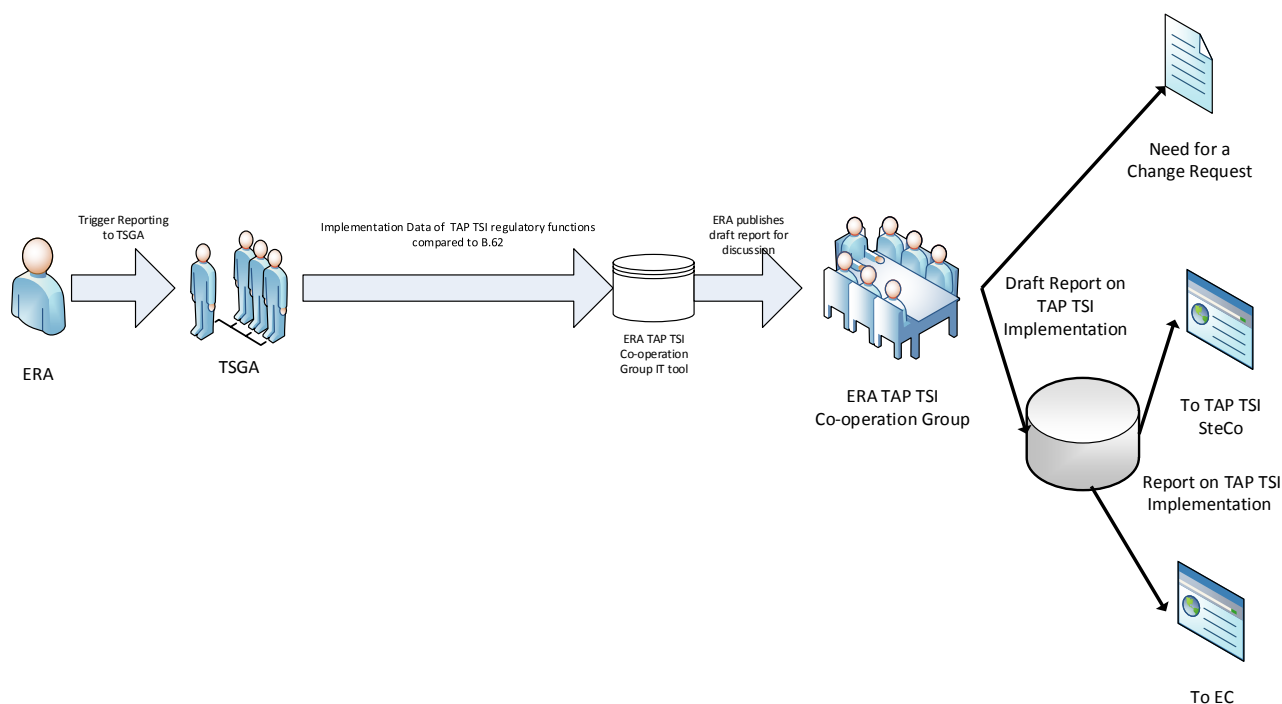
Figure 1: ERA TAP TSI Implementation Cooperation Group process for regulatory functions

The process is triggered by ERA to TSGA to request with a predefined questionnaire a report about the implementation progress for the regulatory functions of the TAP TSI. The request is sent 3 months before the TAP TSI co-operation group to the TSGA. The report will be sent back from TSGA to ERA and incorporated in the IT-tool and the implementation progress report for the working party. After the discussion in the TAP TSI co-operation group two additional weeks are given for further remarks. Then, the implementation progress will be incorporated in the report about the TAP TSI implementation and it is delivered by the Agency to the TAP TSI Steering Committee and the European Commission.

2.2.3 Reporting for TAP TSI retail basic parameters

The diagram below shows the process allowing ERA to perform the above listed activities for the TAP TSI retail basic parameters:
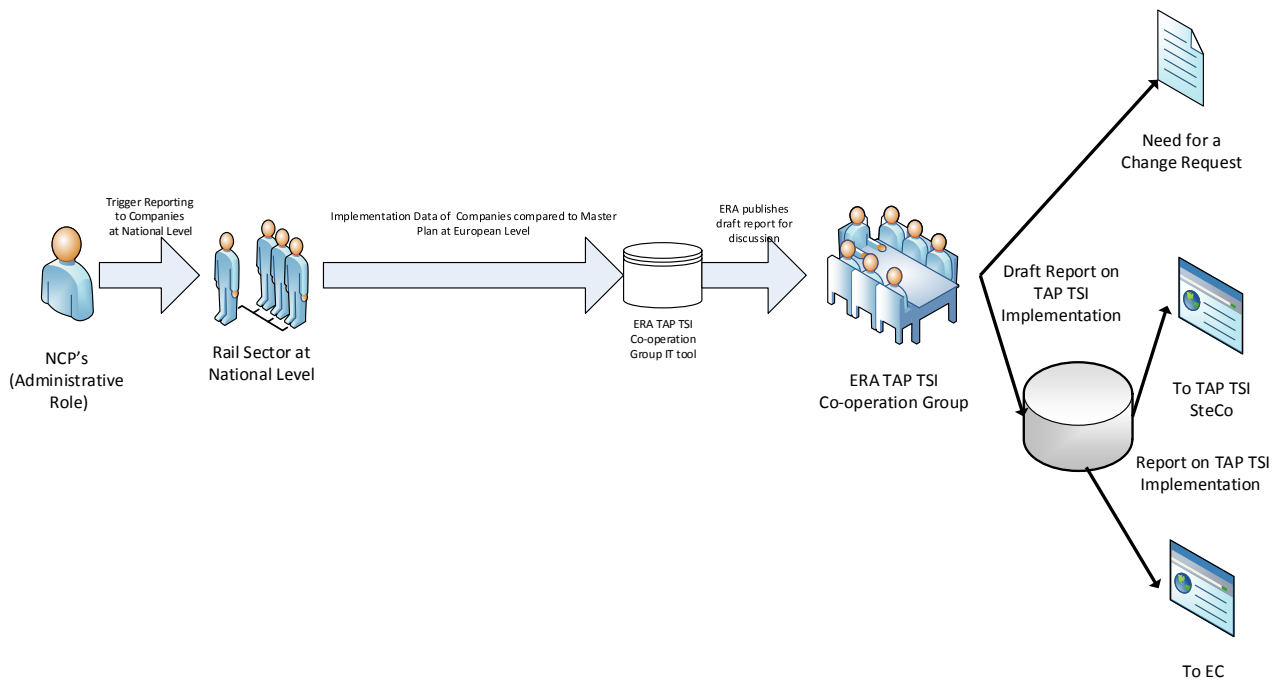
Figure 2: ERA TAP TSI Implementation Cooperation Group process for retail basic parameters.

The process is triggered by the NCP's keeping the list of passenger railway undertakings up-to date. A questionnaire is drafted by ERA and CSG, based on agreed KPI's to evaluate the evolution of TAP TSI retail basic parameters. The common support group (CSG) will deliver 3 months before the TAP TSI co-operation group meeting an e-mail contacting all the companies of the reporting list and launching the reporting. The questionnaire is provided as electronic form on a website. The companies have 1 month to report. Once the reporting is concluded, the tool is close and the CSG will elaborate an implementation report with the sector's view on the implementation. At the same time, the raw data will be delivered to the Agency for uploading the data on the Agency GIS Implementation tool and for drafting the complementary Agency status report for discussion in the TAP TSI co-operation group. The content of the Agency report is discussed and amended during the TAP TSI co-operation group meeting giving two additional weeks for further remarks. Once is concluded the allegation period, the report is delivered by the Agency to the European Commission and to the TAP TSI Steering Committee.

The ticket vendors (TV) are subject to the reporting of the implementation progress of some TAP TSI retail basic parameters as well. These basis parameters are mainly those for the usage of the data delivered by the railway undertakings. The process for ticket vendors is the similar one as for the passenger railway undertakings: The TV are invited to submit their implementation data to their stakeholder organisations ETTSA and ECTAA. They will compile a report based on the data received from their members.

TAP retail functions will be monitored first twice a year to better compile progress of implementation but after a year of monitoring this decision will be revised.

2.2.4 Reporting for TAP TSI RU/IM basic parameters

For the TAP TSI RU/IM-communication basic parameters, the process existing for TAF TSI (described in the following picture) is followed.
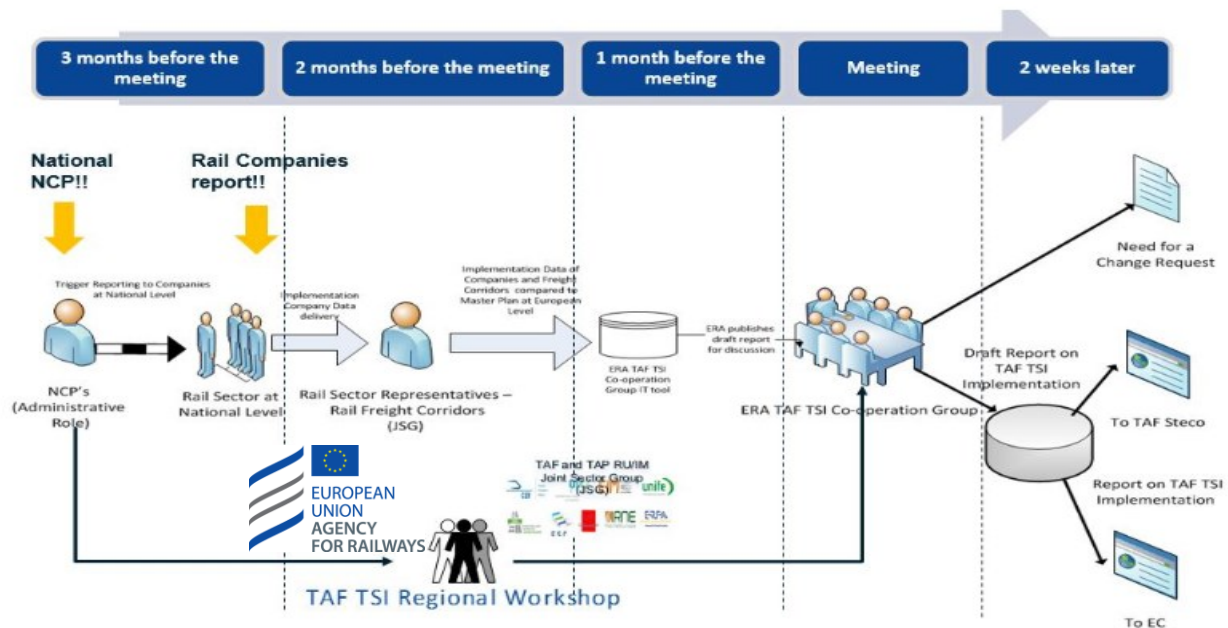
Figure 3: ERA TAF TSI Implementation Cooperation Group process for RU/IM basic parameters.

For the reporting of the RU/IM basic parameters the co-operation group for the implementation of the TAF TSI is in charge of the reporting for the TAP TSI as well. The NCPs will trigger the reporting exercise keeping up to date the list of companies stored in the JSG reporting tool taking part in the reporting exercise. This task is performed 1 month before the campaign starts. Then, the JSG will deliver 3 months in advance of the TAP TSI co-operation group an e-mail contacting all the companies of the reporting list and launching the reporting. The reporting is provided as electronic form on the JSG tool. The companies have 1 month to report. Once the reporting is concluded, the tool is close and the JSG will elaborate an implementation report with the sector's view over the implementation. At the same time, the raw data will be delivered to the Agency for uploading the data on the Agency GIS Implementation tool and for drafting the complementary Agency status report. Both reports should be made available for the members of the TAF TSI Implementation Cooperation Group at least 2 weeks before the meeting for discussion within the mirror groups. The content of the Agency report is discussed and amended during the meeting giving two additional weeks for further remarks. Once is concluded the allegation period, the report is delivered by the Agency to the European Commission and to the TAF TSI Steering Committee. Thereby, this reporting about the TAF TSI basic parameters is not in the scope of the current report about the TAP TSI implementation progress.

TAP TSI RU/IM functions were monitored until 2018 twice a year to better compile progress of implementation. Since 2019 only one report per year will be delivered.

2.2.5 Further steps after the reporting

After the reporting of the progress for the TAP TSI implementation further steps have to be done by ERA. ERA has to inform the EC about the results of this monitoring and has to advise the EC about the possible changes needed. For the common part TAP and TAF, the report will be as well submitted to the TAP TSI Steering Committee. In a multimodal context, ERA has to guarantee that any of the actions taken do not create additional obstacles for multimodal environment.

The Agency delivers the reports also to the Member States through the Rail Interoperability and Safety Committee.

3 Context

The context of the reporting of the implementation progress of the TAP TSI is based on two legal documents: the TAP TSI Master Plan (TAP TSI technical document B.62) (1), covering the implementation timetable for the TAP TSI regulatory services and the TAP TSI consolidated Master Plan covering the implementation dates of the specific functions for the TAP TSI for each actor (e.g. RU, IM, ticket vendor)

The final version of the TAP-TSI Master Plan (1), establishing the implementation timeline for the regulatory functions of the Regulation, was submitted to the DG MOVE and ERA on 11th May 2012. This Master Plan contains the milestones for the implementation of the regulatory functions of the TAP TSI ecosystem, which have to be implemented in common by the affected actors. These functions have to be provided to all actors affected by the TAP TSI.

Based on the submission of the TAP TSI Master Plan for the regulatory functions ERA has submitted on 31st October 2012 a recommendation about a revised TAP TSI to the European commission. The revised TAP TSI has been published on the official journal of the EU on 6th December 2013 as EC 1273/2013. The TAP TSI Master Plan has been annexed to the TSI as technical document B.62. Therefore, the TAP TSI Master Plan is legally binding for the implementation of the regulatory functions of the TAP TSI.

On the other hand, the undertakings have submitted their individual implementation plans to the TAP TSI project team until end 2012. The consolidated Master Plan document summarises the consolidation of the individual TAP TSI implementation plans established by RUs, IMs and SMs in 2012 and 2013. Overall, 40 RUs, IMs and groups – representing a total of over 70 licensed railways - have submitted their plans in time for the consolidation exercise performed by the TAP TSI project team between January and April 2013. The target dates are based on the corresponding TAP-TSI function to be implemented.

The reporting for the implementation of the TAP TSI functions by the actors is two folded: the reporting for the RU-IM communication and the reporting for the retail functions. Latter one has been assigned to the co-operation group for the implementation of the TAF TSI. Most of the RU/IM-functions are common with the TAF TSI and therefore the reporting has been centralised in the co-operation for the implementation of the TAF TSI, considering the milestones set-out in the TAP TSI Master Plan.

In order to collect the data and to boost the involvement of the higher possible number of companies, the European Railway Agency has closely worked with the European Rail Sector to set-up the appropriate mechanism to collect the data concerning the deployment of the above-mentioned functions. Indeed, on the RU/IM functions, the European Rail Sector grouped through the sector cluster Joint Sector Group (JSG) and the Agency has set-up two IT tools to collect and visualize the data submitted by the European rail companies, Infrastructure Managers, Railway Undertakings and Wagon Keepers. For this purpose, the companies submit their information about the progress of implementation of the RU-IM-communication basic parameters to the JSG IT tool through a Web service available for all the companies registered. For TAP TSI this reporting process is assigned to the TAF TSI co-operation group.

For the TAP TSI retail basic parameters a similar process has been applied. The data are collected by the Common support group (CSG) and the Agency uses the same tool for the reporting of the TAP TSI retail basic parameters.

For the reporting the **number of registered companies on 16th November 2020 was 331**, whereas 210 companies have submitted their contact details to be contacted for the questionnaire, raising the rate of the contacted companies to the registered ones from 58,6% for the report 2019 to 63% for the current report.

The scope of the present report is to inform about the deployment of the functions scheduled to be implemented by 2nd half 2017 in the Master Plan (1) delivered by the sector for the implementation of the TAP TSI [2] system. This report provides information about the implementation of the following functions:

- TAP TSI architecture:
  - Registry

- o Retail reference database
- o Data quality tool
- Governance

To have a common approach for all companies' contributors submitting implementation information, **an optional common criterion has been agreed with the representatives of the rail sector to assess the degree of implementation of TAP TSI functions**. This criterion is based on the standard division in project phases of IT projects defined in the methodology for project management in use at the European Commission (PM^2). Assuming that project phases are divisions within a project where extra control is needed to effectively manage the completion of a major deliverable, then it may be ideally assimilated each of **the 22 TAP TSI retail functions** identified in the TAP TSI Master Plan (1) to an individual IT reference implementation project.

Within every individual IT reference implementation project, we use percentages of completion as early indicators to track the progress made each period of one year (n-3, n-2, and n-1, n) over a 4-year time span. This will allow raising warnings to prevent delays in the implementation of a particular function.

Therefore, considering the above-mentioned assumptions, every function implementation may be considered as an individual project to be split in the following reference phases:

- **Initiating Phase**: This phase may comprise those processes performed to define a new project or a new phase of an existing project by obtaining authorization to start the project or phase. This phase includes typically the following activities:
  - o Feasibility Study
  - o Business Case
  - o Gathering of Technical and Functional Requirements

  These activities may correspond in an "optional" reference implementation to a Degree of Implementation (DI) between 0% and 25% for a particular function. If the DI is achieved at the beginning of the timeframe for the deployment of such a function, deadline minus ideally three years (deadline-3), the implementation of this function can be deemed on time.

- **Planning Phase**: this phase includes typically those activities required to establish the scope of the project, refine the objectives, and define the course of action required to attain the objectives that the project was undertaken to achieve:
  - o Resource Planning
  - o Project Work Planning (Working Break Down Structure)
  - o Migration Planning
  - o Outsourcing Plan
  - o Risk Management Planning

  These activities may correspond in an "optional" reference implementation to a Degree of Implementation (DI) between 25% and 50% for a particular function. If the DI is achieved within the deadline minus ideally two years (deadline-2) period, the implementation of this function could be deemed to be on time.

- **Executing Phase**: this phase may comprise those processes performed to complete the work defined in the project management plan to satisfy the project specifications. This phase includes activities such as:
  - o Procurement
  - o Executing
  - o Testing (User Acceptance and system Integration)
  - o Training and Education

These activities may correspond in an "optional" reference implementation to a Degree of Implementation (DI) between 50% and 75% for a particular function. If the DI is achieved within the deadline minus ideally one year (deadline-1) period, the implementation of this function could be deemed to be on time.

- **In Production & Monitor & Control:** this phase may comprise those processes performed to finalise all activities across all phases to formally close the project. Therefore, it may include the delivery of the product/service, in the context of the TAP TSI [2] deployment, the delivery of the IT system implementing a particular TAP TSI [2] function moving to production environment. These activities correspond in an "optional" reference implementation to a Degree of Implementation (DI) between 75% and 100% for a particular function. If the DI is achieved within the deadline minus ideally one year (deadline-1) period, the implementation of this function could be deemed to be on time.

The above explained phases are summarised in the following diagram explaining the expected commitment of resources made for every phase of the project.
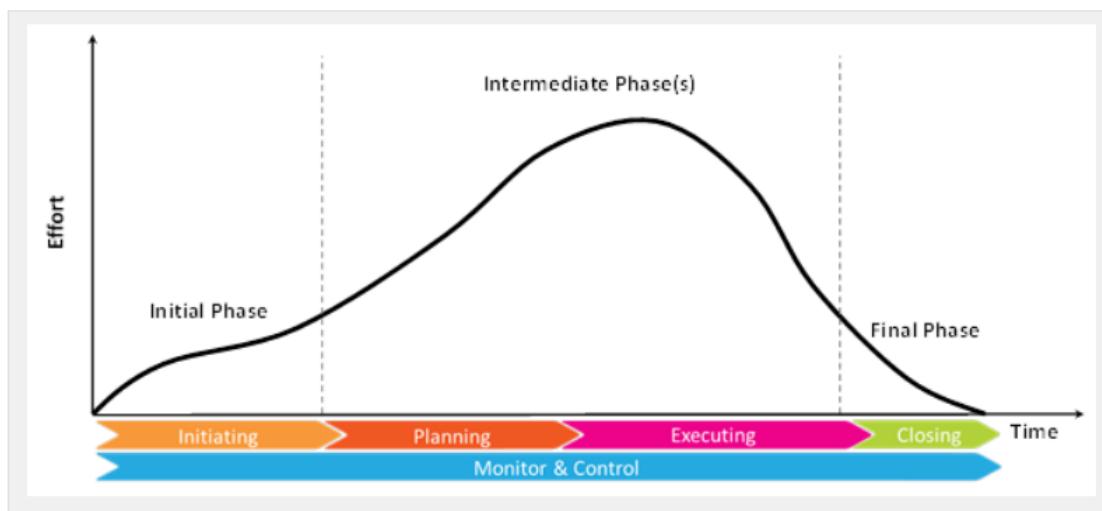

Figure 4: PM² project lifecycle.

Nevertheless, the different activities to be developed in the framework of a project to implement a particular TAP TSI [2] function should be adapted to the particular situation in every company. Therefore, every project may be assimilated, in a voluntary basis, to the addition of the four phases aforementioned (Initiating, Planning, Executing and Closing) establishing an optional comparable reference implementation to assess the progress of the implementation per company.

In conclusion, in the context of the Co-operation Group for TAP TSI Implementation there are two ways to report about the implementation of a particular TAP TSI function compared to the TAP TSI Master Plan (1):

- on one hand, companies may declare the final delivery of a particular TAP TSI function within the deadline set out in the TAP TSI Master Plan (1); in this case the implementation of this function will be deemed to be on time, and thus DI = 100% -> Green colour on the map;
- on the other hand, companies may declare the Degree of Implementation (DI) for every function taking into account the optional methodology aforementioned based on different phases for the project. In this case, the declared Degree of Implementation will be colour-coded and displayed as follows:
  - o Project not launched: 0% or no data -> Blue colour on the map.

- o Initiating Phase accomplished: DI < 25% -> Red colour on the map.
- o Planning Phase accomplished: 25% =< DI < 50% -> Orange colour on the map.
- o Executing Phase accomplished: 50% =< DI < 75% -> Light Green colour on the map.
- o In Production & Monitor & Control accomplished: 75% =< DI =< 100% -> Green colour on the map.

4   Analysis

4.1   Implementation of the regulatory functions

The regulatory functions of the TAP TSI have been implemented in full by TSGA, as seen in the picture below.

Table 6: Milestones for TAP TSI regulatory functions (as of 18/12/2019)

Milestone	Planned date	Actual date	Degree of fulfilment
Setup of the TSGA	30/09/2013	31/12/2016	100%
Setup of the Retail reference database	01/10/2014	31/08/2019	100%
Setup of the TAP TSI registry	01/10/2014	31/08/2019	100%
Setup of the Data quality tool	01/10/2014	31/08/2019	100%

The full Implementation Report delivered by TSGA is available at Annex 1.

In spring 2020 ERA tested the functions of the TSGA application. The detailed report is available in a separated document Test of the services of the TAP TSI governance association (TSGA).

4.2   Implementation of the functions according to the original consolidated TAP TSI Master Plan

The milestones for the TAP TSI consolidated Master Plan for the implementation of the individual functions of the TAP TSI are shown in Figure 5: TAP TSI Master Plan for the retail functions.
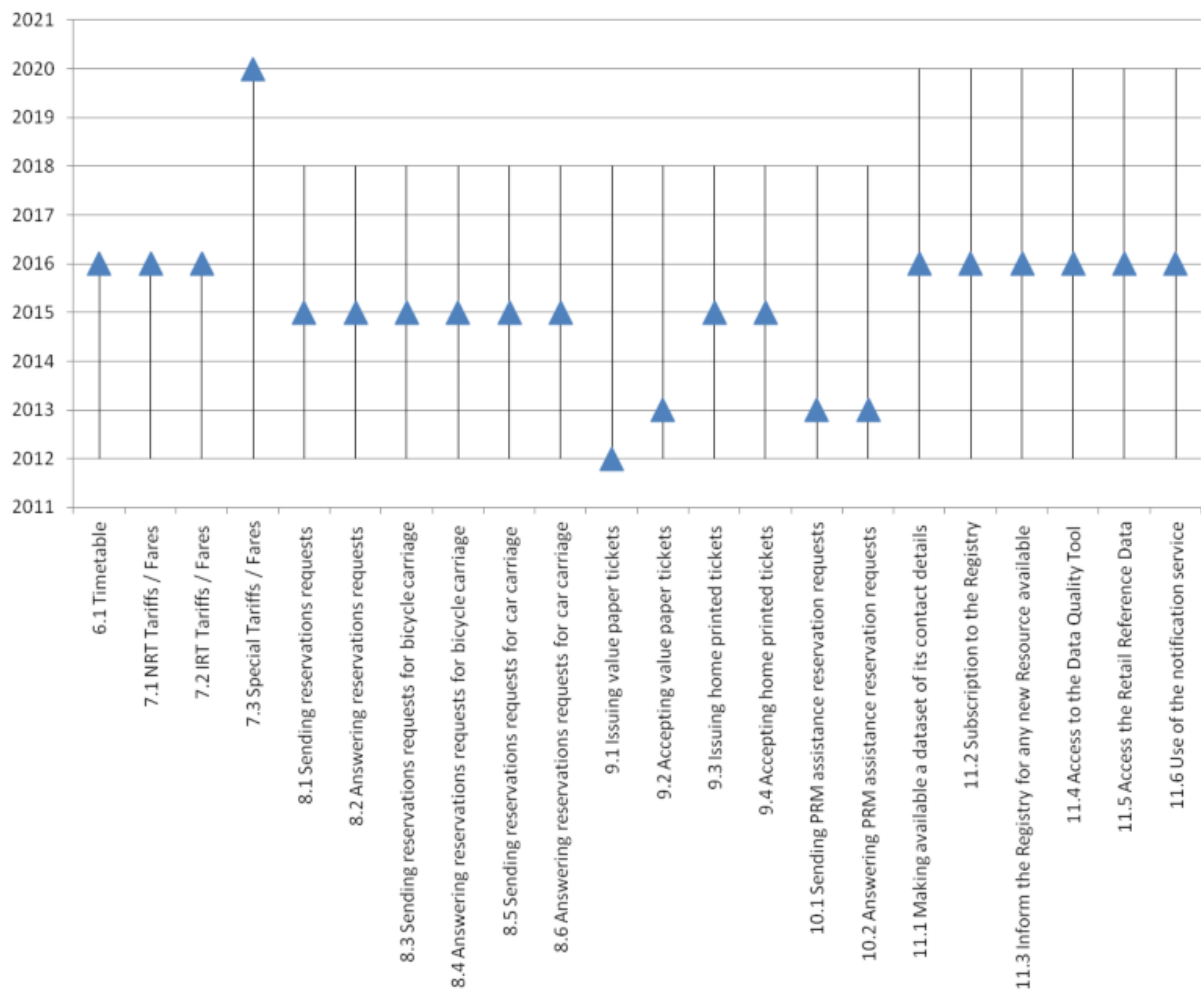
Figure 5: TAP TSI Master Plan for the retail functions

4.2.1 Process for the questionnaire

For the collection of the progress report for the implementation of the TAP TSI retail functions, ERA has drafted a questionnaire, based on the decisions in the TAP TSI co-operation group meeting from (13 October 2020). The calendar for the data collection and analysis has been agreed in last meeting and it was done as follows:

#	Step	Date
1	ERA send the request to update PM's ~~and market shares~~	23.10.2020
2	Update TAP TSI RU/TV PM list	12.11.2020
3	CSG send the questionnaire to ERA	N/A
4	ERA/JSG/CSG/ETTSA triggers reporting session	13.11.2020
5	Opening JSG/CSG tool for reporting	16.11.2020 – 11.12.2020

6	Analysing data for report	January 2021
7	Preparing JSG/CSG or ETTSA/ECTAA report	February 2021
8	Harmonising analysis with ERA	February 2021
9	Approving report JSG	February 2021
10	Presenting TAP TSI implementation report at ERA co-operation group	10.03.2021
11	Publishing implementation report	t.b.c.

Table 7: Reporting schedule for TAP TSI basic parameters (6th reporting)

In the meeting of the TAP TSI co-operation group on 13 October 2020 it has been agreed to report about the following TAP TSI retail basic parameters as described in Table 4: TAP TSI retail functions of the 7th reporting session

It has been further agreed not to collect the market shares of the railway undertakings, because of the uncertainty and the significant reduction of travelling due to the COVID-19 crisis, the marked shares are note reliable. Therefore the existing market shares from 2019 were taken.

The reporting campaign was held in November/December 2020. **83** companies reported to the report. The results of the reporting have been presented in the TAP TSI co-operation group meeting on 10 March 2021.

Since the previous reporting 40% of the invited RUs have answered (-8%). The weighting factor based on passenger-km at European level coming from the NCPs and EC data have been used, based on the marked shares from the last report. The calculation is considered reliable. The responding companies have covered the 80,4% of the European passenger-km rate, as almost in each member state the main RUs have replied. The market share has slightly decreased (-5%), as also the absolute number of companies replying (-9).

Because of the Covid-19 pandemic situation it was not possible to get for 2020 reliable market share figures of the individual contributing rail actors per member state. Therefor the data from the previous report have been used. Furthermore for the UK data from previous report have been used for this reporting.

The report reflects the state of play for the implementation of the TAP TSI end of 12/2020.

4.2.2 Results of the reporting for the TAP TSI retail basic parameters to be implemented by railway undertakings

The following chapter shows the results of the analysis of the data reported by the railway undertakings concerning the implementation of the TAP TSI retail basic parameters.

This 7th reporting is using the weighting factor based on *passengerkm* to secure better view of the status of the TAP implementation across Europe. The weighting factor has been calculated through the 2015 public service obligation market share data per company in each country and the *passengerkm* per country (source of data: European Commission – Statistical Pocketbook 2017). All reporting results for TAP TSI retail basic parameters are presented graphically through Chapter 4.2.2, considering both absolute number of companies and weighting factor (market share of companies according to *passengerkm*), shown in brackets in each graph.

If market share of responsive companies would be considered, than 80% of European market share is covered with this TAP implementation report, as shown at following diagram:

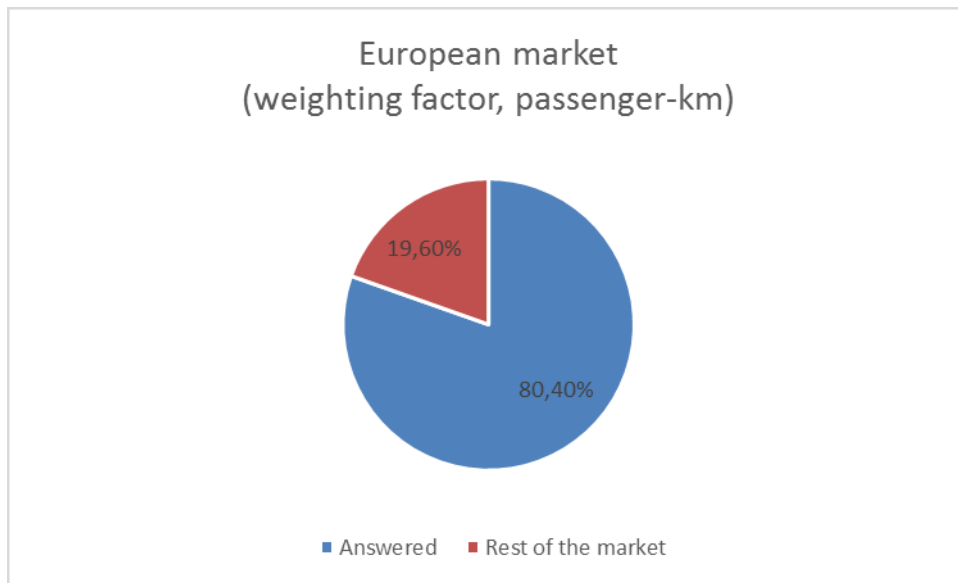*Figure 6: Reporting session 2020 participation per weighting factor (market shares according to passenger-km)*

The following diagram shows the answer rate of the questionnaire.
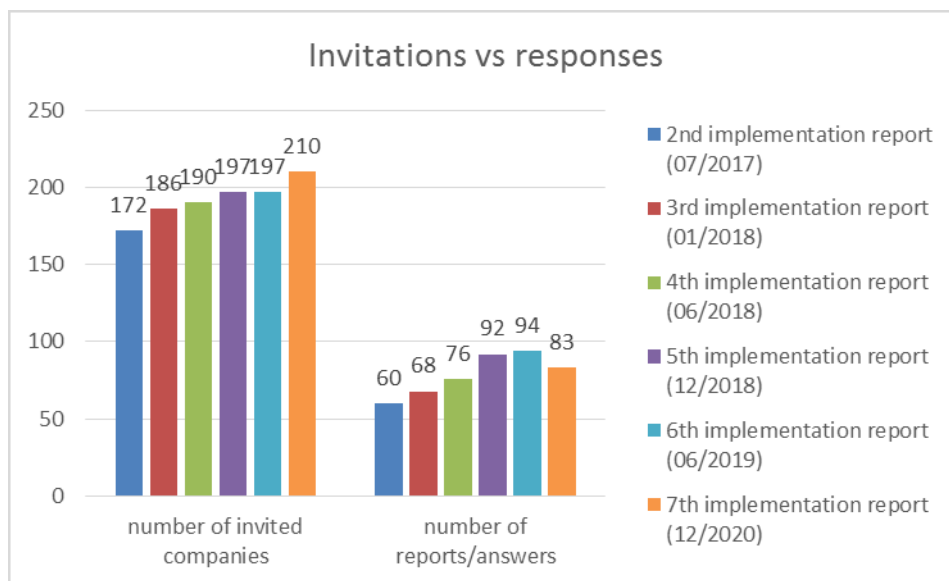

Figure 7: Number of invitations and responses per implementation report

The response rate, calculated as number of received reports in relation to the number of companies invited, is shown at the following diagram:
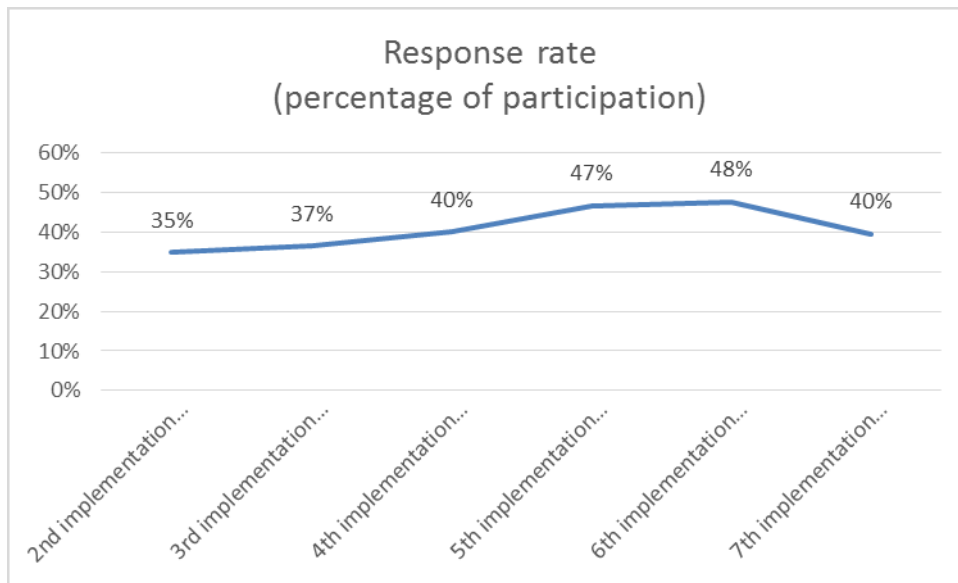
Figure 8: Evolution of response rate vs invited companies

Between 2nd and 6th reporting session the number of responses was slowly increasing by 8 per reporting session, similar as overall answer rate increased from 35% (2nd report) to 48% (6th report). Unfortunately for the 7th report the response rate has been reduced again to 40% even the number of companies contacted for the report, has not been significantly increased. However, the overall number of responses and overall answer rate should be improved by focusing on the member states which did not provide any feedback on invitation or did not provide any contact data for existing RUs, which are obliged to TAP implementation.

The following diagram shows the distribution of answers concerning the request. The RUs from 16 countries (15 member states plus Switzerland) have submitted their responses to the implementation progress of the TAP TSI retail basic parameters.
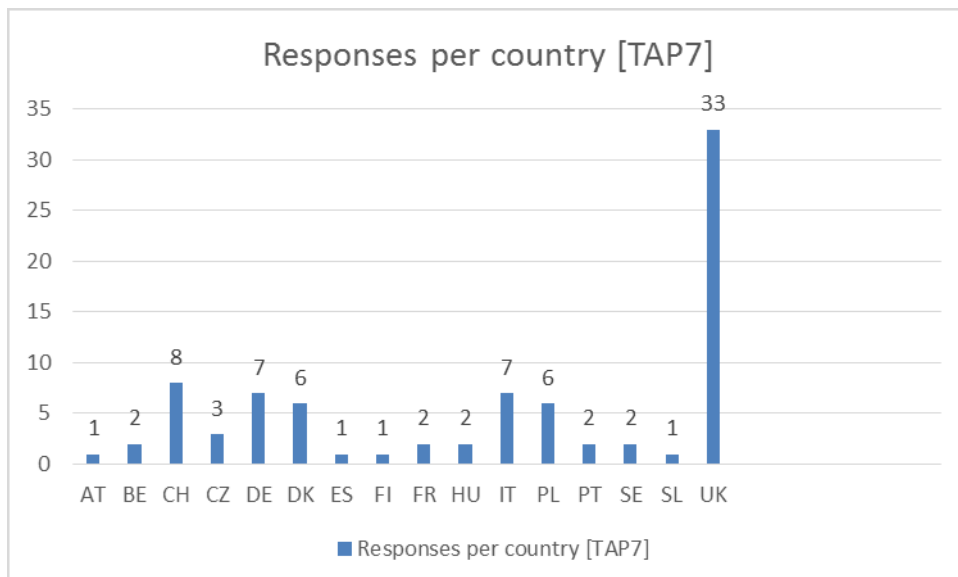
Figure 9: Number of responses per country

The following diagram shows the number of companies which didn't provide any contact data via NCP network, so those companies could not receive any invitation to provide the report. In the following data there is a potential to secure better response rate for future reporting sessions, through NCP cooperation.

By comparing the market share of responsive companies with the number of companies responded, it is reasonable to conclude that majority of companies without contact data being available belong to small RUs.

Figure 10: Number of TAP obliged companies without contact data provided

11 member states could not secure any answers from the RUs operating under their jurisdiction, as shown at the following table:

Table 8: Countries without response with numbers of invited companies[3]

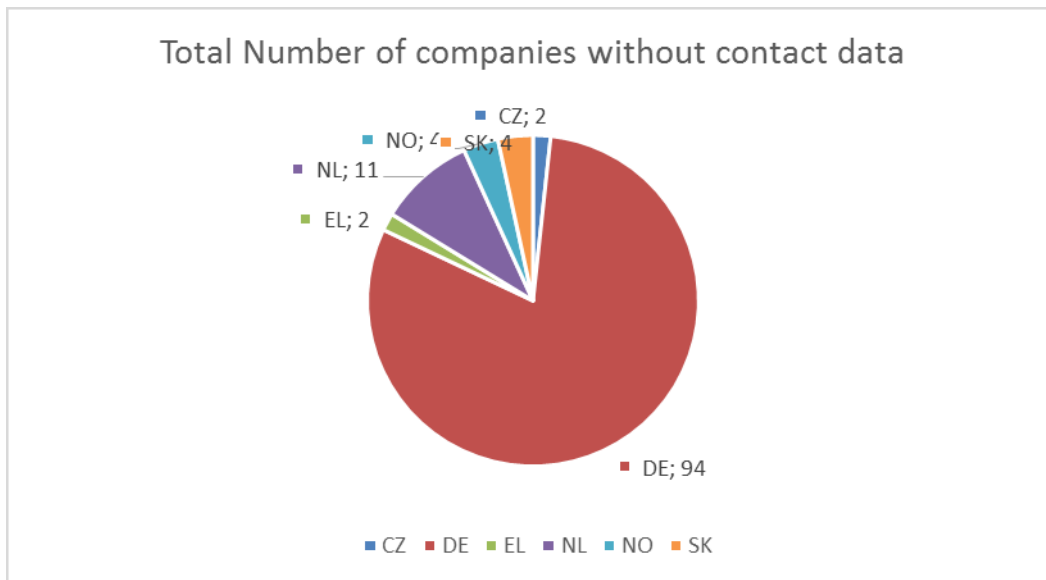| Country	Invitations sent	Invitations Answered	Invitations not answered	Total number of known RUs per country	RUs without contact data
AT	10	1	9	10	
BE	2	2	0	2	
BG	1	0	1	1	
CH	8	8	0	8	
CZ	20	3	17	22	2
DE	46	7	39	140	94
DK	6	6	0	6	
EE	2	0	2	2	
EL	0	0	0	2	2
ES	1	1	0	1	
FI	1	1	0	1	
FR	2	2	0	2	
HR	1	0	1	1	
HU	4	2	2	4	
IE	1	0	1	1	
IT	19	7	12	19	
LT	1	0	1	1	
LU	1	0	1	1	
LV	2	0	2	2	
NL	1	0	1	12	11
NO	0	0	0	4	4
PL	11	5	6	11	
PT	2	2	0	2	
RO	9	0	9	9	
SE	8	2	6	8	
SI	1	0	1	1	
SK	2	0	2	6	4
UK	36	33	3	36	

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[3] Number of invited companies in EL and NO is zero because there was not any company contact provided

The following diagram shows the distribution of the invitations and the answers received per country (EU member states + Switzerland and Norway).

Table 9: Invitations and responses per country
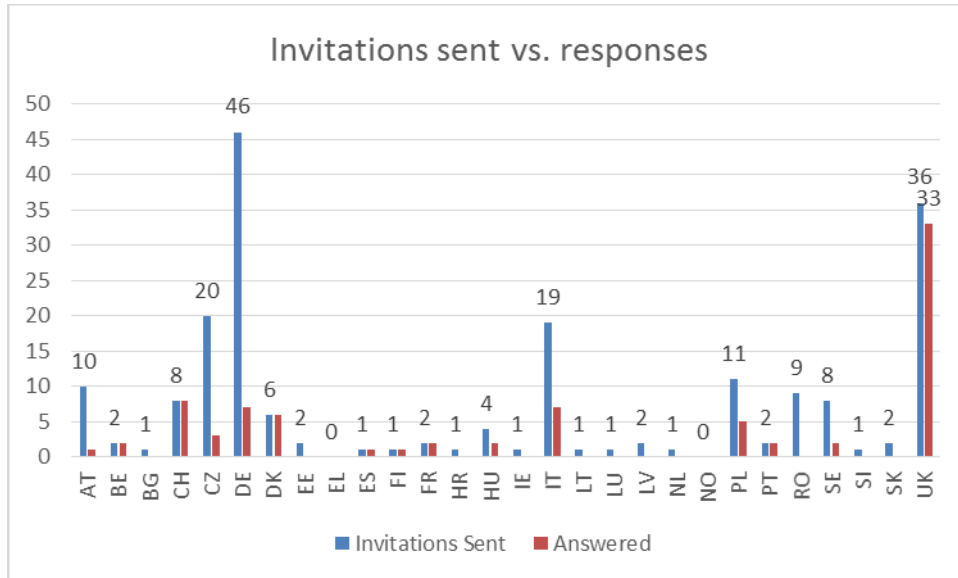
Explanation of the diagrams about the implementation progress per function:

For the explanation of the implementation progress of the TAP TSI basic parameters, the same diagrams are used to make the results comparable. The values shown in the diagrams are explained in as follows:

The first diagram shows the companies subject to the implementation of a specific TAP TSI function and the standards used or planned to be used for the implementation.
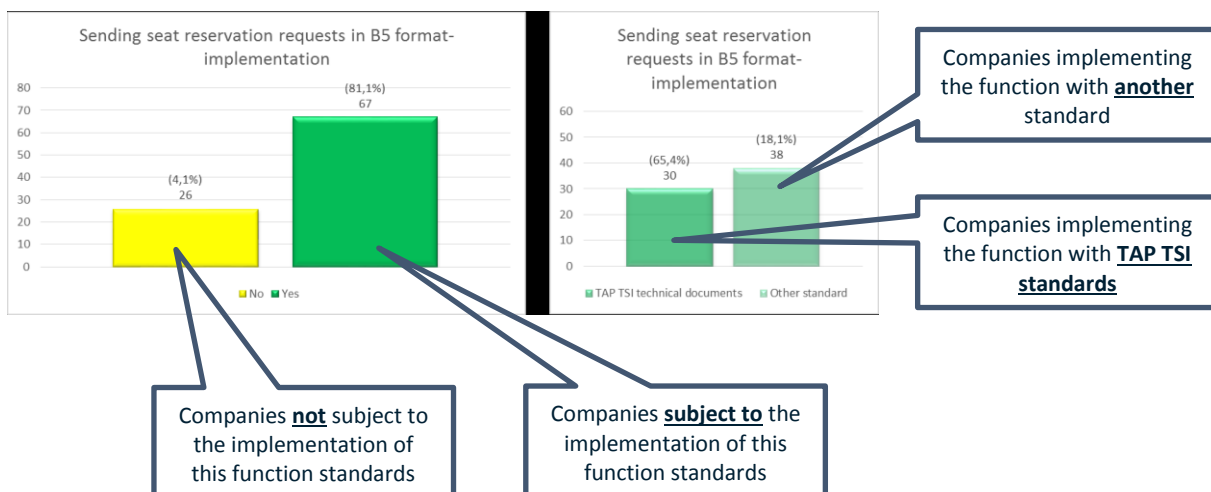
The second diagram shows the progress of the implementation of a specific function depending on the state of the implementation project. The number of completed implementations using TAP TSI technical documents is shown.
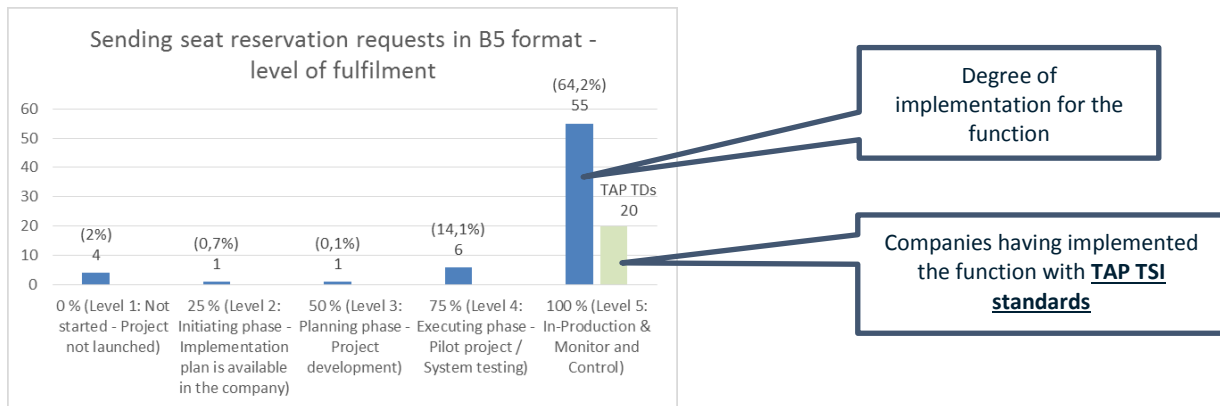
4.2.2.1 Sending reservation requests from agreed RU`s and agreed 3rd parties in B5 format (TAP TSI basic parameter 4.2.9.1)

Figure 11: Sending seat reservation requests in B5 format: subject to the implementation (Y/N), [number of responses (% based on European passenger per km factor][4]

62 companies confirmed, that they are subject to implement this basic parameter. Companies not subject to the implementation of this basic parameter stated, that they either have no seat reservation system at all (e.g. for local traffic operation only) or they are using direct links to the systems of those other railway undertakings for seat reservation.

The implementation of the sending seat reservation request by standards other than TAP TSI is mainly driven by UK, where all responding UK RU's (33) are using those other standards.

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[4] 1 RU declared implementation by using both TAP TSI technical documents and other standards.

Figure 12: Sending seat reservation requests in B5 format – level of fulfilment,
[number of responses % based on European passenger per km factor]

The implementation status of the function "Sending reservation requests" is low, considering number of companies. Taking into account the amount of 33 UK based companies implementing the seat reservation by their own domestic standard and which declared full implementation, only 18 European companies have fully implemented the function according to TAP TSI standards.

However, considering market shares of companies, the implementation level looks better than observing just absolute number of companies. 76% of European railway market declared to be subject of implementation and 60% are part of implementation process according to TAP TSI standards.

The main problems seen by the implementers were the need for internal IT redesign and the stability of the TAP TSI baseline documents.

The declared problem "Stability of TAP TSI baseline documents" has to be checked in detail, because only few changes were introduced in the documents since the publication of the TAP TSI in 2011.

4.2.2.2 Answering reservation requests from agreed RU`s and agreed 3rd parties in B5 format (TAP TSI basic parameter 4.2.9.2)
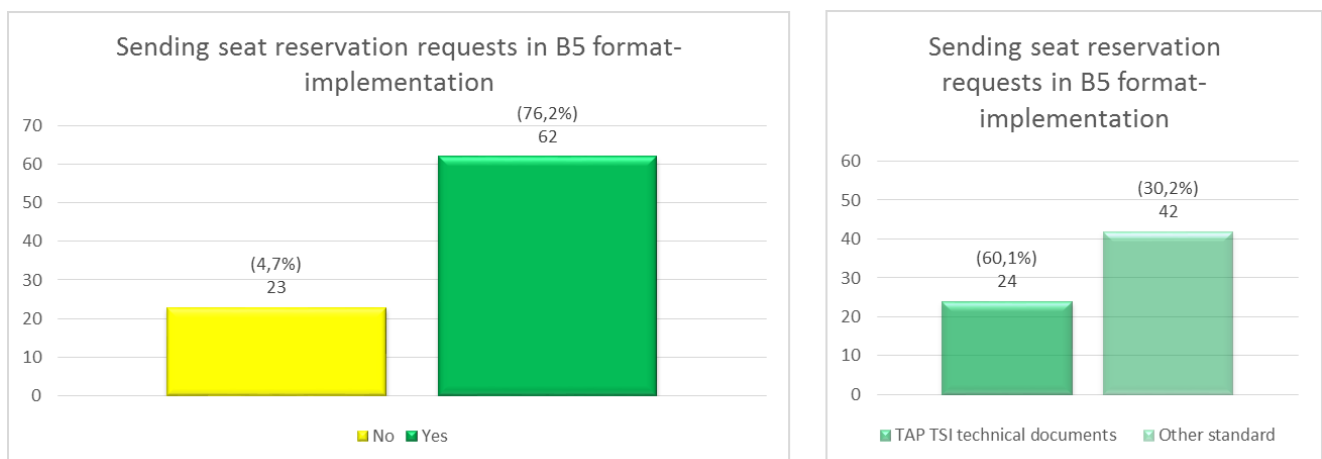

**Figure 13: Answering seat reservation requests in B5 format: subject to the implementation (Y/N),
[number of responses % based on European passenger per km factor]**

59 companies reported that they are subject to implementation of this function. 23 out of them have implemented the function using TAP TSI standards. The implementation of the answering reservation request by standards other than TAP TSI is mainly driven by UK, where all 33 RUs are using standards other than TAP TSI.
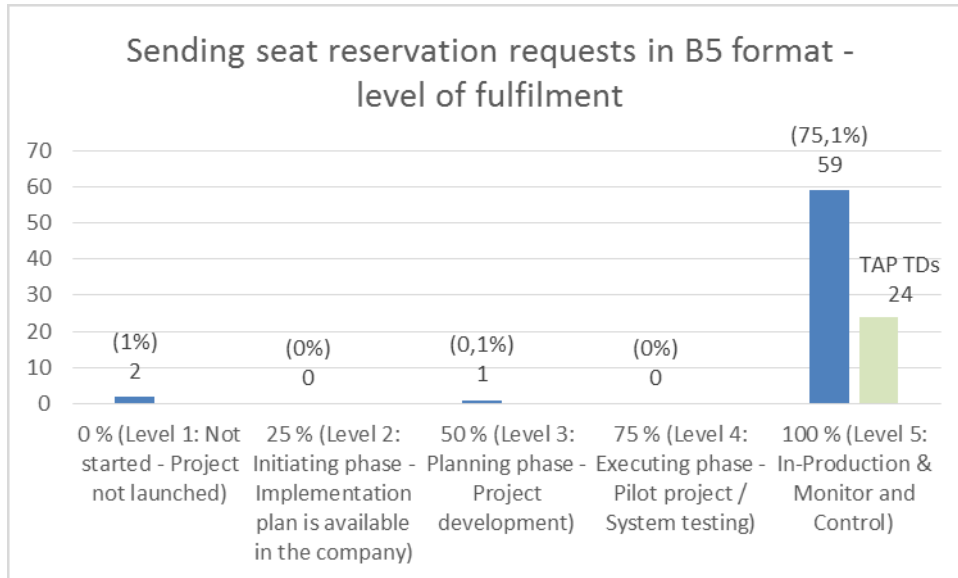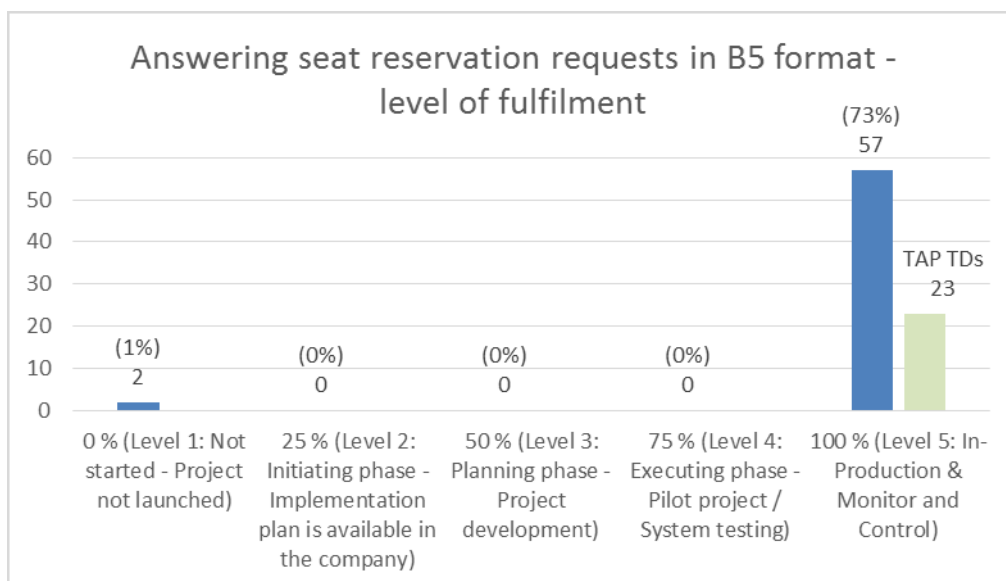

**Figure 14: Answering seat reservation requests in B5 format – level of fulfilment,
[number of responses (% based on European passenger per km factor]**

The main problems of the implementation of the TAP TSI basic parameter "Answering seat reservation request" are the dependency on other reservation systems, possible technical limitations and stability of the TAP TSI baseline. Other problems, such as need of internal IT redesign less emphasized.

The implementation status of the function "Answering seat reservation requests" for those companies is low, considering number of companies. 23 companies have reported that they are subject to the implementation this function and that they have fully implemented this function according to TAP TSI technical documents.

Most of the other companies are not offering seat reservations in their trains and do not implement therefore the function to answer to reservation messages. Furthermore, some member states, e.g. UK, have agreed to use national industry specifications for requesting and responding to reservation requests.

However, considering market shares of companies, the implementation level looks better than observing just absolute number of companies. 73% of European railway market declared to be subject of implementation and 58% are part of implementation process according to TAP TSI standards.

4.2.2.3   Sending reservation requests for bicycle carriage to agreed RU`s in B5 format (TAP TSI basic parameter 4.2.7.2.)
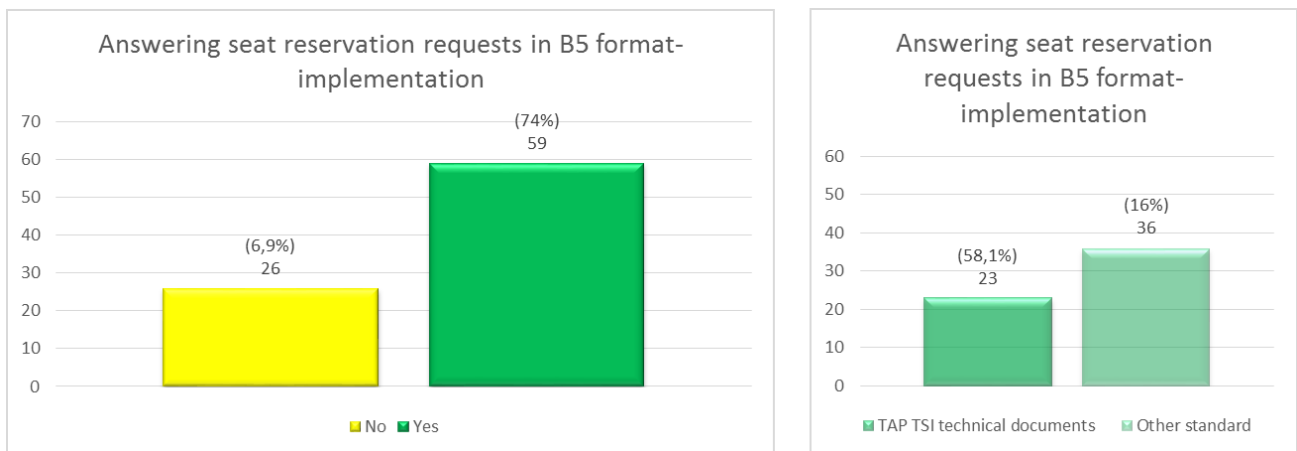

Figure 15: Sending reservation requests for bicycle carriage in B5 format: subject to the implementation (Y/N), [number of responses % based on European passenger per km factor]

Only 27 companies confirmed, that they are subject to implement this basic parameter.
Companies not subject to the implementation of this basic parameter stated, that they either have no bicycle reservation system at all (e.g. for local traffic operation only) or they are using direct links to the systems of those other railway undertakings for seat reservation. Some member states, have agreed to use national industry specifications for requesting and responding to reservation requests.
The implementation of the sending reservation request for bicycle carriage by other standards is marginal both in absolute number of companies (5) and in market share number (2%).

Figure 16: Sending reservation requests for bicycle carriage in B5 format – level of fulfilment,
[number of responses (% based on European passenger per km factor]

All 21 companies which reported full implementation of this function declared that they have fully implemented it in accordance to TAP TSI technical documents.

4.2.2.4 Answering reservation requests for bicycle carriage from agreed RU`s and agreed 3rd parties in B5 format (TAP TSI basic parameter 4.2.7.3.)
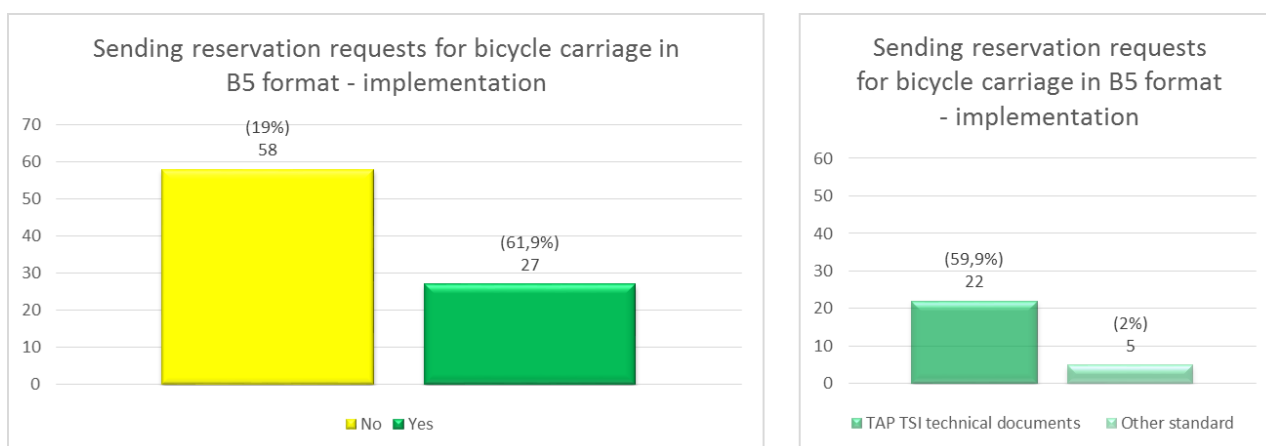

Figure 17: Answering reservation requests for bicycle carriage in B5 format: subject to the implementation (Y/N),
[number of responses (% based on European passenger per km factor]

Only 26 companies confirmed, that they are subject to implement this basic parameter.
Companies not being subject to the implementation of this basic parameter stated, that they either have no bicycle reservation system at all (e.g. for local traffic operation only) or they are using direct links to the systems of those other railway undertakings for seat reservation.
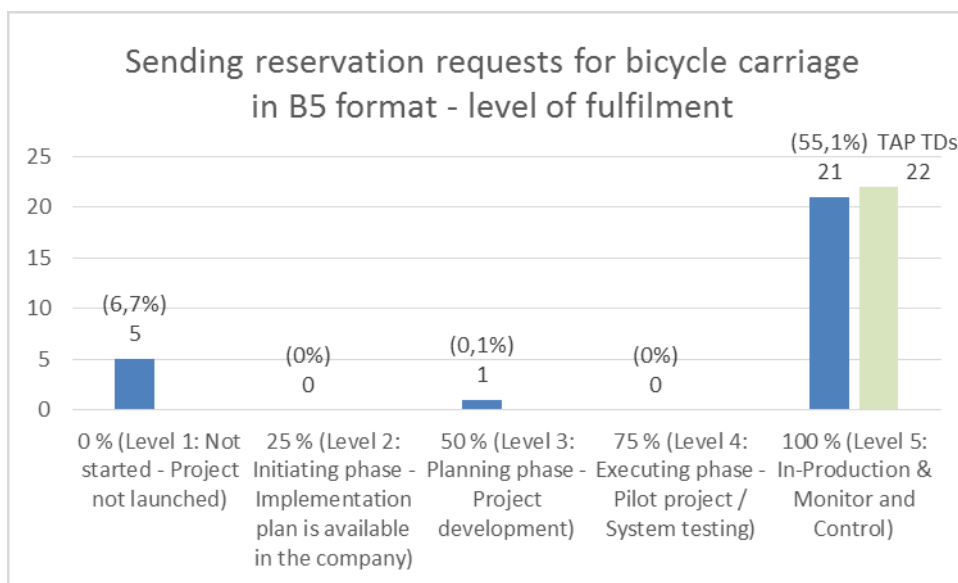
Figure 18: Answering reservation requests for bicycle carriage in B5 format – level of fulfilment,
[number of responses (% based on European passenger per km factor]

The main problems of the implementation of the TAP TSI basic parameter "Answering reservation request for bicycle carriage" are the dependency on other reservation systems, the possible technical limitations and the stability of the TAP TSI baseline. Further problems are minor ones.

Although only 26 companies have reported that they are subject to the implementation of this function, the implementation level from perspective of market shares looks better than observing just absolute number of companies. 61% of European railway market declared to be subject of implementation and 58% are part of implementation process according to TAP TSI standards.

Most of the other companies are not offering bicycle reservations in their trains and do not implement the function to answer to reservation messages.

4.2.2.5 Sending reservation requests for car carriage to agreed RU`s in B5 format (TAP TSI basic parameter 4.2.8.2.)
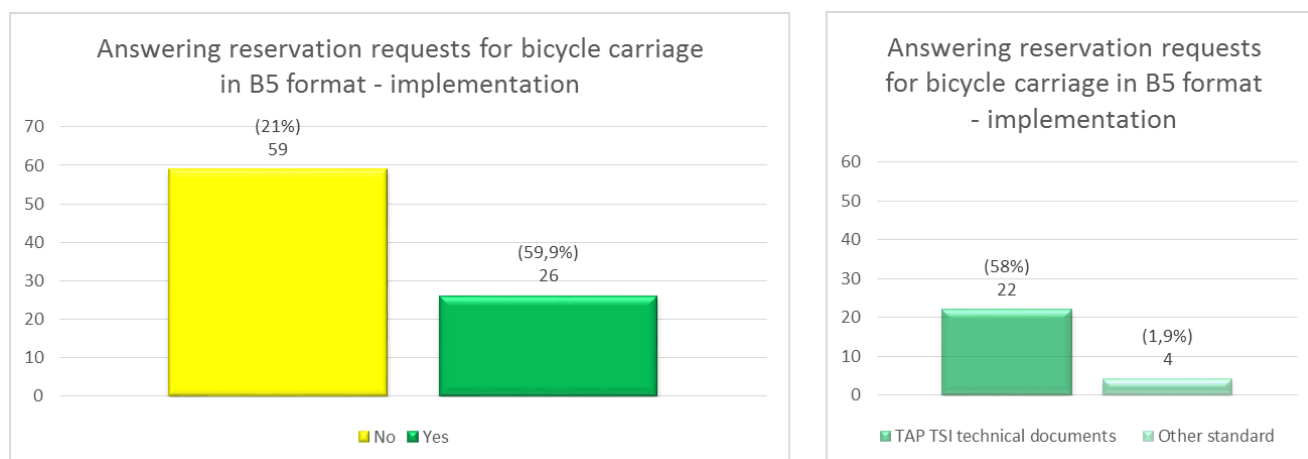

Figure 19: Sending reservation requests for car carriage in B5 format: subject to the implementation (Y/N),
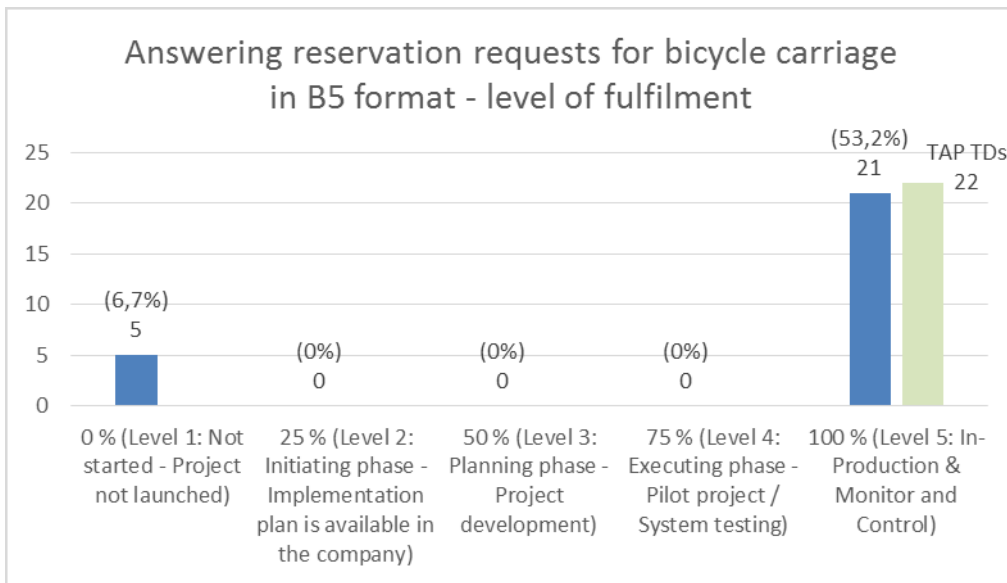*[number of responses (% based on European passenger per km factor]*
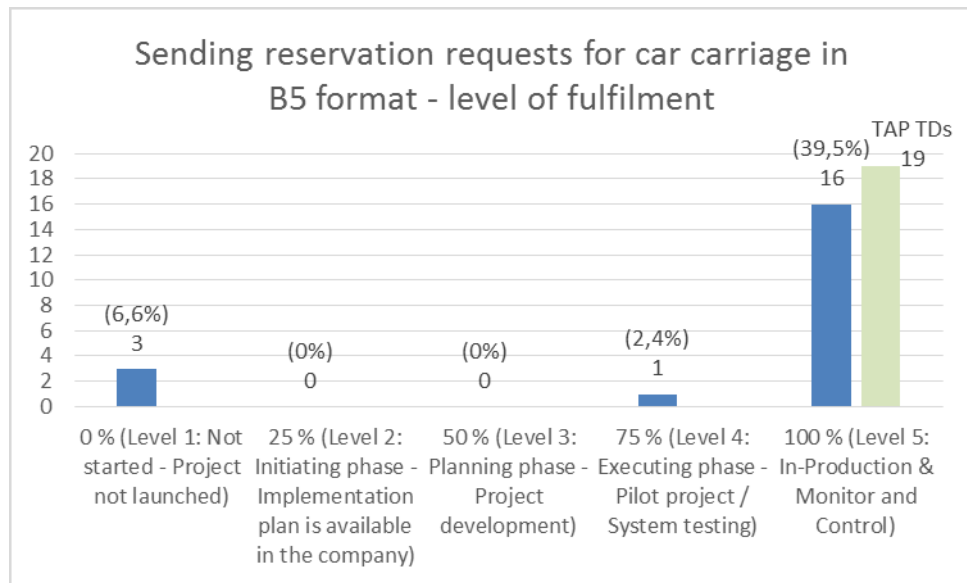
Figure 20: Sending reservation requests for car carriage in B5 format – level of fulfilment,
[number of responses (% based on European passenger per km factor]

The main problems of the implementation of the TAP TSI basic parameter "Sending reservation request for car carriage" are dependency on other reservation systems, lack of financial resources and possible technical limitations.

The implementation status of the function "Sending reservation requests for car carriage" is low, considering number of companies. Considering market shares of companies, 48% of European railway market declared to be subject of implementation and 48% are part of implementation process according to TAP TSI standards.

Most of the other companies are not offering car reservations for their trains at all (e.g. no operation of car-carrying trains, regional trains only) and have not implemented a reservation system including the reservation request for cars in their distribution systems.

4.2.2.6 Answering reservation requests for car carriage from agreed RU`s and agreed 3rd parties in B5 format (TAP TSI basic parameter 4.2.8.3.)
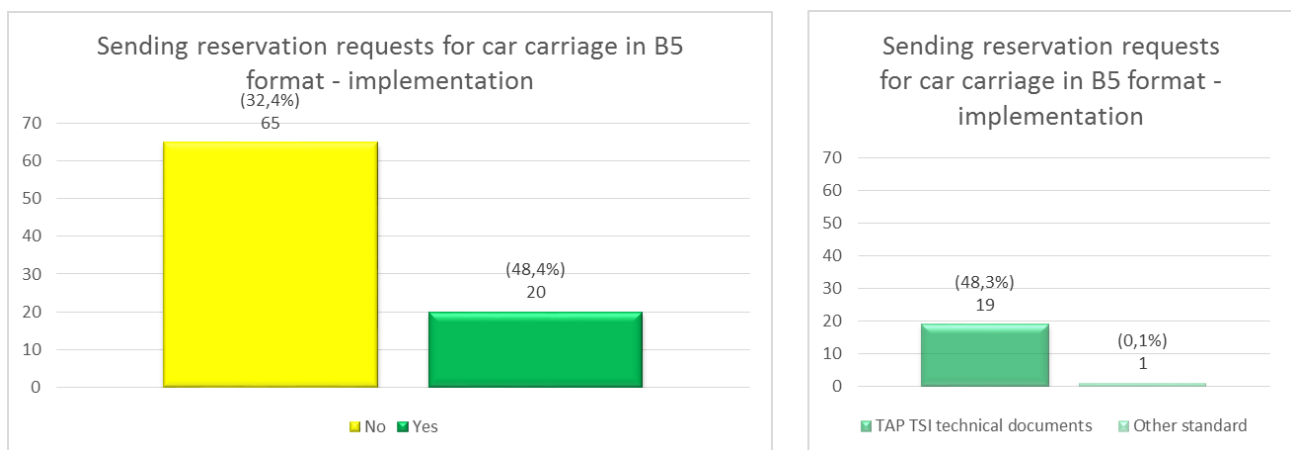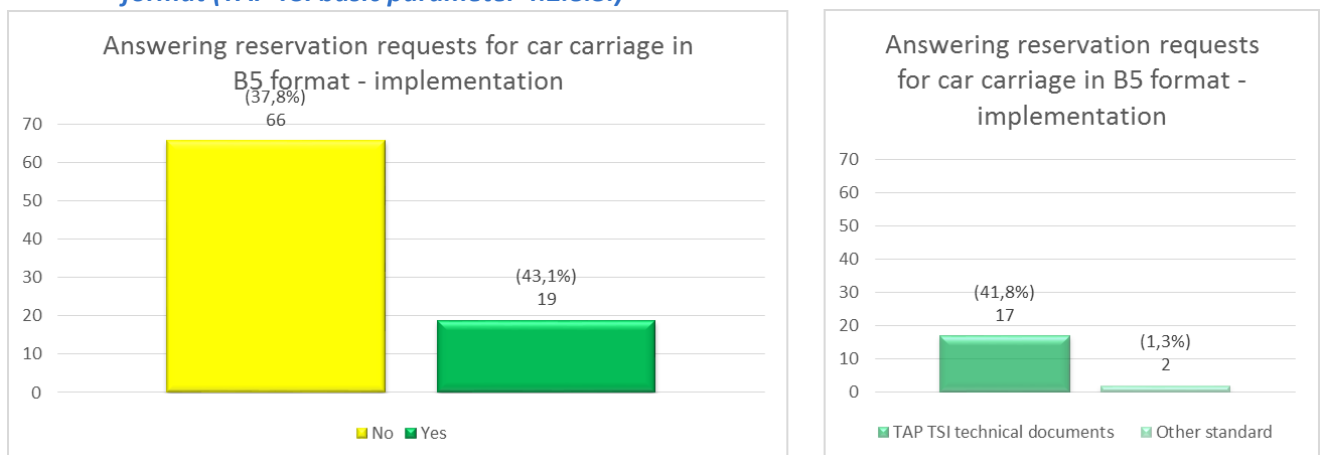

Figure 21: Answering reservation requests for car carriage in B5 format: subject to the implementation (Y/N),
[number of responses (% based on European passenger per km factor]

Only 19 companies reported to be subject to implementation of this basic parameter, where 17 of them are using TAP TSI standards, while 2 companies declared usage of other standards.
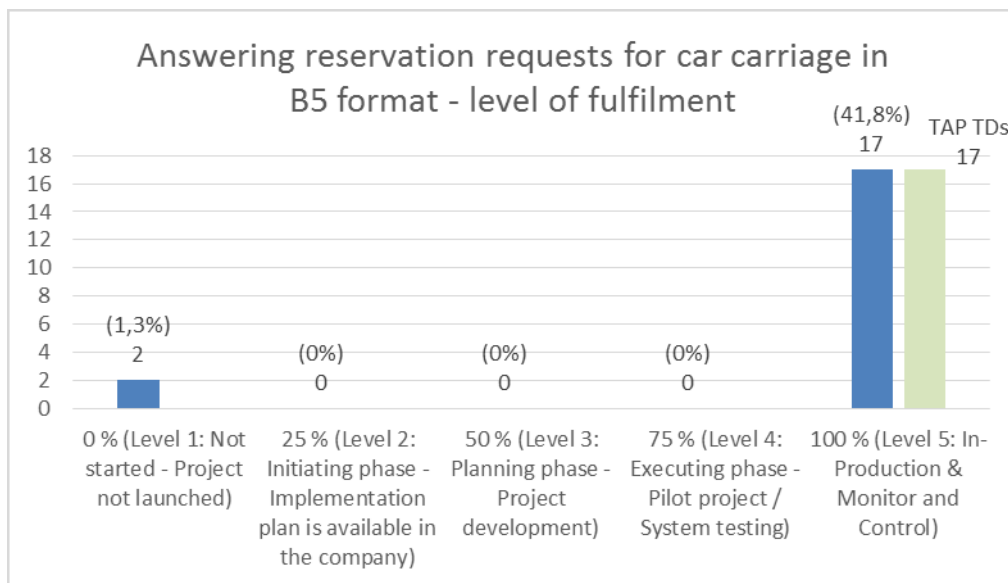
Figure 22: Answering reservation requests for car carriage in B5 format – level of fulfilment,
[number of responses (% based on European passenger per km factor]

The main problems of the implementation of the TAP TSI basic parameter "Answering reservation request for car carriage" are dependency on other reservation systems, possible technical limitations, lack of financial resources and stability of the TAP TSI baseline.

The implementation status of the function "Answering reservation requests for car carriage" is low, considering number of companies. Considering market shares of companies, 42% of European railway market declared to be subject of implementation and 42% are part of implementation process according to TAP TSI standards. This function is fully implemented by 17 companies. Most of the other companies are not offering car carriage reservations in their trains and do not implement the function to answer to reservation messages.

4.2.2.7   Issuing value paper tickets for international and foreign sales in B6 format (TAP TSI basic parameter 4.2.11.1.)

Figure 23: Issuing value paper tickets in B6 format: subject to the implementation (Y/N),
[number of responses (% based on European passenger per km factor]

30 companies reported they are subject to the implementation of this basic parameter. 32 of these companies are using TAP TSI technical documents to issue value paper tickets. RUs in the following member states reported to use standards other than TAP TSI to issue value paper tickets: AT, CZ, SK, IT and PL. It must

be elaborated for which purposes (e.g. domestic tickets, regional cross-border traffic and manually issued international tickets) those other standards are allowed to be used for international ticketing.

Figure 24: Issuing value paper tickets in B6 format – level of fulfilment,
[number of responses (% based on European passenger per km factor]

In terms of market shares, marginal part of railway market declared any problems regarding the implementation of the TAP TSI basic parameter "issue value paper tickets". The biggest share of declared problems belongs to the need for internal IT redesign.

The implementation status of the function "Issuing value paper tickets for international and foreign sales in B6 format" is low, considering absolute number of companies. However, considering market shares of companies, the implementation level looks better as 63% of European railway market declared to be subject of implementation and 62% are part of implementation process according to TAP TSI standards.

4.2.2.8 Accepting value paper tickets for international and foreign sales in B6 format (TAP TSI basic parameter 4.2.11.1.)
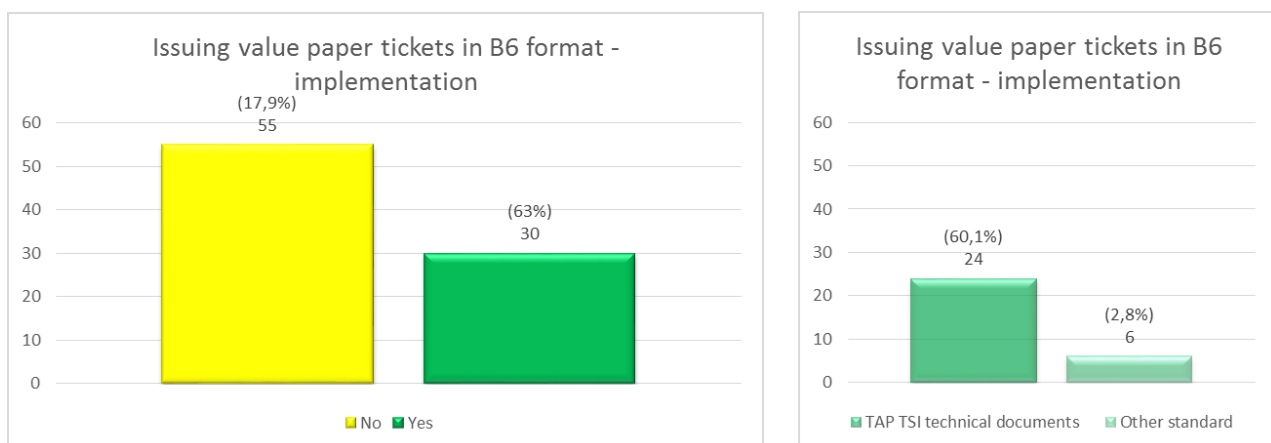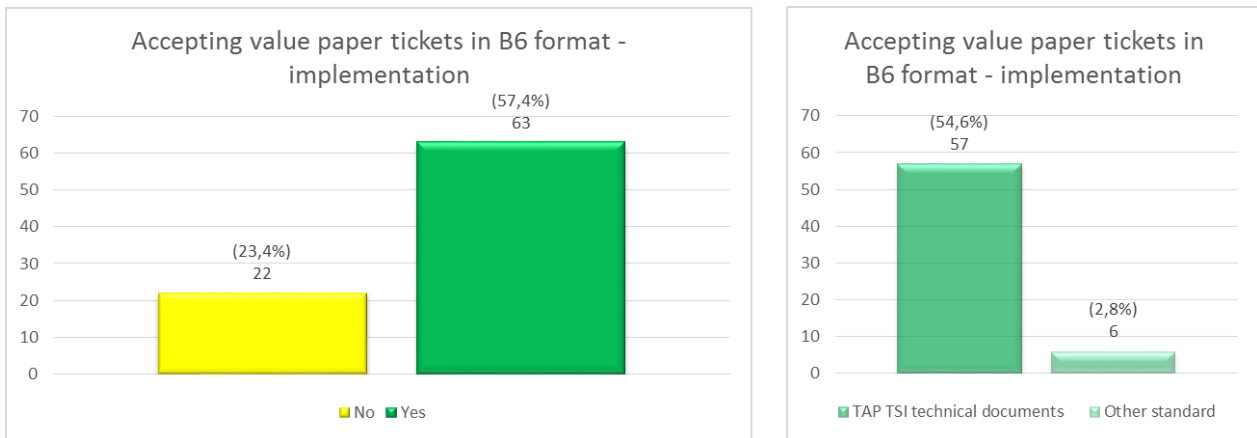

Figure 25: Accepting value paper tickets in B6 format: subject to the implementation (Y/N), [number of responses (% based on European passenger per km factor]

The implementation status of the function "Accepting value paper tickets for international and foreign sales in B6 format" is good, both from aspect of absolute numbers of RUs and from market share aspect. Most of the companies have reported that they are subject to the implementation this function and they have implemented it.

However, the implementation of the acceptance of those tickets has to be part of a commercial agreement between the parties.

Considering market shares of companies, the implementation level analysis showed that 58% of European railway market declared to be subject of implementation and 55% are part of implementation process according to TAP TSI standards.
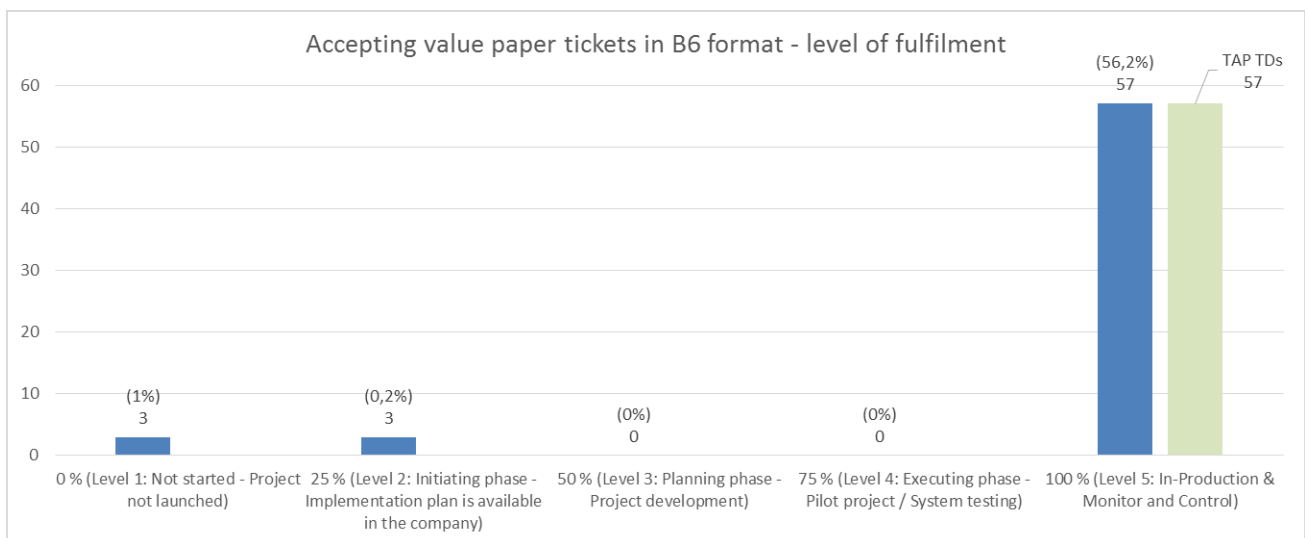
Figure 26: Accepting value paper tickets in B6 format – level of fulfilment, [number of responses (% based on European passenger per km factor]

In terms of market shares, very small part of railway market declared any problems regarding the implementation of the TAP TSI basic parameter "accepting value paper tickets". Majority of declared problems are related to dependency on other reservation systems and the lack of implementation benefit.

The problem "Dependency on other retail systems" has to be elaborated in more detail: This problem seems not to be valid for ERA. The tickets printed on security paper can be accepted without any interactions with an IT system of any railway undertaking. The security of the tickets in ensured through printing on a specific security background[5]. Value paper tickets can be checked without any interaction with IT-systems. So, there is no need at all to connect those systems to accept those tickets and the problem is not evident at all.

4.2.2.9 *Issuing home printed tickets for international and foreign sales in B7 format (TAP TSI basic parameter 4.2.11.2.)*

Figure 27: Issuing home paper tickets in B7 format: subject to the implementation (Y/N),
[number of responses (% based on European passenger per km factor][6]
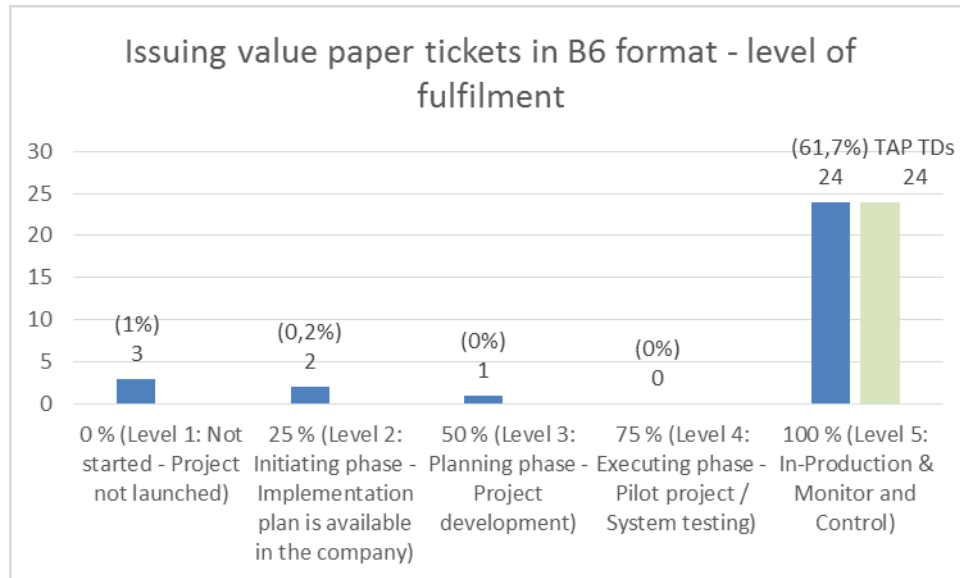

Figure 28: Issuing home paper tickets in B7 format – level of fulfilment,
[number of responses (% based on European passenger per km factor]

In terms of market shares, very small part of railway market declared any problems regarding the implementation of the TAP TSI basic parameter "issuing home paper tickets in B7 format". RUs declared various problems in similar weight. One of declared problems is "Stability of TAP TSI baseline documents"

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[5] See MRT Ticketing manual https://www.cit-rail.org/en/passenger-traffic/cit-documentation/

[6] 1 RU declared implementation by using both TAP TSI technical documents and other standards.

but this problem has to be checked in detail, because only few changes were introduced in the documents since the publication of the TAP TSI in 2011.

The implementation status of the function "Issuing home printed tickets for international and foreign sales in B7 format" is low, considering number of companies. However, considering market shares of companies, the implementation level looks better as 56% of European railway market declared to be subject of implementation and 54% are part of implementation process according to TAP TSI standards.

From companies which declared not to be subject of implementation, most of them declared they are not offering home printed tickets. However, the implementation of the acceptance of those tickets by both parties has to be part of a commercial agreement between them.

Those tickets are widely not issued by several undertakings:

- Currently we do not adopt this ticketing method.
- No GB TOC issues international tickets.
- local RU-P and does not sell international tickets at all

4.2.2.10 Accepting home printed tickets for international and foreign sales in B7 format (TAP TSI basic parameter 4.2.11.2.)
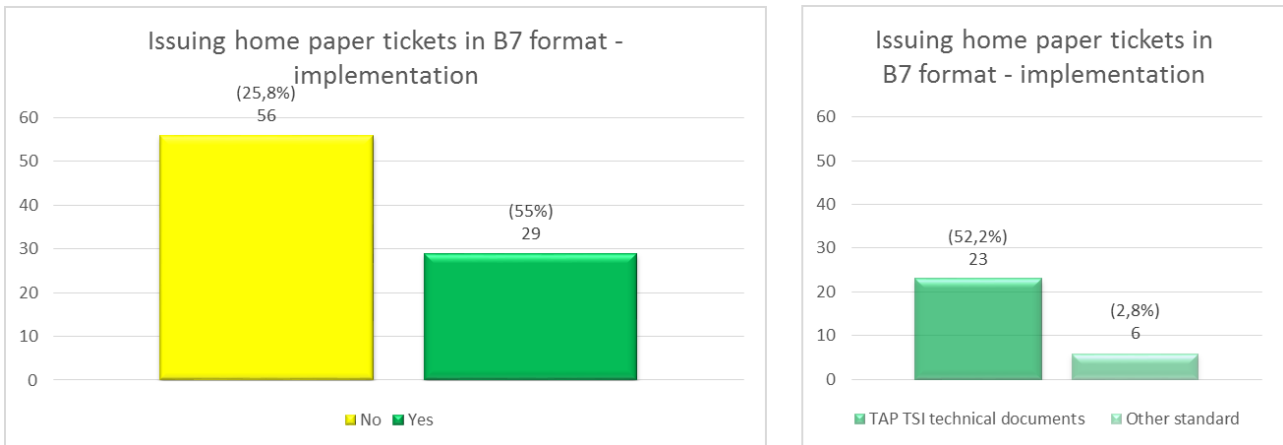

Figure 29: Accepting home paper tickets in B7 format: subject to the implementation (Y/N), [number of responses (% based on European passenger per km factor]
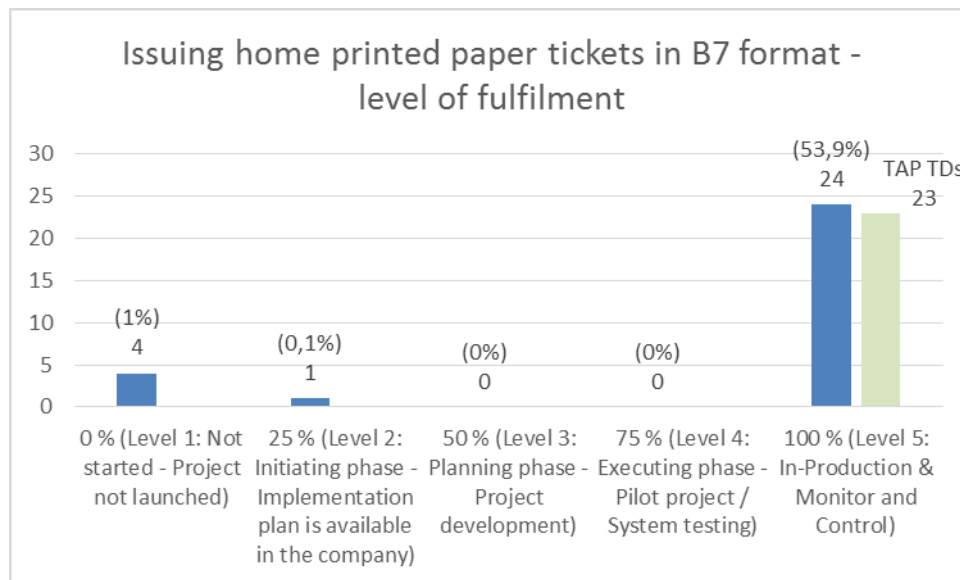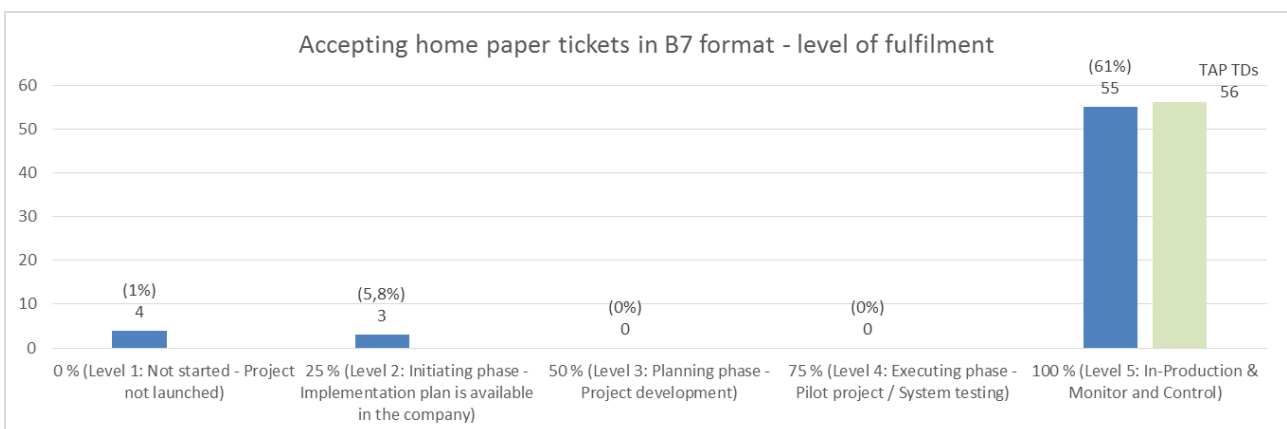

Figure 30: Accepting home paper tickets in B7 format – level of fulfilment, [number of responses (% based on European passenger per km factor]

The main problems of the implementation of the TAP TSI basic parameter "accepting home printed tickets" are dependency on other reservation systems and need for internal IT redesign.

The implementation status of the function "Accepting home printed tickets for international and foreign sales in B7 format" is good, considering number of RUs being subject to implementation of this function according to TAP TSI documents and according to level of fulfilment. Considering market shares of companies, the implementation level analysis showed that 68% of European railway market declared to be subject of implementation and 65% are part of implementation process according to TAP TSI standards.

Most of the RUs which declared not to be subject of implementation are not accepting home printed tickets. However, the implementation of the acceptance of those tickets has to be part of a commercial agreement between the parties.

4.2.2.11   Sending PRM assistance reservation requests via IT communication to agreed RU`s, IM's and SM's in B10 format (TAP TSI basic parameter 4.2.6.2.)
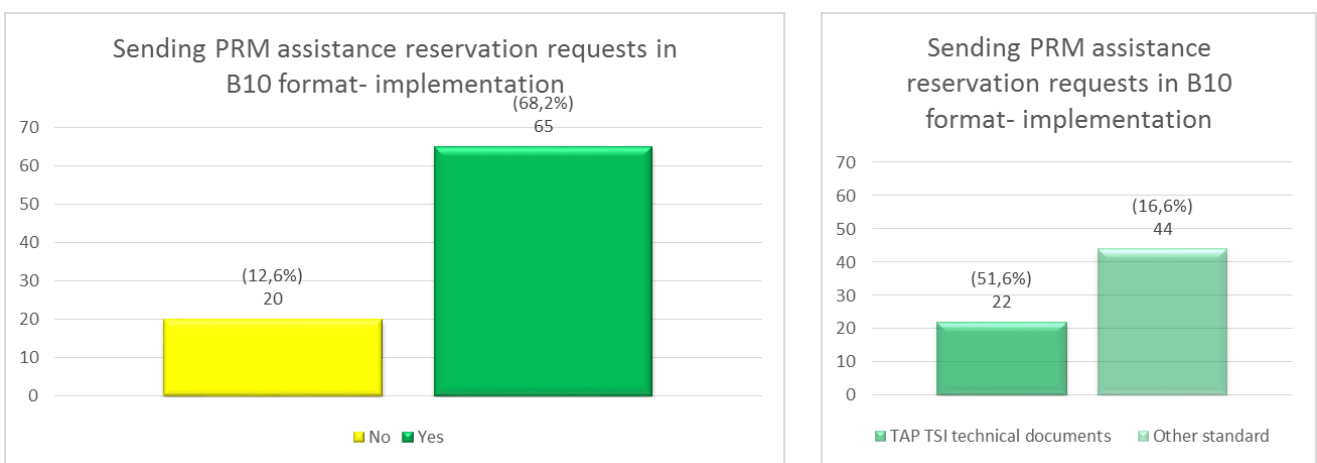
Figure 31: Sending PRM assistance reservation requests in B10 format: subject to the implementation (Y/N), [number of responses (% based on European passenger per km factor]
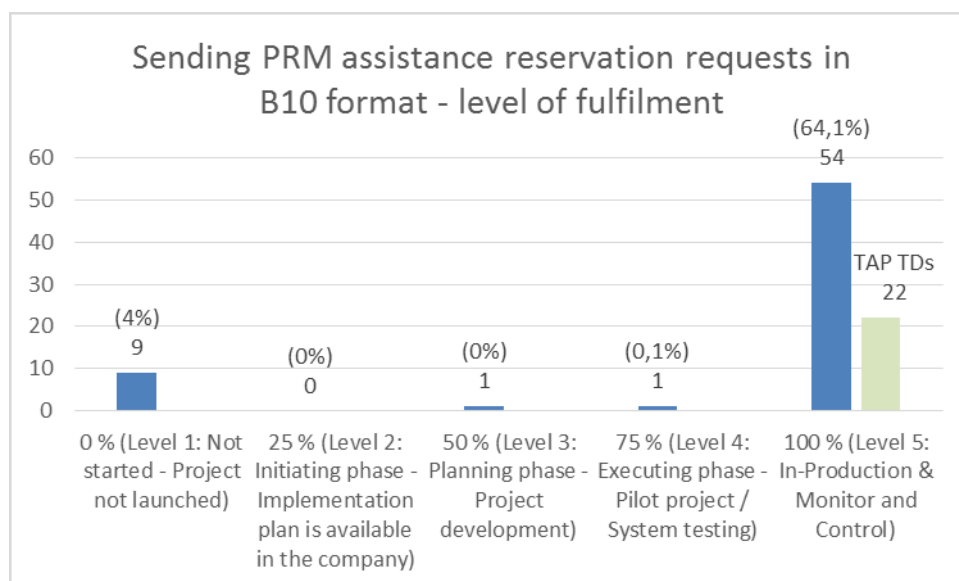
Figure 32: Sending PRM assistance reservation requests in B10 format: level of fulfilment, [number of responses (% based on European passenger per km factor]

The function "Sending PRM assistance reservation requests via IT communication to agreed RU`s, IM's and SM's in B10 format" has been fully implemented by 54 companies (64% of European market).

68% of European railway market declared to be subject of implementation and 52% are part of implementation process according to TAP TSI standards.

4.2.2.12 Answering PRM assistance reservation requests via IT-communication from agreed RU`s and agreed 3rd parties in B10 format (TAP TSI basic parameter 4.2.3.)
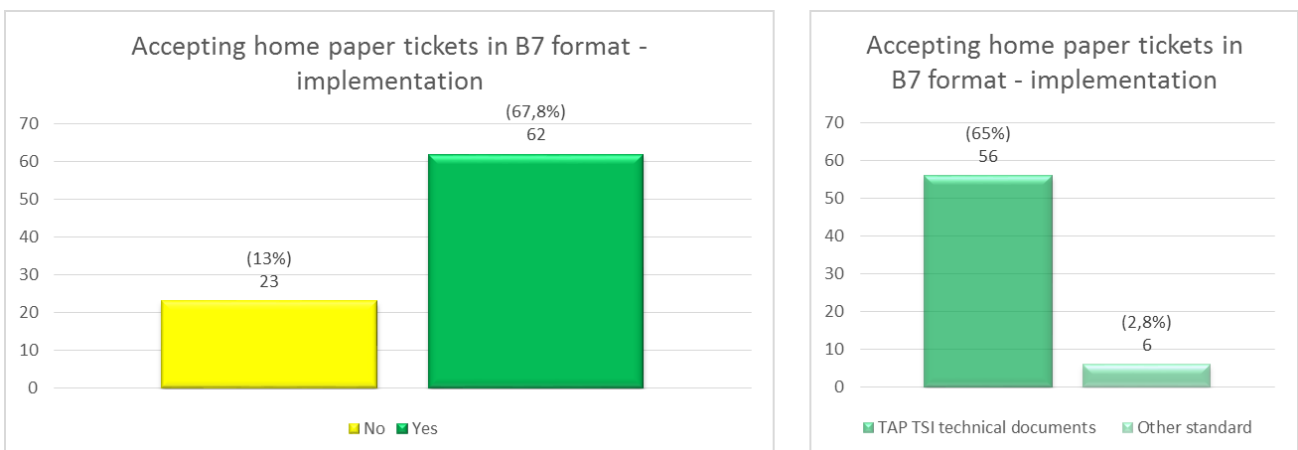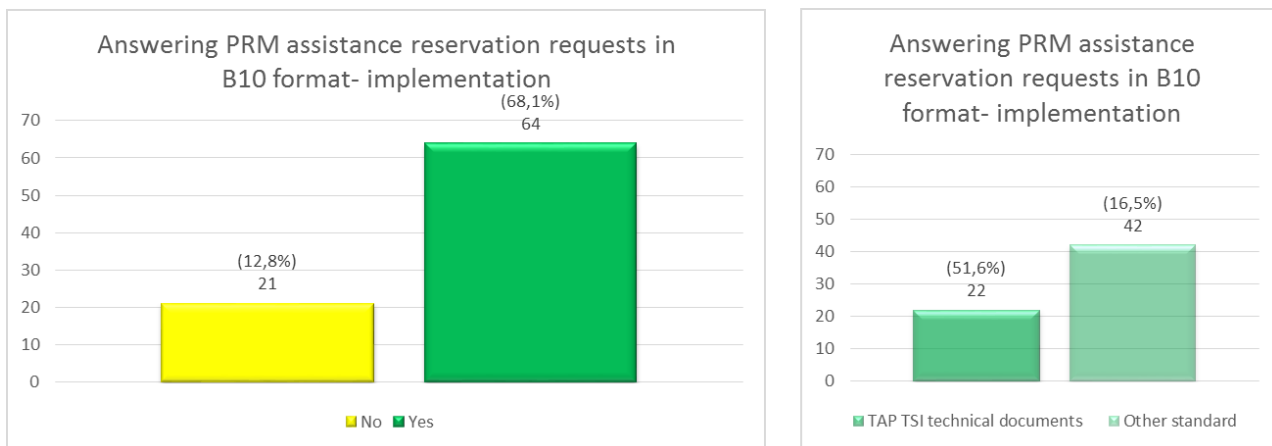

Figure 33: Answering PRM assistance reservation requests in B10 format: subject to the implementation (Y/N), [number of responses (% based on European passenger per km factor]
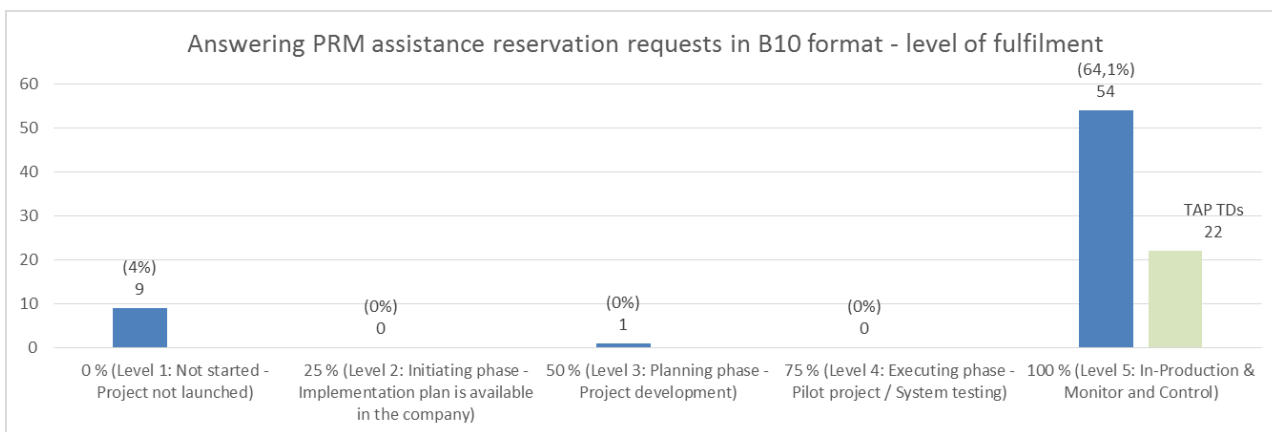
Figure 34: Answering PRM assistance reservation requests in B10 format – level of fulfilment, [number of responses (% based on European passenger per km factor]

The function "Sending PRM assistance reservation requests via IT communication to agreed RU`s, IM's and SM's in B10 format" has been fully implemented by 54 companies (64% of European market).

68% of European railway market declared to be subject of implementation and 52% are part of implementation process according to TAP TSI standards.

4.2.2.13 NRT tariffs/fares (TAP TSI basic parameter 4.2.2)
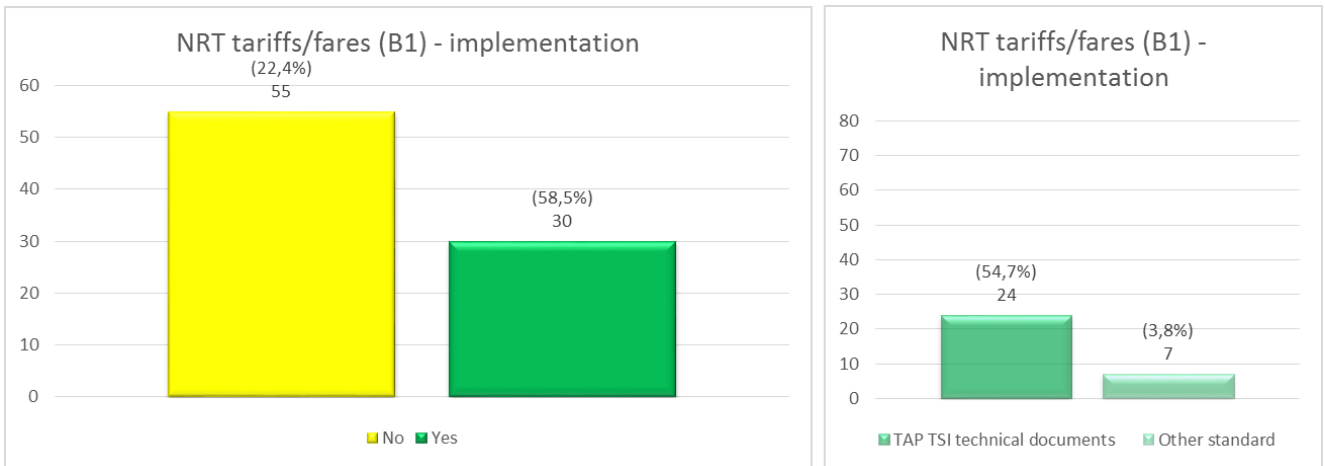
Figure 35: NRT tariffs/fares (B1): subject to the implementation (Y/N),
[number of responses (% based on European passenger per km factor]

30 companies are subject to the exchange of data for the NRT fares. 24 are using the TAP TSI standards and 6 other standards. It has to be elaborated, which standards are used as 'other standards'.

Considering market shares of companies, 59% of European railway market declared to be subject of implementation and 55% are part of implementation process according to TAP TSI standards.
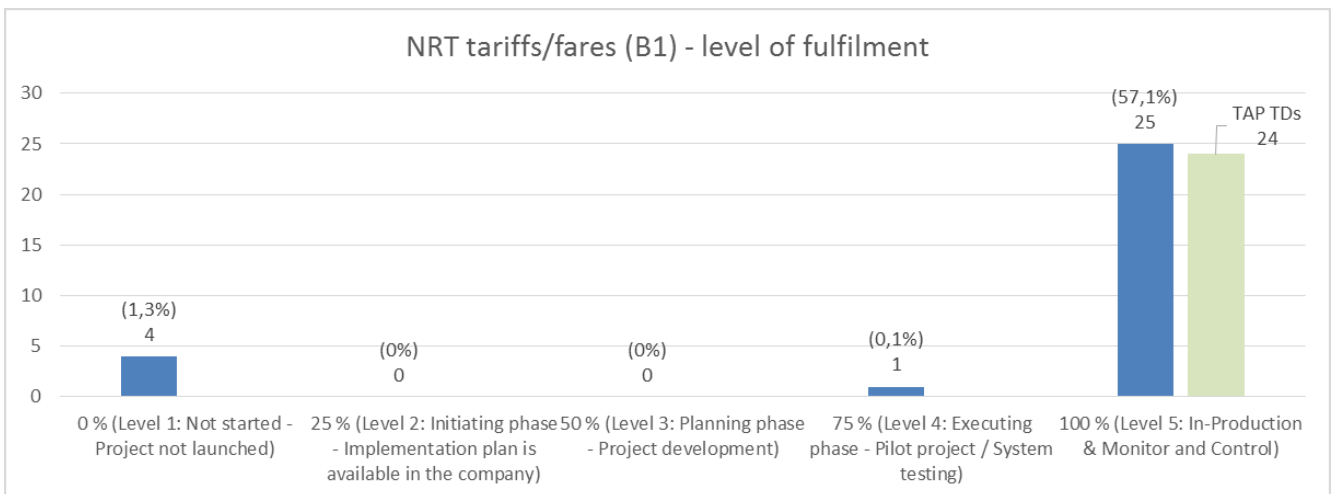
Figure 36: NRT tariffs/fares (B1) – level of fulfilment,
[number of responses (% based on European passenger per km factor]

The main declared problems of the implementation of the TAP TSI basic parameter "publication of NRT tariffs/fares" are stability of need for internal IT redesign, dependency on other retail systems and technical limitations.

4.2.2.14 IRT tariffs/fares (TAP TSI basic parameter 4.2.2)

Figure 37: IRT tariffs/fares (B2): subject to the implementation (Y/N),
[number of responses (% based on European passenger per km factor]

23 companies are subject to the exchange of data for the IRT fares. 17 are using the TAP TSI standards and 6 other standards. Considering market shares of companies, 46% of European railway market declared to be subject of implementation and 43% are part of implementation process according to TAP TSI standards.
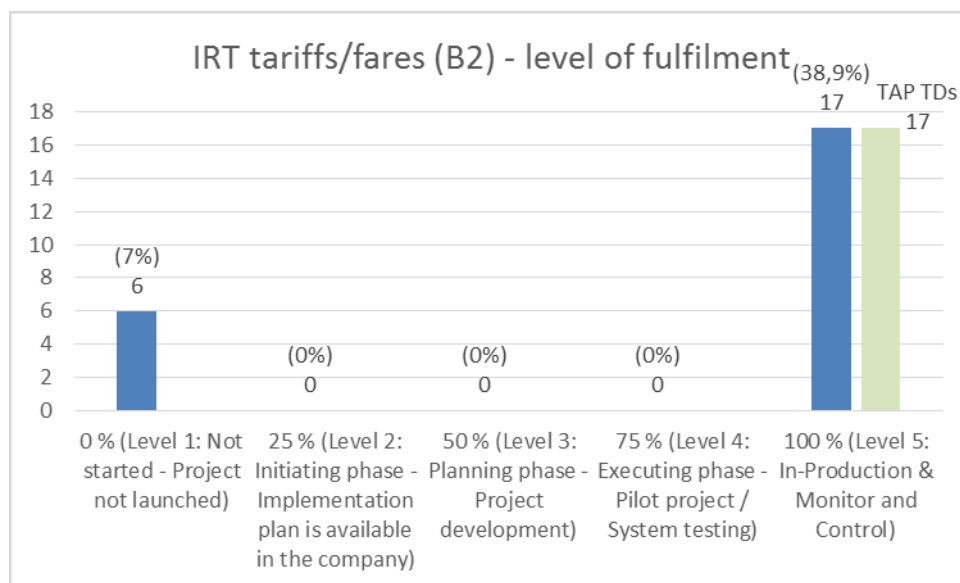
Figure 38: IRT tariffs/fares (B2) – level of fulfilment,
[number of responses (% based on European passenger per km factor]

The main problems of the implementation of the TAP TSI basic parameter "publication of IRT tariffs/fares" are stability of the TAP TSI documents and lack of financial resources. The problem "Stability of TAP TSI baseline documents" has to be checked in detail, because only few changes were introduced in the documents since the publication of the TAP TSI in 2011.

4.2.2.15 Special tariffs/fares (TAP TSI basic parameter 4.2.2)
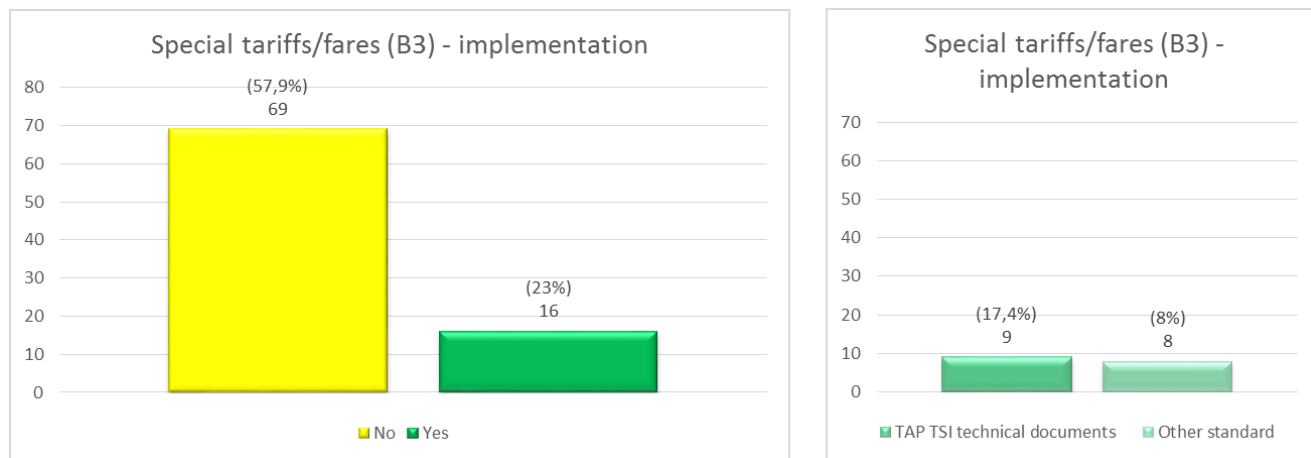
Figure 39: Special tariffs/fares (B3): subject to the implementation (Y/N),
[number of responses (% based on European passenger per km factor]

According to the TAP TSI master plan, the implementation of this function is foreseen in 2021. According to the reported figures, 17 railway undertakings reported to be subject of implementation of this function – 10 according to TAP TSI documents and 7 according to other standards. 76 companies reported they are not subject of implementation of this function.

Considering market shares of companies, the implementation level analysis showed that 18% of European railway market declared to be subject of implementation and marginal 16% are part of implementation process according to TAP TSI standards.
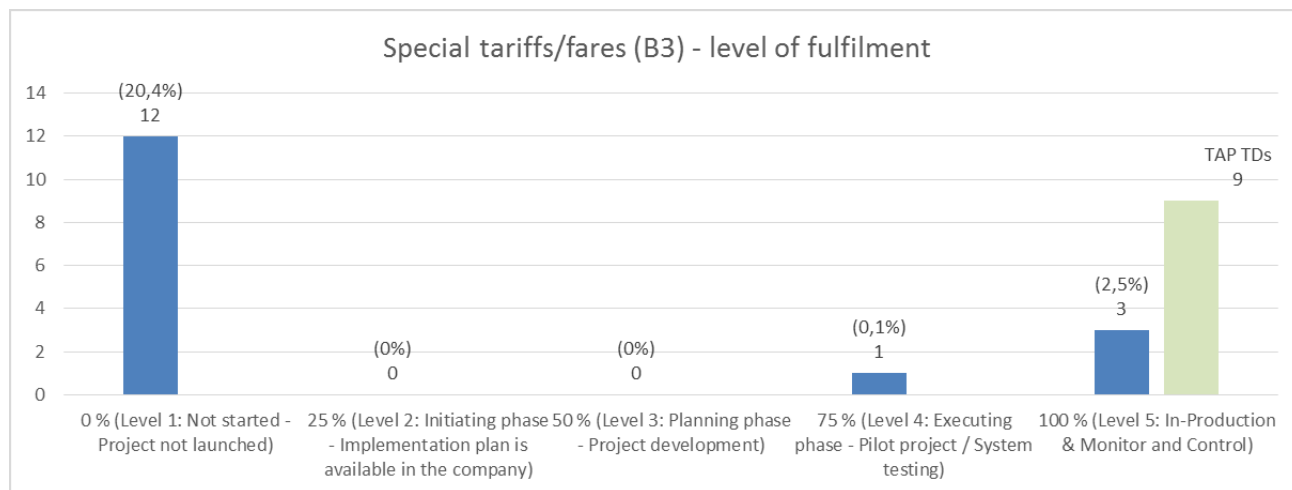
Figure 40: Special tariffs/fares (B3): level of fulfilment, [number of responses (% based on European passenger per km factor]

The main problems of the implementation of the TAP TSI basic parameter "publication of special tariffs/fares" are classified as 'other', out of possible options offered by the reporting questionnaire. Also, 2 RUs declared they don't see benefits in implementation of this function. Also, 2 RUs declared problems in dependency on other reservation system and in stability of the TAP TSI documents.

The problem "Stability of TAP TSI baseline documents" has to be checked in detail, because no changes at all were introduced in the documents since the publication of the TAP TSI in 2011.

The implementation of this basic parameter with "Other standards" should be elaborated in more detail, which standards are in use.

4.2.2.16 Timetables (TAP TSI basic parameter 4.2.1)
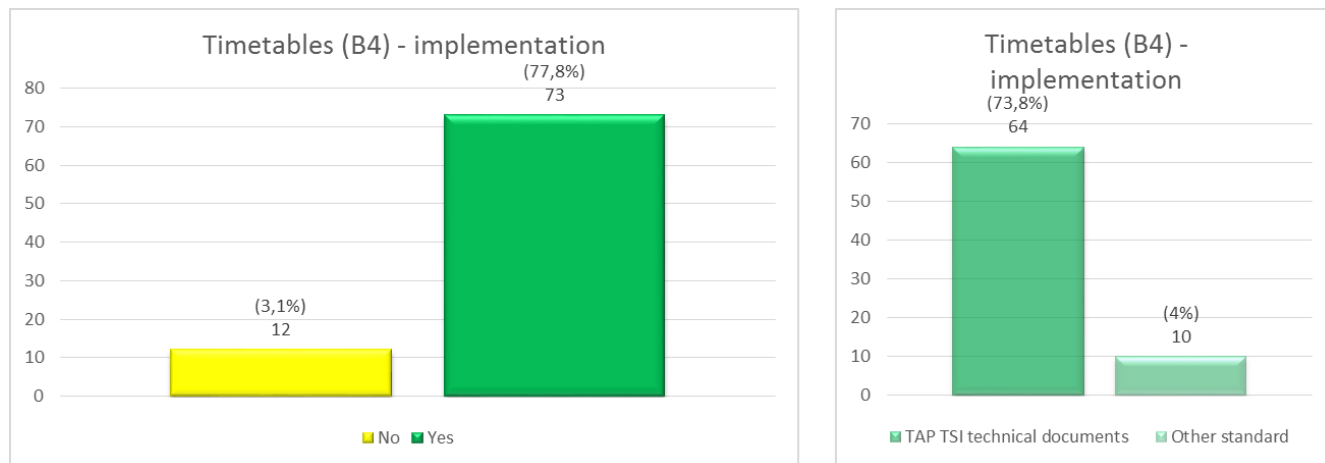
Figure 41: Timetables (B4): subject to the implementation (Y/N),
[number of responses (% based on European passenger per km factor][7]

Great majority of the reporting companies stated, that they are subject to implementation of the basic parameter to provide TAP TSI timetable data. 64 of them are using the TAP TSI standards and only 10 their own specifications. 33 RUs declared using both TAP TSI technical documents and other standards, all of them are UK companies. It is to be analysed further which specifications are used for this purpose.

Considering market shares of companies, the implementation level also looks good as 78% of European railway market declared to be subject of implementation and 74% are part of implementation process according to TAP TSI standards.
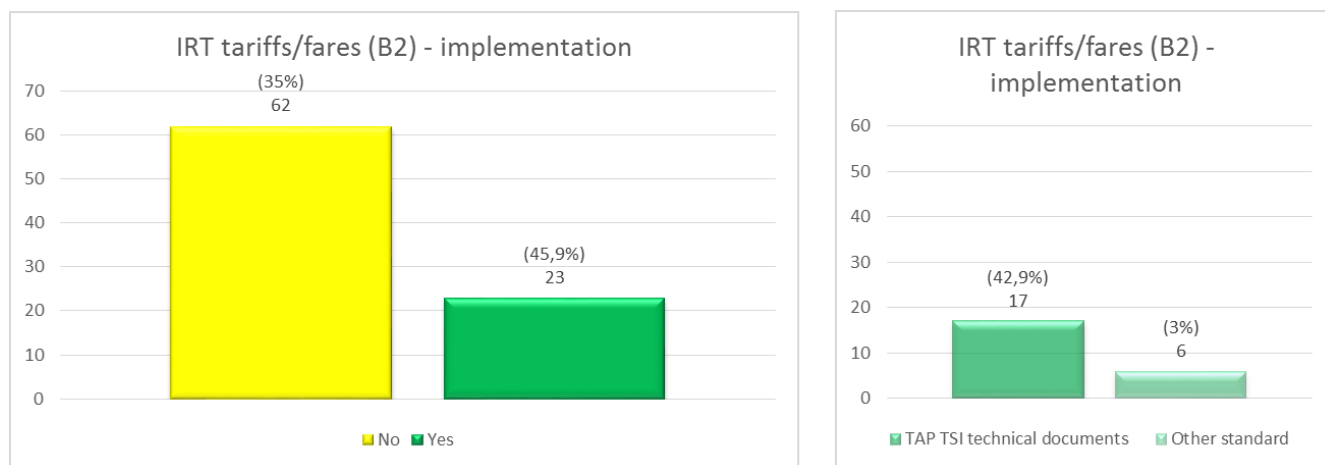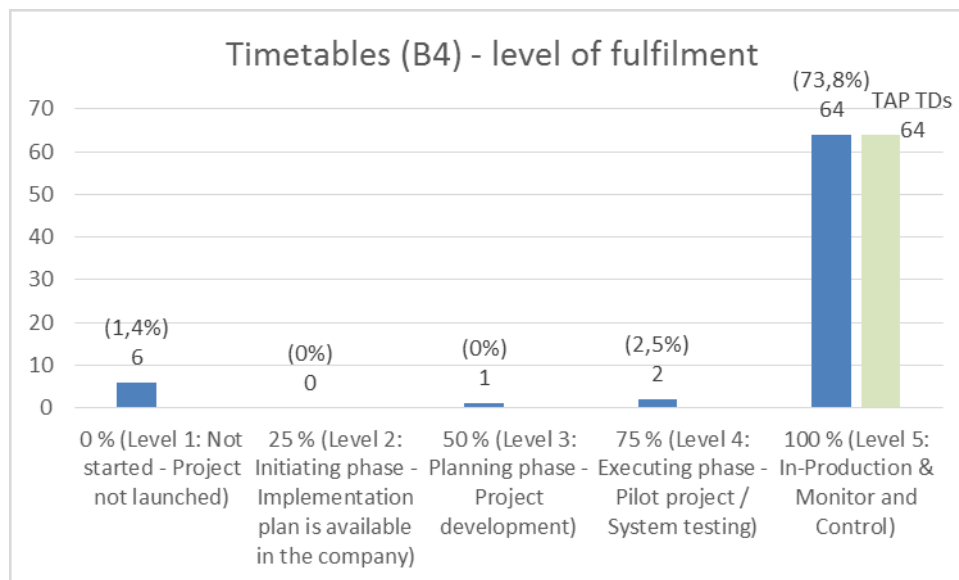

Figure 42: Timetables (B4) – level of fulfilment,
[number of responses (% based on European passenger per km factor]

The implementation progress of the timetable data provision by the railway undertakings is good. 64 railway undertakings confirmed to be already in production and 9 confirmed to be in the system testing phase.

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[7] 33 RUs (14% of market) declared implementation by using both TAP TSI technical documents and other standards.

The main declared problems of the implementation of the TAP TSI basic parameter "publication of timetable data" are stability of the TAP TSI baseline, dependency on other reservation system and technical limitations.

The problem "Dependency on other retail systems" has to be elaborated in more detail: the provision of timetable data does not need any interaction with other IT-systems and the problem is not evident at all. The problem "Stability of TAP TSI baseline documents" has to be checked in detail, because only few changes were introduced in the documents since the publication of the TAP TSI in 2011.

4.2.2.17 Common sector tools

The usage of common sector tools, used by the railway undertakings, has not been analysed in this report.

4.2.2.18 Delivery of timetable data, tariff data to TSGA

This question concerning the implementation of the functions for TSGA has been used in the questionnaire for the first time. The question has been raised to the railway undertakings, to collect information about the usage of TSGA to deliver the data for the access by 3rd parties.
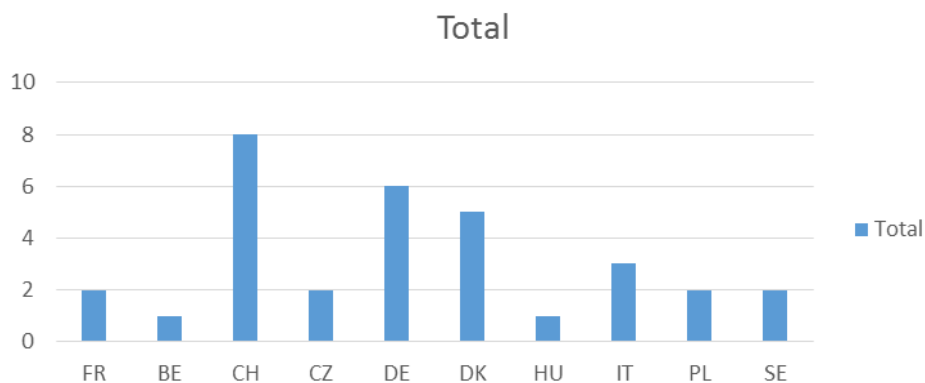
Figure 43 - Implementation of TSGA registration

The Figure 43 - Implementation of TSGA registration shows the number of the implementing companies per member state delivering data to TSGA. In some member states one leading company deals with the data provision to TSGA, such as in DK and DE.

Many undertakings submitted as well the problems in the implementation of the access to TSGA. The problems raised are the following ones:

- No benefit seen for the participation in TSGA
- The participation in TSGA is still under discussion
- Technical problems
- Regional transport operator, not involved in international ticketing

The figures delivered above, are not in line with the figures of TSGA (see further in this report Table 11: Implementation progress of data deliveries to TSGA). Some member states in the Figure 43 (e.g. HU, CZ, PL) are not shown in the data provided by TSGA. The figures have to be discussed with TSGA, to elaborate, where the discrepancies between both tables come from.

4.2.2.19 Registration at TSGA

This question concerning the implementation of the functions for TSGA has been used in the questionnaire for the first time. The question has been raised to the railway undertakings and ticket vendors, if they have been registered at TSGA to receive data from other railway undertakings.

Total
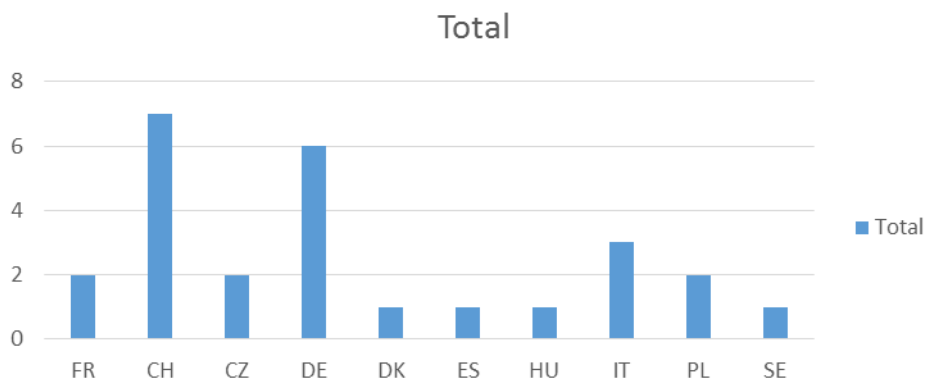
Figure 44 - Registration at TSGA

The Figure 44 - Registration at TSGA shows the number of the companies per member state which have registered at TSGA. The figures delivered above, are not in line with the figures of TSGA (see Table 11: Implementation progress of data deliveries to TSGA).

4.2.2.20 Subscription for timetable data, tariff data, public keys at TSGA

Total
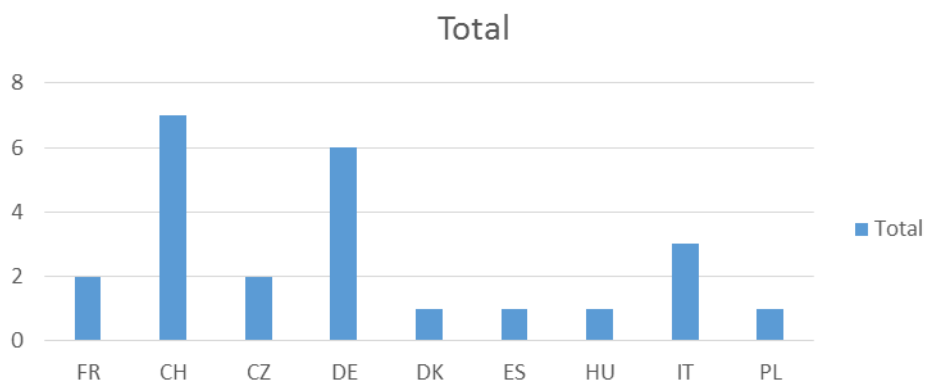
Figure 45 - Subscription for data deliveries

The Figure 45 - Subscription for data deliveries shows the number of the railway undertakings per member state registered for the data delivery from TSGA. The number of the registered railway undertakings is similar to the undertakings, which have been registered at TSGA, but are as well not in line with the figures of TSGA (see Table 11: Implementation progress of data deliveries to TSGA).

4.2.3 Results of the reporting for the TAP TSI retail basic parameters to be implemented by ticket vendors

ERA received 3 reports from ticket vendors, which reflect very low level of implementation. The main reason for non-implementation is the reluctance of RUs to themselves use TAP TSI based standard APIs and the low quality of data provided for timetables and minimum connection times (MCTs) in TSGA.

Despite the fact of the small number of respondents, the ticket vendors represent wide range of geographical territory with diverse business models and scale of market share.

The answers for each question are briefly described as it follows.

None of the three companies have registered membership in TSGA, but one is taking part to TSGA works, although not formally a member. Two of the companies do not have planned date to register, only one entity stated they are waiting visibility on the list of Railways providing their timetable, the quality of the time

tables. As MCTs are not provided still evaluating TSGA subscription as to have a full solution for a journey planner, they need Time Table, MCT's and Stations codes.

None of the organizations have Subscription for timetable data, tariff data, public keys from other railway undertakings through TSGA and they have no planned date. The percentage of implementation is 0% as it was stated by one company: TSGA does not provide all info required to run a Journey Planner as they are not providing the European Minimum connection time. Furthermore, there is not sufficient visibility on the level of time tables accessible and their level of quality.

Ticketing - Issuing value paper tickets for international and foreign sales in B6 format is not scheduled at all in any of the asked companies so they are at 0% fulfilment. The fact is commented by that RUs are using their own distribution channels and systems in their dealings with third party ticket vendors. In the absence of any request to use TAP-TSI based APIs by RUs, TVs have no reason to implement TAP-TSI.

Issuing home printed tickets for international and foreign sales in B7 format is implemented only in one case since 2018. Only in that case there is 100% implementation with one RU who provided raw data allowing to format and deliver the ticket with B7 ticket format standard.

Reservation - Sending PRM assistance reservation requests via IT communication to agreed RU`s, IM's and SM's in B10 format is not planned by none of the asked companies. They are at 0% level fulfilment as RUs with whom they have commercial agreement do not use this standard for their PRM reservation.

Sending requests to agreed RU`s in B.5 format is also not planned and implemented at all as well as for Sending requests for bicycle carriage to agreed RU`s in B.5 format and Sending requests for car carriage to agreed RU`s in B.5 format.

4.2.4 Results of the reporting for the TAP TSI RU/IM basic parameters to be implemented by railway undertakings

The reporting about the progress of the RU/IM functions for passenger railway undertakings is covered in the co-operation group for the implementation monitoring of the TAF TSI. However, the passenger railway undertakings have to implement the RU/IM functions for the TAP TSI as well.

According to the agreements in the TAF TSI implementation co-operation group, the passenger railway undertakings have reported about the implementation progress for the following functions:

- Implementation of company code
- Implementation of the common interface
- Train Running Information

The TAF TSI RU/IM reporting session followed the same schedule as presented in Table 7: Reporting schedule for TAP TSI basic parameters (6th reporting). Overall 72 passenger railway undertakings in Europe sent answers through questionnaire to the Joint Sector Group (JSG).

4.2.4.1 Implementation status on 12/2020 of company codes function

Figure 46 is indicating the existence and use of company codes (CC) as part of the Common Reference Files for IMs and RUs-P. For CCs only two predefined percentage steps exist, because either a company does have an own CC or not. The majority of companies having replied to the query possess a CC (63%).
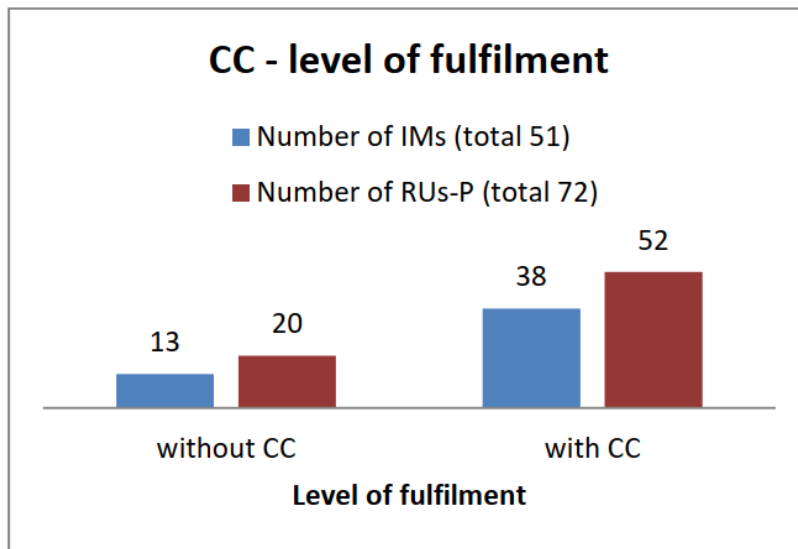
Figure 46: Common Reference Files – Company Codes (CC): level of fulfilment

According to Figure 47, the number of RUs-P with CCs decreased between 6th and 11th TAF reporting sessions (from 27 to 21).
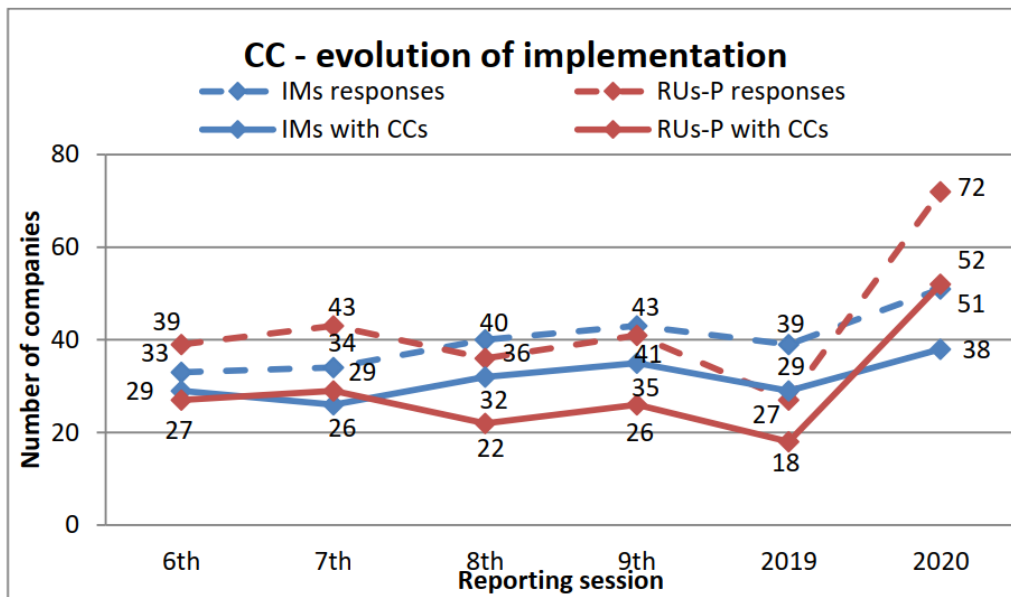
Figure 47: Evolution of implementation for Company Codes (CC) (TAF reporting sessions)

4.2.4.2   Implementation status on 12/2020 of the common interface function

Figure 48 summarises the feedback related to the availability of common interface (CI) and shows a difference in level of fulfilment between IMs and RUs-P. The CI is completely implemented by 22 IMs and only 15 RUs-P.
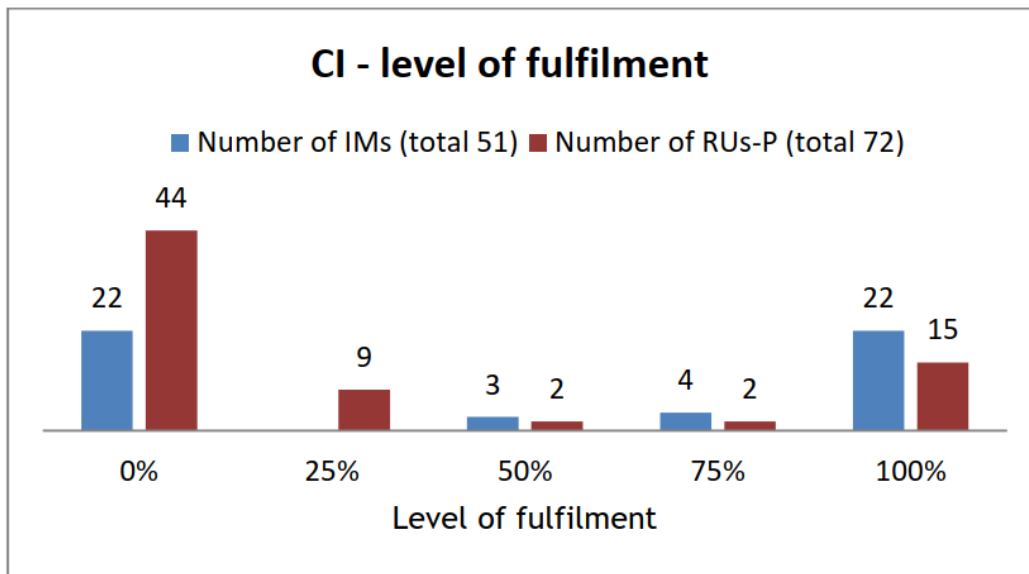
Figure 48: Common Reference Files – Common Interface (CI): level of fulfilment

The developments of complete implementation of the CI over time according to Figure 49 shows again the relation to the number of responses per company type. 22 of responding IMs have already finished the implementation of the CI. However, with completion being at 37 of responding companies, the majority of RUs-P are still developing.
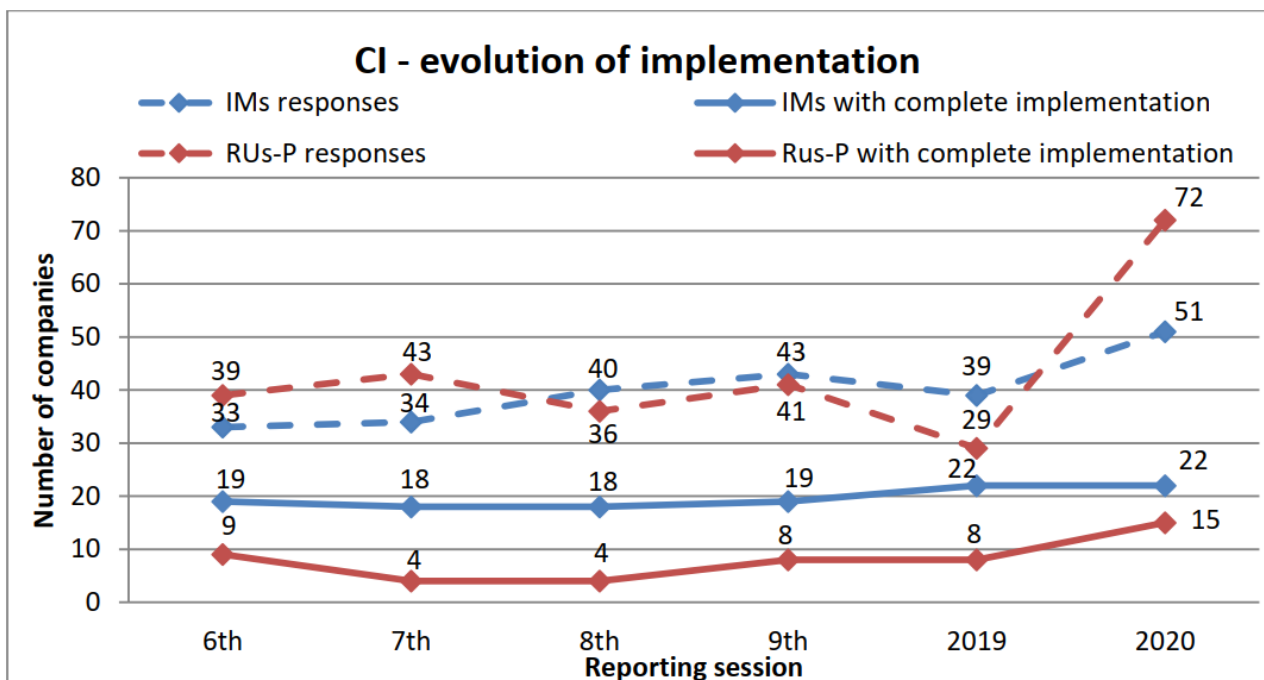
Figure 49: Evolution of implementation for Common Interface (CI) (TAF reporting sessions)

4.2.4.3 Train Running Information

The Target Implementation Milestone for realisation of the Train Running Information message (TRI) according to the TAP TSI Masterplan was end of 2017 for IMs and end of 2018 for passenger RUs (RUs-P). This monitoring concerns only one aspect of the TAP TSI basic parameter 'Train running forecast', the Train Running Information message. The Train Information System (TIS) is a common sector tool managed by RNE. Messages sent by IMs to TIS or messages received by RUs from TIS through traditional interfaces are considered as 75 % complete fulfilment and TAF messages sent or received by Common Interface are counted as 100 % fulfilment.

Figure 50 indicates 24 IMs and 20 RUs-P with 100 % level of fulfilment.
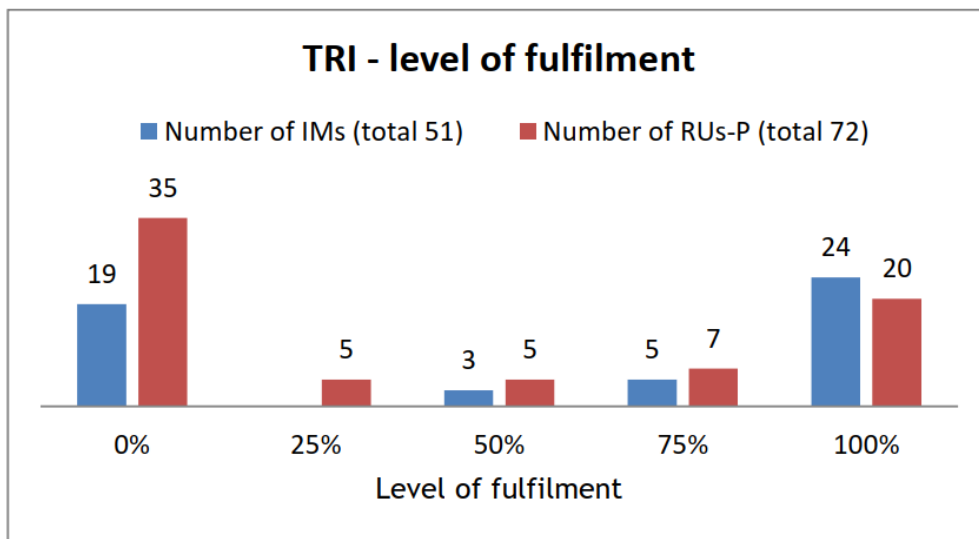
Figure 50: Train Running Information (TRI): level of fulfilment

Regarding Figure 51, both the number of IMs and RUs-P having implemented the TRI increased between 10th and 11th TAF reporting sessions. For RU's this number even doubled.
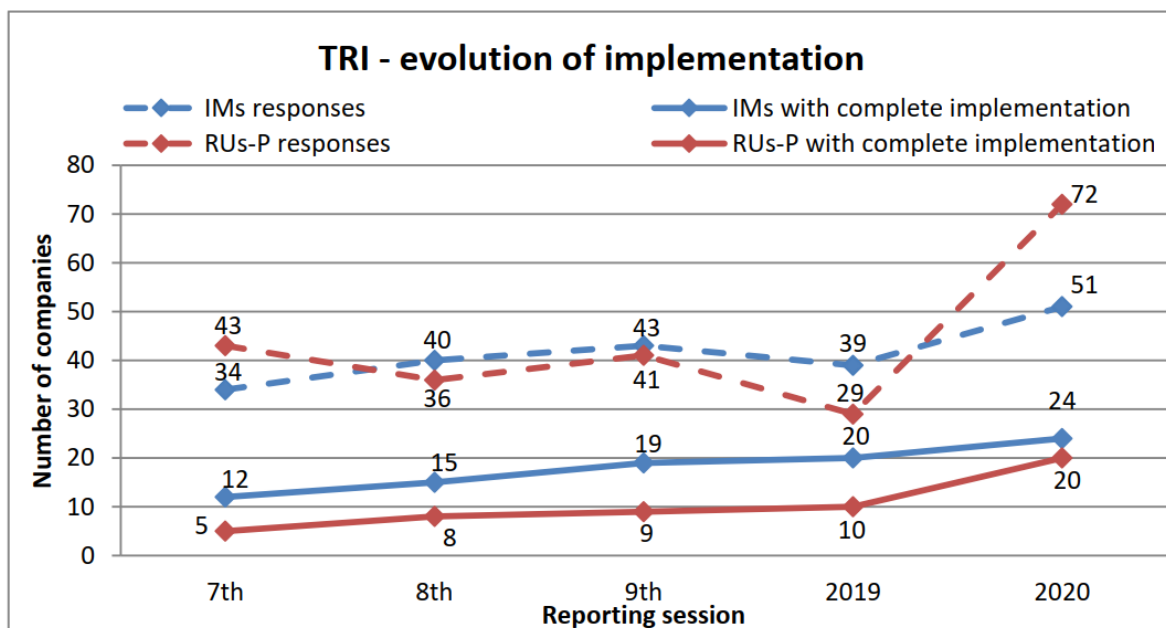
Figure 51: Evolution of implementation for Train Running Information (TRI) (TAF reporting sessions)

The figures above summarises the development of the Degree of Implementation (DI) at European level for the TAP TSI RU/IM basic parameters between 6th and 11th TAF reporting sessions. The DI in this report is defined as the relation of companies having fully implemented (100 %) the particular function compared to the companies having replied (in percentages).

Generally, the proportion of RUs having finished implementation is considerably lower than for IMs. The DI for the CC function stays high at 63 %. For the TRI functions a positive trend is visible.

4.3 Publication of the conditions of carriage and access conditions

Not elaborated for this report.

4.4 Evolution of TAP TSI regulatory functions at European level

The implementation of the TAP TSI regulatory function has been achieved in Europe. The following table shows the progress of the implementation, compared with the previous five reports published by ERA. The following table is created by comparing previous TSGA reports.

Table 10: Progress of implementation of TAP TSI regulatory functions

Milestone	Planned date	Degree of fulfilment 01.09.2016	Degree of fulfilment 01.07.2017	Degree of fulfilment 26.03.2018	Degree of fulfilment 19.06.2018	Degree of fulfilment 19.12.2018	Degree of fulfilment 19.12.2019
Setup of the TAP TSI governance body	01/10/2013	75%	100%	100%	100%	100%	100%
Setup of the Retail reference database	01/10/2014	N/A	50 %	50 %	50 %	50 %	100%
Setup of the TAP TSI registry	01/10/2014	N/A	50 %	50 %	50 %	50 %	100%
Setup of the Data quality tool	01/10/2014	N/A	25 %	50 %	50 %	50 %	100%

The implementation of the TAP TSI regulatory functions setup of the governance and the regulatory functions (retail reference database, registry, data quality tool) has been achieved by TSGA since 2019.

Now the aim of the report is to follow the implementation progress of the service consumption of the services, provided by TSGA. For this purpose ERA has asked TSGA to provide ERA with the figures for the consumption of the services of TSGA. For this purpose TSGA has provided to ERA the following table Table 11: Implementation progress with the data, which have been delivered by the railway undertakings.

Table 11: Implementation progress of data deliveries to TSGA

TSGA Registered Countries	Company	Nr. of Retail locations	Nr. of Retail locations as Railway Station	Linked CRD locations to Railway Stations	Nr. of companies in TSGA	Type	Subscribe to receive notifications about reference data of other companies	Data format provided
Austria	Westbahn	2088	2081		1	Data Provider	no	GTFS
Belgium	SNCB	593	586		1	Data Provider	no	SKDUPD
Denmark	DSB	990	564	137	1	Member	yes	SKDUPD
France	SNCF	7484	7460	3555	1	Member	yes	SKDUPD
Germany	DB	8320	8288	5011	1	Member	yes	SKDUPD
Italy	TI	3067	2982	2477	1	Member	yes	SKDUPD
Luxemburg	CFL	209	169	70	1	Member	yes	SKDUPD
Netherlands	NS	473	468	370	1	Member	yes	SKDUPD
Sweden	Snalltaget	795	700		1	Data Provider	no	SKDUPD
Switzerland	SBB	24346	24345	1807	1	Member	yes	SKDUPD
Total		**48365**	**47643**	**13427**	**10**			

As it can be seen from the table there is an overall use of the services of TSGA by railway undertakings within EU.

- Overall 10 undertakings have delivered their data, 3 of them as data providers, the other 6 as members of TSGA.
- Overall 47643 railway locations have been delivered, but not all stations are linked to stations in CRD
- Not all retail locations seems to be railway stations, in some countries, e.g. Switzerland it seems that much more locations, such a bus stations have been delivered

4.5 Evolution of TAP TSI retail functions at Member state level

The chapter will be amended if there will be sufficient number of reliable data with which it will be possible to distinguish the difference between stable changes and temporary trends in specific basic parameters.

4.6 Analysis of problems

In the questionnaire the railway undertakings have been asked to provide data about the problems for the implementation of the TAP TSI basic parameters, subject to the reporting.

The following problems were asked in the questionnaire:

- The dependency on other retail system or on participation of other railway undertakings
- Internal IT redesign needed

- Lack of financial resources
- Technical limitations
- Stability of [TAP TSI] baseline documents
- No benefits seen
- Other

These answers were analysed in more detail by ERA. It has been analysed:

a) which functions are affected by the problems
b) which member states are mostly affected

Table 12: Problems for TAP TSI implementation per member state and problem scope

Function	Dependency on other retail system	Internal IT redesign needed	Lack of financial resources	No benefits seen	Stability of TAP documents	Technical limitations
Answer Bike Reservation	ES, PL, PT	ES, HU, PL, PT	PL			ES, IT, PT, SL
Answer Car Reservation	IT	IT	PL	IT	PL	SL
Answer Seat Reservation	PL, PT	FI, HU, PT	PL			HU, PT, SL
B10 Answer	IT, PL, PT	HU, IT, PT	HU, PL	IT		HU, PL, PT, SL
B10 Send	IT, PL, PT	HU, IT, PT	HU, PL	IT		HU, PL, PT, SL
B6 Acceptance	ES, HU, IT, PL, PT, SL	FI, HU, PL, PT	DE, PL	PL		PT, SL
B6 Issuing	DE, HU, IT, PL, PT	FI, HU, PL, PT	PL	PL		PT, SL
B7 Acceptance	ES, IT, PL, PT	FI, HU, PL, PT	PL	DE		HU, PT, SL
B7 Issuing	ES, IT, PL, PT, SE	FI, HU, PL, PT	DE, PL	HU		PT, SL
Provide B1 data	IT, PL	CH, FI, HU, IT		IT		HU, IT, PL, SL
Provide B2 data	ES, IT	CH, ES, HU, IT, PL, SL	ES, PL	HU, IT		HU, IT, PL, SL
Provide B3 data	AT, CZ, IT	HU, IT, PL		CZ, HU, IT	PL	HU, IT, SL
Provide B4 data	IT, PL	CH, FI, HU, IT, PL		DE, IT		AT, ES, IT, PL, SL
Send Bike reservation	PL, PT	HU, PL, PT	PL	ES		HU, IT, PL, PT
Send Car Reservation	ES, PL, PT	ES, PT		ES		ES, PL, PT, SL
Send Seat reservation	FI, PL, PT	HU, PL, PT	PT			HU, PL, PT, SL

The analysis of the main problems has shown the following results:

The problems were reported from only 11 countries.

One of the main problems is the "dependency on other railway undertakings or distribution systems". This is especially the case when reservation messages have to be exchanged. It has to be checked what is the reason for this problem. The reservation systems for seats, bikes and trains are using the TAP TSI standards for many reservation systems, based on UIC standards, now technical documents of the TAP TSI. If the systems are developed according to these standards, there should not be any issue with the dependency on other distribution systems. For the exchange of data (timetable, tariff), the problem cannot be understood at all, because the data can be exchanged without any interaction and dependency on other systems.

The lack of financial resources is a problem only in 5 countries and technical limitations have been reported by companies from 5 countries as a problem for the TAP TSI implementation.

The frequently raised problem of "Stability of [TAP TSI] baseline documents" has been raised only by one member state, so it seems that the problem is largely solved.

5   Conclusions

The implementation of the TAP TSI is delayed significantly. The delay is visible in most of the covered reporting streams the implementation of the TAP TSI retail basic parameters by the railway undertakings and ticket vendors as well.

The governance framework (TSGA) for the coordinated development of the TAP TSI implementation is in place and operational for more than 2 years. Therefore, the first milestone to implement the TAP TSI governance has been achieved.

The implementation of the regulatory functions (TAP TSI registry, retail reference database, data quality tool) is achieved now. This means that the railway undertakings can start to implement the access to the TAP TSI registry services to provide their data and to have access to the data from other parties.

For the progress of the TAP TSI implementation for **regulatory functions** the following conclusions can be made:

- The figures delivered by the railway undertakings concerning the implementation of the regulatory functions, are not in line with the figures delivered by TSGA (see Table 11: Implementation progress of data deliveries to TSGA).

For the implementation of the TAP TSI retail basic parameters, in majority of cases, the implementation progress looks better when considering passenger market shares of railway undertakings (with applied weighting factor) than when considering absolute numbers of railway undertakings which declared full implementation of any of TAP TSI retail basic parameter. Therefore, major carriers of TAP TSI retail implementation are still railway undertakings with larger share of passenger market.

For the progress of the TAP TSI implementation for **reservation basic parameters** the following conclusions can be made:

- For the reservation message exchange, either sending or receiving, there is a high level of implementation of those reservation messages used by incumbent railway undertakings. According to applied weighting factor, 76 % of the railway market is sending seat reservation requests and 74% is answering on seat reservations requests. The reservation requests/replies for bicycles are only supported by almost the same amount of undertakings as for the reservation of seats.
- The reservation request for car-carrying trains is supported by a marginal number of undertakings only.
- For the reservation requests for PRM assistance, 68 % of the railway market is both sending and answering seat on PRM assistance reservation requests.
- For the small and medium size railway undertakings who have not reported any degree of implementation, there is almost no intention to implement these functions. The explanation is in many cases that their trains are not subject to reservation (e.g. local trains only) and therefore there is no need to implement reservation messages, neither as railway undertaking nor as issuer of seat reservations.
- A further progress for these basic parameters is therefore difficult to predict.
- The main issues for the undertakings to implement the reservation functions are:
  - o   Technical limitations of the documents
  - o   No benefits seen
  - o   Dependency on other reservation systems
  - o   IT redesign

  This is mainly caused by the fact, that many undertakings operate only on local lines and have no reservation system in place or operate trains where a reservation for seats, bikes or cars is possible.

For the progress of the TAP TSI implementation for **ticketing basic parameters** the following conclusions can be made:

- For the ticketing of international or foreign sales, either issuing or accepting, there is a high level of implementation of these functions for the incumbent railway undertakings. With the applied weighting factor, 63 % of the railway undertakings are issuing and 57 % of the railway undertakings are accepting tickets in value paper tickets in B6 format. For home printed tickets in B7 format 55 % of the railway undertakings are issuing and 52 % of the railway undertakings are accepting those tickets.
- For the small and medium size undertakings there are only few projects ongoing for the implementation of international ticketing, either on a value paper ticket or as home printed ticket.
- The main issues for the undertakings to implement the ticketing functions are:
  o Dependency from other IT systems
  o IT redesign of the own systems

For the progress of the TAP TSI implementation for **tariff data exchange basic parameters** the following conclusions can be made:

- The implementation of the tariff data exchange for the NRT- and the IRT-tariff data is low. This is maybe due to the fact that those tariffs are not offered by some RU's. Successful implementation for the NRT-tariff data has been declared by 54% of railway market (weighting factor applied) and only 45% for IRT-tariff data.
- Few companies with an EU market share of 7% are in the implementation process for IRT-tariff data.
- Based on the fact that these data are available in the TAP TSI format, it has to be checked how these data can be provided to the ticket vendors to allow them the implementation of their TAP TSI basic parameters concerning the tariff data exchange. The services of TSGA to have access to those data by the ticket vendors have to be taken into account.
- The implementation of the tariff data exchange according to the technical document B.3 has to be checked. The document is to our knowledge not implemented in the rail sector. Maybe there is a misunderstanding of the underpinning question in the questionnaire.
- The main issues for the undertakings to implement the tariff data functions are:
  o Technical limitations of the documents
  o Dependency on other IT systems
  o IT redesign necessary
- For the exchange of special tariff data small and medium size railway undertakings see not benefit for the implementation.

For the progress of the TAP TSI implementation for **timetable data exchange basic parameters** the following conclusions can be made:

- For the timetable data exchange the implementation progress is very good: 73 % of the railway market have implemented this basic parameter, 73 % in operation and only 3 % in pilot testing phase.
- For the small and medium size undertakings there are only few projects ongoing for the implementation of timetable data exchange.
- Based on the fact that these data are available in the TAP TSI format, it has to be checked how these data can be provided to the ticket vendors to allow them the implementation of their TAP TSI basic parameters concerning the timetable data exchange. The services of TSGA to have access to those data by the ticket vendors have to be taken into account.
- The main issues for the undertakings to implement the ticketing functions are:
  o Technical limitations of the documents
  o IT redesign necessary

6   Recommendation / actions to be taken

6.1   Functions to be reported in the next report

During the TAP TSI Implementation Cooperation Group meeting held on 10 March 2021, it was agreed to report in 2021 about the same functions as reported in 2020.

Having regarded foreseen migration of the Company Code to alphanumerical format as from 1st of January 2026, it was further agreed that in the 2021 report the reporting entity will have the possibility to report progress on implementation of this change in its IT solutions. This will enable implementation monitoring and additionally support migration strategy laid down in the corresponding Agency opinion[8].

6.2   Calendar for next reporting

In the frame of the TAP TSI Implementation Cooperation Group meeting held on 10 March 2021, it was agreed the following schedule to report about the implementation of TAP TSI functions: 15.11.2021 - 10.12.2021

	2020/2021						
	September	October	November	December	January	February	March
■ Preparing questionnaire at IRG	30						
■ Agreeing questionnaire with ERA		1					
■ ad-hoc ICG on translation issues		13					
■ Opening JSG/CSG Reporting Tool			15	10			
■ Revising draft Report at IRG						10	
■ Agreeing draft Report with ERA						11	
■ Approving draft Report at JSG							
■ Presenting at ERA Coop Group							11
■ Publishing JSG Report							

Figure 52: Reporting Schedule for the 2021 Reporting wave

6.3   ERA recommendations for next reporting

ERA recommends the following actions to accelerate the TAP TSI implementation:

Table 13: Proposed actions for TAP TSI implementation

Who	Action	When
NCPs	The availability of the regulatory services, provided by TSGA, shall be communicated to the railway undertakings.	October 2021
Ticket vendors	The ticket vendors should establish the operational reporting procedure for the report of the implementation progress of the TAP TSI.	October 2021

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[8] ERA/OPI/2020-14 Opinion of the European Union Agency for Railways to the European Commission regarding Change of company code to 4-letter-alphanumeric format

NCP, ERA	Addressing the ticket vendors not organised in the European organisations ECTAA, EU Travel Tech	October 2021
CSG, ERA	The tool EU-survey, proposed for the new questionnaire, will support the translation of the questions	October 2021
NCPs, ERA	It should be checked if a translation of the questionnaire based on EU-survey may improve the response rate. The translation shall be provided by the NCP's, if they consider the translation as useful for an improved response rate.	October 2021
NCPs CZ, DE, NO, EL, SK, NL	It should be checked how to secure contact data from few countries which didn't deliver any contact data of their RUs.	October 2021
NCP, ERA, CSG, JSG	It should be discussed how to find out more or even how to measure the level of TAP TSI obligations awareness in Europe, between TAP project managers in obliged RUs. Possible solution could be in modifying the questionnaire with an adequate question.	October 2021
NCP, ERA, CSG, JSG	The identified problems shall be discussed in the next co-operation group in detail, taking into account the member states affected, the impact of these risks and issues on the further implementation of the TAP TSI. Additionally, ERA will contact the NCPs of countries regarding the details of reported problems in order to facilitate the problem resolution processes.	October 2021

Annex 1   Implementation problems
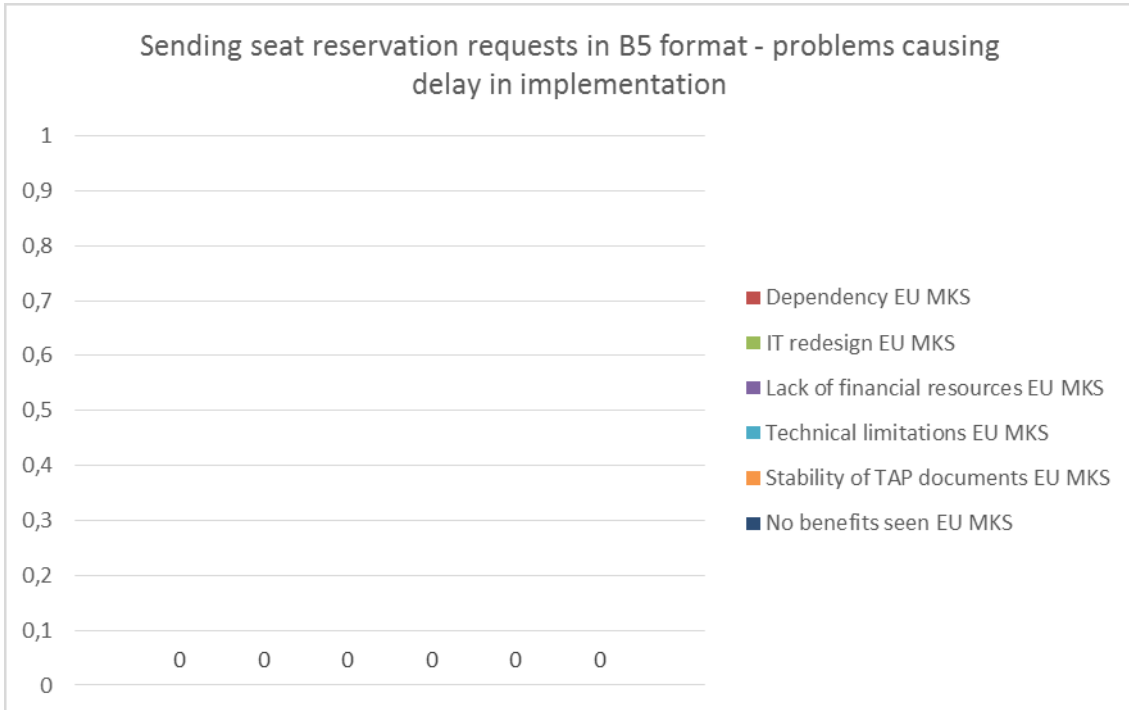
Figure 53: Sending seat reservation requests in B5 format – problems
[number of responses (% based on European passenger per km factor]
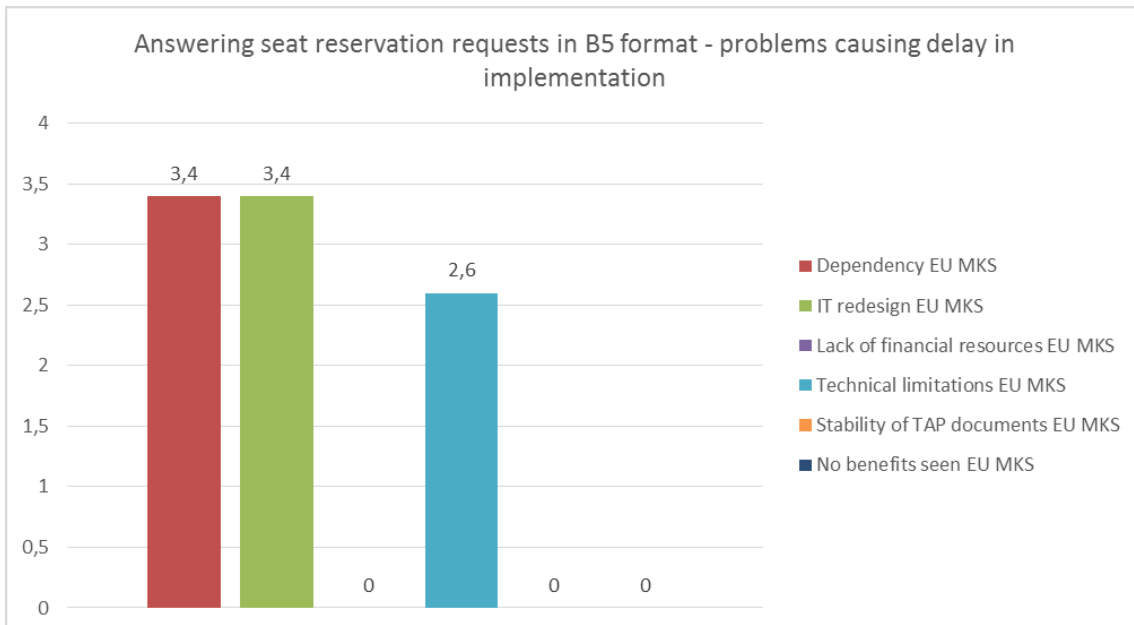
Figure 54: Answering reservation requests for seat reservation in B5 format: problems

[number of responses (% based on European passenger per km factor]
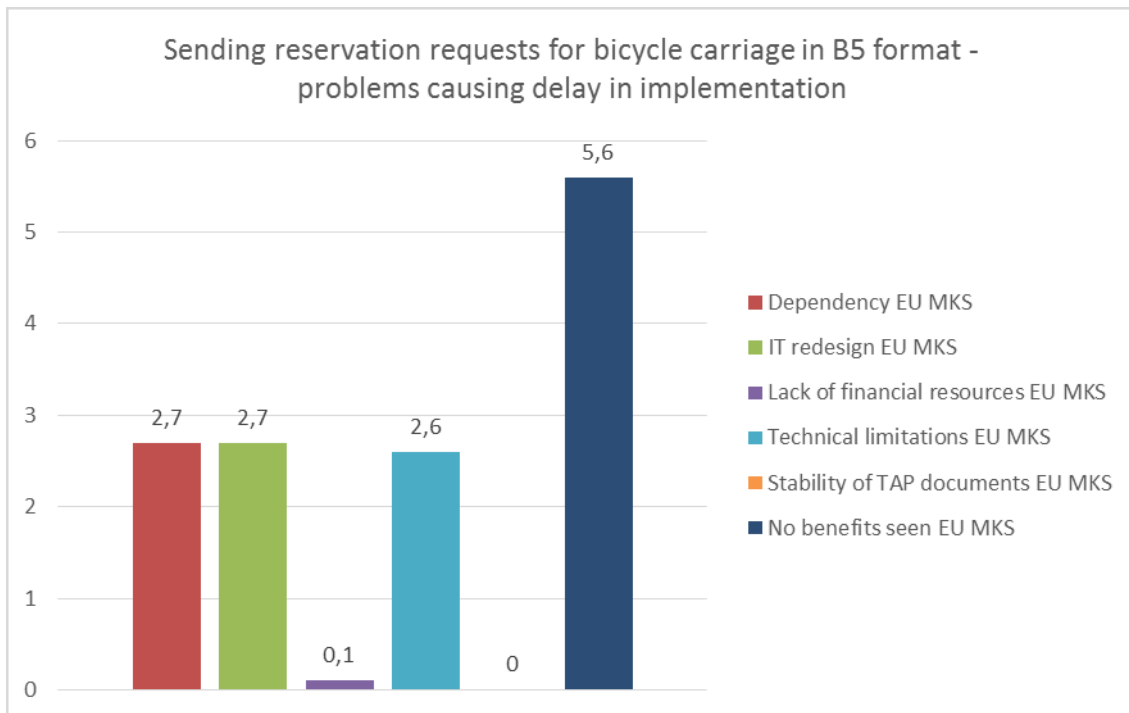
Figure 55: Sending reservation requests for bicycle carriage in B5 format: problems
[number of responses (% based on European passenger per km factor]
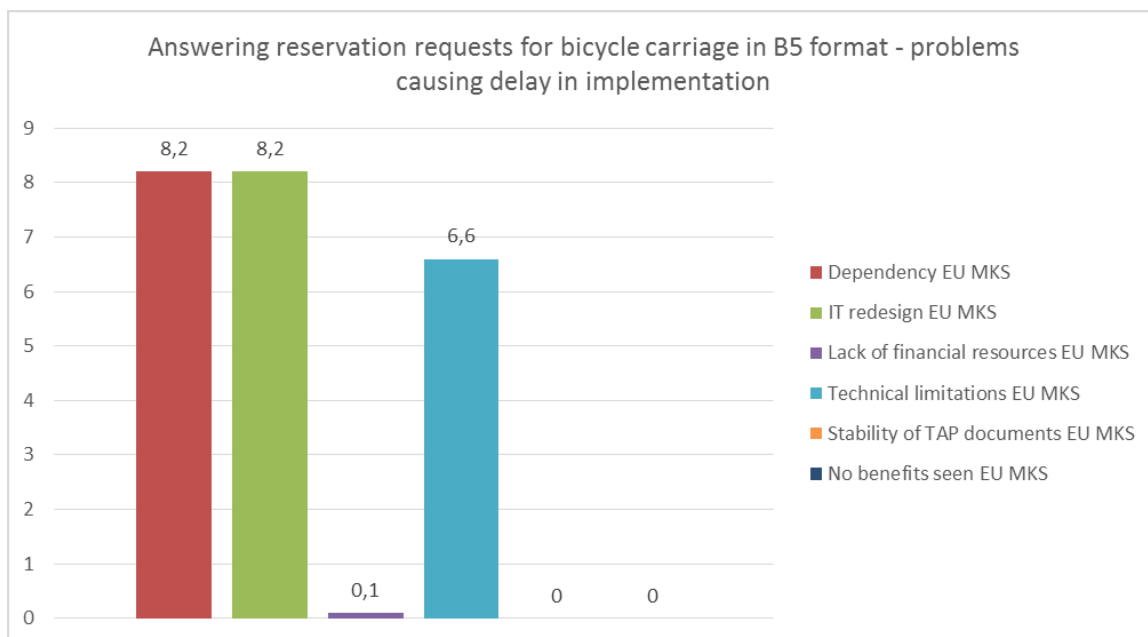
Figure 56: Answering reservation requests for bicycle carriage in B5 format: problems
[number of responses (% based on European passenger per km factor]
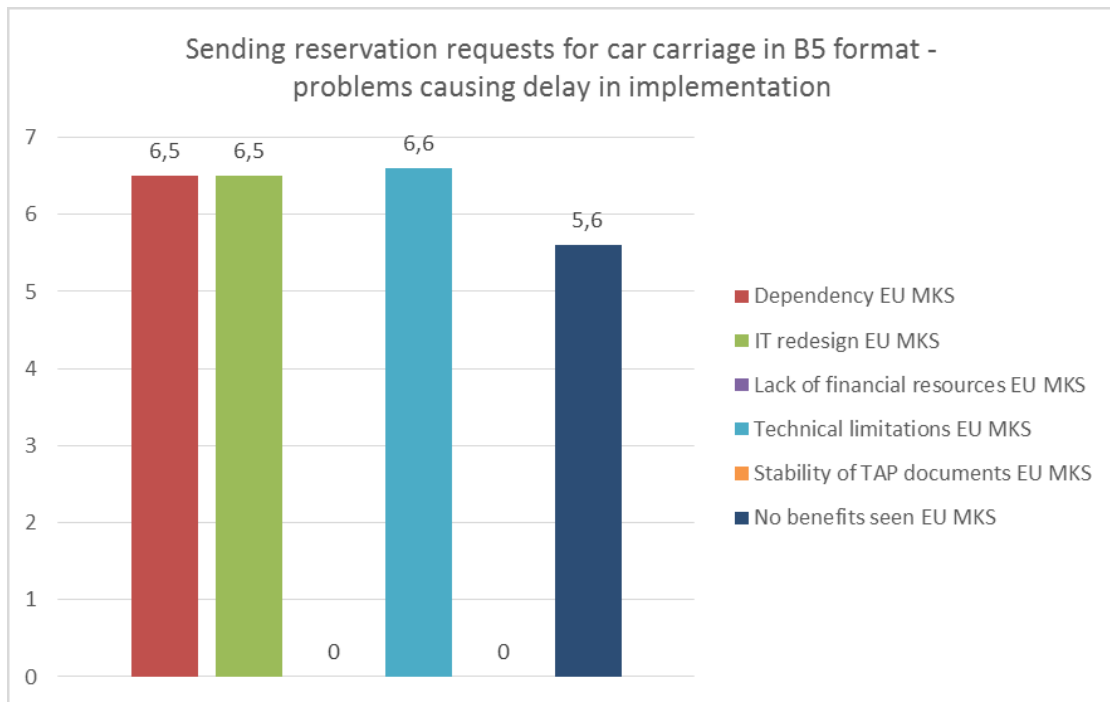
*Figure 57: Sending reservation requests for car carriage in B5 format: problems
[number of responses (% based on European passenger per km factor]*
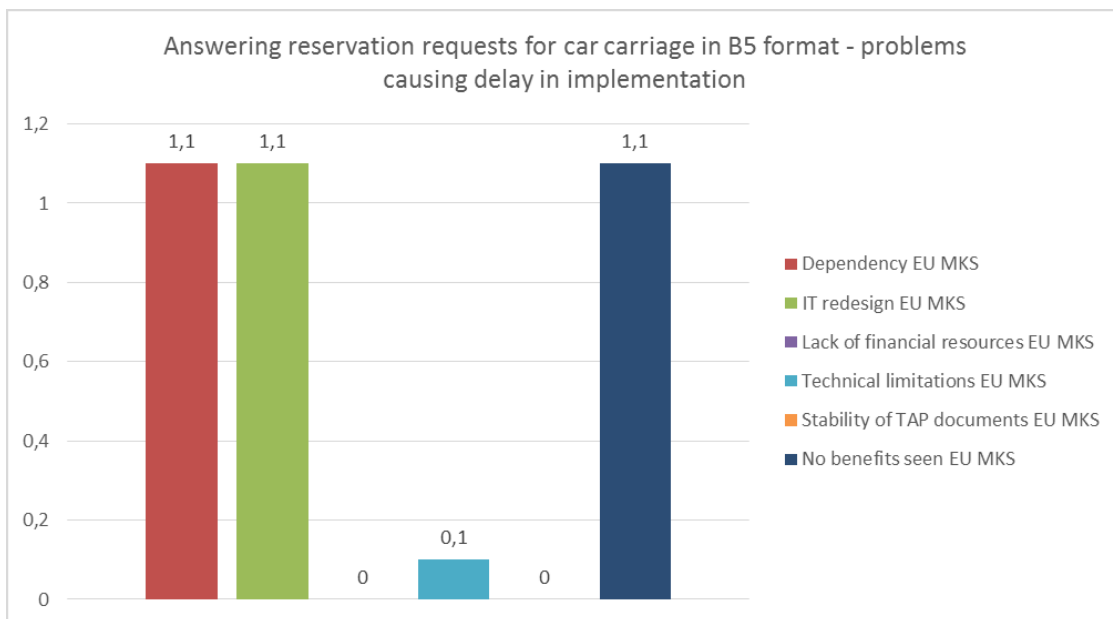
*Figure 58: Answering reservation requests for car carriage in B5 format: problems
[number of responses (% based on European passenger per km factor]*
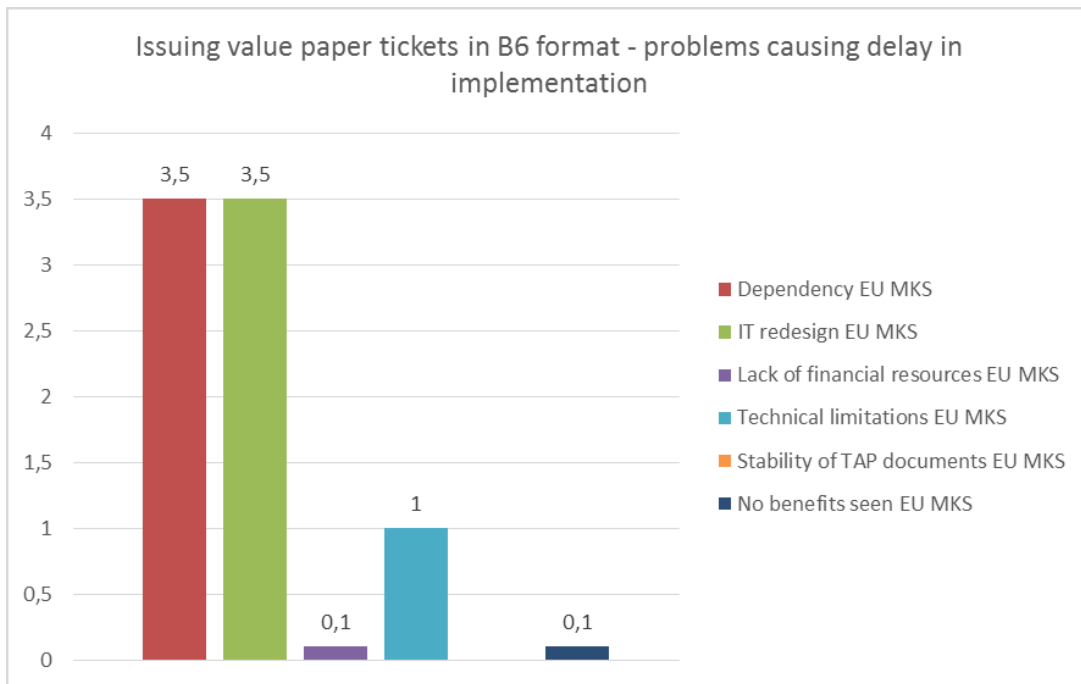
Figure 59: Issuing value paper tickets in B6 format: problems
[number of responses (% based on European passenger per km factor]
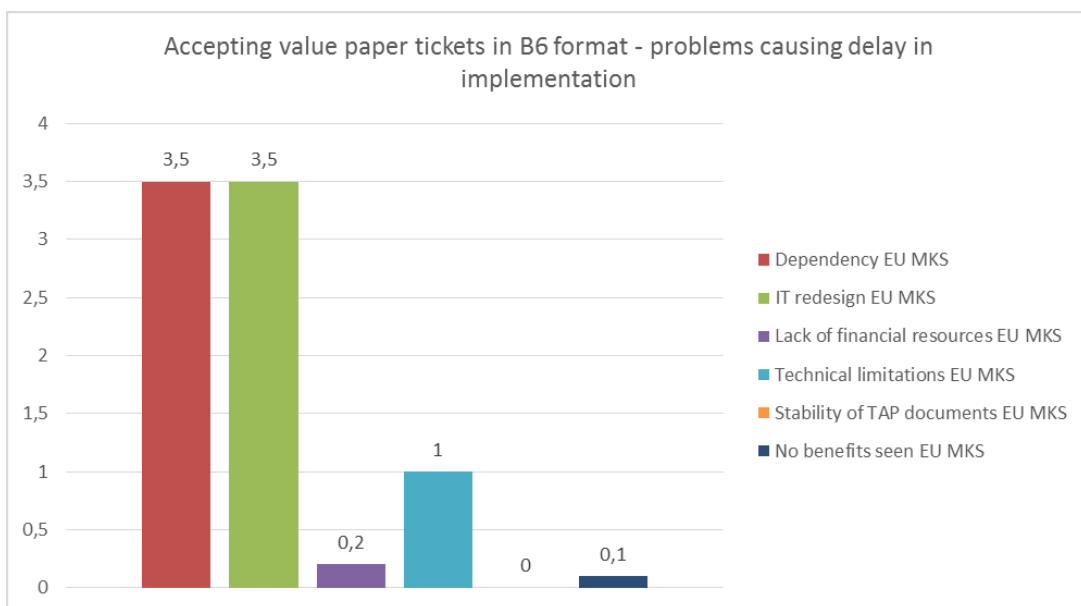
Figure 60: Accepting value paper tickets in B6 format: problems
[number of responses (% based on European passenger per km factor]
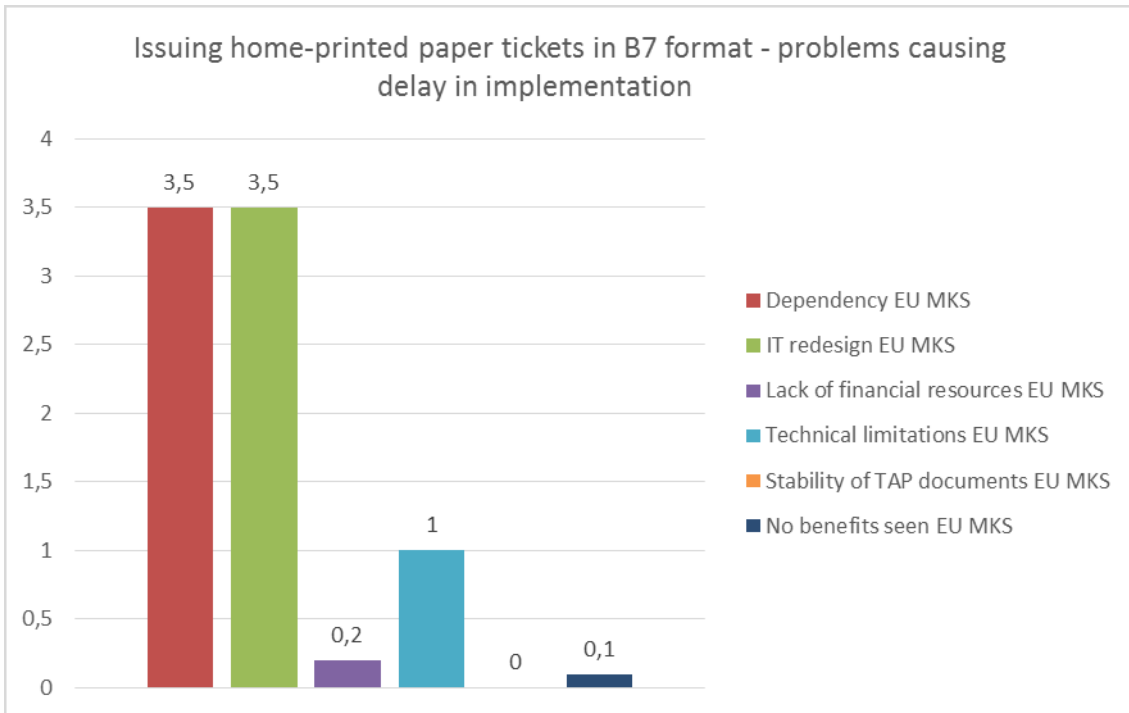
Figure 61: Issuing home paper tickets in B7 format: problems
[number of responses (% based on European passenger per km factor]
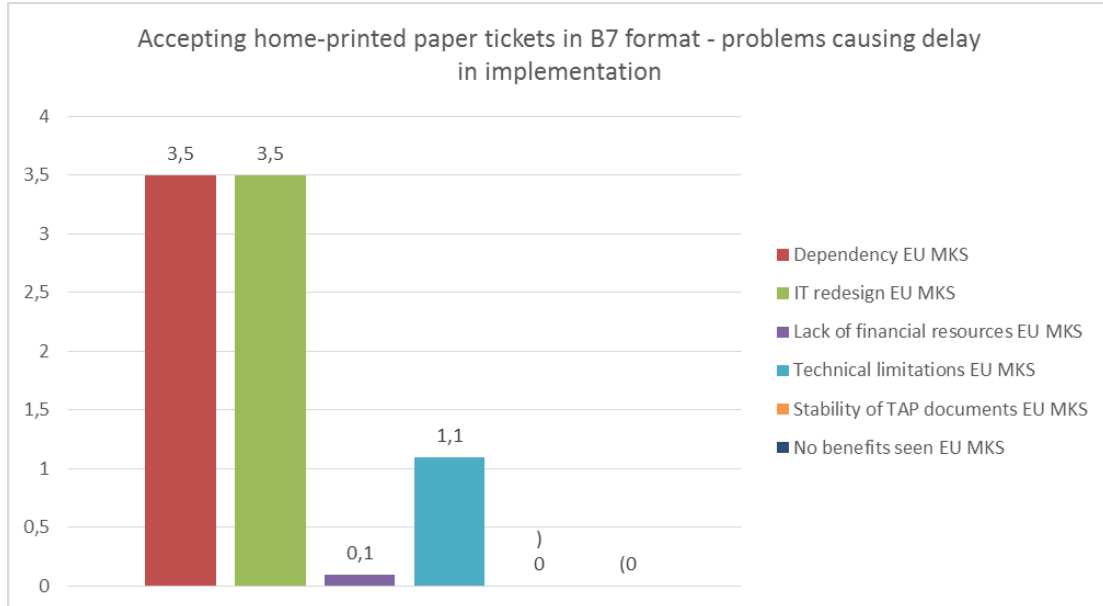
Figure 62: Accepting home paper tickets in B7 format: problems
[number of responses (% based on European passenger per km factor]

Sending PRM assistance reservation requests in B10 format - problems causing delay in implementation
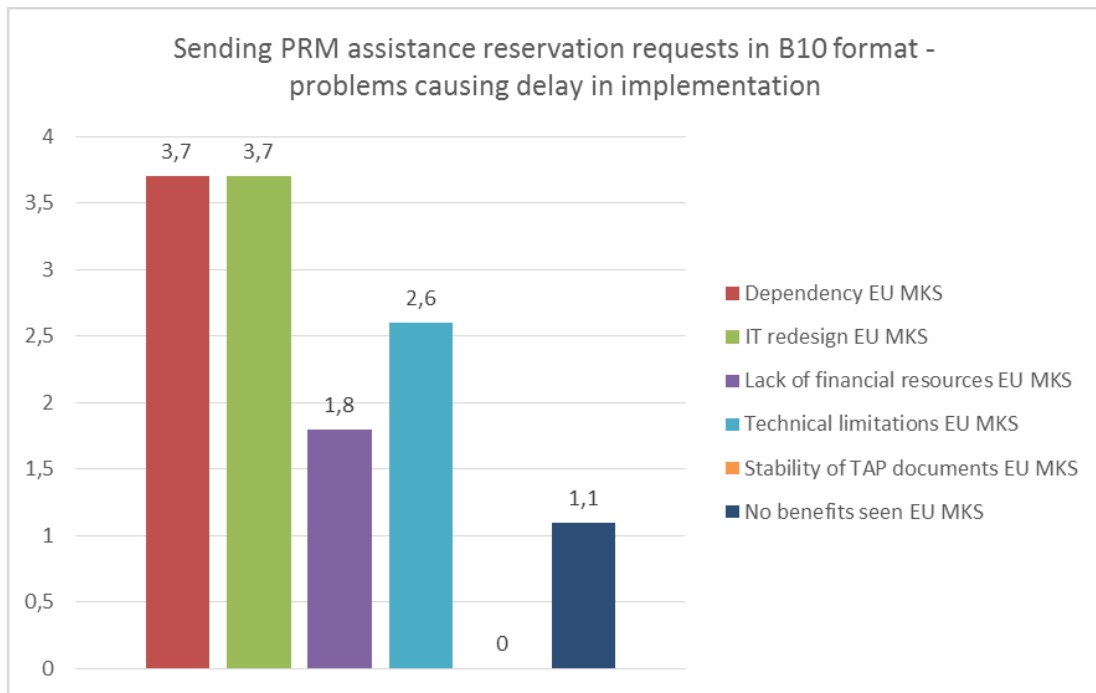
Figure 63: Sending PRM assistance reservation requests in B10 format: problems
[number of responses (% based on European passenger per km factor]

Answering PRM assistance reservation requests in B10 format - problems causing delay in implementation
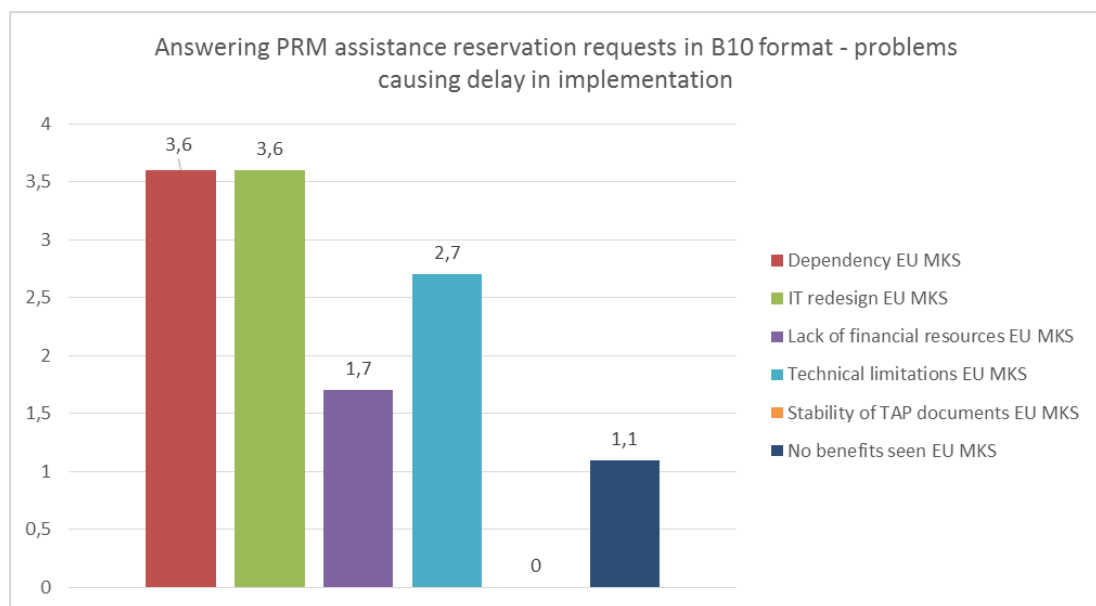
Figure 64: Answering PRM assistance reservation requests in B10 format: problems
[number of responses (% based on European passenger per km factor]
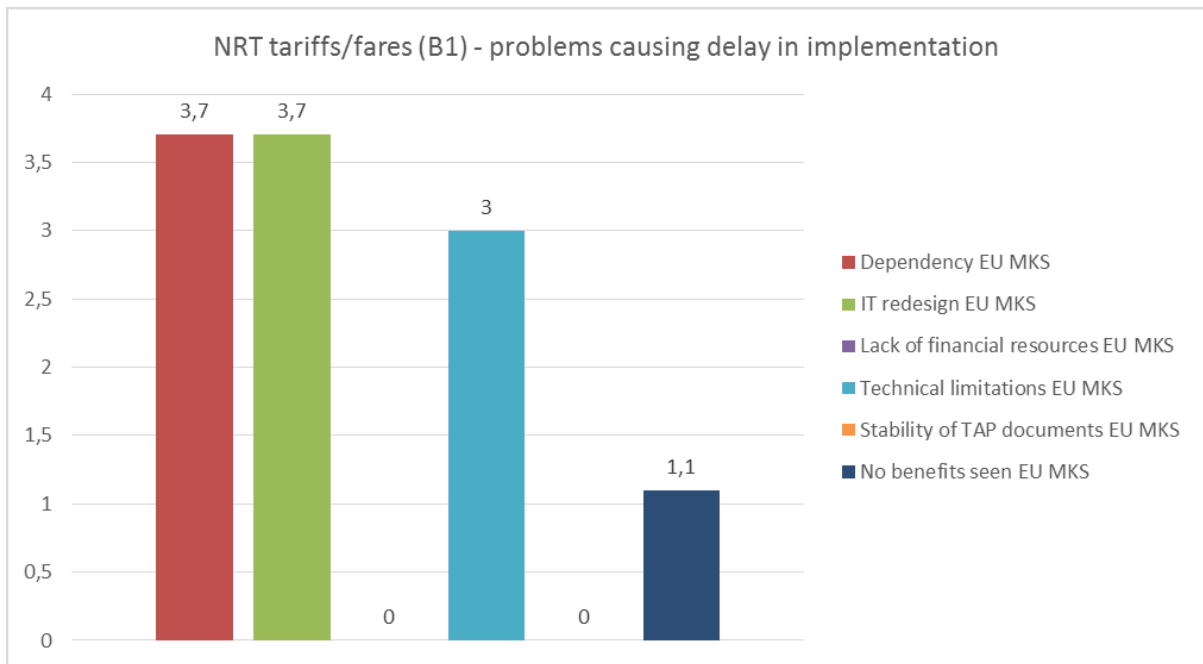
Figure 65: NRT tariffs/fares (B1): problems
[number of responses (% based on European passenger per km factor]
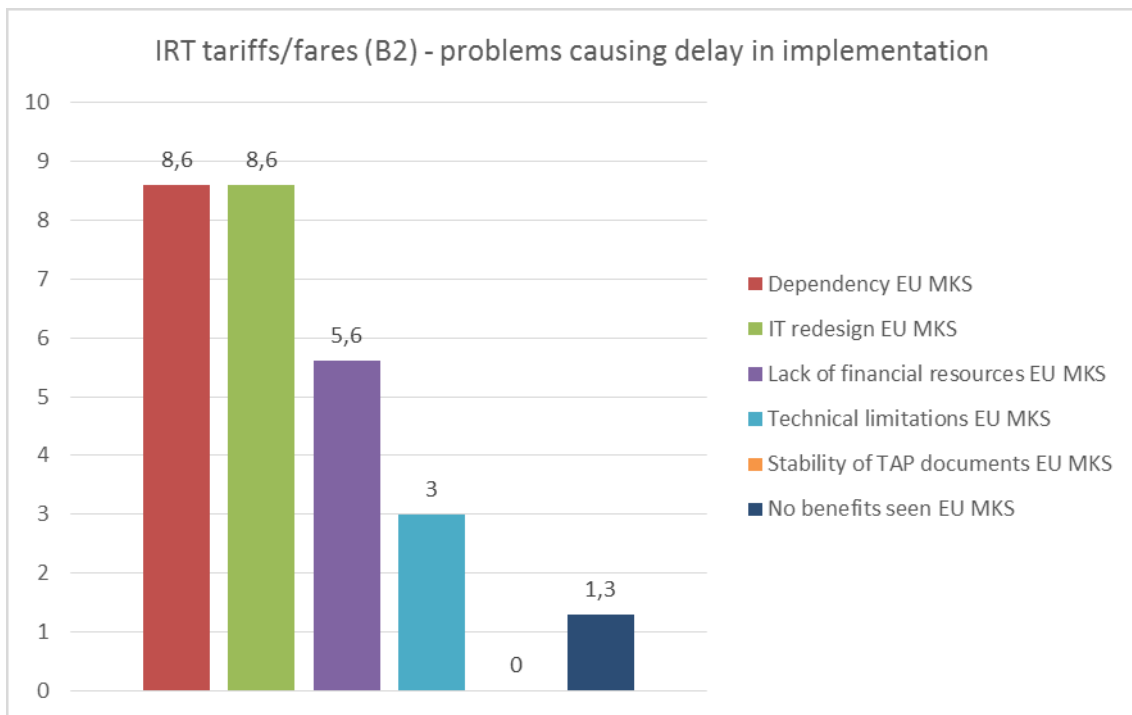
Figure 66: IRT tariffs/fares (B2): problems
[number of responses (% based on European passenger per km factor]
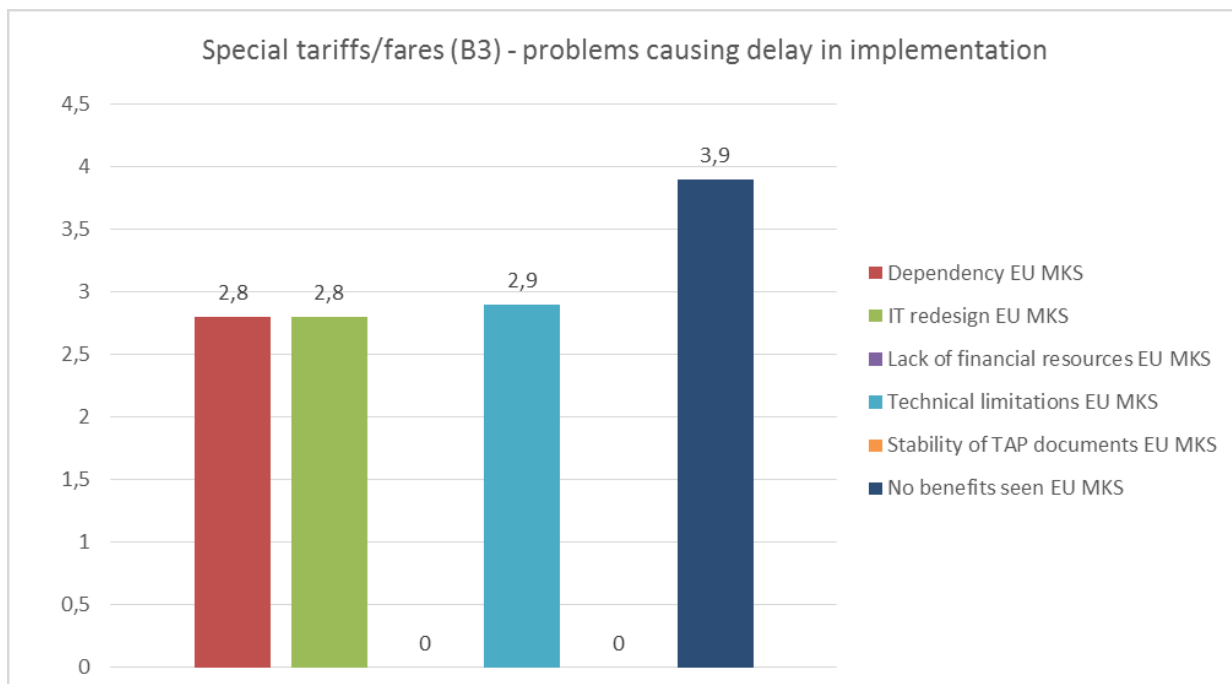
Figure 67: Special tariffs/fares (B3): problems
[number of responses (% based on European passenger per km factor]
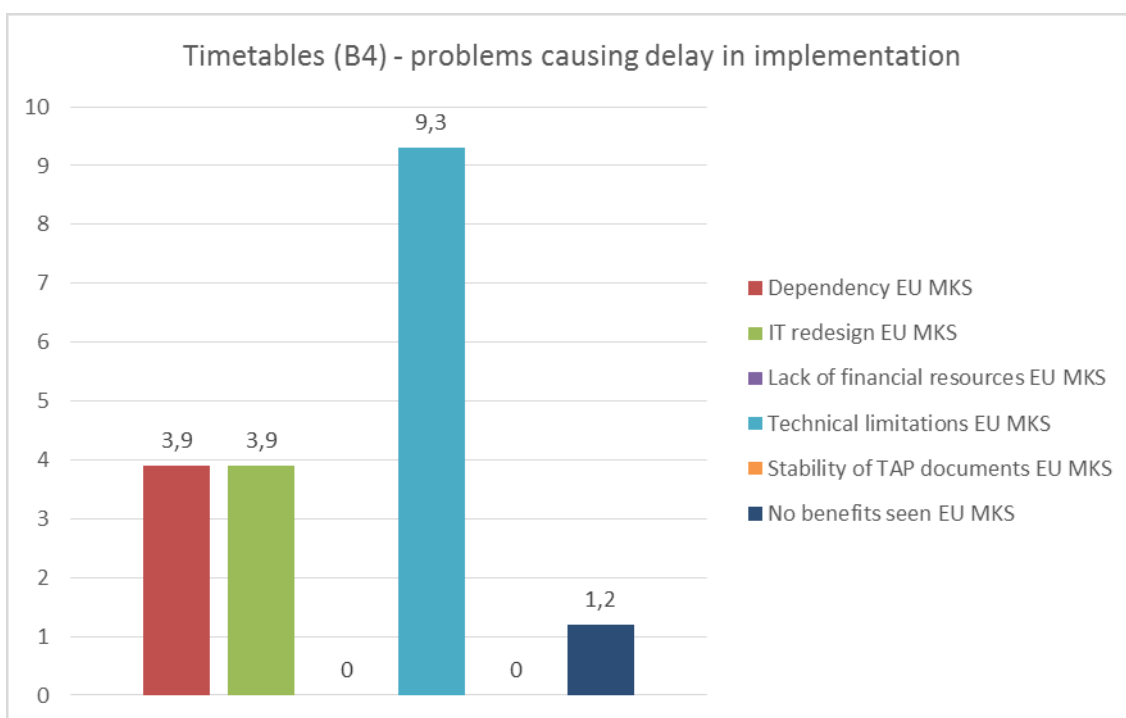
Figure 68: Timetables (B4): problems
[number of responses (% based on European passenger per km factor]

Annex 3   Reasons for not being subject of implementation

Table 14: Reasons for not being subject to implementation

Function	Reasons not to be subject of function implementation
Answer Bike Reservation	as written above
Answer Bike Reservation	Cycle reservations used by GB TOCs and ticket vendor licencees for domestic ticketing only.
Answer Bike Reservation	Do not offer bicycle reservation
Answer Bike Reservation	ITALO SPA does not provide or accept reservations for car carriage.
Answer Bike Reservation	Łódzka Kolej Aglomeracyjna Sp. z o.o., doesn`t sell international and foreign tickets
Answer Bike Reservation	nerealizujeme
Answer Bike Reservation	no resources
Answer Bike Reservation	PKP SKM has its own solution and does not plan to change it in the near future.
Answer Bike Reservation	See our previous reply regarding bicycles
Answer Bike Reservation	Suburban railway company, without reservation for bicycles.
Answer Bike Reservation	Szybka Kolej Miejska carries out domestic transport. As an agglomeration carrier, we are not a ticket issuer. This is the job of the public transport organizer. SKM doesn't provide reservation system.
Answer Bike Reservation	Thalys is using a system provided by SNCF. Uncertainty remains about the use of Tech. Doc B5
Answer Bike Reservation	The company does not have electronic bicycle booking systems
Answer Bike Reservation	The service isn't bookable
Answer Bike Reservation	Ticketing is subcontracted to other company
Answer Bike Reservation	We do not run any public traffic.
Answer Bike Reservation	We don't send bikes.
Answer Car Reservation	As written above
Answer Car Reservation	CP does not provide car carrying trains, then the function "12. Reservation - Answering reservation requests for car carriage from agreed RUs/TVs in B5 format" has not to be implemented by CP.
Answer Car Reservation	Do not offer product
Answer Car Reservation	Do not offer service.

Answer Car Reservation	Do not offer this service
Answer Car Reservation	Do not offer this service.
Answer Car Reservation	In currently used standards in Finnish-Russian traffic there are no answering requests for car carriage.
Answer Car Reservation	Łódzka Kolej Aglomeracyjna Sp. z o.o., doesn`t sell international and foreign tickets
Answer Car Reservation	nerealizujeme
Answer Car Reservation	No car reservations made by GB TOCs.
Answer Car Reservation	no resources
Answer Car Reservation	Not offering this service
Answer Car Reservation	Not relevant.
Answer Car Reservation	Not scope
Answer Car Reservation	PKP SKM does not carry cars and we do not have wagons designed for this purpose.
Answer Car Reservation	Regional transport
Answer Car Reservation	See our previous reply.
Answer Car Reservation	service not supported
Answer Car Reservation	SNCB not offering car reservation services on its trains
Answer Car Reservation	Suburban railway company. We don't transport cars
Answer Car Reservation	Szybka Kolej Miejska carries out domestic transport. As an agglomeration carrier, we are not a ticket issuer. This is the job of the public transport organizer. SKM doesn't provide reservation system.
Answer Car Reservation	Thalys is using a system provided by SNCF. Uncertainty remains about the use of Tech. Doc B5
Answer Car Reservation	The carrier does not transport cars on trains.
Answer Car Reservation	The company does not have electronic car booking systems
Answer Car Reservation	The train can't transport cars
Answer Car Reservation	Ticketing is subcontracted to other company
Answer Car Reservation	Travellers Renfe trains has not this posibility.
Answer Car Reservation	We do not run any public traffic.

Answer Car Reservation	we don't sent cars
Answer Car Reservation	We offer only regional and cross-border rail links (non reservation tickets).
Answer Seat Reservation	Allready in production
Answer Seat Reservation	as written above
Answer Seat Reservation	Do not offer seat reservation
Answer Seat Reservation	Ferrovie del Gargano S.r.l. does not service with seat reservation
Answer Seat Reservation	Hi,We currently do not accept any booking requests from any third parties except for Silverrail and we follow their standards for that integration. However with the new big national ticketing system that is in progress in Sweden we will of course follow
Answer Seat Reservation	ITALO SPA does not sell tickets in connection with other RUs.
Answer Seat Reservation	Łódzka Kolej Aglomeracyjna Sp. z o.o., doesn`t sell international and foreign tickets
Answer Seat Reservation	nerealizujeme rezervace
Answer Seat Reservation	no resources
Answer Seat Reservation	PKP SKM does not book seats on its trains.
Answer Seat Reservation	Regional transport
Answer Seat Reservation	SNCB not offering reservation services on its trains
Answer Seat Reservation	Suburban railway company, without reservation of seats/berths
Answer Seat Reservation	Szybka Kolej Miejska carries out domestic transport. As an agglomeration carrier, we are not a ticket issuer. This is the job of the public transport organizer. SKM doesn't provide reservation system.
Answer Seat Reservation	Thalys is using a system provided by SNCF. Uncertainty remains about the use of Tech. Doc B5
Answer Seat Reservation	The company does not reserve seats on launched trains. Local nature of the carrier's activities.
Answer Seat Reservation	The service isn't bookable
Answer Seat Reservation	There is no technical background.
Answer Seat Reservation	Ticketing is subcontracted to other company
Answer Seat Reservation	We do not run any public traffic.
Answer Seat Reservation	We offer only regional and cross-border rail links (non reservation tickets).We sell the "PKP Intercity" Company tickets based on agency agreement.
B10 Answer	-

B10 Answer	Ferrovie del Gargano S.r.l. does not make electronic reservation service for PRM assistance
B10 Answer	In Finland-Russia traffic we are not answering PRM assistance reservation requests.
B10 Answer	In Italy PRM is dealt by RFI, in France it's dealt by Itiremia
B10 Answer	nerealizujeme tyto rezervace
B10 Answer	no resources
B10 Answer	PKP SKM has its own organizational solutions.
B10 Answer	PRM management is dealt by RFI
B10 Answer	PRM-assistance is handled in co-operation with DSB, whcih handles request for PRM-assistance
B10 Answer	PRM-assistance is handled in co-operation with DSB, whcih handles requests for PRM-assistance
B10 Answer	PRM-assistance is organised in co-operation with DSB, which handle requests for PRM-assistance
B10 Answer	PRM-assistance is organised in co-operation with DSB, which handles requests for PRM-assistance
B10 Answer	See our previous reply. This is stored in a third party tool that Swedish Samtrafiken is coordinating today. However I think that trafikverket is supposed to be the party taking over this and coordinating it with the station managers.
B10 Answer	Szybka Kolej Miejska carries out domestic transport. As an agglomeration carrier, we are not a ticket issuer. This is the job of the public transport organizer. SKM doesn't provide reservation system.
B10 Answer	Thalys is using a system provided by SNCF. Uncertainty remains about the use of Tech. Doc B10
B10 Answer	The function is assolved by Infrastructure Manager
B10 Answer	There is no technical background.
B10 Answer	TPL service doesn't exist and there is no system that handles. The train is accessible with the production of a linear or integratedtravel tickets which allows performing route.
B10 Answer	We do not run any public traffic.
B10 Send	-
B10 Send	Ferrovie del Gargano S.r.l. does not make electronic reservation service for PRM assistance
B10 Send	Hi,We currently support booking our seats for wheelchairs, but also support taking request for assistance. However because the third party that handles these requests does not have a API that supports this, our form on the website creates a support tick
B10 Send	In Finland-Russia traffic we are not sending PRM assistance reservation requests.
B10 Send	In Italy PRM is dealt by RFI, in France it's dealt by Itiremia
B10 Send	nerealizujeme tyto rezervace
B10 Send	no resources
B10 Send	PKP SKM introduced mutual sales of tickets with other RUs and currently does not provide for such notifications. However on the line we manage, we have our own organizational solutions.
B10 Send	PRM management is dealt by RFI
B10 Send	PRM-assistance is handled in co-operation with DSB, whcih handles request for PRM-assistance
B10 Send	PRM-assistance is handled in co-operation with DSB, whcih handles requests for PRM-assistance

B10 Send	PRM-assistance is organised in co-operation with DSB, which handle requests for PRM-assistance
B10 Send	PRM-assistance is organised in co-operation with DSB, which handles requests for PRM-assistance
B10 Send	Szybka Kolej Miejska carries out domestic transport. As an agglomeration carrier, we are not a ticket issuer. This is the job of the public transport organizer.
B10 Send	Thalys is using a system provided by SNCF. Uncertainty remains about the use of Tech. Doc B10
B10 Send	The function is implementing by the Infrastructure Manager (FER and RFI - punto blu)
B10 Send	Trenord replies to the PRM assistance request by email and telephone from who is running the operation the whole time
B10 Send	We do not run any public traffic.
B6 Acceptance	Contactless ticket system with acess gates, integrated with other modes of transport. Not offering or accepting internationaltickets
B6 Acceptance	Do not accept international tickets
B6 Acceptance	Do not offer or accept international tickets
B6 Acceptance	Ferrovie del Gargano S.r.l. does not service with seat reservation
B6 Acceptance	Hi,Please see my previous reply regarding physical tickets on our trains.
B6 Acceptance	Italo S.p.A. does not issue value paper tickets for international and foreign sales, and doesn't sell tickets in connection to other RUs.
B6 Acceptance	Łódzka Kolej Aglomeracyjna Sp. z o.o., doesn`t sell international and foreign tickets
B6 Acceptance	nerealizujeme zahraniční přepravy
B6 Acceptance	PKP SKM accepts tickets in B6 format issued by PKP Intercity SA based on their infrastructure.
B6 Acceptance	SNCF has accepted paper tickets since January 2014 but Since January 1st 2020, SNCF no longer accept paper tickets issued by distributors.Indeed in order to modernise its distribution and facilitate sales and after-sales for its customers, SNCF has moved
B6 Acceptance	Szybka Kolej Miejska carries out domestic transport. As an agglomeration carrier, we are not a ticket issuer. This is the job of the public transport organizer.
B6 Acceptance	Thalys is only issuing digital/electronic tickets.
B6 Acceptance	The competence is of Region Emilia Romagna
B6 Acceptance	The lack of international and foreign sales by the carrier due to the local nature of the business.
B6 Acceptance	Ticketing is subcontracted to other company
B6 Acceptance	Tickets are accepted
B6 Acceptance	Trenord emits home printing.CTA currently doesn't iussue such tickets but recognizes valid those iussued by Trenord.
B6 Acceptance	We do not run any public traffic.
B6 Issuing	As an agglomeration carrier, we are not a ticket issuer. This is the job of the public transport organizer.
B6 Issuing	Customers can book international tickets on a DB feed on Arrivas homepage. The international tickets are issued by DB.
B6 Issuing	Different format decided of RER
B6 Issuing	Do not offer intenational tickets
B6 Issuing	Do not offer international tickets
B6 Issuing	Do not offer international tickets.
B6 Issuing	Ferrovie del Gargano S.r.l. does not service with seat reservation

B6 Issuing	Hi,I was recently involved in this and added as a project member, however we do not actually have any paper tickets at all, all our travelers use our trains without any physical tickets. The only ticket required is a valid ID. Kind regards//Marcus
B6 Issuing	ITALO SPA does not issue value paper tickets for international and foreign sales, and doesn't sell tickets in connection to other RUs.
B6 Issuing	its allready implemented.
B6 Issuing	Łódzka Kolej Aglomeracyjna Sp. z o.o., doesn`t sell international and foreign tickets
B6 Issuing	neprodáváme mezinárodní jízdenky
B6 Issuing	No GB TOC issues international tickets.
B6 Issuing	PKP SKM is a local carrier and uses its own format. The cost of modifications is too high.
B6 Issuing	Thalys is only issuing digital/electronic tickets.
B6 Issuing	The lack of international and foreign sales by the carrier due to the local nature of the business.
B6 Issuing	Ticketing is subcontracted to other company
B6 Issuing	Trenord isn't subject to implement this function bacause it iussues national ticket for the sale of cross-border tickets.Trenord and Tilo have signed an agreement to lay down their terms of transport.
B6 Issuing	We are a suburban railway company, with a contactless tickect system, integrated with other modes of transport. Not issuinginternational tickets.
B6 Issuing	We do not run any public traffic.
B7 Acceptance	as written above
B7 Acceptance	Contactless ticket system with acess gates, integrated with other modes of transport. Not offering or accepting internationaltickets
B7 Acceptance	Currently we do not adopt this ticketing method.
B7 Acceptance	Do not accept international tickets
B7 Acceptance	Hi, Please see our previous replies regarding physical tickets.
B7 Acceptance	ITALO SPA does not accept international home printed tickets or any other type of ticket not issued by the official ITALO booking platform.
B7 Acceptance	Łódzka Kolej Aglomeracyjna Sp. z o.o., doesn`t sell international and foreign tickets
B7 Acceptance	nerealizujeme mezinárodní přepravy
B7 Acceptance	Not accepting international tickets
B7 Acceptance	PKP SKM is a local RU-P and accepts tickets only issued by other carriers from ticket offices.
B7 Acceptance	Szybka Kolej Miejska carries out domestic transport. As an agglomeration carrier, we are not a ticket issuer. This is the job of the public transport organizer.
B7 Acceptance	Thalys is only issuing digital/electronic tickets.
B7 Acceptance	The Autority is the Regione Emilia Romagna
B7 Acceptance	The company is not organized to accept them
B7 Acceptance	The lack of international and foreign sales by the carrier due to the local nature of the business.
B7 Acceptance	Ticketing is subcontracted to other company
B7 Acceptance	We are accepting home printed tickets
B7 Acceptance	We do not accept a control as we use security in system only.
B7 Acceptance	We do not run any public traffic.
B7 Issuing	as written above
B7 Issuing	B7 isn't adopted for international travels by Thello
B7 Issuing	Contactless ticket system with acess gates, integrated with other modes of transport. Not offering or accepting internationaltickets

B7 Issuing	Currently we do not adopt this ticketing method.
B7 Issuing	Customers can book international tickets on a DB feed on Arrivas homepage. The international tickets are issued by DB.
B7 Issuing	Do not issue international tickets
B7 Issuing	Do not offer international tickets
B7 Issuing	Hi,Anyone can print the tickets from their booking confirmation, but ticket confirmations are never used onboard, we only check for valid ID of the passenger. If you have more requirements let us know and ill see if I can elaborate further.
B7 Issuing	Italo S.p.A. does not issue home printed tickets for international and foreign sales, and doesn't sell tickets in connection to other RUs.
B7 Issuing	Łódzka Kolej Aglomeracyjna Sp. z o.o., doesn`t sell international and foreign tickets
B7 Issuing	nerealizujeme mezinárodní přepravy
B7 Issuing	No GB TOC issues international tickets.
B7 Issuing	Not issuing international tickets
B7 Issuing	PKP SKM is a local RU-P and does not sell international tickets at all. At the moment, the sale of tickets of other carriers takes place only at ticket offices based on software used by these carriers.
B7 Issuing	Szybka Kolej Miejska carries out domestic transport. As an agglomeration carrier, we are not a ticket issuer. This is the job of the public transport organizer.
B7 Issuing	Thalys is only issuing digital/electronic tickets.
B7 Issuing	The competence is of Region Emilia Romagna
B7 Issuing	The lack of international and foreign sales by the carrier due to the local nature of the business.
B7 Issuing	The RU does not make a ticket in IRTHP format
B7 Issuing	Ticketing is subcontracted to other company
B7 Issuing	We do not run any public traffic.
Provide B1 data	Do not offer international tickets
Provide B1 data	Do not offer international tickets - they are issued by DB.
Provide B1 data	Ferrovie del Gargano S.r.l. does not sell international tickets
Provide B1 data	GB TOCs do not export tariffs for use by non-GB TOCs.
Provide B1 data	Łódzka Kolej Aglomeracyjna Sp. z o.o., doesn`t sell international and foreign tickets
Provide B1 data	no resources
Provide B1 data	Only regional and inter regional service
Provide B1 data	Our routes are sold at the NRT tariff,limited to the Lombard routes on whichthere is at least one Trenitalia Service. The same aresold to Trenitalia vat
Provide B1 data	PKP SKM provides a tariff in the domestic sales system maintained and managed by PKP Informatyka Sp. z o. o.. Also PKP SKM use its own solution is to integrate for minor companies.
Provide B1 data	řídíme se tarifem DSÚK vyhlašovaným objednavatelem našich služeb
Provide B1 data	Szybka Kolej Miejska carries out domestic transport. As an agglomeration carrier, we are not a ticket issuer. This is the job of the public transport organizer.

Provide B1 data	Thalys only issues IRT tickets.
Provide B1 data	The local nature of the business.
Provide B1 data	this product is not marketed in Renfe.
Provide B1 data	We are a suburban railway company. we don't offering international tickets.
Provide B1 data	We do not integrate towards any third parties at the moment.
Provide B1 data	We do not run any public traffic.
Provide B1 data	We do not use NRT tariff.
Provide B1 data	We will provide TGSA with this.
Provide B2 data	DB does not offer IRT fares
Provide B2 data	Do not offer international tickets
Provide B2 data	Do not offer IRT fares
Provide B2 data	Do not offer IRT tariffs
Provide B2 data	Ferrovie del Gargano S.r.l. does not sell international tickets
Provide B2 data	GB TOCs do not export tariffs for use by non-GB TOCs.
Provide B2 data	IRT fares are not offered
Provide B2 data	IRT fares are not offered
Provide B2 data	Łódzka Kolej Aglomeracyjna Sp. z o.o., doesn`t sell international and foreign tickets
Provide B2 data	neprovozujeme mezinárodní přepravy
Provide B2 data	no resources
Provide B2 data	Not offering tickets
Provide B2 data	Only regional and inter regional service. We are the service according whit B2 technical documents only on the station
Provide B2 data	PKP SKM does not book seats on its trains.
Provide B2 data	See previous reply
Provide B2 data	SNCB not offering IRT fares on its trains.
Provide B2 data	Szybka Kolej Miejska carries out domestic transport. As an agglomeration carrier, we are not a ticket issuer. This is the job of the public transport organizer.

Provide B2 data	Thalys communicates on tarifs details only with distributors under commercial agreement.
Provide B2 data	The local nature of the business.
Provide B2 data	Trenord doesn't use IRT Tariffs
Provide B2 data	VR domestic fares will be available through NAP service when bilaterally agreed in open APIs.
Provide B2 data	We are a suburban railway company. we don't offering international tickets.
Provide B2 data	We do not run any public traffic.
Provide B2 data	We will provide TGSA with info.
Provide B3 data	-
Provide B3 data	Do not offer international tickets
Provide B3 data	Do not offer products.
Provide B3 data	Do not offer special tariffs
Provide B3 data	Ferrovie del Gargano S.r.l. does not sell international tickets
Provide B3 data	GB TOCs do not export tariffs for use by non-GB TOCs.
Provide B3 data	Łódzka Kolej Aglomeracyjna Sp. z o.o., doesn`t sell international and foreign tickets
Provide B3 data	neprovádíme mezinárodní přepravu
Provide B3 data	no resources
Provide B3 data	Not offering tickets
Provide B3 data	not provided
Provide B3 data	Only regional and inter regional service
Provide B3 data	PKP SKM provides a tariff in the domestic sales system maintained and managed by PKP Informatyka Sp. z o. o.. Also PKP SKM use its own solution is to integrate for minor companies.
Provide B3 data	SBB does not offer any special tariffs.
Provide B3 data	See previous reply
Provide B3 data	SNCF does not propose these products.
Provide B3 data	Special tariffs are subject to bilateral agreement. A general standard is not applied.

Provide B3 data	Szybka Kolej Miejska carries out domestic transport. As an agglomeration carrier, we are not a ticket issuer. This is the job of the public transport organizer. SKM doesn't provide reservation system.
Provide B3 data	Thalys does not issue Special Tarifs
Provide B3 data	The local nature of the business.
Provide B3 data	This product is not marketed in Renfe.
Provide B3 data	Trenitalia is not dealing with these products
Provide B3 data	Trenord doesnt use special tariffs.
Provide B3 data	VR domestic fares will be available through NAP service when bilaterally agreed in open APIs.
Provide B3 data	We are a suburban railway company. we don't offering international tickets.
Provide B3 data	We do not run any public traffic.
Provide B3 data	We offer only regional and cross-border rail links (non reservation tickets) based on bilateral agreements. We do not use Special Tariffs/Fares for int&foreign sales.
Provide B4 data	Ferrovie del Gargano S.r.l. does not have hourly production systems in EDIFACT format
Provide B4 data	However, the timetable is passed to the national timetable called HAFAS.
Provide B4 data	neprovozujeme
Provide B4 data	no resources
Provide B4 data	Szybka Kolej Miejska carries out domestic transport. As an agglomeration carrier, we are not a timetable issuer. This is the job of the public transport organizer.
Provide B4 data	The date we have arranged hourly data according to the standard Google expected for engines (GTFS) and we also provided aweb service for portals that(by agreement) can access the time data in real time (including changes).There are no data flows that g
Provide B4 data	The timetable is made, confirmed and shared by Infrastructure Manager.
Provide B4 data	This is IM who owns and makes avaliable timetables to RU (incl. Łódzka Kolej Aglomeracyjna Sp. z o.o.,)
Provide B4 data	We are sending data to MERITS.
Provide B4 data	We currently do not integrate towards any third parties, however we do support a full GTFS endpoint for our schedule for google transit partners as well as manually sending it to the Swedish agency that is responsible for the schedules in Sweden (Samtrafi
Provide B4 data	We do not run any public traffic.
Send Bike reservation	At the moment, the sale of bookings of other RU-P's takes place only at ticket offices based on software used by these RU-P's or software dedicated to "Wspólny Bilet" project.
Send Bike reservation	Cycle reservations used by GB TOCs and ticket vendor licencees for domestic ticketing only.

Send Bike reservation	Do not offer bicycle reservation
Send Bike reservation	Do not offer this service
Send Bike reservation	Hi,If we were to send requests to other RUs we would support it a according to TAP, however we currently have no such third party integrations. But our current trains do not allow us to bring bicycles at all.
Send Bike reservation	In currently used standards in Finnish-Russian traffic there is no sending requests for bicycle carriage.
Send Bike reservation	ITALO SPA does not provide or accept reservations for bicycle transport.
Send Bike reservation	Łódzka Kolej Aglomeracyjna Sp. z o.o., doesn`t sell international and foreign tickets
Send Bike reservation	nerealizujeme
Send Bike reservation	no resources
Send Bike reservation	Suburban railway company, without reservation for bicycles.
Send Bike reservation	Szybka Kolej Miejska carries out domestic transport. As an agglomeration carrier, we are not a ticket issuer. This is the job of the public transport organizer. SKM doesn't provide reservation system.
Send Bike reservation	Thalys is using a system provided by SNCF. Uncertainty remains about the use of Tech. Doc B5
Send Bike reservation	The company does not have electronic bicycle booking systems
Send Bike reservation	The lack of reservation of places for bicycles among other passenger carriers with which the carrier cooperates.
Send Bike reservation	The service isn't bookable
Send Bike reservation	Ticketing is subcontracted to other company
Send Bike reservation	Trenord doesn't make reservations but iussues bicycle carriage tickets nly for trains where the byke service is provided.
Send Bike reservation	we do not have similar use case for Thello products.
Send Bike reservation	We do not run any public traffic.
Send Bike reservation	We don't transport bikes.
Send Car Reservation	Do not offer product.
Send Car Reservation	Do not offer service.
Send Car Reservation	Do not offer this service
Send Car Reservation	Do not offer this service.
Send Car Reservation	In currently used standards in Finnish-Russian traffic there are no sending requests for car carriage.

Send Car Reservation	ITALO SPA does not provide or accept reservations for car carriage.
Send Car Reservation	Łódzka Kolej Aglomeracyjna Sp. z o.o., doesn`t sell international and foreign tickets
Send Car Reservation	nerealizujeme
Send Car Reservation	No activity related to the transport of cars among other passenger carriers with which the carrier cooperates.
Send Car Reservation	No car reservations made by GB TOCs.
Send Car Reservation	no resources
Send Car Reservation	No RUs cooperating with PKP SKM carries a car.
Send Car Reservation	Not offering this service.
Send Car Reservation	Not relevant.
Send Car Reservation	Not scope
Send Car Reservation	Regional transport
Send Car Reservation	service not supported
Send Car Reservation	SNCB not offering car carriage services in its commercial portfolio
Send Car Reservation	Suburban railway company. We don't transport cars
Send Car Reservation	Szybka Kolej Miejska carries out domestic transport. As an agglomeration carrier, we are not a ticket issuer. This is the job of the public transport organizer. SKM doesn't provide reservation system.
Send Car Reservation	Thalys is using a system provided by SNCF. Uncertainty remains about the use of Tech. Doc B5
Send Car Reservation	The company does not have electronic car booking systems
Send Car Reservation	The train can't transport cars
Send Car Reservation	Ticketing is subcontracted to other company
Send Car Reservation	Trenord doesn't carry cars on the trains
Send Car Reservation	We currently do not integrate or send any other requests to other RUs, plus we currently do not have support for any car carriages in our trains.
Send Car Reservation	We do not run any public traffic.
Send Car Reservation	We don't send cars.
Send Car Reservation	We offer only regional and cross-border rail links (non reservation tickets).

Send Seat reservation	allready in operation
Send Seat reservation	as written above
Send Seat reservation	At the moment, the sale of bookings of other RU-P's takes place only at ticket offices based on integrated software used by RUP's participating in "Wspólny Bilet" project and platform Bilkom.
Send Seat reservation	Because is implementing by the infrastructure manager. There is a calling centre to give information
Send Seat reservation	Do not offer seat reservation
Send Seat reservation	Ferrovie del Gargano S.r.l. does not service with seat reservation
Send Seat reservation	Hi,Currently we do not connect towards any other RUs, we only have our own reservation system and website. We do handle incoming requests through third parties though such as Silverrail, which in turn has other big agencies behind them such as Amadeus.
Send Seat reservation	ITALO SPA does not sell tickets in connection with other RUs.
Send Seat reservation	Łódzka Kolej Aglomeracyjna Sp. z o.o., doesn`t sell international and foreign tickets
Send Seat reservation	nerealizujeme tyto rezervace
Send Seat reservation	no resources
Send Seat reservation	Regional Transport
Send Seat reservation	Suburban railway company, without reservation of seats/berths
Send Seat reservation	Szybka Kolej Miejska carries out domestic transport. As an agglomeration carrier, we are not a ticket issuer. This is the job of the public transport organizer. SKM doesn't provide reservation system.
Send Seat reservation	Thalys is using a system provided by SNCF. Uncertainty remains about the use of Tech. Doc B5
Send Seat reservation	Ticketing is subcontracted to other company
Send Seat reservation	We do not run any public traffic.
Send Seat reservation	We offer only regional and cross-border rail links (non reservation tickets).We sell the "PKP Intercity" Company tickets based on agency agreement.

Annex 4   Responses contact list

Table 15: Contacted railway undertakings with responses

Member State	Type of Company	Company name	Reporting Entity
AT	RU	ÖBB-Personenverkehr AG	
BE	RU	Nationale Maatschappij der Belgische Spoorwegen (NMBS)	
BE	RU	THI FACTORY	
CH	RU	BLS AG Personenverkehr	SBB Personenverkehr
CH	RU	OeBB (Oensingen-Balsthal-Bahn AG)	SBB Personenverkehr
CH	RU	RA (RegionAlps AG)	SBB Personenverkehr
CH	RU	SBB AG, Passenger Division	SBB Personenverkehr
CH	RU & SM	Schweizerische Südostbahn AG	
CH	RU	SZU (Sihltal Zürich Uetliberg Bahn SZU AG)	SBB Personenverkehr
CH	RU	THURBO (Thurbo AG)	SBB Personenverkehr
CH	RU	TPF (Transports publics fribourgeois Trafic (TPF TRAFIC) SA)	SBB Personenverkehr
CZ	RU	České dráhy, a.s.	
CZ	RU	Rabbit Rail s.r.o.	
CZ	RU	RegioJet ÚK, a.s.	
DE	RU	Fahrgastverband PRO BAHN - Landesverband Berlin-Brandenburg e.V.	
DE	RU	DB Fernverkehr AG	
DE	RU	DB Regio AG	
DE	RU	DB RegioNetz Verkehr GmbH	
DE	RU	DB ZugBus Regionalverkehr Alb-Bodensee GmbH	
DE	RU	S-Bahn Berlin GmbH	
DE	RU	S-Bahn Hamburg GmbH	
DK	RU & SM	DSB	
DK	RU & SM	Nordjyske Jernbaner	
DK	RU & SM	Arriva A/S	
DK	RU & SM	Midtjyske Jernbaner	
DK	RU & SM	Metro	
DK	RU & SM	Lokaltog	
ES	RU	RENFE VIAJEROS	

Member State	Type of Company	Company name	Reporting Entity
FI	RU	VR Group	
FR	RU	SNCF Voyageurs SA	
FR	RU	Thello	
HU	RU	MÁV-START Railway Passenger Transport Co.	
HU	RU	Győr-Sopron-Ebenfurti Vasút Zártkörűen Működő Részvénytársaság	
IT	RU	ITALO - NUOVO TRASPORTO VIAGGIATORI SPA	
IT	RU	TRENTINO TRASPORTI SPA	
IT	RU	FERROVIE DEL GARGANO	
IT	RU	Trasporto Ferroviario Toscano SpA	
IT	RU	Trenitalia SpA	
IT	RU & SM	Trenitalia Tper S.c.a.r.l	
IT	RU	Trenord Srl	
PL	RU	"Koleje Małopolskie" sp. z o.o.	
PL	RU	Koleje Dolnośląskie S.A.	
PL	RU	Koleje Małopolskie sp. z o.o.	
PL	RU	Łódzka Kolej Aglomeracyjna Sp. z o.o.	
PL	RU & SM	PKP Szybka Kolej Miejska w Trójmieście Sp. z o. o.	
PL	RU	Szybka Kolej Miejska sp. z o.o.	
PT	RU	CP - Comboios de Portugal EPE	
PT	RU	FERTAGUS, S.A.	
SE	RU	MTR Express (Sweden AB, also known as MTRX	
SE	RU	Transdev Sverige AB	
SL	RU	Slovenske železnice - Potniški promet, d.o.o.	
SL	RU	SŽ-Potniški promet, d.o.o.	
UK	RU	Abellio Greater Anglia	Rail Delivery Group (RDG)
UK	RU	Arriva Trains Wales	Rail Delivery Group (RDG)
UK	RU	C2C	Rail Delivery Group (RDG)
UK	RU	Caledonia Sleepers	Rail Delivery Group (RDG)

Member State	Type of Company	Company name	Reporting Entity
UK	RU	Chiltern Railways	Rail Delivery Group (RDG)
UK	RU	CrossCountry	Rail Delivery Group (RDG)
UK	RU	East Midlands Trains	Rail Delivery Group (RDG)
UK	RU	First Hull Trains	Rail Delivery Group (RDG)
UK	RU	First TransPenine Express	Rail Delivery Group (RDG)
UK	RU	Gatwick Express	Rail Delivery Group (RDG)
UK	RU	Govia Thameslink Railway	Rail Delivery Group (RDG)
UK	RU	Grand Central Railway Company Ltd	Rail Delivery Group (RDG)
UK	RU	Great Northern	Rail Delivery Group (RDG)
UK	RU	Great Western Railway	Rail Delivery Group (RDG)
UK	RU	Heathrow Connect	Rail Delivery Group (RDG)
UK	RU	Heathrow Express	Rail Delivery Group (RDG)
UK	RU	Hull Trains	Rail Delivery Group (RDG)
UK	RU	Island Line	Rail Delivery Group (RDG)
UK	RU	London Midland	Rail Delivery Group (RDG)
UK	RU	London North Eastern Railway	Rail Delivery Group (RDG)
UK	RU	London Overground Rail Operations Ltd	Rail Delivery Group (RDG)
UK	RU	Merseyrail	Rail Delivery Group (RDG)
UK	RU	Northern	Rail Delivery Group (RDG)
UK	RU	ScotRail	Rail Delivery Group (RDG)

Member State	Type of Company	Company name	Reporting Entity
UK	RU	South West Trains	Rail Delivery Group (RDG)
UK	RU	Southeastern	Rail Delivery Group (RDG)
UK	RU	Southern	Rail Delivery Group (RDG)
UK	RU	Stansted Express	Rail Delivery Group (RDG)
UK	RU	TFL Rail	Rail Delivery Group (RDG)
UK	RU	Thameslink	Rail Delivery Group (RDG)
UK	RU	TransPennine Express	Rail Delivery Group (RDG)
UK	RU	Virgin Trains	Rail Delivery Group (RDG)
UK	RU	West Midlands Trains	Rail Delivery Group (RDG)