

Making the railway system
work better for society.

To the attention of:
Ms. Elisabeth WERNER
MOVE.DDG2.C
Director "Land"
Rue De Mot 28
DM 28 08/049
BE-1049 Bruxelles
Belgium

JD-SJ-D(2017)1347

Valenciennes, 15 DEC. 2017

Subject: The Agency's 2nd report no ERA-REP-152 IMPL-2017-01 on TAP TSI implementation

Dear Mrs Werner,


In the letter of 21/12/2015 (reference R-5967753), DG MOVE requested the assistance of the Agency for the assessment of the TAP TSI implementation in accordance with Article 21b of Regulation (EC) 881/2004. The Agency set up in May 2016 the Implementation Co-operation Group Telematics Applications for Passengers to perform the assessment of the TAP TSI Implementation.

The Agency hereby provides the 2nd report ERA-REP-152 IMPL-2017-01 to inform DG MOVE on the progress of the implementation of TAP TSI regulation.

Should you require further clarifications, please do not hesitate to contact me.

For detailed questions, you may wish to contact Ms Anna GIGANTINO, the Head of Interoperability Unit (Tel: +33 32 70 96 548) e-mail: anna.gigantino@era.europa.eu.

Yours sincerely,



Josef DOPFFELBAUER
Executive Director

Enclosure: Report ERA-REP-152 IMPL-2017-01
Copy: Keir FITCH, Carlo DEGRANDIS, (DG MOVE)
A. GIGANTINO, F. FERRARI, M. VARGA, S. JUGELT (ERA)

Making the railway system
work better for society.

Report

2nd status report about the implementation progress of the TAP TSI

	<i>Drafted by</i>	<i>Validated by</i>	<i>Approved by</i>
<i>Name</i>	Stefan Jugelt, Kresimir Raguz	Felice FERRARI	Anna GIGANTINO
<i>Position</i>	Project Officer	Head of Sector	Head of Unit
<i>Date</i>	30/11/2017	05/12/2017	05/12/2017
<i>Signature</i>			

Document History

<i>Version</i>	<i>Date</i>	<i>Comments</i>
0.1	04/08/2017	First draft
0.2	11/10/2017	Incorporation of the implementation reports for retail, RU/IM and TSGA
0.3	10/11/2017	Incorporation of the results of the TAP TSI co-operation group
0.4	30/11/2017	Incorporation of the comments of the members of the TAP TSI co-operation group
1.0	05/12/2017	Final

Contents

Abbreviations.....	4
Reference documents	4
Reference legislation	5
1. Executive summary	6
2. Introduction	8
2.1. Reporting structure.....	8
2.2. Reporting procedures	10
2.2.1. Reporting for the conditions of carriage.....	10
2.2.2. Reporting for the regulatory functions.....	10
2.2.3. Reporting for TAP TSI retail basic parameters.....	10
2.2.4. Reporting for TAP TSI RU/IM basic parameters.....	11
2.2.5. Further steps after the reporting.....	12
3. Context.....	13
4. Analysis.....	17
4.1. Implementation of the regulatory functions	17
4.2. Implementation of the functions according to the original consolidated TAP TSI Master Plan.....	22
4.2.1. Process for the questionnaire	22
4.2.2. Results of the reporting for the TAP TSI retail basic parameters to be implemented by railway undertakings.....	23
4.2.2.1. Sending request to agreed RU's in B5 format	25
4.2.2.2. Answering reservation requests from agreed RU's and agreed 3 rd parties in B5 format.....	26
4.2.2.3. Sending reservation requests for bicycle carriage to agreed RU's in B5 format.....	28
4.2.2.4. Answering reservation requests for bicycle carriage from agreed RU's and agreed 3 rd parties in B5 format	29
4.2.2.5. Sending reservation requests for car carriage to agreed RU's in B5 format	30
4.2.2.6. Answering reservation requests for car carriage from agreed RU's and agreed 3 rd parties in B5 format	32
4.2.2.7. Issuing value paper tickets for international and foreign sales in B6 format	33
4.2.2.8. Accepting value paper tickets for international and foreign sales in B6 format	34
4.2.2.9. Issuing home printed tickets for international and foreign sales in B7 format	35
4.2.2.10. Accepting home printed tickets for international and foreign sales in B7 format	36
4.2.2.11. Sending PRM assistance reservation requests via IT communication to agreed RU's, IM's and SM's in B10 format	37
4.2.2.12. Answering PRM assistance reservation requests via IT-communication from agreed RU's and agreed 3 rd parties in B10 format.....	38
4.2.3. Results of the reporting for the TAP TSI retail basic parameters to be implemented by ticket vendors.....	39
4.2.4. Results of the reporting for the TAP TSI retail basic parameters to be implemented by railway undertakings.....	40
4.2.4.1. Implementation status in the 1 st half of 2017 of company codes function.....	40

4.2.4.2. Implementation status in the 1st half of 2017 of the common interface function40

4.3. Publication of the conditions of carriage and access conditions41

4.4. Evolution of TAP TSI regulatory functions at European level41

4.5. Evolution of TAP TSI retail functions at Member state level42

4.6. Evolution of TAP TSI RU/IM functions at Member state level42

5. Conclusions43

6. Recommendation / actions to be taken44

Annex 1 Report provided in July 2017 by the TSGA45

TSI entity formation (TSGA)46

Common services deployment47

Setup of the Retail reference database (to be declared by the TSGA/TAP TSI project team only)47

Setup of the TAP TSI registry (to be declared by the TSGA/TAP TSI project team only)48

Setup of the Data quality tool (to be declared by the TSGA/TAP TSI project team only)49

Abbreviations

Table 1: Table of abbreviations

<i>Abbreviation</i>	<i>Definition</i>
CEF	Connecting Europe Facility
CER	Community of European Railway and Infrastructure Companies
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
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
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

<i>Ref. N°</i>	<i>Title</i>	<i>Reference</i>	<i>Version</i>
(1)	TAP TSI ANNEX B.62 TAP MASTER PLAN	TAP 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

<i>Ref. N°</i>	<i>Document Reference</i>	<i>Title</i>	<i>Last Issue</i>
[1]	Directive 2008/57/EC	Interoperability of the rail system	17.06.2008
[2]	TAP TSI Regulation No 454/2014	Commission Regulation (EU) No 454/2011 of 11 May 2011 on the technical specification for interoperability relating to the telematics applications for passengers 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. Executive summary

The report shows the implementation progress 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. The TSGA has to report about the implementation progress for those functions.

This second report contains the data - as agreed in the 2nd TAP cooperation group meeting on 21st March 2017 to report the status of the implementation by **30.06.2017** of the following TAP TSI [2] regulatory functions:

- TAP TSI architecture:
 - Registry
 - Retail reference database
 - Data quality tool
- Setup of the TAP TSI Services Governance Association (TSGA)

The data for this part of the report have been delivered to ERA by the TSGA.

This report also contains furthermore the reporting about a subset of the TAP TSI basic parameters for retail functions, mainly for the reservation and the ticketing. The subset of these retail functions has been agreed in the TAP TSI co-operation group on 22 March 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 now established, staffed and operational
- The setup of the TAP TSI architecture has been delayed by almost 3 years. This comprises as well:
 - 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

It is envisaged by TSGA to deliver these functions until end 2018. The report identifies the functions where the sector shall allocate more resources to meet the target implementation date quoted in the TAP TSI Master Plan (1).

The second 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 2nd 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 3 rd 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 3 rd 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
8.4 Answering reservation requests for car carriage from agreed RU's and agreed 3 rd 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 3 rd parties in B10 format	TAP BP 4.2.3	RU

2. Introduction

This 2nd 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.60¹ 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 Plan².

“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 ETTS/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	two reports per year	two reports per year	

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. 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.

2.2.1. Reporting for the conditions of carriage

The reporting of the implementation of the conditions of carriage is done by ERA. ERA runs once per year an automated data collection tool, collecting the websites with the conditions of carriage and the accessibility conditions from the websites of the passenger railway undertakings. ERA uses the list of passenger railway undertakings for the reporting which has been delivered by the NCP’s of the member states. To fine-tune ERA tool the NCPs are welcome to provide translations for some keywords in the language(s) of their country. The report is delivered by ERA once per year to the European Commission.

2.2.2. Reporting for the regulatory functions

The reporting procedure for regulatory functions The following picture shows the reporting workflow.

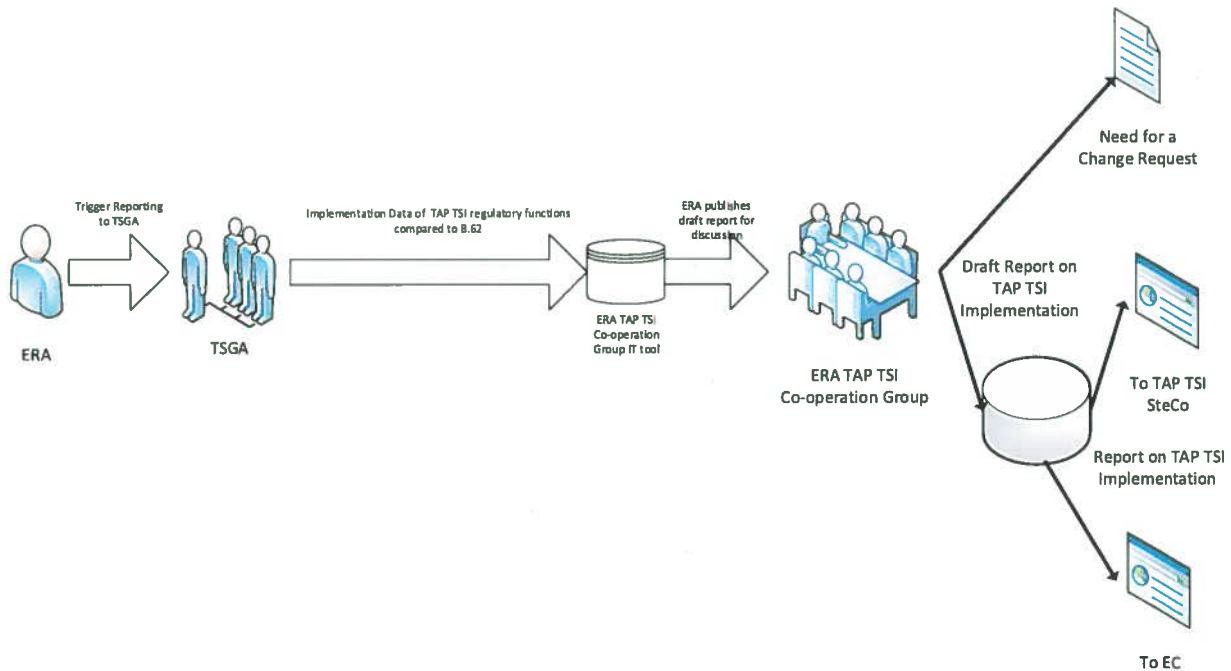


Figure 1 - ERA TAP TSI Implementation Cooperation Group process for regulatory functions

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 send 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:

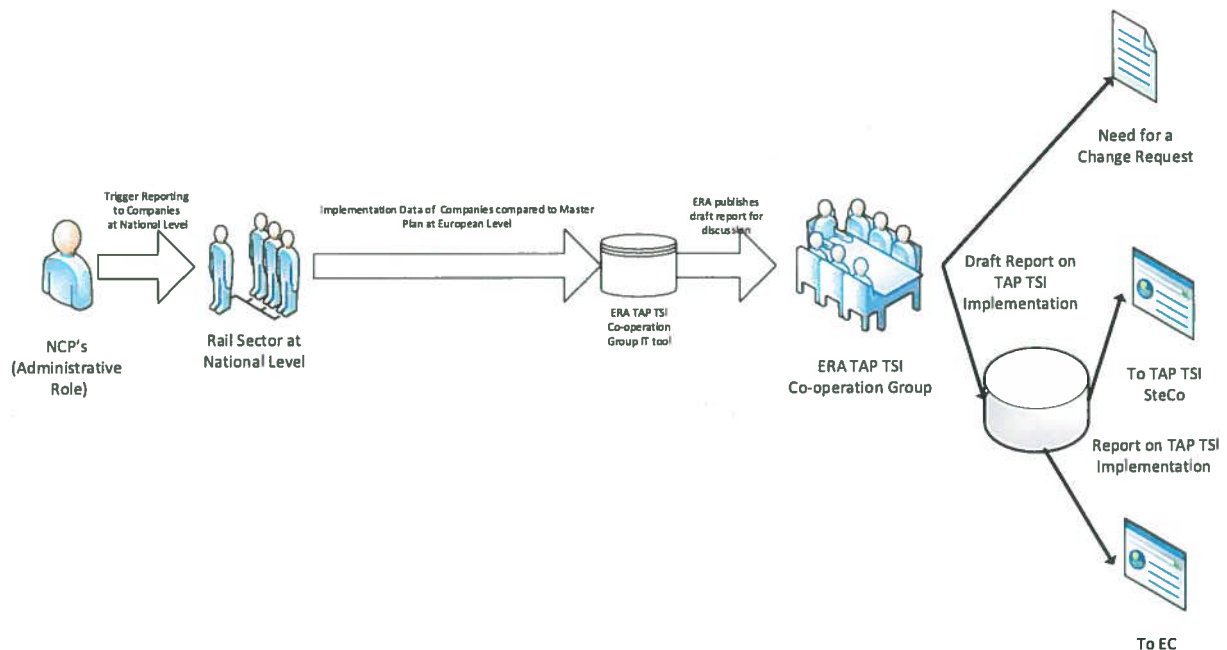


Figure 2: ERA TAP TSI Implementation Cooperation Group process for retail basic parameters.

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.

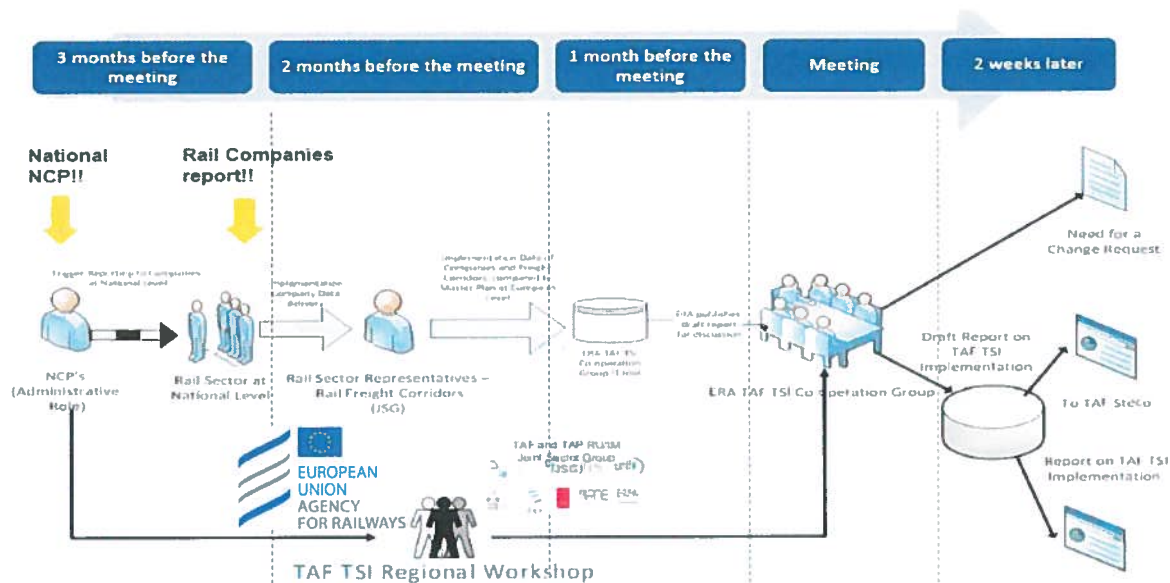


Figure 3: ERA TAF TSI Implementation Cooperation Group process for RU/IM basic parameters.

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

2.2.5. Further steps after the reporting

After the reporting of the implementation 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, taking into account 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 will be applied. The data will be collected by the Common support group (CSG) and the Agency will use the same tool for the reporting of the TAP TSI retail basic parameters.

For the reporting the **number of registered companies on 14th June 2017 was one hundred and seventy two (172)**. Once the data is collected, the raw data is delivered to the Agency, who incorporates this information in the ERA IT tool for TAP TSI [2] monitoring. This IT tool comprises a database to store the data and a GIS tool to visualize on maps the progress of the implementation. There are three groups of maps:

- Maps to report about common functions. These maps show the degree of implementation of the Reference Files (Company Codes and retail Location Codes) at European level.

- Maps to report about Railway Undertaking's and ticket vendor functions. These maps show the degree of implementation at Member state level of the functions to exchange retail data amongst Railway Undertakings and ticket vendors. These maps will be created, once the first report with the implementation progress for the basic parameters of the individual railway undertaking will be created.

The scope of the present report is to inform about the deployment of the functions scheduled to be implemented by 2nd half 2016 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
 - Retail reference database
 - 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 (PM²). 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, taking into account 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:
 - Feasibility Study
 - Business Case
 - 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:
 - Resource Planning
 - Project Work Planning (Working Break Down Structure)
 - Migration Planning
 - Outsourcing Plan
 - 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:
 - Procurement
 - Executing
 - Testing (User Acceptance and system Integration)
 - 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% to 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.

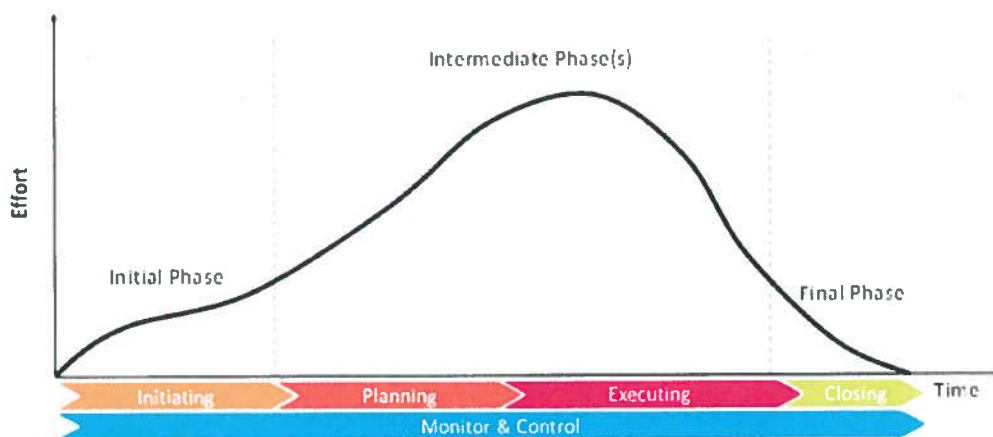


Figure 4: PM² project lifecycle.

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:
 - Project not launched: 0% or no data -> Blue colour on the map.
 - Initiating Phase accomplished: DI < 25% -> Red colour on the map.
 - Planning Phase accomplished: 25% =< DI < 50% -> Orange colour on the map.
 - Executing Phase accomplished: 50% =< DI < 75% -> Light Green colour on the map.
 - In Production & Monitor & Control accomplished: 75% =< DI =< 100% -> Green colour on the map.

4. Analysis

4.1. Implementation of the regulatory functions

The TAP TSI technical document B.62 (Master Plan (1)) shows that the regulatory functions of the TAP TSI have to be implemented by the end of 2014 (Milestone “Common services delivered”).

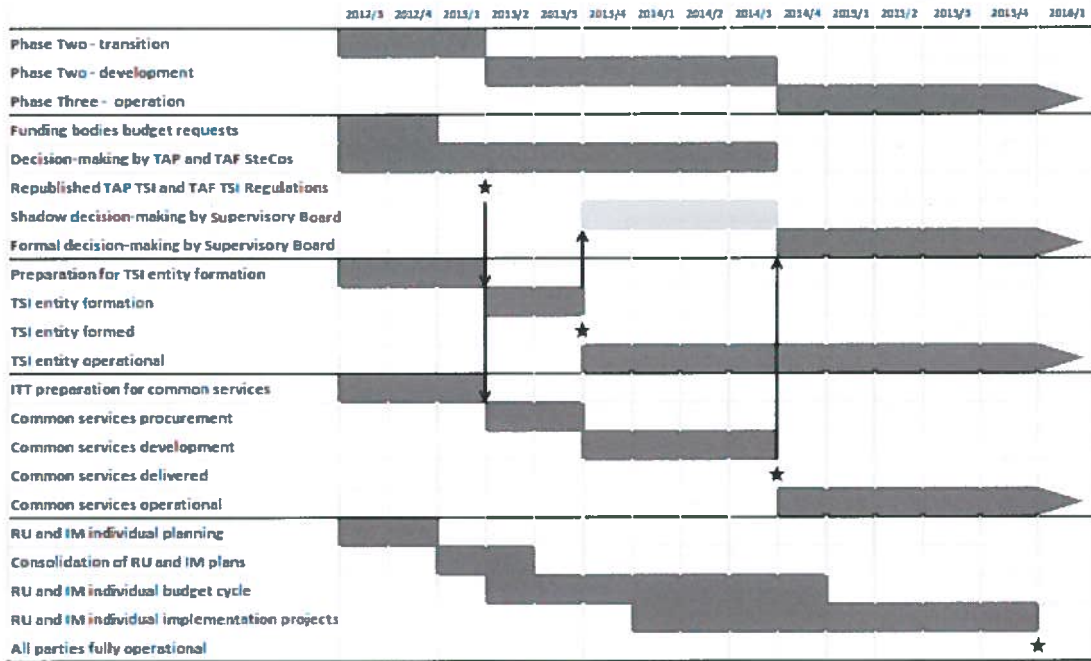


Figure 5: Master Plan for the regulatory functions.

The TAP TSI technical document B.62 is the reference document for the milestones to be respected for the implementation of the regulatory functions of the TAP TSI. The milestones in this document serve as reference for the implementation of these functionalities.

To collect the current status of the implementation of the regulatory functions of the TAP TSI, ERA has submitted to the TSGA on 03/07/2017 a questionnaire by email to get the information about the current implementation status of these functions. Deadline for the report was set on 08/09/2017. On 25/07/2017 the TSGA sent back to ERA the questionnaire with the current status of the implementation of the regulatory functions. This questionnaire has been enhanced on 08/09/2017 by answers concerning further questions concerning the questionnaire raised by ERA.

The current status of the implementation is shown in the Figure 6: Implementation progress of the TAP TSI regulatory functions. This project plan has been provided by the TSGA with the responses of the questionnaire.

TSGA – Project Plan (last update: 07/2017)

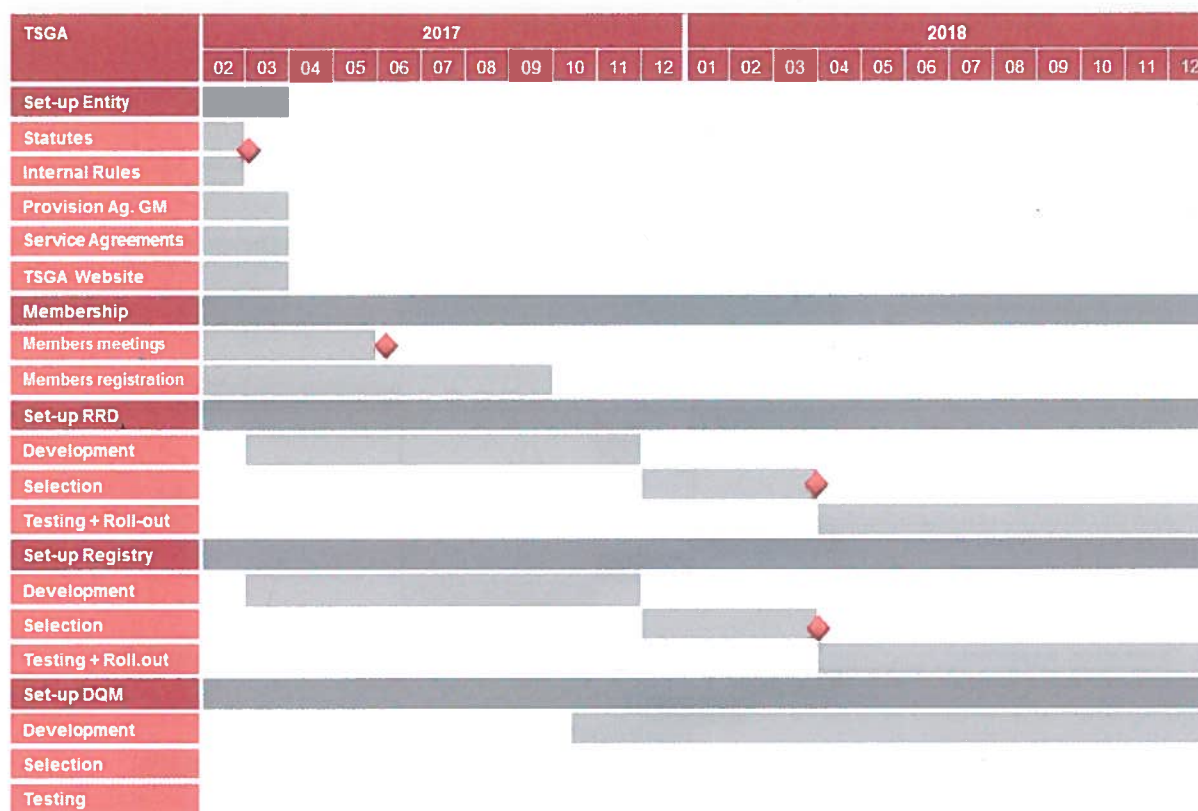


Figure 6: Implementation progress of the TAP TSI regulatory functions.

The analysis shows, that the implementation of all regulatory functions (governance, architecture, common services) of the TAP TSI is significantly delayed. The following table shows the delays of the above mentioned services in detail:

Table 2: Table of current delay for the TAP TSI regulatory functions.

Milestone	Planned date	Actual (planned) date	Delay
Republished TAF and TAP TSI regulation	31/03/2013	11/12/2013	9 months
TSI entity formed	30/09/2013	31/12/2016	3 years, 3 months
Common services delivered	30/09/2014	01/12/2018	4 years, 2 months

The publication of the legislation has been delayed already by 9 months. The reason for that delay was that the approval process of the revised legislation took longer than expected during the TAP TSI phase one.

The table shows furthermore that there is currently a delay of 3 year and 3 months for the setup of the TSI entity. The statutes of the TSGA have been signed on 01/12/2016, so the TSGA is formed. Furthermore the report provided by TSGA team shows, that the implementation of the governance has been finalised and the TSGA is established, staffed and operational.

The progress of the implementation of the functions of the TAP TSI architecture (retail reference database, TAP TSI registry, data quality tool) has been provided on a high level basis with the additional risk. None of the functions has been implemented so far. The Table 6: Milestones for TAP TSI regulatory functions shows the current implementation status of the regulatory functions for the TAP TSI.

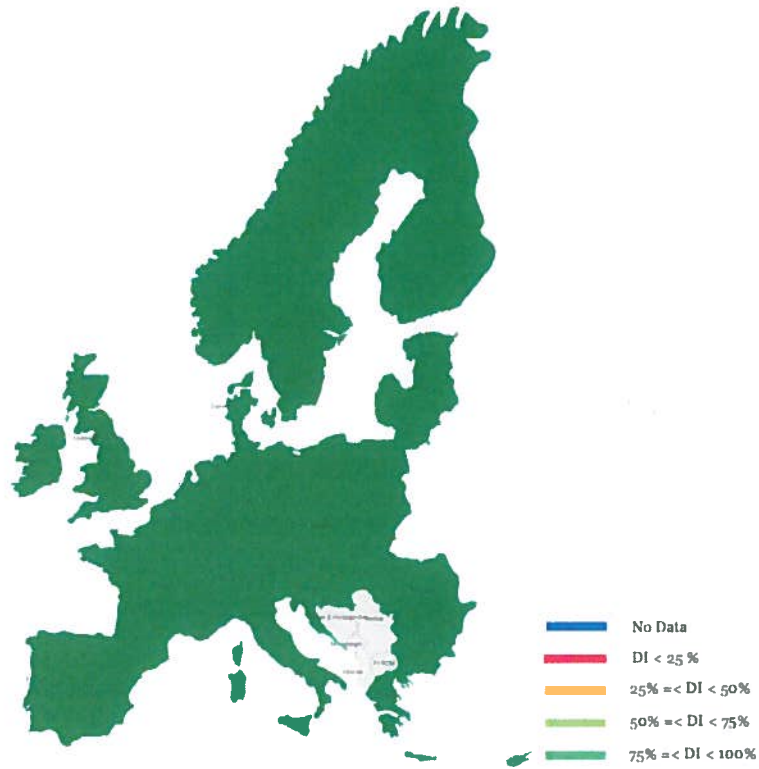
Table 6: Milestones for TAP TSI regulatory functions

<i>Milestone</i>	<i>Planned date</i>	<i>Actual (planned) date</i>	<i>Delay</i>	<i>Degree of fulfilment</i>
Setup pf the TSGA	30/09/2013	31/12/2016	3 years, 3 months	100%
Setup of the Retail reference database	01/10/2014	01/12/2018	4 years, 2 months	50 %
Setup of the TAP TSI registry	01/10/2014	01/12/2018	4 years, 2 months	50 %
Setup of the Data quality tool	01/10/2014	01/12/2018	4 years, 2 months	25 %

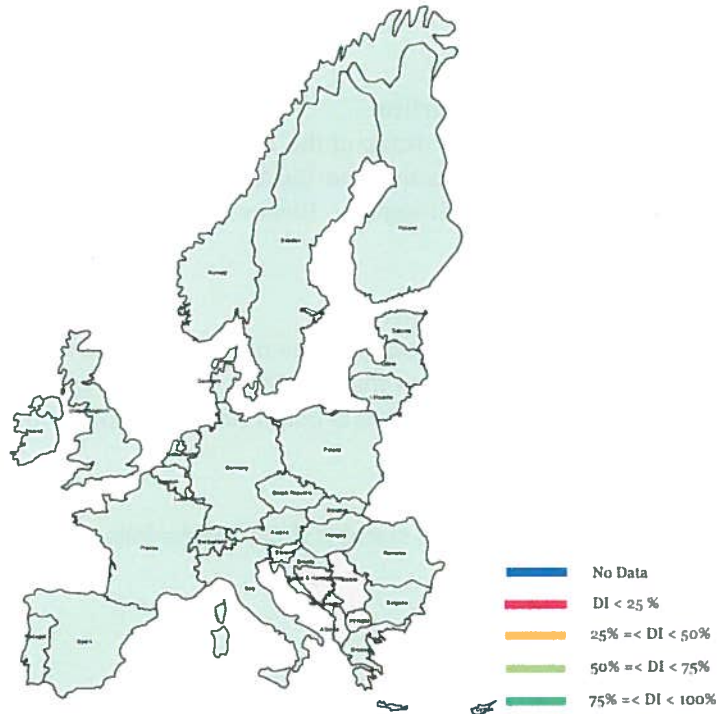
Implementation progress:

- The TSGA has been set-up and it is operational
- The implementation progress for the setup of the retail reference database has been declared with a grade of implementation of 50 %. This means that the TSGA is already at the stage of the planning and the project development of the retail reference database. However the TSGA addressed several issues for the setup of the database:
 - o Search for suitable suppliers
 - o acquirement of specific expertise
- The implementation progress for the setup of the TAP TSI registry has been declared with a grade of implementation of 50 %. This means that the TSGA is already at the stage of the planning and the project development of the TAP TSI registry. However the TSGA addressed several issues for the setup of the TAP TSI registry:
 - o Search for suitable suppliers
 - o acquirement of specific expertise
- The implementation progress for the setup of the data quality tool has been declared with a grade of implementation of 25 %. This means that the TSGA is in the stage of the initiation phase of the project. However the TSGA addressed several issues for the setup of the database:
 - o Search for suitable suppliers
 - o acquirement of specific expertise

The graphical overview of the implementation status is shown in the following maps.



- **Figure 7: Implementation status of the setup of the TSGA**



- **Figure 8: Implementation status for retail reference database and TAP TSI registry**

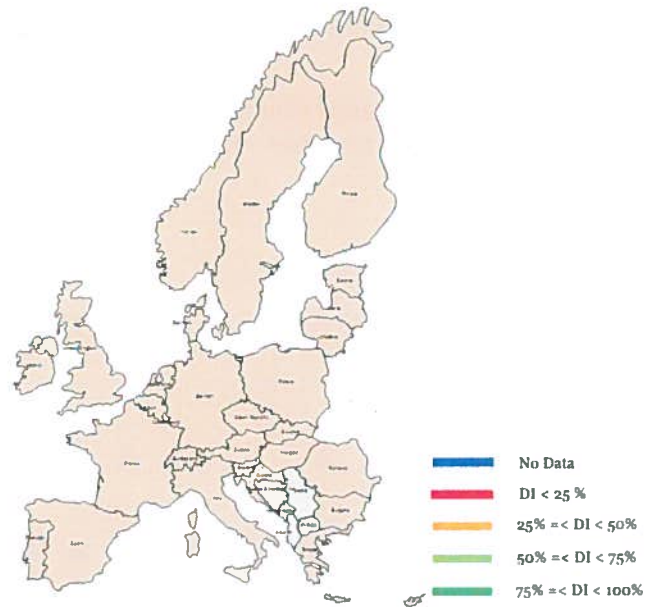


Figure 9: Implementation status of the data quality tool

The main issues of the implementation of the common services are the lack of suppliers and the acquisition of the specific expertise for the implementation of the TAP TSI functions. This makes the procurement, development and deployment of the common functions for the TAP TSI more difficult and may lead to further delays of the implementation of the common functions.

TSGA explained furthermore the potential risks for the implementation of the TAP TSI common functions:

- increasing costs for IT-services development
- applicability of IT-services
- lack of stakeholder interest
- revision of legal framework requiring further adaptations of established project plan
- risk of setting multiple standards in the sector: contradictory encoding (e.g. location codes) compared to existing schemes

Those risks should be observed closely as well to avoid any further disturbances in the implementation of the TAP TSI.

Because of the implementation of the common services is crucial for the implementation of the TAP TSI, detailed mitigation measures (e.g. re-usage and adaption of already existing solutions) for these issues and risks are strongly recommended by ERA to avoid any further delay. Those mitigation measures are mainly needed for the development of the software components (retail reference database, data quality tool, TAP TSI registry) of the 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 is shown in Figure 10: TAP TSI Master Plan for the retail functions.

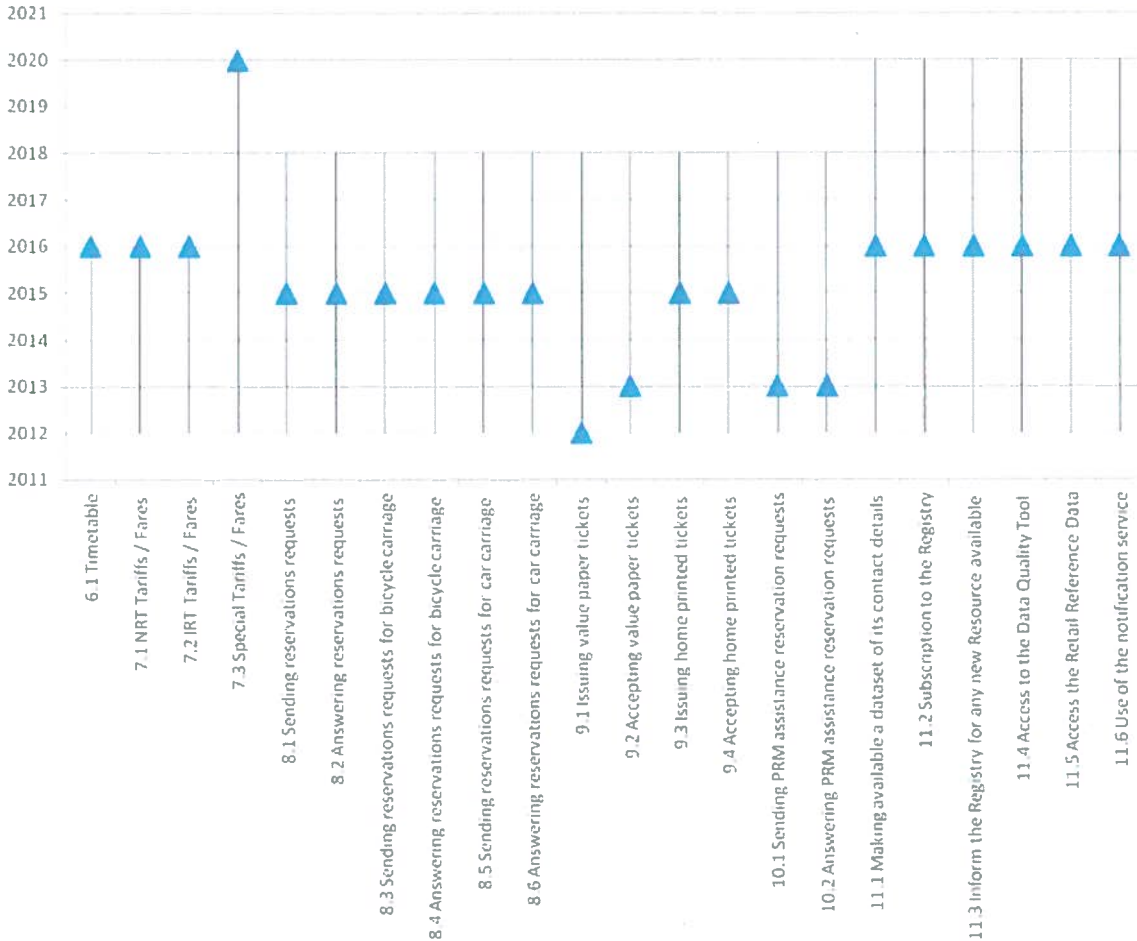


Figure 10: TAP TSI Master Plan for the retail functions.

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 on 21 march 2017. The calendar for the data collection and analysis has been agreed in this meeting as follows:

Table 7: Reporting schedule for TAP TSI basic parameters (1st reporting)

#	Step	Date
1	ERA/CSG/ETTSA triggers 2 nd reporting session	06.06.2017
2	Opening CSG tool *) or ETTSA tool for reporting	19.06.2017 – 14.07.2017
3	Analysing data for report	15.07.2017 – 15.09.2017
4	Preparing CSG or ETTSA/ECTAA report	20.09.2017
5	Harmonising analysis	t.b.c.
6	Approving report	05.10.2017
7	Presenting TAP TSI implementation report at ERA co-operation group	17.10.2017
8	Publishing implementation report	t.b.c.

In the meeting of the TAP TSI co-operation group on 21st March 2017 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 2nd reporting session. This comprises:

- Sending request to agreed RU`s in B5 format
- Answering reservation requests from agreed RU`s and agreed 3rd parties in B5 format
- Sending reservation requests for bicycle carriage to agreed RU`s in B5 format
- Answering reservation requests for bicycle carriage from agreed RU`s and agreed 3rd parties in B5 format
- Sending reservation requests for car carriage to agreed RU`s in B5 format
- Answering reservation requests for car carriage from agreed RU`s and agreed 3rd parties in B5 format
- Issuing value paper tickets for international and foreign sales in B6 format
- Accepting value paper tickets for international and foreign sales in B6 format
- Issuing home printed tickets for international and foreign sales in B7 format
- Accepting home printed tickets for international and foreign sales in B7 format
- Sending PRM assistance reservation requests via IT communication to agreed RU`s, IM's and SM's in B10 format
- Answering PRM assistance reservation requests via IT-communication from agreed RU`s and agreed 3rd parties in B10 format

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.

For the report 192 invitations were send by the common support group. The following diagram shows the answer rate of the questionnaire.

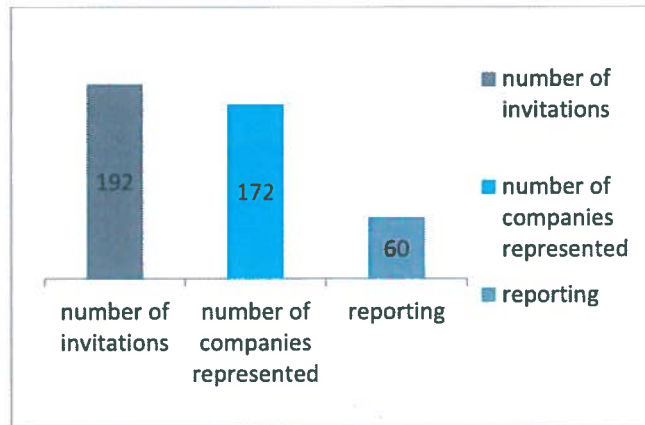


Figure 11 - number of invitations sent and responses

The following diagram shows the distribution of answers concerning the request in the member states of EU. The railway undertakings from 15 out of 26 member states have submitted their responses to the implementation progress of the TAP TSI retail basic parameters.

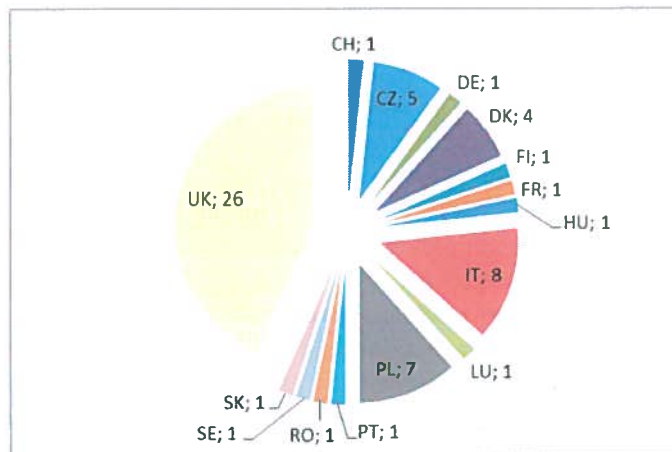


Figure 12 - Number of answering undertakings per member state

The following diagram shows the distribution of the invitations and the answers received per member state.

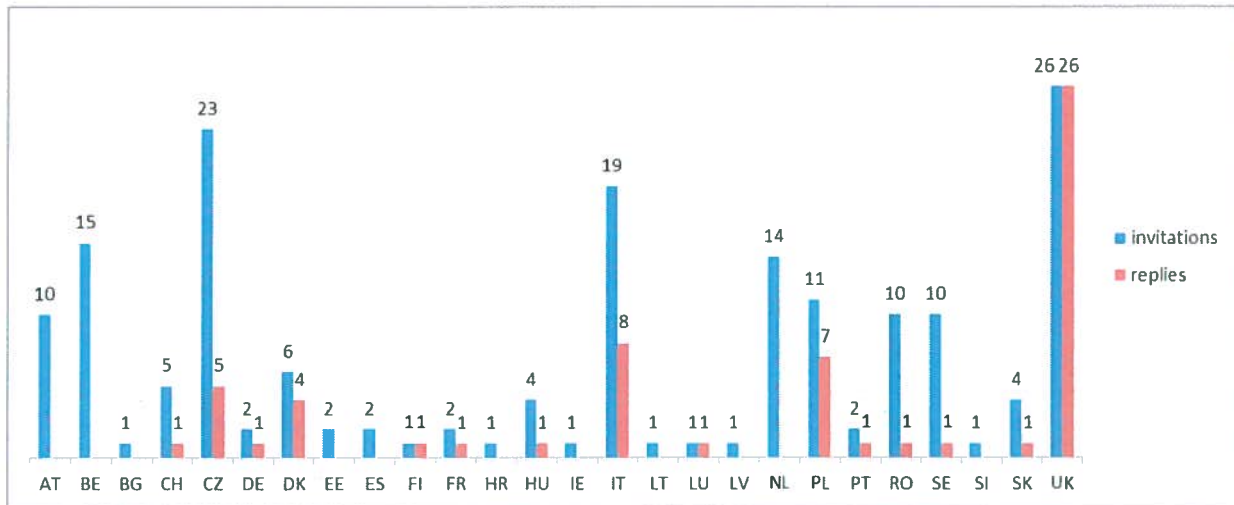
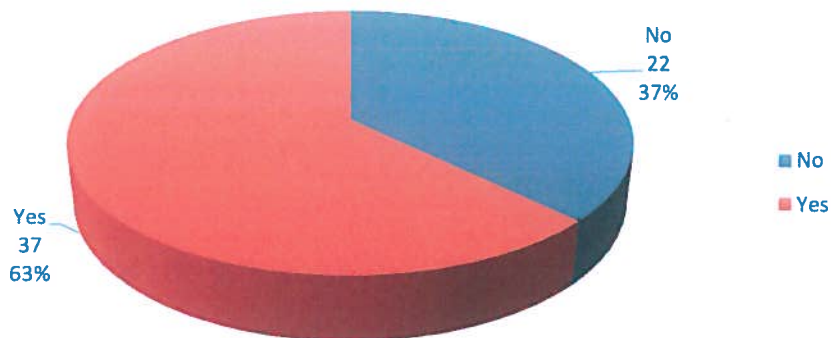


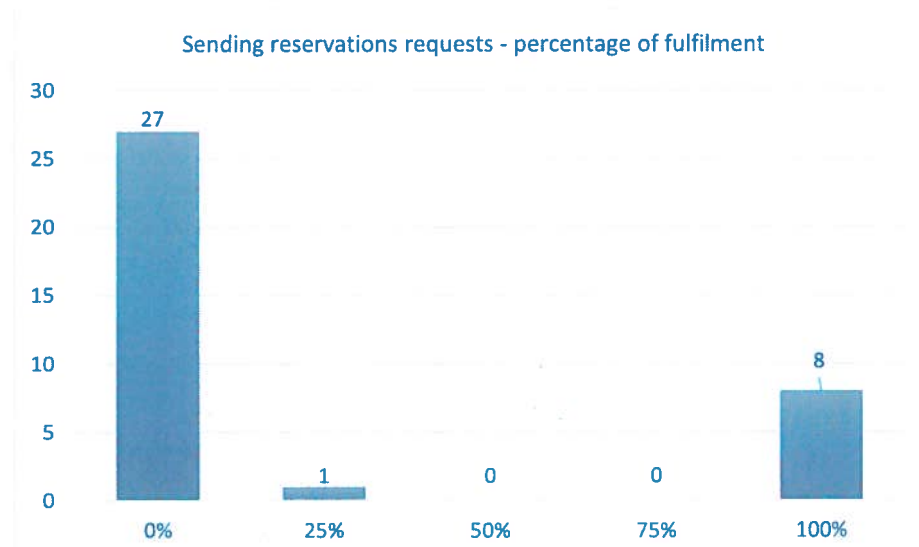
Figure 13 - invitation and responses per member state

The overall answer rate of 34% of the requested railway undertakings to report about the implementation progress of the TAP TSI basic parameters shows for the first report an acceptable level of responses.

4.2.2.1. Sending request to agreed RU's in B5 format

Sending reservations requests - companies subject to implement the function





The implementation status of the function “Sending reservation requests” is low. Few companies have reported that they are subject to the implementation this function and in all cases this are the incumbent railway undertakings, which have implemented this function.

Most of the other companies are not offering seat reservations for their trains (e.g. regional trains) and have therefore not implemented a reservation system including the reservation request in their distribution systems. Some member states have agreed to use national industry specifications for requesting and responding to reservation requests.

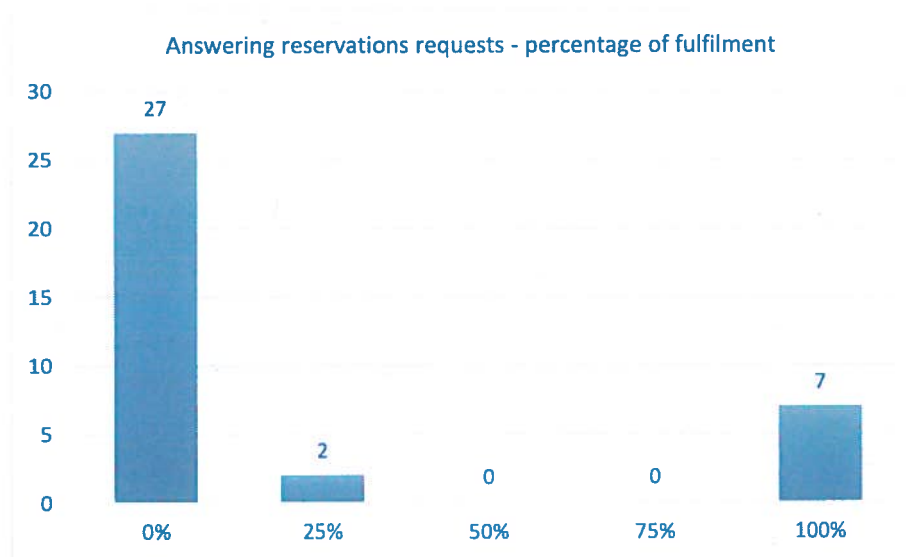
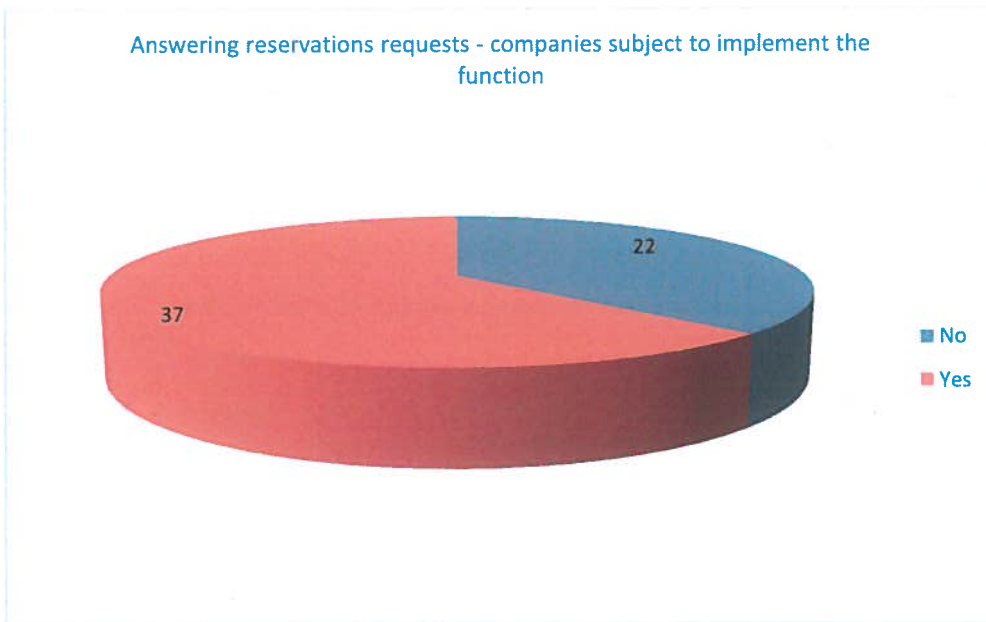
Issues reported:

- Stability of baseline documents
- Unstable baseline documents readiness of TSGA
- No financial resources

Risks reported:

- Dependency on other reservation systems
- Internal redesign of distribution IT system

4.2.2.2. Answering reservation requests from agreed RU’s and agreed 3rd parties in B5 format



The implementation status of the function “Answering reservation requests” for those companies is low. Few companies have reported that they are subject to the implementation this function and in all cases this are the incumbent railway undertakings, which have implemented this function.

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 have agreed to use national industry specifications for requesting and responding to reservation requests.

Issues reported:

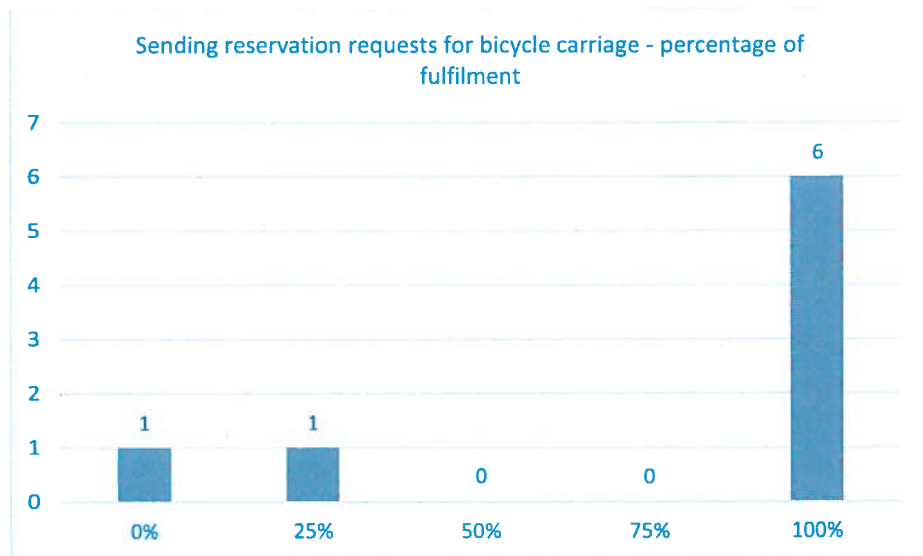
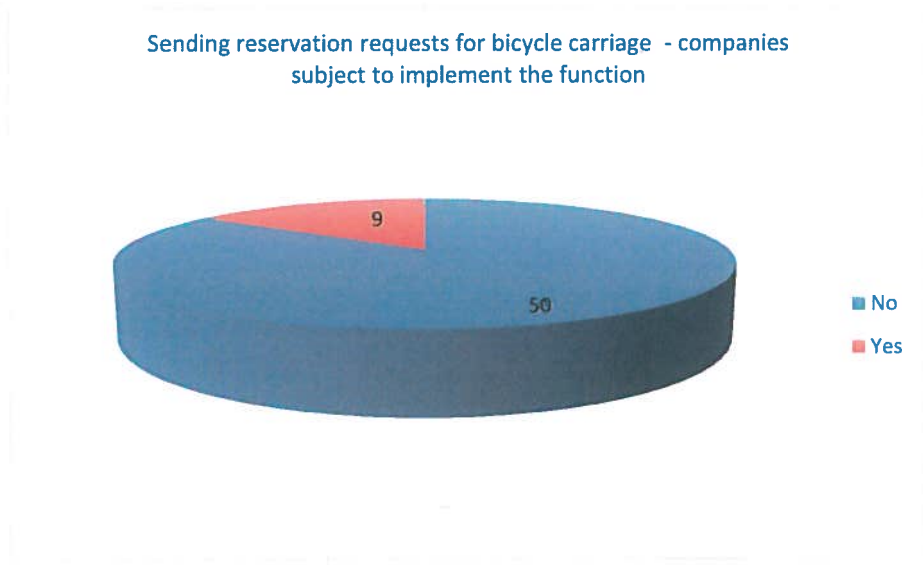
- Stability of baseline documents
- Unstable baseline documents readiness of TSGA

- No financial resources

Risks reported:

- Dependency on other reservation systems
- Internal redesign of distribution IT system

4.2.2.3. Sending reservation requests for bicycle carriage to agreed RU's in B5 format



The implementation status of the function “Sending reservation requests for bicycle carriage” is low. Few companies have reported that they are subject to the implementation this function and in all cases this are the incumbent railway undertakings, which have implemented this function.

Most of the other companies are not offering bike reservations for their trains (e.g. regional trains) and have therefore not implemented a reservation system including the reservation request in their distribution systems. Some member states have agreed to use national industry specifications for requesting and responding to reservation requests.

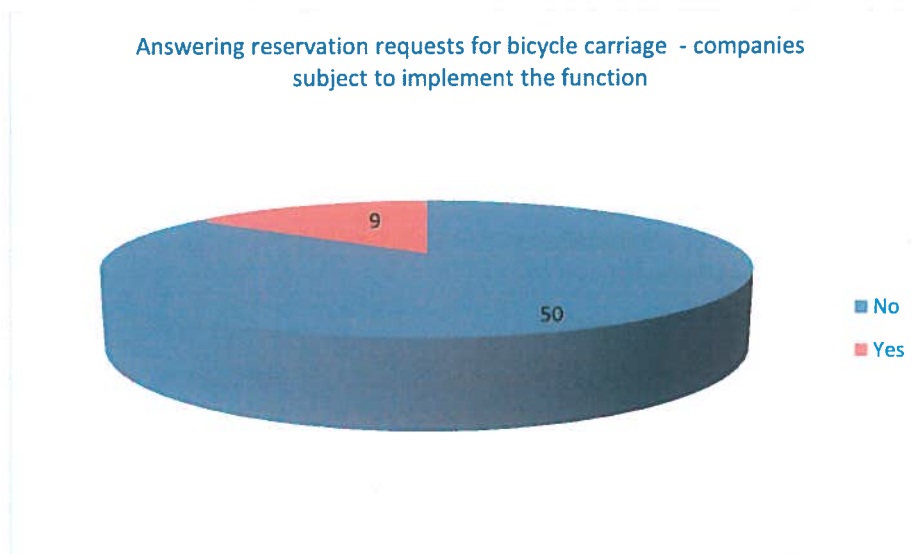
Issues reported:

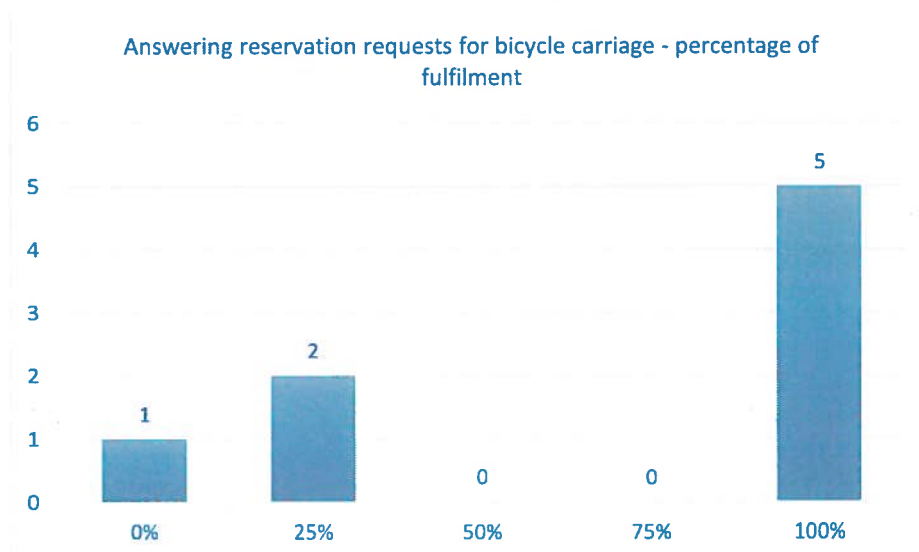
- Stability of baseline documents
- Unstable baseline documents readiness of TSGA
- No financial resources

Risks reported:

- Dependency on other reservation systems
- Internal redesign of distribution IT system

4.2.2.4. Answering reservation requests for bicycle carriage from agreed RU's and agreed 3rd parties in B5 format





The implementation status of the function “Answering reservation requests for bicycle carriage” is low. Few companies have reported that they are subject to the implementation this function and in all cases this are the incumbent railway undertakings, which have implemented this function.

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 have agreed to use national industry specifications for requesting and responding to reservation requests.

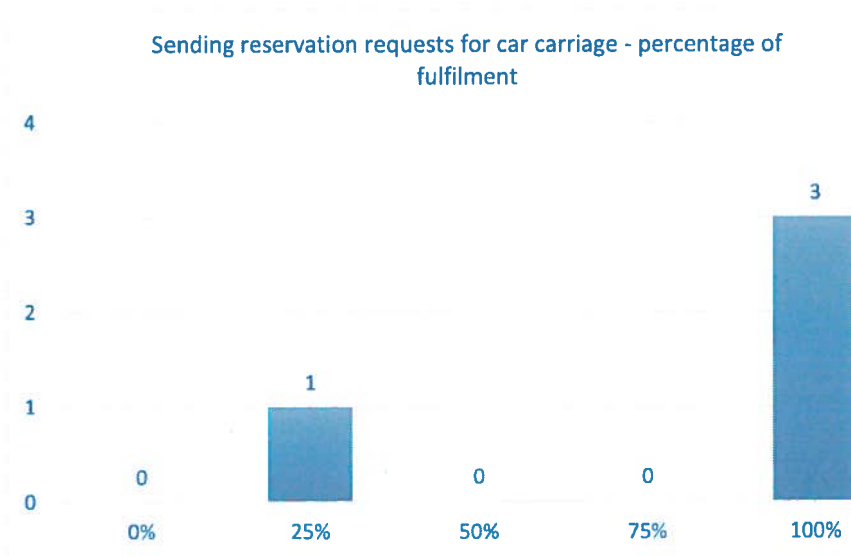
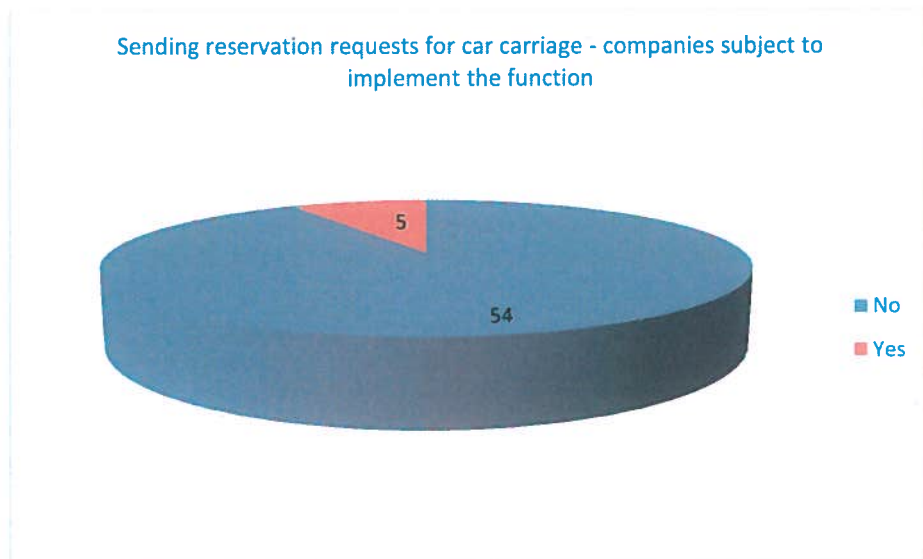
Issues reported:

- Stability of baseline documents
- Unstable baseline documents readiness of TSGA
- No financial resources

Risks reported:

- Dependency on other reservation systems
- Internal redesign of distribution IT system

4.2.2.5. Sending reservation requests for car carriage to agreed RU's in B5 format



The implementation status of the function “Sending reservation requests for car carriage” is low. Few companies have reported that they are subject to the implementation this function and in all cases this are the incumbent railway undertakings, which have implemented this function.

Most of the other companies are not offering car reservations for their trains (e.g. regional trains) and have therefore not implemented a reservation system including the reservation request in their distribution systems. Some member states have agreed to use national industry specifications for requesting and responding to reservation requests.

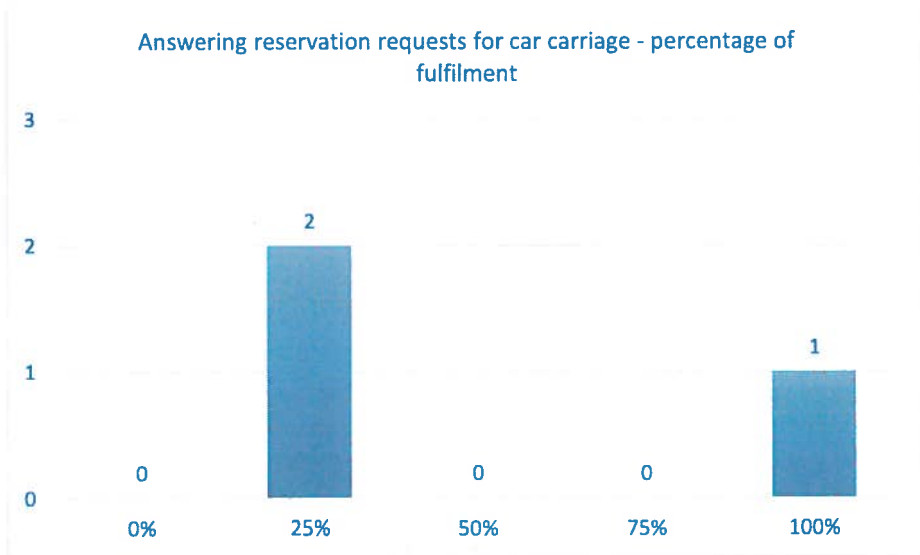
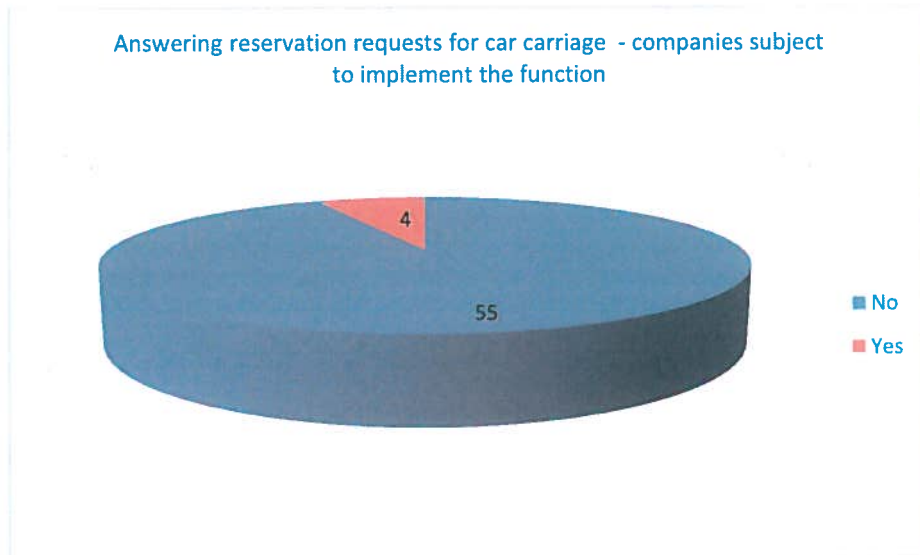
Issues reported:

- Stability of baseline documents
- Unstable baseline documents readiness of TSGA
- No financial resources

Risks reported:

- Dependency on other reservation systems
- Internal redesign of distribution IT system

4.2.2.6. Answering reservation requests for car carriage from agreed RU's and agreed 3rd parties in B5 format



The implementation status of the function “Answering reservation requests for car carriage” is low. Few companies have reported that they are subject to the implementation this function and in all cases this are the incumbent railway undertakings, which have implemented this function.

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

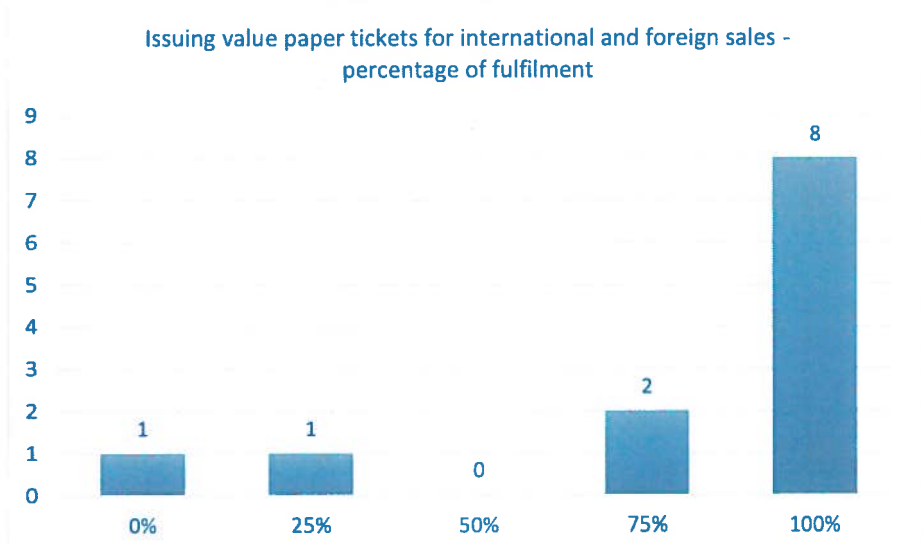
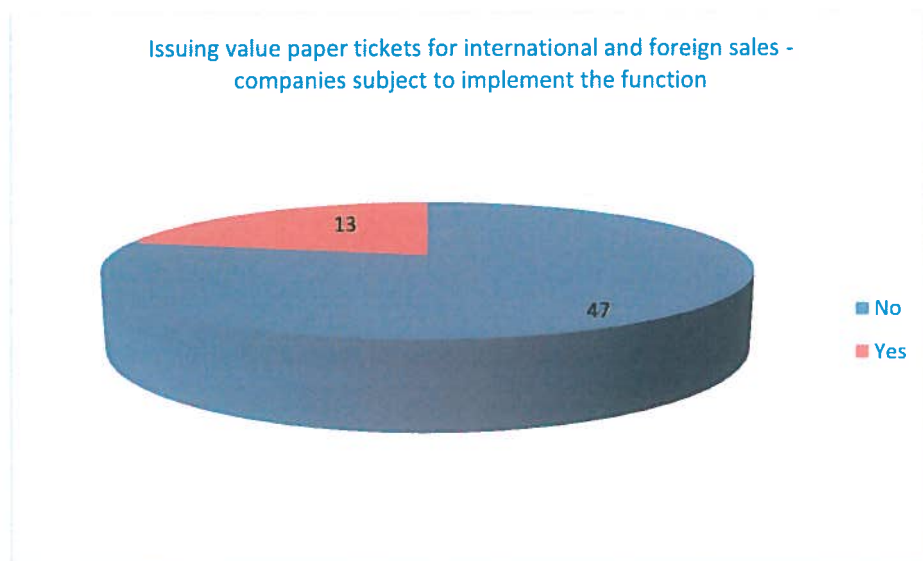
Issues reported:

- Stability of baseline documents
- Unstable baseline documents readiness of TSGA
- No financial resources

Risks reported:

- Dependency on other reservation systems
- Internal redesign of distribution IT system

4.2.2.7. Issuing value paper tickets for international and foreign sales in B6 format



The implementation status of the function “Issuing value paper tickets for international and foreign sales in B6 format” is low. Few companies have reported that they are subject to the implementation this function and in all cases this are the incumbent railway undertakings, which have implemented this function.

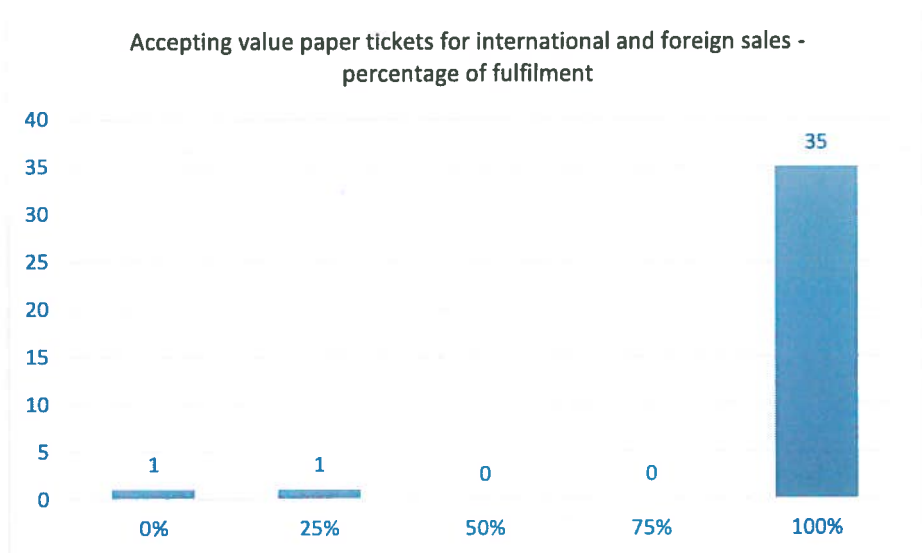
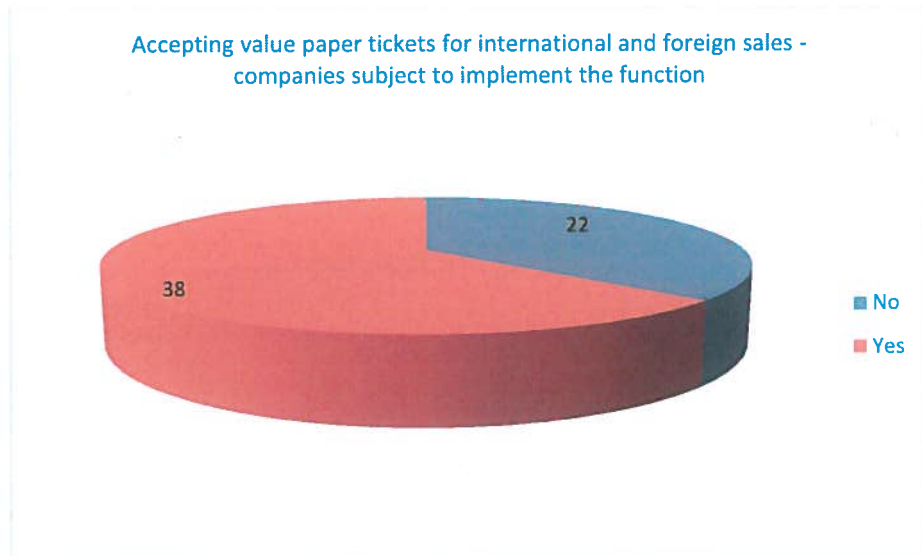
Issues reported:

- Changing specifications

Risks reported:

- Dependency on other reservation systems

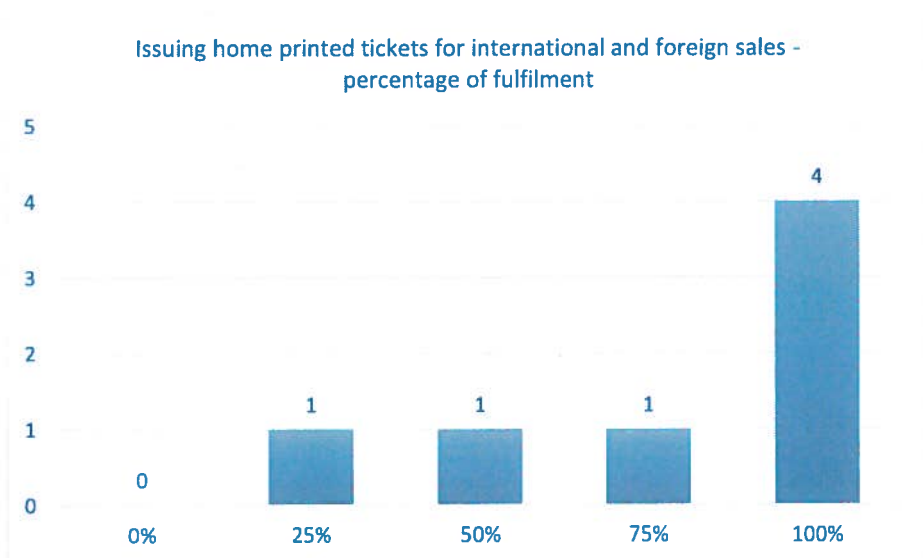
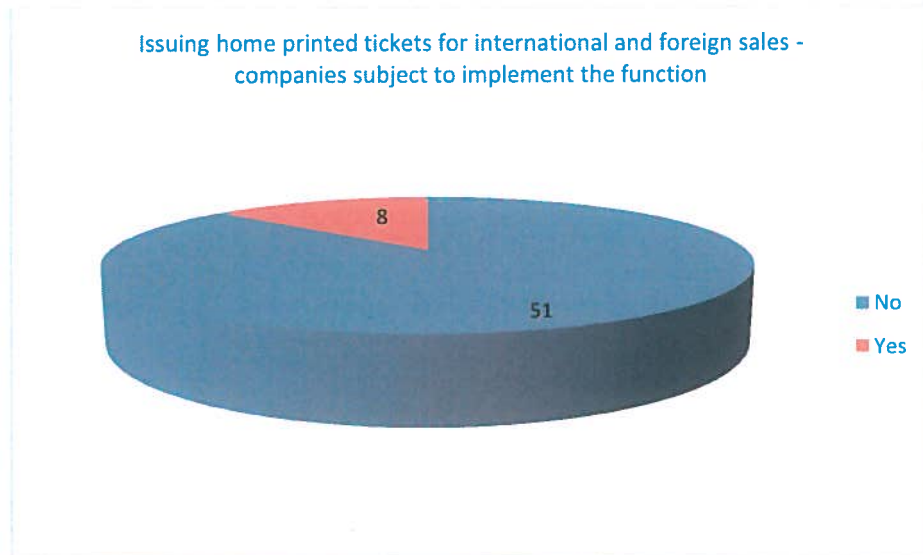
4.2.2.8. *Accepting value paper tickets for international and foreign sales in B6 format*



The implementation status of the function “Accepting value paper tickets for international and foreign sales in B6 format” is good. Most of the companies have reported that they are subject to the implementation this function and they have implemented them.

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

4.2.2.9. Issuing home printed tickets for international and foreign sales in B7 format



The implementation status of the function “Issuing home printed tickets for international and foreign sales in B7 format” is low. Few companies have reported that they are subject to the implementation this function and in all cases this are the incumbent railway undertakings, which have implemented this function.

Most of the other companies are not offering home printed tickets. However the implementation of the acceptance of those tickets has to be part of a commercial agreement between the parties.

Issues reported:

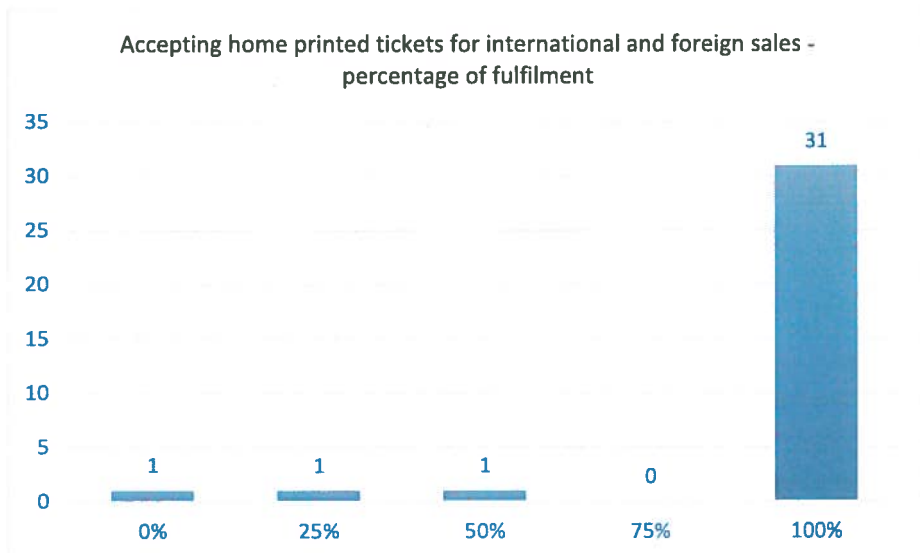
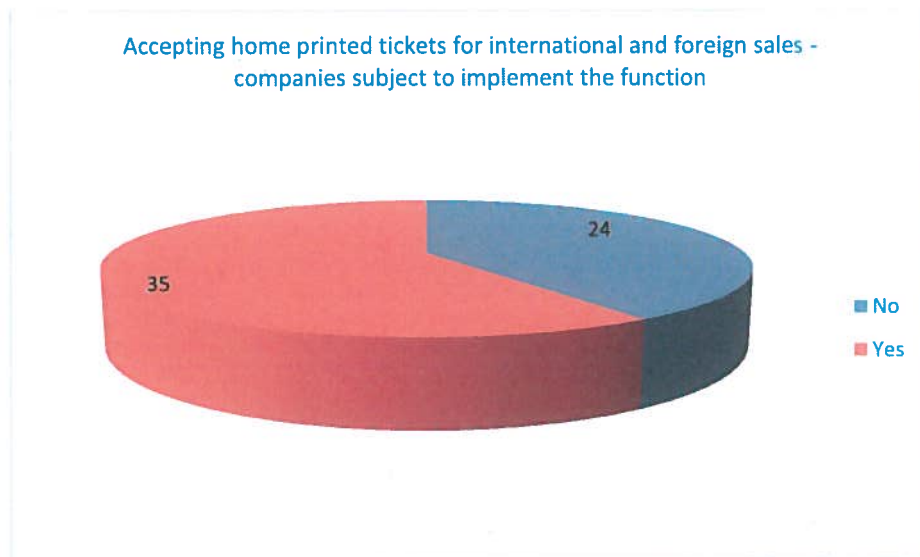
- Changing specifications

Risks reported:

- Dependency on other reservation systems

- technical limitations on the side of software vendors

4.2.2.10. Accepting home printed tickets for international and foreign sales in B7 format



The implementation status of the function “Accepting home printed tickets for international and foreign sales in B7 format” is good. In most of the cases this are the incumbent railway undertakings, which have implemented this function.

Most of the other companies 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.

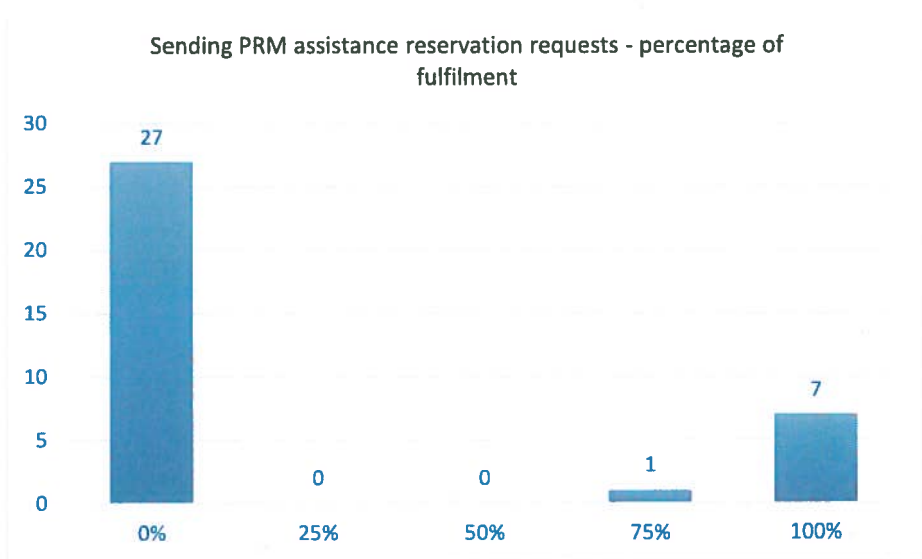
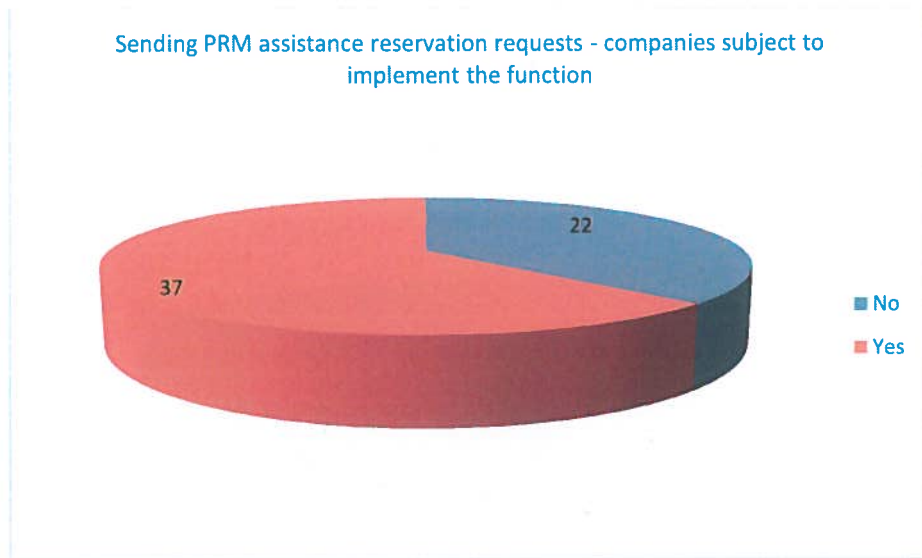
Issues reported:

- Changing specifications

Risks reported:

- technical limitations on the side of software vendors

4.2.2.11. *Sending PRM assistance reservation requests via IT communication to agreed RU's, IM's and SM's in B10 format*



The implementation status of the function “Sending PRM assistance reservation requests via IT communication to agreed RU’s, IM’s and SM’s in B10 format” is low. Only incumbent RU’s have implemented this function, mainly via the product “UIC PRM ABT application”.

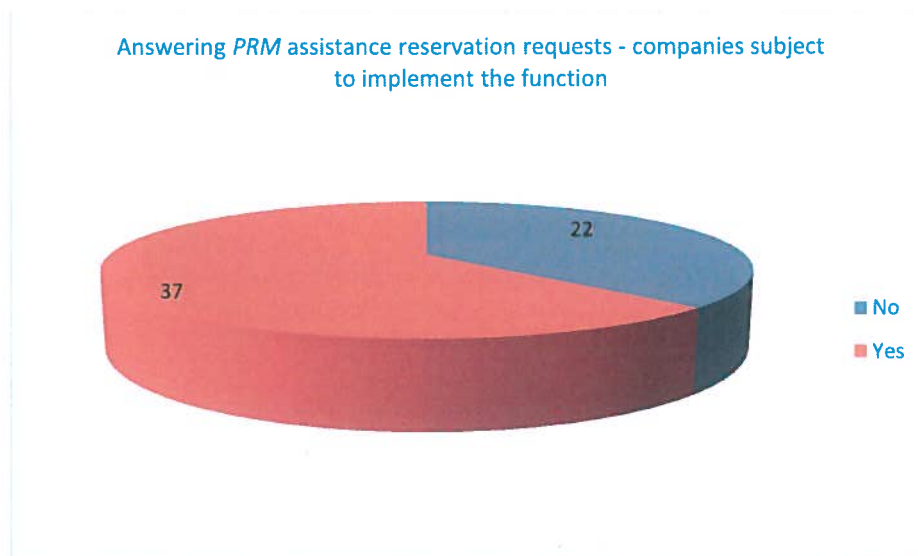
Issues reported:

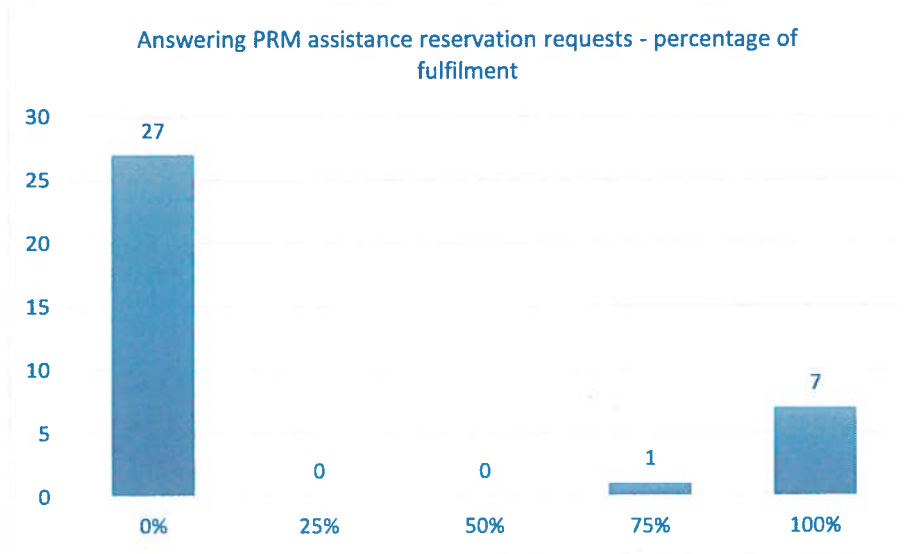
- Changing specifications

Risks reported:

- technical limitations on the side of software vendors

4.2.2.12. Answering PRM assistance reservation requests via IT-communication from agreed RU’s and agreed 3rd parties in B10 format





The implementation status of the function “Answering PRM assistance reservation requests via IT communication to agreed RU’s, IM’s and SM’s in B10 format” is low. Only incumbent RU’s have implemented this function, mainly via the product “UIC PRM ABT application”.

Issues reported:

- Changing specifications

Risks reported:

- technical limitations on the side of software vendors

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

ERA has not received from the ticket vendor organisations detailed data about the implementation progress of the TAP TSI functions at ETTSA and ECTAA. However ETTSA has reported on 15 September 2017 in an email the status of the TAP TSI implementation. ERA has not received any further information from ECTAA.

The results of the TAP TSI implementation are as follows:

“ETTSA prerequisite to be in a position to implement TAP/TSI

- Availability of time table, ref data and MCT’s
- RU’s request to implement TAP/TSI

ETTSA cannot report any implementation until those 2 external pre requisite are fulfilled.

ETTSA cannot report specifically on one of his member implementation due to commercial confidentiality.”

As ETTSA report shows, the implementation of the TAP TSI cannot be started before the reference data, timetable data and minimum connection times (MCT) are available. Before those prerequisites are fulfilled, no implementation of TAP TSI can start on the side of the ticket vendors.

Possible mitigation measures to start the implementation of the TAP TSI by the ticket vendors should be analysed.

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

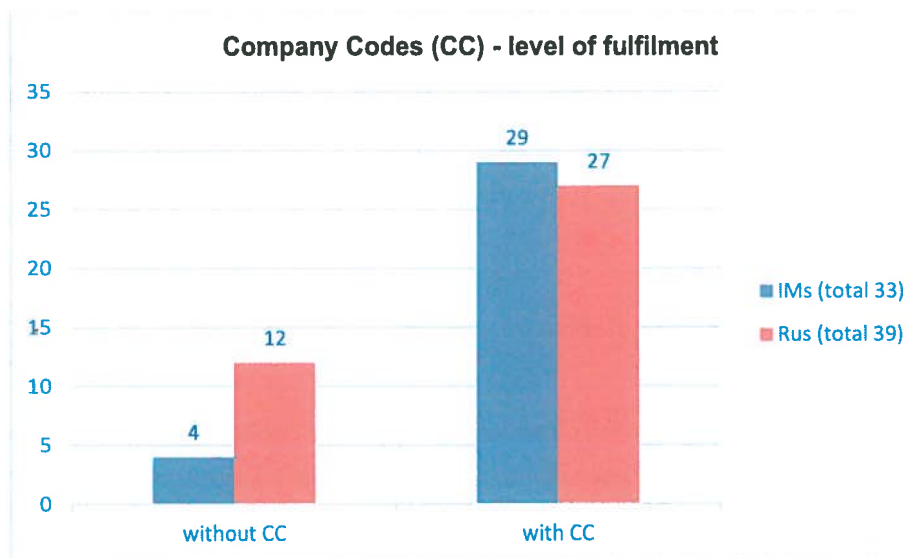
The reporting about the progress of the RU/IM functions for passenger railway undertakings is covered in the co-operation group for the implementation monitoring of the TAF TSI. However the passenger railway undertakings have to be implement the RU/IM functions for the TAP TSI as well.

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:

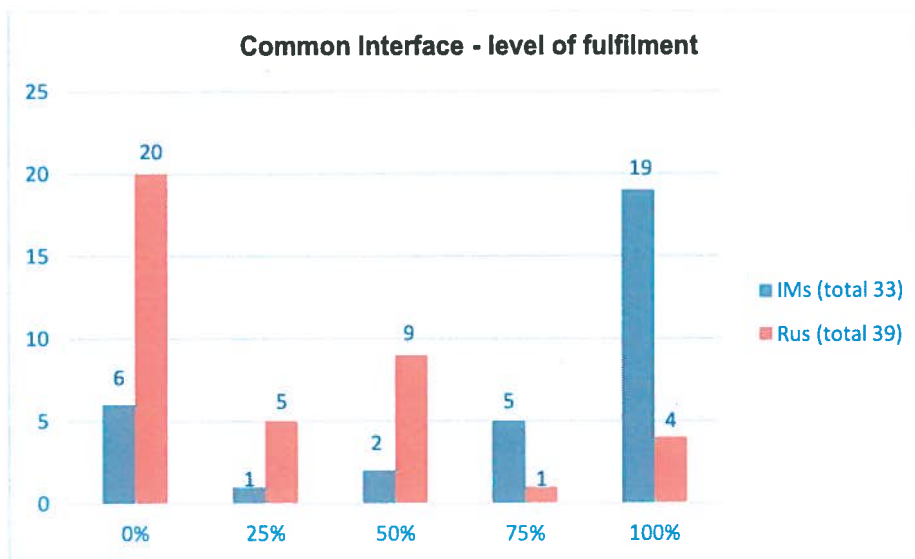
- Implementation of company code
- Implementation of the common interface

The reporting followed the same schedule as presented in Table 7: Reporting schedule for TAP TSI basic parameters (1st reporting). Overall 39 passenger railway undertakings in Europe send answers to the questionnaire to the joint sector group.

4.2.4.1. Implementation status in the 1st half of 2017 of company codes function



4.2.4.2. Implementation status in the 1st half of 2017 of the common interface function



The explanations of the implementation progress for the RU/IM functions for passenger railway undertakings are explained in more detail in the TAF TSI implementation progress report.

4.3. Publication of the conditions of carriage and access conditions

The railway undertakings are obliged to provide to the passengers the information about the conditions of carriage, registered luggage and the access conditions for PRM, and bikes as laid down in the TAP TSI basic parameters 4.2.4.1, 4.2.5.1, 4.2.6.1, 4.2.7.1. and 4.2.8.1. These basic parameters had to be implemented until 11 November 2011 ("The first publication shall take place at the latest 6 months after this TSI comes into force.").

The reporting about the implementation of these basics parameters has been done in 2014 and 2015 by ERA. Based on an automated script ERA has been collecting the conditions of carriage and as well the access conditions from the websites of the railway undertakings several times during 2017.

Due to limitations of automatic script method the results could be analysed only subjectively. For more objective reporting, followed with more precise quantitative indicators, the automatic script method needs to be combined with detailed in-depth analysis of each railway undertaking website. This is the action to be done for the next TAP TSI implementation progress reports.

The basic conclusion drawn from the automated data collection showed positive results, as majority of railway undertakings are taking into account the conditions of carriage and access conditions obligations. Previous statement is specially applicable to websites of bigger railway undertakings.

4.4. Evolution of TAP TSI regulatory functions at European level

The implementation of the TAP TSI regulatory function is only slowly progressing in Europe. The following table shows the progress of the implementation, compared with the last report for the reporting period for the 2nd half 2016, published in Februar 2017 by ERA.

<i>Milestone</i>	<i>Planned date</i>	<i>Actual (planned) date</i>	<i>Degree of fulfilment 01.09.2016</i>	<i>Degree of fulfilment 01.07.2017</i>
Setup of the TAP TSI governance body	01/10/2013	31/12/2016	75%	100%
Setup of the Retail reference database	01/10/2014	01/12/2018	N/A	50 %
Setup of the TAP TSI registry	01/10/2014	01/12/2018	N/A	50 %
Setup of the Data quality tool	01/10/2014	01/12/2018	N/A	25 %

- For the implementation of the TAP TSI regulatory functions there is a significant progress for the setup of the governance and the project initiation for the regulatory functions (retail reference database, registry, data quality tool) visible.
- However the published dates for the regulatory functions in December 2018 are not satisfying at all. The delay of the implementation of these functions – compared with the TAP TSI Master Plan – would be in December 2018 4 years and 2 months.
- This huge delay of the implementation of the regulatory functions will most likely trigger further delays in the implementation of the TAP TSI in the individual passenger railway undertakings. Especially the crucial parts like the RRD and the registry have an impact on the implementation of the TAP TSI.

4.5. Evolution of TAP TSI retail functions at Member state level

The current report is the first report about the implementation progress for the TAP TSI retail functions by the railway undertakings and ticket vendors. Therefore the report will be used as starting point for the evolution of the implementation of the TAP TSI retail functions in the following implementation reports.

4.6. Evolution of TAP TSI RU/IM functions at Member state level

The current report is the first report about the implementation progress for the TAP TSI RU/IM functions by the railway undertakings. Therefore the report will be used as starting point for the evolution of the implementation of the TAP TSI RU/IM functions in the following implementation reports.

5. Conclusions

The implementation of the TAP TSI is delayed significantly. The delay is visible in most of the covered reporting streams: the reporting about the TAP TSI governance and the regulatory functions, 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 now in place and operational. 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 delayed by more than three years and a further delay of overall 4 years is already visible. This will trigger most likely further delays for the implementation of the regulatory functions of the TAP TSI architecture and the implementation of the TAP TSI retail functions by the passenger railway undertakings as well. Therefore it has to be considered that the TAP TSI is currently significantly delayed in the implementation.

For the implementation of the TAP TSI retail basic parameters the implementation progress of the requested basic parameters for ticketing and reservation message exchange is low. Many undertakings stated, that they are not subject to the implementation of TAP TSI basic parameters. Justifications for this statement were not asked.

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 for the incumbent railway undertakings.
- For the small and medium size railway undertakings who have reported the 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 and therefore there is no need to implement reservation messages.

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.
- For the small and medium size undertakings there are only few projects ongoing for the implementation of international ticketing, either on a RCT2 ticket format or as home printed ticket.

The railway undertakings reported that the main issues for the non-implementation of the TAP TSI basic parameters are technical or IT-limitations of the implementing company. They detailed reasons for these IT- or technical limitations were not explained.

6. Recommendation / actions to be taken

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

a) Action - TSGA:

The TSGA should provide the three common services for TAP TSI, namely

- TAP TSI retail architecture
- TAP TSI retail reference database
- TAP TSI data quality tool.

b) Action - List of actors' contacts:

The NCPs and TV organizations shall update to the Agency the contact details of RUs, SMs, IMs and TVs from their countries / organizations subject to the TAP TSI as to ensure that the CSG and Agency can ask them to start reporting about the TAP Master Plan functions to the TAP TSI co-operation group and then to the EC. Furthermore the list will be used to improve the reporting about the conditions of carriage and the access conditions.

c) Action – Ticket vendors:

The ticket vendors should establish the operational reporting procedure for the report of the implementation progress of the TAP TSI.

d) Action – ERA, CSG, JSG:

It should be checked how the response rate for the questionnaires can be raised. It should be checked if a translation of the questionnaire may improve the response rate.

e) ERA will continue with the analysis about the implementation of the conditions of carriage and the access conditions. To improve the quality of the reporting about the conditions of carriage and the access conditions, ERA will continue to rely on NCP's cooperation and automated script method will be improved by manual check-up, to the maximum possible extent.

Annex 1 Report provided in July 2017 by the TSGA

TAP TSI Implementation Report Volume 2

Background

In accordance with Commission Regulation (EU) No 454/2011 on the TSI relating to telematics applications for passengers (TAP TSI), the TSGA/TAP TSI project team is kindly asked to provide the current status of the TAP TSI implementation compared with the Master Plan delivered in 2012. Please use for your reporting the target implementation date for these functions as reported in the TAP TSI Master Plan ([http://www.era.europa.eu/Document-Register/Documents/ERA Technical Document TAP B 62 FINAL.pdf](http://www.era.europa.eu/Document-Register/Documents/ERA_Technical_Document_TAP_B_62_FINAL.pdf)).

This report contains two question groups related to the current implementation status of the TAP TSI:

- TSI entity formation
- Common services deployment
 - TAP TSI retail architecture
 - TAP TSI retail reference database
 - TAP TSI data quality tool

General Information:

(Name) : TAP TSI Services Governance Association

(Contact Person) : Luisa Pockrandt, TSGA General Manager

(Contact Address): c/o CER, Avenue des Arts 53, 1000 Bruxelles

This 2nd reporting session starts on 3rd July 2017 and ends on 8th September 2017.

Definitions:

Issue: An issue is a problem which has actually occurred and either has a positive or a negative effect on a project chances of achieving its objectives.

Risks: Risk is an uncertain event that, if it occurs, will have a positive or negative effect on a project objective.

TSI entity formation (TSGA)

(to be declared by the TAP TSI project team only)

TAP TSI entity Master Plan end date

Date as declared in the TAP TSI Master Plan (ERA TAP TSI TD B.62):

01/10/2013

Current planned end date

Please enter a date:

01/12/2016

Please insert the updated end date of the function, even if there is no deviation from the masterplan.

Please insert the risks, which may affect the planned end date:

n/a

Percentage of fulfilmentPlease choose **only one** of the following:

- | | |
|----------|-------------------------------------|
| 0 %: ... | <input type="checkbox"/> |
| 25%: | <input type="checkbox"/> |
| 50%:... | <input type="checkbox"/> |
| 75%:... | <input type="checkbox"/> |
| 100%:. | <input checked="" type="checkbox"/> |

- 0% - Level 1: Not started - Project not launched
- 25% - Level 2: Initiating phase - Implementation plan is available in the company
- 50% - Level 3: Planning phase - Project development
- 75% - Level 4: Executing phase - Pilot project / System testing
- 100% - Level 5: In-Production & Monitor and Control

Please insert the issues, found during the implementation:

Limited stakeholder interest to join the TSGA as initial members; length of process for official approval on the part of Belgian authorities

Common services deployment

Setup of the Retail reference database (to be declared by the TSGA/TAP TSI project team only)

TAP TSI entity Master Plan end date
 Date as declared in the TAP TSI Master Plan (ERA TAP TSI TD B.62):
 01/10/2014

Current planned end date
 Please enter a date:
 01/12/2018

Please insert the updated end date of the function, even if there is no deviation from the Master Plan.
 Please insert the risks, which may affect the planned end date:
 Length of procurement procedure; legal liability of founding members regarding the procurement procedure; risk of setting multiple standards in the sector: contradictory encoding (e.g. location codes) compared to existing schemes; increasing costs for IT-services development; applicability of IT-services; lack of stakeholder interest; revision of legal framework requiring further adaptations of established project plan.

Percentage of fulfilment
 Please choose **only one** of the following:

0 %: ...
 25%:
 50%:...
 75%:...
 100%:.

0% - Level 1: Not started - Project not launched
 25% - Level 2: Initiating phase - Implementation plan is available in the company
 50% - Level 3: Planning phase - Project development
 75% - Level 4: Executing phase - Pilot project / System testing
 100% - Level 5: In-Production & Monitor and Control

Please insert the issues, found during the implementation:
 Search for suitable suppliers; acquirement of specific expertise.

Setup of the TAP TSI registry (to be declared by the TSGA/TAP TSI project team only)**TAP TSI entity Master Plan end date**

Date as declared in the TAP TSI Master Plan (ERA TAP TSI TD B.62):

01/10/2014

Current planned end date

Please enter a date:

01/12/2018

Please insert the updated end date of the function, even if there is no deviation from the masterplan.

Please insert the risks, which may affect the planned end date:

Length of procurement procedure; legal liability of founding members regarding the procurement procedure; increasing costs for IT-services development; applicability of IT-services; lack of stakeholder interest; revision of legal framework requiring further adaptations of established project plan.

Percentage of fulfilmentPlease choose **only one** of the following:

- | | |
|----------|-------------------------------------|
| 0 %: ... | <input type="checkbox"/> |
| 25%: | <input type="checkbox"/> |
| 50%:... | <input checked="" type="checkbox"/> |
| 75%:... | <input type="checkbox"/> |
| 100%:. | <input type="checkbox"/> |

- 0% - Level 1: Not started - Project not launched
- 25% - Level 2: Initiating phase - Implementation plan is available in the company
- 50% - Level 3: Planning phase - Project development
- 75% - Level 4: Executing phase - Pilot project / System testing
- 100% - Level 5: In-Production & Monitor and Control

Please insert the issues, found during the implementation:

Search for suitable suppliers; acquirement of specific expertise.

Setup of the Data quality tool (to be declared by the TSGA/TAP TSI project team only)

TAP TSI entity Master Plan end date
 Date as declared in the TAP TSI Master Plan (ERA TAP TSI TD B.62):
 01/10/2014

Current planned end date
 Please enter a date:
 01/12/2018

Please insert the updated end date of the function, even if there is no deviation from the Master Plan.
 Please insert the risks, which may affect the planned end date:
 Length of procurement procedure; legal liability of founding members regarding the procurement procedure; increasing costs for IT-services development; applicability of IT-services; lack of stakeholder interest; revision of legal framework requiring further adaptations of established project plan.

Percentage of fulfilment
 Please choose **only one** of the following:

0 %: ...
 25%:
 50%:...
 75%:...
 100%:.

0% - Level 1: Not started - Project not launched
 25% - Level 2: Initiating phase - Implementation plan is available in the company
 50% - Level 3: Planning phase - Project development
 75% - Level 4: Executing phase - Pilot project / System testing
 100% - Level 5: In-Production & Monitor and Control

Please insert the issues, found during the implementation:
 Search for suitable suppliers; acquirement of specific expertise.

