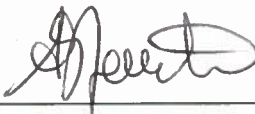EUROPEAN
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Report

1ˢᵗ status report about the implementation progress of the TAP TSI

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Document History

Version	Date	Comments
0.1	10/10/2016	First draft
0.2	09/11/2016	Incorporation of remarks from co-operation group
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Abbreviations

Table 1: Table of abbreviations

Abbreviation	Definition
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

Ref. N°	Title	Reference	Version
(1)	TAP TSI ANNEX B.62 TAP MASTER PLAN	TAP Master Plan	06.12.2013
(2)	TAP TSI consolidated master plan		28.04.2013

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| (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 454/2014	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

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1. Executive summary

The report is dedicated to show 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 according to a 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 first report contains the data - as agreed in the 1st TAP cooperation group meeting 18 Oct 2016 - provided by the TAP TSI project team – the predecessor of the TSGA - to report the status of the implementation by **30.09.2016** of the following TAP TSI [2] regulatory functions:

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

This first report also contains the reporting about the setup of the governance and the preparation of projects for the implementation of the TAP TSI architecture.

To better 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 28 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 setup of the TAP TSI governance has been delayed by almost 3 years
- The setup of the TAP TSI architecture has been delayed by almost 3 years. This includes:
    - o the setup of the TAP TSI registry
    - o the setup of the TAP TSI Retail reference database
    - o the setup of the TAP TSI Data quality tool

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Furthermore, 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).

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2. Introduction

This 1st 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 in 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
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

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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. 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 onboard". 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 4 - 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	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)	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

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2.2. Reporting procedures

As shown in the Table 4 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.
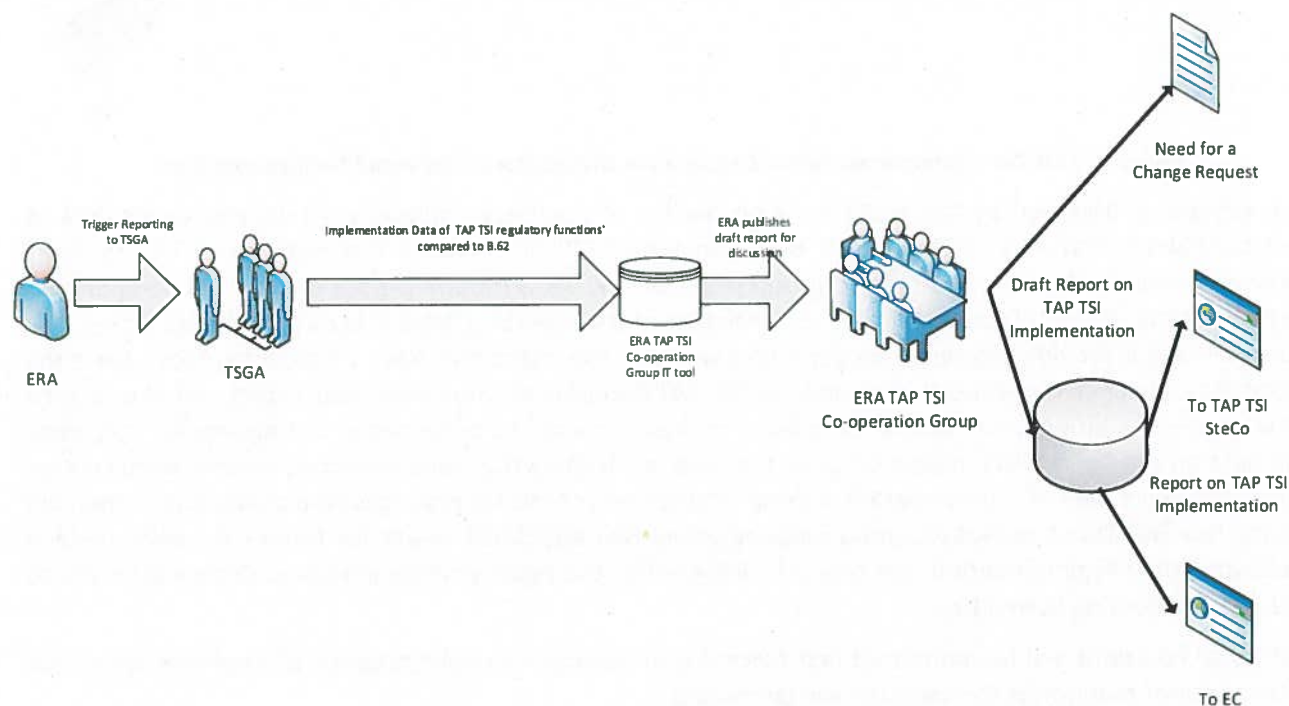

Figure 1 - ERA TAP TSI Implementation Cooperation Group process for regulatory functions

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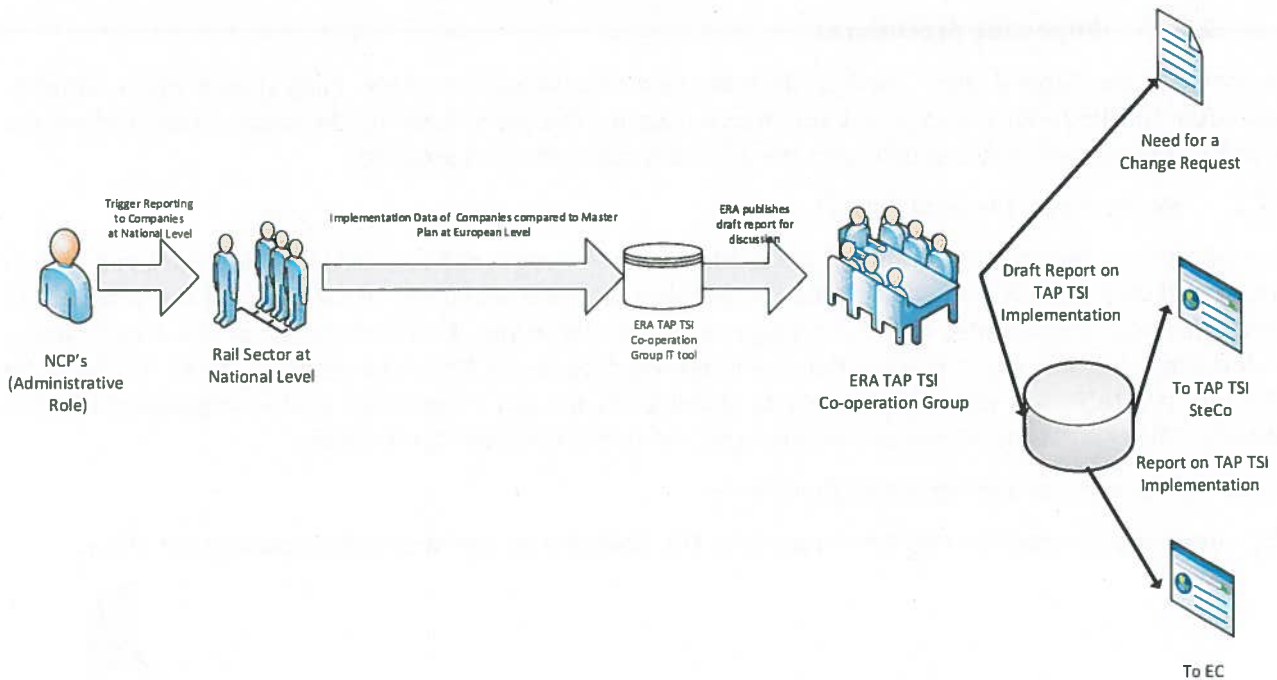
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Figure 2: ERA TAP TSI Implementation Cooperation Group process for retail basic parameters.

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.

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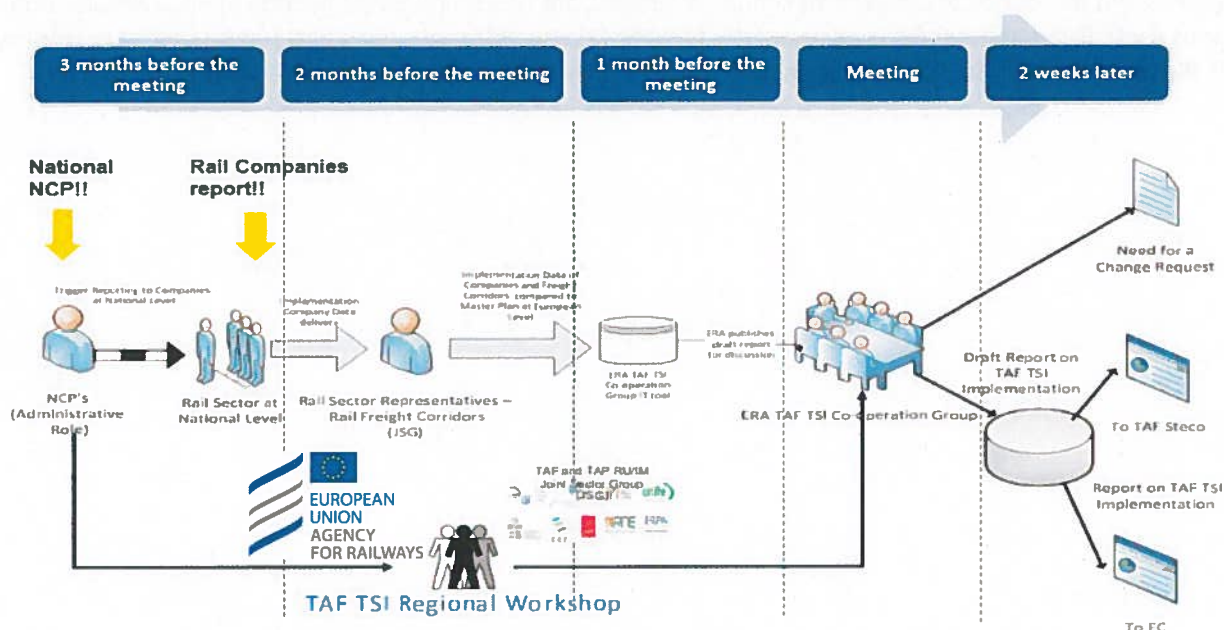
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Figure 3: ERA TAF TSI Implementation Cooperation Group process for RU/IM basic parameters.

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 is not in the scope of the current report.

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.

In addition, the effort made by the European rail sector to deploy the TAP TSI [2] system is also supported by the Connecting Europe Facility (CEF) [4] programme launched by the European Commission and managed by the INEA Executive Agency.

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The CEF[3] [4] will better mobilise private financing and allow for innovative financial instruments such as guarantees and project bonds to gain maximum leverage from this EU funding injection at it's a financial tool at disposal of all the companies implementing TAP TSI [2] regulation. In the 2016 funding call the priority about the development of TAP TSI was given to the Cohesion Members States.

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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 12th 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. This report is limited to the reporting concerning the **TAP TSI retail basic parameters**.

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 time being the **number of registered companies is one hundred fifty (150)**. 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.

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- Maps to report about Railway Undertaking's functions. These maps show the degree of implementation at country 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 (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, 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

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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% 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.
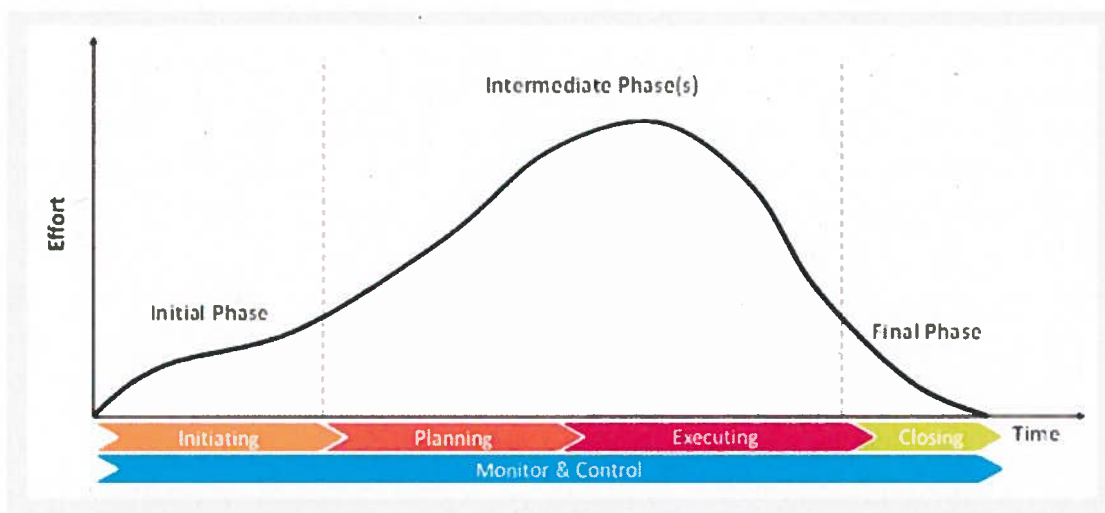
Figure 4: PM² project lifecycle.

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,

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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.

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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").
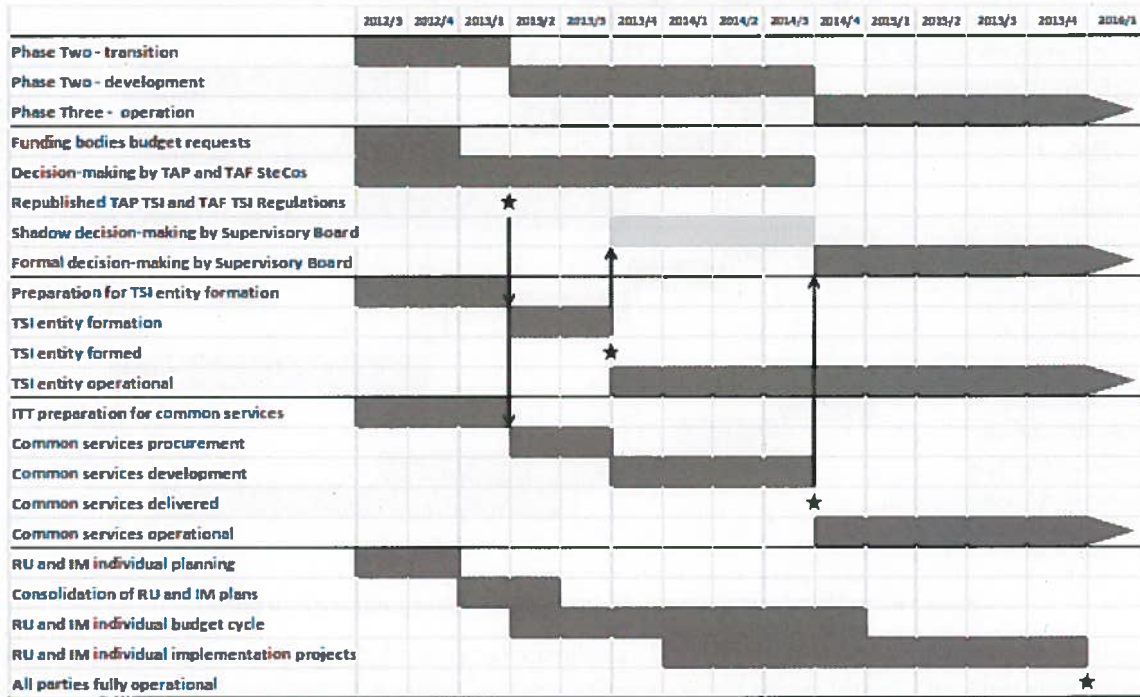

Figure 5: Master plan for the regulatory functions.

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 TAP TSI project team on 08/09/2016 a questionnaire by email to get the information about the current implementation status of these functions. Deadline for the report was set on 30/09/2016. ERA addressed the questionnaire to the TAP TSI project team because the TSGA has not been formed until this date. On 10/10/2016 the TAP TSI project team sent back to ERA the questionnaire with the current status of the implementation of the regulatory functions.

The report provided by the TAP TSI project team shows, that the implementation of the governance has been started and shall be finished until end of 2016. The TAP TSI project team has not provided information concerning the implementation of the TAP TSI architecture functions. They argued, that the TSGA is the only entity in charge to provide those information about the implementation progress because they have the sole responsibility for these tasks. The current status of the implementation is shown in the Figure 6: Implementation progress of the TAP TSI regulatory functions.
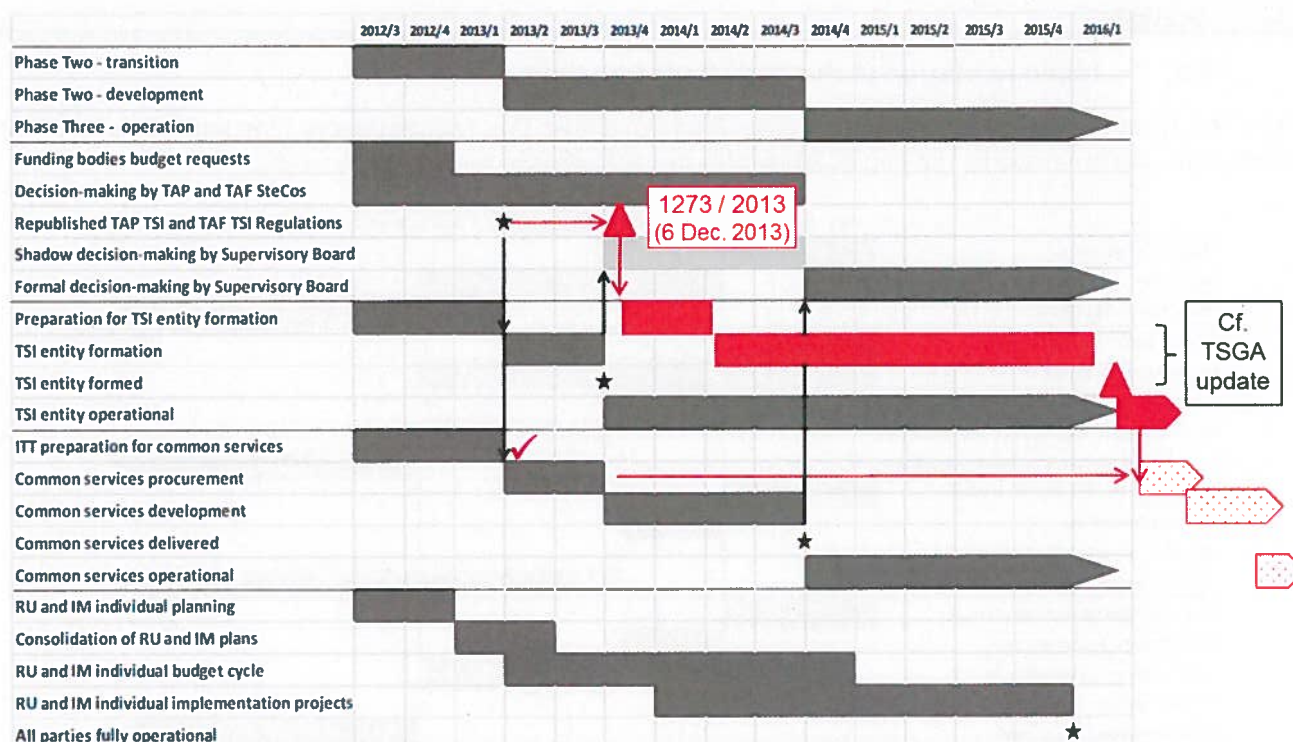
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Figure 6: Implementation progress of the TAP TSI regulatory functions.

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

Table 2: Table of reference legislation.

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	Not predictable	Not predictable (but at least 3 years)

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 TAP TSI project team did not put an explanation about the delay reasons in the report. The TAP TSI team provided in the questionnaire furthermore a significant risk that the "Final clearance of competition authorities for TSGA formation by the three founding members (DB, SNCF and Trenitalia)" is still pending. If the authorities will not allow the formation of such a cooperation, then the whole TAP TSI deployment process would be stopped. It has been confirmed by TAP Project Team in the co-operation group meeting on 18th October 2016, that the risk is not anymore evident, because the competition authorities have provided the clearance.

The progress of the implementation of the functions of the TAP TSI architecture (retail reference database, TAP TSI registry, data quality tool) was not provided.

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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 7: TAP TSI master plan for the retail functions.
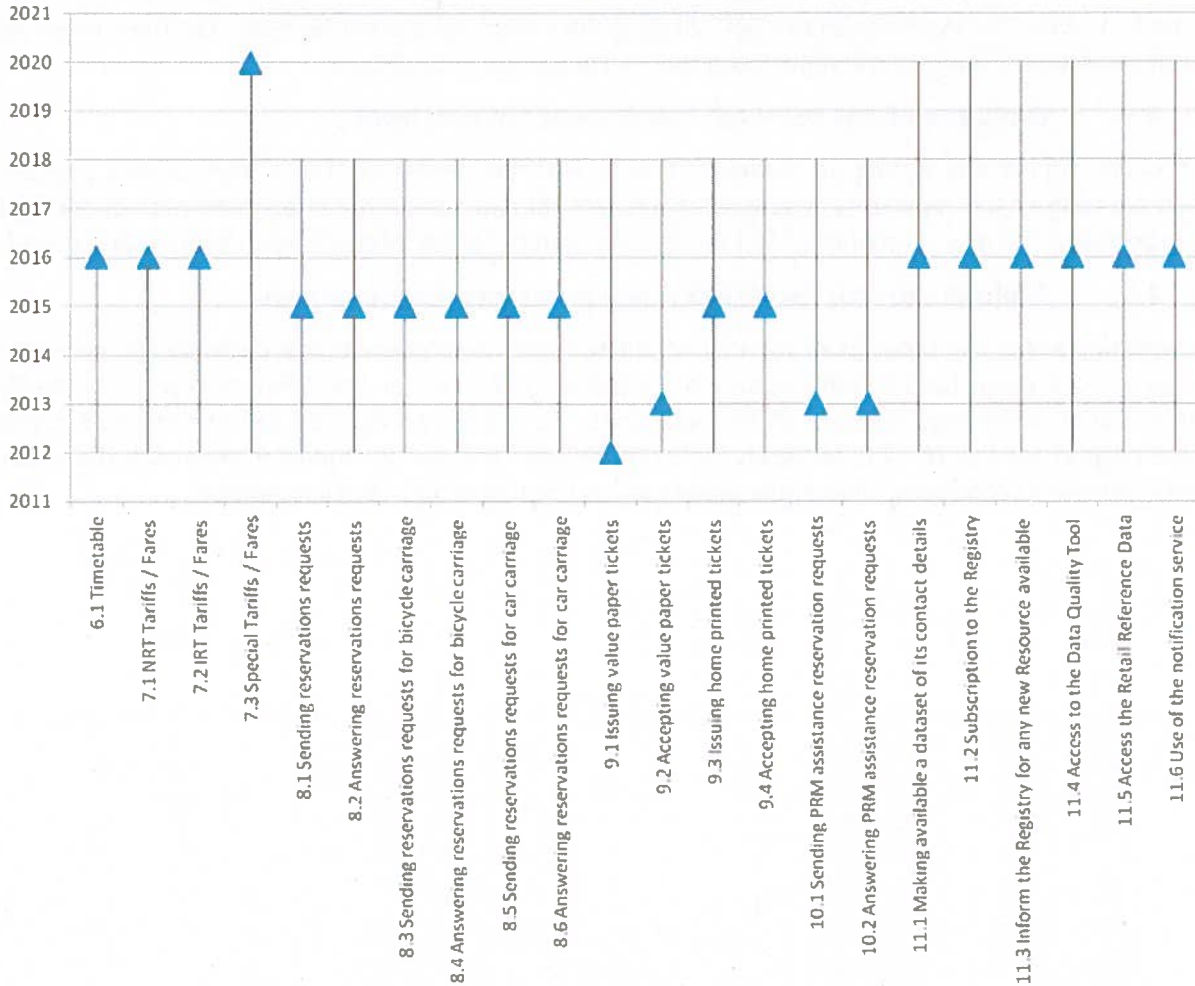
Figure 7: TAP TSI master plan for the retail functions.

This reporting about the functions according to the consolidated master plan has not been requested by ERA from the railway undertakings and will not be subject to the reporting in this implementation progress report.

4.3. Publication of the conditions of carriage and access conditions

The railway undertakings and the ticket vendors 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 collected the conditions of carriage and as well the access conditions from the websites of the railway undertakings.

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ERA will continue the reporting 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 ask the NCP's to deliver more details about the affected railway undertakings.

4.4.   Evolution of TAP TSI regulatory functions at European level

For the first report the evolution of the TAP TSI regulatory functions cannot be reported. The current report will refer as starting point for the reporting about the evolution in the future.

4.5.   Evolution of TAP TSI retail functions at Country level

For this first report a reporting on member state level is not necessary. The report focuses only on the implementation of the regulatory functions of the TAP TSI and not on the implementation of the TAP TSI retail functions. The evolution of the TAP functions on member state level will be started in spring 2017.

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

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. Therefore no reports for the RU/IM communication were requested for this report. These functions will be reported in the implementation progress report for the TAF TSI, foreseen for 2017, because the sector requested to launch the reporting exercise for RU/IM communication at the same time as the rest of TAP TSI functionality.

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5. Conclusions

The implementation of the TAP TSI is delayed significantly. Already the governance framework for the coordinated development of the TAP TSI implementation is **delayed by more than three years**. This will trigger most likely similar 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. It has to be considered that the TAP TSI is currently significantly delayed in the implementation.

On the other hand, taking into account the common deployment with TAF TSI of RU-IM functionality, in particular for the IMs, it is expected that the progress of the implementation for this set of functions will be aligned with the deployment for TAF TSI.

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6. Recommendation / actions to be taken

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

a) Action - TSGA:

The European Rail Sector (subject to the TAP TSI), in particular the signatory parties of the TSGA agreement at InnoTrans in September 2016, shall set up the operational TSGA asap, so that it can be staffed in 2017 and it can procure the above three common services, 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 communicate asap 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.

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Annex 1   Report provided in October 2016 by the TAP TSI project team

TAP TSI Implementation Report Volume 1

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 masterplan 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) .

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 Project Team

(Contact Person) Rütger Fenkes

(Contact Address) c/o Deutsche Bahn AG, Stephensonstr. 1, D-60326 Frankfurt (Main)

This 1ˢᵗ reporting session starts on 08ᵗʰ September 2016 and ends on 30ᵗʰ September 2016.

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.

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TSI entity formation (TSGA)

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

TAP TSI entity masterplan end date

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

01/10/2013

Current planned end date

Please enter a date:

31/12/2016

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:

Final clearance of competition authorities for TSGA formation by the three founding members (DB, SNCF, Trenitalia)

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:

Limited stakeholder interest to join TSGA as members; internal decision processes within volunteering founding members' organisations.

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Common services deployment

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

TAP TSI entity masterplan end date

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

01/10/2014

Current planned end date

Please enter a date:

Click here to enter a date.

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:

Click here to enter text.

Percentage of fulfilment

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

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

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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:

Click here to enter text.

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Setup of the TAP TSI registry
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TAP TSI entity masterplan end date

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

01/10/2014

Current planned end date

Please enter a date:

Click here to enter a date.

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:

Click here to enter text.

Percentage of fulfilment

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50%:...	☐
75%:...	☐
100%:.	☐

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Please insert the **issues**, found during the implementation:

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Setup of the Data quality tool
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TAP TSI entity masterplan end date

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

01/10/2014

Current planned end date

Please enter a date:

Click here to enter a date.

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:

Click here to enter text.

Percentage of fulfilment

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

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25%:	☐
50%:...	☐
75%:...	☐
100%:.	☐

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Please insert the **issues**, found during the implementation:

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