1ST STATUS REPORT IN 2014

OF THE EUROPEAN RAILWAY AGENCY

FOR

EUROPEAN COMMISSION

REGARDING

THE IMPLEMENTATION OF TAF TSI

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Abbreviations

Table 1: Table of abbreviations

Abbreviation	Definition
CEF	Connecting Europe Facility
CER	Community of European Railway and Infrastructure Companies
CI	Common Interface
CRD	Central Reference Database
EC	European Commission
EIM	European Rail Infrastructure Managers
ERA	European Railway Agency (also referred to as Agency)
ETA	Estimated Time of Arrival
IM	Infrastructure Manager
INEA	Innovation and Networks Executive Agency
JSG	Joint Sector Group
PM^2	Official Project Management Methodology of the European Commission
RISC	Rail Interoperability and Safety Committee
RNE	Rail Net Europe
RSRD	Rolling Stock Reference Database
$RSRD^2$	Rolling Stock Reference Database implementation made by UIP members
RU	Railway Undertaking
SMGS	ОРГАНИЗАЦИЯ СОТРУДНИЧЕСТВА ЖЕЛЕЗНЫХ ДОРОГ (ОСЖД) МЕЖДУНАРОДНЫЙ СОЮЗ ЖЕЛЕЗНЫХ ДОРОГ
TAF	Telematics Applications for Freight
TSI	Technical Specification for Interoperability
UIC	Union Internationale des Chemins de fer
UIP	International Union of Wagon Keepers
UNIFE	Association of the European Rail Industry
WIMO	Wagon and Intermodal Unit Operational Database
WK	Wagon Keepers

Reference documents

Table 2: Table of reference documents.

Ref. N°	Title	Reference	Version
(1)	TAF-TSI Master Plan	TAF Master Plan – v4.0	17.01.2013
(2)	NOTE TO ERA EXECUTIVE DIRECTOR: Assessment of TAF TSI implementation by the European Railway Agency	Ref. Ares(2014)1706338	26.05.2014

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]	TAF TSI Regulation No 1305/2014	Commission Regulation (EU) No 1305/2014 of 11 December 2014 on the technical specification for interoperability relating to the telematics applications for freight subsystem of the rail system in the European Union and repealing the Regulation (EC) No 62/2006	11.12.2014
[3]	Corridor Regulation N° 913/2010	Regulation (EU) No 913/2010 of the European Parliament and of the Council of 22 September 2010 concerning a European rail network for competitive freight	22.09.2010
[4]	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

This report contains the data provided to report the status of the implementation by **31.12.2014** of the following TAF TSI [2] functions:

- Reference Files Function:
  - Company Codes
  - Primary Location Codes
- Common Interface Function
- Rolling Stock Reference Database.

To better evaluate the current degree of implementation for every function, the data provided is compared to the baseline defined in the Master Plan (1) [1] to implement the TAF TSI [2] regulation delivered by the European Rail Sector in 2013 by taking into account the company Master Plan (1) dates too. The TAF-TSI Master (1) was submitted to the TAF-TSI Steering Committee, DG MOVE and ERA on 15th November, 2012. A total of 58 companies, representing over 85% of the total Tonne and Track Kilometres in Europe responded with their individual plans for implementation. The target dates are based on the corresponding TAF-TSI function to be implemented and they were set when 80% or more of the respondents indicated a final implementation.

The data provided is a self-declaration made by every company about the level of implementation of the above mentioned functions. Most of the data has been collected through an entity set-up by the European Rail Sector, Joint Sector Group (JSG), to technically support the reporting of implementation of the system. The members of the JSG are the ERA recognised stakeholders:

- CER[2]
- UIC
- EIM
- UNIFE
- UIRR
- ESC
- UIP
- RNE
- ERFA

This entity has collected for the functions Company Codes, Primary Location Codes and Common Interface the data provided by forty-four companies across Europe. The number of records varies between the different TAF functions, with a maximum of forty-one replies for the use of company codes.

Regarding the function Rolling Stock Reference Database, the implementation data has been collected by the International Union of Wagon Keepers, UIP, who has submitted to ERA a file containing the status information of thirty –four companies across Europe.

The following key findings per TAF function can be highlighted:

[1] See «Chapter 0. Contents» for Reference Documents.
[2] See «Chapter 0. Contents» for acronyms.

- The majority of IMs has completed the Common Reference Files for locations on their network.
- Company codes are already widely used within the sector, both by IMs and RUs.
- The majority of RUs is still developing the common interface, while a number of IMs have already finished the implementation of the common interface.
- The deployment of the Rolling Stock Reference Database has been already launched, however only UIP members have delivered data concerning the implementation of this function. Regarding the data delivered, these Wagon Keepers companies have already completed the implementation of this function.

Furthermore, the report identifies the functions where the sector shall allocate more resources to meet the target implementation date quoted in the TAF TSI Master Plan (1).

In particular this report shows that the implementation of the Rolling Stock Reference Database (RSRD) in 2014 is in average for the overall European rail sector slightly delayed compared to the target implementation date, 2015.

The drivers for the implementation of this function are the Private Wagon Owners, mostly UIP members, and the Railway Undertakings (RUs). Therefore, within the report we can observe that the RUs have not yet started delivering information about the implementation of the TAF TSI [2] compliant RSRD database.

2. Introduction

This report is issued according to the legal frame provided by the Commission Regulation (EU) No 1305/2014 of 11 December 2014 on the Technical Specification for Interoperability relating to the Telematics Applications for Freight subsystem of the rail system in the European Union and repealing the Regulation (EC) No 62/2006 in force, TAF TSI [2].

In particular, Article 5 of the Regulation [2] attributes to the European Railway Agency the task to assess and oversee the implementation of the Regulation to determine whether the agreed objectives and deadlines have been achieved and to provide an assessment report to the TAF steering committee referred to in Section 7.1.4 of the Annex. Furthermore, the European Commission (EC) issued a letter on 26.05.2014 (2) describing the tasks expected to be carried out by the Agency for the Assessment of TAF TSI [2] implementation.

In addition, this activity meets the 4th Strategic Priority of the ERA work programmes 2014 and 2015, "Simplified Access for Customers". On this basis, the Agency launched in October 2014 the Co-operation Group for the Implementation of Telematics Applications for Freight. The Co-operation Group performs the following tasks:

- To assess the reports from the sector (companies, NCPs and RBs) about the TAF TSI [2] implementation.
- To compare the data received with the content of the 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)[3] 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 TAF Steering Committee.
- To perform a dissemination campaign to NCPs and assist them to follow-up the TAF TSI [2] implementation at national level.

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

ERA has to inform the EC about the results of this monitoring and has to advise the EC about the possible changes needed. In a multimodal context, ERA has to guarantee that any of the actions taken do not create additional obstacles for multimodal environment.

In addition, the effort made by the European rail sector to deploy the TAF 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.

The CEF[4] [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 TAF TSI [2] regulation.

[3] It will be used from next report.

[4] http://inea.ec.europa.eu/download/calls2014/cef_transport/calltexts/_map_funding-objective-1_annex-3_interoperability.pdf

3. Context

The final version of the TAF-TSI Master Plan (1), establishing the implementation timeline for the Regulation, was submitted to the TAF-TSI Steering Committee, DG MOVE and ERA on 15th November 2012.

A total of 58 companies, representing over 85% of the total Tonnes and Track Kilometres in Europe responded with their individual plans for implementation. Target dates were set when 80% or more of the respondents indicated a final implementation. The target dates are based on the corresponding TAF-TSI function to be implemented.

An analysis, based on Corridor Regulation N° 913/2010 [3], was also incorporated into this Master Plan (1). As the Corridor Regulation specifically addresses Short Term Path Requests and Train Running Information, these were the only functions included. It should be noted that the TAF-TSI is a supporting tool – and not a prerequisite – for the implementation of Regulation N° 913/2010. Therefore the later date of implementation of the TAF-TSI should have no impact on the implementation of 913/2010.

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, the European Rail Sector grouped through the entity 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 to the JSG IT tool through a Web service available for all the companies registered. Once the data is collected, the raw data is delivered to the Agency, who incorporates this information in the ERA IT tool for TAF 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 RU-IM Communication functions. These maps represent the progress of the implementation at corridor level, underpinning the implementation of Corridor Regulation N° 913/2010 [3], of the functions implementing the exchange of data for the following processes:
    - Short Term Path Request,
    - Train Running Information,
    - Train Preparation,
    - Service Disruption and
    - Unique Train Identifiers.
- Maps to report about common functions. These maps show the degree of implementation of the Reference Files and the Common Interface functions at European level.
- Maps to report about Railway Undertaking's functions. These maps show the degree of implementation of the functions to exchange data amongst Railway Undertakings and Wagon Keepers:
    - Consignment Data Function,
    - WIMO Function,
    - Wagon Movement Function,
    - Shipment ETA Function and
    - Rolling Stock Reference Database.

The scope of the present report is to inform about the deployment of the functions scheduled to be implemented by 2014 in the Master Plan (1) delivered by the sector for the implementation of the TAF TSI [2] system. As it was agreed by the members of the Co-operation Group for the Implementation of Telematics Applications for Freight in the kick-off meeting held on 14th October 2014, this report provides information about the implementation of the following functions:

- Reference Files Function:
  - Company Codes
  - Primary Location Codes
- Common Interface Function
- Rolling Stock Reference Database.

To have a common approach for all members of the Cooperation Group in their role of contributors submitting information, a common criterion has been agreed with the representatives of the rail sector to assess the degree of deployment of TAF TSI functions. . This criterion is based on the standard division in project phases for 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 we may ideally assimilate each of the 12 TAF TSI functions identified in the TAF 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, n-1, n) over a 4-year time span. This will avoid arriving at the end of the implementation of a particular function without having launched the implementation project.

Therefore, taking into account the above mentioned optional 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 the "ideal" 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 the "ideal" 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 the "ideal" 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 TAF TSI [2] deployment, the delivery of the IT system implementing a particular TAF TSI [2] function moving to production environment. These activities correspond in the "ideal" 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.

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

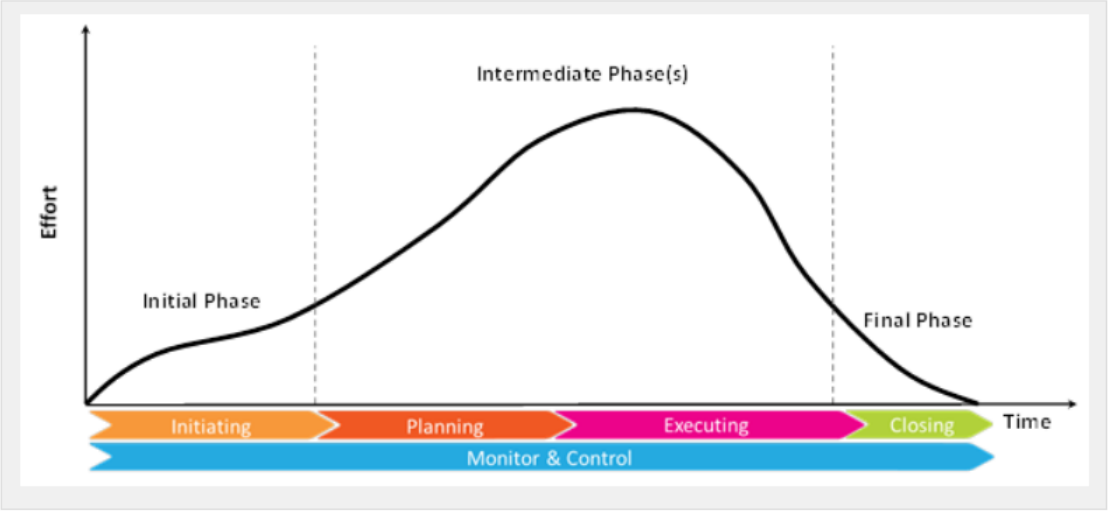


Figure 1: PM^2 project lifecycle.

The different activities to be developed in the framework of a project to implement a particular TAF TSI [2] function should be adapted to the particular situation in every company.

Therefore, every project may be assimilated to the addition of the four phases aforementioned (Initiating, Planning, Executing and Closing) establishing a comparable reference implementation to assess the progress of the implementation.

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

- on one hand, companies may declare the final delivery of a particular TAF TSI function within the deadline set out in the TAF TSI Master Plan (1); in this case the implementation of this function will be deemed to be on time;
- on the other hand, companies may declare the Degree of Implementation (DI) for every function taking into account the 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

TAF TSI Master Plan (1) shows that most of functions of the TAF TSI can be achieved by the end of 2018, with most functions operational by 2016. The most difficult part of the realisation will be the implementation of the unique Train Identifiers (TID), upon which many other functions are dependent. Indeed, the first set of functions to be implemented in order to facilitate the further deployment of the system is:

- Reference Files Function:
    - Company Codes
    - Primary Location Codes
- Common Interface Function
- Rolling Stock Reference Database.

For this reason the members of the TAF TSI Implementation Co-operation Group agreed to focus the first report concerning the implementation of TAF TSI [2] on the implementation of the above mentioned functions in 2014.

4.1. Evolution of RU-IM functions per corridor

In line with the agreements reached in the Kick-Off meeting of the TAF TSI Implementation Co-operation Group, no information will be quoted of this set of functions in the first report based on 2014 implementation.

4.2. Evolution of RU's functions at Country level

In line with the timeline defined in the TAF TSI Master Plan (1) aforementioned and the request of the TAF TSI Implementation Co-operation Group members, the reporting of this first report is limited to the TAF TSI [2] functions which should be achieved by 2014 or which are very close to their delivery:

- Reference Files Function:
  - Company Codes
  - Primary Location Codes
- Common Interface Function
- Rolling Stock Reference Database.

The data were collected by the JSG tool and transferred to the ERA TAF TSI Implementation Co-operation Group IT tool.

4.2.1. Implementation status in 2014 for Company Codes function

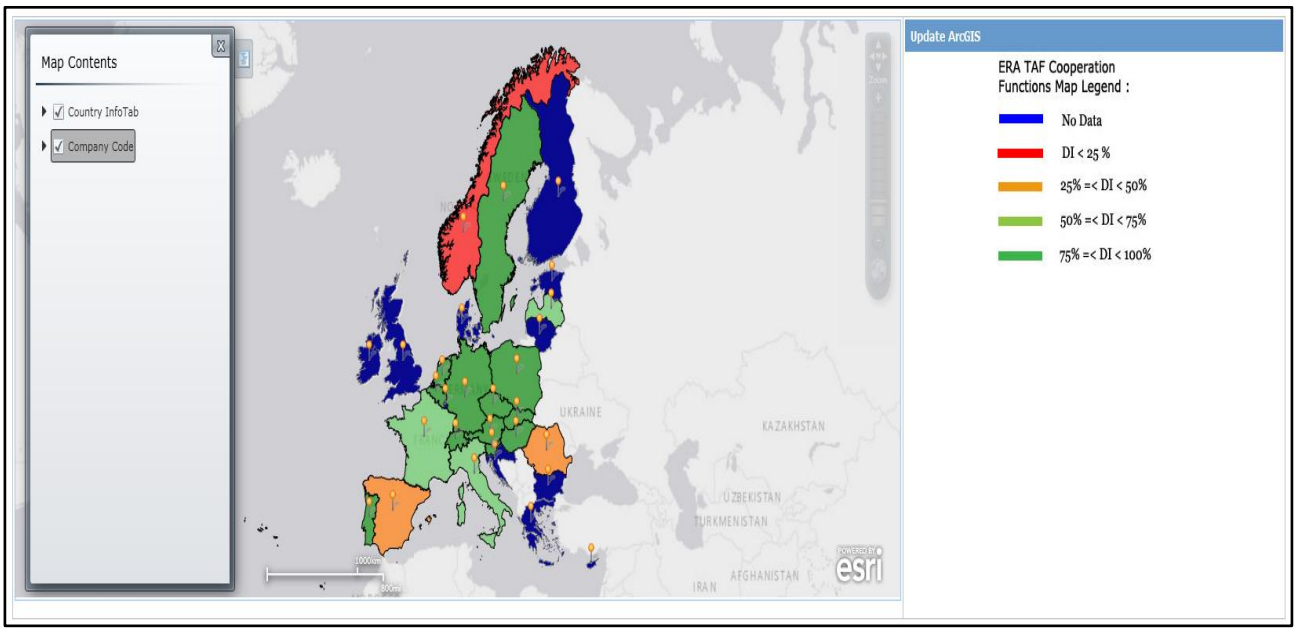


Figure 2: Company Codes function implementation.

The map shows that in 2014 most of the Infrastructure Managers and Railway Undertakings have already performed the implementation of the **Company Codes function**, as it can be drawn from the average level of **88% degree of implementation at European level for all companies having reported**. This means that at European level the deployment of this function is reaching in average the Executing Phase; therefore, most of the countries are in light green coloured on the map.

- In every country, the average level of deployment is calculated from the data provided by the companies operating in that country, thus this average defines the colour attributed to a particular country. We can observe some differences from country to country; indeed we can sort the countries in the following groups: Countries where the companies have declared that the project has not been launched: 0% or no data -> Blue colour on the map:

  - Bulgaria
  - Croatia
  - Cyprus
  - Denmark
  - Estonia
  - Finland
  - Greece
  - Ireland
  - Lithuania
  - Luxembourg
  - United Kingdom
- Countries where the companies have declared in average that the project is at the "Initiating Phase": 25% -> Red colour on the map:
  - Norway
- Countries where the companies have declared in average that the project is at "Planning Phase": 50% -> Orange colour on the map:
  - Romania
  - Spain
- Countries where the companies have declared in average that the project is at "Executing Phase": 75% -> Light Green colour on the map:
  - France
  - Italy
  - Latvia
- Countries where the companies have declared in average that the project is at "In Production & Monitor & Control Phase": 100% -> Green colour on the map:
  - Austria
  - Belgium
  - Czech Republic
  - Germany
  - Hungary
  - Poland
  - Portugal
  - Slovakia
  - Slovenia
  - Sweden
  - Switzerland
  - The Netherlands

To get more information concerning the companies, this data can be retrieved from the **Annex 1 "RU's functions and Common functions Maps + raw data"**. Within this raw data provided by the companies, we have collected some observations from the companies. In most of the cases the company codes were already in use before the delivery of the TAF TSI Implementation Master Plan (1) (January 2013), which means an advantage in terms of TAF TSI [2] implementation for those companies having the codes already included in UIC RICS code list and inherited by the TAF TSI CRD company codes repository. Other companies indicate that they are not yet using the company codes to exchange TAF TSI [2] messages at national level, while most of them use them for international traffic and IT tools implementing TAF TSI [2] functionality as Train Information System (TIS) tool hosted by Rail Net Europe (RNE).

4.2.2. Implementation status in 2014 for Primary Location Codes function

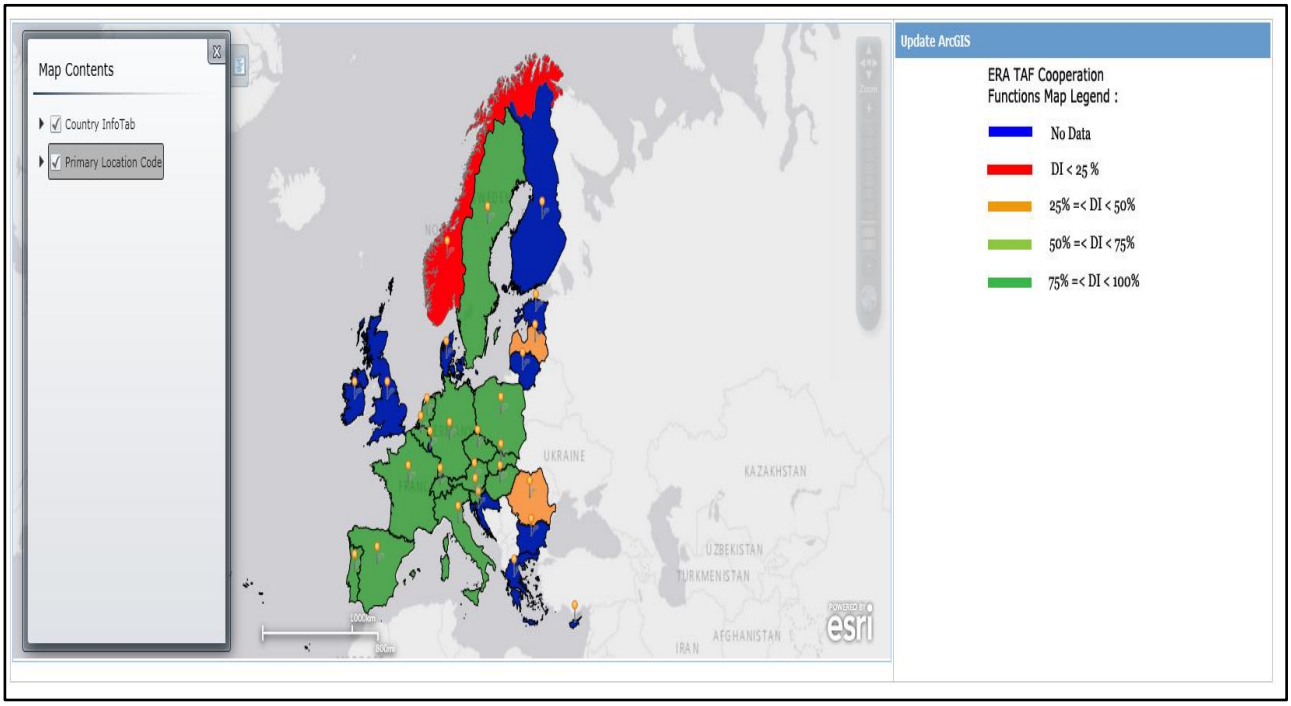


Figure 3: Primary Location Codes function implementation.

The map shows that in 2014 most of the Infrastructure Managers and Railway Undertakings have already performed the implementation of the **Primary Location Codes function**, as it can be drawn from the average level of **86% degree of implementation at European level of all Infrastructure Managers having reported**. This means that at European level the deployment of this function is reaching in average the Execution Phase. However, many countries are in green colour on the map, because the drivers for the implementation of the above mentioned function are the Infrastructure Managers, and in most of the EU Members States and Switzerland the incumbent Infrastructure Managers have completed the deployment of this function and the have reached the "In Production & Monitor & Control Phase". Moreover, in these countries States the Railway Undertakings cooperate with the Infrastructure Managers to improve the data quality, thus the European map appears mostly green.

In every country, the average level of deployment is calculated from the data provided by the companies, thus this average defines the colour attributed to a particular country. We can observe some differences from country to country; indeed we can sort the country in the following groups:

- Countries where the companies have declared that the project has not been launched: 0% or no data -> Blue colour on the map:
  - Bulgaria
  - Croatia
  - Cyprus
  - Denmark
  - Estonia
  - Finland
  - Greece

  - Ireland
  - Lithuania
  - Luxembourg
  - United Kingdom
- Countries where the companies have declared in average that the project is at the "Initiating Phase": 25% -> Red colour on the map:
  - Norway
- Countries where the companies have declared in average that the project is at "Planning Phase": 50% -> Orange colour on the map:
  - Latvia
  - Romania
- Countries where the companies have declared in average that the project is at "In Production & Monitor & Control Phase", in particular those countries where the incumbent Infrastructure Managers have complete this task at 100% level: 100% -> Green colour on the map:
  - Austria
  - Belgium
  - Czech Republic
  - France
  - Germany
  - Hungary
  - Italy
  - Poland
  - Portugal
  - Slovakia
  - Slovenia
  - Spain
  - Sweden
  - Switzerland
  - The Netherlands

To get more information concerning the companies, this data can be retrieved from the **Annex 1 "RU's functions and Common functions Maps + raw data"**. Within this raw data provided by the companies, we have collected some observations from the companies. In most of the cases the primary location codes are already in use for international trains and in some cases for domestic trains as well. Some Railway Undertakings have pointed out that the publication of the **Primary Location Codes** is an obligation for the Infrastructure Managers. In addition, the Railway Undertakings are working together with the Infrastructure Managers to improve the quality data. Furthermore, Railway Undertaking stated that the treatment of border points is still subject to discussion.

4.2.3. Implementation status in 2014 for Common Interface function

In order to reflect the real situation about the implementation of the **Common Interface function**, the data treatment has been differentiated depending on the source:

- the data supplied by the Infrastructure Managers have not been weighted,
- the values provided by the Railway Undertakings have been weighted to reflect the market share of these companies in their national rail market.

This provides a better view about the implementation of this function and allows comparing the implementation status of this function in 2014, based on the response provided by the companies representing approximately 80% of the market share for RUs, with the corresponding information quoted in the TAF TSI Master Plan (1). The weighting factor used is based on the figures stated in the report "**Fourth report on monitoring development in the rail market**" issued by the European Commission in June 2014, where **Annex 19** provides the figures concerning "Market shares of railway undertakings (2011-2012)".

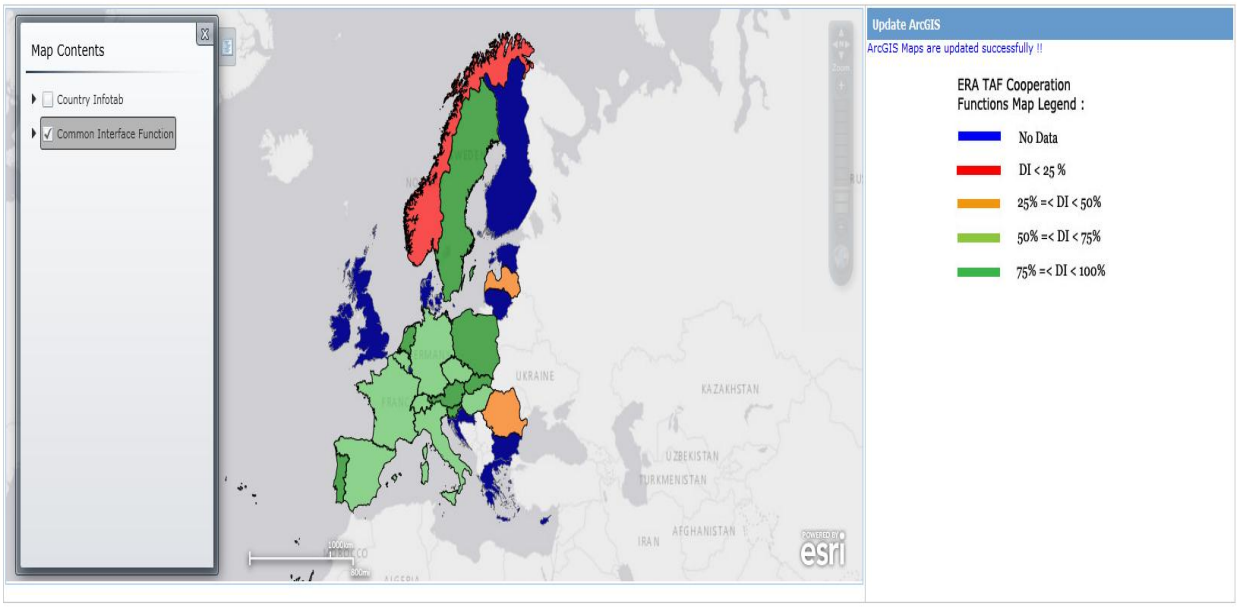


Figure 4: Common Interface function implementation.

The map shows that in 2014 most of the Infrastructure Managers, Railway Undertakings and Wagon Keepers have already performed the implementation of the **Common Interface function**, as it can be drawn from the average weighted level of **63% degree of implementation at European level for all companies having reported**. This means that at European level the deployment of this function is reaching in average the "Executing Phase" (Procurement, Executing, Testing (User Acceptance and system Integration) or Training and Education), therefore, most of the countries are in average close to the light green colour on the map.

In every country, the average level of deployment is calculated from the data provided by the companies, thus this average defines the colour attributed to a particular country. We can observe some differences from country to country; indeed we can sort the country in the following groups:

- Countries where the companies have declared that the project has not been launched: 0% or no data -> Blue colour on the map:
  - Bulgaria
  - Croatia
  - Cyprus
  - Denmark
  - Estonia
  - Finland

  - Greece
  - Ireland
  - Lithuania
  - Luxembourg
  - Norway
  - United Kingdom
- Countries where the companies have declared in average that the project is at "Planning Phase": 50% -> Orange colour on the map:
  - Latvia
  - Romania
- Countries where the companies have declared in average that the project is at "Executing Phase": 75% -> Light Green colour on the map:
  - Belgium
  - Czech Republic
  - France
  - Germany
  - Italy
  - Hungary
  - Spain
  - Switzerland
- Countries where the companies have declared in average that the project is at "In Production & Monitor & Control Phase": 100% -> Green colour on the map:
  - Austria
  - Poland
  - Portugal
  - Slovakia
  - Slovenia
  - Sweden
  - The Nerderlands

To get more information concerning the companies, this data can be retrieved from the **Annex 1 "RU's functions and Common functions Maps + raw data"**. Within this raw data provided by the companies, we have collected some observations from the companies. In most of the cases the **Common Interface function** is not in use for international trains nor for domestic trains, because the companies are still deploying and testing the software application. Some companies have pointed out that they use directly the TAF messages in XML syntax directly, then they do not convert the data and messages are validated against TAF XSDs. Other companies have reported that they are testing the use of the Common Interface to exchange messages with TIS system hosted by RNE for international trains and the exchange train running messages for international traffic, while it is not envisaged for domestic trains. It has been stated as well that the members of the "Common Components Group –UIC", they have already available a reference implementation the Common Interface to be used, but not in operation.

4.2.4. Implementation status in 2014 for Rolling Stock Reference Database function

In order to reflect the real progress of the implementation of the **Rolling Stock Reference Database function**, an overview at European Level showing the information concerning the deployment per country is considered as the most appropriate. Moreover, the value which reflects the real implementation of this

function is the number of wagons stored in the Rolling stock Reference Databases set-up across Europe to fulfil the requirements quoted in the TAF TSI [2] Regulation.

Therefore, it has been agreed in the 1st TAF TSI Implementation Cooperation Group meeting on 26 February 2015 to use as reference the number of wagons composing the complete fleet of wagons in Europe split down per country. In line with these assumptions, the data has been sorted in the following table estimating the percentage of wagons stored in a **Rolling Stock Reference Database**:

Country	Valid registrations VVR / Eurostat	Wagons In RSRD	Percentage
Austria	19706	2967	15%
Belgium	40375	487	1%
BosniaHerzegovina	-		0%
Bulgaria	-		0%
Croatia			0%
Czech Republic	53885	1102	2%
Denmark	2305		0%
Estonia	-		0%
Finland	-		0%
Montenegro			0%
Norway			0%
France	113261	25367	22%
Germany	102778	62822	61%
Greece	4094	5	0%
Hungary	12918	18	0%
Ireland	-		0%
Italy	44482	10	0%
Latvia	11210		0%
Lithuania	-		0%
Luxembourg	4216	1	0%
Netherlands	21957	8149	37%
Poland	109165	3910	4%
Portugal	5168	6	0%
Romania	24076		0%
Slovakia	33359	238	1%
Slovenia	3767		0%
Spain	12760	4887	38%
Switzerland	27398	2921	11%
Sweden	12760	2607	20%
United Kingdom	-	28	0%

Moreover, due to the need of having a visualization of this data and applying the same process that it has been applied for the above functions, this information has been uploaded in a Geographical Information System (GIS) obtaining the following map of Europe representing the implementation of this function at European level:

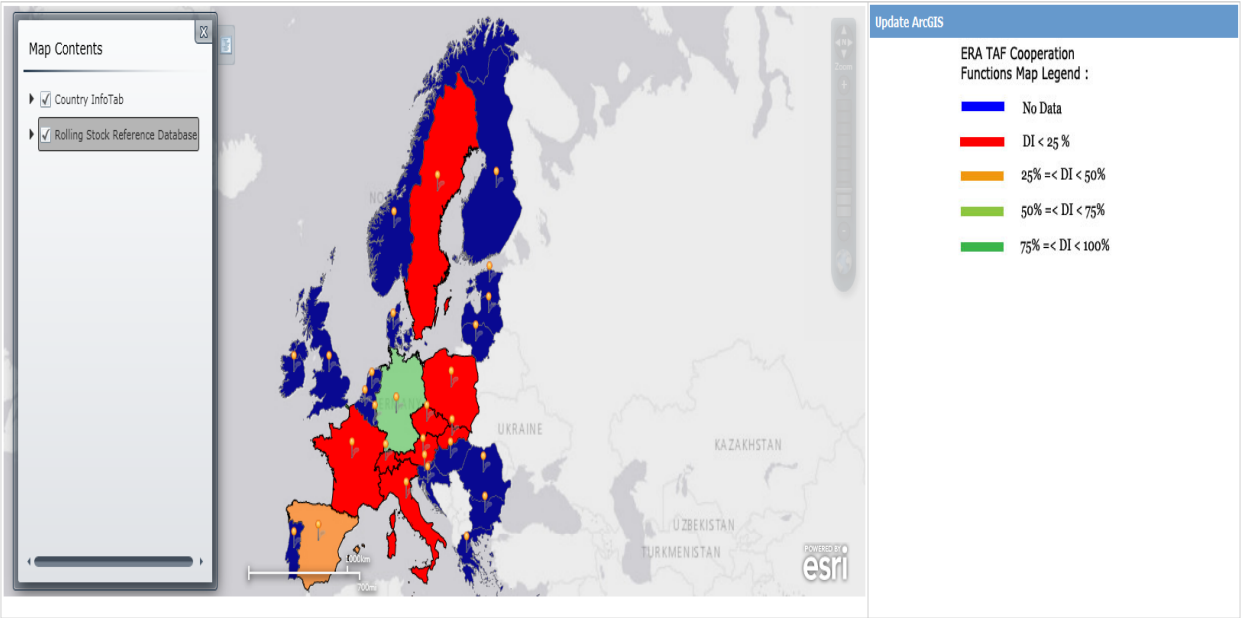


Figure 5: Rolling Stock Reference Database function implementation.

The map shows that in 2014 some Wagon Keepers have already launched the implementation of the **Rolling Stock Reference Database function**, as it can be drawn from the average weighted level of **7% degree of implementation at European level**. This means that at European level the deployment of this function has reached in average the "Initiating Phase" (Feasibility Study, Business Case or Gathering of Technical and Functional Requirements), thus, most of the countries are shown in average on red or blue colour on the map whish some exceptions where the level of implementation is more advanced. In particular the green colour in Germany, means that in this country most of the companies are already facing the "Executing Phase" of an IT project to deploy the function (Procurement, Executing, Testing (User Acceptance and system Integration) or Training and Education) and orange in Spain, where the companies are mostly in the "Planning Phase" (Resource Planning, Project Work Planning (Working Break Down Structure), Migration Planning, Outsourcing Plan or Risk Management Planning).

In every country, the average level of deployment is calculated from the data provided by the companies, thus this average defines the colour attributed to a particular country. We can observe some differences from country to country; indeed we can sort the countries in the following groups:

- Countries where the companies have declared that the project has not been launched: 0% or no data -> Blue colour on the map:
  - Belgium
  - Bulgaria
  - Croatia
  - Cyprus
  - Denmark

  - Estonia
  - Finland
  - Greece
  - Hungary
  - Ireland
  - Latvia
  - Lithuania
  - Luxembourg
  - Norway
  - Portugal
  - Romania
  - Slovenia
  - The Nerderlands
  - United Kingdom
- Countries where the companies have declared in average that the project is at the "Initiating Phase": 25% -> Red colour on the map:
  - Austria
  - Czech Republic
  - France
  - Italy
  - Poland
  - Slovakia
  - Sweden
  - Switzerland
- Countries where the companies have declared in average that the project is at "Planning Phase": 50% -> Orange colour on the map:
  - Spain
- Countries where the companies have declared in average that the project is at "Executing Phase": 75% -> Light Green colour on the map:
  - Germany

To get more information concerning the companies, this data can be retrieved from the **Annex 1 "RU's functions and Common functions Maps + raw data"**. The data supplied by the European association of private wagon keepers, UIP, is based on the companies using the tool developed under the umbrella of UIP to implement the **Rolling Stock Reference Database function** RSRD^2, and it shows the distribution of wagons by registration country. For these companies using this tool, the data stored in RSRD² is complete wagon data sets (mandatory data) therefore, data completeness is 100% ensured for recorded wagons. These figures do not cover keepers having indicated that they will use RSRD² but which are currently in a stage of collecting required wagon data or preparing the interface to RSRD².

The first conclusion that it can be drawn is that in general terms there is a delay in terms of implementation compared to the target implementation milestone quoted in the TAF TSI Master Plan (1), 2015. However, this does not mean that no company has implemented this function, since only the average data is displayed on the map. Indeed, 34 European companies have already in place this functionality through the RSRD^2 tool, as it can be realised looking to the data accompanying the report in **Annex 1 "RU's functions and Common functions Maps + raw data.**

5. Conclusions

The first report of to the degree of implementation of Commission Regulation (EU) No 1305/2014, TAF TSI [2], shows a positive evolution in line with the Master Plan (1) to implement TAF TSI [2] delivered by the sector in January 2013.

The TAF TSI Master Plan (1) issued by the rail sector in January 2013 foresees the following level of realisation by end 2014 for the reported functions:

- Reference files population (Primary Location Codes function and Company Codes function):
  - 98% degree of implementation at European level for Infrastructure Managers and
  - 95% degree of implementation at European level for Infrastructure Managers.
- Common Interface function:
  - 98% degree of implementation at European level for Infrastructure Managers and
  - 95% degree of implementation at European level for Infrastructure Managers.
- Rolling Stock Reference Database function: 80% or more of the respondents (Wagon keepers and Railway Undertakings) indicated a final implementation in 2015.

Therefore, at a first glance the target milestones quoted in the Master Plan (1) are met in most of the cases for the first functions expected to be implemented by 2014. In fact, the level of accomplishment is over 60% for 3 out of 4 functions, which means that the implementation of these 3 functions is already at least in the "Executing Phase" and, for many companies, already in production.

Nevertheless, there is one function, the "Rolling Stock Reference Database" function, where there is a delay if we consider the overall view of every national rail market. However, the companies having in place this function declared that they are already using this functionality in production.

The data shows the different degree of implementation in average per function taking into account the data provided by the companies through the JSG:

- Company Codes function: 88% degree of implementation at European level.
- Primary Location Codes function: 86% degree of implementation at European level.
- Common Interface function: 63% degree of implementation at European level.
- Rolling Stock Reference Database function: 7% degree of implementation at European level.

For the first two functions the results are quite positive, because we can draw the conclusion that at this level of deployment, close to the committed level of realisation committed in the TAF TSI Master Plan (1) (over 85%), the basic elements to deploy the system are already in place. In particular, it is quite relevant that the Infrastructure Managers, as drivers for the "Primary Location Codes" function, have committed to deliver these codes to a central repository, because this will have a positive impact in the further development of other TAF TSI [2] functions as the "Train Running Information" function. The "Company Codes" function is as well in place for at least all the companies performing the implementation, which ensures the communication among all the members of the TAF TSI [2] community, because this coding allows identifying sender and receiver of messages.

The level of implementation of the "Common Interface" function is as well quite satisfactory. In fact, some companies have declared that they will be able to generate TAF TSI [2] compliant messages from their

legacy systems without further conversion. For this reason, even if the level of deployment for this function is lower than that of the "Reference Files" functions (Primary Location and Company codes), this is not seen as problematic for the overall deployment of the TAF TSI system.

The results for the "Rolling Stock Reference Database" function shows that the sector has still to dedicate more resources to develop this functionality, in particular the Railway Undertakings, who in most cases act as Wagon Keepers as well. For these companies no data has been delivered to the JSG and therefore this is not reflected on the maps elaborated by ERA and this has a clear negative impact on the average degree of implementation. Furthermore, the results obtained allow concluding that more support from the EU institutions can be provided to help the companies to implement this function through different actions as better dissemination and increase of funding.

6. Proposals to support the Implementation

This chapter does not apply for this 1st report to be delivered.

7. Functions to be reported in the next report

It has been agreed in the 1st TAF TSI Implementation Cooperation Group meeting on 26 February 2015 that for the next meeting, to be held on 29th and 30th of September 2015, the data concerning the implementation of the following TAF TSI [2] functions has to be delivered:

- New: Train Running Information function, Implementation target 25% (Initiating Phase).
- New: WIMO function, Implementation target 25% (Initiating Phase).
- Cont.: Evolution of Common Interface Function.
- Cont.: Evolution of Company Codes Function.
- Cont.: Evolution of Location Codes Function.
- Cont.: Evolution of RSRD Codes Function.

The request to report on the evolution of the implementation for the aforementioned functions is based on the target implementation dates quoted in the TAF TSI Mater Plan (1).

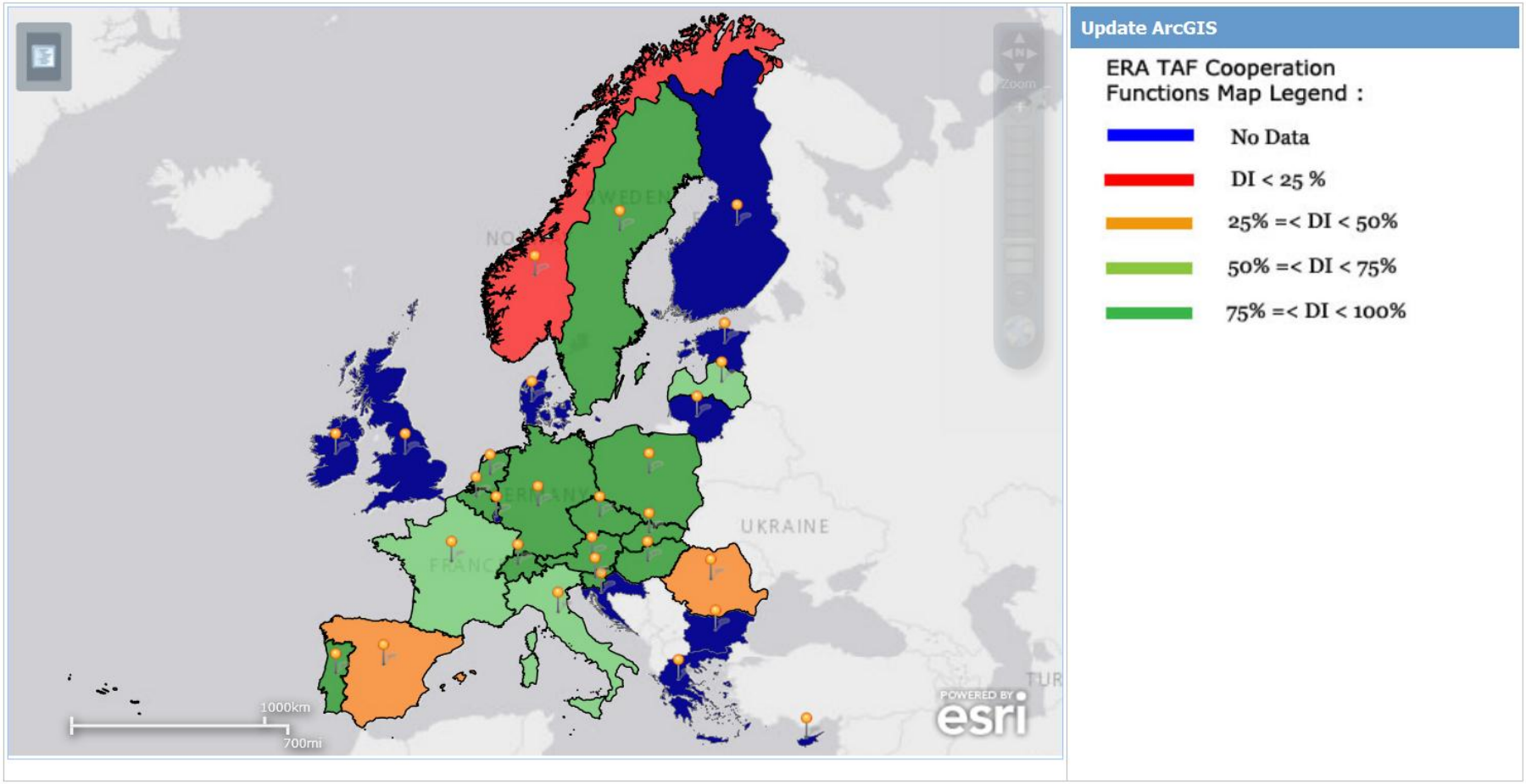
8. Progress of the Implementation of TAF TSI functions from this report compared with previous reports

This chapter does not apply for this 1st report to be delivered.

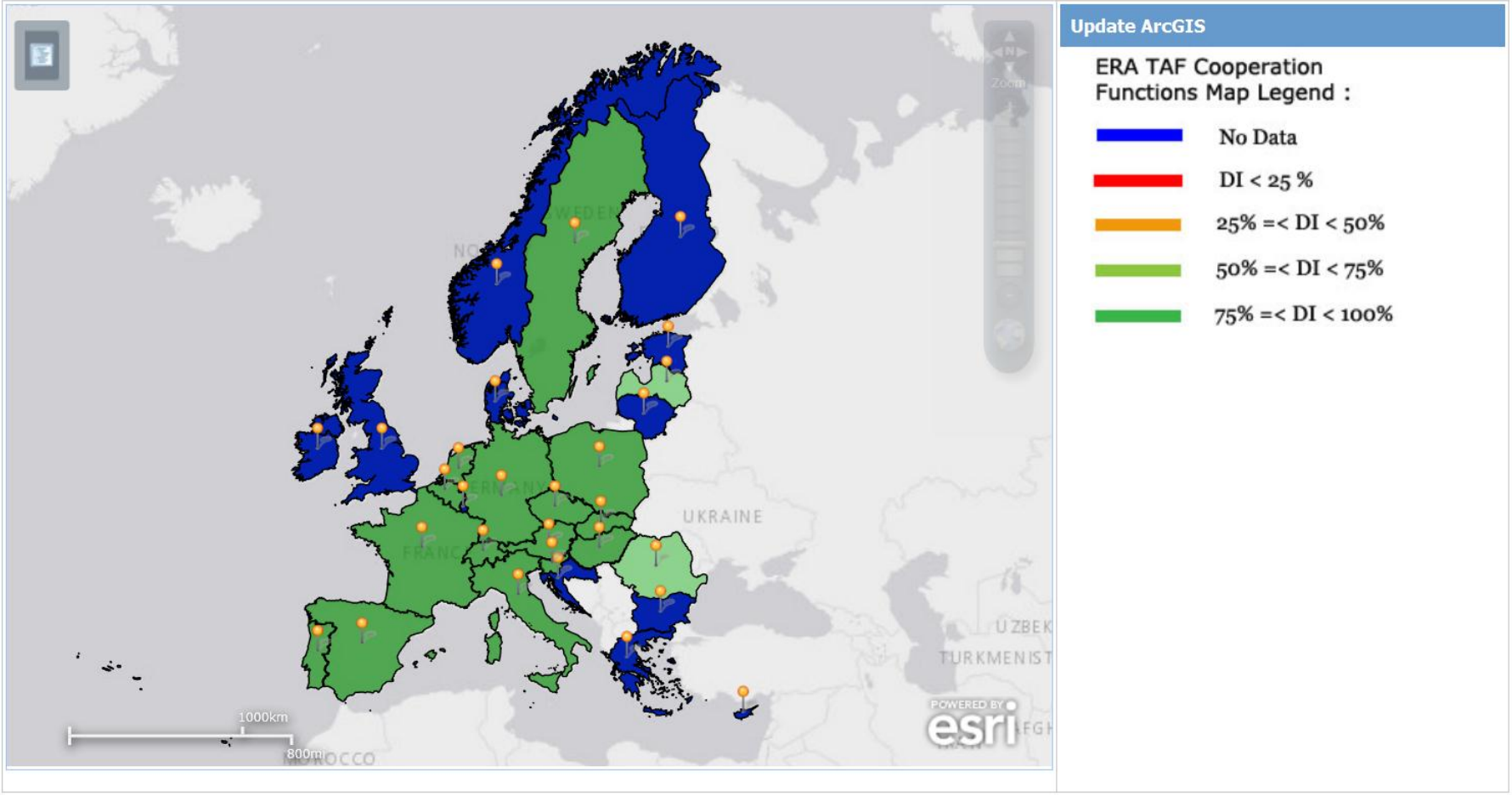
Annex 1: RU's functions and Common functions Maps + Raw data

RU's functions and Common functions Maps

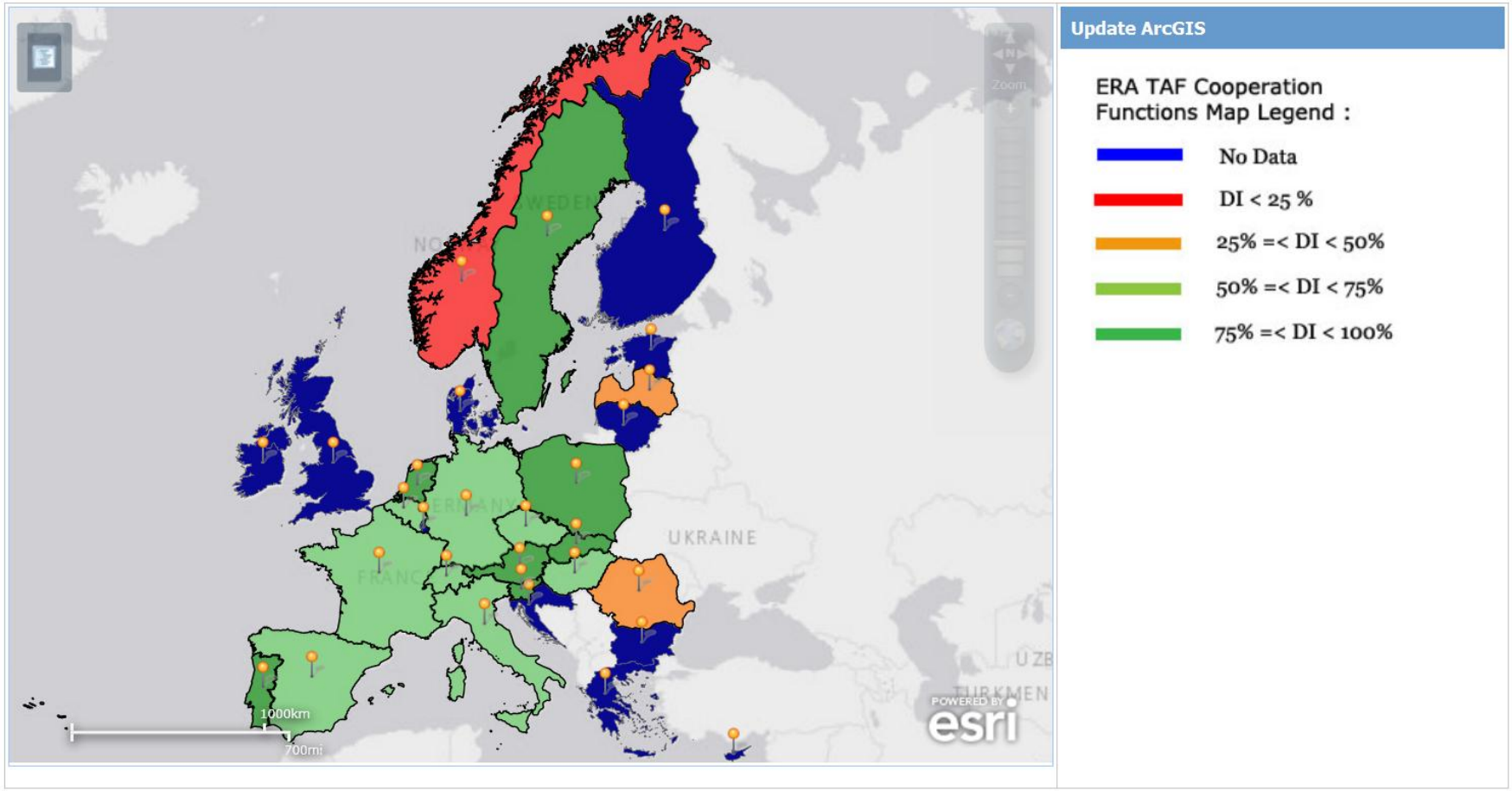
Company Codes function map



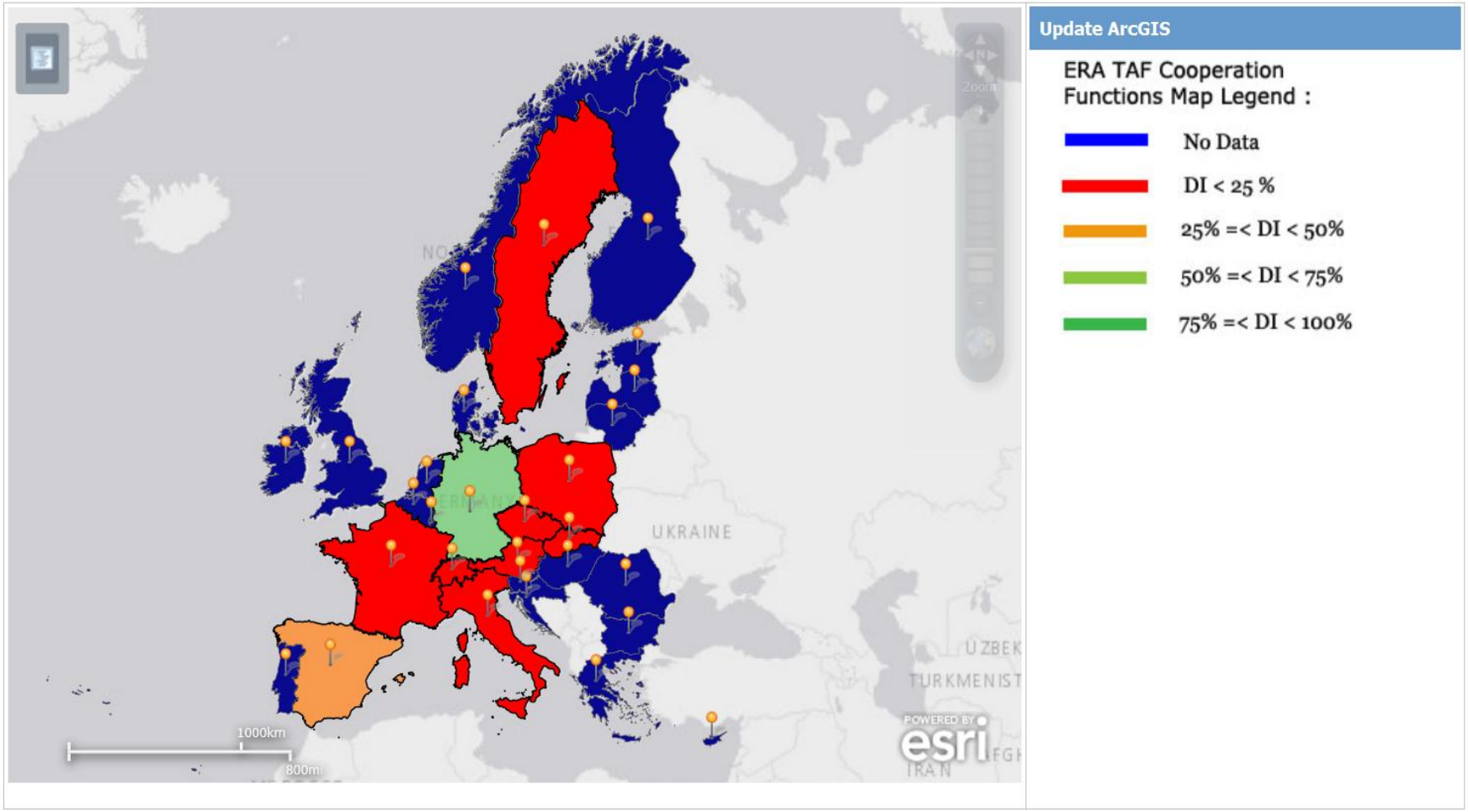
Primary Location Codes function map



Common Interface function map



Rolling Stock Reference Database function map



Raw Data

Company Codes function data

Country	Response ID	Company	Company Code	Company masterplan end date	Current planned end date	Impacted TSI TAP	Impacted TSI TAF	Implementation status	Data Exchange in production for international trains	Data Exchange in production for national trains
AT										
	18	RCA	2181	31/12/2014	31/12/2012	No	Yes	100%		
	30	ÖBB-Holding AG	0081	12/12/2012	12/12/2012	Yes	Yes	100%		
BE										
	35	Infrabel	0088	01/01/2014	01/01/2014	Yes	Yes	100%		
	7	SNCB Logistics	2188	01/01/2013	01/01/2013	No	Yes	100%		
CH										
	34	SBB-Holding	0085	01/12/2015	05/01/2015	Yes	Yes	100%		
CZ										
	15	ČDC	2154	02/12/2012	02/12/2012	No	Yes	100%	01/12/2007	01/12/2007
	51	SŽDC	0054	31/12/2012	31/12/2012	Yes	Yes	100%	31/12/2012	31/12/2012
DE										
	55	DBSDE	2180	31/12/2013	31/12/2013	No	Yes	100%	01/01/2014	01/01/2014
	48	DB Netz AG	0080	01/01/2014	31/12/2013	Yes	Yes	100%	01/01/2014	01/01/2014
ES										

Country	Response ID	Company	Company Code	Company masterplan end date	Current planned end date	Impacted TSI TAP	Impacted TSI TAF	Implementation status	Data Exchange in production for international trains	Data Exchange in production for national trains
	41	ADIF	0071	12/12/2013	12/12/2013	Yes	Yes	100%		
	59	RENFE MERCANCÍAS	2171	18/02/2014	02/02/2016	No	Yes	0%		
FR										
	6	SNCF Réseau	0087	01/03/2014	30/06/2015	Yes	Yes	75%	30/06/2015	30/06/2015
	37	Fret SNCF	2187	15/11/2012	15/11/2011	No	Yes	100%		
HU										
	27	MÁV	0055	24/11/2004	24/11/2004	Yes	Yes	100%		
	49	VPE	3032	14/09/2004	14/09/2004	Yes	No	100%		
IT										
	14	TRENITALIA	0083	28/06/2013	28/06/2013	No	Yes	75%		
	12	RFI	0083	28/06/2013	28/06/2013	Yes	Yes	100%	05/05/2014	05/05/2014
LV										
	50	LDz	0025	31/12/2014	30/06/2015	Yes	Yes	75%	30/06/2015	30/06/2015
NL										
	4	ProRail	0084	31/12/2013	31/12/2013	Yes	Yes	100%	31/12/2013	31/12/2013
NO										
	58	JBV	0076	01/01/2015	01/08/2015	Yes	Yes	0%	01/09/2015	01/09/2015
PL										
	1	PKP PLK S.A.	0051	31/12/2013	31/12/2013	Yes	Yes	100%	30/06/2013	

Country	Response ID	Company	Company Code	Company masterplan end date	Current planned end date	Impacted TSI TAP	Impacted TSI TAF	Implementation status	Data Exchange in production for international trains	Data Exchange in production for national trains
PT										
	16	REFER	0094	12/12/2012	12/12/2012	Yes	Yes	100%	12/12/2012	12/12/2012
RO										
	19	CFR SA	0053	31/12/2014	31/01/2015	Yes	Yes	50%	31/12/2015	31/01/2015
SE										
	36	TRAFIKVERKET	0074	12/12/2012	12/12/2012	Yes	Yes	100%	12/12/2012	12/12/2012
SI										
	47	SŽ, d.o.o.	1079	01/02/2012	01/02/2012	Yes	Yes	100%	01/02/2012	01/02/2012
SK										
	46	ZSSK CARGO	2156	31/12/2013	31/12/2013	No	Yes	100%	01/01/2014	01/01/2014
	57	ŽSR	0056		01/01/2014	Yes	Yes	100%	01/01/2014	

Primary Location Codes function data

Country	Response ID	Company	Company Code	Company masterplan end date	Current planned end date	Impacted TSI TAP	Impacted TSI TAF	Implementation status	Data Exchange in production for international trains	Data Exchange in production for national trains
AT										
	18	RCA	2181			No	No	100%		
	30	ÖBB-Holding AG	0081	31/12/2013	31/12/2014	Yes	Yes	100%		
BE										
	35	Infrabel	0088	30/09/2014	30/09/2014	Yes	Yes	100%		
	7	SNCB Logistics	2188			No	Yes	100%		
CH										
	34	SBB-Holding	0085	01/12/2015	05/01/2015	Yes	Yes	100%		
CZ										
	15	ČDC	2154	02/12/2012	01/10/2014	No	Yes	100%	04/02/2013	04/02/2013
	51	SŽDC	0054	31/12/2012	31/12/2013	Yes	Yes	100%	31/01/2015	31/12/2015
DE										
	55	DBSDE	2180			No	No	100%		
	48	DB Netz AG	0080	01/01/2014	31/12/2013	Yes	Yes	100%	01/01/2014	01/01/2014
ES										
	41	ADIF	0071	12/12/2013	12/12/2013	Yes	Yes	100%	12/12/2013	12/12/2013
	59	RENFE	2171	04/07/2013	01/02/2016	No	Yes	100%		

Country	Response ID	Company	Company Code	Company masterplan end date	Current planned end date	Impacted TSI TAP	Impacted TSI TAF	Implementation status	Data Exchange in production for international trains	Data Exchange in production for national trains
		MERCANCÍAS								
FR										
	6	SNCF Réseau	0087	01/08/2014	01/08/2014	Yes	Yes	100%	01/08/2014	01/08/2014
	37	Fret SNCF	2187	31/12/2013		No	Yes	100%		
HU										
	27	MÁV	0055	27/04/2012	27/04/2012	Yes	Yes	100%		
	49	VPE	3032	27/04/2012	27/04/2012	Yes	Yes	100%		
IT										
	14	TRENITALIA	0083	28/06/2013	28/06/2013	No	Yes	100%		
	12	RFI	0083	28/06/2013	28/06/2013	Yes	Yes	100%	05/05/2014	05/05/2014
LV										
	50	LDz	0025	31/12/2014	30/06/2015	Yes	Yes	50%	30/06/2015	30/06/2015
NL										
	4	ProRail	0084	31/12/2013	31/12/2013	Yes	Yes	100%	31/12/2013	31/12/2013
NO										
	58	JBV	0076	01/01/2015	01/06/2015	Yes	Yes	0%	01/07/2015	01/07/2015
PL										
	1	PKP PLK S.A.	0051	31/12/2013	31/12/2013	Yes	Yes	100%	30/06/2013	

Country	Response ID	Company	Company Code	Company masterplan end date	Current planned end date	Impacted TSI TAP	Impacted TSI TAF	Implementation status	Data Exchange in production for international trains	Data Exchange in production for national trains
PT										
	16	REFER	0094	12/12/2013	12/12/2013	Yes	Yes	100%	01/01/2014	01/01/2014
RO										
	19	CFR SA	0053	31/12/2014	31/01/2015	Yes	Yes	50%	31/12/2015	31/12/2015
SE										
	36	TRAFIKVERKET	0074	12/12/2012	31/05/2013	Yes	Yes	100%	31/05/2013	31/05/2013
SI										
	47	SŽ, d.o.o.	1079	01/07/2014	01/01/2014	Yes	Yes	100%	01/01/2014	01/01/2014
SK										
	46	ZSSK CARGO	2156	31/12/2013	31/12/2013	No	Yes	100%	01/01/2014	01/01/2014
	57	ŽSR	0056	01/01/2013	01/01/2015	Yes	Yes	100%	01/01/2014	

Common Interface function data

Country	Response ID	Company	Company Code	Company masterplan end date	Current planned end date	Impacted TSI TAP	Impacted TSI TAF	Implementation status	Data Exchange in production for international trains	Data Exchange in production for national trains
AT										
	18	RCA	2181	31/12/2014	30/06/2015	No	Yes	62%		
	30	ÖBB-Holding AG	0081	11/12/2013	31/12/2014	Yes	Yes	100%		
BE										
	35	Infrabel	0088	31/12/2013	31/03/2015	Yes	Yes	75%		
	7	SNCB Logistics	2188	01/01/2013	01/01/2016	No	Yes	43%		
CH										
	34	SBB-Holding	0085	01/12/2015	01/12/2015	Yes	Yes	50%		
CZ										
	15	ČDC	2154	01/07/2014	01/07/2015	No	Yes	20%	04/02/2013	04/02/2013
	51	SŽDC	0054	31/12/2013	31/12/2013	Yes	Yes	100%	31/12/2013	
DE										
	55	DBSDE	2180	31/12/2012	31/12/2016	No	Yes	36%	01/07/2017	01/07/2017
	48	DB Netz AG	0080	31/12/2020	31/12/2020	Yes	Yes	75%	01/01/2014	01/01/2014
ES										

Country	Response ID	Company	Company Code	Company masterplan end date	Current planned end date	Impacted TSI TAP	Impacted TSI TAF	Implementation status	Data Exchange in production for international trains	Data Exchange in production for national trains
	41	ADIF	0071	12/12/2013	12/12/2013	Yes	Yes	100%	31/01/2015	
	59	RENFE MERCANCÍAS	2171	23/01/2014	01/06/2016	No	Yes	0%		
FR										
	6	SNCF Réseau	0087	01/01/2014	30/06/2015	Yes	Yes	75%	30/06/2015	30/06/2015
	37	Fret SNCF	2187	31/12/2013	17/11/2014	No	Yes	51%		
HU										
	27	MÁV	0055	07/04/2014	31/03/2015	Yes	Yes	75%		
	49	VPE	3032	12/08/2015	16/08/2016	Yes	Yes	25%		
IT										
	14	TRENITALIA	0083	28/02/2013	30/10/2015	No	Yes	57%		
	12	RFI	0083	28/02/2013	28/02/2013	Yes	Yes	75%	30/06/2015	30/06/2015
LV										
	50	LDz	0025	31/12/2015	30/09/2015	Yes	Yes	38%	30/09/2015	30/09/2015
NL										
	4	ProRail	0084	31/12/2013	31/03/2015	Yes	Yes	75%	31/03/2015	31/03/2015
NO										
	58	JBV	0076	01/01/2015	04/05/2015	Yes	Yes	0%	01/06/2015	23/06/2015

Country	Response ID	Company	Company Code	Company masterplan end date	Current planned end date	Impacted TSI TAP	Impacted TSI TAF	Implementation status	Data Exchange in production for international trains	Data Exchange in production for national trains
PL										
	1	PKP PLK S.A.	0051	31/12/2013	31/12/2013	Yes	Yes	100%	30/06/2013	
PT										
	16	REFER	0094	11/12/2013	11/12/2013	Yes	Yes	75%	30/06/2015	30/06/2015
RO										
	19	CFR SA	0053	31/12/2014	30/06/2015	Yes	Yes	25%	31/12/2015	31/12/2015
SE										
	36	TRAFIKVERKET	0074	31/12/2013	31/12/2013	Yes	Yes	100%	31/12/2013	31/12/2013
SI										
	47	SŽ, d.o.o.	1079	10/12/2013	01/01/2014	Yes	Yes	90%	16/09/2014	16/09/2014
SK										
	46	ZSSK CARGO	2156	30/06/2014	30/06/2015	No	Yes	66%	01/01/2016	30/06/2015
	57	ŽSR	0056	01/01/2013	23/12/2014	Yes	Yes	100%	01/01/2014	

Rolling Stock Reference Database function data

Group Of Country	Response ID	Company	Current planned end date	Impacted TSI TAP	Impacted TSI TAF	Implementation status
AT						
	5	GATX Rail Austria GmbH	31/12/2014	No	Yes	15%
	19	Felbermayr Transport- und Hebetechnik GmbH & Co KG	31/12/2014	No	Yes	15%
CH						
	17	MITRAG AG	31/12/2014	No	Yes	11%
	4	Ermewa SAS, Geneva branch	31/12/2014	No	Yes	11%
	12	TRANSWAGGON AG	31/12/2014	No	Yes	11%
	1	AAE Ahaus Alstätter Eisenbahn Cargo AG	31/12/2014	No	Yes	11%
	20	Holcim (Schweiz) AG	31/12/2014	No	Yes	11%
CZ						
	30	Railco a.s.	31/12/2014	No	Yes	2%
	29	RYKO PLUS spol. s r.o.	31/12/2014	No	Yes	2%

Group Of Country	Response ID	Company	Current planned end date	Impacted TSI TAP	Impacted TSI TAF	Implementation status
	34	Felbermayr Transport- und Hebetechnik spol.s.r.o.	31/12/2014	No	Yes	2%
DE						
	3	Ermewa GmbH	31/12/2014	No	Yes	61%
	6	GATX Rail Germany GmbH	31/12/2014	No	Yes	61%
	13	TRANSWAGGON GmbH	31/12/2014	No	Yes	61%
	14	VTG Aktiengesellschaft	31/12/2014	No	Yes	61%
	18	AlzChem AG	31/12/2014	No	Yes	61%
	22	Logistikgesellschaft Gleisbau mbH	31/12/2014	No	Yes	61%
	23	Stahlberg Roensch GmbH	31/12/2014	No	Yes	61%
	24	Zürcher Bau GmbH	31/12/2014	No	Yes	61%
	32	voestalpine Rail Center Königsborn GmbH	31/12/2014	No	Yes	61%
	25	Kurt Nitzer (GmbH & Co.) KG	31/12/2014	No	Yes	61%
	28	Tyczka Gase GmbH	31/12/2014	No	Yes	61%

Group Of Country	Response ID	Company	Current planned end date	Impacted TSI TAP	Impacted TSI TAF	Implementation status
	27	Mosolf Automotive Railway GmbH	31/12/2014	No	Yes	61%
	21	Nuclear Cargo + Service GmbH	31/12/2014	No	Yes	61%
ES						
	10	Sociedad de estudios y explotacion de material auxiliar de transportes S.A.	31/12/2014	No	Yes	38%
	9	Transportes Ferroviarios Especiales S.A.	31/12/2014	No	Yes	38%
FR						
	15	VTG FRANCE SAS	31/12/2014	No	Yes	22%
	2	Ermewa SAS	31/12/2014	No	Yes	22%
IT						
	16	VTG Italia S.r.l.	31/12/2014	No	Yes	0%
PL						
	7	GATX Rail Poland Sp. z o.o.	31/12/2014	No	Yes	4%
	26	Tankwagon sp.z.o.o.	31/12/2014	No	Yes	4%

Group Of Country	Response ID	Company	Current planned end date	Impacted TSI TAP	Impacted TSI TAF	Implementation status
	31	Felbermayr Immo Sp.z.o.o.	31/12/2014	No	Yes	4%
SE						
	11	TRANSWAGGON AB	31/12/2014	No	Yes	20%
SK						
	8	Ing. Alica Ovciariková A.O.	31/12/2014	No	Yes	1%
	33	Felbermayr Slovakia s.r.o.	31/12/2014	No	Yes	1%