EUROPEAN UNION AGENCY FOR RAILWAYS

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1. DOCUMENT INFORMATION

1.1. Amendment Record

Table 1: Status of the document.

Version Date	Author(s)	Section Number	Modification Description
Guide version 1.0 16/12/2014	ERA-IU	all	First publication This version is the basis of the iteration 2 of release 1.1 Modifications since 28/082014 are on the word version in track changes
Guide Version 1.1 11/06/2015	ERA-IU		This version is the basis of the iteration 2 of release 1.1.available on ERA website since June 2015 Introduction of a new OP type (private siding), of a Set attribute. Introduction of a Set attribute to manage link netween some parameters. The changes underlined in blue were accepted in the RINF joint group meeting of April 2015.and apply in the RINF CUI available for test in ERA environment and "production" from ERA website. The changes underlined in green were accepted in the RINF joint group meeting of April 2015. The dates of application are indicated in corresponding footnotes. The file with trackchanges since 16/12/2014 presenting the differences with version 1.0 is available on ERA extranet.
Guide Version 1.2 7/04/2016	ERA-IU		**This version is the basis of the iteration 2 of release 1.1.1** available on ERA website since end of March 2016. Cleaning up of previous modifications left visible. Deletion or Update of some parameters format. The list of modifications to the previous version of the guide is avalaible in 4.4 "List of admendments".
Guide Version 1.2.1 19/01/2017	ERA-IU		**This version of the guide corresponds to the RINF currently available(RINF CUI File version 1.3)** Correction of Inconsistences with the CUI in production Cleaning up when relevant Modification of format of parameter 1.1.1.3.7.11 "SOL Track Parameter CTD_MinAxleLoad" Update using the new format The list of modifications to the previous version of the guide is avalaible in 4.4 "List of admendments".
Guide Version 1.2.2 20/06/2018	ERA-IU		**This version of the guide corresponds to the RINF currently available(RINF CUI File version 1.3.4)** The list of modifications to the previous version of the guide is avalaible in 4.4 "List of admendments".
Draft Guide Version 1.4	ERA AAM		**Update according draft new RINF regulation (19/03/2019)** **To support the feedback of users before official publication**
Draft Guide Version 1.4.2	ERA AAM		**Update according comments received on Draft Guide Version 1.42 (04/04/2019) (listed in 5.6 / table 8)**
Draft Guide Version 1.4.3	ERA AAM		**Update according comments received on previous Draft Guide Versions(listed in 5.6 / table 8)**

1.2. Table of contents

1.3. List of figures

1.4. List of tables

1 SCOPE OF THIS GUIDE

1.1 Scope

This document provides information on the application of the common specifications for the register of railway infrastructure as referred to in Article 49 of Directive (EU) 2016/797 of the Parliament and of the Council on the interoperability of the rail system within the European Union (RINF) therefore referred to as the Interoperability Directive.

This document does not introduce any new legally binding advice. It serves as a clarification tool for legal documents issued for RINF without however dictating in any manner compulsory procedures to be followed and without establishing any legally binding practice.

The guide needs to be read and used only in conjunction with the "RINF Regulation" [36] published on 27 May 2019.. It is intended to facilitate its application but it does not substitute it. However all information and advice included in the guide are in line with the intentions of the authors of the system and their understanding of the whole concept.

The guide has been prepared by the European Railway Agency (ERA) with the support of railway sector organisations and National Safety Authority experts.
The guide is publicly available and it will be regularly updated to reflect progress related to system evolution and to changes of the TSIs and European standards. The reader should refer to the website of the ERA for information about its latest available edition.

1.2 Content of the guide

This Guide is the basic document for all participants of the process of building RINF in European scale: for National Registration Entities (NREs) to build registers and collect data of their respective member states' (MS) network.

The guide delivers the extended definitions of all the objects and parameters of the RINF. It provides guidance on the most common situations and solutions advised for modelling the railway network.

Examples and variety of possible solutions should support and unify constructions of registers of different MS of the EU.

This guide also delivers wide description of parameters, including their format, utility and explanation.

The instructions for use of the RINF via access to Common User Interface will be published as deliverable of RINF application – they are not included in this guide.

1.3 Reference documents

Table 2: Reference documents

Ref.	Document Reference	Official Journal	Last Modification	Version/ Comment	Acronym
[1]	Commission implementing Decision 2011/633/EU of 15 September 2011 on the common specifications of the register of railway infrastructure	L 256, 1.10.2011	15.09.2011	repealed	
[2]	Commission implementing Regulation (EU) 2019/773 of 16 May 2019 on the technical specification for interoperability relating to the operation and traffic management subsystem of the rail system within the European Union and repealing Decision 2012/757/EU	LI 139/5	27.5.2019		OPE TSI
[3]	Directive (EU) 2016/798 of the European Parliament and of the Council of 11 May 2016 on railway safety (recast)	L 138/102	26.5.2016		
[4]	Directive 2016/797 of the European Parliament and of the Council of 11 May 2016 on the interoperability of the rail system within the European Union (recast)	L 138/44 26.5.2016			
[5]	Commission implementing Regulation (EU) 2019/776 of 16 May 2019 amending Commission Regulations (EU) No 321/2013, (EU) No 1299/2014, (EU) No 1301/2014, (EU) No 1302/2014, (EU) No 1303/2014 **and (EU) 2016/919** and Commission Implementing Decision 2011/665/EU as regards the alignment with Directive (EU) 2016/797 of the European Parliament and of the Council and the implementation of specific objectives set out inCommission Delegated Decision (EU) 2017/1474	L 139I/108, 27.05.2019	27/05/2019		CCS TSI
[6]	Regulation (EU) No 913/2010 of the European Parliament and the Council of 22 September 2010 concerning a European rail network for competitive freight.	OJ L 276, 20.10.2010	11.12.2013		

Table 2: Reference documents

Ref.	Document Reference	Official Journal	Last Modification	Version/ Comment	Acronym
[7]	Document 'Interfaces between CCS track-side and other subsystems' referenced as Index 77 in the list of mandatory specifications (Annex A) of the revised CCS TSI for HS and CR adopted by a Commission Implementing Decision(EU) 2019/776	27/05/2019	20/09/2018	ERA/ERTMS/ 033281 V4.0	
[8]	List of CSS Class B systems	27/05/2019	11/06/2019	ERA_TD_201 1-11	
[9]	Decision 2008/232/EC TSI relating to the Rolling Stock subsystem of the trans-European HS rail system	L 84, 26.03.2008	23.07.2012	Commission Decisions 2008/232/EC and 2011/291/EU are repealed	HS RS TSI
[10]	Decision 2011/229/EU TSI "Rolling stock – noise"	L 99, 13.02.2011	23.07.2012	repealed	
[11]	Commission Regulation (EU) No. 321/2013 of March 2013 TSI Freight Wagons	L 104, 12.04.2013		Draft Regulation amending Regulation (EU) No 321/2013 was approved by RISC in October 2014	WAG TSI
[12]	Decision 2011/275/EU TSI relating to the infrastructure subsystem of the trans-European conventional rail system	14.05.2011		Decisions 2008/217/EC and 2011/275/EU are repealed with effect from 1 January 2015.	CR INF TSI

Table 2: Reference documents

Ref.	Document Reference	Official Journal	Last Modification	Version/ Comment	Acronym
[13]	Decision 2008/217/EC TSI relating to the Infrastructure subsystem of the trans-European HS rail system	L 77, 19.03.2008		Decisions 2008/217/EC and 2011/275/EU are repealed with effect from 1 January 2015.	HS INF TSI
[14]	Regulation 62/2006/EC TSI "Telematics Applications for Freight"	L 13, 18.01.2006	Regulation 280/2013 22.03.2013	repealed	
[15]	Strategic European deployment plan for the European-wide implementation of the TSI Telematics Applications for Freight (TAF TSI)	NA	published 16/02/2010	Version 1.0	
[16]	Decision 2011/291/EU TSI LOC&PAS of the trans-European conventional rail system	L139, 26.05.2011	23.07.2012	Commission Decisions 2008/232/EC and 2011/291/EU are repealed	CR LOC§PAS TSI
[17]	Decision 2008/284/EC TSI Energy trans-European HS rail system	L 104, 14.04.2008	Decision 2012/464/EU	Decisions 2008/284/EC and 2011/274/EU are repealed with effect from 1 January 2015.	HS ENE TSI
[18]	Commission Regulation (EU) No 454/2011 of 5 May 2011 on the technical specification for interoperability relating to the subsystem 'telematics applications for passenger services' of the trans-European rail system.	L 123, 12.05.2011	L 194, 21.07.2012		TAP TSI
[19]	Decision 2008/163/EC TSI SRT trans-European HS and conv. rail system	L 64, 07.03.2008		repealed with effect from 1	

Table 2: Reference documents

Ref. Document Reference	Official Journal	Last Modification	Version/ Comment	Acronym
			January 2015.	
[20] Decision 2008/164/EC TSI PRM trans-European HS and conv. rail system	L 64, 07.03.2008			PRM TSI
[21] Framework Mandate to the European Railway Agency for the Performance of Certain Activities under Directives 96/48/EC and 2001/16/EC				
[22] Commission Recommendation 2014/881/EU of 18 November 2014 on the procedure for demonstrating the level of compliance of existing railway lines with the basic parameters of the technical specifications for interoperability	L 356 12.12.2014			
[23] ERA Document about practical arrangements for transmitting interoperability document (ERA/INF/10-2009/INT)	NA	27.08.2009	Version 0.1	
[24] Regulation (EU) No 1315/2013 of the European Parliament and of the Council of 11 December 2013 on Union guidelines for the development of the trans-European transport network and repealing Decision No 661/2010/EU	L 348/1, 20.12.2013			
[25] RINF XML Data Validation Guide			ERA Document	
[26] Commission Implementing Decision 2014/880/EU of 26 November 2014 on the common specifications of the register of railway infrastructure and repealing Implementing Decision 2011/633/EU	L 356 12.12.2014			RINF Decision
[27] Commission Regulation (EU) No 1299/2014 of 18 November 2014 on the technical specifications for interoperability relating to the 'infrastructure' subsystem of the rail system in the European Union	L 356 12.12.2014			INF TSI

Table 2: Reference documents

Ref. Document Reference	Official Journal	Last Modification	Version/ Comment	Acronym
[28] Commission Regulation (EU) No 1301/2014 of 18 November 2014 on the technical specifications for interoperability relating to the 'energy' subsystem of the rail system in the Union	L 356 12.12.2014			ENE TSI
[29] Commission Regulation (EU) No 1300/2014 of 18 November 2014 on the technical specifications for interoperability relating to accessibility of the Union's rail system for persons with disabilities and persons with reduced mobility	L 356 12.12.2014			PRM TSI
[30] Commission Regulation (EU) No 1302/2014 of 18 November 2014 concerning a technical specification for interoperability relating to the 'rolling stock — locomotives and passenger rolling stock' subsystem of the rail system in the European Union	L 356 12.12.2014			LOC§PAS TSI
[31] Commission Regulation (EU) No 1303/2014 of 18 November 2014 concerning the technical specification for interoperability relating to 'safety in railway tunnels' of the rail system of the European Union	L 356 12.12.2014			SRT TSI
~~[32] Draft Commission Decision amending Commission Decision 2012/88/EU on the technical specification for interoperability relating to the control-command and signalling subsystems of the trans-European rail system~~			~~pending publication~~	
[33] 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	L 356 12.12.2014			TSI TAF
[34] Directive 2012/34/EU of the European Parliament and of the Council of 21 November 2014 establishing a single European railway area	L 343/32, 14.12.2012			

Table 2: Reference documents

Ref.	Document Reference	Official Journal	Last Modification	Version/ Comment	Acronym
[35]	Regulation n° 1304/2014 of 26 November 2014 on the technical specification for interoperability relating to the subsystem 'rolling stock — noise' amending Decision 2008/232/EC and repealing Decision 2011/229/EU amended by Commission Regulation (EU) 2019/774 of 16 May 2019	L 356 12.12.2014			TSI NOI
[36]	COMMISSION IMPLEMENTING REGULATION (EU) 2019/777 of 16 May 2019 on the common specifications for the register of railway infrastructure and repealing Implementing Decision 2014/880/EU	LI 139/312 27.5.2019			RINF REG

1.4 Definitions of expressions, abbreviations and acronyms

1.4.1 Specific definitions

This section provides general definitions. The following table provides a list of terms used in this guide and their definitions. Mainly these terms have been already defined in the relevant legal documents; in these cases the source of the definition is indicated.

Table 3: Definitions

Term	Definition/ Source
Acts issued by the Agency	According to Article 2(a) of Regulation 881/2004/EC and its following amendment, the Agency is entitled to address recommendations to the Commission, concerning issues related to safety, interoperability, national rules classification, maintenance of vehicles, staff qualification and public registers. Furthermore, Article 2(b) of the same Regulation allows the Agency to issue also technical opinions to the Commission- following its request- relating to national rules, quality of the work of Notified Bodies and any project implying modifications in the Interoperability community rail system and involving EU funds
Basic parameter	*Any regulatory, technical or operational condition which is critical to interoperability and is specified in the relevant TSIs*. (Article 2 (k) of Directive 2008/57/EC)
Conformity	According to Article R1 (12), Annex 1 of Decision 768/2008/EC it corresponds to the fulfilment of specified requirements by a product, process, service, system, person or body.
Conformity assessment	*...the process demonstrating whether specified requirements relating to a product, process, service, system, person or body have been fulfilled*. (Article R1(12), Annex 1 of Decision 768/2008/EC)
Existing rail system	*...the structure composed of lines and fixed installations of the existing, rail system plus the vehicles of all categories and origin travelling on that infrastructure*. (Article 2 (o) of Directive 2008/57/EC)
Harmonised standard	[It] "*means any European standard adopted by one of the European standardisation bodies listed in Annex I to Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations and of the rules on Information Society services in connection with a mandate by the Commission drawn up in accordance with the procedure referred to in Article 6(3) of that Directive, which, by itself or together with other standards, provides a solution as regards compliance with a legal provision*. (Article 2 (u) of Directive 2008/57/EC)
Infrastructure Manager	*...any body or undertaking that is responsible in particular for establishing and maintaining railway infrastructure, or part thereof, as defined in article 3 of Directive 91/440/EEC, which may also include the management of infrastructure control and safety systems. The functions of the infrastructure manager on a network or part of a network may be allocated to different bodies or undertakings*. (Article 3 (b) of Directive 2004/49/EC)

Table 3: Definitions

Term	Definition/ Source
National Registration Entity	*Entity in charge of setting up and maintaining its own register. Nominated by each Member State*
National Safety Authority	*National body entrusted with the tasks regarding railway safety in accordance with Directive 2004/49/EC. (Article 3(g) of Directive 2004/49/EC)*
Notified body	*...the bod*[y] *which* [is] *responsible for assessing the conformity or suitability for use of the interoperability constituents or for appraising the "EC" procedure for verification of the subsystems.* (Article 2 (j) of Directive 2008/57/EC)
Open point	According to Article 5(6) of Directive 2008/57/EC, when "*...certain technical aspects corresponding to the essential requirements cannot be explicitly covered in a TSI, they shall be clearly identified in an annex to the TSI as open points...*"
Placing in service	*...all the operations by which a subsystem or a vehicle is put into its design operating state*. (Article 2 (q) of Directive 2008/57/EC)
Railway Undertaking	*...any public or private undertaking, the activity of which is to provide transport of goods and/or passengers by rail on the basis that the undertaking must ensure traction; this also includes undertakings which provide traction only*. (Article 3 (c) of Directive 2004/49/EC)
Register of Infrastructure (RINF)	The Register of Infrastructure referred to in Article 35 of Directive 2008/57/EC indicates the main features of fixed installations, covered by the subsystems: infrastructure, energy and parts of control-command and signalling. It publishes performance and technical characteristics mainly related to interfaces with rolling stock and operation.
Specific case	*...any part of the rail system which needs special provisions in the TSIs, either temporary or definitive, because of geographical, topographical or urban environment constraints or those affecting compatibility with the existing system. This may include, in particular, railway lines and networks isolated from the rest of the Community, the loading gauge, the track gauge or space between the tracks and vehicles strictly intended for local, regional or historical use, as well as vehicles originating from or destined for third countries*. (Article 2 (l) of Directive 2008/57/EC)

1.4.2 *Abbreviations and acronyms*

Table 4a: Abbreviations and acronyms

ABBREVIATION / ACRONYMS	FULL TEXT
AC	Alternating Current
ADD	Automatic Dropping Device
CCS	Command Control and Signalling
CEN	European Committee for Standardisation (Comité Européen de Normalisation
CENELEC	European Committee for ELECtrotechnical Standardisation (Comité Européen de Normalisation ELECtrotechnique)
CR	Conventional Rail
~~CUI~~	~~Common User Interface~~
DC	Direct Current
DeBo	Designated Body
EC	European Commission
EDOR	ERTMS Data Only Radio (modem)
EEA	European Economic Area
EEC	European Economic Community
EIRENE	European Integrated Radio Enhanced NEtwork
EN	European standard
ENE	Energy
ERA	European Railway Agency also called “the Agency”
ERADIS	European Railway Agency Database of Interoperability and Safety
ERATV	European Register of Authorised Types of Vehicles
ERTMS	European Rail Traffic Management System
ETCS	European Train Control System
ETS	European Telecommunications Standard
EU	European Union
FRS	Functional Requirements Specification of ERTMS
GPRS	General Package Radio Service
GPS	Global Positioning System
GSM-R	Global System for Mobile communications- Railway
GUI	Graphical User Interface
HS	High Speed
IC	Interoperability Constituent
IM	Infrastructure Manager
INF	Infrastructure
ISO	International Organisation for Standardisation
IU	Interoperability Unit of ERA
LP	Location Point
MS	EU or EEA Member State
NAP	Normaal Amsterdams Peil
NID_XUSER	Identity of User Design Authority
NoBo	Notified Body
NB-Rail	Coordination group of Notified Bodies

Table 4a: Abbreviations and acronyms

ABBREVIATION / ACRONYMS	FULL TEXT
NRE	National Registration Entity
NSA	National Safety Authority
NYA	Not Yet Available
OCL	Overhead Contact Lines
OP	Operational Point
PRM	Persons with Reduced Mobility
RA	Route Availability
RBC	Radio Block Center
REC	Railway Emergency Call
RFC	Railway Freight Corridor
RINF	Register of Infrastructure
RST	Rolling Stock
RU	Railway Undertaking
SEDP	Strategic European Deployment Plan (TAF TSI)
SoL	Section of Line
SRS	System Requirements Specifications of ERTMS
SRT	Safety in Railway Tunnels
TAF	Telematic Application for freight
TAP	Telematic Application for passagers
TEN-T	Trans-European Transport Network
TSI	Technical Specifications for Interoperability
UIC	International Union of Railways (Union Internationale des Chemins de fer)
WG	Working Group
WP	Working Party
XML	Extensible Markup Language
XSD	XML Schema Definition

Table 4b: Abbreviations and acronyms used in XML tags

ABBREVIATION / ACRONYMS	FULL TEXT
CBP	Control-Command Brake Parameters
CCD	Control-Command Complaint Detection
CDE	Control-Command Declaration
CEI	Control-Command Electromagnetic Interferences
CLD	Control-Command Line-Side Degraded
COP	Control-Command Other Parameters
CPE	Control-Command Protection ETCS
CPO	Control-Command Protection Other
CRG	Control-Command Radio GSMR
CRS	Control-Command Radio System Other
CTD	Control-Command Train Detection

ABBREVIATION / ACRONYMS	FULL TEXT
CTS	Control-Command Transition System
ECS	Energy Contact System
EDE	Energy Declaration
EOS	Energy OCL Separation
EPA	Energy Pantograph
IDE	Infrastructure Declaration
HIS	Infrastructure Health and Safety
ILL	Infrastructure Line Layout
ILR	Infrastructure Load Resistance
IPL	Infrastructure Platform
IPP	Infrastructure Performance Parameters
ISC	Infrastructure Switches and Crossings
ITP	Infrastructure Track Parameters
ITS	Infrastructure Train Servicing
ITU	Infrastructure Tunnel

2 CLARIFICATIONS ON THE RINF

2.1 Foreword

The implementation of the register of infrastructure requires:

- A common knowledge and understanding of the concepts to be used for the description of each concerned network,

- A shared set of parameters related to all the fundamental features of the railway networks. The specification of parameters allows them to be made available through the RINF application.

It can be carried out by successive steps depending on the strategy adopted by each Member State within the implementation plan that has to be notified to the Commission. In addition, by providing its data in stages, each infrastructure manager (IM) can increase the content and the level of description of a given network. After each update of data describing its network by a NRE, the common interface publishes the complete set of data received from MS. Partial updates are not possible. Whenever a Member State wants to update / improve the description of its network, it must upload to the RINF application a complete set of data which will replace the previous one.

2.2 Scope of the RINF

2.2.1 Geographical scope

The geographical scope for RINF corresponds to the scope of the Interoperability directive (Directive (EU) 2016/797) as implemented by each Member State.

In this context, Member Staes may have excluded “privately owned railway infrastructure, including sidings, used by its owner or by an operator for the purpose of their respective freight activities or for the transport of persons for non-commercial purposes, and vehicles used exclusively on such infrastructure; (art 1.4.a).See annex 1 of the iOD

2.2.2 The technical scope

RINF ‘ specifications concern data about the following structural subsystems of the Union rail system:

(a) the infrastructure subsystem,
(b) the energy subsystem,
(c) the trackside control-command and signalling subsystem.

2.2.3 Purpose

The type of data describing the infrastructure is function of the purpose of the RINF as defined in art 2.2 of the Annex of the RINF Regulation.

a) The value of the parameters to be used to check the technical compatibility between vehicle and route are corresponding to “design” values. These values need to be up to date to allow a RU to:

- Develop technical speecificqtion for vehicle design; for new vehicles;

- Identifying the vehicles compatible with the planned route/path and its operational conditions;

- provide relevant data to identify infrastructure characteristics of the intended area of use and facilitate the design of rolling stock and the feasibility check of train services.

b) The type of data intended to facilitate the verification of the technical compatibility between a fixed subsystem and the network into which it is incorporated and to monitor the progress of interoperability of railway fixed installations.

These values need to be up to date to allow a RU to plan the train composition on the attributed route/path in the weeks before starting the service operation.

2.3 Description of features of the RINF

The main features supporting the RINF model are described in the RINF decision [26]. Their definitions are reproduced below:

(a) An 'operational point' (OP) means any location for train service operations, where train services may begin and end or change route, and where passenger or freight services may be provided; 'operational point' means also any location at boundaries between Member States or infrastructure managers;

(b) 'Section of line' (SoL) means the part of line between adjacent operational points and may consist of several tracks;

(c) 'Running track' means any track used for train service movements; passing loops and meeting loops on plain line or track connections only required for train operation are not published;

(d) 'Siding' means any track within an operational point, which is not used for operational routing of a train.

(e) 'Location point' (LP) is a specific point on a track of a SoL (not permitted for OP) where value of a parameter changes. The use of LP is non mandatory.

2.3.1 Levels of the network description

The railway network is presented for RINF purpose as a number of operational points (OPs) connected with sections of line (SoLs). A line can be described in different levels of details. Fig. 1 below shows several ways of representation from a detailed to a simple one. A National Registration Entity can choose what level to populate from simple to detailed level. The visual tool of the RINF application nly presents Ops and SoLs of a line updated by a NRE. There is no link, except the number of OP and SoL, between the initial description of a line by NRE and the final representation allowed by RINF application where the successive levels of zoom are organised according to categories of lines and do not provide supplementary details regarding the description of a lines and its elements..

Within OP there are two types of tracks: running tracks and sidings (see explanations about differences in the following sections).

Installations located along the tracks are attached to the tracks. Parameters related to subsystems INF, ENE, CCS within a SoL or related to subsystem INF within an OP are provided for each "track" element of the SOL or OP ("running track" and/or "siding"). Data provided for each parameter are valid for the whole element described:

- from the start OP to the end OP of a SoL for a "running track"; except if "location point" is used;

- inside the OP for a "siding".

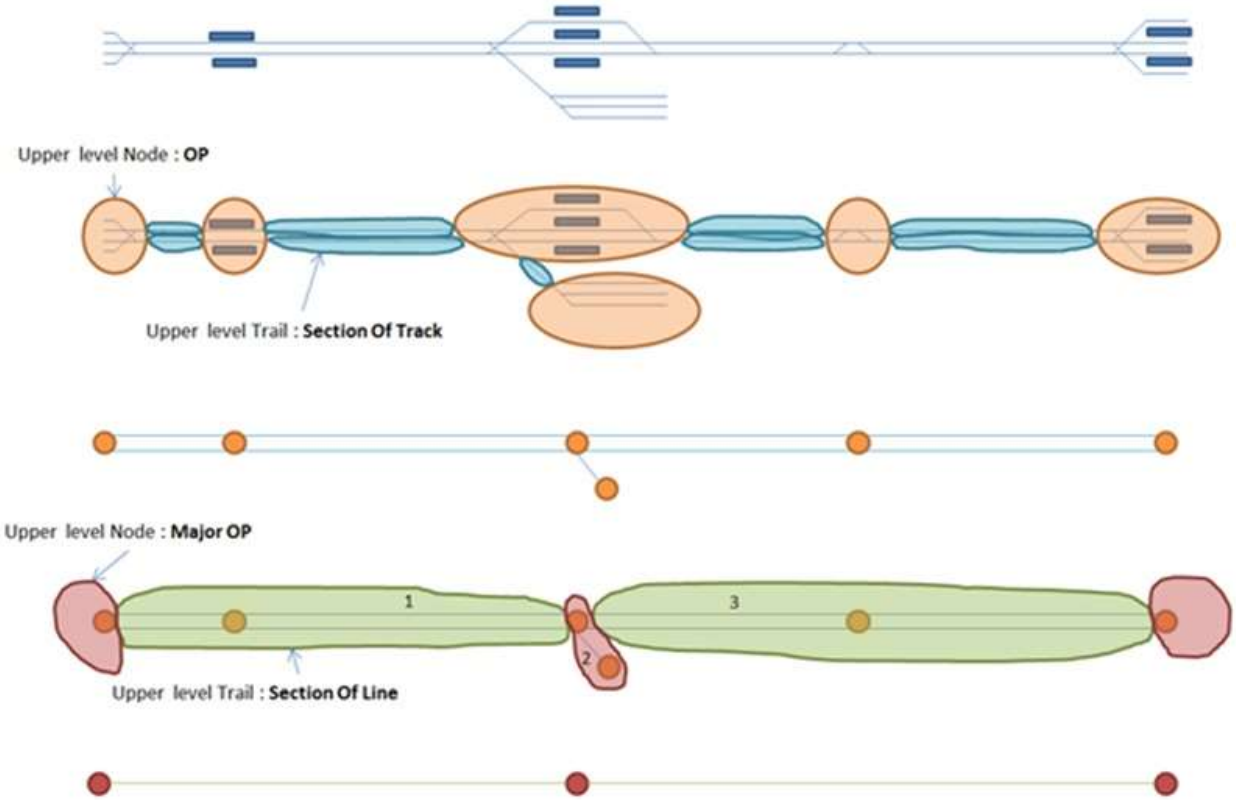

Fig. 1 – Levels of description of the network (adapted from UIC RailTopoModel Railway Network Description)

2.3.2 The Operational Point

Operational point is understood as a point without dimensions, attributed with generic parameters and with objects described by their own parameters. OP is the primary element of the network and selection of OPs is the first task for IMs in procedure of presenting its network. The OP is independent from the notion of line. An OP is not described by belonging to one or several lines. Only SoLs are linked to lines.

An OP will be presented by so called 'centre point' on a global map. This centre point is defined by relevant IM (note that it is not always in the centre of the OP area) and determines the geographical coordinates (and the kilometre from the start of the railway line) of OP to be inserted to generic data about location of the OP.

An OP is allowed to have no track (e.g. border points, technical change or OP private siding).

For the purpose of the RINF, the following types of Ops have been defined:

1. Station – big or huge station with several functions, important for international traffic, basic for national railway system
2. Small station – multifunctional station not so big and not so important like “station”
3. Passenger terminal – station with dominating function of service for passenger traffic
4. Freight terminal – station dominantly serving for loading and unloading of freight trains
5. Depot or workshop – group of tracks used by depot or workshop for RST maintenance
6. Train technical services – group of tracks for servicing trains (parking, washing, etc.)
7. Passenger stop – small OP consisting of at least one platform, normally serving mostly for local passenger services
8. Junction – OP consisting of at least one turnout, normally used mostly for changing direction of trains, with reduced or not existing other functions
9. Border point – located in the point where a border between MSs meets a railway line.
10. Shunting yard – group of tracks used for shunting trains, mostly related to freight traffic.
11. Technical change: to describe a change on CCS or a type of contact line or a Gauge changeover facility – fixed installation allowing a train to travel across a break of gauge where two railway networks with different track gauges meet.
12. Switch: OP consisting of only one switch. It describes a single switch without any extension contrary to a junction that has a real spatial extension and is generally delimited by entry signals.
13. Private siding: ~~OP allowing to provide more information on the “private siding” and on the way its is linked to the main network. Its use is left to the discretion of each Member State.~~

    OP that describes the embranchment located on the main line that leads to the private siding with the information regarding the embranchment characteristics.

14. Domestic border point – located exactly in the point where a border between IMs meets a railway line.

Principles:

A)- For the implementation of the RINF Decision, RINF was populated on the principles below:

There is no obligation to include in RINF all currently existing traffic points of the network.

There are no detailed rules for selecting OPs for RINF.. **An OP must be defined on a network each time a choice in matter of route can be made.**

Only points or stations which are important for the traffic, stopping and starting trains, or delivering services related to trains and their clients must be identified as OP.

It is permissible to ignore some intermediate stops located on the SoL if they are not important from an operational or technical point of view.

B- For the implementation of the RINF Regulation and the needs of the IV Railway Package, RINF should display every point allowing to describe a route corresponding to a service operated by a RU. Moreover, as defined by RINF Regulation " 'operational point'(OP) means any location for train service operations, where train services may begin and end or change route and where passenger or freight services may be provided; it includes locations at boundaries between Member States or infrastructure managers;".

In parallel, the implementation of the TAF/TAP TSIs has promoted the definition of Primary Location codes (PLC) whose ID is a parameter of the OP. The points defined by each CLC should correspond at least to the OP.

As a conclusion,

Regarding OP type n°11:

Changes of value of parameters may require defining an OP (type n°11). It allows in particular to describe the implementation of ETCS using parameter 1.1.1.3.2.. It allows also to describe a Gauge changeover facility – fixed installation. At last, "type 11" OP allows finally to describe a technical change in energy subsystem but this solution should be used as little as possible. It should be noted that:

- the RINF already allows describing several types of contact line systems and several energy power systems on a given element of a SoL by repeating the data;
- the use of the Location points makes possible to precise specific points where technical changes are made.

Regarding OP type 9 ("Border points")

For these OP between two MS, bilateral agreements have to be achieved concerning name, location of them and other attributes to be included in the registers. The list of borders points is agreed between NREs and managed by the Agency. The list is in 5.2.

Regarding OP type 14 ("Domestic border points") located exactly in the point where a border between IMs meets a railway line. Their OP ID and other attributes is managed by each NRE and published by the Agency in 5.2. This list will become necessary when IMs will be allowed to directly import their data in the RINF application .

It is necessary to use the correct OP ID to ensure the continuity of the network.

Specific problems may be met in case of large stations or nodes. Then IM may divide such station into several Ops with different types.

It could be useful to take in account of the existence of Primary "Locations" already defined for the use of the TAP TAF TSIs before defining OP for the RINF needs.

It is mandatory to select OP “Border points”. For these OP between two MS, bilateral agreements have to be achieved concerning name, location of them and other attributes to be included in the registers. The list of borders points managed by the Agency and agreed between NREs is in 4.2.

Fig 2. Below provides an example of Border points between three MS.

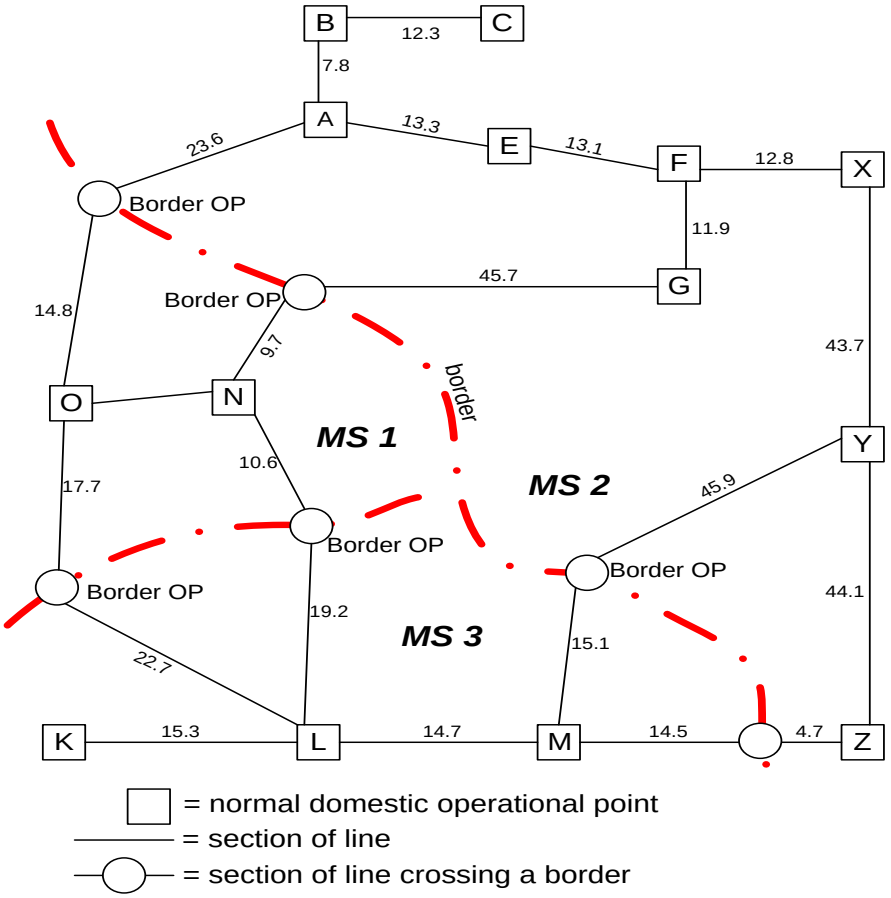

Fig. 2 – International macro railway network with SoL lengths (D. KES)

The same type of agreements will have to be achieved at national level in order to determinate the border points between several IMS and to be able to merge several datasets in a single national one. This task shall be carried out at national level by the NRE.

2.3.3 The Section of line

A section of line is the connection between two adjacent OPs. Section of Line is the second basic element of RINF.A line is a continuous chain of sections of lines and operational points when except beginning and end of a line, the OP at end of a SoL is the OP at start of consecutive SoL.

A single SoL may be settled to be a line at its own. As each SoL is described separately, number of tracks and values of related parameters may be different on different SoL of the same line.

It is important to underline that in one SoL may be included tracks only of the same line. When two different lines are running in parallel – passing by the same OPs - data on tracks of each line has to be published in two separate SoLs.

For proper presentation of the network and for avoiding uncertainties in routes and lines, data about OPs on the respective ends of SoLs must be entered carefully.

SoL which is a single track connecting two OPs within a big node (when this big node has been divided into several OPs) has a reduced set of parameters. Such track is indicated as 'Link' in parameter 1.1.0.0.0.6 'Nature of Section of Line'. Only the group 1.1.0.0.0 'Generic information' must be completed.

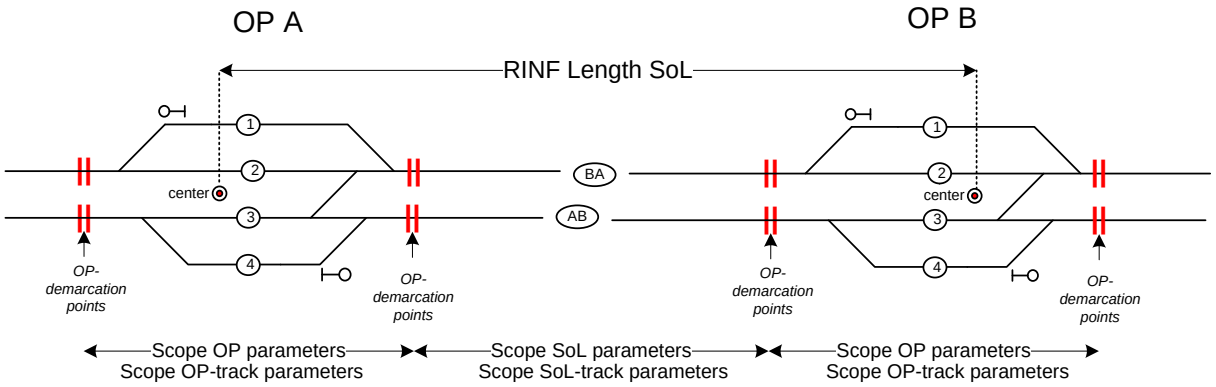

Fig. 3 – Section of Line (SoL) between two Operational Points (OP) (provided by D. KES)

2.3.4 Elements of an operational point

Elements inside an OP are 'running tracks' and 'sidings'. "Running tracks' in OP are regarded all those tracks which are used for operation of trains in service movements. It means that not only main tracks of a station are 'running tracks' according to RINF, but also all additional tracks where passenger trains stop at platforms or where freight trains over-pass group of tracks with platforms.

'Siding' is regarded as a single/simple track. Sidings are all those tracks where running trains in service movements ends and which are not used for operational routing of a train. According to RINF, 'siding' is any track which "delivers support" for the traffic, but which is not a route for the traffic.

It is possible as a first step to describe existing sidings / platforms of an OP in only one "type siding" / "type platform" adopting the most restrictive characteristics and to introduce siding without any track.

In an OP, only few parameters related to infrastructure subsystem are included. **For the other parameters related to infrastructure subsystem energy and command control and signalling subsystems, it is assumed that, in an OP, the same parameter regarding CCS and ENE are corresponding to those of neighbouring SoLs (permitting at least to enter to the center of OP). The exception is the OP used for describing a technical change on type of contact line or CCS.**

The specific for OP description is the group of parameters related to platforms. Platform for the purpose of RINF is understood as a platform edge. Platform identification shall concern only the part of the structure neighbouring to the track (interfaced with trains).

In case when normal platform numbering concern the whole structure between two tracks, the 'RINF platform' may be labelled using the platform number and the track ID to which the specific edge belongs.

It is worth adding that platform is the installation for providing passengers' access to trains – this is not the construction for loading or unloading freight trains.

It is very important for RINF to have a unique identification for each OP (OP ID). OP ID is the code composed from country code and alphanumeric OP code developed by MS or IM. We suggest using those number or abbreviations which are applied in route books or in documentation of the IM. In case of absence of such sources the coding system within the MS may be developed specially for RINF.

Finally, one or several "OP TAF TA"P can exist in the OP area. The corresponding primary codes shall be provided using the relevant parameter (1.2.0.0.0.3).

Private siding: There is no more reference to private siding in RINF Regulation. Any siding in the scope of the implementation of the Interoperability Directive done by a Member State should be described, whatever is the owner, the owner being described by its "IM'code". If the owner have no "TAF/TAP code", an organisation code can now easily be assigned by the Agency (see EVR folder on ERA Website).
Some IMs could have choosen not to describe the siding itself but the location of it on its network where a switch leads to a private installation. The definition of the OP private siding was modified allowing to describe so.

As any siding, the following parameters have at least to be filled:
1.2 OPERATIONAL POINT

1.2.0.0.0 Generic information
1.2.0.0.0.1 OPName / Name of Operational point
1.2.0.0.0.2 UniqueOPID /Unique OP ID
1.2.0.0.0.3 OPTafTapCode / OP TAF TAP primary code
1.2.0.0.0.4 OPType / Type of Operational Point
1.2.0.0.0.5 OPGeographicLocation / Geographical location of Operational Point
1.2.0.0.0.6 OPRailwayLocation / Railway location of Operational point

1.2.2 OPSiding / SIDING
1.2.2.0.0 Generic information
1.2.2.0.0.1 IM's Code / IM's Code
1.2.2.0.0.2 OPSidingIdentification / Identification of siding
(INF)
1.2.2.0.2 IPP / Performance parameter
1.2.2.0.2.1 IPP_Length / Usable length of siding
1.2.2.0.3 Line layout
1.2.2.0.3.1 ILL_Gradient / Gradient for stabling tracks
1.2.2.0.3.2 ILL_MinRadHorzCurve / Minimum radius of horizontal curve

1.2.2.0.3.3 ILL_MinRadVertCurve / Minimum radius of vertical curve

2.3.5 Elements of a section of line

Section of Line consists of one or more tracks of a same national line starting from OP at start of this SoL and ending in the OP at the end of the same SoL.

Values of parameters displayed for a SoL are guaranteed along the corresponding track outside OPs and at least for one or more running tracks inside the area of the start OP and of the end OP up to their center point.

It is advised to organise introduction of data to registers in the way which permits placing the same value of a parameter into all tracks of the same SoL where this is valid.

With regard to the tunnel, the definition foreseen by new SRT TSI [31] is " A railway tunnel is an excavation or a construction around the track provided to allow the railway to pass for example higher land, buildings or water. The length of a tunnel is defined as the length of the fully enclosed section, measured at rail level. A tunnel in the context of this TSI is 0.1km or longer."

'Tunnel' is understood in RINF as the special area of the track with special conditions. So parameters concerning a tunnel are the attributes of a track; however those parameters are given in group of parameters titled 'Tunnel'. If there are several tracks in the same tunnel, data related to this tunnel will be repeated in description of each track. On the other hand if a track passes through several tunnels, in the description of the track will be mentioned several groups of parameters titled 'Tunnel' to describe each of the tunnel separately. The similar rules concern tunnels in OPs which may contain both tracks and sidings.

2.3.6 The Location Point

IMs have the possibility to introduce within SoL Location Points to describe specific change in the value of a parameter at running track level (it cannot be used for parameters of SoL level). LP can be used each time several successive values of a parameter are described for a given track in a same SoL. The new value is valid from the specified location in the direction of the principal SoL direction of the traffic (defined by increasing kilometres, see description of parameter 1.1.0.0.0.3 in Table 5).

The following data has to be included in the description of the LP:

- Km [NNN.NNN] of the line of the point from where the new value is valid
- Geographical longitude of the point from where the new value is valid
- Geographical latitude of the point from where the new value is valid
- The new value of the parameter.

An example of xml is below:

-<SOLTrackParameter Value="351" IsApplicable="Y" ID="IPP_MaxSpeed">
<LocationPoint Value="130" Latitude="14.1345" Longitude="-43.9600" Kilometer="12.45"/>
<LocationPoint Value="123" Latitude="14.1366" Longitude="43.9700" Kilometer="13.1"/>
</SOLTrackParameter>

The application of LP is optional. When LPs are not used they will not appear in the XML file exported from a register to RINFapplication. Even if provided, they will only be displayed in the details of the running track and will not appear in the final representation of the network. The RINF application in its current development will not search in Location Point values.

But any search will display the location point(s) and the specific value each time it exists for a given SoL. The location point is described by its railway location, geographical coordinates and value of the parameter involved.

2.3.7 General information about parameters of RINF

Parameters collected in RINF are mainly:

a) Generic data – valid for SoL, OP, running track, siding,
b) Data related to specific subsystems – for INF, ENE and CCS in SoLs; only for INF in OP,
c) Data for performance parameters, for objects (tunnel, platform) or for providing references of certificates (declarations).

Organisation of parameters in RINF is presented in table 1 of the annex to the EC RINF decision.

It is important to underline that it is permitted/foreseen to repeat certain parameters or groups of parameters. For example: if there are several tracks on the Section of Line – then the whole set of parameters for Track has to be repeated for each track in the SoL.

Also when several data relating to the same parameter co-exist, then this parameter may be repeated. For example, when there are several " EC intermediate statement of verification" (ISV) declarations for a single subsystem concerning the same track, then this parameter may repeated so many times as many declarations concern this track.

But please be aware, not all parameters may be repeated – the respective information is provided in a specific attribute "Can be repeated" with the value 'Y' (See table 5).

For the purpose of the RINF, the appropriate value of a parameter has to be the most critical from all values met along the whole track of the SoL.

It means, in general, when a parameter has several values in a same SoL and the RINF application does not authorise its repetition, the most restrictive value of the parameter on the specific track is the RINF value for this parameter on this track.

That is why it is very important to make a thorough selection of OPs.

NREs/IMs can adopt an "in stages" approach starting to describe their network with the most restrictive characteristic.

New OPs and SoLs can be added in further stages to increase the level of description of the network.

Some values of some parameters may not exist – like 'Tunnel identification', 'EC declaration of verification', 'OP TAF/TAP primary code'. Then the applicability of that parameters will be "N".

In case of multi-rail track, a set of data is to be published separately to each pair of rails to be operated as separate track (the whole set of parameters for the separate track has to be delivered – be careful then with the track identification).

In case of multiple ENE and/or CCS subsystems, the ability to repeat the relevant of parameters allows to describe these particularities of a running track.

The data uploaded to the RINF application should follow metric system principals. For example in the UK miles or miles per hour will be transformed respectively to kilometres or kilometres per hour prior uploading to the CUI. The exception are values of speed related to RA (Route Availability) given for Load Capability (1.1.1.1.2.4).

2.3.8 Objects for separate dating (future validity)

Date of validity of current data collected in RINF is the same as date of export from the MS' registers of infrastructure to the RINF application.

However, if an IM wants to publish a set of data concerning their future value, the separate validity of those data from the date in future may be given. Then the set of data of the 'object', where those data are included, has to be added to current values by repeating the 'object' with the label of the date of validity in future (see explanations for Common User Interface in 3.1.h). **No overlap in the validity dates shall be accepted by the RINF application** (However, an overlap of three month is currently tolerated by the current RINF application. This possibility wil be removed.)**.**

The objects for which this future validity date may be applied are: Operational Point, Section of Line, Track, Siding, Tunnel and Platform. **These dates are not described as attributes of parameters but have to be inserted in the RINF XML**.

2.4 Characteristics of RINF parameters

RINF parameters are listed in table 5. Each presentation of a parameter provides clarification on the requirements, data presentation, when relevant list of possible answers, information on applicability and mandatory status, ability to be repeated and the XML name of the parameter that will be used in the XML file for uploading RINF data in the RINF application.

The XML name of parameters was introduced to replace the numbering identification in order to allow further introduction of new parameters or to delete existing ones. It also provides a better readability of the XML file.
Table 5 is the basis of the validation process used by the RINF application. This process is described in the "RINF XML Data Validation Guide" [25].

An optional attribute was also introduced in the XML for some parameters. It is described in 1.1 of RINF XML Data Validation Guide.
This element is the "optional value". This optional attribute is used only for readability of the XML file. When several answers are proposed in table 5 for providing the value of a parameter, these values will be introduced encoded and supported by an "optional value" attribute where the value

itself of the parameter can be introduced. A specific deliverable “look-up tables” indicates the codes to be used in the XML file.

Example with “optional value”. : :
<OPTrackParameter ID="ILL_InteropGauge" IsApplicable="Y" Value="10" OptionalValue="GA" />
<OPTrackParameter ID="ILL_MultiNatGauge" IsApplicable="Y" Value="30" OptionalValue="GB2" />

In this example, the code « 10 » provided for the parameter « International Gauge » which XML name is "ILL_InteropGauge" corresponds to gauge GA.
Likewise, the code « 30 » provided for the parameter « Multinational Gauge » which XML name is "ILL_MultiNatGauge" corresponds to gauge GB2.

2.5 Parameter groups hierarchy

The list below indicates the hierarchy of main parameter groups and subgroups. The network of each Member State is described in Ops and SoLs. A SoI is composed of one or several running tracks while an OP can have running track(s) and/or siding(s). Specific parameters must be fulfilled depending if the RINF element is a SoL or an OP.

The RINF parameters are organised as follows:

1. MEMBER STATE

1.1 SECTION OF LINE

1.1.0.0.0 Generic information

1.1.0.0.0.1 **SOLIMCode** / IM’s Code
1.1.0.0.0.2 **SOLLineIdentification** / National line identification
1.1.0.0.0.3 **SOLOPStart** / Operational Point at start of Section of Line
1.1.0.0.0.4 **SOLOPEnd** / Operational Point at end of Section of Line
1.1.0.0.0.5 **SOLLengt**h / Length of section of line
1.1.0.0.0.6 **SOLNature** / Nature of Section of Line

1.1.1 SOLTrack / RUNNING TRACK

1.1.1.0.0 Generic information

1.1.1.0.0.1 **SOLTrackIdentification** / Identification of track
1.1.1.0.0.2 **SOLTrackDirection** / Normal running direction

1.1.1.1 Infrastructure subsystem

Parameters below until 1.1.1.2 belong to the group of infrastructure parameters

1.1.1.1.1 IDE / Declarations of verification for track

1.1.1.1.1.1 **IDE_ECVerification** / EC declaration of verification for track (INF)
1.1.1.1.1.2 **IDE_EIDemonstration** / EI declaration of demonstration for track (INF)

1.1.1.1.2 IPP / Performance parameters

1.1.1.1.2.1 **IPP_TENClass** / TEN classification of track
1.1.1.1.2.1.2 **IPP_TENGISID** / TEN GIS identity
1.1.1.1.2.2 **IPP_LineCat** / Category of line
1.1.1.1.2.3 **IPP_FreightCorridor** / Part of a Railway freight corridor

1.1.1.1.2.4 **IPP_LoadCap** / Load Capability
1.1.1.1.2.4.1 **IPP_NCLoadCap** /National classification for load capability
1.1.1.1.2.4.2 **IPP_HSLMCompliant**/Compliance of structures with the High Speed Load Model (HSLM) dynamic load model
1.1.1.1.2.4.3 **IPP_StructureCheckLoc**/Railway location of structures requiring specific checks
1.1.1.1.2.4.4 **IPP_StructureCheckDocRef** /Document with the procedure(s) for static and dynamic route compatibility checks
1.1.1.1.2.5 **IPP_MaxSpeed** / Maximum permitted speed
1.1.1.1.2.6 **IPP_TempRange** / Temperature range
1.1.1.1.2.7 **IPP_MaxAltitude** / Maximum altitude
1.1.1.1.2.8 **IPP_SevereClimateCon** / Existence of severe climatic conditions

1.1.1.1.3 ILL/ Line layout
~~1.1.1.1.3.1 **ILL_InteropGauge** / Interoperable gauge~~
~~1.1.1.1.3.2 **ILL_MultiNatGauge** / Multinational gauges~~
~~1.1.1.1.3.3 **ILL_NatGauge** / National gauges~~
1.1.1.1.3.1.1 **ILL_Gauging** / Gauging
1.1.1.1.3.1.2 **ILL_GaugeCheckLoc**/Railway location of particular points requiring specific checks
1.1.1.1.3.1.3 **ILL_GaugeCheckDocRef** /Document with the transversal section of the particular points requiring specific checks

1.1.1.1.3.4 **ILL_ProfileNumSwapBodies** / Standard combined transport profile number for swap bodies
1.1.1.1.3.5 **ILL_ProfileNumSemiTrailers** / Standard combined transport profile number for semi-trailers
1.1.1.1.3.5.1 **ILL_SpecificInfo** /Specific information
1.1.1.1.3.6 **ILL_GradProfile** / Gradient profile
1.1.1.1.3.7 **ILL_MinRadHorzCurve** / Minimal radius of horizontal curve

1.1.1.1.4 ITP / Track parameters
1.1.1.1.4.1 **ITP_NomGauge** / Nominal track gauge
1.1.1.1.4.2 **ITP_CantDeficiency** / Cant deficiency
1.1.1.1.4.3 **ITP_RailInclination** / Rail inclination
1.1.1.1.4.4 **ITP_Ballast** / Existence of ballast

1.1.1.1.5 Switches and crossings
1.1.1.1.5.1 **ISC_TSISwitchCrossing** / TSI compliance of in service values for switches and crossings
1.1.1.1.5.2 **ISC_MinWheelDiaFixObtuseCrossings** / Minimum wheel diameter for fixed obtuse crossings

1.1.1.1.6 ILR / Track resistance to applied loads
1.1.1.1.6.1 **ILR_MaxDeceleration** / Maximum train deceleration
1.1.1.1.6.2 **ILR_EddyCurrentBrakes** / Use of eddy current brakes
1.1.1.1.6.3 **ILR_MagneticBrakes** / Use of magnetic brakes
1.1.1.1.6.4 ILR_**ECBDocRef** /___Document with the conditions for the use of eddy current brakes
1.1.1.1.6.5 **ILR_MBDocRef** **/** Document with the conditions for the use of magnetic brakes

1.1.1.1.7 IHS / Health, safety and environment
1.1.1.1.7.1 **IHS_FlangeLubeForbidden** / Use of flange lubrication forbidden
1.1.1.1.7.2 **IHS_LevelCrossing** / Existence of level crossings
1.1.1.1.7.3 **IHS_AccelerationLevelCrossing** / Acceleration allowed at level crossing
1.1.1.1.7.4 **IHS_HABDExist** /Existence of trackside hot axle box detector (HABD)
1.1.1.1.7.5 **IHS_TSIHABD**/Trackside HABD TSI compliant
1.1.1.1.7.6 **IHS_HABDID**/Identification of trackside HABD

1.1.1.1.7.7 **IHS_HABDGen**/Generation of trackside HABD
1.1.1.1.7.8 **IHS_HABDLoc**/Railway location of trackside HABD
1.1.1.1.7.9 **IHS_HABDDirection**/Direction of measurement of trackside HABD
1.1.1.1.7.10 **IHS_RedLights**/Steady red lights required
1.1.1.1.7.11 **IHS_QuietRoute** / Belonging to a quieter route

1.1.1.1.8 SOLTunnel / Tunnel

1.1.1.1.8.1 **SOLTunnelIMCode** / IM's Code
1.1.1.1.8.2 **SOLTunnelIdentification** / Tunnel identification
1.1.1.1.8.3 **SOLTunnelStart** / Start of tunnel
1.1.1.1.8.4 **SOLTunnelEnd** / End of Tunnel
1.1.1.1.8.5 **ITU_ECVerification** / EC declaration of verification for tunnel (SRT)
1.1.1.1.8.6 **ITU_EIDemonstration** / EI declaration of verification for tunnel (SRT)
1.1.1.1.8.7 **ITU_Length** / Length of tunnel
1.1.1.1.8.8 **ITU_CrossSectionArea** / Cross section area
1.1.1.1.8.8.1 **ITU_TSITunnel** / compliance of the tunnel with INF TSI
1.1.1.1.8.8.2 **ITU_TunnelDocRef** / Reference ~~of~~ to a document available from the IM with precise description of the tunnel
1.1.1.1.8.9 **ITU_EmergencyPlan** / Existence of emergency plan
1.1.1.1.8.10 **ITU_FireCatReq** / Fire category of rolling stock required
1.1.1.1.8.11 **ITU_NatFireCatReq** / National fire category of rolling stock required

1.1.1.2 Energy system

Parameters below until 1.1.1.3 belong to the group of energy parameters

1.1.1.2.1 EDE/ Declarations of verification for track

1.1.1.2.1.1 **EDE_ECVerification** / EC declaration of verification for track (ENE)
1.1.1.2.1.2 **EDE_EIDemonstration** / EI declaration of demonstration for track (ENE)

1.1.1.2.2 ECS / Contact line system

1.1.1.2.2.1.1 **ECS_SystemType** / Type of contact line system
1.1.1.2.2.1.2 **ECS_VoltFreq** / Energy supply system
1.1.1.2.2.1.2.1 **ECS_TSIVoltFreq** / Energy supply system TSI compliant
1.1.1.2.2.1.3 **ECS_Umax2**/Umax2 for lines referred to in sections 7.4.2.2.1 and 7.4.2.11.1 of Regulation (EU) 1301/2014.
1.1.1.2.2.2 **ECS_MaxTrainCurrent** / Maximum train current
1.1.1.2.2.3 **ECS_MaxStandstillCurrent** / Maximum current at standstill per pantograph
1.1.1.2.2.4 **ECS_RegenerativeBraking** / Permission for regenerative braking
1.1.1.2.2.5 **ECS_MaxWireHeight** / Maximum contact wire height
1.1.1.2.2.6 **ECS_MinWireHeight** / Minimum contact wire height

1.1.1.2.3 EPA / Pantograph

1.1.1.2.3.1 **EPA_TSIHeads** / Accepted TSI compliant pantograph heads
1.1.1.2.3.2 **EPA_OtherHeads** / Accepted other pantograph heads
1.1.1.2.3.3 **EPA_NumRaisedSpeed** / Requirements for number of raised pantographs and spacing between them, at the given speed
1.1.1.2.3.4 **EPA_StripMaterial** / Permitted contact strip material

1.1.1.2.4 EOS / OCL separation sections

1.1.1.2.4.1.1 **EOS_Phase** / Phase separation
1.1.1.2.4.1.2 **EOS_InfoPhase** / Information on phase separation
1.1.1.2.4.2.1 **EOS_System** / System separation
1.1.1.2.4.2.2 **EOS_InfoSystem** / Information on system separation
1.1.1.2.4.3 **EOS_DistSignToPhaseEnd**/Distance between signboard and phase separation ending

1.1.1.2.5 ERS / Requirements for rolling stock

1.1.1.2.5.1 **ERS_PowerLimitOnBoard** / Current or power limitation on board required
1.1.1.2.5.2 **ERS_ContactForce** / Contact force permitted
1.1.1.2.5.3 **ERS_AutoDropRequired** / Automatic dropping device required

1.1.1.3 Control-command and signalling subsystem

Parameters below until 1.2 belong to the group of CCS parameters

1.1.1.3.1 CDE / Declarations of verification for track

1.1.1.3.1.1 **CDE_ECVerification** / EC declaration of verification for track (CCS)

1.1.1.3.2 CPE / TSI compliant train protection system (ETCS)

1.1.1.3.2.1 **CPE_Level** / ETCS level

1.1.1.3.2.2 **CPE_Baseline** / ETCS baseline

1.1.1.3.2.3 **CPE_Infill** / ETCS infill necessary for line access

1.1.1.3.2.4 **CPE_InfillLineSide** / ETCS infill installed lineside

1.1.1.3.2.5 **CPE_NatApplication** / ETCS national packet 44 application implemented

1.1.1.3.2.6 CPE_RestrictionsConditions / Existence of operating restrictions or conditions

~~1.1.1.3.2.7 **CPE_OptionalFunctions** / Optional ETCS functions~~

1.1.1.3.2.8 **CPE_IntegrityConfirmation** / Train integrity confirmation from on-board necessary for line access

1.1.1.3.2.9 **CPE_SystemCompatiblity** / ETCS system compatibility

1.1.1.3.2.10 **CPE_MVersion** / ETCS M_version

1.1.1.3.3 CRG / TSI compliant radio (GSM-R)

1.1.1.3.3.1 **CRG_Version** GSM-R version

1.1.1.3.3.2 **CRG_NumActiveMob** / Advised Required number of active GSM-R mobiles (EDOR) or simultaneous communication session on-board for ETCS Level 2 (or level 3) needed to perform radio block centre handovers without having an operational disruption

1.1.1.3.3.3 **CRG_OptionalFunctions** / Optional GSM-R functions

1.1.1.3.3.3.1 **CRG_AdditionalnetworkInfo** / Additional information on network characteristics

1.1.1.3.3.3.2 **CRG_GPRSForETCS** / GPRS for ETCS

1.1.1.3.3.3.3 **CRG_GPRSAreaOfUse** / Area of implementation of GPRS

1.1.1.3.3.4 **CRG_Needof555** / Use of group 555

1.1.1.3.3.5 **CRG_RoamingAgreement** / GSM-R networks covered by a roaming agreement

1.1.1.3.3.6 **CRG_RoamingPublic** / Existence of roaming to public networks

1.1.1.3.3.7 **CRG_RoamingPublicDetails** / Details on roaming to public networks

1.1.1.3.3.8 **CRG_GSMRNoCoverage** / No GSMR coverage

1.1.1.3.3.9 **CRG_RadioCompVoice** / Radio system compatibility voice

1.1.1.3.3.10 **CRG_RadioCompData** / Radio system compatibility data

1.1.1.3.4 CCD / Train detection systems fully compliant with the TSI

1.1.1.3.4.1 **CCD_TSITrainDetection** / Existence of train detection system fully compliant with the TSI

1.1.1.3.5 CPO / Train protection legacy systems

~~1.1.1.3.5.1 **CPO_Installed** / Existence of other train protection, control and warning systems installed~~

~~1.1.1.3.5.2 **CPO_MultipleRequired** / Need for more than one train protection, control and warning system required on-board~~

1.1.1.3.5.3 **CPO_LegacyTrainProtection** / Train protection legacy system

1.1.1.3.6 CRS / Other radio systems

1.1.1.3.6.1 **CRS_Installed** / Other radio systems installed (Radio Legacy Systems)

1.1.1.3.7 CTD / Train detection systems not fully compliant with the TSI

1.1.1.3.7.1.1 **CTD_DetectionSystem** / Type of train detection system

1.1.1.3.7.1.2 **CTD_TCCheck**/Type of track circuits to which specific checks are needed

1.1.1.3.7.1.3 **CTD_TCCheckDocRef** /Document with the procedure(s) related to the type of track circuits declared in 1.1.1.3.7.1.2

1.1.1.3.7.1.4 **CTD_TCLimitation**/Section with train detection limitation, only for the French network

1.1.1.3.7.2.1 **CTD_TSIMaxDistConsecutiveAxles** / TSI compliance of maximum permitted distance between two consecutive axles

1.1.1.3.7.2.2 **CTD_MaxDistConsecutiveAxles** / Maximum permitted distance between two consecutive axles in case of TSI non-compliance

1.1.1.3.7.3 **CTD_MinDistConsecutiveAxles** / Minimum permitted distance between two consecutive axles

1.1.1.3.7.4 **CTD_MinDistFirstLastAxles** / Minimum permitted distance between first and last axle

1.1.1.3.7.5 **CTD_MaxDistEndTrainFirstAxle** / Maximum distance between end of train and first axle

1.1.1.3.7.6 **CTD_MinRimWidth** / Minimum permitted width of the rim

1.1.1.3.7.7 **CTD_MinWheelDiameter** / Minimum permitted wheel diameter

1.1.1.3.7.8 **CTD_MinFlangeThickness** / Minimum permitted thickness of the flange

1.1.1.3.7.9 **CTD_MinFlangeHeight** / Minimum permitted height of the flange

1.1.1.3.7.10 **CTD_MaxFlangeHeight** / Maximum permitted height of the flange

~~1.1.1.3.7.11 **CTD_MinAxleLoad** / Minimum permitted axle load~~

1.1.1.3.7.11.1 **CTD_ MinAxleLoadByVehicleCat** / Minimum permitted axle load per category of Vehicle

1.1.1.3.7.12 **CTD_TSIMetalFree** / TSI compliance of rules for metal-free space around wheels

1.1.1.3.7.13 **CTD_TSIMetalConstruction** / TSI compliance of rules for vehicle metal construction

1.1.1.3.7.14 **CTD_TSIFerroWheelMat** / TSI compliance of Ferromagnetic characteristics of wheel material required

1.1.1.3.7.15.1 **CTD_TSIMaxImpedanceWheelset** / TSI compliance of maximum permitted impedance between opposite wheels of a wheelset

1.1.1.3.7.15.2 **CTD_MaxImpedanceWheelset** / Maximum permitted impedance between opposite wheels of a wheelset when not TSI compliant

~~1.1.1.3.7.16 **CTD_TSISand** / TSI compliance of sanding~~

1.1.1.3.7.17 **CTD_MaxSandOutput** / Maximum amount of sand

1.1.1.3.7.18 **CTD_SandDriverOverride** / Sanding override by driver required

1.1.1.3.7.19 **CTD_TSISandCharacteristics** / TSI Compliance of rules on sand characteristics

1.1.1.3.7.20 **CTD_FlangeLubeRules** / Existence of rules on on-board flange lubrication

1.1.1.3.7.21 **CTD_TSICompositeBrakeBlocks** / TSI compliance of rules on the use of composite brake blocks

1.1.1.3.7.22 **CTD_TSIShuntDevices** / TSI compliance of rules on shunt assisting devices

1.1.1.3.7.23 **CTD_TSIRSTShuntImpedance**/ TSI compliance of rules on combination of RST characteristics influencing shunting impedance

1.1.1.3.8 CTS / Transitions between systems

1.1.1.3.8.1 **CTS_SwitchProtectControlWarn** / Existence of switch over between different protection, control and warning systems while running

1.1.1.3.8.2 **CTS_SwitchRadioSystem** / Existence of switch over between different radio systems

1.1.1.3.9 CEI / Parameters related to electromagnetic interferences

1.1.1.3.9.1 **CEI_TSIMagneticFields** / Existence and TSI compliance of rules for magnetic fields emitted by a vehicle

1.1.1.3.9.2 **CEI_TSITractionHarmonics** / Existence and TSI compliance of limits in harmonics in the traction current of vehicles

1.1.1.3.10 CLD / Line-side system for degraded situation

1.1.1.3.10.1 **CLD_ETCSSituation** / ETCS level for degraded situation

1.1.1.3.10.2 **CLD_OtherProtectControlWarn** / Other train protection, control and warning systems for degraded situation

1.1.1.3.11 CBP / Brake related parameters

1.1.1.3.11.1 **CBP_MaxBrakeDist** / Maximum braking distance requested

1.1.1.3.11.2 **CBP_AddInfoAvailable** / Availability by the IM of additional information

1.1.1.3.11.3 **CBP_BrakePerfDocRef**/ Documents available by the IM relating to braking performance

1.1.1.3.12 COP / Other CCS related parameters

1.1.1.3.12.1 **COP_Tilting** / Indication whether titling functions are supported by ETCS

1.1.1.4 Rules and restriction

1.1.1.4.1 **RUL_LocalRulesOrRestrictions** / Existence of rules and restrictions of a strictly local nature

1.1.1.4.2 **RUL_LocalRulesOrRestrictionsDocRef** /Reference of the documentsDocuments regarding the rules or restrictions of a strictly local nature available by the IM

1.2 OPERATIONAL POINT

1.2.0.0.0 Generic information

1.2.0.0.0.1 **OPName** / Name of Operational point

1.2.0.0.0.2 **UniqueOPID** /Unique OP ID

1.2.0.0.0.3 O**PTafTapCode** / OP TAF TAP primary code

1.2.0.0.0.4 **OPType** / Type of Operational Point

1.2.0.0.0.4.1 **OPTypeGaugeChangeover** / Type of track gauge changeover facility

1.2.0.0.0.5 **OPGeographicLocation** / Geographical location of Operational Point

1.2.0.0.0.6 **OPRailwayLocation** / Railway location of Operational point

1.2.1 OPTrack / RUNNING TRACK

1.2.1.0.0 Generic information

1.2.1.0.0.1 **OPTrackIMCode** / IM's Code

1.2.1.0.0.2 **OPTrackIdentification** / Identification of track

1.2.1.0.1 IDE / Declarations of verification for track

1.2.1.0.1.1 **IDE_ECVerification** / EC declaration of verification for track (INF)

1.2.1.0.1.2 **IDE_EIDemonstration** / EI declaration of demonstration for track (INF)

1.2.1.0.2 IPP / Performance parameters

1.2.1.0.2.1 **IPP_TENClass** / TEN classification of track

1.2.1.0.2.2 **IPP_LineCat** / Category of Line

1.2.1.0.2.3 **IPP_FreightCorridor** / Part of a Railway freight corridor

1.2.1.0.3 ILL / Line layout

~~1.2.1.0.3.1 **ILL_InteropGauge** / Interoperable gauge~~

~~1.2.1.0.3.2 **ILL_MultiNatGauge** / Multinational gauges~~

~~1.2.1.0.3.3 **ILL_NatGauge** / National gauges~~

1.2.1.0.3.4 **ILL_Gauging_/** Gauging

1.2.1.0.3.5 **ILL_GaugeCheckLoc/**Railway location of particular points requiring specific checks

1.2.1.0.3.6 **ILL_GaugeCheckDocRef** /Document with the transversal section of the particular points requiring specific checks

1.2.1.0.4 ITP / Track Parameters

1.2.1.0.4.1 **ITP_NomGauge** / Nominal track gauge

1.2.1.0.5 OPTrackTunnel / Tunnel

1.2.1.0.5.1 **OPTrackTunnelIMCode** / IM's Code

1.2.1.0.5.2 **OPTrackTunnelIdentification** / Tunnel identification

1.2.1.0.5.3 **ITU_ECVerification** / EC declaration of verification for tunnel (SRT)

1.2.1.0.5.4 **ITU_EIDemonstration** / EI declaration of demonstration for tunnel (SRT)

1.2.1.0.5.5 **ITU_Length** / Length of tunnel

1.2.1.0.5.6 **ITU_EmergencyPlan** / Existence of emergency plan

1.2.1.0.5.7 **ITU_FireCatReq** / Fire category of rolling stock required

1.2.1.0.5.8 **ITU_NatFireCatReq** / National fire category of rolling stock required

1.2.1.0.5.9 **ITU_DieselThermAllowed**/Diesel or other thermal traction allowed

1.2.1.0.6 OPTrackPlatform / Platform

1.2.1.0.6.1 **OPTrackPlatformIMCode** / IM's Code

1.2.1.0.6.2 **OPTrackPlatformIdentification** / Identification of platform

1.2.1.0.6.3 **IPL_TENClass** / TEN Classification of platform
1.2.1.0.6.4 **IPL_Length** / Usable length of platform
1.2.1.0.6.5 **IPL_Height** / Height of platform
1.2.1.0.6.6 **IPL_AssistanceStartingTrain** / Existence of platform assistance for starting train
1.2.1.0.6.7 **IPL_AreaBoardingAid** / Area of use of the platform boarding aid

1.2.2 OPSiding / SIDING

1.2.2.0.0 Generic information

1.2.2.0.0.1 **IM's Code** / IM's Code
1.2.2.0.0.2 OPSidingIdentification / Identification of siding
1.2.2.0.0.3 **IPP_TENClass** / TEN classification of siding

1.2.2.0.1 IDE / Declaration of verification for siding

1.2.2.0.1.1 **IDE_ECVerification** / EC declaration of verification for siding (INF)
1.2.2.0.1.2 **IDE_EIDemonstration** / EI declaration of demonstration for siding (INF)

1.2.2.0.2 IPP / Performance parameter

1.2.2.0.2.1 **IPP_Length** / Usable length of siding

1.2.2.0.3 Line layout

1.2.2.0.3.1 **ILL_Gradient** / Gradient for stabling tracks
1.2.2.0.3.2 **ILL_MinRadHorzCurve** / Minimum radius of horizontal curve
1.2.2.0.3.3 **ILL_MinRadVertCurve** / Minimum radius of vertical curve

1.2.2.0.4 ITS / Fixed installations for servicing trains

1.2.2.0.4.1 **ITS_ToiletDischarge** / Existence of toilet discharge
1.2.2.0.4.2 **ITS_ExternalCleaning** / Existence of external cleaning facilities
1.2.2.0.4.3 **ITS_WaterRestocking** / Existence of water restocking
1.2.2.0.4.4 **ITS_Refuelling** / Existence of refuelling
1.2.2.0.4.5 **ITS_SandRestocking** / Existence of sand restocking
1.2.2.0.4.6 **ITS_ElectricShoreSupply** / Existence of electric shore supply

1.2.2.0.5 OPSidingTunnel / Tunnel

1.2.2.0.5.1 **OPSidingTunnelIMCode** / IM's Code
1.2.2.0.5.2 **OPSidingTunnelIdentification** / Tunnel identification
1.2.2.0.5.3 **ITU_ECVerification** / EC declaration of verification for tunnel (SRT)
1.2.2.0.5.4 **ITU_EIDemonstration** : EI declaration of demonstration for tunnel (SRT)
1.2.2.0.5.5 **ITU_Length** / Length of tunnel
1.2.2.0.5.6 **ITU_EmergencyPlan** / Existence of emergency plan
1.2.2.0.5.7 **ITU_FireCatReq** / Fire category of rolling stock required
1.2.2.0.5.8 **ITU_NatFireCatReq** / National fire category of rolling stock required

1.2.2.0.6 **ECS / Contact line system** Contact line system
1.2.2.0.6.1 **ECS_MaxStandstillCurrent**/Maximum current at standstill per pantograph

1.2.3 Rules and restriction

1.2.3.1 **RUL_LocalRulesOrRestrictions** / Existence of rules and restrictions of a strictly local nature
1.2.3.2 **RUL_LocalRulesOrRestrictionsDocRef** /Documents regarding the rules or restrictions of a strictly local nature available by the IM

2.6 Relations between parameters

The relationships between parameters are described in Table 1 of the Annex of draft RINF Decision [26] and will not be copied in this guide.

If the elements corresponding to parameters are existing (running track, siding, tunnel, platform …), all parameters are defined as mandatory with the respect to the conditions that are specified in the Annex of the RINF Decision.

Table 5 of this guide (see 5.1) gives information on relationships between parameters. Parameters are mandatory if applicable. The "applicability" of parameters can depend on value in relation to TSI or value of other primary parameters. E.g.:

- parameter 1.1.0.0.0.1 ("IM Code") is applicable in all cases and mandatory
- 1.1.1.1.3.2 ("multinational gauges") is only applicable when "none" is selected in parameters 1.1.1.1.3.1 and then mandatory.

The guide provides also explanation on the "specific applicability" of some of them.

Three groups of parameters need to be used with a "Set" attribute each time the"parent" parameter is repeated with a different value. They have to be provided at the level of each track in a SoL.

The XML attribute called "Set" must be declared at the parent and children level with the same keyword value.

The parameters represented by a set group have to be declared for each "parent" present on a track, the applicability and values are entered for each system described.

Even though all the parameters are set in the XML file to applicable="N" or "NYA", the RINF application still requires the 'Set' attribute to be declared and populated. The way to bypass this requirement is to declare the Set as Set="null".

The principles for the use of the set attribute are:
- Any string of characters can be used as value of a set but it must be different from one set to another;
- The value of a given set must be unique in a given track.

The parameters represented by a set group have to be declared for each system present on a track, the applicability and values are entered for each system described.

Even though all the parameters are set in the XML file to applicable="N", the RINF application still requires the 'Set' attribute to be declared and populated. The way to bypass this requirement is to declare the Set as Set="null".

The groups of "linked" parameters are the followings:

1) For each type of contact line declared (parameter 1.1.1.2.2.1.1: **ECS_SystemType** / Type of contact line system) the following full set has to be provided:

1.1.1.2.2.1.2 **ECS_VoltFreq** / Energy supply system

1.1.1.2.2.1.2.1 **ECS_TSIVoltFreq** / Energy supply system TSI compliant

1.1.1.2.2.1.3 **ECS_MaxTrainCurrent** / Maximum train current

1.1.1.2.2.3 **ECS_MaxStandstillCurrent** / Maximum current at standstill per

1.1.1.2.2.4 **ECS_RegenerativeBraking** / Permission for regenerative braking

1.1.1.2.5.1 **ERS_PowerLimitOnBoard** / Current or power limitation on board

2) For each level of ETCS(parameter 1.1.1.3.2.1 : **CPE_Level / ETCS level**), the following full set has to be provided:

1.1.1.3.2.2 **CPE_Baseline** / ETCS baseline

3) For each type of train detection system (parameter 1.1.1.3.7.1**CTD_DetectionSystem** / Type of train detection system), the following full set has to be provided:

1.1.1.3.7.2.1 **CTD_TSIMaxDistConsecutiveAxles** / TSI compliance of maximum permitted distance between two consecutive axles

1.1.1.3.7.2.2 **CTD_MaxDistConsecutiveAxles** / Maximum permitted distance between two consecutive axles in case of TSI non-compliance

1.1.1.3.7.3 **CTD_MinDistConsecutiveAxles** / Minimum permitted distance between two consecutive axles

1.1.1.3.7.4 **CTD_MinDistFirstLastAxles** / Minimum permitted distance between first and last axle

1.1.1.3.7.5 **CTD_MaxDistEndTrainFirstAxle** / Maximum distance between end of train and first axle

1.1.1.3.7.6 **CTD_MinRimWidth** / Minimum permitted width of the rim

1.1.1.3.7.7 **CTD_MinWheelDiameter** / Minimum permitted wheel diameter

1.1.1.3.7.8 **CTD_MinFlangeThickness** / Minimum permitted thickness of the flange

1.1.1.3.7.9 **CTD_MinFlangeHeight** / Minimum permitted height of the flange

1.1.1.3.7.10 **CTD_MaxFlangeHeight** / Maximum permitted height of the flange

1.1.1.3.7.11 **CTD_MinAxleLoad** / Minimum permitted axle load

1.1.1.3.7.12 **CTD_TSIMetalFree** / TSI compliance of rules for metal-free space around wheels

1.1.1.3.7.13 **CTD_TSIMetalConstruction** / TSI compliance of rules for vehicle metal construction

1.1.1.3.7.14 **CTD_TSIFerroWheelMat** / TSI compliance of Ferromagnetic characteristics of wheel material required

1.1.1.3.7.15.1 **CTD_TSIMaxImpedanceWheelset** / TSI compliance of maximum permitted impedance between opposite wheels of a wheelset

1.1.1.3.7.15.2 **CTD_MaxImpedanceWheelset** / Maximum permitted impedance between opposite wheels of a wheelset when not TSI compliant

1.1.1.3.7.16 **CTD_TSISand** / TSI compliance of sanding

1.1.1.3.7.17 **CTD_MaxSandOutput** / Maximum sanding output

1.1.1.3.7.18 **CTD_SandDriverOverride** / Sanding override by driver required

1.1.1.3.7.19 **CTD_TSISandCharacteristics** / TSI Compliance of rules on sand characteristics

1.1.1.3.7.20 **CTD_FlangeLubeRules** / Existence of rules on on-board flange lubrication

1.1.1.3.7.21 **CTD_TSICompositeBrakeBlocks** / TSI compliance of rules on the use of composite brake blocks

1.1.1.3.7.22 **CTD_TSIShuntDevices** / TSI compliance of rules on shunt assisting devices

1.1.1.3.7.23 **CTD_TSIRSTShuntImpedance**/ TSI compliance of rules on combination of RST characteristics influencing shunting impedance

2.7 Governance process of Table 5

Three groups contribute to the current development of this guide and to the implementation of the RINF decision:

The Development WP acts as a ”board”, responsible for:

- providing information on the RINF implementation, needs for change and/or improvement to the application guide (AG) and/or to the software;

- agreeing principles of changes on the basis of the consensus (RINF implementation is not yet mature enough to give this group the power to take decision)

2. The users group is the group of technical experts from NREs/IMs that mainly helps ERA with the implementation of IT databases;

3. The RINF Network WG is the group composed of NREs. The aim of this group is to share feedback on the implementation, on the understanding of the guide.

Principles of draft modifications are presented and first discussed in the Users Group. The result is sent to the all participants of all the RINF groups (RINF Development WP, RINF Network WG) for consultation before the following common meeting.

If participants of the common meeting agree to the principles of changes presented, ERA introduces them in the next version of the application guide.

The Application guide, including table 5, is one of the deliverables that will be under the management of the RINF Change Management Board that have to be established.

3 PRINCIPAL RULES FOR THE RINF APPLICATION

3.1 Main principles

The principles listed below form the basis of the functional and non-functional requirements of the RINF system.

a) There is only one Entity in Charge of the register of Infrastructure (NRE) per Member state and only one national Register to be connected with the Common User Interface (RINF application). In other words, there will be in each country only one centre point of data retrieval towards the Common User Interface, regardless if there is a number of other registers within the country. It is up to the NREs to manage such a case and to consolidate the data from the various local registers into the database of a single register for the RINF purpose. This shall include all RINF data for this country, as required by the RINF Decision.

b) In Article 2.2 of the RINF Decision 2014/880/EU, it is mentioned that the Member States' registers should be "interconnected". This interconnection is performed via the RINF application. Any other direct or indirect connections between the national registers do not form part of the RINF system.

c) The RINF application is a web-based application that will be available over the Internet.

d) Only the RINF data specified in the RINF Decision have to be provided by the Member States' Registers to the RINF application.

e) Results of a query submitted by RINF application users may not be provided immediately. It is acceptable that the results of some complex queries can be provided in the form of reports at a later point in time (no later than 24hours). The exact response times will depend on the complexity of the request. The users receive a URL with the requested RINF data via email as soon as the query results are available at the RINF application. Then, they can access the RINF application and retrieve the results of their queries.

f) Each member state network is described by the upload of a full dataset by NRE. It is not possible to upload partial data. In case of update of the description, it is necessary to upload a new full dataset containing the existing informations and the new one. In the incipient phases of the project, MSs will be allowed to provide sets of data that do not have all mandatory parameters filled. This measure comes to help MSs in showing their progress in collecting and compiling RINF data.

g) Only the data provided within the last submitted dataset by the NRE will be available through the RINF application. All previously existing data (from previous datasets) shall be stored for 2 years from the date of withdrawal of the data and will not be available through the RINF application.

h) No information can be provided in the RINF datasets about railway infrastructure which is no longer in service. These data will be no more accessible through the RINF application. Within the RINF dataset, the NREs have the possibility to provide the following types of time-related information:
   i. Information about the currently existing railway infrastructure
   ii. Information about railway infrastructure that will come into service in the future

iii. Information about currently existing railway infrastructure that will cease to operate in the future

i) No actual documents or other file attachments are included in the RINF datasets.

j) Access to the RINF data is controlled: authentication is necessary (e.g. username/password) before users can access RINF data through the RINF application.

k) No restrictions will be implemented once access granted: all users logged-in to the RINF application shall have access to all RINF data of all countries.

l) A specific module within the RINF application will be available for supporting the management of datasets (XML files) at the national level. For IMs use, it will allow to creating/edit RINF data set and to upload to the NRE. The same module will allow the NRE to merge multiple datasets from different IMs into a single dataset. These two functionalities were developed as tools facilitating the implementation of the RINF Decision. There is no obligation to use these module. It depends on the national implementation strategy.

3.2 Governance

3.2.1 General

Governance is an important aspect to be considered for the implementation and the future operation of RINF. This can be divided in two major areas:

- Governance for the **implementation** of the RINF system, including the business processes, software development, the testing and validation, and implementation of the various sub-systems that will provide the RINF set of data.
- Governance for the **maintenance** of the RINF system, in order to guarantee the availability and integrity of RINF data.

Of course, responsibility for the implementation and maintenance of the system lies with the organisation implementing the respective system component. In this respect, another distinction has to be made between the Governance for the implementation and maintenance of:

- The Member States' Registers, implemented by entities in charge of RINF (NREs) nominated by Member States, hosted in each country's premises,
- The RINF application, implemented and hosted by ERA;
- The artefacts based on which the NREs will base the implementation of the system for RINF purpose.

3.2.2 RINF application

The European Railway Agency (ERA) implements and host the Common User Interface.

In this respect, a web application is implemented at ERA level, for providing the basic functionalities described in the EC Decision, such as search page with filters and search results, user registration, etc. The database of the Common User Interface is a collation of the datasets sent by the Member States.

ERA implements and maintains the RINF application together with a contracted IT supplier. ERA chairs regular meetings with the entities in charge of RINF for implementation and maintenance of the RINF.

3.2.2.1 Team organisation

The implementation of the Common User Interface as well as the activities related to its production operation (roll-out support, corrective and evolutive maintenance) will be undertaken by the European Railway Agency with the assistance of its IT contractor. Some general concepts of this working methodology are provided here:

- ERA Business Managers will be responsible for providing the overall Vision as well as the requirements from a business point of view. They will also be responsible for validating the deliverables (use cases, prototype, software application, etc.) that will be prepared by the IT contractor.

- ERA Project Manager will be responsible for monitoring the progress of the project and mitigating risks.

- ERA will be responsible for validating the technical deliverables prepared by the contractor (software architecture, test management, source code, etc.).

- ERA Service Desk will be responsible for handling the technical communications with the technical experts of the Member States' Registers, and for resolving any technical issues that may arise in the communication between the RINF application and the NRs.

3.2.2.2 RINF application Maintenance

All components installed within the environment of the RINF application (web application, database, web services, etc.) will be maintained by ERA. ERA will be responsible for the following tasks:

Maintenance at operational conditions and support:

- Maintain look-up tables which provide the actual valid values of parameters with predescribed values.

- Maintain the central database, run regular backup and clean-up tasks, communicate on quality of operations.

- Perform standard maintenance tasks on the servers hosting the application (check file systems and logs, create backups, etc.).

- Resolve any issues that emerge in the RINF web application

- Organise help desk to provide support to entities in charge of RINF and users.

Management of changes:

- Establish formal change management process.

- Update the RINF data scheme if relevant.

- Assist any new MS in connecting with the RINF application.
- Maintain the Project and Infrastructure Documentation.

3.2.3 Registers at Member State level

Roles and responsabilities are defined in the RINF Regulation:

- article 2 for the Member State,
- article 4 for the NRE and the IM regarding the collection and the insertion of the data depending of the date of 1st January 2021,
- article 5 for the IM regarding the accuracy, completeness, consistency and timeliness of data in the RINF Application

3.2.4 NREs and Agency responsabilities ~~Communication between RINF application and NREs~~

Each NRE will be responsible for the following (31 December 2020):

Prepare the dataset (XML file) comprising the full RINF information of the Member State including validation through data quality checks.

- Submit the RINF dataset to the central database at ERA.
- Follow-up with ERA relating to any issues on failing validation or upload.
- Define the list of domestic border points, keep it updated and forward it to the Agency
- Manage the data on domestic border points

ERA will be responsible for the following:

- Provide relevant documentation relating to maintenance and evolution of RINF.
- Manage the list of MS border points
- Manage reference list of domestic border points to be used in the validation process
- Provide validation mechanism for the NREs to check the quality of their datasets before submitting them to the central database.
- Facilitate the dataset uploading, through a web interface available only to NRE users,
- Advise the NRE responsible of any problem.
- Provide visibility on quality of upload process toward NREs, and on quality of data towards users.

In order to fulfil the above responsibilities, software modules at ERA will implement the following functionalities:

- Receive from the NREs the XML files with the RINF data.
- Validate the structure of the XML files against:
    - The predefined structure of the XSD file (format of fields, mandatory/optional, size of data, etc.), and
    - The business rules specified for checking the quality of the provided data (e.g. the name of an OP at start of SoL exists as OP within the dataset).
- Logging any errors in the validation.
- Reporting success/failure (with respective errors if any) back to the NREs.

Responsibility for the correctness and integrity of RINF data lies with the Member States. ERA shall finally check the validity of the submitted RINF data in terms of its conformity with the RINF scheme... Non-valid RINF data will be rejected by ERA, which will centrally record such non-valid RINF data submissions in logs on the RINF application server. In addition, the RINF application will automatically dispatch emails to the NREs when such non-valid submissions are detected.

3.3 System Architecture

This architecture requires that the RINF central database is fed with copies of the full sets of RINF data maintained at the Member States' Registers. In particular, the NREs will prepare the XML files that encapsulate the full set of RINF data that is currently available at their Register (a current snapshot of all RINF information). Then, the NREs will submit this XML file to the central RINF repository, which will be collocated with the Common User Interface. This submission of datasets is carried out through manually uploading the compressed XML files to the RINF system via a dedicated interface provided for this purpose.

Figure 4 demonstrates the logical view of the RINF architecture. The RINF system provides two main interfaces. The first one is utilised by RINF users in order to connect to the RINF system and retrieve RINF information, and the other is utilised by the Member States' NREs in order to provide/upload copies of their full RINF datasets. The basic use case is that the users connect via the internet to the RINF system through its user interface and they request to retrieve particular RINF data. The RINF application searches for the requested data centrally in its centralised database, retrieves the data, and presents it to the users.

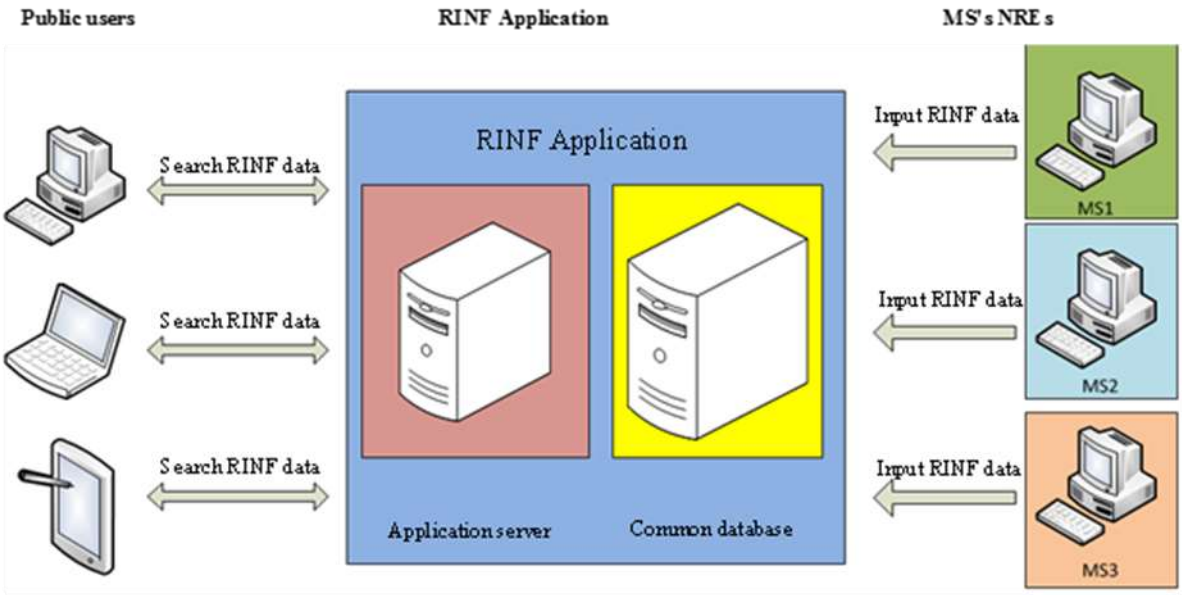

Fig. 4 – RINF System

The NREs will maintain and be responsible for the management of their own RINF datasets at their respective Registers. The RINF system requires from NREs to be able to provide only copies of their full RINF dataset that are maintained in their Registers.

The XML file that encapsulates the full RINF dataset for a Member State's Register is then validated against the corresponding XML Schema Definition (XSD). The responsibility for the correctness and completeness of the provided information is kept at the level of the NRE of the specific country, without prejudice to the roles and shared responsibilities between the national actors for the RINF implementation defined by each Member State. . If the XSD validation fails, the data will be rejected and a report will be dispatched to the NRE listing the encountered errors.

The communication between the users and the RINF system is performed through the internet. Thus, in both cases the RINF architecture is transparent to the users. The users (i.e. RUs, IMs, Manufacturers, NSAs, etc.) open a web browser and connect to the RINF system via HTTP (or HTTPS for extra security if necessary). The RINF system provides access to the provided infrastructure information, as well as any additional functionalities and services. The RINF system queries the central RINF database and provides back to the users the proper RINF information.

3.4 XSD specification

The following deliverables are available on ERA extranet via the RINF specific page:

- RINF xsd Schema

This xsd RINF schema corresponds to the Application Guide ver. 1.4;3 and the RINF application 1.4.3 .

- LookUp Values Dictionaries

This file corresponds to the Application Guide ver. 1.4 and the RINF application 1.4.3

3.5 Data Upload & Validation & import Module (Data Management)

The RINF Data Management module is a software application that will be used by the NREs for uploading, validating their RINF datasets before the import and then import.

The rules of validation of the submitted datasets are described in the "RINF Data Validation Guide" available via the RINF extranet specific page.

3.5.1 RINF Data Life Cycle

The RINF data life cycle involves the following stages:

1) The RINF data of a particular Member State is collated by the NRE into an XML formatted file, following the agreed structure (XSD) and business rules. ~~After January 2021, it should/ shall be then directly uploaded in the RINF application by the IM)~~

2) The XML file is uploaded to the Agency's servers. For this purpose, a dedicated storage area is made available on the Agency's servers for each Member State (NRE).

3) The uploaded XML file is validated by the system, in order to approve the import of the data into the RINF database. The validation will include business rules and quality checks (format of data, management of reference lists, etc.).

4) Upon successful validation, the data can be imported into the RINF database if the NRE decided so.

    a. Any existing data for the particular Member State will be deleted with every new import performed by the NRE.
    b. The files that are successfully imported are archived in the Agency for future reference .

After 1st Jan 2021, the XML formatted file should/ shall be then directly uploaded in the RINF application by the IM).

3.5.2 Validation

In order to perform a validation of RINF data, each NRE will need to follow these steps:

The NRE will connect to the data management module and upload the RINF dataset, containing the RINF data of the particular Member State.

After the data transfer has been completed, the NRE will access the Validation web application, containing a validation form (authorised access only). The validation form will present the list of all files currently stored in the online storage area of that MS, and also a visual indication of whether a dataset import is pending.

The NRE will select for validation one of the files presented in the validation Form.

Alternatively, the user has the option to specify whether the file should also be imported after successful validation (this step additionally ask the user to confirm the selection since it will not be possible to deselect the file selected for import).

The Validation module validates the uploaded file and presents a report with the validation results.

a. If the option for the file to be imported was selected and the validation succeeded, then the file will be moved to a secure location in the file system and the data imported and displayed in the rINF application. From this point onward, the file cannot be accessed.

3.5.2.1 Restrictions

The following restrictions apply for the Validation module:

1) Each NRE user can only access the file area which is allocated to his MS. No access is provided to files from other MS.

2) Each Member State can only have one dataset file pending for import. It is not possible to select “Validate & Import” if another file is already pending import.

Once a dataset file is pending import, it is not possible to undo the forthcoming import

3.5.3 Preproduction environment

The same version of the RINF application as the one installed in production is installed in a preproduction environment and available for NREs and IMs to test their files. This will ensure that the datasets are valid and adhere to the specified business rules and therefore they will not be rejected by the importing mechanism of the production environment.

4 STRATEGY OF UPGRADING THE RINF APPLICATION

4.1 Article 2.3.of the new RINF Regulation:

The requirement is: The Agency shall ensure that the RINF Application is operational by 16 June 2019 at the latest.

Table: main functionalities

List of functionnalities		Test environment (remember: the test environment is not a stable one)	Preproduction	Production
connectivity and authentication: the registered RINF application users must be able to connect to the RINF application via Internet and use its functionalities according to their rights;	RNE/IM/public users	X	X	X
	Representative of railway undertaking(RRU)	1-04-2019	11-06-2019	12-06-2019
prepare files for infrastructure managers users;		depending on further developments ?	depending on further developments?	depending on further developments?
merge files for national registration entity users;		X	X	X
search for the register of infrastructure data including OPs and/or SoLs, including data validity dates;		X	X	X
	with new prameters	1-04-2019	11-06-2019	12-06-2019
select an OP or a SoL and view its details: the RINF application users must be able to define a geographical area using the map interface and the RINF application provides the available data requested by the users for this area;	2013 parameters	X	X	X
	New parameters	1-04-2019	11-06-2019	12-06-2019
view information for a specified subset of lines and OPs in a defined area via a map interface;	2013 parameters		done	
	New parameters	1-04-2019(?)	11-06-2019	12-06-2019
visual representation of items of the register of infrastructure on a digital map: the users, through the RINF application, must be able to navigate, select an item depicted on the map and retrieve any relevant information;	Current visualisation	X	X	X
	ARGis support	1-04-2019 (?)	11-06-2019	12-06-2019
visual representation of data of the register of infrastructure allowing publication of thematic maps;	ARGis support	1-04-2019(?)	11-06-2019	12-06-2019
list SoLs and OPs which are part of a route defined by the user and export the corresponding characteristics;		1-04-2019	11-06-2019	12-06-2019
deliver a certificate each time the export of characteristics resulting from a search is intended to be used by a railway undertaking in accordance with Article 23(1) of Directive (EU) 2016/797;		1-04-2019	11-06-2019	12-06-2019
application programming interface (API);		?	?	?
validation, upload and reception of the data sets provided by a national register entity.	existing; new, deleted parameters	1-04-2019	11-06-2019	12-06-2019
Reference Document Management (New functionality to be developed as soon as possible)	In course of development June 2019	15-07-2019		

Currently(16 June 2019) , there are no enough feedback and contributions to tests of the new RINF release to place it in production. Moreover, some development of the release are still in progress.

A new release of the RINF application, implementing the new Regulation, will be placed in "preproduction environment" as soon as:

- In order to minimize the impact on NRES (that provide the data), the Agency is adapting the validation process to allow a backward compatibility. Xml files compatible with the previous Decision and currently used by NREs will be go on validated by the RINF application.
- A new functionality called "reference documents management" will be developed and available for the NREs.
- The new visualistion (via ARCGIS) is stable

4.2 Article 6 of the new RINF Regulation / Further developments

Article 6 of the RINF Regulation foresee the following developments: see copy of the article below.

"1. The Agency, taking into account the result of a cost-benefit analysis, shall update the RINF application by 1 January 2021 in order to:

(a) streamline the process of updating data in the RINF Application in order to allow infrastructure managers to update information as soon as it becomes available;

(b) improve the description of the network so as to display its geometry accurately;

(c) provide information regarding possible routing on the network;

(d) provide means for alerting railway undertakings regarding changes in the RINF Application relevant to them.

2. By 16 January 2022, the Agency, taking into account the result of a cost-benefit analysis, shall update the RINF application to enable the collection and insertion of information necessary for the Route Book referred to in Appendix D2 to Commission Implementing Regulation xxx (OPE TSI). Each Member State shall ensure that its register of infrastructure provides the information necessary for the Route Book one year after the RINF Application has been updated.

3. Further developments of the RINF application may create a data system feeding into all electronic information flows in respect of the Union rail network."

These further developments are not in the scope of this current guide

5 APPENDICES

5.1 List of parameters: table 5

In order to facilitate the provision of data, as interim solution in case of missing data, it was proposed to use a Not Yet Available (NYA) attribute value in the RINF set of data to indicate the non-availability of data. Providers of data will be duly informed three month in advance of the removal of this option when decided.

A parameter is mandatory to be provided when it corresponds to a core parameter (defined in table 1 of the RINF Regulation) or when the corresponding item exists on the network that is described in accordance with the deadlines in Table 1 of the RINF Regulation. In this case, the possible allowed values for the applicability are Y or NYA (not yet available).

The status “Mandatory” has been deleted from the description of parameters in table 5.

When a parameter is not identified as a core parameter, the possible allowed values for the applicability are N, Y, NYA. It is not mandatory to provide an xml line for this kind of parameters.

Please note that:

The validation of any xml file requires the provision of at least a line for each parameter whose applicability status is ”Y” or “NYA”.

It is allowed, until 16 January 2020, not to provide an xml line for new parameters whose submission deadline is 16 January 2020.

Please note that:

The parameters deleted in the RINF Regulation will be kept and stay able to be imported until 2020. They will be withdrawn after 16 January 2020

Please not that:

The new validation process allows backward compatibility for the import of data until 16 January 2020 or 1 january 2021 depending the status of the corresponding parmeters in the table 1 of the annex of the regulation.

Please note that:

- CharacterString means any sequence of alphanumeric characters (Latin letters and Arabic figures) and other symbols and spaces.

- Predefined CharacterString means the sequence of Latin letters, Arabic figures, symbols and spaces specified and organized in specific way.

- Predefined list – list of values (Predefined CharacterStrings) settled as only possible for the selection; sometimes selected element requires introduction of the additional value in predefined format.

- The following symbols mean: M= mandatory, Y= yes, N= no, NYA= not yet available.

- When [NN…..N] is used inside brackets, it represents a number.

In case the number is smaller than the maximum allowed value, it should not be prefixed with zero(s): example of valid entry for:

- length of section of line where the format is [NNN.NNN]: [76.012] is valid but [076.012] is not valid;
- Maximum permitted speed where the format is [NNN]: [80] is valid but [080] is not valid.;

- In case the number of decimals provided is less than the maximum allowed, the value is not rejected by the validation process: example of valid entry for;

- geographical coordinates where the format is Longitude(±NN.NNNN), (±45.1234) is valid but also (±45.123).

- When the number of an EC declaration of verification is required the data presentation is:

CC/RRRRRRRRRRRRR/YYYY/NNNNNN

- CC Country code (2 letters) based on a standard ISO 3166 alpha-2 except for United Kingdom: UK
- RRRRRRRRRRRRR National registration number of the applicant. The legal registration/identification number, given either by Tax Office or by Commercial Register or some other authority that registers companies in Member State.
- 14 digits, if number is shorter the first digits should be left blank-00, like in case of counter.
- YYYY Year when document issued
- NNNNNN 6 digits counter – unique number by applicant. The counter shall be progressive number to be incremented by one unit each time a declaration is issued. Every year the counter shall restart from zero. The counter is related to the issuing body

Example: BL/00001002036258/2009/000001

- The validations performed by the system are the following:

  - The number of characters and the slashes must be provided in the following manner: [CC/RRRRRRRRRRRRR/YYYY/NNNNNN]

  - The YYYY characters must be a number in the of 1900-2100.

  - The NNNNNN characters must be digits. The same data presentation will be used for the EI declaration of demonstration.

Please note also (as explained above in 2.2.8) that:

- Date of validity of current data collected in RINF is the same as date of export from the MS' registers of infrastructure to the RINF application.

- Validity dates in the future may be inserted in the RINF XML for Operational Point, Section of Line, Track, Siding, Tunnel and Platform. These dates are not described as attributes of parameter.

However, if an IM wants to publish a set of data concerning their future value, the separate validity of those data from the date in future may be given. Then the set of data of the 'object', where those data are included, has to be added to current values by repeating the 'object' with the label of the date of validity in future (see explanations for Common User Interface in 3.1.h).

Please note that some parameters are asking for documents. Only the references of these documents are required to be filled in the RINF application. The Agency is being developing a module for allowing this functionality. The principle is that the NRE will upload in the RINF application via this module, progressively , by IM, all the referenced documents which will be available via a link on the description page of the characteristics of the tracks.

Table 5: Characteristics of RINF parameters

Number	**1**
Title	**MEMBER STATE**
XML Name	**MemberStateCode**
General Explanation	The name of the MS is not a parameter. The MS recognition is automatically derived from the data export delivered by each NRE.
Applicable	Y
Can be repeated	N
Validation	For each national RINFdata shall be one member state defined.
Number	**1.1**
Title	**SECTION OF LINE**
Can be repeated	Y
General Explanation	Each network shall be described using as many SoLs as necessary. Each SoL is generated and identified by OP IDs at start and at end. A SoL only belongs to one Line.
Validation	RINF data are valid with zero or more SoLs declared in it.

Number	**1.1.0.0.0**
Title	**Generic information**
Can be repeated	N

Number	1.1.0.0.0.1
Title	IM's Code
XML Name	SOLIMCode
Definition	Infrastructure Manager means any body or undertaking that is responsible in particular for establishing and maintaining railway infrastructure or a part thereof.
Applicable	Y
Can be repeated	N
Data presentation	[AAAA]
Explanations	The Code is a unique identifier for the Infrastructure Manager and it shall be verified on national level. - If the IM is subject to TAF/TAP TSIs, it correspond to the code used in TAF/TAP TSIs. - In other cases, it corresponds to the **"organisation code" assigned** by the Agency for the specific needs of the RINF Each Section of Line may concern only one IM.
Reference	Article 3 (2) of Directive 2012/34/EU and article 3.4.2 of Decision (EU) 2018/16/4 (EVR Decision)
Validation	No verification by RINF application. Check of the link between MS and IM's Code must be done nationally.

Number	1.1.0.0.0.2
Title	National line identification
XML Name	SOLLineIdentification
Definition	Unique line identification or unique line number within Member State
Applicable	Y
Can be repeated	N
Data presentation	CharacterString
General explanations	Each SoL can belong to only national line. In case when SoL is the track connecting between OPs within big node (resulting from division of big station into several smaller) the line can be identified using the name of this track.

Number	1.1.0.0.0.3
Title	Operational Point at start of Section of Line
XML Name	SOLOPStart
Definition	Unique OP ID at start of Section of Line (kilometres increasing from start OP to the end OP).
Applicable	Y
Can be repeated	N
Data presentation	Predefined CharacterString: [AA+AAAAAAAAAA] = country code (ISO) + alphanumeric OP code
General explanations	Each SoL may have only one start OP, and each OP has unique OP ID within the MS. The "uniqueOPID" is defined in parameter 1.2.0.0.0.2 . Each SoL has the principal direction of the traffic defined by increasing kilometres running from the start OP to the end OP. That is why the start OP is always located at lowest kilometre of the line within the SoL. Data collected in the UK in miles will be transformed to km for uploading to the RINF application.
Validation	OP ID must exist in the MS file of RINF. The value of this parameter must be different from 1.1.0.0.0.4. No validation will be performed by RINF application regarding which is the start and which the end OP. This requires national verification.

Number	1.1.0.0.0.4
Title	Operational Point at end of Section of Line
XML Name	SOLOPEnd
Definition	Unique OP ID at end of Section of Line (kilometres increasing from start OP to the end OP)
Applicable	Y
Can be repeated	N
Data presentation	Predefined CharacterString: [AA+AAAAAAAAAA] = country code (ISO) + alphanumeric OP code
General explanations	Each SoL may have only one end OP, and each OP has unique OP ID within the MS. The "uniqueOPID" is defined in parameter 1.2.0.0.0.2 . Each SoL has the principal direction of the traffic defined by increasing kilometres running from the start OP to the end OP (which later is the reference for definition of the traffic direction for each track of the SoL). That is why the end OP is always at highest kilometre of the line within the SoL. Data collected in the UK in miles will be transformed to km for uploading to the RINF application.
Validation	OP ID must exist in the MS file of RINF. The value of this parameter must be different from 1.1.0.0.0.3

	No validation will be performed by RINF application regarding which is the start and which the end OP. This requires national verification.
Number	1.1.0.0.0.5
Title	Length of section of line
XML Name	SOLLength
Definition	Length between operational points at start and end of section of line.
Applicable	Y
Can be repeated	N
Data presentation	Predefined CharacterString: [NNNN.NNN]
	Explanation on data presentation: The distance is given in kilometres with decimals of 0,001. Data collected in the UK in miles will be transformed to km for uploading to the RINF application.
General Explanations	The length of SoL is theoretical distance between centre points of Ops which are selected in such a way to represent the average value for all tracks within the SoL. It is advised to include distances applied by IM for commercial purposes.
Validation	No validation will be performed by RINF application regarding the length of SoL. This requires national verification.
Number	1.1.0.0.0.6
Title	Nature of Section of Line
XML Name	SOLNature
Definition	Kind of Section of Line expressing size of presented data which depends on fact whether it connects OPs generated by division of a big node into several OPs or not.
Applicable	Y
Can be repeated	N
Data presentation	Single selection from the predefined list: Regular SoL Link
	Data Presentation explanation: A link is to allow a train to go from an OP to another OP without a “regular section of line” between them
Validation	If the value of this parameter is “Link”, then for all tracks belonging to this SoL, all the parameters of the following groups of parameters are not applicable: - 1.1.1.1 Infrastructure subsystem - 1.1.1.2 Energy subsystem - 1.1.1.3 Control-command and signalling subsystem

	1.1.1
	RUNNINGTRACK
	SOLTrack
Can be repeated	Y
Explanation	There might be more than one track within the Section of Line, so then the whole set of data for track has to be repeated for each track within the SoL.
	1.1.1.0.0
	Generic information
Can be repeated	N
Explanation	Each track may have only one set of 'Generic information'.
Number	1.1.1.0.0.1
Title	Identification of track
XML Name	SOLTrackIdentification
Definition	Unique track identification or unique track number within Section of Line
Applicable	Y
Can be repeated	N
Data presentation	CharacterString
General Explanations	Each track shall have unique identification or number within the SoL. This number cannot be used for naming any other track in the same SoL.
Validation	The check of fact that ID is unique within SoL has to be done on national level (preferably by IM).

Number	1.1.1.0.0.2
Title	Normal running direction
XML Name	SOLTrackDirection
Definition	The normal running direction is : - the same as the direction defined by the start and end of the SoL or - the opposite to the direction defined by the start and end of the SoL or - both directions defined for SoL.
Applicable	Y
Can be repeated	N
Data presentation	Single selection from the predefined list: N O B
	Explanation on data presentation: N - same direction as in SoL O - opposite direction to as in SoL B - both directions N and O

Number	**1.1.1.1**
Title	**Infrastructure subsystem**
Can be repeated	N
Explanation	For one track only one set of data on each subsystem is required.

Number	**1.1.1.1.1**
Title	**Declarations of verification for track**
XML Name	**IDE**
Can be repeated	N
Explanation	This group of data concerns infrastructure subsystem on the specific track. There are two types of declarations included: EC declaration issued according to mandatory procedure defined by Interoperability Directive and EI declaration which may be issued according the voluntary procedure defined by EC Recommendation [22].

	1.1.1.1.1.1
	EC declaration of verification for track (INF)
	SOL Track Parameter **IDE_ECVerification**
	Unique number for EC declarations following format requirements specified in the 'Document about practical arrangements for transmitting interoperability documents'
Applicable	Y/N/NYA
	Explanation on applicability: "Y" shall be selected in case when EC declaration was issued

Can be repeated	Y Explanation on repeatability: The parameter may be repeated only when several EC declarations were issued related to the INF subsystem
Data presentation	Predefined CharacterString: [CC/RRRRRRRRRRRRR/YYYY/NNNNNN]
General explanations	With the extension of scope according to Interoperability Directive 2008/57/EC, geographical scope of the INF TSI now includes all the networks (TEN and off-TEN) with the following nominal track gauges: 1435, 1520, 1524, 1600 and 1668 mm
Reference concerning format	'Document about practical arrangements for transmitting interoperability documents' [23]
Validation	The validation is described before this Table

Number	1.1.1.1.1.2
Title	EI declaration of demonstration for track (INF)
XML Name	SOL Track Parameter **IDE_EIDemonstration**
Definition	Unique number for EI declarations following the same format requirements as specified in the 'Document about practical arrangements for transmitting interoperability documents'
Applicable	Y/N/NYA Explanation on applicability: "Y" shall be selected in case when the demonstration was executed and EI declaration was issued
Can be repeated	Y
Data presentation	Predefined CharacterString: [CC/RRRRRRRRRRRRR/YYYY/NNNNNN])
General explanations	It may happen that several EI declarations were issued – then parameter has to be repeated as many times as many declarations were issued. The procedure for demonstration that existing network fits to requirements of the TSIs is executed on voluntary basis, so when EI declaration do not exist then the parameter is optional. If EI declaration was not issued then field shall be left empty.
Reference	[22] Recommendation 2014/881/EU [23] Document about practical arrangements for transmitting interoperability documents'
Validation	The validation is described before this Table, in section 2.3.

Number	**1.1.1.1.2**
Title	**Performance parameters**
XML Name	**IPP**
Can be repeated	N
Explanation	For each track only the one set of 'Performance parameters' may be presented

Number	1.1.1.1.2.1
Title	TEN classification of track
XML Name	SOL Track Parameter **IPP_TENClass**
Definition	Indication of the part of the trans-European network the line belongs to.
Applicable	Y/NYA
Can be repeated	Y
Data presentation	Single selection from the predefined list: Part of the TEN-T Comprehensive Network Part of the TEN-T Core Freight Network Part of the TEN-T Core Passenger Network Off-TEN
Reference	[24] Regulation (EU) No 1315/2013/EC Article 39 2. freight lines of the core network as indicated in Annex I: at least 22,5 t axle load, 100 km/h line speed and the possibility of running trains with a length of 740 m;
Number	1.1.1.1.2.1.2
Title	TEN GIS identity
XML Name	SOL Track Parameter **IPP_TENGISID**
Definition	Indication of the GIS identity (GIS ID) of the section of TEN-T database to which the track belongs
Explanation on definition	
Applicable	Y/N/NYA Y if the answer to parameter 1.1.1.1.2.1 is not off TEN
Can be repeated	N
Data presentation	Characterstring
References Example	TENtec is the European Commission's information system to coordinate and support the Trans-European Transport Network Policy (TEN-T). For more details about the system and the legal background please follow the link to the TENtec Public Portal: http://ec.europa.eu/transport/infrastructure/tentec/tentec-portal/ Some member states representatives have accesss to: https://webgate.ec.europa.eu/tentec/policy/omc4/screen/home. that makes aavailable the list of sections of the TEN network with their GIS ID.

Number	1.1.1.1.2.2
Title	Category of Line
XML Name	SOL Track Parameter **IPP_LineCat**
Definition	Classification of a line according to the INF TSI
Explanation on definition:	INF TSI classifies lines based on the type of traffic (traffic code). TSI categories of line shall be used for the classification of existing lines to define a target system so that the relevant performance parameters will be met.
Applicable	Y/N/NYA Explanation on applicability: Contrary to the Status of core parameter in the RINF Regulation, N can be used for the applicability for the following reasons. Technical scope of the INF TSI now includes all the networks (TEN and off-TEN) for nominal track gauges 1435, 1520, 1524, 1600 and 1668 mm Not applicable when track is not included in technical scope of the TSI. Not applicable when tables 2 or 3 of 4.2.1(7) of INF TSI are not usable on the UK network for Great Britain according the specific case 7.7.17.1(2).
Can be repeated	Y
	Explanation on repeatability: When more than one value of the parameter has to be published, then parameter has to be repeated as many times as many values of the parameter will be published.
Data presentation	Single selection of the following traffic codes Passengers: P1 P2 P3 P4 P5 P6 P1520 P1600 Freight: F1 F2 F3

	F4 F1520 F1600
	Explanation on data presentation: The TSI category of line is a combination of traffic codes. For lines where only one type of traffic is carried (for example a freight only line), a single code can be used to describe the requirements; where mixed traffic runs the category will be described by one or more codes for passenger and freight in case of two types of traffic. Then the parameter is repeated if relevant. The combined traffic codes describe the envelope within which the desired mix of traffic can be accommodated.
Example	If a line is operated by passenger trains with speed of 250 km/h, local commuter trains with speed of 120 km/h and heavy freight trains in the night, then the best combination of traffic codes seems to be P2, P5 and F1. Then, the TSI category of line for this case would simply be P2-P5-F1.
References	INF TSI 4.2.1

Number	1.1.1.1.2.3
Title	Part of a Railway Freight Corridor
XML Name	SOL Track Parameter **IPP_FreightCorridor**
Definition	Indication whether the line is designated to a Railway Freight Corridor
Applicable	Y/N/NYA
	Explanation on applicability: Not applicable if the line is not part of a RFC
Can be repeated	Y
Data presentation	Single selection from the predefined list: Rhine-Alpine RFC (RFC 1) North Sea-Mediterranean RFC (RFC 2) Scandinavian – Mediterranean RFC (RFC 3) Atlantic RFC (RFC 4) Baltic-Adriatic RFC (RFC 5) Mediterranean RFC (RFC 6) Orient-EastMed RFC (RFC 7) North Sea-Baltic RFC (RFC 8) Rhine – Danube RFC (RFC 9)
	Explanation on data presentation:
General Explanation	A line can belong to one or several Rail Freight Corridor (RFC)
References	[6] Reg 913/2010/EC

Number	1.1.1.1.2.4
Title	Load capability
XML Name	SOL Track Parameter **IPP_LoadCap**
Definition	A combination of the line category and speed at the weakest point of the track.
Explanation on definition:	At this step, RINF does not allow to enter additional data referred to additional speed regulations and operating requirements relating to locomotives (e.g. locomotive classes and associated maximum speed) or traffic types (e.g. maximum speed of freight traffic or passenger traffic).
Applicable	Y/NYA
Can be repeated	Y Explanation on repeatability: When more than one value of the parameter has to be published, then parameter has to be repeated as many times as many values of the parameter will be published.
Data presentation	Single selection from the predefined list of load models representing: line category which is amended by value of speed [km/h] permitted for a specific load model: A [NNN] B1 [NNN] B2 [NNN] C2 [NNN] C3 [NNN] C4 [NNN] D2 [NNN] D3 [NNN] D4 [NNN] D4xL [NNN] E4 [NNN] E5 [NNN] Route Availability which is amended by value of speed [miles/h] permitted for a specific load model RA1 [NNN] RA2 [NNN] RA3 [NNN] RA4 [NNN] RA5 [NNN] RA6 [NNN] RA7 [NNN] RA8 [NNN] RA9 [NNN] RA10 [NNN]
General explanation	The load capability describes the weakest point of this track within this section of line (which is normally a bridge or other sub-track structure). It is expressed as a combination of the line category and speed permitted for trains exerting loads defined for this line category. The result of the classification process is set out in EN 15528:2008 (Annex A) and referred to in that standard as “Line Category”. It represents the ability of the infrastructure to withstand the vertical loads imposed by vehicles on the track for regular service as a combination of Line Category with a permitted speed according to EN 15528:2008

	The Load capability for UK consists of RA and speed in miles per hour. RA shall be applied according to UK Railway Group Standard GE/RT8006, Issue Two, September 2010. More than one combination may be published for the same track if applicable, but it has to be done by repetition of the parameter with one value selected only – that is why 'Y' is given in line 'Can be repeated' For the following cases, it is not possible to use EN 15528:2008 categories of line classification: TSI categories of line P1 (passenger traffic at speeds greater than 250 Km/h) TSI categories of line P2 (passenger traffic at speeds greater than 200 Km/h and less than 250 Km/h) TSI categories of line P1520 and F1520 (passenger traffic or freight traffic at any speed) TSI categories of line P1600 and F1600 (passenger traffic or freight traffic at any speed)
Example	The set of selected data may include: B2-160, D4-120 and E5-100 When classifying infrastructure lines into line categories, the following options shall be used by the infrastructure manager to optimize freight traffic: Option 1: determination of the line category at maximum freight traffic speed (maximum 120 Km/h) Option 2: determination of a line category at an associated lower speed (less than the maximum freight traffic speed) Example of option 1 (Annex F of EN 15528:2008): In a given track, if the traffic is mixed, the local speed of the line is 90 Km/h and the determined line category is D4 at a maximum of 90 Km/h, the information displayed should be: D4/90. Example of option 2 (Annex F of EN 15528:2008): In a given track, if the traffic is mixed, the local speed of the line is 120 Km/h and the determined line category is C4 at a maximum of 120 Km/h and D4 at maximum of 90 Km/h, the information displayed should be: C4/120 and D4/90.
References	INF TSI: Paragraph 7.6 CR INF TSI: Paragraph 7.5

Number	1.1.1.1.2.4.1
Title	National classification for load capability
XML Name	SOL Track Parameter **IPP_NCLoadCap**
Definition	National classification for load capability
Explanation on definition:	National classification for load capability
Applicable	Y/N/NYA
Can be repeated	Y
Data presentation	Characterstring
General explanation	
Example	

References	Annex D1 OPE TSI
Number	1.1.1.1.2.4.2
Title	Compliance of structures with the High Speed Load Model (HSLM)
XML Name	SOL Track Parameter **IPP_HSLMCompliant**
Definition	For sections of line with a maximum permitted speed of 200km/h or more.Information regarding the procedure to be used to perform the dynamic compatibility check
Explanation on definition:	
Applicable	Y/N/NYA Y if the maximum permitted speed of the running track is ~~equal or~~ more than 200km/h
Can be repeated	N
Data presentation	Single selection from the predefined list: Y/N
General explanation	
Example	
References	Annex D1 OPE TSI 4.2.7.1.2(2) of Regulation No 1299/2014 TSI INF HSLM is defined in EN 1991-2:2003/AC:2010 paragraphs 6.4.6.1.1 (3) to (6) inclusive
Number	1.1.1.1.2.4.3
Title	Railway location of structures requiring specific checks
XML Name	SOL Track Parameter **IPP_StructureCheckLoc**
Definition	Localisation of structures requiring specific checks
Explanation on definition:	The railway location identifies the location of the structure in the system of reference of the line.towhich the track belongs
Applicable	Y/N/NYA
Can be repeated	Y
Data presentation	Predefined CharacterString: [±NNNN.NNN]
explanation on Data presentation	Explanation on data presentation: The location (generally the distance from the origin of the line to the centre) on a line is given in kilometres with decimals (precision of 0.001). ~~The aim of the "CharacterString" at the end of the format has to precise the name or number of the line.~~ Contrary to the regulation, the reference to the line is not needed : the parameter is still attached to the track of the line
General explanation	This information is to be linked with parameter 1.1.1.1.2.4.4

References	
Number	1.1.1.1.2.4.4
Title	Document with the procedure(s) for static and dynamic route compatibility checks
XML Name	SOL Track Parameter **IPP_StructureCheckDocRef**
Definition	Electronic document available in two EU languages from the IM stored by the Agency with: - precise procedures for the static and dynamic route compatibility checks; Or - relevant information for carrying out the checks for specific structures.
Explanation on definition:	The references of the different documents can be described by repeating the parameter
Applicable	Y/N/NYA
Can be repeated	Y
Data presentation	Characterstring
General explanation	
References	Annex D1 OPE TSI

Number	1.1.1.1.2.5
Title	Maximum permitted speed
XML Name	SOL Track Parameter **IPP_MaxSpeed**
Definition	Nominal maximum operational speed on the line as a result of INF, ENE and CCS subsystem characteristics expressed in kilometres/hour.
Explanation on definition	'Speed on the line' shall be understood as speed on the track of the section of line in question.
Applicable	Y/NYA
Can be repeated	N
Data presentation	[NNN]
Limit values	min=0, max=500
References	INF TSI: All HS and CR TSIs (ENE, CCS)
Example	When INF allows 160 km/h, ENE allows 100 km/h and CCS allows 120 km/h, the max permitted speed on this track of this section of line is 100 km/h. When for freight trains operation the maximum permitted speed is 100 km/h, and for passenger trains it is 160 km/h, as the value of maximum permitted speed shall be presented 160 km/h only.
Number	1.1.1.1.2.6
Title	Temperature range

XML Name	SOL Track Parameter **IPP_TempRange**
Definition	Temperature range for unrestricted access to the line according European standard.
Applicable	Y/NYA
Can be repeated	N
Data presentation	Single selection from the predefined list: T1 (-25 to +40) T2 (-40 to +35) T3 (-25 to +45) Tx (-40 to +50)
Reference	Temperature range according EN 50125-1 (1999) 4.3

Number	1.1.1.1.2.7
Title	Maximum altitude
XML Name	SOL Track Parameter **IPP_MaxAltitude**
Definition	Highest point of the section of line above sea level in reference to Normal Amsterdam's Peil (NAP).
Applicable	Y/NYA
Can be repeated	N
Data presentation	[+/-][NNNN]
General explanation	Normaal Amsterdams Peil (NAP), called also Amsterdam Ordnance Datum, it is a vertical datum commonly in use in Europe as reference level for the description of the height of objects in relation to the sea level. The value of the parameter shall be given in metres, with tolerance of +/-100m.

Number	1.1.1.1.2.8
Title	Existence of severe climatic conditions
XML Name	SOL Track Parameter **IPP_SevereClimateCon**
Definition	Climatic conditions on the line are severe according to European standard.
Applicable	Y/NYA
Can be repeated	N
Data presentation	Single selection from the predefined list: Y N
	Explanation on data presentation: 'Y' shall be selected in case when snow, ice and hail conditions (as defined in TSIs and European standards) indicate that climatic conditions are severe. 'N' to be selected otherwise.
References	EN 50125-1 (1999): 4.7 and 4.8 LOC&PAS TSI:4.2.6.1.2 CR LOC&PAS TSI: 4.2.6.1.5.

Number	**1.1.1.1.3**
Title	**Line layout**
XML Name	**ILL**
Can be repeated	N
Explanation	For the specific track only one line layout may be described
Number	~~1.1.1.1.3.1~~
Title	~~Interoperable gauge~~
XML Name	~~SOL Track Parameter **ILL_InteropGauge**~~
Definition	~~Gauges GA, GB, GC G1, DE3, S, IRL1 as defined in European standard.~~
Explanation on definition	~~For the purpose of RINF only GA, GB, GC, G1, DE3, S, IRL1 were selected as interoperable gauges as they are the only gauges mentioned as performance parameters in CR INF TSI and HS INF TSI.~~
Applicable	~~Y/NYA~~ For facilitating the transition period during which the new parameter gauging is not provided, this parameter will go on being accepted until 16 January 2020 according to RINF Regulation. A “N” value can also be provided .
Data presentation	Single selection from the predefined list: GA GB GC G1 DE3 S IRL1 none
References	EN 15273-3 (2013): Annex C INF TSI: 4.2.3.1 HS INF TSI: 4.2.3 CR INF TSI: 4.2.4.1

Number	~~1.1.1.1.3.2~~
Title	~~Multinational gauges~~
XML Name	~~SOL Track Parameter **ILL_MultiNatGauge**~~
Definition	~~Multilateral gauge or international gauge other than GA, GB, GC, G1, DE3, S, IRL1 as defined in European standard.~~
Explanation to definition	~~For the purpose of RINF only G2, GB1 and GB2 were selected as multinational gauges as they are the only gauges mentioned as multinational/national agreements in the European standard.~~
Applicable	~~Y/N/NYA~~ ~~Y only if "none" is selected in 1.1.1.1.3.1, in other cases the provision of values is voluntary~~ For facilitating the transition period during which the new parameter gauging is not provided, this parameter will go on being accepted until 16 January 2020 according to RINF Regulation. A "N" value can also be provided .
Can be repeated	N
Data presentation	Single selection from the predefined list: G2 GB1 GB2 none
References	EN 15273-3 (2013): Annex D, sections D.1 to D.3 and Annex C, section C.2.1 INF TSI:; 4.2.3.1 HS INF TSI:; 4.2.3 CR INF TSI:; 4.2.4.1
Number	~~1.1.1.1.3.3~~
Title	~~National gauges~~
XML Name	~~SOL Track Parameter **ILL_NatGauge**~~
Definition	~~Domestic gauge as defined in European standard or other local gauge.~~
Can be repeated	~~Y~~ ~~Explanation on Repeatability:~~ ~~When more than one value of the parameter has to be published, then parameter has to be repeated – so many times as many values of the parameter will be published.~~
Applicable	~~Y/N/NYA~~ ~~Y only if "none" is selected in 1.1.1.1.3.2, in other cases the provision of values is voluntary~~

	For facilitating the transition period during which the new parameter gauging is not provided, this parameter will go on being accepted until 16 January 2020 according to RINF Regulation.
Data presentation	Single selection from the predefined list : BE1 BE2 BE3 FR-3.3 PTb PTb+ PTc FIN1 SEa SEc DE1 DE2 Z-GCD UK1 UK1[D] W6 FS S GHE16 GEA16 GEB16 GEC16 IRL1 IRL2 IRL3 …….. other
	Explanation on data presentation: This parameter covers either gauges mentioned in EN or gauges included in national regulations. The list of national gauges will be expanded to express as much as possible the precise information about the gauge and to avoid selection of 'other'. Gauges from BE1 to W6 are mentioned in EN, all others are according the national rules. For example S is for 1520 track gauge system, FS for Italy, IRL 1-3 for Ireland, etc.
Reference	EN 15273-3 (2013): Annex D, section D.4 National Rules

Number	1.1.1.1.3.1.1
Title	Gauging
XML Name	SOL Track Parameter **ILL_Gauging**
Definition	Gauges as defined in European standard or other local gauges, including lower or upper part.
Applicable	Y/NYA
Can be repeated	Y
Explanation on definition	Gauges as defined in European standard or other local gauges, including lower or upper part. In accordance with point 7.3.2.2 in Regulation (EU) 1302/2014, sections of lines of the United Kingdom of Great Britain network may not have gauge reference profile.
Applicable	Y/N/NYA It is allowed, until 16 January 2020, not to provide an xml line for new parameters whose submission deadline is 16 January 2020. After 16 January 2020: Y/NYA
Mandatory	M
Data presentation	Single selection from the predefined list: GA GB GC G1 DE3 G2 GB1 GB2 BE1 BE2 BE3 FR-3.3 PTb PTb+ PTc FIN1 SEa SEc DE1 DE2 Z-GCD UK1 UK1[D] W6 FS S GHE16 GEA16 GEB16 GEC16 IRL1 IRL2 IRL3 GI1 GI2 GI3

	GEE10 GED10 AFM 423 other
Explainations on the use of this parameters	Other values than the already identified in the list above are possible. They will be introduced by the Agency on request via a process of change request. The previous parameters related to the gauge will be deleted foolwing the mandatory provision of the "gauging" parameter foreseen by the RINF Regulation on 16 January 2020.
References	~~EN 15273-3 (2013): Annex C taking into account corrigendum A1.~~ EN15273-3 (2013): Annex C and Annex D INF TSI: 4.2.3.1

Number	1.1.1.1.3.1.2
Title	Railway location of particular points requiring specific checks
XML Name	SOL Track Parameter **ILL_GaugeCheckLoc**
Definition	Location of particular points requiring specific checks due to deviations from gauging referred to in 1.1.1.1.3.1.1.
Explanation on Definition	The railway location identifies the location of the structure in the system of reference of the line.towhich the track belongs. This parameter is applicable when the conditions for the application of the gauge are not fulfilled (for example when the radius is 125 m and the minimum radius admitted for the gauge GC is 150 m).It can also be applicable when the IM wants to highlight als on a particular point and provide info via parameter 1.1.1.1.3.1.3
Applicable	Y/N/NYA This parameter is applicable when the conditions for the application of the gauge are not fulfilled (for example when the radius is 125 m and the minimum radius admitted for the gauge GC is 150 m).It can also be applicable when the IM wants to highlight als on a particular point and provide info via parameter 1.1.1.1.3.1.3
Can be repeated	Y
Data presentation	Predefined CharacterString: [±NNNN.NNN] Explanation on data presentation: The location (generally the distance from the origin of the line to the centre) on a line is given in kilometres with decimals (precision of 0.001). ~~The aim of the "CharacterString" at the end of the format has to precise the name or number of the line.~~ Contrary to the regulation, the reference to the line is not needed : the parameter is still attached to the track of the line
References	

Number	1.1.1.1.3.1.3
Title	Document with the transversal section of the particular points requiring specific checks
XML Name	SOL Track Parameter **ILL_GaugeCheckDocRef**
Definition	Electronic document available from the IM stored by the Agency with the transversal section of the particular points requiring specific checks due to deviations from gauging referred to in 1.1.1.1.3.1.1. Where relevant, guidance for the check with the particular point may be attached to the document with the transversal section.
Explanations	Only the reference of the document must be provided. The parameter must need to be repeated for each document to be refered The parameter has to be repeated for providing the 2 different translations
Applicable	Y/N/NYA
Can be repeated	Y
Data presentation	CharacterString
References	

Number	1.1.1.1.3.4
Title	Standard combined transport profile number for swap bodies
XML Name	SOL Track Parameter **ILL_ProfileNumSwapBodies**
Definition	Coding for combined transport with swap bodies as defined in UIC Code.
Applicable	Y/N/NYA Explanation on applicability: Contrary to the Status of core parameter in the RINF Regulation, N can be used. The selected option shall be 'Y' = applicable if the track belongs to the Trans European Network (TEN)
Can be repeated	Y
Data presentation	Single selection from the predefined list: C 22 C 25 C30 C 32 C 38 C 45 C 50 C 55 C 60

	C 65 C 70 C 80 C 90 C 341 C 349 C 351 C 357 C 364 C 365 C 371 C 380 C384 C 385 C 390 C 395 C 400 C 405 C 410 C 420 C 422 other
	Explanation on data presentation: The technical number is made up of the wagon compatibility code (1 letter) and the standard combined transport profile number (2 digits when width ≤ 2550 mm or 3 digits when, 2550 < width ≤ 2600 mm).
Reference	UIC Code 596-6
Number	1.1.1.1.3.5
Title	Standard combined transport profile number for semi-trailers
XML Name	SOL Track Parameter **ILL_ProfileNumSemiTrailers**
Definition	Coding for combined transport for semi-trailers as defined in UIC Code
Applicable	Y/N/NYA Explanation on applicability: Contrary to the Status of core parameter in the RINF Regulation, N can be used. If the track belongs to the Trans European Network (TEN)., the selected option shall be 'Y' - applicable.
Can be repeated	Y
Data presentation	Single selection from the predefined list:

	P 22 P 25 P 30 P 32 P 38 P 45 P 50 P 55 P 60 P 65 P 70 P 80 P 90 P 341 P 349 P 351 P 357 P 364 P.365 P 371 P 380 P 384 P 385 P 390 P 395 P 400 P 405 P 410 P 420 P 422 other
	Explanation on data presentation: The technical number is made up of the wagon compatibility code (1 letter) and the standard combined transport profile number (2 digits when width ≤ 2500 mm or 3 digits when 2500 < width ≤ 2600 mm).
Reference	UIC Code 596-6
Number	1.1.1.1.3.5.1
Title	Specific information

XML Name	SOL Track Parameter **ILL_SpecificInfo**
Definition	Any specific information from the IM
Explanation on definition	This parameters allows the IM to provide plain text with specific information about the track
Applicable	Y/N/NYA
Data presentation	Characterstring
References	

Number	1.1.1.1.3.6
Title	Gradient profile
XML Name	SOL Track Parameter **ILL_GradProfile**
Definition	Sequence of gradient values and locations of change in gradient
Applicable	Y/NYA
Can be repeated	Y
Data presentation	Predefined CharacterString: [±NN.N] ([±NNNN.NNN])
General explanation	Data on the values of gradient along a SoL is given as a chain of information: Gradient (location) The first location corresponding to the start of the first value of the gradient is the centre point of start OP. If there are different values of the gradient, the parameter will be repeated. The last location will correspond to the point where the last value of the gradient starts This value will be available until the centre point of the end OP. If gradient has only one value along the track then only [+/-NN.N] is required. Gradient is expressed in mm/m; location is expressed in km of the line. Positive gradient (uphill) is marked with '+' and negative gradient (downhill) is marked by '-'. The order in the sequence shall be determined by the normal running direction on the specific track. If it is 'B' (see 1.1.1.0.0.2) then sequence shall follow the increasing kilometres of the line. Changes in gradient shall be registered only as far as necessary for train running calculations (minimum length of constant gradient shall be 500 m, the minimum change of gradient value shall be 0,5 mm/m). The required precision for gradient value is 0,5 mm/m, the required precision of location of the points of change of gradient is 10 m. The points of change of gradient are the points of vertical intersection of each vertical curve.
References	INF TSI: 4.2.3.3 HS TSI INF: 4.2.5 CR TSI INF: 4.2.4.3

Number	1.1.1.1.3.7
Title	Minimum radius of horizontal curve
XML Name	SOL Track Parameter **ILL_MinRadHorzCurve**

Definition	Radius of the smallest horizontal curve of the track in metres.
Applicable	Y/NYA
Can be repeated	N
Data presentation	[NNNNN]
References	INF TSI: 4.2.3.4 CR TSI INF: 4.2.4.4
Explanation	To describe a straight section of line value '99999' shall be used.

Number	**1.1.1.1.4**
Title	**Track parameters**
XML Name	**ITP**
Can be repeated	N

Number	1.1.1.1.4.1
Title	Nominal track gauge
XML Name	SOL Track Parameter **ITP_NomGauge**
Definition	A single value expressed in millimetres that identifies the track gauge
Applicable	Y/NYA
Can be repeated	N
Data presentation	Single selection from the predefined list: 750 1000 1435 1520 1524 1600 1668 other
General explanation	In case of multi-rail track, a set of data is to be published separately to each pair of rails to be operated as separate track (the whole set of parameters for the separate track has to be delivered – be careful then with the track identification).
References	INF TSI: 4.2.4.1 CR INF TSI: 4.2.5 HS INF TSI: 4.2.2

Number	1.1.1.1.4.2
Title	Cant deficiency
XML Name	SOL Track Parameter **ITP_CantDeficiency**
Definition	Maximum cant deficiency expressed in millimetres defined as difference between the applied cant and a higher equilibrium cant the line has been designed for
Applicable	Y/NYA
Can be repeated	N
Data presentation	[+/-] [NNN] Explanations on data presentation: In case of positive value of cant deficiency or zero symbol '+' shall be applied. In case of negative cant deficiency symbol '-' has to be selected. Value of the cant deficiency shall be given in millimetres. In case of lateral uncompensated acceleration on a 1435 mm track gauge of 1.0 m/s^2 the value of 153 mm may be published.
References	INF TSI: 4.2.4.3 HS INF TSI: 4.2.8 CR INF TSI: 4.2.5.4

Number	1.1.1.1.4.3
Title	Rail inclination
XML Name	SOL Track Parameter **ITP_RailInclination**
Definition	An angle defining the inclination of the head of a rail relative to the running surface
Applicable	Y/NYA
Can be repeated	N
Data presentation	[NN]
General explanation	This inclination is in most cases expressed for MS globally, but anyway it requires presentation for the specific track, when in one SoL more values occur. An angle defining the inclination of the head of a rail when installed in the track relative to the plane of the rails (running surface), equal to the angle between the axis of symmetry of the rail (or of an equivalent symmetrical rail having the same rail head profile) and the perpendicular to the plane of the rails. [NN] represents the denominator of the rail inclination expressed as 1/NN. The typical values are 1:20, 1:30, 1:40.
References	INF TSI:4.2.4.7 HS INF TSI: 4.2.11 CR INF TSI: 4.2.5.7

Number	1.1.1.1.4.4
Title	Existence of ballast
XML Name	SOL Track Parameter **ITP_Ballast**
Definition	Specifies whether track construction is with sleepers embedded in ballast or not.
Applicable	Y/N/NYA Y for tracks with permitted speed (parameter 1.1.1.1.2.5) greater than ~~or equal to~~ 250km/h.
Can be repeated	N
Data presentation	Single selection from the predefined list: Y N
General explanation	This parameter is related to phenomena of ballast pick-up observed for the high speed traffic.
Reference	loc&Pas TSI 4.2.6.2.5
Comments	Ballast pick-up is an open point in HS INF TSI and INF TSI: 4.2.10.3 The parameter is about the phenomenon, but not about the ballast itself. As so far any specifications for mitigation of the problem were disclosed, the only information from RINF will be data about the network were the problems may be faced.

Number	**1.1.1.1.5**
Title	**Switches and crossings**
XML Name	**ISC**
Can be repeated	N
Number	1.1.1.1.5.1
Title	TSI compliance of in service values for switches and crossings
XML Name	SOL Track Parameter **ISC_TSISwitchCrossing**
Definition	Switches and crossings are maintained to in service limit dimension as specified in TSI
	Y/NYA
Can be repeated	N
Data presentation	Single selection from the predefined list: Y N
General explanation	If for existing track at least one parameter has less strict value than specified in the TSI, then 'N' shall be selected.
References	INF TSI: 4.2.5 and 4.2.8.6 CR INF TSI: 4.2.6.2 HS INF TSI: 4.2.12
Number	1.1.1.1.5.2
Title	Minimum wheel diameter for fixed obtuse crossings
XML Name	SOL Track Parameter **ISC_MinWheelDiaFixObtuseCrossings**
Definition	Maximum unguided length of fixed obtuse crossings is based on a minimum wheel diameter in service expressed in millimetres.
Applicable	Y/NYA
Can be repeated	N
Data presentation	[NNN]
General explanation	The minimum TSI value is 330 mm and this shall be used as a default value unless advised otherwise. If the value of the wheel diameter is bigger than 330 mm, it has to be specified.
Comments	New lines are assumed to be compliant with the TSI INF. When the line is compliant to TSI the default value of 330 mm has to be presented
References	INF TSI: 4.2.5.3 CR INF TSI: 4.2.6.3; HS INF TSI: 4.2.12.3

Number	**1.1.1.1.6**
Title	**Track resistance to applied loads**
XML Name	**ILR**
Can be repeated	N
Number	1.1.1.1.6.1
Title	Maximum train deceleration
XML Name	SOL Track Parameter **ILR_MaxDeceleration**
Definition	Limit for longitudinal track resistance given as a maximum allowed train deceleration and expressed in metres per square second.
Applicable	Y/N/NYA Explanation on applicability: 'N' shall be selected when specific track is part of a line which is not in the scope of the TSI.
Can be repeated	N
Data presentation	[N.N]
General Explanation	New lines are assumed to be compliant with the TSI INF. For TSI compliant lines the default value of 2.5 m/s^2 shall be presented. If for the design of the track the braking forces where assumed on basis of the deceleration lower value than 2.5 m/s^2, the applied value of the deceleration has to be specified.
References	INF TSI: 4.2.6 HS INF TSI: 4.2.13 CR INF TSI: 4.2.7

Number	1.1.1.1.6.2
Title	Use of eddy current brakes
XML Name	SOL Track Parameter **ILR_EddyCurrentBrakes**
Definition	Indication of limitations on the use of eddy current brakes.
Applicable	Y/NYA
Can be repeated	N
Data presentation	Single choice from the predefined list: allowed allowed under conditions allowed only for emergency brake allowed under conditions only for emergency brake not allowed
Explanations	The use of both brakes is allowed or not under exterior conditions (depending on the features of the train engines for example). The RINF can't be filled without more precisions.
References	INF TSI: 4.2.6.2.2 (open point) CR INF TSI: 4.2.7.2.2 HS TSI: 4.2.13.1

Number	1.1.1.1.6.3
Title	Use of magnetic brakes
XML Name	SOL Track Parameter **ILR_MagneticBrakes**
Definition	Indication of limitations on the use of magnetic brakes.
Applicable	Y/NYA
Can be repeated	N
Data presentation	Single choice from the predefined list: allowed allowed under conditions allowed under conditions only for emergency brake allowed only for emergency brake not allowed
References	INF TSI: 4.2.6.2.2 (open point) CR INF TSI: 4.2.7.2.2 HS INF TSI: 4.2.13.1

Number	1.1.1.1.6.4
Title	Document with the conditions for the use of eddy current brakes
XML Name	SOL Track Parameter **CTD_ECBDocRef**
Definition	Electronic document available in two EU languages from the IM stored by the Agency with conditions for the use of eddy current brakes identified in 1.1.1.1.6.2.
Applicable	Y/N/NYA

	Y if the answer to the1.1.1.1.6.2 Use of eddy current brakes is “allowed under conditions” or “allowed under conditions only for emergency brake”
Can be repeated	Y
Data presentation	CharacterString
	Explanation on data presentation:
References	
Number	1.1.1.1.6.5
Title	Document with the conditions for the use of magnetic brakes
XML Name	SOL Track Parameter **CTD_MBDocRef**
Definition	Electronic document available in two EU languages from the IM stored by the Agency with conditions for the use of magnetic brakes identified in 1.1.1.1.6.3.
Applicable	Y/N/NYA
	Y if the answer to 1.1.1.1.6.3 / Use of magnetic brakes is “allowed under conditions” or “allowed under conditions only for emergency brake”.
Can be repeated	Y
Data presentation	CharacterString
	Explanation on data presentation:
References	

Number	**1.1.1.1.7**
Title	**Health, safety and environment**
XML Name	**IHS**
Can be repeated	N
Number	1.1.1.1.7.1
Title	Use of flange lubrication forbidden
XML Name	SOL Track Parameter **IHS_FlangeLubeForbidden**
Definition	Indication whether the use of on-board device for flange lubrication is forbidden
Applicable	Y/NYA
Can be repeated	N
Data presentation	Single selection from the predefined list: Y N
Number	1.1.1.1.7.2
Title	Existence of level crossings
XML Name	SOL Track Parameter **IHS_LevelCrossing**
Definition	Indication whether level crossings (including pedestrian track crossing)exist on the section of line.
Applicable	Y/NYA
Can be repeated	N
Data presentation	Single selection from the predefined list: Y N
General explanation	Parameter concerns the level crossing of the railway with a road or a street.
Number	1.1.1.1.7.3
Title	Acceleration allowed near level crossing
XML Name	SOL Track Parameter **IHS_AccelerationLevelCrossing**
Definition	Existence of limit for acceleration of train if stopping or recovering speed close to a level crossing expressed in a specific reference acceleration curve ~~in metres per square second.~~
Applicable	Y/N/NYA Explanation on applicability: Applicable only when selected value of parameter 1.1.1.1.7.2 is 'Y'
Can be repeated	N
Data presentation	~~[N.N]~~ Characterstring Explanation on data presentation: The reference of the document defining the limit shall be provided in the characterstring and the document send to the Agency by the NRE . ~~Acceleration shall be presented with precision of 0.1 m/s². If there is no national rules or no limits defined, the value should be [0.0] per default.~~

Number	1.1.1.1.7.4
Title	Existence of trackside hot axle box detector (HABD)
XML Name	SOL Track Parameter **IHS_HABDExist**
Definition	Existence of trackside HABD
Applicable	Y/NYA
Can be repeated	N
Data presentation	Single selection from the predefined list: Y/N
General explanations	
Reference	
Validation	
Number	1.1.1.1.7.5
Title	Trackside HABD TSI compliant
XML Name	SOL Track Parameter **IHS_TSIHABD/**
Definition	Specific for the French, Italian and Swedish networks. Trackside hot axle box detector TSI compliant.
Applicable	Y/N/NYA
Can be repeated	N
Data presentation	Single selection from the predefined list: Y/N
General explanations	
Reference	
Validation	
Number	1.1.1.1.7.6
Title	Identification of trackside HABD

XML Name	SOL Track Parameter **IHS_HABDID**
Definition	Specific for the French, Italian and Swedish networks. Applicable if trackside HABD is not TSI compliant, identification of trackside hot axle box detector.
Applicable	Y/N/NYA Y if the answer to parameter 1.1.1.1.7.5 is N
Can be repeated	N
Data presentation	Characterstring
General explanations	
Reference	
Validation	
Number	1.1.1.1.7.7
Title	Generation of trackside HABD
XML Name	SOL Track Parameter **IHS_HABDGen**
Definition	Specific for the French Italian and Swedish networks. Generation of trackside hot axle box detector.
Applicable	Y/N/NYA
Can be repeated	N
Data presentation	Single selection from the predefined list: Waiting provision of possible answers by the French, Italian and Swedish NREs
General explanations	
Reference	
Validation	
Number	1.1.1.1.7.8
Title	Railway location of trackside HABD
XML Name	SOL Track Parameter **IHS_HABDLoc**

Definition	Specific for the French Italian and Swedish networks. Applicable if trackside HABD is not TSI compliant, localisation of trackside hot axle box detector.
Explanation on Definition	The railway location identifies the location of the HADB in the system of reference of the line.towhich the track belongs
Applicable	Y/N/NYA
Can be repeated	Y
Data presentation	Predefined CharacterString: [±NNNN.NNN]
General explanations	Explanation on data presentation: The location (generally the distance from the origin of the line to the centre) on a line is given in kilometres with decimals (precision of 0.001). The location (generally the distance from the origin of the line to the centre) on a line is given in kilometres with decimals (precision of 0.001). The aim of the "CharacterString" at the end of the format has to precise the name or number of the line. Contrary to the regulation, the reference to the line is not needed : the parameter is still attached to the track of the lineThe aim of the "CharacterString" at the end of the format has to precise the name or number of the line.
Reference	
Validation	
Number	1.1.1.1.7.9
Title	Direction of measurement of trackside HABD
XML Name	SOL Track Parameter **IHS_HABDDirecton**
Definition	Direction of measurement of trackside HABD (Specific for the French Italian and Swedish networks)
Applicable	Y/N/NYA
Can be repeated	N
Data presentation	Single selection from the predefined list: N/O/B
explanations	Specific for the French Italian and Swedish networks. Applicable if trackside HABD is not TSI compliant, direction of measurement of trackside hot axle box detector. If the direction of measurement is: - the same as the direction defined by the start and end of the SoL: (N) - the opposite to the direction defined by the start and end of the SoL: (O) - both directions: (B)
General explanations	
Reference	

Validation	
Number	1.1.1.1.7.10
Title	Steady red lights required
XML Name	SOL Track Parameter **IHS_RedLights**
Definition	Sections where two steady red lights are required in accordance with Implementing Regulation (EU) 2019/773
Applicable	Y/N/NYA
Can be repeated	N
Data presentation	Single selection from the predefined list: Y/N
General explanations	
Reference	
Validation	
Number	1.1.1.1.7.11
Title	Belonging to a quieter route
XML Name	SOL Track Parameter **IHS_QuietRoute**
Definition	Belonging to a “quieter route” in accordance with Article 5b of Regulation (EU) 1304/2014 .
Applicable	Y/NYA
Can be repeated	N
Data presentation	Single selection from the predefined list: Y/N
General explanations	
Reference	
Number	**1.1.1.1.8**
Title	**Tunnel**
XML Name	SOLTunnel
Applicable	Parameters of this group (from 1.1.1.1.8.1 to 1.1.1.1.8.11) are only applicable if tunnels exist on the SoL

Can be repeated	Y
Number	1.1.1.1.8.1
Title	IM's Code
XML Name	SOLTunnelIMCode
Definition	Infrastructure Manager means any body or undertaking that is responsible in particular for establishing and maintaining railway infrastructure or a part thereof.
Applicable	Y
Can be repeated	N
Data presentation	[AAAA]
General explanations	The Code is a unique identifier for the Infrastructure Manager and it shall be verified on national level. - If the IM is subject to TAF/TAP TSIs, it correspond to the code used in TAF/TAP TSIs. - In other cases, it corresponds to the **"organisation code" assigned** by the Agency for the specific needs of the RINF Each Section of Line may concern only one IM.
Reference	Article 3 (2) of Directive 2012/34/EU
Validation	No verification by RINF application. Check of the link between MS and IM' Name must be done nationally.
Number	1.1.1.1.8.2
Title	Tunnel identification
XML Name	SOLTunnelIdentification
Definition	Unique tunnel identification or unique number within Member State
Applicable	Y
Can be repeated	N
Data presentation	CharacterString.
Comments	Here should be given the name, number, code or any other expression which is normally used for the identification of the tunnel other than mentioned in parameters 1.1.1.1.8.3 – 1.1.1.1.8.4. In case when tunnel does not have its own identification within the Member State, the IM should deliver it himself.

Number	1.1.1.1.8.3
Title	Start of tunnel
XML Name	SOLTunnelStart
Definition	Geographical coordinates in decimal degrees and km of the line at the beginning of a tunnel.
Applicable	Y
Can be repeated	N
Data presentation	Predefined CharacterString: [Latitude (NN.NNNN) + Longitude(±NN.NNNN) + km(±NNNN.NNN)]
General Explanations	Geographical coordinates according to the standard World Geodetic System (WGS). Precision for both geographical latitude and geographical longitude is assumed as [NN.NNNN] in degrees with decimals what gives discretion of 10 m in the network. Kilometre shall concern the national line identification given in 1.1.0.0.0.2 Location of the point which is assumed to be the beginning of the tunnel it is the point on the track centre line where is laid the vertical shadow of the extreme part of the tunnel's portal. Data collected in the UK in miles will be transformed to km before uploading to the RINF application.
XML example	<SOLTunnelStart Latitude="51.5479" Longitude="-0.0767" Kilometer="0.270"/>

Number	1.1.1.1.8.4
Title	End of tunnel
XML Name	SOLTunnelEnd
Definition	Geographical coordinates in decimal degrees and km of the line at the end of a tunnel.
Applicable	Y
Can be repeated	N
Data presentation	Predefined CharacterString: [Latitude (NN.NNNN) + Longitude(±NN.NNNN) + km (±NNNN.NNN)]
General Explanations	Geographical coordinates according to the standard World Geodetic System (WGS). Precision for both geographical latitude and geographical longitude is assumed as [NN.NNNN] in degrees with decimals what gives discretion of 10 m in the network. Location of the point which is assumed to be the end of the tunnel it is the point on the track centre line where is laid the vertical shadow of the extreme part of the tunnel's portal. Data collected in the UK in miles will be transformed to km before uploading to the RINF application.
Example	<SOLTunnelEnd Latitude="51.5479" Longitude="-0.0767" Kilometer="0.270"/>

Number	1.1.1.1.8.5
Title	EC declaration of verification for tunnel (SRT)
XML Name	SOL Tunnel Parameter **ITU_ECVerification**
Definition	Unique number for EC declarations following format requirements specified in the 'Document about practical arrangements for transmitting interoperability documents'
Explanation on Definition	(SRT) in title means that here we include only declarations concerning requirements of SRT TSI for infrastructure system on the specific track. Parameter shall be repeated when different EC declarations were issued for different elements of infrastructure subsystem on the specific track in the tunnel.
Applicable	Y/N/NYA Explanation on applicability: "Y" shall be selected in case when EC declaration was issued
Can be repeated	Y
Data presentation	Predefined CharacterString: [CC/RRRRRRRRRRRRR/YYYY/NNNNNN]
General Explanations	With the extension of scope according to Interoperability Directive 2008/57/EC, geographical scope of the INF, ENE and CCS TSIs now includes all the networks (TEN and off-TEN) with the following nominal track gauges: 1435, 1520, 1524, 1600 and 1668 mm
Reference concerning format	'Document about practical arrangements for transmitting interoperability documents' [23]
Validation	The validation is described before this Table, in section 2.3.

Number	1.1.1.1.8.6
Title	EI declaration of demonstration for tunnel (SRT)
XML Name	SOL Tunnel Parameter **ITU_EIDemonstration**
Definition	Unique number for EI declarations following the same format requirements as specified in the 'Document about practical arrangements for transmitting interoperability documents'
Explanation on Definition	(SRT) in title means that here we include only declarations concerning requirements of SRT TSI for infrastructure system on the specific track. Parameter shall be repeated when different EI declarations were issued for different elements of infrastructure subsystem on the specific track in the tunnel.
Can be repeated	Y Explanation on repeatability: It may happen that several EI declarations were issued – then parameter has to be repeated as many times as many declarations were issued.
Applicable	Y/N/NYA Explanation on applicability: "Y" shall be selected in case when the demonstration was executed and EI declaration was issued
Data presentation	Predefined CharacterString: [CC/RRRRRRRRRRRRR/YYYY/NNNNNN])
General Explanations	It may happen that several EI declarations were issued – then parameter has to be repeated as many times as many declarations were issued. The procedure for demonstration that existing network fits to requirements of the TSIs is executed on voluntary bases, so when EI declaration do not exist then the parameter is optional.
References	[22] Recommendation 2014/881/EU [23] 'Document about practical arrangements for transmitting interoperability documents'
Validation	The validation is described before this Table, in section 2.3.

Number	1.1.1.1.8.7
Title	Length of tunnel
XML Name	SOL Tunnel Parameter **ITU_Length**
Definition	Length of a tunnel in metres from entrance portal to exit portal.
Applicable	Y/NYA
	Y only for a tunnel with length of 100 metres or more.
Can be repeated	N
Data presentation	[NNNNN]
	Explanation on data presentation: Length of a tunnel in metres from portal to portal at the level of the top of rail.
Validation	As the validation, whether the parameter is mandatory cannot be performed by the RINF application, the validation has to be done by the NRE.

Number	1.1.1.1.8.8
Title	Cross section area
XML Name	SOL Tunnel Parameter **ITU_CrossSectionArea**
Definition	Smallest cross section area in square metres of the tunnel
Applicable	Y/N/NYA Y if the speed of the line is equal or greater than 200km/h and the length of the tunnel equal or greater than 200 m
Can be repeated	N
Data presentation	[NNN] Explanation on data presentation: Smallest real cross section area (expressed in square metres) of the tunnel.

Number	1.1.1.1.8.8.1
Title	compliance of the tunnel with INF TSI
XML Name	SOL Tunnel Parameter **ITU_TSITunnel**
Definition	compliance of the tunnel with INF TSI at the maximum permitted speed
Applicable	Y/NYA
Can be repeated	N
Data presentation	Single selection from the predefined list: Y/N Explanation on data presentation:

Reference	clause 4.2.10.1 of INF TSI.

Number	1.1.1.1.8.8;2
Title	Document available from the IM with precise description of the tunnel
XML Name	SOL Tunnel Parameter **ITU_TunnelDocRef**
Definition	Electronic document available from the IM stored by the Agency with precise description of the clearance gauge and geometry of the tunnel
Applicable	Y/N/NYA
Can be repeated	Y
Data presentation	Characterstring Explaination: only the reference of the document must be provided here

Number	1.1.1.1.8.9
Title	Existence of emergency plan
XML Name	SOL Tunnel Parameter **ITU_EmergencyPlan**
Definition	Indication whether emergency plan exists.
Applicable	Y/N/NYA
	Explanation on applicability: Y for tunnels longer than 1 km,, in accordance with section 4.4.2 of SRT TSI, the emergency plan is mandatory only for tunnel length of more than 1km. 'N'=not applicable can be selected for short tunnels of less than 1 km, as for them the fire category according SRT TSI does not exist.
Can be repeated	N
Data presentation	Single selection from the predefined list: Y N
General Explanations	Emergency plan has to be a document developed for each tunnel under the direction of the IM, in co-operation, where appropriate, with RUs, Rescue services and relevant authorities. It shall be consistent with the self-rescue, evacuation and rescue facilities provided.
References	SRT TSI: 4.4.2 OPE TSI: 4.2.3.7

Number	1.1.1.1.8.10
Title	Fire category of rolling stock required
XML Name	SOL Tunnel Parameter **ITU_FireCatReq**
Definition	Categorisation on how a passenger train with a fire on board will continue to operate for a defined time period
	Y/N/NYA
	Explanation on applicability: 'N'=not applicable shall be selected for short tunnels of less than 1 km, as for them the fire category according SRT TSI does not exist.
Can be repeated	N
Data presentation	Single selection from the predefined list: A B none
	Explanation on data presentation: Wherever category B is not needed, generally the category A has to be understood as the default value. 'None' shall be selected when none of A or B fire category is applied for a specific tunnel.
References	SRT TSI: 1.1.3 LOC&PAS TSI: 4.2.10.1

Number	1.1.1.1.8.11
Title	National fire category of rolling stock required
XML Name	SOL Tunnel Parameter **ITU_NatFireCatReq**
Definition	Categorisation on how a passenger train with a fire on board will continue to operate for a defined time period - according to national rules if they exist.
Can be repeated	N
Applicable	Y/N/NYA
	Explanation on applicability: 'Y' only for tunnels when for the parameter 1.1.1.1.8.10 the option 'none' was selected and national rules are existing. 'N'=not applicable shall be selected when respective national rules do not exist
Data presentation	CharacterString
	Explanation on data presentation: Data shall include both the category and brief name of the document introducing the categorisation

Number	**1.1.1.2**
Title	**Energy subsystem**
Can be repeated	N

Number	**1.1.1.2.1**
Title	**Declarations of verification for track**
XML Name	**EDE**
Can be repeated	N

Number	1.1.1.2.1.1
Title	EC declaration of verification for track (ENE)
XML Name	SOL Track Parameter **EDE_ECVerification**
Definition	Unique number for EC declarations following format requirements specified in the 'Document about practical arrangements for transmitting interoperability documents'
Explanation on Definition	(ENE) in title means that here we include only declarations concerning energy subsystem on the specific track.
Applicable	Y/N/NYA Explanation on applicability: "Y" shall be selected in case when EC declaration was issued
Can be repeated	Y Explanation on repeatability: Parameter shall be repeated when different EC declarations were issued for different elements of energy subsystem on the specific track.
Data presentation	Predefined CharacterString: [CC/RRRRRRRRRRRRR/YYYY/NNNNNN]
General Explanations	The required value is the number of the EC declaration presented in format defined for ERADIS. With the extension of scope according to Interoperability Directive 2008/57/EC, geographical scope of the ENE TSI now includes all the networks (TEN and off-TEN) with the following nominal track gauges: 1435, 1520, 1524, 1600 and 1668 mm
Reference concerning format	'Document about practical arrangements for transmitting interoperability documents' [23]
Validation	The validation is described before this Table, in section 2.3.

Number	1.1.1.2.1.2
Title	EI declaration of demonstration for track (ENE)
XML Name	SOL Track Parameter **EDE_EIDemonstration**
Definition	Unique number for EI declarations following the same format requirements as specified in the 'Document about practical arrangements for transmitting interoperability documents'.
Explanation on Definition	(ENE) in title means that here we include only declarations concerning energy subsystem on the specific track.
Applicable	Y/N/NYA Explanation on applicability: "Y" shall be selected in case when the demonstration was executed and EI declaration was issued
Can be repeated	Y Explanation on repeatability: Parameter shall be repeated when different EI declarations were issued for different elements of energy subsystem on the specific track.
Data presentation	Predefined CharacterString: [CC/RRRRRRRRRRRRR/YYYY/NNNNNN])
General Explanations	It may happen that several EI declarations were issued – then parameter has to be repeated as many times as many declarations were issued. The procedure for demonstration that existing network fits to requirements of the TSIs is executed on voluntary bases, so when EI declaration do not exist then the parameter is optional. If EI declaration was not issued then field shall be left empty.
References	[22] Recommendation 2014/881/EU [23] 'Document about practical arrangements for transmitting interoperability documents'
Validation	The validation is described before this Table, in section 2.3.

Number	**1.1.1.2.2**
Title	**Contact line system**
XML Name	**ECS**
Can be repeated	N

Number	1.1.1.2.2.1.1
Title	Type of contact line system
XML Name	SOL Track Parameter **ECS_SystemType**
Definition	Indication of the type of the contact line system.
Applicable	Y/NYA
Can be repeated	Y If this parameter is repeated, parameters 1.1.1.2.2.1.2 , and 1.1.1.2.2.2 shall be created also for the corresponding type. These two parameters are to be considered children of the current. For grouping “children” parameters of the current parameter, an XML attribute called “Set” must be declared at the parent and childrent levels with the same keyword value. Modification already accepted from the paragraph above
	~~If this parameter is repeated, parameters 1.1.1.2.2.1.2 , and 1.1.1.2.2.2 shall be created also for the corresponding type. These two parameters are to be considered children of the current. For grouping “children” parameters of the current parameter, an XML attribute called “set” must be declared at the parent and childrent levels with the same keyword value.~~ If this parameter is repeated, parameters 1.1.1.2.2.1.2 , 1.1.1.2.2.2 , 1.1.1.2.2.4 and 1.1.1.2.5.1 shall be created also for the corresponding type. These four parameters are to be considered children of the current. For grouping “children” parameters of the current parameter, an XML attribute called “set” must be declared at the parent and childrent levels with the same keyword value.
Data presentation	Single selection from the predefined list: Overhead contact line (OCL) Third Rail Fourth Rail Not electrified
Comments	When the value "not electrified" is chosen, all parameters 1.1.1.2.2.1.2 - 1.1.1.2.5.3 are not applicable. When the value “Third Rail” or “Fourth Rail” is chosen , parameters 1.1.1.2.2.3, 1.1.1.2.2.5 - 1.1.1.2.4.2.2, 1.1.1.2.5.2 and 1.1.1.2.5.3 are not applicable

Number	1.1.1.2.2.1.2
Title	Energy supply system (Voltage and frequency)
XML Name	SOL Track Parameter **ECS_VoltFreq**
Definition	Indication of the traction supply system (nominal voltage and frequency)
Applicable	Y/N/NYA
	Explanation on applicability: When "not electrified" is chosen in parameter 1.1.1.2.2.1.1, then this parameter is not applicable.
Can be repeated	Y **An XML attribute called "Set" will be used to link the value of this parameter to the parameter 1.1.1.2.2.1.1 / ECS_SystemType**
Data presentation	Single selection from the predefined list: AC 25kV-50Hz AC 15kV-16.7Hz DC 3kV DC 1.5kV DC (Specific Case FR) DC 750V DC 650V DC 600V other
	Explanation on data presentation: If the real values exceed range of the EN 50163:2004, then option 'other' shall be selected.
References	ENE TSI: 4.2.3 EN 50163:2004: clause 4

Number	1.1.1.2.2.1.2.1 (Parameter not in RINF Regulation, introduced to align it with OPE TSI annex D1)
Title	Energy supply system TSI compliant
XML Name	SOL Track Parameter **ECS_TSIVoltFreq**
Definition	indication if the traction supply system (nominal voltage and frequency) is fully compliant with TSI
Applicable	Y/N/NYA
	Explanation on applicability: When "not electrified" is chosen in parameter 1.1.1.2.2.1.1, then this parameter is not applicable.
Can be repeated	Y

	An XML attribute called "Set" will be used to link the value of this parameter to the parameter 1.1.1.2.2.1.1 / ECS_SystemType
Data presentation	Single selection from the predefined list: Y N
	Explanation on data presentation:
References	
Number	1.1.1.2.2.1.3
Title	Umax2 for lines referred to in sections 7.4.2.2.1 and 7.4.2.11.1 of Regulation (EU) 1301/2014.
XML Name	SOL Track Parameter **ECS_Umax2**
Definition	Specific for the French network Highest non-permanent voltage according to EN50163 for the lines referred to in point 7.4.2.2.1 and 7.4.2.11.1 of Regulation (EU) 1301/2014.
Applicable	Y/N/NYA
	Explanation on applicability: When "not electrified" is chosen in parameter 1.1.1.2.2.1.1, then this parameter is not applicable.
Can be repeated	Y **An XML attribute called "Set" will be used to link the value of this parameter to the parameter 1.1.1.2.2.1.1 / ECS_SystemType**
Data presentation	[NNNNNN]
	Explanation on data presentation:
References	

Number	1.1.1.2.2.2
Title	Maximum train current
XML Name	SOL Track Parameter **ECS_MaxTrainCurrent**
Definition	Indication of the maximum allowable train current expressed in amperes.
Explanation on Definition	Maximum current taken by the complete train (composition of one or more units). The value shall be given in amperes.
Applicable	Y/N/NYA Explanation on applicability: When "not electrified" is chosen in parameter 1.1.1.2.2.1.1, then this parameter is not applicable.
Can be repeated	Y depending to the energy supply system (see 1.1.1.2.2.1.2) , SOL Track Parameter ECS_MaxTrainCurrent will be provided for each of selected voltage frequency **An XML attribute called "Set" will be used to link the value of this parameter to the parameter 1.1.1.2.2.1.1 / ECS_SystemType and to the parameter 1.1.1.2.2.1.2 / ECS_VoltFreq**
Data presentation	[NNNN]
Reference	ENE TSI: 4.2.4.1

Number	1.1.1.2.2.3
Title	Maximum current at standstill per pantograph
XML Name	SOL Track Parameter **ECS_MaxStandstillCurrent**
Definition	Indication of the maximum allowable train current at standstill for DC systems expressed in amperes.
Explanation on Definition	Parameter related to current taken by the vehicle when it is not in a traction or regenerative mode, e.g. preheating, air-condition, etc.
Applicable	Y/N/NYA Explanation on applicability: This parameter is applicable ("Y") only if "Overhead contact line (OCL)" is selected for parameter 1.1.1.2.2.1.1 and if DC system is selected in 1.1.1.2.2.1.2
Can be repeated	Y **An XML attribute called "Set" will be used to link the value of this parameter to the parameter 1.1.1.2.2.1.1 / ECS_SystemType and to the parameter 1.1.1.2.2.1.2 / ECS_VoltFreq**
Data presentation	[NNN]
References	ENE TSI: 4.2.6, LOC&PAS TSI: 4.2.8.2.5

Number	1.1.1.2.2.4
Title	Permission for regenerative braking
XML Name	SOL Track Parameter **ECS_RegenerativeBraking**
Definition	Indication whether regenerative braking is permitted or not.
Applicable	Y/N/NYA
	Explanation on applicability: When "not electrified" is chosen in parameter 1.1.1.2.2.1.1, then this parameter is not applicable
Can be repeated	Y An XML attribute called “Set” will be used to link the value of this parameter to the parameter 1.1.1.2.2.1.1 / ECS_SystemType
Data presentation	Single selection from the predefined list: Y N “allowed under conditions”
	Explanation on data presentation: When regenerative braking is permitted (also when under conditions) – then shall be selected ‘yes’, when it is not permitted – then shall be selected ‘no’.

Number	1.1.1.2.2.5
Title	Maximum contact wire height
XML Name	SOL Track Parameter **ECS_MaxWireHeight**
Definition	Indication of the maximum contact wire height expressed in metres.
Applicable	Y/N/NYA
	Explanation on applicability: This parameter is applicable (“Y”) only if “Overhead contact line (OCL)” is selected in 1.1.1.2.2.1.1
Can be repeated	N
Data presentation	[N.NN]
	Explanation on data presentation: The value given can be design value or the last known measured value. If there is no change in height, nominal value will be given. Values shall be given in metres with precision of 0.01 m.

Number	1.1.1.2.2.6
Title	Minimum contact wire height
XML Name	SOL Track Parameter **ECS_MinWireHeight**
Definition	Indication of the minimum contact wire height expressed in metres.
Applicable	Y/N/NYA
	Explanation on applicability: This parameter is applicable (“Y”) only if “Overhead contact line (OCL)” is selected in 1.1.1.2.2.1.1
Can be repeated	N
Data presentation	[N.NN]
	Explanation on data presentation: The value given can be design value or the last known measured value. If there is no change in height, nominal value will be given. Values shall be given in metres with precision of 0.01 m.

Number	**1.1.1.2.3**
Title	**Pantograph**
XML Name	**EPA**
Can be repeated	N

Number	1.1.1.2.3.1
Title	Accepted TSI compliant pantograph heads
XML Name	SOL Track Parameter **EPA_TSIHeads**
Definition	Indication of which TSI compliant pantograph heads are allowed to be used.
Applicable	Y/N/NYA
	Explanation on applicability: This parameter is applicable (“Y”) only if “Overhead contact line (OCL)” is selected for 1.1.1.2.2.1.1, It is not applicable (“N") if there is no contact line.
Can be repeated	Y
Data presentation	Single selection from the predefined list: 1950 mm (Type 1) 1950 mm (Type 1) with insulated horns. 1600 mm (EP) 2000 mm – 2260 mm none
	Explanation on data presentation: The parameter can contain more than one pantograph defined in LOC&PAS TSI. Presentation of those pantographs is done by repetition of the parameter with a single selection. If declaring acceptance of pantograph heads 1950 (type 1), both insulated and conductive horns shall be accepted.

References	LOC&PAS TSI: 4.2.8.2.9.2 EN 50367 (2012): Annex A.2 and EN 50206-1 (2010):4.2 and 6.2.3
Number	1.1.1.2.3.2
Title	Accepted other pantograph heads
XML Name	SOL Track Parameter **EPA_OtherHeads**
Definition	Indication of which pantograph heads are allowed to be used
Applicable	Y/N/NYA
	Explanation on applicability: This parameter is applicable ("Y") only if "Overhead contact line (OCL)" is selected in 1.1.1.2.2.1.1
Can be repeated	Y
	Explanation on repeatability: When more than one value of the parameter has to be published, then parameter has to be repeated as many times as many values of the parameter will be published.
Data presentation	Single selection from the predefined list: 1950 mm (Type2) 1950 mm (PL) 1800 mm (NO,SE) 1760 mm (BE) 1600 mm (GB,CTRL) 1600 mm (GB) 1450 mm other none
	Explanation on data presentation: The parameter may contain more than one type of the pantograph head – all of them shall be indicated by repetition of the parameter with different single selections. Option 'other' shall be selected for types of pantograph heads not specified in the predefined list.
References	LOC&PAS TSI: 7.3.2.14 (specific cases), EN 50367 (2012): Annex B

Number	1.1.1.2.3.3
Title	Requirements for number of raised pantographs and spacing between them, at the given speed
XML Name	SOL Track Parameter **EPA_NumRaisedSpeed**
Definition	Indication of maximum number of raised pantographs per train allowed and minimum spacing centre line to centre line of adjacent pantograph heads, expressed in metres, at the given speed
Applicable	Y/N/NYA
	Explanation on applicability: This parameter is applicable ("Y") only if "Overhead contact line (OCL)" is selected in 1.1.1.2.2.1.1
Can be repeated	Y
Data presentation	Predefined CharacterString: [N] [NNN] [NNN]
	Explanation on data presentation: [N] is number of pantographs. First [NNN] is minimum distance between pantographs, in metres. Second [NNN] is the speed considered in km/h. Data collected in the UK in miles per hour will be transformed to km per hour before uploading to the RINF application.
General Explanations	This parameter gives the information about the number of pantographs and the distance between them at a given speed for which the Overhead Contact Line (OCL) has been designed. As for different speeds different combinations of number of pantographs and distance between them may exist, so this parameter can be repeated to present all of them.
References	ENE TSI: 4.2.13 ; LOC&PAS TSI: 4.2.8.2.9.7

Number	1.1.1.2.3.4
Title	Permitted contact strip material
XML Name	SOL Track Parameter **EPA_StripMaterial**
Definition	Indication of which contact strip materials are permitted to be used.
Applicable	Y/N/NYA
	Explanation on applicability: This parameter is applicable ("Y") only if "Overhead contact line (OCL)" is selected in 1.1.1.2.2.1.1
Can be repeated	Y
	Explanation on repeatability: When more than one value of the parameter has to be published, then parameter has to be repeated – as many times as many values of the parameter will be published.
Data presentation	Single selection from the predefined list: copper plain carbon copper steel copper alloy impregnated carbon ([NN] % of metallic content) carbon with additive material carbon with cladded copper sintered copper other
	Explanation on data presentation: [NN] for impregnated carbon concern the metallic content in %. In case of selection of this option, the respective value of the metallic content has to be added. [NN] is the maximum percentage allowed. In case of permitted material different than specified in predefined list, the option 'other' shall be selected.
Reference	LOC&PAS TSI: 4.2.8.2.9.4.2

Number	**1.1.1.2.4**
Title	**OCL separation sections**
XML Name	**EOS**
Can be repeated	N

Number	1.1.1.2.4.1.1
Title	Phase separation
XML Name	SOL Track Parameter **EOS_Phase**
Definition	Indication of existence of phase separation and required information.
Applicable	Y/N/NYA
	Explanation on applicability: This parameter is applicable (“Y”) only if “Overhead contact line (OCL)” is selected in 1.1.1.2.2.1.1
Can be repeated	N
Data presentation	Single selection from the predefined list Y N
	Explanation on data presentation: In case of existence of phase separation on the track or on the section of the line the option ‘Y’ shall be selected.
Number	1.1.1.2.4.1.2
Title	Information on phase separation
XML Name	SOL Track Parameter **EOS_InfoPhase**
Definition	Indication of required several information on phase separation
Applicable	Y/N/NYA
	Explanation on applicability: Applicable when in parameter 1.1.1.2.4.1.1 selected option is ‘Y’
Can be repeated	N
Data presentation	Predefined CharacterString: length [NNN] + switch off breaker [Y/N] + lower pantograph [Y/N])
	Explanation on data presentation: + ‘length [NNN]’ – the length of the phase separation in metres + ‘switch off breaker [Y/N]’ – single selection of ‘Y=yes’ or ‘N=no’ to show whether the breaker has to be switched off + ‘lower pantograph [Y/N]’ – single selection of ‘Y=yes’ or ‘N=no’ to show whether the pantograph has to be lowered
References	ENE TSI: 4.2.15

Number	1.1.1.2.4.2.1
Title	System separation
XML Name	SOL Track Parameter **EOS_System**
Definition	Indication of existence of system separation
Applicable	Y/N/NYA
	Explanation on applicability: This parameter is applicable (“Y”) only if the value “Overhead contact line (OCL)” is selected for 1.1.1.2.2.1.1
Can be repeated	N
Data presentation	Single selection from predefined list Y N
	Explanation on data presentation: In case of existence of system separation on the track or on the section of the line and required information on the section of the line, the option ‘Y=yes’ shall be selected.
Number	1.1.1.2.4.2.2
Title	Information on system separation
XML Name	SOL Track Parameter **EOS_InfoSystem**
Definition	Indication of required several information on system separation
Applicable	Y/N/NYA
	Explanation on applicability: Selection ‘Y’=yes when in parameter 1.1.1.2.4.2.1 selected option is ‘Y’.
Can be repeated	N
Data presentation	Predefined CharacterString: length [NNN] + switch off breaker [Y/N] + lower pantograph [Y/N] +[CharacterString] ~~+ change supply system [Y/N]~~
	Explanation on data presentation: + ‘length [NNN]’ – the length of the system separation in metres + ‘switch off breaker [Y/N]’ – single selection of ‘Y=yes’ or ‘N=no’ to show whether the breaker has to be switched off + ‘lower pantograph [Y/N]’ – single selection of ‘Y=yes’ or ‘N=no’ to show whether the pantograph has to be lowered + [CharacterString] ~~‘change supply system [Y/N]’ - single selection of ‘Y=yes’ or ‘N=no’~~ to show whether the supply system has to be changed.
References	ENE TSI: 4.2.16
Number	1.1.1.2.4.3

Title	Distance between signboard and phase separation ending
XML Name	SOL Track Parameter **EOS_DistSignToPhaseEnd**
Definition	Specific for route compatibility check on French network. Distance between the signboard authorizing the driver to “raise pantograph” or “close the circuit breaker” after passing the phase separation and the end of the phase separation section.
Applicable	Y/N/NYA
	Explanation on applicability: Specific for route compatibility check on French network.
Can be repeated	N
Data presentation	Predefined CharacterString: [NNN]
	Explanation on data presentation: The distance is expressed in meters
References	
Number	**1.1.1.2.5**
Title	**Requirements for rolling stock**
XML Name	**ERS**
Can be repeated	N
Number	1.1.1.2.5.1
Title	Current or power limitation on board required
XML Name	SOL Track Parameter **ERS_PowerLimitOnBoard**
Definition	Indication of whether an on board current or power limitation function on vehicles is required.
Applicable	Y/N/NYA
	Explanation on applicability: When "not electrified" is chosen in parameter 1.1.1.2.2.1.1, then this parameter is not applicable selection ‘N’.
Can be repeated	Y An XML attribute called “Set” will be used to link the value of this parameter to the parameter 1.1.1.2.2.1.1 / ECS_SystemType
Data presentation	Single selection from predefined list: Y N
References	LOC&PAS TSI: 4.2.8.2.4
Number	1.1.1.2.5.2.

Title	Contact force permitted
XML Name	SOL Track Parameter **ERS_ContactForce**
Definition	Indication of contact force allowed expressed in newtons
Applicable	Y/N/NYA
	Explanation on applicability: This parameter is applicable (“Y”) only if the value “Overhead contact line (OCL)” is selected for 1.1.1.2.2.1.1
Can be repeated	N
Data presentation	CharacterString
	Explanation on data presentation: The force is either given as: a value of the static force and of the maximum force expressed in newtons, or as a formula for function of the speed.
Comments	The formula of the function shall represent the curve describing the value of the contact force in relation to the speed. Static and maximum forces are given only for the maximum permitted line speed (see parameter number 1.1.1.1.2.5).
References	EN 50367:2012 Annex A
Number	1.1.1.2.5.3
Title	Automatic dropping device required
XML Name	SOL Track Parameter **ERS_AutoDropRequired**
Definition	Indication of whether an automatic dropping device (ADD) required on the vehicle.
	Y/N/NYA
	Explanation on applicability: This parameter is applicable (“Y”) only if the value “Overhead contact line (OCL)” is selected for 1.1.1.2.2.1.1
Can be repeated	N
Data presentation	Single selection from the predefined list: Y N
Reference	EN 50206-1:2010

Number	**1.1.1.3**
Title	**Control-command and signalling subsystem**
Can be repeated	N

Number	**1.1.1.3.1**
XML Name	**CDE**
Title	**Declarations of verification for track**
Can be repeated	N

Number	1.1.1.3.1.1
Title	EC declaration of verification for track (CCS)
XML Name	SOL Track Parameter **CDE_ECVerification**
Definition	Unique number for EC declarations following format requirements specified in the 'Document about practical arrangements for transmitting interoperability documents'
Explanation on Definition	(CCS) in title means that here we include only declarations concerning command – control and signalling subsystem on the specific track.
Applicable	Y/N/NYA Explanation on applicability: "Y" shall be selected in case when EC declaration was issued
Can be repeated	Y Explanation on repeatability: For the specific track the several EC declarations may be issued, so parameter has to repeated as many times as many numbers of declarations has to be presented.
Data presentation	Predefined CharacterString: [CC/RRRRRRRRRRRRR/YYYY/NNNNNN]
General Explanations	With the extension of scope according to Interoperability Directive 2008/57/EC, geographical scope of the CCS TSI now includes all the networks (TEN and off-TEN) with the following nominal track gauges: 1435, 1520, 1524, 1600 and 1668 mm
Reference concerning format	'Document about practical arrangements for transmitting interoperability documents' [23]
Validation	The validation is described before this Table, in section 2.3.

Number	**1.1.1.3.2**
Title	**TSI compliant train protection system (ETCS)**
XML Name	**CPE**
Can be repeated	N

Number	1.1.1.3.2.1
Title	ETCS level
XML Name	SOL Track Parameter **CPE_Level**
Definition	ERTMS / ETCS application level related to the track side equipment.
Applicable	Y/NYA
Can be repeated	Y If this parameter is repeated, parameter 1.1.1.3.2.2 shall be created also for the corresponding type. This parameter is to be considered children of the current. For grouping "children" parameters of the current parameter, an XML attribute called "Set" must be declared at the parent and childrent levels with the same keyword value.
Data presentation	Single selection from the predefined list: N 0 1 2 3 NTC
	Explanation on data presentation: The different ERTMS / ETCS application levels are a way to express the possible operating relationships between track and train. Level definitions are principally related to the track side equipment used, to the way the track side information reaches the on board units and to which functions are processed in the track side and in the on board equipment respectively.
Validation	~~If "N" (= no ETCS on the trackside) is chosen from the list, all other ETCS parameters (from 1.1.1.3.2.2 to 1.1.1.3.2.7) are not applicable.~~ If ETCS is on the trackside ('N' is not selected), all other ETCS parameters (from 1.1.1.3.2.2 to 1.1.1.3.2.10) are applicable
References	CCS TSI: 2.3
Number	1.1.1.3.2.2
Title	ETCS baseline
XML Name	SOL Track Parameter **CPE_Baseline**
Definition	ETCS baseline installed lineside.
Applicable	Y/N/NYA
	Explanation on applicability: ~~Not applicable ('N') when selected value for 1.1.1.3.2.1 is 'N'.~~ Only applicable when selected value for 1.1.1.3.2.1 is not 'N'
Can be repeated	Y : SOL Track Parameter CPE_Baseline will be provided for each of selected ETCS Level (SOL Track Parameter CPE_Level) An XML attribute called "Set" will be used to link the value of this parameter to the ETCS Level .
Data presentation	Single choice from the predefined list prebaseline 2 baseline 2

	baseline 3 Maintenance release 1 baseline 3 release 2
	Explanation on data presentation: Prebaseline 2 corresponds to older versions, e.g. “corridor 2007”
Reference	~~CCS TSI: Table A2 of Annex 1 of Decision 2012/696/EU~~ CCS TSI: Tables A2.1, A2.2 and A2.3 of Annex A of Regulation (EU) 2016/919
Number	1.1.1.3.2.3
Title	ETCS infill necessary for line access
XML Name	SOL Track Parameter **CPE_Infill**
Definition	Indication whether infill is required to access the line for safety reasons.
Explanation on definition	Infill is the criterion for a vehicle to get access to the ~~network~~.line.
Applicable	Y/N/NYA
	Explanation on applicability: Only-applicable when selected value for 1.1.1.3.2.1 is ‘1’.
Can be repeated	N
Data presentation	Single selection from the predefined list: Y / N
General Explanations	As indicated in CCS TSI section 7.2.6 an ETCS Level 1 trackside application may require that the on-board is equipped with the corresponding in-fill data transmission (Euroloop or radio) if the relase speed is set to zero for safety reasons.
Reference	CCS TSI: 7.2.6 and 4.2.3
Number	1.1.1.3.2.4
Title	ETCS infill installed line-side
XML Name	SOL Track Parameter **CPE_InfillLineSide**
Definition	Information about installed trackside equipment capable to transmit infill information by loop or GSM-R for level 1 installation.
Applicable	Y/N/NYA
	Explanation on applicability: Only applicable when selected value for 1.1.1.3.2.1 is ‘1’.
Can be repeated	N
Data presentation	Single choice from the predefined list: None Loop GSM-R radio infill Loop & GSM-R radio infill
Reference	CCS TSI: 4.2.2

Number	1.1.1.3.2.5
Title	ETCS national packet 44 application implemented
XML Name	SOL Track Parameter **CPE_NatApplication**
Definition	Indication whether data for national applications is transmitted between track and train.
Applicable	Y/N/NYA
	Explanation on applicability: ~~Not applicable 'N' when selected value for 1.1.1.3.2.1 is 'N'.~~ Only applicable when selected value for 1.1.1.3.2.1 is not 'N'
Can be repeated	N
Data presentation	Single selection from the predefined list: Y / N
General Explanations	Packets 44 are the means to transmit data for national applications between train and track and vice versa, using the data transmission facilities included within the ETCS. NID_XUSER values managed by ERA in a document about ETCS variables available on ERA website.
Reference	CCS TSI: 6.3.4

Number	1.1.1.3.2.6
Title	Existence of operating restrictions or conditions
XML Name	SOL Track Parameter **CPE_RestrictionsConditions**
Definition	Indication whether restrictions or conditions due to partial compliance with the CCS TSI exist.
Applicable	Y/N/NYA
	Explanation on applicability: ~~Not applicable 'N' when selected value for 1.1.1.3.2.1 is 'N'.~~ Only applicable when selected value for 1.1.1.3.2.1 is not 'N'
Can be repeated	N
Data presentation	Single selection from the predefined list: Y / N
General explanations	In case of Y, the RU have to contact the IM to be informed of these conditions. These conditions and restrictions of use are considered in section 6.4 of the CCS TSI. They should be described using the template available on Agency website (Certification and deviations – Guidelines for using the ERA template) with the following link: https://www.era.europa.eu/activities/european-rail-traffic-management-system-ertms_en#meeting6

Reference	CCS TSI: 6.4

Number	~~1.1.1.3.2.7~~
Title	~~Optional ETCS functions~~
XML Name	~~SOL Track Parameter **CPE_OptionalFunctions**~~
Definition	~~Optional ETCS functions which might improve operation on the line.~~
Applicable	~~Y/N/NYA~~ ~~Explanation on applicability:~~ ~~Not applicable 'N' when selected value for 1.1.1.3.2.1 is 'N'.~~ For facilitating the transition period, this parameter wil go on being accepted.
Can be repeated	~~N~~
Data presentation	~~CharacterString~~ ~~Explanation on data presentation:~~ ~~Optional ETCS functions are given for information only and they are not network access criteria. If such functions do not exist on the respective track then introduce "0" or "no function".~~
Reference	~~CCS TSI: 7.2.6~~

Number	1.1.1.3.2.8
Title	Train integrity confirmation from on-board necessary for line access
XML Name	SOL Track Parameter **CPE_IntegrityConfirmation**
Definition	Indication whether Train Integrity monitoring system (TIMS) is required to access the line for safety reasons.
Applicable	Y/N/NYA Explanation on applicability: Only applicable when selected value for 1.1.1.3.2.1 is '3"
Can be repeated	N
Data presentation	Single selection from the predefined list: Y / N
General Explanations	
Reference	

Number	1.1.1.3.2.9
Title	ETCS system compatibility
XML Name	SOL Track Parameter **CPE_SystemCompatiblity**
Definition	ETCS requirements used for demonstrating technical compatibility.
Applicable	Y/N/NYA Explanation on applicability:

	Only applicable when selected value for 1.1.1.3.2.1 is not 'N'
Can be repeated	Y
Data presentation	Single selection from the predefined list: The list should be provided by CCS experts - - - <None>
General Explanations	As defined in the revised CCS TSI in sections 6.1.2.4 and 6.1.2.5, the Agency will "set up and manage in a technical document the set of checks to demonstrate the technical compatibility of an on-board subsystem with the trackside subsystem". The predefined list of values will follow the changes in that technical document. Each set of checks will have a unique id, like "ESC-1" (final format not defined")."
Reference	CCS TSI: Agency technical document, future chapter 4.2.17and 6.1.2.4 of new CCS TSI
Number	1.1.1.3.2.10
Title	ETCS M_version
XML Name	SOL Track Parameter **CPE_MVersion**
Definition	ETCS M_version according to SRS 7.5.1.9
Applicable	Y/N/NYA
	Explanation on applicability: Only applicable when selected value for 1.1.1.3.2.1 is ~~'1'. Not 'N'~~
Can be repeated	N
Data presentation	Single selection from the predefined list: 1.0 1.1 2.0 2.1
General Explanations	
Reference	CCS TSI: ETCS M_version according to SRS 7.5.1.9
Number	**1.1.1.3.3**
Title	**TSI compliant radio (GSM-R)**
XML Name	**CRG**
Can be repeated	N
Number	1.1.1.3.3.1
Number	GSM-R version
Title	**GSM-R version installed lineside.**
XML Name	SOL Track Parameter CRG_Version
Applicable	Y/NYA

Can be repeated	Y Explanation on repeatability: When more than one value of the parameter has to be published, then parameter has to be repeated – as many times as many values of the parameter will be published. The parameter may be repeated if different versions are installed in different sections of the network.
Data presentation	Single selection from the predefined list: none previous version to Baseline 0 Baseline 0 r3 Baseline 0 r4 Baseline 1
	Explanation on data presentation: Since more than one version may be installed in different areas, the information has to be done by parameter repetition using a single selection.
General Explanations	In case there is no GSM-R network available, please select “none”. In case you have installed FRS 7.3.0/SRS15.3.0, please select “Baseline 0 r3”. In case you have installed FRS 7.4.0/SRS 15.4.0, please select “Baseline 0 r4”. In case you have installed FRS 8.0.0/SRS 16.0.0, please select “Baseline 1”. In case you have installed a version prior to those (i.e. FRS 7/SRS 15 or FRS 6/SRS 14) please select “Previous version to Baseline 0”.
Comments	If "none" is chosen from the list of 1.1.1.3.3.1, all other GSM-R parameters (number 1.1.1.3.3.2 and 1.1.1.3.3.3) are not applicable.
Reference	CCS TSI: Table A2 of Annex 1 of Decision 2012/696/EU
Number	1.1.1.3.3.2
Title	Number of active GSM-R mobiles (EDOR) or simultaneous communication session on-board for ETCS Level 2 (or level 3) needed to perform radio block centre handovers without having an operational disruption
XML Name	SOL Track Parameter **CRG_NumActiveMob**
Definition	
applicability	Y/N/NYA
	Applicable only when level 2 or 3 is selected for parameter 1.1.1.3.2.1
Can be repeated	N
Data presentation	Single selection from the predefined list: 1 2
	Explanation on data presentation: In case there is no ETCS Level 2 in the line (ETCS Level 1), please select “0”. In case there is ETCS Level 2 in the line, the minimum number of EDOR required on board would be 1. In case ETCS baseline 3 release 2 is selected, select “2” Please select ”1” or “2”, taking into account that TSI compliant trains may only be fitted with 1 EDOR.
Reference	No reference in TSI yet.

Number	1.1.1.3.3.3
Title	Optional GSM-R functions
XML Name	SOL Track Parameter **CRG_OptionalFunctions**
Definition	Use of optional GSM-R functions which might improve operation on the line. They are for information only and not for network access criteria.
Applicable	Y/N/NYA
	Explanation on applicability: Not applicable ('N') when "none" is selected in parameter 1.1.1.3.3.1.
Can be repeated	Y
	Explanation on repeatability: To show more than one function by indicating single selection, the parameter has to be repeated as many times as many function has to be presented.
Data presentation	Single selection from the predefined list: Network selection manual (*1) Network selection via balise (*1) Network selection automatic (*1) Public emergency (112) available (*2) Broadcast calls (VBS) used (*3) Text message service used (SMS) (*4) Restriction of display of called/calling user (*5) Automatically forward of incoming call if no reply (*5) Automatically forward of incoming call if not reachable (*5) Use of chargeable Network Services (*6) General data applications ~~and GPRS~~(*7) ~~Direct Mode (*8)~~ ETCS RBC or other devices alerted when initiating a REC (Railway Emergency Call) (*8) Display at the controller terminal of the location of the mobile initiating a REC (Railway Emergency Call) (*8) Use of enhanced Railway Emergency Call (eREC) (*8) GSM-R shunting used (*8) Data recorded in case of Shunting Emergency Call (*8) Extended frequency bands used (*9) ~~Roaming to public networks (*10)~~ ~~Other(*11):~~
	Explanation on data presentation: (*1) These inputs refer to the expected behaviour by your network, i.e. if you have any area or point where an automatic selection of network should be done or if you have any location where you have installed balises to instruct a change of radio network. In order to be able to attend to these indications (automatic network, network change by balise) some configuration is needed in the mobile.

	In case there is a balise used to announce the change of the network, or if there are locations where the network selection is planned by the IM to be done automatically (and not manually, as stated in the requirements). It should be considered as an item that is related to the design of the infrastructure. (*2) the possibility to dial 112 is something specific to the network that should be communicated to the vehicles accessing it. (*3) the use of broadcast calls is something specific to the network that has to be configured in it. (*4) it is something specific to the network that has to be configured in it if the service is provided (*5) it is something specific to the network that has to be configured in it if the service is provided; something has to be configured on the network but also in the mobile if it wants to use the service. What is requested here is the information of the network capability (*6) if they are configured on the network. Please indicate which in the "Other information" box. (*7) To be selected if other data applications, different from ETCS L2, can be used within the network – (*8) if it is configured on the network. Direct mode is a feature of the terminals, so this should be selected if they expect that the cab radios/handsets would be using direct mode. "GSM-R Shunting used" in order to make public if the GSM-R is used in the network for shunting activities. (*9) Please specify in the "Other information" box for which services /applications are they planned and which are the frequencies in use. ~~(*10) if roaming to a public network is configured, please indicate to which networks, for which users and in which areas in the "Other information" box. Please also add if there is any operational restriction for vehicles that cannot roam into any of the available public networks.~~ ~~(*11): Please use this field to indicate any additional information on network characteristics, e.g.; interference level, leading to the need of additional on-board protection; areas where GPRS for ETCS can be used;~~
Number	1.1.1.3.3.3.1
Title	Additional information on network characteristics
XML Name	SOL Track Parameter **CRG_AdditionalnetworkInfo**
Definition	Any additional information on network characteristics or corresponding document available from the IM and stored by the Agency, e.g.; interference level, leading to the recommendation of additional on-board protection
Applicable	Y/N/NYA Explanation on applicability: Not applicable ('N') when "none" is selected in parameter 1.1.1.3.3.1.
Can be repeated	Y Explanation on repeatability:
Data presentation	[characterstring]

explanations	Please use this field to indicate any additional information on network ~~if GPRS can be used for ETCS and in which areas in the "Other information" box~~
Reference	Sections of EIRENE not covered by references in TSI
Number	1.1.1.3.3.3.2
Title	GPRS for ETCS
XML Name	SOL Track Parameter **CRG_GPRSForETCS**
Definition	Indication if GPRS can be used for
Applicable	Y/N/NYA Explanation on applicability: Not applicable ('N') when "none" is selected in parameter 1.1.1.3.3.1 or when 1.1.1.3.2.1 is "N", "NTC", "0" or "1"..
Can be repeated	N Explanation on repeatability:
Data presentation	Single selection from the predefined list: Y / N
explanations	Indicate if GPRS can be used for ETCS
Reference	Sections of EIRENE and ETCS subsets for trackside in TSI
Number	1.1.1.3.3.3.3
Title	Area of implementation of GPRS
XML Name	SOL Track Parameter **CRG_GPRSAreaOfImpl**
Definition	Indication of the area in which GPRS can be used for ETCS
Applicable	Y/N/NYA Explanation on applicability: Not applicable ('N') when "none" is selected in parameter 1.1.1.3.3.1 1 or when 1.1.1.3.2.1 is "N", "NTC", "0" or "1".. Applicable if the answer to 1.1.1.3.3.3.2 / GPRS for ETCS is Y
Can be repeated	Y Explanation on repeatability:
Data presentation	[characterstring]
explanations	Since GPRS can be used for ETCS, indicate in which areas it is implemented (e.g: whole section, only between two signals, at the station…)
Reference	Sections of EIRENE optional for trackside in TSI
Number	1.1.1.3.3.4

Title	Use of group 555
XML Name	SOL Track Parameter **CRG_Needof555**
Definition	Indication if group 555 is needed
Applicable	Y/N/NYA Explanation on applicability: Not applicable ('N') when "none" is selected in parameter 1.1.1.3.3.1.
Can be repeated	N Explanation on repeatability:
Data presentation	Selection from the predefined list: Y/N
explanations	
Reference	Sections of EIRENE not covered by references in TSI
Number	1.1.1.3.3.5
Title	GSM-R networks covered by a roaming agreement
XML Name	SOL Track Parameter **CRG_RoamingAgreement**
Definition	Name of the own GSM-R network and list of GSM-R networks which are covered by a roaming agreement (for CS services.)
Applicable	Y/N/NYA Explanation on applicability: Not applicable ('N') when "none" is selected in parameter 1.1.1.3.3.1.
Can be repeated	Y Explanation on repeatability:
Data presentation	Single selection from the predefined list: GSM-R A (Austria) GSM-R AL (Albania) GSM-R B (Belgium) GSM-R BA (Bosnia Herzegovina) GSM-R BG (Bulgaria) GSM-R BY (Belarus) GSM-R CH (Switzerland) GSM-R CZ (Czech Rep.) GSM-R D (Germany) GSM-R DK (Denmark) GSM-R E (Spain) GSM-R EE (Estonia) GSM-R F (France) GSM-R FI (Finland) GSM-R GB (UK (Great Britain)) GSM-R GR (Greece) GSM-R HR (Croatia) GSM-R HU (Hungary) GSM-R I (Italy) GSM-R IE (Ireland) GSM-R IS (Iceland) GSM-R KO (Kosovo)

	GSM-R L (Luxembourg) GSM-R LT (Lithuania) GSM-R LV (Latvia) GSM-R MD (Moldova) GSM-R ME (Montenegro) GSM-R MK (Macedonia) GSM-R N (Norway) GSM-R NL (Netherlands) GSM-R P (Portugal) GSM-R PL (Poland) GSM-R RO (Romania) GSM-R RU (Russia) GSM-R S (Sweden) GSM-R SI (Slovenia) GSM-R SK (Slovakia) GSM-R SR (Serbia) GSM-R TR (Turkey) GSM-R UA (Ukraine)
explanations	Name of the own GSM-R network and list of ~~public~~ GSM-R networks which are covered by a roaming agreement for CS services. This list is managed by UIC.The Agency will monitor it in oder to update the list of possible values when necessary. For Route Compatibility purposes and simplicity, the own network needs to be declared by the IM, so the RUs can systematically check the compatibility. For voice services, roaming for CS is applicable. For ETCS, as long as roaming for CS is ensured, the interoperability will be guaranteed.
Reference	Sections of EIRENE not covered by references in TSI
Number	1.1.1.3.3.6
Title	Existence of roaming to public networks
XML Name	SOL Track Parameter **CRG_RoamingPublic**
Definition	Existence of roaming to a public networks (if roaming to a public network is configured, please indicate so)
Applicable	Y/N/NYA Explanation on applicability: Not applicable ('N') when "none" is selected in parameter 1.1.1.3.3.1.
Can be repeated	N Explanation on repeatability:
Data presentation	Selection from the predefined list: Y N
explanations	In case of y: provide the name of the public network in parameter 1.1.1.3.3.7

Reference	Sections of EIRENE not covered by references in TSI
Number	1.1.1.3.3.7
Title	Details on roaming to public networks
XML Name	SOL Track Parameter **CRG_RoamingPublicDetails**
Definition	If roaming to public networks is configured, please indicate to which networks, for which users and in which areas.
Applicable	Y/N/NYA Explanation on applicability: Not applicable ('N') when "none" is selected in parameter 1.1.1.3.3.1. Applicable if the answer to parameter 1.1.1.3.3.6 / Existence of roaming to public networks is Y
Can be repeated	N Explanation on repeatability:
Data presentation	Character string
explanations	If roaming to a public network is configured, please indicate to which networks, for which users and in which areas. Please also add if there is any operational restriction for vehicles that cannot roam into any of the available public networks.
Reference	
Number	1.1.1.3.3.8
Title	No GSMR coverage
XML Name	SOL Track Parameter **CRG_GSMRNoCoverage**
Definition	Indication if there're is a no GSMR coverage
Applicable	Y/N/NYA Explanation on applicability: Not applicable ('N') when "none" is selected in parameter 1.1.1.3.3.1.
Can be repeated	N Explanation on repeatability:
Data presentation	Single selection from the predefined list: Y / N
explanations	Indication if there're is a no GSMR coverage
Reference	Sections of EIRENE not covered by references in TSI

Number	1.1.1.3.3.9
Title	Radio system compatibility voice
XML Name	SOL Track Parameter **CRG_RadioCompVoice**
Definition	Radio requirements used for demonstrating technical compatibility voice
Applicable	Y/N/NYA Explanation on applicability: Not applicable ('N') when "none" is selected in parameter 1.1.1.3.3.1.
Can be repeated	~~N~~Y Explanation on repeatability: The vehicles are considered compatible with the infrastructure regarding this parameter, if matches any of the values declared.
Data presentation	Single selection from the predefined list: <None>
explanations	As defined in the revised CCS TSI in sections 6.1.2.4 and 6.1.2.5, the Agency will "set up and manage in a technical document the set of checks to demonstrate the technical compatibility of an on-board subsystem with the trackside subsystem". The predefined list of values will follow the changes in that technical document. Each set of checks will have a unique id, like "ESC-1" (final format not defined")."
Reference	

Number	1.1.1.3.3.10
Title	Radio system compatibility data
XML Name	SOL Track Parameter **CRG_RadioCompData**
Definition	Radio requirements used for demonstrating technical compatibility data voice
Applicable	Y/N/NYA Explanation on applicability: Not applicable ('N') when "none" is selected in parameter 1.1.1.3.3.1.
Can be repeated	~~N~~ Y Explanation on repeatability: The vehicles are considered compatible with the infrastructure regarding this parameter, if matches any of the values declared
Data presentation	Single selection from the predefined list: Waiting the list from Radio experts <None>
explanations	As defined in the revised CCS TSI in sections 6.1.2.4 and 6.1.2.5, the Agency will "set up and manage in a technical document the set of checks to demonstrate the technical compatibility of an on-board subsystem with the trackside subsystem". The predefined list of values will follow the changes in that technical document. Each set of checks will have a unique id, like "ESC-1" (final format not defined")."
Reference	
Number	**1.1.1.3.4**

Title	**Train detection systems fully compliant with the TSI**
XML Name	**CCD**
Can be repeated	N
Number	1.1.1.3.4.1
Title	Existence of train detection system fully compliant with the TSI
XML Name	SOL Track Parameter **CCD_TSITrainDetection**
Definition	Indication if there is any train detection system installed and fully compliant with the CCS TSI requirements.
Applicable	Y/NYA
Can be repeated	N
Data presentation	Single choice from the predefined list: Y N
General Explanations	Verification of compliance with TSI includes application of notified national rules (when they exist).
Reference	CCS TSI: Annex A Index 77
Number	**1.1.1.3.5**
Title	**Train protection legacy systems**
XML Name	**CPO**
Can be repeated	N
Number	~~1.1.1.3.5.1~~
Title	~~Existence of other train protection, control and warning systems installed~~
XML Name	~~SOL Track Parameter **CPO_Installed**~~
Definition	~~Indication if other train protection, control and warning systems in normal operation are installed lineside.~~
~~Applicable~~	~~N/Y/NYA~~ For facilitating the transition period, this parameter wil go on being accepted. N value is accepted
~~Can be repeated~~	~~N~~
~~Data presentation~~	~~Single selection from predefined list:~~ ~~Y~~ ~~N~~
~~General Explanations~~	~~Other systems can be operated in superposition with ETCS on a given track or in absence of ERTMS.~~
~~Reference~~	~~National Rules~~
Number	~~1.1.1.3.5.2~~
Title	~~Need for more than one train protection, control and warning system required on-board Train protection legacy system~~

XML Name	~~SOL Track Parameter **CPO_MultipleRequired**~~
Definition	~~Indication whether more than one train protection, control and warning system is required to be on-board and active simultaneously.of which class B system is installed~~
Applicable	~~Y/N/NYA~~ For facilitating the transition period during which the new parameter gauging is not provided, this parameter wil go on being accepted.
Can be repeated	~~N Y~~
Data presentation	~~Single selection from the predefined list:~~ ~~or Characterstring~~
References	~~National Rules~~ ~~ERA/TD/2011-09 already published~~
	1.1.1.3.5.3
	Train protection legacy system
	SOL Track Parameter **CPO_LegacyTrainProtection**
	Indication of which class B system is installed
Applicable	~~Y/NYA~~ Y/N/NYA It is allowed, until 16 January 2020, not to provide an xml line for new parameters whose submission deadline is 16 January 2020. After 16 January 2020: Y/NYA
Can be repeated	Y
Data presentation	Single selection from the predefined list: None ALSN ASFA ATB First generation ATB new generation ATC v2 ATC vR

	ATP
	ATP-VR/RHK
	BACC
	CAWS
	Chiltern-ATP
	Crocodile
	DAAT
	EBICAB 700 BU
	EBICAB 700 PT
	EBICAB 900 ES
	EuroSIGNUM
	EuroZUB
	EVM
	GNT (Geschwindigkeitsüberwachung für NeiTech-Züge)
	GW ATP
	INDUSI I60
	KCVB
	KCVP
	KVB
	KVBP
	LS
	LZB (LZB L72, LZB L72 CE I and LZB L72 CE II)
	LZB ES
	Mechanical Trainstops
	MEMOR II+
	NEXTEO
	PKP radio system with Radiostop function

	PZB 90 RETB RSDD/SCMT SHP SSC TBL 1 TBL 2 TBL1+ TPWS/AWS TVM 300 TVM 430 ZUB 123
References	version 4.0 of the TD/2011-11 List of CCS Class B systems
Number	**1.1.1.3.6**
Title	**Other radio systems**
XML Name	**CRS**
Can be repeated	N
Number	1.1.1.3.6.1
Title	Other radio systems installed (Radio Legacy Systems)
XML Name	SOL Track Parameter **CRS_Installed**
Definition	~~Indication if other radio systems in normal operation are installed line-side.~~ Indication of radio legacy systems installed.
Applicable	Y/N/NYA
Can be repeated	Y
Data presentation	Single selection from the predefined list: UIC Radio Chapter 1-4 UIC Radio Chapter 1-4+6 UIC Radio Chapter 1- 4 + 6 (Irish system) UIC Radio Chapter 1-4 (TTT radio system installed at Cascais line)

	TTT radio system CP_N PKP radio system TRS — The Czech Railways radio system LDZ radio system CH — Greek Railways radio system (VHF) UIC Radio Chapter Bulgaria The Estonian radio system The Lithuanian radio system 450 Mhz UIC (kanál C) Analogue Radio Germany - UIC 751 BOSCH GSM-P Multikom OMEGA RDZ - in compliance with UIC 751-3 RETB (voice) Radio Network of CFR SRO Shunting Radio Communication System ZUGFUNK 95 ZUGFUNK 2000
Reference	National Rules and version 4.0 of the TD/2011-11 List of CCS Class B systems,
Number	**1.1.1.3.7**
Title	**Train detection systems not fully compliant with the TSI**
XML Name	**CTD**
Can be repeated	N
Number	1.1.1.3.7.1.1
Title	Type of train detection system
XML Name	SOL Track Parameter **CTD_DetectionSystem**
Definition	Indication of types of train detection systems installed.
Applicable	Y/N/NYA NYA for 1.1.1.3.7.1 will trigger NYA for parameters 1.1.1.3.7.2 to 1.1.1.3.7.23
Can be repeated	Y Explanation on repeatability: If this parameter is repeated, parameters 1.1.1.3.7.2 to 1.1.1.3.7.23 shall be created also for the corresponding type. These parameters are to be considered children of the current. But not all parameters are applicable to all types of train detection systems; it depends on the applicability condition.

Data presentation	Single selection from the predefined list: track circuit wheel detector loop
	Explanation on data presentation: Following parameters 1.1.1.3.7.2 -1.1.1.3.7.23 depend on which type of train detection is installed on the track. The option of 'wheel detector' has to be also selected for: wheel sensor for axle counter, pedal or treadle.
Reference	National Rules
Number	1.1.1.3.7.1.2
Title	Type of track circuits or axle counter to which specific checks are needed
XML Name	SOL Track Parameter **CTD_TCCheck**
Definition	Indication of types of train detection systems to which specific checks are needed
Applicable	Y/N/NYA
Can be repeated	Y Explanation on repeatability: An XML attribute called "Set" will be used to link the value of this parameter to the train detection type.
Data presentation	Single selection from the predefined list: waiting proposals of Member States
	Explanation on data presentation:
Reference	National Rules
Number	1.1.1.3.7.1.3
Title	Document with the procedure(s) related to the type of track circuits declared in 1.1.1.3.7.1.2
XML Name	SOL Track Parameter **CTD_TCCheckDocRef**
Definition	Electronic document available in two EU languages from the IM stored by the Agency with precise procedures for the specific check to be performed for train detection systems identified in 1.1.1.3.7.1.2.
Applicable	Y/N/NYA the applicability remains the latitude of the IM
Can be repeated	Y Explanation on repeatability:
Data presentation	Single selection from the predefined list: CharacterString
	Explanation on data presentation:

Reference	National Rules
Number	1.1.1.3.7.1.4
Title	Section with train detection limitation
XML Name	SOL Track Parameter **CTD_TCLimitation**
Definition	Specific for route compatibility check on French network. Sections with: -1 Tonnage circulated per track is inferior to 15000 tons/day/track -2 Directional Interlocking -3 45-second delay for directional interlocking -4 Installation with track circuit announcement -5 Absence of a shunting assistance pedal in the normal direction of circulation for non-reversible double track lines -6 Absence of a shunting assistance pedal regardless of the direction of traffic for single track lines and tracks for two way working -7 Absence of a pedal announcement mechanism -8 45-second delay for specific announcement reset devices
Applicable	Y/N/NYA
Can be repeated	Y Explanation on repeatability:
Data presentation	Single selection from the predefined list: Single selection from the predefined list: [Y / N]+N The number N is between 1 and 8 as from the definition above Explanation on data presentation:
Reference	National Rules
Number	1.1.1.3.7.2.1
Title	TSI compliance of maximum permitted distance between two consecutive axles
XML Name	SOL Track Parameter **CTD_TSIMaxDistConsecutiveAxles**
Definition	Indication whether required distance is compliant with the TSI.
Explanation on Definition	Related to the minimum length of train detection section. This requirement is related to the minimum length of a signalling section, so that if a vehicle does not bridge it, making the train detection system reports it as “unoccupied”.
Applicable	Y/NYA
Can be repeated	Y but only one per train detection type (CTD_DetectionSystem) An XML attribute called “Set” will be used to link the value of this parameter to the train detection type.
Data presentation	Single selection from the predefined list: TSI compliant Not TSI compliant
Reference	CCS TSI: 3.1.2.1 of Annex A, Index 77
Number	1.1.1.3.7.2.2

Title	Maximum permitted distance between two consecutive axles in case of TSI non-compliance
XML Name	SOL Track Parameter **CTD_MaxDistConsecutiveAxles**
Definition	Indication of maximum permitted distance between two consecutive axles in case of TSI non-compliance, given in millimetres
Applicable	Y/N/NYA
	Applicable ('Y') when in 1.1.1.3.7.2.1 selected option is 'Not TSI compliant'
Can be repeated	Y but only one per train detection type (CTD_DetectionSystem) **An XML attribute called "Set" will be used to link the value of this parameter to the train detection type.** Example: <SOLTrackParameter ID="CTD_DetectionSystem" IsApplicable="Y" Value="10" Set="trackcircuit"/> <SOLTrackParameter ID="CTD_TSIMaxDistConsecutiveAxles" IsApplicable="Y" Value="20" Set="trackcircuit"/> <SOLTrackParameter ID="CTD_MaxDistConsecutiveAxles" IsApplicable="Y" Value="123" Set="trackcircuit"/>
Data presentation	[NNNNN]
Reference	CCS TSI: 3.1.2.1 of Annex A, Index 77

Number	1.1.1.3.7.3
Title	Minimum permitted distance between two consecutive axles
XML Name	SOL Track Parameter **CTD_MinDistConsecutiveAxles**
Definition	Indication of distance given in millimetres.
Applicable	Y/N/NYA Explanation on applicability: Applicable ('Y') when parameter 1.1.1.3.7.1 the selected option is 'wheel detector'
Can be repeated	Y An XML attribute called "Set" will be used to link the value of this parameter to the train detection type (see example given for 1.1.1.3.7.2.2 / CTD_TSIMaxDistConsecutiveAxles).
Data presentation	[NNNN]
General Explanation	The distance is that corresponding to the maximum speed of the SoL.The CCS TSI gives formula in accordance with the gauge that apply if the maximum line speed is lower or equal to 350 km/h. It is an open point for line speed higher than 350 km/h. Axle counter systems have to be able to distinguish the detection of an axle by 2 subsequent counters with sufficient resolution; otherwise the result will be a count-error.
Reference	CCS TSI : Annex A , index 77 section 3.1.2.2 and 3.1.2.3 (open point) CCS TSI: Index 77 updated (V2.0 of ERA/ERTMS/033281)

Number	1.1.1.3.7.4
Title	Minimum permitted distance between first and last axle
XML Name	SOL Track Parameter **CTD_MinDistFirstLastAxles**
Definition	Indication of distance given in millimetres.
Explanation on Definition	Related to track circuits or respective specific cases. The electrical joints between adjacent track circuits may have an area where the detection of an axle of a vehicle is not ensured.
Applicable	Y/N/NYA Explanation on applicability: Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'track circuits'.
Can be repeated	Y **An XML attribute called "Set" will be used to link the value of this parameter to the train detection type** (see example given for 1.1.1.3.7.2.2 / CTD_TSIMaxDistConsecutiveAxles).
Data presentation	[NNNNN]
Reference	CCS TSI: 3.1.2.4 of Annex A, Index 77

Number	1.1.1.3.7.5
Title	Maximum distance between end of train and first axle
XML Name	SOL Track Parameter **CTD_MaxDistEndTrainFirstAxle**
Definition	Indication of maximum distance between end of the train and first axle, given in millimetres, applicable for both sides (front and rear) of a vehicle or train.
Applicable	Y/N/NYA Explanation on applicability: Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'track circuits' or 'wheel detector'. A train detection system shall be able to detect: • the first axle before the nose of the train reaches a danger point ahead • the last axle until the tail of the train has passed the danger point.
Can be repeated	Y but only one per train detection type (CTD_DetectionSystem) **An XML attribute called "Set" will be used to link the value of this parameter to the train detection type** (see example given for 1.1.1.3.7.2.2 / CTD_TSIMaxDistConsecutiveAxles).
Data presentation	[NNNN]
General Explanations	Length given in millimetres. Related to track circuits and axle counters. A train detection system shall be able to detect the first axle before the nose of the train reaches a danger point ahead as well as the last axle until the tail of the train has left the danger point. 'Nose' is applicable for both sides (front and rear) of a vehicle or train.
Reference	CCS TSI: 3.1.2.5 (HS) and 3.1.2.6 (other lines) of Annex A, Index 77

Number	1.1.1.3.7.6
Title	Minimum permitted width of the rim
XML Name	SOL Track Parameter **CTD_MinRimWidth**
Definition	Indication of width given in millimetres.
Explanation on Definition	Related to axle counters, pedals and treadles. The detection field of the axle counter is influenced by the wheel which passes. The rim width has to be big enough to influence the field sufficiently to ensure appropriate detection.
Applicable	Y/N/NYA Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'wheel detector'.
Can be repeated	Y **An XML attribute called "Set" will be used to link the value of this parameter to the train detection type** (see example given for 1.1.1.3.7.2.2 / CTD_TSIMaxDistConsecutiveAxles).
Data presentation	Predefined CharacterString: [NNN]
Reference	LOC&PAS TSI: 4.2.3.5.2.2, Table 5.

Number	1.1.1.3.7.7
Title	Minimum permitted wheel diameter
XML Name	SOL Track Parameter **CTD_MinWheelDiameter**
Definition	Indication of wheel diameter given in millimetres.
Explanation on Definition	Compatibility with axle counters. The area of the influence (on the flange surface of a wheel) of the detection field of the axle counter is related to the wheel diameter.
Applicable	Y/N/NYA Explanation on applicability: Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'wheel detector'.
Can be repeated	Y **An XML attribute called "Set" will be used to link the value of this parameter to the train detection type** (see example given for 1.1.1.3.7.2.2 / CTD_TSIMaxDistConsecutiveAxles).
Data presentation	[NNN]
References	LOC&PAS TSI: 4.2.3.5.2.2, Table 5

Number	1.1.1.3.7.8
Title	Minimum permitted thickness of the flange
XML Name	SOL Track Parameter **CTD_MinFlangeThickness**
Definition	Indication of flange thickness given in millimetres.
Applicable	Y/N/NYA Explanation on applicability: Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'wheel detector'.
Can be repeated	Y An XML attribute called "Set" will be used to link the value of this parameter to the train detection type (see example given for 1.1.1.3.7.2.2 / CTD_TSIMaxDistConsecutiveAxles).
Data presentation	[NN.N]
General Explanations	Compatibility with axle counters, pedals and treadles. The detection field of the axle counter is influenced by the wheel which passes. The flange thickness has to be big enough to influence the field sufficiently to ensure appropriate detection. Thickness given in millimetres with decimals. The TSI makes dictinction between several values depending on the wheel diameter; The less value acceptable by the infrastructure (axle counters, pedals and treadles) has to be provided.
Reference	LOC&PAS TSI: 4.2.3.5.2.2, Table 5

Number	1.1.1.3.7.9
Title	Minimum permitted height of the flange
XML Name	SOL Track Parameter **CTD_MinFlangeHeight**
Definition	Indication of height of flange given in millimetres.
Applicable	Y/N/NYA Explanation on applicability: Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'wheel detector'.
Can be repeated	Y An XML attribute called "Set" will be used to link the value of this parameter to the train detection type (see example given for 1.1.1.3.7.2.2 / CTD_TSIMaxDistConsecutiveAxles).
Data presentation	[NN.N] Explanation on data presentation: Height given in millimetres with decimals.
General Explanations	Compatibility with axle counters, pedals and treadles. The detection field of the axle counter is influenced by the wheel which passes. The flange height has to be big enough to influence the field sufficiently to ensure appropriate detection. The TSI makes distinction between several values depending on the wheel diameter; The least acceptable value by the infrastructure has to be provided.
Reference	LOC&PAS TSI: 4.2.3.5.2.2, Table 5

Number	1.1.1.3.7.10
Title	Maximum permitted height of the flange
XML Name	SOL Track Parameter **CTD_MaxFlangeHeight**
Definition	Indication of height of flange given in millimetres.
Applicable	Y/N/NYA Explanation on applicability: Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'wheel detector'.
Can be repeated	Y **An XML attribute called "Set" will be used to link the value of this parameter to the train detection type** (see example given for 1.1.1.3.7.2.2 / CTD_TSIMaxDistConsecutiveAxles).
Data presentation	[NN.N]
General Explanations	Compatibility with axle counters, pedals and treadles. The detection field of the axle counter is influenced by the wheel which passes. For the flange height the range of the dimension Sh(min) – Sh(max) has to be defined. Height given in millimetres with decimals. The TSI makes distinction between several values depending on the wheel diameter; The least acceptable value by the infrastructure has to be provided.
Reference	LOC&PAS TSI: 4.2.3.5.2.2, Table 5

Number	~~1.1.1.3.7.11~~
Title	~~Minimum permitted axle load~~
XML Name	~~SOL Track Parameter **CTD_MinAxleLoad**~~
Definition	~~Indication of load given in tons.~~
Applicable	~~Y/N/NYA~~ ~~Explanation on applicability:~~ ~~Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'track circuit' or 'wheel detector'.~~ For facilitating the transition period , this parameter wil go on being accepted.
Can be repeated	~~Y but only one per train detection type (CTD_DetectionSystem)~~ ~~**An XML attribute called "Set" will be used to link the value of this parameter to the train detection type** (see example given for 1.1.1.3.7.2.2 / CTD_TSIMaxDistConsecutiveAxles).~~
Data presentation	~~[NN.N]~~
General Explanations	~~Compatibility with track circuits, pedals and treadles. A minimum axle load will activate pedals and treadles. Also, minimum axle load will have a beneficiary effect on the resistance between wheel and track, which is important for the operation of track circuits. Load given in tons (unit of mass).~~ ~~In case that there is no restriction for "wheel detector' the Value =0.0 can be given"~~
Reference	~~CCS TSI: Annex A Index 77 3.1.7.1~~

Number	1.1.1.3.7.11.1
Title	Minimum permitted axle load per category of Vehicle
XML Name	SOL Track Parameter **CTD_MinAxleLoadByVehicleCat**
Definition	Indication of load given in tons depending of the category of vehicle.
Applicable	Y/N/NYA Explanation on applicability: Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'track circuit' or 'wheel detector'.
Can be repeated	Y but only one per train detection type (CTD_DetectionSystem) **An XML attribute called "Set" will be used to link the value of this parameter to the train detection type** (see example given for 1.1.1.3.7.2.2 / CTD_TSIMaxDistConsecutiveAxles).
Data presentation	Single selection from the predefined list representing categories of vehicle which is amended by value of minimum permitted axle load [tons] for a specific category: [NN.N] for Vehicles with more than 4 axles and wheel tread brakes [NN.N] for Vehicles with 4 axles and wheel tread brakes [NN.N] for All other vehicles
General Explanations	Compatibility with track circuits, pedals and treadles. A minimum axle load will activate pedals and treadles. Also, minimum axle load will have a beneficiary effect on the

	resistance between wheel and track, which is important for the operation of track circuits. Load given in tons (unit of mass). In case that there is no restriction for "wheel detector' the Value =0.0 can be given"
Reference	CCS TSI: Annex A Index 77 3.1.7.1
Number	1.1.1.3.7.12
Title	TSI compliance of rules for metal-free space around wheels
XML Name	SOL Track Parameter **CTD_TSIMetalFree**
Definition	Indication whether rules are compliant with the TSI.
Applicable	Y/N/NYA
	Explanation on applicability: Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'wheel detector'.
Can be repeated	Y **An XML attribute called "Set" will be used to link the value of this parameter to the train detection type** (see example given for 1.1.1.3.7.2.12/ CTD_TSIMaxDistConsecutiveAxles).
Data presentation	Single selection from the predefined list: TSI compliant not TSI compliant
General Explanations	Compatibility with wheel sensors for axle counters. The principle of axle counters is based on the distortion of an electromagnetic field. The distortion should occur only by the passage of the wheel and not of the surrounding parts of rolling stock.
Comments	Verification of compliance with TSI includes application of notified national rules (when they exist) in case of part covered by open point.
Reference	CCS TSI: 3.1.3.5, Annex A, Index 77

Number	1.1.1.3.7.13
Title	TSI compliance of rules for vehicle metal construction
XML Name	SOL Track Parameter **CTD_TSIMetalConstruction**
Definition	Indication whether rules are compliant with the TSI.
Applicable	Y/N/NYA Explanation on applicability: Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'loop'.
Can be repeated	Y **An XML attribute called "Set" will be used to link the value of this parameter to the train detection type** (see example given for 1.1.1.3.7.2.2 / CTD_TSIMaxDistConsecutiveAxles).
Data presentation	Single selection from the predefined list: TSI compliant not TSI compliant
General Explanations	Compatibility with induction loops. The metal-mass influences loop detection systems. Verification of compliance with TSI includes application of notified national rules (when they exist) concerning the part covered by open point.
Reference	CCS TSI: 3.1.7.2 of Annex A, Index 77

Number	1.1.1.3.7.14
Title	TSI compliance of Ferromagnetic characteristics of wheel material required
XML Name	SOL Track Parameter **CTD_TSIFerroWheelMat**
Definition	Indication whether rules are compliant with the TSI.
Applicable	Y/N/NYA Explanation on applicability: Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'wheel detector'.
Can be repeated	Y **An XML attribute called "Set" will be used to link the value of this parameter to the train detection type** (see example given for 1.1.1.3.7.2.2 / CTD_TSIMaxDistConsecutiveAxles).
Data presentation	Single selection from the predefined list: TSI compliant not TSI compliant
General Explanations	Compatibility with wheel sensors for axle counters. This characteristic is necessary to generate the distortion of the electromagnetic field of axle counters, to ensure appropriate detection.
Reference	CCS TSI: 3.1.3.6, Annex A, Index 77

Number	1.1.1.3.7.15.1
Title	TSI compliance of maximum permitted impedance between opposite wheels of a wheelset
XML Name	SOL Track Parameter **CTD_TSIMaxImpedanceWheelset**
Definition	Indication whether rules are compliant with the TSI.
Applicable	Y/N/NYA Explanation on applicability: Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'track circuit'.
Can be repeated	Y **An XML attribute called "Set" will be used to link the value of this parameter to the train detection type** (see example given for 1.1.1.3.7.2.2 / CTD_TSIMaxDistConsecutiveAxles).
Data presentation	Single selection from the predefined list: TSI compliant Not TSI compliant
General Explanations	Compatibility with track circuits. A track circuit is only able to detect rolling stock if the impedance between rails does not exceed a certain value.
Reference	CCS TSI 3.1.9 Annex A, Index 77

Number	1.1.1.3.7.15.2
Title	Maximum permitted impedance between opposite wheels of a wheelset when not TSI compliant
XML Name	SOL Track Parameter **CTD_MaxImpedanceWheelset**
Definition	The value of maximum permitted impedance given in ohm in case of TSI non-compliance.
Applicable	Y/N/NYA Explanation on applicability: Applicable ('Y') only when for parameter 1.1.1.3.7.15.1 the selected option is 'Not TSI compliant'
Can be repeated	Y **An XML attribute called "Set" will be used to link the value of this parameter to the train detection type** (see example given for 1.1.1.3.7.2.2 / CTD_TSIMaxDistConsecutiveAxles).
Data presentation	[N.NNN]
General Explanations	A track circuit is only able to detect rolling stock if the impedance between rails does not exceed a certain value, given by the impedance of the opposite wheels of the wheelsets and the contact resistance at the wheel-rail surface. The interface requirement given here is only related to the electrical resistance between the running surfaces of the opposite wheels of a wheelset. Remark: operational rules may apply to ensure that a sufficiently low value of the contact resistance is maintained during service: see 3.1.4 (Use of sanding equipment), 3.1.5 (On board flange lubrication) and 3.1.6 (Use of composite brake blocks).
Reference	CCS TSI 3.1.9 Annex A, Index 77

Number	~~1.1.1.3.7.16~~
Title	~~TSI compliance of sanding~~

XML Name	~~SOL Track Parameter **CTD_TSISand**~~
Definition	~~Indication whether rules are compliant with the TSI or not~~
Applicable	~~Y/N/NYA~~
	~~Explanation on applicability:~~ ~~Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'track circuit' and when selection for parameter 1.1.1.3.7.18 is "yes".~~ For facilitating the transition period, this parameter wil go on being accepted.
Can be repeated	~~Y~~ ~~**An XML attribute called "Set" will be used to link the value of this parameter to the train detection type** (see example given for 1.1.1.3.7.2.2 / CTD_TSIMaxDistConsecutiveAxles).~~
Data presentation	~~Single selection from the predefined list:~~ ~~TSI compliant~~ ~~Not TSI compliant~~
General Explanations	~~The sanding devices on board must be compliant to the TSI to allow compatibility with track circuits. Too much sand brings the risk of not detecting trains in tracks equipped with track circuits.~~
Reference	~~CCS TSI: 3.1.4 of Annex A, Index 77~~
Number	1.1.1.3.7.17
Title	~~Maximum sanding output~~ Maximum amount of sand
XML Name	SOL Track Parameter **CTD_MaxSandOutput**
Definition	Maximum amount of sand within ~~value of sanding output for~~ 30 s given in grams accepted on the track.
Applicable	Y/N/NYA
	Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'track circuit' and when selection for parameter 1.1.1.3.7.18 is "yes".
Can be repeated	Y **An XML attribute called "Set" will be used to link the value of this parameter to the train detection type** (see example given for 1.1.1.3.7.2.2 / CTD_TSIMaxDistConsecutiveAxles).
Data presentation	~~[NNNNN]~~ Single selection from the predefined list: TSI compliant when speed lower than140km/h Not TSI compliant when speed lower than140km/h TSI compliant when speed higher than140km/h Not TSI compliant when speed higher than140km/h
Reference	CCS TSI: 3.1.4.1 of Annex A, Index 77
Number	1.1.1.3.7.18
Title	Sanding override by driver required

XML Name	SOL Track Parameter **CTD_SandDriverOverride**
Definition	Indication whether possibility to activate/deactivate sanding devices by driver, according to instructions from the Infrastructure Manager, is required or not.
Explanation on Definition	Compatibility with track circuits at places where the use of sanding is not permitted.
Applicable	Y/N/NYA Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'track circuit'.
Can be repeated	Y **An XML attribute called "Set" will be used to link the value of this parameter to the train detection type** (see example given for 1.1.1.3.7.2.2 / CTD_TSIMaxDistConsecutiveAxles).
Data presentation	Single selection from the predefined list: Y N
Reference	OPE TSI: Appendix B (C1)
	1.1.1.3.7.19
	TSI Compliance of rules on sand characteristics
	SOL Track Parameter **CTD_TSISandCharacteristics**
	Indication whether rules are compliant with the TSI.
Explanation on Definition	Compatibility with track circuits where sending is permitted.
Applicable	Y/N/NYA Explanation on applicability: Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'track circuit' and when the track belongs to a 1520 mm gauge.
Can be repeated	Y **An XML attribute called "Set" will be used to link the value of this parameter to the train detection type** (see example given for 1.1.1.3.7.2.2 / CTD_TSIMaxDistConsecutiveAxles).
Data presentation	Single selection from the predefined list: TSI compliant Not TSI compliant
Reference	CCS TSI: 3.1.4.2 of Annex A, Index 77; open point for 1435 mm gauge
Number	1.1.1.3.7.20
Title	Existence of rules on on-board flange lubrication
XML Name	SOL Track Parameter **CTD_FlangeLubeRules**
Definition	Indication whether rules for activation or deactivation of flange lubrication exist.
Explanation on Definition	Concerns activation or deactivation of flange lubrication according to instructions from IM, for compatibility with the track circuits.

Applicable	Y/N/NYA Explanation on applicability: Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'track circuit'.
Can be repeated	Y **An XML attribute called "Set" will be used to link the value of this parameter to the train detection type** (see example given for 1.1.1.3.7.2.2 / CTD_TSIMaxDistConsecutiveAxles).
Data presentation	Single selection from the predefined list: Y N
References	LOC&PAS TSI: 7.5.3.1 CCS TSI: 3.1.5 of Annex A, Index 77
Number	1.1.1.3.7.21
Title	TSI compliance of rules on the use of composite brake blocks
XML Name	SOL Track Parameter **CTD_TSICompositeBrakeBlocks**
Definition	Indication whether rules are compliant with the TSI.
Applicable	Y/N/NYA Explanation on applicability: Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'track circuit'.
Can be repeated	Y **An XML attribute called "Set" will be used to link the value of this parameter to the train detection type** (see example given for 1.1.1.3.7.2.2 / CTD_TSIMaxDistConsecutiveAxles).
Data presentation	Single selection from the predefined list: TSI compliant Not TSI compliant
General Explanation	Composite brake blocks can create an isolating film between wheels and rail compromising detection by track circuits.
References	LOC&PAS TSI Appendix J-2, index 1, clause 3.1.6 , CCS TSI: 3.1.6 of Annex A, Index 77

Number	1.1.1.3.7.22
Title	TSI compliance of rules on shunt assisting devices
XML Name	SOL Track Parameter **CTD_TSIShuntDevices**
Definition	Indication whether rules are compliant with the TSI.
Applicable	Y/N/NYA Explanation on applicability: Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'track circuit'.
Can be repeated	Y **An XML attribute called "Set" will be used to link the value of this parameter to the train detection type** (see example given for 1.1.1.3.7.2.2 / CTD_TSIMaxDistConsecutiveAxles).
Data presentation	Single selection from the predefined list: TSI compliant Not TSI compliant
General Explanations	In some cases shunt assisting devices may be necessary to operate track circuits. According to the TSI, they should not be required.
Reference	CCS TSI: 3.1.8 of Annex A, Index 77

Number	1.1.1.3.7.23
Title	TSI compliance of rules on combination of RST characteristics influencing shunting impedance
XML Name	SOL Track Parameter **CTD_TSIRSTShuntImpedance**
Definition	Indication whether rules are compliant with the TSI.
Applicable	Y/N/NYA Explanation on applicability: Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'track circuit'.
Can be repeated	Y **An XML attribute called "Set" will be used to link the value of this parameter to the train detection type** (see example given for 1.1.1.3.7.2.2 / CTD_TSIMaxDistConsecutiveAxles).
Data presentation	Single selection from the predefined list: TSI compliant Not TSI compliant
General Explanations	The composition of a train may impact on the compatibility with track circuits' detection.
Reference	CCS TSI: 3.1.10 of Annex A, Index 77

Number	**1.1.1.3.8**
Title	**Transitions between systems**
XML Name	**CTS**
Can be repeated	N
Number	1.1.1.3.8.1
Title	Existence of switch over between different protection, control and warning systems while running
XML Name	SOL Track Parameter **CTS_SwitchProtectControlWarn**
Definition	Indication whether a switch over between different systems whilst running exist
Applicable	Y/N/NYA Explanation on applicability: Applicable ('Y') when at least two different protection, control and warning systems exist.
Can be repeated	N
Data presentation	Single selection from the predefined list: Y N
General Explanations	Switch over between different systems whilst running. Installation depends on local conditions.
Reference	CCS TSI and national rules
Number	1.1.1.3.8.2
Title	Existence of switch over between different radio systems
XML Name	SOL Track Parameter **CTS_SwitchRadioSystem**
Definition	Indication whether a switch over between different radio systems and no communication system whilst running exist
Applicable	Y/N/NYA Explanation on applicability: Applicable ('Y') when at least two different radio systems exist and are declared for parameter 1.1.1.3.6.1/Other radio systems installed/SOL Track Parameter CRS_Installed
Can be repeated	N
Data presentation	Single selection from the predefined list: Y N
General Explanations	Switch over between different radio systems and no communication system whilst running. Installation depends on local conditions.The "Indication if other radio systems in normal operation are installed line-side" is given in parameter 1.1.1.3.6.1 / SOL Track Parameter CRS_Installed".
Reference	CCS TSI and national rules
Number	**1.1.1.3.9**
Title	**Parameters related to electromagnetic interferences**
XML Name	**CEI**

Can be repeated	N
Number	1.1.1.3.9.1
Title	Existence and TSI compliance of rules for magnetic fields emitted by a vehicle
XML Name	SOL Track Parameter **CEI_TSIMagneticFields**
Definition	Indication whether rules exist and are compliant with the TSI.
Applicable	Y/N/NYA Explanation on applicability: Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'wheel detector'.
Can be repeated	N
Data presentation	Single selection from the predefined list: none TSI compliant Not TSI compliant
General Explanations	Compatibility with wheel detectors. The electromagnetic fields generated by rolling stock can interfere with the operation of axle counters and wheel detectors. 'none' means that the rules do not exist. 'TSI compliant' means the rules exist and are compliant with the frequency management specified in the TSI 'Not TSI compliant' means the rules exist and are not compliant with the frequency management specified in the TSI
Comments	Verification of compliance with TSI includes application of notified national rules (when they exist) in case of part covered by open point.
Reference	CCS TSI: 3.2 of Annex A, Index 77
Number	1.1.1.3.9.2
Title	Existence and TSI compliance of limits in harmonics in the traction current of vehicles
XML Name	SOL Track Parameter **CEI_TSITractionHarmonics**
Definition	Indication whether rules exist and are compliant with the TSI.
Applicable	Y/N/NYA Explanation on applicability: Applicable ('Y') only when for parameter 1.1.1.3.7.1 the selected option is 'wheel detector' or 'track circuit'.
Can be repeated	N
Data presentation	Single selection from the predefined list: none TSI compliant Not TSI compliant
General Explanations	Compatibility with track circuits and wheel detectors of axle counters. The harmonics in the traction current in the rails can interfere with the operation of track circuits. The DC current in the rails may saturate the detectors of the axle counters, preventing their operation.

	'none' shall be selected when respective national rules do not exist.
Comments	Verification of compliance with TSI includes application of notified national rules (when they exist) in case of part covered by open point.
Reference	LOC&PAS TSI : Appendix J-2, index 1, clause 3.2.2
Number	**1.1.1.3.10**
Title	**Line-side system for degraded situation**
XML Name	**CLD**
Can be repeated	N
Number	1.1.1.3.10.1
Title	ETCS level for degraded situation
XML Name	SOL Track Parameter **CLD_ETCSSituation**
Definition	ERTMS / ETCS application level for degraded situation related to the track side equipment
Applicable	Y/N/NYA Explanation on applicability: 'N'=not applicable shall be selected when ETCS is not installed (selection of parameter 1.1.1.3.2.1 is 'no').
Can be repeated	Y
Data presentation	Single selection from the predefined list: none 0 1 2 3 NTC
General Explanations	System for degraded situation. In case of failure of the ETCS Level for normal operation, train movement can be supervised in another ETCS Level. Example: Level 1 as a degraded mode for Level 2. If the actual level (see 1.1.1.3.2.1) was "no", none degradation is possible, so only 'none' level is possible for degraded case.
Comments	It assumed that the degraded level has to be lower than the actual operating level.
References	OPE TSI: 4.2.1.2.1 and 4.4 National rules

Number	1.1.1.3.10.2
Title	Other train protection, control and warning systems for degraded situation
XML Name	SOL Track Parameter **CLD_OtherProtectControlWarn**
Definition	Indication of existence of other systems than ETCS for degraded situation.
Applicable	Y/N/NYA
	Y in case when for parameter 1.1.1.3.10.1 was selected 'none'.
Can be repeated	N
Data presentation	Single selection from predefined list: ALSN ASFA ATB First generation ATB new generation ATC v2 ATC vR ATP ATP-VR/RHK BACC CAWS Chiltern-ATP Crocodile DAAT EBICAB 700 BU EBICAB 700 PT EBICAB 900 ES EuroSIGNUM EuroZUB EVM GNT (Geschwindigkeitsüberwachung für NeiTech-Züge) GW ATP INDUSI I60 KCVB KCVP KVB KVBP LS LZB (LZB L72, LZB L72 CE I and LZB L72 CE II) LZB ES Mechanical Trainstops MEMOR II+

	NEXTEO PKP radio system with Radiostop function PZB 90 RETB RSDD/SCMT SHP SSC TBL 1 TBL 2 TBL1+ TPWS/AWS TVM 300 TVM 430 ZUB 123
	Explanation on data presentation: Selected value shall answer the question whether any other system than ETCS exists on the respective track.
References	version 4.0 of the TD/2011-11 List of CCS Class B systems,
Number	**1.1.1.3.11**
Title	**Brake related parameters**
XML Name	**CBP**
Can be repeated	N
Number	1.1.1.3.11.1
Title	Maximum braking distance requested
XML Name	SOL Track Parameter **CBP_MaxBrakeDist**
Definition	The maximum value of the braking distance [in metres] of a train shall be given for the maximum line speed.
Applicable	Y/NYA
Can be repeated	N
Data presentation	[NNNNN]
Comments	~~This distance corresponds to the smallest physical distance between signals of the section of line at V max reduced in stage less the value of the safety margin used by the IM.~~ "This distance corresponds to the smallest physical distance between signals of the section of line at V max, taking into account the effect of gradient, minus the value of the safety margin used by the IM." The braking capability of a train allows it to respect this braking distance.

	Note that the OPE TSI provides for an exchange of detailed information between the infrastructure manager and the railway undertaking to ensure safe operation.
References	OPE TSI: 4.2.2.6 CCS TSI: 4.2.2
Number	1.1.1.3.11.2
Title	Availability by the IM of additional information
XML Name	SOL Track Parameter **CBP_AddInfoAvailable**
Definition	Availability by the IM of additional information as defined in 4.2.2.6.2 (2) Regulation XXX - OPE TSI
Applicable	Y/NYA
Can be repeated	N
Data presentation	Single selection from the predefined list: Y/N
General explanations	(see TSI OPE 4.2.2.6.2 (2)),
Reference	(see TSI OPE 4.2.2.6.2 (2)),
Validation	
Number	1.1.1.3.11.3
Title	Documents available by the IM relating to braking performance
XML Name	SOL Track Parameter **CBP_BrakePerfDocRef**
Definition	Electronic document available in two EU languages from the IM stored by the Agency providing additional information as defined in point (2) of point 4.2.2.6.2 of the Annex to Regulation XXX - OPE TSI
Applicable	Y/N/NYA Y in case of Y for 1.1.1.3.11.2
Can be repeated	Y
Data presentation	CharacterString
General explanations	the infrastructure manager should have submited such document to the Agency in an electronic format and in two EU languages. The Agency should make it available in document library on ERA extranet. The reference is the name of the file transmitted to the Agency.
Reference	
Validation	

Number	**1.1.1.3.12**
Title	**Other CCS related parameters**
XML Name	**COP**
Can be repeated	N
Number	~~1.1.1.3.12.1~~
Title	~~Tilting supported~~
XML Name	~~SOL Track Parameter **COP_Tilting**~~
Definition	~~Indication whether tilting functions are supported by ETCS.~~
~~Applicable~~	~~Y/N/NYA~~ ~~Explanation on applicability:~~ ~~'N'=not applicable shall be selected when ETCS is not installed (selection in parameter 1.1.1.3.2.1 is 'no').~~ For facilitating the transition period, this parameter wil go on being accepted.
~~Can be repeated~~	~~N~~
~~Data presentation~~	~~Single selection from predefined list:~~ ~~Y~~ ~~N~~
~~General Explanations~~	~~Support of tilting function helps to drive faster in curves and shorten travel time on a line equipped with ETCS (using special train category 'tilting train' for ETCS equipped trains); without support of this function even ETCS equipped tilting trains move as normal trains with more restrictive speed limitations on curves.~~
~~References~~	~~EN 15686 (2010)~~ ~~LOC&PAS TSI: 4.2.3.4.2 b)~~
Number	**1.1.1.4**
Title	**Rules and restrictions**
XML Name	
Can be repeated	N
Number	1.1.1.4.1
Title	Existence of rules and restrictions of a strictly local nature
XML Name	SOL Track Parameter **RUL_LocalRulesOrRestrictions**
Definition	Existence of rules and restrictions of a strictly local nature
Applicable	Y/N/NYA
Can be repeated	Y
Data presentation	Single selection from the predefined list: Y/N

General explanations	"In case of Y, the RU have to contact the IM to be informed of these conditions"
Reference	IOD : Notification of national rules Art 14. 11. Member States may decide not to notify rules and restrictions of a strictly local nature. In such cases, Member States shall mention those rules and restrictions in the registers of infrastructure referred to in Article 49
Validation	
Number	1.1.1.4.2
Title	Documents regarding the rules or restrictions of a strictly local nature available by the IM
XML Name	SOL Track Parameter **RUL_LocalRulesOrRestrictionsDocRef**
Definition	Electronic document available from the IM stored by the Agency providing additional information
Applicable	Y/N/NYA
Can be repeated	Y
Data presentation	CharacterString
General explanations	
Reference	IOD : Notification of national rules Art 14. 11. Member States may decide not to notify rules and restrictions of a strictly local nature. In such cases, Member States shall mention those rules and restrictions in the registers of infrastructure referred to in Article 49
Validation	
Number	**1.2**
Title	**OPERATIONAL POINT**
Can be repeated	Y Explanation on repeatability: It means that many Operational Points within MS may be described – depending on the number of OPs in MS - and for each of them the whole set of data has to be filled. OPs do not have to be numbered as identification is done by OP IDs.

Number	**1.2.0.0.0**
	Generic information
Can be repeated	N
Number	1.2.0.0.0.1
Title	Name of Operational Point
XML Name	OPName
Definition	Name normally related to the town or village or to traffic control purpose
Explanation on Definition	Name of OP may not always exists in common use. In such case IM should propose a name for OP.
Can be repeated	N
Applicable	Y
Data presentation	CharacterString
Number	1.2.0.0.0.2
Title	Unique OP ID
XML Name	UniqueOPID
Definition	Code composed of country code and alphanumeric OP code.
Explanations on definition	The first part 'AA' is the country code in two-letter system of ISO. The second part is alphanumeric OP code within the MS. For example an OP code could be current abbreviation of name used in route books. In case of borders point, the code is to be selected in the corresponding list in annex 5.1.
Applicable	Y
Can be repeated	N
Data presentation	Predefined CharacterString: [AA+AAAAAAAAAA] Explanation on data presentation: The first two characters represent the country code in two-letter system of ISO. The second part 'AAAAAAAAAA' is maximum 10 Characters String corresponding to OP code within the MS. 'LUAB4' or 'LUAB46TH-G' or 'LUAB4/-_ERT7' are accepted by the validation process **In case of "borders point"**, the code is to be selected in the corresponding list in annex 5.1 (this first part "AA" is EU. The second part is 'AAAAAAAAAA'). Any OP ID that is not referenced in the annex 5.1 will not be accepted by the validation process. **In case of "domestic borders point",** the code will be selected in the corresponding list in annex 5.2 that will be developed later. Any OP ID that is not referenced in the annex 5.1 will not be accepted by the validation process

Validation	The provided OP ID must be unique within each Member State. The validation has to be made nationally by NRE. The exception are "Border point" and domestic border point" that must be referenced in annex 5.1
Reference	ISO 3166-1 alpha 2

Number	1.2.0.0.0.3
Title	OP TAF TAP primary code
XML Name	OPTafTapCode
Definition	Primary code developed for TAF/TAP.
Can be repeated	Y
	Explanation on repeatability: Unique OP ID may cover area which is described by several TAF TAP Codes, so as in such case all those Primary Codes have to specified, the parameter 1.2.0.0.0.3 has to be repeated for every Primary Code.
Applicable	Y/N/NYA
	Y in case when OP TAF TAP primary code exists, otherwise N
Data presentation	Predefined CharacterString: [AANNNNN]
Reference	Primary code developed for TAF TSI by SEDP as given in CEN CWA15541:May2006. It is composed of two letters for the Country Code and five numbers for the Location Code.

Number	1.2.0.0.0.4
Title	Type of Operational Point
XMLName	OPType
Definition	Type of facility in relation to the dominating operational functions.
Explanations on definition	Each existing case has to be approximated to the one of the above defined types by including size, importance and dominating functions. It is most important to recognize the most important role of specific OP in the network. That is why only one type for one OP is permitted.
Applicable	Y
Can be repeated	N
Data presentation	Single selection from the predefined list: station small station passenger terminal freight terminal depot or workshop train technical services passenger stop junction border point shunting yard technical change switch private siding domestic border point
Explanations to format	For purpose of RINF, there were defined the following types of OPs:

	1. Station – big or huge station with several functions, important for international traffic, basic for national railway system 2. Small station – multifunctional OP not so big and not so important like "station" 3. Passenger terminal – OP with dominating function of service for passenger traffic 4. Freight terminal – OP with dominating functions related to loading and unloading of freight trains 5. Depot or workshop – OP which is a group of tracks used by depot or workshop for rolling stock maintenance 6. Train technical services – OP which is a group of tracks for servicing trains (parking, cleaning, washing, current revisions, etc.) 7. Passenger stop – small OP consisting of at least one platform, normally serving mostly for local passenger services 8. Junction – OP consisting of at least one turnout, normally used mostly for changing direction of trains, with reduced or not existing other functions 9. Border point – located exactly in the point where a border between MSs meets a railway line. 10. Shunting yard – group of tracks used for shunting trains, mostly related to freight trains 11. Technical change – to describe a change on CCS or a type of contact line or gauge changeover facility – fixed installation allowing a train to travel across a break of gauge where two railway networks with different track gauges meet. 12: Switch 13: Private siding – OP allowing to provide more information on the "private siding" and on the way its is linked to the main network. Its use is left to the discretion of each Member State. 14: Domestic border point: located exactly in the point where networks of different IMs are connected in a Member State

Number	1.2.0.0.0.4.1
Title	Type of track gauge changeover facility
XMLName	**OPTypeGaugeChangeover**
Definition	Type of track gauge changeover facility
Explanations on definition	
Applicable	Y/N/NYA
Can be repeated	N
Data presentation	Characterstring
Explanations to format	

Number	1.2.0.0.0.5
Title	Geographical location of Operational Point
XML Name	**OPGeographicLocation**

Definition	Geographical coordinates in decimal degrees normally given for the centre of the OP.
Applicable	Y
Can be repeated	N
Data presentation	[Latitude (NN.NNNN) + Longitude(±NN.NNNN)] Explanation on data presentation: Geographical coordinates according to the standard World Geodetic System (WGS) defining the location of the OP. This will normally be in the centre point of the OP. Values for coordinates are in degrees with decimals precision of 0.0001.
Comments	Latitude and Longitude are expressed in the WGS-grid for GPS-coordinates.

Number	1.2.0.0.0.6
Title	Railway location of Operational Point
XML Name	**OPRailwayLocation**
Definition	Kilometre related to line identification defining the location of the OP. This will normally be in the centre of the OP.
Explanation on Definition	The railway location identifies the location of an OP in the system of reference of a given line. The parameter can be repeated to allow to describe the location of the OP when it belongs to several lines.
Applicable	Y
Can be repeated	Y
Data presentation	Predefined CharacterString: [±NNNN.NNN] + [CharacterString] Explanation on data presentation: The location (generally the distance from the origin of the line to the centre) on a line is given in kilometres with decimals (precision of 0.001). The aim of the "CharacterString" at the end of the format has to precise the name or number of the line. The same 'CharacterString' has to be used as 'National line identification' for a specific line in description both all OPs and all SoL. In [CharacterString] the name of the line shall be used the same type like in SoL description in parameter 1.1.0.0.0.2 National line identification.

Number	**1.2.1**
Title	**RUNNING TRACK**
XML Name	**OPTrack**
Can be repeated	Y Explanation on repeatability: There might be more than one track within the Operational Point, so then the whole set of data for track has to be repeated as many times as many tracks exists.
Applicable	Parameters of this group (from 1.2.1.0.0.1 to 1.2.1.0.4.1) are only applicable if running tracks exist in the OP

Number	**1.2.1.0.0**
Title	**Generic information**
Can be repeated	N Explanation on repeatability: For each track may exist only one set of 'Generic information'
Number	1.2.1.0.0.1
Title	IM's Code
XML Name	**OPTrackIMCode**
Definition	Infrastructure Manager means any body or undertaking that is responsible in particular for establishing and maintaining railway infrastructure or a part thereof.
Applicable	Y
Can be repeated	N
Data presentation	[AAAA]
General Explanations	The Code is a unique identifier for the Infrastructure Manager and it shall be verified on national level. - If the IM is subject to TAF/TAP TSIs, it correspond to the code used in TAF/TAP TSIs. - In other cases, it corresponds to the **"organisation code" assigned** by the Agency for the specific needs of the RINF Each Section of Line may concern only one IM.
Reference	Article 3 (2) of Directive 2012/34/EU
Validation	No verification by RINF application. Check of the link between MS and IM' Name must be done nationally.
	1.2.1.0.0.2
	Identification of track
	OPTrackIdentification
	Unique track identification or unique number within OP
Applicable	Y
Can be repeated	N Explanation on repeatability: Each track shall have unique identification or number within the OP. This number cannot be used for naming any other track in the same OP.
Data presentation	CharacterString
Validation	The check of fact that ID is unique within OP has to be done on national level (preferably by IM).
Number	**1.2.1.0.1**
Title	**Declarations of verification for track**
XML Name	**IDE**

Applicable	Y
Can be repeated	N
General Explanations	This group of data concerns infrastructure subsystem on the specific track. There are two types of declarations included: EC declaration issued according to mandatory procedure defined by Interoperability Directive and EI declaration which may be issued according the voluntary procedure defined by EC Recommendation [22].

Number	1.2.1.0.1.1
Title	EC declaration of verification for track (INF)
XML Name	OP Track Parameter **IDE_ECVerification**
Definition	Unique number for EC declarations following format requirements specified in the 'Document about practical arrangements for transmitting interoperability documents'
Explanation on Definition	(INF) in the title means that here we include only declarations concerning infrastructure subsystem on the specific track.
Applicable	Y/N/NYA
	Explanation on applicability: "Y" shall be selected in case when EC declaration was issued
Can be repeated	Y
	Explanation on repeatability: The parameter may be repeated only when several EC declarations were issued after verification of the track and several numbers has to be registered.
Data presentation	Predefined CharacterString: [CC/RRRRRRRRRRRRR/YYYY/NNNNNN]
General Explanations	With the extension of scope according to Interoperability Directive 2008/57/EC, geographical scope of the INF TSI now includes all the networks (TEN and off-TEN) with the following nominal track gauges: 1435, 1520, 1524, 1600 and 1668 mm
Reference concerning format	'Document about practical arrangements for transmitting interoperability documents' [23]
Validation	The validation is described before this Table, in section 2.3.
Number	1.2.1.0.1.2
Title	EI declaration of demonstration for track (INF)
XML Name	OP Track Parameter **IDE_EIDemonstration**
Definition	Unique number for EI declarations following the same format requirements as specified in the 'Document about practical arrangements for transmitting interoperability documents'
Applicable	Y/N/NYA
	Explanation on applicability: "Y" shall be selected in case when the demonstration was executed and EI declaration was issued
	Y

Can be repeated	Explanation on repeatability: It may happen that several EI declarations were issued – then parameter has to be repeated as many times as many declarations were issued.
Data presentation	Predefined CharacterString: [CC/RRRRRRRRRRRRR/YYYY/NNNNNN])
General Explanations	It may happen that several EI declarations were issued – then parameter has to be repeated as many times as many declarations were issued. The procedure for demonstration that existing network fits to requirements of the TSIs is executed on voluntary bases, so when EI declaration do not exist then the parameter is optional. If EI declaration was not issued then field shall be left empty.
References	[22] Recommendation 2014/881/EU [23] 'Document about practical arrangements for transmitting interoperability documents'
Number	**1.2.1.0.2**
Title	**Performance parameters**
XML Name	**IPP**
Can be repeated	N
Explanation	For each track only the one set of 'Performance parameters' may be presented
Number	1.2.1.0.2.1
Title	TEN classification of track
XML Name	OP Track Parameter **IPP_TENClass**
Definition	Indication of the part of the trans-European network the track belongs to
Applicable	Y/NYA
Can be repeated	Y
Data presentation	Single selection from the predefined list: Part of the TEN-T Comprehensive Network Part of the TEN-T Core Freight Network Part of the TEN-T Core Passenger Network Off-TEN
Reference	[24] Regulation (EU) No 1315/2013
Number	1.2.1.0.2.2
Title	Category of Line
XML Name	OP Track Parameter **IPP_LineCat**

Definition	Classification of a line according to the INF TSI
Explanations on definition	INF TSI classifies lines based on the type of traffic (traffic code). TSI categories of line shall be used for the classification of existing lines to define a target system so that the relevant performance parameters will be met.
Can be repeated	Y Explanation on repeatability: When more than one value of the parameter has to be published, then parameter has to be repeated as many times as many values of the parameter will be published.
Applicable	Y/N/NYA
	Explanation on applicability: Technical scope of the INF TSI now includes all the networks (TEN and off-TEN) for nominal track gauges 1435, 1520, 1524, 1600 and 1668 mm Applicable if track is included in technical scope of the TSI. Not applicable when tables 2 or 3 of 4.2.1(7) of INF TSI are not usable on the UK network for Great Britain according the specific case 7.7.17.1(2).
Data presentation	Single selection of the predefined list Passengers: P1 P2 P3 P4 P5 P6 P1520 P1600 Freight: F1 F2 F3 F4 F1520 F1600
	Explanation on data presentation: The TSI category of line is a combination of traffic codes. For lines where only one type of traffic is carried (for example a freight only line), a single code can be used to describe the requirements; where mixed traffic runs the category will be described by one or more codes for passenger and freight in case of two types of traffic. Then the parameter is repeated if relevant. The combined traffic codes describe the envelope within which the desired mix of traffic can be accommodated.

Example	If a line is operated by passenger trains with speed of 250 km/h, local commuter trains with speed of 120 km/h and heavy freight trains in the night, then the best combination of traffic codes seems to be P2, P5 and F1. Then, the TSI category of line for this case would simply be P2-P5-F1.
References	INF TSI 4.2.1
Number	1.2.1.0.2.3
Title	Part of a Railway Freight Corridor
XML Name	OP Track Parameter **IPP_FreightCorridor**
Definition	Indication whether the line is designated to a Railway Freight Corridor
Applicable	Y/N/NYA
	Y if the line is part of a RFC
Can be repeated	Y
Data presentation	Single selection from the predefined list: Rhine-Alpine RFC (RFC 1) North Sea-Mediterranean RFC (RFC 2) Scandinavian – Mediterranean RFC (RFC 3) Atlantic RFC (RFC 4) Baltic-Adriatic RFC (RFC 5) Mediterranean RFC (RFC 6) Orient-EastMed RFC (RFC 7) North Sea-Baltic RFC (RFC 8) Rhine-Danube RFC (RFC 9)
	Explanation on data presentation: If a line belongs to several corridors, repeat the parameter
Reference	Regulation (EU) No 913/2010
Number	**1.2.1.0.3**
Title	**Line layout**
XML Name	**ILL**
Can be repeated	N
Explanations	For specific track only one line layout may be described
Number	~~1.2.1.0.3.1~~
Title	~~Interoperable gauge~~
XML Name	~~OP Track Parameter **ILL_InteropGauge**~~
Definition	~~Gauges GA, GB, GC, G1, DE3, S, IRL1 as defined in European standard.~~

Explanations on definition	~~For the purpose of RINF only GA, GB, GC, G1, DE3, S, IRL1 were selected as interoperable gauges as they are the only gauges mentioned as performance parameters in CR INF TSI and HS INF TSI.~~ ~~The meaning of this parameter is that the selected gauge was used together with rules kinematic calculations for settling the structure gauge (clearance) of the specific track.~~
Can be repeated	~~N~~
Applicable	~~Y/NYA~~ For facilitating the transition period during which the new parameter gauging is not provided, this parameter wil go on being accepted. A N value can also be provided .
Data presentation	~~Single selection from the predefined list:~~ ~~GA~~ ~~GB~~ ~~GC~~ ~~G1~~ ~~DE3~~ ~~S~~ ~~IRL1~~ ~~none~~
Reference	~~EN 15273-3 (2013): Annex C~~ ~~INF TSI: 4.2.3.1~~ ~~HS INF TSI: 4.2.3~~ ~~CR INF TSI: 4.2.4.1~~
Number	~~1.2.1.0.3.2~~
Title	~~Multinational gauges~~
XML Name	~~OP Track Parameter **ILL_MultiNatGauge**~~
Definition	~~Multilateral gauge or international gauge other than GA, GB, GC, G1, DE3, S, IRL1 as defined in European standard.~~
Explanations on definition	~~For the purpose of RINF only G2, GB1 and GB2 were selected as multinational gauges as they are the only gauges (except GA, GB and GC) mentioned as multilateral/national agreements in the European standard.~~
Can be repeated	~~N~~
Applicable	~~Y/N/NYA~~ ~~Y only if "none" is selected in 1.2.1.0.3.1~~ For facilitating the transition period during which the new parameter gauging is not provided, this parameter wil go on being accepted.
Data presentation	~~Single selection from the predefined list:~~ ~~G2~~ ~~GB1~~ ~~GB2~~ ~~none~~
References	~~EN 15273-3 (2013): Annex D sections D.1 to D.3 and Annex C section C.2.1~~ ~~INF TSI: 4.2.3.1~~

	~~HS INF TSI: 4.2.3~~ ~~CR INF TSI: 4.2.4.1~~
Number	~~1.2.1.0.3.3~~
Title	~~National gauges~~
XML Name	~~OP Track Parameter **ILL_NatGauge**~~
Definition	~~Domestic gauge as defined in European standard or other local gauge.~~
Can be repeated	~~Y~~
Explanation	~~When more than one value of the parameter has to be published, then parameter has to be repeated – so many times as many values of the parameter will be published.~~
Applicable	~~Y/N/NYA~~ ~~Y only if "none" is selected in 1.2.1.0.3.2~~ For facilitating the transition period during which the new parameter gauging is not provided, this parameter wil go on being accepted.
Data presentation	~~BE1~~ ~~BE2~~ ~~BE3~~ ~~FR-3.3~~ ~~PTb~~ ~~PTb+~~ ~~PTc~~ ~~FIN1~~ ~~SEa~~ ~~SEc~~ ~~DE1~~ ~~DE2~~ ~~Z-GCD~~ ~~UK1~~ ~~UK1[D]~~ ~~W6~~ ~~FS~~ ~~S~~ ~~GHE16~~ ~~GEA16~~ ~~GEB16~~ ~~GEC16~~ ~~IRL1~~ ~~IRL2~~ ~~IRL3~~ ~~……~~ ~~other~~
General Explanations	~~This parameter covers either gauges mentioned in EN or gauges included in national regulations. The list of national gauges will be expanded to express as much as possible the precise information about the gauge and to avoid selection of 'other'.~~ ~~Gauges from BE1 to W6 are mentioned in EN, all others are according the national rules. For example S is for 1520 track gauge system, FS for Italy, IRL 1-3 for Ireland, etc.~~
Reference	~~EN 15273-3 (2013): Annex D, section D.4~~ ~~National rules~~

Number	1.2.1.0.3.4
Title	Gauging
XML Name	SOL Track Parameter **ILL_Gauging**
Definition	Gauges as defined in European standard or other local gauges, including lower or upper part.
Can be repeated	Y
Explanation on definition	
Applicable	Y/N/NYA
Data presentation	Single selection from the predefined list: GA GB GC G1 DE3 G2 GB1 GB2 IRL1 BE1 BE2 BE3 FR-3.3 PTb PTb+ PTc FIN1 SEa SEc DE1 DE2 Z-GCD UK1 UK1[D] W6 FS S GHE16 GEA16 GEB16 GEC16 IRL1 IRL2 IRL3 GI1 GI2 GI3 GEE10 GED10 AFM 423 …….. other
References	~~EN 15273-3 (2013): Annex C~~ EN15273-3 (2013): Annex C and Annex D INF TSI: 4.2.3.1

Number	1.2.1.0.3.5
Title	Railway location of particular points requiring specific checks
XML Name	**ILL_GaugeCheckLoc**
Explanation on Definition	Location of particular points requiring specific checks due to deviations from gauging referred to in 1.2.1.0.3.4.
Explanations o the definition	The railway location identifies the location of the structure in the system of reference of the line.towhich the track belongs
Applicable	Y/N/NYA
Can be repeated	N
Data presentation	Predefined CharacterString: [±NNNN.NNN] + [CharacterString] Explanation on data presentation: The location (generally the distance from the origin of the line to the centre) on a line is given in kilometres with decimals (precision of 0.001). The aim of the "CharacterString" at the end of the format has to precise the name or number of the line. The same 'CharacterString' has to be used as 'National line identification' for a specific line in description both all OPs and all SoL. In [CharacterString] the name of the line shall be used the same type like in SoL description in parameter 1.1.0.0.0.2 National line identification.
References	EN 50125-1 (1999): 4.7 and 4.8 LOC&PAS TSI:4.2.6.1.2
Number	1.2.1.0.3.6
Title	Document with the transversal section of the particular points requiring specific checks
XML Name	**ILL_GaugeCheckDocRef**
Definition	Electronic document available from the IM stored by the Agency with the transversal section of the particular points requiring specific checks due to deviations from gauging referred to in 1.2.1.0.3.4. Where relevant, guidance for the check with the particular point may be attached to the document with the transversal section.
Applicable	Y/N/NYA
Can be repeated	Y
Data presentation	CharacterString Explanation on data presentation:
References	EN 50125-1 (1999): 4.7 and 4.8 LOC&PAS TSI:4.2.6.1.2

Number	**1.2.1.0.4**
Title	**Track parameters**
XML Name	**ITP**
Can be repeated	N
Number	1.2.1.0.4.1
Title	Nominal track gauge
XML Name	OP Track Parameter **ITP_NomGauge**
Definition	A single value expressed in millimetres that identifies the track gauge
Can be repeated	Y Explanation on repeatability: When in the track has been installed a track gauge changeover without having OP type 'Technical change', the value of nominal track gauge has to be given twice, for each track gauge separately.
Applicable	Y/NYA
Data presentation	Single selection from the predefined list: 750 1000 1435 1520 1524 1600 1668 other
General Explanations	In case of multi-rail track, a set of data is to be published separately to each pair of rails to be operated as separate track (the whole set of parameters for the separate track has to be delivered – be careful then with the track identification).
Reference	INF TSI 4.2.4.1
Number	**1.2.1.0.5**
Title	**Tunnel**
XML Name	OPTrackTunnel
Applicable	Parameters of this group (from 1.2.1.0.5.1 to 1.2.1.0.5.8) are only applicable if tunnels exist in the OP
Can be repeated	Y
Number	1.2.1.0.5.1
Title	IM's Code

XML Name	OPTrackTunnelIMCode
Definition	Infrastructure Manager means any body or undertaking that is responsible in particular for establishing and maintaining railway infrastructure or a part thereof.
Applicable	Y
Can be repeated	N
Data presentation	[AAAA]
General Explanations	The Code is a unique identifier for the Infrastructure Manager and it shall be verified on national level. - If the IM is subject to TAF/TAP TSIs, it correspond to the code used in TAF/TAP TSIs. - In other cases, it corresponds to the **"organisation code" assigned** by the Agency for the specific needs of the RINF Each Section of Line may concern only one IM.
Reference	Article 3 (2) of Directive 2012/34/EU
Validation	No verification by RINF application. Check of the link between MS and IM' Name must be done nationally.

Number	1.2.1.0.5.2
Title	Tunnel identification
XML Name	OPTrackTunnelIdentification
Definition	Unique tunnel identification or unique number within Member State
Can be repeated	N
Applicable	Y In case when tunnel does not have own identification within the Member State, the IM should deliver it himself.
Data presentation	CharacterString
Comments	Here should be given the name, number, code or any other expression which is normally used for the identification of the tunnel
Number	1.2.1.0.5.3
Title	EC declaration of verification for tunnel (SRT)
XML Name	OP Track Tunnel Parameter **ITU_ECVerification**
Definition	Unique number for EC declarations following format requirements specified in the 'Document about practical arrangements for transmitting interoperability documents'
Can be repeated	Y Explanation on repeatability: (SRT) in title means that here we include only declarations concerning requirements of SRT TSI for infrastructure system on the specific track. Parameter shall be repeated when different EC declarations were issued for different elements of infrastructure subsystem on the specific track in the tunnel.
Applicable	Y/N/NYA Explanation on applicability:

	"Y" shall be selected in case when EC declaration was issued
Data presentation	Predefined CharacterString: [CC/RRRRRRRRRRRRR/YYYY/NNNNNN]
General Explanations	With the extension of scope according to Interoperability Directive 2008/57/EC, geographical scope of the INF, ENE and CCS TSIs now includes all the networks (TEN and off-TEN) with the following nominal track gauges: 1435, 1520, 1524, 1600 and 1668 mm
Reference concerning format	'Document about practical arrangements for transmitting interoperability documents' [23]
Validation	The validation is described before this Table, in section 2.3.
Number	1.2.1.0.5.4
Title	EI declaration of demonstration for tunnel (SRT)
XML Name	OP Track Tunnel Parameter **ITU_EIDemonstration**
Definition	Unique number for EI declarations following the same format requirements as specified in the 'Document about practical arrangements for transmitting interoperability documents'
Can be repeated	Y Explanation on repeatability: (SRT) in title means that here we include only declarations concerning requirements of SRT TSI for infrastructure system on the specific track. Parameter shall be repeated when different EI declarations were issued for different elements of infrastructure subsystem on the specific track in the tunnel.
Applicable	Y/N/NYA Explanation on applicability: "Y" shall be selected in case when the demonstration was executed and EI declaration was issued.
Data presentation	Predefined CharacterString: [CC/RRRRRRRRRRRRR/YYYY/NNNNNN])
General Explanations	It may happen that several EI declarations were issued – then parameter has to be repeated as many times as many declarations were issued. The procedure for demonstration that existing network fits to requirements of the TSIs is executed on voluntary bases, so when EI declaration do not exist then the parameter is optional. If EI declaration was not issued then field shall be left empty.
Reference	[22] Recommendation 2014/881/EU [23] 'Document about practical arrangements for transmitting interoperability documents'
Validation	The validation is described before this Table, in section 2.3.
Number	1.2.1.0.5.5
Title	Length of tunnel

XML Name	OP Track Tunnel Parameter **ITU_Length**
Definition	Length of a tunnel in metres from entrance portal to exit portal.
Explanations on definition	Length of a tunnel in metres from portal to portal at the level of the top of rail.
Can be repeated	N
Applicable	Y/N/NYA
	Y only for a tunnel with length of 100 metres or more.
Data presentation	Predefined CharacterString: [NNNNN]
Validation	The validation whether the parameter is mandatory cannot be performed by the RINF application, the validation has to be done by the NRE.

Number	1.2.1.0.5.6
Title	Existence of emergency plan
XML Name	OP Track Tunnel Parameter **ITU_EmergencyPlan**
Definition	Indication whether emergency plan exists.
Can be repeated	N
Applicable	Y/N/NYA
	Explanation on applicability: Y for tunnels longer than 1 km,, in accordance with section 4.4.2 of SRT TSI, the emergency plan is mandatory only for tunnel length of more than 1km. 'N'=not applicable can be selected for short tunnels of less than 1 km, as for them the fire category according SRT TSI does not exist.
Data presentation	Single selection from the predefined list: Y N
General Explanations	Emergency plan has to be a document developed for each tunnel under the direction of the IM, in co-operation, where appropriate, with RUs, Rescue services and relevant authorities. It shall be consistent with the self-rescue, evacuation and rescue facilities provided.
References	SRT TSI: 4.4.3 SRT TSI: 4.4.2
Number	1.2.1.0.5.7
Title	Fire category of rolling stock required
XML Name	OP Track Tunnel Parameter **ITU_FireCatReq**
Definition	Categorisation how a passenger train with a fire on board will continue to operate for a defined time period.
Can be repeated	N
Applicable	Y/N/NYA
	Explanation on applicability:

	'N'=not applicable shall be selected for short tunnels of less than 1 km, as for them the fire category according SRT TSI does not exist.
Data presentation	Single selection from the predefined list: A B none
	Explanation on data presentation: Wherever category B is not needed, generally the category A has to be understood as the default value. 'none' shall be selected when none of A or B fire category is applied for a specific tunnel.
References	SRT: section 4.2.3.3.4 SRT TSI: 4.2.5.5 LOC&PAS 4.2.10.4.4
Number	1.2.1.0.5.8
Title	National fire category of rolling stock required
XML Name	OP Track Tunnel Parameter **ITU_NatFireCatReq**
Definition	Categorisation on how a passenger train with a fire on board will continue to operate for a defined time period - according to national rules if they exist.
Can be repeated	N
Applicable	Y/N/NYA
	Explanation on applicability: 'N'=not applicable shall be selected when respective national rules do not exist Y only for tunnels when for the parameter 1.2.1.0.5.7 the option 'none' was selected.
Data presentation	CharacterString
	Explanation on data presentation: Data shall include both the category and brief name of the document introducing the categorisation
Number	1.2.1.0.5.9
Title	Diesel or other thermal traction allowed
XML Name	OP Track Tunnel Parameter **ITU_DieselThermAllowed**
Definition	Indication whether it is allowed to use diesel or other thermal traction in the tunnel
Can be repeated	N
Applicable	Y/N/NYA
	Explanation on applicability: 'N'=not applicable shall be selected when respective national rules do not exist Y only for tunnels when for the parameter 1.2.1.0.5.7 the option 'none' was selected.

Data presentation	Single selection from the predefined list: Y / N
	Explanation on data presentation:
Number	**1.2.1.0.6**
Title	**Platform**
XML Name	OPTrackPlatform
Applicable	Parameters of this group (from 1.2.1.0.6.1 to 1.2.1.0.6.7) are only applicable if platforms exist on the OP
Can be repeated	Y
Number	1.2.1.0.6.1
Title	IM's Code
XML Name	OPTrackPlatformIMCode
Definition	Infrastructure Manager means any body or undertaking that is responsible in particular for establishing and maintaining railway infrastructure or a part thereof.
Can be repeated	N
Applicable	Y
Data presentation	[AAAA]
General Explanations	The Code is a unique identifier for the Infrastructure Manager and it shall be verified on national level. - If the IM is subject to TAF/TAP TSIs, it correspond to the code used in TAF/TAP TSIs. - In other cases, it corresponds to the **"organisation code" assigned** by the Agency for the specific needs of the RINF Each Section of Line may concern only one IM.
Reference	Article 3 (2) of Directive 2012/34/EU
Validation	No verification by RINF application. Check of the link between MS and IM' Name must be done nationally.

Number	1.2.1.0.6.2
Title	Identification of platform
XML Name	OPTrackPlatformIdentification
Definition	Unique platform identification or unique platform number within OP
Can be repeated	N
Applicable	Y
Data presentation	CharacterString
General Explanations	Platform for the purpose of RINF is understood as a platform edge. Platform identification shall concern only the part of the structure neighbouring to the track (interfaced with trains). In case when normal platform numbering concern the whole structure between two tracks, the "RINF track" may be labelled with the identification made of platform number and the track ID to which the specific edge belongs. Other solutions for the identification of the platform as the edge adopted by IM or MS are also permitted.

Number	1.2.1.0.6.3
Title	TEN Classification of platform
XML Name	OP Track Platform Parameter **IPL_TENClass**
Definition	Indicates the part of the trans-European network the platform belongs to.
Can be repeated	Y
Applicable	Y/ NYA
Data presentation	Single selection from the predefined list: Part of the TEN-T Comprehensive Network Part of the TEN-T Core Freight Network Part of the TEN-T Core Passenger Network Off-TEN
Reference	[24] Regulation (EU) No 1315/2013

Number	1.2.1.0.6.4
Title	Usable length of platform
XML Name	OP Track Platform Parameter **IPL_Length**
Definition	The maximum continuous length (expressed in metres) of that part of platform in front of which a train is intended to remain stationary in normal operating conditions for passengers to board and alight from the train, making appropriate allowance for stopping tolerances.
Explanation on Definition	The maximum continuous length (expressed in metres) of that part of platform in front of which a train is intended to remain stationary in normal operating conditions for passengers to board and alight from the train, making appropriate allowance for stopping tolerances
Applicable	Y/NYA
Can be repeated	N
Data presentation	[NNNN]
Comments about problems in the definitions	Platform dimensions are always related to one neighbouring track at a time. So if two tracks are along a platform, this platform should be divided into two RINF platforms to have precise description of each.
References	INF TSI 4.2.10, OPE TSI: 2.3.6 and 2.3.7 of Appendix D

Number	1.2.1.0.6.5
Title	Height of platformtunnel
XML Name	OP Track Platform Parameter **IPL_Height**
Definition	Distance between the upper surface of platform and running surface of the neighbouring track. It is the nominal value expressed in millimetres.
Applicable	Y/ NYA
Can be repeated	N
Data presentation	Single selection from the predefined list: 250 280 550 760 300-380 200 580 680 685 730 840 900 915 920 960 1100 other

	Explanation on data presentation: Values included in the list are taken from PRM and INF TSIs including Specific Cases. They are the values which are mandatory for the design of the platform at the respective part of the network. They are not real values measured at real platforms.
Comment	Platform dimensions are always related to one neighbouring track at a time. So if two tracks are along a platform, this platform should be divided into two or more 'RINF platforms' to have precise description of each.
References	INF TSI 4.2.10.4 PRM TSI 4.1.8 and 4.1.2.18 OPE TSI: 2.3.8 of Appendix D
Number	1.2.1.0.6.6
Title	Existence of platform assistance for starting train
XML Name	OP Track Platform Parameter **IPL_AssistanceStartingTrain**
Definition	Indication of existence of equipment or staff supporting the train crew in starting the train.
Explanation on Definition	Fixed equipment (for example mirrors or CCTV cameras) or station staff indicating to train crew or driver when to close doors and whether this has been done successfully.
Applicable	Y/NYA
Can be repeated	N
Data presentation	Single selection from the predefined list: Y N
Number	1.2.1.0.6.7
Title	Range of use of the platform boarding aid
XML Name	OP Track Platform Parameter **IPL_AreaBoardingAid**
Definition	Information of the train access level for which the boarding aid can be used.
Applicable	Y/NYA
Can be repeated	N
Data presentation	[NNNN]
	Explanation on data presentation:Vertical difference that is overcome by the platform boarding aid in millimetres The value "0" means that the platform is not equipped with a platform boarding aid
General Explanations	~~This parameter is mandatory only if such a device exists.~~ There is no check on the provision of the parameter in the verification process of the RINF application.
References	PRM TSI: 4.4.3

Number	**1.2.2**
Title	**SIDING**
XML Name	OPSiding
Can be repeated	Y Explanation on repeatability: The set of data for siding may be repeated as many times as many sidings within the same OP exist.
Applicable	Parameters of this group are only applicable (from 1.2.2.0.0.1 to 1.2.2.2.0.4.6) if sidings exist in the OP

Number	**1.2.2.0.0**
Title	**Generic information**
Can be repeated	N Explanation on repeatability: For each siding it may exist only one set of 'Generic information'

Number	1.2.2.0.0.1
Title	IM's Code
XML Name	OPSidingIMCode
Definition	Infrastructure Manager means any body or undertaking that is responsible in particular for establishing and maintaining railway infrastructure or a part thereof.
Applicable	Y
Can be repeated	N
Data presentation	[NNNN]
General Explanations	Code shall correspond to the name of Infrastructure Manager and it shall be verified on national level. It should correspond to the code used in TAF/TAP TSIs to identify IMs. Each Section of Line may concern only one IM.
Reference	Article 3 (2) of Directive 2012/34/EU
Validation	No verification by RINF application. Check of the link between MS and IM' Name must be done nationally.
Number	1.2.2.0.0.2
Title	Identification of siding
XML Name	OPSidingIdentification
Definition	Unique siding identification or unique siding number within OP
Can be repeated	N Explanation on repeatability: Each track shall have unique identification or number within the OP. This number cannot be used for naming any other track in the same OP.
Applicable	Y
Data presentation	CharacterString
Validation	The check of fact that ID is unique within OP has to be done on national level (preferably by IM).

Number	1.2.2.0.0.3

Title	TEN classification of siding
XML Name	OP Siding Parameter **IPP_TENClass**
Definition	Indication of the part of the trans-European network the siding belongs to.
Can be repeated	Y
Applicable	Y/NYA
Data presentation	Single selection from the predefined list: Part of the TEN-T Comprehensive Network Part of the TEN-T Core Freight Network Part of the TEN-T Core Passenger Network Off-TEN
Reference	[24] Regulation (EU) No 1315/2013
umber	**1.2.2.0.1**
Title	**Declaration of verification for siding**
XML Name	**IDE**
Can be repeated	N
Explanation	As RINF includes only INF parameters for OP, information on EC declaration concerns also only infrastructure subsystem verification
Number	1.2.2.0.1.1
Title	EC declaration of verification for siding (INF)
XML Name	OP Siding Parameter **IDE_ECVerification**
Definition	Unique number for EC declarations following format requirements specified in the 'Document about practical arrangements for transmitting interoperability documents'
Can be repeated	Y Explanation on repeatability: (INF) in the title means that here we include only declarations concerning infrastructure subsystem on the specific siding. The parameter may be repeated only when several EC declarations were issued after verification of the siding and several numbers has to be registered.
Applicable	Y/N/NYA Explanation on applicability: “Y” shall be selected in case when EC declaration was issued
Data presentation	Predefined CharacterString: [CC/RRRRRRRRRRRRR/YYYY/NNNNNN]
General Explanations	With the extension of scope according to Interoperability Directive 2008/57/EC, geographical scope of the INF TSI now includes all the networks (TEN and off-TEN) with the following nominal track gauges: 1435, 1520, 1524, 1600 and 1668 mm
Reference concerning format	‘Document about practical arrangements for transmitting interoperability documents' [23]
Validation	The validation is described before this Table, in section 2.3.

Number	1.2.2.0.1.2
Title	EI declaration of demonstration for siding (INF)
XML Name	OP Siding Parameter **IDE_EIDemonstration**
Definition	Unique number for EI declarations following the same format requirements as specified in the 'Document about practical arrangements for transmitting interoperability documents'
Can be repeated	Y
Applicable	Y/N/NYA Explanation on applicability: "Y" shall be selected in case when the demonstration was executed and EI declaration was issued.
Data presentation	Predefined CharacterString: [CC/RRRRRRRRRRRRR/YYYY/NNNNNN])
General Explanations	It may happen that several EI declarations were issued – then parameter has to be repeated as many times as many declarations were issued. The procedure for demonstration that existing network fits to requirements of the TSIs is executed on voluntary bases, so when EI declaration do not exist then the parameter is optional. If EI declaration was not issued then field shall be left empty.
Reference	[22] Recommendation 2014/881/EU [23] 'Document about practical arrangements for transmitting interoperability documents'
Validation	The validation is described before this Table, in section 2.3.
Number	**1.2.2.0.2**
Title	**Performance parameter**
XML Name	**IPP**
Can be repeated	N
Explanation	For each siding only the one set of 'Performance parameters' may be presented
Number	1.2.2.0.2.1
Title	Usable length of siding
XML Name	OP Siding Parameter **IPP_Length**
Definition	Total length of the siding/stabling track expressed in metres where trains can be parked safely.
Applicable	Y/NYA
Can be repeated	N
Data presentation	[NNNN] Explanation on data presentation: The value shall include operational rules for braking, position of vehicles not influencing the clearance of neighbouring tracks, etc.
Reference	INF TSI: 4.2.10.1.

Number	**1.2.2.0.3**
Title	**Line layout**
XML Name	**ILL**
Can be repeated	N
Number	1.2.2.0.3.1
Title	Gradient for stabling tracks
XML Name	OP Siding Parameter **ILL_Gradient**
Definition	Maximum value of the gradient expressed in millimetres per metre.
Applicable	Y/NYA
Can be repeated	N
Data presentation	[NN.N]
General Explanations	It has to be shown the real value of the gradient when it exceeds the TSI limit of 2.5 expressed in millimetres per metre.
Reference	INF TSI: 4.2.4.3 (8)
Number	1.2.2.0.3.2
Title	Minimum radius of horizontal curve
XML Name	OP Siding Parameter **ILL_MinRadHorzCurve**
Definition	Radius of the smallest horizontal curve expressed in metres.
Applicable	Y/NYA
Can be repeated	N
Data presentation	[NNN]
General Explanations	The real value of the radius (expressed in metres) has to be presented if it is below the minimum limit of 150 m given in CR INF TSI.
References	INF TSI: 4.2.3.4
Number	1.2.2.0.3.3
Title	Minimum radius of vertical curve
XML Name	OP Siding Parameter **ILL_MinRadVertCurve**
Definition	Radius of the smallest vertical curve expressed in metres
Applicable	Y/ NYA
Can be repeated	N

Data presentation	Predefined CharacterString: [NNN+NNN]
	Explanation on data presentation: Here shall be presented the real values of the radius of vertical curve when at least one of the values in crest or in hollow is smaller than the minimum limit given in INF TSI. The first 'NNN' is a value of crest, second 'NNN' is a value of hollow, both expressed in metres, For the TSI compliant lines the default values of crest is 600 m, and for hollow is 900 m. For TSI compliant marshalling yards default values are: crest 250 m, hollow 300 m.
References	INF TSI: 4.2.3.4
Number	**1.2.2.0.4**
Title	**Fixed installations for servicing trains**
XML Name	**ITS**
Can be repeated	N
Number	1.2.2.0.4.1
Title	Existence of toilet discharge
XML Name	OP Siding Parameter **ITS_ToiletDischarge**
Definition	Indication whether exists an installation for toilet discharge (fixed installation for servicing trains) as defined in INF TSIs.
Applicable	Y/NYA
Can be repeated	N
Data presentation	Single selection from the predefined list: Y N
References	INF TSI: 4.2.13.2.

Number	1.2.2.0.4.2
Title	Existence of external cleaning facilities
XML Name	OP Siding Parameter **ITS_ExternalCleaning**
Definition	Indication whether exists an installation for external cleaning facility (fixed installation for servicing trains) as defined in INF TSIs.
Applicable	Y/NYA
Can be repeated	N
Data presentation	Single selection from the predefined list: Y N
References	INF TSI: 4.2.13.3.
Number	1.2.2.0.4.3
Title	Existence of water restocking
XML Name	OP Siding Parameter **ITS_WaterRestocking**
Definition	Indication whether exists an installation for water restocking (fixed installation for servicing trains) as defined in INF TSIs.
Applicable	Y/NYA
Can be repeated	N
Data presentation	Single selection from the predefined list: Y N
References	INF TSI: 4.2.13.4.
Number	1.2.2.0.4.4
Title	Existence of refuelling
XML Name	OP Siding Parameter **ITS_Refuelling**
Definition	Indication whether exists an installation for refuelling (fixed installation for servicing trains) as defined in INF TSIs.
Applicable	Y/NYA
Can be repeated	N
Data presentation	Single selection from the predefined list: Y N
References	INF TSI 4.2.13.5.

Number	1.2.2.0.4.5
Title	Existence of sand restocking
XML Name	OP Siding Parameter **ITS_SandRestocking**
Definition	Indication whether an installation for sand restocking exists (fixed installation for servicing trains).
Applicable	Y/NYA
Can be repeated	N
Data presentation	Single selection from the predefined list: Y N
Reference	
Number	1.2.2.0.4.6
Title	Existence of electric shore supply
XML Name	OP Siding Parameter **ITS_ElectricShoreSupply**
Definition	Indication whether an installation for electric shore supply exists (fixed installation for servicing trains).
Applicable	Y/NYA
Can be repeated	N
Data presentation	Single selection from the predefined list: Y N
References	INF TSI: 4.2.12.6 and 6.2.4.14
Number	**1.2.2.0.5**
Title	**Tunnel**
XML Name	OPSidingTunnel
Applicable	Parameters of this group (from 1.2.2.0.5.1 to 1.2.2.0.5.8) are only mandatory if tunnels exist on the siding on the OP
Can be repeated	Y
Number	1.2.2.0.5.1
Title	IM's Code
XML Name	OPSidingTunnelIMCode
Definition	Infrastructure Manager means any body or undertaking that is responsible in particular for establishing and maintaining railway infrastructure or a part thereof.
Can be repeated	N
Applicable	Y
Data presentation	[AAAA]

General Explanations	The Code is a unique identifier for the Infrastructure Manager and it shall be verified on national level. - If the IM is subject to TAF/TAP TSIs, it correspond to the code used in TAF/TAP TSIs. - In other cases, it corresponds to the **"organisation code" assigned** by the Agency for the specific needs of the RINF Each Section of Line may concern only one IM.
Reference	Article 3 (2) of Directive 2012/34/EU
Validation	No verification by RINF application. Check of the link between MS and IM' Name must be done nationally.

Number	1.2.2.0.5.2
Title	Tunnel identification
XML Name	OPSidingTunnelIdentification
Definition	Unique tunnel identification or unique number within Member State
Applicable	Y In case when tunnel does not have own identification within the Member State, the IM should deliver it himself.
Can be repeated	N
Data presentation	CharacterString
Comments	Here should be given the name, number, code or any other expression which is normally used for the identification of the tunnel.

Number	1.2.2.0.5.3
Title	EC declaration of verification for tunnel (SRT)
XML Name	OP Siding Tunnel Parameter **ITU_ECVerification**
Definition	Unique number for EC declarations following format requirements specified in the 'Document about practical arrangements for transmitting interoperability documents'
Can be repeated	Y Explanation on repeatability: (SRT) in title means that here we include only declarations concerning requirements of SRT TSI for infrastructure system on the specific track. Parameter shall be repeated when different EC declarations were issued for different elements of infrastructure subsystem on the specific track in the tunnel.
Applicable	Y/N/NYA Explanation on applicability: "Y" shall be selected in case when EC declaration was issued
Data presentation	Predefined CharacterString: [CC/RRRRRRRRRRRRR/YYYY/NNNNNN]

General Explanations	With the extension of scope according to Interoperability Directive 2008/57/EC, geographical scope of the INF, ENE and CCS TSIs now includes all the networks (TEN and off-TEN) with the following nominal track gauges: 1435, 1520, 1524, 1600 and 1668 mm
Reference concerning format	'Document about practical arrangements for transmitting interoperability documents' [23]
Validation	The validation is described before this Table, in section 2.3.
Number	1.2.2.0.5.4
Title	EI declaration of demonstration for tunnel (SRT)
XML Name	OP Siding Tunnel Parameter **ITU_EIDemonstration**
Definition	Unique number for EI declarations following the same format requirements as specified in the 'Document about practical arrangements for transmitting interoperability documents'
Can be repeated	Y Explanation on repeatability: (SRT) in title means that here we include only declarations concerning requirements of SRT TSI for infrastructure system on the specific track. Parameter shall be repeated when different EI declarations were issued for different elements of infrastructure subsystem on the specific track in the tunnel. It may happen that several EI declarations were issued – then parameter has to be repeated as many times as many declarations were issued.
Applicable	Y/N/NYA Explanation on applicability: "Y" shall be selected in case when the demonstration was executed and EI declaration was issued
General Explanations	It may happen that several EI declarations were issued – then parameter has to be repeated as many times as many declarations were issued. The procedure for demonstration that existing network fits to requirements of the TSIs is executed on voluntary bases, so when EI declaration do not exist then the parameter is optional. If EI declaration was not issued then field shall be left empty.
Data presentation	Predefined CharacterString: [CC/RRRRRRRRRRRRR/YYYY/NNNNNN])
References	[22] Recommendation 2014/881/EU 'Document about practical arrangements for transmitting interoperability documents' [23]
Validation	The validation is described before this Table, in section 2.3.

Number	1.2.2.0.5.5
Title	Length of tunnel
XML Name	OP Siding Tunnel Parameter **ITU_Length**
Definition	Length of a tunnel in metres from entrance portal to exit portal.
Explanations on definition	Length of a tunnel in metres from portal to portal at the level of the top of rail.
Can be repeated	N
Applicable	Y/N/NYA
	Y only for a tunnel with length of 100 metres or more.
Data presentation	[NNNNN]

Number	1.2.2.0.5.6
Title	Existence of emergency plan
XML Name	OP Siding Tunnel Parameter **ITU_EmergencyPlan**
Definition	Indication whether emergency plan exists.
Can be repeated	N
Applicable	Y/ N/NYA
	Explanation on applicability: Y for tunnels longer than 1 km,, in accordance with section 4.4.2 of SRT TSI, the emergency plan is mandatory only for tunnel length of more than 1km. 'N'=not applicable can be selected for short tunnels of less than 1 km, as for them the fire category according SRT TSI does not exist.
Data presentation	Single selection from the predefined list: Y N
General Explanations	Emergency plan has to be a document developed for each tunnel under the direction of the IM, in co-operation, where appropriate, with RUs, Rescue services and relevant authorities. It shall be consistent with the self-rescue, evacuation and rescue facilities provided.
Reference	SRT TSI: 4.4.2

Number	1.2.2.0.5.7
Title	Fire category of rolling stock required
XML Name	OP Siding Tunnel Parameter **ITU_FireCatReq**
Definition	Categorisation on how a passenger train with a fire on board will continue to operate for a defined time period.
Can be repeated	N
Applicable	Y/N/NYA
	Explanation on applicability: 'N'=not applicable shall be selected for short tunnels of less than 1 km, as for them the fire category according SRT TSI does not exist.

Data presentation	Single selection from the predefined list: A B none
	Explanation on data presentation: Wherever category B is not needed, generally the category A has to be understood as the default value. 'none' shall be selected when none of A or B fire category is applied for a specific tunnel.
References	SRT TSI : 1.1.3 CR LOC&PAS TSI: 4.2.10.1
Number	1.2.2.0.5.8
Title	National fire category of rolling stock required
XML Name	OP Siding Tunnel Parameter **ITU_NatFireCatReq**
Definition	Categorisation on how a passenger train with a fire on board will continue to operate for a defined time period - according to national rules if they exist.
Can be repeated	N
Applicable	Y/N/NYA
	Explanation on applicability: 'N'=not applicable shall be selected when respective national rules do not exist Y only for tunnels when for the parameter 1.2.2.0.5.7 the option 'none' was selected.
Data presentation	CharacterString
	Explanation on data presentation: Data shall include both the category and brief name of the document introducing the categorisation
Number	**1.2.2.0.6**
Title	**Contact line system**
XML Name	**ECS**
Can be repeated	N
Number	1.2.2.0.6.1
Title	Maximum current at standstill per pantograph

XML Name	**ECS_MaxStandstillCurrent**
Definition	Indication of the maximum allowable train current at standstill for DC systems expressed in amperes.
Explanation on Definition	Parameter related to current taken by the vehicle when it is not in a traction or regenerative mode, e.g. preheating, air-condition, etc.
Applicable	Y/N/NYA Explanation on applicability: This parameter is applicable ("Y") only if "Overhead contact line (OCL)" is selected for parameter 1.1.1.2.2.1.1 and if DC system is selected in 1.1.1.2.2.1.2 It can be not applicable, at the iniative of the IM, in the following cases: • Siding destined to freight traffic, whose trains have a low consumption in stationary (the maximum demand of energy is due to air conditioning systems, which is not significant in these trains). • Siding used in access to depots or workshops.
Can be repeated	Y
Data presentation	[NNN]
References	ENE TSI: 4.2.6, LOC&PAS TSI: 4.2.8.2.5
Number	**1.2.3**
Title	**Rules and restrictions**
XML Name	
Can be repeated	N
Number	1.2.3.1
Title	Existence of rules and restrictions of a strictly local nature
XML Name	**RUL_LocalRulesOrRestrictions**
Definition	Existence of rules and restrictions of a strictly local nature
Applicable	Y/N/NYA
Can be repeated	
Data presentation	Single selection from the predefined list: Y/N "In case of Y, the RU have to contact the IM to be informed of these conditions"
General explanations	
Reference	IOD : Notification of national rules Art 14. 11: There is a general obligation for Member States to notify existing national rules but: *"Member States may decide not to notify rules and restrictions of a strictly local nature.*

	In such cases, MemberStates shall mention those rules and restrictions in the registers of infrastructure."
Validation	
Number	1.2.3.2
Title	Documents regarding the rules or restrictions of a strictly local nature available by the IM
XML Name	**RUL_LocalRulesOrRestrictionsDocRef**
Definition	Electronic document available from the IM stored by the Agency providing additional information
Applicable	Y/N/NYA
Can be repeated	
Data presentation	CharacterString
General explanations	
Reference	IOD : Notification of national rules Art 14. 11. Member States may decide not to notify rules and restrictions of a strictly local nature. In such cases, Member
Validation	

5.2 List of Borders points: table 6

The list below is stil under development. Some questions are still pending as:

- How to deal with sections of line that cross the border several times between two following OPs.
- Consistency between the geographical coordinates provided by NREs

It has been developed by the Agency on the basis of informations and agreement from NREs. Any change shall be justify and agreed by the relevant NREs, sent to ERA for the numbering (if needed) of the border point and published.

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Table

Table 6 : List of border points

BP NAME	Between MS		Between OPs		Latitude	Longitude
EU00001	Germany	Netherlands	Ihrhove	Nieuweschans	53.18900	7.21112
EU00002	Germany	Netherlands	Bad Bentheim	Oldenzaal	52.31050	7.04085
EU00003	Germany	Netherlands	Gronau	Enschede	52.21940	6.98072
EU00004	Germany	Netherlands	Emmerich	Zevenaar Oost	51.90260	6.13832
EU00005	Germany	Netherlands	Kaldenkirchen	Venlo	51.34230	6.19319
EU00006	Germany	Netherlands	Herzogenrath	Landgraaf	50.88150	6.08651
EU00007	Germany	Belgium	Aachen West	Montzen	50.75460	6.02195
EU00008	Germany	Belgium	Aachen Hbf/Aachen Süd	Abzw. Hammerbrücke, Hergenrath	50.71970	6.04193
EU00009	Germany	Luxembourg	Igel	Wasserbillig	49.71500	6.50729
EU00010	Germany	France	Perl	Apach	49.47010	6.37031
EU00011	Germany	France	Hemmersdorf	Bouzonville	49.33710	6.59184

BP NAME	Between MS		Between OPs		Latitude	Longitude
EU00012	Germany	France	Saarbrücken	Forbach	49.21510	6.94498
EU00013	Germany	France	Hanweiler	Sarreguemines	49.11300	7.05807
EU00014	Germany	France	Winden	Wissembourg	49.02810	7.97971
EU00015	Germany	France	Wörth	Lauterbourg	48.97630	8.19632
EU00016	Germany	France	Kehl	Strasbourg	48.57660	7.80190
EU00017	Germany	France	Neuenburg	Bantzenheim	47.81520	7.54723
EU00018	Germany	Switzerland	Weil-am-Rhein - RB	Basel Bad Bhf RB		
EU00019	Germany	Switzerland	Grenzach	Basel Bad Bhf PB		
EU00020	Germany	Switzerland	Lörrach	Riehen		
EU00021	Germany	Switzerland	Waldshut (DB)	Koblenz (AG)	47.61010	8.23502
EU00022	Germany	Switzerland	Lotstetten [1]	Rafz		
EU00023	Germany	Switzerland	Neuhausen-am-Rheinfall [2]	Jestetten		
EU00024	Germany	Switzerland	Erzingen (Baden)	Trasadingen		
EU00025	Germany	Switzerland	Thayngen	Singen		
EU00026	Germany	Switzerland	Konstanz	Kreuzlingen	47.65460	9.17769
EU00027	Germany	Switzerland	Konstanz	Kreuzlingen Hafen	47.65350	9.17890
EU00028	Germany	Austria	Lindau-Reutin	Lochau-Hörbranz	open	open
EU00029	Germany	Austria	Pfronten-Steinach	Vils	47.5604	10.5905
EU00030	Germany	Austria	Griesen	Ehrwald	47.4697	10.9302

BP NAME	Between MS		Between OPs		Latitude	Longitude
EU00031	Germany	Austria	Mittenwald	Scharnitz	47.3978	11.2675
EU00032	Germany	Austria	Kufstein	Kiefersfelden	47.6012	12.1774
EU00033	Germany	Austria	Freilassing	Salzburg	47.8319	12.9890
EU00034	Germany	Austria	Simbach	Braunau	open	open
EU00035	Germany	Austria	Passau	Wernstein	48.5633	13.4517
EU00036	Germany [3]	Czech Republic	Bayerisch Eisenstein	Železná Ruda st.hr.	49.12162	13.20916
EU00037	Germany	Czech Republic	Furth im Wald	Česká Kubice st.hr.	49.33266	12.87956
EU00038	Germany	Czech Republic	Schirnding	Cheb st.hr.	50.08700	12.25349
EU00039	Germany	Czech Republic	Bad Brambach [4]	Vojtanov st.hr.	50.21365	12.32714
EU00040	Germany	Czech Republic	Zwotental	Kraslice st.hr.	50.35392	12.46645
EU00041	Germany	Czech Republic	Johanngeorgenstadt	Potůčky st.hr.	50.43227	12.73535
EU00042	Germany	Czech Republic	Cranzahl	Vejprty st.hr.	50.50482	13.03204
EU00043	Germany	Czech Republic	Bad Schandau	Děčín st.hr.	50.85942	14.22218
EU00044	Germany	Czech Republic	Sebnitz	Dolní Poustevna st.hr.	50.98116	14.27914
EU00045	Germany	Czech Republic	Ebersbach (Sachs)	Rumburk st.hr.	50.99774	14.57976
EU00046	Germany	Czech Republic	Großschönau	Varnsdorf st.n.st.hr.	50.92107	14.60403
EU00047	Germany	Czech Republic	Seifhennersdorf	Varnsdorf st.hr.	50.90259	14.64450
EU00048	Germany	Poland	Zittau	Porajów	50.89360	14.83100
EU00049	Germany	Poland	Görlitz	Zgorzelec	51.14410	14.99260

BP NAME	Between MS		Between OPs		Latitude	Longitude
EU00050	Germany	Poland	Horka	Węgliniec	51.28740	15.03260
EU00051	Germany	Poland	Forst (Lausitz)	Tuplice	51.73800	14.66170
EU00052	Germany	Poland	Guben	Gubin	51.97410	14.70740
EU00053	Germany	Poland	Frankfurt (Oder)	Rzepin	52.32260	14.57860
EU00054	Germany	Poland	Küstrin-Kietz	Kostrzyn	52.58240	14.63060
EU00055	Germany	Poland	Tantow	Szczecin Gumieńce	53.32720	14.41650
EU00056	Germany	Poland	Löcknitz	Szczecin Gumieńce	53.41740	14.37530
EU00057	Germany	Poland	Hirschfelde	Hirschfelde Grenze	50.94970	14.89570
EU00058	Germany	Poland	Hagenwerder	Krzewina Zgorzelecka	51.04800	14.95790
EU00059	Denmark	Germany	Padborg	Abzw. Flensburg Friedensweg	54.81690	9.36413
EU00059	Germany	Denmark	Abzw. Flensburg Friedensweg	Padborg	54.81690	9.36413
EU00060	Austria	Czech Republic	Summerau	Horní Dvořiště st.hr.	48.5930684068896	14.4337143742064
EU00061	Austria	Czech Republic	Gmünd N.Ö.	České Velenice st.hr.	48.7644450517819	14.9683315468887
EU00062	Austria	Czech Republic	Retz	Znojmo st.hr.	48.7736541725890	16.0146799358495
EU00063	Austria	Czech Republic	Bernhardsthal	Břeclav st.hr.	48.7125440909622	16.8683838845128
EU00064	Czech Republic	Poland	Frýdlant v Č.st.hr.	Zawidów	51.01240	15.03812
EU00065	Czech Republic	Poland	Harrachov st.hr.	Szklarska Poręba Górna	50.77900	15.39559

BP NAME	Between MS		Between OPs		Latitude	Longitude
EU00066	Czech Republic	Poland	Královec st.hr.	Kamienna Góra	50.68597	15.98491
EU00067	Czech Republic	Poland	Meziměstí st.hr.	Mieroszów	50.63628	16.22027
~~EU00068~~	~~Czech Republic~~	~~Poland~~	~~Otovice st.hr.~~	~~Ścinawka Średnia~~	~~50.55084~~	16.41019
EU00069	Czech Republic	Poland	Lichkov st.hr.	Międzylesie	50.09817	16.69059
EU00070	Czech Republic	Poland	Mikulovice st.hr.	Głuchołazy	50.30751	17.35133
EU00071	Czech Republic	Poland	Jindřichov ve Slezsku st.hr.	Głuchołazy	50.27431	17.50602
EU00072	Czech Republic	Poland	Bohumín-Vrbice st.hr.	Chałupki	49.92250	18.30150
EU00073	Czech Republic	Poland	Bohumín st.hr.	Chałupki	49.91641	18.32249
EU00074	Czech Republic	Poland	Petrovice u Karviné.st.hr.	Zebrzydowice	49.88546	18.56831
EU00075	Czech Republic	Poland	Český Těšín st. hr.	Cieszyn	49.75211	18.61869
EU00076	Czech Republic	Slovakia	Horní Lideč st.hr.	Lúky pod Makytou št. hr.	49.17981	18.12982

BP NAME	Between MS		Between OPs		Latitude	Longitude
EU00077	Czech Republic	Slovakia	Vlársky průsmyk st.hr.	Horné Srnie št. hr.	49.03166	18.05331
EU00078	Czech Republic	Slovakia	Velká nad Veličkou st.hr.	Vrbovce št. hr.	48.82603	17.51682
EU00079	Czech Republic	Slovakia	Sudoměřice nad Moravou st.hr.	Skalica na Slovensku št. hr.	48.86982	17.24065
EU00080	Czech Republic	Slovakia	Hodonín st.hr.	Holíč nad Moravou št. hr.	48.83772	17.12643
EU00081	Czech Republic	Slovakia	Lanžhot st.hr.	Kúty št. hr.	48.71112	17.00042
EU00082	Czech Republic	Slovakia	Mosty u Jablunkova st.hr.	Čadca št. hr.	49.49439	18.76439
EU00083	Belgium	France	Antoing	Wannehain		
EU00084	Belgium	France	Mouscron	Tourcoing		
EU00085	Belgium	France	Froyennes	Baisieux		
EU00086	Belgium	France	Quévy	Aulnoye		
EU00087	Belgium	France	Erquelines	Jeumont		
EU00088	Belgium	France	Aubange	Longwy		
EU00089	Belgium	Netherlands	Antwerpen-Noorderkempen	Breda (grens)		
EU00090	Belgium	Netherlands	Essen	Roosendaal		
EU00091	Belgium	Netherlands	Neerpelt	Budel		

BP NAME	Between MS		Between OPs		Latitude	Longitude
EU00092	Belgium	Netherlands	Lanaken	Maastricht		
EU00093	Belgium	Netherlands	Visé	Eijsden / Maastricht Randwyck		
EU00094	Belgium	Netherlands	Zelzate	Sas van Gent		
EU00095	Belgium	Luxemburg	Gouvy	Troisvierges		
EU00096	Belgium	Luxemburg	Autelbas	Kleinbettingen		
EU00097	Belgium	Luxembourg	Aubange	Pétange		
EU00098	Belgium	Luxemburg	Athus	Pétange		
EU00099	France	Luxembourg	Mont-St-Martin	Pétange	49,5433	5,8106
EU00100	France	Luxembourg	Audun-le Tiche	Esch-sur-Alzette	49,4859	5,9688
~~EU00101~~	~~France~~	~~Luxembourg~~	~~Volmerange-les-Mines~~	~~Dudelange-Usines~~		
EU00102	France	Luxembourg	Thionville	Bettembourg	49,4721	6,1079
EU00103	Austria	Hungary	Baumgarten	Sopron	47.7136868847223	16.5413599522395
EU00104	Austria	Hungary	Loipersbach-Schattendorf	Sopron	47.6989654931559	16.4940757080922
EU00105	Austria	Hungary	Nickelsdorf	Hegyeshalom	47.9384856496069	17.0954082578180
EU00106	Austria	Hungary	Pamhagen	Fertöszéplak-Fertöd	47.6882186710393	16.8839494446881
EU00107	Austria	Hungary	Deutschkreutz	Harka	47.6267713611272	16.6248597012975
EU00108	Austria	Hungary	Jennersdorf	Szentgotthárd	46.9504875132700	16.2461343496966
EU00109	Austria	Slovakia	Kittsee	Bratislava-Petržalka št. hr.	48.1028339129659	17.0842207180160

BP NAME	Between MS		Between OPs		Latitude	Longitude
EU00110	Austria	Slovakia	Marchegg	Devínska Nová Ves št. hr.	48.2412288712550	16.9466364770388
EU00111	Austria	Slovenia	Bleiburg	Prevalje	46.5667	14.8399
EU00112	Austria	Slovenia	Rosenbach	Jesenice	46.4815	14.0199
EU00113	Austria	Slovenia	Spielfeld-Straß	Šentilj	46.6920	15.6404
EU00114	Austria	Italy	Sillian	Prato alla Drava	46,74025	12,37123
EU00115	Austria	Italy	Steinach in Tirol	Brennero	47.0067	11.5074
EU00116	Austria	Italy	Thörl-Maglern	Tarvisio Boscoverde	46,53482	13,64054
EU00117	Austria	Lichtenstein	Tosters	Nendeln	47.21875	9.56960
EU00118	Austria	Switzerland	Lustenau	St. Margrethen		
EU00119	France	Spain	Hendaya	Irún/Irún Cambiador	43.35065	-1.78589
EU00120	France	Spain	Cerbère	PortBou/Portbou Cambiador	42.43494	3.15970
EU00121	France	Spain	RFF - TP FERRO	Límite Adif-TPFerro	42.45679	2.86245
EU00122	France	Spain	La Tour de Carol-Envigt	Puigcerdà	42.44716	1.91449
EU00123	Portugal	Spain	Valença do Minho	Tui	42,03630	-8,64676
EU00124	Portugal	Spain	Vilar Formoso	Fuente de Oñoro	40,60570	-6,82600
EU00125	Portugal	Spain	Elvas	Badajoz	38,92024	-7,03015
EU00126	France	Italy	Menton-Garavan	Ventimiglia / Ventimiglia Parco Roja	43,78537	7,52957

BP NAME	Between MS		Between OPs		Latitude	Longitude
EU00127	France	Italy	Modane	Bardonecchia	45,13757	6,68342
EU00128	France	Italy	Vievola	Limone Piemonte	44,15268	7,56981
EU00129	France	Italy	Breil-sur-Roja	Olivetta - S. Michele	43,89028	7,53092
EU00130	France	Switzerland	Pougny-Chancy	La Plaine		
EU00131	France	Switzerland	Annemasse	Chènes-Bougeries		
EU00132	France	Switzerland	Les Longevilles-Rochejean	Vallorbe		
EU00133	France	Switzerland	Pontarlier	Les Verrières		
EU00134	France	Switzerland	Morteau	Le Locle-Col-des-Roches		
EU00135	France	Switzerland	Delle	Boncourt		
EU00136	France	Switzerland	Leymen	Flüh		
EU00137	Switzerland	France	Rodersdorf [7]	Leymen		
EU00138	France	Switzerland	Saint-Louis	Basel St. Johann		
EU00139	France	Switzerland	St.Gingolph France	St.Gingolph		
EU00140	Switzerland	France	Le Châtelard-Frontière [8]	Vallorcine		
EU00141	Denmark	Sweden	Peberholm	Lernacken		
EU00142	Lithuania	Poland	Mockava	Trakiszki	54,26487	23,22999
EU00143	Latvia	Russia	Zilupe	Sebeža	56,38863	28,17265
EU00144	Latvia	Russia	Kārsava	Pitalova	56,85329	27,72848

BP NAME	Between MS		Between OPs		Latitude	Longitude
EU00145	Latvia	Lithuania	Meitene	Joniškis	56,36361	23,65876
EU00146	Latvia	Lithuania	Eglaine	Rokiškis	55,94445	26,04576
EU00147	Latvia	Lithuania	Kurcums	Turmantas	55,70351	26,46777
EU00148	Latvia	Lithuania	Reņģe	Mažeikiai	56,37945	22,62039
EU00149	Italy	Slovenia	Gorizia C.le	Vrtojba	45,92315	13,62690
EU00150	Italy	Slovenia	Villa Opicina	Stanjel	45,72324	13,81084
EU00151	Italy	Slovenia	Villa Opicina	Sezana	45,68757	13,83348
EU00152	Italy	Switzerland	Pino Tronzano	Ranzo S. Abbondio	46,10370	8,756673
EU00153	Italy	Switzerland	Iselle	Brig	46,27094	8,09526
EU00154	Italy	Switzerland	Como St. Giovanni	Chiasso	45,83074	9,03423
EU00155	Italy	Switzerland	Cucciago (via Bivio Rosales)	Chiasso	45,83074	9,03423
EU00156	Italy	Switzerland	Gaggiolo [9]	Stabio		
EU00157	Switzerland	Liechtenstein - Austria	Buchs SG	Schaan-Vaduz		
EU00158	Poland	Slovakia	Zwardoń	Skalité št. hr.	49.50388	18.97193
EU00159	Poland	Slovakia	Muszyna	Plaveč št. hr.	49.29605	20.92397
EU00160	Poland	Slovakia	Łupków	Medzilaborce št. hr.	49.25086	22.03846
EU00161	Slovakia	Ukraine	Maťovce ŠRT št. hr.	Uzhhorod	48.56241	22.16063
EU00162	Slovakia	Ukraine	Čierna nad Tisou št. hr.	Chop	48.43276	22.13762

BP NAME	Between MS		Between OPs		Latitude	Longitude
EU00163	Slovakia	Ukraine	Čierna nad Tisou ŠRT št. hr.	Chop	48.43276	22.13762
EU00164	Hungary	Slovakia	Sátoraljaújhely	Slovenské Nové Mesto št. hr.	48,38981	21,66948
EU00165	Hungary	Slovakia	Hidasnémeti	Čaňa št. hr.	48,52877	21,26256
EU00166	Hungary	Slovakia	Bánréve	Lenartovce št. hr.	48,30180	20,33859
EU00167	Hungary	Slovakia	Somoskőújfalu	Fiľakovo št. hr.	48,16836	19,82116
EU00168	Hungary	Slovakia	Nógrádszakál	Malé Straciny št. hr.	48,16365	19,51302
EU00169	Hungary	Slovakia	Ipolytarnóc	Lučenec št. hr.	48,24626	19,63834
EU00170	Hungary	Slovakia	Szob	Štúrovo št. hr.	47,82362	18,85269
EU00171	Hungary	Slovakia	Komárom	Komárno št. hr.	47,75657	18,08790
EU00172	Hungary	Slovakia	Rajka	Rusovce št. hr.	48,01373	17,17945
EU00173	Poland	Ukraine	Medyka	Mościska		
EU00174	Poland	Ukraine	Werchrata	Rawa Ruska		
EU00175	Poland	Ukraine	Hrebenne	Rawa Ruska		
EU00176	Poland	Ukraine	Hrubieszów Miasto	Izov		
EU00177	Poland	Ukraine	Hrubieszów LHS	Izov		
EU00178	Poland	Ukraine	Dorohusk	Jahodyn		
EU00179	Poland	Belarus	Terespol	Brześć		
EU00180	Poland	Belarus	Czeremcha	Wysokie		

BP NAME	Between MS		Between OPs		Latitude	Longitude
EU00181	Poland	Belarus	Siemianówka	Świsłocz		
EU00182	Poland	Belarus	Kuźnica Białostocka	Grodno		
EU00183	Poland	Russia	Skandawa	Železnodorožnyj		
EU00184	Poland	Russia	Braniewo	Mamonowo		
EU00185	Hungary	Slovenia	Őriszentpéter	Hodoš	46,81974	16,34172
EU00186	Greece	Turkey	Pythion	UzunKopru	41.36209	26.63149
EU00187	Bulgaria	Greece	Svilengrad	Dikea	41.74770	26.16666
EU00188	Bulgaria	Greece	Kulata	Promachon	41.37950	23.36433
EU00189	Greece	FYROM	Idomeni	Gevgelija	41.12826	22.51719
EU00190	Greece	FYROM	Neos Kafkasos	Kremenitsa	40.90731	21.46449
EU00191	Czech Republic	Poland	Hrádek nad Nisou st.hr.	Porajów	50.86917	14.83999
EU00192	Hungary	Ukraine	Eperjeske	Соловка	48,37405	22,25738
EU00193	Hungary	Ukraine	Záhony	Чоп	48,41547	22,18605
EU00194	Hungary	Romania	Biharkeresztes	Oradea	47,12495	21,79295
EU00195	Hungary	Romania	Kötegyán	Salonta	46,76040	21,48629
EU00196	Hungary	Romania	Lőkösháza	Curtici	46,40992	21,25383
EU00197	Hungary	Romania	Nyírábrány	Valea lui Mihai	47,52521	22,03182
EU00198	Hungary	Romania	Ágerdőmajor	Berveni	47,77062	22,43627
EU00199	Hungary	Serbia	Kelebia	Суботица / Subotica	46,16952	19,63273

BP NAME	Between MS		Between OPs		Latitude	Longitude
EU00200	Hungary	Serbia	Röszke	Хоргош / Horgoš	46,23042	20,00099
EU00201	Croatia	Hungary	Botovo	Gyékényes	46,24703	16,94493
EU00202	Croatia	Hungary	Beli Manastir	Magyarboly	45,79834	18,55795
EU00203	Croatia	Hungary	Kotoriba	Murakeresztur	46,35918	16,85202
EU00204	Latvia	Belarus	Indra	Polocka	55,84455	27,63814
EU00205	Latvia	Estonia	Lugaži	Valga	57,76861	26,02336
EU00206	Bulgaria	Romania	Ruse razpredelitelna	Giurgiu Nord	43,88719	26,00771
EU00207	Bulgaria	Romania	Ruse	Giurgiu Nord	43,88719	26,00771
EU00208	Bulgaria	Romania	Vidin tovarna	Golenti	44,00301	22,94836
EU00209	Bulgaria	Romania	Vidin patnicheska	Golenti	44,00301	22,94836
EU00210	Bulgaria	Romania	Kardam	Negru Voda	43,78590	28,15100
EU00211	Bulgaria	Serbia	Kalotina Zapad	Dimitrovgrad	42,99824	22,83536
EU00212	Bulgaria	Turkey	Svilengrad	Kapikule	41,72183	26,34738
EU00213	Croatia	Slovenia	Mursko Središće	Lendava	46,51546	16,44405
EU00214	Croatia	Slovenia	Kumrovec	Imeno	46,11559	15,60657
EU00215	Croatia	Slovenia	Kamanje	Metlika	45,64556	15,34289
EU00216	Croatia	Slovenia	Savski Marof	Dobova	45,89068	15,68015
EU00217	Croatia	Slovenia	Šapjane	Ilirska Bistrica	45,50518	14,24422
EU00218	Croatia	Slovenia	Čakovec	Središće ob Dravi	46,38822	16,30414
EU00219	Croatia	Slovenia	Buzet	Podgorje	45,45398	13,95010

BP NAME	Between MS		Between OPs		Latitude	Longitude
EU00220	Croatia	Slovenia	Đurmanec	Rogatec	46,21231	15,77691
EU00221	Croatia	Bosnia and Herzegovina	Slavonski Šamac	Bosanski Šamac	45,06100	18,49626
EU00222	Croatia	Bosnia and Herzegovina	Metković	Čapljina	43,05886	17,65746
EU00223	Croatia	Bosnia and Herzegovina	Volinja	Dobrljin	45,18939	16,48235
EU00224	Croatia	Bosnia and Herzegovina	Ličko Dugo Polje razdjelna točka	Martin Brod	44,45715	16,13599
EU00225	Croatia	Bosnia and Herzegovina	Drenovci	Brčko	44,86828	18,83090
EU00226	Croatia	Serbia	Tovarnik	Šid	45,14734	19,16442
EU00227	Croatia	Serbia	Erdut	Bogojevo	45,52332	19,08632
EU00228	United Kingdom	France	Folkestone	Calais Frethun	51.01718	01.50182
EU00229	United Kingdom	Ireland	Newry	Dundalk	54,0690	-06,3787
EU00230	Germany	Czech Republic	Selb-Plossberg	As	50.212494	12.173480

[1] Line of SBB on German territory

[2] Line of SBB on German territory

[3] Coordinates are being reviewed due to differences detected

[4] The section of line crosses the border several times although there is no station

[5] Reopening expected for 2017 (CEVA)

[6], [7], [8] Track gauge 1000 millimetres

[9] Line under construction

Table
Table 7: List of domestic border points

Domestic BP NAME	Between IMS	Between OPs	Latitude	Longitude

5.3 principles defining the references of documents uploaded by IMs

waiting proposals from stake holders

EUROPEAN UNION AGENCY FOR RAILWAYS

Making the railway system work better for society.

5.4 List of IM's codes (the code will be manage via the new list of "organisations codes" according the EVR regulation)

5.5 List of admendments of the guide (2013 RINF Decision): table 7

Table 8: list of admendment to the previous version

Version 1.2.1 - 19/01/2017

Paragraph/Parameter/Table	Description	according
all	Update	New format of the ERA documents
all	Cleaning of all the parts of the texte let highlighted, strikeout in the previous version a good understanding of the modifications,	
P 19 : Border point	Deletion of "or IMs" in the definition	
P 19 : Domestic border point	The definition is: located exactly in the point where networks of different IMs are connected in a Member State	
Parameter 1.1.1.3.7.11 / SOL Track Parameter / **CTD_MinAxleLoad**	Modification of the format: [NN.N] No impact on the current work of NREs	Request of LV NRE
Parameter 1.2.0.0.0.4 / Type of Operational Point	Type 9: Deletion of "or IMs" in the definition	
Parameter 1.1.1.3.3.1 / GSM-R version / SOL Track Parameter **CRG_Version**	Deletion of the last sentence of the comment	
Parameter 1.1.1.3.2.2 / ETCS baseline / SOL Track Parameter **CPE_Baseline**	Deletion of the last sentence of the comment	
Parameter 1.1.1.3.5.2 / Need for more than one train protection, control and warning system required on-board / SOL Track Parameter **CPO_MultipleRequired**	Deletion of the link with ETCS level (applicability)	
Parameter 1.2.0.0.0.2 / Unique OP ID / UniqueOPID	Deletion of the last line of the Explanations	
Table 6	Update of the definition of some Borders points	
Table 7	Deletion of the previous list of admendments New list	

Version 1.2 - 07/04/2016: list of modifications to version 1.1		
Paragraph/Parameter/Table	Description	according
Table 1 and Table 5	The modifications highlighted (underlined) in blue in the previous version of the guide are now included. The modifications previously highlighted in green are also cleaned up. Some modifications were introduced by the end of April 2016 in the CUI (test) and will be introduced in the CUI in production by mid May 2016. They are highlighted in grey. The way to use the parameter is advised for the meantime.	
2.3.6 “the Location point”	paragraph completed at its end	Change request 50 (CR50)
2.6 Relations between parameters	explanation of the use of the “Set” attribute improved	
Parameters 1.1.0.0.0.3/ **SOLOPStart** and 1.1.0.0.0.4/ **SOLOPEnd**	Reference to parameter 1.2.0.0.0.2 for the definition of “uniqueOPID”	
Parameters 1.1.0.0.0.3 and 1.1.0.0.0.4	SOLOPStart and SOLOPEnd – change format to [AA+AAAAAAAAAA] which is the new format of parameter 1.2.0.0.0.2.	Consequence of CR 38
Parameter 1.1.1.1.2.2 / **IPP_LineCat**	The parameter will be N (Not applicable) when tables 2 or 3 of 4.2.1(7) of INF TSI are not usable on the UK network for Great Britain according the specific case 7.7.17.1(2).	CR 72
Parameter 1.1.1.1.2.5	IPP_MaxSpeed – change range of values from [10, 500] to [0, 500]	CR 34
Parameter 1.1.1.1.3.3/ **ILL_NatGauge**	The previous footnote was deleted. The description of the upper and lower parts of the gauge will be by introducing new parameters	
Parameter 1.1.1.1.3.6 / **ILL_GradProfile**	ILL_GradProfile – change format to [±NN.N] ([±NNNN.NNN], as a consequence of the modification of the format of Parameter 1.2.0.0.0.6 .	CR 63
Parameter 1.1.1.1.7.3	SOL Track Parameter **IHS_AccelerationLevelCrossing** : Modification of the definition, update of the explanations on data presentation, statement to have a contact with the IM	CR 46
Parameter 1.1.1.1.8.3	**SOLTunnelStart** – change format to [Latitude (NN.NNNN) + Longitude(±NN.NNNN) + km(±NNNN.NNN)] , as a consequence of the modification of the format of Parameter 1.2.0.0.0.6 .	CR 64

Parameter 1.1.1.1.8.4	**SOLTunnelEnd** – change format to [Latitude (NN.NNNN) + Longitude(±NN.NNNN) + km(±NNNN.NNN)] , as a consequence of the modification of the format of Parameter 1.2.0.0.0.6 .	CR 65
Parameter 1.1.1.2.3.1 / **EPA_TSIHeads**	Modification of the list of "Accepted TSI compliant pantograph heads". This modification will be introduced in the CUI as soon as possible.	
Parameter 1.1.1.3.2.1 / **CPE_Level**	Update of the explanation due to the modification of the applicability condition of Parameter 1.1.1.3.5.1. This modification will be introduced in the CUI as soon as possible.	
Parameter 1.1.1.3.5.1 / **CPO_Installed**	Modification of the applicability condition This modification(highlighted in grey) was introduced by the end of April 2016 in the CUI (test) and will be introduced in the CUI in production by mid May 2016. Update of the explanation	1.1.1.2.3.1 Accepted TSI compliant pantograph heads
Parameter 1.1.1.3.6.1 / **CRS_Installed**	Modification of the applicability condition This modification(highlighted in grey) was introduced by the end of April 2016 in the CUI (test) and will be introduced in the CUI in production by mid May 2016.	F
Parameter 1.1.1.3.8.1 / **CTS_SwitchProtectControlWarn**	Update of the explanation on the applicability	
Parameter 1.1.1.3.8.2 / **CTS_SwitchRadioSystem**	Update of the applicability condition (wrong reference to parameter 1.1.1.3.7.1)	
Parameter 1.2.0.0.0.2	**UniqueOPID** – change format to [AA+AAAAAAAAAA] where the first AA is the country code and AAAAAAAAAA is the up to 10 alpha-numeric characters OP code	CR 38
Parameter 1.2.0.0.0.4 / **OPType**	new type of Operational Point: the domestic border point This modification(highlighted in grey) was decided by the end of April 2016 (test) and will be introduced in the CUI in test and in production as soon as possible	
Parameter 1.2.0.0.0.6 / **OPRailwayLocation**	OPRailwayLocati–n - change of format to [±NNNN.NNN]	CR 33
Parameter 1.2.0.0.0.6 / **OPRailwayLocation**	Explanation updated to describe the ability to be repeated	CR 76
Parameter 1.2.1.0.2.2 / **IPP_LineCat**	The parameter will be N (Not applicable) when tables 2 or 3 of 4.2.1(7) of INF TSI are not usable on the UK network for Great Britain according the specific case 7.7.17.1(2).	CR 72

Parameter 1.2.1.0.3.3 / **ILL_NatGauge**	The previous footnote was deleted. The description of the upper and lower parts of the gauge will be by introducing new paramters	
Parameter 1.2.1.0.6.7 / **IPL_AreaBoardingAid**	Explanation was updated on the mandatory ststus of the parameter	
Parameter 1.2.2.0.3.1 / **ILL_Gradient**	ILL_Gradient – change format to [NN.N]	CR 61
Table 6	EU00228 and EU00229 were added	

Version 1.3 - ??/09/2016: list of modifications to version 1.2		
1.1.1.1.3.4 Standard combined transport profile number for swap bodies 1.1.1.1.3.5 Standard combined transport profile number for semi-trailers	NRE SW: Request to add C/P 371 and 422 RFI: request to add C/P 25, 30 and 384	
1.1.1.2.2.4 Permission for regenerative braking	NSA SE wants to add the option “allowed under conditions” (or with similar signification) for the value of parameter 1.1.1.2.2.4.	
1.1.1.1.3.1, 1.1.1.1.3.2 and 1.1.1.1.3.3 for SOL and 1.2.1.0.3.1,1.2.1.0.3.2 and 1.2.1.0.3.3 for OP	Removal of the dependenciesy to allow to select combinations between interoperability gauge, multinational gauge and national gauges.	
1.1.1.3.3.1 CRG_Version GSM-R version.	Need to include Baseline 1 as a value	
Table border points	Could you please insert it in the Table 6: List of border points in AG. EU00115 Austria Italy Steinach in Tirol Brennero 47.0067 11.5074 EU00117 between Austria and Lichtenstein. Tosters Nendeln 47.21875 9.56960 Mail France/Luxemburg 11/07/2017 EU00099 Mont-St-Martin et Pétange Latitude 49,5433 ; Longitude 5,8106 EU00100 Audun-le-Tiche et Esch-sur-Alzette Latitude 49,4859 ; Longitude 5,9688 EU00102 Thionville et Bettembourg Latitude 49,4721; Longitude 6,1079	

	EU100101 to be deleted	
NRE AT How to represent a fixed intsallation linked to a running track in an OP	As already said in last RINF meeting in March, I would like to discuss with you the following issue in order to find a best/common solution for such a case in RINF: Few of Austrian OPs have some of their fixed installations for servicing trains (for example the water restocking) not on the siding but on running track. The Application Guide does not specify such a case. But we have it and some of Austrian railway undertakings consider important to map this services in RINF, because of future application of RINF and its public accessibility. In order to put this fixed installations for servicing trains in RINF, we elaborate two scenarios. In both scenarios we get the valid RINF XML-file with correct syntax, but they don't reflect reality. Scenario 1: We map such running track (with the fixed installations for servicing trains) as running track as well as siding in its RINF operational point. Disadvantage: the siding is virtual one Scenario 2: The operational point, let call it "Vienna real", is divided in to two OPs: (real) OP "Vienna" and (virtual) OP "Vienna train technical services" of OPType Train technical services. The running track with the fixed installations for servicing trains is mapped, in this scenario, in both part-OPs of real operational point: • as (real) running track, in (real) part-OP "Vienna" and • as (virtual) siding in (virtual) part-OP "Vienna train technical services"	

1.1.1.3.2.2 ETCS Baseline	Need to include “Baseline 3 Maintenance release 1” and “Baseline 3 release 2” . Also, the reference has to be changed to the corresponding table in the new CCS TSI (Regulation 2016/919): CCS TSI: Tables A2.1, A2.2 and A2.3 of Annex A of Regulation (EU) 2016/919	
1.1.1.3.3.2 Advised number of active GSM-R mobiles (EDOR) on board for ETCS	If ETCS B3 R2 is selected, then automatically , this value is 2	
location point	The Polish NRE asks us to allow negative values for the railway location of a location point	
Format use of decimals		

5.6 List of admendments of Draft Guide Version 1.4: table 8

Table 9: list of admendment to Draft Guide Version 1.4

26/03/2019

Paragraph/Parameter/Table	Description	according
	In the review process of the AG, I have some comments: - Parameter 1.1.1.1.2.4.2 – is the naming “Compliance of structures with the (HSLM)” correct? NO (the naming I had was “Compliance of structures with the High Speed Load Model (HSLM) dynamic load model”) corrected in the guide - Parameter 1.1.1.1..6.4 - Document with the conditions for the use of eddy current brakes there are 2 points in the index corrected - Parameter 1.1.1.1..6.5 - Document with the conditions for the use of magnetic brakes o there are 2 point in the index corrected o Can be repeated - N? Y instead of N - Parameter 1.1.1.1.7.4 – the correct name of the parameter is “Existence of trackside (HABD)” or ”Existence of trackside hot axle box detector (HABD)”? Modified: Title: Existence of trackside hot axle box detector (HABD) definition: Existence of trackside HABD - Parameter 1.1.1.2.2.4 – Permission for regenerative braking - there are 2 values in “Can be repeated” section corrected : N - Parameter 1.1.1.2.4.3 – Distance between signboard and phase separation ending - in my validation process I have “Applicable ‘Y’ when in parameter 1.1.1.2.4.2.1 selected option is ‘Y’.”, but I don’t find it in the AG. Do I keep this constraint or not? The correct condition is : “Applicable ‘Y’ when in parameter 1.1.1.2.4.1.1 selected option is ‘Y’.”, - Parameter 1.1.1.3.2.9 - no list of values - Parameter 1.1.1.3.3.9 - no list of values - Parameter 1.1.1.3.3.10 - no list of values Yes the Agency will “set up and manage in a technical document the set of checks to demonstrate the technical compatibility of an on-board subsystem with the trackside subsystem”. The lists of possible answers is not currently known	

	- Parameter 1.1.1.3.6.1 - Other radio systems installed (Radio Legacy Systems) - the data presentation list should be: ○ UIC Radio Chapter 1-4 ○ UIC Radio Chapter 1-4+6 ○ UIC Radio Chapter 1- 4 + 6 (Irish system) ○ UIC Radio Chapter 1-4+6+7 ○ BR 1845 ○ BR 1609 ○ FS ETACS and GSM ○ UIC Radio Chapter 1-4 (TTT radio system installed at Cascais line) ○ TTT radio system CP_N ○ PKP radio system ○ VR trainr ○ TRS — The Czech Railways radio system ○ LDZ radio system ○ CH — Greek Railways radio system ○ UIC Radio Chapter Bulgaria ○ The Estonian radio system ○ The Lithuanian radio system Corrected thanks - Parameter 1.1.1.3.7.1.2 - Type of track circuits to which specific checks are needed - data presentation list values needed The list is not still defined	
Parameters1.1.1.3.2.1 to 1.1.1.3.2.10	• We are not sure what a restrictions meant in "1.1.1.3.2.6 Existence of operating restrictions or conditions" would look like. Can you clarify this by providing an example? This is considered in the CCS TSI Chapter 6.4, and such deviations should be described using by the template provided by the Agency and that will be included in the CCS TSI application guide. (Website link). Examples are provided at the end of the document. If more details are needed Hans Bierlien can provide. • According to our ETCS experts "1.1.1.3.2.8 Train integrity confirmation from on-board necessary for line access" should only be necessary for ETCS level 3, according to the Application guide it is only applicable for ETCS level 1. On the other hand there might me use-cases where it is useful to allow timed intervals, eg. at night no tic is necessary, but during the day it is. Agree. It should only by requested for Level 3 • According to our ETCS experts "1.1.1.3.2.9 ETCS system compatibility" should be applicable for all ETCS levels and not only for level 1 Agree. It should be for all levels • The same applies for "1.1.1.3.2.10 ETCS M_version" this should be applicable for all ETCS levels instead for only level 1 Agree. It should be for all levels All the modifications are copied in comments linked to the description of the parameters	
29/03/2019	This may be better as 1.1.1.3.7.11.1 CTD_ MinAxleLoadByVehicleCat / Minimum permitted axle load per category of Vehicle instead of 1.1.1.3.7.11.1 CTD_MinAxleLoadVehicleCat / Minimum permitted axle load per category of Vehicle 1.1.1.1.7.9 IHS_HABDDirecton/Direction of measurement of trackside HABD becomes 1.1.1.1.7.9 IHS_HABDDirection/Direction of measurement of trackside HABD	
29/03/2019	Something is unclear to me. On the AG, the parameter 1.1.1.1.6.4 "Document with the conditions for the use of eddy current brakes" has the XML name "CTD_ECBDocRef". Isn't "ILR_ECBDocRef" the correct value for it, as they belong to "ILR – Track resistance to applied loads" group of parameters? The same thing for 1.1.1.1.6.5.	
29/03/2019	3.2.4 NREs and Agency responsabilities Communication between RINF application and NREs Each NRE will be responsible for the following (until 1st January 2021): Prepare the dataset (XML file) comprising the full RINF information of the Member State including validation through data quality checks. - Submit the RINF dataset to the central database at ERA.	

	- Follow-up with ERA relating to any issues on failing validation or upload. - Define the list of domestic border points, keep it updated and forward it to the Agency - Manage the data on domestic border points ERA will be responsible for the following: - Provide relevant documentation relating to maintenance and evolution of RINF. - Manage the list of MS border points - Manage reference list of domestic border points to be used in the validation process	
02/04/2019	The label HHH was corrected The character string was deleted in the the data format for the provision of parameters 1.1.1.1.4.3, 1.1.1.13.1.2 and 1.1.1.1.7.8	
02/04/2019	The applicaibility condition of parameters to be deleted was updated to allo to go providing them or not during the ptransitional period	
02/04/2019	The value “nono” was added as a possible answer in the list of parameter 1.1.1..3.5.3	
02/04/2019	The applicability status of parameters that are new and needed for route compatibility check was adapted in order to allow not to provide the xml line until thes parameters become mandatory to be provided in January 2020	
04/04/2019	Review of the sope, and purpose of the RINF (2.2.1 to 2.2.3)	
16/04/2019	the list of border points: Deletion of “EU00068”, update of EU00073,	
26/04	Update of principles according whch Ops are defined (link with PLCs	
	Quid users: NRE , IMs, Public users, RRU	
04/06	Description of the process according which a NRE/IM will use the new Document management functionality	
14/06	Cleaning of references to HS or CR TSIs Cleaning/pdate of the table 2	
21/06	Modification of coordinates of BP EU28 to EU 35 on request AT NRE (mail 21/05/2019), EU 28 and EU35 stay “open”. Modification od coordinates of EU60 to EU63 (with Czech Republic, of EU103to EU 108 (with Hngaria), of EU 109 to EU 113 (with Slovakia)	
21/06	Modifications on parameter’s description are identified by a comment	
24/06/2019	Modification of BP EU 111 oEU113 o request of AT NRE (mail 24/06/2019)	