

RailNetEurope (RNE)

Supporting international
Infrastructure processes

Guus de Mol, VP Management Board

Riga, May 30th

RailNetEurope (RNE) Introduction

- » In reaction to European Council Directive 91/440, the Infrastructure Managers (IMs) and Railway Undertakings (RUs) separated – some separated completely while others reorganised under the roof of a holding company.
- » In order to facilitate the international business and cooperation of these newly organised IMs, RailNetEurope (RNE) was founded.
- » RNE became operational in January 2004.

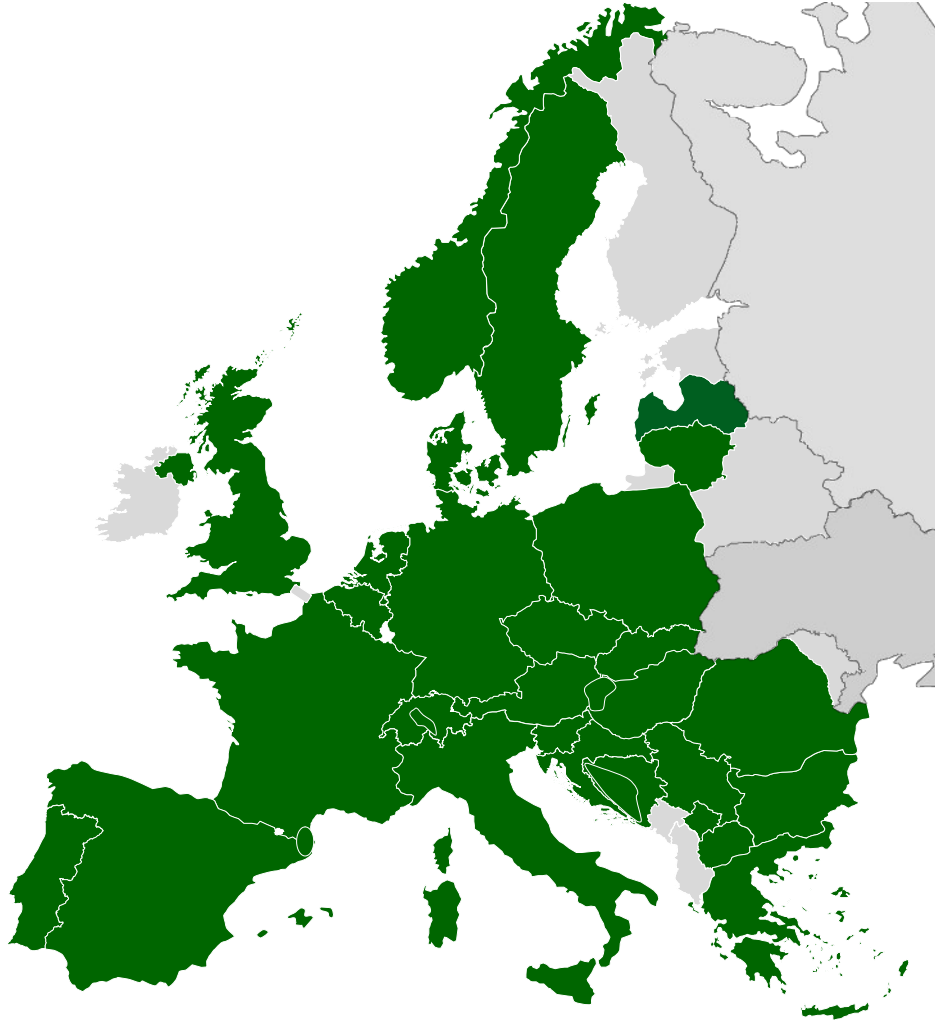
RailNetEurope (RNE) Introduction



RailNetEurope

- » was established in 2004
- » currently has 35 Full Members and 10 Associate Members
- » is an umbrella organisation of Infrastructure Managers (IMs)/Allocation Bodies (ABs)
- » facilitates international rail traffic
- » delivers solutions and tools for international infrastructure management
- » provides information on the European railway infrastructure

Members



- » Nearly all European IMs and ABs are RNE Members
- » Exceptions: IMs/ABs from Ireland, Northern Ireland, Estonia, Finland and parts of the Balkans

Core Business

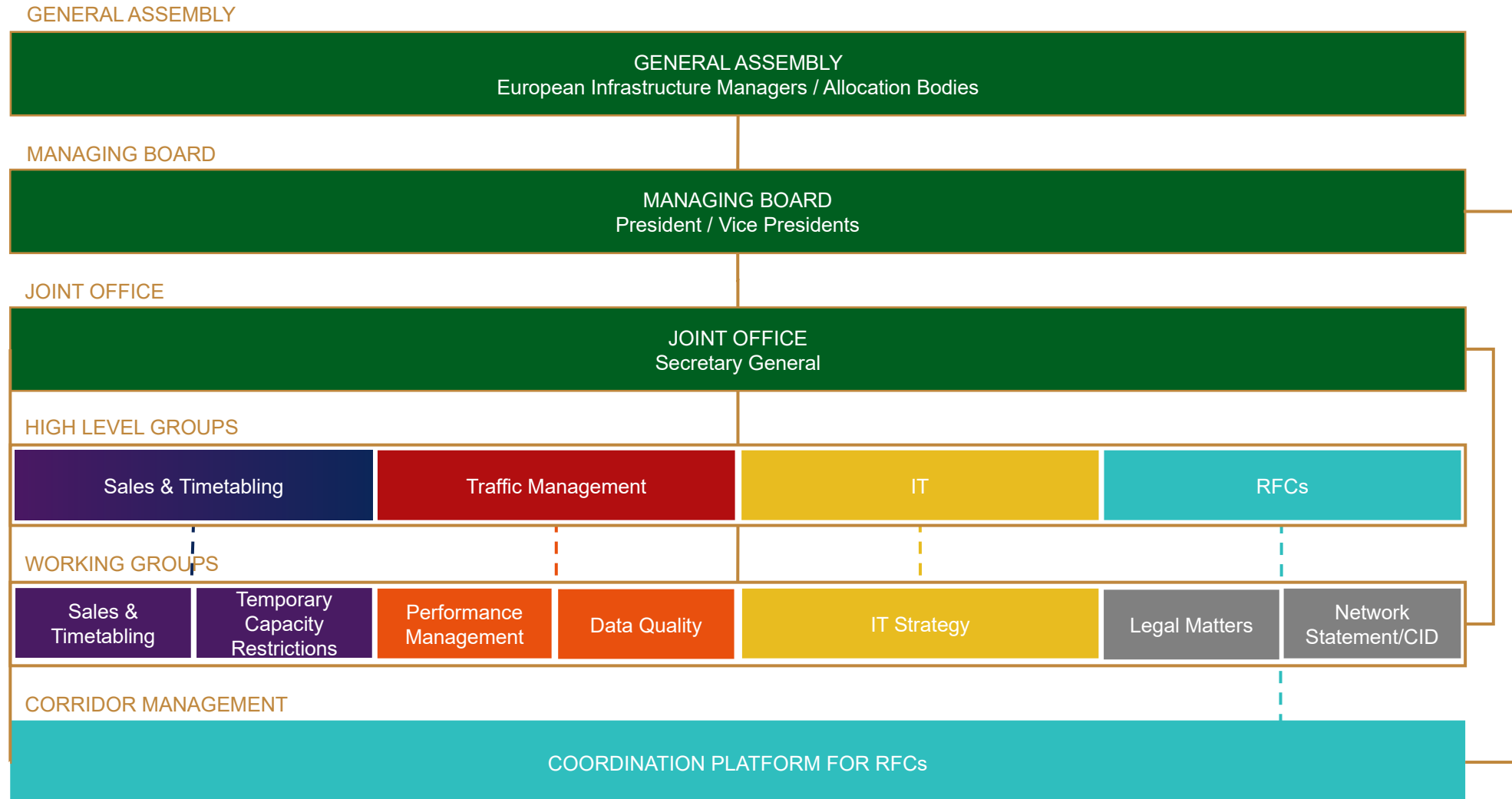
The core business of RNE is to provide support to European Rail Infrastructure Managers with the planning, selling and managing of international train paths:

- » RNE follows a market-oriented approach
- » RNE designs the entire rail infrastructure production process



In addition, RNE acts as a coordination platform for the development of common procedures and IT tools across all of the Rail Freight Corridors (RFCs).

Organisational Structure



Organisational Structure

Secretary General			
RNE CIO			
RNE RFC Management	RNE Sales & Timetabling	Traffic & Train Performance management	RNE Supporting IT
RNE RFC Senior Manager & Project Manager	Sales & Timetabling Manager	TIS & TPM General Manager	Common Components Systems General Manager
RNE RFC Senior Manager	TTR Project Manager**	Traffic Management Manager	IT Architect
RNE Supporting Services	PCS Technical Manager & IT Service Desk	Train Performance Manager	IT Service Desk
Head of Legal Matters	PCS Functional Manager	TIS Support Manager	
Senior Legal Adviser		Reporting Expert	
Communications Manager*			
Administration & Finance Manager			
Management Assistant			

* Part-time position

** TTR – Review of International Timetabling Process

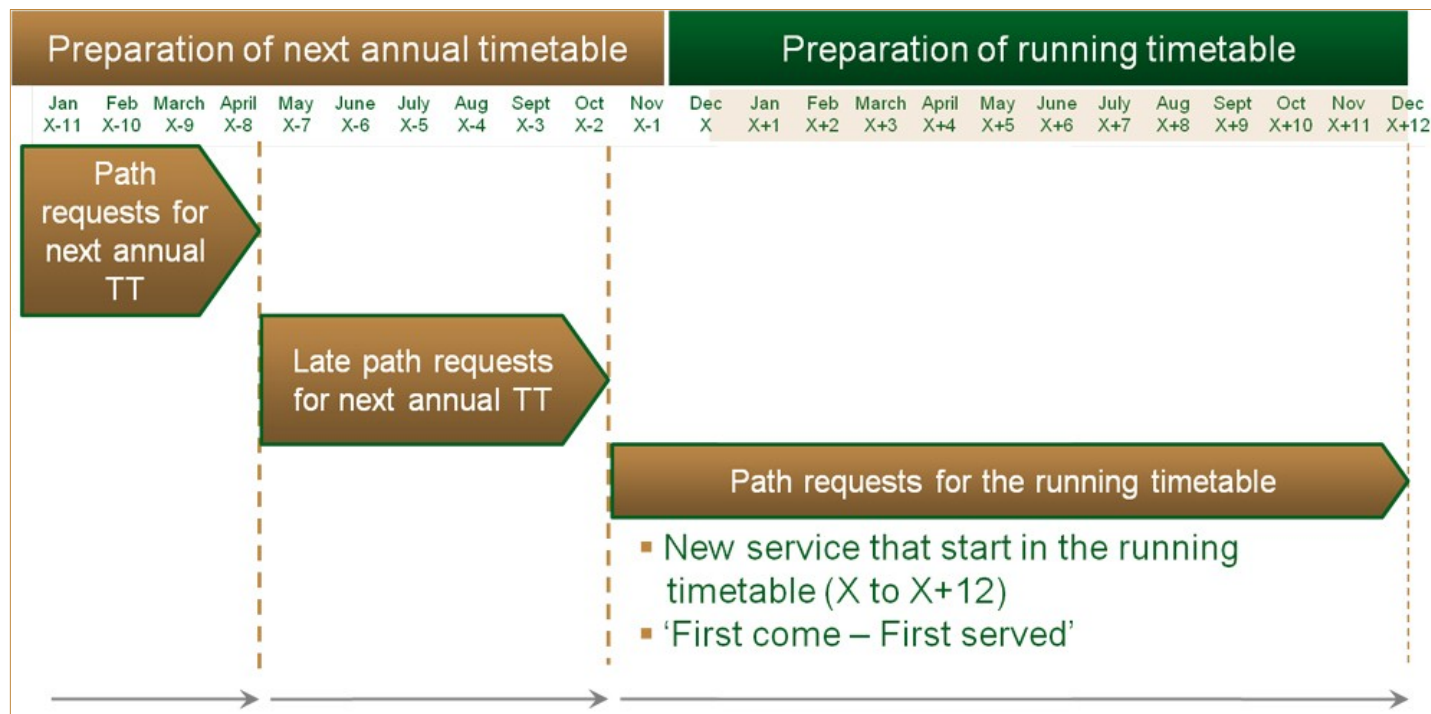
Sales & Timetabling

Timetabling

A key element for easier access to the European rail network is a harmonised timetabling process for international train path requests.

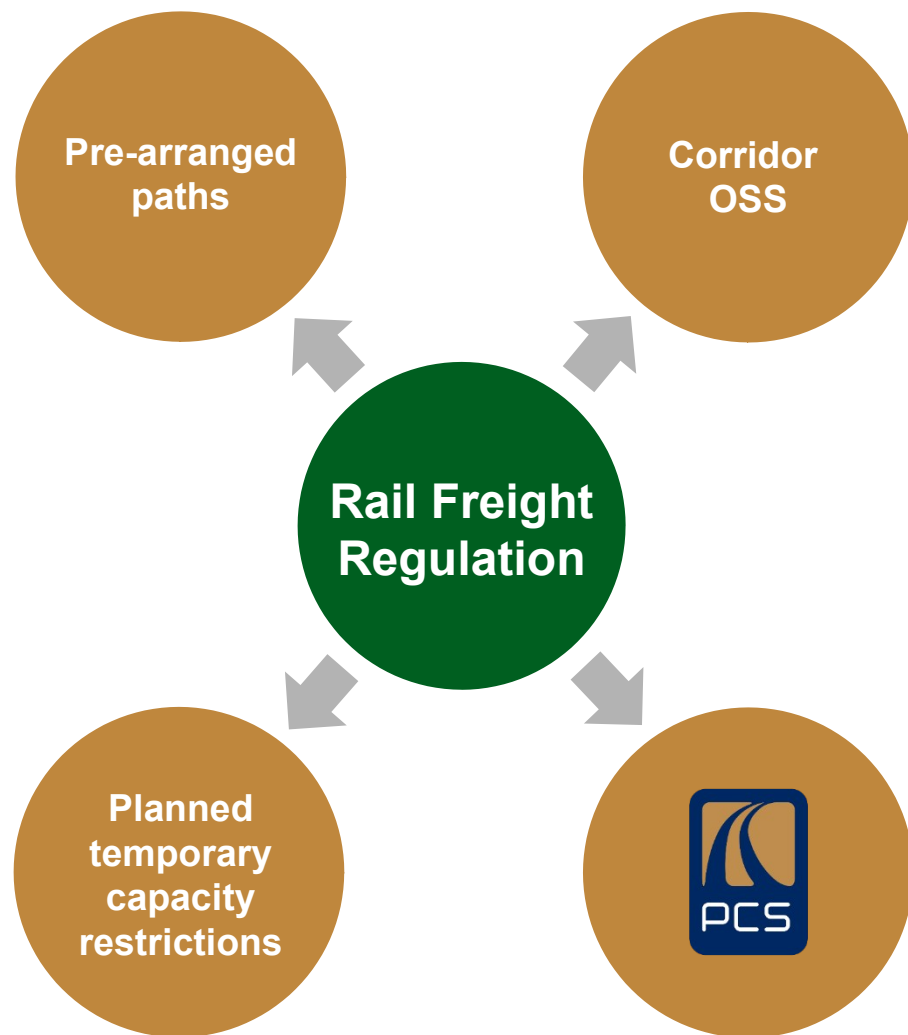
It is RNE's role to continuously improve and further develop this process. Harmonised procedures and deadlines that are valid for all Infrastructure Managers (IMs) and Allocation Bodies (AB) within the RNE network benefit the entire rail industry.

RNE and its Members are providing path management processes both for the annual and the running timetables.



Sales & Timetabling

Key Activities based on Freight Regulation 913/2010



Based on Freight Regulation 913/2010 several new elements have been introduced in the sales & timetabling process:

- » RFC Guidelines for
 - Corridor OSS
 - pre-arranged paths (PaPs)
 - planned temporary capacity restrictions
- » new functions in Path Coordination System (PCS)
- » close cooperation with Corridor OSS Community

Timetabling Achievements

RNE has harmonised the core processes of international timetabling:

- » publication of process handbooks for international timetabling
- » description of all timetabling-related processes from X-24 months to X+12 months
- » streamlining of major deadlines for international timetabling
- » guidelines for production and publication of catalogue paths
- » inclusion of Rail Freight Corridors in timetabling process
- » ongoing improvements of international timetabling

RNE has developed an IT system handling communication and co-ordination processes for international path requests and path offers:



RNE Path Coordination System (PCS)



RNE's system for international path coordination stretches across Europe:

- » currently there are more than 1400 users from 30 countries
- » 154 RUs require PCS to coordinate their desired timetables for their international freight services
- » 68 passenger RUs use PCS to coordinate their timetables for international trains across Europe
- » 36 IMs in Europe use PCS to harmonise their paths for cross-border traffic

Project 'Redesign of the international timetabling process' (TTR)



RNE and FTE, with ERFA support, have agreed to reform international timetabling as sponsors of the joint project 'Redesign of the International Timetabling Process'

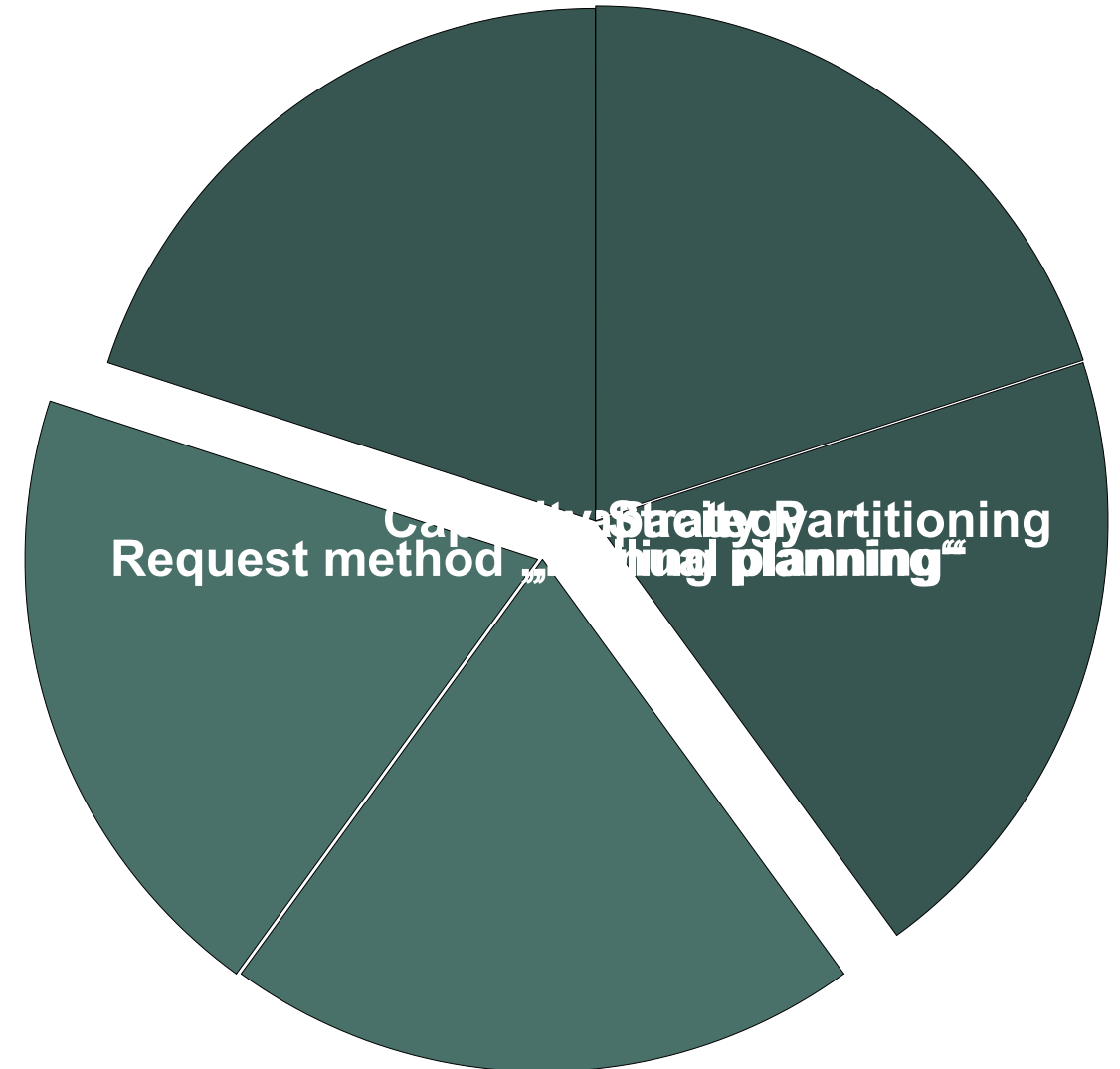
Objectives:

- » clear market orientation
- » greater reliability (incl. planning and execution of possessions)
- » improved commitment to the international timetabling process by all parties involved
- » greater efficiency in terms of capacities and resources
- » larger rail market share thanks to a better use of existing track capacity

In May/June 2017 the RNE General Assembly and FTE Plenary Assembly agreed to gradually implement the redesigned TT process.

Project 'Redesign of the international timetabling process' (TTR)

- The TTR project team, consisting of timetabling, construction, IT and legal experts, recruited from all parties concerned (RUs, IMs, supporting companies), started to define the possible approaches for a new process
- The redesigned timetabling process finally took shape as an innovative and market-oriented process with five main elements.
- The planning of capacity starts as early as 5 years prior to the timetable change



Project 'Redesign of the international timetabling process' (TTR)

Temporary Capacity Restrictions (TCRs) are important element of TTR. TCRs are important to keep rail infrastructure in best possible shape and allow safe operation. However, badly coordinated TCRs are a destabilizing factor when planning capacities and timetables.

Hence, good and timely coordination of TCRs is a main factor in re-shaping the international capacity management and timetabling. The main goal of TCR coordination:

The traffic has to flow!

RNE achievements:

- Recast of Annex VII of Directive 2012/34/EU with TTR results taken into consideration
- Issuing of general TCR Guidelines for the complete rail network
- Installation of a TCR Working Group and close cooperation with RUs/applicants
- Development of a TCR Tool as a part of the future TTR IT Landscape

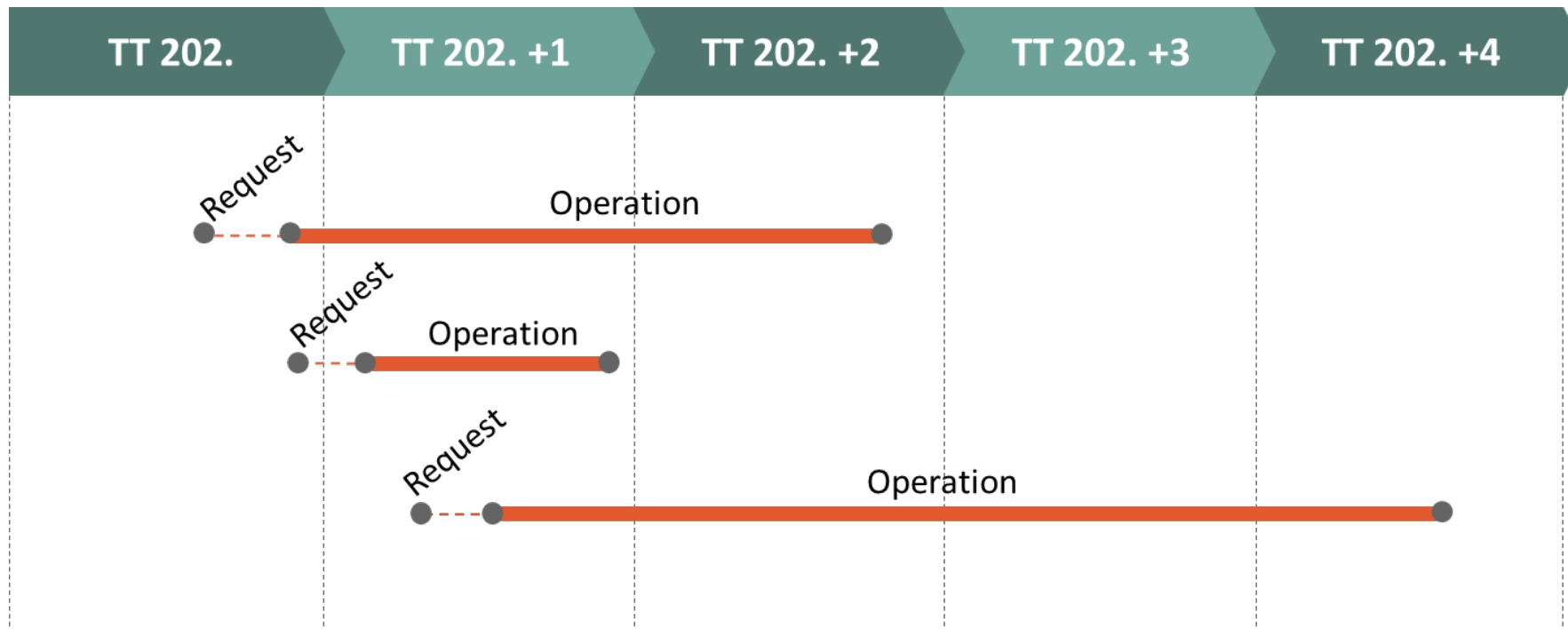
Project 'Redesign of the international timetabling process' (TTR)

New and innovative product: Rolling Planning

To serve a volatile market: Request at any time between 4 and 1 month before the first operation day

To provide stability: Valid for any period of time (max. 36 months)

To ensure high quality paths: Answers based on safeguarded capacity for later planning



Project 'Redesign of the international timetabling process' (TTR)



The process elements are tested in pilot lines

- Antwerp-Rotterdam (TT 2020)
- Mannheim-Miranda de Ebro (TT 2020)
- Munich-Verona (TT2020)
- ÖBB Network Pilot (TT2021)

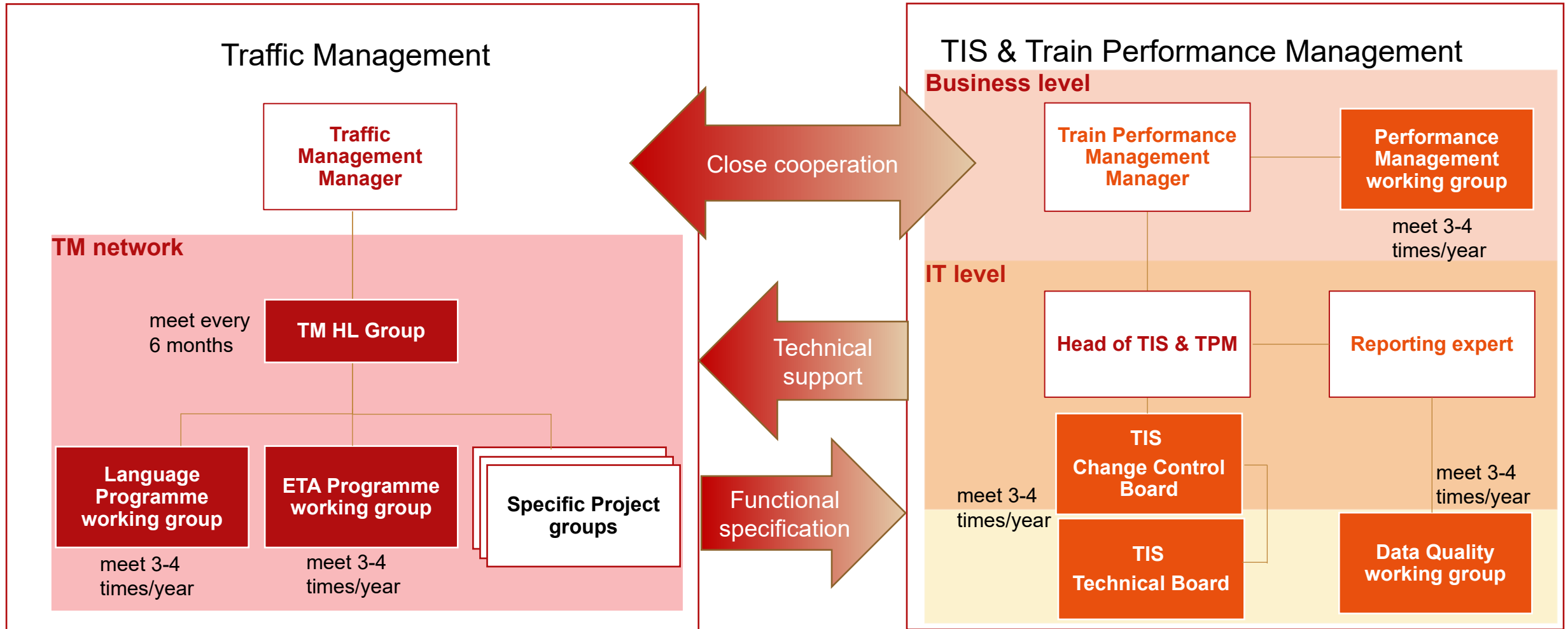
Active participation of RUs/applicants in the pilots is essential to reach good results!

For a full TTR rollout, all preconditions shall be available by the end of 2024:

- IT Systems
- Commercial Conditions and Allocation Rules
- Legal framework

Traffic & Train Performance Management

Organisational set-ups



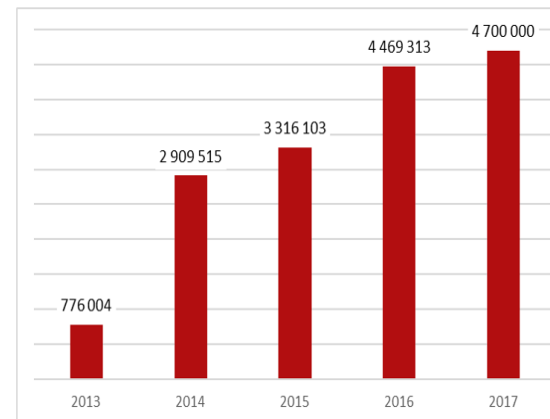
RNE Train Information System

The Train Information System (TIS) monitors international trains from origin to destination on the involved IMs' networks. It serves as information source for international performance reports and quality analysis and standardises the exchange of data between different players.

Supports international Railway Companies to track trains from original departure to final destination. Terminals will be included as well (add first and last mile to the entire transport)

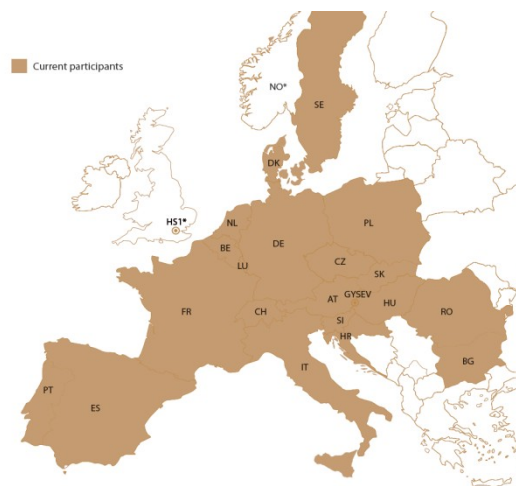
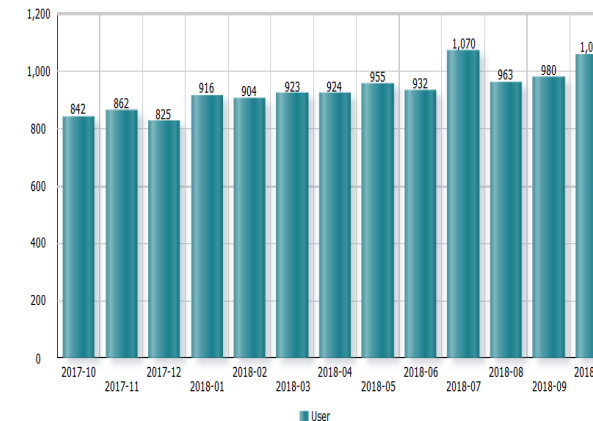
TIS also allows the identification of problems due to different national processes (for international trains) and triggers appropriate corrective actions. The relevant data is obtained directly from the Infrastructure Managers' systems.

Single train runs per year

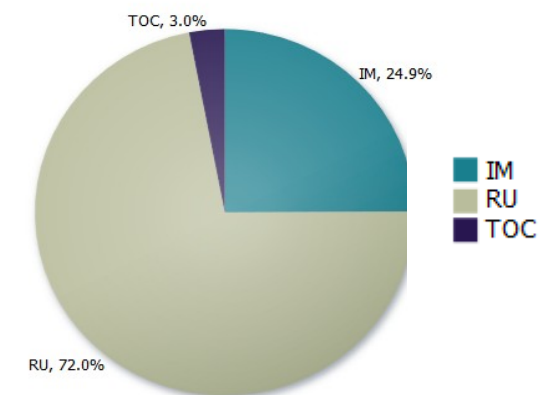


Single Train Runs per Year

Unique user per month



Distribution of TIS user



Overview of TIS Functions

TIS real-time information is available for desktops and tablets

- » Real-time rail traffic data – e.g., forecast, running advice, delays
- » Real-time information is visualised in the TIS graphical interface
- » Accessible through standard web browsers

TIS reporting function based on Oracle Business Intelligence (BI)

- » Predefined reports and graphs (punctuality, delay causes, etc.)
- » Customisable reports and graphs
- » Information source for international Train Performance Management (TPM)

TIS data exchange function

- » Raw data exchange based on TAF/TAP TSI messages and since 2012 TAF TSI messages
- » Filtering function to select the required information
- » Major message broker for IM and international operating Railway Undertakings

TIS support Traffic Management processes and other projects

- » **To enhance the harmonisation of the European Railway sector, the TCCCom and Park or Run tools were developed and integrated into TIS**
- » **TCCCom tool** = messaging tool to overcome language barriers in multinational Traffic Management processes:
 - Exchange of pre-defined messages
 - E-mail notification about received messages
 - Automatic translation of message and notification in the language chosen by the user
- » **ETA Programme** = [\(click for more details\)](#)
- » TIS provides TrainRunningInformation (Forecast, TimeTables, DelayCodes ...)
- » **Park or Run tool** = tool to facilitate the dispatching of freight trains in disrupted situations. It provides the following features:
 - Automatic identification of trains and players affected by an interruption
 - Overview of all recorded interruptions and their impact
 - Interactive list of affected trains as a communication tool regarding the treatment of affected trains

Train Performance Management (TPM) Introduction

RNE provides a platform for cooperation and coordination related to train performance management.

The RNE Performance Management Working Group

- » defines international processes for monitoring and improving train performance management on RFCs
- » supports implementation of train performance management on RFCs and serves as a platform where RCFs can exchange experiences
- » defines a set of standard KPIs applicable to all RFCs, as well as standard train run and punctuality reports
- » takes care of functional improvements to Train Information System related to reporting and serve as Reporting Change Control Board

The Data Quality Working Group

- » constantly monitors TIS data quality, propose measures for its improvement and streamlines the data quality process

RNE Reporting portfolio

- » All information collected in TIS since August 2013 is stored in the data warehouse. Based on the data stored in the data warehouse, several different reports are built and can be accessed by the TIS users concerned via Oracle Business Intelligence (OBI).

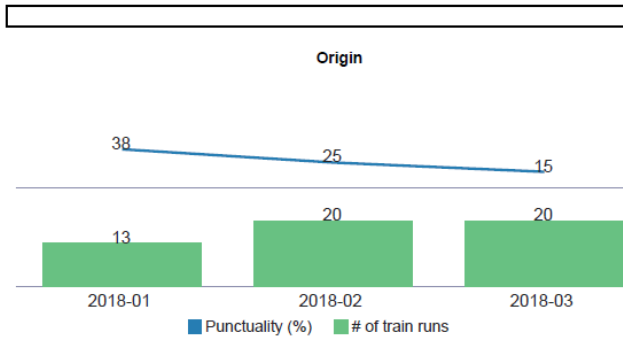


- » **TIS Reporting function features:**

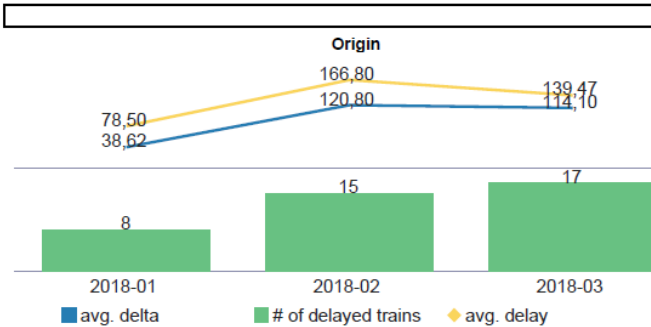
- Provides both pre-defined and customisable reports
- Enables scheduling of report execution
- Accessible online with TIS user account
- Flexible and user-friendly application

Example of reports

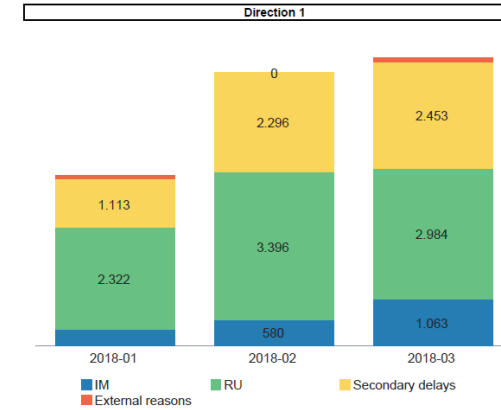
Punctuality overview at origin and destination



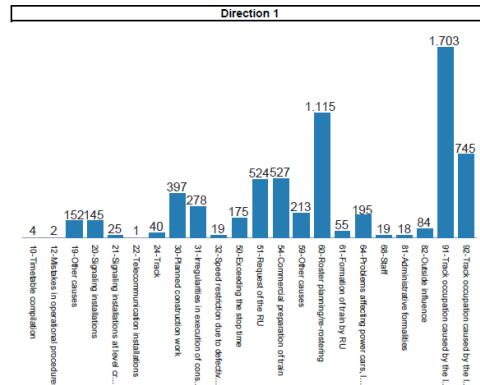
Delay overview at origin and destination



Amount and distribution of delays



Number of minutes per delay code



Dwell time

Direction 1													
Point name	# of trains w/ planned dwell	# of trains w/ unplanned dwell	# of trains w/ reduction dwell	# of trains at RA arr. /dep.	# of trains at RA runthr.	# of trains at CTT arr. /dep.	# of trains at CTT runthr.	Avg. Dwell at CTT	Avg. Dwell at RA	Avg. Planned Dwell	Avg. Real Dwell	Avg. Unplanned Dwell	Avg. Reduction Dwell
Hegyeshalom	2	0	0	2	0	2	0	62,00	72,00	62,00	72,00		
Nickelsdorf	0	0	0	0	19	0	19						
Kledering (in Zur)	18	0	0	18	0	18	0	26,00	55,00	26,00	55,00		

Key figures per location

Direction 1										
Point name	arr. / dep.	RU name	Punct. (%)	# of train runs	Sum of delay min.	Avg. delta	Avg. delay all trains	Avg. delayed trains	# of missing CTTs	# of missing RAs
Győr-Rendező	dep.	Rail Cargo Hungaria Zrt.	15,00	20	2379	113,10	117,55	138,29	0	0
Hegyeshalom	arr.	Rail Cargo Hungaria Zrt.	50,00	2	257	128,50	117,00	234,00	0	0
Hegyeshalom	dep.	Rail Cargo Hungaria Zrt.	50,00	2	315	139,00	157,50	315,00	0	0
Nickelsdorf	arr.	Rail Cargo Austria AG	15,79	19	3659	189,95	192,58	228,69	0	0

Network Statement

Network Statement Working Group & Corridor Information Document Subgroup key activities

Common Structure

Making sure that all Network Statements (NSs) and Corridor Information Documents (CIDs) adopt the same chapter structure

Implementation Guide

Specifying the content to be expected under each chapter and, where applicable, suggesting a common text

Benchmark

Harmonisation of KPIs' calculation and other studies on the nature and production methods for NS and CID

Heading	Implementation guide	Remarks (version control)
<p>Content</p> <p>The following headings have been agreed for the main sections of the Network Statement.</p>	<p>Content</p> <p>Each IM is responsible for providing information regarding its network. Information regarding neighbouring networks (including cross-border information) is optional. The NS should include all the points mentioned in Annex IV of Directive 2012/34/EU, clearly stating whether the information is not provided because not applicable (e.g. information on specific services not presented since such services are non-provided by the IM; information on discounts and mark-ups on charges not presented since they actually do not exist).</p> <p>The network statement shall be published in at least two official languages of the Union.</p>	Updated in 2015
VERSION CONTROL	All previous versions of this annual document should be identified, together with a short description of the changes.	
TABLE OF CONTENTS		
1 GENERAL INFORMATION		
2 ACCESS CONDITIONS		
3 INFRASTRUCTURE		
4 CAPACITY ALLOCATION		
5 SERVICES		
6 CHARGES		
INDEX		

CHAPTER 1 – GENERAL INFORMATION
Recommended Texts

Recommended text

A coordination platform for the Rail Freight Corridors (RFCs)

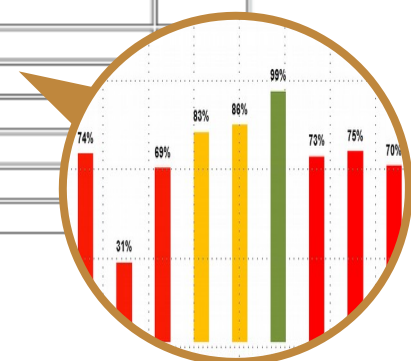
In November 2013 the first six Rail Freight Corridors (RFCs) became operational and a network of Corridor One-Stop Shops (COSSs) was established. In November 2015 three additional RFCs were officially launched. RNE has provided support to the IMs concerned from the beginning and is now the coordination platform of the RFCs as regards operational business. RNE's tasks include ensuring that harmonised processes and tools are applied on various corridors to the benefit of Applicants, and of IMs and AOs that are part of several RFCs. As a consequence the RFCs have become Associate Members of RNE.

An umbrella organisation

In its day-to-day work, RNE's task is to simplify, harmonise and optimise international rail processes as Europe-wide timetabling, sales (including Network Statements), traffic management and after-sales services (e.g. reporting).

These tasks are carried out by four standing working groups and by ad-hoc project groups coordinated by the RNE Joint Office, which is based in Vienna, Austria.

International working groups and boards are striving to make seamless cross-border operations a reality – whether this is by creating common standards for data exchange between traffic control centres or agreeing to...



Contact Information

RailNetEurope

Oelzeltgasse 3/9 | 1030 Vienna

Tel: +43 1 907 62 72 00 | Fax: +43 1 907 62 72 90

mailbox@rne.eu | www.rne.eu

