

RNE Summer Academy 2025 – Day 2

RailNetEurope

28 AUGUST 2025



RailNetEurope

01 Ongoing Activities in Capacity Management



Ongoing Activities in Capacity Management

Speaker



Josef Zitzler

Senior TTR Implementation Manager -
Team Leader of TTR Implementation

Agenda

1. Basics of European Rail Capacity Management
2. Challenges in European Capacity Management
3. A New Capacity Management Approach
4. Digital Capacity Management
5. Implementation Is Reality
6. Outlook

Getting started: Audience Interaction

Do you know what Capacity Management on European level stands for?



RailNetEurope

01 Basics of European Rail Capacity Management

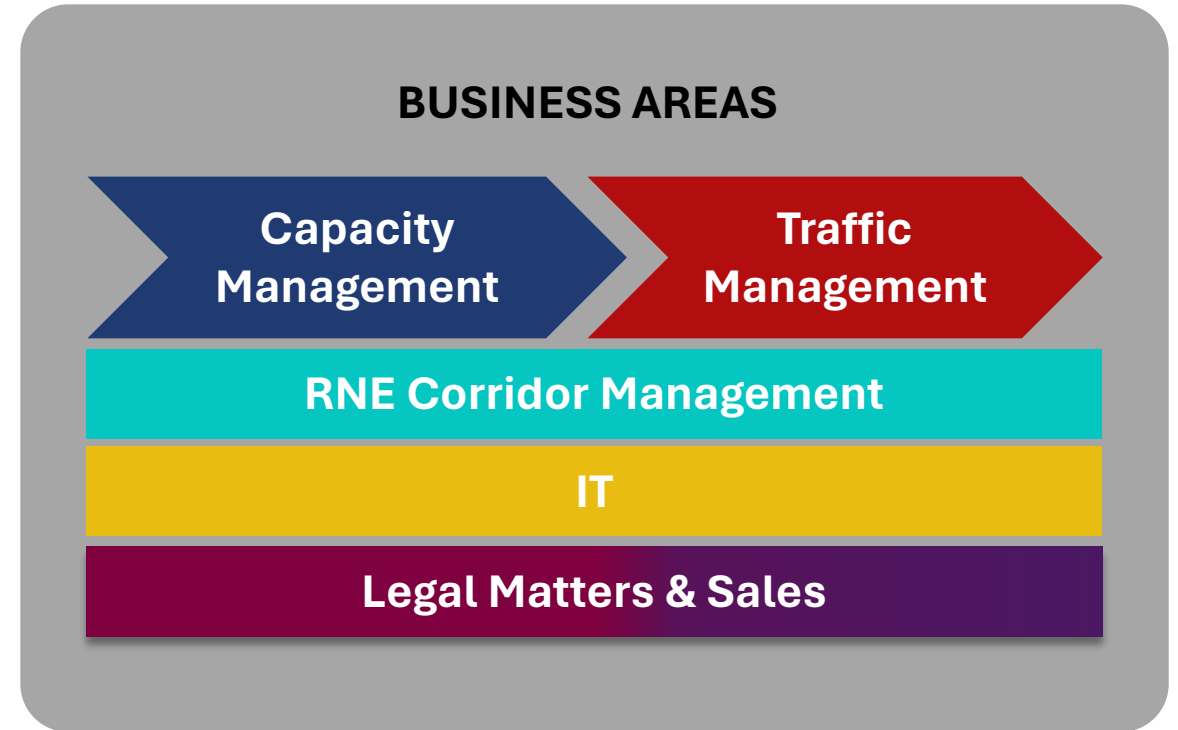


RNE Core Business

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 international rail infrastructure production process

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

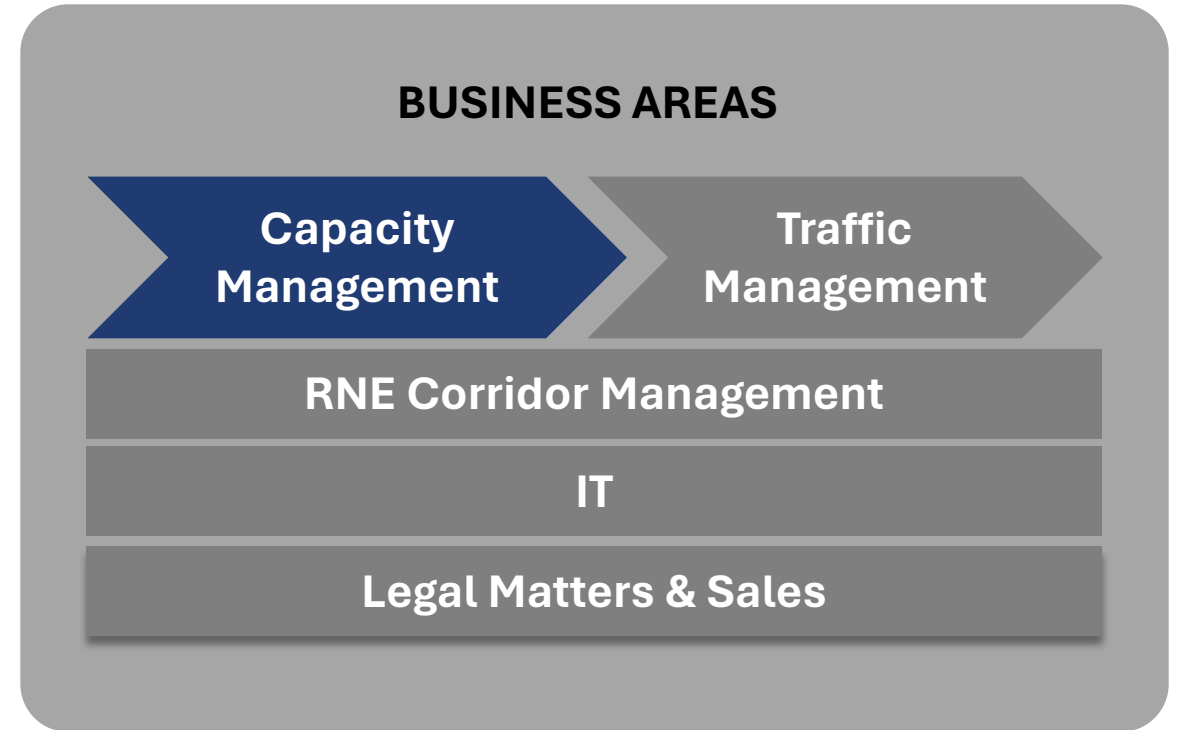


Today's Focus: Capacity Management

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

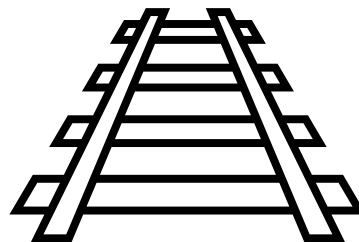
- RNE follows a market-oriented approach
- RNE designs the international rail infrastructure production process

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

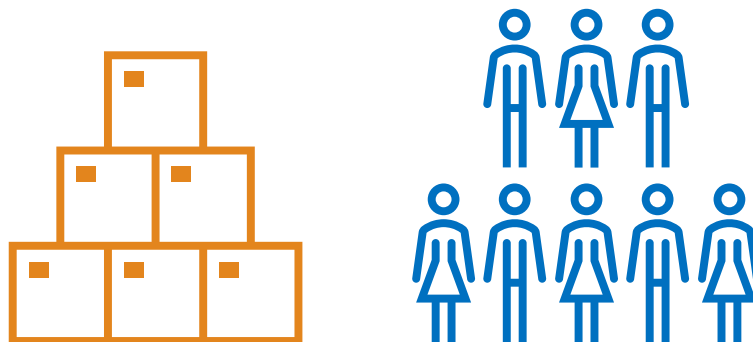


Goal of Capacity Management

To plan train runs on existing rail infrastructure...

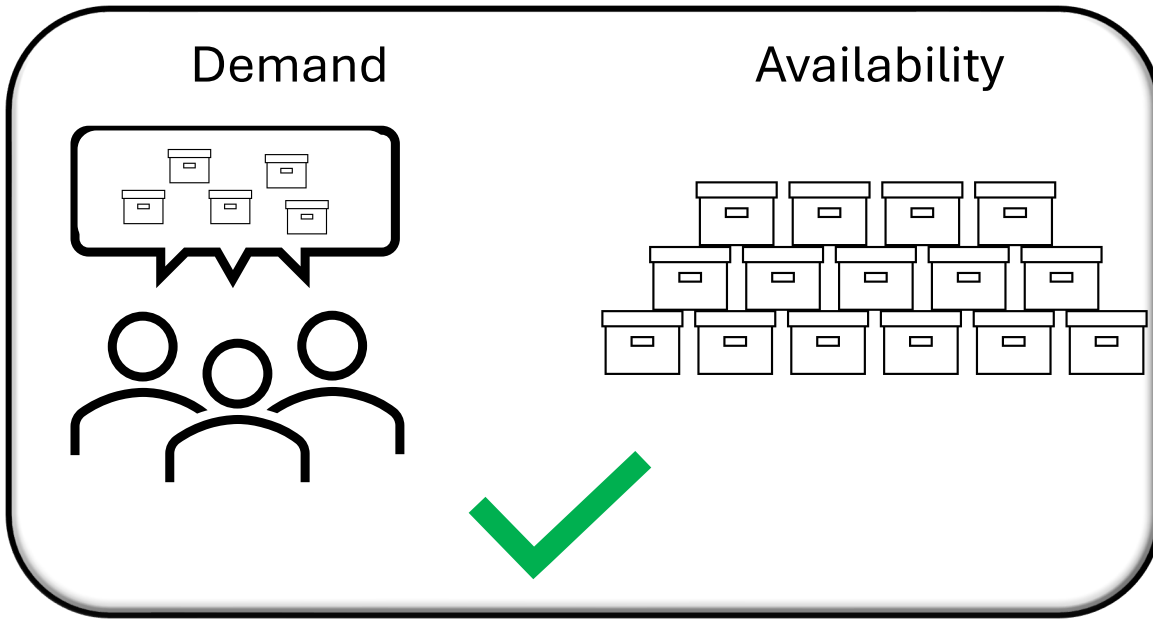


...for optimum transport volumes for goods and passengers.



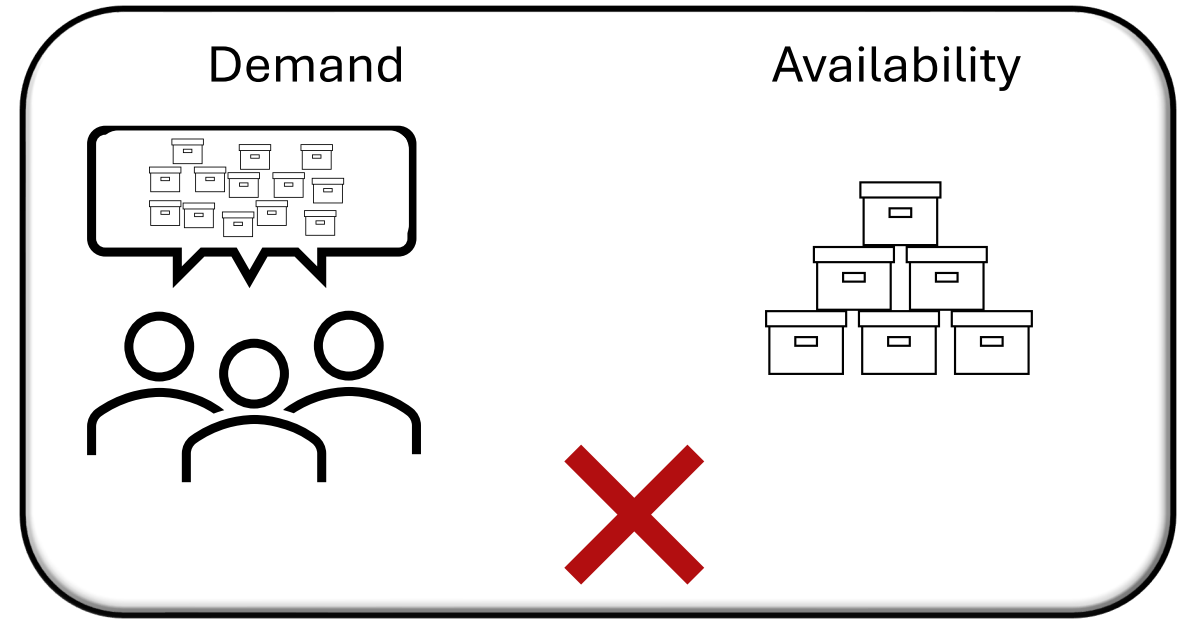
Rail Capacity Availability to Satisfy the Market

Past



All demands can be satisfied (quality and quantity) – no process changes needed

Present



Demands cannot be fully met (quantity and quality) – high requirement for better planning

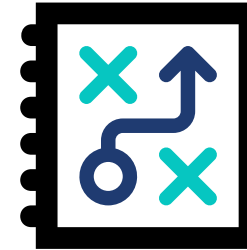
Possibilities to Increase Capacity

Build new or upgrade existing infrastructure



Eventually necessary
but cost and time consuming and strongly
interfering with running traffic (i.e. constructions)

Optimise capacity on existing infrastructure



By increasing efficiency in planning with cost-
effective measures on short- and mid-term



RNE Mission for Capacity Management

RailNetEurope

02 Challenges in European Capacity Management





Looking at Legacy Capacity Management Processes

Inefficient legacy Capacity Management process

- Constant **changes in planning**
- **Unused capacity bookings**
- **Annual timetable** planning does not meet today's market requirements
- Lots of **manual work**
- **Different planning procedures** in Europe leading to further manual workarounds



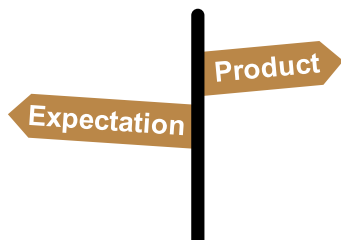
Result:

High costs, unsatisfied end customers
and missed business opportunities!

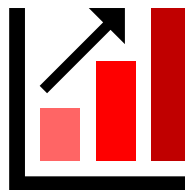
Leads to:

Clear situation of capacity waste

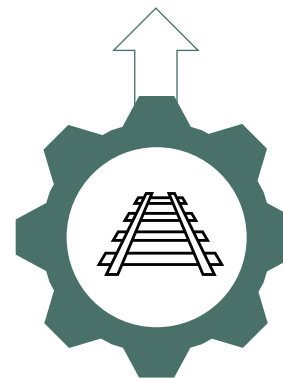
Identified Problem Drivers



Inadequate products for many market requirements



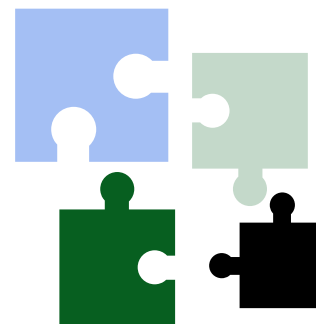
Increased transport demand



Need to upgrade infrastructure



Lack of digitalization



Mismatching national processes

Sector Solution: TTR



Developed by RNE together with the sector!



RailNetEurope

03 A New Capacity Management Approach



Audience Interaction

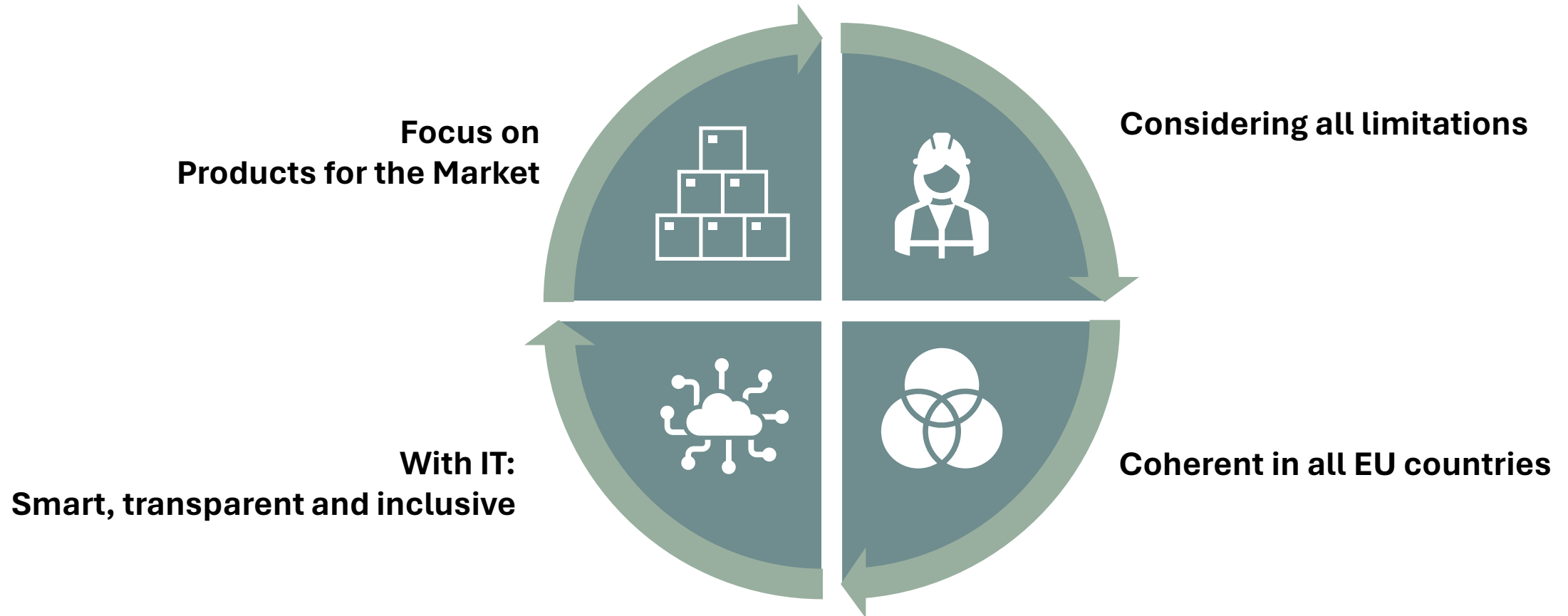
Have you heard about 'TTR' before?

If yes, do you know what it does comprise?



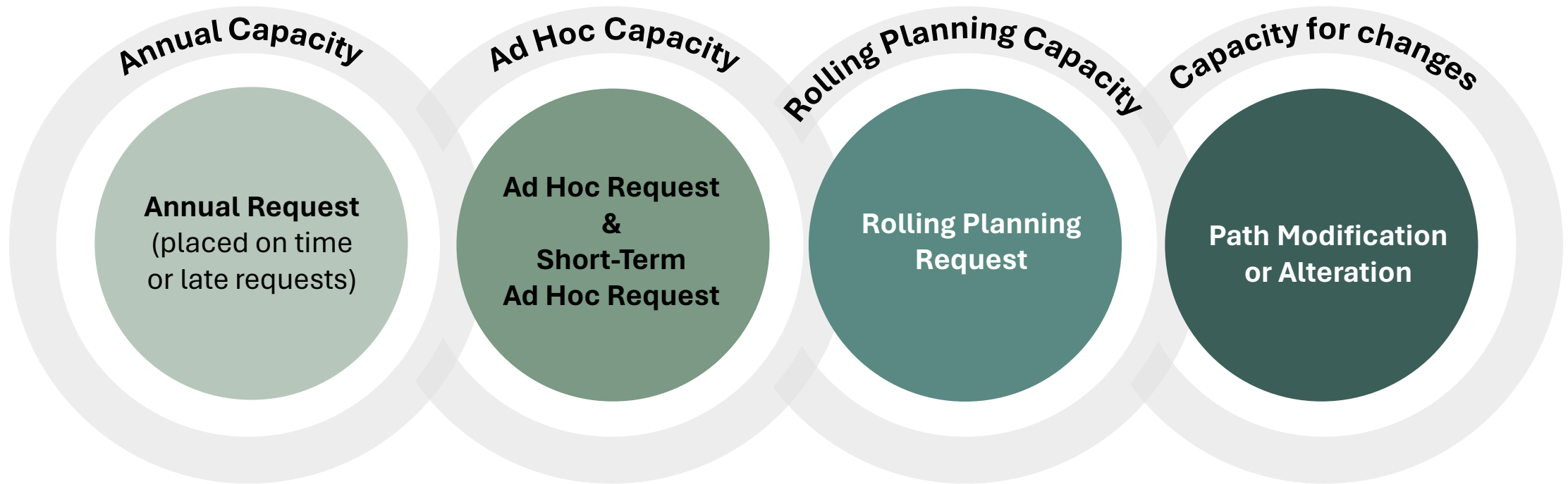
Sector Proposal Timetable Redesign (TTR)

The Timetable Redesign, or “TTR for Smart Capacity”, proposed a vastly new approach.



A Capacity Product for Every Need

The market requires a **variety of products** with different features and characteristics.



To provide such products while efficiently using the rail infrastructure requires planning upfront:

Advance Capacity Planning

Advance Planning: From Rough to Detailed Information

The redesigned timetabling process consists of several components to cover advance as well as short-term planning and provides products for stable as well as variable market needs.

Capacity Strategies



From rough information...



Capacity Models



...to building blocks...



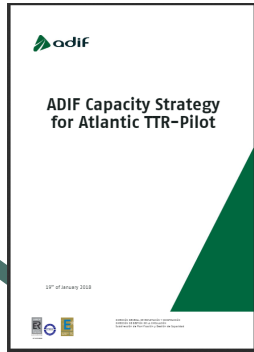
Capacity Supply Plans



...to a complete picture!

Internationally aligned
cross-border process

Advance Planning: From Rough to Detailed Information

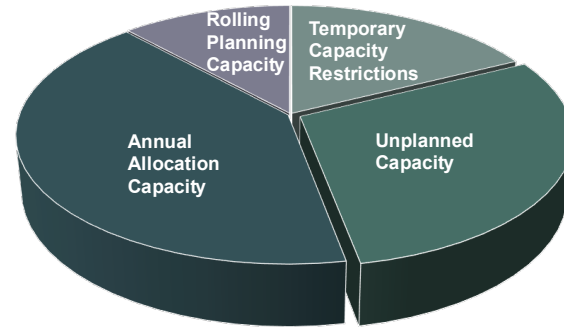


X-60

Capacity Strategy

Describes main **principles** to be used in the TCR planning and timetabling.

X-36



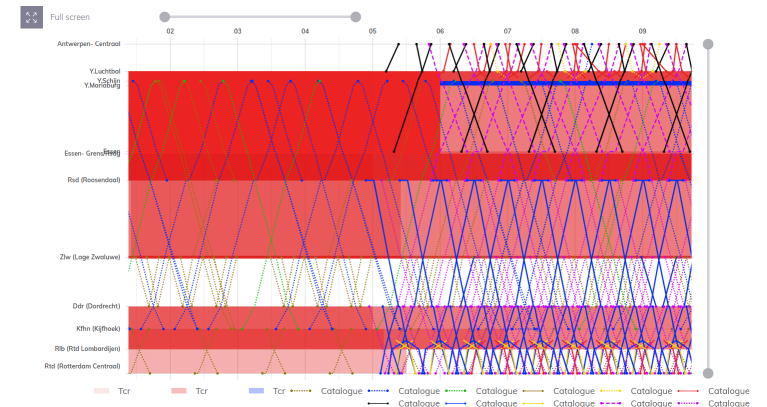
Capacity Model

Focuses on **volumes** and shares! Set the volumes of the transport per each market segment and the share for TCRs.

X-18

Capacity Supply Plan

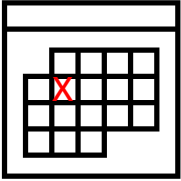
Shows all the **objects** (TCRs and commercial part) in a 365-days capacity diagram



X-11

Requests

Temporary Capacity Restriction Planning in TTR



TCR planning as early as possible, analysing the impact on traffic
→ the higher the impact, the earlier the planning;
Provision of reliable multi-annual financing is imperative



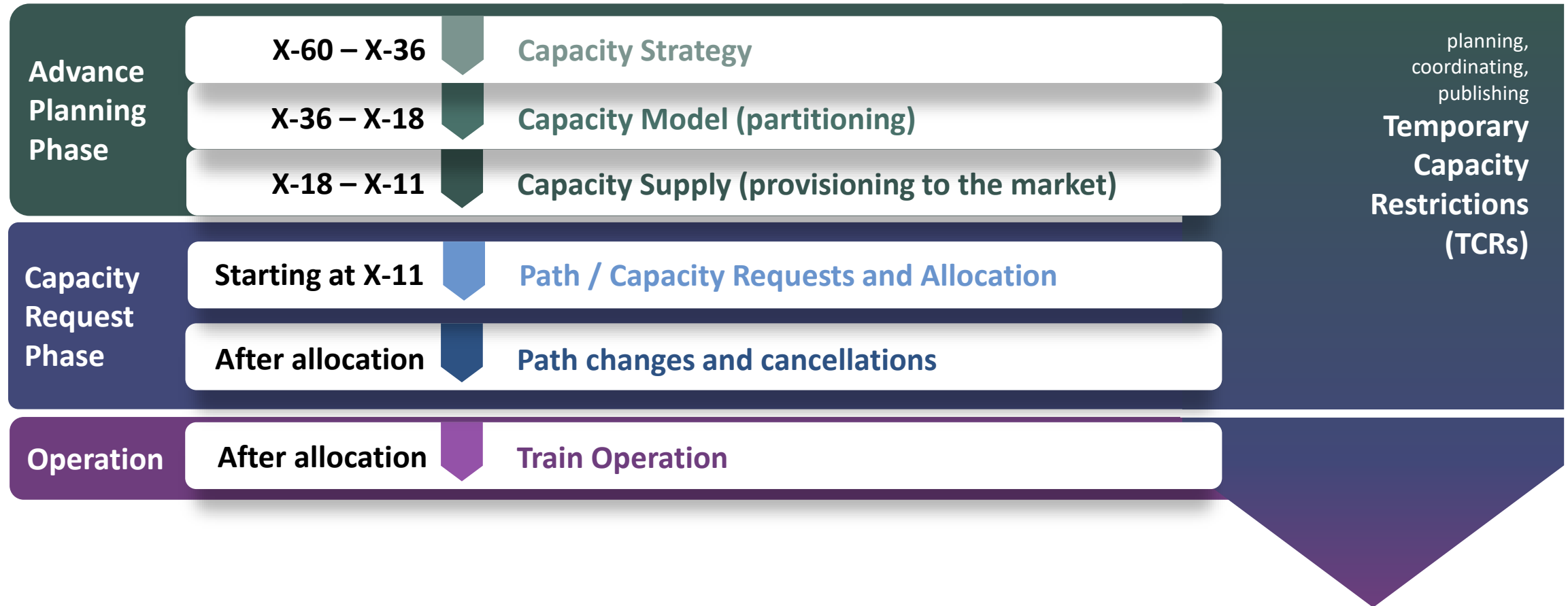
IMs - supported by applicants coordinate TCRs
to ensure traffic flows and high efficiency in planning



TCRs published as soon as possible, ensuring:

- **Planning alternatives**, including resources
- **Timely information** to end customers

The TTR Process Timeline



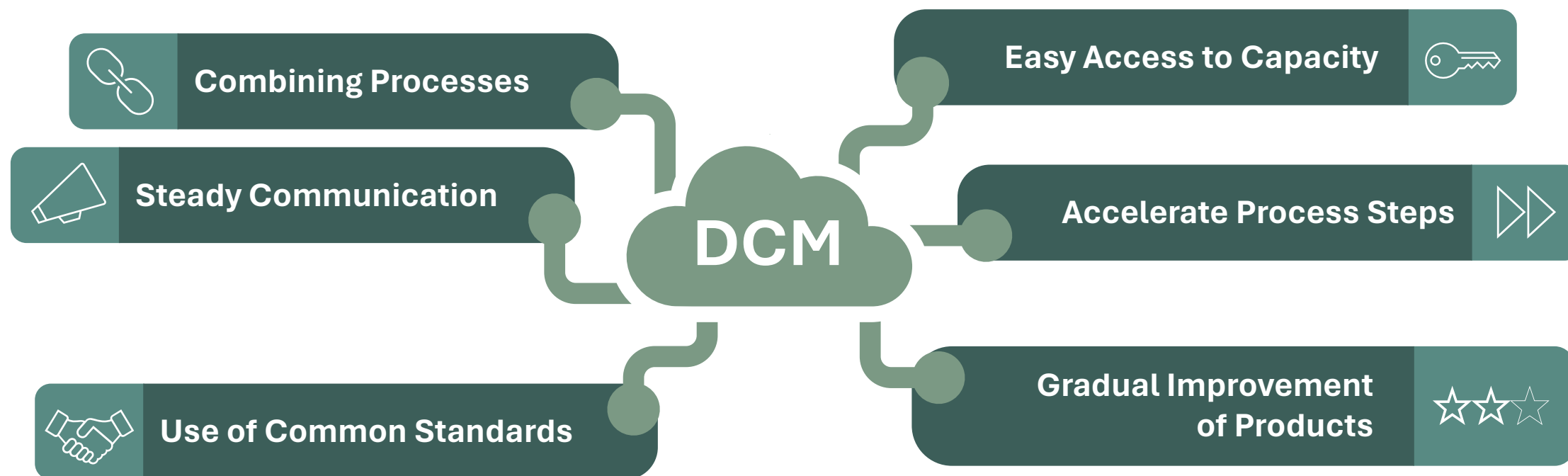
X-# = Number of months before the day of timetable change

RailNetEurope

04 Digital Capacity Management



Need for Digital Capacity Management (DCM)



The main DCM components



National Tools

national systems need to be made fit for Europe-wide capacity management and connected via central systems



Central Systems

providing workflows to enable coordination and harmonization on a European level



Interfaces

to enable true digital capacity management and universal participation

TAF/ TAP TSI

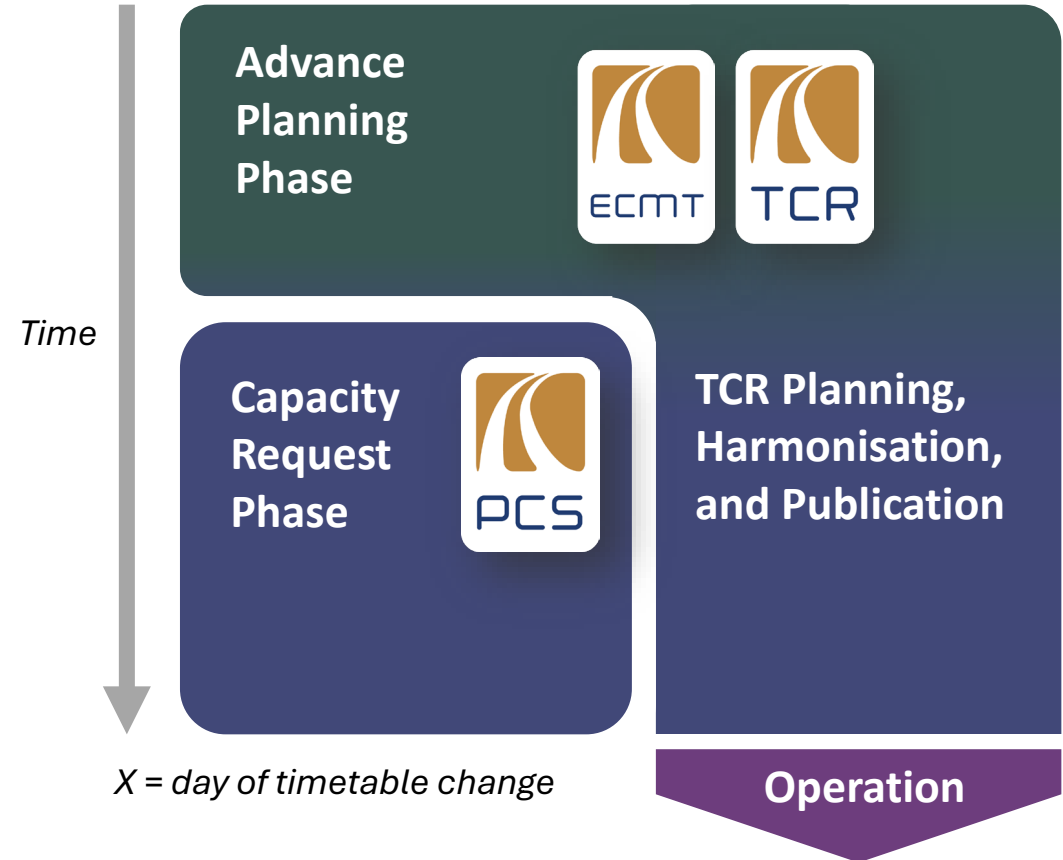
as the “common language” to establish a connected European network of systems

TTR Processes and Central DCM Tools

DCM facilitates the streamlined processes laid out in TTR

Each phase of TTR has a corresponding DCM platform:

- The **European Capacity Management Tool (ECMT)** and the **TCR Tool** are used for Advance Planning and for TCRs
- The **Path Coordination System (PCS)** is used for capacity requests



RailNetEurope

04 Implementation Is Reality



TTR: From Idea to Reality



Gradual implementation principles:

- **Follow the process timeline:** Implement one TTR component after another
- **Increase the geographical scope:**
Start with main lines and extend with each timetable period the lines and partaking IMs
- **Facilitate improvements:**
Learn from each implementation step and use findings to improve the processes, IT systems and deliverables in the next timetable period

Capacity Strategies

Capacity Strategy 2027

Common document of
Infrabel, ProRail, ACF/CFL, SNCF Réseau, DB Netz AG, SBB
Infrastruktur AG, BLS Netz AG, ÖBB Infrastruktur AG, RFI S.p.A and SŽ
Infrastruktura

Version 1.0
December 2023



Table of content

Disclaimer	3
Introduction	3
0. Geographical scope	5
1. Expected Capacity of Infrastructure in Timetable 2027	6
1.1 Additional Available Capacity	7
1.2 Reduced Available Capacity	19
2. Temporary Capacity Restrictions	25
2.1 Principles for TCR Planning	25
2.2 Pre-Announcement of Major impact TCRs	47
3. Expected Traffic Flows and Traffic Planning	57
3.1 General Principles	57
3.2 Approaches for evaluating traffic flows in the Capacity Strategy and further in the Capacity Model	57
3.3 National Specificities	58
3.4 Introduction to the Capacity Model	62
3.5 Traffic flows	64
4. Validation & Publication	75
Annex 1 Connected areas where TCRs shall not be planned simultaneously	76

2.2 Pre-Announcement of Major impact TCRs

A selection of TCRs with major impact on traffic is shown in Table 3. The corresponding numbers per country are shown on the maps in Figure 8 to Figure 12.

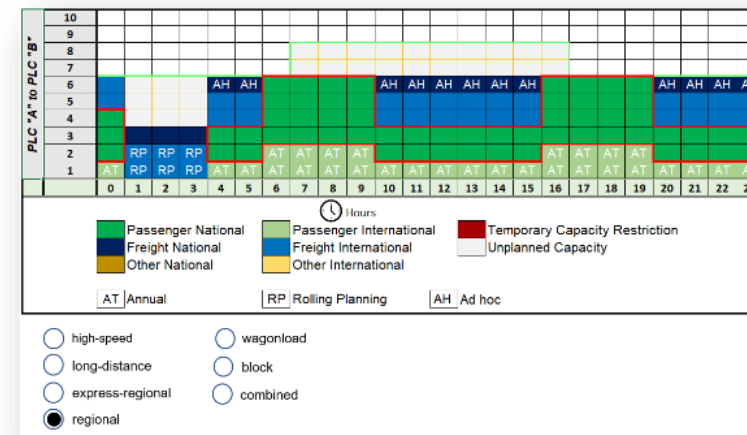
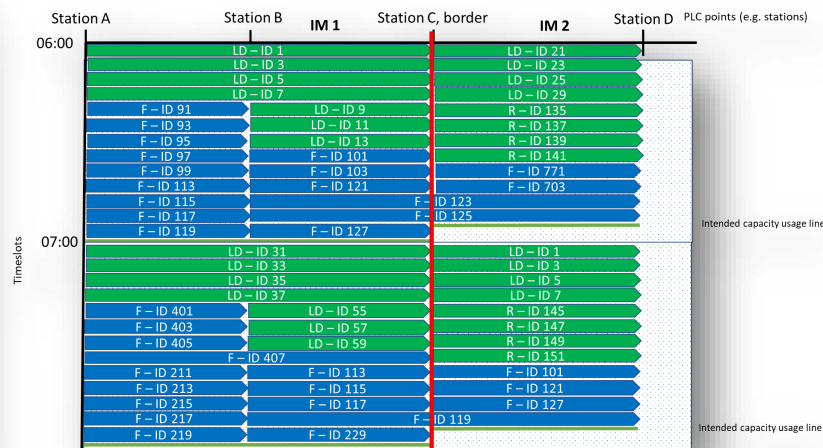
In general, the selected TCRs have impact on the timetable during an exceptional period of time and the financing of these TCRs is secured. Exceptions on these two criteria apply; please see the data in the table.

The first publication of High and Major impact TCRs is made by the IMs at X-24.

Country	Nr.	Network segment	Purpose	Time of execution	Start (quarterly basis)	Impact (total closure/single track operation/speed restriction)	Impact to passenger & freight traffic[1]	Financing secured
AT	1	Wien "S-Bahn Stammstrecke"	Increased capacity and establishment of ETCS	07/2026	12/2027	Total Closure in alternating sections	Bus replacement service or rerouting of suburban trains; No impact on freight traffic	Yes
BE	1	Rochefort-Jemelle - Grupont	Axe 3	14/12/2026 17/12/2027	Q4 2026	One Track during daytime + Total Line Closure during night (continuously)		Yes

<https://rne.eu/capacity-management/capacity-strategies/>

Capacity Models



Section overview

Capacity situation on a selected line
to facilitate the cross-border harmonisation
and creation of variants (*e.g. during Temporary
Capacity Restrictions periods*)

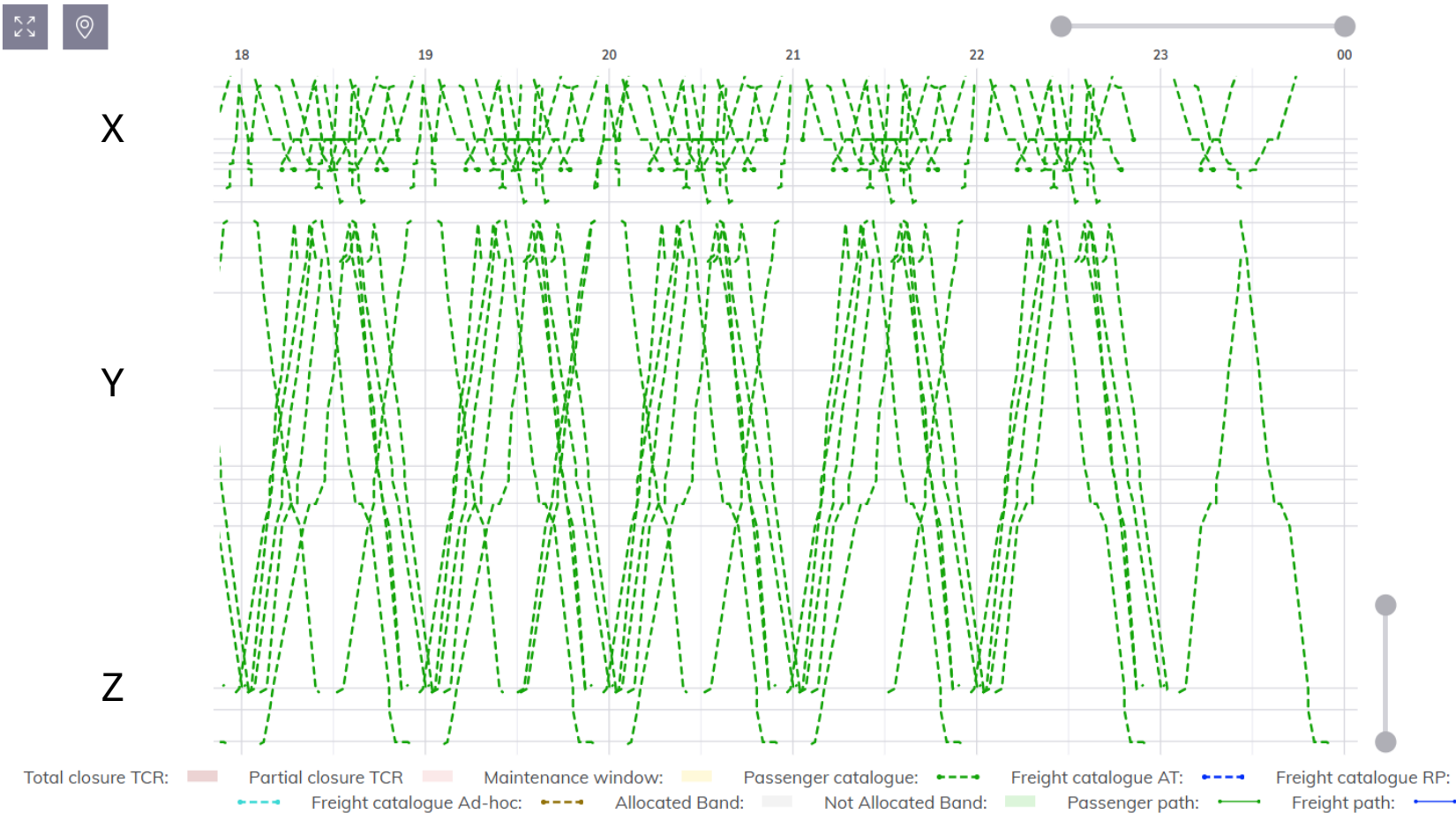
Capacity situation between two locations (practically between two neighbouring ones e.g. borders)

Main users: IMs, Applicants

Main users: IMs, Applicants

Implementation Is Reality

Capacity Supply (Pilot)



Implementation Is Reality

Temporary Capacity Restrictions (TCR) Tool



<https://tcr-online.rne.eu/>

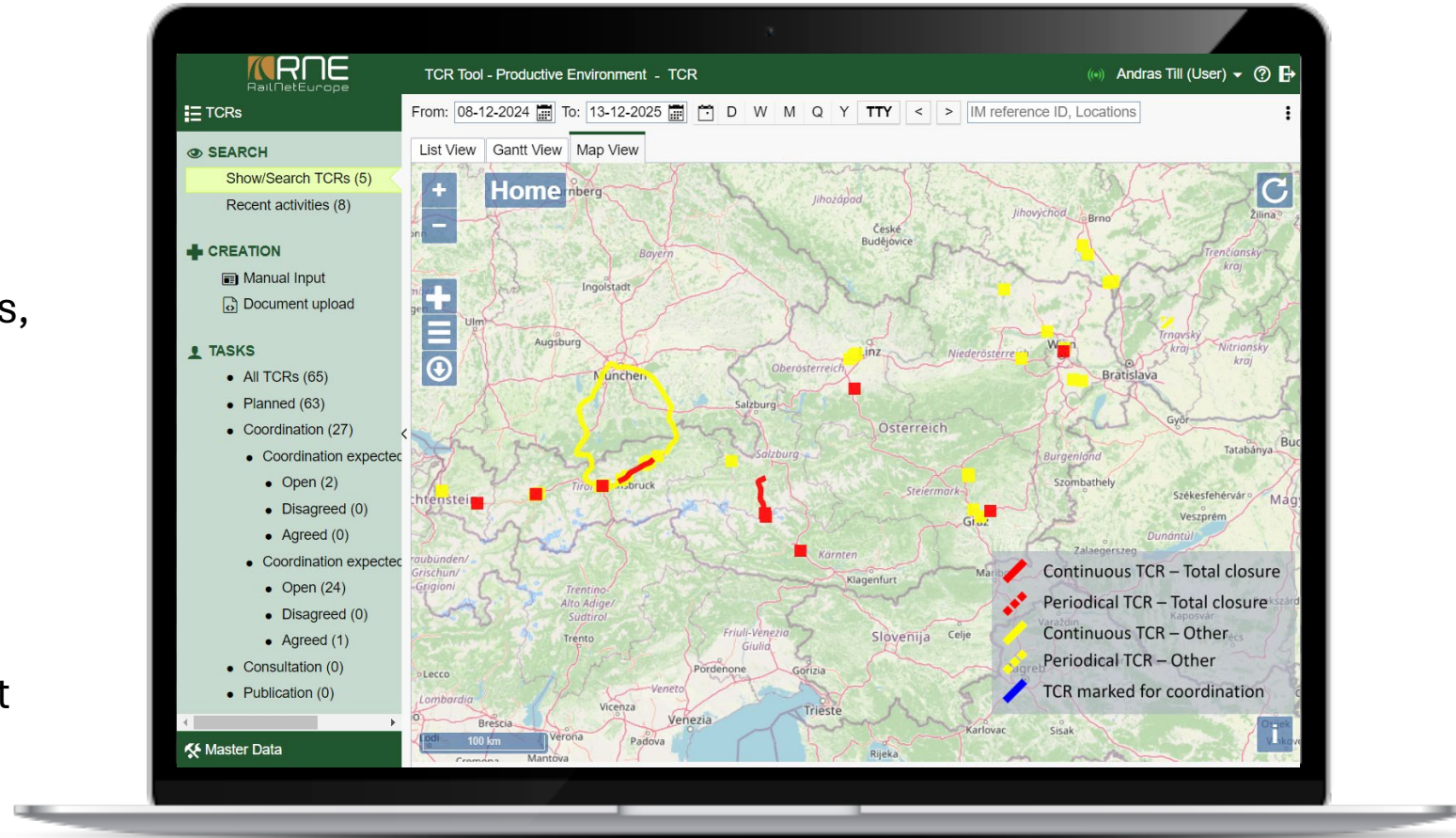


support.tcr@rne.eu



- Infrastructure Managers,
- Allocation Bodies,
- Applicants or
- Rail Freight Corridors

who have concluded
a user/license agreement
with RNE



Implementation Is Reality

European Capacity Management Tool (ECMT)



<https://ecmt-online.rne.eu/>

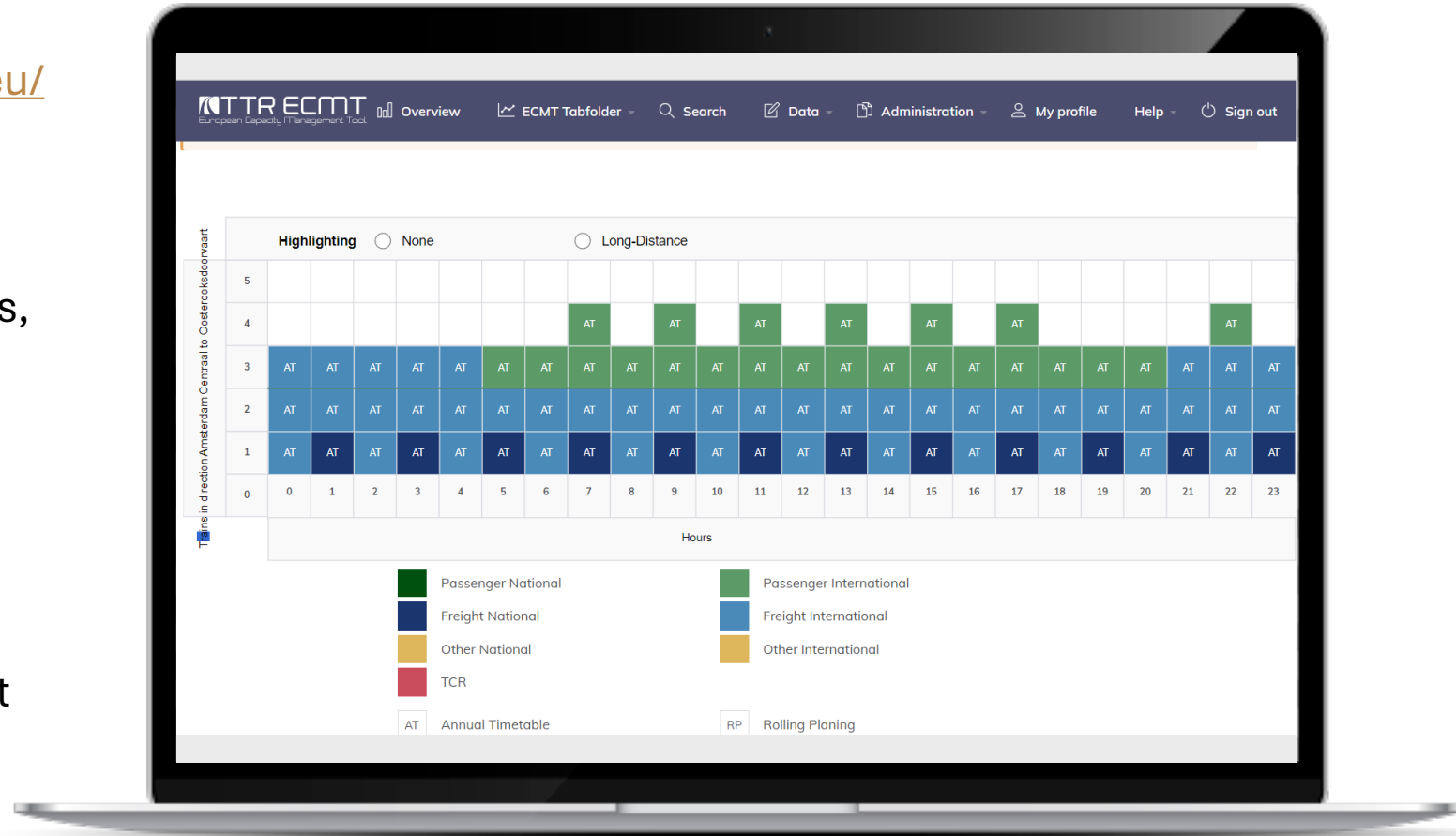


support.ecmt@rne.eu



- Infrastructure Managers,
- Allocation Bodies,
- Applicants or
- Rail Freight Corridors

who have concluded
a user/license agreement
with RNE



Implementation Is Reality

Path Coordination System (PCS)



<https://pcs-online.rne.eu/>

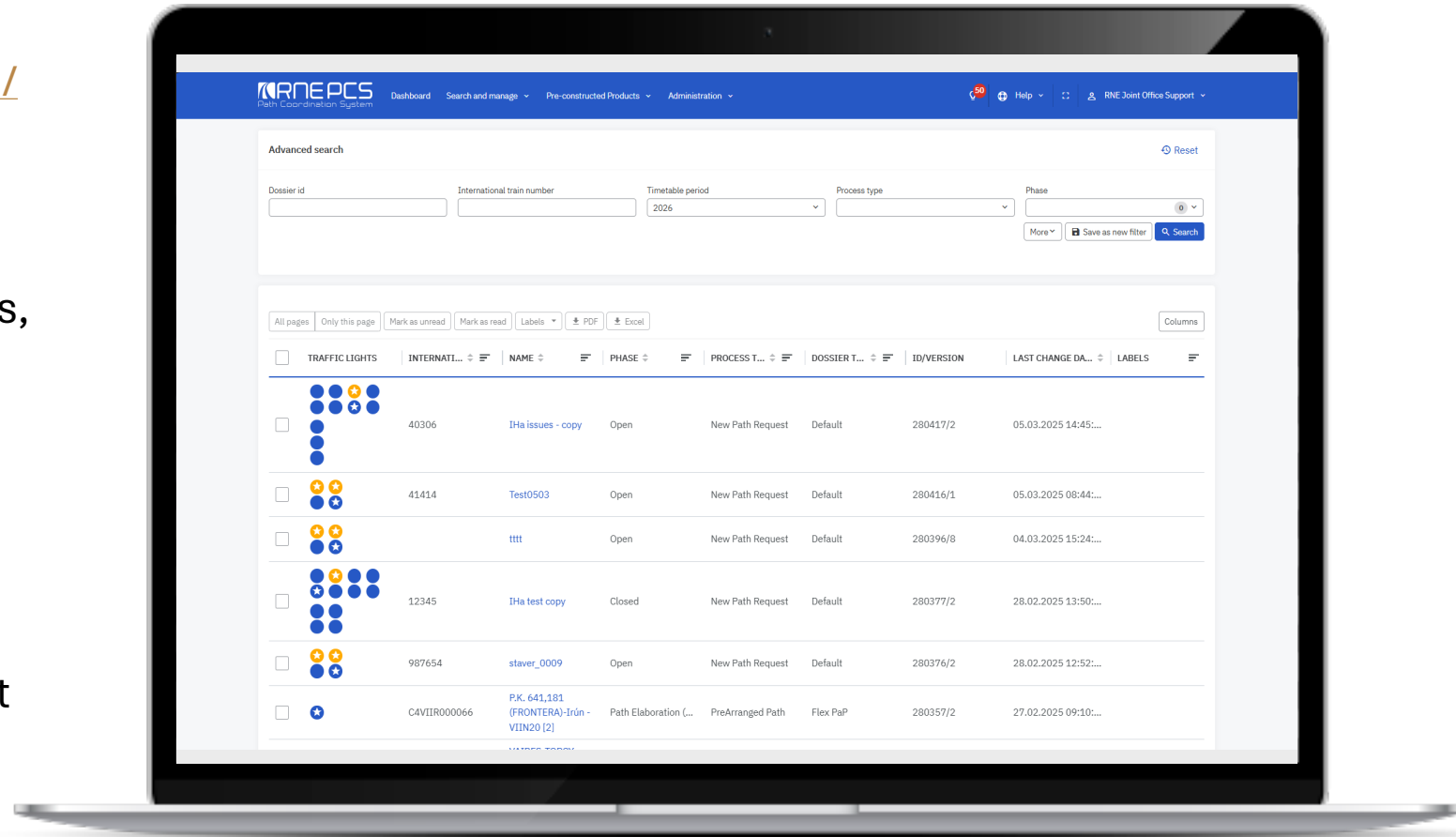


support.pcs@rne.eu



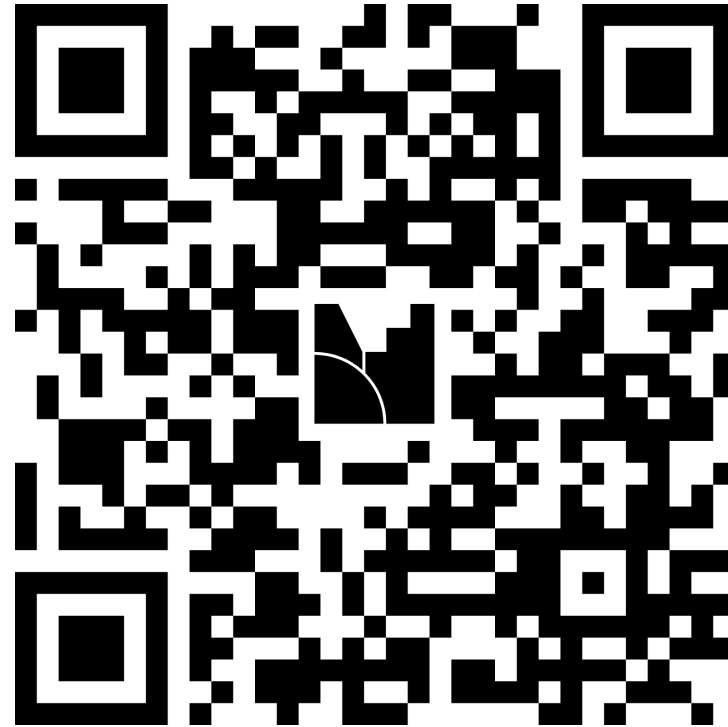
- Infrastructure Managers,
- Allocation Bodies,
- Applicants or
- Rail Freight Corridors

who have concluded
a user/license agreement
with RNE



Audience Interaction

With the mentioned processes and corresponding IT tools, do you have a picture how European Capacity Management does and will work?



RailNetEurope

06 Outlook



Paradigm Shift in Implementation

TTR

Agreement on RNE Level



- Voluntary implementation at RNE's discretion
- Inclusive development

Transition

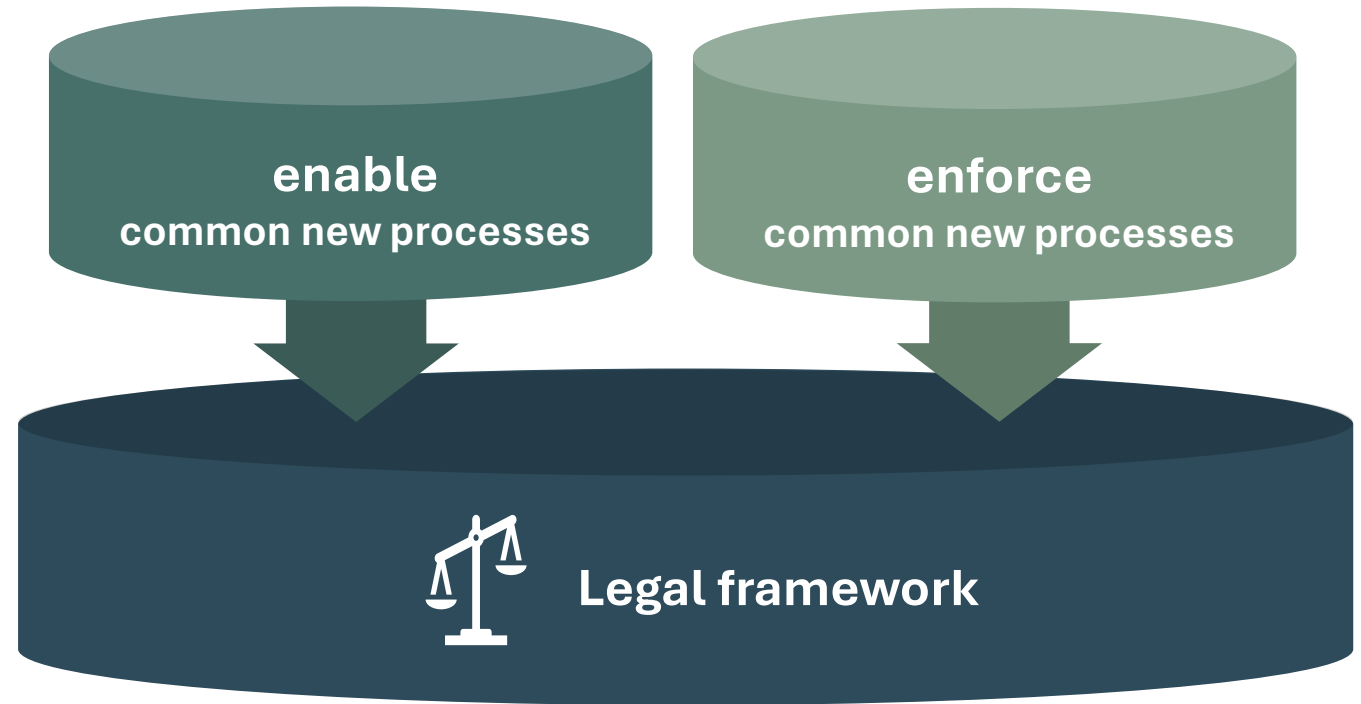
Capacity Regulation

Tasks of Network Coordinator



- Obligatory implementation with fixed (tight) deadlines
- Expert development

European Legal Framework as Basis for Implementation



Aim: Backing the transition to harmonize European processes
→ avoid room for interpretation!

Legal proposal is being negotiated since July 2023: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52023PC0443>

Implementation Areas

1

Process

- Further efforts on European harmonization
- Continuation of close monitoring

2

Digital Capacity Management

- Significant **investments** in pipeline (central & national)
- **Redevelopment of central tools** ('DCM 2.0') ongoing
- RNE provides **integrated solutions**



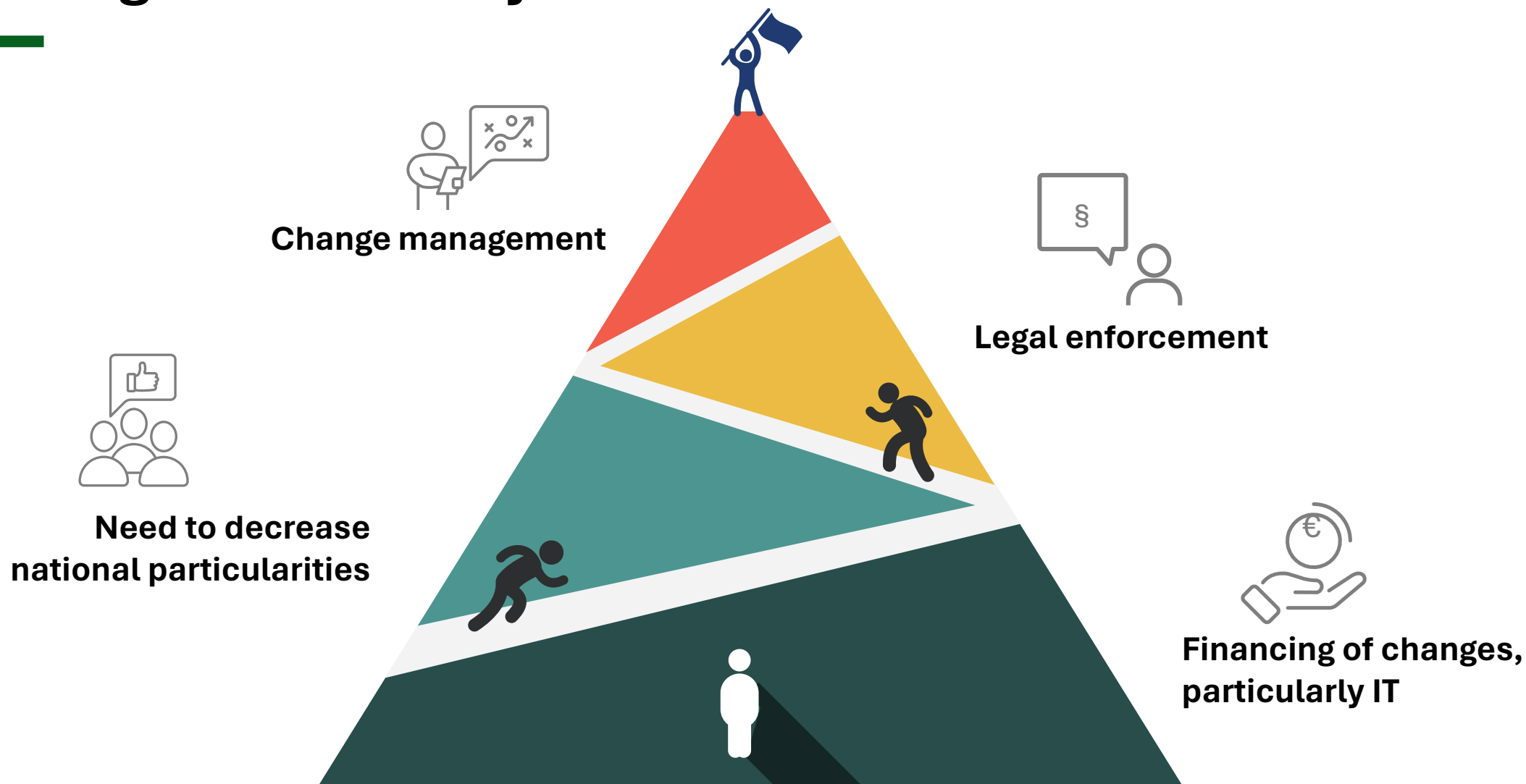
Capacity Regulation subject of trilogue negotiations



Current aim of RNE: Full implementation by TT 2032*

** Based on latest trilogue agreement*

Challenges on the Way



Goal



Together as one sector we will be able to overcome all obstacles and achieve full implementation!

Contact



Josef Zitzler

Senior TTR Implementation Manager
Team Leader of TTR Implementation

+43 676 9402 909

josef.zitzler@rne.eu

RailNetEurope

Austria Campus 3

Jakov-Lind-Straße 5

1020 Vienna, Austria

www.rne.eu

RNE Summer Academy 2025

Knowledge. Connections. Impact.

Networking Break until 10:50



#RNESummerAcademy

RailNetEurope

02 Capacity Management Q&A Session



RailNetEurope

03 European IT Landscape



European IT Landscape

Speaker



Andras Till

Team Leader Capacity Management IT

What do we mean by RNE IT?

Products and solutions supporting:

- Planning workflows
- Operations
- Interoperability
- Data sharing

What's driving RNE's IT strategy

- Customer needs
- Sector agreements
- Regulation



**Business Needs
& Processes**



**EU Legislation
& TSIs**



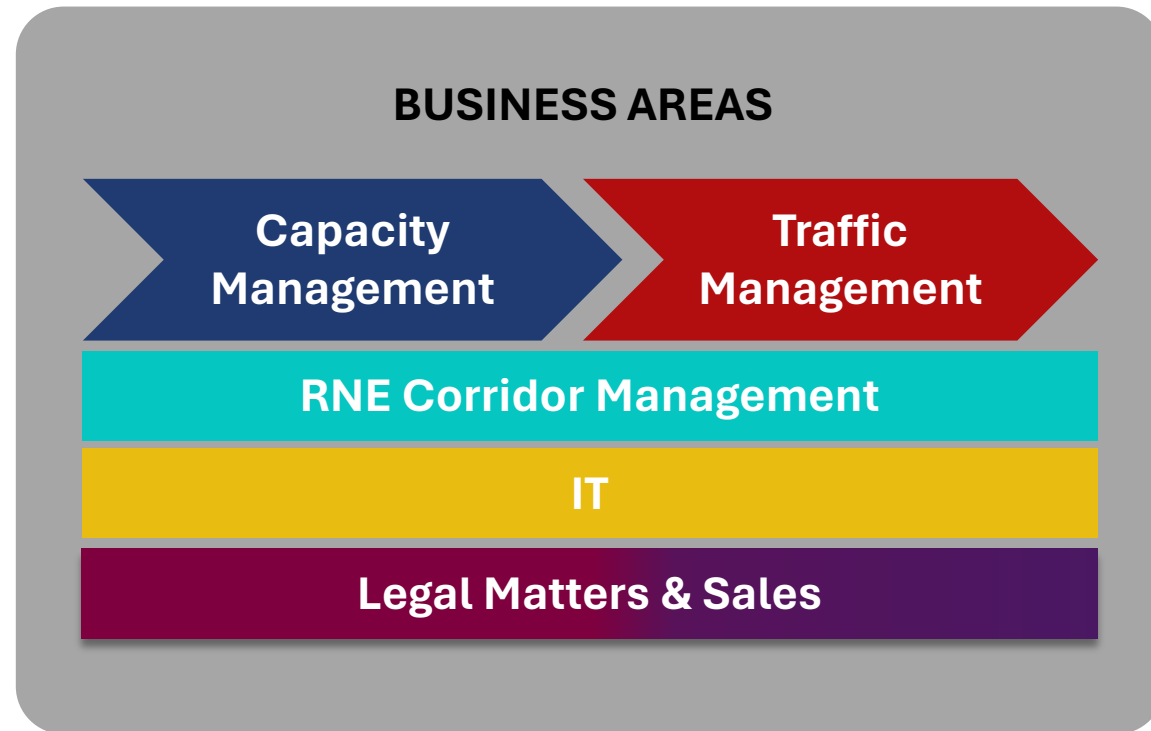
RNE Systems

**European
IM Systems**

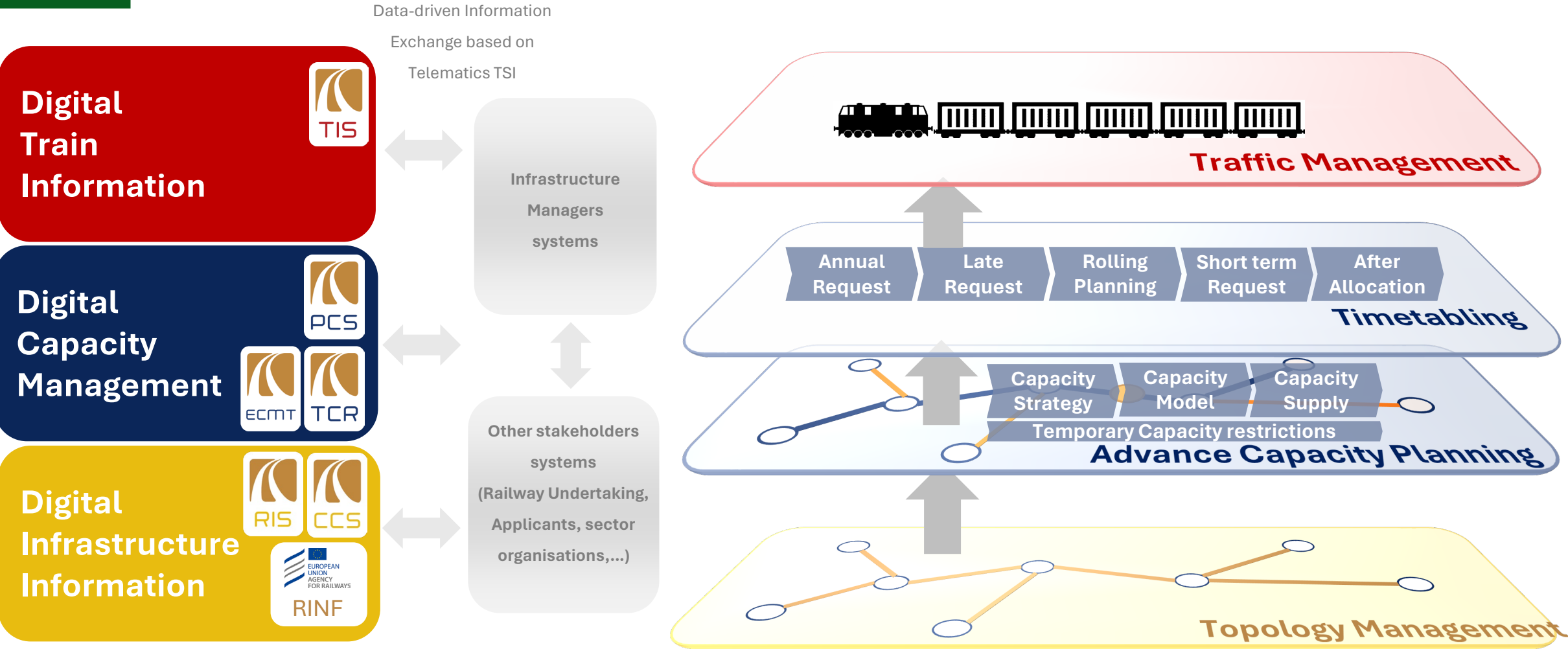


Business areas

Reflecting RNE's business structure



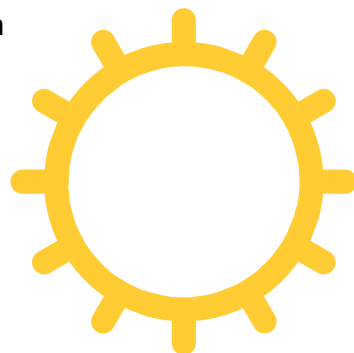
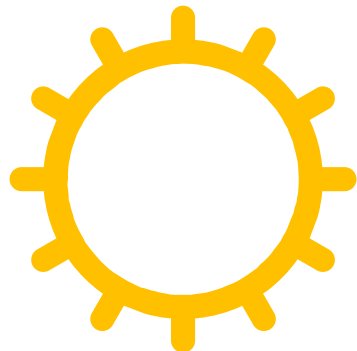
RNE IT Strategy



Digital Infrastructure Information

Provision of Infra data to sector applications

Adapt to future data requests and data quality issues coming from Capacity and Operations applications

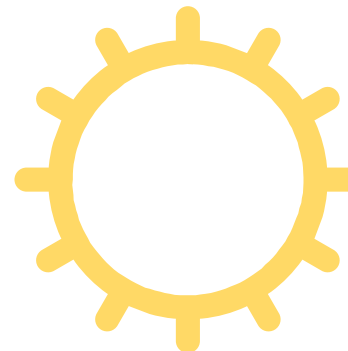
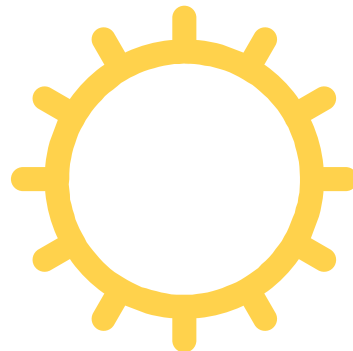


RIS-RINF Connection

Work towards the retrieval of infrastructure data from RINF

Telematics TSI Compliance

Improve CI to support compliance

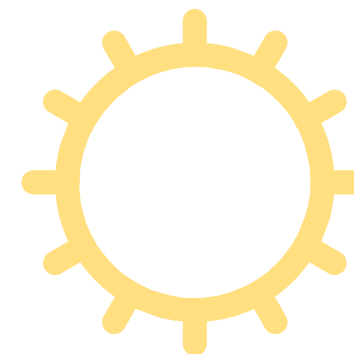


Expand RFP, CIP and CRD functionalities

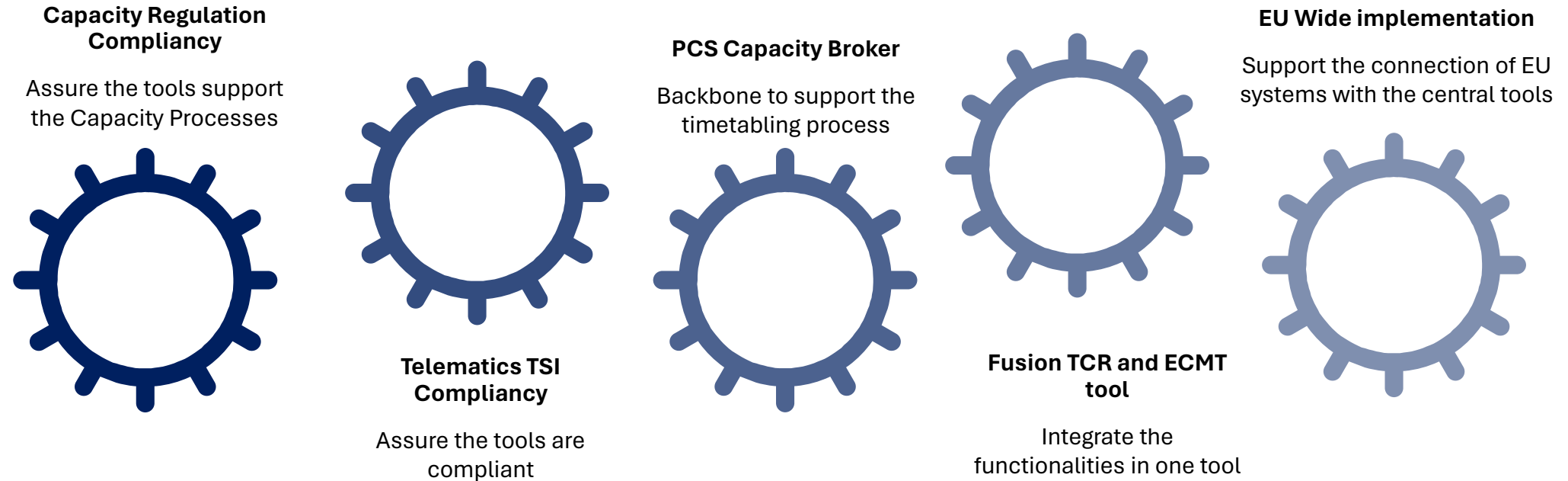
Improve user experience and functionalities of the RIS presentations layouts

Linked Data Approach

Assist IMs in the provision of data to RINF and the use of Linked Data technologies by the sector



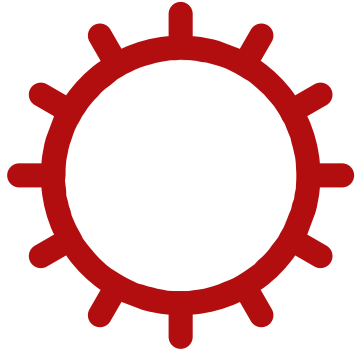
Digital Capacity Management



Digital Train Information

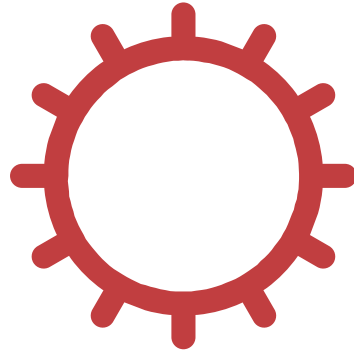
Telematics TSI and Capacity regulation Compliancy

Support and propose improvements for the Operations where needed



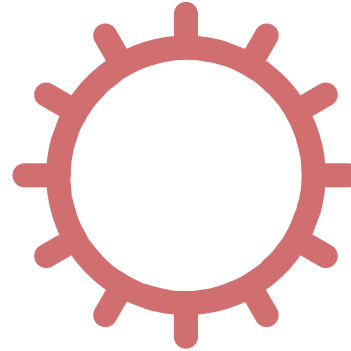
User Friendliness of the tool

Enhance the user experience in the fields of TCM, Geo-Positioning Data, Mobile within time and budget



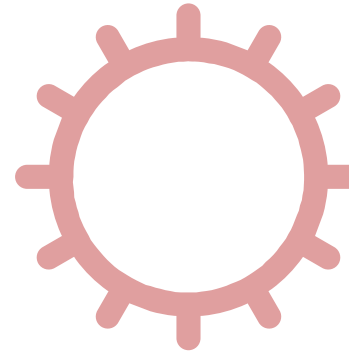
Implement the Traffic Management related functions

ETA, Incident Management, ETMN



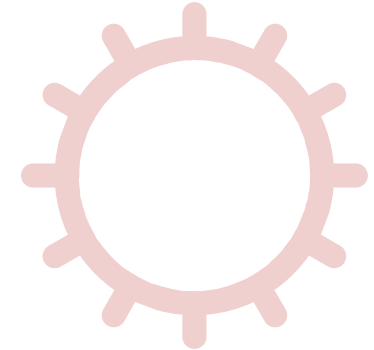
RNE TIS Evolutions

Enable TIS through new functionalities to strengthen its role transport related application to support various stakeholders



Promotion of TIS

Further promote TIS as TAF/TAP TSI certified and well-established solution for real-time train monitoring



RailNetEurope

Sector Cooperation – RNE IT



EC & sector interaction in the scope of RNE activities

1 Creation, update and enforcement of **POLICIES**
(EU Regulations/Directives, TSIs, Implementing/delegated acts)



2 Lobbying / sector bodies



3 Implementation of **POLICIES**



RUs

Service Facilities

...



- TEN-T Regulation
- SERA Directive
- Capacity Mgt Regulation
- Corridor Regulation
- Telematics TSI (TAF/TAP)
- Operations TSI (OPE TSI)
- RINF regulation
- PRIME Work Program



Collaboration with the EC



Main purpose:



Deliverable:



RNE involvement
RailNetEurope



DG MOVE

Develop and enforce EU policies
(TSIs, work programmes,...)

Deliver the legislative framework

Technical input to upcoming legislation (e.g., via SERAF) & deliverables in context of CEF TA funding



Europe's Rail Joint Undertaking

Unified operational concept and system architecture

STIP - Standardisation Input Plan

5 years

Coordinator for the **"Capacity Management System"** & **"Traffic Management System"** ensuring the alignment with RNE projects/activities



Mobility Data Space

Data sharing within the transport sector

EMDS principles and data sharing principles

Contributor in the **working groups** assuring the data objectives are in line with the RNE data policy



PRIME (IMs – EU)

IM cooperation across borders, implementation of EU policy, performance benchmarking

PRIME Work Programme

Participating in the **PRIME Plenary meeting** emphasising the importance of digitalisation*



PRIME Subgroups (e.g. Digital)

Define and follow-up of « Digitalisation initiatives »

PRIME Digital Work Plan

0-2 years

Co-organising the forum with the EC and supporting the IMs with their preparation for the meeting



CINEA

Funding for the policy implementation

Grant Agreements

Coordinating **funding request** on behalf of the IMs



ERA

Manage the registers, maintain the TSI's annexes and the ERA ontology












TSI annexes, RINF, Implementation follow up, ERA Ontology

Give **input for the TSI revisions** through the RNE working groups and RNE-led sector working groups, support with Ontology activities

* Covering DCM as defined in TTR as well as DCM beyond TTR

** In case of PRIME and RNE taking over roles as IM central entity in future legislation, RNE's involvement in PRIME might go beyond this in the mid-term

Collaboration with sector organisations

		Main purpose:	 Involvement:
	EIM	Official representative body for a number of EU IMs	Providing expert knowledge. Alignment of strategies (CM, TM, ..), TSIs (TAF, TAP, OPE), regulations and registers.
	CER	Official representative body for a number of EU IMs and RUs	Providing expert knowledge. Alignment of strategies (CM, TM, ..), TSIs (TAF, TAP, OPE), regulations and registers.
	Rail Freight Forward	Sector CEO organisation uniting the large freight RUs	Common approach for sharing operation train information and common approach for TTR implementation
	Forum Train Europe	Sector organisation uniting RUs focussing on capacity management	Common approach for TTR
	UIC	Worldwide organisation uniting railway companies with a strong European focus	Strategic alignment with all initiatives where UIC is involved (RFF, TTR/DCM, Rail Data, Language Programme)
	UIRR (Rail-Road)	Sector body of the intermodal companies	Common approach for the Rail Facilities Portal, alignment in Digital Train Information and support of terminals' involvement in data exchange
	Rail Data	Develops and runs IT services for some EU freight RUs under UIC umbrella.	Common approach for sharing operation train information
	TSGA	Providing location services for the passenger RU community	Common approach for Digital Infrastructure Information
 	Joint Sector Group	Sector organization for the TAF TSI and TAP TSI implementation	Alignment with digitalization activities of RNE and the TSIs

Note: Additional collaboration activities with other organisations might emerge in future.

RailNetEurope

Railway Infrastructure System (RIS)



Rail Infrastructure System (RIS)

The RIS project merges the infrastructure data from four different RNE systems:

Central Reference File Database (CRD)

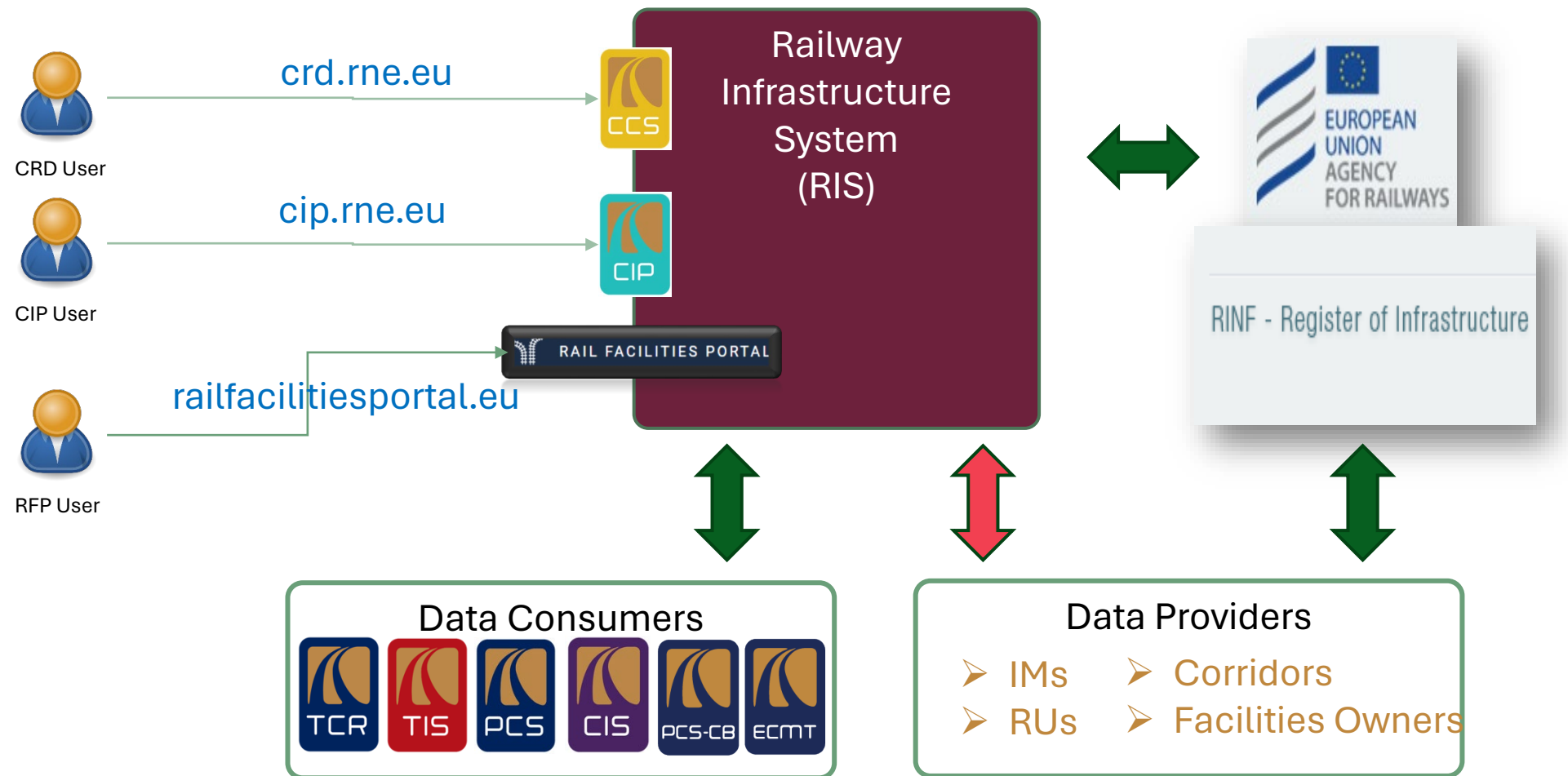
- List of Countries (ISO 3166)
- The Location Reference File which uniquely identifies physical rail points (PLCs, SLCs).
- The Companies Reference File uniquely identifies all rail actors (Company Codes).

Topology: Segments, Sections, Layers, Properties

Customer Information Platform (CIP): Line Properties, ETCS Deployment, Projects, Terminals

Rail Facilities Portal (RFP): Service Facilities


RIS in operation



RIS – corridor lines



RIS – Primary Location Codes (PLCs)



Co-funded by
the European Union

Topology

Corridors Information

ETC Information

RFP Information

CRD

Settings

EN

Jerónimo Padilla Alon

Reference Data

CRD Information

History

Audit

CRD

Reference Data

Primary Locations

Countries

Companies

Locations

Primary Locations

Subsidiary Locations

Subsidiary Types

Primary Location Code Requests

Subsidiary Location Code Requests

Primary Location Proposals





















Contacts

PRIMARY LOCATIONS (2405)

Add new

Import

Columns

Select	Code	Name	Name (ASCII)	Country	Responsible IM	Add Date	Modified Date	Status	Actions
<input type="checkbox"/>				Spain		<	<	Active	
<input type="checkbox"/>	56005	LOS PROPIOS Y CAZORLA	LOS PROPIOS Y CAZORLA	Spain - ES	ADIF - 0071	2014-04-29 12:39:11	2025-07-03 13:24:11	Active	 
<input type="checkbox"/>	8208	LA ROBLAAV	LA ROBLAAV	Spain - ES	ADIF - 0071	2025-02-11 14:57:01	2025-06-18 15:53:32	Active	 
<input type="checkbox"/>	87766	B.S. TUNEL DE ALBA	B.S. TUNEL DE ALBA	Spain - ES	ADIF - 0071	2025-02-11 14:57:01	2025-06-18 15:53:32	Active	 
<input type="checkbox"/>	87765	B.N. TUNEL NOCEDO DE GORDON	B.N. TUNEL NOCEDO DE GORDON	Spain - ES	ADIF - 0071	2025-02-11 14:57:01	2025-06-18 15:53:32	Active	 
<input type="checkbox"/>	87764	B.S. TUNELES PAJARES	B.S. TUNELES PAJARES	Spain - ES	ADIF - 0071	2025-02-11 14:57:01	2025-06-18 15:53:32	Active	 
<input type="checkbox"/>	37612	PLATAFORMA LOGISTICA DEL SUROESTE	PLATAFORMA LOGISTICA DEL SUROESTE	Spain - ES	ADIF - 0071	2025-02-11 14:57:01	2025-02-13 12:48:56	Active	 
<input type="checkbox"/>	5353	SOTO DE RIBERA	SOTO DE RIBERA	Spain - ES	ADIF - 0071	2020-07-17 12:54:39	2025-02-11 14:57:07	Active	 
<input type="checkbox"/>	5305	FUSO DE LA REINA	FUSO DE LA REINA	Spain - ES	ADIF - 0071	2020-07-17 12:54:39	2025-02-11 14:57:07	Active	 
<input type="checkbox"/>	87753	PEÑAS BLANCAS	PENAS BLANCAS	Spain - ES	ADIF - 0071	2023-01-02 12:31:34	2025-02-11 14:57:02	Active	 
<input type="checkbox"/>	87747	BIF. EL CHAPARRAL	BIF. EL CHAPARRAL	Spain - ES	ADIF - 0071	2023-01-02 12:31:34	2025-02-11 14:57:02	Active	 


0 selected entities

Export to CSV

Export to XML

Export XSD

Items per page: 101 – 10 of 2405<<>>



RailNetEurope

RailNetEurope

02 Digital Capacity Management (DCM)



Europe currently...



From a planning perspective:

- Isolated with a national focus, lack of strategic planning
- Cooperation ‘islands’
- Tedious planning meetings with limited scalability

From an allocation perspective:

- Varying levels of maturity and digitalization
- Request country by country for a single train run
- Tedious coordination for changes

Europe with Digital Capacity Management



Planning

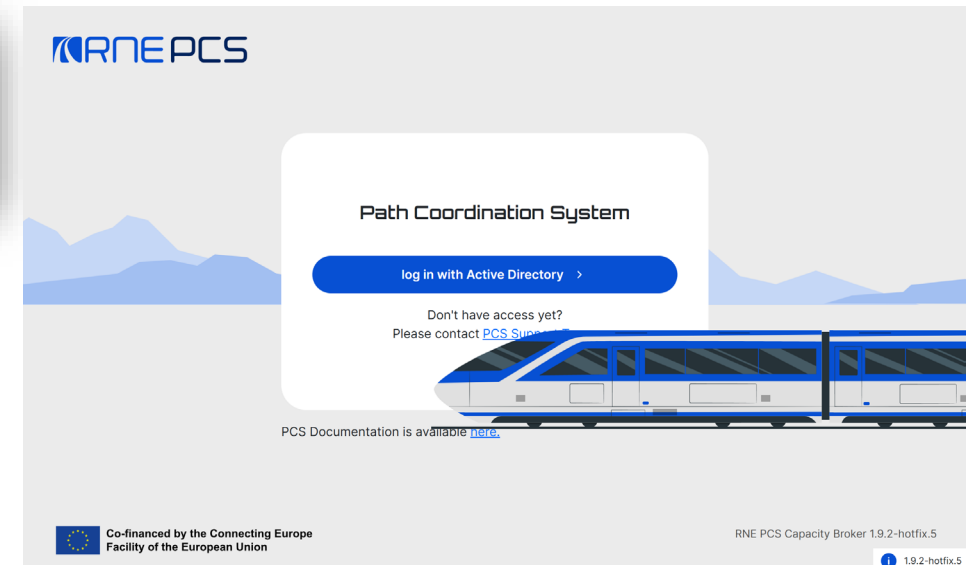
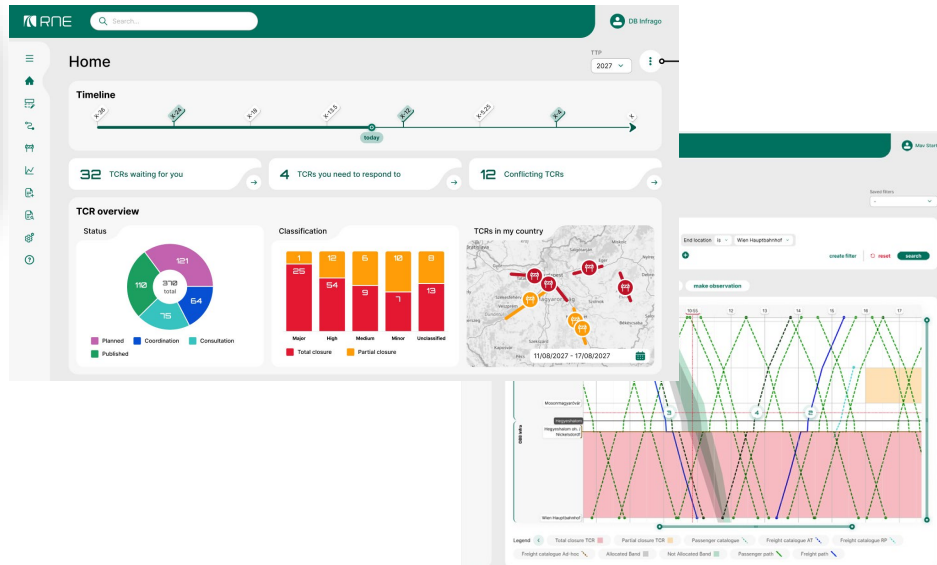
- Various tools support strategic decisions
- Harmonized international traffic flows
- Universal European processes

Allocation

- Modern, digital solutions for capacity booking
- Single-place solution for international requests
- Up-to-date and traceable change management

Main focus 2025-2027

- Infrastructure Managers would like a **seamless planning experience**, and customers would like a **seamless booking experience** across Europe.
- The European Commission and the sector are pushing for transparency, coordination, and consultation across the planning phases via the **Capacity Regulation**.

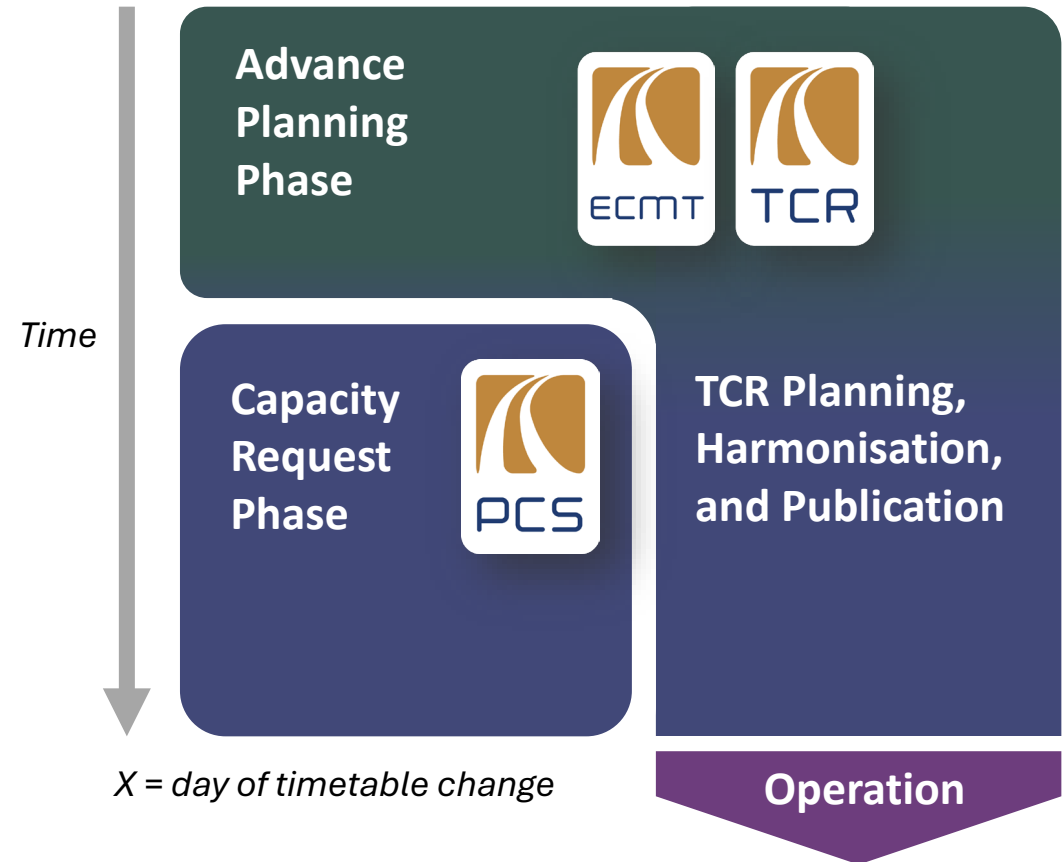


TTR Processes and DCM Tools

DCM facilitates the streamlined processes for Capacity Management

Each planning and allocation phase has a corresponding DCM platform:

- The **European Capacity Management Tool (ECMT)** is used for Advance Planning and for TCRs
- The **Path Coordination System (PCS)** is used for capacity requests



The main DCM components



National Tools

national systems need to be made fit for Europe-wide capacity management and connected via central systems



Central Systems

providing workflows to enable coordination and harmonization on a European level



Interfaces

to enable true digital capacity management and universal participation

TAF/ TAP TSI

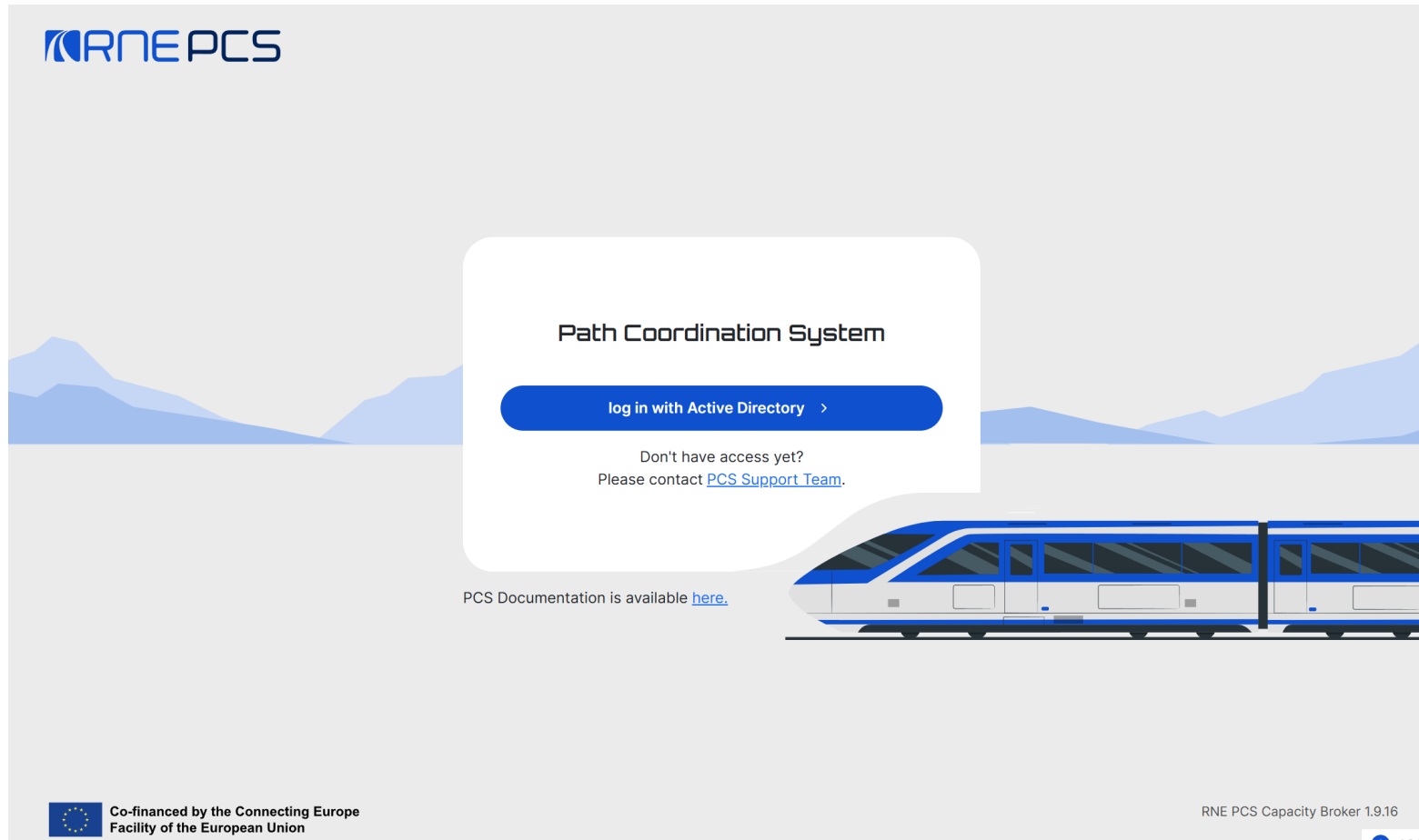
as the “common language” to establish a connected European network of systems

The next step in Digital Capacity Management (central)


- In light of the upcoming **Capacity Regulation** and the gradual implementation of **TTR**, RNE is making the **second generation of the Digital Capacity Management tools**.

Tool	Current versions (DCM 1.0) - Pilots	DCM 2.0 – Integrated Solutions
TCR Tool & ECMT	<ul style="list-style-type: none">■ Providing central databases■ Replace ‘Excel and PowerPoint based’ harmonization processes■ Some support of the coordination and harmonization■ Designed to support the piloting of TTR processes	<ul style="list-style-type: none">■ Tools providing central workflows and processes for cross border planning, coordination, and harmonization■ Designed for robustness, user experience, and scalability across Europe
PCS	<ul style="list-style-type: none">■ The first tool based on workflows■ Already captured some market share■ Successfully covering the Annual Path Request phases	<ul style="list-style-type: none">■ Extending the workflows to all cross-border trains, IMs, and planning phases■ Integrating new process types (e.g. automated international immediate ad-hoc path booking)

Path Coordination System – Capacity Broker



Path Coordination System – Capacity Broker





dashboardsearch and manage ▾pre-constructed products ▾administration ▾

DBInfraGOAG User

Dashboard

reference trains >

Search for name, train number, PCS ID...

manage filters 


13
Leading


3
Waiting for others

11
My unresolved

1
With observation for me

12
Participating

 With PaP

 Late Path Request

labels ▾

<input type="checkbox"/>	Name	Phase	Int. train number	PCS ID	Last updated	Companies	Label
<input type="checkbox"/>	Elaboration comment	Harmonization	804	100098	06/08/2025	<div><div>★ GYSEV CARGO</div><div>★ DB InfraGO</div></div> <div><div>Green Cargo</div><div>Banedanmark</div></div>	
<input type="checkbox"/>	Reject request with EM	Path elaboration	754	100092	06/08/2025	<div><div>★ GYSEV CARGO</div><div>★ DB InfraGO</div></div>	
<input type="checkbox"/>	Kiel Hbf - Flensburg Grenze 2025-07-31T11:21:40.083Z	Harmonization	803	100075	31/07/2025	<div><div>★ GYSEV CARGO</div><div>★ DB InfraGO</div></div> <div><div>★ GYSEV CARGO</div><div>Banedanmark</div></div>	
<input type="checkbox"/>	Kiel Hbf - Flensburg Grenze 2025-07-30T06:37:35.239Z	Path elaboration	803	100068	30/07/2025	<div><div>★ GYSEV CARGO</div><div>★ DB InfraGO</div></div>	



Path Coordination System – Capacity Broker

dashboard |
 search and manage ▾ |
 pre-constructed products ▾ |
 administration ▾

DBInfraGOAG User

Kiel Hbf - Flensburg Grenze 2025-07-30T06:37:35.239Z

100068

Int. train number 803	Timetable period 2026	Process type New path request	Train type Freight
---------------------------------	--------------------------	---	------------------------------

[path elaboration](#)

[< previous](#) **Leading** [next >](#)

Requests
Offers
Control
Comments
History

Paths
Journey

In territory (GYSEV CARGO / **DB InfraGO**)

Path requests without offers: **All responded**
Requested / Offered days: **1 / 1**

☒ Path offer ☐ Variation

★ GYSEV CARGO

MY TERRITORY

/ ★ DB InfraGO

...

2

- ▼ **1 Path**
 - Kiel Hbf
 - Flensburg Grenze

Path

Offer to [Path Request](#) 2

Journey

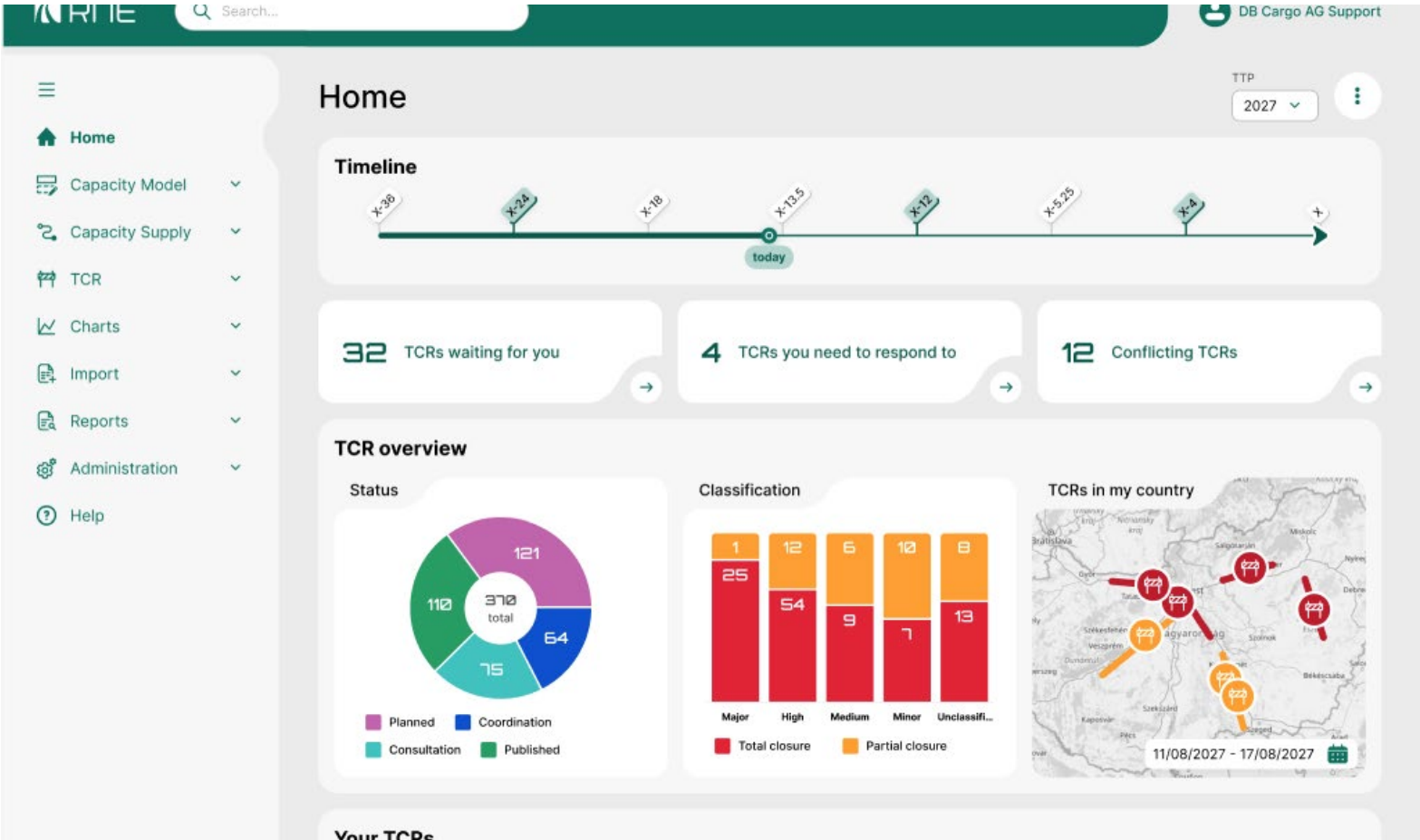
[edit](#)

Territory	Applicant	Responsible IM		
	GYSEV CARGO	DB InfraGO		
Location	Arrival	Departure	Dwell time	Train number
Kiel Hbf	-	10:05	-	803
<div>UTC +1</div>	Activity type	Location type	Path number	Owner IM
	Commercial stop	Origin	-	DB InfraGO
Location	Arrival	Departure	Dwell time	Train number
Flensburg Grenze	-	-	-	803
<div>UTC +1</div>	Activity type	Location type	Path number	Owner IM
	Commercial stop	Handover	-	DB InfraGO

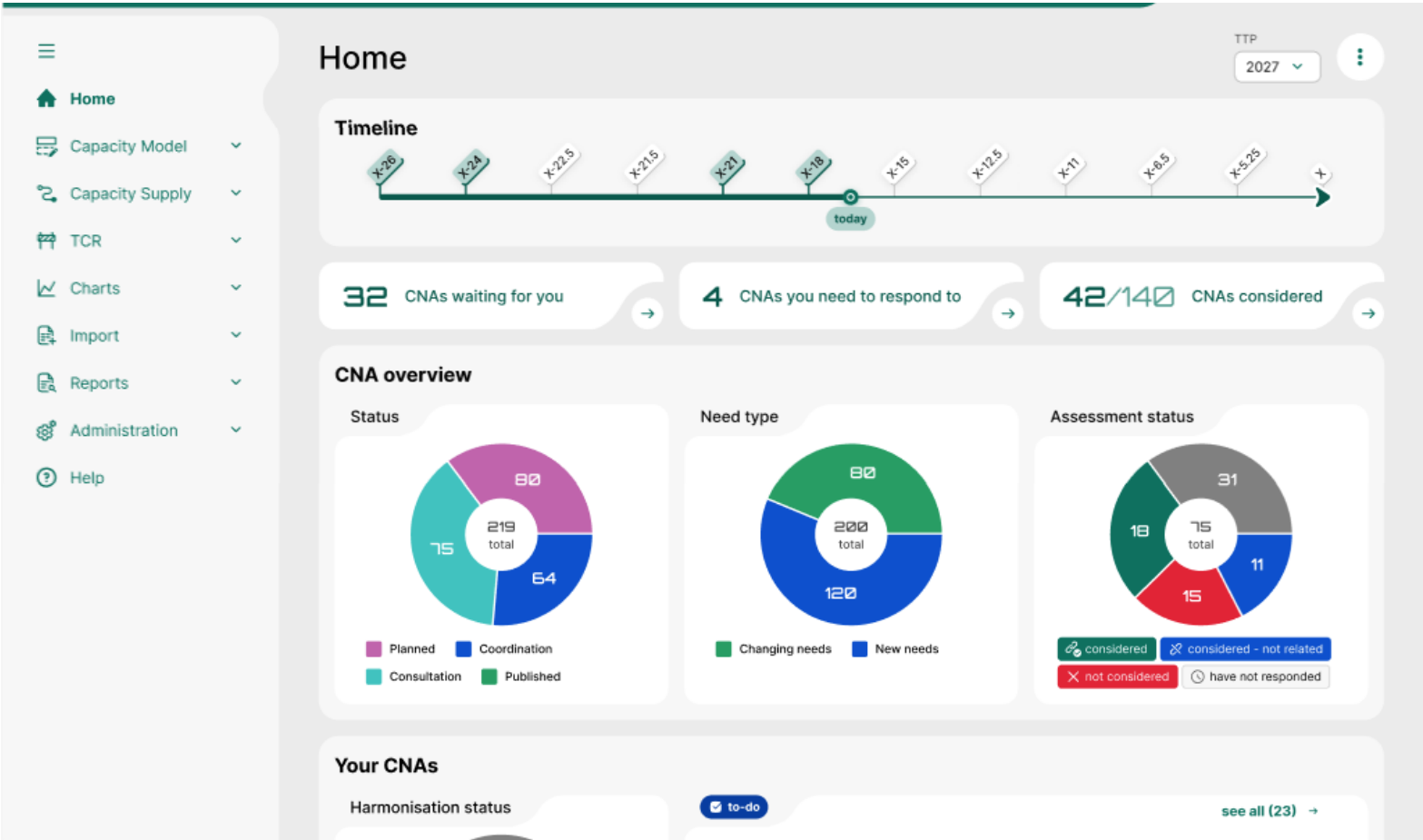
Capacity Management Tool - Fusion



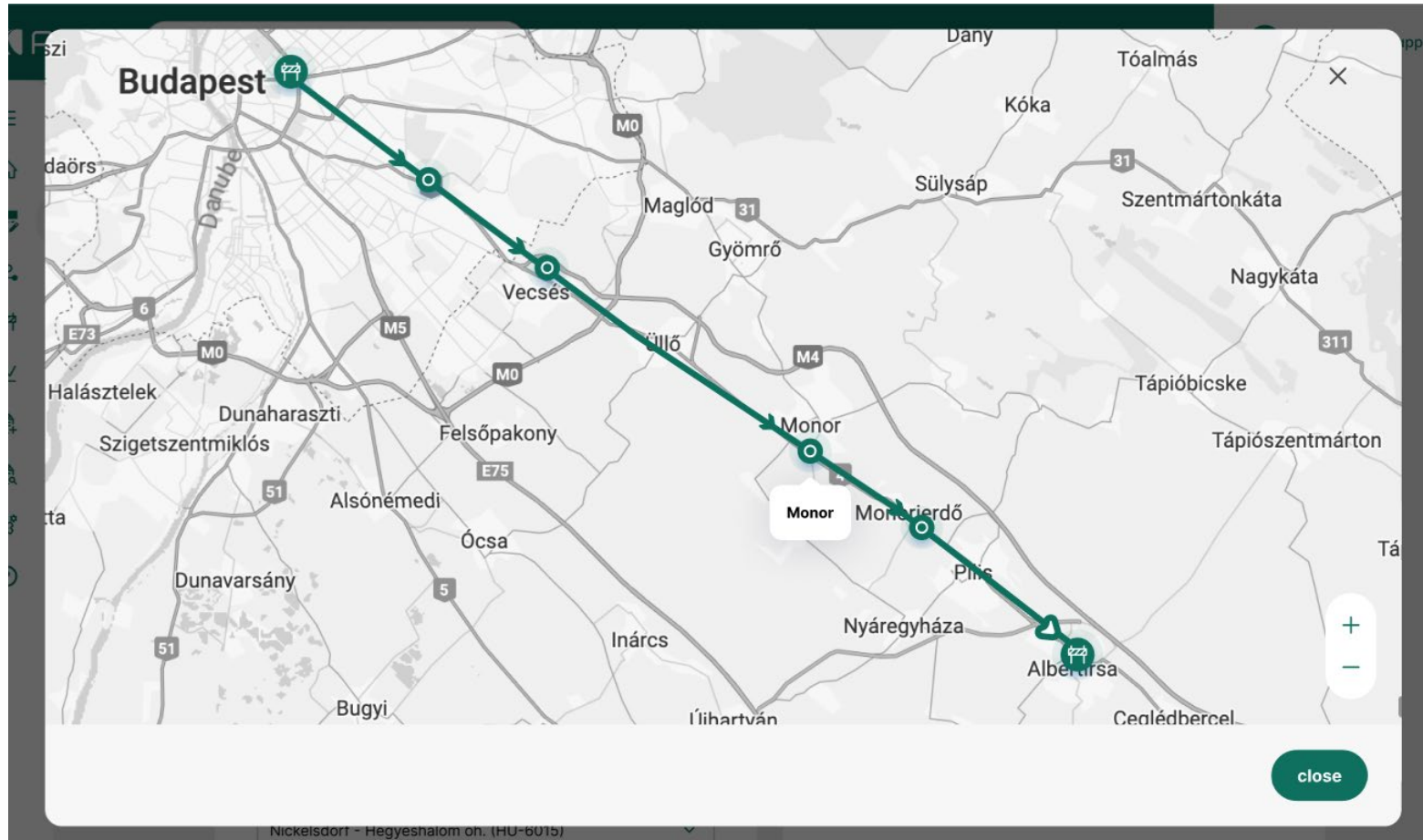
Capacity Management Tool - Fusion



Capacity Management Tool - Fusion



Capacity Management Tool - Fusion



RailNetEurope

03 Train Information System (TIS)



Train Information System

Covered separately!



RailNetEurope

Common Interface

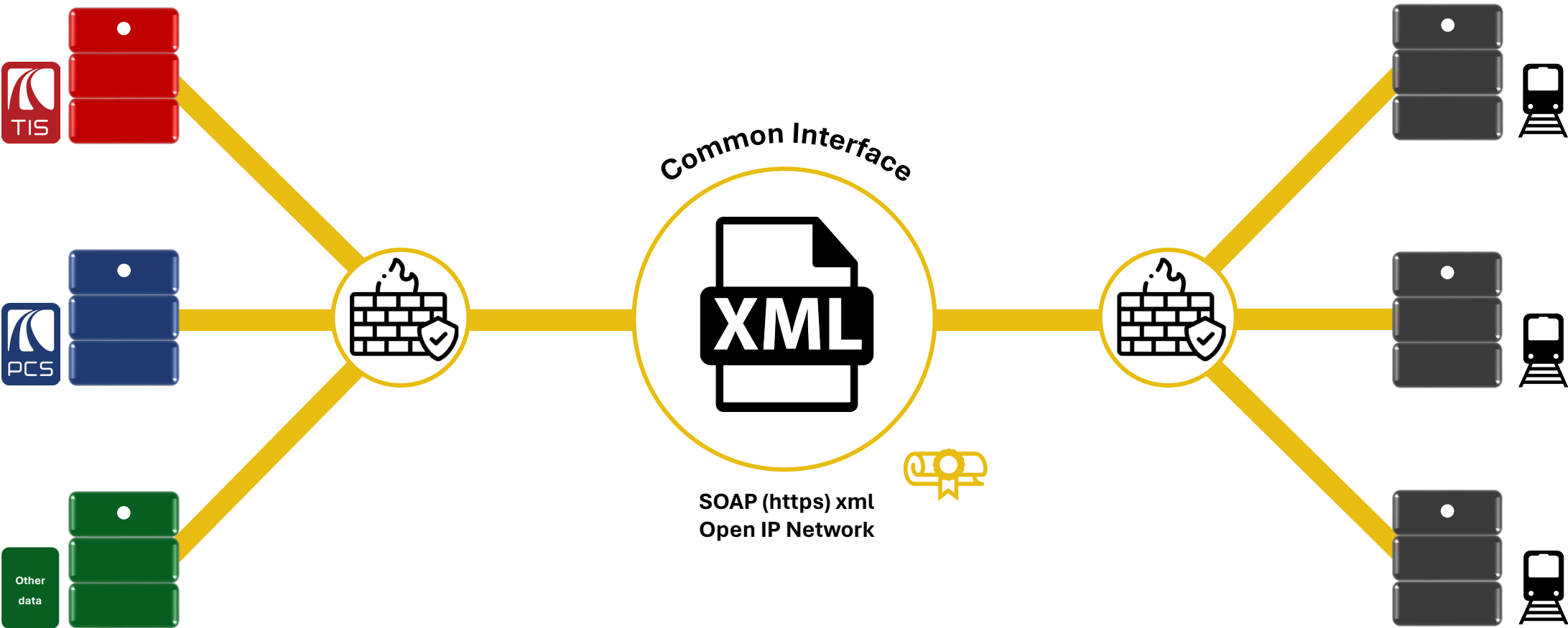


The connector: RNE Common Interface

The RNE Common Interface is:

- is a TAF/TAP TSI message exchange peer to peer application,
- can be locally installed in customers' data centers,
- can also be used to exchange other customer-specific messages.

Common Interface



Summary

RNE's IT solutions:

- provide a **common European basis** for infrastructure data,
- enable Infrastructure Managers to **harmonize their planning and allocation processes**,
- enable applicants to **access information about planning and capacity restrictions** on a European level,
- enable applicants to **book capacity in a single European tool**,
- enable people to **monitor and integrate live train data**,
- and more...

Contact



Harald Reisinger

CIO and CFO

harald.reisinger@rne.eu



Andras Till

Leader of Capacity
Management IT

andras.till@rne.eu

RailNetEurope

Austria Campus 3

Jakov-Lind-Straße 5

1020 Vienna, Austria

www.rne.eu

A group of people at a social event, overlaid with a green tint and text. The image shows a diverse group of individuals in professional and semi-formal attire. Some are holding glasses, suggesting a toast or social gathering. The background is slightly blurred, focusing attention on the people in the foreground.

RNE Summer Academy 2025

Knowledge. Connections. Impact.

Lunch Break until 13:00

#RNESummerAcademy

RailNetEurope

04 Ongoing Activities in Traffic Management



Speakers



Peter Šišolák

Head of Traffic Management



Juraj Maliacek

Senior Traffic Management Manager &
Deputy to Head



Nektarios Zacharias

Senior IT Manager (TIS) –
Team Leader TIS

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 and traffic management**:

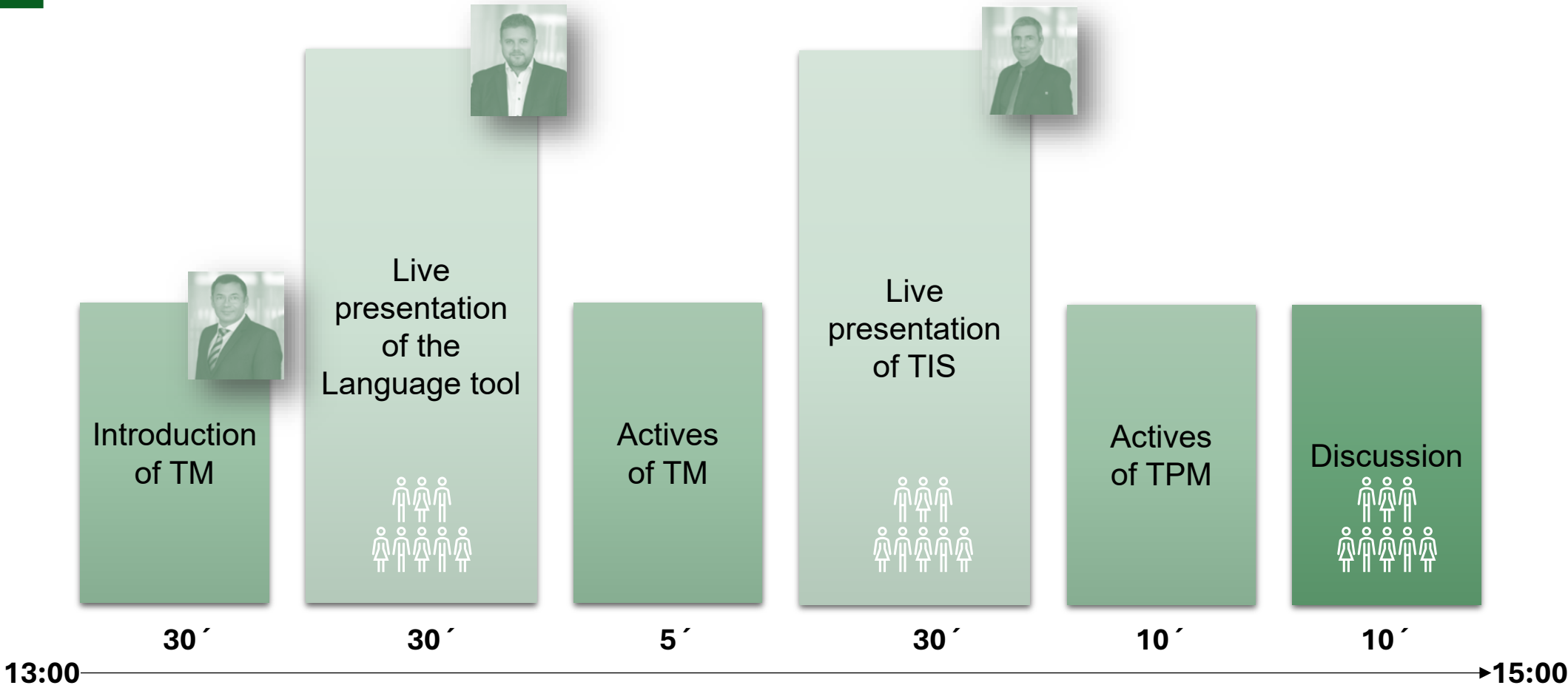
RNE follows a market-oriented approach

RNE designs the international rail infrastructure production processes




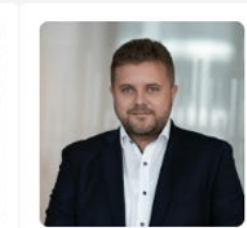
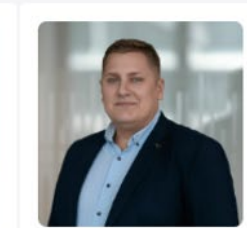
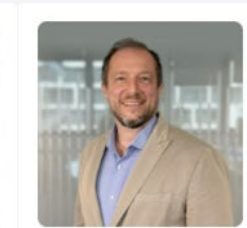
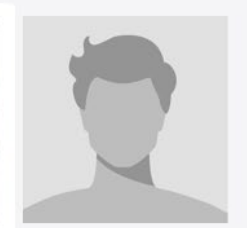
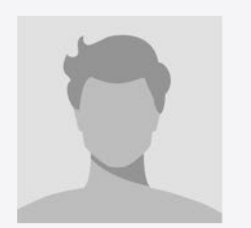
In addition, RNE acts as a **coordination platform** for the development of common procedures and IT tools across the Rail Freight Corridors (RFCs).

Agenda


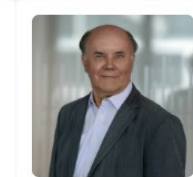




Traffic management cooperation



TRAFFIC MANAGEMENT

					
PETER ŠIŠOLÁK	JURAJ MALIAČEK	ANDREJS LEPSKIS	RICCARDO IONCOLI	MATÚŠ DLUGOŠ	MARTIN KOBERL
Head of Traffic Management	Senior Traffic Management Manager and Deputy to Head	Traffic Management Manager	Traffic Management Manager	Traffic Management Manager	Train Performance Manager

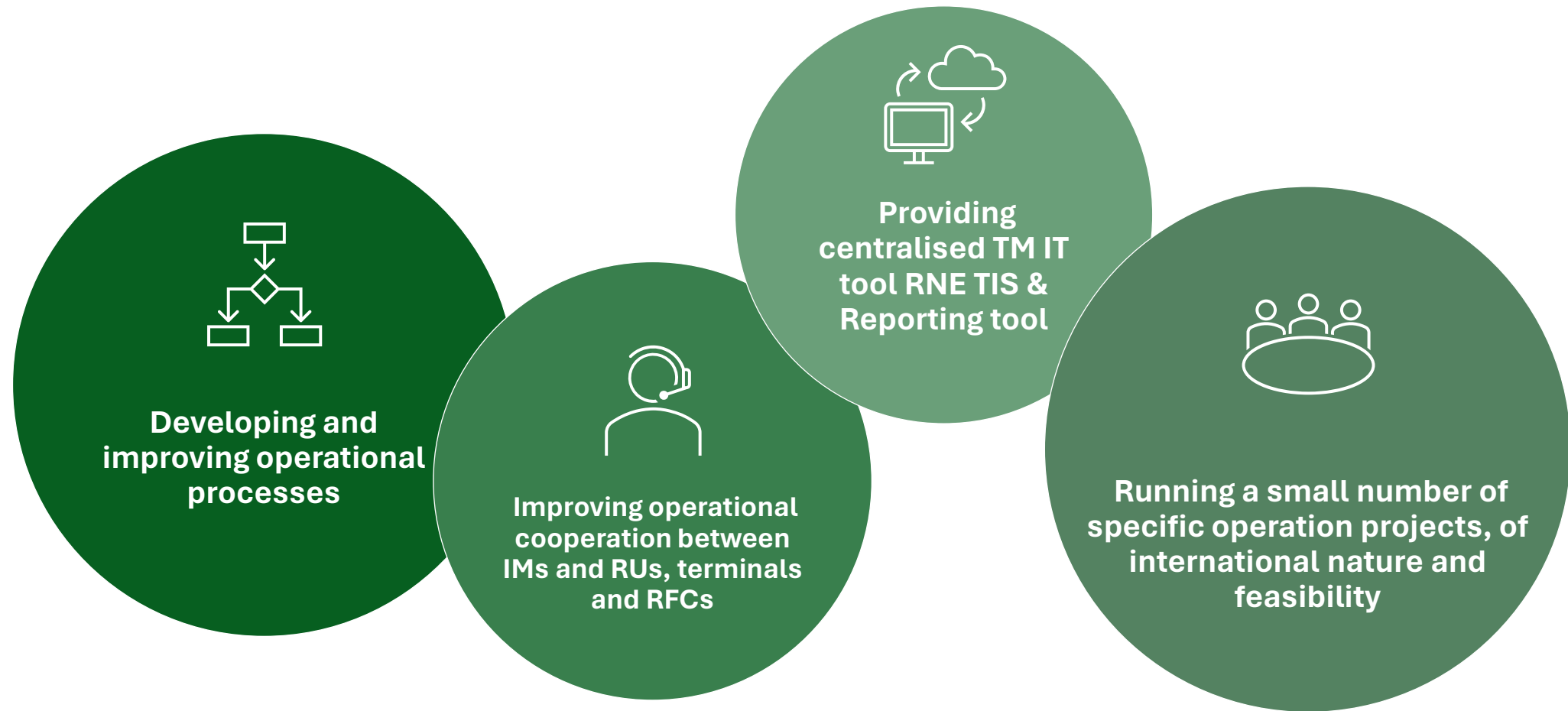
TRAIN INFORMATION SYSTEM

			
NEKTARIOS ZACHARIAS	JOSEF STAHL	ARTURAS PAULASKAS	VIKTOR KÁDÁR
Senior IT Manager (TIS) - Team Leader TIS	Senior IT Manager (TIS)	IT Manager (TIS)	Junior IT Manager (TIS)

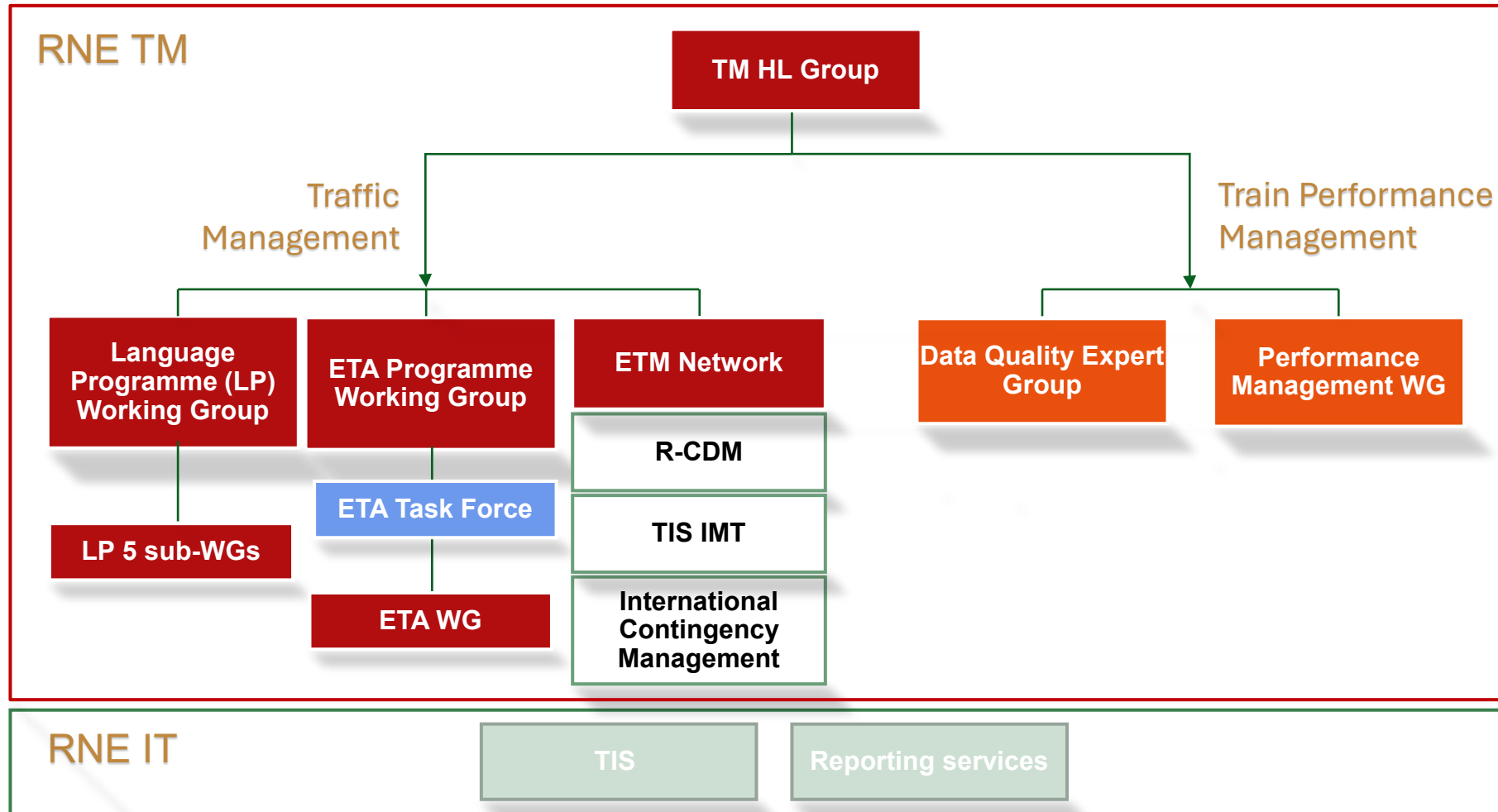
GENERAL IT

	
SEMKO MERDAN	ÖMER EMRE SORHUN
Senior IT Manager (Reporting)	Business Intelligence & Data Analyst

Traffic management main activities



Organisational Set-Up Traffic-Mgt department at RNE



Traffic Management – areas of activities



Management



Cooperation



Communication



Predictions



Performance

RNE supports Traffic & Train Performance Management

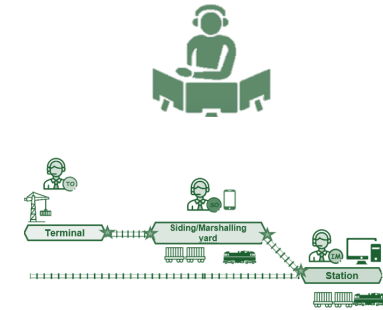


RailNetEurope

Insight to supported areas



Traffic Mng – areas of activities – ETM Network concept



Management

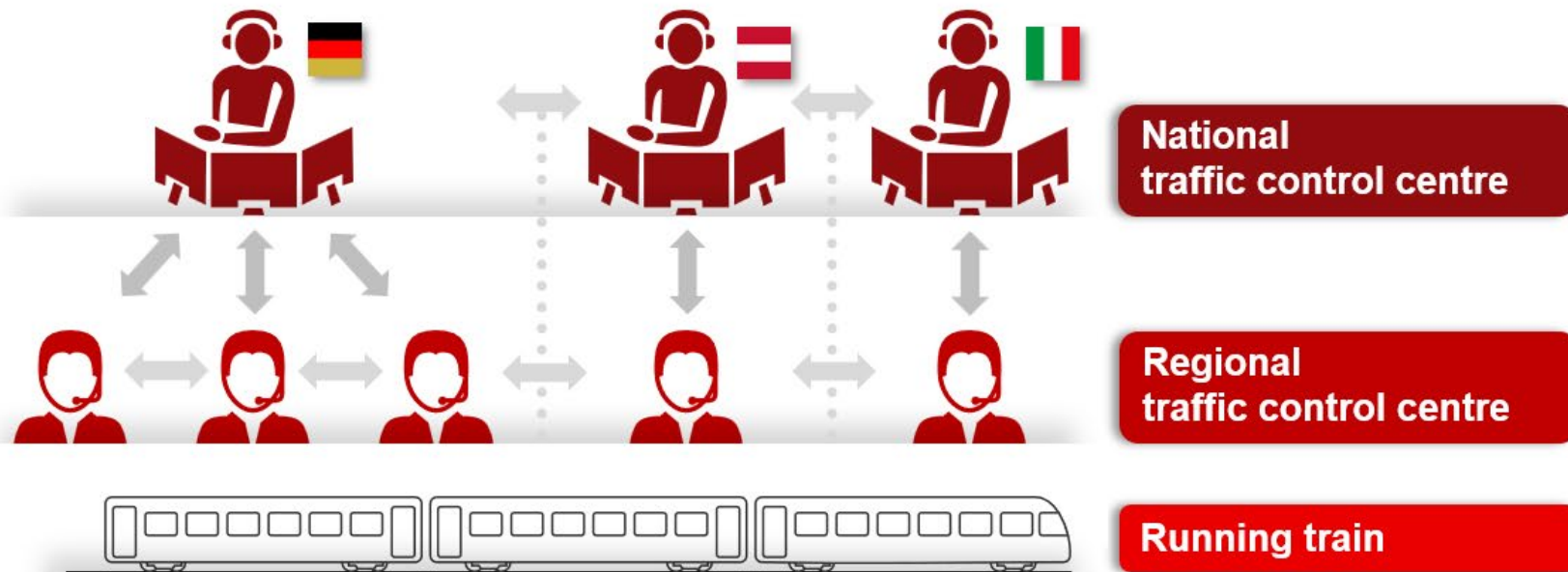
Cooperation

Traffic Management

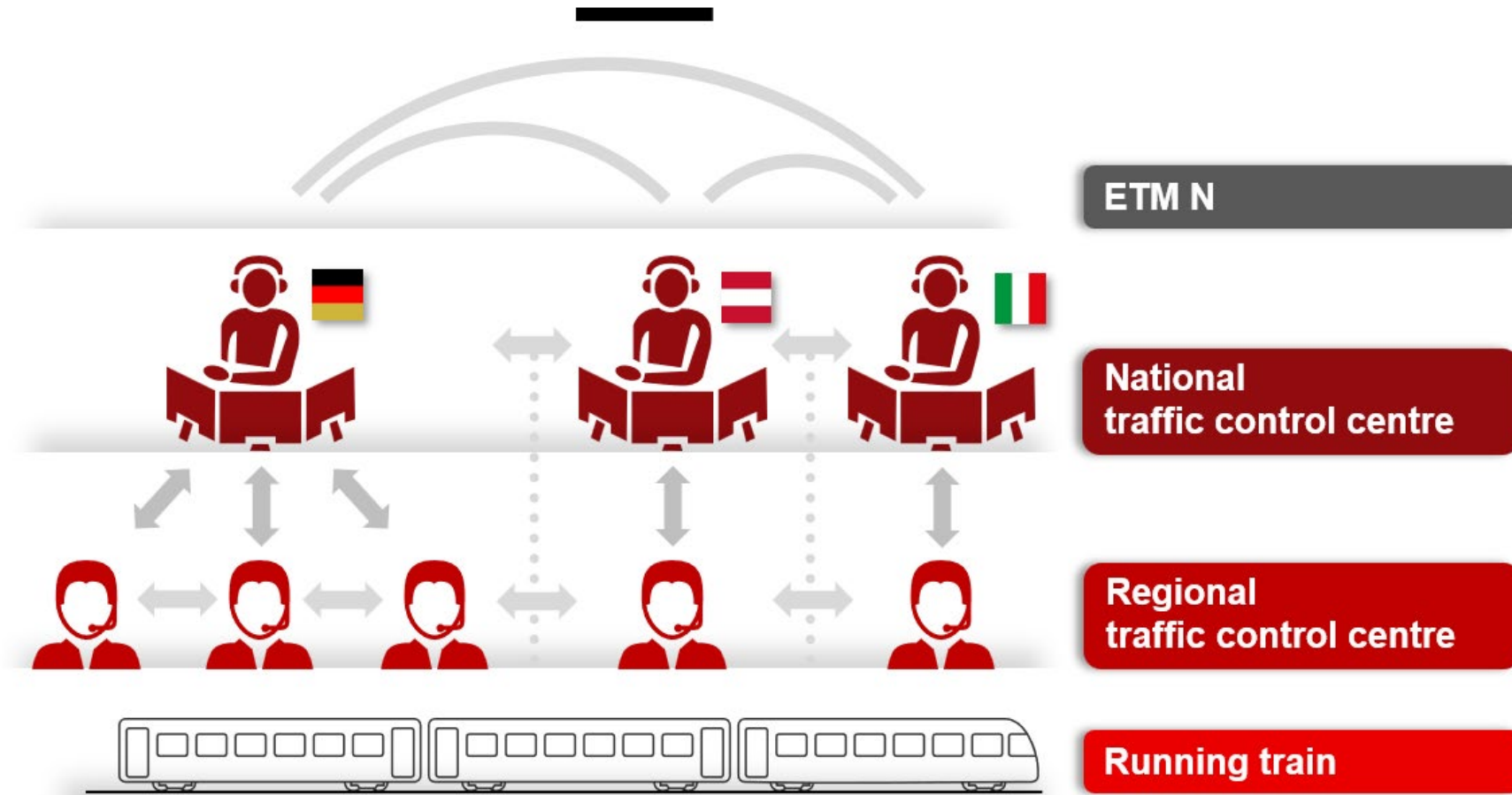


Example:

- Train from Munich (D) to Verona (IT).
- **Regional traffic control centers** are involved in each country.
- They are under surveillance of one **national traffic control center**.
- **Cooperation ongoing** between neighboring regional and national control centers.



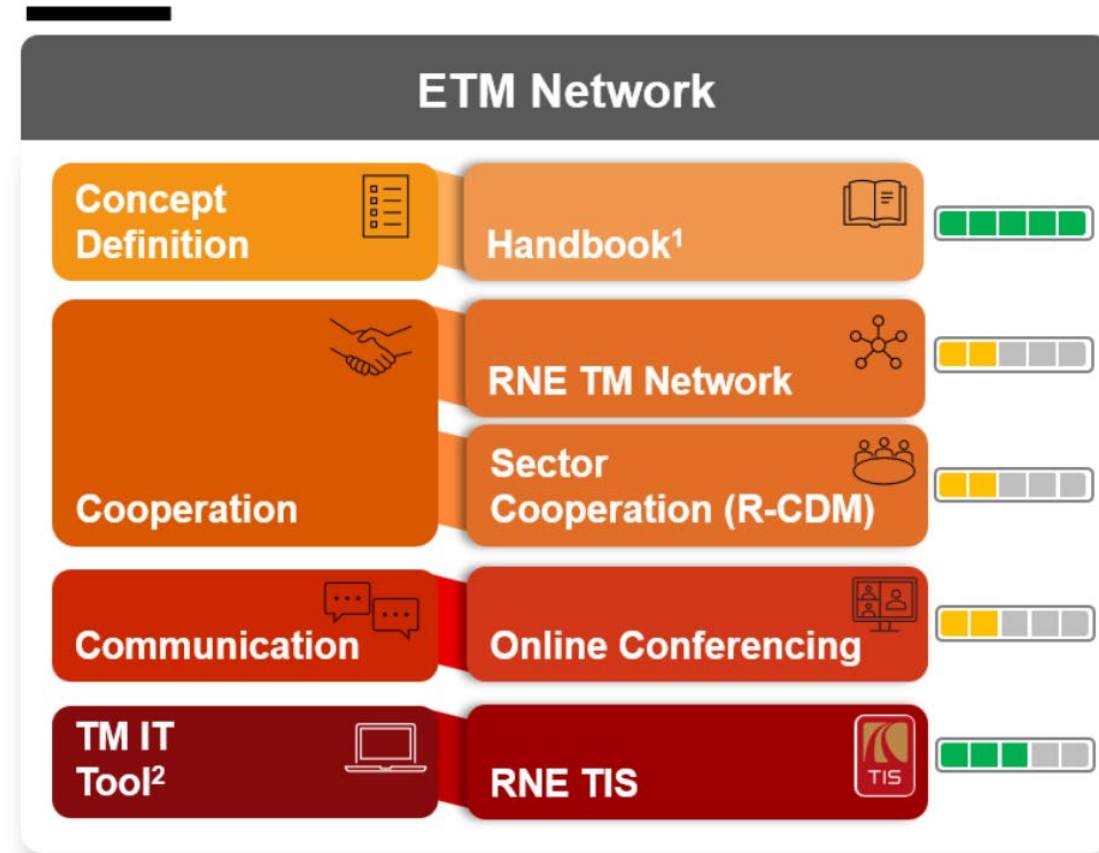
European Traffic Management Network concept



European Traffic Management Network concept

The **RNE ETM Network** facilitates swift and practical solutions by **connecting national dispatching centers** with all relevant centers involved in train operations, fostering a **unified approach throughout Europe**.

Communication within the network is maintained through **bilateral data exchange** and verbal communication, supported by **RNE's TIS**.



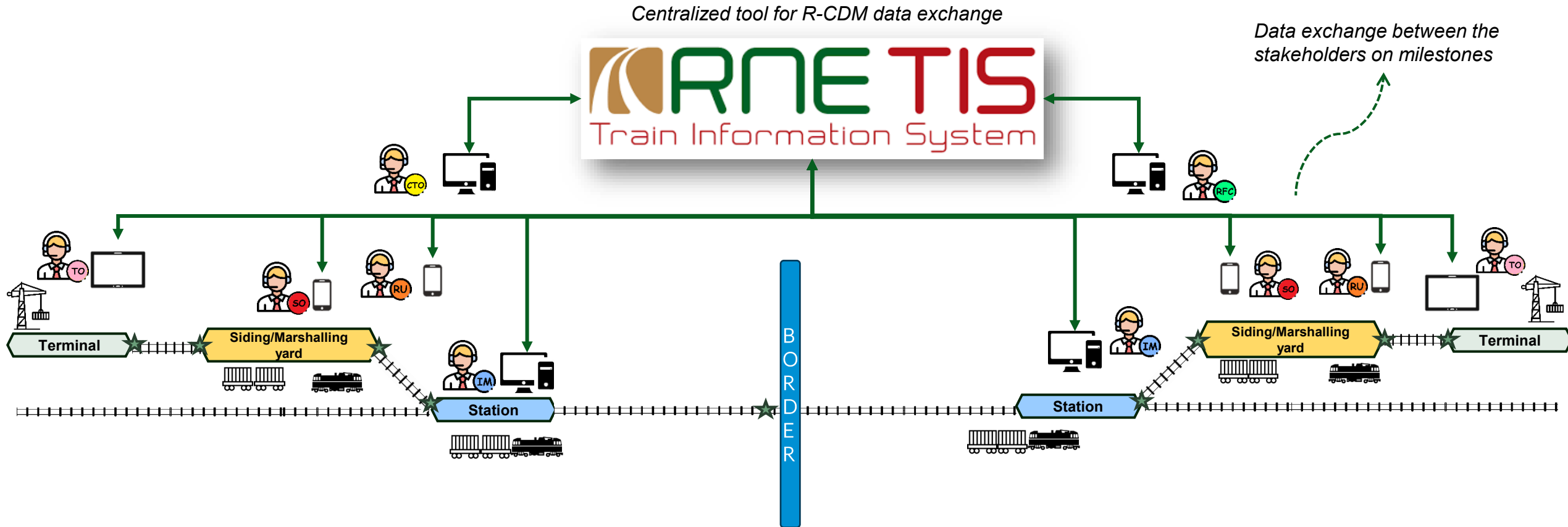
Traffic Management – areas of activities – R-CDM



Cooperation

Railway Collaborative Decision Making (R-CDM)

Different stakeholders – different devices – same interface
Data exchange with predefined messages



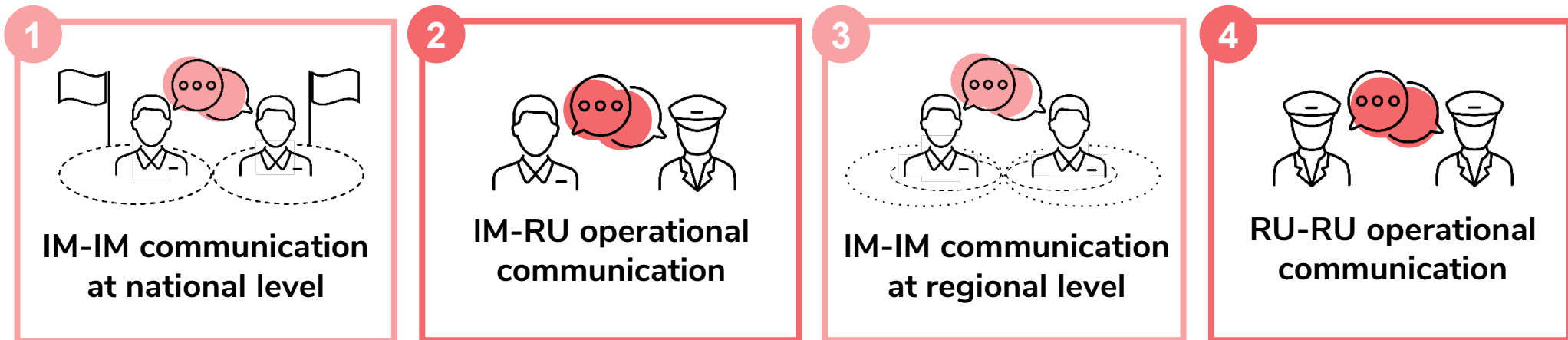
Traffic Manag. – areas of activities – Language Programme



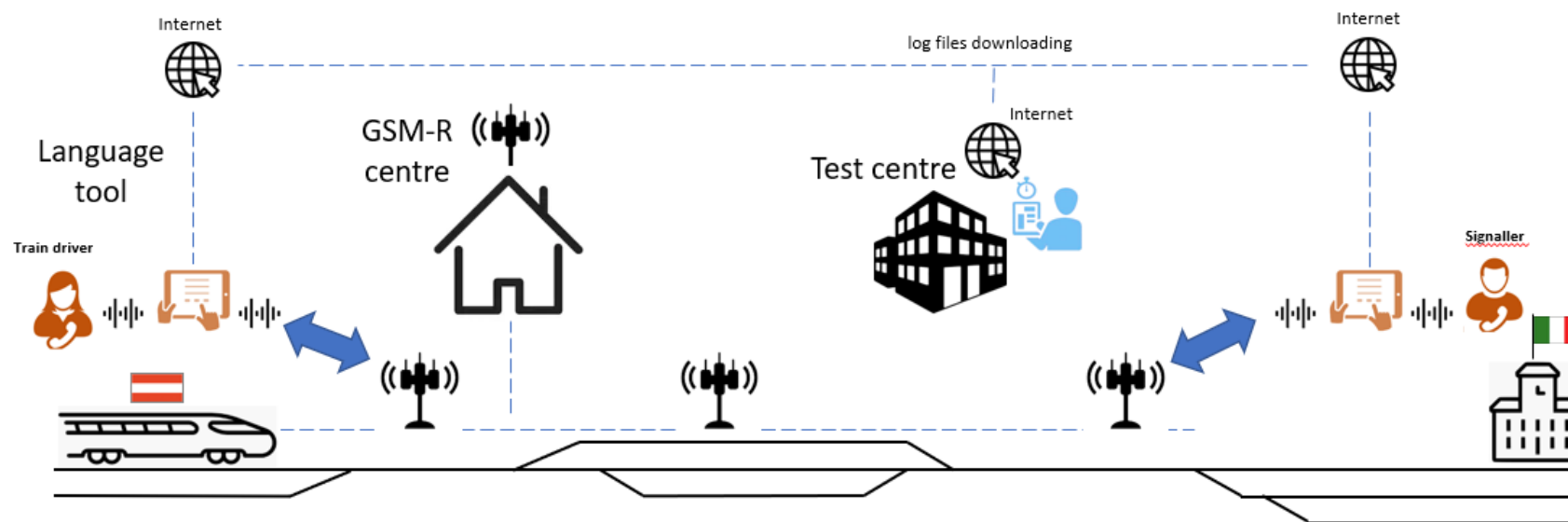
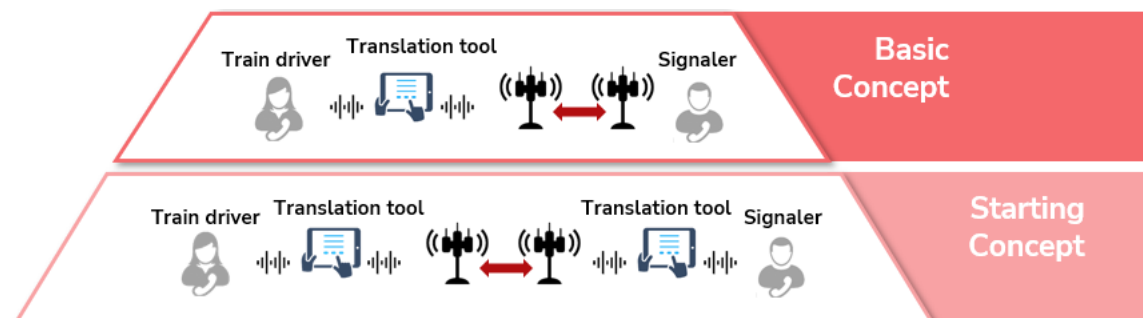
Communication

Language Programme

*Find a **common and international solution** suitable for all environments in the sector to **overcome the language barrier**.*

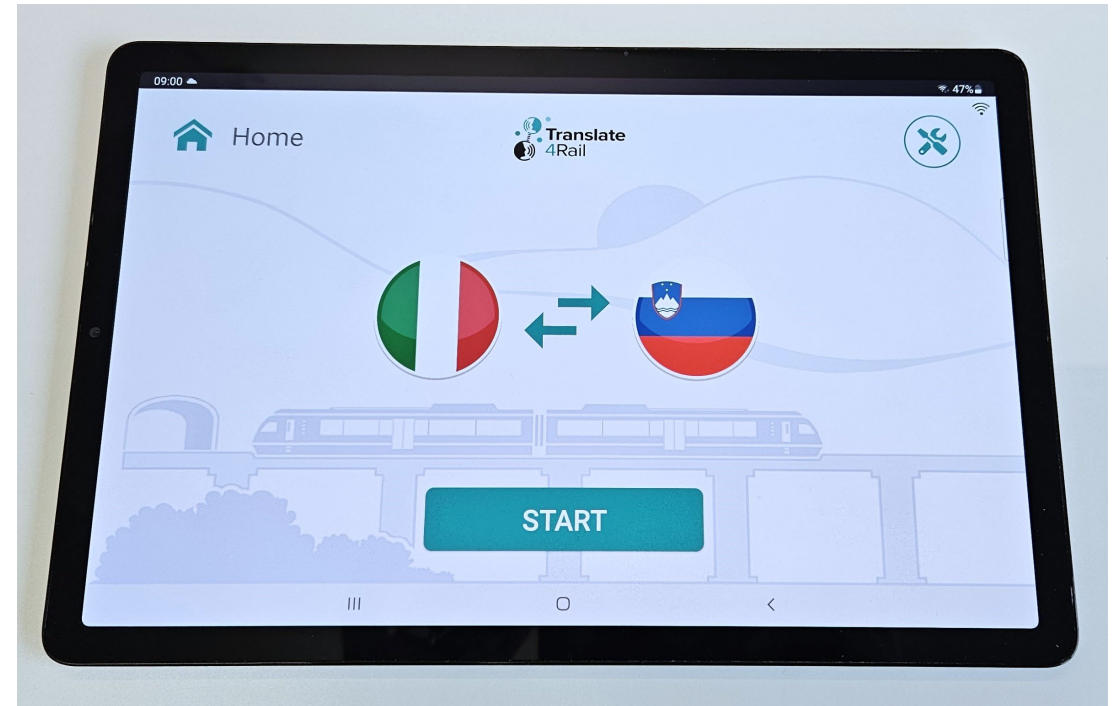


Language Concepts Structure

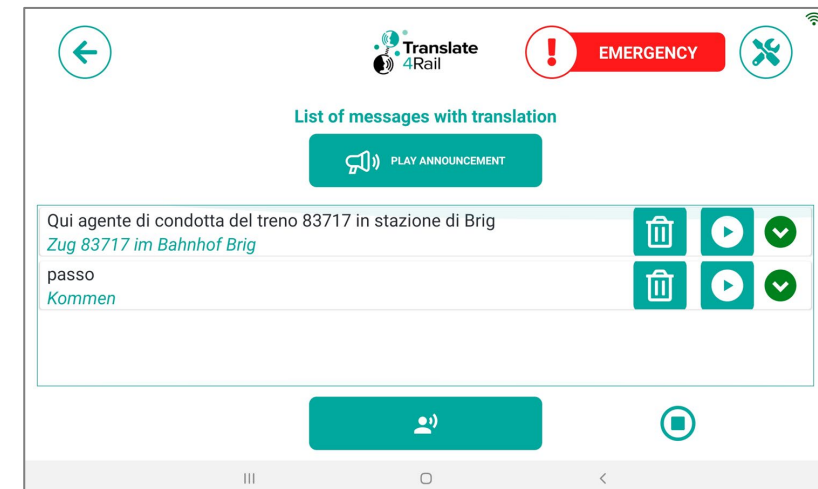
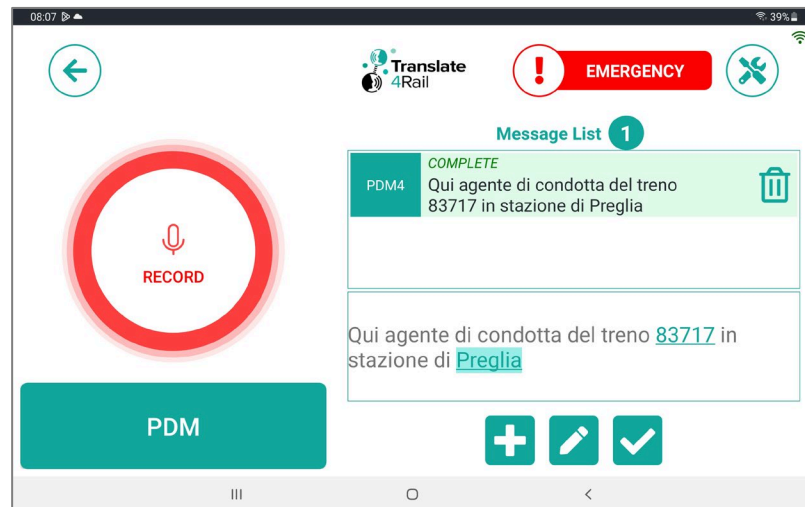
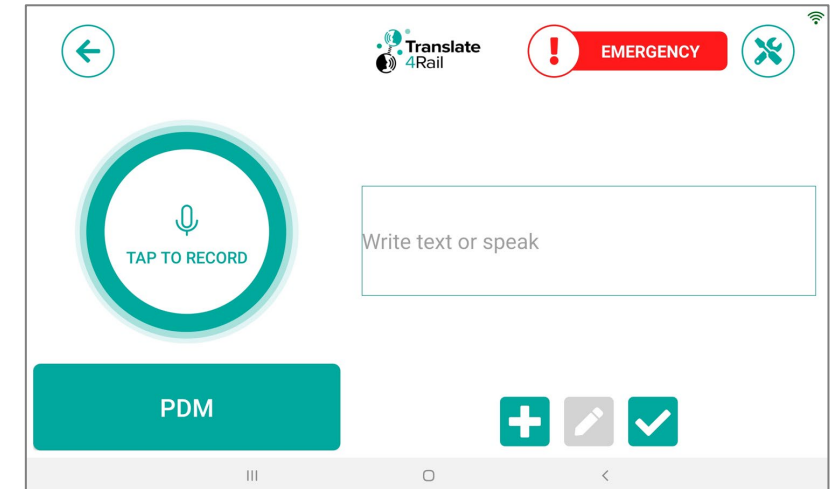
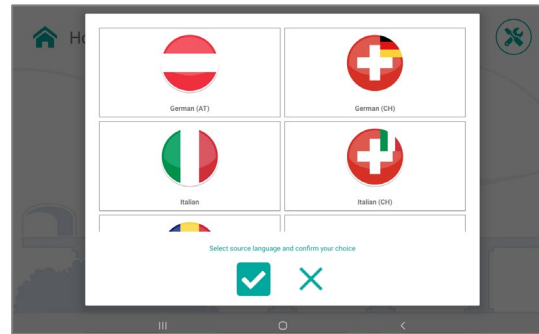


LT Tablet: T4R LT prerequisites for installation

- Android 9
- 10-inch screen device for full experience
- Installation and security file
- Tablet „set-up“ for S2T, T2S
- Microphone authorisation

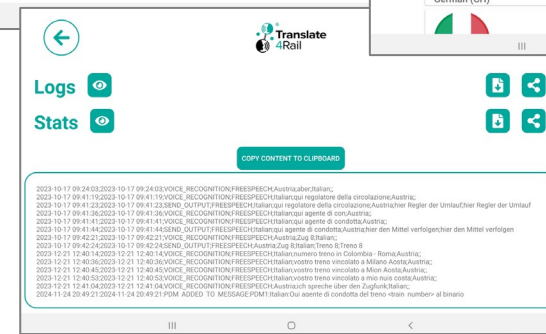
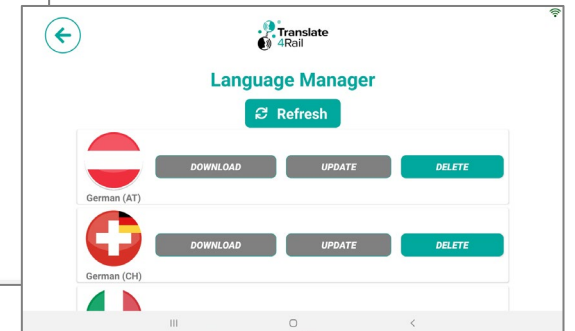
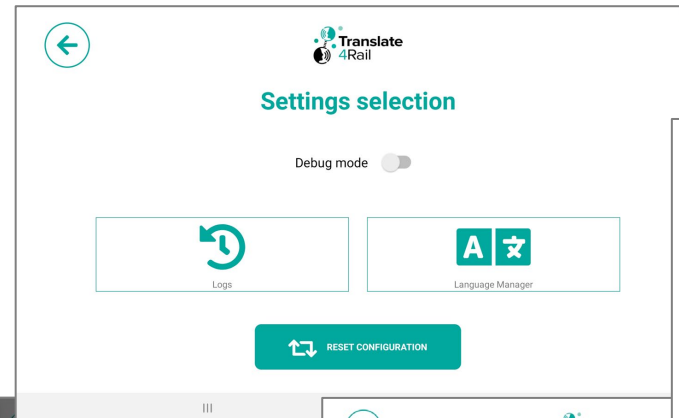
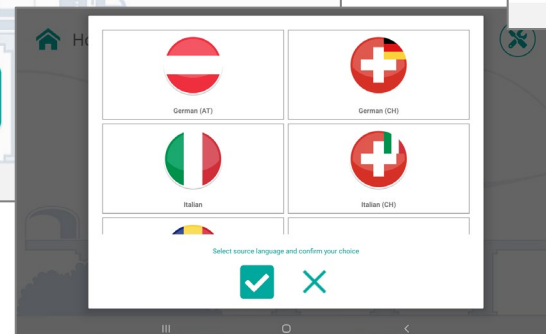
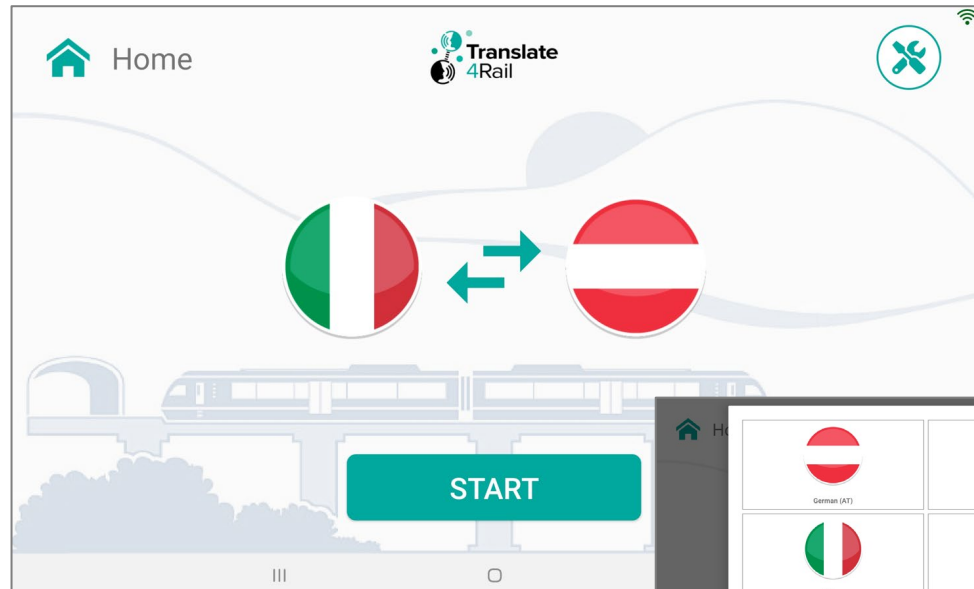


LT Tablet: T4R LT – how the tool works... in a few steps...



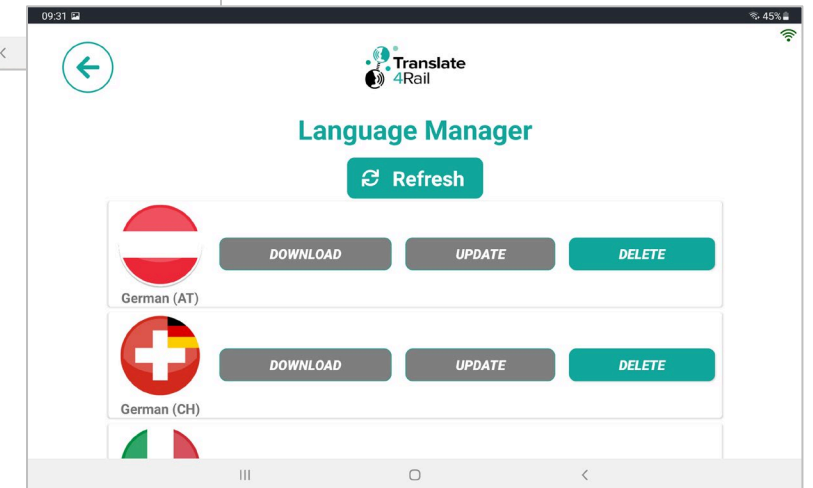
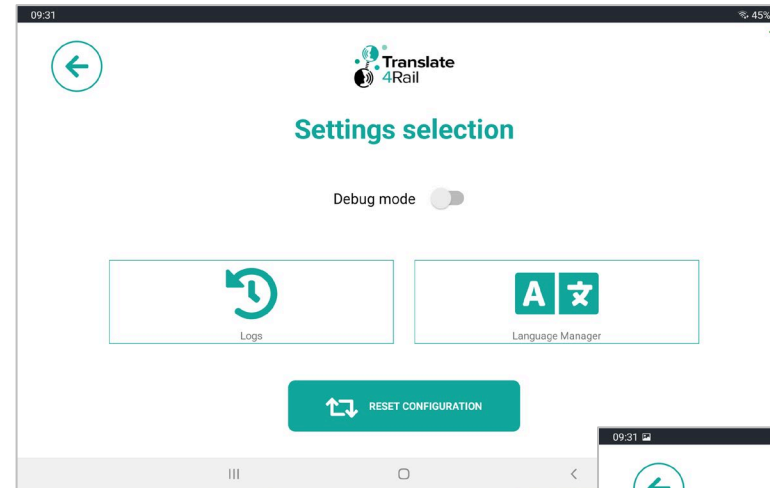
LT Tablet: T4R LT Main Screen

- Language pair selection
- Settings – Logs & Language Manager
- Language database



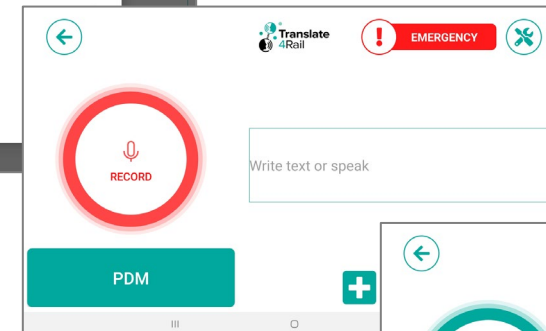
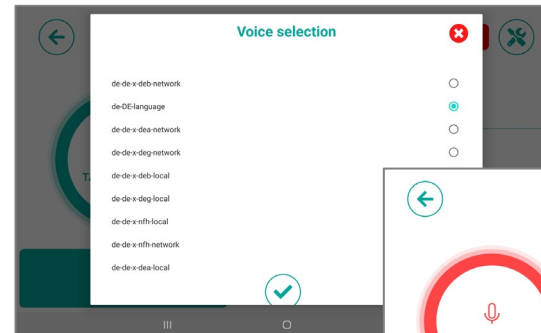
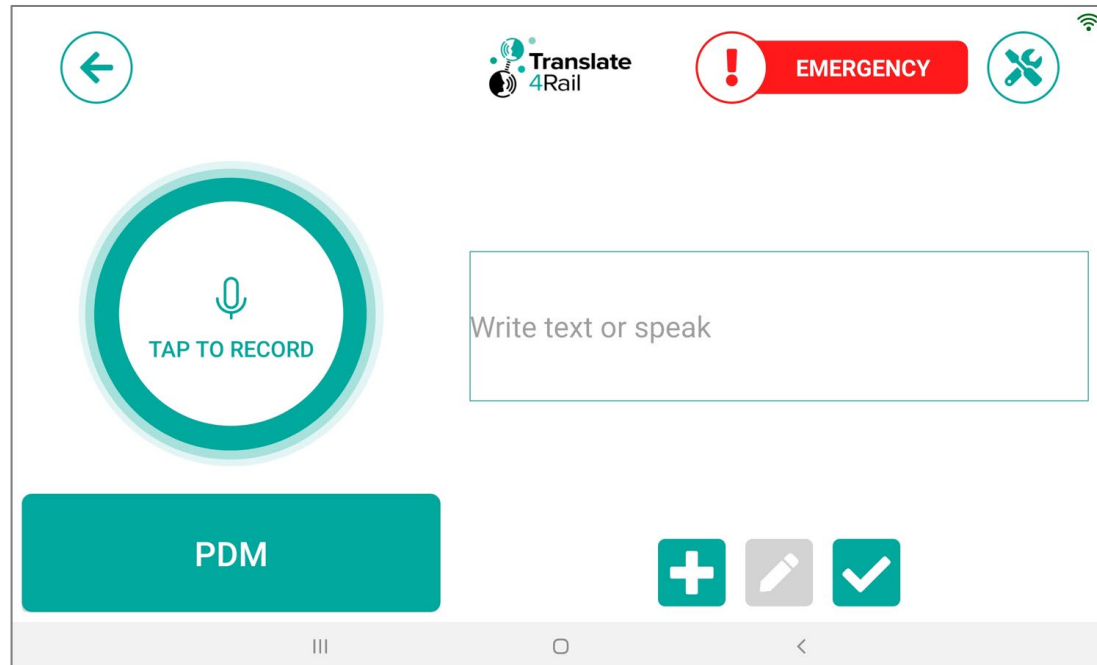
LT Tablet: T4R LT Language Packs Downloading

- Wi-Fi connection
- Download required languages
- Update or delete the language packs
- Railway jargon training



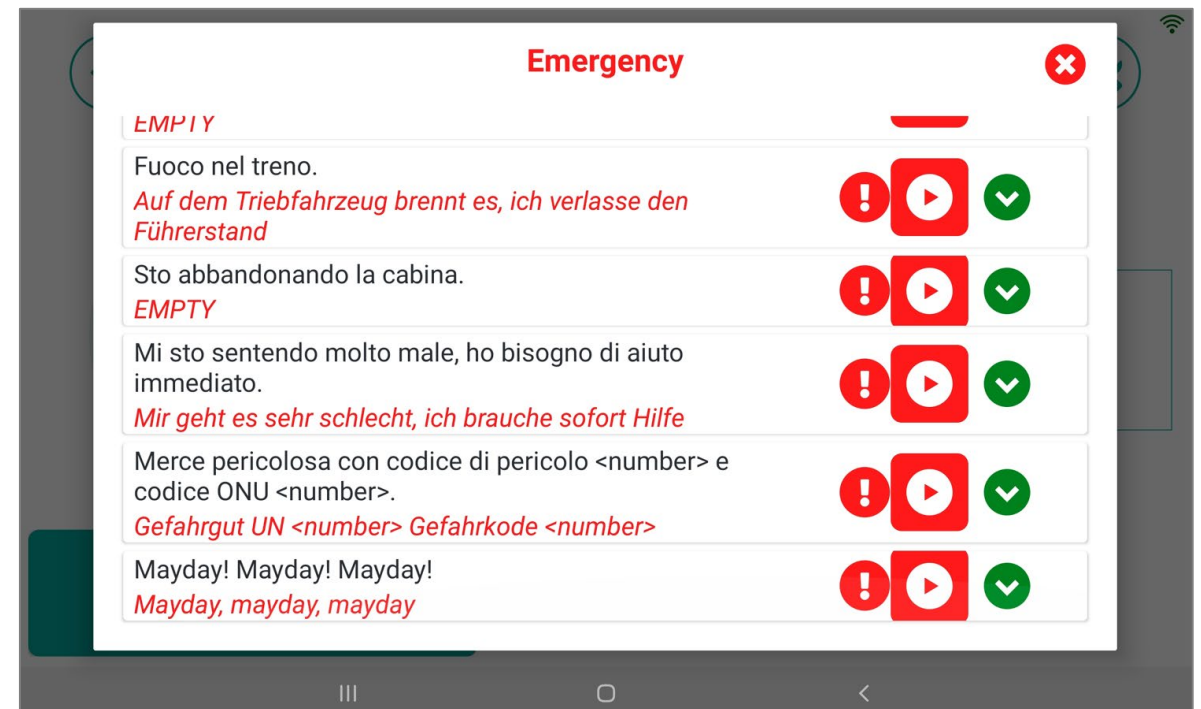
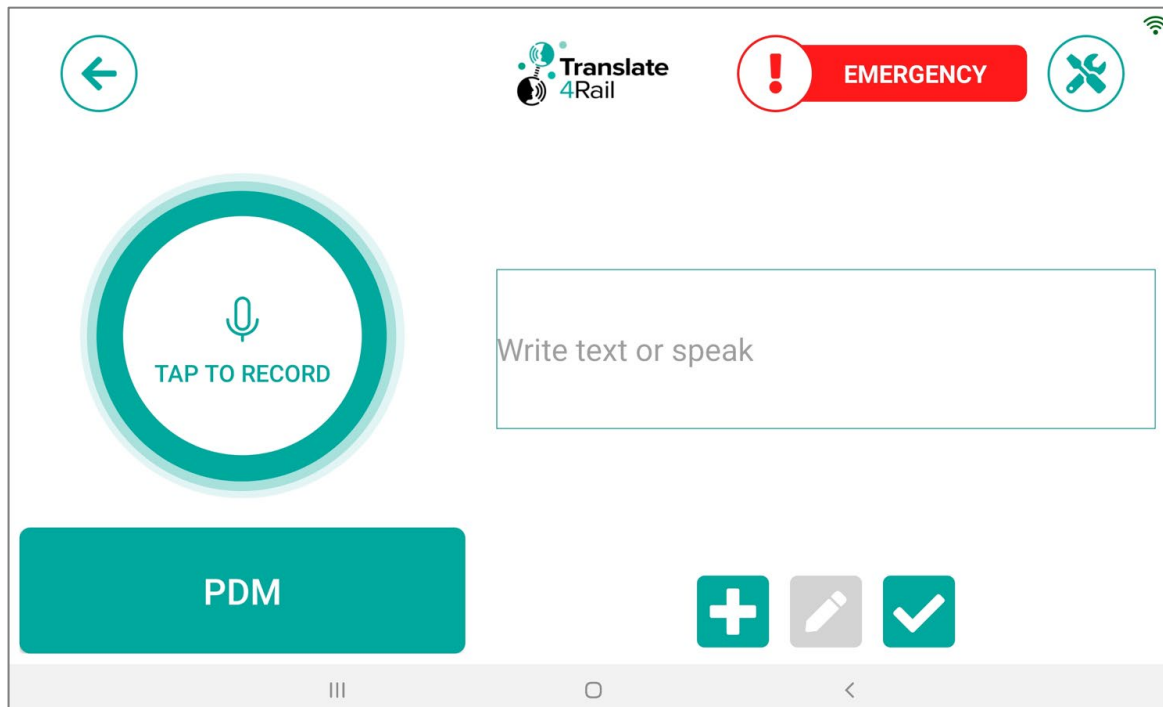
LT Tablet: T4R LT Message Creation Screen

- Message creation (PDMs) – Voice recognition & Manual selection
- Message completion, adding, reordering, deleting...
- Voice selection



LT Tablet: T4R LT Message Creation Screen – Emergency

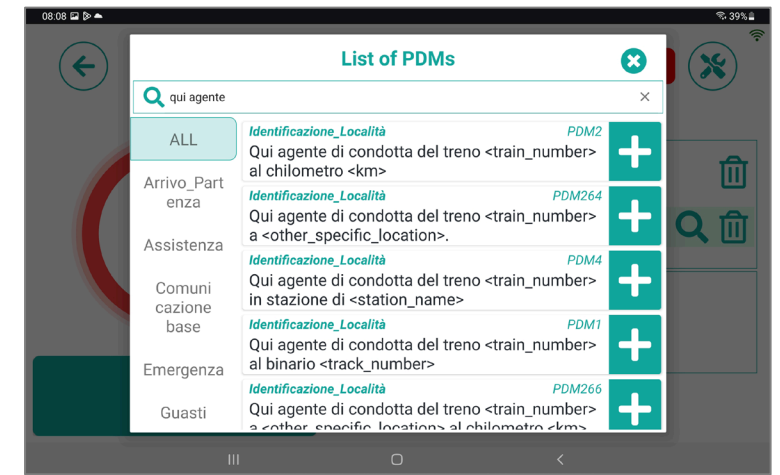
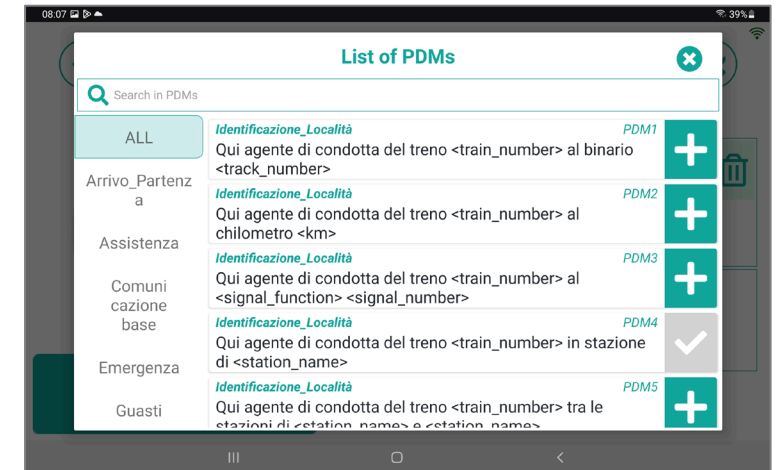
- Emergency Predefined Messages
- Send by one click...



LT Tablet: T4R LT Message creation

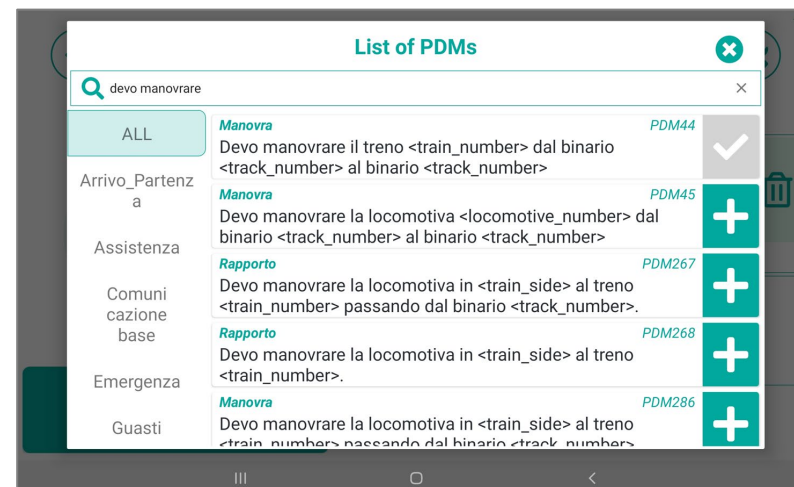
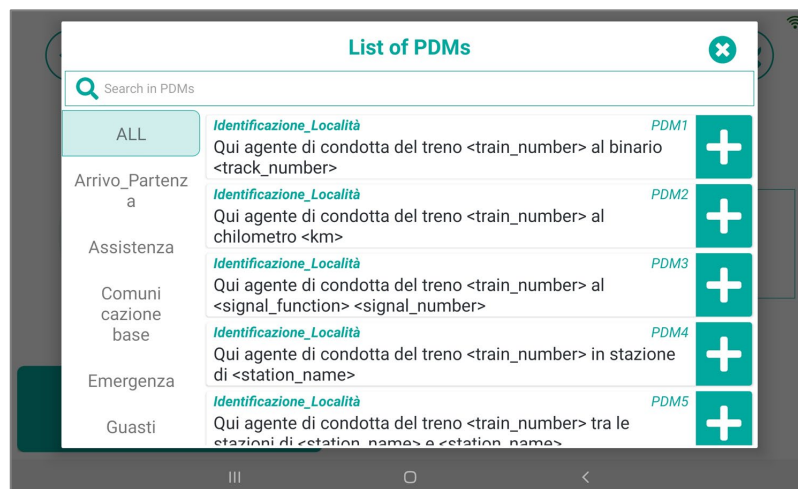
Predefined Messages

- Speech recognition
- Manual search
- Key words
- The way PDMs works
- Emergency messages



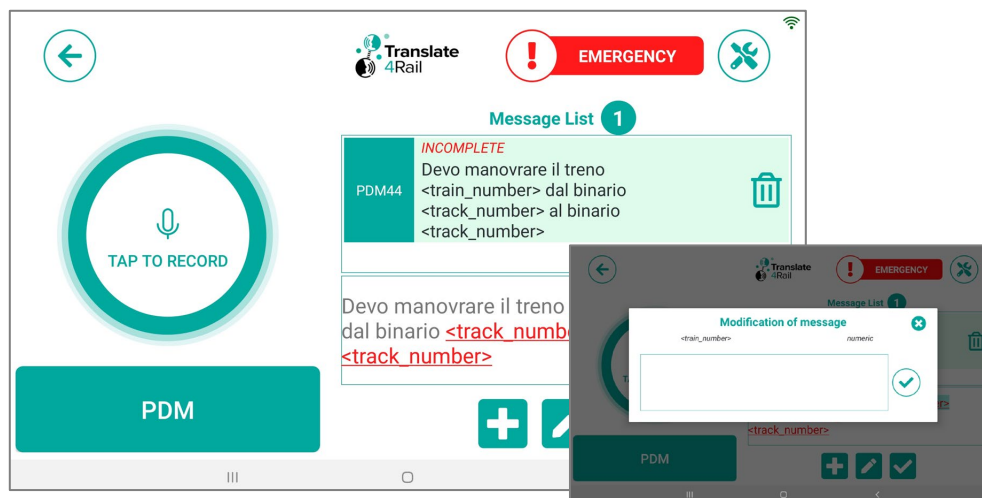
LT Tablet: T4R LT Message creation – MANUAL SELECTION

PDMs
selection
from the
„list“



PDMs
selection
from the
„list“ with
keyword

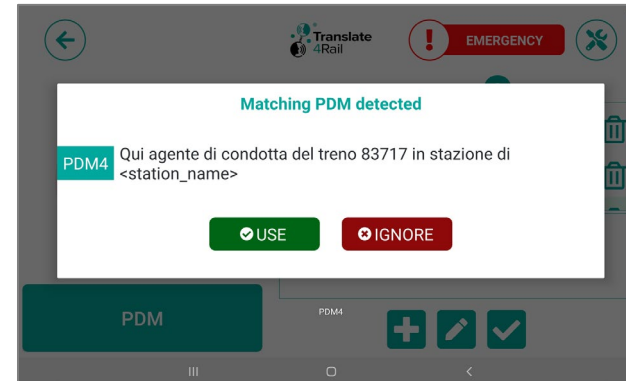
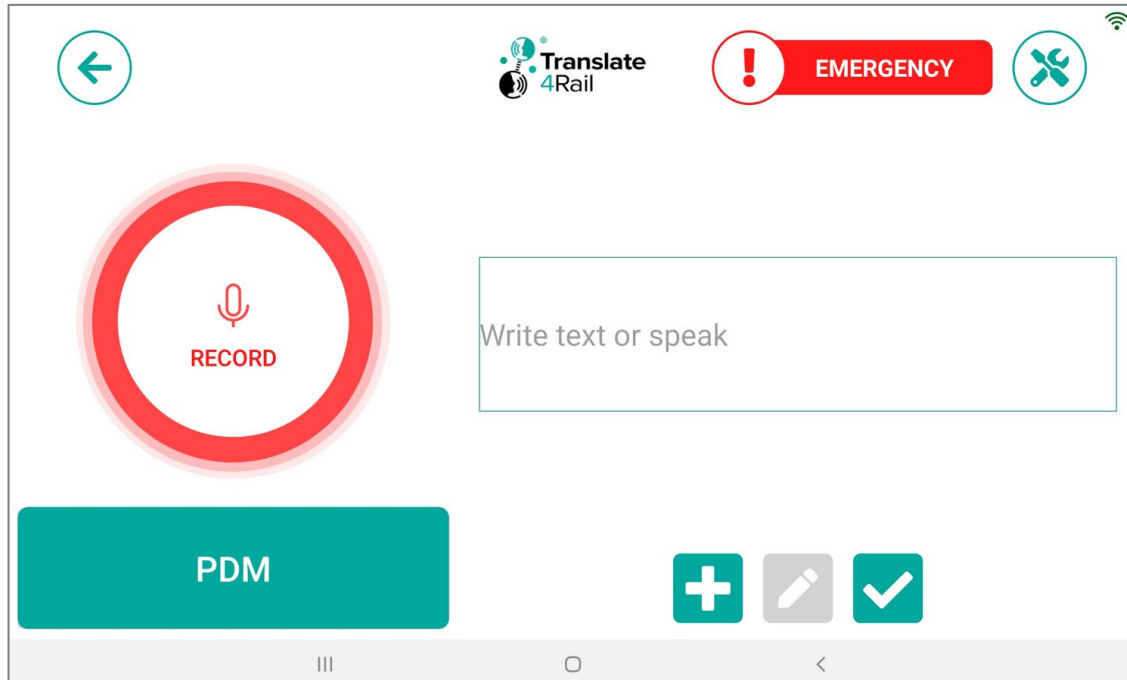
Incomplete
PDM



Complete
PDM

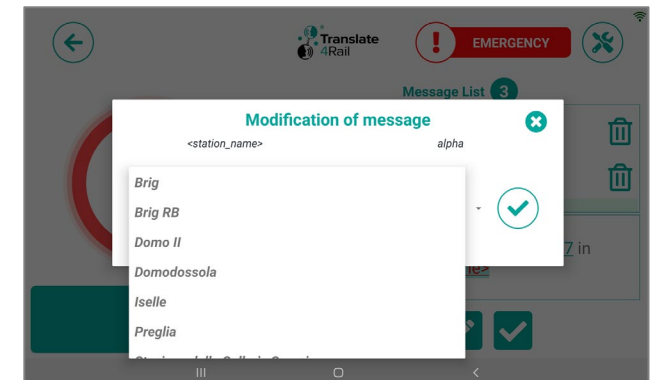
LT Tablet: T4R LT Message creation – VOICE RECOGNITION

TAP TO RECORD button

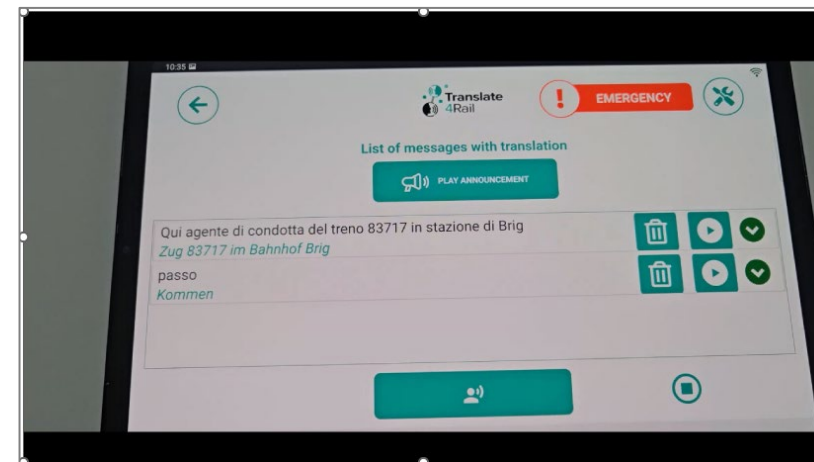
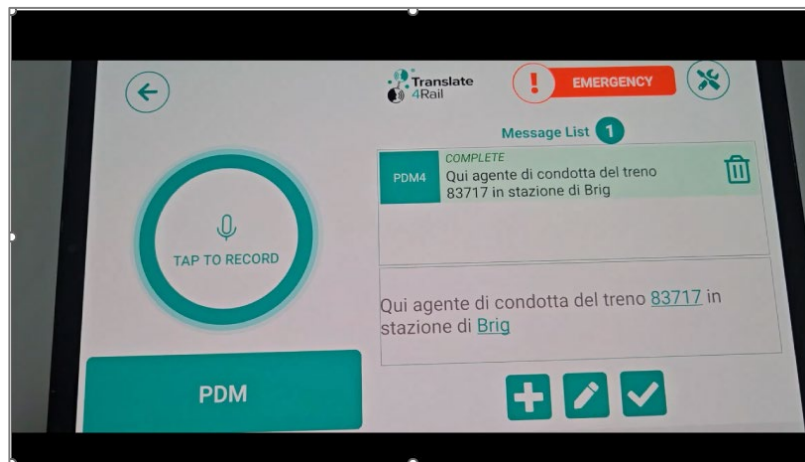
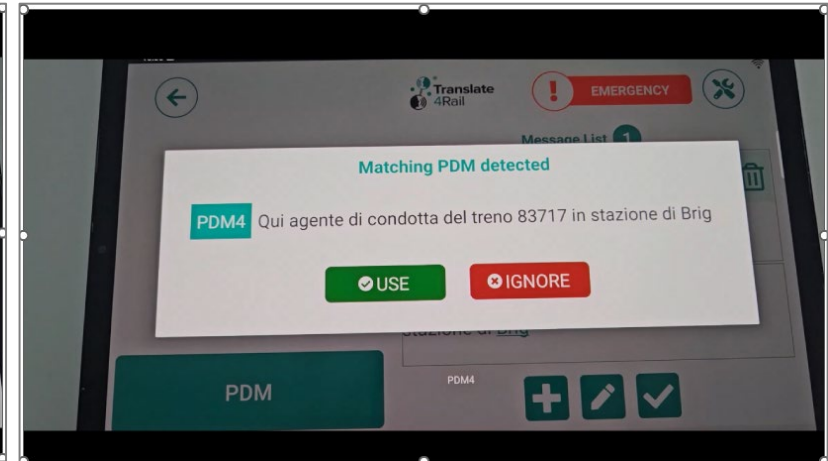
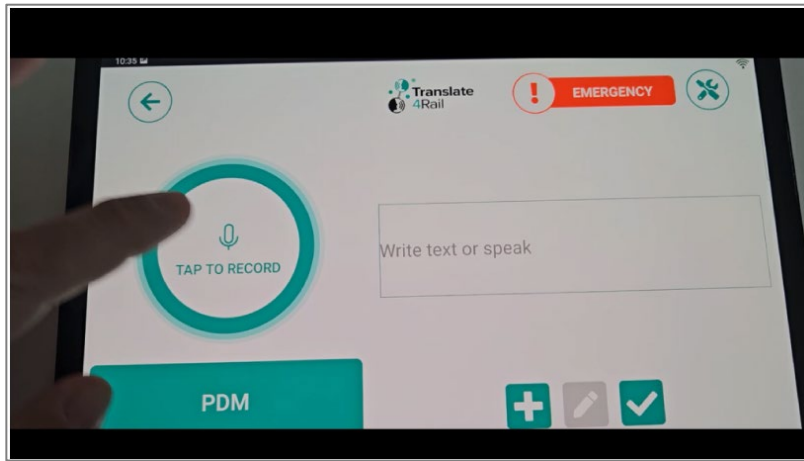


PDM recognition...

PDM modification...

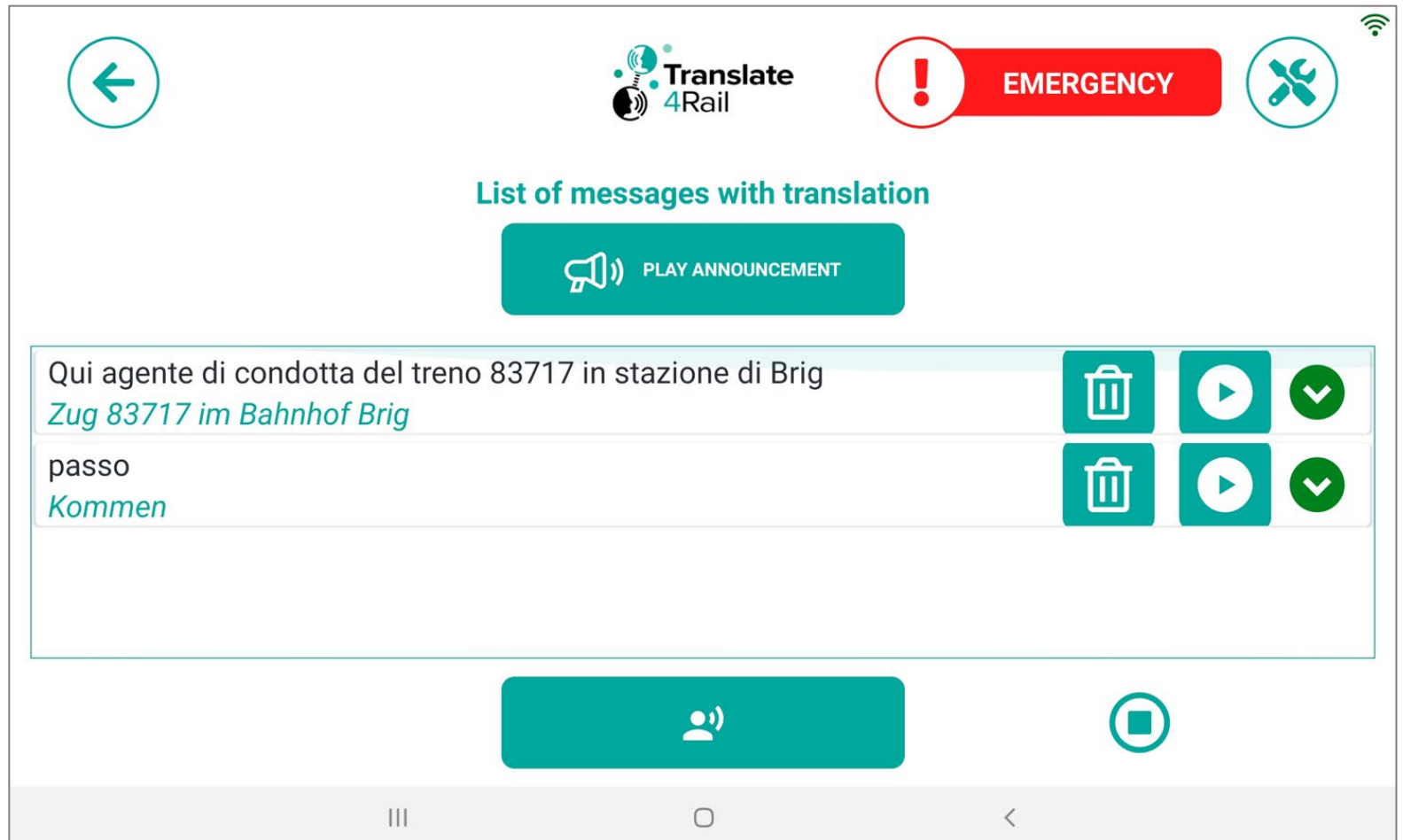


LT Tablet: T4R LT Message creation – VOICE RECOGNITION



T4R LT Message sending and receiving – TRANSLATION SCREEN

- Sending options
- Announce sending/arrival of message
- TSI OPE communication principle („Passo“ / „Kommen“ / „Over“)

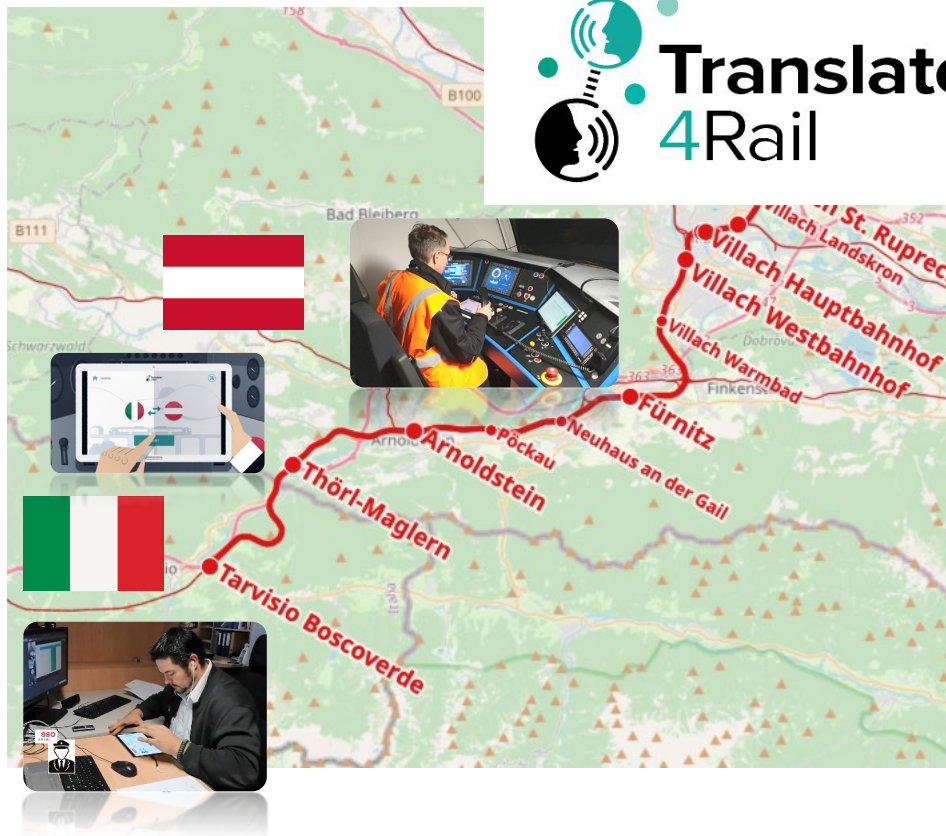


T4R Language Tool further way forward & development...

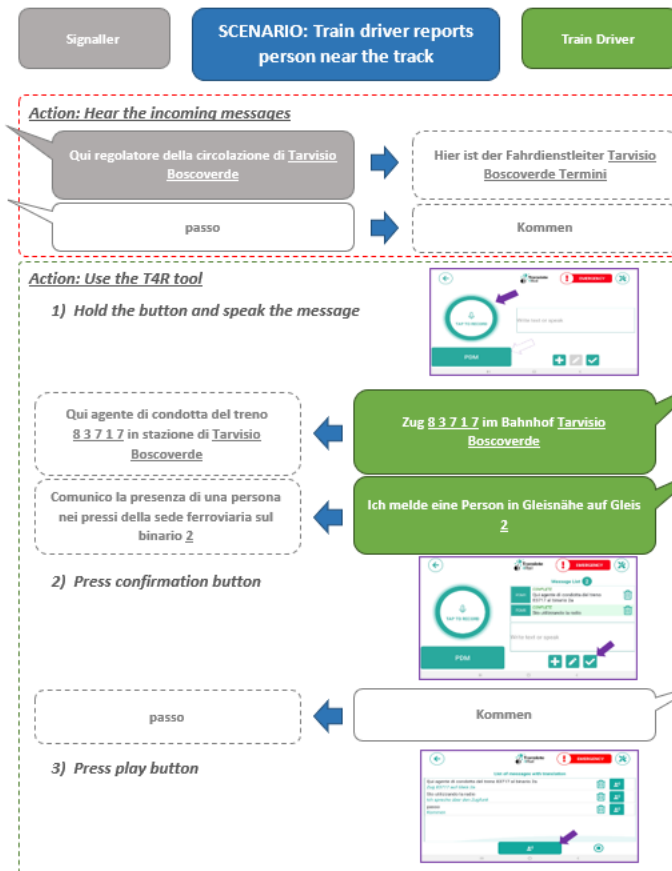
Enhance existing and further develop functionalities for application in the operation – further testing and Pilots to:

- **Identify the use cases** that best fit the tablet-based tool usage:
 - IM – RU operational communication;
 - IM – IM communication;
 - Training, etc.
- **Enhance the tool based on the identified requirements for further developments** (enhanced & higher accuracy of recognition and translation, free speech algorithm, PDMs, transformation of state-of-the-art of existing language tools, etc.);
- **Test the tool** in different environments/situations;
- **Scale up** from TRL5 to TRL8: **Ready for operational usage;**
- Definition of the **implementation framework;**
- **Supporting...** (guideline for training, supporting videos, etc.).

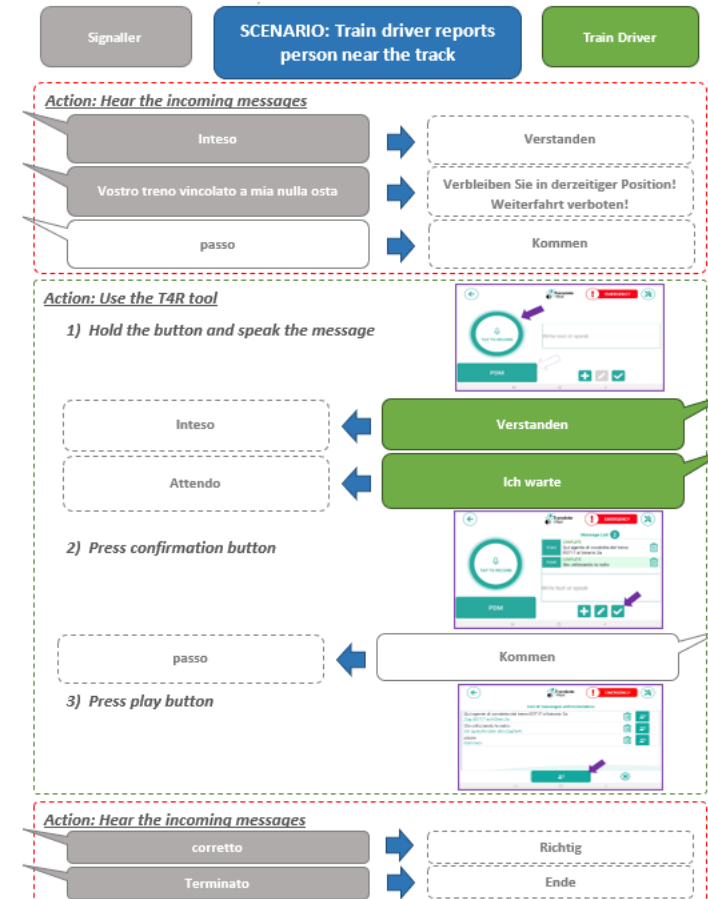
Train Driver reports person near the track – SCENARIO...



1



2



**Do you consider a presented language tool as a tool which
could ease the railway communication?**





Juraj Maliaček

Senior Traffic Management
Manager

+43 664 884 248 16

juraj.maliacek@rne.eu

RailNetEurope
Austria Campus 3
Jakov-Lind-Straße 5
1020 Vienna, Austria
www.rne.eu

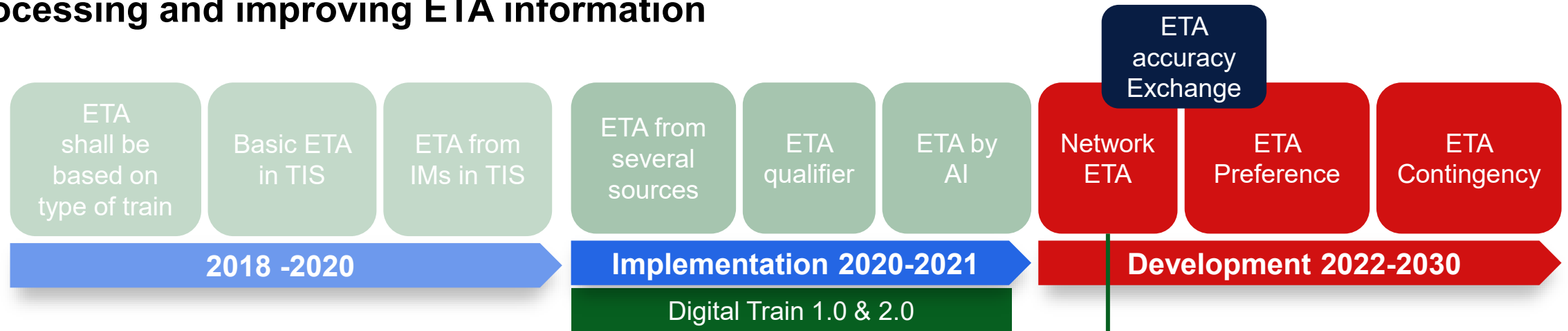
Traffic Management – areas of activities – ETA Programme



Predictions

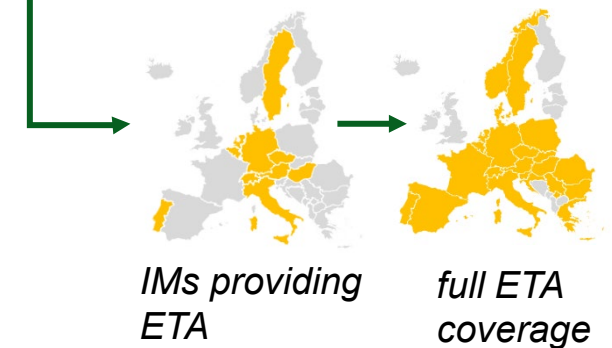
Train Running Forecast (ETA)

Processing and improving ETA information



Benefits

- Higher efficiency of traffic and resource management
- Predictions with accuracy indicator
- Predictions for IMs, RUS, Terminals
- Several predictions from different recourses



Traffic Management – areas of activities – RNE TIS



Cooperation



Communication



Predictions



Performance

Train Information System (TIS)

TRAFFIC MANAGEMENT

03 SEPTEMBER 2025



Welcome



RailNetEurope

01 General Overview



General Overview

Train Information System

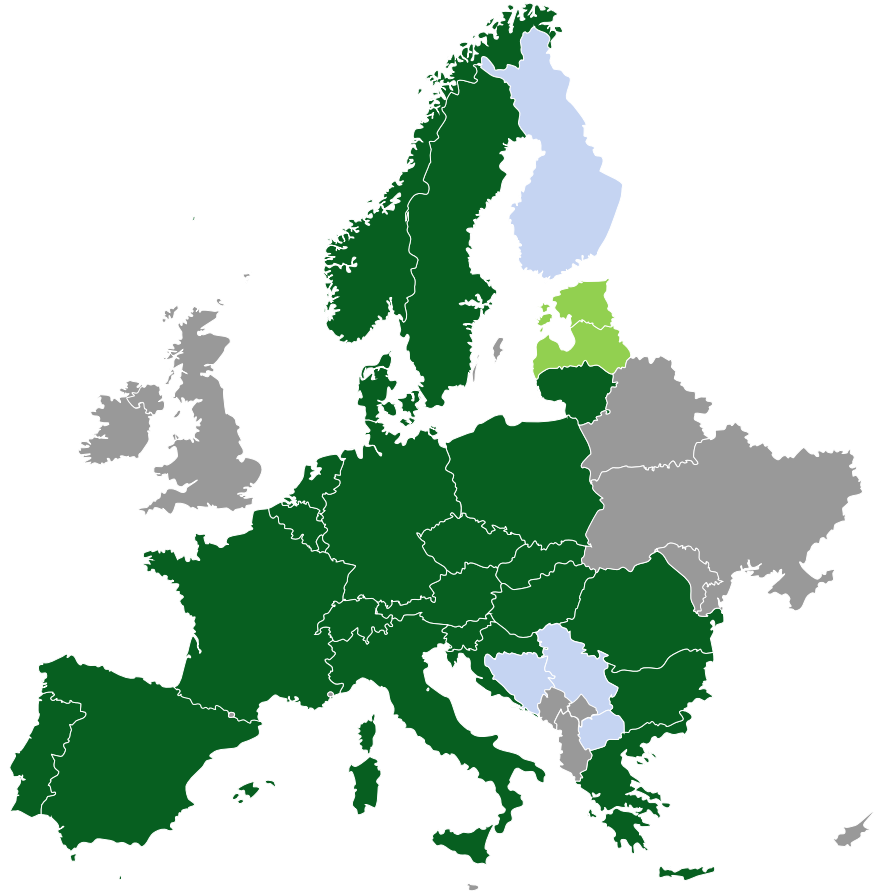
is a free of charge web-based access application that supports IMs, RUs and Terminals by providing real-time information for national and international trains

Over 6.000 railway professionals from 250 companies connect every month to

Train Information System



TIS Country Coverage



Already in TIS

Coming Soon

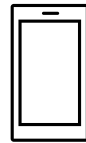
Could join in the future

TIS Products & Services



TIS Web

- Real time train monitoring
- Timetables, train delays, path cancelations
- Free of charge access to all stakeholders



TIS Mobile

- Simplified version of TIS Web for mobile devices
- Compatible with and operational on every device
- Available on Play Store



Train Driver App

- Train Drivers transmit data to TIS
- Improve the visibility and the accuracy of the trains
- Contribute to the overall data quality



Data Exchange

- Secure TAF/TAP TSI data exchange through the Common Interface
- Identification of all train events under one unique Train ID



Reporting

- Scheduled train performance reports
- Tailormade to match the business needs
- Possibility for reports per case

RailNetEurope

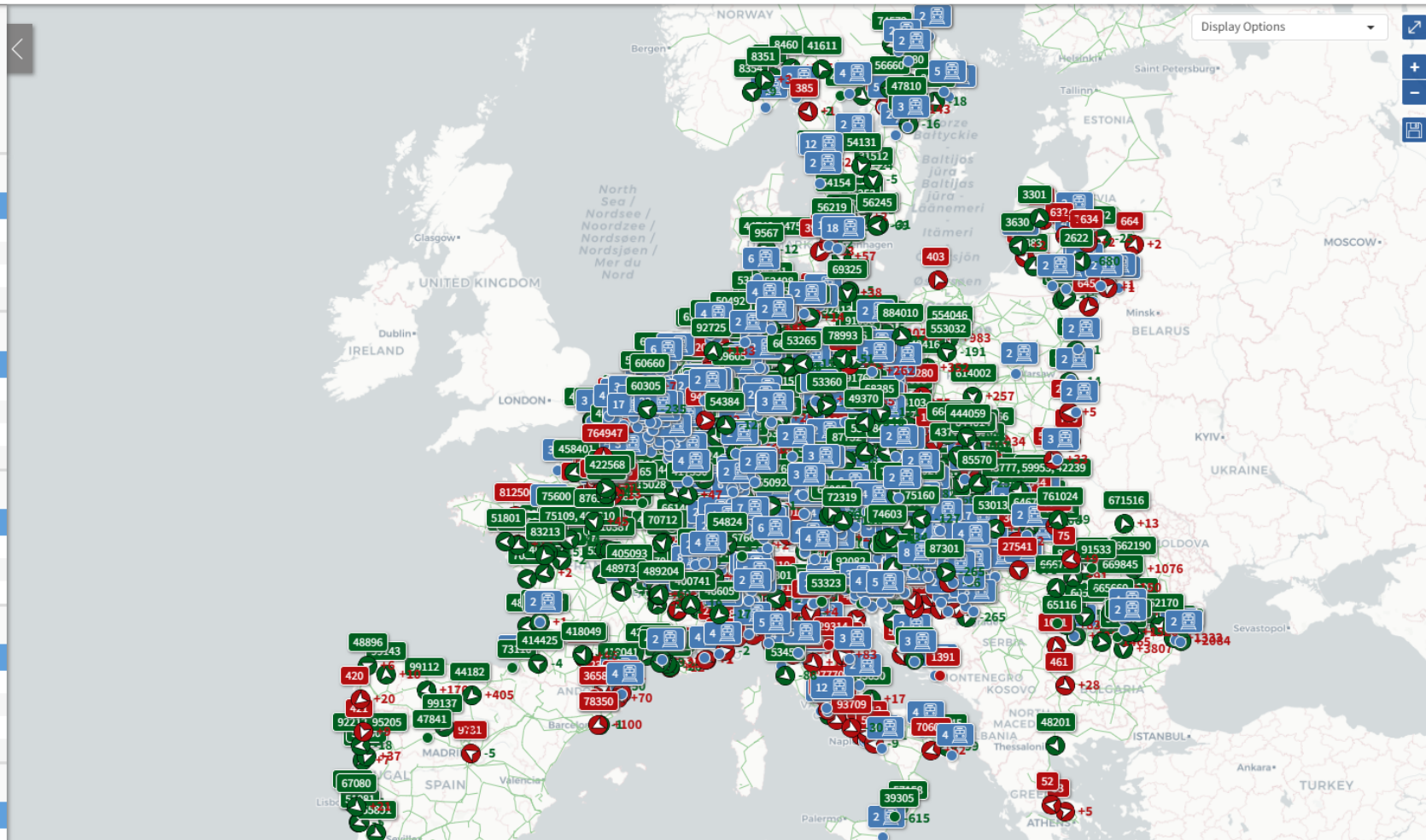
02 TIS Web




TIS Web Map Overview



[Trains](#)
[Wagons and Containers](#)
[Diagrams](#)
[Configuration](#)
[Incident Management](#)
[Email Notifications](#)


Train Search			
05.08.2025 08:00 - 05.08.2025 09:59		Passenger	Freight
International		Maximum number of search results : 10000	
Search Train Number		4158 Results	
444059 Captrain Polska Spotka 2 Ograniczona Odpowiedzia... Details			
Piekary Śląski...	→	Tarnowskie Góry	📍 Tarnowskie Góry
05.08.2025		05.08.2025	05.08.2025
22:42		23:03	23:03
07:35 ⁻⁹⁰⁷		08:00 ⁻⁹⁰³	08:00 ⁻⁹⁰³
27541 MAV Passenger Transport Co. Link-Search Details			
Lőkösháza oh.	→	Lőkösháza	📍 Lőkösháza
05.08.2025		05.08.2025	05.08.2025
19:32		19:35	19:35
08:17		08:20 ⁻⁶⁷⁵	08:20 ⁻⁶⁷⁵
39305 Mercitalia Rail Details			
MESSINA CENT...	→	MESSINA CEN...	📍 MESSINA CENT...
05.08.2025		05.08.2025	05.08.2025
18:55		18:55	18:55
08:40 ⁻⁶¹⁵		08:40 ⁻⁶¹⁵	08:40 ⁻⁶¹⁵
49370 EP Cargo a.s. Link-Search Details			
Dečín-Prostře...	→	Dresden-Fried...	📍 Dečín st.hr.
05.08.2025		05.08.2025	05.08.2025
14:14		15:17	14:22
08:29 ⁻³⁴⁴		09:31 ⁻³⁴⁶	08:35 ⁻³⁴⁶
87301 Rail Cargo Hungaria Zrt. Details			
Kaposvár	→	Taszár	📍 Taszár
05.08.2025		05.08.2025	05.08.2025





TIS Web Map Overview





 **Trains**

 Wagons and Containers

 Diagrams

 Configuration

 Incident Management

 Email Notifications

< Train Search

05.08.2025 08:00 - 05.08.2025 09:59

Passenger

Freight


National

International

Maximum number of search results : 10000

Search Train Number

4158 Results



444059 Captrain Polska Spotka 2 Ograniczona Odpowiedzia...

[Details](#)

Piekary Śląski...	→	Tarnowskie Góry	📍 Tarnowskie Góry
05.08.2025		05.08.2025	05.08.2025
22:42		23:03	23:03
07:35 ⁻⁹⁰⁷		08:00 ⁻⁹⁰³	08:00 ⁻⁹⁰³

27541 MAV Passenger Transport Co.

[Link-Search](#)

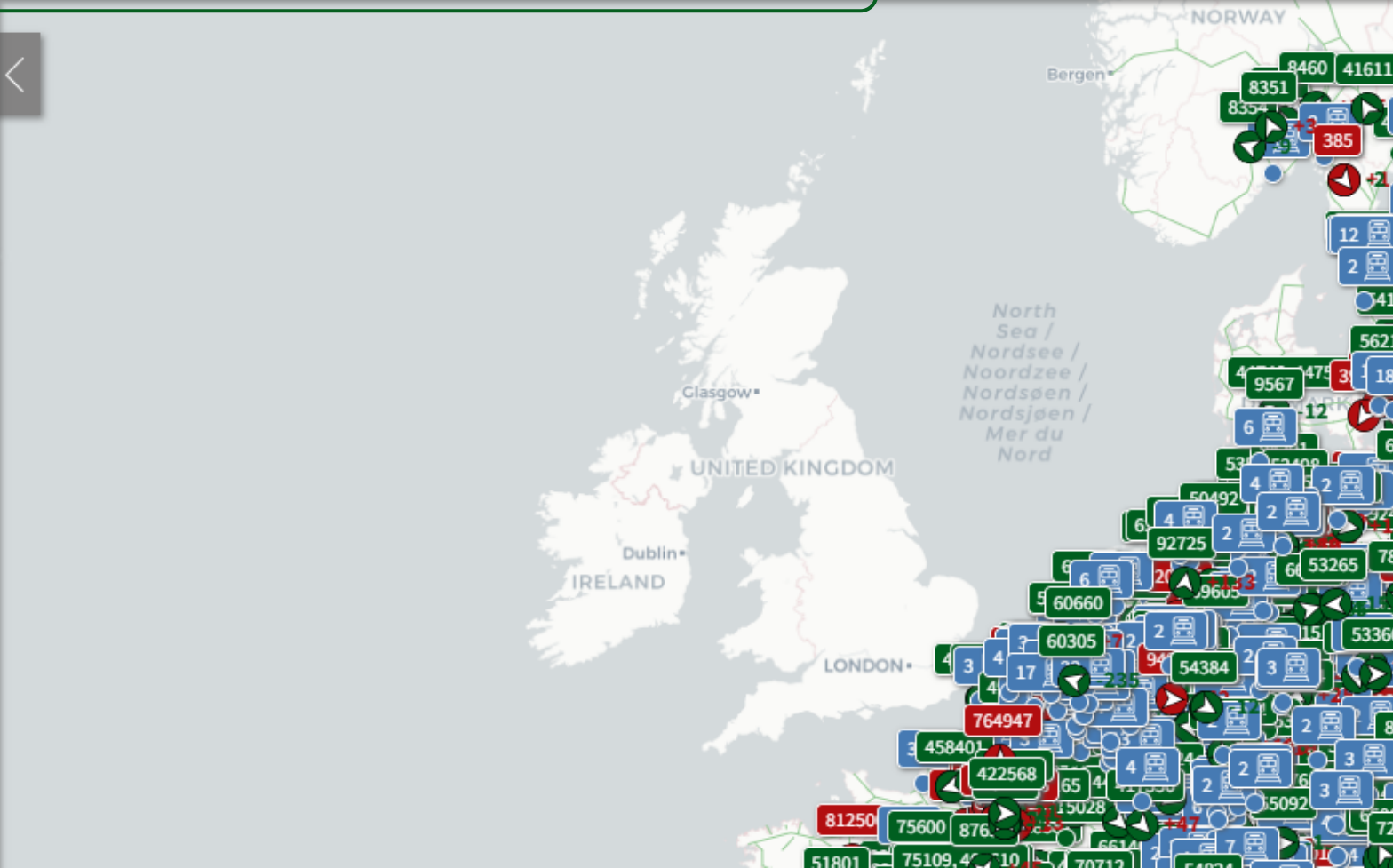
[Details](#)

Lőkősháza oh.	→	Lőkősháza	📍 Lőkősháza
05.08.2025		05.08.2025	05.08.2025
19:32		19:35	19:35
08:17		08:20 ⁻⁶⁷⁵	08:20 ⁻⁶⁷⁵

39305 Mercitalia Rail

[Details](#)

MESSINA-GENT	→	MESSINA-GENT	📍 MESSINA-GENT
--------------	---	--------------	----------------



TIS Web Map Overview

< Train Search

05.08.2025 08:00 - 05.08.2025 09:59 Passenger Freight National

International Maximum number of search results : 10000

Search Train Number

4158 Results



444059 Captrain Polska Spotka 2 Ograniczona Odpowiedzia...

[Details](#)

Piekary Śląski... → Tarnowskie Góry Tarnowskie Góry

05.08.2025	05.08.2025	05.08.2025
22:42	23:03	23:03
07:35 -907	08:00 -903	08:00 -903

27541 MAV Passenger Transport Co.

[Link Search](#)

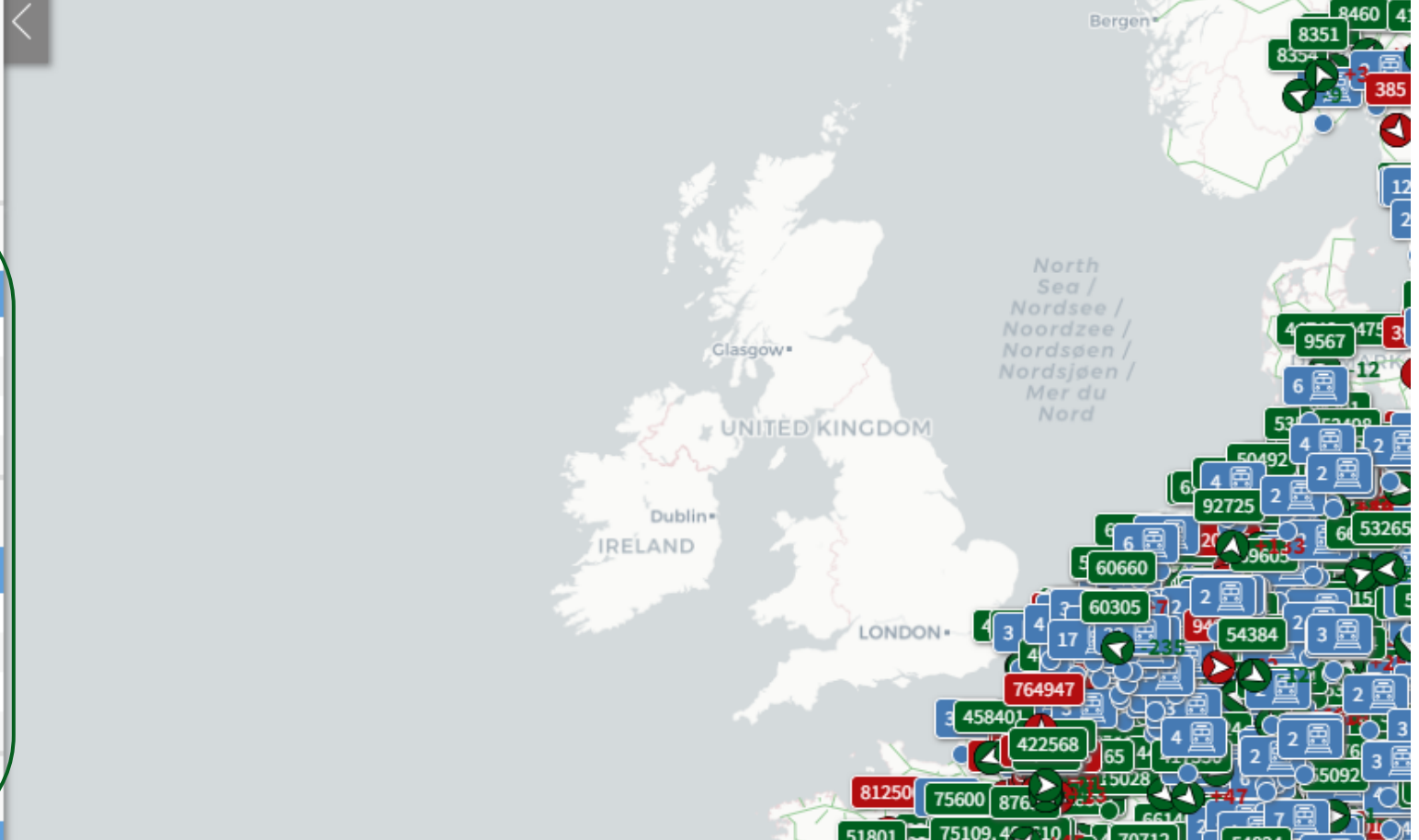
[Details](#)

Lőkősháza oh. → Lőkősháza Lőkősháza


05.08.2025	05.08.2025	05.08.2025
19:32	19:35	19:35
08:17	08:20 -675	08:20 -675


39305 Mercitalia Rail


[Details](#)





TIS Web Map Overview





Trains

Wagons and Containers

Diagrams

Configuration

Incident Management

Email Notifications

< Train Search

05.08.2025 08:00 - 05.08.2025 09:59

Passenger

Freight


National

International

Maximum number of search results : 10000

Search Train Number

4158 Results



444059

Captrain Polska Spotka 2 Ograniczona Odpowiedzia...

Details

Piekary Śląski...	→	Tarnowskie Góry	<div><div>Tarnowskie Góry</div></div>
05.08.2025		05.08.2025	05.08.2025
22:42		23:03	23:03
07:35 -907		08:00 -903	08:00 -903

27541

MAV Passenger Transport Co.

Link-Search


Details


Lőkősháza oh.	→	Lőkősháza	<div><div>Lőkősháza</div></div>
05.08.2025		05.08.2025	05.08.2025
19:32		19:35	19:35
08:17		08:20 -675	08:20 -675

39305

Mercitalia Rail

Details





RailNetEurope

TIS Web Map Overview

Train Search

05.08.2025 08:00 - 05.08.2025 09:59

Passenger

Freight

National

International

Maximum number of search results : 10000

Search Train Number

4158 Results

444059

Captrain Polska Spotka 2 Ograniczona Odpowiedzia...

Details

Piekary Śląski...

→

Tarnowskie Góry

📍 Tarnowskie Góry

05.08.2025

05.08.2025

05.08.2025

22:42

23:03

23:03

07:35 -907

08:00 -903

08:00 -903

27541

MAV Passenger Transport Co.

Link-Search

Details

Lőkősháza oh.

→

Lőkősháza

📍 Lőkősháza

05.08.2025

05.08.2025

05.08.2025

19:32

19:35

19:35

08:17

08:20 -675

08:20 -675

39305

Mercitalia Rail

Details

Trains

Wagons and Containers

Diagrams

Configuration

Incident Management

Email Notifications

North Sea / Nordsee / Noordzee / Nordsjøen / Nordsjøen / Mer du Nord

UNITED KINGDOM

IRELAND

LONDON

Glasgow

Dublin

Bergen

NORWAY

8460

8351

8354

385

9567

475

12

6

531

53400

60492

92725

2

6

60660

9605

60305

72

54384

2

3

15

9

764947

458401

422568

65

4

4

2

2

6

3

81250

75600

876


5028

5092

75100

6614

7


RailNetEurope

TIS Web Train Search



Search



Reset

☐ Only Running

Train Number

42170



From Date

14.07.2025 00:00



To Date

15.07.2025 23:59



From Location

To Location

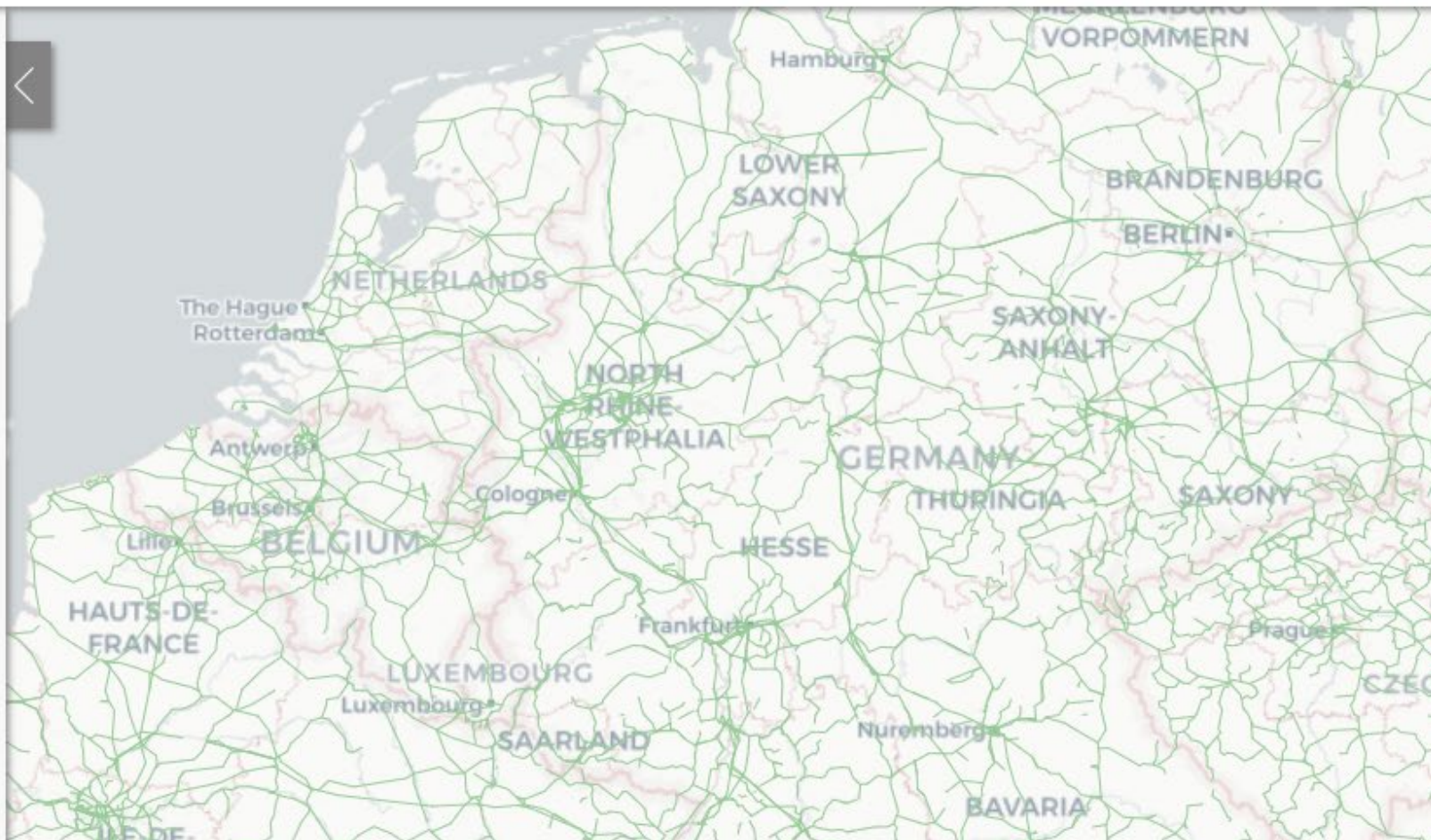
☐ Search in both directions

Location on path

☐ All specified locations must be present in train run

▼ Train Properties

Train Type



TIS Web Train Search

< Train and Map

Display Options

42170 Rail Cargo Carrier - Germany GmbH

[More Details →](#)

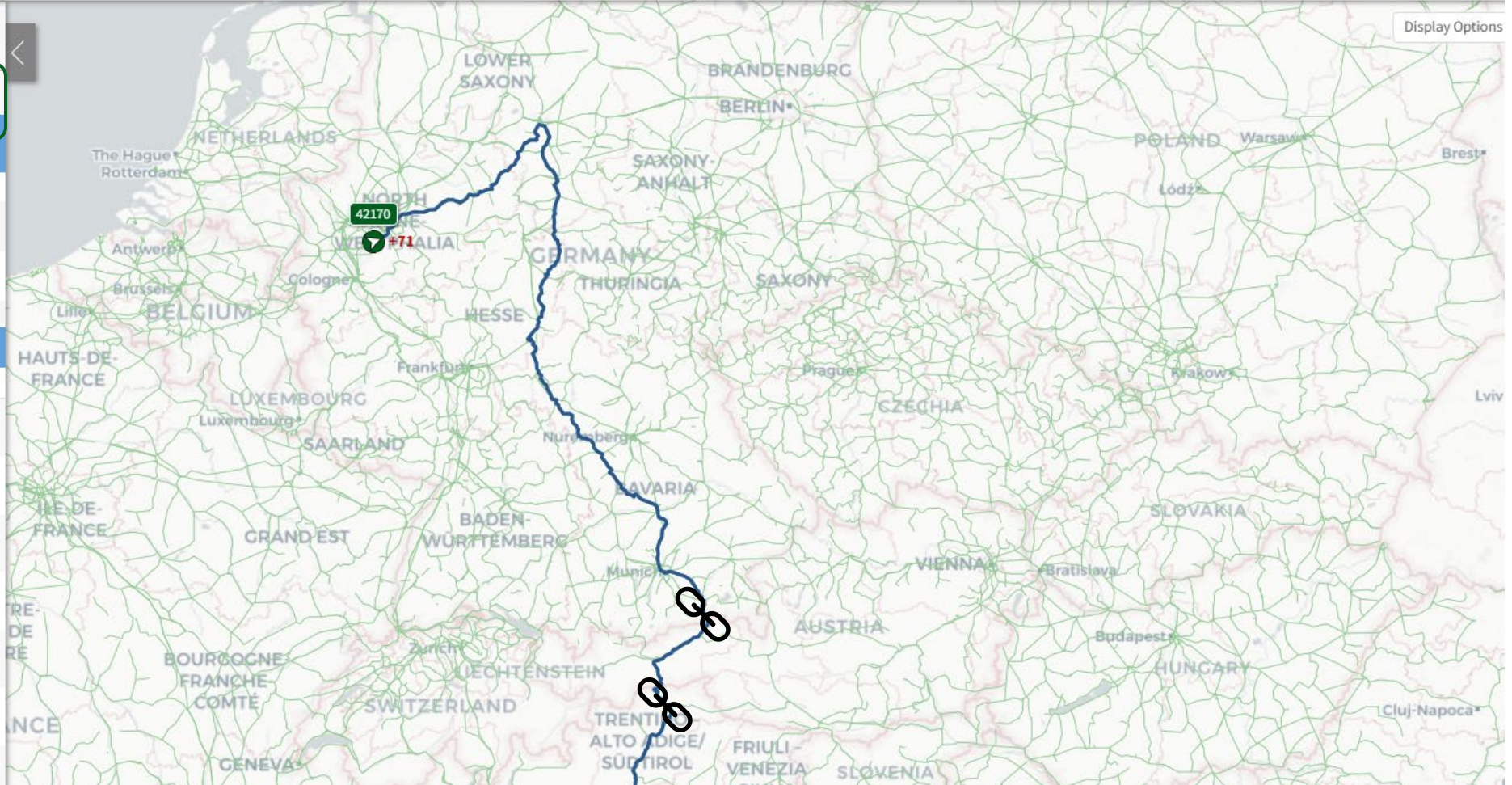
SOMMACAPAG NA-SONA →	Wuppertal- Langerfeld	Wuppertal- Langerfeld
14.07.2025	15.07.2025	15.07.2025
16:42	18:22	18:22
Planned	Planned	Planned
20:08 ⁺²⁰⁶	19:33 ⁺⁷¹	19:33 ⁺⁷¹
Actual	Actual	Actual

 Route


Route

Planned	Actual	ETA
---------	--------	-----


SOMMACAMPAGNA-SONA	16:42	20:08 ⁺²⁰⁶
BIVIO/PC FENILONE	16:47	20:15 ⁺²⁰⁸
BIVIO/PC S.MASSIMO	16:48	20:18 ⁺²¹⁰
DOMEGLIARA-S.AMBROGIO	16:58	20:46 ⁺²²⁸
ALA	17:20	21:05 ⁺²²⁵
ROVERETO	17:31	21:22 ⁺²³¹
TRENTO	17:50	21:41 ⁺²³¹





TIS Web Train Details





Train Information System


 Trains

 Wagons and Containers


 Diagrams


 Configuration

 Incident Management

 Email Notifications

00:59:52

 Help

 n_zacharias

DetailsForecastsIncidentsStatisticsLinkingWagons and Containers



International Train Number
42170
National Train Numbers
42170

Actual Location
Wuppertal-Langerfeld
15.07.2025 19:33 +71 min

From
SOMMACAMPAGNA-SONA
To
Wuppertal-Langerfeld
14.07.2025 16:42
15.07.2025 18:22





Planned Distance
1.525,39 km
Actual Distance
1.371,39 km






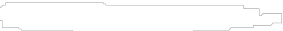
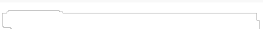

Train Type
International Freight
Last Update
16.07.2025 13:41


14

Train Identifier
TR.3178.000583068521.00.2025.20250714
Other Train Identifiers

Layout:




Location	Planned			Actual			Delta	Delay Reason	OTN	Infrastructure Manager	Railway Undertaking	Forecast			Median Forec: Qualifier	
	Status	Date	Time	Status	Date	Time						Status	Date	Time		Delta
Westhofen (Westf)	↓	15.07.2025	17:44	↓	15.07.2025	18:00	+35 min		42170	DB InfraGO Aktiengesellschaft						
Hohensyburg	↓	15.07.2025	17:46	↓	15.07.2025	18:07	+37 min	92 (3)	42170	DB InfraGO Aktiengesellschaft						
Hagen-Hengstey	↓	15.07.2025	17:48	↓	15.07.2025	18:17	+41 min	91 (4)	42170	DB InfraGO Aktiengesellschaft						
Hagen Streckenwechsel 2811/2823	↓	15.07.2025	17:51	↓	15.07.2025	18:19	+41 min		42170	DB InfraGO Aktiengesellschaft						
Hagen Gbf Bez Ost	↓	15.07.2025	17:52	↓	15.07.2025	18:20	+40 min		42170	DB InfraGO Aktiengesellschaft						
Hagen Gbf Bez West	↓	15.07.2025	17:53	↓	15.07.2025	18:21	+40 min		42170	DB InfraGO Aktiengesellschaft						
Hagen Gbf Hgw	↓	15.07.2025	17:54	↓	15.07.2025	18:22	+39 min		42170	DB InfraGO Aktiengesellschaft						
Hagen Rehsiepen	↓	15.07.2025	17:57	↓	15.07.2025	18:24	+37 min		42170	DB InfraGO Aktiengesellschaft						
Hagen Rehsiepen	↓	15.07.2025	17:57	↓	15.07.2025	18:24	+34 min		42170	DB InfraGO Aktiengesellschaft						
Hagen-Haspe	↓	15.07.2025	18:00	↓	15.07.2025	18:26	+32 min		42170	DB InfraGO Aktiengesellschaft						
Ennepetal (Gevelsberg)	↓	15.07.2025	18:05	↓	15.07.2025	18:31	+31 min		42170	DB InfraGO Aktiengesellschaft						
Schwelm	↓	15.07.2025	18:08	↓	15.07.2025	18:35	+32 min		42170	DB InfraGO Aktiengesellschaft						
Wuppertal-Langerfeld	↓	15.07.2025	18:12	↓	15.07.2025	18:39	+32 min		42170	DB InfraGO Aktiengesellschaft		↓	15.07.2025	18:39	+32 min	25
• Wuppertal-Langerfeld Ubf	↓	15.07.2025	18:00	↓	15.07.2025	19:10	+70 min		42170	DB InfraGO Aktiengesellschaft						
Wuppertal-Langerfeld	↓	15.07.2025	18:14		15.07.2025	19:24	+70 min		42170	DB InfraGO Aktiengesellschaft						
Wuppertal-Oberbarmen	↓	15.07.2025	18:18		15.07.2025	19:28	+70 min		42170	DB InfraGO Aktiengesellschaft						
Wuppertal-Langerfeld	↓	15.07.2025	18:22	↓	15.07.2025	19:33	+71 min		42170	DB InfraGO Aktiengesellschaft		↓	15.07.2025	19:33	+71 min	25




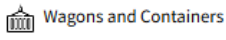
RailNetEurope

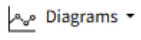
TIS Web Train Details

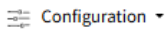


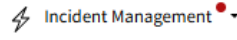
Train Information System

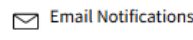
 Trains

 Wagons and Containers

 Diagrams

 Configuration

 Incident Management

 Email Notifications

00:59:52

Details

Forecasts

Incidents

Statistics

Linking

Wagons and Containers

International Train Number
42170
National Train Numbers
42170

Actual Location
Wuppertal-Langerfeld
15.07.2025 19:33 +71 min


From
SOMMACAMPAGNA-SONA
To
Wuppertal-Langerfeld


14.07.2025 16:42
15.07.2025 18:22

Planned Distance
1.525,39 km

Actual Distance
1.371,39 km

Train Type
International Freight
Last Update
16.07.2025 13:41


14





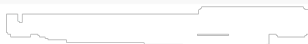




Train Identifier
TR.3178.000583068521.00.2025.20250714
Other Train Identifiers

Planned

Actual

Forecast

Location	Status	Date	Time	Status	Date	Time	Delta	Delay Reason	OTN	Infrastructure Manager	Railway Undertaking	Status	Date	Time
Westhofen (Westf)	↓	15.07.2025	17:44	↓	15.07.2025	18:00	+35 min		42170	DB InfraGO Aktiengesellschaft				
Hohensyburg	↓	15.07.2025	17:46	↓	15.07.2025	18:07	+37 min	92 (3)	42170	DB InfraGO Aktiengesellschaft				
Hagen-Hengstey	↓	15.07.2025	17:48	↓	15.07.2025	18:17	+41 min	91 (4)	42170	DB InfraGO Aktiengesellschaft				
Hagen Streckenwechsel 2811/2823	↓	15.07.2025	17:51	↓	15.07.2025	18:19	+41 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Gbf Bez Ost	↓	15.07.2025	17:52	↓	15.07.2025	18:20	+40 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Gbf Bez West	↓	15.07.2025	17:53	↓	15.07.2025	18:21	+40 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Gbf Hgw	↓	15.07.2025	17:54	↓	15.07.2025	18:22	+39 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Rehsiepen	↓	15.07.2025	17:57	↓	15.07.2025	18:24	+37 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Rehsiepen	↓	15.07.2025	17:57	↓	15.07.2025	18:24	+34 min		42170	DB InfraGO Aktiengesellschaft				
Hagen-Haspe	↓	15.07.2025	18:00	↓	15.07.2025	18:26	+32 min		42170	DB InfraGO Aktiengesellschaft				
Ennepetal (Gevelsberg)	↓	15.07.2025	18:05	↓	15.07.2025	18:31	+31 min		42170	DB InfraGO Aktiengesellschaft				
Schwelm	↓	15.07.2025	18:08	↓	15.07.2025	18:35	+32 min		42170	DB InfraGO Aktiengesellschaft				



TIS Web Train Details



Details Forecasts Incidents Statistics Linking Wagons and Containers

International Train Number
42170
National Train Numbers
42170

Actual Location
Wuppertal-Langerfeld
15.07.2025 19:33 +71 min

From
SOMMACAMPAGNA-SONA **14.07.2025 16:42**
To
Wuppertal-Langerfeld **15.07.2025 18:22**

Planned Distance
1.525,39 km
Actual Distance
1.371,39 km

Train Type
International Freight
Last Update
16.07.2025 13:41

14

Train Identifier
TR.3178.000583068521.00.2025.20250714
Other Train Identifiers

Location	Planned			Actual			Delta	Delay Reason	OTN	Infrastructure Manager	Railway Undertaking	Forecast		
	Status	Date	Time	Status	Date	Time						Status	Date	Time
Westhofen (Westf)	↓	15.07.2025	17:44	↓	15.07.2025	18:00	+35 min		42170	DB InfraGO Aktiengesellschaft				
Hohensyburg	↓	15.07.2025	17:46	↓	15.07.2025	18:07	+37 min	92 (3)	42170	DB InfraGO Aktiengesellschaft				
Hagen-Hengstey	↓	15.07.2025	17:48	↓	15.07.2025	18:17	+41 min	91 (4)	42170	DB InfraGO Aktiengesellschaft				
Hagen Streckenwechsel 2811/2823	↓	15.07.2025	17:51	↓	15.07.2025	18:19	+41 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Gbf Bez Ost	↓	15.07.2025	17:52	↓	15.07.2025	18:20	+40 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Gbf Bez West	↓	15.07.2025	17:53	↓	15.07.2025	18:21	+40 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Gbf Hgw	↓	15.07.2025	17:54	↓	15.07.2025	18:22	+39 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Rehsiepen	↓	15.07.2025	17:57	↓	15.07.2025	18:24	+37 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Rehsiepen	↓	15.07.2025	17:57	↓	15.07.2025	18:24	+34 min		42170	DB InfraGO Aktiengesellschaft				
Hagen-Haspe	↓	15.07.2025	18:00	↓	15.07.2025	18:26	+32 min		42170	DB InfraGO Aktiengesellschaft				
Ennepetal (Gevelsberg)	↓	15.07.2025	18:05	↓	15.07.2025	18:31	+31 min		42170	DB InfraGO Aktiengesellschaft				
Schwelm	↓	15.07.2025	18:08	↓	15.07.2025	18:35	+32 min		42170	DB InfraGO Aktiengesellschaft				

TIS Web Train Details

DetailsForecastsIncidentsStatisticsLinkingWagons and Containers

International Train Number
42170
National Train Numbers
42170

Actual Location
Wuppertal-Langerfeld
15.07.2025 19:33 +71 min

From
SOMMACAMPAGNA-SONA **14.07.2025 16:42**
To
Wuppertal-Langerfeld **15.07.2025 18:22**

Planned Distance
1.525,39 km
Actual Distance
1.371,39 km

Train Type
International Freight
Last Update
16.07.2025 13:41


14



14

Train Identifier
TR.3178.000583068521.00.2025.20250714
Other Train Identifiers

Planned				Actual				Forecast			
Location	Status	Date	Time	Status	Date	Time	Delta	Delay Reason	OTN	Infrastructure Manager	Railway Undertaking
Westhofen (Westf)	↓	15.07.2025	17:44	↓	15.07.2025	18:00	+35 min		42170	DB InfraGO Aktiengesellschaft	
Hohensyburg	↓	15.07.2025	17:46	↓	15.07.2025	18:07	+37 min	92 (3)	42170	DB InfraGO Aktiengesellschaft	
Hagen-Hengstey	↓	15.07.2025	17:48	↓	15.07.2025	18:17	+41 min	91 (4)	42170	DB InfraGO Aktiengesellschaft	
Hagen Streckenwechsel 2811/2823	↓	15.07.2025	17:51	↓	15.07.2025	18:19	+41 min		42170	DB InfraGO Aktiengesellschaft	
Hagen Gbf Bez Ost	↓	15.07.2025	17:52	↓	15.07.2025	18:20	+40 min		42170	DB InfraGO Aktiengesellschaft	
Hagen Gbf Bez West	↓	15.07.2025	17:53	↓	15.07.2025	18:21	+40 min		42170	DB InfraGO Aktiengesellschaft	
Hagen Gbf Hgw	↓	15.07.2025	17:54	↓	15.07.2025	18:22	+39 min		42170	DB InfraGO Aktiengesellschaft	
Hagen Rehsiepen	↓	15.07.2025	17:57	↓	15.07.2025	18:24	+37 min		42170	DB InfraGO Aktiengesellschaft	
Hagen Rehsiepen	↓	15.07.2025	17:57	↓	15.07.2025	18:24	+34 min		42170	DB InfraGO Aktiengesellschaft	
Hagen-Haspe	↓	15.07.2025	18:00	↓	15.07.2025	18:26	+32 min		42170	DB InfraGO Aktiengesellschaft	
Ennepetal (Gevelsberg)	↓	15.07.2025	18:05	↓	15.07.2025	18:31	+31 min		42170	DB InfraGO Aktiengesellschaft	
Schwelm	↓	15.07.2025	18:08	↓	15.07.2025	18:35	+32 min		42170	DB InfraGO Aktiengesellschaft	



TIS Web Train Details



Trains

Wagons and Containers

Diagrams

Configuration

Incident Management

Email Notifications

00:59:52

DetailsForecastsIncidentsStatisticsLinkingWagons and Containers

International Train Number
42170
National Train Numbers
42170

Actual Location
Wuppertal-Langerfeld
15.07.2025 19:33 +71 min

From
SOMMACAMPAGNA-SONA 14.07.2025 16:42
To
Wuppertal-Langerfeld 15.07.2025 18:22

Planned Distance
1.525,39 km

Actual Distance
1.371,39 km

Train Type
International Freight

Last Update
16.07.2025 13:41


14

Train Identifier
TR.3178.000583068521.00.2025.20250714

Other Train Identifiers

	Planned			Actual							Forecast			
Location	Status	Date	Time	Status	Date	Time	Delta	Delay Reason	OTN	Infrastructure Manager	Railway Undertaking	Status	Date	Time
Westhofen (Westf)	↓	15.07.2025	17:44	↓	15.07.2025	18:00	+35 min		42170	DB InfraGO Aktiengesellschaft				
Hohensyburg	↓	15.07.2025	17:46	↓	15.07.2025	18:07	+37 min	92 (3)	42170	DB InfraGO Aktiengesellschaft				
Hagen-Hengstey	↓	15.07.2025	17:48	↓	15.07.2025	18:17	+41 min	91 (4)	42170	DB InfraGO Aktiengesellschaft				
Hagen Streckenwechsel 2811/2823	↓	15.07.2025	17:51	↓	15.07.2025	18:19	+41 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Gbf Bez Ost	↓	15.07.2025	17:52	↓	15.07.2025	18:20	+40 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Gbf Bez West	↓	15.07.2025	17:53	↓	15.07.2025	18:21	+40 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Gbf Hgw	↓	15.07.2025	17:54	↓	15.07.2025	18:22	+39 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Rehsiepen	↓	15.07.2025	17:57	↓	15.07.2025	18:24	+37 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Rehsiepen	↓	15.07.2025	17:57	↓	15.07.2025	18:24	+34 min		42170	DB InfraGO Aktiengesellschaft				
Hagen-Haspe	↓	15.07.2025	18:00	↓	15.07.2025	18:26	+32 min		42170	DB InfraGO Aktiengesellschaft				
Ennepetal (Gevelsberg)	↓	15.07.2025	18:05	↓	15.07.2025	18:31	+31 min		42170	DB InfraGO Aktiengesellschaft				
Schwelm	↓	15.07.2025	18:08	↓	15.07.2025	18:35	+32 min		42170	DB InfraGO Aktiengesellschaft				

TIS Web Train Details



Trains

Wagons and Containers

Diagrams

Configuration

Incident Management

Email Notifications

00:59:52

DetailsForecastsIncidentsStatisticsLinkingWagons and Containers


International Train Number
42170
National Train Numbers
42170

Actual Location
Wuppertal-Langerfeld
15.07.2025 19:33 +71 min


From
SOMMACAMPAGNA-SONA 14.07.2025 16:42
To
Wuppertal-Langerfeld 15.07.2025 18:22

Planned Distance
1.525,39 km
Actual Distance
1.371,39 km







Train Type
International Freight
Last Update
16.07.2025 13:41




14




Train Identifier
TR.3178.000583068521.00.2025.20250714
Other Train Identifiers


Location	Planned			Actual			Delta	Delay Reason	OTN	Infrastructure Manager	Railway Undertaking	Forecast		
	Status	Date	Time	Status	Date	Time						Status	Date	Time
Westhofen (Westf)	↓	15.07.2025	17:44	↓	15.07.2025	18:00	+35 min		42170	DB InfraGO Aktiengesellschaft				
Hohensyburg	↓	15.07.2025	17:46	↓	15.07.2025	18:07	+37 min	92 (3)	42170	DB InfraGO Aktiengesellschaft				
Hagen-Hengstey	↓	15.07.2025	17:48	↓	15.07.2025	18:17	+41 min	91 (4)	42170	DB InfraGO Aktiengesellschaft				
Hagen Streckenwechsel 2811/2823	↓	15.07.2025	17:51	↓	15.07.2025	18:19	+41 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Gbf Bez Ost	↓	15.07.2025	17:52	↓	15.07.2025	18:20	+40 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Gbf Bez West	↓	15.07.2025	17:53	↓	15.07.2025	18:21	+40 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Gbf Hgw	↓	15.07.2025	17:54	↓	15.07.2025	18:22	+39 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Rehsiepen	↓	15.07.2025	17:57	↓	15.07.2025	18:24	+37 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Rehsiepen	↓	15.07.2025	17:57	↓	15.07.2025	18:24	+34 min		42170	DB InfraGO Aktiengesellschaft				
Hagen-Haspe	↓	15.07.2025	18:00	↓	15.07.2025	18:26	+32 min		42170	DB InfraGO Aktiengesellschaft				
Ennepetal (Gevelsberg)	↓	15.07.2025	18:05	↓	15.07.2025	18:31	+31 min		42170	DB InfraGO Aktiengesellschaft				
Schwelm	↓	15.07.2025	18:08	↓	15.07.2025	18:35	+32 min		42170	DB InfraGO Aktiengesellschaft				





RailNetEurope


TIS Web Train Details





 Trains

 Wagons and Containers

 Diagrams

 Configuration

 Incident Management

 Email Notifications

00:59:52

Details

Forecasts

Incidents

Statistics

Linking

Wagons and Containers



International Train Number
42170
National Train Numbers
42170

Actual Location
Wuppertal-Langerfeld
15.07.2025 19:33 +71 min


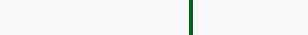

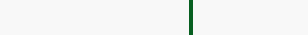

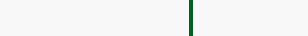

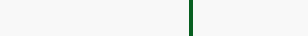

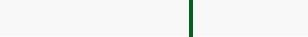


From
SOMMACAMPAGNA-SONA 14.07.2025 16:42
To
Wuppertal-Langerfeld 15.07.2025 18:22

Planned Distance
1.525,39 km
Actual Distance
1.371,39 km

Train Type
International Freight
Last Update
16.07.2025 13:41

 14


Train Identifier
TR.3178.000583068521.00.2025.20250714
Other Train Identifiers

	Planned				Actual					Forecast				
Location	Status	Date	Time	Status	Date	Time	Delta	Delay Reason	OTN	Infrastructure Manager	Railway Undertaking	Status	Date	Time
Westhofen (Westf)	↓	15.07.2025	17:44	↓	15.07.2025	18:00	+35 min		42170	DB InfraGO Aktiengesellschaft				
Hohensyburg	↓	15.07.2025	17:46	↓	15.07.2025	18:07	+37 min	92 (3)	42170	DB InfraGO Aktiengesellschaft				
Hagen-Hengstey	↓	15.07.2025	17:48	↓	15.07.2025	18:17	+41 min	91 (4)	42170	DB InfraGO Aktiengesellschaft				
Hagen Streckenwechsel 2811/2823	↓	15.07.2025	17:51	↓	15.07.2025	18:19	+41 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Gbf Bez Ost	↓	15.07.2025	17:52	↓	15.07.2025	18:20	+40 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Gbf Bez West	↓	15.07.2025	17:53	↓	15.07.2025	18:21	+40 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Gbf Hgw	↓	15.07.2025	17:54	↓	15.07.2025	18:22	+39 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Rehsiepen	↓	15.07.2025	17:57	↓	15.07.2025	18:24	+37 min		42170	DB InfraGO Aktiengesellschaft				
Hagen Rehsiepen	↓	15.07.2025	17:57	↓	15.07.2025	18:24	+34 min		42170	DB InfraGO Aktiengesellschaft				
Hagen-Haspe	↓	15.07.2025	18:00	↓	15.07.2025	18:26	+32 min		42170	DB InfraGO Aktiengesellschaft				
Ennepetal (Gevelsberg)	↓	15.07.2025	18:05	↓	15.07.2025	18:31	+31 min		42170	DB InfraGO Aktiengesellschaft				
Schwelm	↓	15.07.2025	18:08	↓	15.07.2025	18:35	+32 min		42170	DB InfraGO Aktiengesellschaft				

TIS Web Train Details



Details Forecasts Incidents Statistics Linking Wagons and Containers

International Train Number
42170
National Train Numbers
42170

Actual Location
Wuppertal-Langerfeld
15.07.2025 19:33 **+71 min**

From
SOMMACAMPAGNA-SONA 14.07.2025 16:42
To
Wuppertal-Langerfeld 15.07.2025 18:22

Planned Distance
1.525,39 km
Actual Distance
1.371,39 km

Train Type
International Freight
Last Update
16.07.2025 13:41

14

Train Identifier
TR.3178.000583068521.00.2025.20250714
Other Train Identifiers

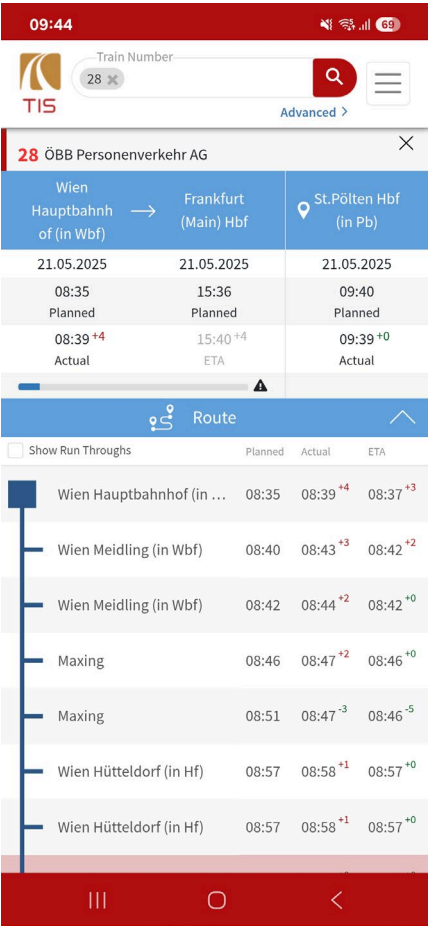
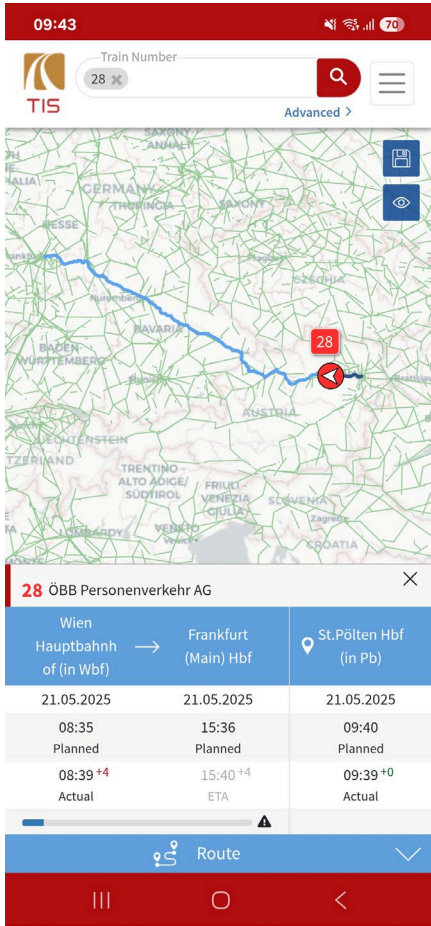
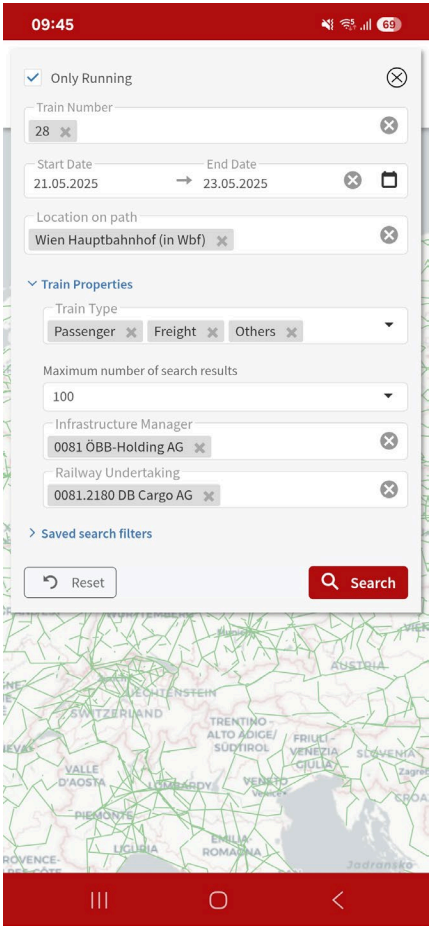
	Planned				Actual				Delta	Delay Reason	OTN	Infrastructure Manager	Railway Undertaking	Forecast				Med
	Status	Date	Time		Status	Date	Time							Status	Date	Time	Delta	
2811/2823	↓	15.07.2025	17:44		↓	15.07.2025	18:00		+35 min		42170	DB InfraGO Aktiengesellschaft						
	↓	15.07.2025	17:46		↓	15.07.2025	18:07		+37 min	92 (3)	42170	DB InfraGO Aktiengesellschaft						
	↓	15.07.2025	17:48		↓	15.07.2025	18:17		+41 min	91 (4)	42170	DB InfraGO Aktiengesellschaft						
	↓	15.07.2025	17:51		↓	15.07.2025	18:19		+41 min		42170	DB InfraGO Aktiengesellschaft						
	↓	15.07.2025	17:52		↓	15.07.2025	18:20		+40 min		42170	DB InfraGO Aktiengesellschaft						
	↓	15.07.2025	17:53		↓	15.07.2025	18:21		+40 min		42170	DB InfraGO Aktiengesellschaft						
	↓	15.07.2025	17:54		↓	15.07.2025	18:22		+39 min		42170	DB InfraGO Aktiengesellschaft						
	↓	15.07.2025	17:57		↓	15.07.2025	18:24		+37 min		42170	DB InfraGO Aktiengesellschaft						
	↓	15.07.2025	17:57		↓	15.07.2025	18:24		+34 min		42170	DB InfraGO Aktiengesellschaft						
	↓	15.07.2025	18:00		↓	15.07.2025	18:26		+32 min		42170	DB InfraGO Aktiengesellschaft						
	↓	15.07.2025	18:05		↓	15.07.2025	18:31		+31 min		42170	DB InfraGO Aktiengesellschaft						
	↓	15.07.2025	18:08		↓	15.07.2025	18:35		+32 min		42170	DB InfraGO Aktiengesellschaft						
	↓	15.07.2025	18:12		↓	15.07.2025	18:39		+32 min		42170	DB InfraGO Aktiengesellschaft				15.07.2025 18:39	+32 min	25

RailNetEurope

03 TIS Mobile



TIS Mobile

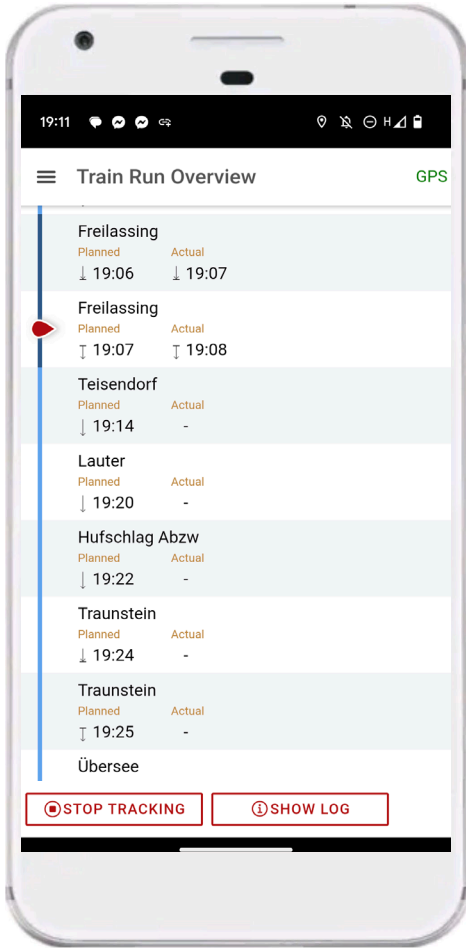
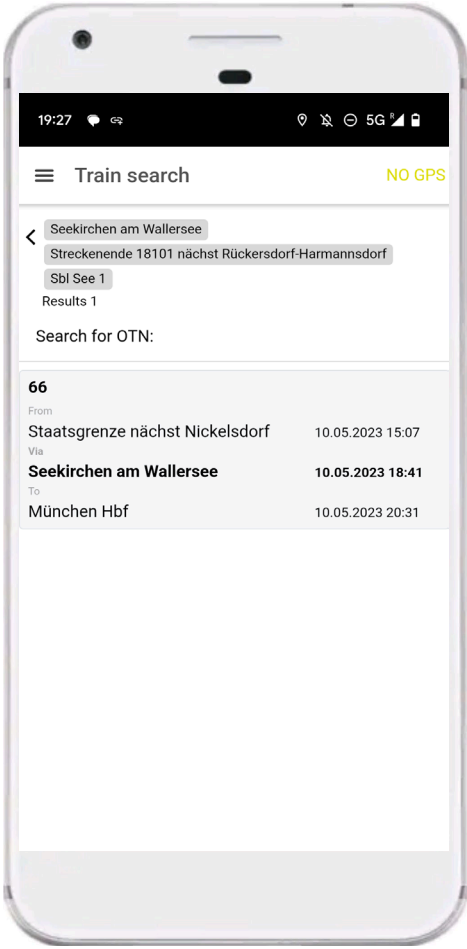
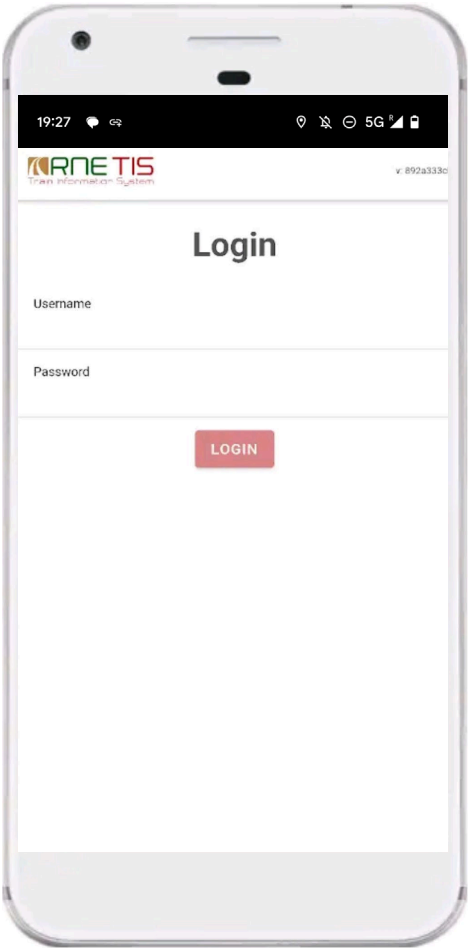


RailNetEurope

04 TIS Train Driver App



TIS Train Driver App

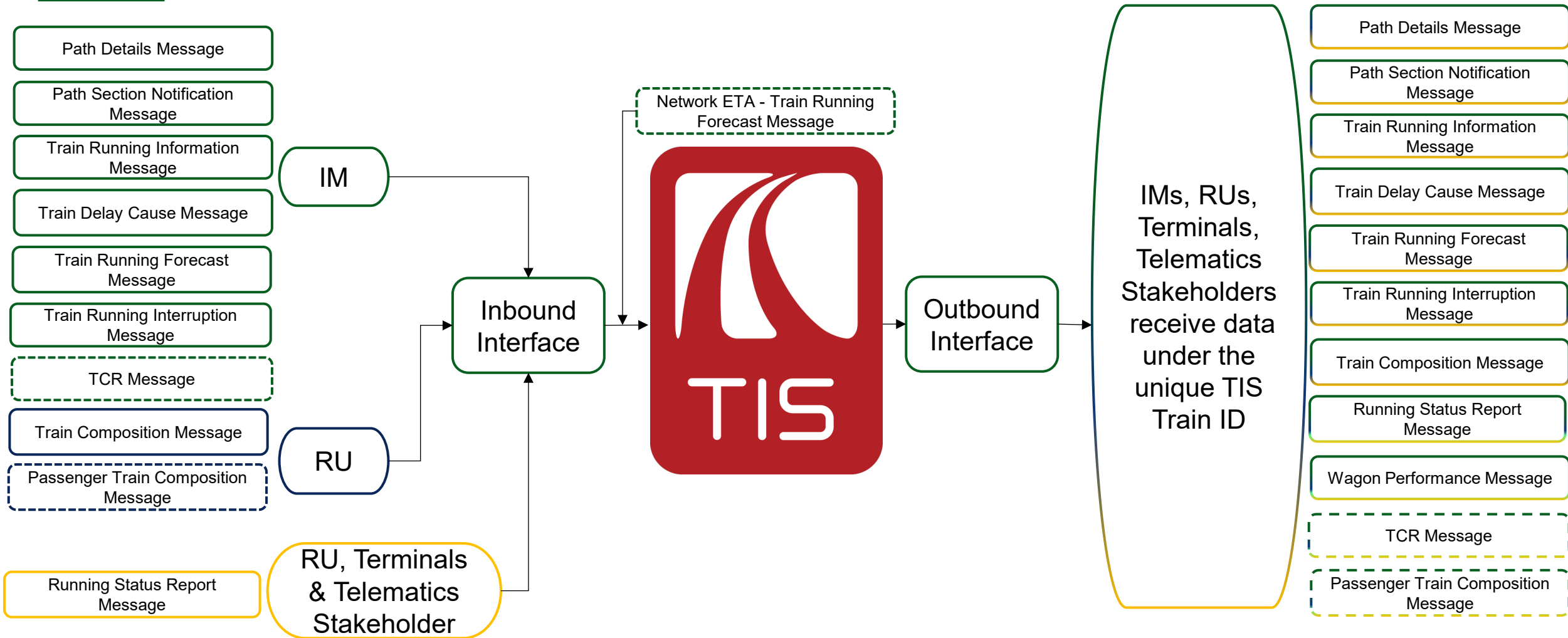


RailNetEurope

05 Data Exchange



TIS Data Exchange



RailNetEurope

06 Current Developments



Current Developments

Incident Management Data Exchange

95%

Geo-positioning Data

80%

Network ETA

70%

European Traffic Management Concept

50%

Single Sign On

30%

- The TCR message is implemented in UAT
- Fully compliant with Incident Management Tool
- Automates the Incident creation between IM – RNE TIS

- Wagon association to train
- Tracking of train/wagon movements in any territory based on geographical coordinates. This includes countries which are not integrated in TIS

- Generated by TIS
- Machine learning ETA making use of the historical data
- Currently evaluated in UAT

- All TCM information will be recorded and presented to the authorized user with a specific right
- Dangerous goods included and highlighted. Search availability for “Dangerous Goods” trains

- One account to login in all RNE applications
- It is expected to be fully released in Q4 2025

RailNetEurope

07 TIS Contacts



Whom to contact

support.tis@rne.eu



Nektarios Zacharias

Senior IT Manager (TIS) - Team
Leader TIS

+43 664 884 248 13

nektarios.zacharias@rne.eu



Josef Stahl

Senior IT Manager (TIS)

+43 664 884 248 04

josef.stahl@rne.eu



Arturas Paulauskas

IT Manager (TIS)

+43 676 560 07 17

arturas.paulauskas@rne.eu



Viktor Kádár

Junior IT Manager (TIS)

+43 676 705 6841

viktor.kadar@rne.eu

WE KNOW WHAT YOUR TRAIN DID LAST SUMMER



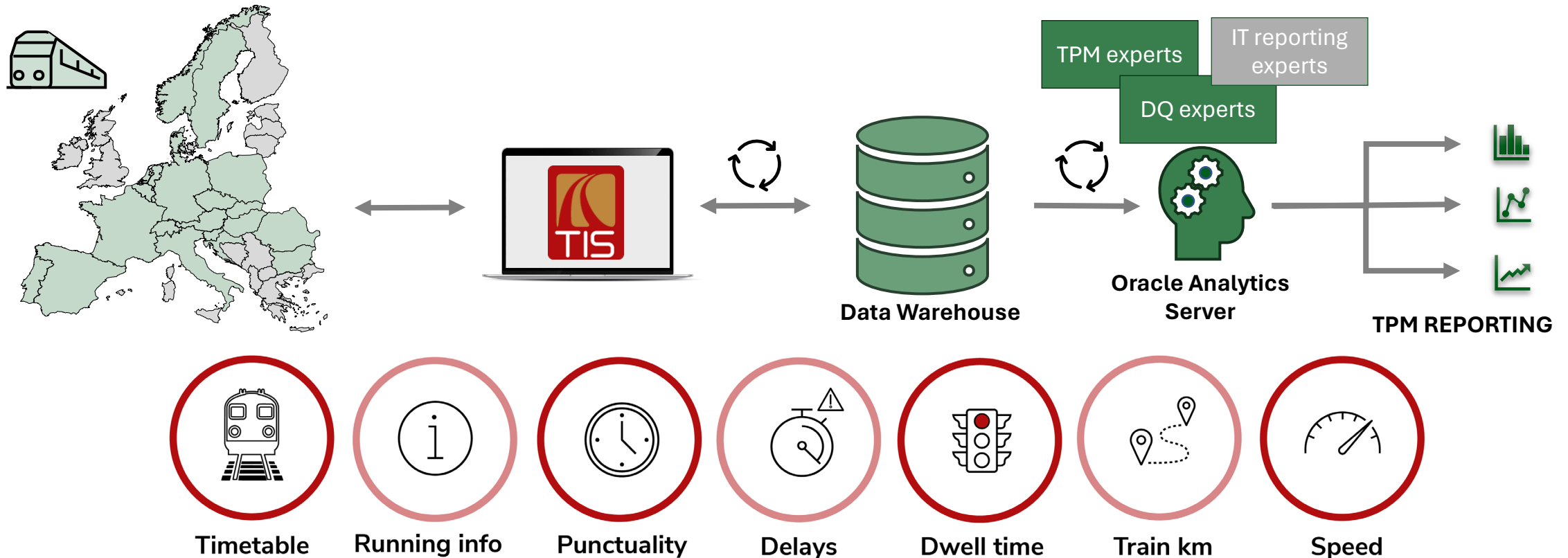
Traffic Management – areas of activities



Performance

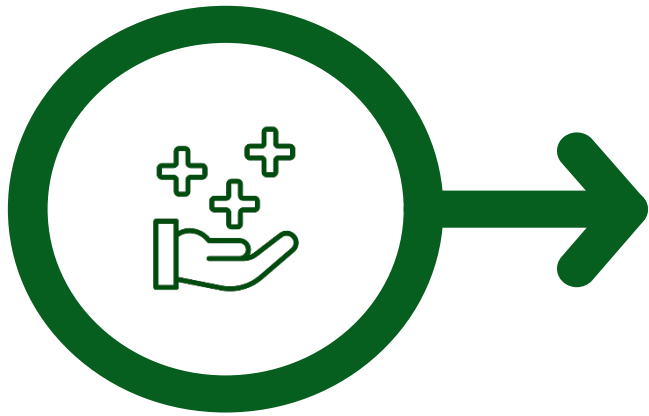
RNE collects data and became European Data Warehouse

- All data collected from members through RNE TIS application are stored in the data warehouse. Based on stored data, reports are prepared and made accessible to users via Oracle Analytics Server (OAS).



TIS Data Quality

Benefits



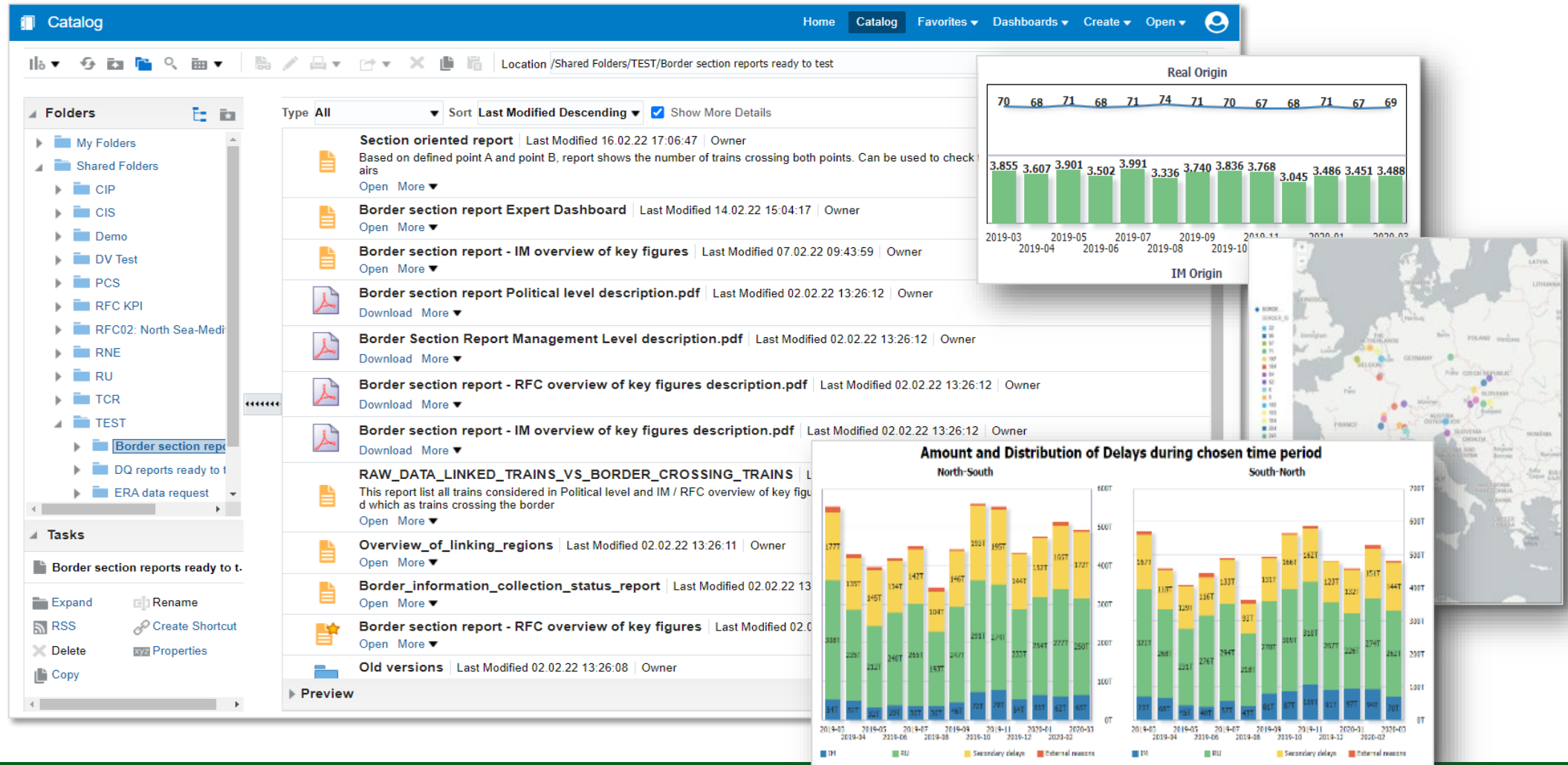
- ✓ **Real and complete trains run** on the European network through TIS and available to railway transportation stakeholders
- ✓ Facilitate the **exchange of relevant and reliable data** among entities within the TIS app, including IMs, RUs, or terminals
- ✓ **Deliver reliable reports/datasets** for IMs, RFCs, RUs, European bodies, agencies and academia presenting the status and performance of railway transportation
- ✓ Platform to **assess the status of TIS data quality**, discuss current and potential data quality and reporting issues, and define actions to address them.

RNE Train Performance Management



- **Define and propose harmonised international processes and KPIs** for IMs and RFCs to monitor and improve train performance management
- **supports implementation of train performance management** and serves as a **platform** where RFCs and IMs can exchange experiences and concerns
- **assess the data provision to external subjects** – EU authorities, universities, etc
- **takes care of functional improvements of TIS** related to reporting
- Serves as **Reporting Change Control Board**
- Support the members on the **preparation and design of suitable reports and datasets** to be used by IMs and RFCs

TPM Reports and Dashboards



Mentimeter

Should the railway sector consider providing a public version of TIS, similar to platforms such as Flightradar24 or MarineTraffic?

- **Definitely**
- **Need to be discussed in which extent**
- **No way**



Contacts



Peter Šišolák

Head of Traffic Management

+43 676 553 86 72
peter.sisolak@rne.eu



Juraj Maliacek

Senior Traffic Management
Manager

+43 664 884 248 16
juraj.maliacek@rne.eu



Nektarios Zacharias

Senior IT Manager (TIS) – Team
Leader TIS

+43 664 884 248 13
nektarios.zacharias@rne.eu

RailNetEurope
Austria Campus 3
Jakov-Lind-Straße 5
1020 Vienna, Austria
www.rne.eu

RailNetEurope

05 Closing words



Closing words

Speakers



Joachim Kroll

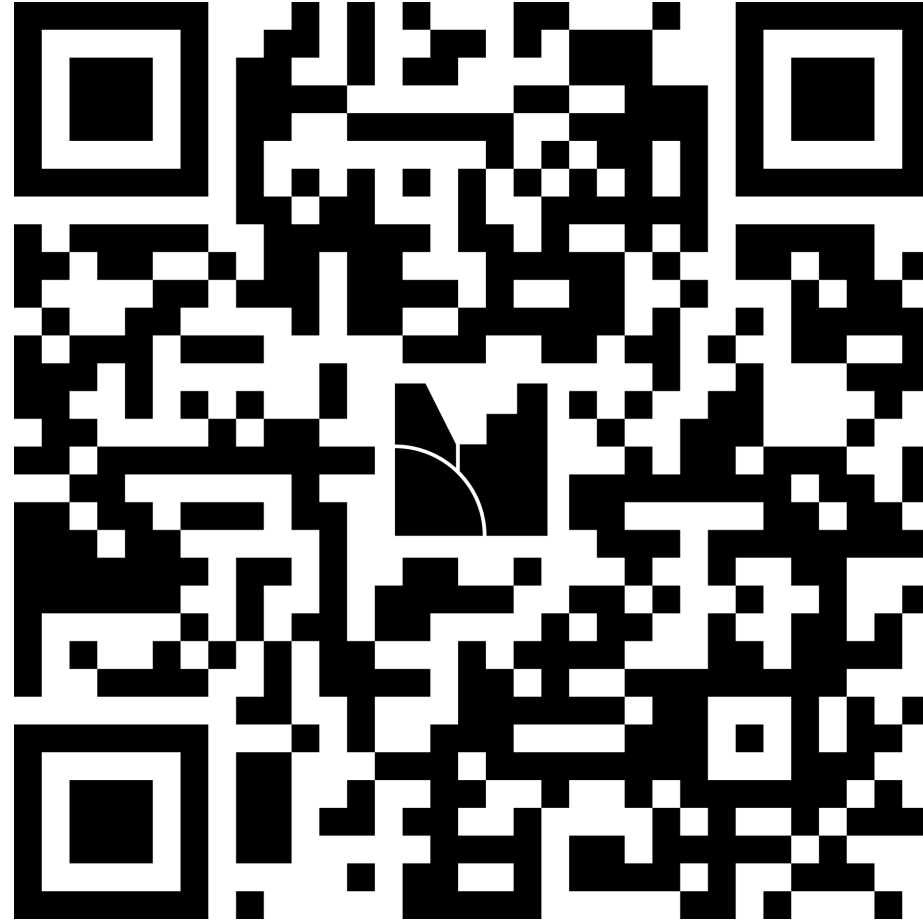
Secretary General



Artemis Kottas

Team Leader Administration &
Communications

We would love to hear your feedback!



Thank you for joining us!

RailNetEurope

28 AUGUST 2025

