26 November 2025 | 10:00–11:00 CET

Train Information System (TIS)

Webinar







## Agenda

- Welcome & Introduction
- Survey on TIS Facts

#### **Break-out sessions**

- 1. TIS functions for new and advanced users
- 2. Exploring Traffic Management activities
- 3. Getting started with TIS: Company contracts product & services
- Conclusions
- Q&A Session

## **TIS Overview**

International freight,
passenger and national
freight trains can be
followed in the
Train Information
System

Over 6.100 users from 29 IMs, 171 RUs and 18 Terminals connect every month with

Train Information

System



## **Presenters**



Harald Reisinger
Chief Information Officer /
Chief Financial Officer
at RNE



Nektarios Zacharias
Senior IT Manager (TIS) –
Team Leader TIS at RNE



Peter Šišolák Head of Traffic Management at RNE



Jaroslav Lučkay Sales Manager at RNE

## **Choose a Break-out Session**

### **TIS functions** for new and advanced users

With Nektarios Zacharias (Senior IT Manager, Team Leader TIS)

- How it works
- Telematics
- Geo-Positioning
- Statistics

## **Exploring Traffic Management** activities

With Peter Šišolák (Head of Traffic Management)



#### **Getting started with TIS:**

Company contracts – product & services

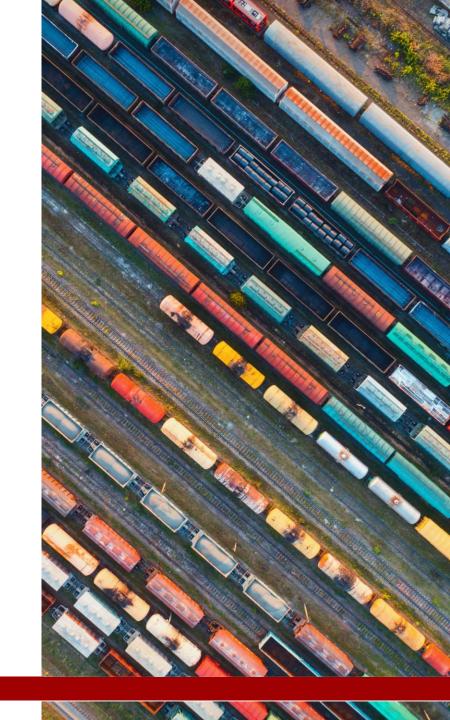
With Jaroslav Lučkay (Sales Manager)



Onboarding

Jaroslav Lučkay, Sales Manager at RNE

## Getting started with TIS: Company contracts - products & services



#### Train Information System

## **Options**



## **Live Map**

via web browser

Free of charge
No installations required
Multiple accounts per company



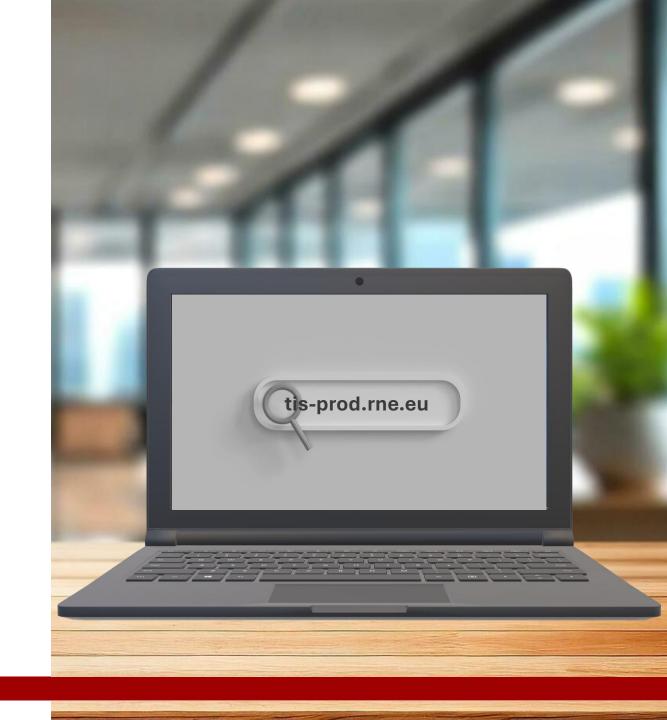
#### **Data Flow**

via Common Interface

TAF/TAP TSI standard
Advanced filtering capabilities
High message volume handling



## **Overview**



## **Overview**



## Web-based app

Don't bother with installing offline applications,
TIS Live Map is online and ready to use.



## Real-time data

Get the exact position of your train with reliable information directly from Infrastructure Managers.



## **Overview**



#### Real-time data

Get the exact position of your train with reliable information directly from Infrastructure Managers.



## **Additional info**

TIS Live Map goes even further providing information about the whole route, delays, incidents etc.



## **Overview**



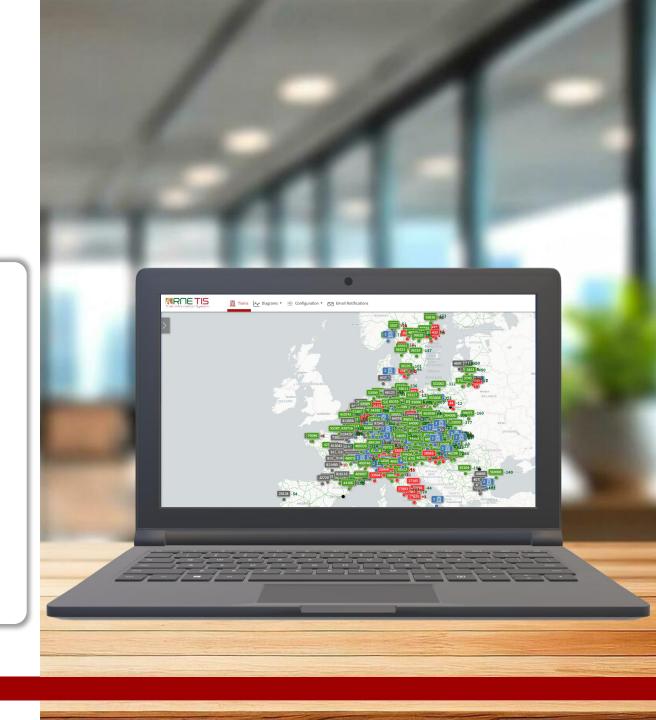
### **Additional info**

TIS Live Map goes even further providing information about the whole route, delays, incidents etc.



### **Both worlds**

If it is passengers or freight cargo, TIS Live Map provides train information about all the trains on the network.



## **Features**



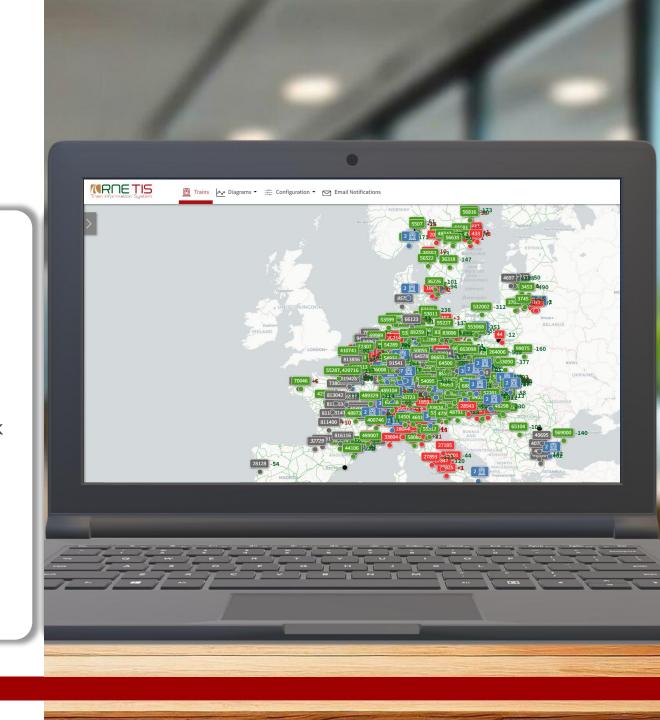
## **Features**



## Train on the map

With Train Information System Live Map you will never lose track of your train. The information about exact location of your train is sent by respective Infrastructure Managers, thus is official and reliable.

And not only that, by selecting specific train you can see the whole train run, from its initial departure station until its final destination.



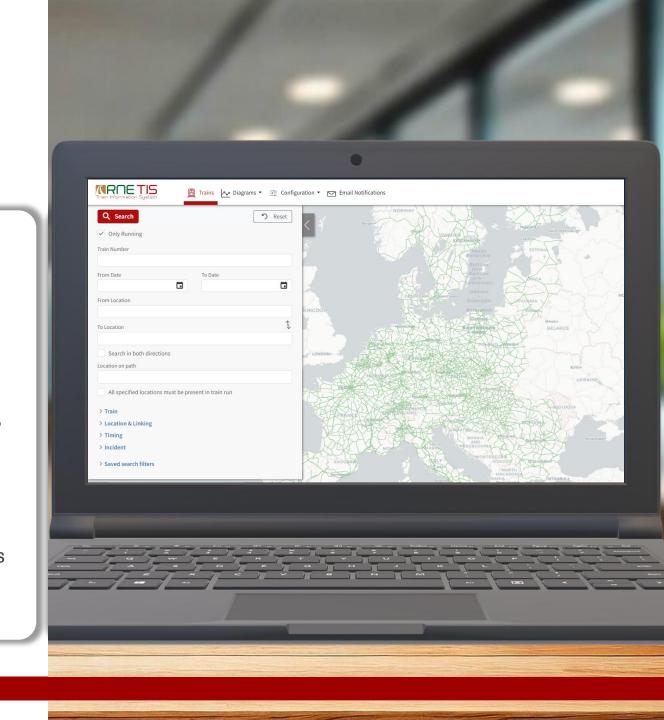
## **Features**



## **Advanced filtering**

Do you need to focus on particular trains with specific criteria? TIS Live Map offers you wide range of filters and parameters.

Train number, dates, locations, train types, infrastructure manager, railway undertaking, linking status, timing, even incidents and affected trains status, this and many more allows you to visualize your train map according to your needs.



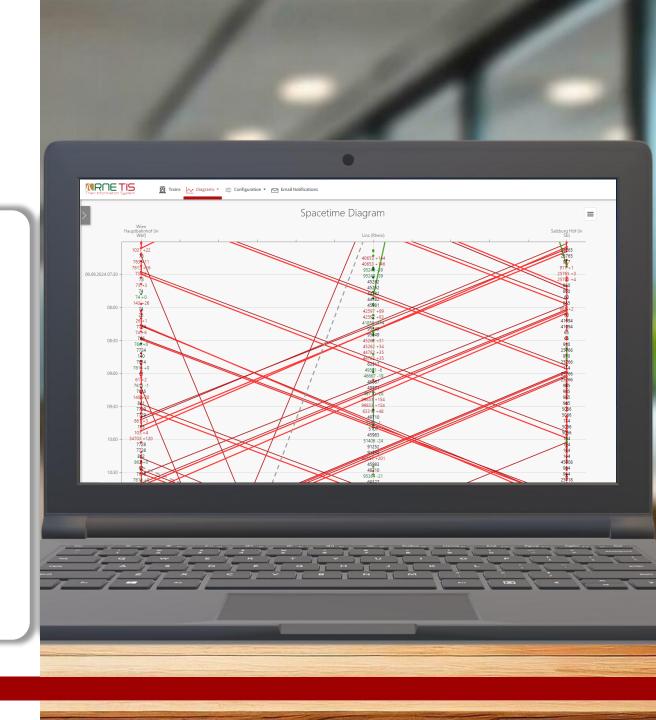
## **Features**



## **Space Time Diagrams**

Space Time Diagram visually tracks train movements in relation to time and location. Users can customize views, set axis orientation, and filter data by interest. Configurations are savable, diagrams update every 90 seconds, and all screens are exportable as PNG or PDF.

All Train numbers are linked to the detailed TrainInfo page.



## **Features**



## **Connection Diagrams**

Connection Diagram visually displays all train movements at a station on a time axis, showing past, current, and future positions. Trains are organized by arrival and departure on a vertical axis, regardless of route or direction. Users can customize time frames, apply filters, zoom in/out, and save or print views. Ideal for monitoring hubs, borders, or any key locations efficiently.

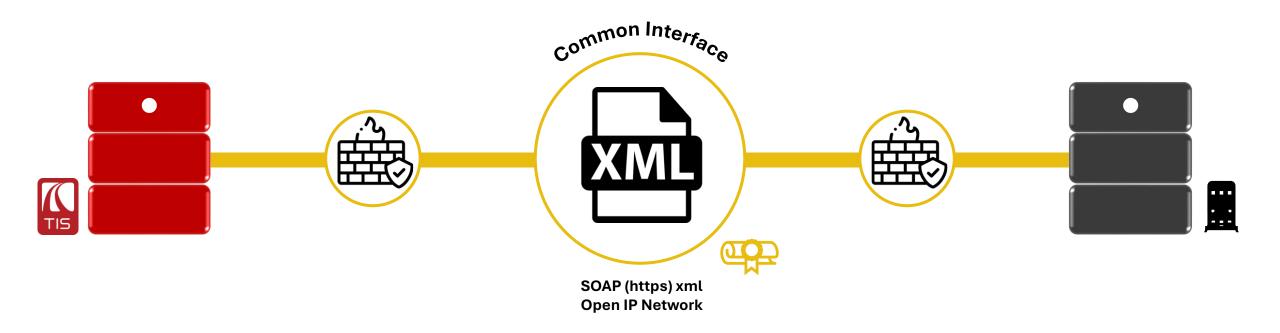


## Train Information System Data Flow



Train Information System Data Flow How does it work?

## How does it work?



Path Details Train Running Information

Train Running Forecast

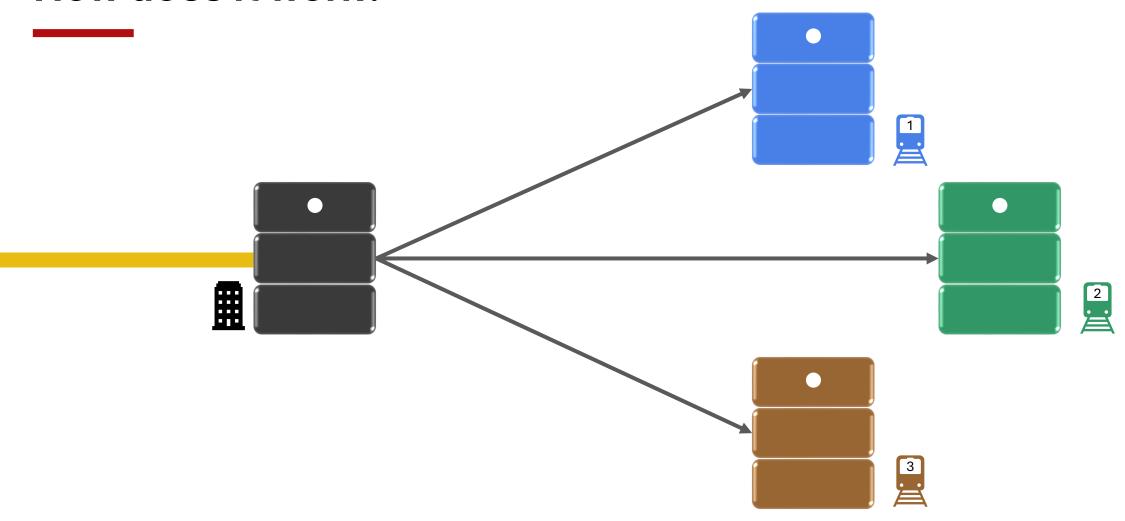
Path Section Notification

Train Composition

Train Delay Cause Train Running Interruption

Wagon Performance

## How does it work?



## How much does it cost?



#### Example 1

Railway Undertaking operates 18k trains per month and wants to receive Train Running Information Messages, Path Details Messages and Train Delay Cause Messages:

#### Costs for Common Interface

✓ One-time registration fee: 4,600 €

✓ Annual maintenance fee: 2,760 €

#### Costs for Train Information System

✓ One-time set up fee: 8,000 €

✓ Maintenance fee: 6,000 €

✓ Message fees: 9,600 €

#### Total:

✓ First year: 30,960 €

✓ Every other year: 18,360 €

## How much does it cost?



#### Example 2

5 Railway Undertakings operate together 75k trains per month and start a project to integrate all their data into one app for efficient traffic management, so they need Train Running Information Messages and Path Details Messages:

#### Costs for Common Interface

✓ One-time registration fee: 9,200 €

✓ Annual maintenance fee: 5,520 €

#### Costs for Train Information System

✓ One-time set up fee: 8,000 €

✓ Maintenance fee: 49,500 €

✓ Message fees: 8,400 €

#### Total:

✓ First year: 80,620 €

✓ Every other year: **63,420** €

## How to become a user?

Submit the order form

1

Sign the agreement

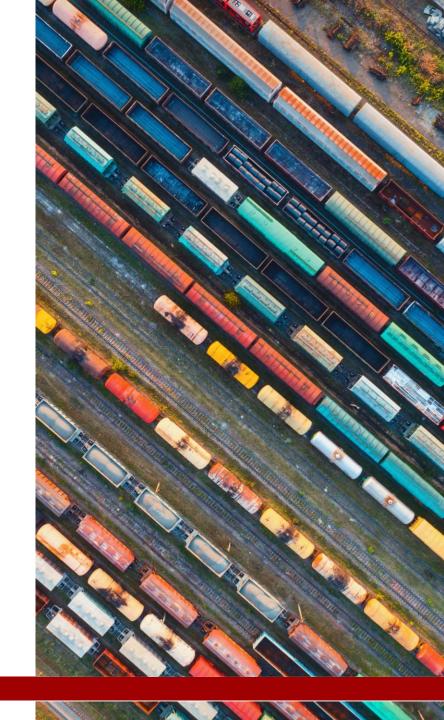


Use the service



Nektarios Zacharias, Senior IT Manager (TIS) – Team Leader TIS at RNE

## TIS functions for new and advanced users



TRAFFIC MANAGEMENT

## 01 General Overview



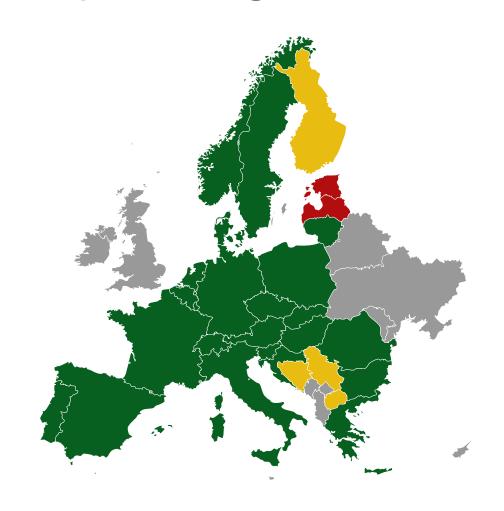
## **TIS Overview**

Nearly 40.000
International freight,
passenger and national
freight trains can be
followed in the
Train Information
System

Over 6.100 users from 29 IMs, 171 RUs and 18 Terminals connect every month with Train Information System



## **TIS Country Coverage**



Already in TIS

Coming Soon

Could join in the future

## **TIS Products & Services**





- 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

TRAFFIC MANAGEMENT

## 02 Train Visibility – Roles & Rights

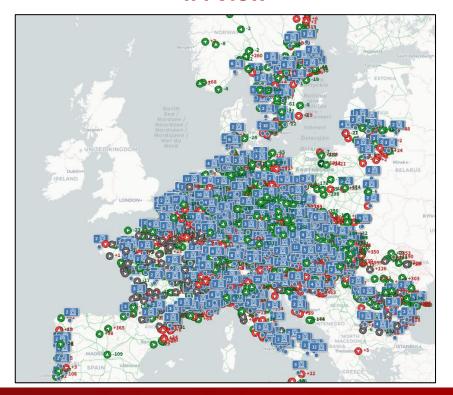


## **Train Visibility**

#### **TAF TSI**

Every stakeholder may exchange the (TAF) messages with other stakeholders involved in the same freight service, under the condition that the stakeholders are identifiable. These exchanges of messages may be charged by the sender.

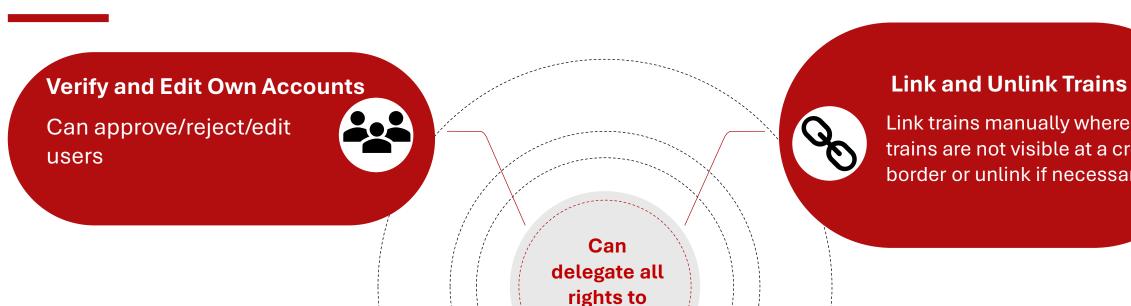
#### **IM View**



#### **RU View**



## **Role: Company Administrator**



Manage Company Groups, **Edit Own Company** 

Administer multiple companies of the same entity, edit settings for the visual part of TIS



Link trains manually where trains are not visible at a cross border or unlink if necessary

other users



#### **Company Agreements**

Can create, request and approve/reject company agreements

TRAFFIC MANAGEMENT

## 03 Completed and Ongoing Developments



## Implemented in 2025

1

**TIS Mobile** 

2

Incident Management Automation

3

**Network ETA** 

4

Automatic Unlinking of trains

- TIS Mobile has been available since June 2025. After the rollout, we observed a 30% increase in mobile usage compared to the previous month.
- TCR Message implemented
- TIS can accept this message to automate the incident creation
- ETA generated through machine learning based on TIS historical data
- Available in the TIS UI and TIS data exchange
- ETA Accuracy indicators

 Unlinking of trains is possible for cases where there is a route change or a full cancelation of a train

## **Ongoing Developments**

Single Sign On

75%

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

**Geo-positioning Data** 

70%

- 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

European Traffic Management Concept

40%

- All TCM information for freight and passenger trains will be recorded
- Include dangerous goods

and presented

- Communication platform in TIS
- Location search in English and user local language

**General Agreements Optimization** 

30%

- Requesting / Adding new agreements by users
- Notifications Online Company Agreement Documentation
- Synchronization of the company agreements with the outbound interfaces

## 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



**Arturas Paulauskas** 

IT Manager (TIS)

+43 676 560 07 17 arturas.paulauskas@rne.eu



Viktor Kádár

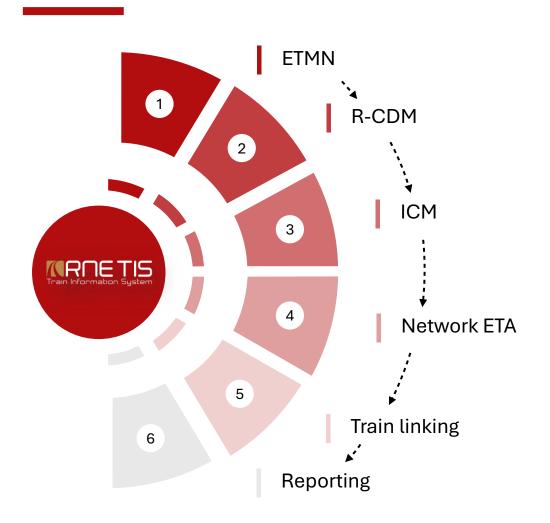
Junior IT Manager (TIS)

+43 676 705 6841 viktor.kadar@rne.eu Peter Šišolák, Head of Traffic Management at RNE

## **Exploring Traffic Management activities**



## TIS - Traffic Management Supporting Tool



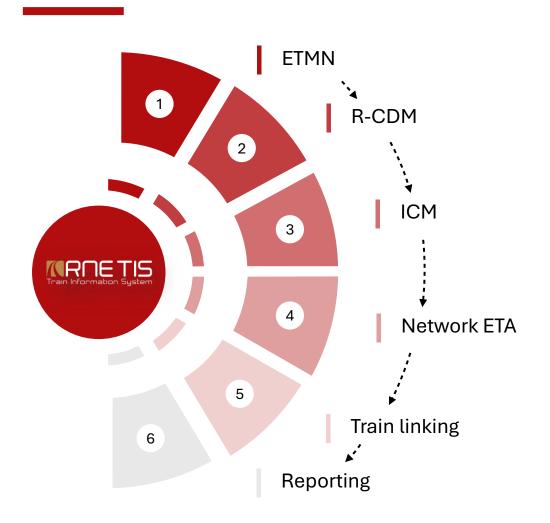
### TIS supports traffic management activities

- Provides an overview of entire international train journeys
- Train timetables
- Contains:
  - Train timetables
  - Train characteristic
  - Actual train delta
  - Train running statistics
  - Train composition
- Overview of main incidents on the European network
- Trains affected by incidents and their handling
- Train running forecast for any location

# 01 European TrafficManagement TrafficNetwork Concept



## TIS - Traffic Management Supporting Tool



### TIS supports traffic management activities

- Provides an overview of entire international train journeys
- Train timetables
- Contains:
  - Train timetables
  - Train characteristic
  - Actual train delta
  - Train running statistics
  - Train composition
- Overview of main incidents on the European network
- Trains affected by incidents and their handling
- Train running forecast for any location

# 01 European TrafficManagement TrafficNetwork Concept



## **European Traffic Management Network Concept**

### **Trigger**

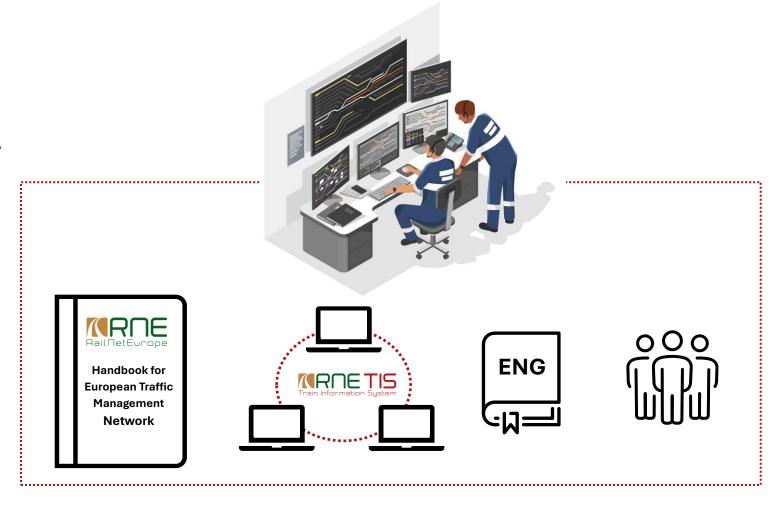
 Reaction to the EU Transport Strategy and European Commission document Sustainable and Smart Mobility Strategy from 2020.

### **Focus**

International train run coordination

### **Principle**

 Enhanced cooperation of national traffic control centres over the whole European network



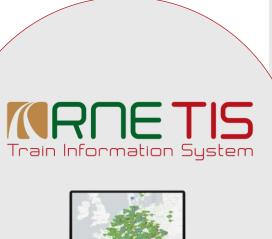
## **ETMN TIS Elements**

ETMN relies on several tools and modules to enhance functionality. The primary tools under development or improvement include:



### **Communication Platform &** Storage

Ensuring real-time and structured communication between Infrastructure Managers (IMs).



### **Network Status Module**

Providing a high-level view of railway network conditions, with both manual input and AI-based forecasts.





### **Incident Management Tool** (IMT+)

Enhancing real-time tracking and management of incidents affecting train operations.

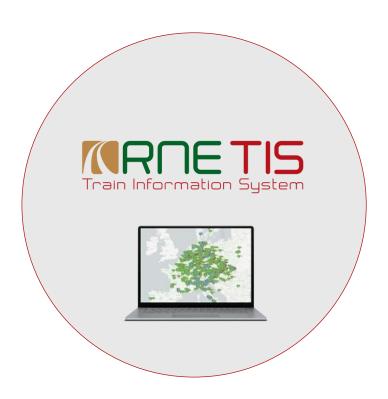


### **Capacity Status Module**

Monitoring and managing available cross-border railway capacity



## **European Traffic Management Network**



### **Expected benefits**

- Increased efficiency and capacity of the rail network
- Higher focus on international traffic
- Reliable international traffic management with higher punctuality and smaller delays
- More efficient border handling
- More efficient handling of disruptions
   with international impact with Efficient handling of affected trains

## 02 TIS - Train running forecasting

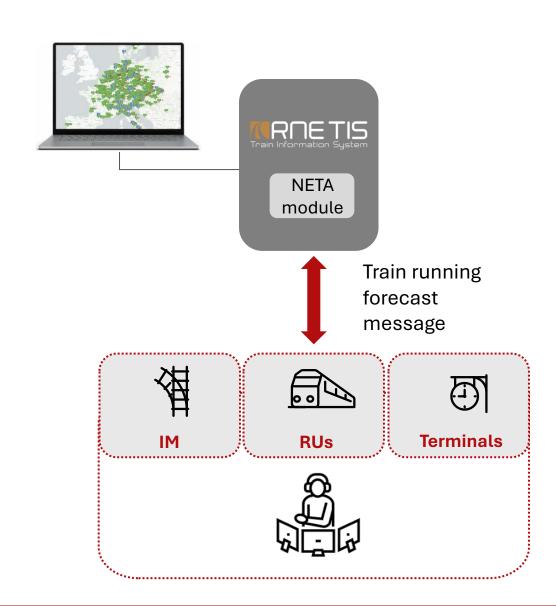


## **Train Running Forecast (ETA)**

- Prediction Network ETA module in RNE TIS
- Data confidentiality
- For all locations on the European railway network
- No train in TIS without forecasts
- High accuracy

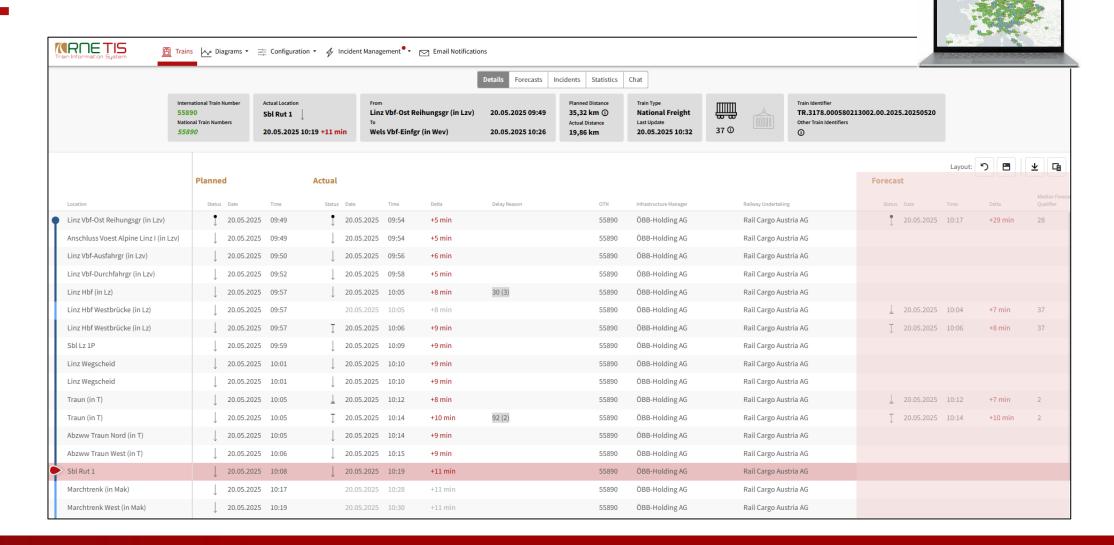
### **Benefits**

- Increased TM effectiveness
- Better resource management for all stakeholders
- Accuracy indicator attached
- Free in TIS UI



### Traffic Management

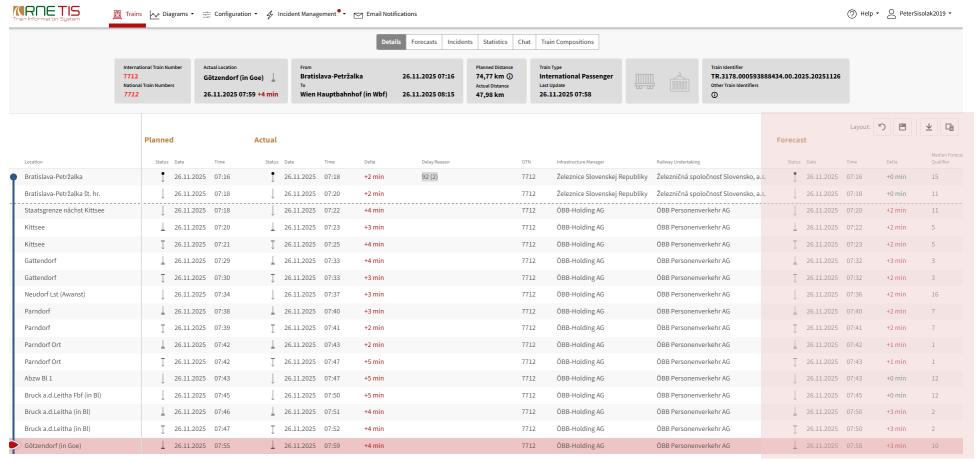
## **Train Running Forecast (ETA)**



### Traffic Management

## Train Running Forecast (ETA) – with NetworkETA





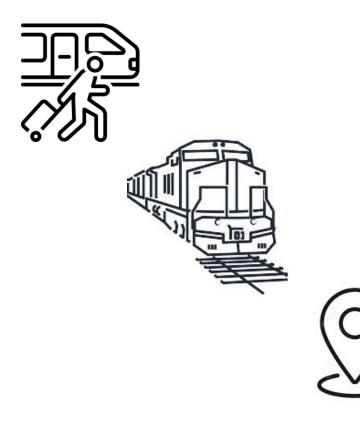
ALL

## **Network ETA forecasts**

Freight and passenger trains

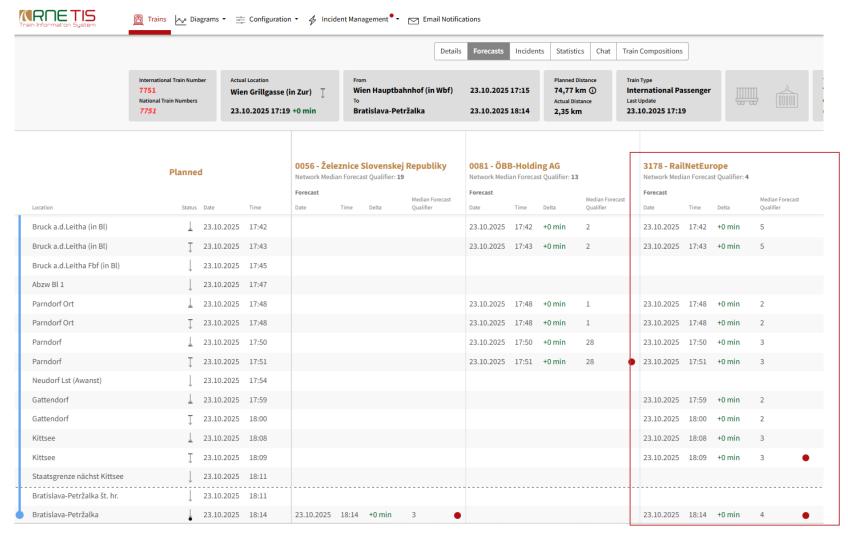
National and international trains

For each location in the timetables

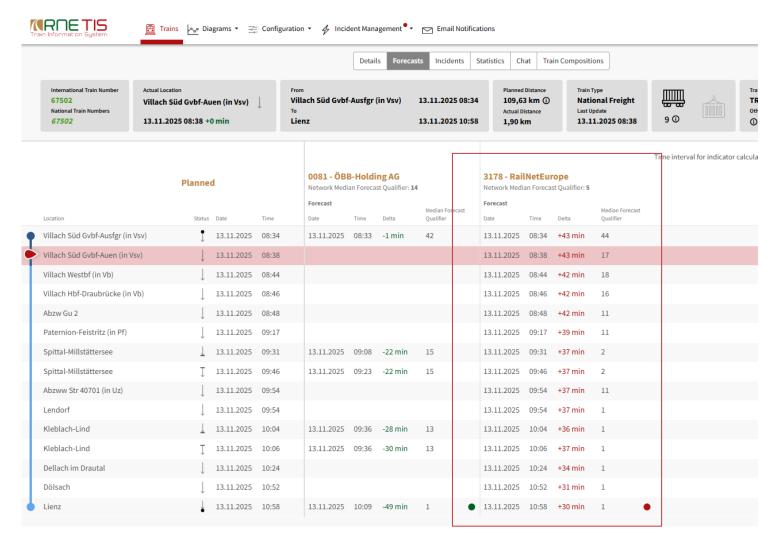


The Network ETA is the only tool forecasting entire international train run

## Network ETA – TIS interface – Passenger train



## Network ETA – TIS interface – Freight train



## **Network ETA – Implementation - DONE**



### **Benefits**

- Increased TM effectiveness
- Better resource management for all stakeholders
- Quality assessment accuracy indicator attached
- Free in TIS UI







# 02 TIS – Railway Collaborative Decision Making



### Current rail transport logistics chain is not prepared for increasing traffic volumes







- Strong focus on own supply chain activities
- Lack of cooperation and harmonised procedures in between different actors



### Missing information

- Lack of holistic forecasts for traffic management and customers
- Technical restrictions or missing communication formats



### **Planning uncertainties**

- Lack of predictability
- Re-active behavior rather than pro-active thinking



#### **R-CDM** comes with

- Definition of
  - new collaborative processes
  - additional timestamps
  - significant milestones



#### **R-CDM** enables



- Availability of timely information
- Forecasting
- Mutual decision process
- Involvement of relevant actors

Proper information flow will make operations more resilient and increase predictability



### **Infrastructure Manager**

- Decreasing overall delay minutes
- More predictable operations
- Improved capacity management
- Better quality of service



## Railway Undertakings & Shunting Operators

- Better reliability
- More cost-efficient operations
- Better resource utilisation
- Real-time monitoring
- Proactive re-planning



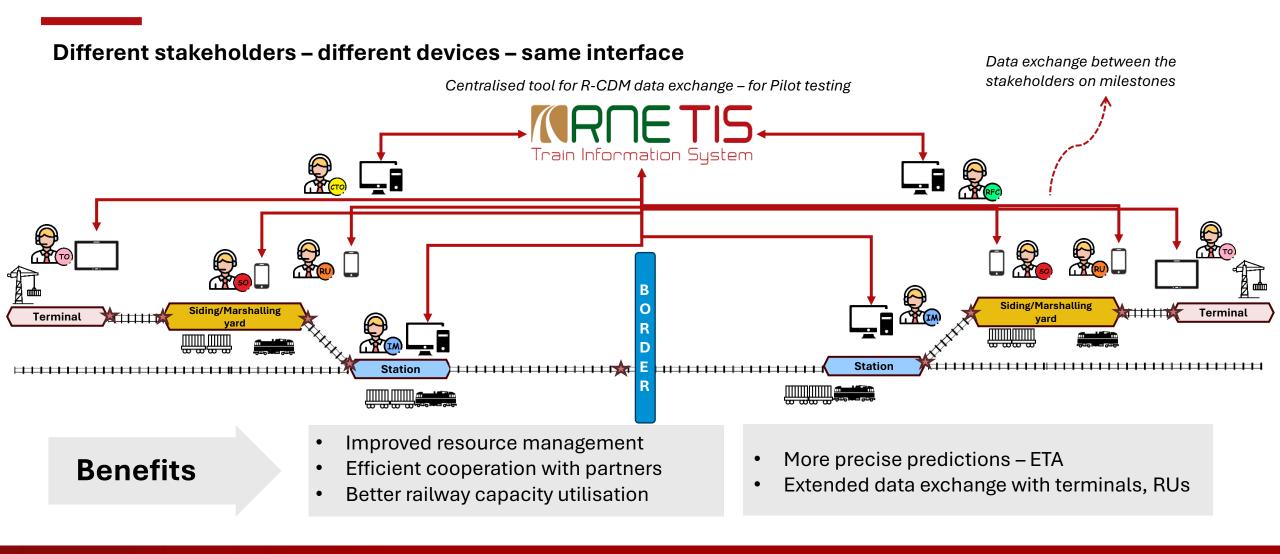
### **Terminal Operators**

- Better predictability
- Improved capacity utilisation
- Decrease in energy usage

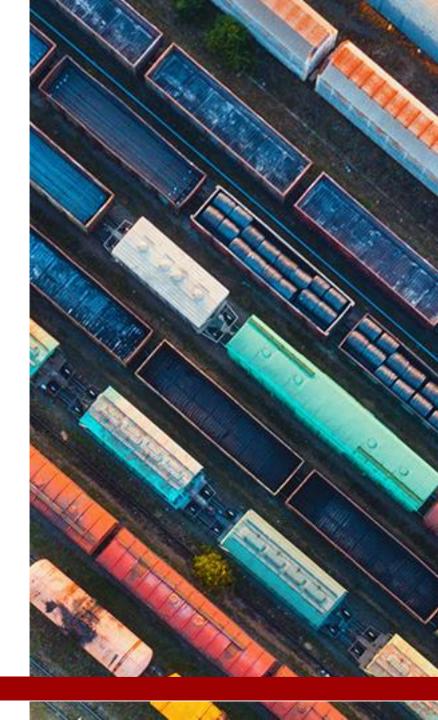


### **Intermodal Operators**

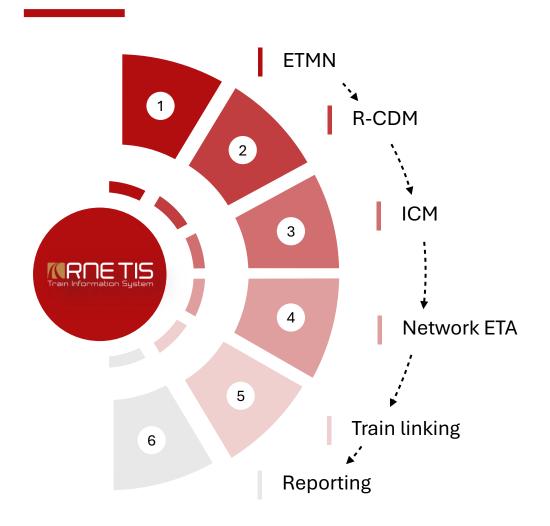
- Eliminated planning uncertainties
- Proactive collaboration
- Better quality of information



## 02 Summary



## TIS - Traffic Management Supporting Tool



### TIS for traffic management activities

- Supporting tool
- Bilateral data exchange remains request to replicate data to TIS
- Forecasting tool
- Communication tool
- Cooperation tool
- Incident management tool

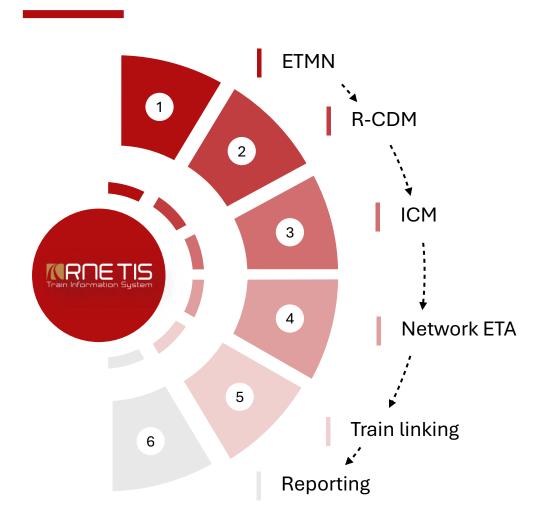
### Participants are invited to

- Become the TIS user
- Participate in TIS-related projects
- Start data exchange with TIS

## 02 Discussion



## TIS - Traffic Management Supporting Tool



### Question

Do you see the benefit of TIS Network ETA to improve efficiency of your processes?

## **Break-out Sessions Takeaways & Summary**

1

## TIS functions for new and advanced users

With Nektarios Zacharias
(Senior IT Manager, Team Leader TIS)

- How it works
- $\{0\}$
- Telematics
- Geo-Positioning
- Statistics

2

## **Exploring Traffic Management** activities

With Peter Šišolák (Head of Traffic Management)



3

### **Getting Started with TIS:**

Company contracts - product & services

With Jaroslav Lučkay
(Sales Manager)

- TIS Live MapTIS Data Flow
  - Onboarding

Thank you for participating in the 2025 TIS Webinar!





