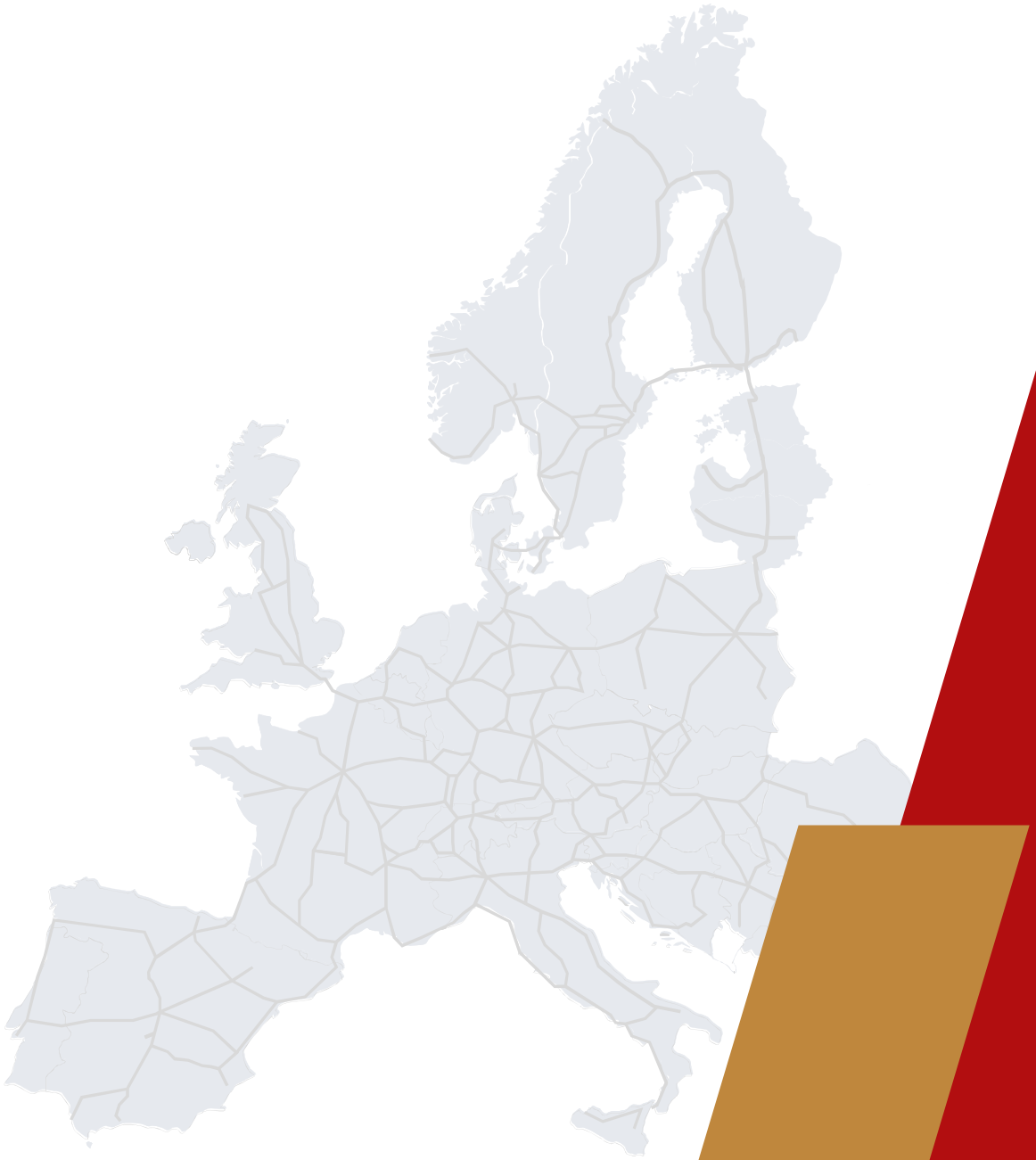
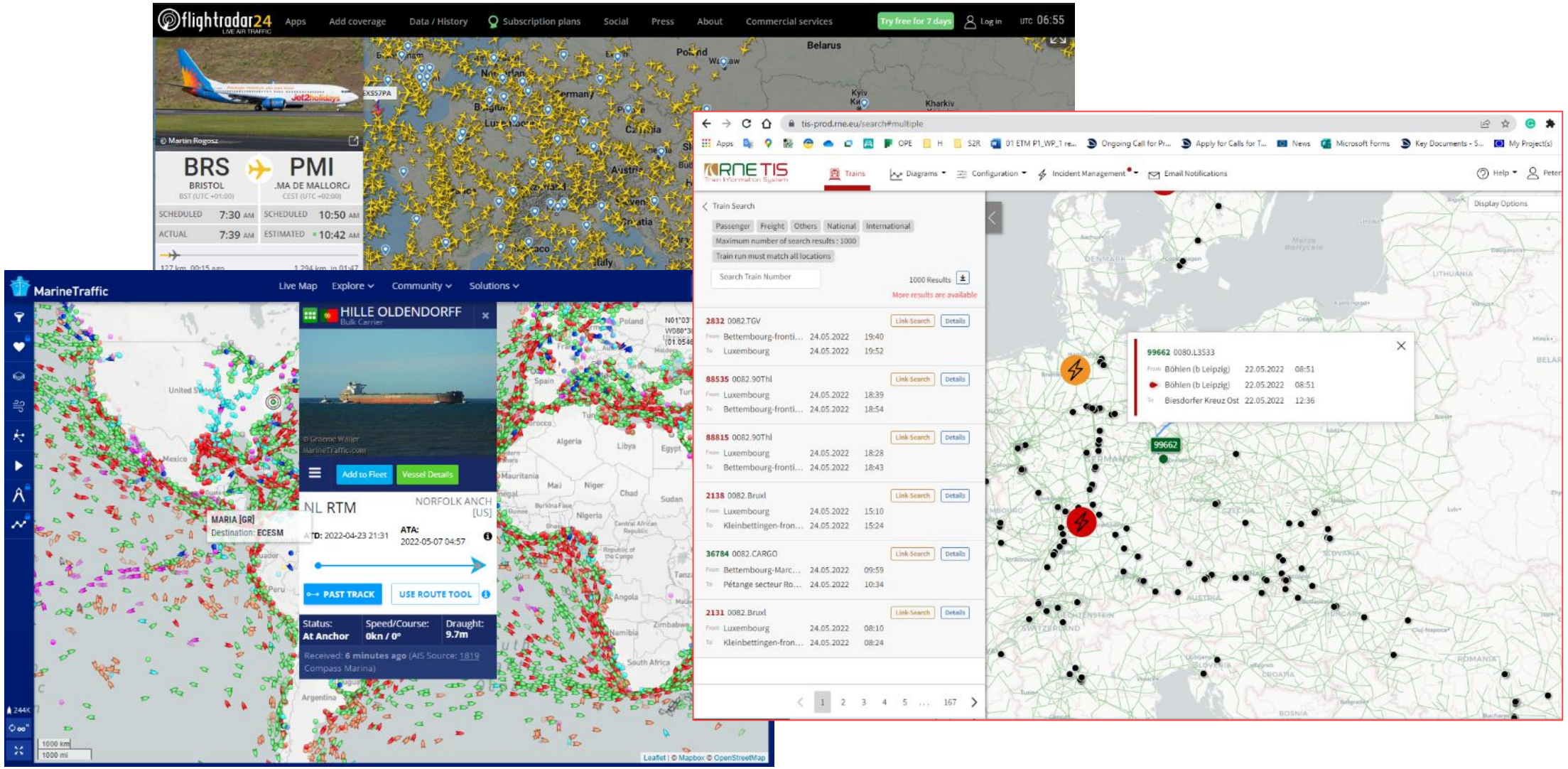


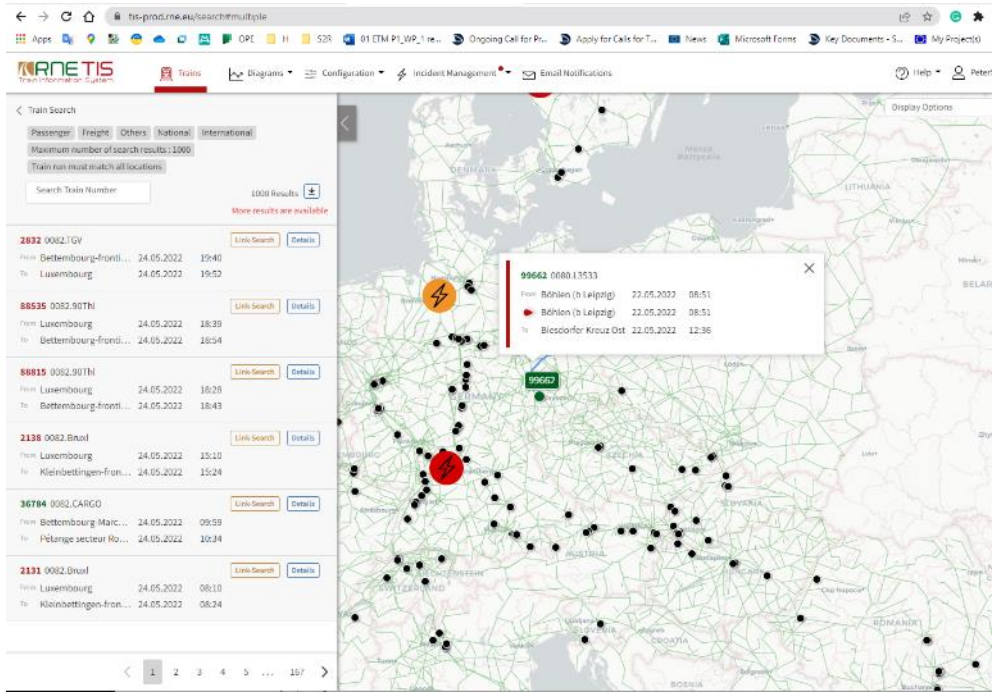
Meeting of the Advisory Groups of Railway Undertakings and Terminals

Vienna/ HYBRID – 30 March 2023

RNE TIS between platforms for sharing data on the movement of goods and people



RNE TIS as the only pan-European railway platform with train running information



- combines data from the national information systems of IMs and some RUs
- works on the unified TAF/TAP TSI platform
- provides data to national dispatch systems
- creates international routes from national data
- provides ETA
- support for managing train traffic in accidents
- Datawarehouse of train runs on the European network

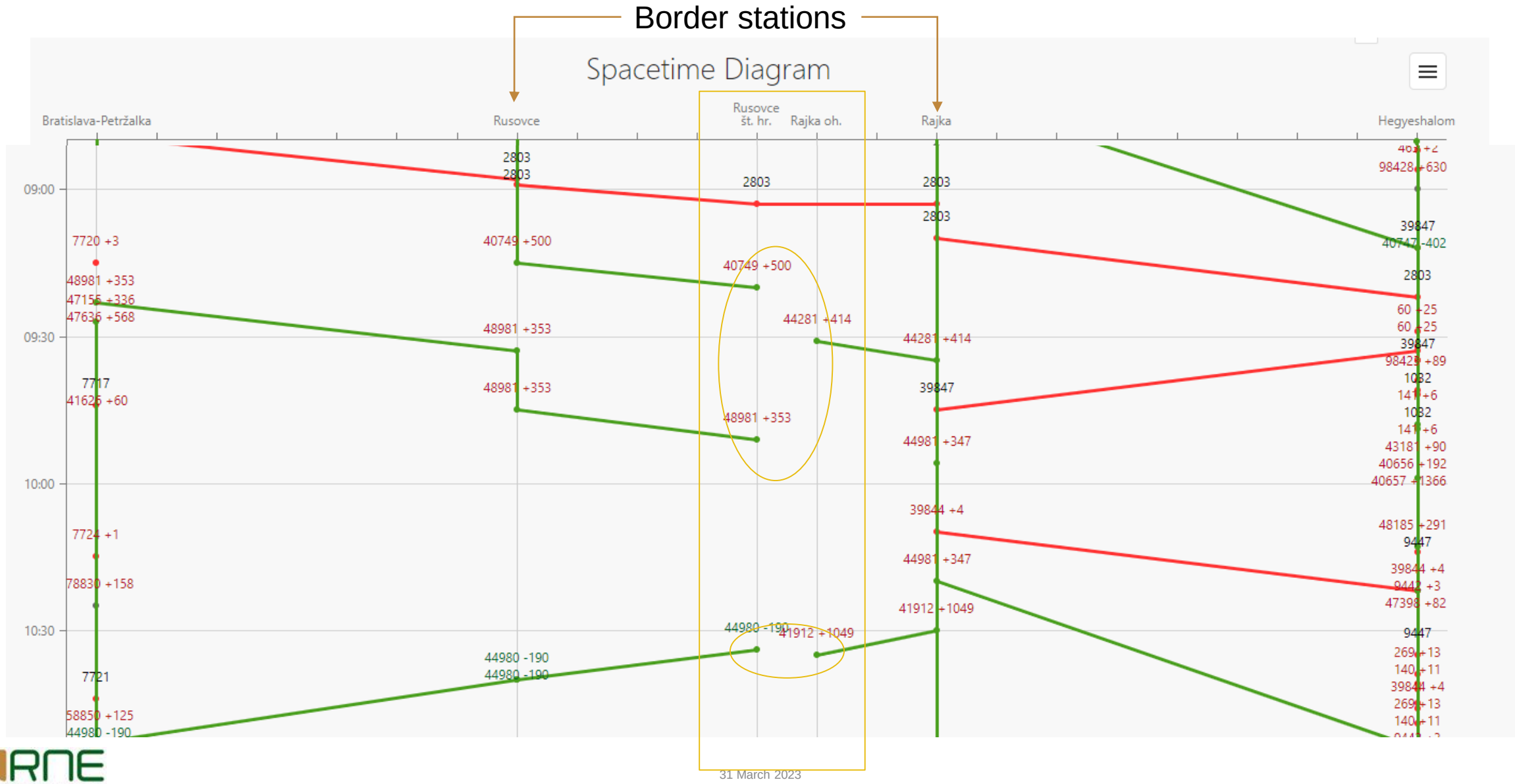
Where is my train located?

RNE TIS
Train Information System

Ask the national administrator for free web access

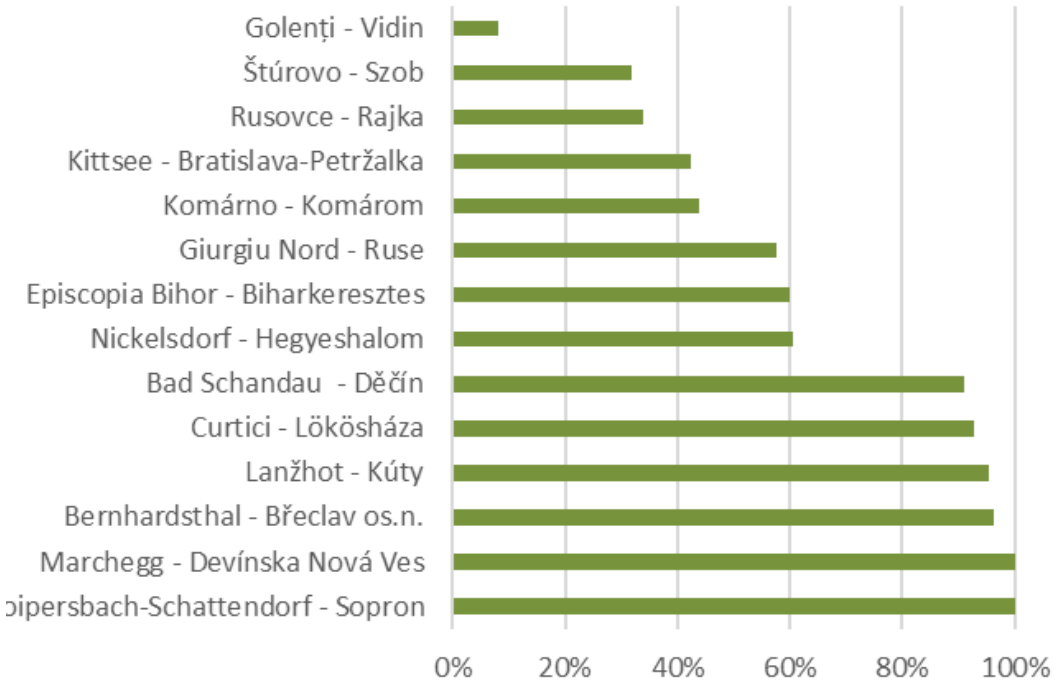
RNE
RailNetEurope

Trains at borders change train numbers and remain national

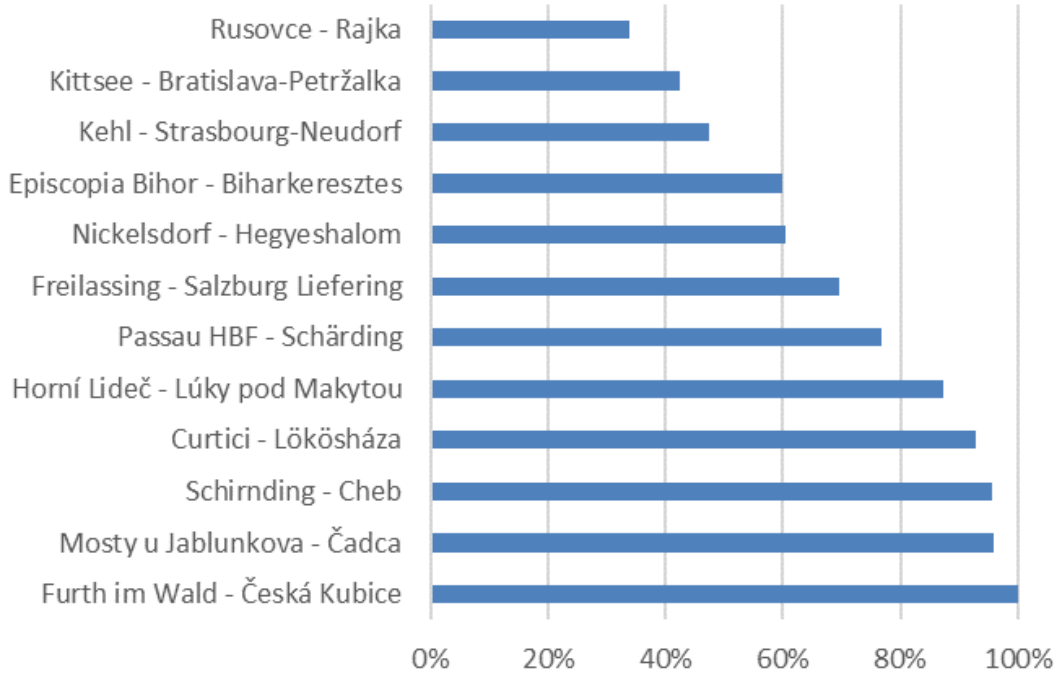


We still run an international train as several national one

RFC7 Orient/East-Med



RAIL FREIGHT CORRIDOR Rhine-Danube

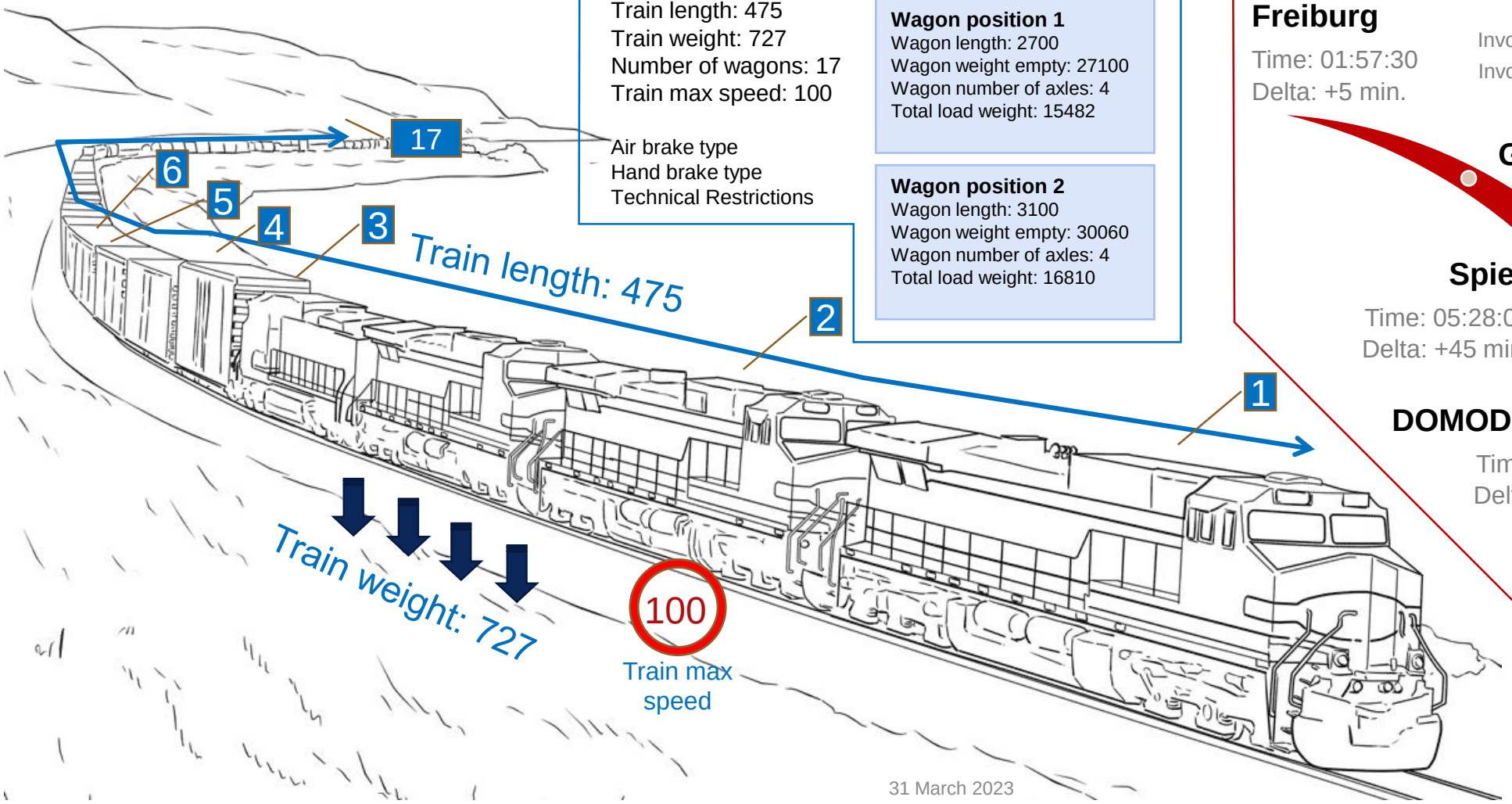


Share of linked trains at borders Feb 2023

TIS Data Exchange Within the Railway Sector

Exchanged TAF TAP /TSI Messages	Rules
Path Details	1-2 days before the Departure
Path Section Notification	Before the Departure / Real Time
Train Running Information	Real time
Train Running Forecast	Real time
Train Running Interruption	Real time
Train Delay Cause	Real time
Train Composition	Before the Departure / Real Time
Wagon Performance Message	After arrival at final destination

Train Run / Composition



Train composition data

Train length: 475
Train weight: 727
Number of wagons: 17
Train max speed: 100

Air brake type
Hand brake type
Technical Restrictions

Wagon position 1
Wagon length: 2700
Wagon weight empty: 27100
Wagon number of axles: 4
Total load weight: 15482

Wagon position 2
Wagon length: 3100
Wagon weight empty: 30060
Wagon number of axles: 4
Total load weight: 16810

Train running data

Freiburg
Time: 01:57:30
Delta: +5 min.

Involved IMs: DBNetz, SBB INFRA, BLS, RFI
Involved RUs: SBB Cargo, BLS Cargo

Gellert
Time: 03:34:44
Delta: +40 min.

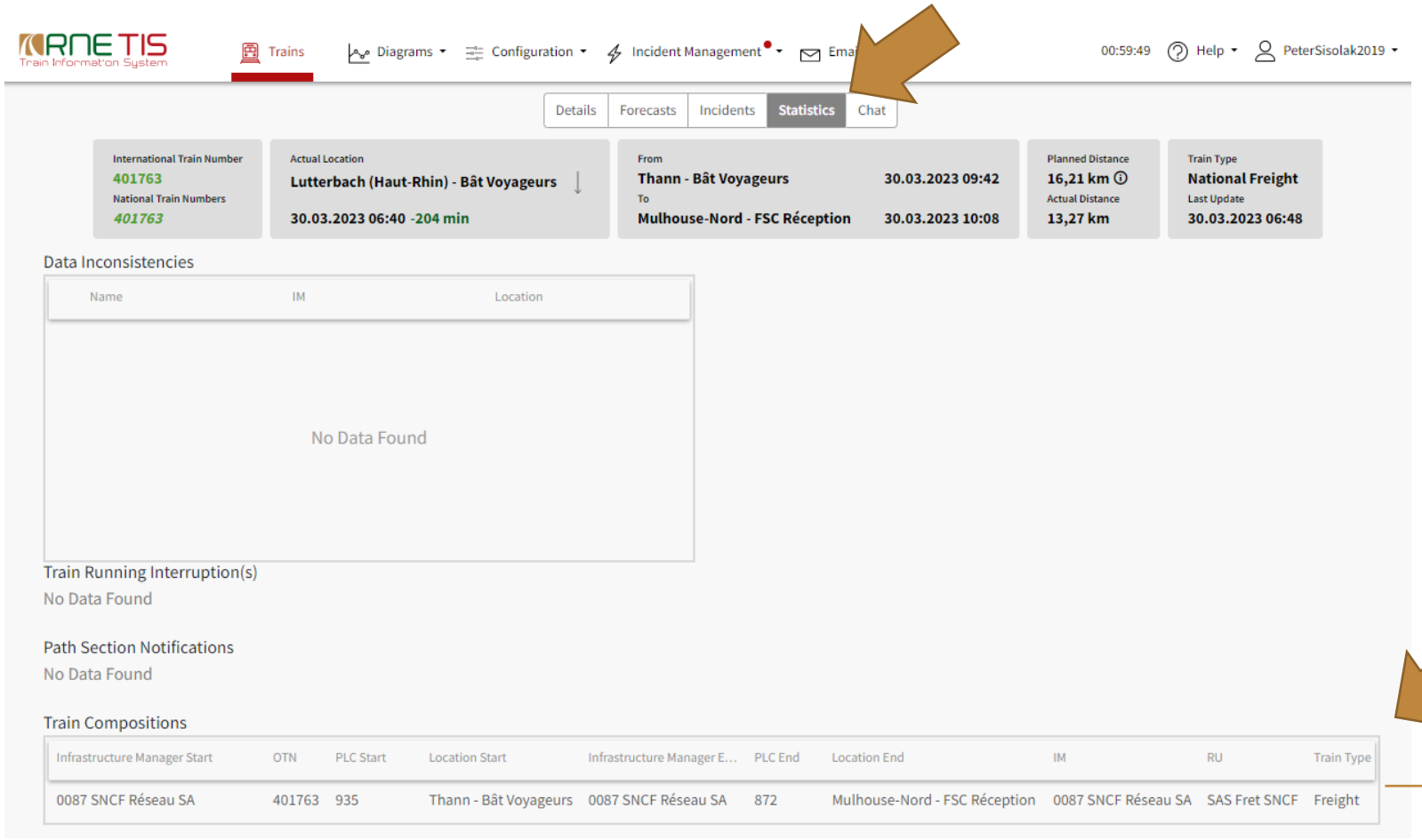
Spiez
Time: 05:28:04
Delta: +45 min.

Brig
Time: 06:18:47
Delta: +26 min.

DOMODOSSOLA
Time: 07:16:30
Delta: +28 min.

NOVARA
Time: 11:48:30
Delta: +132

Train Run / Composition is presented in TIS for subjects involved in the train run



Train composition data

Train length: 475
Train weight: 727
Number of wagons: 17
Train max speed: 100

Air brake type
Hand brake type
Technical Restrictions

Wagon position 1
Wagon length: 2700
Wagon weight empty: 27100
Wagon number of axles: 4
Total load weight: 15482

Wagon position 2
Wagon length: 3100
Wagon weight empty: 30060
Wagon number of axles: 4
Total load weight: 16810

Train Compositions

Train Weight	Train Length	Train Max Speed	Train Max Axle Weight	Brake Type	Brake Weight	Vehicles	Axles	Exceptional Gauging	Dangerous Goods	Associated OTNs	Loco Number
156	28	100		Freight	59	2	8	No	Allowed		928700601208

TIS uses train composition information as reliable info to link trains with different train numbers but the same cargo.

Train Number **40000** Infrastructure A

Train Number **45000** Infrastructure B

Border Station

hash value (token)

A hash value (token) will be created for every train. If the token is identical at the same border and on the same day, the train will be linked automatically.

Different Train Number Linking based on Train Composition

Case one:

OTN - a — IM 1

LINK !

OTN - b — IM 2

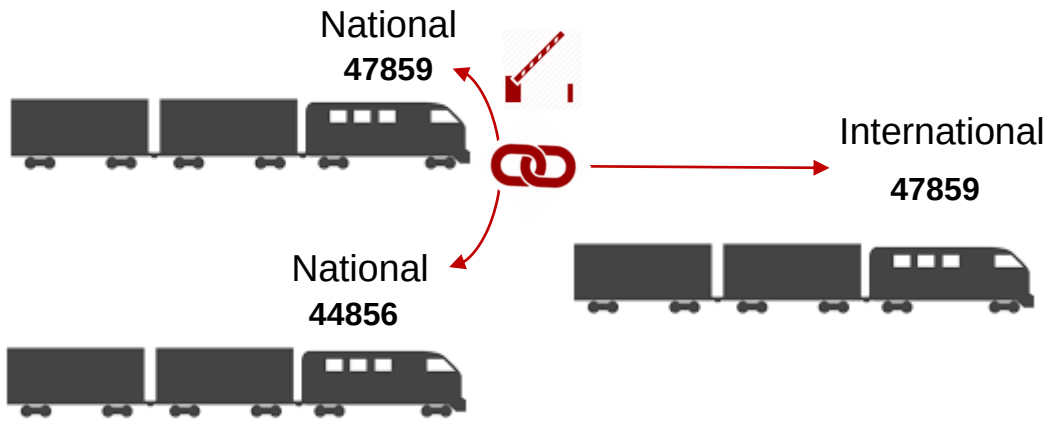
Case two:

OTN - a — IM 2

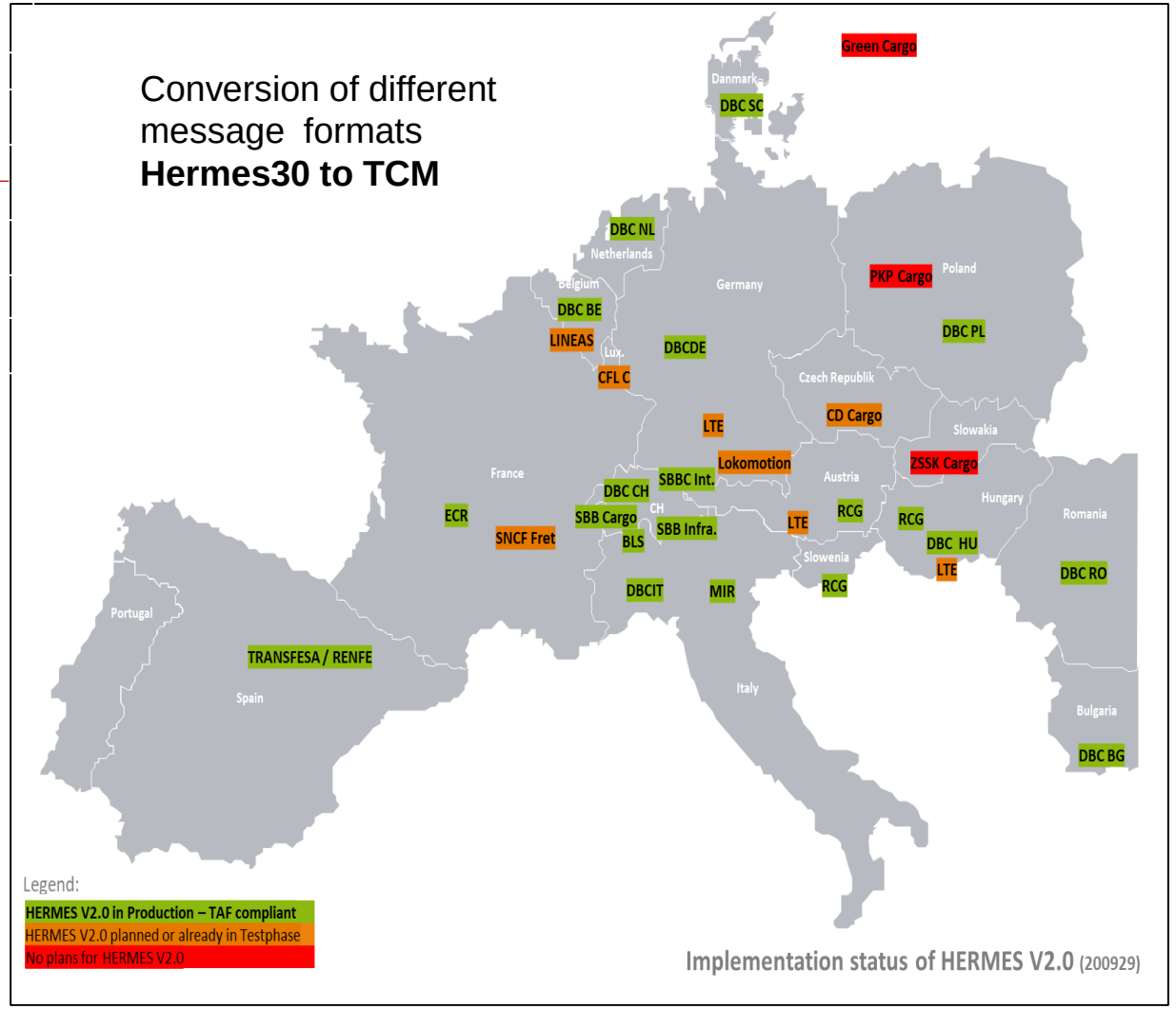
LINK !

OTN - b — IM 2

80 % Fitting: wagon number – total load



Conversion of different message formats **Hermes30 to TCM**

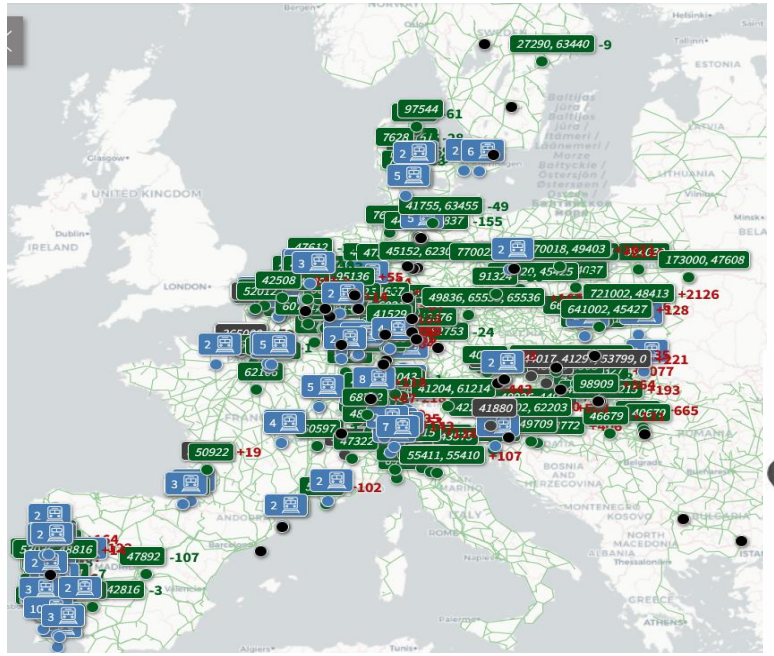


ERA Certified

Overview of participating companies TCM/Hermes30

TCMs - daily

- for around 700 trains
- on 1200 segments



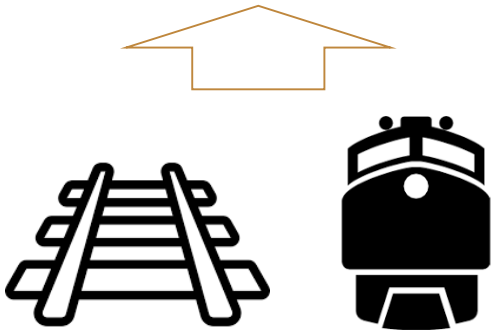
RU	Message Format	Status
DB Cargo DE	Hermes30	active
DB Cargo FR	TCM	active
DB Cargo DE for Bremen Port	Hermes30/TCM	active
DB Cargo NL, PL	TCM	active
LTE AT, DE, PL, NL, HU	TCM	active
Lineas FR, BE, DE	TCM	active
SBB Cargo Int CH, DE, NL	TCM	active
BLS Cargo IT, CH, DE, NL	Hermes	active
SNCF FRET	TCM	active
RailCargo Austria AT, IT, SZ, HU	TCM	active

The provision of TCM messages and train linking is beneficial for the whole railway sector and logistic chain

RNE TIS
Train Information System

Train linking in TIS

- Manualy
- TIS algorithm
- TCM
  - IMs
  - RUs

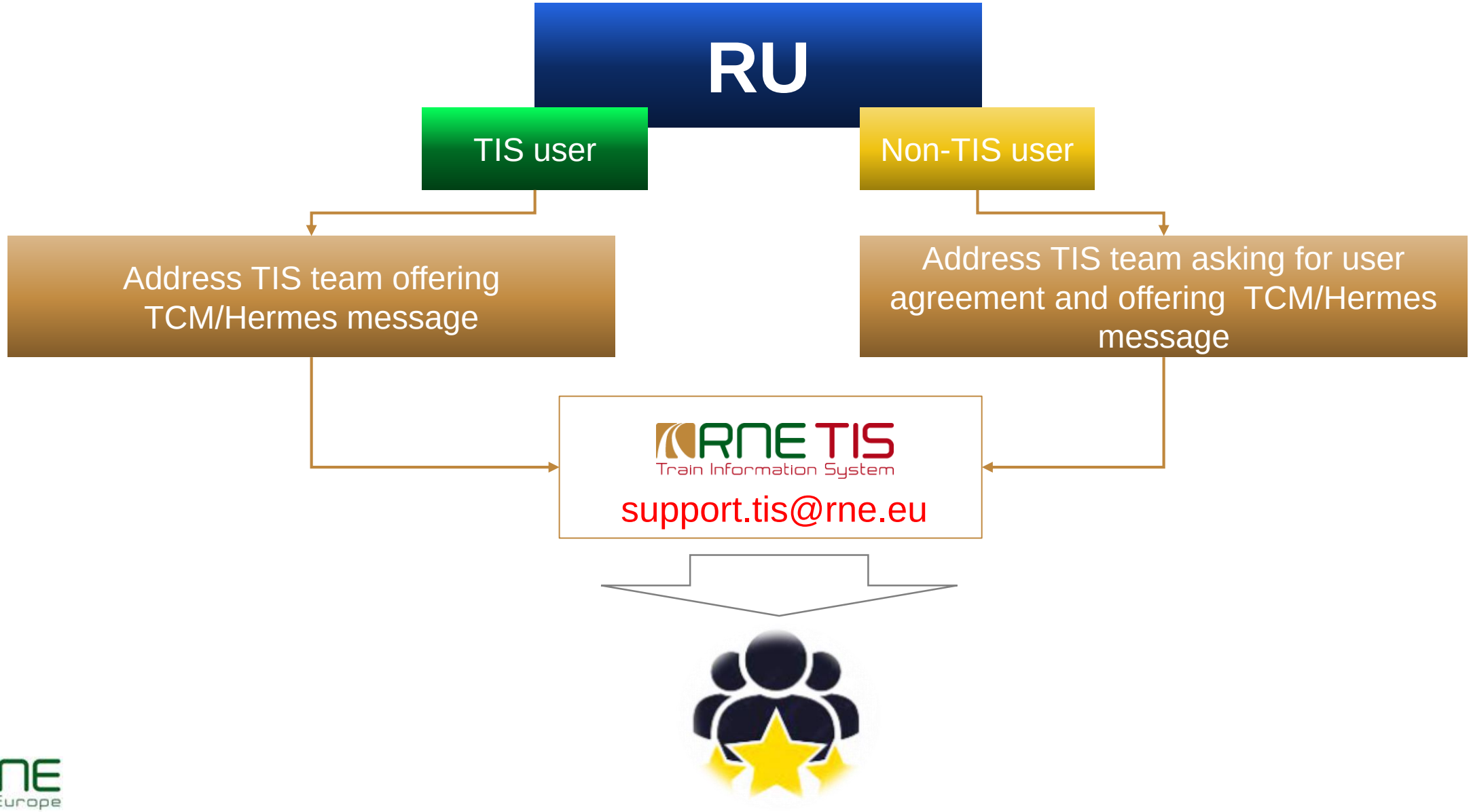


- unhiding international trains
- Introducing reality
- Providing additional information to the process

Benefits

- Complete international train running data
- Information on a train run and its composition from origin to destination for railway staff and customers
- Information on train handover and interchange
- More reliable performance reporting of international traffic
- Enhanced reporting possibilities
- Higher railway credibility

Required actions from the RU side are simple and easy



Thank you for your attention