



FIT FOR FREIGHT

Corridor development

UIC Freight – competence centres

**LOAD
SAFETY**

**WAGON
UTILISATION**

**DANGEROUS
GOODS**

**TRAIN
OPERATION**

**COMBINED
TRANSPORT**

**DATA
EXCHANGE**

**CORRIDOR
DEVELOPMENT**

**RAIL FREIGHT
FORWARD**

UIC Freight – new website



ABOUT ▾

ACTIVITIES ▾

REGIONS ▾

PRODUCTS & SERVICES ▾



Home / Freight

FREIGHT

Let's MODAL SHIFT to an environmentally sustainable future where rail plays a central role in mobility and, asserts itself as its unwavering backbone. To support this ambition, UIC is a key partner working with its members to drive modal shift. This is achieved by harmonising business, operational and information processes which are at the heart of rail freight's daily business activities.

WAGON UTILISATION

Wagons are a key asset in rail freight transport. UIC works in this area to ensure the interoperability, availability, and easy and safe hand over of wagons, which has a direct impact on operational capacity and overall cost. [Read more...](#)

ATTI Claim Settlement

Corrective Maintenance / Restoring fitness to run GCU

Technical Inspection Wagon Utilisation

COMBINED TRANSPORT

Combined transport (CT) is key to achieve a carbon neutral transport sector in the context of the European Green Deal. Combined Transport, presenting a range of benefits, contributes towards a better quality of life and proposes a seamless transport solution in order to improve the productivity of the entire chain. [Read more...](#)

CORRIDOR DEVELOPMENT

The development of intercontinental rail freight corridors opens extremely promising perspectives to the growth of rail transportation over long distance, as an alternative to other modes - maritime or road transport - or as an effective partner in the global logistic chain. [Read more...](#)

ECCO Freight Forwarders

DANGEROUS GOODS

The transport of dangerous goods is subject to specific regulatory measures stipulated by the competent international, European, or national authorities, as well as certain measures taken by companies themselves. Dangerous goods safety on the railways is based on general railway operations safety. This area is managed by UIC in close consultation with its members and in cooperation with other stakeholders. [Read more...](#)

TRAIN OPERATION

Harmonisation is the basis for a seamless international and border crossing freight traffic. UIC facilitates best practice sharing to ensure interoperability as well as increase commercial speed of train traffic. Key part of this competence centre is corridor development, ensuring that significant traffic flows are being prioritised and investments being put in place. [Read more...](#)

Exceptional Consignments Operations Quality

XBorder

DATA EXCHANGE

Digitalisation is key tool to facilitate business growth, reduce future costs and mitigate errors. UIC manages and develops a broad portfolio of transversal digital solutions, enabling efficient data exchange between supply chain partners. At utmost importance it the development of DP-RAIL, an RFF initiative to create an open European Digital Ecosystem to facilitate seamless interoperable information flows between all rail freight entities. [Read more...](#)

Border Points Coding DIUM DIUM/NHM GRU

IT working group NHM RailData

LOAD SAFETY

The safety of goods is pivotal in rail freight transport. Hence, UIC has produced Loading Guidelines to clearly outline the key principles and technical recommendations for loading methods, which will ensure that goods reach the intended destination unscathed. [Read more...](#)

Loading guidelines Loading Guidelines - Working group

UIC Pallets

RAIL FREIGHT FORWARD

Rail Freight Forward is a coalition of European rail freight companies that are committed to drastically reduce the negative impact of freight transport on the planet and mobility, through innovation and a more intelligent transport mix. UIC Freight acts as the overall coordinator of the RFF program and related technical projects. [Read more...](#)

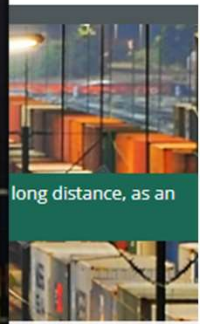
DEEP DIVE INTO CORRIDOR DEVELOPMENT



JOOST OVERDIJKINK, UIC

UIC - ECCO COORDINATION

UIC Freight – Corridor Development



long distance, as an

ECCO

For the members, and with the members, the Efficient Cross Corridor Organisation advocates stakeholder interests in the harmonisation of European Rail (...) [Read more...](#)

UIC IRS on Rail Freight Forward Contingency Management handbook

For the members, and with the members, the Efficient Cross Corridor Organisation advocates stakeholder interests in the harmonisation of European Rail Freight Corridors (RFC), whose aim is to facilitate rail freight across Europe and mitigate any arising throughput or capacity disruptions. We constantly advocate the implementation of productivity enhancements, and we address adverse practices at the multiple decision levels. We use direct operational input from almost all RUs operating on EU corridors



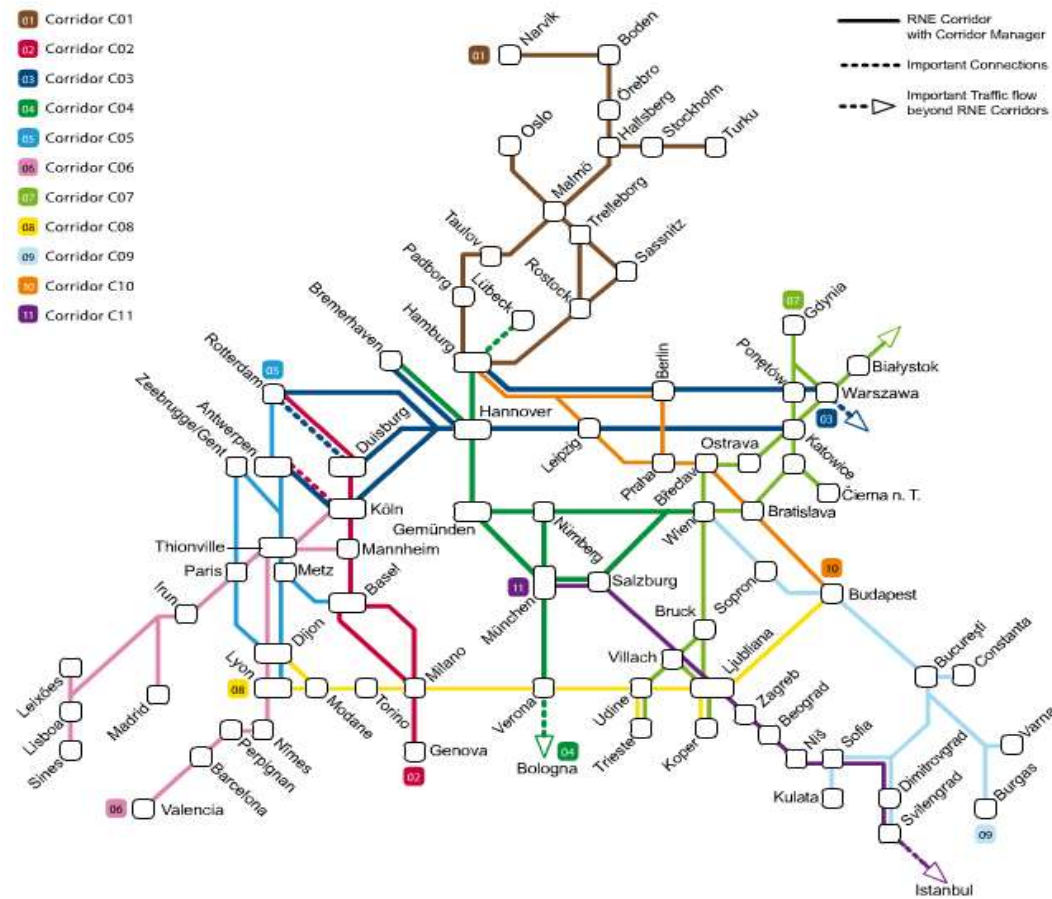
EFFICIENT CROSS CORRIDOR ORGANISATION



Corridors as vectors for cooperation
Fostering an international approach to support freight in Europe

Corridor beginnings, 2004 ...

- RNE: Rail Net Europe (established in 2004 by IMs and Capacity Allocation Bodies)
- Exclusively on railway corridors, numbered 1 to 11
- Voluntary coordination common processes and tools (pathfinder, real-time train data, etc.)



Initial multi-modal corridors, 2007-2013

- Multimodal but with rail priority
- 30 projects
- Budget EU 2007-2013 = 8 billion EUR
 - co-financing studies up to 50%
 - realisation projects up to 20-30%
- Total EU Budget = 225 billion EUR



Rail Freight Corridors (RFCs), 2010...

**Regulation
No 913/2010
(EU)
concerning a
European
rail network
for
competitive
freight**



Rail Freight Corridors (RFCs) map 2020



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Corridor basics

Routes:

- Corridors chosen along existing traffic flows and potential, promising new flows
- Connect to transcontinental corridors via Belorussia, Turkey and the Black Sea

Principle products:

- Offer guaranteed paths along the corridors
- Coordinate works along the corridor
- Coordinate disruption management

Governance:

- Corridors are legal entity
 - with a management structure
 - a Railway Advisory Group (called 'RAG')
 - a Terminal Advisory Group (called 'TAG')
 - and an Executive Board with Member State representation

Rail Freight Corridor (RFC) Network overview

EU policy - Regulation (EU) 913/2010

Implementation and development of Europe-wide network of Rail Freight Corridors

(Additional to the TEN-T Regulation)

Geographics

→ **11 corridors, completion 2030**

→ in the eyes of RUs, corridors are precursor of Network wide TEN-T parameter implementation

Objective of the regulation - **Make rail freight compatible with other modes**

Good quality and sufficiently financed railway infrastructure > freight transport services to be provided under good conditions:

- compatible **commercial speed**
- compatible **journey times**
- **reliable**: service provided by Infra Manager (IM) corresponds to contractual agreement between IM and Railway Undertakings (RUs)

Products:

Capacity reserved for freight, coordinated across borders, platform for international traffic issues to be addressed, coordination of works along the corridor, coordination of disruption management

Trans-European Transport Network (TEN-T), 2013...



**Regulation
No 1315/2013
(EU) Union
guidelines
for the
development
of the trans-
European
transport
network**



Harmonised infrastructure

Main infra parameters for corridors:

- ECTS-ERTMS
- loading gauge P400
- electrification
- 740m trains
- 22.5 tons axle load

UIC corridor requirements and parameters study:

<https://uic.org/IMG/pdf/requirements-ru-4the-implementation-of-european-rail-freight-corridors.pdf>



Relevance and importance










Actions proposed by RUs

Impact and consequences for the rail freight business if action is not taken



**REQUIREMENTS OF RAILWAY UNDERTAKINGS
FOR THE IMPLEMENTATION OF EUROPEAN
RAIL FREIGHT CORRIDORS**

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Trans-European Transport Network (TEN-T) overview

EU policy - Regulation (EU) 1315/2013

Implementation and development of Europe-wide network of:

- Railway lines and terminals
- Roads
- Inland waterways & Maritime shipping routes
- Ports & Airports

Part of EU objective - **Single European Transport Area**

Seamless, safe and sustainable mobility of persons and goods

Geographics

- Core Network: **9 corridors, completion of parameter implementation 2030**
- Comprehensive Network: covers all European regions completion 2050

Objective of Regulation:

- close gaps
- remove bottlenecks
- remove technical barriers (harmonized infrastructure)
- strengthen social, economic and territorial cohesion in the EU

Standard parameters for harmonized infrastructure:

740m trains, 22.5t max axle load, loading gauge CP70/400, electrification, ERTMS

Tools

- Financial incentives via different support programmes

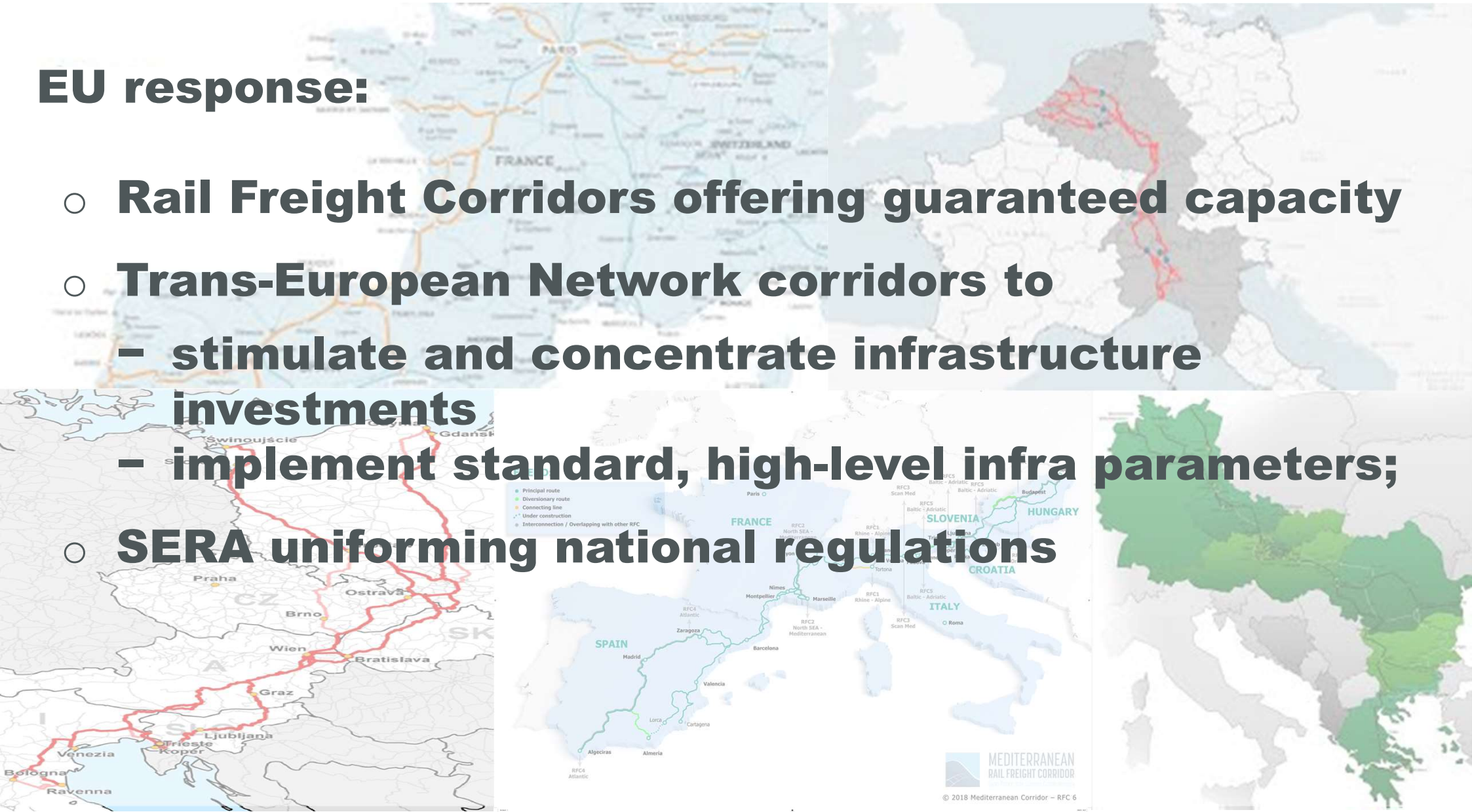


What rail freight needed:

- ▶ **smooth, ‘borderless’ international traffic**
 - harmonised infrastructure parameters, rules, procedures
- ▶ **smooth interchange between modes**
- ▶ **enough capacity conforming to market needs**

EU response:

- Rail Freight Corridors offering guaranteed capacity
- Trans-European Network corridors to
 - stimulate and concentrate infrastructure investments
 - implement standard, high-level infra parameters;
- SERA uniforming national regulations



...evaluation in a nutshell

Challenge for Rail:

! All modes promoted, strong counter-lobbies
non-rail modes hamper rail freight transport

Consequences:

- ! Implementation TEN-T parameters lags behind
- ! ERTMS is not implemented in harmonized way

! Get member-state focus on Rail:

- Investing in Harmonization & Parameters
- Level playing field

Positive:

- ✓ The legal basis fosters national investments and makes EU aid possible
- ✓ There is an agreed goal amongst states: a Single European Railway Area.
- ✓ UIC objectives match EU objectives

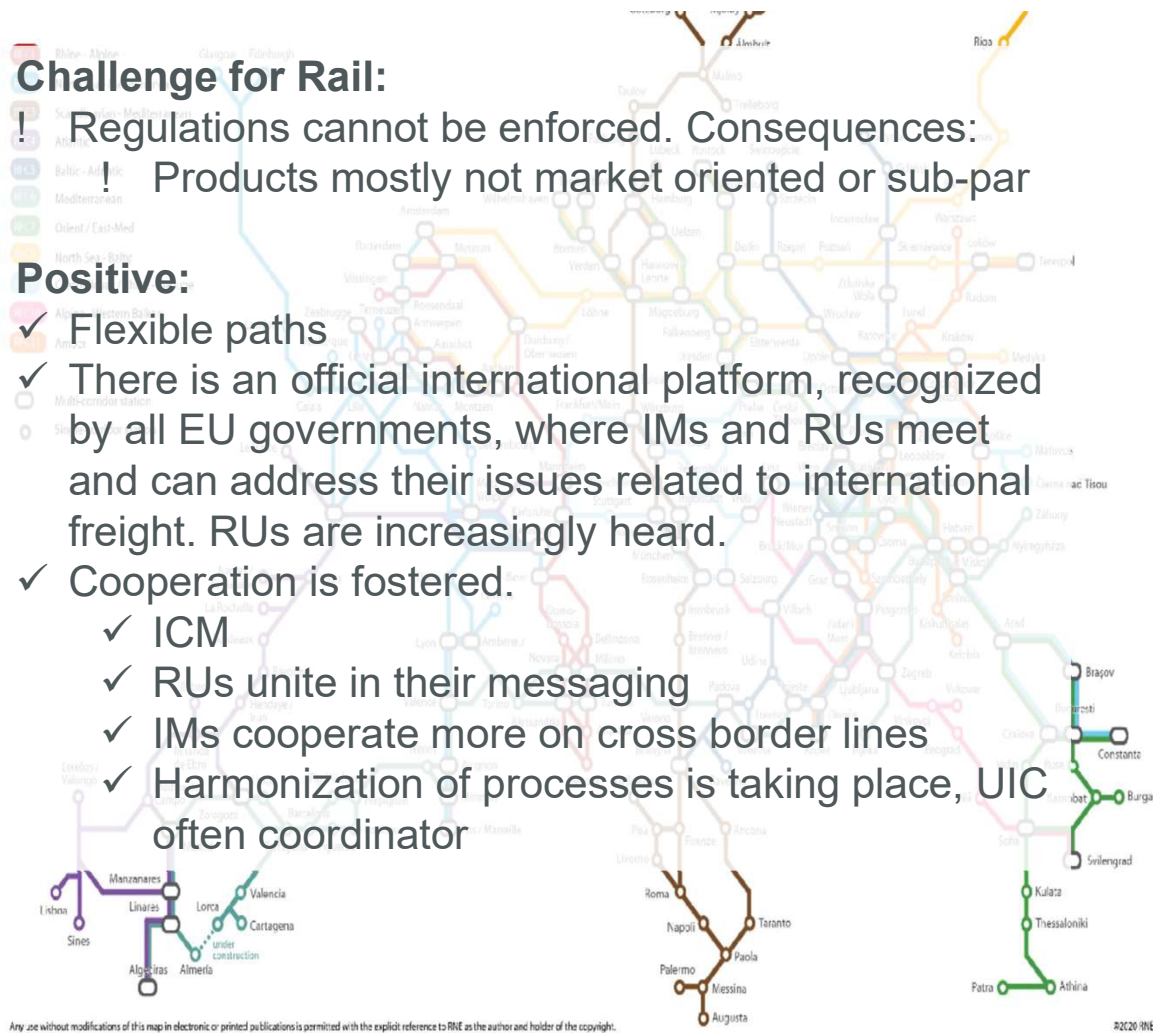
Challenge for Rail:

! Regulations cannot be enforced. Consequences:

! Products mostly not market oriented or sub-par

Positive:

- ✓ Flexible paths
- ✓ There is an official international platform, recognized by all EU governments, where IMs and RUs meet and can address their issues related to international freight. RUs are increasingly heard.
- ✓ Cooperation is fostered.
 - ✓ ICM
 - ✓ RUs unite in their messaging
 - ✓ IMs cooperate more on cross border lines
 - ✓ Harmonization of processes is taking place, UIC often coordinator



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EFFICIENT CROSS CORRIDOR ORGANISATION

Coordination

Devise joint new solutions for RUs

Best practice sharing

Vector for sector projects

Take initiative

Share issues

Joint input IM/RFC

Cross-vertilization

Joint representation corridor management

Operational input CEOs





**ANDREA MARCO PENSO, DB CARGO
CHAIR RU ADVISORY GROUP RFC SCAN-MED**

INFLUENCING CROSS BORDER GIGA PROJECTS

Locomotives

- Voltage
- CCS on-board unit
- Pantograph geometry and contact strip material

Infrastructure

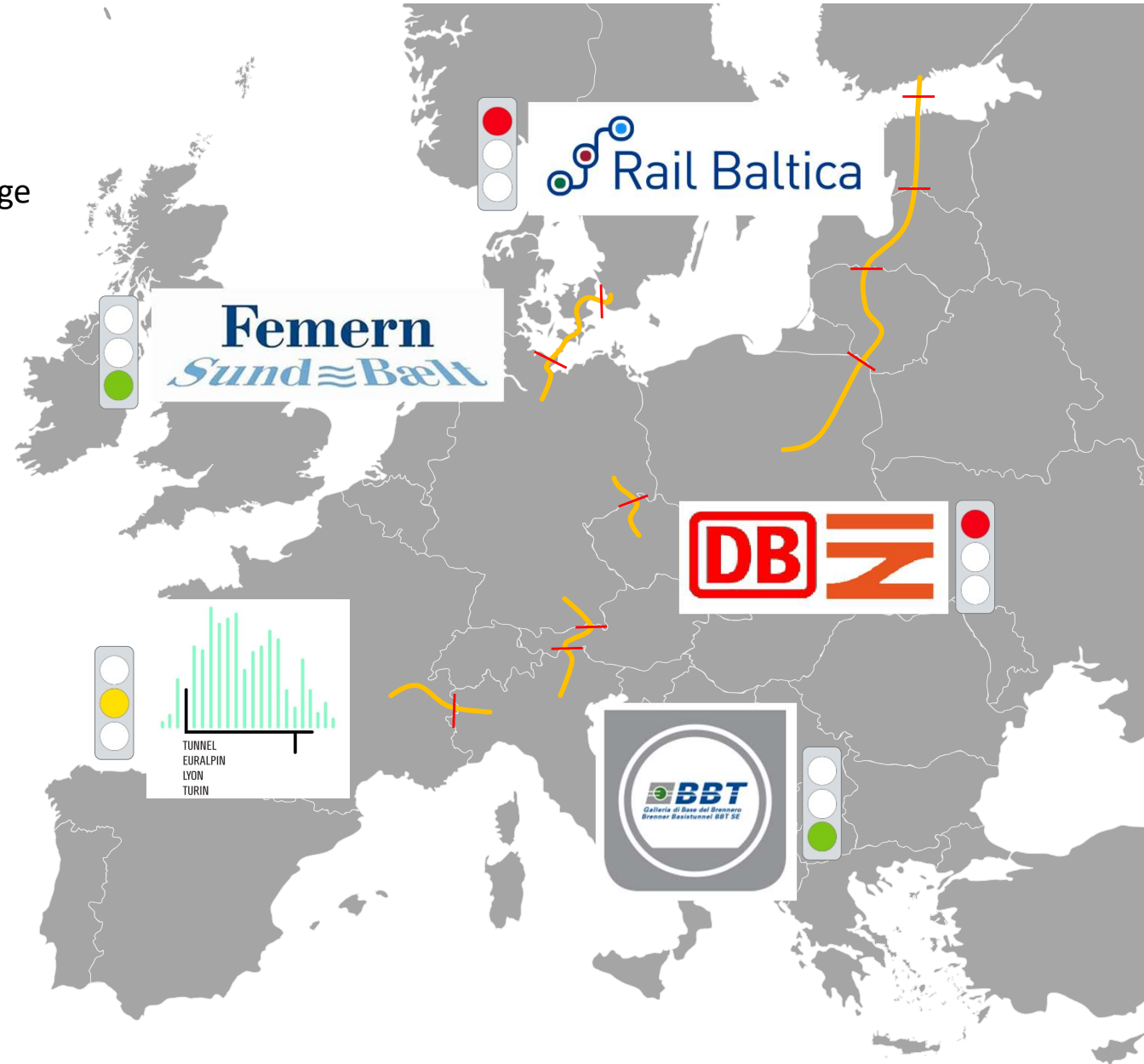
- CCS system
- Catenary voltage

Operations

- Activities at borders due to national rules (train parameters, train composition, brake settings, waste and RID transports)
- RU-IM communication
- Train operating rules (simplified corridor certification)

Labour aspects

- Taxation regime
- Health and safety laws





**MARTIN ERLINGER, RAIL CARGO GROUP
CHAIR RU ADVISORY GROUP RFC RHINE-DANUBE**

QUALITY CIRCLE OPERATIONS

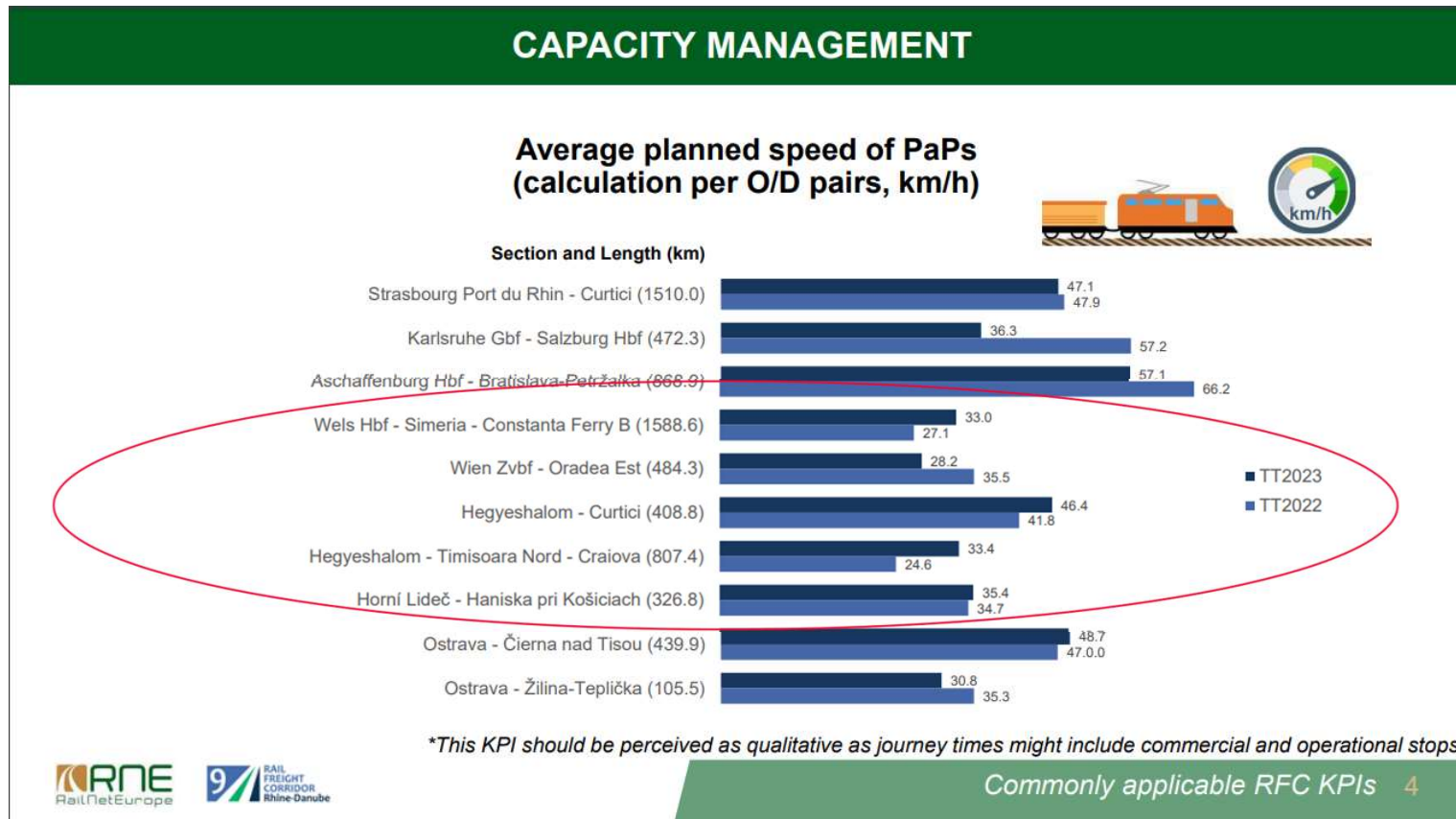


The payoff of endurance
Passau & Curtici border crossings and
enhancing traffic fluidity

Martin Erlinger – Chair RU AG RFC RhD

Rail Freight Corridors as *the* driver of competitive international rail freight traffic

Speed and reliability do matter - they are main pre-requisites for modal shift



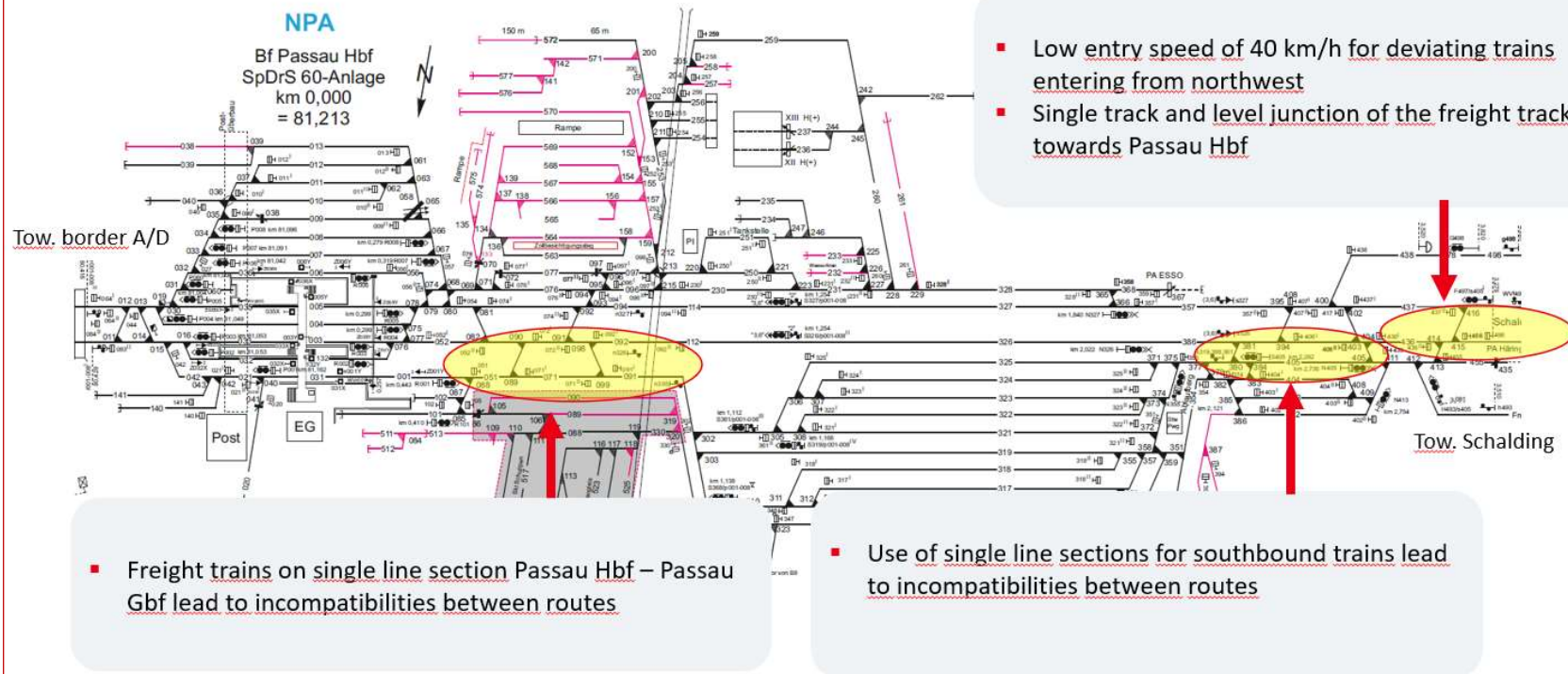
A planned average train path speed of about 30 km/h is certainly not sufficient for an international quality transport on rail.

And the actual speed is often even lower due to operational delays on the way...

Passau Hbf/Gbf

Main challenges at Passau - Station design and Carrier diversity

Passau node



- Low entry speed of 40 km/h for deviating trains entering from northwest
- Single track and level junction of the freight tracks towards Passau Hbf

- Freight trains on single line section Passau Hbf – Passau Gbf lead to incompatibilities between routes

- Use of single line sections for southbound trains lead to incompatibilities between routes

The combination of the above mentioned insufficiencies leads to a bottleneck-situation

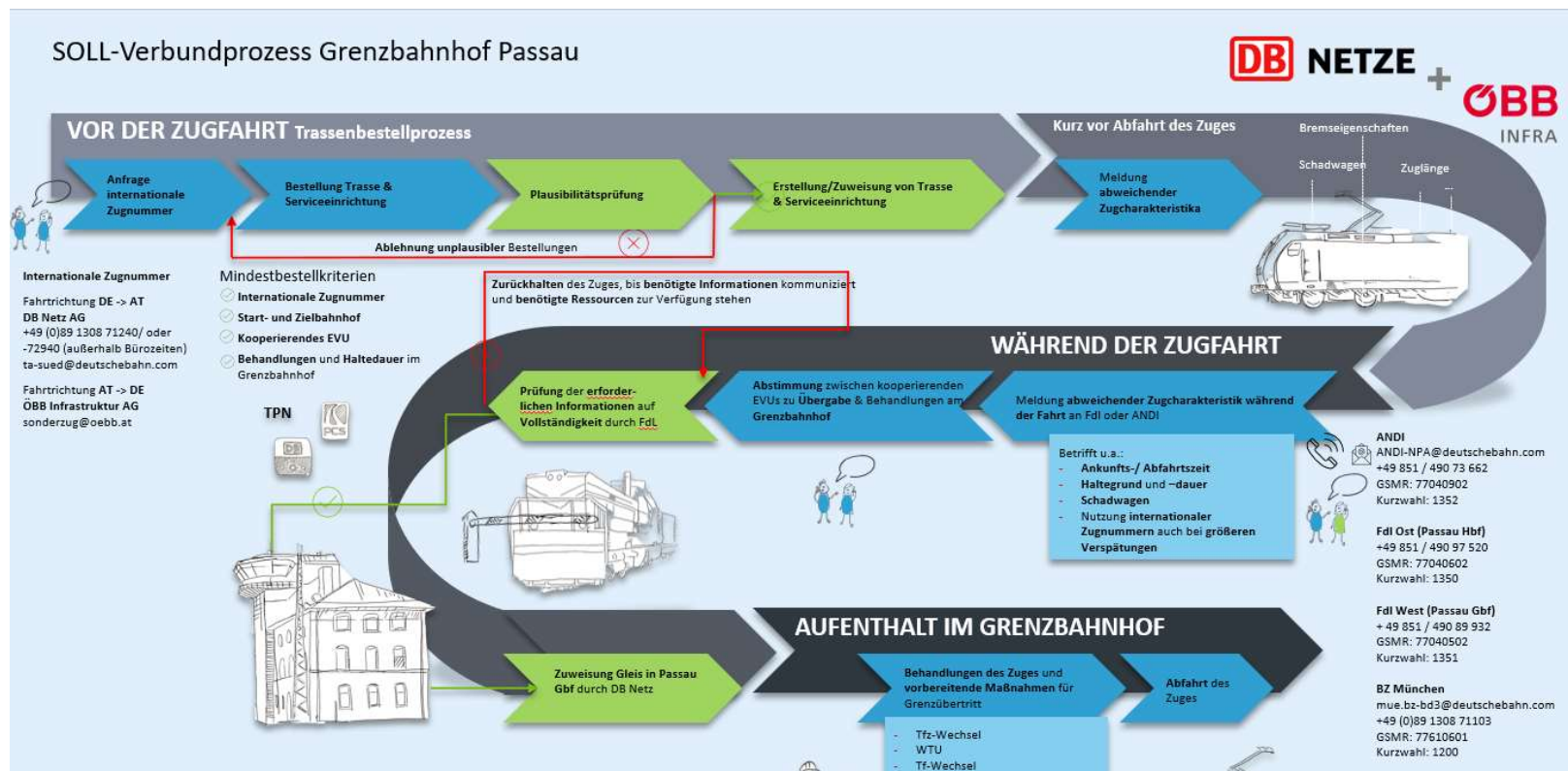
Train dispatching becomes increasingly challenging due to

- Less buffer tracks between Regensburg and Passau from north-east and respectively between Wels and Passau from south-east

This requires

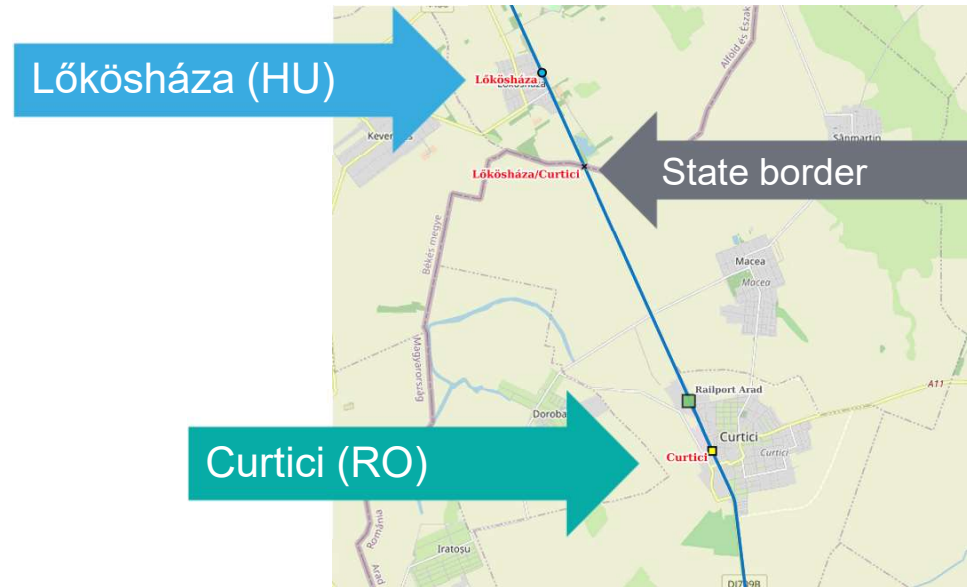
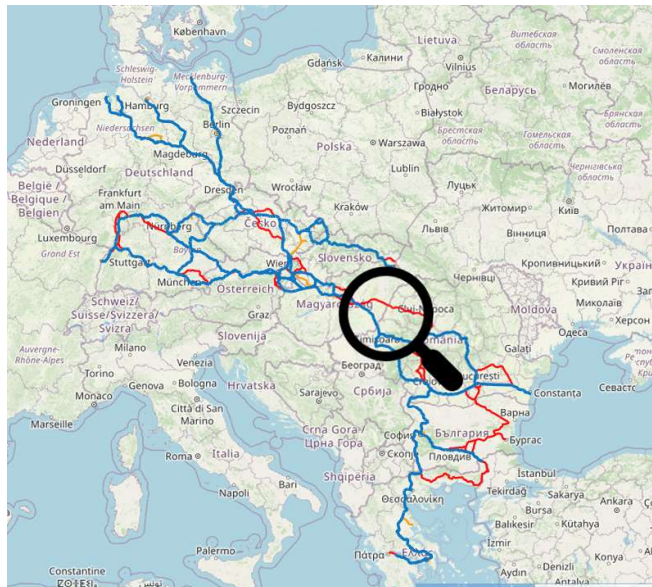
- early, efficient and well established communication flows and procedures between involved cooperating Railway Undertakings and between RUs and IMs

Railway Undertakings and Infra Managers jointly worked on an optimisation of border procedure-related communication process

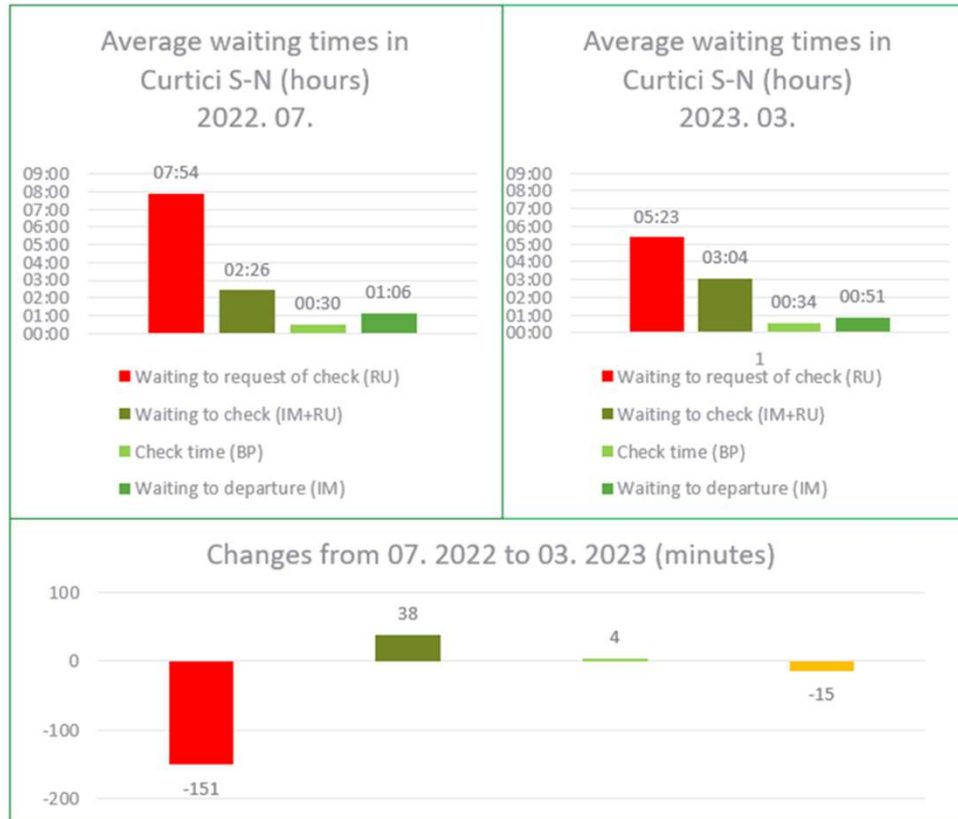


Curtici/Lőkösháza

Required stops at both sides of the HU/RO border are a significant source of poor transport speed



Challenge at Curtici – complexity of the train hand over with various interdependencies of single process steps



Co-financed by the European Union
Connecting Europe Facility

Vienna, 17th December 2021

From:
Chairs of Executive Boards
Chairs of Management Boards
Speakers of Railway Undertakings Advisory Groups of
Orient/East-Med and Rhine-Danube Rail Freight Corridors

To:
Ministry of Foreign Affairs and Trade of Hungary
Ministry of Internal Affairs of Romania

Dear colleagues from Ministry of Foreign Affairs and Trade of Hungary,
Dear colleagues from Ministry of Internal Affairs of Romania,

The Rail Freight Corridors (RFCs), established by the Regulation (EU) No 913/2010 of the European Parliament and of the Council of 22 September 2010 concerning a European rail network for competitive freight, have succeeded in creating platforms for functional dialogue between the various stakeholders in rail transport, particularly concerning freight. Ministries, Railway Infrastructure Managers, Railway Undertakings and Terminals, in collaboration with the European Commission, cooperate in this framework to further develop European rail freight, to meet the objectives of decarbonisation of transport, competitiveness and reliability.

The Orient / East-Med (OEM) and Rhine-Danube (RHD) Rail Freight Corridors share both a similar route in the heart of Europe and similar issues dealing with the transport flows from West to East and from North to South. The governance structures of both RFCs, composed of the representatives of Member States and national Railway Infrastructure Managers agreed from the beginning of the establishment of both RFCs, to cooperate closely and work together to improve international rail freight transport.

To this end, the representatives of the Railway Undertakings (RUs) providing services on these two RFCs have informed us, that the current situation encountered at the border crossings between Hungary and Romania is considered a major gap concerning the efficiency of the corridor. The Railway Undertakings' Advisory Group (RAG) members have jointly identified the border police train controls on the outside border of the Schengen Area as the main driver for exhaustive dwelling times at Curtici station, not only but especially for freight trains entering the Schengen area.

The representatives from Hungary and Romania within the Executive Boards of the two RFCs have informed us that the Hungarian and Romanian governments are working together to find solutions, and we, together with the different stakeholders of the RFCs, and the European Commission, welcome very much these actions and thank you for taking these issues into political consideration.

Federal Ministry
Republic of Austria
Climate Action, Environment,
Energy, Mobility,
Innovation and Technology

Waiting time for border-police checks at Curtici station - RO-HU direction (minutes)



- **For April 2023:**
5h*xEUR/hour/train*300trains/month
- **additional cost due to waiting for police border control and waiting for departure (after train is ready)**

Current situation imposes a significant burden to RUs and requires quick relief !

Stops at Curtici and Lökösháza as a significant source of poor transport speed

An urgently needed **significant dwell-time reduction** will especially require

- a **one-stop only** policy for train runs in **both directions**
- **quicker availability** of the police staff to **start** with the inspections **earlier**
- **more staff** or **technical support** to **perform more inspections in parallel**

... but we, the RUs, **can we help** to mitigate the problems and speed up the handling in Curtici?

Yes, we can!

- Avoid technical inspection through using ATTI agreement
- Use as much as possible interoperable locomotives and train drivers (no changes at border station)

**Most important effect:
Make Romania part of the Schengen Zone!**



PARINAZ BAZEGHI, UIC

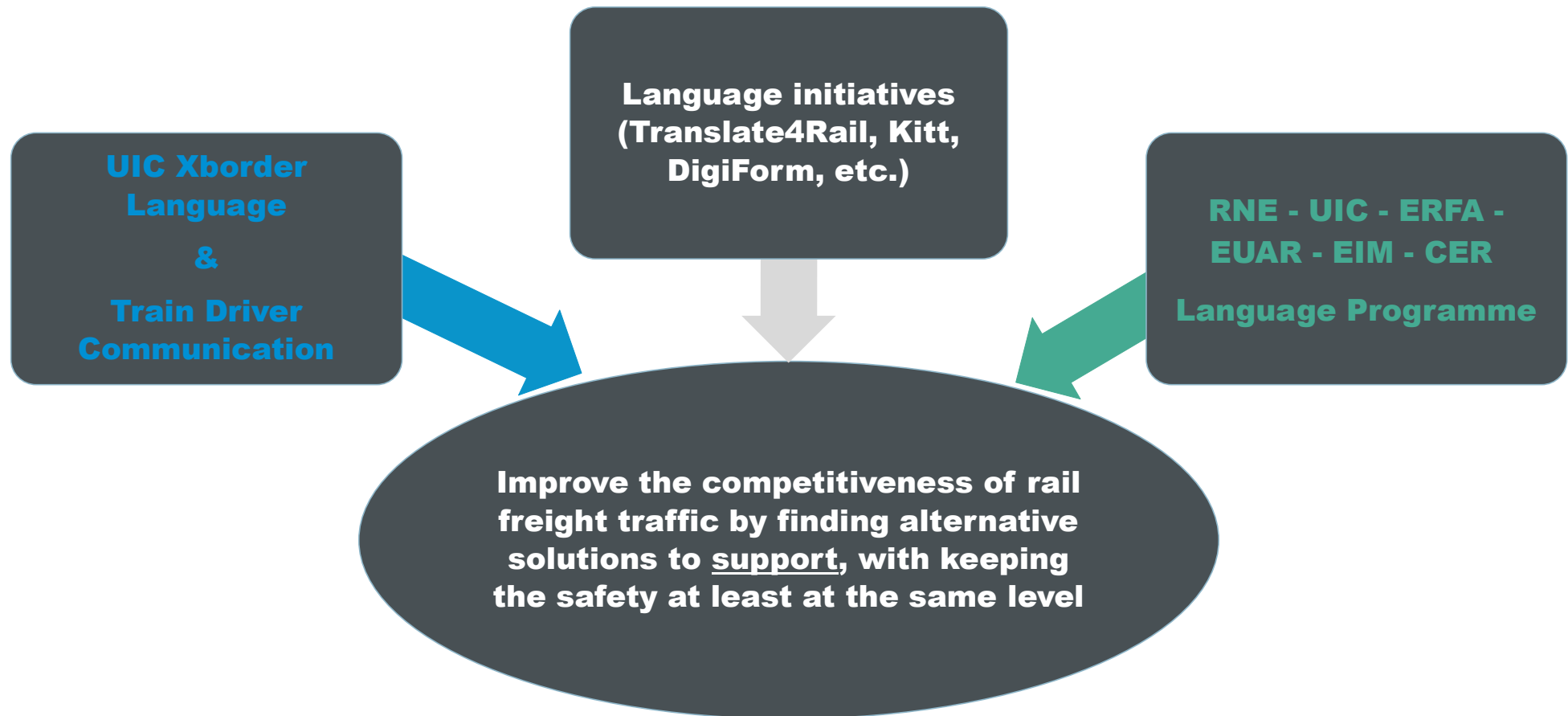
LANGUAGE HARMONISATION

Why language initiatives?

- Rail Freight sector ambition: to increase the modal share from ~18% to 30% by 2030
- RFCs are facing with language related inefficiencies in different levels
- Interoperability barriers still exist – one of them B1 level language proficiency requirement for train drivers
- Our goal: support the implementation of SERA (Single European Railway Area) by overcoming the language barriers in cross-border rail freight operation
- **Current bottlenecks:**
 - driver shortage
 - incident impact mitigation (eg. rerouting options)



Initiatives with the same goal demonstrating a best practice sector approach

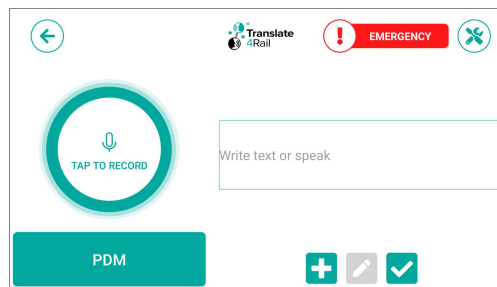


Translate4Rail project contribution

- Enabling operational communication in the field between train driver and traffic controller
- Addressing B1 language competence acquisition



Operational communication in the field
(including railway jargon, variables, and constants)
Enhancing TSI OPE messages



<https://translate4rail.eu/>



Achievements and work in progress



Pilot Italy - Slovenia
T4R LT tested

On-going Pilot
between Italy
- Switzerland

Seeking for EU funding
means to scale up



High interest and support from the sector

2019 - 2021

2022 - 2023

2024 - 2025



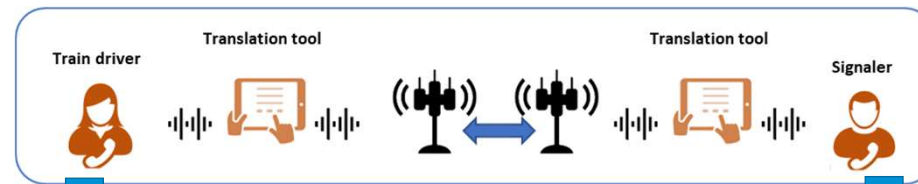
Pilot ITALY - AUSTRIA (Villach - Tarvisio - Pontebba)

Part I

- T4R LT app functionalities, Selection & Editing of Predefined messages
- Connection tests

Part II

- Scenarios: Damage of the switch, Break test, Shunting



Pilot ITALY - AUSTRIA (Villach - Tarvisio - Pontebba)

Breaking language barriers in the railway sector



This project has received funding from the Shift2Rail Joint Undertaking (JU) under the grant agreement No 881779. The JU receives support from the European Union's Horizon 2020 research and innovation programme and the Shift2Rail JU members other than the Union.



Special thanks to

Infrastructure Managers



Railway Undertakings



Key findings

- The Tool supported users in accurate and more efficient communication based on operational rules
- Higher confidence was reached, in communication between users who were not speaking the same language
- Tool connection compatible with existing European Railway Communication System (GSM-R)

Achievements and work in progress



Pilot Italy - Slovenia
T4R LT tested

On-going Pilot
between Italy
- Switzerland

Seeking for EU funding
means to scale up



High interest and support from the sector

2019 - 2021

2022 - 2023

2024 - 2025



Train Driver Communication project



One – year project
2023 – 2024



Pilot testing of language tool (T4R) prototype
in real operational situations

Assess the tool as training mean to facilitate
learning railway terminology and operational
messages

Members of the project:

bls cargo

CFL cargo

**FERROVIE
DELLO STATO
ITALIANE**

LINEAS
YOUR FREIGHT FORCE

SNCF

 **SBB Cargo International**

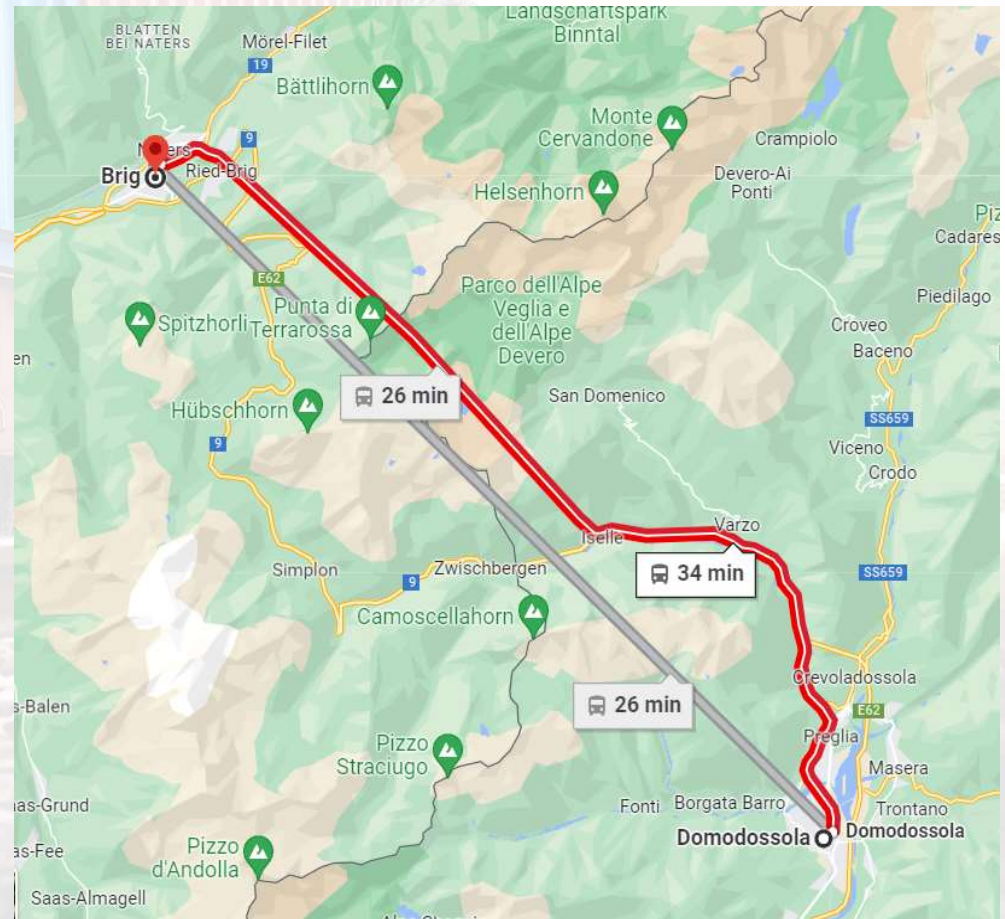
Pilot testing in operational situation

Pilot between **Domo 2 - Domodossola – Brig**
– border between Italy and Switzerland

To use T4R tool prototype in the **real operational situation** (*with drivers who already run in the section*)

To **assist** train drivers to increase the quality of the communication

Assess the usage of the tool as a **training mean**



Way forward

Further testing and Pilots to:

- Identify the use cases the best fit the tablet-based tool usage
 - IM-RU communication in operation
 - IM-IM communication
 - Training
 - etc.
- Test the tool in different environments/situations
- Scale up from TRL 5 to TRL 8: Ready for operational usage

Closing words

These were examples of international cooperation on the corridors promoted within the ECCO project. They have the potential for long-lasting success and increased significance as we continue to advocate these experiences on other locations over the network.

For questions after the webinar:

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