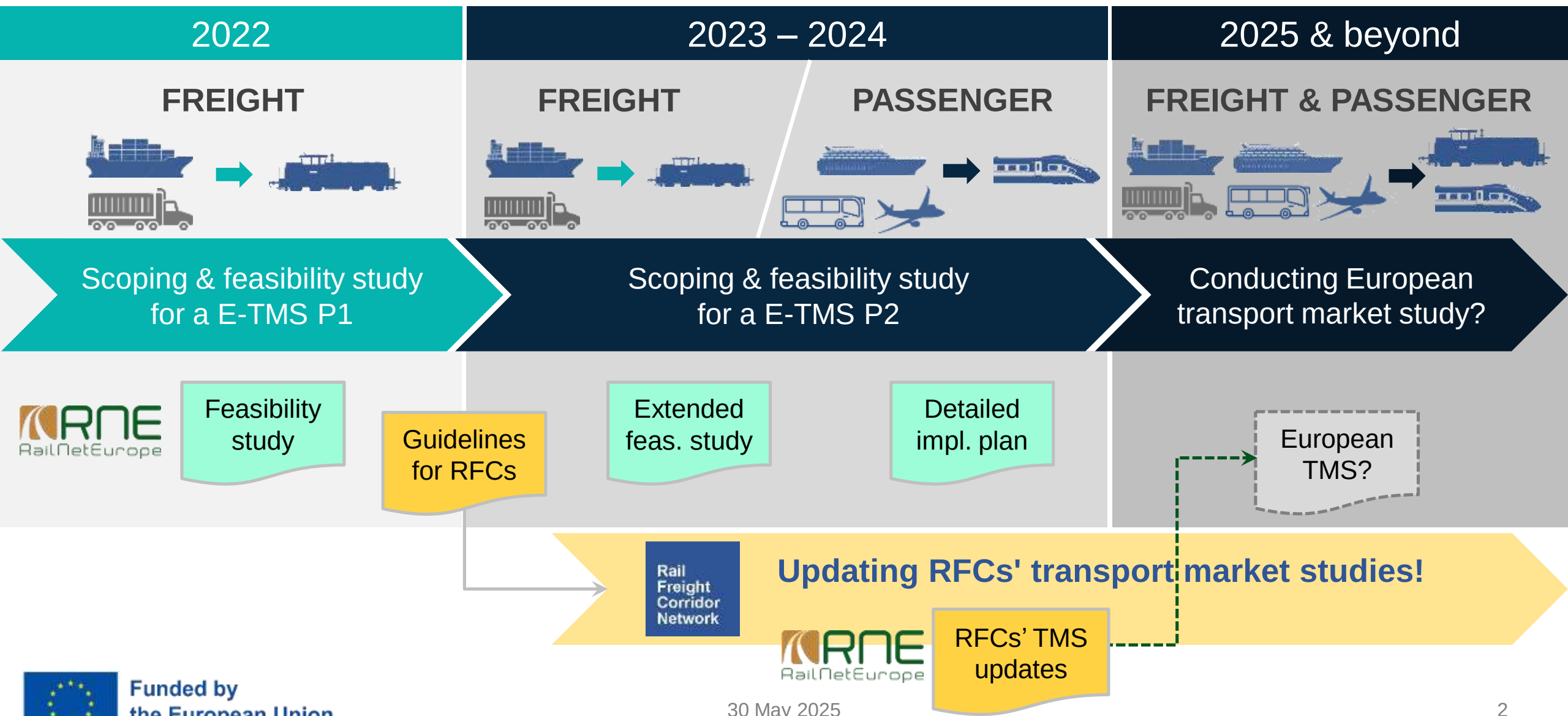


TRANSPORT MARKET STUDY

European TMS project – Overall timeline (update RFC HLG and RNE MB)



For the analysis of the current transport markets:

- ✚ CIP: Data on the geographical alignment of RFC routes and the existing parameters.
- ✚ TIS Data from RNE: a full set of data for 2021 and 2022.
- ✚ For areas (border-points) not covered in TIS and for historical information on traffic volumes in general, use of the RFC KPI data collection sheets, RFC annual reports and/or data provided directly by the RFCs/IMs - to provide a complete data set.

For the analysis of the future transport markets:

- ✚ NEAC Model – EC European Transport Forecast Model (allows to project transport flows)
Sources: Eurostat, NEAC, RNE (TIS), EC (for GDP), United Nations (for GDP).
- ✚ Updated list of projects was extracted from CIP.
- ✚ RAG TAG: survey 2023 - RAG/TAG members of each RFC.
Aim: collecting relevant input to elaborate significant changes that occurred since the establishment of the corridor and significant expected changes up to 2030 (for future market analysis).

3 Scenarios to simulate for the analysis: (reference year 2022, forecast 2030)

- **Reference** (only economic development 2030 was considered)
- **Completed** projects by 2030 (Missing links, speed, UIC gauge - identified from the Implementation Plans of RFCs, as updated until January 2024. Projects with completion date up to 31/12/2030 were considered.)
- **Potential** (what if? Theoretical - assuming the network would be at standard)
 - ERTMS (assumption 5% extra time gain, less transport costs per ton)
 - Longer trains - 740-meter (assumption 15% more volume, less transport costs per ton)

ETC extension analysis:

- Same methodology as in TMS updates, but the outcomes in one report with corridor specific analysis and information in one annex per corridor.
- On EU scale, expected impact on modal shift will be small.
- The Final report was delivered along with individual Executive Summaries on May 6th 2025.

ETC TMS ANALYSIS

Purpose and approach

Remarks:

- Focus on international freight transport
- Based on available statistics and the data available from TIS concerning O/Ds, BCPs
- No capacity analysis
- No corridor specific market dataset available
- No corridor specific primary data collection foreseen

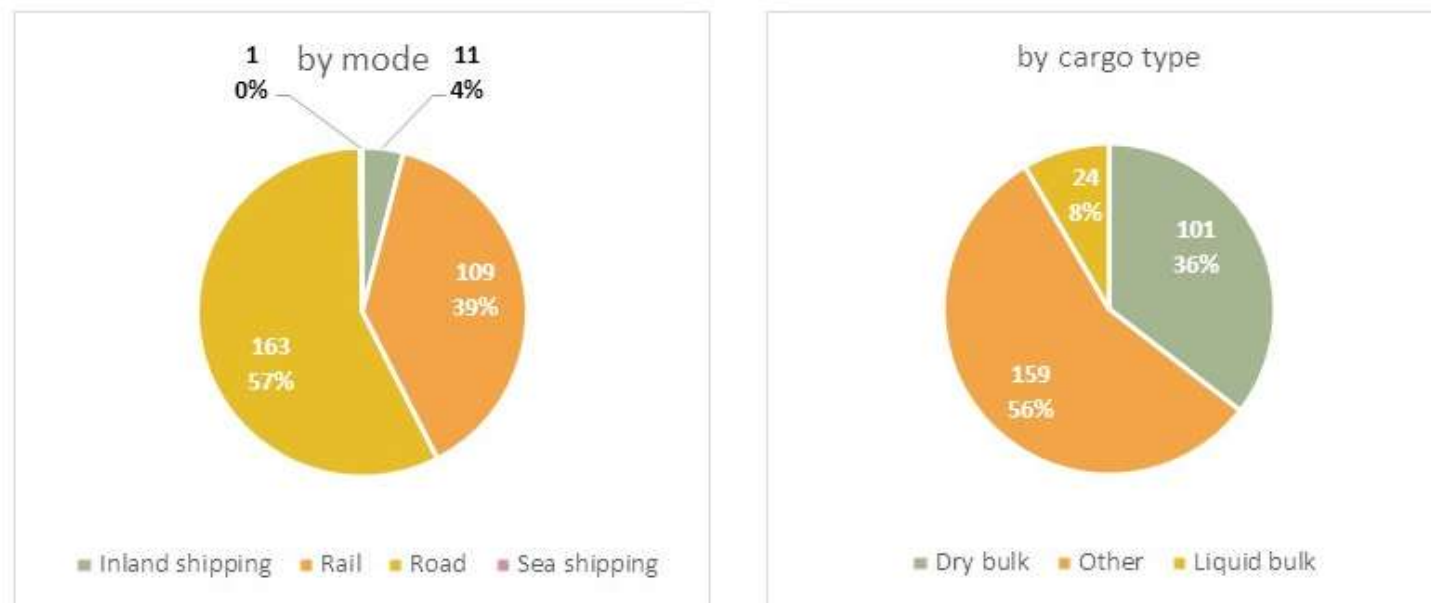


Extending the 11 RFCs Transport Market Analysis to the 9 ETCs

- ETC freight corridor alignment
 - *(Annex III of Reg. (EU) 2024/1679 + RFCs proposed amendments)*
- Considering the same base year (2022)
- Providing short-term forecasts (2030)
 - *2030 EU Reference scenario*
 - *2030 Projects scenario: projects envisaged to be completed by 2030. Only projects that can be translated into time gains + non-operational lines projects with envisaged completion date before 2030*
 - *Sensitivity scenario: 9 ETCs freight network in line with European standard track gauge, 22.5 t axle load, intermodal loading gauge, and allowing for operating 740-meter-long trains, and with ERTMS deployed (theoretical simulation referring to infrastructure standards and not compliance) + non-operational lines projects with envisaged completion date after 2030*
- Use the same dataset, tools and methodology used for the RFCs TMS Update (i.e. top-down – network to corridor – approach)

ETC – RFC RD Estimated volume by land mode and cargo type

Figure 4 Estimated volume (million tonnes) and share of international freight transport by mode and cargo type in the corridor and catchment area of ETC RD

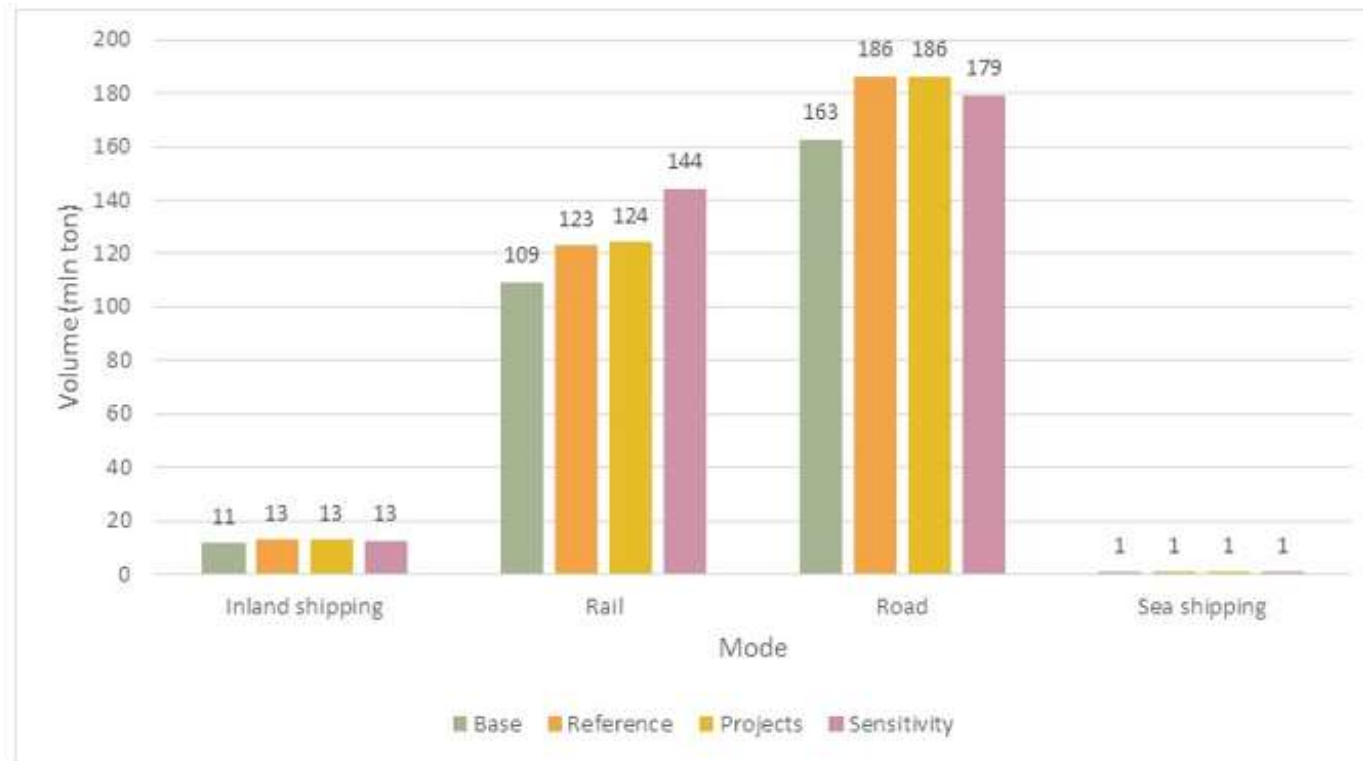


Source: NEAC estimations

- **Mode:** Total volume of international transport (shipping, rail, road, sea) ETC RD: 284 mio. tonnes in 2022. Freight transport volume = 109 mio. tonnes. This is 39% of the total amount of freight transport for the ETC. Road = 163 mio. tonnes, 57%.
- **Cargo types:** 'Other' (General cargo, incl. Intermod. transport and container) is the most important type at 159 mio. tonnes (56%). Dry bulk makes 36%, liquid bulk makes 8%.

ETC – RFC RD Development of volume by mode and scenario for the catchment area of ETC RD

Figure 5 Development of volume (in million tonnes) by mode and scenario for the catchment area of ETC RD

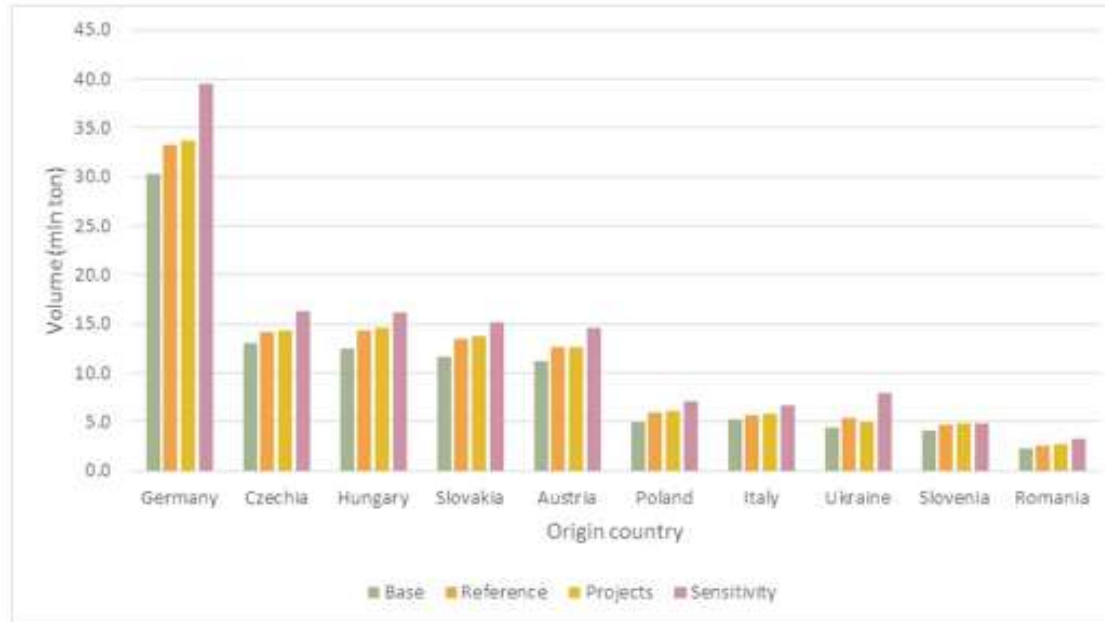


Source: NEAC estimation

- **Reference scenario:** estimated growth from 109 mio. tonnes to 123 mio. tonnes. (+13%, 14 mio. t)
- **Projects scenario:** adds another 1 mio. tonnes to the total volume. (+0.4%)
- **Sensitivity scenario:** would lead to a volume of 144 mio. tonnes. (+32%, 35 mio. t)

ETC – RFC RD Development of volume of international rail freight transport by origin country

Figure 6 Development of volume (in million tonnes) of international rail freight transport by origin country in the ETC RD corridor and catchment area



Source: NEAC estimation

- Concerning origin countries, international rail freight transport has the highest volume in Germany 33.2 mio. tonnes in the Reference scenario. Impact of infrastructure Projects and Sensitivity scenario shown as well.
- Czech Republic and Hungary show second and third highest volume.
- The growth is similar in all countries – primarily due to the assumed increase in train length up to 740 m.

Some information limitations relate to Train Information System (TIS) database managed by RNE (main source of train traffic data to be used in the analysis):

- ✚ The quantity and quality of data available in **TIS** allows for an analysis of international freight trains but is **insufficient for the analysis of national freight trains** and international and national passenger trains;
- ✚ In certain cases, international trains are classified as national trains until border stations and **only get classified as international trains** from border locations onward. (Allows for quantification of international traffic across borders, but may affect correct representation of the Origins and/or Destinations);
- ✚ Information on the number of trains per section/node is generally available, but **not the exact routing**;
- ✚ Information on the type of train (i.e. block/single wagon), type of cargo (intermodal, dry bulk, liquid bulk...), type of commodities, **weight, and length is partial**;
- ✚ Information for **certain countries**, including the three Baltic States, Ireland, and the Western Balkans, is **not encoded in TIS**;
- ✚ TIS data is gradually improving, but the data **before 2022 is not sufficiently consistent**. Given that no other dataset is available measuring the transport of goods and traffic of trains along the corridors, no information is available to analyse the observed changes in the traffic on the corridors.

Positive:

- Improvements – increasingly harmonized data, one methodology
- Better and coherent picture of the market

Negative:

- Still incomplete and inconsistent data
- Many aspects to be considered to get a reliable output (industry, infrastructure, market players etc.) for drawing meaningful conclusions
- Disruptions affect the reliability of study results – geopolitics, trade conflicts (tariffs), infrastructure financing.

One joint Transport Market Study looking at Rail Freight and Passenger Traffic – entire network view (harmonized data and wider scope)

- Under the framework of CEF III – carried out by RNE
- Started in February - Tender procedure finished; Kick off - June
- Will be a consortium: Panteia lead, Tplan (Stakeholder management), further contributors...Haskoning (internat. system engineering comp.), Karlsruhe Institute of Technology (technical, digitalization)
- Will create a demand model for passenger traffic
- Then integrate rail freight (also results of current TMS update) and give a joint market projection
- Project duration from 2025 to 2027

THANK YOU