

RNE Members' Declaration of Intent on the Virtual European Traffic Management Network

Sharing the vision of EU Transport Strategies

In 2020, the European Commission presented its 'Sustainable and Smart Mobility Strategy', including an Action Plan of 82 initiatives that should guide their work for the next four years. This strategy defines how the EU transport system can achieve its green and digital transformation and become more resilient to future crises through a smart, competitive, safe, accessible and affordable transport system. The Commission's plan shall be realised by implementing measures to expand the rail market, addressing the needs of railway undertakings for access to high-quality capacity and maximising the use of rail infrastructure. A clear message also goes towards rail freight transport, which needs serious boosting through increased capacity, strengthened cross-border coordination and cooperation between rail infrastructure managers for better overall management of the rail network.

RNE Members' commitment

The RNE Members fully support the European Commission's ambition to strengthen the competitiveness of the European rail network system in the coming years and to make it more attractive to customers by improving its performance. Therefore, the RNE Members, with the support of the RFCs, are committed to implementing joint actions to achieve a more effective international railway traffic management.

The need for well-functioning and reliable international railway transport calls for improvements in operational procedures, multilateral cooperation and information exchange to meet customers' needs and fulfil European strategies today and tomorrow. The pace of harmonisation needs to be increased in order to improve punctuality and capacity utilisation and raise average speeds. The persisting dwelling times at borders are a challenge for IMs and RUs alike. This information must be accessible and reliable for all stakeholders. This cannot be done without a European mindset of knowing that we need to work together with all parties involved along the logistical chain.

One of our answers to these challenges is the improvement of cross border cooperation between the IMs by agreeing on a common harmonised European Traffic Management (ETM) concept in parallel to other ongoing projects such as the Timetable Redesign (TTR) project.

RNE's Members believe that the improvement of traffic management processes in Europe will lead to better capacity utilisation, smoother transit on border crossing points, increasing commercial speed and punctuality of rail services.

The concept of a virtual ETM network

The ETM concept focuses on the cooperation and coordination between the Traffic Control Centres (TCCs). The goal is to define how the IMs can contribute to the EU Strategy aiming to improve traffic management processes, especially in regard to international trains. The train run is influenced by all levels of traffic management, starting on a local level via regional to the national level as top of the process. The goal of the proposed concept is to strengthen current practices and solutions on a more harmonised and developed level. We believe that a good starting point is to use the experience of the already functioning relationships and working practices that are built upon the regional and national level of TCCs. The systematic establishment of virtual interconnections of NTCCs should be the cornerstone of ETM, with direct support from other levels of traffic control centres. This approach reflects the existing vertical and horizontal structure and its roles and responsibilities. The new virtual network is focused on national traffic control centres in synergy with regional centres involved in cross border cooperation of neighbouring areas. We will take into account the lessons learnt from ongoing projects focusing on traffic management solutions developed on bilateral and corridor bases.

The gradual European integration of such mostly national elements will grow into a harmonised European approach. This will result in a more effective and smoother international train run management with fluent data exchange. The expected enhanced international cooperation of NTCCs can result in swift operative capacity utilisation, lower costs, reduced time loss in cross-border operation and generally a more internationally-oriented European traffic management.

The new harmonised rules and procedures, reflecting the European mindset, will bring benefits for the railway customers as well as contribute to the achievement of EU targets.

Main focus areas to reach the goal

- For a successful cooperation and communication, it is essential to agree on and implement common harmonised NTCCs operational procedures for international traffic management. The gradual harmonisation of the core procedures should support

international train run management, simplifying the necessary steps for handover at borders. In parallel, the regular information exchange of international train runs is part of the new approach to ensure optimal handling of trains between national networks, especially in case of disruptions. Modern chatting tools can significantly support these actions.

- It is a key requirement to have at least one English speaking dispatcher in every shift at national TCCs , a measure proven to be useful and already being implemented. To continue with this approach, as verified by other industries, a gradual implementation of a common communication language to be used by the National TCCs under the potential support of digitalised translation tools is necessary. This is to be promoted in cases of multinational communication. The deployment and shift to a real European mindset cannot be done without relevant staff language training and support.
- Besides the rules, procedures and communication without barriers, another strong pillar is the use of IT systems adapted for traffic monitoring, communication and data exchange between IMs and partners, in particular supporting the needs of NTCCs' cooperation. The last several years of successive transformation and adaptation of the RNE TIS system are to continue together with underlying data warehouses. The tool works without interfering with national traffic control dispatching systems and offering international train run monitoring.
- Further adaptation of IT systems is planned to extend data exchange with terminals, ports and freight forwarders to provide relevant data for customers. The continuous improvement in connecting national to international trains is ongoing, through TIS or through the use of international information displayed in national traffic management tools using TAF/TAP compliant data exchanges. Further development should support TCCs in predicting train runs and introducing machine learning results in train run forecasting, unequivocally supporting the idea of a virtual ETM network.
- All these scopes of cooperation must be ruled by commonly agreed guidelines, which create a steady platform resulting in a more effective system benefiting from synergies. Clear interfaces among Traffic Management and Capacity Management as well as among subjects such as RFCs, terminals and customers must bring higher effectiveness and competitiveness to the railway sector already in a position as Europe's core transport mode.
- As all reliable systems can suffer from contingencies, the railway sector is not an exception and must cope with disruptions of various kinds. More effective contingency management is a cornerstone of the proposed ETM aligned with the updated RNE International Contingency Management (ICM) Handbook, which should be integrated

into the future European traffic management concept. The NTCCs should use the TIS Incident Management tool which will be adapted to support the virtual ETM network.

- A clear position and coordination role of RFCs will guarantee that the planned processes will strengthen the international cooperation among infrastructure managers and will reflect the railway customers' expectations at the highest level. The given role of the RFCs with supportive actions and pilots will allow the virtual network of ETM to deliver tangible results and follow customers' demands. The present abilities of RFCs in surveying, monitoring, piloting and providing support to the traffic management process create a strong pillar for a future virtual ETM network. Although the RFCs keep their non-operational task, their contribution and their accelerating force will result in significant benefits and support for the new ETM approach.
- RNE is qualified to be the facilitating force in the design of the virtual ETM concept and to run the related projects. RNE has experience in providing a strategical platform to discuss, define and coordinate all necessary harmonisation issues with IMs and RFCs for improved traffic management in Europe as well as running the already used IT tools.

The deployment of the overall concept should be done via implementation projects. The gradual introduction of the virtual network can benefit from an implementation approach in the form of three packages.

The first package, the essential one, further develops the already existing **level of cooperation among neighbouring IMs**. The aims are:

- Increased transparency of the European train run through the improvement of existing international information systems (TIS).
- Early identification of delays and conflicts through international forecasts (TIS ETA).
- Predictable external effects on the national networks through pro-active information supply.
- Establishment of a fundament for connecting NTCCs through standardised language levels and language training for the dispatchers.

The second enhanced package is focusing on the **Strengthening of (national) dispatching through European standardisation** and includes:

- Detailed information of the entire transport chain from E2E – through a gradual connection of terminals and harbours to international systems.
- Daily exchange with neighbouring IMs through international exchange platforms (e.g., virtual conferences).

- Formalised processes and a commitment to international cooperation through a self-obligation of the IMs to participate in European cooperation.
- Common rules of cooperation in cases of minor incidents, including incident communication between IMs and RUs.
- Standardised, tool-based processes in international incident management (TIS IMT).

The third package as full Virtual ETM network setup should come after deployment of the second group of actions and implement a **completely integrated network with forecasting and other analytical tools** with:

- Exchange of detailed status during the day through international communication structures.
- Analytical forecasting of and debriefing on information exchanged on NTCC-levels in order to learn how to act pro-actively in case of similar situations.
- Implemented dispatching concept for capacity restrictions on all RFCs with extensive European exchange of information to ensure timetables with operational quality.
- Increased customer satisfaction through improved cross-border quality and timetabling reliability with the support of comprehensive incident evaluation with all participants.

The package preparation needs a detailed action plan and should be structured in four projects scheduled in the period of 2021-2025.

- Standardised communication and cooperation procedures among TCCs and with RFCs and Capacity Management (2021-2024)
- RNE TIS adaptation to meet the needs for improved TCCs information exchange (2022-2024)
- Definition of an approach for communication languages and translating tools for NTCCs (2022-2025)
- Definition of common professional standards for NTCCs (Human resources) (2023-2025)

Conclusions

National TCCs are the core entities in a developed virtual network. The existing cooperation can be improved by extending it to regional and local entities operating in border areas. This will improve the coordinated handling of trains with the aim of minimal delays and dwell times. RNE Members believe that RFCs are the platforms to support, test and monitor the implementation of the European traffic management concept at the regional level along major traffic streams (e.g. Brenner) and thus ensure deployment of harmonised international solutions that will work across Europe with the support of RNE.

There is room for further improvement in international traffic management in Europe. The available capacity must be used in a more efficient way in order to facilitate seamless traffic flows across the borders and to achieve better punctuality for both freight and passenger services. All stakeholders need access to reliable information, both in normal and degraded conditions. This helps make the most efficient decisions and provide correct information to rail customers in time.

In order to meet market demands more successfully, three key advancements are needed: Improvement in the standardised procedures for communication, both verbal communication and digital information exchange, clear identification of roles and responsibilities for cross border coordination activities and a more international approach to traffic management. Further development of the RNE TIS system as the main information exchange tool, including its use in the operational procedures, or the use of international information displayed in national traffic management tools using TAF/TAP TSI compliant data exchange, is also a basic prerequisite. It is also important to continue the development and improvement of processes and information exchange with regard to international contingency management.

The creation of a harmonised traffic management framework involving all actors of the logistics chain will provide a valuable opportunity for better international-minded rail operation in Europe with the aim of improving trust in the railway services.

RNE's Members are committed to start actions as described in this Declaration of Intent as soon as possible.