

Position Paper

Striving for a virtual European Traffic Management Network - Update

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CER/EIM Updated Position Paper on virtual European Traffic Management Network¹

Background

EU's Smart and Sustainable Mobility Strategy sets ambitious targets on rail transport, both passenger and freight, granting it a prominent role in the transition towards zero-emission mobility and the delivery of the EU Green Deal objectives. The Strategy sets ambitious targets in international rail, both passenger and freight, resulting in more demands in efficient traffic management on a European level. In parallel to the initiative of Infrastructure managers (IMs) to create a virtual European Traffic Management network also according to Regulation 913/2010, Rail Freight Corridors are required to put in place procedures for coordinating traffic management and to ensure optimal coordination between the operation of the railway infrastructure and the logistic terminals (Article 16). It is also envisaged that in cases of disturbances to normal operations on rail freight corridors, common targets for punctuality and/or guidelines for traffic management are to be adopted (Article 17).

CER and EIM's [Position Paper](#) on Rail Freight Corridors Regulation states that a more efficient cooperation among all the actors of the logistic chain is needed with the final aim to improve performance and the reliability of the international rail transport in both regular services and the services after disruptions.

Traffic management is an area which plays a key role in strengthening the competitiveness of international rail transport for both passenger and freight. The sector recognizes there is room for improving cooperation between traffic control centers of individual IMs. RailNetEurope's (RNE) Members have recently published a Declaration of Intent to implement joint actions to achieve a more effective international railway traffic management.

A stronger virtual European Traffic Management Network

Infrastructure Managers are in the process of developing a virtual European Traffic Management network that will bring the National Traffic Control Centers (NTCCs) closer together. With stronger cooperation and collaboration, the traffic management process will be improved contributing to a modal shift and achieving the European Smart and Sustainable Mobility Strategy and European Green Deal objectives.

More concretely, the IMs are committed to:

- Improve procedures for verbal and digital communication, including exchange of digital information;
- Implement common harmonized NTCCs traffic management procedures and communication in the international traffic management;
- Define a common approach to railway communication and facilitate the implementation of digital tools to be used by the NTCCs for the communication amongst themselves. Such digital tools could potentially also help the communication between the train crew and the traffic control centre, provided that technology has developed to such an extent that safety are fully considered;

¹ Virtual: A non-physical presence of European traffic management, supported by digital solutions.

- Use common harmonized IT tools (e.g. RNE TIS) as a primary option in cross border traffic management for information exchange and communication purposes, in addition to the information displayed in the IMS' traffic management tools and obtained through TAF/TAP obligatory data exchange;
- Further adapt the mentioned IT tools and procedures to extend data exchange with terminals, ports and freight forwarders and provide relevant data for customers;
- Identify roles and responsibilities related to cross border coordination activities in the context of the train run (not related to safety procedures) and strive for a fully international approach to traffic management;
- Support the role of RFCs in contributing to an efficient virtual ETM network that would deliver tangible results and meet the expectations of customers and stakeholders, such as RUs, Terminals, Ports;
- Integrate the International Contingency Management (ICM) Handbook into the future virtual European Traffic Management network concept;
- Maintain synergies between Smart Capacity Management (TTR), including Digital Capacity Management (DCM), and European Traffic Management (ETM).

One of the basic prerequisites for developing a stronger European Traffic Management of international passenger and freight trains is to deliver train operational data in real time. Accordingly, international train management is supported by the development of the specifications of the TAF/TAP compliant common interface as the main information exchange tool. It also includes its use in the operational traffic management procedures, or the use of international information displayed in national traffic management tools using TAF/TAP TSI compliant data exchange supported by train information system (RNE TIS).

The creation of a common virtual European Traffic Management network will contribute to the improvement of rail's performance attracting more passengers and freight operators to choose rail and thus contributing to the climate policy objectives of the EU.

Therefore, CER and EIM support the activities declared in the RNE members' Declaration of Intent on ETM and are ready to provide input to the policy makers in the upcoming legislative proposals related to rail.

Annex: Technical Update²

IMs approved the Handbook for the European Traffic Management Network in the General Assembly of RNE on 06 December as a first step towards implementation.

Since the publication of the position paper in February 2022, IMs have been working on several approaches to establish the virtual European Traffic Management Network (ETMN). The entire rail sector works together on this goal in the framework of the ERJU activities.

This annex outlines the status and planning of projects of ETMN.

Technical Framework

The first phase defines the technical framework and IT architecture. It outlines concrete rules and procedures for cooperation and collaboration among traffic control centres thereby creating the virtual European network. It builds upon the implementation of the TAF TAP TSI Regulation as the binding element to the network.

The generally applicable process for traffic management (provide information – monitor – manage risks – coordinate actions – improve cooperation) was set as a common framework. The process modules were designed to extend the dispatchers' perspective of the train view from national to European, therefore improving the exchange of foresight information and making the traffic smoother. The intention is to extend the cooperation of the dispatchers, not just with direct neighbours, but also to relevant over-neighbour dispatchers with a focus on a train from its origin to its destination. This should increase the train run effectiveness, punctuality and network capacity utilisation.

Supporting solutions

To support the aforementioned technical framework, several solutions are envisaged that are part of the concept deployment. In parallel, they will be supported by new or updated RNE TIS modules.

Event-related data for deviations from the plan as well as obstructions and disruptions with an international impact should be shared digitally in a standardised format and if deemed necessary by making direct communication with the concerned parties (neighbouring IM(s) or IMs farther away depending on the current case). The aim is to move towards more digital information sharing over time, in accordance with TAF/TAP TSI and mutually agreed information exchange. In this regard, the further development of RNE TIS, as a main concept pillar, will improve the availability and accessibility of information. However, the RNE TIS shall not substitute or compete with national TMS, but rather serve as a complementary tool with the following solutions that enable IMs to access information beyond national TMS from the whole network.

- the **European network status** will create situational awareness of the railway network condition. Such information helps the dispatching staff to plan the traffic management for the next shift more effectively and to consider the main prerequisites for the train run across Europe.
- The **network communication concept** allows communication and collaboration of national traffic control centres (NTCCs) with the aim to include regional centres in the future. It will enable to organise teleconferences and exchange messages

² This annex is an update added to the joint position paper firstly published in February 2022.

with the possibility for translation to the operational language of the infrastructure managers, therefore greatly improving information exchange and cooperation. Besides that, a new proposed information exchange of adjacent lines capacity of the neighbouring network should enable better management of trains crossing the border. This information supplies capacity utilisation of the neighbouring IM border section, which helps to agree on cross-border traffic management, especially in contingency cases.

- The **international contingency management tool** improves the management of the current smaller incidents and simulates the effects of the forecasted network condition on the train runs. An automatic data exchange on incidents is being developed as part of the ETMN. Simplification of the contingency cases data exchange performed on the background of the national systems gives more time for the involved staff to focus on mitigating the incidents' adverse effects.

The detailed user requirements are being defined in the second phase.

Cooperation with other stakeholders

In parallel, IMs are developing an approach to cooperate with other stakeholders, such as railway undertakings, terminals and ports, to strengthen current practices and solutions on a more harmonised and developed level. A full sector approach will be developed in a concept named Rail Collaborative Decision-Making (R-CDM). The R-CDM concept should define the main collaboration principles and contribute to the involvement of the stakeholders in the ETMN cooperation platform- a concept where sharing information and barrier-free communication takes place about any traffic situation if needed.

All the ETMN and R-CDM activities contribute to the common European strategies and are built on existing rules and data exchange defined in relevant TSIs. In parallel to these bilateral exchanges, the centralised data exchange via RNE TIS ensures transparent and reliable monitoring of the ETMN, which could also serve for R-CDM. The distributed responsibilities of NTCCs with clear procedures and the common synergies with other stakeholders will provide the optimised and distributed performance.

The ETMN's further concept deployment via the approach described above should additionally build up resilient structures to increase railway transport effectiveness and customer satisfaction, improving communication among NTCCs.

About CER

The Community of European Railway and Infrastructure Companies (CER) brings together railway undertakings, their national associations as well as infrastructure managers and vehicle leasing companies. The membership is made up of long-established bodies, new entrants and both private and public enterprises, representing 71% of the rail network length, 76% of the rail freight business and about 92% of rail passenger operations in EU, EFTA and EU accession countries. CER represents the interests of its members towards EU policy makers and transport stakeholders, advocating rail as the backbone of a competitive and sustainable transport system in Europe. For more information, visit www.cer.be or follow [@CER_railways](https://twitter.com/CER_railways) on Twitter.

About EIM

EIM, the association of European Rail Infrastructure Managers, was established in 2002 to promote the interests and views of independent infrastructure managers in Europe, following the liberalisation of the EU railway market. It also provides technical expertise to the appropriate European bodies such as the European Railway Agency. EIM's primary goal is promoting growth of rail traffic and the development of an open sustainable, efficient, customer orientated rail network in Europe. For more information, visit www.eimrail.org.

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