

Platform for International Rail Passenger Transport

Established after Ministers' Declaration June 2020

Better railway connections for Europe's passengers

A common agenda



Third Integrated Progress Report

2023

***Platform for International Rail Passenger Transport
Established after Ministers' Declaration June 2020***

Third Integrated Progress Report

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Prologue: a shared vision on international railway passenger transport

The Member States, as well as the European Commission, sector parties and passenger representatives are aware that continuing the status quo pertaining to international railway passenger transport is not an option. The international transport systems of Europe need to be adapted to face the challenges of the ongoing and accelerating climate crisis. An interconnected and competitive network of rail passenger services will underpin the economic, social, and environmental sustainability of our continent. It will advance realisation of the Green Deal, securing modal shift whilst enhancing sustainable mobility; strengthen European cohesion by reinforcing connectivity and fair development, not only in the most densely populated areas but also with less well-connected regions.

Extensive improvements are imperative in the way international railway services are offered, marketed, and performed. Rail should become the backbone for international travel for passengers: improvements to the availability and online distribution of tickets, travel information, onboard services and better support during disruptions are required. Additionally, a fully integrated and harmonized infrastructure network is needed, with optimised use of capacity, ensuring frequent and efficient passenger services connecting key passenger hubs. The full achievement of the Single European Railway Area is therefore vital. All parties involved have a key role to play in removing the barriers that exist related to digitalization, infrastructure, rolling stock, and legislation.

The IRP considers the following principles to be essential:

1. Making rail the preferred mode of international passenger transport;
2. Providing high-quality and resilient rail infrastructure and capacity;
3. Making railways more competitive vis-à-vis air and road transport;
4. Investing in national and cross-border railways.

The development of more attractive and new concepts for international services and their connectivity must first be based on sound market analysis to inform estimates of their long-term viability and therefore sustainability. To provide easy access to simple, reliable, and comprehensive information to customers, digitalisation will be an enabler (through an increased use of e-ticketing and a better access to dynamic travel information for instance). Enhancing interoperability, coherent timetabling, and capacity management as well as completion of missing links and removal of bottlenecks are prerequisites for seamless cross-border journeys. Efficient capacity management will help railway infrastructure managers to accommodate forecasts of growing market demand.

In order to deliver the economic and consumer benefits of competition, a fair level playing field is essential. Creating a level playing field for all international passenger transport modes will make pricing more transparent and railways more competitive. Finally, targeted investments in accordance with market and societal needs are crucial for the successful realization of the international rail passenger network. Long-term investment planning and coordinated infrastructure maintenance and development are needed to provide high quality international rail passenger services all over Europe.

The IRP member states are convinced that only consistent cooperation between railway undertakings, infrastructure managers, regulatory bodies, European Commission, Member states and competent authorities and other relevant parties can deliver on the goals set out above. Through its activities and reporting, the Platform aims to advance this process further.

0 Management summary

0.1 Introduction

Since the start of the IRP in 2020, notable progress was made in a number of ways, as detailed in the present Integrated Progress Report, as well as in the 2021 and 2022 reports. In addition, important was the concretisation of areas requiring further discussion between the Member States, between the Member States and the Commission, between the Member States and the sector, and between the European Commission and the sector. These areas can be expected to figure at the forefront of ongoing and future work towards improved international railway passenger transport.

Currently, during the typical working day, the European Union, Switzerland, Norway and the United Kingdom are served by some 200 international railway passenger services. Regional cross-border connections total just over 100, with an average frequency of 12 to 13 trains daily (unidirectional). On top of this, 40 direct intercity services are operated, with an average of 5 to 6 daily trips. High-speed services count a total of 28, on average offering 6 to 7 trains per day. Finally, 29 night train connections are available. Together, these services make up for a total of 1.752 trains per day. Among many origins and destinations throughout Europe, the number of direct connections between capital cities amounts to 27. These key facts are shown in the table below:

Table 1. Key figures 2023 (EU + Norway, UK, Switzerland)

Type of train	<i>Regional</i>	<i>Intercity</i>	<i>High-speed</i>	<i>Night train</i>
<i>Connections Europe</i>	102	40	28	29
<i>Average daily</i>	12-13	5-6	6-7	1
<i>Aggregate</i>	1.297	234	186	35
<i>Trains total</i>	1.752			
<i>Capital-to-capital connections</i>	27			

The European Commission is an important driving force toward a better functioning international railway passenger market. Nevertheless, the MS consider it vital that all government and sector parties, both at national and European level, work together to progressively develop, improve and expand cross-border railway services for passengers. The preferred approach is market-oriented, based on open rail market complemented with public service contracts where needed. Indeed, a group of states have pointed out their own successful application of the market-oriented approach. However, at the same time the Platform emphasizes that PSOs, within the established legal framework, can have added value towards the overarching aim of modal shift.

Whereas the market-driven and PSO approaches are not mutually exclusive, any significant improvement of the international service network depends on progress on a range of related topics, notably: customer experience and digitalization, matters related to the EU's Green Deal, and regulatory framework. This is reflected in the following paragraphs.

0.2 Customer experience and digitalization

In order for international rail to be competitive, improved customer experience is a vital element. Digitalization, including for data sharing and ticket selling, has the potential to contribute greatly to this aim. Consequently, the Platform considers digitalization a critical enabler for level playing field between rail and competing modes of transport.

The process of buying international railway tickets, including through-tickets, is not consistently customer friendly. As stipulated in Regulation 2021/782, IMs and RUs are obliged to make available information on both timetables and tariffs, required for smooth international operations and passenger information. Regulation (EU) 454/2011 (TAP TSI) requires all railway undertakings to share their timetable and tariff data with other railway undertakings, public authorities and third parties, such as ticket vendors. In addition, the sector has developed two, essentially interoperable, formats for open ticket selling: OSDM and Transmodel NeTEx. The MS call on the sector to avoid any delays in the full implementation of these standards.

Other framework conditions important for a level playing field between different modes of transport are noted by the Platform. Passenger rights, including for end-to-end journeys, are still a subject for considerable improvement. Also, the internalization of external costs, and fiscal treatment, are not aligned in an equal manner across competing modes, perhaps best illustrated by the existing VAT exemption for aviation. However, the MS maintain that it is imperative that the aforementioned shortfalls pertaining to digitalization are solved before other conditions could be addressed.

0.3 Network definition

Today, international railway passenger services are limited by heterogeneous national framework conditions, constraints in infrastructure capacity and capacity allocation, and insufficient implementation of the European legal framework and standards. However, several Platform members consider that improving international railway passenger transport may ultimately require developing a shared vision on a viable and resilient European network of services. This should take into account market demand and potential, matters of international capacity allocation, and available infrastructure.

As was already remarked, market models employed differ throughout Europe, in turn shedding different lights on government's role in network definition. One example are the Nordic countries, where a combination open access services and PSO services is found to serve the public interest well and hence the need for government to intervene is diverse. Differing views are found elsewhere, such as in Belgium, France, the Netherlands, Portugal, Poland, where international services have developed to a limited extent and public authorities are thus incentivized to formulate the contours of a desired cross-border regional and intercity network. There is the exception of the HSR network. Where cross-border HSL infrastructure exists, such as in Belgium, France, the Netherlands, these services are usually provided under open access regimes.

Consequently, the Platform reaffirms that network definition has an important regional dimension, next to a European one. Working together on a common vision on the European network of international rail passenger services, as is done e.g. in the TEE letter of intent, has added value but should not exclude other market oriented initiatives.

Therefore, it is important that the existing and foreseen international railway passenger services in Europe have been charted (see chapter 7 of this report), and that their future development is monitored. In doing so, possible network gaps become better visible, urgency of market analysis clearer, and future discussions within the IRP and between the IRP and other actors richer.

Importantly, a significant number of initiatives, aiming for the inception or expansion of services, has already ensued. In particular, the following projects are noteworthy:

- Rail Net Europe's Timetable Redesign (TTR) also emphasizes cross-border infrastructure capacity required for passenger transport;
- The commissioning of 10 EU pilot services to boost cross-border rail by the European Commission under the headline "Connecting Europe by train";
- The TEE 2.0 concept and the implementation of services by railway undertakings;
- The Eurolink concept on trans-European capacity for a network of services;
- The European Commission initiative Cross-border rail traffic – Better management and coordination of capacity and traffic management and possible related upcoming legal proposals of European Commission.

The Member States emphasize that sufficient, high-quality and seamless cross-border railway infrastructure is not always available. In order to identify and remedy bottlenecks, further enhanced cooperation between IMs and RUs is necessary. Also, and directly related to network definition, essential for competitive long distance rail passenger services are efficient hubs providing interconnection with other railway and intermodal services. The Platform considers that more thought is to be given to identifying these hubs. The results from a working group on hub definition at the level of UNECE may serve as basis. Additionally, the MS assert that a uniform approach regarding track access charges, taking into account Commission, EU-Rail System Pillar and CER guidelines, is vital.

For night trains, the same market access conditions apply as for other services. However, there might be specific requirements pertaining to rolling stock, train routing and service facilities. Certain stakeholders within the Platform consider that, in terms of capacity allocation, it may be necessary to include transparent priority rules for night trains.

0.4 Green Deal

In order for the EU to achieve its environmental targets as laid down in the Green Deal, international railway passenger transportation should be boosted by making optimal use of the TEN-T network and its interoperability standards. The international rail passenger network should be based on hubs, integrating international connections with other modes of public transport. In order to achieve efficient operation of international passenger services, it is essential to facilitate the correct implementation of the EU rail acquis which targets technical, administrative and procedural harmonization. In addition, the railway and aviation sectors should offer combined attractive services in a seamless way.

For completion of the TEN-T network, the MS share the view that the results and conclusions from the process of network definition, including those pertaining to bottlenecks, must be taken into account in the continuous dialogue with the Commission and corridor coordinators. In addition, long-distance international railway passenger services should connect passenger hubs throughout Europe. Definition of hubs goes hand in hand with further enabling intermodal journeys, including first and last mile and air-rail connections. Identification of international rail passenger hubs is seen as integral to

network definition, also emphasized through the letter of intent in support of the Trans Europe Express (TEE) 2.0 concept, signed by 21 Member States. Similar to other aspects of international railway passenger services, it is essential that the views of passengers are taken into account.

Next to bottlenecks, there is an insufficient focus on impact of infrastructure conditions on international passenger services. In addition to implementation of technical interoperability standards (TSIs), it is imperative that improved infrastructure governance, including on capacity allocation and track access charges, delivers on its potential in the next years. The RNE project Time Table Redesign (TTR) for smart capacity management, expected to be introduced in 2025, is aiming at creating benefits for international rail passenger services, especially to allocate the annual capacity in advance allowing the ticket selling compatible with competing modes. A potential EU framework for cross-border infrastructure governance deserves ample consideration.

Finally, one of the challenges for (high-speed) through-services is posed by the availability, and financing, of rolling stock interoperable with different technical systems (e.g. safety, electrification, certification systems). Availability of rolling stock depends on multiple factors, including finance, convincing business cases for services (including infrastructure capacity and reliable timetabling), and as much uniformity of technical specifications as possible. In terms of financing, a key impediment is access to loans, especially for open access operators. In addition, financing for second-hand and third-party-owned rolling stock falls short. The Platform stresses the importance of continuing discussions around these issues, especially as other impediments are gradually ameliorated. Furthermore, costs for internationally operating rolling stock could be reduced through streamlining of the vehicle authorization process, thereby indirectly improving access to loans.

0.5 Regulatory framework

The regulatory framework should enable the development of an integrated international rail passenger network, connecting all European hubs, with integrated services. We deem it essential that any initiative will contribute to a more level playing field between railways and other modes of transport (i.e. road and air) so that the former will receive a strong increase in the volume of passengers. As time is running and the overall climate goals are pressing, it is urgent to find ways to increase the international rail services while awaiting the full effects of current legislation. Such measures should not counteract or obstruct the potential market initiatives within current legislation.

Market demand and open access competition as enablers of the desired modal shift to rail remain leading principles in EU law, whereas the possibility of PSO-driven services may be employed where the market is not expected to develop and services are considered necessary by national, regional and local authorities who play an essential role and enjoy a wide discretion in providing, commissioning and organising services of general economic interest.

Increased cooperation between MS, infrastructure managers and railway undertakings is essential to enable more cross-border services. Sharing knowledge and experience could reduce economic barriers for the operation of international services such as infrastructure planning, capacity allocation, track access charges and access to rolling stock. Integration of cross-border services in national timetables and networks and stopping at regional stations can provide a significant improvement in service supply.

0.6 Conclusions

Since the start of the IRP in 2020, notable progress was made in a number of ways, whereas the concretisation of areas requiring further discussion will be vital for shaping future work towards improved international railway passenger transport. The European Commission are working toward a better functioning international railway passenger market. Nevertheless, all government and sector parties, both at national and European level, must work together to progressively develop, improve and expand cross-border railway services for passengers.

European railway legislation is market-oriented, based on an open rail market complemented with public service contracts where needed. The Platform recognizes that PSOs, within the established legal framework, can have added value towards the overarching aim of modal shift. Either way, progress within the fields of customer experience and digitalization, network definition, matters related to the EU's Green Deal, and regulatory framework is vital for enabling the necessary modal shift to rail.

Customer experience and digitalization first and foremost hinges on the progressive implementation of standardized ticketing models and initiatives relating to passenger rights and journey continuation.

Effective network definition, next to completion of the TEN-T network and removal of bottlenecks, ultimately depends on addressing the heterogeneous national framework conditions, constraints in capacity allocation, and insufficient or disharmonized implementation of the European legal framework and standards. However, several Platform members consider that improving international railway passenger transport may ultimately require developing a shared vision on a viable and resilient European network of services, taking into account market demand and initiatives that already exist today. Therefore, it is important that the existing and foreseen international railway passenger services in Europe have been charted. In doing so, possible network gaps become better visible, urgency of market analysis clearer, and future discussions within the IRP and between the IRP and other actors richer.

Achieving the modal shift necessary for the Green Deal's targets requires completion of the TEN-T network as well as advancing on the concept of passenger hubs. Also, further progress pertaining to air-rail journeys and network governance is required. Challenges with regard to financing rolling stock cannot be left unaddressed.

Finally, it is urgent to find ways to increase the international rail services while awaiting the full effects of current legislation in the field of governance. Increased cooperation between MS, infrastructure managers and railway undertakings is essential to enable more cross-border services.

1 Introduction

1.1 The IRP platform

This Integrated Progress Report of the Ministerial Platform on International Rail Passenger Transport (IRP) sets forth the progress made, over the 2022 – 2023 period, regarding the ministers' declaration of the Ministries of Transport of the EU Member States, Switzerland and Norway. During the Transport Council on June 4, 2020, the European countries embraced the initiative to work on a common agenda aimed at fostering and supporting the improvement of international railway passenger transport in cooperation with the relevant stakeholders. As a result of the political declaration, a joint platform of the EU Member States¹, Norway and Switzerland was set up to further facilitate discussions. In 2022, the United Kingdom acceded as an observer. The platform is supported by sector parties and the consumer organisations including BEUC / European Passenger Federation (EPF). It also involves representatives of the European Commission, European Union Agency for Railways, OTIF, and EU-Rail. Panteia supported the Platform in drafting this report.

The Terms of Reference 2021 for the Platform stated that the Platform build upon the existing EU railway acquis and policy, in particular the 4th Railway Package (Single European Railway Area), TEN-T, innovation, etc.) and COTIF rules. Participation in the Platform does not lead to any binding financial or legal commitments from any party. The budgetary framework, both on EU and national level, should always serve as foundation for the proposals made in order to inspire and define ideas to improve international railway passenger services.

The platform presented its first report during the kick-off event Year of Rail in March 2021, accompanied by the publication of a sector statement. In June of the same year, the Member States presented an Integrated Progress Report, detailing the results of the discussions among the members of the Platform. The document provided an inventory of barriers for the further development of international railway passenger transport. It also identified shared scenarios and options on solving the existing impediments, and indication a workplan for addressing the barriers. The second Integrated Progress Report was published in June 2022.

The present Progress Report sets forth the progress made over the last year. The members of the IRP invited the European Commission, ERA, EU-Rail, OTIF, sector parties and other stakeholders to consider the findings of this report in the conduct of their works, in particular in view of the European Commission's action plan on international railway passenger transport.

1.2 Status of the document

This document is written by the ministries, taking into account the results of the discussions among the members of the Platform, and between the platform and the aforementioned stakeholders. The report provides an inventory of progress made, including on the action agenda as defined in the previous report (2022), that may contribute to facilitate improving international railway passenger transport. Thus, the members of the Platform jointly act to

¹ With the exception of Cyprus and Malta.

remove identified barriers. The document does not imply any legal, policy, or financial obligations.

1.3 IRP platform organization and division of work

Based on the barriers and possible solutions identified in the previous Progress report, the IRP proceeded with the work through the subgroup structure. The platform comprises the following four subgroups:

- Subgroup A – Customer experience & digitalization
- Subgroup B – Defining a network of International Passenger services
- Subgroup C – EU Green Deal
- Subgroup D – Regulatory framework

Further building upon the results from the previous progress reports, the Platform addressed a number of priority actions that were considered for the second half of 2022 and early 2023. The priority actions are summarized in the tables at the end of each subgroup chapter.

1.4 Outlook IRP 2023-2024 and beyond

The platform has been established 2nd half of 2020 following the Ministerial declaration from June 2020. In the revised terms of reference from September 2021 the platform committed expressed the intention to develop progress reports in 2022 and 2023.

Following the ministers declaration back in 2020 high policy initiatives were developed, notably the action plan on cross border and long distance rail transport from December 2021 and the 2 sector statements from 2021 and 2022.

The platform notes that the purpose and scope of the platform identified in the 2021 ToR remain valid.

For the next period 2023-2025 the platform shall review its way of organization. A number of key developments and principles will be taken into account:

- Build on the increased cooperation between Member States with regard to international rail passenger transport at European level. In the 2020-2023 period 9 ministries (Austria, Belgium, France, Germany, Italy, Netherlands, Slovenia, Switzerland and UK) volunteered as co-chair of one of the subgroups and carried cooperation forward. This is well needed in the transition towards a fully interoperable and open market for cross border rail services;
- The establishment of the sector mirror group on international rail passenger services that have led to common sector commitments and respecting the work of all sector stakeholders;
- The work of the European institutions, notably the 2021 European Commission's action plan, the Europe's Rail innovation program on i.a. ticketing and high speed, the work of the EU Agency for Railways on interoperability and digitalization and OTIF on the application of the international legal framework between sector parties;
- The establishment in 2023 by the European Commission of the Single European Railway Area Forum as an expert group to the European Commission. The forum

will support the Commission in the further implementation of Directive 2012/34/EU and in relation to the establishment of the Single European Railway Area²;

- The expected legislative proposals from the European Commission regarding the management of capacity (rail freight corridors review) and the Multi-Modal Digital Mobility Services proposal to enhanced intermodal ticket selling and travel information;
- Work efficiently, take into account international work done in other places and avoid duplication of work.

Table 2. From Terms of Reference IRP, September 2020

Article 1 Purpose and scope

- (1) The Platform will support a European agenda on international rail passenger services, to discuss with sector representatives" necessary actions based on the progress report presented to to Ministers of Transport on 3rd June 2021. . The focus shall be on framework conditions for market development and may include:
 - Actions at European level (EC, S2R, ERA, OTIF);
 - Actions for Member States or for States working together on an international rail passenger corridor;
 - Actions by the Railway sector.
- (2) The Platform envisages a holistic and customer centred approach to bringing EU / Member States / sector initiatives together to ensure improving framework conditions for developing international rail passenger services. In this way, the respective EU / national and private parties can converge their activities and inspire the Platform.
- (3) The Platform does not replace existing EU and national bodies and organisations, but complements them, taking into account the respective competencies.
- (4) The Platform does not create any binding decisions.
- (5) In addition to defining the necessary actions, the Platform shall cooperate on the implementation and monitoring of actions and will take into account where actions are tackled under another existing platform. The Platform works closely together with the European Commission and with sector mirror group, and builds upon the follow-up of the indicative work plan that is part of the progress report. The Platform will take into account ongoing work by the sector mirror group and the European Commission, avoid doing double work. It will initiate actions if applicable. The monitoring of actions is already ongoing (2020 onwards).

The Platform will develop reports including recommendations on key areas of mutual interest for developing International Rail Passenger Services, within the scope of its competence as defined by the Ministerial Declaration on IRP.

As a next step, open for discussion, the platform may continue its work on bringing stakeholders together. In this phase the work of the areas listed in the progress report can be continued and the focus may be more on **monitoring and supporting** progress in number of already identified areas such as:

² From terms of reference Single European Railway Area Forum. 26 September 2022 Brussels.

- (1) Projects intended to support (framework conditions for) new international rail passenger services. These can be from the 10 pilots projects from the European Commission or other projects and may highlight different market segments (e.g. short distance cross border / long distance cross border, high speed, night trains);
- (2) Wider innovation projects in the governance / railway sector that are identified already in this progress report. A non-exhaustive list can be (name project / sponsor)
 - TEE 2.0 (German ministry)
 - TTR (RailNetEurope, Forum Train Europe)
 - Eurolink (RailNetEurope)
 - Work on rail ticketing
 - Air – Rail innovation (Europe’s Rail JU, SESAR JU)
 - International Railway hubs (UN ECE)
 - Good practices on governance for infrastructure / service development (in cooperation with TEN T European Transport Corridors)
 - Cross border application of regulatory framework, including PSO (subgroup)
- (3) Foster the development of key indicators on the development of the international railway passenger services and market.

Taking this into consideration, the platform will further discuss its modalities of organisation for the 2023-2025 period and intends to update its Terms of Reference in the 2nd half of 2023.

2 A – Customer experience and digitalization

2.1 Management summary

Customer experience and digitalization are vital elements of expanding international railway passenger services: they are determinants for the framework for the necessary competition within the railway sector and between rail and other modes of transport. Key topics include:

- Data sharing: an essential enabler for journey planning and competitive ticket selling;
- Ticket selling: flexible, customer-friendly and competitive ticket selling is only possible through the implementation of common standards;
- Resources: the necessary means for uniform implementation of common standards.
- Level playing field: vital for achieving intra- and intermodal competition.

The main themes discussed in the subgroup during the 2022-2023 period, focussing on the overall aim of improving the end-to-end journey customer experience included:

- Fair, Reasonable and Non-Discriminatory (FRAND) principles for ticketing
- Data standards, open data sharing, and
- Regulatory requirements for integrated ticketing.
- The rollout of the Agreement on Journey Continuation (AJC) principles.

The Platform took note of the potential of the two models for ticket distribution for international sales, namely OSDM/FSM and NeTex. Although consensus on a single standard for open data was not found, ERA, supported by the industry, has developed a solution for interoperability between OSDM and NeTex as part of the TAP TSI revision. Emphasizing the need for a result-oriented approach, the Member States welcome this initiative and call for progressive implementation.

In addition, the linkages with the EU's Timetable Redesign (TTR) project were noted, with CER commenting that this could help to stabilise timetables, although without being fundamental to their roadmap. Also, on customer-friendly through ticketing, the MS noted the rationale behind the Agreement on Journey Continuation (AJC), which aims to protect through ticketing rights without the liability implications. The Platform calls on the sector to consider how AJC can be expanded and demonstrate progress without the need for further regulation.

Finally, the subgroup took note of the sector's commitments around harmonizing tariffs or tariff categories. Harmonized tariffs (e.g. the same age groupings for children, retired persons, etc.) will allow for unification of pricing, further streamlining relevant processes.

2.2 Topic introduction

As the Platform noted in previous progress reports, customer experience for international passenger rail is currently not prioritized sufficiently. A positive customer experience depends on far more than the actual journey. It starts with the planning and ends only when the post-trip arrangements are completed, in case they are needed. Subgroup A's overarching goal is to contribute to an improvement of customer experience, exemplified by a simplified customer journey.

Digitalization has the potential to contribute greatly to this aim. The subgroup focuses on digitalization that directly enhances customer experience, and on journeys that are exclusively by railway, even as multimodal journeys remain firmly on the horizon. Therefore, the following barriers are addressed by the Platform: data sharing, ticket selling, resources and issues concerning the level playing field with other modes. Regarding passenger rights, the identified barriers are still the subject of differing views, which is why this aspect remains an 'open point.'

With regard to people with reduced mobility, progress is needed on online information on special fares, which may require a regulatory obligation. Furthermore, proof of entitlement to these special fares should be recognized in all countries. This could be done either with the deployment of a European disability card, or with principles of recognition of cards from other countries. This approach should also be considered for other categories of passengers with reduced tariffs, such as children, students and seniors.

2.2.1 Barriers and possible solutions

Data sharing

As stipulated in Regulation 2021/782, IMs and RUs are obliged to make available information on both timetables and tariffs, required for smooth international operations and passenger information. Although in a number of MS the sharing of real-time information is performed well, this should be improved in practice. This is partly due to insufficient digitalization as well as not yet fully implemented data standardization in the rail sector. Furthermore, data exchange between domestically oriented ticketing systems of the railway undertakings, other operators and ticket vendors, presents untapped potential.

Amongst other solutions, the requirements for publishing timetable data and tariffs are already organized at EU level, but not yet fully implemented. Member States have an important role in regulating how this data is made available on the national access points (NAP), to make sure that the data sets are compatible in the national profiles. As a minimum, a national register is needed (which would include at least metadata and a reference to the data source), as well as to consider a national regulation to ensure that international interoperability is included. Also, the Member States need to ensure the implementation of Regulation (EU) 454/2011 (TAP TSI) by all railway undertakings, to share the timetable and tariffs (including fare tables for basic fares but also discounted fare types) data with other railway undertakings, public authorities and 3rd parties (e.g. ticket vendors).

Several solutions are considered. With regard to ticket distribution (or other contracts), some common standards are needed. The project OSDM (Open Sales Distribution Model) was released in 2020 under the supervision of the UIC with this goal in mind. For example, there should be minimum standards for international tickets, with regard to products, price calculations, passenger categories, rules for refunds etc. In addition, the Transmodel model (Reference Data Mode for Public Transport) and NeTEx (Network Exchange) standard were set up by the European Committee for Standardisation (CEN), aiming to facilitate multimodal transport.

Table 3. Ticket selling: some concepts

OSDM

Swedish company Samtrafiken is basing their new digital infrastructure for the distribution of reserved train tickets on the international and open standard OSDM (Open Sales and Distribution Model) developed by UIC. Sweden is one of the first countries in Europe to implement OSDM. Others will follow closely with the CER Ticketing Roadmap implementation. Worth pointing out is that OSDM is multimodal, bringing value for the whole public transport. For Sweden OSDM means:

- the booking process for travellers is simplified and improved
- the distribution cost for the railway sector is reduced
- a reduced supplier dependency since subsystems can be added or replaced more easily

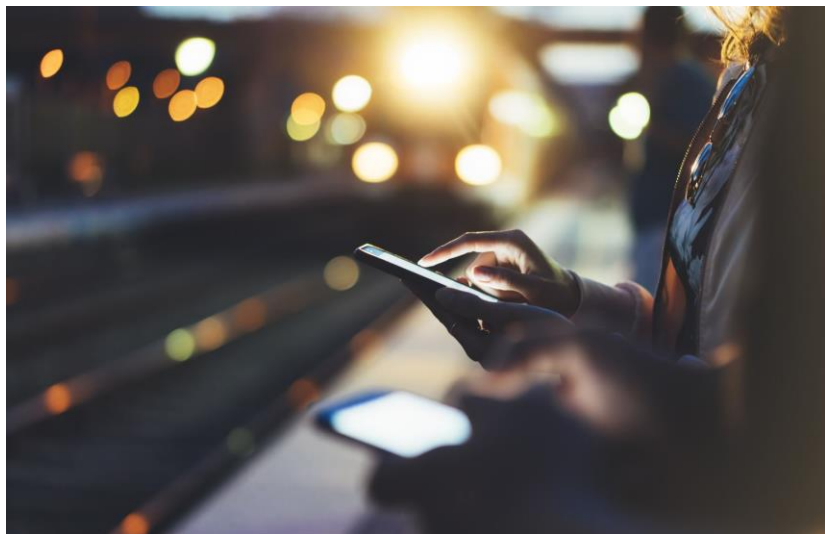
Agreement on Journey Continuation (AJC)

Within the framework of an "Agreement on Journey Continuation (AJC)", 16 European railway undertakings* have agreed that rail passengers who miss a connecting train and lose their seat reservation due to a delay, will be transported on the next possible train without additional costs if they can present a confirmation of delay. The railways involved in the agreement have put into place the relevant procedures and in particular the information to be provided to passengers. This solution was developed by the International Rail Transport Committee (CIT) as part of the CER Ticketing Roadmap, a sector initiative to improve international rail services for passengers.

The electronic Ticket Control Database (eTCD)

The electronic Ticket Control Database (eTCD) is a centralised, real-time passenger ticket management system developed by UIC for use by railway companies. In operation since February 2020, it is an important cornerstone of rail distribution ecosystem. All international tickets that do not have obligatory reservations will be automatically registered by the sales channel in an online UIC shared database (eTCD) and their status kept up to date. In the future, eTCD will play a crucial role in creating a journey protection system for passengers, by combining real-time information, such as delays and cancellations, with the ticket(s) a passenger holds (eTCD), and with a robust timetable (MERITS database). This will allow railways to automatically register delays directly with the ticket information, to offer alternative journeys for passengers to reach their destination, inform them of their rights, and even potentially rebook a reservation on a later train. UIC and CIT members continue to discuss the possibilities for the digitalisation of processes (e.g. delay confirmation, manual annotation on the ticket etc.) to further enhance support of passengers during disruptions as defined in the Agreement on Journey Continuation (AJC).

Source: CER



Ticket selling

The process of buying international railway tickets is not consistently customer friendly. Initiatives to make the process easier, as well as to introduce new ways of distributing tickets through third parties still need to be implemented. This includes digital tickets and the opportunity to sell or be part of mobility packages. However, the identified shortfalls are not primarily technical. RUs typically want freedom to exercise maximum commercial flexibility. Passengers, understandably, require the ability to purchase through-tickets at transparently competitive prices. Policy analysts are aware that the great majority of passenger journeys are made using PSO-regulated (and guaranteed) services. Some therefore argue that this should be reflected in the extent to which RUs are allowed to exercise unfettered commercial freedom, whereas others place greater emphasis on the potential for innovation in an unregulated market.

Also, the possibility of a requirement for transport operators to allow third party sales could be considered as an option. However, considering ongoing work on implementation of the aforementioned standards, the MS are of the opinion that in the short term a result-oriented approach should be preferred over regulations for commercial conditions. In this vein, a large number of passenger railway undertakings have proposed a paper called "Ticketing Roadmap" which represents the commitment of some of the main players of the market to overcome the above-mentioned barriers. Other parts of the sector have indicated an intention to develop alternative proposals.

Resources

Traditionally, railway undertakings have focused on their own domestic markets. Most recently, also thanks to the implementation of the EU railway packages, international connections began to be successfully developed. In any case, the resources deployed by railway operators for implementation of technical solutions for improving customer experience on international railway trips could be strengthened (IT, manpower, time, money).

The MS see a clear need for Union policy support for implementation of digitalization, consistent with the Smart & Sustainable Mobility Strategy, the New Consumer Agenda and Union support for R&I. After the legislative effort that led to positive results, there is a need to speed up the introduction and implementation of technical solutions. It should be discussed how standard software components or Software-as-a-Service solutions based on European standards could help.

Level Playing Field (framework conditions)

From a customer's point of view, disparities regarding the level playing field between rail and other modes, are striking. Often, air can not only outcompete rail with regard to speed, but also on price. This puts railways in an uphill battle, as framework conditions are not treated equally. The internalization of external costs is not ensured in an equal manner across competing transport modes. Also, aviation is exempt from VAT by all Member States, whereas rail is subject to VAT on cross-border tickets in a number of member states³.

³ With the VAT rates reform that came about with the adoption of Council Directive (EU) 2022/542, Member States have been enabled to apply an exemption with right of deduction (also referred to as a zero rate) to the supply of certain of the goods and services listed in the updated Annex III of the VAT Directive. That includes transport of passengers, as featured in point (5) of the said Annex III while freight transport is not eligible for reduced or zero rate. The use of reduced rates remains optional and it is therefore up to each Member State within the legal framework set by the VAT Directive to decide on the goods or services to which reduced or zero rates are applied. In doing so, Member States must respect the principle of fiscal neutrality, which is inherent in the common system of VAT. According to this principle, which is not affected by the recent

A level playing field should be assured. Also, the alignment with the objectives of the Green Deal and Fit for 55 (FF55) package means that a lower VAT, fuel tax, carbon emission trading and employment condition treatment should be considered for green transport modes. However, so far these topics are not fully covered within the scope of the IRP. Therefore, the subgroup considers that its work should not be further developed in that field unless the scope of the IRP is reconsidered.

A level playing field is not only relevant for competition between rail and other modes, but also in an intramodal sense. All other transport modes have intramodal competition and thus benefit from innovation and customer choice, whereas new entrant operators in rail still only have between 6-8% market share within the mode. Enabling the impartial retail, data sharing and through ticketing is expected to contribute to modal shift, matters appropriately dealt with under the Union's competition policy provisions.

2.3 Progress

The main themes discussed in the subgroup during the 2022-2023 period included:

- Fair, Reasonable and Non-Discriminatory (FRAND) principles for ticketing
- Data standards, open data sharing, and
- Regulatory requirements for integrated ticketing.

It was noted that the role of the sector will be critical to continue making progress across each of these core themes. This was also emphasized by the sector, which reiterated its endorsement of commitments made in the last progress report, and reflected that these involved difficult conversations to find consensus. It was agreed that it is important to revisit these commitments, which remain valid today. The Platform stressed its appreciation for sector commitment on the following key objectives:

- Improving the end-to-end journey customer experience
- Transparency of information sharing, adhering to the FRAND principles
- The rollout of the Agreement on Journey Continuation (AJC) principles.

Both the subgroup and the sector also welcomed the European Commission's action plan to boost long-distance and cross-border passenger rail. It was emphasized that cooperation with regard to its roll-out, evaluation and follow-up in the coming months and years will be vital for achieving the shared aims.

The Platform, as well as the EPF, also noted the aforementioned ticketing roadmap, which is considered another element carrying significant potential for boosting international railway passenger transport. CER explained the latest progress on the roadmap, where work has been done to identify overlapping topics, identify and assign owners at international level as well as within companies, and establish working groups to look at each of the key priorities/themes. Also, CER outlined the organisation's latest thinking behind their open data standard, the Open Sales and Distribution Model (OSDM), also favored by EUTT, ECTAA and CIT. In similar vein, a paper on ticketing by Allrail is expected

reform, similar goods and services, which are in competition with each other, cannot be treated differently for tax purposes.

shortly. Next to OSDM, the Allrail has expressed commitment to an alternative open data standard better suiting new entrants (NeTex). Although consensus on a single standard for open data was not found, ERA, supported by the industry, has developed a solution for interoperability between OSDM and NeTex as part of the TAP TSI revision. Emphasizing the need for a result-oriented approach, the Member States welcome this initiative.

A factsheet, outlining and comparing the two complementary intermodal data solutions, is found in Figure 1.

Figure 1. Factsheet OSDM and Transmodel/NeTex

Fact Sheet

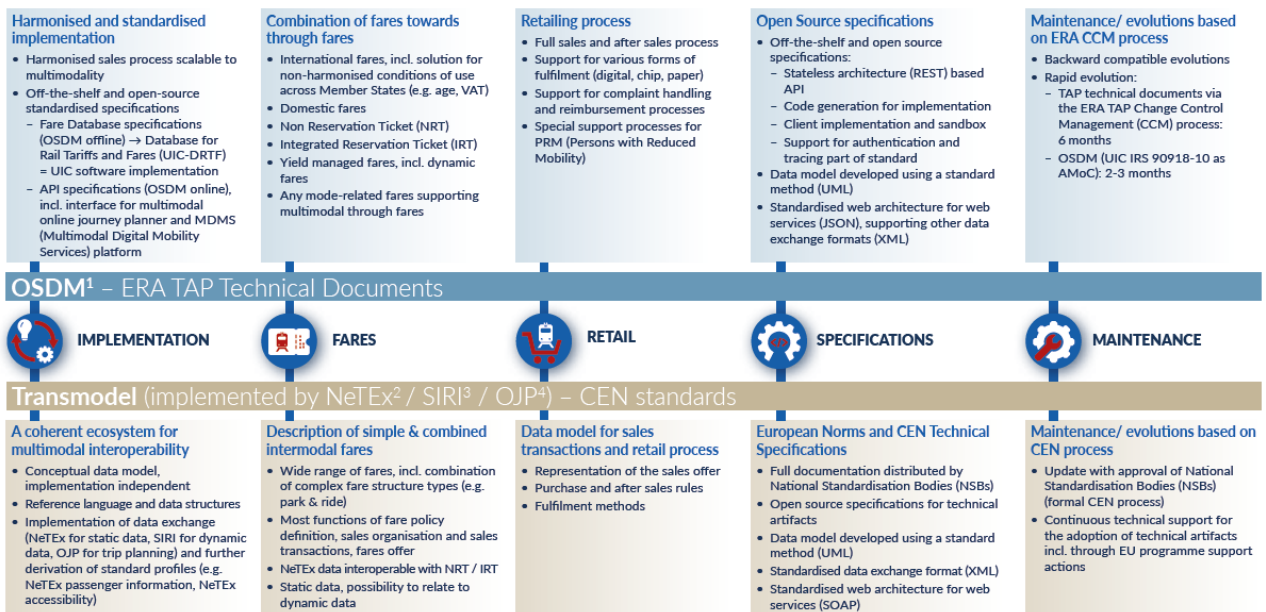
OSDM¹ & Transmodel: two complementary solutions for multimodal passenger services



CER and UITP jointly support leaving the choice to stakeholders to use either:

- **Transmodel** (NeTex² / SIRI³ / OJP⁴) as a harmonised reference for **public transport stakeholders**, or
- **OSDM** – the Open Sales and Distribution Model – as an interoperable standardised sector solution for **regional, long distance rail and multimodal operators and ticket vendors** part of the Single European Railway Area (SERA).

Compare the two models below and read more in our joint statement '[Data models and standards for multimodal passenger services](#)'



1 Open Sales and Distribution Model 2 Network Timetable Exchange 3 Service Interface for Real time Information 4 Open Journey Planner

September 2022 **1**

The Platform emphasised the need to ensure that ticketing plans prioritise uniformity and simplicity – minimising exceptions and derogations of individual operators or companies wherever possible. The key test will be how quickly implementation can take place, and whether sufficient action is demonstrated without regulatory intervention. The Platform found that it is conceivable that voluntary schemes prove to be insufficient, such as in cases where open through-ticketing remains impeded.

On through-ticketing, CER highlighted that liability implications for small operators in particular can be difficult. The hesitancy of passengers to combine different rail operators is largely derived from the uncertainty about what happens if they miss their connecting rail service at no fault of their own if they are not travelling on a through ticket. This makes the through ticket, for large operators who are able to offer it, a competitive advantage

over new entrants. This is the rationale behind the Agreement on Journey Continuation (AJC), which aims to protect through ticketing rights without the liability implications. AJC needs to be universal across all operators and countries. The sector should consider how AJC can be expanded and demonstrate progress without the need for further regulation. However, EPF flagged the role both the EU and national ministries can play in addressing some of these issues, such as liabilities, where there are unintended consequences in the regulations.

Regarding open data, the Platform took note of the potential of the two models for ticket distribution for international sales. However, the subgroup emphasized the ongoing need for concrete steps to implement ongoing initiatives such as OSDM/FSM and NeTex, based on objective oriented approach, and to expand participation in those initiatives. In addition, the linkages with the EU's Timetable Redesign (TTR) project were noted, with CER commenting that this could help to stabilise timetables, although without being fundamental to their roadmap.

Concerning improving customer experience, with its research and innovation activities, Europe's Rail Joint Undertaking continues addressing the challenges in providing more seamless, efficient and resilient rail service. Taking into account the results of the previous, Shift2Rail innovation programme 2 and 4 (IP2, IP4), it aims to improve planning and operational management of rail services and deliver the future European Traffic Management System (TMS) that is interoperable, resilient, able to adapt the capacity and able to integrate all involved services, including last mile operations provided by other transport modes, by taking advantage of the potential of digitalisation. With the advancements on the traffic management level, with inter-modal disruption management, the door-to-door, multimodal passenger experience has the potential to be substantially improved.

Furthermore, the subgroup took note of the sector's commitments around harmonising tariffs or tariff categories. Harmonised tariffs (e.g. the same age groupings for children, retired persons and so on, allowing for unification of pricing), as well as reaching collective agreement across all member states (e.g. Poland and the Czech Republic still do not allow advance ticket sales) are important goals. Further work is needed, and may require action at national or international level. CER indicated its willingness to work with the ministries to address these challenges – for example through harmonising ticket categories. Other organisations noted their support for this.

2.4 Conclusions

Customer experience and digitalization are vital elements of expanding international railway passenger services: they are determinants for the framework for the necessary competition within the railway sector and between rail and other modes of transport.

Although consensus on a single standard for open data was not found, ERA, supported by the industry, has developed a solution for interoperability between OSDM and NeTex as part of the TAP TSI revision. Emphasizing the need for a result-oriented approach, the Member States welcome this initiative and call for progressive implementation.

With its Flagship Projects (notably FP1-MOTINAL and FP6-FUTURE), Europe's Rail Joint undertaking continues developing technologies that will enhance the door-to-door customer experience by improved planning and operations, as well as with efficient disruption management, also on capillary, regional lines.

In addition, the linkages with RNE’s/FTE’s Timetable Redesign (TTR) project were noted, with CER commenting that this could help to stabilise timetables, although without being fundamental to their roadmap. Also, on customer-friendly through ticketing, the MS noted the rationale behind the Agreement on Journey Continuation (AJC), which aims to protect through ticketing rights without the liability implications. The Platform calls on the sector to consider how AJC can be expanded and demonstrate progress without the need for further regulation.

Finally, the subgroup took note of the sector’s commitments around harmonising tariffs or tariff categories. Harmonised tariffs (e.g. the same age groupings for children, retired persons, etc.) will allow for unification of pricing, further streamlining relevant processes.

2.5 Way ahead

In the following table, progress regarding the action points identified in the previous progress report, and further steps, are summarized.

Table 4. Priority actions Subgroup A

Priority action	Deliverable	Lead	Previous planning	Progress	Remarks
A.2 <i>Regulatory frameworks to enable data exchange</i>	Progress report on TAP/TSI, MMTIS revision, NAPCORE project and possible other initiatives outlining the lessons learned	UIC Passenger Group	Next IRP progress report	Report drafted by UIC Passenger Group	Commission presented further policy options recently
	Provide a paper, considered as reference, on the governance of data reference and the best practices on the implementation of national allocation entities, identifying, where relevant, legal enforcement.	CER	<ul style="list-style-type: none"> Beginning 2023 : consensus among members 	In progress	
	Define the approach for exchange of views and information between expert groups established at the EU level (such as MPMF, MDMS,	SGM	Intersessional	Addressed in this progress report	

	MMTIS) and the subgroup A				
	Based on the legal framework and existing practices, draft recommendations on access to real-time data services for the customers.	SMG	<ul style="list-style-type: none"> 2023: tbc depending the progress made 	Addressed in this progress report	
A.4 <i>Selling (international) tickets by third party vendors</i>	Report on ticketing roadmaps initiatives, taking into account CER and AllRail ticketing papers, and identifying enabling actions MS to implement them	CER	Mid-term report by September 2022	Report drafted by CER	To be discussed by Platform
	Recommendations on FRAND principles, especially regarding to the definition, and how to implement them (e.g. legal, funding)	SMG	<ul style="list-style-type: none"> Beginning 2023: consensus among members 	Action pending	Depending on consensus within SMG on FRAND definitions
	Report on framework conditions allowing ticketing solutions, taking into account a potential pan-European system and the interoperability between platforms.	SMG	<ul style="list-style-type: none"> February 2023: consensus among members 	Taken up in CER ticketing roadmap	Solution in the form of OSDM
A.5 <i>Common and interoperable standards for an open</i>	Overview of the available solutions and the obstacles for implementation	SMG, ERA	<ul style="list-style-type: none"> March 2023: consensus among parties 	Solution allowing the interoperability of OSDM and Netex is being	Thereby the issue of (competing) technical

<i>source based approach for ticket sales, distribution</i>	Proposal with concrete steps to implement ongoing sector-based initiatives such as OSDM/FSM, based on objective oriented approach, and to expand participation in those initiatives.			designed by the ERA with the support of the industry.	standards is solved.
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3 B – Defining a network of international services

3.1 Management summary

The Subgroup B is one of four working groups of the Platform on International Rail Passenger services. Main task of SG B is to deal with 6 action items defined in the IRP work plan. SG B continued its work in the 2022/2023 period to further elaborate those items and to address still existing obstacles in regard of market access, barriers to competition and the introduction of new services.

As in previous working periods several projects and development on a European level had to be considered, having relevance to all 6 actions items:

- the TTR project of Rail Net Europe and Forum Train Europe,
- the naming of 10 EU pilot services to boost cross-border rail by European Commission under the headline "Connecting Europe by train",
- the TEE 2.0 letter of intent, supported by 20 Member States, showing key routes where international services can be facilitated / developed, and the implementation of services by railway undertakings,
- the EuroLink concept on trans-European capacity for a network of services,
- the European Commission initiative 'Cross-border rail traffic – Better management and coordination of capacity and traffic management and possible related upcoming legal proposals of European Commission.

SG B followed closely the respective development and took up relevant findings into its own works, maintaining a continuous exchange of information with the relevant stakeholders. The initiatives are of different maturity levels, whereas non-discriminatory access for all railway undertakings must be ensured.

A first in this period was the examination of several case studies on the introduction of new services provided by railway undertakings and related topics. Doing so SG B was able to gain a more precise insight into existing issues and to draw additional conclusions on a necessary prioritization of measures and adjust recommendations made in this report. Some prominent topics are non-adjusted national timetables for the capacity allocation process leading to cross-border fragmentation in allocated capacity, a deficient harmonization of temporary capacity restrictions (TCRs) between infrastructure managers, and laborious processes for the certification of rolling stock. In addition, problems related to getting competitively neutral access to suitable stabling sidings, sometimes controlled by incumbent operators, are seen as a barrier to the introduction of new services. Also, it seems many infrastructure managers and Member States are suffering from a lack of funds also to enlarging siding capacity, essential contribution to achieve modal shift. An in-depth workshop on the planning of TCRs showed possible levels for improvements by infrastructure related stakeholders.

The work of the others subgroups is a major contribution to the development of a network of international passenger services and close exchange a views and findings between the subgroups is of continuing importance.

With regard to the potential impact of an upcoming legal proposal of the European Commission on capacity management also important for international rail passenger services, the draft legislation must be awaited and then examined. In addition, the proposals for TEN-T revision, as agreed in principle by the Council on 5 December 2022,

will address rail passenger transport as well. The 10 pilot services selected by the European Commission will provide additional input to the topics discussed not only by SG B, but by the IRP in total.

3.2 Topic introduction

Today, international railway passenger services are limited by heterogeneous national framework conditions such as timeframes for capacity allocation procedures different between countries, constraints in infrastructure capacity and capacity allocation, and differing implementation and enforcement of the European legal framework at national level. Significant modal shift to rail will only be achieved if passengers can easily access services that meet their mobility needs, are attractive to them and offered at a competitive price.

However, the Platform considers that a viable and resilient European network of services could be developed by the market players, creating the right conditions for the development of such network. This should take into account market and passenger demand and potential, matters of international capacity allocation, and available infrastructure. The market models employed differ throughout Europe.

Mobility, already existing operations, expected demand, technical, operational and economic viability, investment needs in relation to infrastructure, signaling, IT developing (e.g. capacity management) and other elements which are necessary to offer competitive, efficient and commercially attractive services influence the optimal selection and implementation of the different routes. Furthermore, the development of these international rail services should be accompanied by interoperable infrastructures, common allocation processes, commercial conditions, operational rules and prioritisation, which offer robust services and have a high standard throughout. Any issues regarding the international network of passenger services, including for new entrants, have to be analysed and subsequently addressed.

3.2.1 Developing the network

In the previous reports, future development of a network of nodes, corridors and multi-country connections was discussed. The discussion took into account the concepts of interval clock-face timetables ('Europatakt') and TEE 2.0 which is supported by 20 Member states. For a meaningful increase of international passenger railway transport, structural changes are still necessary, including implementation of the harmonized technical standards (TSIs) and harmonized European capacity allocation as well as the removal of still existing market access barriers and barriers to competition across Europe.

Table 5. TEE 2.0

The TEE 2.0 concept was initiated by Germany in the context of the German EU Council presidency in 2020 and is supported by many European ministers of transport. The TEE 2.0 concept takes up the earlier scheme of high-quality international passenger trains services branded TEE ("TransEuropExpress") and provided by European railways between 1957 and 1995. Core of the TEE 2.0 concept is to give an effective impulse to the European railway sector for initiating new cross-border high-speed and night train services, providing new links between European metropolises with commercial services of high speed, enhanced comfort and covering distances of at least 600 kilometres.

In addition, the TEE 2.0 concept aims at an optimized use of available infrastructure capacity as well as an integration into regular interval timetable schemes such as 'Deutschlandtakt' also on a European level while encouraging cooperation between railway undertakings in providing such services. The TEE 2.0 concept further contributes to the cooperation and work of stakeholders in the Ministerial Platform International Rail Passenger Transport by supporting the improvement of access to rail passenger services and the removal of still existing barriers to competition in Europe.

In 2023 several lines of the TEE 2.0 concept have already been implemented by railway undertakings, such as a day train service Munich – Zurich and night train services Stockholm – Copenhagen – Hamburg – Berlin (although in Sweden capacity is allocated on open access and socio-economic prioritization grounds), Vienna – Munich – Paris. New services are currently introduced, such as a night train service Brussels – Amsterdam – Berlin. More new services are already announced by railway undertakings, among others a new high speed service Paris – Berlin and a night train service also between Paris and Berlin.

Source: German MoT

In the previous progress report, the following key steps towards building the envisaged network were identified:

1. Examine existing and future market demands and policy ambitions on the European travel market. Define the most important market potential, including for city pairs, and conduct market analysis.
2. Use the current services as a possible starting point. Then define step-by-step improvements, learn and reiterate.
3. All stakeholders can examine the concept ideas, i.a. creating star-shaped line elements to the nearest neighboring towns or hubs from each country to the next node abroad, recognizing geographic priorities. These line elements of all countries are collected and compared. The TEN-T network should be taken into account.
4. Provide an overview of the whole network on wider scale, addressing the concept of integrated international train paths and hubs.
5. Fine-tune on line level: links are then created to lines and networks and are provided with travel times and/or train paths (recognizing the capacity requirements of other train services. The resulting lines can be examined both in terms of their technical requirements (rolling stock). A comparison of the lines is required to show the overall network effect.
6. In-depth study of the implementation requirements, rolling stock requirements and infrastructure by IMs and RUs and other stakeholders in relation with the transport authorities and/or MS.
7. Summary of the results by the stakeholders including prioritization on the services and required actions like improving infrastructure measures or adjusting framework conditions. Reformulation of EU contribution for financing of infrastructure and rolling stock equipment is suggested to boost the network.

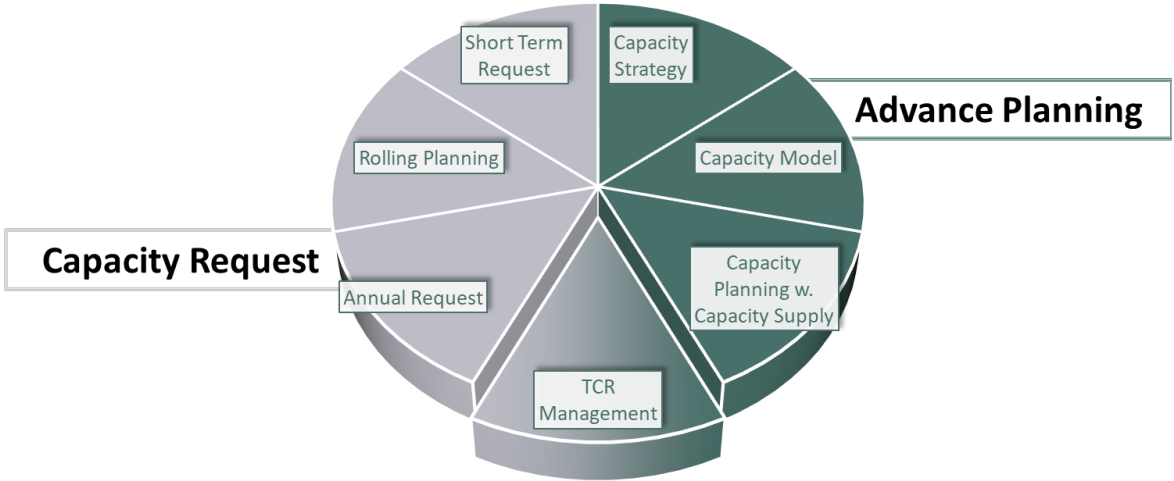
Consequently, the Platform set out to continue the work in these directions, with the shared aim to further align national visions and market analyses. High-level evaluation of pilot services was to be carried out, and preliminary market analysis pertaining to network integration of European rail passenger hubs to be conducted.

Table 6. Time Table Redesign

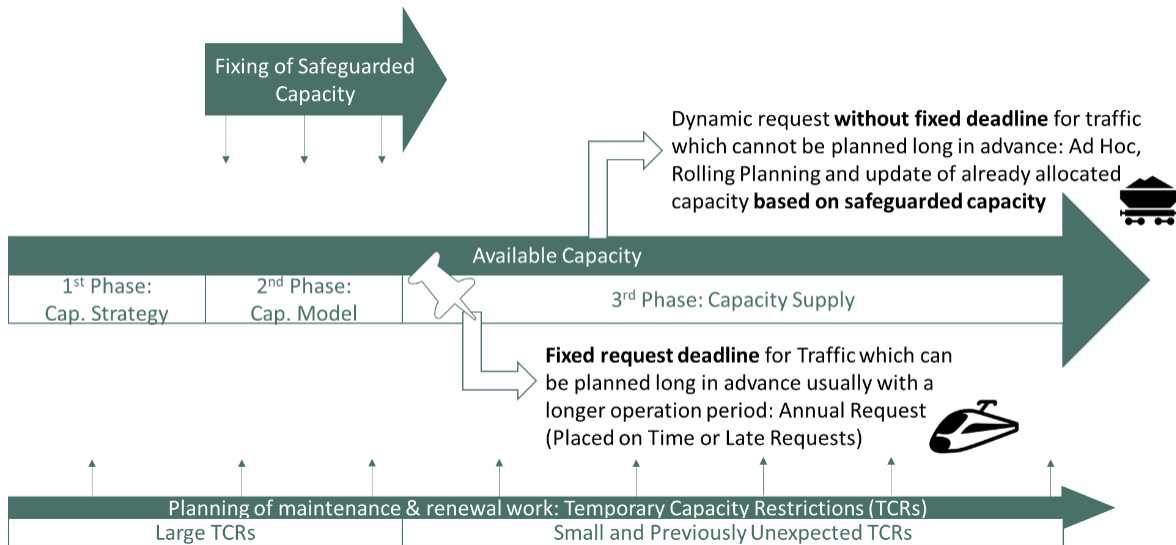
Some time ago, RailNetEurope and Forum Train Europe joined forces to start an ambitious project – the Redesign of the International Timetabling Process: 'TTR for Smart Capacity Management'. Simply put, TTR is the programme to simplify, unify, and solidify improvements to the European rail timetabling system to significantly increase the competitiveness of railways.

The redesigned capacity management process consists of several components to cover advance as well as short-term planning, and provides products for stable as well as variable market needs. The process starts five years before the respective timetable period commences and ends with the conclusion of that period. Advance planning allows to identify capacity availability and potential shortages, e.g. during high-demand times, on an origin-destination basis across Europe. Main deliverables are Capacity Strategies describing the anticipated factors influencing the capacity availability, Capacity Models which plans available and unavailable capacity in volumes and a Capacity Supply, describing in more detail the capacity available for booking. Planning of Temporary Capacity Restrictions is included in all phases.

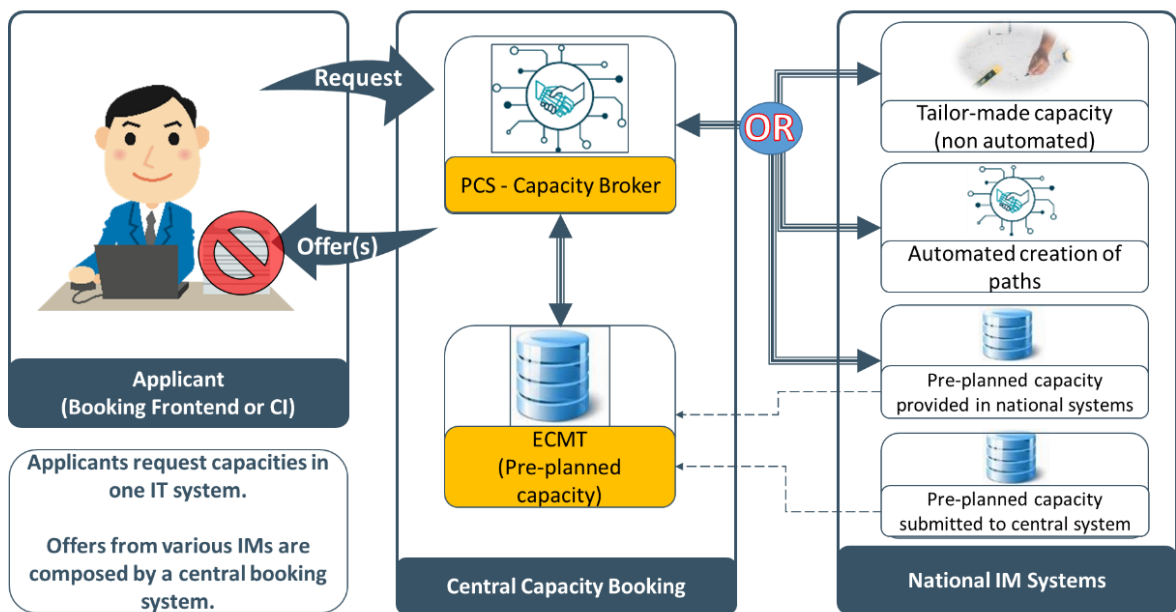
Different request methods ensure that various market needs are covered with the right products and allocation processes. These are clustered as annual timetable requests with a request deadline similar to today's process, Rolling Planning requests, an innovative and flexible method to allow capacity requests to be placed much closer to operation and over several timetabling periods, and Short Term Requests for all short term needs, including changes to already allocated capacity.



A main enabler of these new and innovative processes is the Digital Capacity Management, which will combine the European IT landscape for Capacity Management into one common architecture. This will be achieved by developing a central IT which is connected to national IT via interfaces based on common standards, particularly TAF and TAP-TSI.



TTR aims for a gradual implementation, starting with components for timetable period 2025. The first components covering advance capacity planning for the timetables 2025 and 2026 were released starting in mid-2022. Central IT is currently being developed and upgraded at RNE with Infrastructure Managers working on the implementation of interfaces. The European Commission is in parallel working on an updated European legal framework to further support TTR.



Source: Rail Net Europe

3.2.2 Governance and capacity allocation

In the 2022 reporting, the MS laid down their shared vision on building upon the existing legal and market framework for an integrated network (wherein both open access services and PSO services are possible).. For this it was discussed how to develop a joint vision where governments would consider existing services and market analyses as well as stakeholder input when giving an additional impetus to the development of rail service networks and in addition consider facilitating policies and supporting mechanisms.

However, different governance models were found to exist. Within the different governance models, Member States were encouraged to discuss how to facilitate new international rail passenger services. In particular, harmonized usage of the existing infrastructure was identified as promising. For capacity allocation, the future implementation of the 'Timetabling and Capacity Redesign' (TTR) project initiated by RailNetEurope (RNE) and Forum Train Europe (FTE) was considered key. TTR not only has the potential of harmonization of the national capacity management processes, but also aims to allow for better planning of capacities in advance, and to better fit the different market needs (ensuring efficient capacity allocation and increasing the overall efficiency and reliability of timetables). In addition, the upcoming EC legislative proposal on capacity management as part of the Greening Freight Package is expected to also cover cross-border capacity allocation and traffic management for all railway services.

Consequently, national variations and diverging legislation, partial or incomplete application of common IT standards and processes (or diverging implementation of the relevant EU standards such as TAF/TAP TSI, governed by the SERA directive, and routines brought forward by RNE) constraining the implementation of TTR were to be addressed. The process is governed by the SERA Directive. As a complement to this an approach and routines have been brought forward and decided by in RNE, to support a common implementation.

In addition to TTR, it was noted that further results are expected from the Master Plan of the Europe's Rail Joint Undertaking, part of Flagship Area 1 and expected to deliver results at TRL 7 in some key components by the end of 2026.

In order to further the implementation of TTR, the Platform agreed to monitor the common calendar for TTR implementation. Additionally, best practices for TCRs were to be shared and discussed within the TTR framework, with focus on overcoming barriers (i.a. a lack of cooperation between IMs, and of inclusion of RUs in the planning process). In addition the influence of the respective national governments on the infrastructure maintenance and upgrade works of the infrastructure managers leading to TCRs has to be considered too.

3.2.3 Other barriers and framework conditions

The Member States previously noted that sufficient, high-quality and seamless cross-border railway infrastructure is not always available. In order to identify and remedy bottlenecks, further enhanced cooperation between IMs and RUs was deemed necessary. In addition, the capacity and quality of service facilities, such as stations, depots or workshops, should be taken into account.

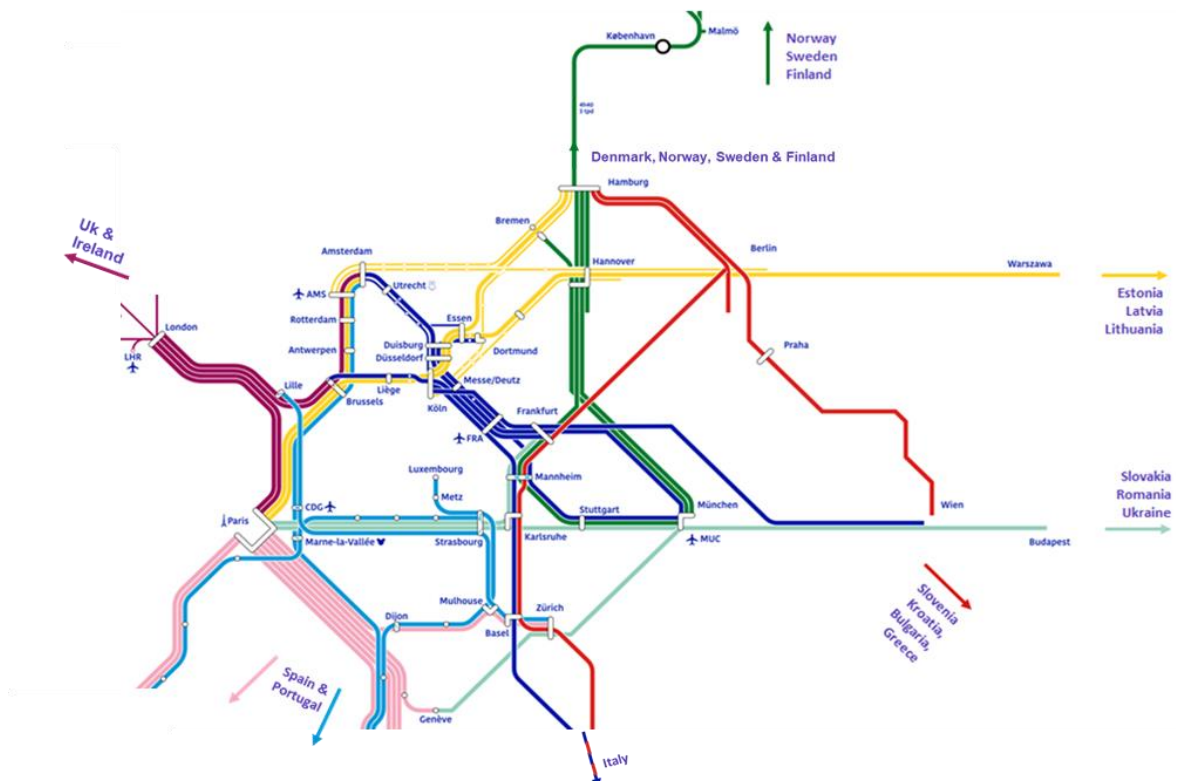
Table 7. Eurolink

In 2019 a number of IMs created the EuroLink platform dedicated to contributing to a better European long-distance rail network for passengers and freight. Its premise is that an European optimum is more than harmonizing national optimums, and that the rail growth goals of the Sustainable and Smart Mobility Strategy can only be achieved by a new network design philosophy putting European long-distance services first, while safeguarding the capacities vital for domestic and freight services. To show what a better and coherent European network could look like in practice, EuroLink designs pan-European timetable concepts and structures for medium and long-term strategy. These products can serve as a starting-point for discussion (no blueprint).

In 2022, the draft network of passenger train services on existing and expected infrastructure for 2030 was extended and refined, based on:

- a path structure for a combination of medium and long distance train paths throughout Europe;
- creating hourly patterns as a standard;
- using the shortest routes, smart timetabling and infrastructure that grants the fastest journey times;
- improving and creating hubs and nodes with optimised transfer times;
- aligning it with the capacity needs of other national, regional and freight traffic.

Potential high-performance passengers network around 2030 on existing and planned infrastructure



Design philosophy



This coherent European node-and-edge timetable structure could serve as the basis for operators to combine the individual trainpath sections into high-quality passenger services throughout Europe, mitigating the risk of trainpath conflicts for all market segments. EuroLink does not distinguish or prefer services operated under open-access or PSO regime and by incumbents or new entrants, the goal is that these services form a composite of a reliable and attractive European rail offer to the passenger and transporter.

The EuroLink platform consists of rail network and timetabling professionals from (mainly) IMs and works in a creative, open and strictly non-discriminatory way. The platform has steadily expanded and now covers a majority of EU and IRP countries (from UK to the Baltic region expected to join in summer 2023), area and population. Providing proper capacities for regional and rail freight services have been included explicitly into the timetabling works and the scope of activities has been enlarged to the 2040 time horizon taking into consideration the interdependency of new infrastructure projects and the EuroLink concept. EuroLink deepened its activities in the field of market studies and demand modelling too.

Furthermore, EuroLink is in close contact with:

- RNE and complements (not substitutes!) the formal capacity allocation process and TTR;
- both incumbent and open access train operators or their umbrella associations;
- a number of Ministries and contributes in the IRP;
- and has reached out to passenger federations, NGO's and other stakeholders.

Source: Rail Net Europe

Essential for competitive long distance rail passenger services are efficient hubs providing interconnection with other railway and intermodal services. Easily accessible passenger stations, maintenance depots and workshops for different purposes and passenger services will help to make international passenger rail more competitive. Earlier, the Platform considered that more thought is to be given to the process of identifying these hubs, as well as to the possibility for new entrants to serve them. The MS set out the intention to use the results from a working group on the definition of international passenger hubs at the level of UNECE. A proposal⁴ on rail hubs including legal instrument is currently discussed by a group of experts at UNECE level.

In addition to the availability of infrastructure, it was emphasized that a uniform approach regarding track access charges, taking into account Commission, EU-Rail System Pillar and CER guidelines, is vital.

Last year, the MS welcomed the Commission's initiative for the setup of pilot services. The platform envisaged that details and results of the pilots be taken into account in its own, broader evaluation that will be an important element of the conceptual European network definition. Commission has now selected 10 pilots and IRP members will closely follow those pilots, being ready to take up any input from them and also to communicate with EC in this regard.

⁴ <https://unece.org/transport/rail-transport/group-experts-international-railway-passenger-hubs>

For night trains, the same market access conditions apply as for other services. However, there might be specific requirements pertaining to rolling stock, train routing and service facilities. Displacement of night trains may occur if there is a conflict between capacity requests of freight trains and night trains, or commuter trains and night trains. The Platform found that, in terms of capacity allocation, it may be necessary to consider the harmonization of priority rules. In addition, it was considered that it is essential that night trains be part of the process of network definition.

A call for expressions of interest in 2022 to support the launch of international night trains showed that these services can operate as open access commercial services or otherwise, if needed, be supported as PSO services. In order to facilitate their launch, the Platform considered that start-up aid could be one option to facilitate such projects scheduled for 2023 and 2024, as well as to projects already launched, compliant with Article 108 of the Treaty on the Functioning of the European Union.

3.3 Progress

Over the present reporting period, discussions in subgroup B focussed on several long-, medium- and short-term topics pertaining to defining a network of international passenger services. Specific examples from the sector further enabled a better and common understanding of the current situation within Europe. Especially, the discussions within the subgroup emphasized – from an international network perspective – the importance of harmonization on a European level, transparency and network capacity. With regard to governance, the idea was entertained of ‘system integrator tasks’ bringing together relevant stakeholders on a short, medium and long term horizon, in order to support international services. On 24 November 2022 a workshop was organized together with subgroup B on governance structures for international rail passenger services, both at member state level and at EU level.

Several topics are already being addressed under the umbrella of the TTR project, led by RNE but also involving sector parties. An appropriate consideration in the European legal framework and hence in the announced legal proposal of European Commission on capacity management is necessary too. Regarding middle- and long-term tasks – e. g. extended usage of the existing network, and the question of how to design a European network of services that links national infrastructure networks and aligns national and European objectives – more discussions are needed between MS and IM. The Platform requires a better understanding of what we have, what might be lacking and how identified gaps could be addressed. For this the platform follows closely the 10 pilots selected by European Commission and the work of other workgroups e.g. on an Amsterdam – Vienna – Budapest or an Amsterdam – Berlin – Warsaw link.

In addition, regarding a common vision, it was considered that the translation of goals and requirements into the network might vary between parts of the European network. An efficient strategy would be to identify common goals and requirements, and then to develop the common network vision in network parts. It was agreed that a closer look on specific lines and connections is necessary, in order to identify problems and solutions on these lines and connections (which might have different characteristics). Consequently, the identified solutions might be used for other lines and connections as well. The 10 pilots and the work of other workgroups are expected to provide additional insight and input.

Also in light of the above, EuroLink has presented its work, however a number of issues remain to be solved and are currently evaluated by EuroLink. Therefore, further discussions

are necessary, e.g. on the topic of common usage of rail networks by international rail passenger services as well as freight and national passenger services. Likewise, the continuing work on TTR, aiming to enable better alignment between national systems and processes, is highly valued. The Platform considered the importance of aligning the TTR concept with other European proposals, including on governance.

It was emphasized that the question of financing of new services is an essential element for the Platform's work. However, it is necessary to discuss and identify what is needed first. Afterwards, the financial aspects of the identified solutions have to be discussed.

Table 8. Case studies of new services

Stockholm – Germany

This case study by Snälltåget shows the opportunity of regained interest in night trains (+500% ridership 2019 – 2022):

- Challenges: High operational costs due to national barriers, signalling, loco changes, language, safety regulations etc and the cost for track access. Approximately 25-30% of the operational cost for a night train Malmö – Berlin relates to track access and bridge fees.
 - Sweden-Denmark-Germany: Night services (night train Stockholm – Hamburg) procured. Resulting in 100 days annually when Snälltåget (open access) operates in parallel with PSO service run by SJ.
 - Denmark: problems with regulations for RIC-coaches in tunnels.
 - Germany: high track access fees and VAT, 2,60EUR per kilometre in Germany, 0,69 EUR in Denmark and 0,81 EUR in Sweden. VAT 7% on German territory. VAT for international traffic in Denmark and Sweden 0%. EU-regulation: VAT on on-board sales too complicated (to be paid in the country of the trains origin until its destination).

The way forward according to Snälltåget:

- Long term solution is needed – it takes time to change the industry – compare development in flight industry. Stimulate competition and innovation. Improved conditions – fair and reasonable costs. Market definition by customers, market insights – market driven.
- Short term solution – block competition and innovation. Monopoly with subsidies – incumbents in partnership. Market defined by politicians, traditional way of thinking.
- Act in long term perspective with the customer in focus. Do not create new monopolies (with PSO) and block the market/competition – else end up with fewer trains and higher costs. Single European railway Area in reality – long term conditions (signalling, system, language, working rules, national regulations etc). Fair infrastructure access rules – i.a. international trains need to be prioritised. Path allocation and track works must be better harmonised between the IMs.
- To boost international long distance traffic: Reduce track access fees for international trains – support competition, more trains, VAT free travel and on-board sales.

Milan – Paris

The Italian domestic high-speed (HS) market was consolidated (competition since 2012). Still, FS Group and Trenitalia were willing to further expand. New opportunities in the EU were arising thanks to the implementation of the 4th Railway Package by Member States. The French HS market was considered an interesting option: it is the second-biggest market in Europe, with market research revealing a high propensity to travel by HS. An active cross-border market already existed (already tested in many years of operations with Thello). The proposition includes 5 daily return services between Paris and Lyon, and 2 daily return services between Paris and Milan. Issues encountered include the use of different signalling systems in Italy and France, high track access charges, coordination of train paths and TCRs, language barriers, and staff recruitment in France. In spite of these challenges, head-on competition has proven to enable growth of the entire railway system, and can be beneficial for incumbent operators as well.

Sources: Swedish MoT, FS Group/Trenitalia

In addition to the considerations above, the subgroup discussed a case study, performed by Trafikverket, into train path coordination, timetable allocation and best practice examples. It was noted that the related socio-economic priority criteria applied in Sweden, if no voluntary coordination of competing requests can be reached, are complex but, after years of experiences (and also legal discussions), they are accepted by the stakeholders involved. It was shown that conflicts in capacity demand can be solved with the Swedish approach by considering all trains which are part of the congestion to achieve the best solution for the TT plan, not only prioritize one train in relation to another. This approach may be extended to cross-border services and cooperation. The political ambition in Sweden is to have an open and transparent process and to start every year with a free market.

Table 9. Case studies of new services (continued)

<p>Amsterdam – Frankfurt – Vienna – Budapest</p> <p>The ministries of Austria, Germany, Hungary and the Netherlands have established a cooperation for improving the framework conditions for international rail passenger services between Amsterdam – Frankfurt – Vienna and Budapest and work in this context closely together with their railway infrastructure managers. This route was identified as a route part of the TEE 2.0 network. The infrastructure managers have analyzed infrastructure capacity including the known capacity enhancement plans for period until 2023-2035. Also a railway transport demand analysis has been done in the first phase till 2023 Q1. The analysis shows substantial market potential both in long distance / cross border high speed as well as night trains whereas a short to medium term (2023-2030) railway capacity is scarce and interoperability issues for cross border vehicles and operations persist. The next phase of the project foresees a consultation phase with i.a. interested railway undertakings. After this phase ministries and infrastructure managers can decide on the best way to work together on common measures (capacity, interoperability, market access) to improve framework conditions on this corridor route.</p> <p>Source: Dutch MoT</p>
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Furthermore, political ambitions can be included in the socio-economic priority criteria. According to Trafikverket, there are regions that want to offer their customers clock-face timetables. However, these times / timetables are not “set in stone”. If there are conflicts that involve these services, Trafikverket might move these services “some minutes” in order to solve the conflict and enable more traffic and compliance with up front market needs. Connections are also included in the criteria in order to enable changing trains at hubs, access to depots, etc.

Apart from welcoming the pilot services that are being developed by the Commission, the MS emphatically stressed the need for transparent goal-setting and evaluation criteria. An in-depth discussion between the MS and Commission is required, detailing results, lessons learned, and way ahead. This was confirmed by the Commission, stressing that a discussion with the MS concerning obstacles experienced by the pilots may also involve the Platform. Finally, in addition to the Commission pilots, the subgroup welcomed the birth of new services, such as the European Sleeper starting in May 2023.

3.4 Conclusions

The work of Subgroup B in the reporting period has clearly shown that some recurring topics are to be considered as the main barriers to be addressed by the stakeholders involved: at least the infrastructure managers, the railway undertakings, the European Commission and the ministries responsible for rail.

In the reporting period the European Commission selected 10 pilot services of several railway undertakings representing a broad range of either already existing, new or announced international train services. It will be necessary that Subgroup B will closely follow these 10 pilots and be ready to take up any findings from conducting the services and the experiences made there. Also, further communication with European Commission and the pilots will facilitate the work of Subgroup B.

Figure 2. The EU’s ten pilot projects



In addition, in the reporting period other workgroups commenced their work on specific links, such as Amsterdam – Vienna – Budapest or Amsterdam – Berlin – Warsaw, being inspired by the TEE 2.0 concept, bringing together again the relevant stakeholders with a focus on the links being dealt with. Again, feedback and exchange will facilitate the work of SG B and those workgroups, especially as several stakeholders are represented either in IRP and those workgroups.

A more detailed approach to specific topics was followed in the reporting period, and this approach was supported by the case studies examined. This will also be considered in the priority action list for upcoming reporting periods.

Subgroup B will also follow further the development of a European Commissions legal proposal on capacity management within the Greening Freight Package, as this proposal is expected to address several topics raised and discussed in SG B, and hence being able to have an impact on international rail passenger services and their implementation and operation. In addition it has to be seen how the TTR project is taken up by the legal proposal and to what benefit of international train services.

3.5 Way ahead

For the second half of 2023 and onwards, the agenda points as detailed in the table below are foreseen. Please note that it will be important to discuss these indicative action points at the beginning of the next IRP phase in more detail in order to set out concrete actions, planning, and rapporteurs per item.

Table 10. Priority actions Subgroup B

Priority action	Deliverable	Lead	Previous Planning	Progress	Remarks
B.1, B.2 <i>Developing the network</i>	Continue the accompaniment of EuroLink, e.g. the presentation of a European service network taking account of available preliminary market and modal shift analysis.			Intersessional	
	Develop a questionnaire for collecting visions and ideas on how to connect national infrastructure visions to one European rail infrastructure (regarding task 2).	MS		Action pending	
	Share experiences and ideas regarding new services and regarding the implementation of new services as, e.g. the connection Amsterdam _ Vienna	MS, SMG		Intersessional	
B.3 <i>Upgrade European capacity management process (TTR)</i>	Monitor the common calendar for TTR implementation and its evolution as result of the EU-Rail FA1 and System Pillar	MS EC	12/2022	Intersessional	The Platform looks forward to the EC proposal

					"Greening Freight Package" (expected in June), expected to also address TCRs.
	Discussing best practices on TCRs in order to focus on several barriers (i.a. lack of cooperation of IMs, the inclusion of Railway Undertakings into the planning process and the implementation of infrastructure measures) that have been identified. These best practices need to be shared with TTR afterwards. (also relevant for B.4)	MS, IM		Discussion of best practices TCR, taking due account of RNE experience.	The Platform looks forward to the EC proposal "Greening Freight Package" (expected in June), expected to also address TCRs.
	High-level evaluation of all pilots for the IRP's purposes	MS	Q1 – 2 / 2023	Action pending	
	Conduct preliminary market analysis pertaining to integration of European rail passenger hubs in a network	MS or SMG	Q3 – 4 / 22	Topic addressed within subgroup C (EU Green Deal)	
B.4 <i>Removal of barriers for international services</i>	Questions and challenges that Member States face in regard of hubs, are collected and ideas on how to further approach them (in distinction to questions and challenges that are addressed by Eurolink and TTR) are discussed (e. g. best practices).	MS		Topic addressed within subgroup C (EU Green Deal)	
	Invite railway undertakings to share "case studies" on their experiences on how to launch new services, taking into account best practice examples from the Rail Freight Corridors.	SMG		Case studies addressed and results considered.	

	Consider Commission-, EU-RAIL, MS- and sector-initiated pilots / startup services in integral way in the process of network definition	MS	Q3 – 4 / 22	Pilots taken into account.	Link with monitoring instrument to be further considered.
B.5 <i>EC initiative 15 pilots</i>	Emphasize the importance of a uniform approach regarding track access charges, taking into account Commission, EU-Rail System Pillar and CER guidelines	MS		Link with governance / capacity allocation emphasized.	The Platform looks forward to the EC proposal “Greening Freight Package” (expected in June), expected to also address governance.
B.6 <i>framework conditions for Night train services</i>	Take into account night trains as an integral part of network definition	MS		Intersessional.	

4 C – EU Green Deal

4.1 Management summary

In order for the EU to achieve its environmental targets as laid down in the Green Deal, international railway passenger transportation should be boosted in order to achieve the necessary modal shift. For that purpose, the Platform considered the following topics key:

- Completing the TEN-T network
- International rail passenger hubs and urban nodes
- Governance structure
- Technical interoperability
- Capacity allocation
- Air - rail
- Rolling stock

Next to completing the TEN-T network, including technical interoperability standards, the concept of passenger hubs must enable for better intermodality. The Platform took note of current work within UNECE, EU Rail, the European Passengers' Federation (EPF) and the Swiss infrastructure manager SBB. Modification of the European Agreement on Main International Railway Lines (AGC) network should be based the harmonized approach that is being developed.

For air-rail journeys, it is important to provide a seamless multimodal journey to passengers. The Platform took note of the many challenges that have to be addressed in this respect, such as: standards, technology of data exchange, access to data, the confidentiality of individual traveler data, competition law, commercial conditions, framework of contracts between (air)carriers and (rail)operators. A step by step approach, primarily based on sector initiatives, should be preferred rather than resolving all challenges at once.

In terms of governance, barriers for cross-border services remain related to issues such as the allocation of train paths, signaling systems, safety systems and languages that are different per corridor. In addition, differences between European countries in terms of track access charges, and the implementation of EU legislation, still hinder cross-border services. Infrastructure managers are now increasingly cooperating on corridor level. They do so with pre-planning within the capacity allocation process, coordinating infrastructure planning and works, improving interoperability. In spite of this, the Platform considered that there is still ample room for improvement, both within current legislation and with regard to steps towards a harmonized coordination framework at EU level. Furthermore, as input for further discussion, the Platform compiled an example governance model for stronger harmonization of governance.

Finally, an obstacle for new services are the overall large investments that are required for acquiring rolling stock, especially for non-PSO projects. These make it difficult for smaller entrants to arrange for the necessary investment guarantees. In addition, the lack of interoperability of rolling stock prevents the possibility to reuse the rolling stock elsewhere in case of failed business case, further complicating the matter. The Platform considered that further discussion of this matter may be necessary.

4.2 Topic introduction

As discussed in the earlier Progress Reports, in order for the EU to achieve its environmental targets as laid down in the Green Deal, international railway passenger transportation should be boosted by making optimal use of the TEN-T network and its interoperability standards. The international rail passenger network should be based on hubs, integrating international connections with other modes of public transport. In order to achieve efficient operation of international passenger services, it is essential to facilitate the correct implementation of the EU rail acquis which targets technical, administrative and procedural harmonization. The European Partnership on Rail Research & Innovation (EU-Rail) is supportive to match the present vision. In addition, the railway and aviation sectors should offer combined attractive services in a seamless way.

4.2.1 Barriers and possible solutions

In previous reports, the following main areas were identified for international rail passenger services in relation to the Green Deal:

- Completing the TEN-T network
- International rail passenger hubs and urban nodes
- Governance structure
- Technical interoperability
- Capacity allocation
- Air - rail
- Rolling stock

The Member States continue to conduct a constructive dialogue with the Commission and the corridor coordinators in the context of TEN-T policy (e.g. TEN-T Committee, TEN-T corridor forums, work plans) with a view to developing the right infrastructure to boost long-distance passenger transport. This includes sharing the results of the present Platform subgroup, in particular if specific bottlenecks are identified.

Long-distance international railway passenger services should connect passenger hubs throughout Europe. Identification of international rail passenger hubs, based on the revision of the TEN-T regulation (apart from major urban nodes), is seen as a promising approach. Start of the identification of the hubs could be the list of city pairs, also taking into account the geographical cohesion between regions, from the letter of intent on TEE 2.0 signed by 20 Member States.

There is an insufficient focus on cross border impact of infrastructure conditions on international passenger services. In particular, this concerns factors defining governance and capacity allocation. The TEN-T standards are developed to harmonize the different MS standards into a European interoperability standard to achieve interoperable infrastructure by 2030 (TEN-T core network) and 2050 (comprehensive network). However, the existing TEN-T definition for passenger services infrastructure is limited to ERTMS and electrification by 2030 for the core network.

The RNE project Time Table Redesign (TTR) for smart capacity management, expected to be introduced in 2025, is aiming at creating benefits for international rail passenger services, especially to allocate the annual capacity in advance allowing the ticket selling compatible with the competitors (planes, buses). Infrastructure capacity for international rail services should be reserved for a multiannual period. Timetable characteristics (speed

/ punctuality) and frequencies should be attractive for international, national, regional as well as freight services.

Finally, one of the challenges for (high-speed) through-services is posed by the rolling stock which cannot cross the border without difficult adjustments. Today, only few dedicated rolling stock is able to cross the border, thereby making trans-European through-services possible. Due to the higher costs of the rolling stock (additional safety systems, electricity systems, certification, constructed in limited series) border-crossing services might be less economically attractive for the railway undertakings. A key issue in implementation of international connections is posed by the enormous amount of regulations and restrictions in terms of rolling stock and in terms of providing such communication. The Platform therefore considers the work toward stronger technical uniformity as set out in the 4th Railway Package, and common vehicle authorization by ERA, as vital.

4.3 Progress

In the second half of 2022 subgroup C resumed the work through various workshops, focusing on passenger hubs for better intermodality, multimodal integrated ticketing and air-rail cooperation initiatives, governance structures for international passenger rail services, and monitoring of actions including rolling stock.

On the following pages, discussions between the MS and between the MS and the Commission, taking into account sector input, are described.

- **C3. Develop concept of passenger hubs for better intermodality**

On 26 July 2022 a workshop has been organized on the concept of passenger hubs for better intermodality with contributions from UN ECE, Europe's Rail, The European Passengers' Federation (EPF) and the Swiss infrastructure manager SBB.

In order to facilitate international rail passenger transport and inspired by the example of uniformity of international airports (e.g. standard colors, standard signs), UN ECE is working on the identification of uniform and harmonized technical and service parameters necessary for the definition of international railway passenger hubs⁵. UN ECE is also working on the identification which railway stations on the European Agreement on Main International Railway Lines (AGC⁶) network should be defined as an international railway passenger hub. As a result of this exercise between UN ECE and its member states, the ACG will be modified.

The EU Europe's Rail JU presented its Shift2Rail (S2R) Programme activities in relation to the railway station of the future including:

- Improved station design with new components and materials and new energy saving technologies;

⁵ An International Railway Passenger Hub is a rail station that provides passengers connections to multiple international and national rail services, to other hubs and to the services delivered by other modes.

International railway passenger hubs can be "Primary" or "Secondary" as defined by member States and depending on the level of service offered.

⁶ The AGC originally was the basis for the EU TEN-T network. The TEN-T network further developed itself and includes urban nodes in contrast with the AGC that does not.

- Improved accessibility to trains, e.g. by a platform train interface, technical solutions for rolling stock, phone apps and platform wayfinding;
- Crowd management in high capacity stations by digital twins and data analysis;
- Safety and security management in public areas through security and vulnerability assessment models as decision support tools.

Currently solutions are being tested in lab and on test track, to be followed by testing in real operational environment before deployment in the market (time horizon foreseen until approximately 2025).

The Swiss infrastructure manager SBB presented the three main functions of a passenger hub: destination, port and hub. These functions do not only apply to rail stations, but also to bus stations, airports etc. A passenger hub efficiently connects different modes of transport. Hubs are also destinations where you shop, meet people or work, and hubs have a port function as point of arrival or departure. Every hub has its own characteristics, e.g. with large bicycle parking facilities, dense connection network, connection to local ferries. A passenger hub consists of four basic elements: the fast zone for transfer, travel services and run shopping, the slow zone for entertainment and other (fun)shopping, the public space and access area with connection to the city and local public transport, and finally comfort and ambiance which are important for the passenger experience in the port function (e.g. lightning, design, safety).

Some key findings:

- A passenger hub is not only a technical hub between different modes of transport with a focus on capacity and passenger flows;
- An international passenger hub should also be a calling card for the city;
- Transfer connections are an integral part of the railway system. Transfer hubs should be designed in such a way that every passenger feels as comfortable as possible;
- Slow and fast zones should not be mixed as they hinder rapid transfer;
- The neighbouring areas are an integral part of the passenger hub.

The European Passenger Federation presented their views on the end-users' perspective. Passengers want an affordable, reliable, sustainable and coordinated public transport system with sufficient capacity for a comfortable transfer at any times. Passengers would like to use whichever combination of modes is overall most efficient, in social, environmental and economic terms. Passenger hub facilities should be attractive rather than appropriate and offer many services such as information, ticketing, PRM assistance, waiting areas and toilets, wireless connectivity, premium and commercial services, safety and security, and customs, passport and border controls. Attractiveness of international railway passenger hubs can contribute to making rail transport the first choice for an international passenger.

Conclusions and recommendations

The following conclusions were drawn:

- It is important to define minimum requirements for international railway passenger hubs that could result in standards, e.g. uniform wayfinding in all railway hubs. Both UN ECE, from the legal and policy perspective, and EU-Rail, from the innovation perspective, are contributing to this;
- It is important to not only focus on the primary level of international railway passenger hubs, such as in cities as Zurich and Vienna, but also on the secondary level of hubs in smaller cities that also have significant traffic flows to and from the stations (e.g. Linz, Lausanne);

- Broader integration of hubs in urban planning is necessary to ensure integration in local areas;
- Decarbonisation of the transport sector and circular economy have to be taken into account when planning transport hubs in Europe.

The Platform makes the following recommendations:

- Take into account the behavioral aspects and psychology of the passenger, e.g. safety, comfort, ambiance, avoidance of accidents, light and dark;
- Hubs have a multimodal connection function including to local public transport and to air transport, hubs are not only rail transport related;
- Ensure fair access and visibility of all operators in the hubs, from a viewpoint of competition and to improve information for the passengers;
- Ensure economic integration of activities at the hubs;
- Ensure attractiveness of hubs so that rail becomes the first choice of an international passenger;
- Adopt a future proof perspective and think in terms of potential;
- Pay attention to new components and materials, energy and cost saving technologies (e.g. alternative fuels), comfort and ambiance, crowd management, (PRM) accessibility, safety and security in the design of hubs;

- **C6. Air-Rail journey initiatives**

In the second progress report an action (C.6) has been defined on combined air-rail journeys, including a European forum for air-rail cooperation, innovation and standardization. In this respect a workshop has been organized on 13 October 2022 together with subgroup A, including EU wide integrated ticketing and payment systems (action A.4).

The Belgian Ministry of Transport, as former chair of IRP subgroup A, presented the results, challenges and key take aways of a workshop on integrated ticketing, that took place on 30 June. For the upcoming challenges, there are questions on how to correctly implement the FRAND principles and how to guarantee mutual acceptance. Also, neutral management is important through standards and processes. One of the key take aways of the workshop is that everyone agrees on the FRAND principles, but there is no common understanding of FRAND application in rail distribution. Key issues related to integrated ticketing are trust, clear and equal requirements for everyone, and open standards set in legislation.

The EU Europe's Rail JU explained their S2R R&I Innovation Programme (IP4) on IT services for passengers. The objective is to put the traveler and his needs at the center and encourage travelers to use environmentally friendly means of transport, such as rail and other public transport services by developing an ecosystem containing all necessary functions (planning, shopping, ticketing, navigation, tracking, aftersales) to provide an attractive solution to passengers. Parts of the ecosystem are: a one-stop-shop access to all multimodal travel services through a mobile application Travel Companion, the Interoperability Framework as the core of the ecosystem, facilitating the integration of any kind of interface (API) of Transport Service Providers, a dedicated portal for operators to define mobility packages, and other tools that further enhance the travel experience.

Various demonstration activities of the functionalities, with real data and in real environments, have taken place in different EU countries with real travelers and using the offers from a variety of Transport Service Providers, covering a wide array of transport modes. For future exploitation, business model solutions with API type integrations and

open data models are preferred. Data governance, data sharing, data ownership and data security are key required capabilities to enable the ecosystem to grow. To bring the solution a step closer towards the market, the IRP is requested to help finding public transport operators who are willing to run systems such as the IP4 ecosystem developed within EU-Rail, to get access to the necessary data of public transport operators and to convince public transport operators to use standards.

The SESAR 3 JU explained their activities on multimodality R&D (including air-rail) and passenger experience. Various projects have links with the air-rail journey initiatives as described in the second progress report of the IRP: the SYN+AIR project⁷ aims to set and develop a blueprint to establish collaboration among Transport Service Providers (TSPs) and to develop the idea of seamless door-to-door user journey. TRANSIT⁸ enables the design of synchronised intermodal timetables between air transport and rail operators. Other relevant projects are Modus and IMHOTEP⁹. Since 2021, the SESAR 3 JU is collaborating with EU-RAIL on multimodality to possibly align their work programmes and with aviation stakeholders (including the airports) to include the multimodal transport chain in their technical and operational requirements.

UIC and IATA have signed an MoU and developed a multiannual air-rail implementation project to enable air-rail interoperability. The joint work is aimed at providing technical guidance and specifications to facilitate integration, to provide technical solutions and encourage open innovation. Both organisations are transforming their own specifications and are working on the adoption of open standards and application programming interfaces (APIs). All aspects of an integrated modal journey are covered including inspiration and shopping, preparation, departure, travel, arrival and post travel. Agreements are required between air and rail operators for an integrated multimodal journey offer and delivery.

CER provided information on their ticketing roadmap for seamless international rail passenger travel including orientation, booking, way to the station, boarding and ticket control, in the train, and finally the way to the destination. CIT is involved in the implementation of the roadmap.

In the workshop the European Commission/DG MOVE presented its view on the promotion of the multimodal services, based on the main goals of reducing emission and increasing the users' demand. They also explained the Multimodal Digital Mobility Services (MDMS) initiative which is intended to facilitate standardization of air-rail offers, based on ongoing work by the sector.

Participants to the workshop mentioned that many TSPs would be interested to implement the developed R&I concepts, such as in S2R IP4 programme activities; investment is needed to realise this as the solutions would bring added value to the traveler, but not immediately direct profit. Economic viability is therefore key in the route towards market deployment.

Important multimodal journeys should combine air with local public transport (metro, tram, bus). These actors should not be forgotten. The same applies for airport operators and infrastructure managers.

⁷ <http://syn-air.eu/>

⁸ <https://www.transit-h2020.eu/>

⁹ <https://modus-project.eu/> and <https://www.imhotep-h2020.eu/>

Furthermore, participants mentioned that information should be shared between multimodal operators to offer an integrated journey. This concerns not only ticketing, but also for example information about a delay, travel disruptions and the recovery time. Others argued that sharing information comes at a cost and commercial aspects should be taken into account. Intermediaries add costs on top of this. Such costs could lead to higher integrated fares for the traveler. Currently there are many legacy processes and the system is rigid, which are barriers to the integration of information. The importance of through tickets has been raised to tackle what happens in the event of disruption to an air-rail journey (if the train is delayed and causes the flight to be missed and vice versa). Replanning of air and rail is essential so that travelers arrive at their destination. Customers should receive end to end protection and their passenger rights should be respected, e.g. concerning compensation in case of delay. Information is also crucial for the passenger. Real time open data are important, and should according to EPF be part of the MDMS initiative.

A distinction could be made between the leisure and business traveler when offering multimodal offers, develop it step by step. Various technical solutions and multimodal platforms already exist, although sometimes at a national level such as the Italian *rome2rio* website.

The differences between the process of flying abroad by plane and travel abroad by train must be kept in mind, e.g. the security control that exists at airports but in general not at train stations, the nominative boarding pass where the identity of the passenger is registered (which is not always the case on a train ticket), and the location and the infrastructure of the airport itself that is much different from a train station. When offering one multimodal air-rail ticket for a combined journey, the boarding pass will become a nominative one.

In EU-Rail, the activities in Flagship Area 1 will address the objective to develop a European rail traffic management considering a multimodal transport system which will be supported by the System Pillar to define an interoperable system architecture for rail to interface with other transport modes. In this field cooperation could be sought with the SESAR JU and, specifically, airports as key transport hubs.

Conclusions

The following conclusions were drawn:

- It is important to provide a seamless multimodal journey to passengers;
- Many challenges have to be addressed in this respect, such as: standards, technology of data exchange, access to data, the confidentiality of individual traveler data, competition law, commercial conditions, framework of contracts between (air)carriers and (rail)operators;
- A step by step approach should be preferred rather than resolving all challenges at once;
- Integrated ticketing is only one aspect of a seamless multimodal journey;
- Other important topics are the provision of information to the passengers and operators, travel disruptions and handling of delays, risk responsibility sharing, liabilities;
- The subgroup notes that various initiatives are ongoing, e.g. in EU R&ID JU's such as within the SESAR 3 and in the S2R IP4 ecosystem, on a voluntary level the CER ticketing roadmap and UIC and IATA cooperation, and on regulatory level, e.g. the EU MDMS initiative, implementation of FRAND principles;

- To bring S2R IP4 solutions a step closer towards the market the JU requests the IRP to help finding public transport operators who are willing to run systems like the IP4 ecosystem, to get access to the necessary data of public transport operators and to convince public transport operators to use standards;
- Important stakeholders should not be forgotten, such as airport operators, local public transport operators and infrastructure managers;
- Investment is important for deployment of innovative solutions that are not directly profitable, but do bring added value for the traveler.

Considering all of the above, the IRP subgroup C invited the major players in the air-rail cooperation field to develop together important milestones for the next 2-3 years, such as by EU-Rail JU, SESAR 3 JU, UIC, IATA, CER, ALLRAIL, EIM, Airports association (e.g. ACI-Europe), and CIT (see Annex 3). As a follow up of this invitation EU RAIL presented to the IRP their investigation into a possible joint R&I topic by EU RAIL JU and SESAR JU demonstrating how rail and air traffic management could leverage from each other.

• **C4. Governance**

On 24 November 2022 a workshop was organized together with subgroup B on governance structures for international rail passenger services, both at member state level and at EU level. Presentations were provided by the Florence School of Regulation, and the railway undertakings Snälltåget and TrenItalia France. These were followed by a panel discussion between experts from Snälltåget, EIM, EPF and the Hungarian Ministry of Technology and Industry.

The chair introduced the workshop by mentioning that there are different interpretations of 'governance' and different levels of governance to facilitate new railway passenger services. Some issues, such as legal support and border control for non-Schengen border crossings, are done by authorities and other issues are done by the railway sector. Issues relevant for governance include for example infrastructure, interoperability, market access, allocation, and charging. Infrastructure development includes for example HSR or the development of platforms, but it is also how to steer and finance infrastructure managers. Other instruments include interoperability. There is a role for investments, reduction of national rules and the implementation of TSIs. The framework for capacity allocation is also relevant. The financial framework can also be influenced by member states, e.g. rules for track access charges and the possibility of mark-ups. Whether to have open access, or to what extent, is also relevant. PSO contracts also fall into this category.

The Florence School of Regulation presented their analysis on governance structures on the existing European railway network. Governance is defined as how a system is organized including for example rules, institutions, customs and informal arrangements. In the presentation the fragmentation of the network was highlighted. There are no clear rules for cross-border services. In addition, the network lacks a system integrator, in contrast to the aviation sector where traffic managing authorities do exist. Rail governance is mostly at national level and no specific governance for cross-border services exists in the EU framework.

Previous EU networks (e.g. energy, aviation) have developed by creating regional blocks. Rail freight corridors are the railway sector's first step working towards an European network. However, there is no regional integration in rail passenger services. From other sectors we see that blocks tend to be "sticky", whereas regional integration is supposed to be a temporary solution. According to the Florence School of Regulation, an important next

step could therefore be to develop an EU institutional framework for closer cooperation between national institutions, a more formal role of associations of operators and of regulatory bodies, and a more formal way for infrastructure managers to cooperate in cross-border services. The process could in theory in the future be completed with an EU traffic manager ('Eurocontrol for rail') and an EU regulator.

One of the main findings of the Florence School of Regulation is that due to the lack of a system coordinator national infrastructure managers are currently more active in cross-border services with the TTR project and real-time traffic management. In more dense national networks infrastructure managers commit to more pre-planning in the capacity allocation process. The Florence School of Regulation suggests therefore to go a step forward by a more active infrastructure management for cross-border services (for e.g., reserve capacity, define cross-border coordinated paths (in accordance with EuroLink's aim), real-time traffic management), a better coordination between the infrastructure managers, a formal engagement of the rest of the ecosystem such as the RUs, and a supervision by a more formalized IRG-Rail.

Table 11. Workshop on nighttrains (April 2023)

As night trains are being revived, the market is changing: new developments are occurring and new operators arrive. Currently there is a mixture of commercial and PSO operations in Europe, all facing issues such as market access, insufficient capacity, availability of rolling stock, certification and the profitability of running night trains. In this well-attended workshop, with participants from ministries, IMs, regulators, associations, and operators (both private and incumbents), these topics were introduced followed by lively discussion. Some of the most challenging issues discussed included:

- Path allocation: night trains always arrive during rush hours, have different characteristics (not stopping at each station and faster than regular trains) and require smooth international train paths (TTR) not hindered by night track maintenance or customs border stops in the middle of the night. Framework agreements, securing capacity for a long period of time and dedicated night train paths should facilitate the smooth introduction of new services.
- Rolling stock is not available for rent, so should be acquired or leased. On the one hand this is an opportunity as new concepts can be materialized (like mini-cabin, capsules or additional comfort) but on the other hand the costs are high and difficult to manage, especially for the smaller private operators. The costs for guarantees go up to 10% of the operators costs. These costs are especially high as the dedicated rolling stock cannot be operated all over Europe, due to differing technical specifications and certification per country. And in the end, flexibility reduces risks which reduces guarantee costs.
- Operational costs are high, too. Countries such as Belgium are considering reducing the operational costs by reducing track access charges and electricity costs. Interoperability costs are also striking as multimodal locomotives are not always available so changes at the border are still required. PSO contracts could secure a viable business case, but only after market analysis and competitive tender procedure. But also funding or guarantees for acquiring rolling stock could work as flywheel to start up new services.

It was concluded that the workshop provided a comprehensive overview of all topics relevant for night trains. Still the stakeholders are partly dependent on the EU legislator, but capacity management and cooperation between IMs do not depend on the upcoming EU legislation.

According to the Florence School of Regulation another important role is left with national governments: they can invest in interoperability, e.g. ERTMS and bottlenecks. They should also ensure a legal support for cross-border services (e.g. priority criteria in congested infrastructure). Furthermore, there are possibilities for incentivizing the infrastructure managers to provide capacity and priority for international travel. It remains unclear if

international travel can be part of PSOs (see also section 5.3.3), or should be commercial. Lastly, the differences between EU countries in terms of track access charges hinder cross-border services.

The Florence School of Regulation concluded that there is a need for a new governance structure for cross-border rail services. At EU level a more active coordination in track allocation and traffic management is required. The interaction of infrastructure managers, railway undertakings and regulatory bodies for cross-border services should be formalized, and national governments should have a decisive role.

The Swedish railway undertaking Snälltåget explained the challenges it faced with the launch of their new open access Stockholm-Malmö-Copenhagen-Berlin night train connection since 2021 (see also table 6). Firstly, there exists a significant variation in demand between seasons, with high demand in summer and no demand in winter. Secondly, the many border crossings and national barriers lead to high operational costs due to different signaling systems, safety systems, loco changes and language issues. In Denmark there are difficulties with regulations for old RIC-coaches for tunnels. In addition, passengers have to be woken up at 2:00 am every night for the temporarily installed border controls. In Germany Snälltåget experiences high track access charges and VAT % on German territory, which hinder profitability. Furthermore, in Sweden there is competition between PSO and open access, with a parallel PSO night train from Stockholm to Hamburg.

The introduction of the new service has been successful. In order to remove barriers Snälltåget proposes to: (i) put customer demands central with a market defined by customers, (ii) stimulate competition and innovation according to the FRAND principles and avoid to create new monopolies with PSO, (iii) improve technical interoperability and implement rules of the SERA, (iv) give higher priority to international travel in infrastructure access rules and (v) reduce of track access fees on international train travel and free VAT for travel and onboard sales.

TrenItalia France presented their new high speed service between Milan and Paris since 2021. Trenitalia entered the French market when open access was introduced. The strategy was to create a new service centered product different from TGV, by offering a complementary product which is Italian "in soul", with simple and flexible pricing, and having eco-performing rolling stock. The new service has been a success so far, also increasing SNCF passenger numbers in summer by 10 percent confirming benefits of competition for the entire rail system.

TrenItalia France presented the challenges they faced with this new cross-border high speed service, such as high track access charges costs in France compared to the ones in Italy (in Italy maintenance costs are paid by the government). Other issues include different signaling systems, coordination between infrastructure managers in regards to the allocation of train paths, or in case of interruptions for work on infrastructure. In this respect cooperation between the Italian and French governance institutions was important. A final important consideration is the monopolistic market they entered. All expertise and skills remain with the national operator and as new operator it is a challenge to find well-trained staff.

In order to remove barriers TrenItalia France proposes to improve cooperation at institutional level, such as harmonization of cross-border capacity, a coordinated strategy of investments and technological upgrades on international routes, the introduction of

ERTMS and regulation of the transport sector to promote environmental sustainability (modal shift).

In the panel discussion the representative of the Hungarian Ministry of Transport explained that they are actively involved through the capacity allocation process, also for international rail services. They see that the system should not only deliver market optimum, but also user optimum. Therefore, e.g. the goal of an all-day every-hour Budapest-Vienna service is set as a high level policy goal. They see that when a service less than this is delivered by the market alone, market failures still exist in the international railway market, potentially raising the necessity of PSOs. For this purpose an MoU was signed between the Hungarian and Austrian government. The Hungarian Ministry participates in pre-identifying train paths in order to facilitate that at least every hour a path is available. The next step is to pre-coordinate even more capacity so that this is also available for open access train operators, thereby promoting competition. Pre-coordinating train paths with Austria is also important to reach timetable nodes in Vienna and this enables further services beyond Vienna to the west. Therefore, Hungary also takes part in the EuroLink initiative, which they consider as a very good approach to optimize train paths within Europe. Hungary is also investigating possibilities to impose requirements for end users on the pre-coordinated train paths, such as requirements for integrated ticketing with Hungarian domestic trains, or requirements to accept Interrail passes.

The representative of the European Rail Infrastructure Managers (EIM) argued however that member states should not directly intervene in the market. Governments should create a technical, economic and legal level-playing field and stimulate competition through open access. Infrastructure managers are responsible for daily operations, they implement EU regulations, build new infrastructure, maintain it and invest in renewables. Governments should provide sufficient financial resources to infrastructure managers with long term guarantee not being dependent on the political climate. EIM mentioned the bottom-up EuroLink initiative as example of enabling cooperation and linking member states that have ambition for a cross border passenger network, but lack the "know how". A regional corridor approach would just be the first step, to be followed by a network approach.

The representative of EPF brought up that the market should respond to customer demands to guarantee market sustainability. Additionally, in EPF's view the moral basis for a PSO depends on whether it corresponds with passenger demands. Corridor arrangements can often be dominated by powerful parties, such as governments, infrastructure managers and national operators. EPF argues in favor of easy input for user representation in planning a desired public transport network and ensuring the representation of users' interests in managing corridor capacity. There is a need for network coherence and flexibility. Considering what is best for the international customer should remain key within policy of all stakeholders. National preoccupations should not be getting in the way of an international network.

Lastly, Snalltaget urged governments to implement the fourth European Railway package and improve interoperability. There is need for more interaction between member states and infrastructure managers and to shift focus from the national railway system to a European one. EU pilots might incentivize infrastructure managers to remove barriers, but cooperation between infrastructure managers should remain on a voluntary basis. The European Commission could work as a catalysator.

Conclusions and recommendations

The following conclusions were drawn:

- There is a market demand for (new) international railway services;
- Currently, barriers for cross-border services remain related to issues such as the allocation of train paths, signaling systems, safety systems and languages that are different per corridor;
- Differences between European countries in terms of track access charges, and the implementation of EU legislation, still hinder cross-border services;
- Regional structures usually based on corridor-routes could be seen as support instrument towards a European passenger service network. Enhanced governance of these corridors may be useful for a transitional period of e.g. 10 years;
- Infrastructure managers (especially in dense networks) are now increasingly working together on corridor level. They do so with pre-planning within the capacity allocation process, coordinating infrastructure planning and works, improving interoperability. Infrastructure managers will have to consult railway undertakings in their corridor work;
- A second step towards a European passenger service network could be to have a harmonized coordination framework at EU level concerning capacity allocation and traffic management by infrastructure managers. This could resolve the lack of a network coordinator;
- Such a proposed framework could contribute to the implementation of the Single European Railway Area;

The Platform makes the following recommendations:

- Important role for governments is to provide infrastructure managers with the right incentives to allow cross-border services and coordinate infrastructure developments;
- Customer demands (of international passengers) should be put central in developing a European rail passenger network. This prevents national preoccupations from getting in the way of an international network;
- The chair of the IRP proposed to prepare a recommendation within the platform on a governance example for a regional/corridor structure as a transitional measure towards the Single European Railway Area. This has been explored within the IRP in 2023. The proposed recommendation can be seen as an input in the current legislative process carried out by the European Commission.

• **C1/C8 Financial support and rolling stock**

Regarding the availability of, and financial support for rolling stock, the subgroup focussed on an update provided by the EIB. Over 2022, the EIB's investment volume in rolling stock within the EU was somewhat lower than in previous years. This was due to a lower demand for EIB financing of rolling stock projects. Nevertheless, rail remains a priority. Also, the EIB is engaging with the promoters of the 10 new EU pilot services.

The members considered the question of obstacles for rolling stock projects to mature, and discussed the share of open access projects, compared to PSO organized projects, that successfully attained EIB financing. The majority of projects are PSO organized. An obstacle, especially for non-PSO projects, are the overall large investments that are required, which make it difficult for smaller entrants to arrange for investment guarantees. One problem, which was illustrated in one of the case studies presented in IRP, is that

entrants that are not state owned have a less favourable rating than the state owned resulting in less favourable conditions or lack of possibility to lend money for rolling stock acquisition. Competition law does not remedy this situation. In addition, the lack of interoperability of rolling stock prevents the possibility to reuse the rolling stock elsewhere in case of failed business case, further complicating the matter.

It was pointed out that although most EIB-financed projects are PSO organized, the open access principle is heralded by the EU. The EIB emphasized its openness for discussions with new entrants. However, as rolling stock investments run into hundreds of millions, the bank's rules typically require a strong balance sheet or other form of investment guarantee. Some instruments are available supported by EU guarantees, but the size of these guarantees is not sufficient for large rolling stock projects, which are thus less available for new entrants.

Opinions were shared concerning possible implicit, or assumed state guarantees enjoyed by incumbents, even as state aid rules apply. However, established companies generally have a large balance sheet, whereas smaller new entrants sometimes do not. Also, where newcomers compete for PSO contracts and the public transport authority offers guarantees for the lenders, the EIB often carries out project appraisal in cooperation with the contracting authority prior to or during the tendering process, thus making EIB financing available in principle to all the bidders. Nevertheless, in cases where parties do experience uneven hurdles, EIB is open to discuss this case by case.

4.4 Conclusions

Next to completing the TEN-T network, including technical interoperability standards, the concept of passenger hubs must enable for better intermodality. Modification of the European Agreement on Main International Railway Lines (AGC) network should be based the harmonized approach that is being developed.

For air-rail journeys, the Platform took note of the many challenges that have to be addressed in this respect. A step by step approach, primarily based on sector initiatives, should be preferred rather than resolving all challenges at once.

In terms of governance, in spite of increased cooperation between infrastructure managers the Platform considered that there is still ample room for improvement, both within current legislation and with regard to steps towards a harmonized coordination framework at EU level. Furthermore, as input for further discussion, the Platform compiled an example governance model for stronger harmonization of governance.

Finally, with regard to the barrier for new entrants posed by the overall large investments for rolling stock, and the lack of interoperability of rolling stock further complication the matter, the Platform considered that further discussion may be necessary.

4.5 Way ahead

In the following table, progress regarding the action points identified in the previous progress report, and further steps, are summarized. For those actions that are identified as "postponed" action has not yet started and can be tabled in the next period of the platform.

Table 12. Priority actions Subgroup C

Priority action	Deliverable	Lead	Previous planning	Progress	Remarks
C.1, C.8 <i>Explore optimising the conditions for financial support;</i> <i>Promote existing EU tools to fund upgrading of rolling stock</i>	Facilitate initiatives for improving access to (second hand) rolling stock, such as Rosco model and Norwegian pool model	All MS	12/2022	postponed	
	Follow progress EU / EIB financing of rolling stock.	MS, sector	Workshop and EIB presentation in 2023	Update provided by EIB in March 2023	The EIB supports the creation of new assets, as well as the modernisation and upgrading of existing materiel, but (currently) does not finance trading of existing assets, such as the purchase of second-hand rolling stock.
	Discuss initiatives to facilitate the reuse of second hand rolling stock.	All MS / EC	12/2022	postponed	
	Clean up national technical rules (like proposed in the Issues Logbook) for vehicle authorisation	All MS	12/2022	Ongoing	Ongoing
Optimize functioning of ERA OSS in Vehicle Authorization	ERA		Fully operational since 2021, in 2023 establishment of ERA advisory	Ongoing	

				groups on vehicle authorisation	
C.2 <i>(high speed) Infrastructure & bottleneck alleviation</i>	Synchronize the planning for new international services with infrastructure development and planning.	Railway undertakings or stakeholders or Member States		EU RAIL HSR study presented in IRP	
	Where relevant, aim for cross-border Operational Agreements between IMs relevant for (new) international passenger connections (covering coordination procedures for timetable and capacity allocation, simultaneous works at both sides of the cross-border section and infrastructure development.	IMs / sector / competent authorities		postponed	
C.4 <i>Governance and capacity allocation</i>	Develop harmonised procedures on capacity allocation for international passenger trains, based on European rules and requirements	All MS, EC, stakeholders		EC impact assessment on RFC revision and capacity management for cross border rail transport in 2022/23. IRP workshop on governance held in 2022. Optional voluntary model on international rail passenger governance elaborated as annex to the report.	

C.6 <i>Rail-air action plan for combined air-rail journeys</i>	Facilitate the continuation and expansion of air-rail initiatives such as the German and Austrian 'Rail&Fly', and the Dutch Air-Rail initiative	All MS, sector, stakeholders		IRP Air-Rail workshop in October 2022 including air and rail stakeholders	
	Develop an EU approach on standardization for intermodal IT connectivity within the framework of the MDMS initiative and the Multimodal Passenger Mobility Forum	EC, MS, sector		Within the EU Multimodal Passenger Mobility Forum under the MDMS or MMTIS initiative	
	European forum for air-rail cooperation / innovation / standardization.	Commission, MS, sector		IRP Air-Rail workshop in October 2022 on R&I cooperation. Invitation to the sector to develop common air rail initiatives in a European context Development of a possible joint R&I topic by EU RAIL JU and SESAR JU	Making use of the EU Multimodal Passenger Mobility Forum under the MDMS or MMTIS initiative. Putting air-rail action plan as agenda item of the EU Multimodal Passenger Mobility Forum.
	Facilitate the large-scale testing and deployment of an integrated platform demonstrator with different service providers on integrated ticketing in Europe.	MS, EU RAIL		IRP Air-Rail workshop on integrated ticketing held in October 2022	Consensus between the MS still has to be reached

	Include international rail passenger transport in ongoing / future issue log book initiatives from the Commission / ERA	Commission / ERA, stakeholders		Follow up of subgroup C discussion with EC and MS in November 2021.	
<i>C.7 Issue Logbook for international rail passenger transport</i>	Reinforce / Initiate a single European database providing all data required for RUs for the TEN-T network.	EC / ERA / RNE		Ongoing action by EC	
<i>C.9 ERTMS deployment and international rail passenger transport</i>	Build on and evaluate the existing uniform European subsidy mechanism for fitting existing rolling stock (in CEF2)	Commission, MS		Ongoing	

5 D – Regulatory framework

5.1 Management summary

The regulatory framework should enable the development of an integrated international rail passenger network, connecting all European hubs, with integrated services. Cross-border rail passenger services in Europe typically encounter multiple regulatory regimes – and hence market conditions – along their routes, and are consequently complicated to organize. Where open access market initiative has not yet developed and is unlikely to develop in a way that is required by the Member States the competent authorities can cooperate in order to organize PSO contracts for international services.

Although the implementation of the European regulatory framework as the basis for all actions is not yet complete, the economic and technical framework conditions for rail passenger transport seem not sufficiently conducive to the development of new international services; until now the number of open access and commercial international services is still marginal at EU level and there is a discussion about the reasons for this. Barriers and possible solutions for the development of international rail passenger services include:

- Technical specifications and consequently equipment are still not the same in all countries. It is recommended that the technical differences between the countries are reduced.
- At present, in case of PSO services the competent authorities are not obliged to cooperate to develop cross border services. On a basis that the competent authorities desire, where applicable competent authorities on both sides of the border should cooperate (analyze the market situation, the obstacles, introduce transportation plan) in order to define, regulate and compensate the required services, or make use of open access.
- Cross-border services may require additional support/PSO compensation. Directive 2012/34/EU art 33.3 can be applied on lowering charges for new services levied on a railway undertaking by the infrastructure manager. In the long run, international PSO contracts could be financed and/or subsidized. In addition, until 2023, financial support, if needed, can derive from the implementation of the Regulation (EU) 2020/1429 on overcoming impact of COVID-19, to promote a sustainable rail market and accordingly lowering track access charges.
- Organizing a tender procedure for an international service, where two (or even more) countries are involved, can be difficult. The national procurement systems can differ widely caused by differing methods of national implementation of the EU directive.
- Experience in operating cross-border services may be limited. Best practices should be discussed between undertakings, infrastructure managers and competent authorities in close cooperation and collaboration. Authorities on both sides of the border need to deepen their contacts in order to exchange experience in organizing or facilitating cross border services and/or building it up where necessary.
- Most MS have different regimes on capacity allocation. Alignment between national/international and passenger/freight services may enable more train paths to be allocated.
- In general, acquisition of rolling stock is one of the biggest obstacles for establishing passenger services. MS may take a supporting role in the acquisition of rolling stock.

In the IRP work plan, four action items were defined for subgroup D. Progress during the 2022-2023 IRP cycle is as follows:

D.1 Harmonization internal market, legal framework

As a draft document for revised Guidelines to Regulation (EC) No 1370/2007 is circulating, subgroup members took up the possibility to discuss certain topics in 2022, focussing on the scope of assessments and legitimization of PSO as well as possible incentives to push open access regimes on certain lines. Consequently, topics D.1 and D.3 were addressed by the compilation of a manual on the organization of cross-border awards. A suggestion for further discussion about uncertainty in real demand as challenge for the introduction of new services as well as the suggestion that the possibility of hybrid systems (PSO/non-PSO-services) should be deepened, also considering coordinative procedures regarding the market analysis and concerns from some Member States and Sector members on fair competition in hybrid systems. Another discussion took place regarding the differences in the capacity allocation process between corridor and network systems. It became apparent that there is no one model that fits all Member States, because of, for example, differences in infrastructure, capacity and demographic structures.

D.2 Reduce economic barriers / cooperation on infrastructure charges as well as access barriers to rolling stock

Discussions revolved around possible differences in infrastructure charges between domestic and cross-border services. Also, specific charges for night trains are a matter for attention. Any action on infrastructure charges should take into account its impact on (open access) cross border services (e.g. international trains that do not run profitable any longer by higher infrastructure charges in one state). Therefore, a close cooperation between all railway stakeholders is necessary to enable the development and stability of cross border business cases. A best practices approach was followed in order to share information to reduce economic barriers. Sector members but also Member States were asked to share experience concerning establishment of business cases for international train services. Topics of interest are technical issues, legal/organizational issues and economic issues

D.3 Integrate open access services in national networks

It became apparent that Member States have different priorities when it comes to integrating market initiatives in national networks. There is no single answer on the question whether international services should be integrated into the national system or run in addition to national trains (infrastructure managers are obliged by law to coordinate international train paths). From the administrative and regulatory side it should be facilitated to integrate cross-border services into national timetable systems where such a solution fits best to the needs of the concerned member state and the constraints of the infrastructure capacity. Important questions concern unstructured allocation of infrastructure capacity vs. "catalogue train paths". Current European legislation is based on free market demand rather than pre-arranged catalogue train paths. These topics must be further discussed in the future

D.4 Increase cooperation between MS

Cooperation of Member States is essential to enable international passenger services. When need be, Member States may cooperate more on sharing knowledge and experience. Cooperation of authorities is essential – in particular where there are no services initiated by the market, positive results/services only turn out to be positive, where authorities cooperate in a good way. This cooperation should cover also topics like conditions for parallel operation of PSO and open-access services.

5.2 Topic introduction

The regulatory framework should enable the development of an integrated international rail passenger network, connecting all European hubs, with integrated services. Ideally, services would run on optimal times and intervals as much as possible, but the potential to materialize this is limited due to population density, geography, a naturally limited amount of available capacity that is and will be used for both passenger and freight services and most importantly customer demand. We deem it essential that any initiative will contribute to a more level playing field between railways and other modes of transport (i.e. road and air) so that the former will receive a strong increase in the volume of passengers. Therefore, increased cooperation between the actors (infrastructure managers, railway undertakings and competent authorities) is necessary.

As the implementation of the European regulatory framework as the basis for all actions is not yet complete, the effects of the economic and technical framework conditions for rail passenger transport on the development of new international services cannot be fully assessed. Until now the number of open access international services is still marginal at EU level and there is a discussion about the reasons for this. Some Member States consider that the current open access regime does not yet bring about a level of service offer that corresponds to the positive trend of increased demand, due to a number of remaining barriers of legal, administrative, economic, organisational, technical or operational nature. Some other Member States suggest that the full implementation of current legislation may lead to the desired increase in new international services. In both cases, removing the remaining barriers will facilitate the implementation of additional open access services.

The current legislation has not yet been completely implemented across Europe in the way intended to enable market driven competition by open access commercial rail services in a single European railway area. Therefore, market demand and competition as enablers of the desired modal shift to rail remain leading principles, whereas the possibility of PSO-driven services may be employed where the market is not expected to develop and services are considered necessary by national, regional and local authorities who play an essential role and enjoy a wide discretion in providing, commissioning and organising services of general economic interest, in accordance with Protocol (No 26) annexed to the Treaty on the Functioning of the European Union (TFUE). As time is running and the overall climate goals are pressing, it is urgent to find ways to increase the international rail services according to market and passenger demand while awaiting the full effects of current legislation. Such measures should not counteract or obstruct the potential market initiatives within current legislation. Therefore, as stated in the PSO regulation, PSOs may only be resorted to when and where no open access traffic – in sufficient extent and quality – can be expected. Especially regional and commuter services that are not delivered on an open access base because of unfavourable characteristics (stopping pattern, travel time, size of served towns and villages, concentration of demand in peak hours) should be financed by PSO in the same way regardless whether they are domestic or cross-border services.

5.2.1 Market organization and structure

Cross-border rail passenger services in Europe typically encounter multiple regulatory regimes – and hence market conditions – along their routes, and are consequently complicated to organize. Where open access market initiative has not yet developed and is unlikely to develop in a way that is required by the Member States the competent authorities can cooperate in order to organize PSO contracts for international services as

outlined below. The Member States stressed that market initiatives should be prioritized and facilitated in line with current legislation. But if these initiatives are neither commencing, nor expected to appear in the future, authorities could cooperate to foster the required international passenger service, where applicable:

- 1) Cooperation on operators level: market initiative and one PSC or two or more PSCs,
- 2) Cooperation on authorities' level: two or more PSCs,
- 3) Cooperation on authorities' level: one PSC.

If market initiatives do not yet meet established demand as well as any other strategic policy objectives pursued by Member States and competent authorities, a market analysis should be done before a PSO is considered (as far as requested by Regulation (EC) 1370/2007). Dependent on the available capacity and the mandatory coordination with freight trains and other services, PSO regulated services could for example be used for ensuring regular connections (e.g. all day 120 minute intervals) between major international hubs. Integration in national timetables and network and stopping at regional stations can provide a significant improvement in service supply at national level and especially for regional centres. One of the most important challenges is the need for competent authorities to commit railway undertakings to fulfil national policy goals and quality standards, which in many cases can only be fulfilled by imposing or contracting for PSO. The usage of regular intervals for international passenger trains must however in principle take the needs of freight rail and new competitors into account, as upholding strictly regular intervals may decrease the overall capacity available to other trains.

When market initiatives do not provide cross border passenger services, the role of competent authority could be to make efforts to cover routes with PSO services, where possible within the framework of international cooperation with competent authority/RUs in other countries. Regulatory bodies – responsible for granting open access – may cooperate in this respect with competent authorities, informing them about cross border routes for which no requests for open access services have been received and there may be a need to launch PSO services.

5.2.2 Barriers and possible solutions

The following barriers, possible solutions and recommendations for the development of international rail passenger services were discussed:

Technical specifications

Technical specifications and consequently equipment are still not the same in all countries. National technical rules can make internationally operating rolling stock more costly, however the industry is becoming more experienced in finding more cost-effective solutions.

It is recommended that the technical differences between the countries are reduced in order to facilitate the seamless introduction of new services and improve the existing ones. It is important to implement the existing relevant legislation across Europe.

Need for cooperation and information

At present, in case of PSO services the competent authorities are not obliged to cooperate to develop cross border services. This voluntary aspect makes that quite often services are cancelled or the service level is reduced over the years. Different countries have

implemented different policies in regard of international rail passenger services. This includes different authorities being responsible for issuing PSO-contracts.

In relevant cases for cross border services in line with PSO Regulation article 1, it takes two to tango: on a basis that the competent authorities desire, where applicable competent authorities on both sides of the border should cooperate (analyse the market situation, the obstacles, introduce transportation plan) in order to define, regulate and compensate the required services. Also one competent authority is free to extend a PSO service as a commercial service beyond the border making use of open access, at least if the open access is not restricted. If the service is not commercially viable on either side of the border and no open access services can be expected, if applicable the competent authorities in both MS can decide to cooperate and organise further steps including possible PSO. As international PSO contracts may require financial support from different countries, this assumes equal financial possibilities and/or willingness on both sides of the border, which is not always the case.

In order to overcome the lack of clarity as to who is responsible for organizing public transport services in adjacent countries, national contact points might be appointed even within already existing structures. It is imperative that the MS, where applicable, proceed with commissioning dedicated National Contact Points, responsible for organizing public transport services in adjacent countries (this may also be done on a sub-state level, as shown in the example below). In the 2022 report, the chairing countries have prepared a register of competent (local) authorities on a national and regional level in order to ameliorate cooperation between transport authorities of Member States. The register does not imply that PSO regimes are preferred for creating new services (), but merely facilitates any exchange of experiences and cooperation on experts' level.

In compiling the register, some clear delimitations may be taken into account:

- In order to comply with data protection rules, there should be no names or addresses of natural persons be stated.
- Only organizational units and its official email-addresses should be listed.
- The focus is on major competent authorities (also of international interest); the need of listing (major) municipalities is up to a Member states individual consideration.

Cross-border services may require additional support/PSO compensation

Given the linear increase in access charges with distance and the absence of financial incentives on these segments, many international connections could prove economically unviable without PSO eliminating existing barriers, or granting a subsidy, which can take the form of a compensation or targeted discount on track access charges and mark-ups. Existing cross-border services on open access basis should not be counteracted by introducing competing PSO services and any creation of unfair competition and market distortion has to be avoided (see also table 6).

In the short term, financial support, if needed, can derive from the implementation of the Regulation (EU) 2020/1429 to promote a sustainable rail market and accordingly lowering track access charges. In the long run, international PSO contracts could be financed and/or subsidized. Also, EU legislation that promotes the extension of national PSO contracts to the nearest hubs across borders, instead of stopping at the border town within the home country, could be envisaged. Other forms of aid to railway companies may be considered if compatible with the internal market and state aid rules, in particular on the basis of Article 93 of the Treaty on the Functioning of the European Union (TFEU).

Organization of cross-border tenders

How to organize a tender procedure for an international service, where two (or even more) countries are involved, can be an intricate question. It is therefore very important to understand that Regulation (EC) No. 1370/2007 covers no procedural details for tender procedures. These details are fixed in the EU-procurement/concession directives. Nevertheless, the national procurement systems can differ widely caused by differing methods of national implementation of the EU directive.

The experience of some Member States shows that if such international tenders are organized, they usually concern regional cross border services, not international long-distance services. Efforts could be made to exchange experiences and develop directions for such a tendering system to improve international long-distance services. It is especially important for those countries where a significant part of such connections are covered by PSO services.

Experience in operating cross-border services

While safeguarding open competition within the European level, operators with experience in international connections have an advantage, as they have already been cooperating for years with operators in neighbouring countries and can integrate international services more easily in their applications for national timetables and funding schemes. Hence, under the concept of best practice this could create valuable experiences how to address obstacles in creating new international passenger services for new market entrants, at least if best practices are discussed between undertakings, infrastructure managers and competent authorities in close cooperation and collaboration.

Authorities on both sides of the border need to deepen their contacts in order to exchange experience in organizing or facilitating cross border services and / or building it up where necessary.

Infrastructure capacity issues

Most MS have different regimes on capacity allocation, such as granting international passenger trains priority over freight, or granting local trains priority, or assigning a minimum number of paths per hour per line section to freight trains. This mixed picture shows that developing each new service involves a patchwork of rules and that there is no 'one size fits all' concept (need for alignment between national/international and passenger/freight services). In addition the planning of maintenance and renewal work leading to a temporary capacity restriction is not always coordinated in a timely and good manner between the infrastructure managers involved, leading to additional burden for international train services by creating additional obstacles.

Infrastructure on the main lines to the hubs is quite often already congested. One possible way to tackle this challenge is by using alternative routes. In addition, integrating international passenger trains in national networks can help to avoid congestion.

The EC proposal Greening Freight Package, expected in June, is expected to also address cross-border operations and capacity allocation.

Rolling stock

In general, acquisition of rolling stock is one of the biggest obstacles for establishing passenger services. Rolling stock for international services is generally more expensive than for domestic use due to additional technical requirements and limited editions. Also, the (second-hand) market for such material is very limited.

To address this, different approaches are conceivable. One approach would be to further harmonize the technical rules for rolling stock suitable for international trains and to reduce the red tape involved in rolling stock certification. Also the idea of a single European vehicle register to provide better access to rolling stock data could be a measure to stimulate the leasing market for international rolling stock, providing additional access to rolling stock without the necessity to procure a higher amount of capital for buying rolling stock by railway undertakings. Also MS may agree on providing compensation through PSO frameworks or that state guarantees that are compatible with EU state aid rules, what can be granted to operators in order to obtain better interest rates. Such schemes still allow the operator to be the owner. Alternatively, operators lease rolling stock, either through the state or directly from an independent rolling stock leasing company ('rosco').

Quality standards

High quality of services is in combination with easy accessibility, suitable travel times and competitive pricing the key for revitalizing international rail passenger transport. However, it can be argued that the main quality check derives from the passenger: if passenger demand is not picking up, this could imply an insufficient level of service beside a lack of demand. Passenger demand is generally bound to turn to those offering the best value for money and a high level of quality in rail services. Facilitating for new entrants to enter the rail market and start competing in open access can also increase the overall level of service quality and supply. Besides that, MS authorities can influence service levels through PSO contracts, in which quality requirements are specified. It would be desired to consider in a next phase, after formulating the recommendations and defining the necessary steps, whether it is relevant to establish and review key performance indicators (KPIs).

5.3 Progress

The main topics discussed in subgroup D during the 2022-2023 period included the Manual on cross-border PSO-services, business cases: definition of and possible solutions for obstacles, PSO-Guidelines (publication of Guidelines by EC pending) and hybrid systems (combination of PSO/non-PSO-services). Slovenia shared knowledge and experience on the implementation of integrated public transport in Slovenia. Norway presented and lead a discussion with questions such as who could take role to facilitate/support/coordinate train operating companies to request train paths on European level, and who could be 'competent authority'?

In the IRP work plan, 4 action items were defined for subgroup D:

- D.1 Harmonization internal market, legal framework
- D.2 Reduce economic barriers / cooperation on infrastructure charges as well as access barriers to rolling stock
- D.3 Integrate open access services in national networks.
- D.4 Increase cooperation between MS.

In the following sections, progress made regarding these subjects is elaborated on.

5.3.1 Harmonization internal market, legal framework (D.1)

As a draft document for revised Guidelines to Regulation (EC) No 1370/2007 is circulating, subgroup members took up the possibility to discuss certain topics in 2022, focussing on the scope of assessments and legitimation of PSO as well as possible incentives to push open access regimes on certain lines. Consultation with the EC has now been completed

and the Guidelines may be finalized and published in the first half of 2023. No further discussion took place in the subgroup meetings this year.

Consequently, topics D.1 and D.3 were addressed by the compilation of a manual on the organization of cross-border awards. Platform Members were asked to give inputs on the draft manual (version of 2nd IRP-Progress Report). ERA suggested to include a more detailed explanation of the rules applicable for cross border services and to elaborate on additional topics such as language schemes to be applied for cross border sections, requirements for interoperable vehicles used for cross border services, and rules for border stations where specific cases for the usage of rolling stock and operational rules may exist. CER added inputs regarding timetable aspects (reference TTR) such as coordination and timelines, and suggested to introduce an overview on termination of public service contracts. Also, CER suggested to elaborate further on ticketing. The consolidated version with ERA and CER inputs was submitted before the subgroup meeting on 12 October 2022. It became apparent that cross border operating sections should be covered in the manual. A suggestion for further discussion about uncertainty in real demand as challenge for the introduction of new services as well as the suggestion that the possibility of hybrid systems (PSO/non-PSO-services) should be deepened, also considering coordinative procedures regarding the market analysis and concerns from some Member States and Sector members on fair competition in hybrid systems. Another discussion took place regarding the differences in the capacity allocation process between corridor and network systems: RFC-system (allocation via Corridor Manager) vs. integrated networks (allocation via rail infrastructure manager). Also, ALLRAIL provided input to the manual. After no further inputs have been returned, the additions have been considered and, where applicable, taken over. References to the PSO-Guidelines will be kept general. A further description of the action, as well as the full final manual, are included below.

Also, platform members elaborated on so-called hybrid systems (combination of PSO/non-PSO-services) and how those systems can be coordinated. Hybrid systems allow Member States, for example, to extend a line with open access from A to B on a PSO basis from B to C. It is suggested clear from applicable legislation that PSOs should not be implemented where open market initiative is developing; only when there is no market service establishing. It became apparent that there is no one model that fits all Member States, because of, for example, differences in infrastructure and capacity. The development and implementation of hybrid systems can be further discussed in the future. During the discussions, it was emphasized by several participants that the full implementation of the ideas of the SERA Directive of competition in open access should be the primary goal of any action and that PSOs should only be resorted to where necessary.

5.3.2 Reducing economic barriers (D.2)

Discussions revolved around possible differences in infrastructure charges between domestic and cross-border services. Also, specific charges for night trains are a matter for attention. Any action on infrastructure charges should take into account its impact on (open access) cross border services (e.g. international trains that do not run profitable any longer by higher infrastructure charges in one state). Therefore, a close cooperation between all railway stakeholders is necessary to enable the development and stability of cross border business cases, also taking into account the price elasticity of demand regarding night services.

A discussion regarding improving cross-border services took place among subgroup member. Norway presented three roles in developing cross border services:

- Provide legislation and technical interoperability (ERA, MS Railway Authorities);
- Provide improved (pre-planned) train paths for RUs on their requests (RNE, National Capacity/Infrastructure Managers);
- Facilitate, support (e.g. negotiation track access fees, access to stabling facilities, economical support/guarantees for rolling stock), and coordinate train operating companies to actually request these train paths (commercial and/or PSO).

Subgroup members elaborated on the way of initiating new cross border train services. It was suggested that international passenger services should be based on commercial operation (if economically feasible) or could be a tendered or directly awarded PSO agreement, if the conditions of Regulation (EC) 1370/2007 are at hand. Apart from this, cooperative cross border services between incumbents are common practice. Facilitating for newcomers to enter the competition is also a matter of great importance.

A best practices approach was followed in order to share information to reduce economic barriers. Sector members but also Member States were asked to share experience concerning establishment of business cases for international train services. Topics of interest are technical issues, legal/organizational issues and economic issues. Guiding questions that were asked are:

- Why are operators not interested in providing services on a line?
- What do they need to come to this line?
- Why are certain connections unprofitable? What are usual reasons (cost drivers, revenue based factors) in this context?
- Which incentives could help to stimulate certain lines?

Sector members and Member States provided input regarding their experience in establishment of business cases for international train services.

Barriers for the access of rolling stock that may remain after implementation of the 4th Railway Package were discussed in conjunction with the other subgroups.

5.3.3 Integrating market initiatives in national networks (D.3)

Passengers can often change from regional to long distance services on a national level, but cross-border services and/or market initiatives might not be integrated in these timetables. The number of passengers in trains at the border point is mostly low compared to the number of domestic passengers in those trains. Still – due to a deep integration in national networks – such trains can be profitable and enable cross-border services organized either on open access basis or by cooperation and combination of PSO services.

It became apparent that Member States have different priorities when it comes to integrating market initiatives in national networks. There is no single answer on the question whether international services should be integrated into the national system or run in addition to national trains.

However, it must be possible to integrate cross-border services into regular interval timetabled schemes by administrative and regulatory means, while maintaining the commercial freedom of railway undertakings. If certain national line segments of international passenger trains services might be integrated in PSO schemes by a Member State this will create additional challenges in regard of open access and competition.

Important questions concern the approach of allocation of infrastructure capacity according to applicants demand vs. a “catalogue train paths” approach. Current European legislation is based on free market demand rather than pre-arranged catalogue train paths. These topics could be further discussed in the future, considering also the need of international excursion and special trains for suitable capacity outside of predefined schemes.

It became apparent that Member States have different priorities it comes to integrating market initiatives in national networks. There is no single answer on the question whether international services should be integrated in national system or run in addition to national trains. This topic could be further discussed in the future.

The subgroup members discussed the implementation of integrated public passenger transport in Slovenia, based on the concession model. This best practice cleared different carriers to operate more public transport services. Also, attention was given at the allocation process and the increase of public funding.

Additional items that may be considered include: ticketing, distribution, and timetable data. These topics were referred to subgroup A.

5.3.4 Increasing cooperation between MS (D.4)

Cooperation of Member States is essential to enable international passenger services. When need be, Member States may cooperate more on sharing knowledge and experience. Cooperation of authorities is essential – in particular where there are no services initiated by the market, positive results/services only turn out to be positive, where authorities cooperate in a good way.

After having completed the register of national contact points in the 2022 progress report, discussions now revolved about tackling market barriers as well as barriers on PSO-level, where there are no services initiated by the market, in order to facilitate positive business cases. The register of national contact points and the manual on the organization of cross-border awards are concise results which can be used to facilitate preparation of cooperation.

There remain practical topics that may be improved with more cooperation, sharing knowledge and sharing experience. Examples that could be explored are (HSR and conventional) infrastructure planning, capacity allocation, the facilitation of cross-border services, actions on infrastructure charges and standardization of technical regulation (e.g. safety certificates for international services to border stations/cities).

5.3.5 Organization of cross-border awards (Finalization of draft manual)

Where applicable, cooperation of competent Public Passenger Transport Authorities (PPTAs) to facilitate cross-border rail transport services is needed. Since there are no common rules and practices for rail passenger cross-border public service obligation (PSO) services, it is useful to provide a manual with relevant guidelines according to the existing regulations (Regulation No. 1370/2007 and its interpretative guidelines) and possible solutions in order to help PPTAs to introduce joint cross border PSOs effectively and easier. Currently the draft concept with key elements to be addressed in manual was prepared.

The Manual is attached in Annex 6 and was conceived on the following fundamental issues that precede potential service awards:

1. Preparation/questions
 - a. Network vs. (single) line
 - b. Integration of cross-border-services with other services/networks
 - c. According to the services concerned:
 - Logical "cradle" for the whole network
 - Services balanced in each country involved
 - Services as appendix or corridor
2. Tendering procedure
 - a. Synchronized tender vs. downstream procedure
 - b. Separate (synchronous) tenders by each authority or joint tendering as a group of authorities or by one authority (cooperation inter se)
3. Decision support.
 - a. Principles:
 - Interfaces increased/less harmonization → legal uncertainty/risk → less participation and/or raised cost
 - Interfaces reduced/high harmonization level → less risk mark-ups → risks to be born on authorities' level (inter se) and result of compromises
 - b. Result of preparation: pros and cons deliver choice of tendering procedure or conception of timeline (e.g., leader-follower)
 - c. Dilemma: political, legal and/or economic feasibility
4. Documents/Agreements
 - a. General
 - Language: contractual vs. procedural language
 - Variety of standards in different spheres
 - Interfaces vs. priority of one party
 - b. Specifications on services
 - Rolling-stock requirements (especially standards, capacities)
 - Acquisition of rolling-stock (especially when public grants/guarantees are involved)
 - Social standards (specifications for employees)
 - Quality standards
 - c. Specifications on tariffs
 - Risk of revenues (gross/net contracts)
 - "Through-tariffing"
 - d. Legal framework
 - Allocation of competences
 - Procurement law (including legal protection/remedy)
 - Civil law (esp. tort law)
 - Employment law
 - Economic law (public guarantees/grants, budget law)
5. Operators' view: business cases, including if and how (international) services should be integrated in national systems.

5.4 Conclusions

Priority actions D.1 (harmonisation internal market, legal framework D.3 (integrate open access services in national networks) were addressed by the finalization of the manual on the organization of cross-border awards.

For topic D.2 (reduce economic barriers / cooperation on infrastructure charges as well as access barriers to rolling stock), it was assessed that a close cooperation between all Member States and RUs is necessary to enable the development and stability of cross border business cases.

Regarding D.4 (increase cooperation between MS), the register of dedicated National Contact Points, responsible for organizing public transport services to and from adjacent countries, is completed. It is concluded that sharing knowledge and experience between Member States and Sector members is essential to enable more cross-border services.

5.5 Way ahead

For the second half of 2023 and onwards, the agenda points as detailed in the table below are foreseen. Please note that it will be important to discuss these indicative action points at the beginning of the next IRP phase in more detail in order to set out concrete actions, planning, and rapporteurs per item.

Table 13. Priority actions Subgroup D

Priority action	Deliverable	Lead	Previous planning	Progress	Remarks
D.1 <i>Harmonization internal market, legal framework</i>	Presentation on PSO guidelines and discussion on interpretation	All MS, EC		Action pending	
	Evaluate the reception and use of the manual on the organization of cross-border awards	All MS	12/2022	Action pending	
D.3 <i>Integrate open access services in national networks</i>					
	Exchange of knowledge and experience on the implementation of track allocation systems in Europe	All MS		Action pending	

D.4 <i>Increase cooperation between MS</i>	Where applicable, proceed with commissioning dedicated National Contact Points, responsible for organizing public transport services to adjacent countries. A register was prepared by chairing MS	All MS	12/2022	completed	This may also be done on a sub-state level, as shown in the example table
	Finalize manual for cross-border tenders	Chairing countries, all MS	12/2022	completed	

6 Monitoring the development of international railway passenger transport

6.1 Introduction

Since the start of the Platform in 2020, progress was made in a number of relevant fields, laying the groundwork with regard to enhanced, concerted efforts by the Member States to contribute to improving international railway passenger transport. In light of this ongoing process, the Member States required a means to estimate the impact of the efforts of the IRP and other stakeholders. In order to allow for an understanding of the development of the market and network, this report sets forth the results of the first monitoring exercise.

The monitoring methodology was to be concise but easy to replicate, e.g. in an annual iterative pattern. For this purpose, it was proposed to map the number, type and frequency of international rail passenger services through border crossings in Europe, based on an OD (origin-destination) matrix. An elaborate dataset was received with the cooperation from RNE; however, its complexity proved prohibitive for the IRP's purposes, whereas a number of entries were lacking. Nevertheless, the RNE dataset was successfully used for generalized punctuality calculations (sample month: March).

Consequently, an expert count of European services was carried out at the behest of the IRP's co-chairs. The results displayed in the following paragraphs provide for a reliable overview but cannot guarantee exactness on all entries. Reiterations and refinements over the next years can be expected to provide for even greater reliability.

6.2 Descriptive results

Currently, during the typical working day, the European Union, Switzerland, Norway and the United Kingdom are served by some 200 international railway passenger services. Regional cross-border connections total just over 100, with an average frequency of 12 to 13 trains daily (unidirectional). On top of this, 40 direct intercity services are operated, with an average of 5 to 6 daily trips. High-speed services count a total of 28, on average offering 6 to 7 trains per day. Finally, 29 night train connections are available. Together, these services make up for a total of 1.752 trains per day. Among many origins and destinations throughout Europe, the number of direct connections between capital cities amounts to 27. These key facts are shown in the tables below:

Table 14. Key figures 2023 (EU + Norway, UK, Switzerland)

Type of train	<i>Regional</i>	<i>Intercity</i>	<i>High-speed</i>	<i>Night train</i>
<i>Connections Europe</i>	102	40	28	29
<i>Average daily</i>	12-13	5-6	6-7	1
<i>Aggregate</i>	1.297	234	186	35
<i>Trains total</i>	1.752			
<i>Capital-to-capital connections</i>	27			

Table 15. Average punctuality 2019 – 2023

	Average punctuality at origin [5 min. threshold]	Average punctuality at destination [5 min. threshold]
2019	99.2%	94.3%
2020	92.3%	83.5%
2021	93.2%	83.2%
2022	89.2%	75.0%
2023	89.2%	76.0%
Grand Total	91.1%	79.5%

The previous year for which expert data were available, and thus used as baseline, was 2009. In 2009, Croatia had not acceded to the EU yet; also, data were not compiled for Switzerland and Norway. Therefore, the following comparison was made for the 27 countries that were EU Member States in 2009.

In 2009, the total number of international railway passenger services for these countries stood at just over 130, together operating some 1.176 trains per day. In 2023 this had risen to 160 connections and 1.357 trains: an increase of 21% and 15% respectively. This growth mainly pertains to regional and night train services, with intercity and high-speed services displaying marginal changes. These results are shown in the table below.

Table 16. Comparison 2009/2023 (EU Member States 2009), excluding night trains

Type of train	Regional		Intercity		High-speed		Night trains	
	2009	2023	2009	2023	2009	2023	2009	2023
<i>Connections Europe</i>	70	80	43	40	17	20	3	20
<i>Average daily</i>	11	12	6	5-6	7-8	6	2	1
<i>Aggregate</i>	778	991	262	217	130	125	6	24
<i>Trains total</i>	2009		1.176					
	2023		1.357					

6.3 Mapping international railway passenger transport

For the monitoring, information on train services has been collected from the websites of national and international train operators. Per train service, what is collected is the origin and destination cities of the service, the number of trains per day, the type of train (HST/ICE, IC/EC/IR, other LD, regional), and the operator of the service. The train services have been visualized on several maps of Europe as displayed below. The first map shows an overview of Europe with the major cities, subsequent maps each zoom in on a particular part of the continent, and show all cities that occur in the data, either as an origin or a destination. For each train service, a line is drawn as the crow flies between the origin and destination, coloured according to the train type that occurs most often on that OD-pair. The width of the line varies with the total number of trains per day (across all train types).

Figure 3. Europe overview map services 2023

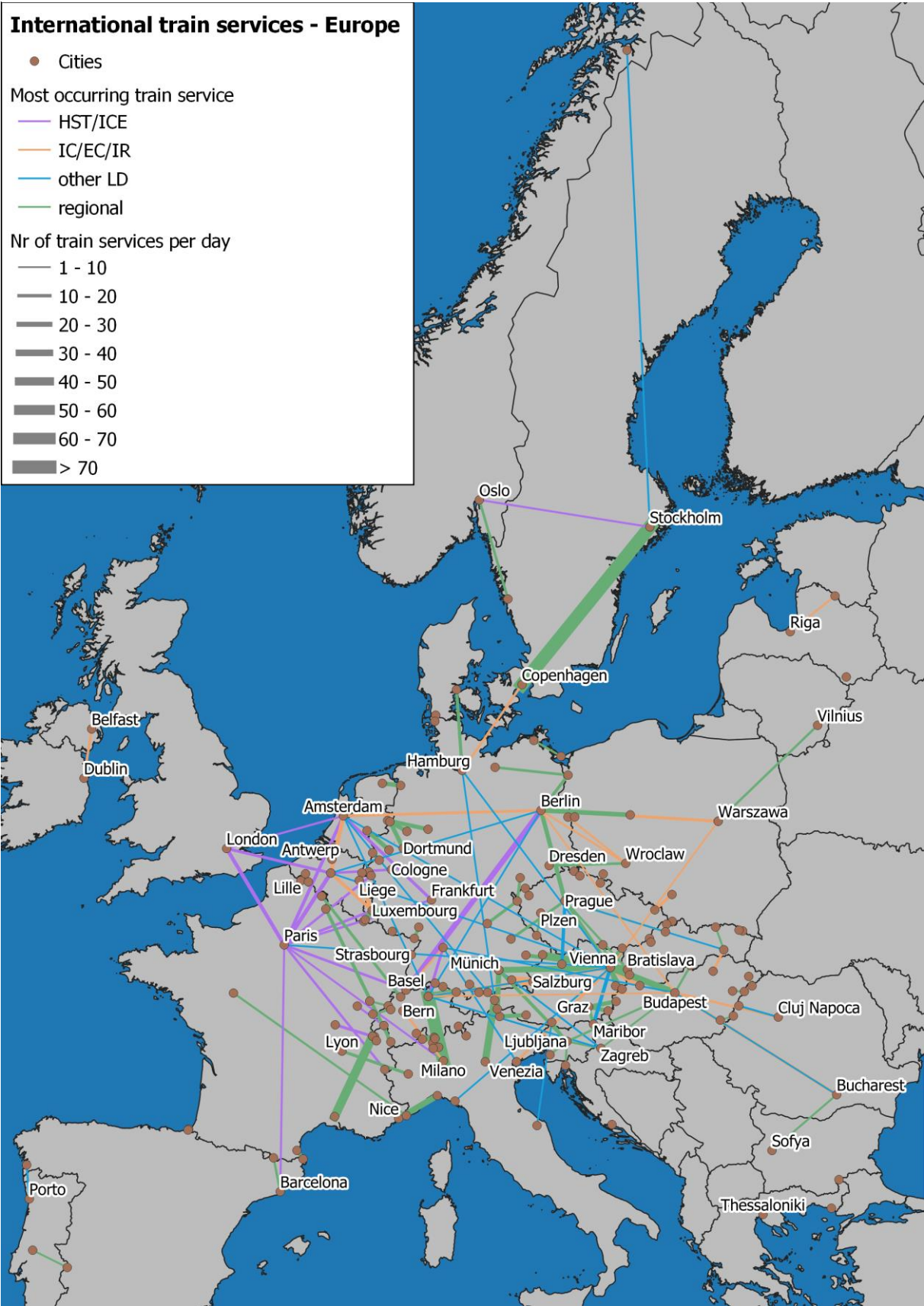


Figure 4. Europe overview map services 2023 – regional

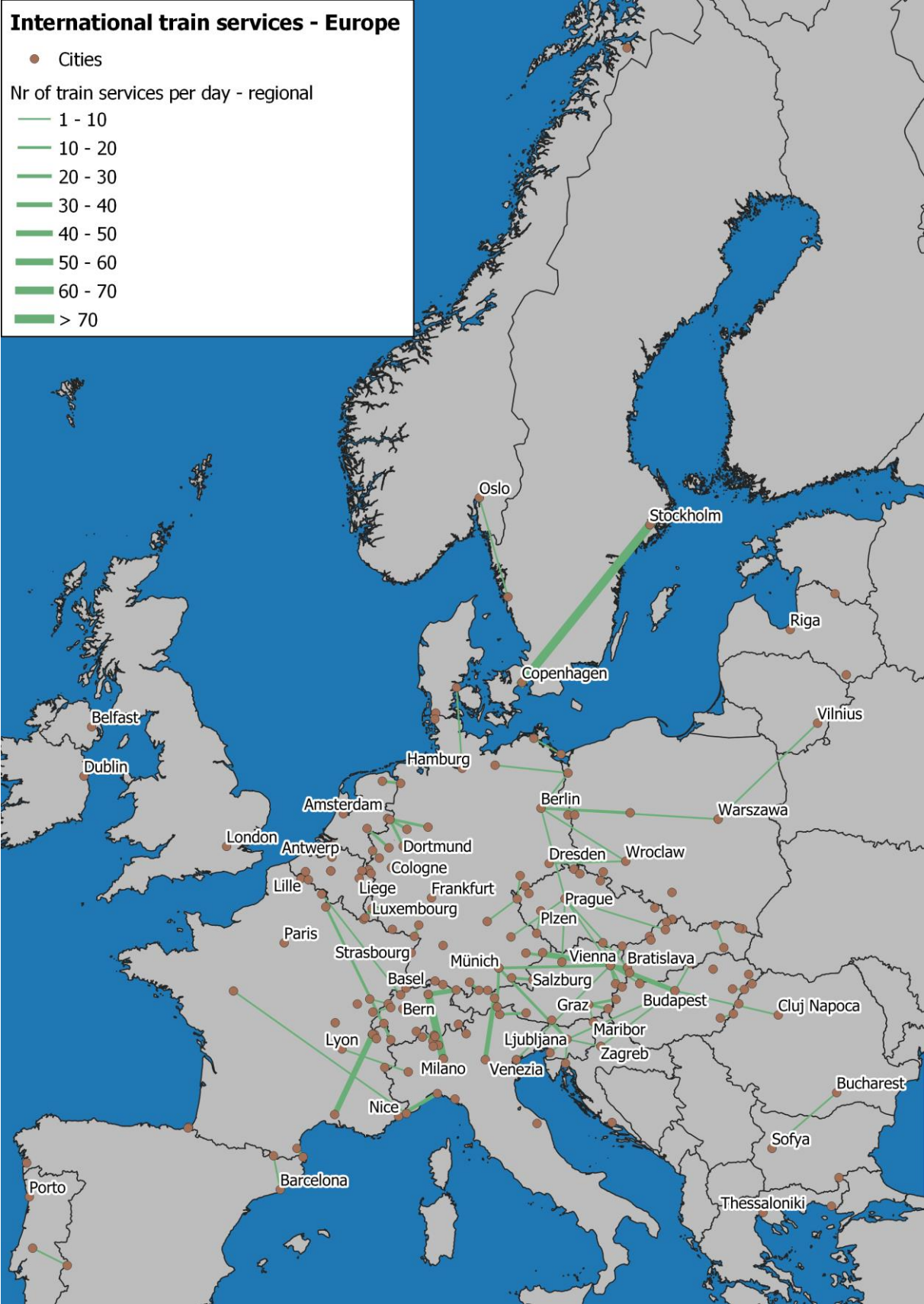


Figure 5. Europe overview map services 2023 – intercity

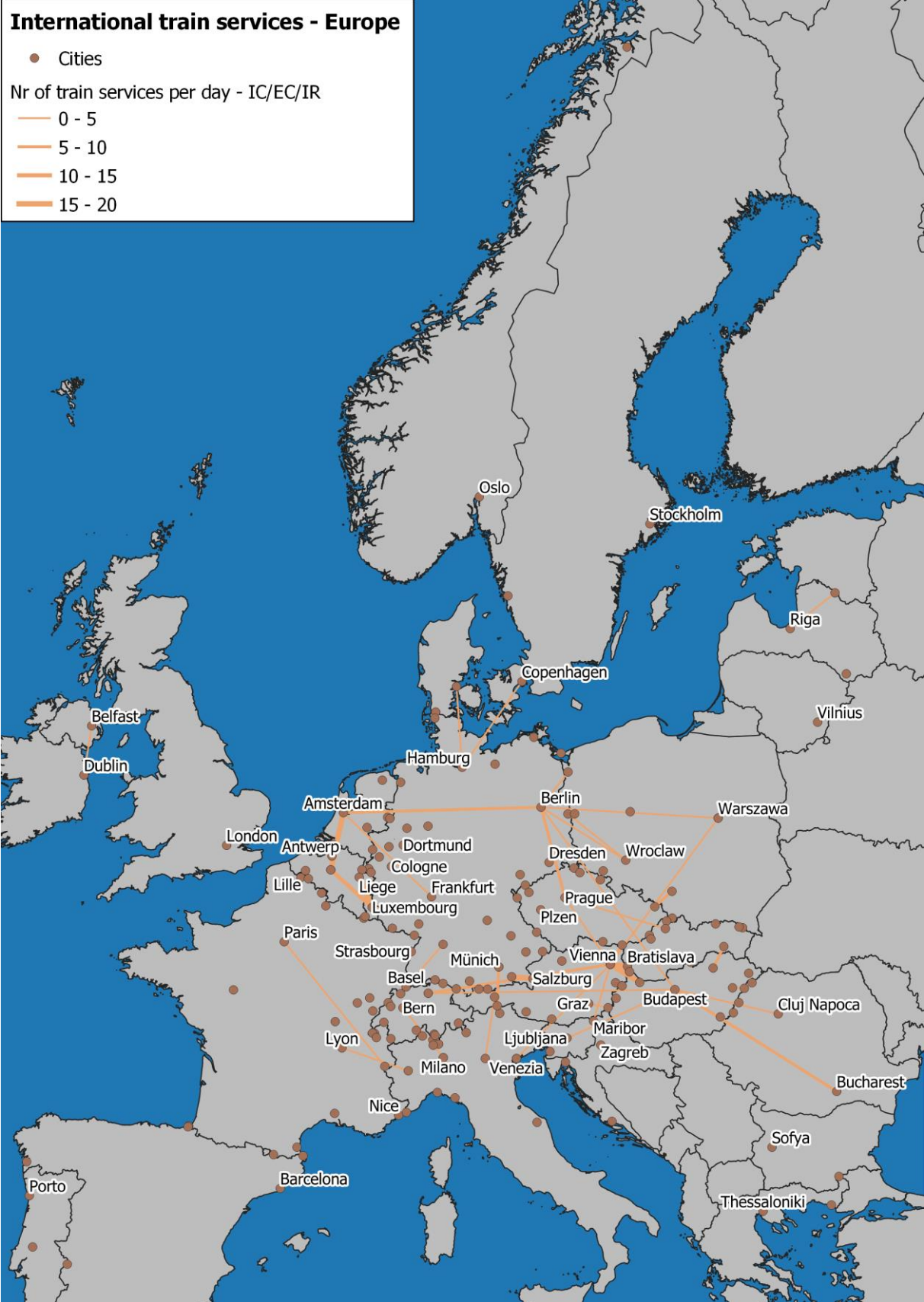


Figure 6. Europe overview map services 2023 – high speed

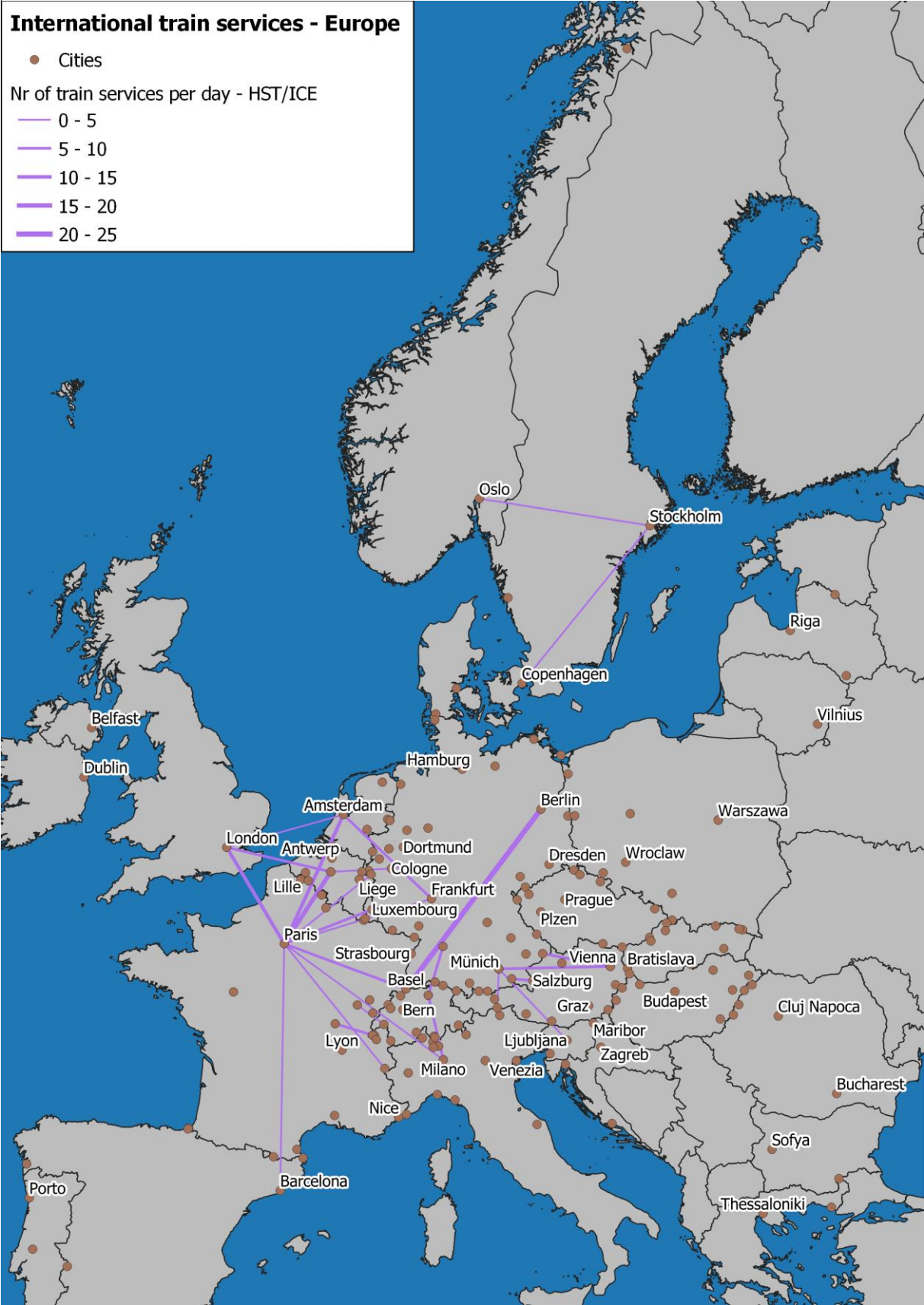


Figure 7. Europe overview map services 2023 – night trains

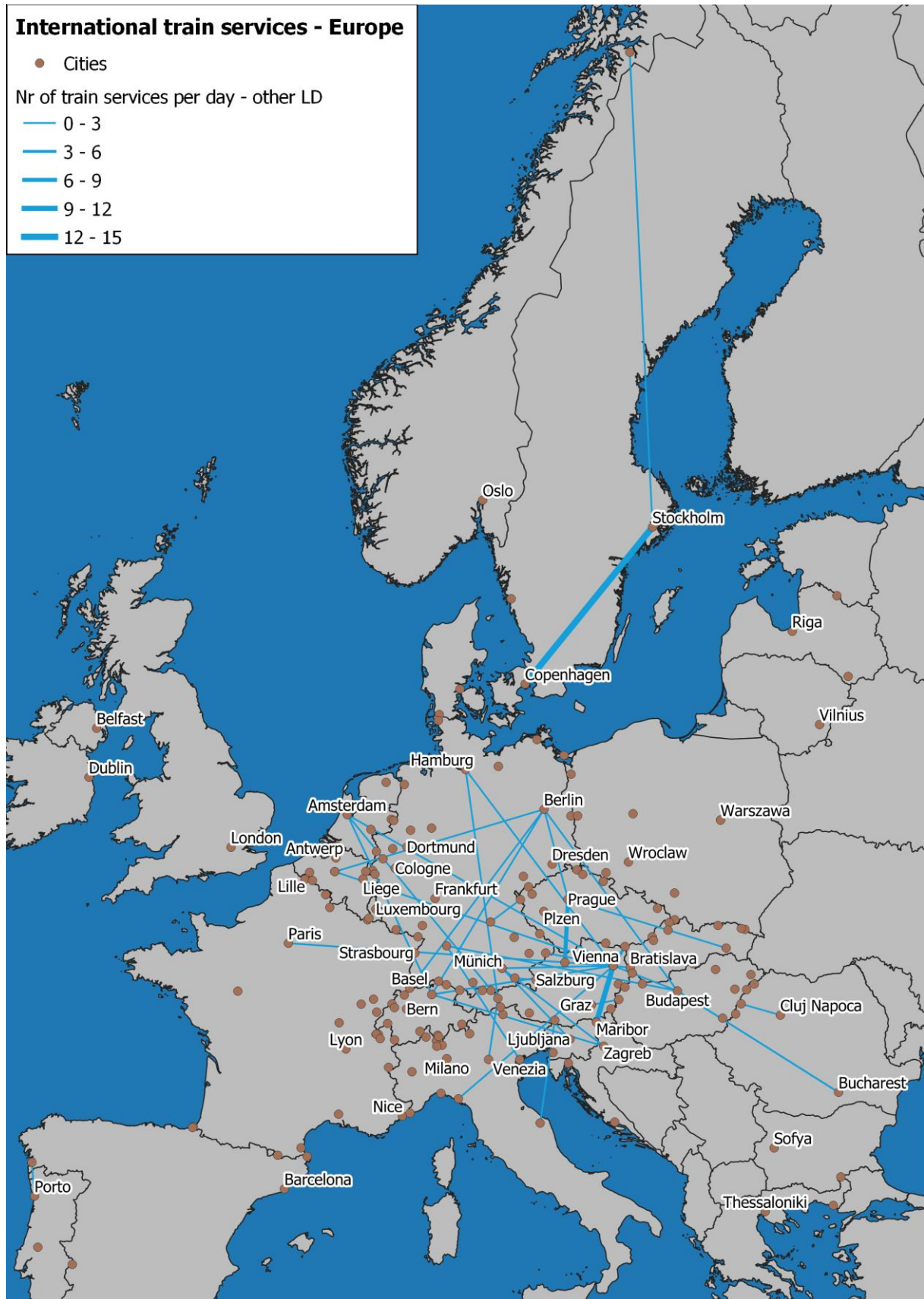


Figure 9. Southwest Europe map services 2023

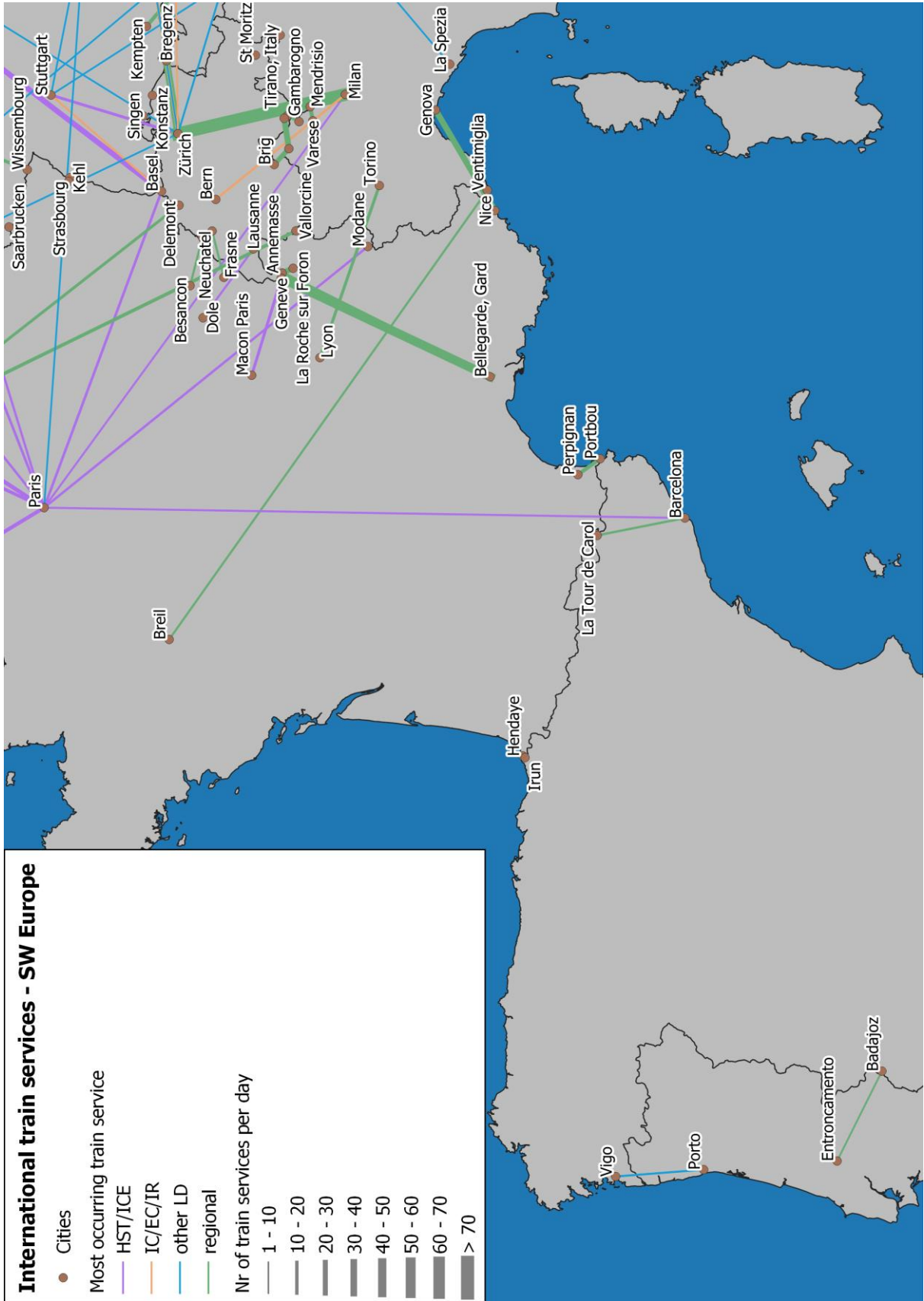


Figure 10. Southern Europe map services 2023

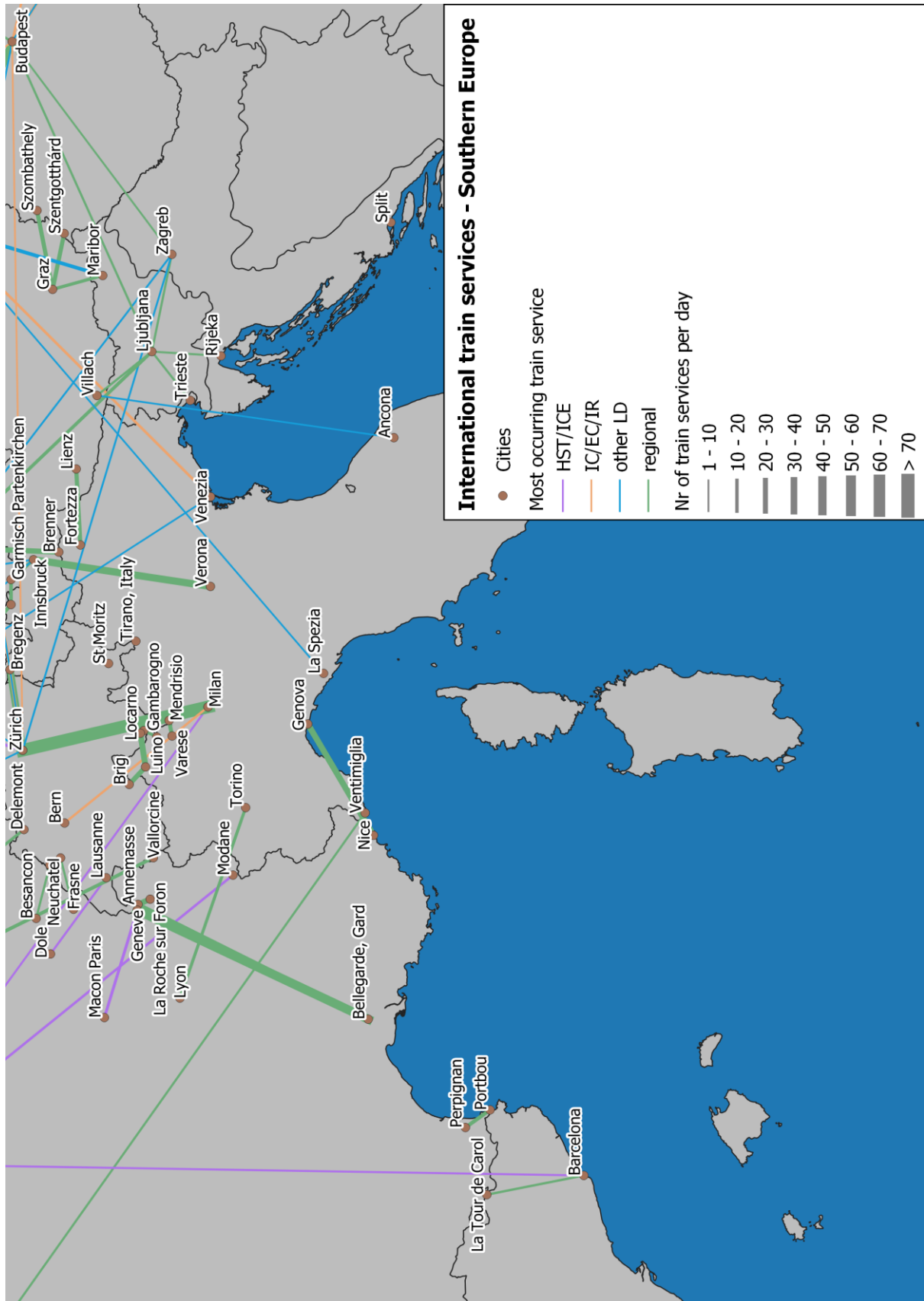


Figure 11. Southeast Europe map services 2023

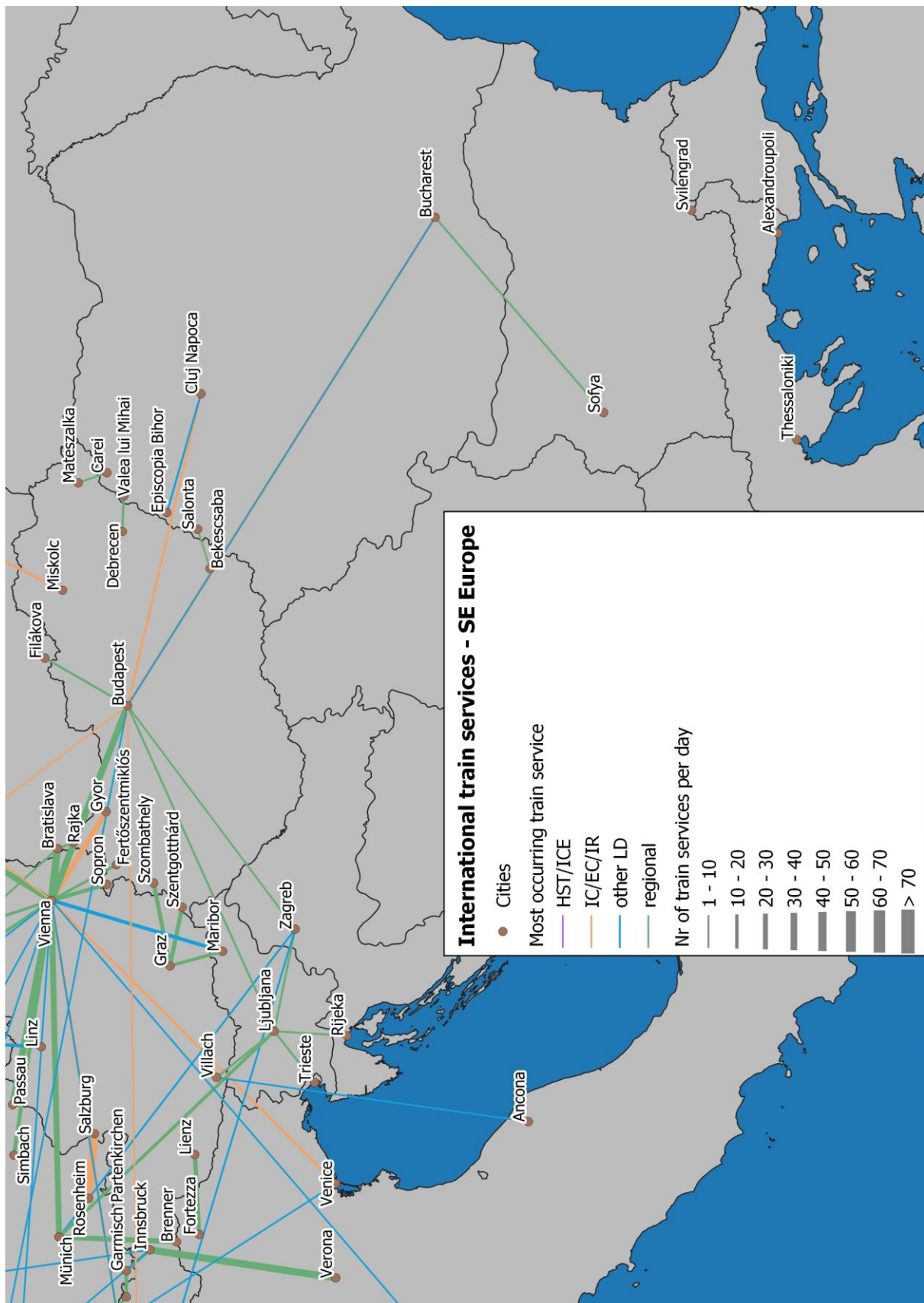


Figure 12. Central Europe map services 2023

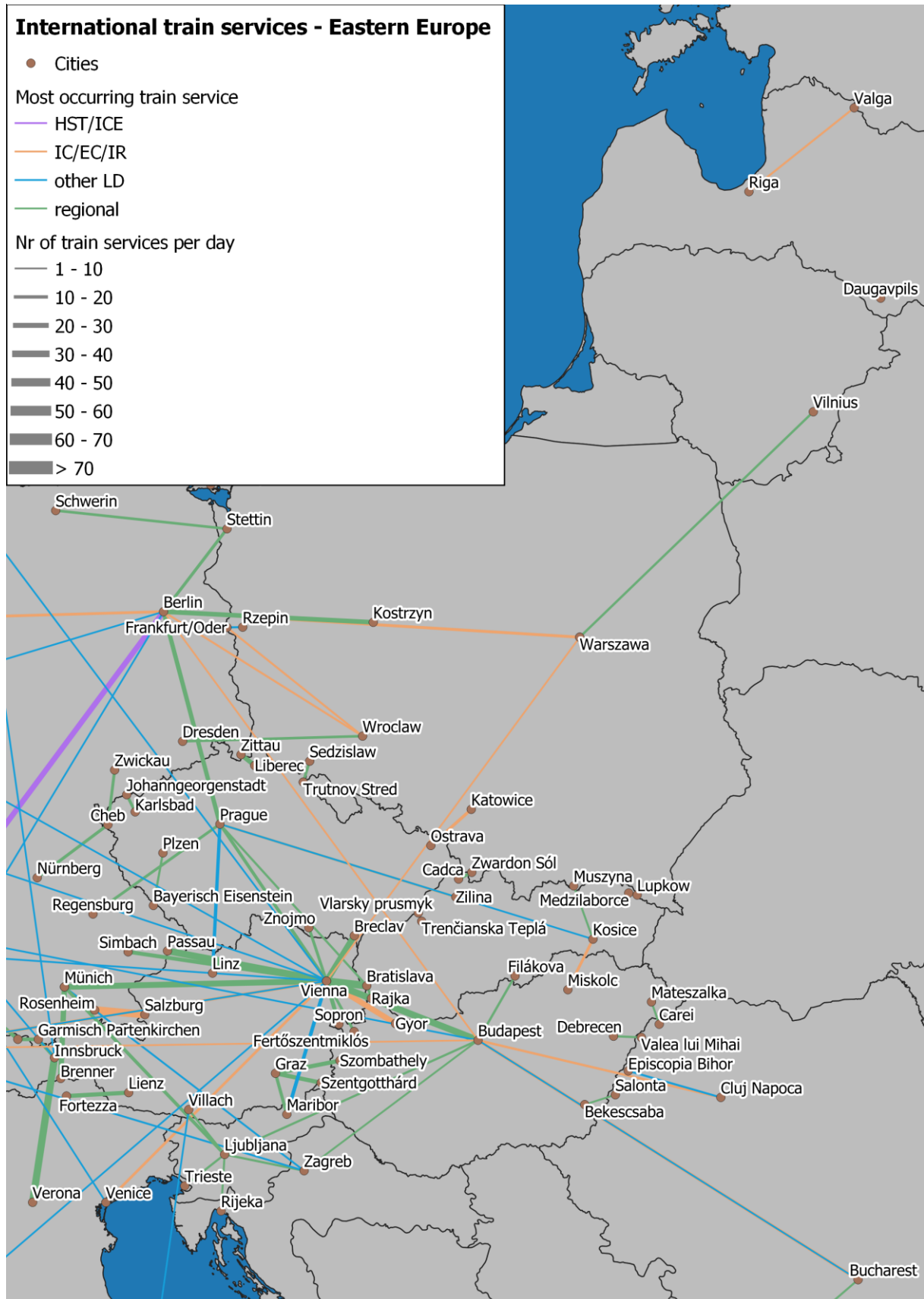
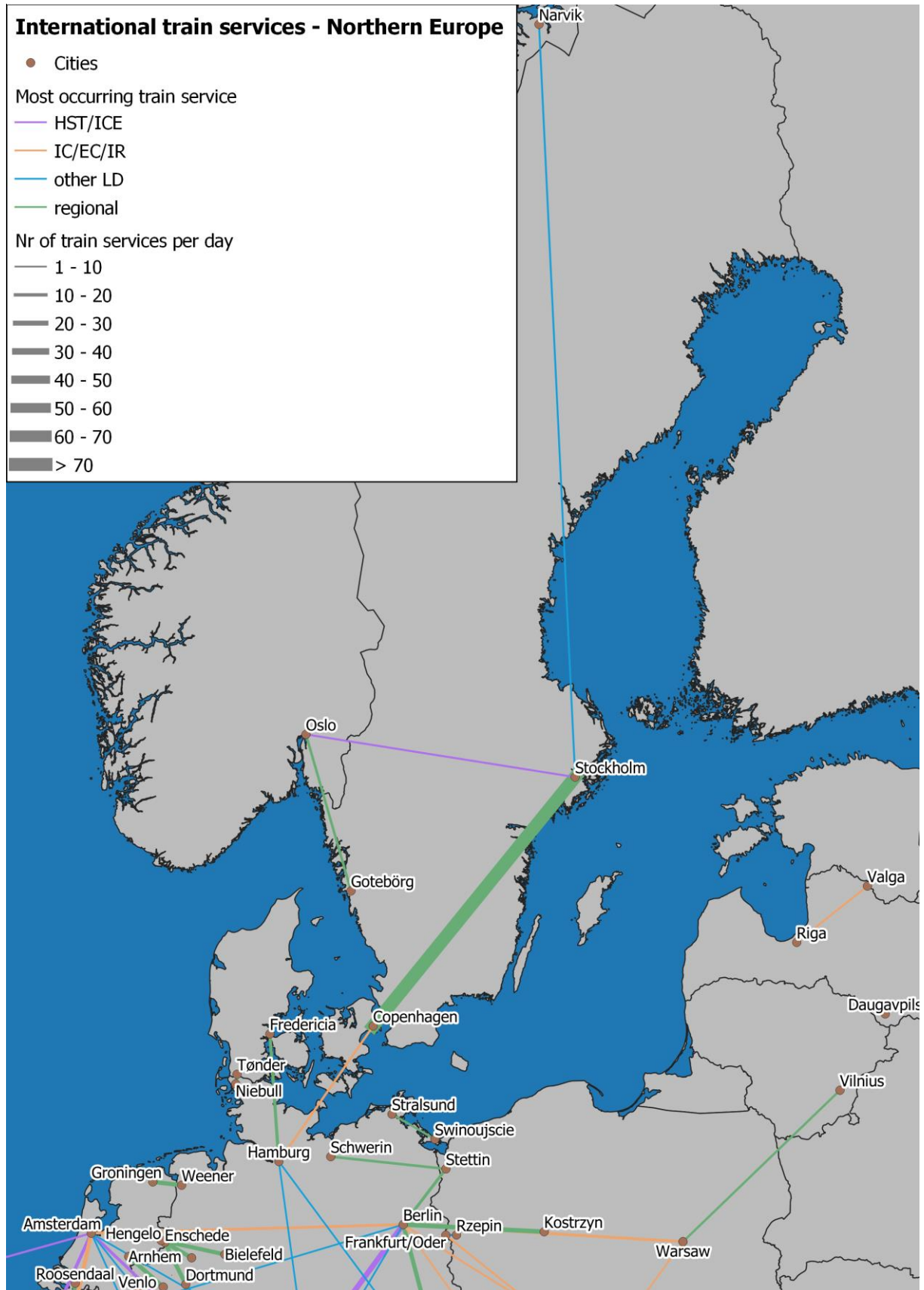


Figure 13. Northern Europe map services 2023



Annex 1 – Sector progress

The Sector Mirror Group made some important and substantial commitments in their two Statements to the Platform, issued in spring 2021 and 2022. For 2023 it was agreed that the Group’s co-chairs should this year focus our input on recording the progress that has been made in delivering on those commitments and on identifying those obstacles to delivery that still need addressing and for which we seek support from government – both national and European. The table below records the commitments reflected in the two statements and reflects the outcomes, or progress made in delivering on those commitments, to date.

Table 17. Sector progress

	COMMITMENT	OUTCOME
Statement 1.1	The rail sector commits to be the backbone of a seamless and integrated multimodal transport system in close cooperation with the other transport modes, in particular by linking major urban centres with high-speed rail connections and connecting peripheral urban areas with city centres.	ALLRAIL, CER and UNIFE collaborated with EU-RAIL which commissioned a study by Ernst & Young analysing the social, economic and environmental impact of the European High-Speed Rail (HSR) Network connecting the Capitals of Europe and the main European cities and regions (see https://rail-research.europa.eu/publications/smart-and-affordable-rail-services-in-the-eu-a-socio-economic-and-environmental-study-for-high-speed-in-2030-and-2050/ . The sector is looking to national governments and the Commission for timely action. The revision of the TEN-T Regulation could be the appropriate vehicle to achieve this. There are also Pilot projects in which both CER and ALLRAIL members are participating.
1.2	The sector commits to implement e-ticketing for all passenger services, provide dynamic travel information, with the aim of completing digitalization in rail transport and provide easy access to simple, reliable, and comprehensive information to customers of rail services, whichever distribution channel they have chosen to buy their tickets.	Already, CER members are developing and implementing eTCD and universal digital ticket as part of its <i>Ticketing Roadmap</i> . However, the real time information part of the roadmap is not going as planned and it is labelled yellow. CER members identified technical challenges that are being addressed.
1.3	The sector commits to promote technological innovation and the implementation of new digital solutions for providing better	Sectoral involvement in the EU-RAIL joint undertaking.

	services and attract new passengers.	
1.4	The sector commits to implement the existing regulation and obligations for all railway undertakings together with taking concrete steps to implement the ongoing sector-based initiatives such as Open Sales Distribution Model (OSDM)/Full Service Model (FSM).	Developing and implementing OSDM is still looking good to deploy by 2025. However, the delay to the adoption of TAP-TSI is having an impact on the deployment. The release of Version 2.0 of OSDM is the basis of implementations in significant parts of the Swedish as well as the Swiss market. However, some parts of the sector – notably that represented by ALLRAIL – have expressed support for CEN’s Transmodel model and NeteX standard. We look to national governments and the Commission for their early assistance in achieving delivery of an improved, simplified and cost-effective booking process for public transport users.
1.5	The sector commits to support initiatives based on the digital markets act, digital services act and the sustainable and smart mobility strategy at European level to ensure transparency and to create a level playing field between Railway Undertakings and third-party vendors or MaaS services’ providers, for selling tickets (international and national services) on fair, reasonable and non-discriminatory (FRAND) commercial principles, and cooperate actively with the European Commission for the preparation of such initiative.	Members of the SMG were present in the EC expert Group on MDMS, Multimodal Passenger Mobility Forum (MPMF), contributing actively to its work as participants and rapporteurs. The final report reflects the views of all stakeholders involved in the MPMF.
1.6	The sector commits to increase the booking horizon for international passengers in order to be competitive with air transport.	The sector is doing a lot of work on this topic; however, it is not all in sector hands. Selling tickets more than 1 month in advance is against national legislation in some MSs. It is part of the Time Table Redesign (TTR) project and some RUs are already doing pilots of selling tickets 12 months in advance and 11 CER members already have a booking horizon 6 months or more. CER developed a proposal to do TTR and asked the Commissioner to act.
1.7	The sector commits to develop more rail-through tickets and promote the use and awareness of journey continuation agreements with	The CIT Agreement on Journey Continuation (AJC) is now a public agreement, with additional RUs joining, such as MAV-Start and GYSEV (both from Hungary). AJC will also be improved and soon better

	all the rail sector actors, which assist passengers who have missed a connection due to delay or cancellation of the previous train.	communicated. CIT and CER are working together with EPF on the details.
1.8	The sector commits to cooperate more strongly with the air sector with the aim of integrating air-rail journeys and promoting rail as an attractive low-carbon alternative for many journeys.	<p>There is an UIC-IATA project on air-rail tickets, currently working to define the solution based on NDC and OSDM standards. Project is fully funded and many deliverables expected for 2023. There are also current and expected initiatives like DB – Lufthansa, NS – KLM, SNCF – Air France, Trenitalia – ITA and Lufthansa, ...</p> <p>Separate from the projects being delivered by CER members within the UIC-IATA framework, ALLRAIL reports that it is working towards providing encouragement to its members to conclude air-rail agreements with non-incumbent airlines to provide budget-conscious passengers with more affordable multimodal alternatives.</p> <p>The integration of air-rail journeys in a multimodal context is a cornerstone of the proposed MDMS Regulation. The Regulation will be a key initiative to favour air-rail journeys by enabling comparison and combination of transport modes. However, this can only be achieved if air offers are fully integrated in the MDMS Regulation, on an equal footing with the obligations applicable to rail offers, through an adequate scope.</p>
1.9	The sector commits to support measures aiming at strengthening rail passengers' rights.	The Sector Mirror Group is involved in EC initiative on multimodal passenger rights set to be adopted in second half of 2023. Rail sector will be ready for the rail PRR implementation by 7 June 2023. Effectiveness will depend on effective enforcement by the national enforcement bodies, which should swiftly rectify any non-compliance.
1.10	The sector commits to support the TTR process which will allow for a more flexible planning of railway infrastructure capacity while at the same time increasing its quality.	Ongoing activity with TTR that will be enhanced with the Commission's upcoming legislative act on capacity management. More Infrastructure Managers publish common capacity strategies (timetable 2026) for a coordinated implementation of infrastructure planning. Sector players (CER, RNE, FTE, EIM) developed detailed analysis and proposal about how to amend

		the current timetable and improve capacity management.
1.11	The sector commits to pursuing the internalisation of our external costs and calls on the Member States and European institutions to put in place an alignment of tax treatment between competing transport modes together with the development of additional measures likely to meet the objectives of the Green Deal.	Rules on VAT exemption for international rail tickets have loosened (still waiting for MS to implement the actions), ETS for road and better rules for aviation, but the sector still needs member states and the Commission to implement timely actions in creating the level playing field. Exploratory work by the European Commission is underway to consider reshaping the VAT framework applicable to passenger transport in the EU, which may further facilitate this level playing field.
1.12	The sector strongly supports the intention to explore all possibilities and financial resources that will back up interoperable and seamless cross-border rail connections and services.	We still strongly support this; however, the revision of TEN-T is the appropriate vehicle to achieve these long-term goals and urge the Council and European Parliament to take this into consideration when negotiating the revision.
1.13	Long-term investment planning and coordinated infrastructure maintenance and development are needed to provide high quality international rail passenger services all over Europe. A stable and long-term financial framework is key for the railway industry in this regard. It is essential to speed up the implementation of cross-border infrastructure projects by making use of the existing financial tools and incentives.	Work in progress, with the revised TEN-T proposal. Targeted investments should become more "targeted" across borders if the Network is to be completed by the given deadlines
Statement 2.1	All European Rail Sector stakeholders will cooperate actively in the preparation of the measures to be adopted in the roll-out of the EC Action Plan on long-distance and cross-border rail.	The sector has pursued this topic in the framework of IRP and also in the Multimodal Passenger Mobility Forum (MPMF).
2.2	The sector commits to work to establish a common understanding of the FRAND framework at the earliest opportunity. The FRAND terms should apply to access to rail contents (fares, schedules, ancillary services, etc.) and real-time information to ensure a high level of	Work is in progress on these complex issues. FRAND featured as a core point of discussion in the Multimodal Passenger Mobility Forum (MPMF), where SMG members participated. The final report includes reflections on the application of the FRAND framework to passenger transport distribution.

	customer experience regardless of the distribution channel.	
2.3	The sector commits to the implementation of the new Rail Passenger Rights Regulation and is therefore committing to support the development of an openly accessible European real-time data service to keep all the stakeholders, including especially passengers, appropriately informed.	<p>CER is expecting the provisions to be fully implemented by 7 June. However, the real time information part of the CER's Ticketing Roadmap is not going with the speed planned and it is labelled yellow. CER members identified technical challenges that are being addressed.</p> <p>ALLRAIL RU members are willing to share all data (static and dynamic). However, this is often not under their control but that of the infrastructure manager instead.</p> <p>Stakeholders commit to effectively cooperate with each other in good faith in the implementing of the Rail Passenger Rights Regulation, where relevant. Effectiveness will depend on effective enforcement by the national enforcement bodies, which should swiftly rectify any non-compliance.</p>
2.4	The stakeholders acknowledge CER's willingness to extend the CIT Agreement on Journey Continuation (AJC) arrangements to cover all cross-border journeys, and to continue to encourage all railway undertakings to participate, and for the AJC's provisions to be communicated to consumers in a clear and transparent manner both at booking time and in case of travel disruption.	AJC is now a public agreement, with additional RUs joining, such as MAV-Start and GYSEV (both from Hungary). AJC will also be improved and soon better communicated. CIT and CER are working together with EPF on the details.
2.5	The sector commits to work towards clustering ticketing conditions to create standardised traveller/tariff types to facilitate through ticketing and to reduce barriers to accessing the best offers.	OSDM provides a technical solution for many of the issues and it is currently being developed. For PRM's, SMG are in support of an EU disability card. The sector is looking to national governments and the Commission for timely action.
2.6	EU TravelTech and ECTAA members have indicated their willingness to distribute the services generated by	Both eu travel tech and ECTAA are involved in OSDM governance.

	implementation of CER's Ticketing Roadmap.	
2.7	EPF is contributing to the establishment of key performance indicators relevant to independent monitoring from a passenger-focussed perspective.	Subject of continuing open discussion, representatives of both CER and EPF having had constructive meetings on the topic
2.8	The sector is committed to TTR being implemented on a sound legal basis.	Ongoing activity with TTR that will be enhanced with the Commission's upcoming legislative act on capacity management. More Infrastructure Managers publish common capacity strategies (timetable 2026) for a coordinated implementation of infrastructure planning. Sector players (CER, RNE, FTE, EIM) developed detailed analysis and proposal about how to amend the current timetable and improve capacity management.
2.9	The sector intends that the TEN-T Proposal will provide the push for the realization of a high speed network connecting all capitals and major cities in order to achieve the doubling of passengers by 2030 and tripling by 2050.	Following the successful work on the study of high speed rail commissioned by EU-RAIL, the sector is looking to national governments and the Commission for timely action. The revision of the TEN-T Regulation could be the appropriate vehicle to achieve this.
2.10	The Sector will continue to provide support to the International Rail Passenger Platform in all its Subgroups work to improve framework conditions for developing international rail passenger services.	SMG continues work internally on ways of improving the framework conditions for developing international passenger rail and to support the work on the Platform.

Annex 2 – Example governance railway passenger corridors

Governance new railway (passenger) transport corridors, example model

1. Introduction

In this paper a possible governance model for supporting market development for international passenger rail services is presented. This example governance model does not imply consensus among Member States pertaining to railway passenger corridors.

The term railway passenger transport corridor is used in this paper to reflect the governance model. Legally the railway passenger transport corridor can be part of a TEN T European transport corridor once the TEN T revision is concluded. The term is used for recognition and to reflect upon the tasks needed for developing international rail passenger transport and is not a statement to show preference for a separation of governance between rail passenger and freight transport corridors.

The model is an optional/voluntary model, which could exist if a the executive board of rail freight corridor bodies ex regulation 913/2010/EC decides to include also railway passenger transport in their portfolio (as proposed under TEN T 2021 revision process). The model may also be used in a voluntary way as a governance model for rail passenger corridors that are not part of a rail freight corridor and use other infrastructure such as dedicated high speed lines. The model is voluntary given its non-legal status. Regulatory reinforcement of a governance model on railway passenger corridors may further add to the effectiveness of the governance model.

Redundancy of governance structure should be avoided, so therefore synchronization with the expected governance model for the new TEN T in the form of European Transport Corridors is important. If railway passenger transport is added formally to the former RFC then the European Transport Corridor it is no longer voluntary and has a legal basis (art 65 changes of the TENT-T regulation proposal. So it is a key decision for executive boards to decide about this to avoid a new series of structures. The basis is the routing is the TEN-T network so if rail passenger transport is added also high speed lines are also part of this European transport corridor

The presented governance model can be used(1) for routes that are part of the European transport corridors but can also be used (2) if Member States / infrastructure managers decide on other routes that do not overlap with rail freight corridors. The governance model shall fully respect the EU legal framework with key requirements on governance of the European railway sector included in 2012/34/EU, 913/2010/EC and 1315/2013/EC. The described governance model can act as a support instrument to further facilitate development of international rail passenger transport, given the state of railway transport market development and integration.

The regulation 913/1010/EC is being revised as part of the Commission proposal ex COM(2021)812 to revise the existing 1315/2013/EU TEN T regulation. Part of this Commission proposal is the voluntary inclusion of railway passenger transport in the governance of a rail freight corridor. In addition Commission is expected launch a further

proposal to revise regulation 913/2010/EC (and possible directive 2012/34/EU) regarding the revision of the EU legal framework on capacity allocation. Other relevant Commission initiative is on data sharing (MDMS) where later in 2023 a Commission proposal is expected.

The presented model shall not be a substitute for discussion forum, and on various aspects European level approach may be needed.

2. Governance structure

A number of important considerations do apply:

- Scope: governance entities along (TEN T / RFC defined) European transport corridors or supplementary predefined corridors . A good reference for the latter may be the service routes defined in the May 2021 letter of intent regarding Trans Europe Express 2.0 Noting that geographical the scope of the TEE 2.0 is different than the scope of the RFC's. SO therefore a precise analysis per corridor / routes is useful. The predefined corridors need to include the routes of the European transport corridors (once TEN T is revised) and must be based on explicit market needs and political ambitions, not of a business concept developed by existing RUs. The Member States may also define a railway (passenger) transport corridor beyond the scope of the routes of the EuropeanTransport Corridor lines since demand for rail passenger transport differs from railway freight transport routes. A relation with more than one European transport corridor / rail freight corridor is also possible;
- The following governance entities may be involved, similar to the entities from the rail freight corridors:
 - o Executive Board: member states
 - o Management Board: infrastructure managers. The infrastructure managers may use / set up a corridor office for the daily work of the corridor. Such a corridor office may have added value for launching innovative concepts and must be resourced properly;
 - o Supervisory authorities: National Safety Authorities, railway regulatory bodies
 - o Advisory groups shall be set up by the infrastructure managers, and different stakeholder groups (e.g. stations, ports, airports) may be invited to participate in same advisory group depending on geographical and market situation. The executive board may decide to have one or more advisory groups, depending on the market situation and the wish of stakeholders. The following entities can be invited to participate in the corridor advisory group or groups:
 - Railway undertakings;
 - Railway stations managers
 - Passenger organizations as representatives of customers.
 - Possibly Ports (as regards intermodality with maritime transport);
 - Possibly Airports (as regards intermodality with aviation)poss. ;

The transport and railway sectors are differently organized in our countries, but the roles to fill should be similar all over Europe. There are at least 3 roles that may be executed by the infrastructure manager:

- Infrastructure management (asset management, traffic control)
- Capacity Management
- Station Management

- Advising on capacity management regarding open access of public service contract operations

Which of these roles performed by the IM is different from country to country. When assigning, depending on a Member States legal framework, a task to the IM it is important to specify in which role – the task is assigned.

Context is that railway passenger corridors are included as optional transport mode in the rail freight corridor revision as part of the Commission proposal from 14 December 2021 COM(2021)821 and the EU council general approach on TEN T (5 December 2022) and the proposed *article 65 point 4 paragraph 3*. If the rail freight corridor executive board decides to include also railway passenger transport, the existing governance structures of that rail freight corridor (executive board / management board / advisory groups) will, according to the revised TEN-T, have to be used.

Consultation of advisory groups is an integrated part of the functioning of a governance model for international rail passenger transport and will apply throughout all phases of the work of the rail (passenger) corridor. Note that in case the railway passenger corridors are integrated with rail freight we shall refer to European transport corridors. Substantial parts of the TEN-T network are mixed traffic and according to the applicable networks statement both passenger and freight operators can request capacity

3. Objectives

Objectives of the governance structure are:

- Facilitate, accelerate the development of the international rail passenger market along an international railway transport corridor
- Improve the framework conditions for international railway passenger transport;
- Coordinate the appropriate measures with relevant Member States, infrastructure managers and in a non-discriminatory way with railway undertakings

The objectives can be realized with i.a. the following means: The railway (passenger) corridor can act here is governance model to coordinate measures in achieving those means by both the ministries of transport, their infrastructure managers and other actors where relevant, This is coordination because it requires in many cases competences of ministries of transport and infrastructure managers at national level. So this governance model does not change any of the national competences but requires coordination. In case the railway passenger transport is included in the rail freight corridor by decision of the executive board, competences are partly defined by the updated 913/2010/EC regulation to the corridor institutions.

The railway passenger corridors that actually are be integrated in the European Transport Corridors should follow the future regulatory framework of the to be revised regulation 1315/2013/EU and take account of the allocation of competences between European TEN T coordinators and Member States where is comes to coordination of railway infrastructure investments.

Coordination may be useful at corridor level and for some cases at European level. Non exhaustive list of means where coordination of measures at corridor level is possible:

- Extending capacity / removing bottlenecks / coordinated infrastructure works;
- Improving interoperability along the corridor, including ERTMS respecting existing competences and existing initiatives at European level;
- Preparing enhanced and coordinated railway capacity offers to railway undertakings in an open market;

- Improving and cooperation, taking into account competences of EU Member States, on the financial / economic framework conditions for new international rail passenger services. This may concern fiscal measures (VAT, duties), infrastructure charges (mark-ups, reduction new services, etc), commercial conditions railway infrastructure managers in correspondence with market needs
- Defining appropriate open access framework for international services. E.g. coordination on applicable general rules for international services (e.g. on ticketing)
- Concluding internationally coordinated PSO contracts. This possible measure is within the scope of the PSO competent authorities ex regulation 1370/2007/EC to decide
- Initiatives (e.g. innovation, piloting, deployment planning) to support ticketing integration to promote intermodality

Taking into account sector wide initiatives on rail ticketing and data sharing

- Identify opportunities for and/or obstacles to market initiatives, both in current and potential future situation.
- Identify interfaces, interdependencies, synergies and risks with overlapping/adjoining other parts of the European network and corridors.
- measures to support the integration with other modes of transport and specifically to the integration between rail transport and the role of nodes and hubs, both intermodal in and around cities/regions as well as near airports.

4. Deliverables

The governance structure will define the implementation plan for the corridor reflecting the market / infrastructure / economic conditions. The implementation plan will address the development of international passenger railway services on that corridor and also the wider railway network connections and services (freight and passengers). Corridor development is a step but integration in a wider railway passenger network will enable catching wider demand. If the railway passenger corridor is by choice of the executive board included in a rail freight corridor the conditions of the regulation on e.g. implementation plan must be met.

Generally the deliverables of a railway (passenger) transport corridor aim to improve the framework conditions for the international rail transport market. The milestones will include:

Phase 0: establishment of railway (passenger) transport corridor

The process starts with the mutual consent of Member States and infrastructure managers to work together in a railway (passenger) corridor. This mutual consent can be expressed by a letter of intent. It is expected that in many / most cases routes will be part of a TEN T European transport corridors. For these cases an explicit decision of the executive board of the respective rail freight corridor to include railway passenger transport in its scope will be the starting point of the work.

Phase 1: Preparation phase (6-9 months)

Goal of the preparation phase is to prepare a report on the potential development of a railway passenger corridor.

The executive board (ministries) will coordinate with the management board (infrastructure managers) this work. Management board will do the preparatory work /

studies using the corridor governance including the corridor office and the corridor advisory boards.

- (a) market analysis;
- (b) infrastructure analysis. Capacity management / bottlenecks / interoperability;
- (c) where necessary railway stations analysis (intermodality, access, etc.);
- (d) Analysis on potential market enhancement measures;
- (e) stakeholders dialogue. IM / stations / RU / passengers.

In the annex proposals are done on the (minimum) content of such elements. As a minimum art 9 of 913/2010/EC (to be revised) is relevant.

For railway passengers transport there are a number of additional / special elements to be analysed compared to railway freight. These elements include:

- Analysis of rail passenger market in intermodal context (aviation / road / rail / maritime transport). Market supply and demand development, travel time, price sensitivity, urban hubs / air rail connections. Market segments e.g. night trains, high speed, regional cross border, long distance conventional;
- Capacity allocation: is there attractive railway capacity available?. What are the relevant regulatory principles, priority rules, framework agreements? Capacity allocation framework(s). Relation with ongoing innovation projects like Time Table Redesign implementation, Eurolink,
- Overview of relevant international railway passenger undertakings market. Which railway undertakings are (potentially) active, which developments are known or expected?
- Customer experience. Digitalisation and ticketing;
- Relevant railway stations, access to stations, other service facilities
- Overview of potential market enhancement measures:
 - Innovation pilots;
 - Infrastructure charging;
 - Open access regulations, general rules;
 - Public service contracts

In the Annex detailed content of these elements are defined.

The advisory groups will be consulted before finalization of this preparatory phase.

Phase 2: Decision phase on implementation plan, market approach (3 -9 months):

In this phase the ministries / infrastructure managers work together to decide on measures to support the development of international passenger railway services on that corridor :

Part A: Infrastructure related (implementation plan)

- Infrastructure measures. Investment plan, taking into account art 11 of 913/2010/EC and the (future) roles of the European Coordinator. Bottleneck alleviation, interoperability, ERTMS,
- Capacity management measures. Coordination of priority rules. Predefined capacity ex 2012/34/EU,
- Operational measures: coordination of works, digitalization enhancements, traffic management cooperation;

Part B: Market and service related measures

- Market monitoring. Corridor information document
- Infrastructure charging measures. E.g. incentives new services;
- Incentive schemes;
- Coordinated general rules on open access services, including ticketing;

- Border control, customs;
- Approach for public services contracts for international rail passenger services.

Ministries of transport and infrastructure managers will decide in a coordinated way on the measures listed under Part A and Part B to support development of international rail passenger market on the respective corridor. Where this corridor is partly identical with the rail freight corridor the decision making shall take into account the corridor implementation plan ex art 9 913/2010/EC. Some issues may not be within the competences of ministers of transport or infrastructure managers and may need further coordination with other institutions (like ministries of Justice on border issues)

Phase 3: Implementation phase (1-5 years)

In this phase the measures outlined under phase 2 will be put in practice. Ministries and infrastructure managers will in a executive board / management board session define the responsible bodies (ministries, infrastructure managers, 3rd parties) for implementing the listed measures and will ensure / supervise the application of the measures. Periodically the corridor implementation plan (phase 2) will be updated.

Annex

Content of proposal for corridor implementation plan (phase 1) – list of elements:

- Analysis of rail passenger market in intermodal context (aviation / road / rail / maritime transport). Market supply and demand development, travel time, price sensitivity, urban hubs / air rail connections. Market segments e.g. night trains, high speed, regional cross border, long distance conventional;
- Capacity allocation: is there attractive railway capacity available?. What are the relevant regulatory principles, priority rules, framework agreements? Capacity allocation framework(s), Time Table Redesign implementation, Eurolink,
- Overview of relevant international railway passenger undertakings market
- Customer experience. Digitalisation and ticketing. As far as implementation / application within the scope of the corridor is concerned
- Relevant railway stations, access to stations, other service facilities
- Overview of potential market enhancement measures:
 - Innovation pilots;
 - Infrastructure charging;
 - Open access regulations, general rules;
 - Public service contracts

Annex 3 – Letter IRP air-rail cooperation

Ministry of Infrastructure
and Water Management

> Return address Postbus 20901 2500 EX Den Haag

EU-Rail JU, Mr C. Borghini
SESAR 3 JU, Mr L. Crecco
UIC, Mr M. Guigon
IATA, Mr J. Diez
CER, Mr A. Mazzola and Mr B. Pongracic
ALLRAIL, Mr N. Brooks
EIM, Mr B. Schettini
ACI-Europe, Mr A. Flanagan
CIT-Rail, Mr C. Brand and Mrs. N. Scherf

Bestuurskern

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Our reference

IENW/BSK-2022/271193

Date 19 December 2022
Subject IRP Air Rail cooperation initiative

Dear Colleagues,

First of all I would like to thank you for your active contributions to the air-rail workshop of 13 October 2022. Your presentations and input provided valuable input to the discussions. A summary report of the workshop has been provided to you and is also included in the annex to this letter. The conclusions and recommendations will feed into the third International Rail Passenger Platform (IRP) progress report to be presented to the EU Transport Council in June 2023.

With reference to the conclusions of the workshop I would like to invite you - as major players in the Air-Rail cooperation field - to develop together important milestones for the next 2-3 years, and to present these to a plenary meeting of the IRP platform in the first half of 2023. I also propose to include these milestones in the third IRP progress report.

I thank you in advance for taking my proposal into consideration and I am looking forward to further working with you.

Yours sincerely,



Hinne Groot
Chair IRP platform – subgroup C on interoperability

Annex

Summary report of 13 October 2022

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Date

19 December 2022

Our reference

IENW/BSK-2022/271193

In the second IRP progress report an action (C.6) has been defined on combined air-rail journeys, including a European forum for air-rail cooperation, innovation and standardization. In this respect a workshop has been organized on 13 October 2022 together with subgroup A, including EU wide integrated ticketing and payment systems (action A.4).

The Belgium Ministry of Transport, as former chair of IRP subgroup A, presented the results, challenges and key take aways of a workshop on integrated ticketing , that took place on 30 June. For the upcoming challenges, there are questions on how to correctly implement the FRAND principles and how to guarantee mutual acceptance. Also, neutral management is important through standards and processes. One of the key take aways of the workshop is that everyone agrees on the FRAND principles, but there is no common understanding of FRAND application in rail distribution. Key issues related to integrated ticketing are trust, clear and equal requirements for everyone, and open standards set in legislation.

The EU Europe's Rail JU explained their S2R R&I Innovation Programme (IP4) on IT services for passengers. The objective is to put the traveler and his needs at the center and encourage travelers to use environmentally friendly means of transport, such as rail and other public transport services by developing an ecosystem containing all necessary functions (planning, shopping, ticketing, navigation, tracking, aftersales) to provide an attractive solution to passengers. Parts of the ecosystem are: a one-stop-shop access to all multimodal travel services through a mobile application Travel Companion, the Interoperability Framework as the core of the ecosystem, facilitating the integration of any kind of interface (API) of Transport Service Providers, a dedicated portal for operators to define mobility packages, and other tools that further enhance the travel experience. Various demonstration activities of the functionalities, with real data and in real environments, have taken place in different EU countries with real travelers and using the offers from a variety of Transport Service Providers, covering a wide array of transport modes. For future exploitation, business model solutions with API type integrations and open data models are preferred. Data governance, data sharing, data ownership and data security are key required capabilities to enable the ecosystem to grow. To bring the solution a step closer towards the market, the IRP is requested to help finding public transport operators who are willing to run systems such as the IP4 ecosystem developed within EU-Rail, to get access to the necessary data of public transport operators and to convince public transport operators to use standards.

The SESAR 3 JU explained their activities on multimodality R&D (including air-rail) and passenger experience. Various projects have links with the air-rail journey initiatives as described in the second progress report of the IRP: the SYN+AIR project¹ aims to set and develop a blueprint to establish collaboration among Transport Service Providers (TSPs) and to develop the idea of seamless door-to-door user journey. TRANSIT ²enables the design of synchronised intermodal timetables between air transport and rail operators. Other relevant projects are

¹ <http://syn-air.eu/>

² <https://www.transit-h2020.eu/>

Modus and IMHOTEP³. Since 2021, the SESAR 3 JU is collaborating with EU-RAIL on multimodality to possibly align their work programmes and with aviation stakeholders (including the airports) to include the multimodal transport chain in their technical and operational requirements.

UIC and IATA have signed an MoU and developed a multiannual air-rail implementation project to enable air-rail interoperability. The joint work is aimed at providing technical guidance and specifications to facilitate integration, to provide technical solutions and encourage open innovation. Both organisations are transforming their own specifications and are working on the adoption of open standards and application programming interfaces (APIs). All aspects of an integrated modal journey are covered including inspiration and shopping, preparation, departure, travel, arrival and post travel. Agreements are required between air and rail operators for an integrated multimodal journey offer and delivery.

CER provided information on their ticketing roadmap for seamless international rail passenger travel including orientation, booking, way to the station, boarding and ticket control, in the train, and finally the way to the destination. CIT is involved in the implementation of the roadmap.

In the workshop the European Commission/DG MOVE presented its view on the promotion of the multimodal services, based on the main goals of reducing emission and increasing the users' demand. They also explained the Multimodal Digital Mobility Services (MDMS) initiative which is intended to facilitate standardization of air-rail offers, based on ongoing work by the sector.

Participants to the workshop mentioned that many TSPs would be interested to implement the developed R&I concepts, such as in S2R IP4 programme activities; investment is needed to realise this as the solutions would bring added value to the traveler, but not immediately direct profit. Economic viability is therefore key in the route towards market deployment.

Important multimodal journeys should combine air with local public transport (metro, tram, bus). These actors should not be forgotten. The same applies for airport operators and infrastructure managers.

Furthermore, participants mentioned that information should be shared between multimodal operators to offer an integrated journey. This concerns not only ticketing, but also for example information about a delay, travel disruptions and the recovery time. Others argued that sharing information comes at a cost and commercial aspects should be taken into account. Intermediaries add costs on top of this. Such costs could lead to higher integrated fares for the traveler. Currently there are many legacy processes and the system is rigid, which are barriers to the integration of information. The importance of through tickets has been raised to tackle what happens in the event of disruption to an air-rail journey (if the train is delayed and causes the flight to be missed and vice versa). Replanning of air and rail is essential so that travelers arrive at their destination. Customers should receive end to end protection and their passenger rights should be respected, e.g.

³ <https://modus-project.eu/> and <https://www.imhotep-h2020.eu/>

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19 December 2022

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concerning compensation in case of delay. Information is also crucial for the passenger. Real time open data are important, and should according to EPF be part of the MDMS initiative.

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A distinction could be made between the leisure and business traveler when offering multimodal offers, develop it step by step. Various technical solutions and multimodal platforms already exist, although sometimes at a national level such as the Italian *rome2rio* website.

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19 December 2022

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The differences between the process of flying abroad by plane and travel abroad by train must be kept in mind, e.g. the security control that exists at airports but in general not at train stations, the nominative boarding pass where the identity of the passenger is registered (which is not always the case on a train ticket), and the location and the infrastructure of the airport itself that is much different from a train station. When offering one multimodal air-rail ticket for a combined journey, the boarding pass will become a nominative one.

In EU-Rail, the activities in Flagship Area 1 will address the objective to develop a European rail traffic management considering a multimodal transport system which will be supported by the System Pillar to define an interoperable system architecture for rail to interface with other transport modes. In this field cooperation could be sought with the SESAR JU and, specifically, airports as key transport hubs.

Conclusions and recommendations of the workshop on air rail cooperation, R&I and standardization of 13 October 2022

- The overall aim is to provide a seamless multimodal journey to passengers;
- Many challenges have to be addressed in this respect, such as: standards, technology of data exchange, access to data, the confidentiality of individual traveler data, competition law, commercial conditions, framework of contracts between (air)carriers and (rail)operators;
- A step by step approach should be preferred rather than resolving all challenges at once;
- Integrated ticketing is only one of the building blocks;
- Other important topics are the provision of information to the passengers and operators, travel disruptions and handling of delays, risk responsibility sharing, liabilities;
- Various initiatives are ongoing, e.g. in EU R&ID JU's such as within the SESAR 3 and in the S2R IP4 ecosystem, on a voluntary level the CER ticketing roadmap and UIC and IATA cooperation, and on regulatory level, e.g. the EU MDMS initiative, implementation of FRAND principles;
- To bring S2R IP4 solutions a step closer towards the market the JU requests the IRP to help finding public transport operators who are willing to run systems like the IP4 ecosystem, to get access to the necessary data of public transport operators and to convince public transport operators to use standards;
- Important stakeholders should not be forgotten, such as airport operators, local public transport operators and infrastructure managers;

- Investment is important for deployment of innovative solutions that are not directly profitable, but do bring added value for the traveler;
- The IRP platform invites the major players in the air-rail cooperation field to develop together important milestones for the next 2-3 years;
- Parties to be invited for the development of such milestones could be EU-Rail JU, SESAR 3 JU, UIC, IATA, CER, ALLRAIL, EIM, Airports association (e.g. ACI-Europe), CIT.

Bestuurskern
Dir. Openbaar Vervoer en
Spoor
Veiligheid en Goederen

Date
19 December 2022

Our reference
IENW/BSK-2022/271193

Annex 4 – IRP Member States and other participants

Signatory countries of the ministers 2020 declaration on international rail passenger transport

- Austria
- Belgium
- Bulgaria
- Croatia
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Netherlands
- Norway
- Poland
- Portugal
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
- Switzerland

Observant country

- United Kingdom

Other contributing parties

- European Commission
- European Passenger Federation (EPF)
- Community of European Railway and Infrastructure Companies (CER)
- European Railway Infrastructure Managers (EIM)
- Allrail
- European Investment Bank
- EU RAIL
- Rail Net Europe (RNE)
- European Agency for Railways (ERA)
- Intergovernmental Organisation for International Carriage by Rail (OTIF)
- EU Travel TECH
- Bureau Européen des Unions de Consommateurs (BEUC)
- International Rail Transport Committee (CIT)

Annex 5 – IRP Ministers’ Declaration 2020

International Rail Passengers Platform

2 June 2020

The European Commission presented its proposals for Green Deal 11 December 2019. Part of it includes reduction of greenhouse gas emissions in the transport sector. International passenger rail transport is presently not performing to its potential within EU. Domestic rail markets are much further developed than international rail passenger market; at national level infrastructure and timetables / frequencies of services are planned at a higher standard than for international services.

International rail has potential to increase its modal share for distances from 300-800km. There is an open market in the context of the 4th railway package for railway undertakings to offer rail services, however obstacles exist to live up to the potential. Other ongoing initiatives relevant for the development of international passenger rail include upcoming study commissioned by EC as requested by European Parliament, development of the TEN T network, Shift2Rail programming, development of rail passenger rights and market initiatives.

The potential of international passenger railways was discussed at a high level meeting between Member States and third countries representatives and European Commission 15 November 2019.

The signatories want to express their will to work together to facilitate growth of international rail passenger market.

In the short term international passenger services by rail are severely reduced by COVID-19 measures and continues to fulfill critical functions for passenger transport. For the medium term the development of international passenger services is an opportunity to contribute to the Green Deal.

Considering

- The UN 2030 agenda for the sustainable development which is the global framework addressing i.a. the need of resilient infrastructures, sustainable cities and climate action;
- The EC Green Deal initiative from 11 December 2019, COM(2019)640 to transform European economy to become carbon neutral;
- The European Court of Auditors Special report n° 19/2018: A European high-speed rail network: not a reality but an ineffective patchwork highlighting shortcomings for international passenger railway services;
- The proposal from the European Commission from 4 March 2020, COM(2020)78 to designate 2021 as European Year of Rail;
- The Dutch position paper from 30 January 2020 on the need of a European agenda on international rail passenger transport;
- Initiatives from the market to develop international passenger services. E.g. Eurostar London to Amsterdam, High speed services Milan – Paris, domestic and international night services;
- Recognizing that the value of international passenger services increases with improved network connections;

- The support from European rail sector parties and European Passenger organizations to cooperate on a European agenda for international railway passenger services (tbc);
- The involvement of the users perspective is key in any improvement efforts in international rail passengers transport;
- Public and political calls to develop a wider international rail passengers network; • The proposal from the European Commission to enhance Rail Passenger rights which is being discussed between EU Transport council and European Parliament;
- The need to develop better and accessible services to passengers based on a European innovation, e.g. the Shift2Rail agenda in the railway sector or the Payment Service Directive 2 in the financial sector;

The Ministers, signatories

- Express their commitment to support a European agenda for international passenger rail which builds upon the existing EU initiatives and should offer the legal and otherwise framework for attractive alternatives to make railway become an attractive alternative in distances in which it is not currently competitive and work together in this context with all EU Member States, European Commission, European Railway Agency, Shift2Rail and OTIF;
- Decide to establish a platform of Member States and third countries in close cooperation with European Commission with the aim of cooperation on improving international rail passenger services and including international rail passengers as part of the EC Green Deal initiative in a comprehensive way. The platform shall take due account of the work of other initiatives;
- Wish to assess, within the context of the aforementioned platform, the functioning of the relevant market for international rail passenger connections of capital cities as well as of other relevant ones. Existing corridors in the framework of the TEN-T network may be used. The assessment will include demand patterns, present service levels (transport times, frequencies, prices, etc.), public service obligations, infrastructure capacities, timetabling options and interoperability questions.
- The platform intends to cooperate closely with infrastructure managers, railway undertakings, competent authorities, other sector representatives and European passenger organizations;
- Invite railway sector and relevant 3rd parties innovation platforms at European level to establish a high level platform with strategic aim of improving the cross-corridor conditions for international rail passenger services. This will include initiatives of digital solution allowing to easily book and buy tickets and user-friendly and effective multimodal trips;

Intend to establish a calendar for monitoring the progress on the aforementioned actions within one year.

Annex 6 – Manual for rail passenger transport cross-border PSO Services

Manual for rail passenger transport cross-border PSO Services

FINAL DRAFT

May 2023



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Project number:	22-PRPI-04
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LIST OF ACRONYMS

EC	European Commission
IRP	International Rail Passenger Transport
JV	Joint Venture
OTIF	Intergovernmental Organisation for International Carriage by Rail
PPTA	Public Passenger Transport Authority
PSO	Public Service Obligation
TFEU	Treaty on the Functioning the European Union
TSI	Technical Specifications for Interoperability

INTRODUCTION

This Manual for rail passenger transport Cross-border PSO Services aims at making proposals for improving cooperation between concerned parties. It has been developed within Subgroup D of the Platform on International Rail Passenger Transport (IRP), established by European Ministers of Transport on June 2nd 2020. The Platform has involved all signing EU Member States and third countries, the European Commission, the European Railway Agency, Shift2Rail, OTIF and rail sector organisations.

It should be made clear that this manual is to be seen as a helpful guide for interested parties without any claim to completeness or legal commitment and is only intended to provide information and possible options for action. At this point, reference may be made to the official publications of the European Union (e.g. EUR-Lex), where the currently valid legal acts are available.

Regardless of this Manual focusing on PSOs, it should be duly noted that achieving a modal shift to rail by means of competition between independent railway undertakings operating commercially in open access is the primary subject of current European railway legislation (Directive 2012/34/EU) and PSOs should only be considered, where market initiatives do not meet established demand.

Due to the still ongoing revision of the PSO Guidelines of the European Commission, references in this regard still refer to their first version of March 29, 2014.

The Manual consists of the following four main topics, which need to be addressed among involved PPTAs when granting and managing the cross-border rail passenger transport as PSO:

- Establishment of a joint cross-border coordinating structure,
- Harmonisation of general rules for railway passenger transport cross-border PSO,
- Implementation of Cross-border PSO award procedure and
- Management of Cross-border PSO operation.

The main obstacles and identified issues are addressed with proposed solutions and options where relevant (two or more alternatives or options).

Part 1 of the Manual addresses the establishment of a joint cross-border coordinating structure. It includes possible solution for the definition of a cross-border area with the need of introduction of cross-border railway transport services and possible solutions of PPTAs cooperation needed to implement cross-border PSOs.

Part 2 covers key elements of railway passenger transport cross-border PSO and provides proposals for harmonisation of general rules, including definition of cross-border PSO scope, suggestions for timetable harmonisation and requirements for cross-border PSO operation (requirements for railway transport, vehicles and maintenance, railway staff, ticket requirements, passenger information). In addition, part 2 addresses also financing of cross-border PSO operation, monitoring, quality control and other requirements for cross-border operation.

Part 3 addresses cross-border PSO award procedure, including proposed solutions of the PSO award procedure, preparation and publication of PSO award documentation.

The last part (Part 4) includes instructions and recommendations for cross-border PSO operation including, monitoring of PSO contract implementation, financing, reporting and inspection

The Manual (developed in 2022) was distributed by e-mail to all public passenger transport authorities in European countries listed in Annex 3 of the 2nd IRP Progress Report from June 2022. The Manual was then further developed according to the experiences and comments of users. Amendments or changes are now included in this revised (fourth) version of the Manual, which will be published together with the 3rd IRP Progress Report.

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PART 1: ESTABLISHMENT OF A JOINT CROSS-BORDER COORDINATING STRUCTURE

The PSO cross-border service initiative can be given by one or all PPTAs that express their interest for PSO cross border services on the certain railway line or railway network. Each PPTA is free to decide whether to recognise the public service status of the proposed service on the territory under its jurisdiction.

The first step of involved PPTAs when introducing a cross-border PSO is to set up a common cross-border coordinating structure with clearly defined responsibilities for the definition, allocation, financing and management of proposed cross-border PSOs.

The pre-requisite for the establishment of a joint cross-border coordinating structure is the conclusion of a cooperation agreement between involved competent PPTAs, on whose territory the PSOs will be provided. The cooperation agreement shall define the cross-border area, allocation of powers, delimitation of tasks and obligations between the PPTAs related to the definition, allocation, financing and management of cross-border PSOs and other important contractual elements, such as, decision-making process, time schedule, dispute settlement, applicable law, validity of the agreement, valid language, etc.


- **Identification of competent PPTAs for railway passenger transport services on defined cross-border area**

For the conclusion of a cooperation agreement and establishment of a joint cross-border structure on defined cross-border area, it is essential for PPTAs to identify and contact all competent authorities in the countries where the cross-border railway passenger transport PSO is intended to take place. To facilitate the identification of competent authorities in Europe, a register of competent PPTAs is attached in Annex 1 to this Manual.

All identified PPTAs need to appoint their responsible person or team to participate in the preparation and coordination of the content of the cooperation agreement and in the implementation of the activities of establishing a joint cross-border coordination structure.




- **Defining the cross-border area under the responsibility of the joint cross-border coordinating structure**

Involved PPTAs specify in the cooperation agreement the cross-border area in which they want jointly introduce cross-border PSOs. In the cooperation agreement they can define cross-border area wider than the geographical scope of an individual cross-border railway passenger transport PSO thus allowing one cross-border structure to take care of several different PSOs running through this area. When defining the cross-border area they can choose among different solutions, such as:

	SOLUTION 1: One or more cross-border railway routes/lines (start and end station).
	SOLUTION 2: One or more cross-border rail passenger corridors.
	SOLUTION 3: Cross-border railway network.

- **Establishment of joint cross-border coordinating structure for introduction and management of cross-border PSO**

Involved PPTAs determine the joint cross-border coordinating structure for introduction and management of cross-border PSO within concluded cooperation agreement. They can choose between different possibilities for cooperation, such as:

	<p>SOLUTION 1: Establishment of Consortium of involved PPTAs</p>
	<p>The consortium of involved PPTAs is based on a cooperation agreement concluded between involved PPTAs. In the cooperation agreement, the PPTAs define the governance structure (e.g. executive board, management board, administration support, coordination groups for definition of PSO elements) with the allocated tasks and the staff they will provide for the implementation of these tasks, decision-making process and other important contractual elements for the operationalisation of governance structure. Under the cooperation agreement, the PPTAs also reach agreement on the division of the powers, tasks and obligations between the PPTAs related to the definition, allocation, financing and management of cross-border PSOs. They can choose from the following options:</p> <ul style="list-style-type: none"> ✓ Option 1a: Involved PPTAs authorise one of them to prepare the cross-border PSO documentation, carry out the award procedure, conclude the contract with the selected operator and monitor the implementation of the PSO contract. The other PPTAs participate in coordinating cross-border PSO elements and provide agreed funds for cross-border PSO compensation. ✓ Option 1b: All involved PPTAs are cooperating in the preparation of the cross-border PSO documentation. They are included in a joint cross-border PSO award procedure and conclude a multi-party contract with the selected operator. The contract specifies the share of co-financing provided directly to the selected operator by each PPTA and the responsibilities of each PPTA regarding the monitoring of the cross-border PSO contract implementation. ✓ Option 1c: Each of the involved PPTA prepares the PSO documentation for the part of services on its territory, carry out the PSO award procedure for this part and conclude the contract with the selected operator. Each PPTA is also responsible for the financing and monitoring of implementation of concluded PSO contract.
	<p>SOLUTION 2: Delegation of power by the PPTAs to an existing joint legal entity</p> <p>In the cooperation agreement, the involved PPTAs may agree that the tasks related to the introduction and management of cross-border PSOs delegate to an existing common legal entity already carrying out cross-border cooperation tasks in the PSO area (e.g. European Grouping of Territorial Cooperation or European economic interest grouping). In this case, the PPTAs need to specify in their cooperation agreement the tasks and powers, which will be allocated to the selected entity and the financing of its services. They also need to authorise the representative for the conclusion of the contract and define the responsible team to monitor implementation of delegated tasks.</p>
	<p>SOLUTION 3: Cross-border railway network.</p> <p>In the cooperation agreement, the involved PPTAs may agree to establish the cross-border passenger corridor as legal entity with its own governance structure to take care of all activities linked to the introduction and management of planned cross-border PSOs. The railway corridor can include all designated railway lines on the territory between involved PPTAs, linking two or more railway station along a principal route and diversionary routes and sections connecting them, including the railway infrastructure and its equipment and relevant rail services. In the cooperation agreement, the PPTAs need to define:</p>





	<ul style="list-style-type: none">- the governance structure of the corridor,- the tasks to be undertaken by this entity,- activities and time plan with responsible team for the establishment of this entity,- the financial resources for the establishment of the entity and- the financial resources and the method of financing the implementation of the tasks delegated to this entity.
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PART 2: HARMONIZATION OF GENERAL RULES FOR RAILWAY PASSENGER TRANSPORT CROSS-BORDER PSO

When introducing a cross-border PSO, the involved PPTAs need to harmonise different rules regarding the scope and requirements of railway passenger transport PSO and control of the implementation of these services, which applying on their territory. The first step towards this is to define in the cooperation agreement the manner for these rules' harmonisation (e.g. establishment of coordination groups and appointment of professional team for each involved PPTA). In the cooperation agreement, PPTAs also need to specify a procedure for approval of harmonised elements, conditions and requirement, which will be included in the cross-border PSO contract award documentation. The involved PPTAs need to reach agreement on the following PSO elements.


- **Defining a geographical scope of PSO for cross-border rail passenger transport**

Involved PPTAs need to specify a geographical area in which the PSO for cross-border rail passenger services will be carried out. The following solutions are suggested:

	SOLUTION 1: One or more cross-border railway routes/lines (start and end station).
	SOLUTION 2: One or more cross-border rail passenger corridors.
	SOLUTION 3: Cross-border railway network.
	SOLUTION 4: Integration of cross-border-services with other services/networks.

	<p>According to Regulation 1370/2007 (article 2(e) and 2a), involved PPTAs need to demonstrate a real demand for railway passenger transport covered by cross-border PSO, by ex-ante quantitative assessment of the services to be provided for the overall period considered, and must demonstrate that the market would not assume these services or would not assume them to the same extent or under the same conditions without reward</p> <p>According to Directive 2012/34/EU (article 11, point 2) and Commission Implementing Regulation (EU) 2018/1795 laying down procedure and criteria for the application of the economic equilibrium test, the involved PPTAs need to submit a request to national regulatory body or bodies for elaboration of objective economic analysis in case of existing national limitation of the right of access and of the right to pick up and set down passengers.</p>
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Involved PPTAs also need to decide if it is possible to extend a geographical scope, covered by cross-border PSO, during the implementation of the concluded PSO contract. In the case they decide to allow the extension of the PSO line, the involved PPTAs need to determine objective criteria based on which it will be possible to assess that this change does not constitute a significant modification of PSO contract.

	<p>The interpretative guidelines concerning Regulation (CE) 1370/2007 (chapter 2.1.10) regarding interpretation of significant modification of public service contracts refer to the use of case law. As substantial modifications are considered new provisions, which are materially different in character from the original contract and are therefore such as to demonstrate the intention of the parties to renegotiate the essential terms of that contract.</p>
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It is highly recommended for PPTAs to introduce consultative mechanism regarding the introduction of proposed railway passenger transport cross-border PSO, which will include passengers and other relevant stakeholders in involved countries, at best including all passenger rail operators operating in the area. The role and importance of this consultative mechanism can be further elaborated within concluded cooperation agreement.




- **Definition of cross-border PSO scope**

Involved PPTAs need to specify which services will be provided within the PSO for cross-border rail passenger transport. Within the cross-border PSO, they can include the following services:

	SERVICE 1: Cross-border railway transport of passengers, luggage and bicycles on defined geographical PSO area (point 2.1 of the Manual), which can include:
	<ul style="list-style-type: none"> ✓ Option 1a: Cross-border tickets ✓ Option 1b: Cross border and national tickets
	SERVICE 2: Cross-border tickets issuing, sale, and cross border ticket control.
	SERVICE 3: Informing passengers about cross-border transport service timetables, transport terms and conditions, ticket price

- **Defining a timetable for cross-border PSOs**




The PPTAs need to specify inputs of the PSO for cross-border rail passenger transport, which will be necessary for preparation of the timetable:

	INPUT 1: Defining stops on PSO route(s) where the cross-border train will stop and travel time between these stops.
	INPUT 2: Defining daily trains' frequencies of PSO route(s), specified by daily periods (morning and afternoon rush hour).
	INPUT 3: Yearly volume of kilometres to be realised by selected operator.

It is highly recommended for PPTAs to introduce a consultative mechanism on proposed railway passenger transport cross-border PSO offer (route(s), planned frequencies of trains on this route(s), etc), which will include passengers and other relevant stakeholders in involved countries, at best including all rail operators operating in the area. The role and importance of this consultative mechanism can be further elaborated within concluded cooperation agreements. PTAs should establish this process in line with the capacity planning procedures (under TTR program implementation from timetable 2025), to define the general timetable framework sufficiently in advance and to allow coordination with other capacity needs on the commonly used infrastructure in all involved countries. Until the common TTR process is implemented, PSO authorities need to take diverging national processes into account and would need to start the planning according to the timeline of the earliest involved country / IM.




Involved PPTAs should consider technical feasibilities of the concept, involving IMs and RUs (either those already under contract or with a consulting mechanism using the experience of potential RUs).

Involved PPTAs also need to determine the responsible entity for the submission of request for railway train paths allocation governed by cross-border PSO in the international train path allocation processes, within which stretches of the national timetables are formed with the obligation to be coordinated. The following solutions are suggested:








	SOLUTION 1: Applicant for train paths for cross-border PSO is cross-border PSO contracting authority or authorities, established in accordance with chapter 1.3 of the Manual.
	SOLUTION 2: Applicant for train paths for cross-border PSO is cross-border PSO operator.
	<i>National legislation should provide that national train paths allocation procedure assign sufficient priority to the train paths governed by railway passenger transport cross-border PSOs (reference to Directive 2012/34/EU, article 11.)</i> <i>According to Directive 2012/34 /EU (article 38, point 2), the cross-border PSO contracting authority can enter into framework agreements with national infrastructure managers to guaranty a train paths governed by cross-border PSO for the whole cross-border area and for the entire PSO period.</i>

The PPTAs need to decide if the change of the timetable during the duration of the concluded contract on the implementation of the cross-border PSO will be possible. In the case they decide to allow the change of timetable, the involved PPTAs need to determine reasons and manner of changing the timetable. This change has to be notified to the operators sufficiently in advance in order to allow efficient coordination of timetables with other non-PSO and freight path requests. Except extraordinary, unexpected situations, the change should be communicated to the operator and or to the infrastructure managers before the establishment of any pre-constructed capacity and capacity models (as introduced with the new TTR allocation process).

The PPTAs need to further define the entity responsible for publication of a valid cross-border PSO timetable. They can choose from the following solutions:

	SOLUTION 1: PSO contracting authority, established in accordance with chapter 1.3 of the Manual, is responsible for the publishing of valid cross-border timetable.
	SOLUTION 2: PSO operator is responsible for the publishing of valid cross-border timetable.
	<i>The publication of the timetable data for cross border services has to follow the European regulation (EU) 454/2011 “Telematics applications for passenger services”. The railway undertaking(s) operating the service are responsible for the publication. In case of cooperating undertakings, the harmonisation of the timetable data has to be ensured for the handover point for the responsibility.</i>

They must also agree on where and when the valid cross-border timetable will be published. They may decide to publish timetable as follows:

	SOLUTION 1: Website of PSO operator.
	SOLUTION 2: Website of PSO contracting authority established in accordance with chapter 1.3 of the Manual.
	SOLUTION 3: Website of involved PPTAs.
	SOLUTION 4: A single web portal for cross-border rail transport in the EU.
	SOLUTION 5: On cross-border train path stations
	SOLUTION 6: On the main national web portals of all the countries involved in the cross-border PSO
	<i>The publication of the timetable data for cross border services has to follow the European regulation (EU) 454/2011 “Telematics applications for passenger services”. Existing tools like</i>

	<i>the national access point according to regulation (EU) 2017/1926 or the usage of the UIC MERITS database should be considered.</i>
--	---




○ **Cross-border PSO operation**

Involved PPTAs need to specify conditions and requirements for operation of railway passenger transport cross-border PSOs, which will guaranty continual, punctual, quality and seamless passenger transport service on overall cross-border train path. To ensure this, the PPTAs need to specify the conditions and requirements for the provision of cross-border transport, rolling stock, staff, cross-border tickets and the provision passengers' information.



General performance requirements for cross-border railway passenger transport

Involved PPTAs must agree on the quality performance requirements, which should cover at least punctuality of cross-border transport services, frequency of train operations, quality of rolling stock and transport capacity for passengers. Quality requirements must be included in the PSO contract together with the penalties in case the PSO operator does not meet them.

To provide seamless passenger transport throughout the whole cross-border PSO route, involved PPTAs can select among the following suggestions:





	SOLUTION 1: One interoperable vehicle for the whole route, which has permits to run on the entire railway network of the cross-border PSO route, need to be provided. In this case, the PPTAs need to determine the responsible entity for the provision of the interoperable vehicles. The following options are suggested: <ul style="list-style-type: none"> ✓ Option 1a: PSO operator provides vehicles ✓ Option 1b: Involved PPTAs co-finance the acquisition of necessary rolling stock. ✓ Option 1c : PPTAs provides vehicles.
	SOLUTION 2: Change of locomotives on border stations is possible.
	<i>In the case, when involved PPTAs provide interoperable vehicles for cross-border PSO, according to Regulation 1370/2007 (article 5(a), point 3), they shall include in the PSO documents all available information about the cost of maintenance of the rolling stock and about its physical condition. Please note, that the acquisition of interoperable rolling stock needs further coordination and cooperation either if acquisition is on operators or PPTAs side.</i>

The PPTAs also must agree on the method of cross-border and national rail tickets validation. The following solutions are suggested:

	SOLUTION 1: Installation of on-board validators at the entrance / exit of the vehicle.
	SOLUTION 2: Manual on-board validation of tickets by railway staff.

Vehicle requirements and maintenance



The PPTAs must determine technical requirements for the rolling stock, which will be used to provide cross-border PSO. They also need to define requirements for the entity in charge of vehicle for cross-border PSO maintenance and the standard requirements to ensure adequate vehicle maintenance. They can use one of the following proposed solutions:

	SOLUTION 1: The requirements regulated by existing national railway legislation valid in the territory of one of involved PPTAs.
	SOLUTION 2: The requirements regulated by existing UIC standards or other international standards.
	SOLUTION 3: Definition of new harmonised requirements for the rolling stock and their maintenance.
	<i>According to Regulation 1370/2007 (article 5.a, point 1), PPTAs must assess whether measures are necessary to ensure effective and non-discriminatory access to suitable rolling stock. The assessment report must be publicly available. When assessing the extent to which operators have effective access to rolling stock, the competent authority should assess the financial, technical or regulatory barriers that may hinder such access. Supply from leasing companies from other market actors providing rolling stock from pools of rolling stock operated by competent authorities should be taken in to account. Based on report PPTAs should adopt appropriate measures to ensure fair, transparent and non-discriminatory PSO award procedure.</i>

Railway staff requirements

The PPTAs need to identify the operational staff (e.g. train drivers, conductors, sales staff, ticket controllers) that must be involved in the operation of transport service on the cross-border train and the knowledge and experiences they must meet. They also need to determine the tasks that these staff need to perform, including the tasks for provision of safe journey on the cross-border train (e.g. ensuring safe entry/exit of the passengers, providing assistance in entering/exiting persons with disabilities, providing information to passengers (e.g. route, stops, delays)).

Involved PPTAs must also define the conditions regarding the provision of staff. They can choose between these solutions:

	SOLUTION 1: Cross-border PSO operator can change the railway staff at border stations.
	SOLUTION 2: Cross-border PSO operator must provide the railway staff throughout the entire cross-border train path.


Furthermore, the PPTAs must determine:

- language that railway staff on cross-border train need to master¹ and
- labour legislation applicable to staff scheduling, labour costs and other conditions of the employment contract (location of work, working hours, shift work, overtime work); they can refer to EU legislation (e.g. Directive 2001/23/EU) or existing national labour legislation valid in the territory of one of involved PPTAs.


Cross-border ticket requirements

Involved PPTAs must also harmonise the requirements regarding cross-border ticketing, which include the following:

- **Entity which will take care of issuing cross-border ticket:**

	SOLUTION 1: Cross-border PSO operator.
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¹ The language scheme to be used is defined in the European Train Driver Directive 2007/59/EC or the Commission Implementing Regulation (EU) 2019/773 (OPE TSI)

	SOLUTION 2: Cross-border PSO contracting authority, established in accordance with chapter 1.3 of the Manual.
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Furthermore, cross-border services have to follow the technical specifications according to the European Regulation (EU) 454/2011 “Telematics applications for passenger services” for ticketing.

- **The content which will be included on cross-border ticket, e.g.:**

- ticket issuer,
- ticket number,
- undertaking(s) operating the service (usually identified by company/RICS code),
- passenger travel origin/destination or zone ID,
- date and time of issue,
- validity time,
- price (definition of applicable VAT).

Please note, that Regulation (EU) 1371/2007, Annex I Appendix A, Article 7 has to be respected. At least the necessary information of that article has to be provided on a ticket.







- **Ticket media which will be used for cross-border ticket, where involved PPTAs can choose among following solutions:**

	SOLUTION 1: Paper ticket with or without AZTEC code.
	SOLUTION 2: Electronic ticket.
	SOLUTION 2: Mobile ticket.
	<i>For the ticketing the technical specifications according to the European regulation (EU) 454/2011 “Telematics applications for passenger services” have to be applied. These specifications cover all 3 ticketing methods. The involved parties shall take the interoperable ticket check for electronic tickets and the data exchange for those control data into account.</i>



- **Integrated cross-border tariff scheme, which should include the following elements:**

The tariff scheme for the cross-border ticketing should follow at least the provisions of the Regulation (EU) 454/2011. At least NRT tariffs for the border crossing should be used, which is for most of the existing border crossings the case.



o *Definition of cross-border product(s), where PPTAs can choose from the following options:*

	Option (4.1)a: Single ticket
	Option (4.1)b: Daily ticket
	Option (4.1)c: Weekly ticket
	Option (4.1)d: Monthly ticket
	Option (4.1)e: Week-end ticket
	Option (4.1)f: Flexible ticket

- *Definition of methodology for cross-border ticket pricing, where PPTAs have the following available solutions:*






	SOLUTION 1: Distance-based tariff system (harmonisation of tariffs – e.g. price change according distances (5 km, 10km).
	SOLUTION 2: Zone-based tariff system (number of zones and price per zone).

- *Harmonisation of discounts, where PPTAs have the following available solutions:*

	SOLUTION 1: Use of most favourable railway ticket discounts in the area of included PPTAs.
	SOLUTION 2: Definition of unified discounts for cross-border tickets.

- **Definition of sales network for purchase of cross-border ticket, which should include the following elements:**





- (5.1) *Definition of ticket sales location, where PPTAs can choose from the following options:*

	Option (5.1)a: Single sales web portal for cross-border services.
	Option (5.1)b: Existing sale points of PSO operator.
	Option (5.1)c: Existing sales web portal of PSO operator.
	Option (5.1)d: Other agents (third-party ticket vendors, travel agencies, tobacconist's,...)
	Option (5.1)e: Indirect distribution by all railway undertakings, which have implemented the Regulation (EU) 454/2011.



- (5.2) *Required equipment for sale points*

- (5.3) *Definition of commission for cross-border ticket sale*

- **Entity which will issue general terms and conditions for cross-border ticket use, where the following solutions are suggested:**

	SOLUTION 1: The terms and conditions for cross-border ticket use will be issued by cross-border PSO operator with the consent of the cross-border PSO contracting authority, established in accordance with chapter 1.3 of the Manual.
	SOLUTION 2: The terms and conditions for cross-border ticket use will be issued by the cross-border PSO contracting authority, established in accordance with chapter 1.3 of the Manual.
	SOLUTION 3: Use of existing legislation in one of the involved PPTA area.
	<i>The terms and conditions shall be based on the Annex I of the regulation 1371/2007 (CIV)</i>



- **Entity which will provide supporting (after-sales) services (claims, complaints, damages, ticket refunds) for cross-border ticket, where involved PPTAs can choose among the following solutions:**

	SOLUTION 1: Supporting (after-sales) services will be provided by cross-border PSO operator.
	SOLUTION 2: Supporting (after-sales) services will be provided by cross-border PSO contracting authority, established in accordance with chapter 1.3 of the Manual.

- **Definition of requirements and conditions for cross-border PSO operator regarding the organisation and the implementation of cross-border ticket control.**

Passenger information requirements



The PPTAs need to define the necessary information for passengers regarding the cross-border PSO (e.g. cross-border products, cross-border ticket tariffs, timetables, terms and conditions, passenger rights, etc) and the way to deliver them to the passengers (announcements on vehicles, stations, websites, app with passenger digital self-check-in, etc) taking into account the provisions made in Regulations (EU) 1371/2007 and (EU) 454/2011. They also need to determine responsible entity for provision of this information. The following solutions are suggested:

	SOLUTION 1: Information for passengers regarding cross-border PSO will be provided by cross-border PSO operator.
	SOLUTION 2: Information for passengers regarding cross-border PSO will be provided by cross-border PSO contracting authority, established in accordance with chapter 1.3 of the Manual.


o **Financing of cross-border PSO operation**

The PPTAs should agree on the financing of cross-border PSO operation, which include the following elements:


(1) **Determination of financing model, where the following financing models are available:**

	SOLUTION 1: Gross contracts model.
	SOLUTION 2: Net contracts model.

(2) **Determination of parameters for calculation of cross-border PSO compensation in accordance with Regulation (EC) No 1370/2007 (article 4, point 1.(b)).**





	<i>PSO compensation need to fulfil the requirements of Regulation (EC) No 1370/2007 (article 4, point 1.(b)). According to the interpretative guidelines concerning Regulation (CE) 1370/2007 (chapter 2.5.1.), the PPTAs must clearly identify with an appropriate methodology the costs that are directly attributable to the discharge of cross-border PSO in order to calculate the cross-border PSO compensation and avoid any overcompensation. This is in particular the case where an undertaking carries out activities falling both inside and outside the scope of the cross-border PSO. In addition, safeguards should be put in place to ensure that in case of unforeseeable deviation from the initial traffic forecasts, the cross-border PSO operator will not be overcompensated.</i>
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(3) **Determination of eligible costs for PSO operation in accordance with Regulation (EC) No 1370/2007 (article 4, point 1.(c)).**

	<i>According to Regulation (EC) No 1370/2007 (article 4, point 1.(c)), the PPTAs should identify costs connected with provision of cross-border PSO. These costs may include in particular the costs of staff, energy, infrastructure charges, maintenance and repair of public transport vehicles, rolling stock and installations necessary for operating the passenger transport services, fixed costs and a suitable return on capital.</i>
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(4) **Determination of a cap on the maximum profit margin that operator is entitled to make.**

(5) Determination of cross-border PSO compensation co-funding by involved PPTAs, where the following solutions are suggested:

	SOLUTION 1: Involved PPTAs provide equal shares for cross-border PSO co-funding.
	SOLUTION 2: Involved PPTAs provide proportional co-funding of cross-border PSO according to the number of km realised on the part of PSO route in each cross-border country.
	SOLUTION 3: Involved PPTAs provide proportional co-funding of cross-border PSO according to the number of passenger entered the station on the part of PSO route in each cross-border country.
	SOLUTION 4: Involved PPTAs provide proportional co-funding of cross-border PSO according to the number of stops per km within the each cross-border country.

(6) Determination of payment conditions

(7) Determination conditions and requirements for separated accounting on assets, resources and revenues / expenses of cross-border PSO operation.



	<i>According to Regulation (EC) No 1370/2007 (article 4, point 1. And 2.) and the interpretative guidelines concerning Regulation (CE) 1370/2007 (chapter 2.5.5), the PPTAs should ensure that cross-border PSO operator cannot use the PSO compensation to strengthen its competitive position in other, commercial markets. The costs and revenues of the operator must be correctly allocated between the public services (on a contract-by-contract basis) and the commercial services. Specific obligations on the separation of accounts of railway undertakings are also enshrined in Directive 2012/34/EC, article 6.</i>
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○ **Reporting on cross-border PSO operation**

Involved PPTAs must specify the types and content of the reports on the performance of cross-border rail passenger transport services, which need to be provided periodically by the cross-border PSO operator. They also need to define time frame and frequency of this reports provision (monthly, semi-annual, annual).

○ **Liability of the PSO operator and the PSO contracting authority for damage caused to third parties**

Delineation of liabilities of the PSO operator and the PSO contracting authority for damage caused to third parties can be done in the following ways:

	SOLUTION 1: Joint and several liability the PSO operator and the PSO contracting authority, established in accordance with chapter 1.3 of the Manual
	SOLUTION 2: Primary liability of the PSO operator and the subsidiary liability of the PSO contracting authority

PPTAs also need to agree on the valid civil law, which will be used in the case of the damage disputes initiated by third parties. They can use the same solution as proposed in point 2.11 of the Manual.

○ **Monitoring of PSO operation**

The cross-border PSO operation should be monitored by the PPTAs. In the cooperation agreement, they have to define the responsible entity for the performance of monitoring activities (e.g. one of the PPTAs, one unit of the established governance structure). They also need to specify the monitoring procedure and the content to be controlled (e.g. periodical

reports on cross-border PSO operation, accounting, and conditions of vehicles for cross-border PSO operation).

- **Quality control**



For quality control of PSO operation, the PPTAs have to specify the quality performance indicators. Define of a system of bonuses and maluses is recommended in order to ensure high quality of cross-border PSO services.

- **Termination of PSO**



PPTAs have to identify the cases due to which the cross-border PSO contract is partly or completely cancelled or expired. Transparent deadlines have to be settled, to reflect the PPTAs (partial) cancellation in the establishment of the annual timetable (and if possible earlier capacity planning processes as defined by new TTR process under implementation from 2025) and thus allow best utilisation of the released capacity by other railway operators.

- **Dispute settlements between the PSO operator and the PSO contracting authority**

The PPTAs have to determine dispute settlement procedures. The following solutions are suggested:

	SOLUTION 1: Arbitration.
	SOLUTION 2: The local authorised court in involved PPTA country where the longest part of the cross-border PSO route is.

PPTAs also need to determine the applicable law, which will be used in dispute settlement. They can choose among these proposed solutions:

	SOLUTION 1: Applicable law will be used the law of the country where is the longest part of the cross-border PSO route.
	SOLUTION 2: As applicable law will be used law the law of the country, in which the cross-border PSO contracting authority is established.

PART 3: CROSS-BORDER PSO AWARD PROCEDURE

The cross-border PSO for railway passenger transport can be awarded in accordance with the rules of Regulation (EC) No 1370/2007. Involved PPTAs have to decide which award procedure they will use for the railway passenger transport cross-border PSO contract award and how it will be carried out. In the cooperation agreement they designate a responsible entity, established in accordance with chapter 1.3 of the Manual (hereinafter referred as cross-border PSO contracting authority) to take care of the preparation of PSO award documentation and implementation of the activities of the PSO contract award procedure.

○ Selection of Award procedure

The cross-border PSO contracting authority selects award procedure for railway passenger transport cross-border PSO contract in accordance with the Regulation (EC) 1370/2007 (article 5). The selected award procedure can be implemented in the following proposed ways:

✓	Option 1: As one single award procedure for the whole cross-border route or railway network
✓	Option 2: As a separate award procedure by involved PPTAs for the part of cross-border route or railway network in their countries
✓	Option 3: As a separate award procedure in one member state and open access solution in the neighbouring member state.

With respect to option 1 it should be noted, that subsidies in member state A for cross border services across the border to member state B may have impacts on existing operations of operators in member state B. According to Regulation (EC) 1370/2007 (article 1, point 2) as amended by Regulation (EC) 2016/2338 PSO may only concern public transport services at cross-border level if all the PPTAs of the Member States, on whose territory the services are provided, agree.

As far as option 2 is concerned it should be noted, that separate award procedures by the PPTAs involved are not not or only very limited applicable if the parts of the PSO contract are or have to be tendered out. The result of the award procedure in member state A might be JV Company A/Company B, whereas the winner of the tender process in member state B might be the competitor of JV Company A/Company B, the JV Company C/Company D.

The third option can be used, if the service is not feasible without subsidies in one member state but works without subsidies in the other member state on an open access basis. This form is viewed very critically, especially by market participants, as the risk is considered very high that this will distort competition (in the open access part) to the detriment of market participants who are not commissioned with such services (increased possibility of price undercutting).

Nevertheless, this option should be mentioned here for the sake of completeness, as it represents an important option for the case mentioned at the beginning, but it requires an overall consideration in any case.




According to Regulation 1370/2007 (article 7(2)), cross-border PSO contracting authority have to provide the publication of information on planned cross-border railway PSO contract award at least one year in advance. In view of the interpretative guidelines concerning Regulation (CE) 1370/2007 (chapter 2.6.), the objective of this provision is:

	<ul style="list-style-type: none"> - first, to enable economic operators to react to the intentions of the competent authority, in particular to the type of award that it intends to resort to (invitation to tender or direct award), and - second, to give economic operators time to better prepare for an invitation to tender. <p><i>Failure to publish the information pursuant to Article 7(2) can result in the annulment of the call for tender if the lack of prior information caused a significant disadvantage to operators compared to the operator that currently performs the contract, and therefore has exact knowledge of all its characteristics. Such failure will also deprive Member States from the exemption of notification pursuant to Article 108(3) TFEU.</i></p>
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○ **Preparation of cross-border PSO award documentation**


The cross-border PSO contract award documentation covers the territory of at least two countries, therefore the cross-border PSO contracting authority have to decide in which language this documentation will be prepared and published. In the case of multilanguage publication, the cross-border PSO contracting authority determines the valid language for the interpretation of the documentation contents.

The cross-border PSO contract award documentation must clearly state whether interested railway operators can submit an offer as joint venture and if the involvement of subcontractors is possible. In this case, the documentation must also specify conditions and requirements, which partners and subcontractors need to comply.

	<p><i>According to article 4(7)) of the Regulation (EC) No 1370/2007, the cross-border PSO contracting authority award documentation shall indicate, in a transparent manner, whether, and if so to what extent, subcontracting may be considered. If subcontracting takes place, the public transport operator is always required to perform “a major part” of the public passenger transport services itself. According to the interpretative guidelines concerning Regulation (CE) 1370/2007 (chapter 2.2.6.) it would be reasonable to considered that subcontracting is acceptable up to one third of the public transport services. The fraction of transport services is measured in value terms or in timetable kilometres.</i></p>
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The content of the cross-border PSO award documentation have to include essential information for preparation of an offer (costs, prices, infrastructure), determination of requirements for cross-border PSO operator and subcontractors, description of PSO conditions and requirements, selection criteria, contract duration and other. The following detailed content of the award documentation is recommended:


(1) Information to enable interested parties to prepare an offer (well informed business plan)

	<p><i>In accordance with the Regulation (EC) No 1370/2007 (article 4, point 8.), the cross-border PSO award documentation needs to include:</i></p> <ul style="list-style-type: none"> - <i>information on passenger demand on cross-border area,</i> - <i>cross-border ticket fares,</i> - <i>costs and revenues related to the public passenger transport covered by the PSO and</i> - <i>details of the infrastructure specifications relevant for the operation of the required vehicles or rolling stock on the cross-border PSO area.</i>
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(2) Determination of requirements for PSO operator and subcontractors:


- reference to requirements and conditions defined in Directive 2012/24/EU and other relevant European legislation, especially technical specifications for interoperability (EU) 2016/797 relating to the infrastructure TSI INF, accessibility TSI PRM, energy TSI ENE, rolling stock - locomotive and passenger's rolling stock TSI LOC PAS and to command control and signalling TSI CCS, subsystems, operations TSI OPE and telematics TSI TAF / TSI TAP;
- the main operational conditions that the railway operator and subcontractors must fulfil in order to be able to provide the cross-border PSO transport services on the selected infrastructure, such as:
 - to dispose of train drivers with certificate indicating the infrastructure on which the holder is authorised to drive and the rolling stock which the holder is authorised to drive;
 - to dispose of the staff which meets the linguistic knowledge criterion for the infrastructure for which the certificate is being applied, referred to Directive 2007/59/EU,
 - to dispose of the licence which means an authorisation issued by a licensing authority to an undertaking, by which its capacity to provide rail transport services as a railway undertaking is recognised.

- (3) **Description of PSO conditions and requirements (Part 2 of the manual) and criteria for assessing compliance of the tendering operator with these conditions and requirements;**
- (4) **Required guarantees (e.g. tender guarantee, performance guarantee);**
- (5) **Selection criteria;**
- (6) **Sample of cross-border PSO contract;**
- (7) **Determination of cross-border PSO contract duration, including a possibility and conditions of an extension of contract duration;**

	<p><i>In accordance with the Regulation (EC) No 1370/2007 (article 4, point 4.), the duration of the cross-border PSO contract may be extended by a maximum of 50 %. The extension is possible:</i></p> <ul style="list-style-type: none"> - <i>if the public service operator provides assets, which are both significant in relation to the overall assets needed to carry out the passenger transport services covered by the PSO contract and linked predominantly to the passenger transport services covered by the contract or</i> - <i>in the case of outermost regions, if the extension is justified based on the particular geographical situation.</i> <p><i>According to the interpretative guidelines concerning Regulation (CE) 1370/2007 (chapter 2.2.5), the possibility and conditions of such an extension should be clearly indicated in the tender documents and in the PSO contract. In addition, such an extension may affect the level of compensation, which should be adjusted as a result.</i></p>
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○ **Publication of cross-border PSO procurement and award documentation**

In accordance with Regulation (EC) No 1370/2007 (article 7, point 2.), the documents have to be published EU-wide in the Official Journal of the EU, besides that, in order to make the process more transparent, a publication should also be issued:

✓	Option 1: EU eProcurement platform (TED)
✓	Option 2: Procurement platform in PPTA countries
	<i>Please note that the number of characters in TED is usually limited and that there is an additional publication requirement anyway - especially with regard to graphical representations. In addition, the European and national procurement regulations regarding transparency and documentation must be observed in the respective procurement procedure.</i>

○ **Complaint procedure**

The cross-border PSO contracting authority have to include in the award documentation the rules and procedure for dealing with interested cross-border PSO operators' complaints regarding the content of the published awarding documentation and the decisions taken by the cross-border PSO contracting authority. Further, the applicable law for resolution of these complaints should be also determined.

PART 4: RAILWAY PASSENGER TRANSPORT CROSS-BORDER PSO OPERATION

After the award of cross-border PSO contract to selected operator, the cross-border PSO contracting authority should monitor the proper implementation of operator's contractual obligations, provision of the required quality of cross-border railway transport and other services covered by the PSO contract and ensures timely financing of agreed cross-border PSO compensation. This part of the Manual includes instructions and recommendations for cross-border PSO operation including, monitoring of PSO contract implementation, financing, reporting and inspection that are essential for an efficient PSO service operation.

○ **Monitoring of cross-border PSO contract implementation**

Monitoring of PSO contract implementation is highly recommended. It includes quality control of implemented services and control of periodical reports submitted from the cross-border PSO operator. The cross-border PSO operator should provide the cross-border PSO contracting authority with information regarding the implementation of the cross-border PSO contract and enable it unrestricted access to business books, other documentation and records in any way related to the implementation of the cross-border PSO contract obligation.

○ **Financing control of cross-border PSO contract implementation**

Financing of cross-border PSO operation includes regular checks of reported eligible costs, ticket revenues and other reported parameters by cross-border PSO operator for calculation of PSO compensation periodical payments and implementation of compensation payments to the cross-border PSO operator in accordance with the payment conditions. The cross-border PSO contracting authority also need in most cases – dependent on the awarding procedure – to conduct ex post checks to detect overcompensation. The ex post check need to be carried out by the reference to the costs and revenues and the maximal level of profit that shall normally be established in the cross-border PSO contract.

○ **Reporting on cross-border PSO operation**



According to Regulation (EC) No 1370/2007 (article 7, point 1.), the cross-border PSO contracting authority shall make public once a year an aggregated report on the cross-border PSO for which it is responsible, the selected cross-border PSO operator and the compensation payments and exclusive rights granted to the said PSO operator by way of reimbursement. This report shall allow the performance, quality and financing of the public transport network to be monitored and assessed and, if appropriate, provide information on the nature and extent of any exclusive rights granted.

○ **Inspection of railway passenger transport covered by cross-border PSO**

Inspection of cross-border railway passenger transport is usually carried out on the railway network and at the seat of the cross-border PSO operator. It includes control of validity of relevant of cross-border PSO operator documentation (e.g. validity of railway operator's licence and safety certificate, validity of train driver's certificate) and its compliance with other regulated requirements. In the cooperation agreement, the PPTAs have to agree on the procedure and valid legislation, which will be used for inspection. It is recommended that a competent national inspection body is designated to carry out inspections in the part of the cross-border PSO route that takes place within the territory of its country, and that it carries out inspections in accordance with the national law of that country.

