Ministerial Platform International Rail Passenger Transport

Better rail connections for Europe's passengers

A common agenda

2nd Progress Report 2022

23 May 2022

Contents

1 Introduction

The 2022 Progress Report of the Ministerial Platform on International Rail Passenger Transport (IRP) sets forth the progress made regarding the initiative of the Ministries of Transport of the EU Member States, Switzerland and Norway. During the Transport Council on June 4, 2020, these European countries embraced the initiative to foster and support the improvement of international rail passenger transport in connection with relevant stakeholders. The countries agreed to work together on a European agenda for international rail connections. As a result of the political declaration, a joint platform of Member States (all EU MS minus Cyprus and Malta + Norway and Switzerland) was set up with the aim of further developing international rail passenger transport in the EU. The platform is supported by sector parties and the European Passenger Federation (EPF). It also involves representatives of the European Commission, European Union Agency for Railways, and EU-Rail. Panteia supported the MS in drafting this report.

The Terms of Reference for the platform was drafted in order to set up a framework for the work. It states 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.

The platform presented its first report[1] during the kick-off event Year of Rail in March 2021. The presentation of the first report was accompanied by the publication of a sector statement, showing a vision and commitments from sector and consumer organizations on international passenger railway transport[2]. In June of the same year, the Member States presented an Integrated Progress Report (see Annex 4), 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 present Progress Report sets forth the progress made over the last year. The members of the IRP invited the European Commission, ERA, EU-Rail, 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[3].

Against the background of the COVID-19 crisis affecting railway passenger transport, and the economic recovery thereafter, the momentum for progressing on the European agenda for international railway passenger transport remains strong. This was shown by the high commitment and motivation of all partners to work in the platform. The platform agreed in its revised terms of reference from 1 September 2021 (Annexed) its intention to put a report to Ministers by mid-2022 and mid 2023. This report reflects this momentum and suggests a further agenda and action points for the MS and other parties. The Ministries valued the cooperation with the sector during the previous months and welcome the development of the Second Sector Statement to be found in Annex 1.

[1] See Report of the Platform on International Rail Passenger Transport | Publication | The Netherlands at International Organisations (permanentrepresentations.nl)
2 See http://cer.be/publications/latest-publications/sector-stakeholder-statement-international-rail-passenger-services
[3] COM(2021)810 from 14 December 2021

1.1 Status of the document

This document is the result 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, and identifies an action agenda for the MS and other parties in order to make the improvements that are necessary for international railway passenger transport. Not all action points or solutions will fit or can be applied in all regions across Europe. Neither does the document include legal or financial obligations.

1.2 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 report, the platform identified priority actions, to be carried out over the second half of 2022 and early 2023. The priority actions are summarized in the tables below:

Table 1-1 Priority actions 2022 – 2023 Subgroup A – Customer experience and digitalization

Priority action	Deliverable
A.2 *Regulatory frameworks to enable data exchange*	Progress report on TAP/TSI, MMTIS revision, NAPCORE project and possible other initiatives outlining the lessons learned
	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.
	Define the approach for exchange of views and information between expert groups established at the EU level (such as MPMF, MDMS, 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.
A.4 *Selling (international) tickets by third party vendors*	Report on ticketing roadmaps initiatives, taking into account CER and AllRail ticketing papers, and identifying enabling actions MS to implement them
	Recommendations on FRAND principles, especially regarding to the definition, and how to implement them (e.g. legal, funding…)
	Report on framework conditions allowing ticketing solutions, taking into account a potential pan-European system and the interoperability between platforms. The framework conditions could also consider websites providing information and tickets on all trains on all routes. Aside of the input from the group, the conclusions of the study on remaining challenges for EU-wide integrated ticketing and payment systems could serve as a reference. Results of Shift2Rail Joint Undertaking research and innovation should also be considered.
A.5 *Common and interoperable standards for an open source based approach for ticket sales, distribution*	Overview of the available solutions and the obstacles for implementation
	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.

Table 1-2 Priority actions 2022 – 2023 Subgroup B – Defining a network of international passenger services

Priority action	Deliverable
B.1, B.2 *Developing the network*	Continue the accompaniment of Eurolink, e.g. the presentation of the preliminary market and modal shift analysis.
	Develop a questionnaire for collecting visions and ideas on how to connect national infrastructure visions to one European rail infrastructure (regarding task 2).
	Share experiences and ideas regarding new services and regarding the implementation of new services as, e.g., the connection Amsterdam – Vienna.
B.3 *Upgrade European timetabling process (TTR)*	Monitor the common calendar for TTR implementation and its evolution as result of the EU-Rail FA1 and System Pillar
	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)
	High-level evaluation of all pilots for the IRP's purposes
	Conduct preliminary market analysis pertaining to integration of European rail passenger hubs in a network
B.4 *Removal of barriers for international services*	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).
	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.
	Consider Commission-, EU-RAIL, MS- and sector-initiated pilots / startup services in integral way in the process of network definition
B.5 *EC initiative 15 pilots*	Emphasize the importance of a uniform approach regarding track access charges, taking into account Commission, EU-Rail System Pillar and CER guidelines
B.6 *framework conditions for night train services*	Take into account night trains as an integral part of network definition

Table 1-3 Priority actions 2022 – 2023 Subgroup C – EU Green Deal

Priority action	Deliverable
C.1, C.8 *Explore optimising the conditions for financial support;* *Promote existing EU tools to fund upgrading of rolling stock*	Facilitate initiatives for improving access to (second hand) rolling stock, such as Rosco model and Norwegian pool model
	Follow progress EU / EIB financing of rolling stock.
	Discuss initiatives to facilitate the reuse of second hand rolling stock.
	Clean up national technical rules (like proposed in the Issues Logbook) for vehicle authorisation
	Optimize functioning of ERA OSS in Vehicle Authorization
C.2 *(high speed) Infrastructure & bottleneck alleviation*	Synchronize the planning for new international services with infrastructure development and planning.
	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.
C.4 *Governance and capacity allocation*	Develop harmonised procedures on capacity allocation for international passenger trains, based on European rules and requirements
C.6 *Rail-air action plan for combined air-rail journeys*	Facilitate the continuation and expansion of air-rail initiatives such as the German and Austrian 'Rail&Fly', and the Dutch Air-Rail initiative
	Develop an EU approach on standardization for intermodal IT connectivity within the framework of the MDMS initiative and the Multimodal Passenger Mobility Forum
	European forum for air-rail cooperation / innovation / standardization.
	Facilitate the large-scale testing and deployment of an integrated platform demonstrator with different service providers on integrated ticketing in Europe.
C.7 *Issue Logbook for international rail passenger transport*	Include international rail passenger transport in ongoing / future issue log book initiatives from the Commission / ERA
C.9 *ERTMS deployment and international rail passenger transport*	Reinforce / Initiate a single European database providing all data required for RUs for the TEN-T network.
	Build on and evaluate the existing uniform European subsidy mechanism for fitting existing rolling stock (in CEF2)

Table 1-4 Priority actions 2022 – 2023 Subgroup D – Regulatory framework

Priority action	Deliverable
D.1 *Harmonisation internal market, legal framework (PSO regulation)*	Evaluate the reception and use of the manual on the organization of cross-border awards
D.3 *Integrate open access services in national networks*	
D.4 *Increase cooperation between MS*	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
	Further elaborate and agree on draft manual for cross-border tenders

2 A – Customer experience & digitalization

2.1 Topic introduction

Currently, the customer experience for international passenger rail is 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 focus and overarching goal is to contribute to an improvement of customer experience, exemplified by the simplified customer journey. Digitalization pertaining to the integral European railway network, has the potential to contribute greatly to this aim. However, the subgroup focuses only on digitalization that directly enhances customer experience. Digitalization of technical systems, such as the rail traffic management system (ERTMS), is not in the focus of this subgroup. Also, for the time being, the subgroup focuses on journeys that are exclusively by railway, even as multimodal journeys remain firmly on the horizon.

The following barriers have been identified: 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 students and seniors.

2.1.1 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 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).

Ticket selling

At the moment, 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.

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 launched 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. Also, the possibility of a requirement for transport operators to allow third party sales could be considered as an option. However, considering further work on this subject by the subgroup foreseen later in 2022 and in 2023, 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 recently 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.

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 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 states.

A level playing field should be assured. Also, the alignment with the objectives of the Green Deal 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. This could be envisaged in the second half of 2022 by amending the letter of intent if the MSs agree to extend the scope of the platform. Other Member States stressed that discussions on such topics can only be done in the relevant Council working groups.

2.2 Progress

2.2.1 Overview

After the 2021 report, subgroup A proceeded with workshops on 26 November and 17 December 2021. Additional workshops were held on 4 February and 15 March 2022.

The first meeting was dedicated to the definition of a short list of actions from the previously identified actions related to digitalization from the work program of the IRP. The group decided to focus on a limited number of priorities taking into account the timeline and the most prevalent issues which could bring the most added value for the international passenger traffic.

The subgroup decided to focus on three of the action points (A2, A4 & A5). For each action a proposed approach was then elaborated. The applied methodology was, in a first phase, to gather more in depth information on related items, and, in a second phase, to document and propose solutions to overcome identified barriers. Finally a work program with sub-actions and deliverables was then set up and endorsed by the group at the end of December:

- A.2 Enforce or incentivize the implementation of the existing railway specific as well as multimodal regulatory frameworks to enable data exchange.
  1. General objective
     - Develop clearer guidelines
     - Investigate the reasons for reluctance of railway operators to share certain data
  2. Sub-actions
     1) Monitor ongoing initiatives:
        - Presentation on the TAP/TSI implementation by ERA
        - Presentation on the MMTIS revision
        - Presentation on the NAPCORE-project
     2) Create a formal link between the MDMS expert group and the subgroup A
     3) Investigate the presence of any potential barriers to share real-time data for railway operators
        - Presentation or input paper from CER taskforce
        - Look into the MDMS consultation
        - Barriers identified by ERA
     4) Study the legal, economic and governance tools to involve every stakeholder in the long-term
  3. Deliverables:
     - Progress report on the ongoing initiatives and possibly draft recommendations
     - Overview and proposals with regards to RT data sharing barriers
     - - Input paper on benefits of an open ticketing market for RU's

- A.4 Provide feasible solutions for selling (international) tickets by third party vendors or MaaS service providers on fair, reasonable and non-discriminatory commercial principles (FRAND). Agree on timeline for implementation.
  1. General objectives
     - Monitor ticketing roadmap
     - Refine the definition of FRAND (Fair, Reasonable & Non-discriminatory) terms, which should not focus only on international travel and relate to commercial consideration, not technical 'solutions'.
  2. Sub-actions
     1) Monitor sector initiatives
        - Ticketing roadmaps

2) Refine the definition of FRAND principles
   - Presentation EU Travel Tech
   - Further information from the sector
3) Investigate obstacles with regards to ticketing solutions
   - Challenges for EU-wide ticketing and payment systems
   - Presentation/input paper third party ticket vendors

3. Deliverables
   - Report on ticketing roadmaps
   - Common statement on FRAND principles
   - - Input paper on current obstacles for feasible solutions

- A.5 The development of common and interoperable standards for an open source based approach for ticket sales and distribution with cooperation between the countries, which is compatible with the fourth railway package.
  1. General objective
     - Monitor OSDM
       - Identification of technical, legal & financial barriers
       - Discuss and recommend, based on consensus, practical ways to accelerate the adoption of OSDM.
       - Consider the subgroup as a neutral forum to discuss strategic obstacles to an ambitious adoption of OSDM
     - Further raise the profile of this standard among national policymakers
     - Highlight the ongoing lack of implementation
  2. Sub-actions
     1) Investigate currently available solutions on standards and strategic obstacles to a timely adoption
     - Input paper from the sector
     - Presentation CEN (technical report on multimodal API's for ticketing)
     - Contribute to impact assessment study
  3. Deliverables

Overview of the available solutions and obstacles and proposal with concrete steps to implement ongoing sector-based initiatives. The progress in the different area is summarized in the following sections.

2.2.2 Regulatory frameworks to enable data exchange (A2)

The legal basis to enable the necessary data exchange, in the form of the recast on rail passengers' rights and obligations (EU Reg. 2021/782), is given in both railway specific as well as multimodal regulatory frameworks and will apply from June 2023. The EC action plan proposes several initiatives to address this barrier.

It is relevant to mention that the subgroup tried to keep an approach oriented towards the needs of the customers.

On the sub-action of monitoring, the European Commission presented the different initiatives that are being taken up by the Commission, such as the ITS directive revision, MMTIS delegated regulation revision, MDMS initiative, MPMF and the parallel work done on the data act. In that regard, the question of minimum connecting times was raised. It is not fully in the scope of the impact assessment study of MMTIS, but yet is very relevant to ensure seamless multimodality. This issue refers to the difficulty of balancing, on the one hand, the needs of the slowest part of the

journey with, and on the other hand, through journey timings that reinforce the competitiveness of the rail option.

Regarding the NAPCORE initiative, it aims to coordinate better the NAPs and NBs on an EU-wide level, improve harmonization and interoperability and empower the NAPs as the backbone for ITS digital infrastructure and data exchange in Europe. Since the project just started in November 2021, there is a need to find their way. However, a link with the EU data space seems relevant.

On the TAP TSI, the implementation progress is slow and the specifications are mostly implemented by many but not all of the major railway operators, but still difficult to address for some of the smaller railway undertakings which are not necessary aware about the regulations. The upcoming revision of the TSI (June 2022) will address the Open Sales and Distribution Model OSDM, E-ticket check and European Passenger Information Railway Station Accessibility Profile.

On the sub-action creating a formal link between the MDMS expert group and the subgroup A, the proposal was not addressed but remains on the agenda of the group.

On the sub-action to investigate the presence of any potential barriers to share real-time data for railway operators, a first round of analysis took place after each presentation. From the NAPCORE and TAP TSI presentations, the group identified as most important the proper governance of reference data and good implementation of national allocation entities. Governance of reference data is crucial since not all data are exchanged but codes instead. If different parties use different codes for the same thing, it adds a layer of complexity. In that perspective, ERA and CER, supported by the SMG's representatives, presented their approach towards a reference data. For TAP TSI, central reference database is used for location codes and company codes. The retail reference database manages retail location codes. In addition, ERA manages code lists for TAP TSI and for TAF TSI. The following challenges were identified by ERA: not all member states have appointed a National allocation entity for TAP/TAF TSI retail location codes, there is no clear processes for the code allocation for some retail location codes, (e.g. primary location codes for retail) and no clear documented use cases for the maintenance of location data. Furthermore, only partial publication of retail reference data is made at ERA (Subsidiary Location identification for frontier and transit points). Finally, primary retail reference data are not published on ERA website. These topics are still under discussion at ERA level.

CER, with the support of the SMG's representatives, demonstrated also for national coordination, covering rail but also other modes of transport.

Supporting the presentation made by CER, the SMG rapporteurs were of the opinion that reference data governance arrangements are needed to avoid unnecessarily complex data exchanges between parties. A range of National Allocation Entities will also be needed to align coding methods for aggregation by National Access Points, allowing whole mobility sector access and facilitating further aggregation internationally. SMG considers that this will require the support of Member States.

The enforcement of existing legal framework as well as a coordinated approach seem necessary to progress on the implementation of such governance. A fair governance, including private stakeholders, should also be considered.

The SMG considered also that provision of dynamic travel information requires access to real-time data services covering all operators and networks. Potential challenges associated with data integration were noted, for example whether supplied by infrastructure managers or railway undertakings, how and if data provision should be priced (e.g., marginal cost, market-determined, or not at all), and challenges related to the integration with data from different modes. The

stakeholders pointed out that anti-competitive behaviours, such as restrictive or unfair terms and conditions or reinforcement of dominant position, have no place. However, as set forth already, data sharing is laid down in Regulation 2021/782.

Finally, on the sub-action on the study on the legal, economic and governance tools to involve every stakeholder in the long-term, the subgroup gave the matter only preliminary consideration without reaching any conclusion so far. The discussions highlighted however the need for data access, which raises the question of the cost – and the related question of price and whether it should be set to reflect the marginal cost of access or to deliver a return on investment, or whether it should be based on a 'subscription', a commission on turnover or some other model - since existing databases are mostly owned and maintained by some operators, and the impartial distribution channels for tickets (third party ticket vendors, see action A.4). It also touched upon the issue of a legal approach versus a market oriented one, through commercial agreements which is more flexible but may not be enforceable. On the other hand, the legal approach takes time to be set up and to be fully implemented while the market sometimes needs to move swiftly. Finally, customers need to have the certainty to reach their final destination even in case of delay or last-minute cancellation (addressed under the rail ticketing roadmap section hereafter).

2.2.3 Selling (international) tickets by third party vendors or MaaS service providers (A4)

Obstacles feasible solutions for selling (international) tickets by third party vendors or MaaS service providers on fair, reasonable and non-discriminatory commercial principles (FRAND) remain in the form of content restrictions and unfair commercial conditions. The subgroup considers that the main barrier is inadequate level playing field conditions for the sale of tickets through third parties (like MaaS service providers) on fair, reasonable and non-discriminatory (FRAND) commercial principles. The CER ticketing roadmap policy can serve as a first step forward.

Regarding to the first sub-action on the monitoring of the sector initiatives, ticketing roadmaps were addressed. CER initially presented a first outline of its roadmap in fall 2021. However, even if the SMG acknowledged this to be a step in the right direction, there are some reservations still to be resolved (e.g. the sufficiency of the proposed timescales, the extent to which it is compatible in practice with migration towards multimodality, assured third-party vendor access on FRAND terms). There is also the more fundamental issue of whether such arrangements need to be under-pinned by *acquis*, whether this is compatible with the preferred timescale for delivery and the scope of the legislation, mindful of the legislative challenges posed by the need to enable innovation and adaptation when dealing with developing technologies.

The group also considered taking into account the study on remaining challenges for EU-wide integrated ticketing and payment systems from February 2019 and see where we are now compared to 3-4 years ago. It will be taken into account for the next steps.

Finally, the question of website(s) that can provide information on and sell all tickets for all trains on all routes in every country and whether regulatory intervention is necessary to achieve this, either from the viewpoint of the constraints of current Competition policy or for ensuring provision, was regularly raised. It should be part of a further work.

Regarding to the sub-action on the definition of FRAND principles, SMG's rapporteurs indicated that the sector could go along with the underlying general principle FRAND. However, the group acknowledges to work further on the definition and to investigate if this principle needs to be enforceable in court and if it needs legislation. Moreover, the group concluded that the funding in order to implement properly the FRAND principles should also be investigated.

The sub-action regarding investigation of obstacles to ticketing solutions was not addressed in detail by the group and will be on the agenda for the next steps. However, some orientations were drawn such as to think about a pan-European system, avoiding one system per Member States. For example, Shift2Rail Joint Undertaking has been developing and demonstrating in its Innovation Programme 4 potential solutions that allow seamless integration of various Transport Service Providers (TSPs) and provide all the services that are required for a multi-modal door-to-door travel, including ticketing. These solutions are by design as European and support all the common interfaces through a with an Ontology-based integration approach. This will be further examined by the group, especially within A.5 framework.

The stakeholders acknowledged CER's willingness to extend the CIT's Arrangements on Journey Continuation (AJC) 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. Passengers should have the assurance of consistent support when their journey is disrupted, whichever the operators involved and whatever the relevant tickets held for the journey.

2.2.4 Standards for an open source based approach for ticket sales, distribution (A5)

The diversity of policies and standards currently applied individually by different railway undertakings in Europe don't necessarily lead to a good customer experience. The subgroup considers that compatibility between interfaces is the most prevalent issue. Solutions such as OSDM, developed by UIC or Transmodel/Netex developed by CEN are steps forward to address the problem.

On the sub-action on investigating available solutions on standards and strategic obstacles to a timely adoption, the group looked at the needs from the customer's point of view. In that perspective, there was a common understanding to reuse, where possible, existing standards and technology. The question of enforcement and cooperation among stakeholders, already addressed with the real-time barriers, was raised. Integration of multimodal solution versus rail-only oriented approach is also a point to take into account, according to the group. The group concluded on this point to look at a result objective oriented approach, based on the outcome of the different initiative, rather than to merely list existing solutions. Moreover, the balance between commercial oriented solutions, suitable for each stakeholder, and the interoperability should be also considered.

2.3 Conclusions

General conclusion:

Due to vast amount of work, the group could not investigate as initially planned the potential actions to be tested in order to reduce barriers. However, the work of the group delivered several findings which are most valued at this stage.

Firstly, the group acknowledged the difficulty to build a consensus on critical issues such as roadmap toward ticketing or FRAND principles' implementation. As the role of the SMG is crucial, especially since the group recognized the customer-oriented approach of its work, the group considers it is necessary to give some time to the stakeholders in order to make some progress on their statement.

In addition, the group recognized with great appreciation the progress made on agreement in principle from SMG on extension of CIT's Agreement on Journey Continuation (AJC) provisions through more enforceable legal approach.

The subgroup considered that it was not in a position to consider the level playing field issue unless the IRP's terms of reference are reconsidered in order to enable him to do so. Lastly,

the work of the subgroup delivered a clear message on the way forward, which is to look at objectives and outcome of initiatives rather than a top-down approach. The importance of a multimodal approach, where rail related data are integrated with other data coming from other modes of transport is also underlined by the group.

Conclusions on A2:

- Legal needs to be considered but the timeline to implement the whole legal package and the pace of innovation and market's needs should be considered
- Regarding to real time barriers, the legal and governance, as well as the environment and actors are far more important, from authorities' point of view than technology. In that perspective, the group recommends to further work on these aspects.

Conclusions on A4:

- The main barriers for ticket distribution are inadequate level playing field conditions for the sale of tickets through third parties on fair, reasonable and non-discriminatory, commercial principles.
- Regarding FRAND principles and obstacles for implementation, further work is required. It is proposed that the MS and SMG work together on compiling technical reports on these matters.
- On the ticketing roadmaps, further work needs to be done. Research and innovation work by Shift2Rail Joint Undertaking on multi-modal travel solutions should be considered.

Conclusions on A5:

- The subgroup considered it vital to adopt a results-oriented approach, exploring existing standards (as well as multimodal solutions) and impediments for their implementation. These should then serve as a basis for concrete steps to be taken.

2.4 Way ahead

- Next steps / agenda second half 2022 and onwards
- Regarding to the growing importance of this topic, it is proposed to make progress with intersessional work
- It is also proposed to inform regularly the group on discussions taking place at EU level on pieces of legislation, relevant for its work

Priority action	Deliverable	Leader/ rapporteur	Planning	Remarks
A.2 *Regulatory frameworks to enable data exchange*	Progress report on TAP/TSI, MMTIS revision, NAPCORE project and possible other initiatives outlining the lessons learned		Next IRP progress report	
	Provide a paper, considered as reference, on the governance of data reference and the best		• September 2022: First draft • October 2022: Discussion and proposed amendments	Planning to be confirmed depending the progress made on MMTIS&MDMS

	practices on the implementation of national allocation entities, identifying, where relevant, legal enforcement.		• December 2022: 2nd draft • Beginning 2023 : consensus among members	
	Define the approach for exchange of views and information between expert groups established at the EU level (such as MPMF, MDMS, MMTIS…) and the subgroup A		Intersessional	
	Based on the legal framework and existing practices, draft recommendations on access to real-time data services for the customers.		• December 2022: workshop • February 2023: first draft based on the outcome of the workshop • March 2023: Discussion and proposed amendments • 2023: tbc depending the progress made	Planning to be confirmed depending the progress made on MMTIS&MDMS
A.4 *Selling (international) tickets by third party vendors*	Report on ticketing roadmaps initiatives, taking into account CER and AllRail ticketing papers, and identifying enabling actions MS to implement them		Mid-term report by September 2022	Depending on a consensus within SMG on ticketing roadmaps
	Recommendations on FRAND principles, especially regarding to the definition, and how to implement them (e.g. legal, funding…)		• June 2022: workshop on the framework conditions • September 2022: 1st draft • November 2022: discussion & proposed amendments	Depending on consensus within SMG on FRAND definitions

			• Beginning 2023: consensus among members	
	Report on framework conditions allowing ticketing solutions, taking into account a potential pan-European system and the interoperability between platforms. The framework conditions could also consider websites providing information and tickets on all trains on all routes. Aside of the input from the group, the conclusions of the study on remaining challenges for EU-wide integrated ticketing and payment systems could serve as a reference. Results of Shift2Rail Joint Undertaking research and innovation should also be considered.		• October 2022: workshop taking account the mid-term report on ticketing roadmaps, with the objective to establish priorities on most prevalent issues • November 2022: 1st draft based on the outcome of the workshop • December 2022: discussion and amendments • February 2023: consensus among members	Planning to be confirmed depending the progress made on MMTIS&MDMS
A.5 *Common and interoperable standards for an open*	Overview of the available solutions and the obstacles for implementation		June 2022: presentation of OSDM and Benerail	

source based approach for ticket sales, distribution	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.		• September 2022: workshop to define the scope • November 2022: 1st draft based on the outcome of the workshop • December 2022: discussion and amendments • March 2023: consensus among members	Planning to be confirmed depending the progress made on MMTIS&MDMS The role of transport organizing authority should be also taken into account

3 B – Defining a network of international passenger services

3.1 Topic introduction

The interest of passengers in climate-friendly rail services, including for longer distances, has strongly increased in recent years. People appreciate the opportunity of making use of their journey time in digitally well-equipped trains, for instance for working, or to reach their destination overnight. In particular, the years before the corona crisis have shown that many people would like to use attractive, i.e. speedy through-services for intra-European journeys between the major cities.

Today, international passenger services are limited by heterogeneous national framework conditions, constraints in infrastructure capacity and capacity allocation, and insufficient 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. Improving international rail passenger transport requires, among other actions, developing a network strategy for a viable and resilient European network and creating the right conditions for the development of such network. This should also take into account market demands and potential, matters of international capacity allocation, available infrastructures (e. g. existing TEN-T corridors) and market analysis. The market models differ throughout Europe.

Mobility, already existing operations, expected demand, technical, operational and economic viability, investment needs in relation to infrastructure, signalling, 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.

In 2021, the Member States set forth their preliminary findings on the subject in the 'Integrated Final Report.'

In the second IRP phase, a lot of discussions took place and at the end of the second IRP phase, it was concluded that the discussions as well as the defined action items of subgroup B could be structured coming from the primary aim of improving international rail passenger transport. As the discussions during subgroup B meetings emphasized that structuring the actions is necessary, the following paragraphs will follow this structured approach. First aim is to facilitate the better usage of the existing infrastructure.

As the first task of that structured approach, any issues regarding the international network of passenger service have to be analysed and subsequently addressed. Specifically, we have to focus on still existing barriers and other obstacles hindering the introduction of new services, within a short to medium term perspective. Subgroup B has in the first IRP phase developed several action items, and the focus has to be on action B.4 (removal of barriers for international services) and action B.3 (the upgrade of the European timetabling process by means of the TTR project of RNE) to reach this goal. Looking at the creation of new services, 21 Member States support the TEE 2.0 concept as a detailed template for creating a network and the related services, providing an impulse to new market entrants as well as incumbents to provide new services based on this concept. Also, there is the upcoming EC initiative for 15 pilot lines of international rail passenger services, to evaluate the idea of international rail services also as a method to facilitate the modal shift within

the Green Deal and the December 2021 EC Rail Action Plan. In terms of an infrastructure network as a platform to run these services, there is the TEN-T network, the underlying legislation currently undergoing a revision, together with the national rail infrastructure not being part of the TEN-T-network. Eurolink is a complimentary initiative of several large infrastructure managers to provide more and better capacity for international rail services in Europe, in a medium- and long-term perspective.

Nevertheless, any measure and discussion on an international network of rail passenger services is overlaid by the question for infrastructure capacity and quality. Further growth could be accomplished in two ways. One approach is to further optimize the usage of the infrastructure, with i.a. the TTR project and the Eurolink project in support. This approach is in the end limited by the infrastructure itself. Another approach is to enhance or amend the infrastructure, which is a medium to long term measure due to nature of the infrastructure construction process.

This creates the second task of the structured approach, addressed by action B.1 (European regular interval timetable). While projects such as TTR and Eurolink aim at an optimized usage of the current network, there will be the necessity to address the second approach (infrastructure enhancement or amendment) too. In order to succeed, a common vision of a European rail network that includes European and national strategies should be discussed. After this vision has been defined, questions on infrastructure needs and implementation scenarios might be discussed. However, if the implementation of this vision is envisaged, options for financing the implementation need to be discussed as well.

The action items that have been defined for subgroup B during the first IRP phase contribute to the first as well as to the second task. However, in order to focus discussions within the subgroup, it is important to differentiate between both of the tasks.

The group acknowledged the importance to work further on Member States or Infrastructure Managers' initiatives that might substantiate the network or facilitate the creation such as TEE 2.0, EuroLink or Time Table Re-design (TTR). The European Commission is presently preparing an initiative for more efficient freight and passenger services, which includes questions on capacity allocation. A public consultation has been launched as part of the analysis. The initiative is planned for the first quarter of 2023.

3.1.1 Developing the network

In the 2021 report, future development of a network of nodes, corridors and multi-country connections was discussed, including interval clock-face timetables ("Europatakt"), predominantly using the existing rail infrastructure. The discussion took into account the TEE 2.0 concept, which is supported by 21 Member states, as an example and impulse for the implementation of a European network of rail passenger services.

For a rapid and extensive increase of international passenger rail transport, structural changes are still necessary. The technical standards framework conditions in Europe are not yet commonly implemented to a satisfactory level and this poses technical, operational and economic challenges for cross-border passenger transport. Also, a harmonised European capacity allocation process has so far not been applied everywhere[4]. Furthermore, to ensure a strong network, the viability of the connections defined should be analysed by thorough cost-benefits analyses. Finally, other challenges, such as the ones linked with infrastructure planning and rolling stock, should also be considered.

[4] The acceptance of the RNE developed and commonly agreed application tool PCS (Path Coordination System) is still low amongst the IMs, and in some countries not even an accepted way to request capacity through (despite fulfilling the requirements of SERA art. 44.4)

For building up a network, the following key steps were identified by the participants of the subgroup during the meetings and are a first idea regarding the second task:

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 a market analysis.
2. Use the current services as a possible starting point. Then define step-by-step improvements, learn and re-iterate.
3. All stakeholders can examine the concept ideas, i.a. creating star-shaped line elements to the nearest neighbouring 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 within this step.
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.

3.1.2 Governance and capacity allocation

Member States' cooperation is needed to build upon the legal and market framework for an integrated network (wherein both commercial services and PSO services are possible). From there, international rail passenger services will be able to compete with other transport modes in line with the EU legislation. To do so, a joint vision should be developed in which the governments could take the lead to draft the network taking account of existing services and market analyses, discuss the conditions, and develop the flanking policies and supporting mechanisms (considering input from railway stakeholders).

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, considering also the TEN-T network.

One barrier that has already been identified and that is already addressed regarding international passenger services is the harmonized usage of the existing infrastructure. For capacity allocation, the future implementation of the 'Timetabling and Capacity Redesign' (TTR) project initiated by RailNetEurope (RNE) and supported by Forum Train Europe (FTE) was considered during the meetings. TTR aims at a harmonization of the national capacity management processes throughout Europe. It also aims to implement a process to better plan capacities in advance, provide better products fitting to the different market needs, ensures a quick allocation of capacities and overall increases the efficiency and reliability of timetables. However, national variations, lack of common IT standards and processes and diverging national legislation (or different implementation of the relevant EU Directives) constrain the implementation of the project and should be addressed to fully access possible benefits of TTR. Any measure however has still to provide the necessary flexibility to implement a regular interval timetable.

In addition, the TTR project of RNE can be considered as contribution nonetheless, further work is expected to reach a European rail network as described in the Master Plan of the Europe's Rail Joint Undertaking, communicated to the Council and the European Parliament. This is part of Flagship Area 1 and expected to deliver results at TRL 7 in some key components by the end of 2026.

3.2 Progress

Over the last period, subgroup B convened several times. Topics discussed were as follows:

- Kick-off 15/11/2021, setting the stage and discussing updates on Eurolink, pilot lines, TEE 2.0. Furthermore, the action items were discussed: What might be our next steps and deliverables per action item, what about priorities? Regarding action item B.6 it was suggested and accepted by the participants to organize night train meetings in collaboration with subgroup D.
- 16/12/2021, (further) discussing EC action plan for pilot lines, Eurolink, sector input regarding barriers, and a state of play on the discussion of night trains were given.
- 10/02/2022, (further) discussing sector input, proposal for pilots, proposal on ideas on successful network planning, night trains.

In the IRP work plan, 6 action items were defined for subgroup B:

- B.1 – European regular interval timetable (Europatakt, Eurolink, others)
- B.2 – Developing TEE 2.0 day and night connections based on steps Letter of Intent (i.e. market analysis)
- B.3 – Upgrade European timetabling process (TTR)
- B.4 – Removal of barriers for international services
- B.5 – EC initiative for 15 pilots for international rail passenger services
- B.6 – Framework conditions for night train network

Progress made regarding these subjects is set out in the sections below.
In addition, the topic of night trains was discussed in specific common meetings of the subgroups B and D.

3.2.1 Developing the network (B.1, B.2)

Perspective of EuroLink:
Improving the European network also means exploring a common network strategy for capacity usage and timetabling 5-10-20 years ahead, optimising the international network, aligning it with the capacity needs of other national, regional passenger and freight traffic and identifying potential logistical bottlenecks and (need for additional) investments.

The European network can and should be seen and to be developed as a functioning network:

- Passengers (and transporters) regularly use several train services and modalities from door-to-door.
- Network is used by many different users.
- Think (plan, choose and invest) European and without borders to obtain new perspectives and optimal results.

In EuroLink, a growing number of European IMs co-operate to design timetable concepts for a better European long-distance network, both for passenger and freight rail transport. EuroLink's ambition is to help align the national networks to optimise capacity and improve international connections by offering high frequency slots, shorter travel times, direct connections and optimised transfers. In 2022, the platform has grown further (with new members from Southern and Eastern Europe). Also further constructive discussions with railway undertakings have been held.

The EuroLink platform helps to create a vision on capacity configuration, helps to strengthen the structure of the hubs and aims to optimise connections. In 2021, a first draft timetable on existing and expected infrastructure for 2030 has been made. This design is based on:

- A slot structure for a combination of medium and long distance slots 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, which foresee in the possibility of alternating paths and/or optimised transfer times within the hubs and nodes.

Preliminary market and modal shift analysis show that such a better European rail network can attract many more passengers and can contribute to sustainable mobility. In this way, concrete suggestions and perspectives arise that can be discussed with operators, member states and other stakeholders to determine viable propositions and steps forward.

Further building on this in 2022:

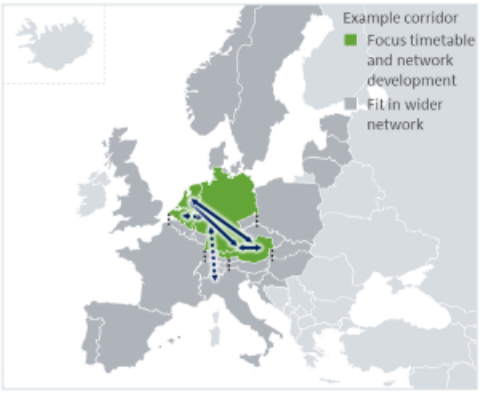
- First building blocks for an international freight concept 2030 have been laid out in co-operation with RFC's. Next steps for a closer cooperation with RNE will be taken as well.
- For implementation of improved and new services, be it in TEE2.0, EU pilots or market initiatives, EuroLink with help of SCHIG of Austria is working on contributions to: (1) how to structure the work, (2) step-by-step strategy of specific lines/improvements and (3) concrete suggestions for first TEE 2.0 lines and potential pilots. The Amsterdam – München – Wien corridor is a first test case for this. The outcome of this exercise should deliver best practises that can help us to proceed on other lines and connections.

A harmonised timetable with regular intervals is (in many parts of the network) are a precondition for a better and optimised product, but it is not an objective in itself. We believe the proposed focus on TEE 2.0 and pilots (among other projects) offers a good framework to work on concrete objectives to start delivering more to the customer. As a by-product of, and condition for new services, IMs can develop timetable solutions that will (need to) be more efficient and market orientated. Inputs from operators, member states and other stakeholders are to be taken into account.

This means that smaller sets of partners from two, three, maybe four countries, can study more intensively parts of the European network as to feasibility, identify bottlenecks and propose potential improvements. With EuroLink IMs can embed this focus on lines/corridors in a European approach, offer overview and network coherence.

Capacity strategy by IMs can contribute to further steps. Eurolink can tie initiatives together.

- **Further steps expected on a bi-tri-more-lateral basis.** IMs can work from their regular role and responsibilities.
- **Eurolink can supply an overarching perspective, network view and organization.**
  - Build and keep the network a network.
  - Overview and synergy.
- **Eurolink can contribute to a step-by-step strategy for development of the network.**
  - In addition to TTR.
  - Other RNE projects aimed at improved performance.



Subgroup B:
As explained at the beginning of this chapter, the two tasks – more services on the existing infrastructures as well as on new infrastructure - need to be further discussed and worked on. Most important is to identify and remove still existing barriers for international services, which may be either of a legal, financial or technical nature. Furthermore it is important to integrate sector driven initiatives and projects (including TTR by RNE and FTE, Eurolink), in which parts of the two tasks are discussed.

Also it is to be noted that the research and innovation activities launched in 2022 by the EU Rail Joint Undertaking will also be considered by the Platform and its Members. As already indicated, the new EU-RAIL program will cover relevant and important aspects, including the development of a European dynamic capacity management and traffic management system. In addition, EU-RAIL will also develop a railway functional architecture (via the System Pillar), as well as new functions supporting capacity increase and operational flexibility, such as ETCS Level 3 and ATO GoA3/4. This work will be supported and demonstrated through large scale demonstrations, starting from 2026.

3.2.2 Governance and capacity allocation (B.3)

For TTR, legal aspects were discussed in an informal working group of the European Commission (DG MOVE), and participating Member States. Based on the findings of this working group, the Commission presented conclusions in the SERAC meeting of December 2021.

TTR mainly focuses on a reliable and predictable capacity offer where a certain amount of capacity is "set aside" for later use by (mainly) the freight RUs to avoid blocking of capacity allocated in the annual timetable process. To achieve the aforementioned predictability it is vital for the IMs to apply what can be perceived as the first legal steps towards full TTR implementation, Directive 2012/34/EU, annex VII. Rather than offer flexibility for the IMs this annex is limiting the maneuver space for the IMs as it requests stable information on TCRs at an earlier time compared to before. However, annex VII also defines the flexibility for both RUs and IMs by "Late Path Request".

RNE and FTE have further refined the TTR concept, taking into account also the requirements of international long distance rail passenger services. Based on presentations of RNE and FTE, the different aspects, challenges, and upgrades of TTR have been discussed within the subgroup B. One of the main challenges of TTR is still taking into account the different requirements of the various types of rail transport, such as rail freight and national passenger services. Some IMs and RUs are already running pilots on specific border lines. The results of these pilots are to be discussed in regard of international rail passenger services also within the subgroup B. In addition, an important aspect is the handling of temporary capacity restrictions (TCR) in a harmonized and synchronized approach within TTR. Moreover, it will be important to ensure that sufficient flexibility is retained for other types of traffic, both for new entrants to the rail passenger market and for rail freight traffic. As TCRs are an illustrative example of various barriers that have been identified within subgroup B, and as TCRs are not yet focused on within the TTR program, Member States might share their experiences and best practices on TCRs within the subgroup. TCRs are a suitable subject, as the necessity to find a harmonized approach to implement TCRs in a cross-border approach to avoid loss of capacity and quality of train paths. It addresses a broad scale of topics, such as the lack of cooperation of IMs, the inclusion of Railway Undertakings into the planning process and the implementation of infrastructure measures. The experience made by the Rail Freight Corridors should be taken into.

In addition to the TTR project, the subgroup also discussed other forms of possible capacity allocation, such as the model used in Switzerland. This model foresees five steps for the successful planning of capacity and a continuous implementation.

3.2.3 Barriers for international services (B.4)

Regarding this sub topic, the following key conclusions were drawn:

- For competitive international rail passenger services sufficient infrastructure capacity of good quality and without interruptions at network borders is essential. Furthermore, bottlenecks should be identified and, if possible, remedied. Therefore, it is necessary to further enhance the cooperation of infrastructure managers and railway undertakings to provide and make use of seamless, international infrastructure capacity. Today, this is not always the case.
- In addition to the matter of infrastructure capacity, it is important to consider the capacity of service facilities and their suitability.
- Looking at the ongoing revision of TEN-T regulation, ideas and concepts such as TEE 2.0 provided input to the evaluation of the existing regulation, thus facilitating an improvement of the European TEN-T network.
- Key performance indicators (KPIs) are a focus point for stakeholders to improve performance, remove obstacles and study concrete new/improved train services and infrastructure. Accordingly designed, they could be helpful to understand the current situation and to further develop that understanding.
- Essential for competitive long distance rail passenger transport services are good connections and effective hubs providing interconnection with other rail services and intermodal services. Any development of related concepts should take this into account. The subgroup 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 consider it necessary to effectively take into account the importance of hubs and their integration into the future network definition. A working group on the definition of international passenger hubs has been created at the level of UNECE. The members of the subgroup could use its work to conduct a preliminary market study on European rail passenger hubs.

3.2.4 Pilot projects (B.5)

The MS welcome the Commission's initiative and are looking forward to further details regarding the setup of the pilots. The platform extends an invitation for further discussion later in 2022. In addition, the platform envisages that details and results of the pilots initiated by the Commission will be taken into account in its own, broader evaluation (see. B.1, B.2) that will be an important element of the conceptual European network definition.

3.2.5 Night trains (B.6)

Basically, night trains are a specific form of long distance trains. While there is no legal definition of a night train, night trains often consist of sleepers and couchettes, running in the late and small hours. Nevertheless, some railway undertakings do operate day train rolling stock, such as high-speed train sets, also in that period of time to address corresponding market demand.

The same national market access conditions apply to both types of train services, day and night trains. 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.

Based on these findings, it is necessary to follow a balanced approach in facilitating night trains. In terms of capacity allocation it may be necessary to include transparent priority rules, reflecting the socio-economic value of the full capacity usage, and considering all stakeholders' and types of rail services' needs, to gain the best possible benefit for the environment and the economy.

To facilitate night train services, it is important to continue the identification and the removal of obstacles hindering the establishment of new services and hampering already existing services, always considering market demand and conditions. In addition, it is considered that a revival of night train services may partially depend on conceptual European network definition. Therefore, it is essential that night trains are part of the process of network definition (B.1, B.2). The platform emphasized that sector ideas and proposals pertaining to night train pilots and network definition will be taken into account.

One example of that can be what is happening in France. A study on the development of new trains for national and regional territorial cohesion (Intercités / Trains d'Equilibre du Territoire), requested by the Mobility Orientation Law, was submitted to the French parliament in June 2021. Among the lines considered, a set of national night trains would be in a deficit, but at an acceptable level provided that a real network of night lines is set up and that the methods of designing, marketing and producing are modified in depth. The corresponding deficit would require government involvement through a public service contract. Given these prospects, two new night routes have been reopened in 2021: Paris-Nice in May and Paris-Tarbes-Lourdes (extended to the Basque coast in the summer period) in December, in addition to the two existing routes Paris-Briançon and Paris-Rodez/Latour-de-Carol/Cerbère. The opening of a Paris-Aurillac night line in December 2023 has also been announced. In addition, 130 million euros will be spent on renovating 122 cars by mid-2023 and on adapting the associated service facilities, including €100 million under the France Relance plan. In addition, the

In March 2022, a call for expressions of interest to support the launch of international night train lines was launched. The aforementioned study showed that international night trains could have a balanced financial situation, justifying that these trains should not be PSO contracted like the current night trains "Intercités" but should be open-access services. In order to facilitate the launch of these offers, start-up aid could be considered for the winners of this call for expressions of interest. This aid could be given as a priority to projects scheduled for 2023 and 2024 annual services, as well as to projects already launched. Should it be deemed necessary, this start-up aid will be notified to the European Commission in accordance with Article 108 of the Treaty on the Functioning of the European Union.

3.3 Conclusions

In order to reach the defined, primary aim, it is necessary to focus on both tasks, on enabling more services on our existing infrastructures as well as on thinking about even more services by building new infrastructure.

3.4 Way ahead

For the second half of 2022 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.

Priority action	Deliverable	Leader/rapporteur	Planning	Remarks
B.1, B.2 *Developing the network*	Continue the accompaniment of Eurolink, e.g. the presentation of the			

	preliminary market and modal shift analysis.			
	Develop a questionnaire for collecting visions and ideas on how to connect national infrastructure visions to one European rail infrastructure (regarding task 2).	MS		
	Share experiences and ideas regarding new services and regarding the implementation of new services as, e.g., the connection Amsterdam – Vienna.	MS, SMG		
B.3 *Upgrade European timetabling process (TTR)*	Monitor the common calendar for TTR implementation and its evolution as result of the EU-Rail FA1 and System Pillar	MS EC	12/2022	
	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		
	High-level evaluation of all pilots for the IRP's purposes	MS	Q1 – 2 / 2023	
	Conduct preliminary market analysis pertaining to integration of European rail passenger hubs in a network	MS or SMG	Q3 – 4 / 22	Coordination with Commission, sector Take into account work from the UNECE working group on passenger hubs
B.4	Questions and challenges that Member States face in	MS		

Removal of barriers for international services	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).			
	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		
	Consider Commission-, EU-RAIL, MS- and sector-initiated pilots / startup services in integral way in the process of network definition	MS	Q3 – 4 / 22	Network definition under subgroup B to resume in Q3-4.
B.5 *EC initiative 15 pilots*	Emphasize the importance of a uniform approach regarding track access charges, taking into account Commission, EU-Rail System Pillar and CER guidelines	MS		
B.6 *framework conditions for Night train services*	Take into account night trains as an integral part of network definition	MS		

4 C – EU Green Deal

4.1 Topic introduction

As discussed in the 2021 Progress Report[5], in order for the EU to achieve its environmental targets as laid down in the Green Deal, international railway passenger transportation can be boosted by making optimal use of the TEN-T network and its interoperability standards. The international rail passenger network should be based on international railway passenger hubs, which integrate international railway connections with other modes of public transport. In order to achieve the efficient operation of international passenger services on the TEN-T network, it is essential to facilitate the correct implementation of the EU rail acquis which targets technical, administrative and procedural harmonization.

In addition, a new European Partnership on Rail Research & Innovation (EU-Rail) has been established by Council Regulation (EU) 2021/2085 of 19 November 2021, whose programme is also supportive in its different aspects to match the present vision.

Finally, the railway and aviation sectors should work closely together and offer combined attractive services in a seamless way. For passengers, the conditions of such offers should be attractive, support full intermodality, and ensure travel continuity.

4.1.1 Barriers and possible solutions

In the 2021 report, 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

For rail to play a decisive role in decarbonising transport, efforts are needed to further develop the European railway network and to increase its standards, including to the benefit of long-distance passenger rail traffic. To this end, the Member States have defined together with the European Parliament a cross-border railway passenger infrastructure network of European importance, as central component of the trans-European transport network (TEN-T): the TEN-T core rail network for passengers. In this regard, the Member States will continue to conduct a constructive dialogue with the Commission and the European 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

[5] See annex and: Better rail connections for Europe's passengers | Publication | The Netherlands at International Organisations (permanentrepresentations.nl)

cohesion between regions, from the letter of intent signed by 21 Member States in support of the Trans Europe Express (TEE) 2.0 concept.

In addition, the subgroup discussed that a rail passenger (specific) governance structure/cooperation may promote and facilitate international rail passenger transport, as well as support technical measures for enhancing rail passenger specific interoperability. Although there is no common understanding as of yet how an international network should be organised, the Members States recognise that the current patchwork is hindering their ambition.

There is an insufficient focus on cross border impact of infrastructure conditions on international passenger services. In particular, this concerns factors defining capacity. 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 and regional services, taking into account expected demand as well as capacity requirements for 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. The most hindering issue in implementation of international connections poses the enormous amount of regulations and restrictions in terms of rolling stock and in terms of providing such communication.

4.2 Progress

In early 2022, subgroup C resumed the work through four workshops, focusing on the availability of rolling stock, the TEN-T network (infrastructure, high-speed infrastructure, bottleneck alleviation), ERTMS and air-rail cooperation initiatives. These topics also included overarching issues like capacity allocation, financing, technical interoperability, and network definition. On the following pages, discussions between the MS and between the MS and the Commission, taking into account sector input, are described.

After the 2021 report, subgroup C proceeded with identifying a first short list of action points:

- C.1 Explore optimising the conditions for financial support, in conjunction with C8
- C.8 Promote existing EU tools to fund upgrading of rolling stock
- C.2 (high speed) Infrastructure & bottleneck alleviation
- C.6 Rail-air action plan for combined air-rail journeys
- C.9 ERTMS deployment and international rail passenger transport In relation with D2

In its first meeting the subgroup C voiced that the issue log book initiative from the Commission should be extended to international rail passenger transport as well.
Remaining items not yet taken up by the subgroup include:

- C.3 Develop concept passenger hubs for better intermodality
- C.4 Enhance experience on governance structures for international passenger. Based on experience B2, B5
- C.5 EC initiative Rail connectivity index
- C.7 Issue Logbook extension to passenger

4.2.1 Rolling stock (C.1, C.8)

Availability of rolling stock depends on multiple factors, including finance, convincing business cases for services (including infrastructure capacity and reliable timetabling), and uniformity of technical specifications.

In case of absence of direct public financing, according to the sector specific support measures can be meaningful, such as small infrastructure investments or easing technical specifications. However, the main impediment appears to be access to loans (especially for open access operators). In addition, financing for second-hand and third-party-owned rolling stock falls short. The EIB supports the creation of new assets, as well as the modernisation and upgrading of existing materiel, but does not finance trading of existing assets, such as the purchase of second-hand rolling stock[6].
Separating rolling stock ownership from the operator reduces barriers to entry and promotes competition. The rolling stock leasing company (ROSCO) model, as well as the Norwegian national rolling stock pool model, can deliver investment in new rolling stock enabling the introduction of new cross-border services, providing flexibility to respond to service requirements, and managing vehicles throughout their life. However, this must be made in a market neutral way to answer to free market demands. Stronger provisions supporting the reuse of existing rolling stock fleets owned by incumbents can also stimulate competition and facilitate new services. This may include observing the reuse of goods as follows from Directive 2008/98/EC, art. 4 on waste hierarchy. In addition, limitations to acquiring second-hand rolling stock stemming from the REACH Regulation (1907/2006) concerning asbestos could be considered.

The European Commission has made its own proposal regarding rolling stock availability, revolving around the following points:

- seek with the EIB eligible pilot projects to acquire rolling stock under the Green Rail Investment Platform / InvestEU;
- prepare "go-everywhere" passenger rolling stock specifications, in cooperation with ERA (a TSI deliverable expected for 2022);
- clarify by 2023 the State aid rules on public funding of interoperable rolling stock for cross-border services in the revised Railway Guidelines;
- continue supporting the fitting and retrofitting of rail vehicles with ERTMS;
- promote the ratification of the Luxembourg Rail Protocol to the Cape Town Convention and support its implementation within the EU.

Furthermore, costs for internationally operating rolling stock could be reduced through streamlining of the vehicle authorization process, thereby improving access to loans. Importantly, this includes unique authorisation for passenger coaches by ERA, to be achieved through change request within the TSI package 2022. Where MS harmonize their technical standards to EU (TSI) standards, a significant reduction can be achieved (especially in cases where second-hand rolling stock has already been authorized for one or more of the relevant MS). Therefore, MS should proceed with cleaning up national technical rules (like proposed in the Issues Logbook) for vehicle authorisation.

[6] The EIB is the long term lending institution of the EU and provides financial support to investment in Europe and beyond. The purpose of such investment is to increase the productive capital stock of economies in support of sustainable long-term growth and welfare.

Also, ERA could be resourced for processing vehicle authorizations in the most efficient way. In this respect the ERA Management Board adopted in February 2022 the ERA strengthening plan.
Finally, technical uniformity also depends on clarity pertaining to the implementation of ERTMS and the time horizon thereof.

4.2.2 TEN-T network: (high-speed) infrastructure, bottleneck alleviation (C.2)

In the ongoing TEN-T revision process, increased emphasis is laid on international rail passenger transport. One of the pillars of the proposal is achieving a high-performance rail passenger network across the EU, fully interoperable, at high speed, and connecting urban nodes. Also, introduction of new minimum quality standards, such as a 160 km/h line speed requirement for passenger railway lines of the core and extended core network, are considered by the Commission. Wider inclusion of urban nodes into the (comprehensive) TEN-T network is envisaged, including bypasses, access points to the TEN-T, first and last mile connections between and to these access points, and the development of multimodal passenger hubs to facilitate first and last mile connections[7].

Effective timetabling for international services should take into account infrastructure development (including cross-border) and infrastructure planning. Where relevant, in conjunction with TEN-T completion, cross-border Operational Agreements between IMs relevant for (new) international passenger connections will logically cover coordination procedures in the areas of timetable and capacity allocation, simultaneous works at both sides of the cross-border section, emergency situation management and infrastructure (missing links) development.

4.2.3 Governance and capacity allocation

Timetabling is often optimised to attain the best possible use of infrastructure capacity. Also, due to nationally divergent implementation of Directive 2012/34/EU, different prioritization rules and train path allocation processes exist. Therefore, it can be difficult to accommodate additional (i.e. international) trains. For operators, it is difficult to get a clear picture of the allocation process in all the countries involved and of the possibility of being successful in applying for a path. International trains (especially night trains) in some cases have reduced priority in the rules of prioritization of certain traffic.

A step toward a harmonised coherent approach by MS pertaining to capacity allocation seems to be delivery of the TTR project. For TTR to be effective, it is acknowledged that the necessary legal framework for an implementation of TTR has to be established on an EU-level. Also, the possible advantage of streamlined, and coherent prioritization rules by and between MS could be examined. This could improve stability and predictability. Less bureaucracy in the capacity allocation process is recommended.

In particular cases, dedicated high-speed lines have the potential to free up capacity on conventional lines. In this way, traffic flows on conventional lines, including for rail freight flows, might be optimized. Therefore, development of the HSL network connecting major cities in Europe to avoid a patchwork is essential for success. This also applies for cooperation between the relevant national partners, such as between Czech high-speed railway initiative ZEI and SNCF Réseau and DB Netz,

[7] CER welcomed a prevailing minimum line speed of 160 km/h on the passenger lines of the core and the extended core network by 2040. Faster rail connections for passenger traffic will increase the competitiveness of rail. However, it was asserted that exemptions might be needed, such as on mixed networks and in conjunction with integrated regular interval timetables. It is also important to check that there is a market need for this requirement on a specific section of the network.

EIM argued that technical requirements such as a minimum speed of 160 km/h should be applied after an analysis that takes into consideration market needs, track capacity, topographical release and urban nodes in addition to other relevant factors that require high-speed adaptation.

improving planning, construction, development and maintenance of dedicated HSR systems. Finally, further steps in the implementation of common technical standards (TSIs) are vital.

4.2.4 Air-Rail journey initiatives (C.6)

Although the IRP primarily focuses on railway transport, discussions between the MS also explored the topic of combined air-rail journeys. Strengthening of air-rail connectivity for all core EU airports and EU airports above 4 million passengers has already been included as one of the goals of the Green Deal. The Multimodal Digital Mobility Services (MDMS) initiative, inclusion of air-rail connectivity in the TEN-T revision, and level playing field between different modes are closely aligned. The MS emphasize the coherence between this action point and the action points from subgroup A, especially action points A.2 and A.3. Feasible solutions for selling (international) tickets by third party vendors will be an essential enabler for air-rail combinations. This was also reflected by the EPF, who presented their views on passenger requirements concerning air-rail journey initiatives.

The air-rail connectivity is especially relevant for short- and mid-range flights, but requires increased rail frequencies with transfer guarantee, improved rail travel times, rail stops at international airports and combined air-rail service offers:

- Fair choice for a travel option (e.g. integrated booking platform, trip scanner)
- Continuous guidance through the journey (e.g. trip overview and status, notifications to travelers on timing and luggage, empowered staff)
- Coherent services on train and plane (e.g. ticket integration, luggage integration, food and entertainment, air-rail branding)
- Confident transfer between train and plane (e.g. transfer time choice, transfer details and video, air-rail fastlane and lounge)
- Multi-modal disruption care (e.g. automatic rebooking, air-rail helpline, empowered staff, emergency alternatives)

The subgroup considers it vital that MS facilitate the continuation and expansion of air-rail initiatives such as the German 'Rail&Fly', and the Dutch Air-Rail, KLM-Thalys, ÖBB 'Rail&Fly' and SNCF initiatives. Moreover, the subgroup welcomes the new EU Multimodal Passenger Mobility Forum which also addresses data standardization for intermodal IT connectivity to support multimodal ticketing and passenger services including air/rail. The Commission's MDMS initiative, planned for adoption at the end of 2022, is intended to help facilitate standardization of air-rail offers. Also, it will enable public-private platforms for this. The subgroup welcomes the new Multimodal Passenger Mobility Forum, which also addresses data standardization for intermodal IT connectivity, as a cooperation between the Commission and the MS. Further discussions could also take place in the context of the SMG of the IRP.

The Shift2Rail programme put forward activities related to door to door multimodal journey planning and ticketing system. In EU Rail, the activities will address the objective to develop a European 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. EU Rail can contribute to the platform with demonstrators and prototypes, e.g. on the development of an integrated platform demonstrator with different service providers on integrated ticketing in Europe.

4.2.5 ERTMS (C.9)

Although ERTMS implementation on most of the TEN-T network is foreseen by 2040, ample challenges remain. Even where legacy systems are phased out, many border crossings still involve different ERTMS levels as well as national operational values influencing the characteristics of

ERTMS. Several cross-border cooperation platforms have been launched, including between France and Italy, between the Scandinavian countries, between the Netherlands and Belgium and between the Rhine-Alpine countries.

In addition to infrastructure, new and existing rolling stock requires investment, which in turn should be enabled through transparency of data on ERTMS deployment and EU subsidies. One of the key success factors of the ERTMS is the interoperability of components both track sides and rolling stock. For financing, the current funding is insufficient for timely ERTMS implementation as set out in the TEN-T proposal. The sector urged for more flexibility in the application of the EU State Aid Guidelines concerning financing of ERTMS on board migration. Regarding transparency, the subgroup takes note of the stance taken by the sector that current databases (EC TEN-T, RINF) lack detail pertaining to future planning and regional lines, as well as uniformity. A sufficient level of cooperation between IMs and RUs should be brought into place in order to coordinate the parallel implementation of trackside and onboard systems, their timing and cross-border compatibility. For funding, the sector is in favor of a uniform European subsidy mechanism for on-board units, thus guaranteeing a level playing field between MS.

The sector suggests the EC ERTMS coordinator to conduct a feasibility study in terms of technology, resources and financial support needed for ERTMS deployment in accordance with the deadlines set by the EC for the TEN-T network. The first work plan provided an overview of costs related to ERTMS deployment, both on-board and trackside. Last year, the Commission finalised the Impact Assessment accompanying the TEN-T revision proposal (SWD(2021)472 final), as well as a dedicated study with a special focus on ERTMS deployment underpinning both the forthcoming TEN-T and CCS TSI revision. In 2023, the revision process of the current ERTMS European Deployment Plan (EDP) will be started in cooperation with the MS, in order to be ready following the adoption of the revised TEN-T.

4.3 Conclusions

The subgroup arrived at the following conclusions:

Rolling stock

- Where MS harmonize their technical standards to EU (TSI) standards, a significant cost reduction for rolling stock can be achieved;
- Especially in cases where second-hand rolling stock has already been authorized according to the TSI standards for one or more of the relevant MS.
- MS should clean up national technical rules (like proposed in the Issues Logbook) for vehicle authorisation.

Infrastructure network

- Effective timetabling for international services should be synchronized with infrastructure development (including cross-border) and infrastructure planning.
- Where relevant, cross-border Operational Agreements between IMs relevant for (new) international passenger connections will logically cover coordination procedures in the areas of timetable and capacity allocation, simultaneous works at both sides of the cross-border section and infrastructure (missing links) development.

Governance and capacity allocation

- A step toward a harmonised coherent approach by MS pertaining to capacity allocation seems to be delivery of the RNE Time Table Redesign (TTR) project.

- For TTR to be effective, the necessary legal framework for an implementation of TTR has to be established on an EU-level. Also, the possible advantage of streamlined, and coherent prioritization rules by and between MS could be examined.
- Development of the high-speed network connecting major cities in Europe to avoid a patchwork is essential for success.
- Further steps in the implementation of common technical standards (TSIs) are vital.

Air-rail journey initiatives

- The subgroup considers it vital that MS facilitate the continuation and expansion of air-rail initiatives such as the German 'Rail&Fly', the Dutch Air-Rail, KLM-Thalys pilot, ÖBB 'Rail&Fly' and SNCF initiatives.
- Moreover, the platform welcomes the new EU Multimodal Passenger Mobility Forum, which also addresses data standardization for intermodal IT connectivity to support multimodal ticketing and passenger services including air-rail.

ERTMS

- Many border crossings still involve different ERTMS levels as well as national operational values. Several cross-border cooperation platforms have been launched.
- New and existing rolling stock requires ERTMS investment.
- For financing, the current funding is insufficient for timely ERTMS implementation as set out in the TEN-T proposal.
- For transparency, the subgroup takes note of the stance taken by the sector that current databases (EC TEN-T, RINF) lack detail pertaining to future planning and regional lines, as well as uniformity.
- A sufficient level of cooperation between IMs and RUs should be brought into place in order to coordinate the parallel (and cross-border) implementation of trackside and on-board.

4.4 Actions for next year

Priority action	Deliverable	Leader	Planning	Remarks
C.1, C.8 *Explore optimising the conditions for financial support; Promote existing EU tools to fund upgrading of rolling stock*	Facilitate initiatives for improving access to (second hand) rolling stock, such as Rosco model and Norwegian pool model	All MS	12/2022	
	Follow progress EU / EIB financing of rolling stock.	MS, sector	Workshop and EIB presentation in 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	
	Clean up national technical rules (like proposed in the Issues Logbook) for vehicle authorisation	All MS	12/2022	
	Optimize functioning of ERA OSS in Vehicle Authorization	ERA		Ongoing
C.2 *(high speed) Infrastructure & bottleneck alleviation*	Synchronize the planning for new international services with infrastructure development and planning.	Railway undertakings or stakeholders or Member States		
	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		
C.4 *Governance and capacity allocation*	Develop harmonised procedures on capacity allocation for international passenger trains, based on European	All MS, EC, stakeholders		

	rules and requirements			
C.6 *Rail-air action plan for combined air-rail journeys*	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		
	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		
	European forum for air-rail cooperation / innovation / standardization.	Commission, MS, sector		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		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.

C.7 *Issue Logbook for international rail passenger transport*	Reinforce / Initiate a single European database providing all data required for RUs for the TEN-T network.	EC / ERA / RNE		
C.9 *ERTMS deployment and international rail passenger transport*	Build on and evaluate the existing uniform European subsidy mechanism for fitting existing rolling stock (in CEF2)	Commission, MS		

5 D – Regulatory framework

5.1 Topic introduction

An integrated 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 regular 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 should 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 (competent authorities, infrastructure managers and railway undertakings) is necessary.

The implementation of the European regulatory framework as the basis for all actions is not yet complete and the economic and technical framework conditions for rail passenger transport seem not sufficiently conducive to the development of new international services; the number of open access international services is marginal at EU level. 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. Reducing these barriers can lead to additional open access services.

The current legislation has not yet been completely implemented across Europe in the way intended to create market driven competition by open access rail services on a harmonized, single European rail net. 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 while awaiting the full effects of current legislation. Such measures should not counteract or obstruct the potential market initiatives within of current legislation.

5.1.1 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:

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,
4) The franchise model, in line with the PSO Regulation, on-the-track competition is foreseen, but within the framework and conditions set by the competent authority (similar to general

rules within a PSC approach and in line with Regulation 1370/2007), in order to assure that the service fits in the national transport policy.

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 thorough market analysis should be done before a PSO is considered. 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.

5.1.2 Barriers

In the 2021 report, the following barriers 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.

National contact points and need for cooperation

At present, 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.

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 parallel PSO services.

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.

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 and competent authorities in close cooperation and collaboration. .

Implementation of night trains

Night trains are particularly interesting for both national and international connections. However, it is generally difficult to make night train services profitable, as they entail high capital and maintenance costs, have few places per carriage, and places and seats in sleeping cars can only be sold once per journey. In addition, demand for night trains often varies over the year, and there are relatively high infrastructure costs due to the long distance. As most countries do not have PSO compensation schemes in place and investment costs are high, commercial viability of new services is difficult to achieve and at the moment only a few night train services throughout Europe are commercially viable.

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).

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.

Quality standards

High quality of services is 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. Passenger demand is 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 increases 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).

5.1.3 Recommendations from the 2021 report

Authorities on both sides of the border should cooperate

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, 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. If the service is not commercially viable on either side of the border, 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.

National contact points

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.

Cross-border services may require financial incentives
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).

Experience in operating cross border services
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.

Technical specifications
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.

Infrastructure capacity issues
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. The results of the TTR project and the need for coordinated prioritization rules should be taken into account.

Services - Rolling stock
One solution could be that MS 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
Standards set in contracts by different competent authorities concerning cross-border services should be coordinated beforehand, but only when this can be regarded as appropriate and when it is in relation to PSO/PSC.

5.2 Progress

After conclusion of the 2021 report, progress in subgroup D was made during meetings on 17 November and 7 December 2021, 20 January, 28 February, 4 April and 4 May 2022. Subjects addressed included:

- D.1 Harmonisation internal market, legal framework (PSO regulation)
- 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.

Finally, discussions focussed on the organization of cross-border (PSO) tenders. In the following sections, these items are elaborated on.

5.2.1 *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, focussing on the scope of assessments and legitimation 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 further description of the action, as well as the full manual, are included below.

5.2.2 *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.

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

5.2.3 *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.

Therefore, cross-border services should be integrated into national timetable systems. Important questions concern infrastructure capacity vs. "catalogue train paths". Current European legislation is based on free market demand rather than pre-arranged catalogue train paths.

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

5.2.4 *Increasing cooperation between MS (D.4)*

What is needed is that Member States cooperate more on (HSR and conventional) infrastructure planning and the facilitation of cross-border services or actions on infrastructure charges. Next to the sharing of best practice models, 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). 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 organisational 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.

MS	Region	Area of responsibility (relevant)	(Local) Competent Authority	Type	Organisational Unit	Contacts
					Sustainable Public Mobility	
BE	Belgium	rail transport, strategic issues, transport policy…	Federal Ministry of Transport	Federal ministry	DG Duurzame Mobiliteit en Spoorbeleid	info@mobilit.fgov.be
BE	Flanders	local and regional transport (road), traffic planning, …	Flemish governement	Regional Government	Departement Mobiliteit en Openbare Werken	stafdienst@mow.vlaanderen.be
BE	Walloon	local and regional transport (road), traffic planning, …	Walloon governement	Regional Government	L'autorithé Organisatrice du Transport	transportpublic.mobilite@spw.wallonie.be
LU		Reservation and booking of PAPs	Administraion des chemins de fer			oss.acf@etat.lu
LU		Cooperation with existing services	CFL			qualite@cfl.lu
LU		Construction of PAPs	CFL			GI.PlanificationExploitation@cfl.lu
BG	Bulgaria	rail and road passenger transport, strategic issues, transport policy	Ministry of Transport and Communications of the Republic of Bulgaria	National Ministry	Executive Agency Railway Administration; Executive Agency Road Transport Administration	mail@mtitc.government.bg; kabinet-iaja@iaja.bg; Foffice@iaja.bg; avto_a@rta.government.bg

Note: Inputs received by 31st of March

Figure 1. Example of the register of competent authorities

5.2.5 Organization of cross-border awards (Draft manual for consultation)

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 2 and include the following main items:

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.

5.3 Conclusions

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

Regarding D.4 (increase cooperation between MS), it was concluded that it is imperative that all MS proceed with the commissioning of dedicated National Contact Points, responsible for organizing public transport services to and from adjacent countries (this may also be done on a sub-state level, as shown in the example below). In order to assist in this process, the chairing countries prepared the register of competent (local) authorities on a national and regional level.

For topic D.2 (reduce economic barriers / cooperation on infrastructure charges as well as access barriers to rolling stock), it was assessed that any action on infrastructure charges should take into account its impact on cross border services. Therefore, a close cooperation between all railway stakeholders is necessary to enable the development and stability of cross border business cases.

5.4 Follow-up actions

Priority action	Deliverable	Leader	Planning	Remarks
D.1 *Harmonisation internal market, legal framework (PSO regulation)*	Evaluate the reception and use of the manual on the organization of cross-border awards	MS	12/2022	
D.3 *Integrate open access services in national networks*				
D.4 *Increase cooperation between MS*	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	This may also be done on a sub-state level, as shown in the example table
	Further elaborate and agree on draft manual for cross-border tenders	Chairing countries, all MS	12/2022	

Annex 1 – Sector Statement

Second Sector Stakeholder Statement on International Passenger Rail Services, May 2022

The European Rail Sector stakeholders[8] are determined that cross-border rail passenger services should become a more attractive option for longer-distance journeys. They reiterate the opinion expressed in the first report[9] from the Platform International Passenger Rail Transport that the customer experience is not always prioritised sufficiently.[10] They have subscribed to the vision of an enhanced customer experience described in the Platform's report, acknowledging that this starts when a journey is first planned and ends only when the whole journey is completed, including ones involving multiple operators and member states.

The European Rail Sector stakeholders can therefore only welcome the adoption by the European Commission of an ambitious Action Plan to boost long-distance and cross-border passenger rail.[11] In line with the sector statement adopted last year,[12] they support this initiative aimed at improving general conditions for, and the competitiveness of, rail with other modes of transport, ensuring transparency for passengers and creating a level playing field between Railway Undertakings and third-party vendors for selling tickets (international and national services) on fair, reasonable and non-discriminatory (FRAND) principles. All European Rail Sector stakeholders will cooperate actively in the preparation of the measures to be adopted in the roll-out of this action plan.

This second sector stakeholder statement therefore is intended to highlight the views of European Rail Sector stakeholders regarding certain issues that will be dealt with in the implementation of this Action plan.

Decisive action is needed around ticketing so that train tickets become easier to find and book, and more attractive to potential passengers. European Rail Sector stakeholders consider that this will be facilitated by enabling different distribution channels, including third-party vendors, websites, or apps.

Other railway undertakings and ticket vendors should be able to access the same products and services as the railway undertakings' own retail outlets. The stakeholders commit that the commercial arrangements underpinning those dealings would not be done in a way that restricts competition (including commissions) or are unenforceable in law, or in which a dominant stakeholder seeks otherwise to impose terms that would render the business of the party with who they are negotiating unsustainable. The stakeholders also commit that these arrangements will offer non-discriminatory services and terms of trade to all potential distributors (including in-house retail outlets) and *vice versa*. The stakeholders commit to work to establish a common understanding of this FRAND framework at the earliest opportunity. The FRAND terms should apply to access to rail contents (fares, schedules,

[8] Encompassing representatives of railway undertakings (CER/ALLRAIL/UIC/CIT) and infrastructure managers (EIM/CER/UIC), railway suppliers (UNIFE), passenger and consumers' organizations (EPF/BEUC), travel companies (EU Travel Tech/ECTAA) and distributors (EU Travel Tech/ALLRAIL).
[9] Platform International Rail Passenger Transport, Better rail connections for Europe's passengers. A common agenda: Progress report following the June 4th, 2020; Ministers declaration on international rail passengers transport
[10] *Ibid*, p41
[11] COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL Action plan to boost long distance and cross-border passenger rail. COM (2021) 810.
[12] Sector Stakeholder Statement on International Rail Passenger Services, March 2021

ancillary services, etc.) and real-time information to ensure a high level of customer experience regardless of the distribution channel.

The stakeholders acknowledge the importance of ensuring a high level of customer experience, including keeping passengers informed, regardless of the distribution channel.[13] This should be done, both before and during their journey, by providing real-time information. They commit to the implementation of the new Rail Passenger Rights Regulation. They are 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.

Passengers are often deterred from choosing to use rail for a journey combining more than one service for fear that they may be unable to complete it without additional penalty if one of the trains is delayed. 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.[14] Passengers should have the assurance of consistent support to reach their destination when their journey is disrupted, whichever the operators involved and whatever the relevant tickets held for the journey and that the passengers are informed about these arrangements when searching and booking their journey.

Tariff rules that vary between operators and member states – e.g., with regard to age groups, acceptance of rail passes, definition of items like luggage, necessary personal identification documents, etc. – sometimes make it more difficult to book international journeys. The stakeholders commit 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.

The stakeholders recognise the importance of regulatory intervention in tackling the above-mentioned issues [and stand ready to support actively the Commission ahead of the "Multimodal Digital Mobility Services" initiative,[15] notably within the dedicated expert group]. They also acknowledge the intentions highlighted in the CER *Ticketing Roadmap*[16] published in the wake of the Platform's first report. They look forward to its early roll-out by European railway undertakings in its entirety, noting the planned inclusion of first and last mile services and observing that implementation is the ultimate test of good intention. EU Travel Tech and ECTAA members have indicated their willingness to distribute the services generated by implementation of the *Ticketing Roadmap*, while EPF is contributing to the establishment of key performance indicators relevant to independent monitoring from a passenger-focussed perspective. Representatives of the Stakeholder Mirror Group have also welcomed the expressed intention of AllRail, another key stakeholder, to put forward other practical proposals to facilitate further improvements to the overall customer experience of cross-border journey-making.

For the development of more attractive and new concepts of international services, it is important that these are first based on sound market analysis that meet passengers' needs. In addition, an efficient use of the cross-border network is also needed to promote rail attractiveness among passengers, in line with the EC Action Plan objective to strengthen infrastructure for passenger rail.

To this purpose, rail infrastructure managers reiterate their commitments to work for seamless cross-border journeys by enhancing interoperability, coherent timetabling and capacity management, as well as completing missing links and removing bottlenecks.

Stakeholders also support specific strategic sector initiatives such as Eurolink and Timetabling and Capacity Redesign (TTR) allowing flexible planning of railway infrastructure capacity and increasing its quality, as stated, in the first Sector Statement. The sector wishes to see a sound legal basis for the implementation of TTR.

To achieve a proper functioning cross-border railway system an adequate allocation of funds is needed. Long-term investment planning and coordinated infrastructure maintenance and development are

[13] In relation to the distribution channel, it is important to refer to the previous joint position paper (Real time information for high customer services): https://eimrail.org/wp-content/uploads/2021/06/20210604-CER-EIM-UNIFE-EUTT-Position-Paper-Real-time-information.pdf) that highlights that IMs provide information to operators and to passengers in the stations.
[14] The AJC is presently a CIT confidential agreement signed between 15 railway undertakings, first set up in 2017. It provides that in the event of delay and missed connection a passenger will be allowed to travel onwards to their destination by a later train at no additional charge even if they hold separate tickets for each train and those trains are run by different operators, as long as those operators are signatories to the AJC.
[15] https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13133-Multimodal- digital-mobility-services_en
[16] www.cer.be/publicationslatest-publications/cer-ticketing-roadmap

indeed essential to provide high quality international rail passenger services all over Europe. The sector stakeholders support the Proposal for a TEN-T Regulation which is part of the Commission's Action Plan. It is a crucial Proposal to enable the transition to sustainable modes of transport such as rail and in achieving the objectives of the European Green Deal and Smart and Sustainable Mobility Strategy. A synchronised and harmonised deployment of ERTMS, on track and on board, will be crucial to deliver interoperability and good quality services of rail traffic. 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.

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.

Annex 2 – Draft Manual for Cross-border PSO Services

Manual for rail passenger transport cross-border PSO Services

FINAL DRAFT

May 2022

Project title:	Manual for rail passenger transport Cross-border PSO Services
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CONTRACTOR:	Institute of Traffic and Transport Ljubljana, founded by Slovenian Railways (Prometni institut Ljubljana d.o.o.)
Project number:	22-PRPI-04
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Project manager:	Director:
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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 draft Manual for rail passenger transport Cross-border PSO Services aims at making proposals for improving cooperation between concerned parties.

The Manual consists of 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,
- Harmonization 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 harmonization 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 was prepared within the Platform on International Rail Passenger Transport (IRP), established by European Ministers of Transport on June 2nd 2020. The Platform includes all signing EU Member States and third countries, the European Commission, the European Railway Agency, Shift2Rail, OTIF and rail sector organisations.

The Manual (developed in 2022) and distributed by e-mail to all public passenger transport authorities in European countries listed in Annex 3. The Manual can be further developed according to the experiences and comments of users. Amendments or changes will be included in new edition of the Manual, which will be published only by the IRP.

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 PPTA 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 join 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:

SOLUTION 1: Establishment of Consortium of involved PPTAs

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 operationalization 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:

- ✓ **Option 1a:** Involved PPTAs authorize 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.

SOLUTION 2: Delegation of power by the PPTAs to an existing joint legal entity

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 authorize the representative for the conclusion of the contract and define the responsible team to monitor implementation of delegated tasks.

SOLUTION 3: Cross-border railway network.

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: - 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.

PART 2: HARMONIZATION OF GENERAL RULES FOR RAILWAY PASSENGER TRANSPORT CROSS-BORDER PSO

When introducing a cross-border PSO, the involved PPTAs need to harmonize 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 harmonization (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 harmonized 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.

	*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.*
	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.*

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.

	*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.*

It is highly recommended for PPTAs to introduce consultative mechanisem regarding the introduction of proposed railway passenger transport cross-border PSO, which will include passengers and other relevant stakaholders in involved countries. 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:
	✓ **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 this 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 realized by selected operator.

It is highly recommended for PPTAs to introduce a consultative mechanisem on proposed railway passenger transport cross-border PSO offer (route(s), planed frequences of trains on this route(s), etc), which will include passengers and other relevant stakaholders in involved countries. The role and importance of this consultative mechanism can be further elaborated within concluded cooperation agreement.

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 national train path allocation processes, within which national timetables are formed. The following solutions are suggested:

	**SOLUTION 1:** Applicant for train paths for cross-border PSO is cross-border PSO contracting authority, 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.
	*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.)*
	According to Directive 2012/34 /EU (article 38, point 2), the cross-border PSO contracting authority can enter into a 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.

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.

The PPTAs need 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.

They must also agree on where and when the valid cross-border timetable will be publish. 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

○ Cross-border PSO operation

Involved PPTAs need to specify conditions and requirements for operation of railway passenger transport cross-border PSO, which will guaranty continual, punctual, quality and seamless passenger transport service on overall cross-border train path. To ensure this, the PPPTs 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 met 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:

	✓ **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.
	*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.*

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 harmonized requirements for the rolling stock and their maintenance.
	*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 rollingstock. The assessment report must be publicly available. When assessing the extent to which operators have effective access to rollingstock, 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 rollingstock 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.*

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 to determine:

- language that railway staff on cross-border train need to master 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 harmonize the requirements regarding cross-border ticket, which include the following:

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

	SOLUTION 1: Cross-border PSO operator.
	SOLUTION 2: Cross-border PSO contracting authority, established in accordance with chapter 1.3 of the Manual.

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

  - ticket issuer,
  - ticket number,
  - passenger travel distance (destination) or zone ID,
  - date and time of issue,
  - validity time,
  - price (definition of applicable VAT).

- **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.

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

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

- *Harmonization 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 (travel agencies, tobacconist's,…)

(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.

- **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 organization and 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). They also ned 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.

○ 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)).

	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.

(3) Determination of eligible costs for PSO operation in accordance with Regulation (EC) No 1370/2007 (article 4, point 1.(c)).

	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.

(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 realized 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.

	*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.*

○ 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, 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.

- **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:** Aspplicable 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 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/Compony 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.

!	*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:* - *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.* *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.

○ 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 an 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.

	*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.*

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)

	*In accordance with the Regulation (EC) No 1370/2007 (article 4, point 8.), the cross-border PSO award documentation need to include:* - *information on passenger demand on cross-border area,* - *cross-border ticket fares,* - *costs and revenues related to the public passenger transport covered by the PSO and* - *details of the infrastructure specifications relevant for the operation of the required vehicles or rolling stock on the cross-border PSO area.*

(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 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;

- 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**;

	*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:* - *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* - *in the case of outermost regions, if the extension is justified based on the particular geographical situation.* *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.*

○ 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
✓	**Option 3:** Sending documentation to all registered PSO operators in PSO cross-border countries

- **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 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.

Annex 3 – Register of Competent Authorities

MS	Region	Area of responsibility (relevant)	(Local) Competent Authority	Type	Organisational Unit	Contacts
AT	All regions	rail passenger transport, strategic issues, transport policy, …	BMK - Federal Ministy for Climate Action, Environment, Energy, Mobility, Innovation and Technology	Federal Ministry	DG II Mobility - DII/4 passenger transport	ii4@bmk.gv.at
AT	Burgenland	local and regional transport (rail, road), traffic planning, …	Amt der Burgenländischen Landesregierung	State Government	Abteilung 2 - Landesplanung, Gemeinden und Wirtschaft	post.a2@bgld.gv.at
AT	Carinthia	local and regional transport (rail, road), traffic planning, …	Amt der Kärntner Landesregierung	State Government	Abteilung 7 - Wirtschaft, Tourismus und Mobilität	abt7.post@ktn.gv.at
AT	Carinthia	local and regional transport (rail, road), traffic planning, …	VKG - Verkehrsverbund Kärnten GesmbH	Transport association (Regional level)		sekretariat@vkgmbh.at
AT	Lower Austria	local and regional transport (rail, road), traffic planning, …	Amt der Niederösterreichischen Landesregierung	State Government	Abteilung Raumordnung und Gesamtverkehrsangelegenheiten	post.ru7@noel.gv.at
AT	Salzburg	local and regional transport (rail, road), traffic planning, …	Amt der Salzburger Landesregierung	State Government	Abteilung 6 - Infrastruktur und Verkehr	landesbaudirektion@salzburg.gv.at
AT	Salzburg	local and regional transport (rail, road), traffic planning, …	Salzburger Verkehrsverbund GmbH	Transport association (Regional level)		office@salzburg-verkehr.at
AT	Styria	local and regional transport (rail, road), traffic planning, …	Amt der Steiermärkischen Landesregierung	State Government	Abteilung 16 - Verkehr und Landeshochbau	abteilung16@stmk.gv.at

MS	Region	Area of responsibility (relevant)	(Local) Competent Authority	Type	Organisational Unit	Contacts
AT	Styria	local and regional transport (rail, road), traffic planning, …	Verkehrsverbund Steiermark GmbH	Transport association (Regional level)		office@verbundlinie.at
AT	Tyrol	local and regional transport (rail, road), traffic planning, …	Amt der Tiroler Landesregierung	State Government	Abteilung Mobilitätsplanung	mobilitaetsplanung@tirol.gv.at
AT	Tyrol	local and regional transport (rail, road), traffic planning, …	Verkehrsverbund Tirol GesmbH	Transport association (Regional level)		info@vvt.at
AT	Upper Austria	local and regional transport (rail, road), traffic planning, …	Amt der Oberösterreichischen Landesregierung	State Government	Abteilung Gesamtverkehrsplanung und öffentlicher Verkehr	GVOEV.Post@ooe.gv.at
AT	Upper Austria	local and regional transport (rail, road), traffic planning, …	OÖ Verkehrsverbund-Organisations GmbH Nfg. & Co KG (OÖVG)	Transport association (Regional level)		office@ooevg.at
AT	Vienna	local and regional transport (rail, road), traffic planning, …	City of Vienna	Local/State Government	MA 18 - Stadtentwicklung und Stadtplanung	post@ma18.wien.gv.at
AT	Vienna Region (Vienna, Lower Austria, Burgenland)	local and regional transport (rail, road), traffic planning, …	Verkehrsverbund Ostregion GesmbH (VOR)	Transport association (Regional level)		office@vor.at
AT	Vorarlberg	local and regional transport (rail, road), traffic planning, …	Amt der Vorarlberger Landesregierung	State Government	Abteilung Allgemeine Wirtschaftsangelegenheiten	wirtschaft@vorarlberg.at
AT	Vorarlberg	local and regional transport (rail, road), traffic planning, …	Verkehrsverbund Vorarlberg GmbH	Transport association (Regional level)		info@vmobil.at
BE	All regions	rail transport, strategic issues, transport policy…	Federal Ministry of Transport	Federal ministry	DG Duurzame Mobiliteit en Spoorbeleid	info@mobilit.fgov.be
BE	Flanders	local and regional transport (road), traffic planning, …	Flemish governement	Regional Government	Departement Mobiliteit en Openbare Werken	stafdienst@mow.vlaanderen.be

MS	Region	Area of responsibility (relevant)	(Local) Competent Authority	Type	Organisational Unit	Contacts
BE	Walloon	local and regional transport (road), traffic planning, …	Walloon governement	Regional Government	L'autoritié Organisatrice du Transport	transportpublic.mobilite@spw.wallonie.be
BG	All regions	rail and road passenger transport, strategic issues, transport policy	Ministry of Transport and Communications of the Republic of Bulgaria	National Ministry	Executive Agency Railway Administration; Executive Agency Road Transport Administration	mail@mtitc.government.bg; kabinet-iaja@iaja.bg; Foffice@iaja.bg; avto_a@rta.government.bg
DE	All regions	operation of infrastructure	DB Netz AG	Infrastructure manager		dbnetz@deutschebahn.com
DE	All regions	rail regulation	Bundesnetzagentur	national regulatory body for the railway sector	Abteilung 7 Eisenbahnregulierung	info@bnetza.de
DE	All regions	Public national rail passenger transport	Bundesministerium für Digitales und Verkehr	National ministry		poststelle@bmdv.bund.de
DE	Baden-Württemberg	Public regional rail passenger transport	Land Baden-Württemberg	Regional ministry	Ministerium für Verkehr Baden-Württemberg	Poststelle@vm.bwl.de
DK	All regions	Transport: roads, vehicles, railways, rapid transit systems (e.g. the Copenhagen metro), fixed links, harbours, ferry operations, aviation, airports and postal services.	Ministry of Transport	national ministry		trm@trm.dk
ES	All regions	rail and road interregional passenger transport, transport policy and legislation	Ministry of Transportation, Mobility and Urban Agenda	State Government	General Secretariat of Transportation General Secretariat of Infraestructure	sec.transportes@mitma.es sec.infraestructuras@mitma.es
ES	Catalonia autonomous community	Regional transport	Generalitat de Catalunya	Regional Government	Vicepresidencia de Políticas Digitales y territorio	protecciodades.tes@gencat.cat

MS	Region	Area of responsibility (relevant)	(Local) Competent Authority	Type	Organisational Unit	Contacts
ES	Mallorca	Island transport	Gobern Illes Balears	Regional Government	Consejería de Movilidad y Vivenda	https://www.caib.es/govern/organigrama/area.do?coduo=3828370
ES	Valencia autonomous community	Regional transport	Generalitat Valenciana	Regional Government	Conselleria de Política Territorial, Obras Públicas y Movilidad	premsa_chopvt@gva.es
ES	Vasque Country autonomous community	Regional transport	Eusko Jaurlaritza - Gobierno Vasco	Regional Government	Departamento de Planificación Territorial, Vivienda y Transportes	https://www.euskadi.eus/atencion-por-internet/web01-a2zuzen/es/
HU	All regions	rail and road passenger transport, strategic issues, transport policy,	Ministry of Innovation and Technology, Hungary	national ministry	Department of Public Services (under the State Secretary for Transport Policy)	kozszolgaltatas@itm.gov.hu
HU	Budapest	local road transport/ urban transport	Centre for Budapest Transport	city administration competent authority		bkk@bkk.hu
HU	Budapest	local road transport/ urban transport	Municipality of Budapest	city administration competent authority		
IT	All regions	Public national transport	Ministry of sustainable infrastructures and mobility	national ministry	DG Rail Transport and Infrastructures	segreteria.dgtif@mit.gov.it
IT	All regions	Public local transport	Ministry of sustainable infrastructures and mobility	national ministry	DG for Local and Regional Public Transport and Sustainable Public Mobility	segr.tif@mit.gov.it
LU	All regions	Reservation and booking of PAPs	Administraion des chemins de fer			oss.acf@etat.lu
LU	All regions	Cooperation with existing services	CFL			qualite@cfl.lu

MS	Region	Area of responsibility (relevant)	(Local) Competent Authority	Type	Organisational Unit	Contacts
LU	All regions	Construction of PAPs	CFL			GI.PlanificationExploitation@cfl.lu
LV	All regions	rail and road passenger transport, strategic issues, transport policy,	Ministry of Transport Republic of Latvia	national ministry	Department of public transport; Rail division	satiksmes.ministrija@sam.gov.lv
LV	All regions	local and regional transport (rail, road), traffic planning, PSO award	VSIA AUTOTRANSPORTA DIREKCIJA	PSO authority		info@atd.lv
NL	All regions	rail and road passenger transport, strategic issues, transport policy,	Ministry of Infrastructure and Water Management of the Netherlands	National ministry	DG Mobility, Rail Transport Department	
NL	Drenthe	local and regional transport (rail, road), traffic planning, …	Provincie Drenthe	Regional government	Verkeer en Vervoer (Traffic and transport department)	post@drenthe.nl
NL	Gelderland	local and regional transport (rail, road), traffic planning, …	Provincie Gelderland	Regional government	Verkeer en Vervoer (Traffic and transport department)	post@gelderland.nl
NL	Groningen	local en regional transport (rail, road), traffic planning, …	Provincie Groningen	Regional government	Verkeer en Vervoer (Traffic and transport department)	info@provinciegroningen.nl
NL	Limburg	local and regional transport (rail, road), traffic planning, …	Provincie Limburg	Regional government	Cluster Mobiliteit	postbus@prvlimburg.nl
NL	Noord-Brabant	local and regional transport (rail, road), traffic planning, …	Provincie Noord-Brabant	Regional government	Verkeer en Vervoer (Traffic and transport department)	info@brabant.nl
NL	Overijssel	local and regional transport (rail, road), traffic planning, …	Provincie Overijssel	Regional government	Eenheid Ruimte en Bereikbaarheid	postbus@overijssel.nl
NL	Zeeland	local and regional transport (rail, road), traffic planning, …	Provincie Zeeland	Regional government	Programma Fysieke leefomgeving	provincie@zeeland.nl

MS	Region	Area of responsibility (relevant)	(Local) Competent Authority	Type	Organisational Unit	Contacts
NO	All regions	rail passenger transport, strategic issues, transport policy, …	Norwegian Railway Directorate (Jernbanedirektoratet)	National directorate		post@jernbanedirektoratet.no
PL	All regions	rail passenger transport, strategic issues, transport policy, PSC	Ministry of Infrastructure	National ministry	Railway Departament	sekretariatDTK@mi.gov.pl
PT	All regions	rail and road passenger transport, strategic issues, transport policy	Ministry of Infrastructure	national agency	The Portuguese Mobility and Transport Agency	gjc@imt-ip.pt
SE	All regions	Rail and road transport, strategic and operational issues, transport policy,	Ministry of Infrastructure	National ministry	Trafikverket	trafikverket@trafikverket.se
SE	Blekinge	Regional transport	Region Blekinge	Regional government		region@regionblekinge.se
SE	Dalarna	Regional transport	Region Dalarna	Regional government		region.dalarna@regiondalarna.se
SE	Gävleborg	Regional transport	Region Gävleborg	Regional government		rg@regiongavleborg.se
SE	Gotland	Regional transport	Region Gotland	Regional government		regiongotland@gotland.se
SE	Halland	Regional transport	Region Halland	Regional government		regionen@regionhalland.se
SE	Jämtland	Regional transport	Region Jämtland	Regional government		region@regionjh.se
SE	Jönköping	Regional transport	Region Jönköping	Regional government		regionen@rjl.se
SE	Kalmar län	Regional transport	Region Kalmar län	Regional government		region@regionkalmar.se
SE	Kronoberg	Regional transport	Region Kronoberg	Regional government		info@rkmbd.se

MS	Region	Area of responsibility (relevant)	(Local) Competent Authority	Type	Organisational Unit	Contacts
SE	Norrbotten	Regional transport	Region Norrbotten	Regional government		region@skane.se
SE	Örebro län	Regional transport	Region Örebro län	Regional government		
SE	Östergötland	Regional transport	Region Östergötland	Regional government		region@regionostergotland.se
SE	Skåne	Regional transport	Region Skåne	Regional government		kontakt@regionstockholm.se
SE	Sörmland	Regional transport	Region Sörmland	Regional government		kontaktcenter@regionsormland.se
SE	Stockholm	Regional transport	Region Stockholm	Regional government		
SE	Uppsala	Regional transport	Region Uppsala	Regional government		region.uppsala@regionuppsala.se
SE	Värmland	Regional transport	Region Värmland	Regional government		
SE	Västerbotten	Regional transport	Region Västerbotten	Regional government		regionen@regionvasterbotten.se
SE	Västernorrland	Regional transport	Region Västernorrland	Regional government		
SE	Västmanland	Regional transport	Region Västmanland	Regional government		region@regionvastmanland.se
SE	Västra Götaland	Regional transport	Region Västra Götaland	Regional government		
SI	All regions	rail and road passenger transport, strategic issues, transport policy,	Ministry of Infrastructure, Republic of Slovenia * (remarks: in adoption the law establishing a new company for integrated passenger transport)	national ministry	Inland Transport Directorate - rail, Sustainable Mobility and Transport Policy Directorate - road	gp.mzi@gov.si

MS	Region	Area of responsibility (relevant)	(Local) Competent Authority	Type	Organisational Unit	Contacts
SI	Municipality Ljubljana	local road transport / urban transport	City of Ljubljana : Public Holding Ljubljana, LPP-Ljubljanski potniški promet d.o.o.	city administration competent authority : public holding operator	Mestna uprava Ljubljana, LPP-Ljubljanski potniški promet d.o.o.	glavna.pisarna@ljubljana.si; mail@lpp.si
SI	Municipality Maribor	local road transport/ urban transport	City of Maribor : Marprom d.o.o.	city administration competent authority : public company operator	Mestna uprava Maribor, Marprom d.o.o.	mestna.obcina@maribor.si; info@marprom.si

Annex 4 – Integrated Progress Report 2021

Contents

1 Introduction and management summary

The Report of the Platform on International Rail Passenger Transport' (Annex 1) is the result of an initiative of the Ministries of Transport of the EU Member States, Switzerland and Norway. During the Transport Council on June 4, 2020[17] (Annex 2), these European countries embraced the initiative to foster and support the improvement of international rail passenger transport in connection with relevant stakeholders. The countries agreed to work together on a European agenda for international rail connections. As a result of the political declaration, a joint platform of Member States – all EU MS minus Cyprus and Malta + Norway and Switzerland, has been set up with the aim of further developing international rail passenger transport in the EU. The platform is supported by sector parties and the European Passenger Federation (EPF). It also involved representatives of the European Commission, European Union Agency for Railways, Shift2Rail. Panteia supported the MS drafting the report.

The platform presented its first report[18] (Annex 3) during the kick off event Year of Rail 29 March 2021 organized jointly by the Portuguese EU presidency and the European Commission. The presentation of the first report was accompanied by the publication of the sector statement showing a vision and commitments from sector and consumer organizations on international passengers rail[19] (Annex 4).

The Members of the platform invited European Commission, ERA, Shift2Rail and OTIF to consider the findings of this report in the conduct of their works, in particular in view of the intention of the European Commission to present in 2021 an action plan on international rail passengers. The smart and sustainable mobility strategy from the European Commission (December 2020) pointed out the intention to launch 15 pilots for new international rail passengers services. The European Commission has put forward a proposal to establish a new European Partnership on Rail Research & Innovation, whose programme should also be supportive in reaching the goals of this initiative.

The momentum is there for a European agenda on international rail passengers. This was shown by the high commitments and motivation of all partners to work in the platform that was set up. Against the background of the COVID-19 crisis affecting railway passenger transport and the economic recovery plans that are in preparation at European and national level there is a need for a new dynamic in developing international passengers services. This report is reflecting this momentum and is suggesting issues for the European agenda on international rail passengers.

1.1 Status of the document

The document is the result of the discussions among the Members of the Platform. The document contains the work of the platform International Rail Passengers that was formed following this declaration. The document provides an inventory of barriers where improvements are necessary for international railway passenger transport. The document also indicates shared scenario's and options on solving the existing barriers. Not all scenario's or solutions will fit or can be applied in all regions across Europe. Neither does the document include legal or financial obligations.

[17] See Political statement for coalition of the willing on development international rail passenger transport | Publication | The Netherlands at International Organisations (permanentrepresentations.nl)
[18] See Report of the Platform on International Rail Passenger Transport | Publication | The Netherlands at International Organisations (permanentrepresentations.nl)
19 See http://cer.be/publications/latest-publications/sector-stakeholder-statement-international-rail-passenger-services

1.2 Follow-up

Based on the barriers and (scenario's for) solutions described in this report further work is necessary in different areas. Therefore the platform International Rail will develop its workplan for follow-up in order to be able to report to Ministers on the results by mid-2022. The platform will monitor the implementation of the mentioned actions by the different stakeholders and support the actions where necessary and appropriate. When drafting its workplan the platform intends to synchronize its work with the sector partners that are working together in sector mirror group. Also the platform will continue to work closely with the European Commission, ERA, Shift2Rail and OTIF. Duplication of work needs to be avoided and close cooperation is vital for success.

Based on the report, the below topics will be considered for inclusion of the workplan.

Table 1-1 Indicative Workplan

No.[i]	***Actions***	***Remarks***
A.1	Further develop and maintain EU wide standards (static and dynamic EU 454/2011 and EU 2017/1926). Strive to include new types of transport modes (multimodal standards).	
A.2	Enforce or incentivize the implementation of the existing railway specific as well as multimodal regulatory frameworks to enable data exchange	
A.3	Integrate interoperable solutions promoted preferably as open-source tools. Develop and deploy API's in a harmonized and multimodal perspective	Concerns the further development of the TAP TSI and the further implementation of regulation (EU) 2017/1926 (MMTIS). The analysis of the usage of a standard such as EN 12896 (Public transport reference model Transmodel) is currently ongoing.
A.4	Provide feasible solutions for selling (international) tickets by third party vendors or MaaS service providers on fair, reasonable and non-discriminatory commercial principles (FRAND). Agree on timeline for implementation.	Taking into account ticket, assistance and information access for PRM. Also, OSDM should be taken into account
A.5	The development of common and interoperable standards for an open source based approach for ticket sales and distribution with cooperation between the countries, which is compatible with the fourth railway package. Promote the coordination between companies, and enhance coherence with TAP TSI	
A.6	Explore financial support for technical solutions, including for accessibility	
A.7	Investigate how standard software components or Software-as-a-Service solutions based on European standards could help to lower the costly implementation and customization effort of each railway undertakings	

A.8	Align mechanisms internalizing external costs and further frame conditions, which allow customers to take well informed decisions based on transparent and undistorted prices	
B.1	European regular interval timetable ("Europatakt, Eurolink, others")	Feasibility and implementation to be discussed between the States, IMs and Ru's
B.2	Developing TEE 2.0 connections based on steps LOI (i.a. market analysis)	
B.3	Upgrade European timetabling process (TTR)	
B.4	Removal of barriers for international services	In relation with C7
B.5	EC initiative 15 pilots for international rail passenger services	including participation in the Shift2Rail JU and its successor, implementation pilots/demonstration program for the period 2021-2027
B.6	Framework conditions for Night train network	
C.1	Explore optimising the conditions for financial support	
C.2	(high speed) Infrastructure & bottleneck alleviation	
C.3	Develop concept passenger hubs for better intermodality	
C.4	Enhance experience on governance structures for international passenger. Based on experience B2, B5	
C.5	EC initiative Rail connectivity index	
C.6	Rail-air action plan for combined air-rail journeys	
C.7	Issue Logbook extension to passenger	In relation with B4
C8	Promote existing EU tools to fund upgrading of rolling stock	In relation D2
C9	ERTMS deployment and international rail passenger transport	
D.1	Harmonisation internal market	
D.2	Reduce economic barriers / cooperation on infrastructure charges as well access barriers to rolling stock.	Rolling stock part in relation with C8
D.3	Integrate open access services in national network.	
D.4	Increase cooperation MS.	This may include and establishing "national contact points"

1.3 Summary of the results of the platform

The platform has focused on four areas, which are elaborated below.

Customer experience and digitalization

This topic contributes to an improvement of customer experience, which includes aspects such as ticketing, reliability, travel times, comfort, etc., by developing optimized framework conditions so that travelers are motivated to choose trains. In addition, attention was given to ways in which the digitalization of European railway sales and information systems can contribute to this aim. In order to achieve this, the primary focus was on international railway journeys, while actively including offers that are multimodal ready or compatible.

To speed up the developments, the efficient implementation of interoperability standards (TSIs TAP, PRM), and the promotion of unified data for standards of (ultimately multimodal) tickets are recommended. Also, enabling third-party vendors to sell international tickets and developing an open source based approach for ticket sales and distribution systems were identified as important steps. Moreover, financial support for technical solutions should be explored.

Network of international passenger services

The platform discussed with a focus on developing a European rail passenger network the concept of networked multi-country connections with interval clock-face timetables. An initial governmental impetus and the removal of barriers are expected to allow international rail passenger services to flourish. Furthermore, improving the enabling framework and developing an integrated capacity management and timetabling process could boost the competitiveness of railways in a common international approach. In addition the benefits of using already existing concepts with this scope were examined, where the TEE 2.0 concept was found as highly viable.

Nevertheless, it should be noted that consensus on the TEE 2.0 concept is yet to be achieved by some MS. A thorough market analysis and a solid market study should always be made prior new network initiatives.

EU Green Deal: infrastructure bottlenecks and interoperability issues upon TEN-T

The platform emphasized the importance of identifying infrastructure bottlenecks, missing links and interoperability issues (including pertaining to access for disabled persons) that, once alleviated, can substantially contribute to the growth of international rail passenger services. In addition, a rail passenger (specific) governance structure/cooperation is considered to promote and facilitate international rail passenger transport, as well as to support technical measures for enhancing rail passenger specific interoperability. Different cooperation models have been elaborated on in order to better understand their advantages and disadvantages. It was concluded that the best way to start is with a limited number of pilots to learn from.

Regulatory framework

It was concluded that services regulated through Public Service Obligation (PSO) can be used for ensuring regular connections between major international hubs, where open access services are not commercially feasible. In order to achieve effective regulation of international services through PSO, one of the most important challenges is the need for identifying competent authorities at MS level to organize such PSOs, which should complement national policy goals and quality standards.

Harmonization on the internal market is key for further developing international services. Essential is the integration of open access services in national networks. Cooperation between the MS will facilitate the increase and integration of the services.

Based on the work of the four subgroups, the platform has developed recommendations addressing all players and stakeholders, to support the revival of international rail passenger transport and to foster the modal shift towards rail as environmentally friendly alternative to other modes of transport, while boosting intermodal opportunities to provide comprehensive transport for the public. In addition, these recommendations were translated into a checklist for desired framework conditions, setting forth the goals identified and current status.

1.4 Recommendations

The platform has arrived at the following main recommendations:

1. In order to provide passengers with comprehensive access to international train journeys, the advantages of digitalisation and easy access to the rail system must be fully exploited.

2. Realizing the concept of an attractive European rail passenger network, with the regular train services necessary to attract travellers, the development of a European regular interval timetable ("Europatakt") is recommended, following the concept of TEE 2.0 connections. That said, MS should first establish the desired character of such as timetable, taking into account the specific transport needs of the connected MS. Also, a concise analysis of market demand should be included in the approach. An upgraded European timetabling process is necessary to facilitate the future European rail passenger network. In addition, the removal of barriers may be facilitated by elaborating and addressing an international rail passenger services Issues Logbook. Infrastructure Managers' initiatives will substantiate the network with initiatives like EuroLink, which goal is to develop a concept for an international high frequency transport plan for high-speed trains and fast long-distance IC connections with optimised transfers in hubs to connect the most important origin-destinations (ODs). Also, the platform takes good note of the initiative of the European Commission to promote 15 pilot international passenger rail services.

3. The European legal framework provides on a European level a Single European Railway Area with open markets for rail passenger services. Increasing the speed of the development of the Single European Railway Area will facilitate new services and decrease the operational, organisational and financial costs of the international services. Therefore it is recommended to further foster this development.

In addition to the high-level recommendations, the platform created a unique opportunity to discuss relevant topics between a wide range of sector stakeholders, the ministries responsible for transport, the European Commission and other public authorities, thereby creating valuable input for ongoing rail related discussions and projects in Europe. Beyond the conclusion of this report the platform has identified several topics for further discussion, including:

- Aspects of a European regular interval timetable for international rail passenger services under the name of "Europatakt"
- Support and coordination of international rail passenger connections in the framework of the TEE 2.0 concept, based on the LoI of the transport ministers, including night trains
- Promotion of EU tools to fund upgrading of rolling stock
- Development of a concept of international passenger hubs
- Concept of combined air-rail journeys, together with aviation sector representatives
- Compatibility of open access services with regulated national rail networks.

2 Summary topic reports

2.1 Summary A – Customer experience & digitalization

This report is built on a common vision which entails:

1. The customer shall have access to **simple, reliable and comprehensive online platforms** where he/she has access to the full set of timetables, prices, up-to-date and real-time information and can buy tickets for international rail transport services, including domestic (urban, regional, long-distance) and international rail services, and including connections by other means of local public transport services.
2. A greater acknowledgement of the **customer experience** among railway undertakings.
3. Inclusion of **legal, contractual, technical aspects**, and financial incentives in future action.

This subgroup's overarching goal is to contribute to an improvement of customer experience by developing optimized framework conditions to allow for smooth international journeys reaching from planning, booking, ticketing, the journey itself, real-time information to the aftersales support. The group's focus is on railway journeys, while actively including offers that are multimodal-ready or compatible. Four barriers to this goal have been identified, existing investment and measures meant to counter them, other possible approaches and the subgroup's recommendations are provided:

1. **Data Sharing** (caused by insufficient digitalization and implementation of existing legislation).
   Ongoing Measures: a range of legislation, guidelines, and initiatives.
   Possible approaches: standardize data formats and sharing across countries and implement regulation, make available static, dynamic, and real-time data and engineer EU-wide systems, consider the legal basis for responses to parties who do not fulfil obligations, standardize on and create converters from and to NeTEx/SIRI.
   Recommendations: Enforcement or incentives should promote data exchange and standardization, and promote multimodal-ready offers and compatible data standards;
2. **Ticket Selling:** (hampered by inadequate conditions for selling tickets, including for persons with reduced mobility, through third parties and different systems).
   Ongoing Measures: a range of legislation, guidelines, and initiatives
   Possible approaches: Find ticketing and distribution solutions, which fit the many different business models. In the absence of a market-led solution, consider mandatory requirements for transport operators to allow third party sales and clarification of liabilities. Stimulate cooperation between operators through incentives and legislation. Need for a system to assert the rights of disabled persons in all countries.
   Recommendations: stakeholders should assess how the railway sector can provide feasible solutions for selling international tickets by third party vendors or MaaS service providers, and develop an open source based approach with cooperation between the countries that is compatible with the fourth railway package.
3. **Resources** (these are scarce due to undertakers' focus on internal networks).
   Ongoing Measures: no initiatives are identified for this barrier;
   Possible approaches: EU funding and support for digitalization and standardization.
   Recommendations: use EU funding to speed up the introduction and implementation of technical solutions, and have the EC explore other avenues for support (including rail software).
4. **Issues concerning the level playing field with other modes** (VAT, and internalization Mechanisms for external costs.);
   Ongoing Measures: the Sustainable and Smart Mobility Strategy

Possible approaches: reconsider frame conditions, internalization of external costs across competing transport modes,
Recommendations: create price transparency for customers between all possible modes by reconsidering distorting frame conditions. Align external cost internationalization mechanisms and reconsider VAT and fuel taxation treatment across all competing transport modes.

A number of discussion points, such as the controversial topic of passenger rights, are still open, leaving space for further discussion and fine-tuning of the analysis and recommendations. The subgroup is aware that the recommendations formulated cover only part of the whole customer journey and that further action is needed to improve the overall customer experience to a large extent.

2.2 Summary B – A network of international passenger services

This subgroup is one of four (which operate in conjunction) set up by the Platform to identify action to increase the modal split of rail. The common vision defined by subgroup B entails the creation of:

1. **A network of nodes, corridors and multi-country connections** with interval clock-face timetables with trains provided by railway undertakings and adapted to market demands.
2. An initial **governmental impetus** and the removal of barriers and improvement of the enabling framework in order for the European rail passenger services to flourish.
3. An **integrated capacity management and timetabling** process which boosts the competitiveness of railways that is implemented in a common international approach.

Per each of these three topics a series of barriers, enabling actions, and processes are identified:

1. **A network of nodes, corridors and multi-country connections**
   Barriers: First, the technical standards framework conditions in Europe are not yet commonly implemented to a satisfactory level and pose technical, operational and economic challenges for cross-border passenger transport. Second, to ensure a strong network the viability of the connections defined should be analysed by thorough cost-benefits analyses. Other barriers such as related to rolling stock or high ticket prices are addressed in the other sub-group reports.
   Enabling actions: The development of the TransEuropExpress (TEE) 2.0 network based on the integration of timetables and further exploration and application of the EuroLink platform may help define the new network.
   Processes: Any network design should focus on market demands looking at the creation of border-crossing core connections and strong hubs with reliable transfer options and address the current interoperability in rolling stocks.
2. **Governance**
   Barriers: the current existence of a patchwork network with some bilateral initiatives and unequal customer service levels, without a jointly created legal and market framework.
   Enabling actions: Governance needs to develop additional mechanisms (e.g. coordination structure) between Ministries of Transport and IMs, and commercial ventures consisting of RUs.
   Processes: Within the different governance models Member States are encouraged to discuss bilaterally or trilaterally to optimize nodes and core connections and cross-border regional routes based on the TEN-T network. The RUs and other applicants would provide the necessary information and requirements (notwithstanding any commercial secrets of the RUs) to enrich the bilateral discussions and for organizing the multilateral connections.
3. **Capacity management and timetabling**

Barriers: National particularities, lack of common IT standards and processes, and diverging national legislation hinder the implementation of a common process. Moreover, it has to be evaluated whether the European legal framework incorporates measures to base capacity allocation on pre-planned clock face timetables and systematized train paths in a non-discriminatory way. Last, the programme for the necessary investments of states and IM (or other allocating bodies) as well as central European IT systems is missing digital capabilities.
Enabling actions: First, bilateral and multilateral coordination of capacity allocation on TEE 2.0 core and multi-country connections are needed. Second, member states and IMs are encouraged to develop and promote optimal network use and connections, such as demonstrated with EuroLink. TTR and digital capacity management (DCM) are part of the capacity defining digital infrastructure such as ERTMS. Third, it must be explored whether further development of European and national legislations around capacity management is necessary. This may include considering clock face and systematized timetables.

Some open and potentially controversial issues, such as planning parameters are mentioned are last.

2.3 Summary C – EU Green Deal

The goal of this subgroup is to identify infrastructure bottlenecks, missing links and interoperability issues that, once alleviated, can substantially contribute to the growth of international rail passenger services. The group's vision is to help boost international railway passenger transportation by promoting the optimal use of the TEN-T network and its operability standards.

The report argues a market analysis is necessary to define the interesting connections on which the platform could work and facilitate the cooperation between the concerned Member States, and that if rail is to play a decisive role in decarbonizing transport, efforts are needed to further develop the European railway network and to increase its standards, including to the benefit of long-distance passenger rail traffic.

The Member States will/should continue to conduct a constructive dialogue with the Commission and the European Coordinators in the context of the TEN-T policy, with a view to developing the right infrastructure to boost long-distance passenger transport (while taking into account the different stages at which infrastructures in different Member States (MS) find themselves). Ultimately, long-distance international railway passenger services should connect passenger hubs throughout Europe. Infrastructure Managers should, on the basis of market needs expressed by RUs and other reviews, offer attractive long-term capacity between railway hubs. Identification of international rail passenger hubs into or based on the revision of the TEN-T regulation (connected but in addition to the existing TEN TE concept major urban nodes), as well as for the expected outcomes of introducing such hubs on the TEN-T network, is seen as a promising approach.

In addition, a rail passenger (specific) governance structure/cooperation is considered to promote and facilitate international rail passenger transport, as well as implementing technical measures (TSIs and TEN-T standards) to elevate the identified barriers for enhancing rail passenger specific interoperability (achieved by close cooperation between neighbouring countries). Four cooperation models are elaborated on to understand better their advantages and disadvantages: (a) do nothing, (b) starting with some pilots, (c) integrated in Rail Freight Corridors (RFCs) or (d) separate governance. Several pros and cons are listed for each model:

- (A): Pros: No additional structure, budgets, efforts are needed. Cons: the current sub-optimal status quo is maintained, making a modal-shift to rail improbable.

- (B): Pros: MS can tailor-make governance structures per service, line or corridor. Pilots will be organised voluntarily, can be organised within existing structures, and will give employees experience in improving frameworks for international pass rail. Cons are that MS should take initiative themselves, and that a patchwork of different structures might arise over time.
- (C): Pros: this model promotes the transparency, effectiveness, efficiency of the rail system. Cons: RFCs' structures are complicated, and may not be compatible with passenger rail.
- (D): Pros: this model could contribute to transparency and the optimal allocation of resources. Cons: there is limited political support for this model or the associated legal reforms, and experience and clarity on how to organize is lacking, while the model demands more cooperation.

Subgroup C proposes to concentrate – at least as a first step to gain experience- on the light approach to governance as suggested in the option (b However, a series of key aspects, such as the expectations of the passengers, will need to be considered.

Additionally to the governance structure, solutions will have to be found for operability issues such as different phases of the implementation of ERTMS among different MS, especially in cross-border areas. As for capacity allocation, we urgently need a model of implementation which includes cross – border long-term capacity strategies and capacity models. Time Table Redesign is the common objective here. Another issue is that rolling stock is often unable to cross borders easily, but new developments (such as the new role of the ERA in implementing the 4th RP, or co-financing structures to finance rolling stock that crosses borders), could address this problem.

2.4 Summary D – Regulatory framework

In the near future, especially when the current COVID-crisis has subdued, a renewed customer interest in rail is expected. It is important to support and encourage within the current regulatory framework a revival and extension of European rail passenger services in cooperation with the railway sector stakeholders. This report lays out the vision and recommendations on such a framework, on the basis of the different structures and organizational models that are present in Member states' markets. The report discusses four models of organization for and cooperation in international services. It is stressed that open access market initiatives prevail and a related study currently executed by the European Commission is expected to provide additional details.. But if Open Access is not offering the desired services, authorities may consider to foster the required international passenger service via an extended cooperation.

If open access services do not meet market demand, beside other measures PSO regulated services could be used as last resort for ensuring regular connections between major international hubs. Open access could lead to some improvement of service quality and service frequency and a reduction of fares and the budgetary cost for Member States. Consequently, open access might increase the attractiveness and hence the modal share of rail. However, open access regimes may be less predictable, and can be withdrawn easily. One way governments can subvert the risk of a cancellation of services by commercial actors is by using the possibility of cancellation charges. The main challenge remains combining the advantages of open access with the national transport policies/requirements.

Several barriers for the organization of international rail passenger services and recommendations to address them are identified:

1. **Technical specifications** – the reduction of technical differences between countries could facilitate the seamless introduction of new services and improve the existing ones;

2. **National contact points and need for cooperation** –appointing national contact points in all MS's reduces the lack of clarity as to who is responsible for organizing public transport services; **Cross-border services may require some additional support** –In case there is no viable or integrated commercial service available despite sufficient market demand, Member States may provide support for international rail services in a suitable manner
3. **Organization of cross-border** services - if the market situation demonstrates that services cannot be provided commercially, additional cooperation may be necessary. However, cooperation should never be obligatory since States may have different policies on the provision of cross-border passenger rail services;
4. **Experience in operating cross-border services** - Authorities on both sides of the border need to deepen their contacts and exchange experience on cross-border services preferably on the basis of open access and according to market demand;
5. **Implementation of night trains** – reduction of TAC via a concerted reduction of mark-ups by IMs and, if needed, subsequent financial compensation by MS could be introduced - for long-distance international services, including night trains, taking into account the budgetary situation of MS;
6. **Infrastructure capacity issues** - the improvement and the enhancement of the current network and the use of alternative routes could help address congestion and sub-optimal timetabling;
7. **Rolling stock** - Access to rolling stock is sometimes impeded by the peculiarities of the rolling stock market and the financial circumstances;
8. **Quality standards** - International rail services should provide a quality standard in accordance with market demand and therefore passenger expectations.
9. **Air/Rail Cooperation -** Considering the need to extend intermodal cooperation in passenger transport with additional focus on further Air/Rail cooperation, taking up already existing cooperation between rail and aviation undertakings.

3 Annex 1 – Topic reports

3.1 A – Customer experience & digitalization

3.1.1 Introduction

The Platform has set up groups to identify actions for the European agenda in the following areas:

A. Customer experience, Digitalization.
B. Defining a network of International Passenger services, including market analysis, the usage of existing TEN-T corridors and matters of capacity allocation.
C. Green Deal. Identify infrastructure bottlenecks, missing links and interoperability issues that once alleviated can substantially contribute to the growth of international rail passenger services.
D. Regulatory framework, including financial support measures for international rail passenger services. Public Service Obligations, support measures for rolling stock, and framework conditions for infrastructure charging are key topics.

The working areas for the subgroups A, B, C and D should always be seen in conjunction. In particular, the goals of subgroup A are dependent on a better regulatory framework, covered by subgroup D. This especially concerns regulations setting minimum standards and practices for commercial cooperation in providing cross-border services.
In the following paragraphs, the findings and recommendations regarding customer experience and digitalization are set forth.

3.1.2 Vision

The subgroup has defined a common vision to be achieved through the identified measures and plans. The customer shall have access to simple, reliable and comprehensive online platforms where he/she has access to the full set of timetables, prices, up-to-date and real-time information and can buy tickets for international rail transport services, including domestic (urban, regional, long-distance) and international rail services.

Today's international railway standards are not yet fully implemented and therefore have not yet achieved real improvements for the customers. The subgroup recognizes the need for balance between the commercial freedom of railway undertakings and customer experience. Currently, the customer experience for international passenger rail is currently not prioritized sufficiently.

The subgroup's vision involves various fields and levels. Solutions might be necessary at the European, Member State, regional or railway sector level. They should not exclude multimodal solutions. Solutions could involve legal, contractual as well as technical aspects, and financial incentives, depending on which required services are not provided by the open access market.

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. A simplified customer journey is illustrated in the following picture.

An illustrative example of the current limitations for international railway passengers in the EU was given by an anonymous traveler (slightly adapted):
"Last year, I travelled by train from my home town in the Netherlands to Stresa on the shore of Lago Maggiore in North Italy. A few days later I continued from Stresa to Florence. I travelled back in one day from Florence to my hometown. I had to consult the websites of NS, DB, SBB, FS and Trainline to find the most suitable schedules and the best prices. I discovered that for me a global rail pass would be the best solution. To buy one, I needed yet another website. In the end I paid much less than for a plane ticket. But it took me hours to get the information and book my ticket."

When planning journeys, the customer wishes to get an overview of options, prices, timetables and conditions at one glance. Booking should be easy, without requiring different websites or applications to discover the full set of available services and fares. This is also true for issuing tickets, which should be compatible internationally. The experience during the journey includes many aspects: (real time) information at stations and on trains, ticket validation and inspection, assistance, quality, punctuality, comfort, accessibility, etc. Efficient customer-driven and need-based tracking and aftersales allow for customer support that does not end with the journey.
While this works relatively well for journeys booked through the vending system of a single transport company and within a given country, it is still a major challenge in international passenger rail transport due to the national and regional characteristics of the railway sector (as shown above). The problem may exist even on member state level when several operators are involved and no common tariff scheme / booking platform exists, without prejudice to the competition rules in force.

3.1.3 Delimitation

Subgroup A's focus and overarching goal is to contribute to an improvement of customer experience, exemplified by the simplified customer journey. Digitalization pertaining to the integral European railway network, has the potential to greatly contribute to this aim. However, the subgroup focuses only on digitalization that directly enhances customer experience. Digitalization of technical systems, such as the rail traffic management system (ERTMS), is not in the focus of this subgroup.

For the time being, the subgroup focuses on railway only, rather than multimodal journeys. Multi-modal ticketing schemes for international journeys under the commercial responsibility of railway undertakings exist in few cases based on COTIF/CIV (e.g. long distance coaches or ferries), but can be considered as market-niche. Subgroup A is fully aware of the importance of multimodal travel offers: The proposals made should not exclude multimodal offers, but rather be multimodal-ready or compatible. As the subgroup (and also the platform) consists mainly of stakeholders from the railway sector, and multimodal stakeholders are not sufficiently represented, the work will concentrate on those aspects which are in the reach of the former's competence. However, the general objective of the platform is to make international passenger rail transport more attractive. Subgroup A aims to contribute to this goal by developing optimized framework conditions for an

improved customer experience. This type of promotion of rail transport is also directly related to the multimodal approach: the customer-friendly combination of different modes of transport is intended to be an incentive for travelers to switch from private motorized transport or air travel to public transport, in particular passenger rail transport. It is therefore crucial for the further work of the platform that no exclusive railway solutions are developed and supported.

Thus, subgroup A's main goals are to identify the necessary measures / actions that are needed to enable railway companies and third parties to set up customer platforms in such way as to allow for smooth customer journeys. This includes the positive identification of the responsibilities for these objectives and the necessary measures to achieve them.

3.1.4 Barriers

The following barriers have been identified: data sharing, ticket selling, resources and issues concerning the level playing field with other modes. Regarding passenger rights, the identified barriers are controversial, which is why this aspect is addressed under Chapter 8 "Open Points".

Data Sharing
Data containing real time information, required for smooth international operations and passenger information, are often not available for sharing in practice. This is partly due to insufficient digitalization as well as not yet fully implemented data standardization in the rail sector. Compared to other sectors, such as air transportation and hotel bookings, the lack of a comprehensive solution is particularly striking. Furthermore, data exchange between domestically oriented ticketing systems of the railway undertakings, other operators and ticket vendors, presents untapped potential.

An obligation to make timetable data, fares and reference data available is already covered by EU Regulation[20], while new measures related to the provision of real time data by rail operators are envisaged in the new Recast of Passenger Rights Regulation. However, railway specific approaches currently being developed[21] could be an obstacle unless common and suitable interoperability and multimodal specifications, for Application Programming Interfaces and/or data formats, are agreed upon at EU level.

Even though several information systems are in place already, these are not yet all connected. Also, certain harmonized standards do already exist in specific sectors[22] but are not yet all implemented. Works are ongoing between standardisation bodies and organisations active in rail, aimed at finding a common interoperability ground. A presently restricted availability of real-time data and full digitalization which is still to be achieved[23], can be an actual barrier in practice.

With regard to customer information, common ticket format, inspection systems and handling of disruptions, the customer journey needs further improvements. These areas are not functioning properly across railway undertakings today.

Ticket selling
As the illustrative example at the beginning shows clearly, the process of buying international railway tickets is not consistently customer friendly at the moment. Initiatives to make the process easier, as well as to introduce new ways of distributing tickets through third parties still need to

[20] EU Regulation 454/2011 "Telematics applications for passenger services" TAP TSI and Commission Delegated Regulation (EU) 2017/1926 supplementing Directive 2010/40/EU with regard to the provision of EU-wide multimodal travel information services.
[21] OSDM/FSM
[22] CEN EN 12896("Transmodel"), CEN/TS 16614 (NeTEx) and EN 15531 ("SIRI")
[23] Obligations to share real time travel information are already in place, either under MMTIS (2017/1926), where this data needs to be shared via National Access Points, or under the recast PRR, where both infrastructure managers and railway undertakings will be obligated to share this information with ticket vendors (subject to the adoption by EU lawmakers).

be implemented[24]. This includes digital tickets and the possibility to sell or be part of mobility packages. Each railway undertaking should maintain a high degree of commercial freedom and risk, creating new product parameters.

The identified shortfalls are not primarily technical. Market forces on their own have not yet led to feasible and adequate solutions for selling international tickets (including cross-border and domestic segments). Obstacles remain to ticket distribution in the form of content restrictions and unfair commercial conditions. The main barrier is inadequate level-playing field conditions for the sale of tickets through third parties (like MaaS service providers) on fair, reasonable and non-discriminatory, commercial principles.. Finally, combined air-rail journeys, providing the customer with seamless multimodal ticketing across Europe and putting railways in the center of multimodal travelling, are not yet common and easy to book. This is not only true for air-rail, but for multimodal ticketing in general.

Resources
Railway undertakings are focusing primarily on their own domestic markets, stemming from their respective business models or due to other reasons. Hence, the resources deployed within railway operators for implementation of technical solutions for improving customer experience on international railway trips may be too sparse (IT, manpower, time, money). With the liberalization of the international rail passenger market in 2010, it was expected that more competition would ensue, and help direct the necessary resources for improving customer experience. However, this does not seem to have sufficed so far. Existing means are primarily used for improvements in the national context and actually allocated funds are often very scarce, especially for the implementation of digitalization.

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 compete on 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 States.

Ongoing Initiatives
Many initiatives are already ongoing. The investments made and measures taken should be taken fully into account before defining possible approaches and recommendations. Relevant initiatives enhancing the customer experience of international rail have been collected by the subgroup participants (table in appendix). A selected number of initiatives at the European level is presented according to the barriers they seek to overcome. A short description with the level they comprise (European, State or Railway Sector) and whether they are of legal, technical or commercial nature is included for each ongoing initiative.

<u>Data Sharing</u>

- *EU Regulation 454/2011 "Telematics applications for passenger services" TAP TSI*
  Timetable information and data, fare data and real-time information have to be made available by the railway undertakings according to TAP TSI. Thus, the standards for data exchange for the railway sector are available and mandatory within the EU, as attached as technical documents to the Regulation (EU) 454/2011 (TAP TSI). Also, mandatory instruments to share these data are available, e.g. through the TAP TSI Services Governance Association (TSGA). A change management process, operated by ERA, ensures the further development of the standards.

[24] Open Sales and Distribution Model (OSDM)

Classification: *European level / legal*

- *EU Delegated Regulation 2017/1926* "Multimodal travel information services*" MMTIS*
  MMTIS provides an enabling framework for travel and traffic information data exchange (including standards; possibly license agreements). It aims to enhance the development of travel information services which facilitate multimodal travel, by providing or publishing all information (making data accessible) in one source (NAP).

Classification: *European level / legal*

- *Programme Support Action (PSA) for the implementation of a Coordination mechanism to federate the National Access Points established under the ITS Directive (2010/40/EU)*
  This PSA will support enforcement of data sharing obligations and compliance with existing Delegated Regulation of the ITS Directive, one activity will look at strengthening and harmonizing enforcement for the different national access points.[25]

Classification: *European level / legal*

- *EU Directive 2019/1024: Open Data, Public Sector Information*
  Public Sector Information Directive and the upcoming data act. More real-time data, available via Application Programming Interfaces (APIs), can allow companies, especially startups, to develop innovative products and services, e.g. mobility apps. Publicly-funded research data is also being brought into the scope of the directive: – Member States are required to develop policies for open access to publicly funded research data while harmonized rules on re-use will be applied to all publicly-funded research data which is made accessible via repositories.
  This Directive is without prejudice to provisions laid down in Commission delegated regulations adopted under the ITS Directive.

Classification: *European level / legal*

- *DATA4PT*
  EU-funded project by a consortium coordinated by UITP with ITxPT, and 9 Member States. Data4PT's overall objective is to support the development of data exchange standards and models, to fulfil the needs of multimodal travel information service providers.

Classification: *European level / technical*

- *UIC Door-to-Door Guidelines (D2D)*
  Giving customers the possibility to choose a single travel solution, even if it involves multiple transport modes or is provided by various mobility operators, through a single user-friendly interface to plan, book and pay for the entire trip.[26]

Classifaction: *European level / technical*

- *UIC MERITS database (Multiple East-West Railways Integrated Timetable Storage)*
  A B2B sector initiative allowing the commercialization of integrated timetable data of many European and some non-European countries (Russia, Turkey, Belarus), comprising a few hundred railway undertakings, which are published twice a week.

Classification: Sector level / technical

- *Shift2Rail IP 4*

[25] https://ec.europa.eu/transport/content/2020-call-for-proposals-nap_en
[26] *https://uic.org/projects-99/article/door-to-door-415*

Shift2Rail R&I is carried out under this Horizon 2020 initiative and develops the necessary technology to complete the Single European Railway Area (SERA). Within its Innovation Pillar 4, specific projects overcome all the barriers to perform a seamless door to door travel across Europe, including ticket selling, data sharing and other multimodal travel obstacles.

Shift2Rail IP4 is developing the so called Interoperability Framework, which offers a pan European connection possibility. It goes far beyond the technical complexity of local multimodal connections which already exist and mainly based on bilateral agreements. This technology can accommodate any standard (FSM, TAP-TSI, SIRI-NETEX).

Classifaction: *European level / technical*

Ticket selling

- *DIRECTIVE (EU) 2016/2370*
  Member States may require railway undertakings operating domestic passenger services to participate in a common information and integrated ticketing scheme for the supply of tickets, through-tickets and reservations or give the power to competent authorities to establish such a scheme. If such a scheme is established, Member States shall ensure that it does not create market distortion or discriminate between railway undertakings and that it is managed by a public or private legal entity or an association of all railway undertakings operating passenger services.

  Classifaction: *European level / legal*

- *EU Regulation 454/2011 "Telematics applications for passenger services" TAP TSI*
  International tickets have to be issued by the railway undertakings and ticket vendors according to the TAP TSI. The standards for the ticketing for the rail sector are available and mandatory within EU. The standards are attached as legally binding technical documents. A change management process, operated by ERA, ensures the further development of the standards.

  Classification: *European level / legal*

- *DIRECTIVE (EU) 2012/34*
  Amended by the 4th railway package, the EC shall present a report by 31 December 2022 on the rail market developments on through-ticketing systems, assessing the need for action at European Union level and accompanied if necessary, by a legislative proposal.

  Classification: *European level / legal*

- *Electronic Ticketing Control Database (eTCD)*
  Under the UIC umbrella, a rail sector initiative develops a technical enabler for e-ticketing for all participating railway undertakings, including online ticket control services.

  Classification: *Sector level / technical*

- *Open Sales and Distribution Model (OSDM) / Full Service Model (FSM)*
  A B2B sector initiative (railways and ticket vendors) seeking an open IT- specification, enabling data exchange between companies, focuses on rail but considers multimodality. Aims at facilitating online distribution services to the benefit of the travelers and can contribute to offering door-to-door travel solutions. OSDM: Pan-European tariff distribution platform (replacement of PRIFIS/MERITS). An integration of OSDM specification in the Regulation (EU) 454/2011 (TAP TSI) is under discussion.

  Classification: *Sector level / technical*

- *New EU Regulation on Multimodal Travel:*

Alongside the revision of the ITS directive and in connection with the delegated regulation 2017/1926 (MMTIS) a new regulation proposal addressing market aspects / cooperation between operators and intermediaries re-selling tickets for multimodal travel is currently being examined by the EC.

Classification: *European level / legal*

- *Regulation (EU) 2019/1150 on promoting fairness and transparency for business users of online intermediation services*
  With the P2B Regulation, the European Union wants to prevent existing and new business models or offers from being blocked, unilaterally influenced or offering entrepreneurs or consumers from being disadvantaged in any way.

  Classification: *European level / legal*

- *Research and Innovation (R&I) Activities S2R IP4 / Crosscutting activities*
  Achieving a technical framework, customer experience applications and multimodal travel services. Enabling the technology to achieve a seamless travel across Europe, making railways more attractive.[27] IP4 technologies, offer the traveler the possibility to access from one interface access to all mobility services across Europe. Not only to book and buy a multimodal ticket from point A to B, but also offering all the services: trip-tracking, after sales, booking or buying ancillary services.

  Classification: *European level / technical*

- *Agreement concerning the Relationships between Transport Undertakings in respect of International Passenger Traffic by Rail (AIV)*
  Agreement on claims handling answering the questions of who handles the claim? Who pays? Who bears the cost? Who has to do something on the spot?

  Classification: *Sector level / legal (commercial)*

- *Boilerplate contracts for air-rail cooperation*
  Model of contracts for air and rail cooperation containing the clauses to be negotiated by the partners. Those boilerplate contracts are being used in the air-rail project of UIC.

  Classification: *Sector level / legal (commercial)*

- *Manual for International Rail Tickets (MIRT)) CIT/UIC and Electronic Ticket Control Database (ETCD)*
  Definition of the legal and functional specifications of tickets (paper and eTickets) and technical specification for paper tickets. There is a need to adopt technologies to exchange ticket control data between ticket issuers and railway undertakings. An integration of these documents in the Regulation (EU) 454/2011 (TAP TSI) is under discussion. The Electronic Ticket Control Database (ETCD) enables real-time control of passenger tickets.

  Classification: *Sector level / legal (commercial) / technical*

- *Agreement concerning Journey Continuation in respect of International Passenger Traffic by Rail (AJC) CIT/CER*
  Agreement permitting to the passenger to continue his/her journey with the next available train, if passenger missed his/her connection due to a delay/cancellation of the previous train, which is operated by another operator participating in the agreement.

  Classification: *Sector level / legal (commercial)*

[27] https://shift2rail.org/research-development/ip4/

Public Key Management website (PKMW), Flexible Content Barcode (FCB) and Universal Rail Ticket (URT) Initiatives driven by UIC on enhancing the technical aspects of ticketing (layout, security and reservations systems). An integration of these standards as mandatory specifications in the revised Regulation (EU) 454/2011 (TAP TSI) is already in preparation.

Classification: *Sector level / technical*

- *Air & Rail (UIC – IATA) MoU*
  Evaluating cooperation opportunities with airline operators, targeting an improvement in the interoperability between rail and air transport solutions

Classification: *Sector level / legal (commercial) / technical*

Resources

- No initiatives identified for this barrier.

Level Playing Field (frame conditions)

- *Sustainable and Smart Mobility Strategy*
  Anticipates additional legislative proposals for the protection of 'fair mobility' (defined as 'protection for passengers and their rights') and consideration of the options and benefits of going further with a multimodal framework for simplified, more consistent and harmonized passenger rights. The Working Plan of the Strategy also intends to cope with revision of the EU Emissions Trading System (ETS) with respect to maritime transport, aviation and CORSIA; revision of the Energy Taxation Directive; and review of VAT exemptions for international passenger transport which has a potential to create a more level playing field for all modes of international passenger transport.

Classification: *European level / legal*

3.1.5 Possible approaches

The aim of this chapter is to present an open and broad list of all conceivable solutions for tackling the described barriers in order to cover a wide range of possibilities. The individual solutions are not necessarily compatible with each other and may also contradict each other. The consensus reached by the subgroup on the solutions that are recommended, is shown in chapter 7 "Recommendations". The approaches are listed according to the main barriers they seek to tackle.

Generally speaking, solutions for products, passenger categories, pre-sale time limits, ticket distributions, refunds and refund processes, cancellations, and customer management at disruptions all need to be standardized.

Data sharing

- The requirements for publishing timetable data and tariffs is already organized at EU level, but is not yet fully implemented. The Member States have an important role in regulating how this data is made available on the NAP, to make sure that the data sets are compatible in the national profiles. As a minimum, a national registrar is needed, as well as regulation to ensure that international interoperability is included. An example is Norway, where public transport operators are required to publish data on the National Access Point, and to deliver data to an integration point that will verify data quality and ensure that codes are interoperable across data sets for timetables, real time information, fares and ticketing. A distinction is made between commercial data (not to share) and operational data (to share), using common systems also to ensure the interoperability of data. The Norwegian systems are made for both rail and public transport and are the main sales

systems for rail transport. Internally, both rail operators and other public transport are using the NeTEx and SIRI formats for exchanging data. Specific rail formats like TAP-TSI are used when exporting data for use by other countries. Norway shows that most passengers need intermodal information at domestic level. For that reason, the best way forward is to focus on standardizing NeTEx/SIRI for European rail in all regulations, or at least to enforce the acceptance and harmonization of such formats so that parties do not need to export data in two formats. Another solution could be by creating a shared NeTEx/SIRI to TAP-TSI converter centrally for information flow to the UIC.

- The Member States shall ensure the implementation of the Regulation (EU) 454/2011 (TAP TSI) by all railway undertakings, to share the timetable and tariff (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). Railway undertakings shall ensure that the tariff data are accurate and up-to-date. The shared data should include both the yearly planned timetable as basis, and the planned operative modifications, e.g. track closures for which they are responsible as sole or joint carrier, and that are related to transport services available for purchase by the public. A distinction is made between commercial data (not to share) and operational data (to share). This will guarantee access for all railway undertakings, third parties and public bodies, including sanction mechanisms towards parties not fulfilling the above mentioned obligations.
- Railway undertakings shall make available their real-time data for trip tracking purpose in order to provide accurate information to passengers about any disruption that may occur for applications such as interactive maps. It is important for passengers to gather update information of delays, connections and possible alternatives in real time. A domestic example is the intermodal travel planner developed by the 4 Belgian public transport operators (smartmobilityplanner.be). Real-time data from De Lijn, TEC, MIVB and NMBS are integrated in one interface, providing the best possible route to the customer. The data of this Smart Mobility Planner are accessible via an open source, multimodal web application. Other partners and transport modes could be integrated in future. All the data used in this application is free accessible and can be used to create other applications. In some countries the operators (like the NMBS in Belgium) started already sharing real time data for free to third parties (via a license agreement).
- EU-wide systems for the provision of real-time data on the basis of the regulation (EU) 1305/2014 are in place (e.g. TIS[28]), covering the real-time data for international journeys.
- The legal basis for responses to parties who do not fulfil obligations should be considered, this is taken into account by the new CEF PSA-project "federation of National Access Points". The obligation to share necessary data could be a part of every public service contract (PSC). As it is the sectors responsibility to share information, sanctions could also only be implemented on a contractual basis or in contracts, instead of public-law sanctions.
- Standards Converters (NeTEx / SIRI to TAP-TSI and vice versa): Standardize on NeTEx / SIRI for European rail in all regulations, or at least enforce the acceptance of such formats, so that parties do not need to export data in two formats. Create a bi-directional shared NeTEx / SIRI to TAP-TSI converter centrally for information flow between participating organisations, compliant with the Regulation (EU) 454/2011 (TAP TSI). Those solutions should be preferably available as open-source license.

Ticket selling

- Tariff information and ticket sales are complex areas. Many railway undertakings have fare cooperation agreements with regional PTAs, ensuring seamless travel between rail and other modes. In regional public transport there are many different business models, which need to be supported. Also with regard to ticket distribution (or other contract), some common standards are needed. Like there should be minimum standards for

[28] https://tis.rne.eu/

international tickets, with regard to products, price calculations, passenger categories, rules for refunds etc.

Norway decided to create a mandatory national online "store" for interoperable tickets, setting common standards for account/ID based ticketing. This is a result of Norway considering a decentralized model to be too vulnerable. Aspects of the Norwegian model could be considered at the European level as well. An account based system is developed, using NeTEx/Transmodel as a foundation, which will support different business models within the same solution. A generic way of describing and exchanging travel rights are needed, which should build on Transmodel as well.

- Mandatory requirements for transport operators to allow third party sales are considered necessary for success. However, regulations for commercial conditions must be developed, ensuring fairness and ensuring the income to the PTOs, to avoid higher prices or degraded offer. Many PTOs depend on PSOs, and don't have margin for sales commissions to third parties. Today it is required to have commercial agreements with each rail undertaking to be able to sell their tickets. This should be simplified.
- Member States should stimulate more cooperation between railway operators in order to offer tickets reciprocally and to share data on rail ticketing in such a way that international through tickets via standardized programs will become available and third party ticket vendors or MaaS service providers can sell these tickets, possibly as part of wider travel packages. This could be done through incentives. As it is understandable that railway undertakings might be reserved sharing data, taking into account the resources that have been invested and the potential risk to provide their information to data tech companies.
- In the absence of a market-led solution, any such regulation should secure a mandatory scheme for granting third parties access to passenger-relevant static and dynamic real-time data necessary for journey planning, ticketing, and journey completion, as well as to distribution contracts between railway undertakings and any ticket vendors (whether independent of or vertically integrated with railway undertakings), on fair, reasonable and non-discriminatory terms.
- The MS take note of a possible need for legal obligation to ensure a level playing field on a European level, should the market fail to provide an adequate solution. The principal object would be to ensure an interoperable, non-discriminatory and consistent level playing field, mitigating the risk of unfair contract terms given the likely contractual and material imbalance between railway undertakings and third-party ticket vendors, whether independent of, or related to, railway undertakings. An alternative could be to for the Member States to include in their PSO contracts certain conditions to show willingness to share a minimum of data with third parties. Fair, reasonable and non-discriminatory, commercial principles are still open for interpretation and should be further defined and the conditions to share data to third parties should be specified
- Also, clarification of liabilities is advised (e.g. in the case of a third-party vendor's supply to passenger of information about minimum connection time or in cases where a combined ticket involves the services of more than one RU). In theory, the TAP TSI defines already a framework under which conditions the data have to be shared between railway undertakings and ticket vendors. But the ticketing is linked to a distribution agreement between the railway undertakings and the other railway undertakings / ticket vendor. However, the responsibility here lies within the sector. The recast of Regulation 1371/2007 does not stipulate any such provision.
- Discussions regarding obligations concerning cross-border ticketing are connected with the ongoing revision of Regulation (EU) 2017/1926. The principle of voluntariness has not succeeded. This should be further coordinated on a European level.
- There is a need to modify the vendor systems in the direction of single contingent reservation systems. The reservation possibility should not be discriminative on mid-term between the different types of passengers especially on being inland or international travelers, and having different tickets authorizing them to make (seat or bed) reservation

(e.g. classic inland ticket, national global passes, NRT tariff, EURail/Interrail passes, special international offers, etc.)

- These issues are also addressed in the European Commission's Sustainable & Smart Mobility Strategy and we note that the case for a European solution is to be addressed under Article 13(a)2 of the Rail Governance Directive (2016/2370).

Resources

- The MS see a clear need for Union support for implementation of digitalization, consistent with the Smart & Sustainable Mobility Strategy, the New Consumer Agenda and Union support for R&I (e.g., through adequate funding of Transforming Europe's Rail System).
- The need for EU financial support is required, to speed up the introduction and implementation of technical solutions. If actors have already made investments in solutions that, due to broader international solutions, need to be adjusted, the need for financial help should be analyzed.
- Only few IT-suppliers are offering software solutions for rail distribution. This requires a costly implementation and customization effort on the IT-systems of the railway undertakings and ticket vendors. It should be discussed how standard software components or Software-as-a-Service solutions based on European standards could help.

Level playing field

- From the customers point of view it is most important to allow price transparency between all possible modes. Only then, the customer will be able to take well informed choices. Therefore, all frame conditions which currently distort the level playing field and thereby the price perception will have to be reconsidered.
- Internalization of external costs across competing transport modes: The alignment with the objectives of the Green Deal means that a lower VAT, fuel tax, carbon emission trading and employment condition treatment should be considered for green transport modes.
- Legal cf: airline legislation; demand access in contracts and franchises; include obligations in Covid support measures and demands. Compare solutions done in the airline market when these tickets became available. Competition law is no practical solution given the length and complexity of the procedure and legal motivation.

3.1.6 Recommendations

This chapter will outline the consensus of the subgroup on the possible approaches which should be recommended and are broadly supported. A concrete working plan must then be developed by the platform as a whole.

Data sharing

- The EU 454/2011 and EU 2017/1926 legislation point out standards for static and dynamic data. These standards are under development to create opportunities for innovation and development for EU services. This work should be coordinated to support further development and maintenance of EU wide standards, and should also include new types of transport modes. Market actors should strive to work towards multimodal standards for provision of data to 3-parties.
- The legal basis to enable the necessary data exchange is given in both railway specific as well as multimodal regulatory frameworks. The implementation of these obligations should be either enforced, and sanctions for actors not complying be considered, or implementation should be supported by incentives.
- The need for widely accepted data standards is acknowledged. Where possible, standards should be unified, or standards' converters should be considered and promoted preferably

as open-source tools. The actors should work towards multimodal ready/compatible data standards.
- Similarly, Application Programming Interfaces (API's) should be developed and deployed in a harmonized and multimodal perspective.

Ticket selling

- The European Commission, with the involvement of the railway sector and interested stakeholders, should assess how the railway sector can provide feasible solutions for selling international tickets by third party vendors or MaaS service providers on fair, reasonable and non-discriminatory commercial principles (FRAND). A timeline for the implementation should be agreed upon. Data for the purpose of enabling ticket sales made available to third-party ticket vendors must be as complete as the data provided to, or made available via, the railway undertaking's own retail/distribution channels through agreements based on FRAND principles.
- Develop a freely accessible approach, with cooperation between the countries, which is compatible with the fourth railway package. This approach should be used for both ticket sales and distribution. The standards of today open for railway undertaking individual solutions are not compatible with a good customer experience. Ticket formats and solutions for ticket inspection must be regulated to make them coherent between companies (like the format for ticket inspection which will be part of the revision of TAP TSI). The announced revision of the Delegated Regulation 2017/1926 in 2022 should promote the coordination between companies, point out further requirements and enhance coherence with TAP TSI (EU Regulation 454/2011).

Resources

- The need for EU financial support is required, to speed up the introduction and implementation of technical solutions. If actors have already made investments in solutions that, due to broader international solutions, need to be adjusted, the need for financial help should be analyzed.
- Invite the European Commission to explore, on a European level, further possibilities for support, consistent with the Sustainable and Smart Mobility Strategy, New Consumer Agenda, the Connecting Europe Facility (CEF), the Recovery and Resilience Fund and Union support for research and innovation should be explored.

- Only few IT-suppliers are offering software solutions for rail distribution. This requires a costly implementation and customization effort on the IT-systems of the railway undertakings and ticket vendors. It should be discussed how standard software components or Software-as-a-Service solutions based on European standards could help.

Level playing field

- From the customer's point of view, it is most important to allow price transparency between all possible modes. Only then the customer will be able to take well informed choices. Therefore, all frame conditions which currently distort the level playing field and thereby the price perception will have to be reconsidered.
- Align the mechanisms for the internalization of external costs across all competing transport modes. Reconsider the VAT and fuel taxation treatment across all competing transport modes. in order to enable customers to choose to greener modes of transport.

3.1.7 Open points

A number of discussion points are identified, leaving space for further discussion and fine-tuning of the analysis and recommendations. These are listed below and show that there is still more need for action.

Passenger rights

As the topic of passenger rights was discussed controversially, furthermore the Recast of Regulation EC No 1371/2007 on rail passengers' rights and obligations has recently been concluded and is about to be approved formally by the European Parliament (status as of 19 March 2021). Therefore, the barriers, possible approaches and recommendations were moved to the present chapter "open questions". The questions and approaches can be taken up again at a later stage by the Platform.

It is widely acknowledged that further improvements on passenger rights are needed[29]. Too many customers still experience disruptions without remedial actions. The recasting of the regulation on rail passengers' rights will ensure better protection and encourage the development of rail transport[30] according to the options chosen during its implementation. Extra efforts are required for implementing the new regulation. Agreements ensuring proper passenger protection could be a solution in the event of missed connection or cancellation, disturbances, rerouting.

Assistance for persons with disabilities and persons with reduced mobility during international journeys is a further barrier which has to be addressed. Currently, for persons with disabilities and reduced mobility it is particularly difficult to get assistance during their journeys, as single points of contact are missing. Most of the countries have One-Stop-Shops (OSS) assisting persons with reduced mobility. The interface specification of systems is specified in the regulation (EU) No 454/2011. However, systematic cooperation between these existing organizations is still missing. An approach would be that common rules for collaboration and contact lists for booking services that are used by persons with reduced mobility should be established on a EU level. Furthermore, a need to increase collaboration with those Member States who do not already participate in the voluntary work around these EU-services (PRM-ABT) has been identified.

Extra efforts are required for implementing and enforcing the Regulation (EC) No 1926 /2007 in order to enhance protection for passengers and to encourage an increase in railway travel. This should be assessed for the likely impact of eventual judicial clarification of aspects of the proposed recast Rail Passenger Rights Regulation.

Additional open points

- Can we apply systems (ticket platforms, information platforms, etc.) which are able to handle new entrant operators easily?
- What is the perspective future of the EURail/InterRail system as the best practice of current European international ticketing (partly reflecting to the illustrative example on page 2)? Can it be a basis of certain integrated flat rate systems and subject of further developments, or will it be one system besides others with a need of embedding into some new integrated system?
- New technical distribution capabilities only based on mobile phones as ticket media such as the check-in – check-out ticketing increase the need to allow the distribution of the full set of available products. Otherwise the passenger cannot trust the ticket issuer, that he has always a valid ticket for his trip.
- As it is developed in air transport, passengers choosing train as a mode of international transport should be able to plan the whole journey using a platform where a passenger can buy, rebook and return tickets and if necessary issue hotel orders. Widening the

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[30] See Position of the Council at first reading with a view to the adoption of a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on rail passengers' rights and obligations (recast) - Adopted by the Council on 25 January 2021

accessibility of international tickets to create door-to door multimodal solutions for passengers, can be expected to increase demand and increase occupation rates and therefore ultimately be beneficial for all parties, including railway undertakings.

Open points from the Sector Mirror Group

A number of discussion points were identified which the Sector Mirror Group acknowledged as significant but on which it did not prove possible to achieve consensus in the time available, leaving space for further discussion and fine-tuning of the analysis and recommendations. These are listed below and show that there is still more need for action.

Data sharing

BEUC, EPF and others argue that the cross-border development of rail will necessarily involve a user-centric approach. To this end, enabling consumers/passengers to easily plan their trips through a single transaction by purchasing, for example, a single integrated ticket for connecting trains would be a real step forward for European passengers. However, this can only be achieved if the different stakeholders, such as rail operators and ticket vendors, have access to the static and dynamic data essential to enable combined bookings with different operators. Currently, it is very complicated, if not impossible for European passengers to book international rail tickets in a single, simple, and straightforward way. This barrier greatly hinders the attractiveness and development of rail in general, and cross-border services in particular, to the detriment of passengers. In practice, this data is often not available to be shared and data exchange between the national ticket offices of railway companies, other operators and ticket vendors is lacking. We believe it is due to the lack of sufficient legal obligations to share static and dynamic data. The market initiatives currently underway have proven to be insufficient and do not meet the needs necessary to promote rail and enable efficient distribution by third party ticket vendors. In addition, the existing legal bases requiring data sharing are incomplete, partially implemented and poorly enforced. Thus, it is essential that additional legislative measures be proposed to oblige rail operators to share a minimum set of static and real-time/dynamic data.

Passenger rights

BEUC, EPF and others point out that when passengers use the train, they want to be protected for their entire trip, even when their trips include different legs with different railway operators. Unfortunately, this is not currently the case. The availability of "through-tickets", protecting travelers for their entire trip is extremely limited because rail operators tend to sell tickets for specific segments of a trip. As a result, passengers are very often not entitled to re-routing, assistance or compensation in the event of disruption to the journey. These shortcomings are a barrier to rail's attractiveness, as passengers might consider the train unreliable and instead remain on traditional, more polluting means of transport. Although we recognize certain improvements in the recast of Regulation (EC) No. 1371/2007, which provides that passengers who purchase combined tickets sold by a railway undertaking or its 100%-owned subsidiaries will benefit from travelers rights for their entire journey, we consider this to be insufficient. The very limited scope of application will de facto exclude many connecting tickets (i.e., a combined Lyon>Paris - Paris>Brussels journey operated by SNCF and Thalys respectively, will not be covered). This lack of obligation to offer through tickets and this limited scope is all the more prejudicial in the case of cross-border railway services, which by their very nature usually involve different operators. In this situation, simple incentives to offer through tickets as defined in the reviewed Regulation are not sufficient. Market led solutions have proven to be limited and inefficient and voluntary through ticketing agreements between railway undertakings tend to be disappear. New legislative proposals to make mandatory offers of through tickets, including for international travel, should be considered.

3.2 B – Developing a network and implementing / governing it

3.2.1 Definitions

Core Connection
Core Connections are regular connections between adjacent urban nodes of the core network, which would create a backbone of international passenger network. One example is the line from Prague to Berlin (120 minutes interval) that constitutes the core connection between two hubs with easy connections to various destinations.

EuroLink
EuroLink is a bottom-up initiative from Infrastructure Managers (IMs) Infrabel, DB Netz and ProRail. Meanwhile SNCF Réseau, ÖBB Infra, S práva Železnic, Eurotunnel ADIF, NetworkRail and HS1 have joined EuroLink as well. Talks with BaneNOR, Banedanmark and ACF are ongoing at this moment. The goal is to develop a concept for an international high frequency transport plan for high speed trains and fast long-distance IC connections with optimised transfers in hubs to connect the most important origin-destinations (ODs). A lot of the proposed TEE 2.0 lines could be configured by using the building blocks offered by the EuroLink concept. Because EuroLink is designing timetable concepts 5-10-20 years into the future for this purpose, it is the complement to the 0-5 year's horizon of TTR for formal capacity allocation. EuroLink and RNE are in contact to align both projects.

EuroLink's focus is not only on International Passenger Traffic. A reconfiguration of international transport plans for passenger traffic will inevitably have consequences on the transport plans for freight traffic and domestic traffic. This will also be in scope in the future, to offer both opportunities and possible solutions to bottlenecks (in logistics or infrastructure) as well as an optimisation study for the nodes where national and international transport plans meet. Both passenger transport plans have to serve as a feeder/outflow for different passenger fluxes.

Hubs and nodes
Hubs should be located at the centre of major cities or metropolitan areas, ideally with good intermodal integration with local rail services and other modes of transport, promoting easy accessibility (including PRM) to the whole city or metropolitan area. The concept of passenger hubs builds on the urban nodes but adds additional requirements to facilitate international rail passenger transport. On the other hand nodes in the rail network are connection points were transfers can be made to another core connection.

TEE 2.0
The concept TEE 2.0 is a strategy for strengthening entrepreneurial international passenger rail services with high-speed and overnight rail services. The term "Trans Europ Express – TEE", which was coined by Western European railway undertakings between 1957 and 1995 for particularly high-quality international trains, could be used to designate already existing services that are now being interconnected. The TEE has been one of the first symbols of European integration and it is still one of the strongest brands in international rail travel. In contrast to the original TEE which offered only a few first class trains per day targeted primarily at business travellers, the concept of the new TransEuropExpress or TEE 2.0 will offer connections at frequent intervals for all customers. TEE 2.0 will interlink the individual optimized national systems to form a range of European services designed to reduce international journey times. The concept is based on the current market-oriented framework conditions of the fourth railway package but calls for a more active participation of the states and all stakeholders according to their respective role. The concept TEE 2.0 consists of three components: Firstly, intensified bi- and multinational cooperation to coordinate (clock-face) timetables for a border-crossing network with more connections between hubs and nodes ("Europatakt"). Secondly, *TEE 2.0 trains* offering direct

connections on longer routes integrating existing national train runs. And thirdly, a network of night train services.

TTR

The 'Timetabling and Capacity Redesign' (TTR) project of RailNetEurope (RNE), Forum Train Europe (FTE) and European Rail Freight Association (ERFA) aims at an improvement of the current timetabling and capacity management process including the trans-national coordination of awarding capacity and construction of the timetables. RNE aims for an implementation for the timetable of 2025. Planning capacities in advance provides adequate products to the market, where the needs vary from flexible products booked shortly before the train run for a volatile market (particularly freight traffic) to detailed products available long before the timetable changes (particularly passenger traffic). Also, keeping the rail infrastructure in good condition is necessary to ensure a good performance. However, planning and coordinating construction works and other Temporary Capacity Restrictions (TCRs) is needed to avoid destabilization of capacity products before and after their allocation and thus make timetables more reliable. In TTR, e. g. passenger services get an earlier path allocation than today (draft offer six months and a half before timetable change).

3.2.2 Topic introduction

The interest of passengers in climate-friendly rail services, including for longer distances, has strongly increased in recent years. People appreciate the opportunity of making use of their journey time in digitally well-equipped trains, for instance for working, or of reaching their destination overnight. In particular, the years before the corona crisis has shown that many people would like to use attractive, i.e. speedy through-services for intra-European journeys between the major cities.

Today, international passenger services are limited by heterogeneous national framework conditions, a certain lack of market access and insufficient implementation & 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 which are attractive to them and offered at a competitive price. Improving international rail passenger transport requires, among other actions, creating the right conditions for the development of a viable and resilient network of such services, taking into account market demands and potential, matters of international capacity allocation, available infrastructures (e. g. existing TEN-T corridors) and market analysis. What would be the features of a European network of services that covers all major passenger nodes and systematically covers all major international traffic flows? What would be the most attractive multi-country connections? What are the most attractive cross-border regional connections? Where and how is the real customer driven market demand?

Mobility, already existing operations, expected demand, technical, operational and economic viability, investment needs in relation to infrastructure, signalling, IT developing (ie ticketing, 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. Studies that have already been undertaken in this domain should be taken notion of when making this analysis.[31] Furthermore, the development of these international rail services should be accompanied by interoperable infrastructures which offer robust services and have a high standard throughout.

[31] See for example a joint study by various European Councils for Environment and infrastructure (July 2020), accessible via: https://en.rli.nl/publications/2020/advice/improving-international-passenger-rail

In this report, the Member States (MS) set forth their preliminary findings with regard to supporting the development of a network of international rail passenger services. The MS centred their works regarding the definition of a network on the concept of the TransEuropExpress (TEE) 2.0 network, which, integrates nodes and hubs through multi-country connections according to market demands. TEE 2.0 foresees the coordination of (inter-)national timetables and is to be enhanced by corresponding cross-border regional connections. Infrastructure Managers initiatives will substantiate the network with initiatives like EuroLink or TTR.

3.2.3 Overall vision

A network of nodes, corridors and multi-country connections is envisaged with interval clock-face timetables ("Europatakt") with trains provided by railway undertakings and adapted to market demands offering a combination of both several options for longer journeys without the need of changing trains or with well-timed correspondences per day and high-frequency connections with a limited number of quality changeovers. The concept takes into account the common market approach for an open access European passenger market, catering for an effective and competitive rail market and allowing all RUs to benefit from this approach. The concept makes rail travel more attractive to passengers and allows a more efficient process for international capacity-planning.

"More frequent – faster – everywhere": integrated clock-face timetable will establish a new, transparent principle of infrastructure planning and capacity management at an increasing number of railway networks in Europe. For all types of traffic, the approach of reserved capacity will help to ensure good connections in passenger traffic and reliable paths in goods traffic. The basis might be a clock-face system with trains running every two hours, hourly or even in a higher frequency structure according to market demand. Infrastructure plans derived from the timetable will significantly enhance the capacity of the overall network and can appreciably increase the nationwide system speed. Numerous European countries already have a network of highly frequent clock-face long-distance trains. However, if a clock-face timetable is applied too rigorously it might be both capacity consuming and negatively impact new market players' possibilities to gain access to a competitive timetable and compete on a level playing field when it comes to speed etc. Therefore, the timetabling and capacity strategy has to be designed in a way to incorporate enough flexibility to cater for the different users of the network. In general, a systematized timetable optimises capacity allowing more users to pursue their transport offerings.

The objective of the TEE 2.0 concept or similar services is to bring the customer more direct connections, regular service, higher frequencies, shorter travel times and better transfer connections, which will result in better passenger experiences and increasing numbers of passengers.

3.2.4 Barriers

For a rapid and extensive increase of international passenger rail transport, structural changes are still necessary. The technical standards framework conditions in Europe are not yet commonly implemented to a satisfactory level and pose technical, operational and economic challenges for cross-border passenger transport.

Border crossings are indeed interfaces between different national networks with non-harmonised standards. Those differences, e.g. in terms of ERTMS implementation or electrification, can lead to time loss at the border and higher costs for the railway undertakings; which have to invest in costly multi-system locomotives or EMU's equipped with interoperable systems if a stop at the border to change locomotives is avoided.

In an open market, where several operators compete for capacity on sometimes already congested infrastructure, a harmonised European capacity allocation process has so far not been applied as intended everywhere. The use of the network should be optimized and its reliability ensured, by a strengthened cooperation on allocation (e.g. rules for prioritizing particular services on congested infrastructure) between the IMs. A balance between national and international interests is to be kept in mind.

Furthermore, to ensure a strong network, the viability of the connections defined should be analysed by thorough cost-benefits analyses. The viability of the identified lines should indeed not be seen as an acquis but should be carefully considered for each line defined within the network as the success of an international passenger network depend on it.

Other challenges, such as the ones linked with the rolling stock or the price of the tickets for high-speed passenger trains, should also be considered. Those points are however developed by the other subgroups of the platform. More details can therefore be found in their reports.
A major barrier is that infrastructure planning is mostly done from a national perspective, in some cases it is not coordinated and not communicated with the RUs[32]. A pan-European view is necessary to ensure the development of a highly efficient network.

3.2.5 Enabling actions

TEE 2.0
The TEE 2.0 assessment for future uptake should fully consider to the creation of a competitive rail market in the last 30 years with rights and duties for various rail actors concerned. While states are responsible for providing infrastructure capacity and framework conditions, transport services are offered by Railway Undertakings (RUs) and other applicants in a commercial manner. Infrastructure Managers (IMs) ensure non-discriminatory allocation of capacity to the RUs and efficient operation of the infrastructure.

An increasing number of European states are establishing clock-face timetables and systematized train paths in order to ensure attractive offerings with higher-frequencies for the travelling public as well as to optimise the capacity of the infrastructure for all users of the network. This approach might be extended to build up a network of international connections ("Europatakt") by the provision of appropriate framework conditions. Therefore, all states should have the possibility to analyse and influence the TEE 2.0 network in an open, transparent, and discrimination-free way. All interested RUs can participate in the network on a commercial base.

In consequence, the TEE 2.0 leverages the clock-face timetables of the European countries to build up a coordinated service network of international connections. This approach is most effective for journeys linking cities that are 4-5 hours apart by rail for the business traveller and up to about 6-7 hours for climate-conscious and leisure travellers. Since already existing commercial long-distance rail services are connected for longer, international journeys, the TEE 2.0 could be an economically viable model for the future of international passenger rail services without needing new subsidies. Critical issues that must be taken into consideration are an increased need of multi-system rolling stock, staffing issues, increased timetable vulnerability of longer lines and more rigid rolling stock and staff rostering.

If the timetables are coordinated between neighbouring states, the next step is to have direct trains with a longer itinerary connecting several nodes and hubs in three or more states. This way, long distance through-services of *TEE 2.0 trains* as flagship products of the concept between Paris and Warsaw via Berlin or between Barcelona and Berlin via Strasbourg without the need for a change of trains could be established when there is market demand without making use of

[32] in spite of coordination being mandatory following European legislation (Art. 7e of the SERA Directive)

additional capacities. Taking into consideration an attractive travel time is equally important, in some cases even more important. For business and leisure travellers, these services could very soon represent a climate-friendly alternative to air travel once the enabling framework is established.

The network of the TEE 2.0 could be implemented step by step if several railway undertakings and EU Member States support the concept. An initial TEE 2.0 network could be realized in a speedy manner without new infrastructure. At the first stage of development, existing high-speed links could be connected linking major national mobility hubs that offer further connections. The goal would be to increase frequencies on existing connections (for example London - Amsterdam or Paris - Berlin) and infrastructure. In parallel after the completion of major European infrastructure works such as the Fixed Fehmarnbelt Link and the Brenner base tunnel, more services could be added. The long-term objective is to increase the number of international travellers by rail on international short- medium- and long-distance travel and establish railway connections between all the European capitals and economic centres according to market demands, offering longer journeys without the need of changing trains. The list of potential connections of the new TEE 2.0 network is attached separately to this document.

The TEE 2.0 network could according to market demands be complemented by a portfolio of pre constructed paths of cross-border regional routes or *core connections* available for any applicant to request, which are simply regular connections between adjacent urban nodes of the core network, which would create a backbone of international passenger network. These connections would also take into account the TEN-T network, which already identified strategic nodes. But many cross-border connections are not located on the TEN-T network. One of many examples is the line from Prague to Berlin (120 minutes interval) that constitutes a *core connection* between two hubs with easy connections to various destinations. Using the TEE 2.0 approach we can extend these *core connections* identified within or outside the TEN-T network into longer routes, especially when cities are interlinked (such as Berlin, Prague and Vienna).

EuroLink

Another platform that might help defining the network is EuroLink, a bottom-up initiative from IMs Infrabel, DB Netz and ProRail. Meanwhile other IM's have joined this platform (SNCF Réseau, ÖBB Infra, Správa Železnic, Eurotunnel and ADIF) and others will follow soon. EuroLink's ambition is to help align the national networks to optimise capacity and improve international connections by offering high frequency slots, shorter travel times, direct connections and optimised transfers. In this way EuroLink tries to be a part of the answer of the climate debate, congested roads, the problem of short haul flights, but also align with the (intercontinental) aviation market to offer easy combined mobility solutions between the different transport modes.

The EuroLink platform could help to create a vision on capacity configuration, strengthen the structure of the hubs and to optimise connections. The capacity/network design is based on existing and dedicated infrastructure for 2030. Within that scope, EuroLink studies an improvement of a European Network, based on fast and regular connections between major hubs, feeder hubs and transfer points. The goal is to develop a concept for an international high frequency transport plan for high-speed trains and fast long-distance IC connections. The EuroLink design will foresee cadenced train paths that will run on hourly, half hourly or even higher frequencies. Besides that, EuroLink tries to optimise transfers in hubs to connect the most important OD's. A lot of the proposed TEE 2.0 lines could be configured by using the building blocks offered by the EuroLink concept.

EuroLink develops longer term concepts for capacity usage and timetabling 5-10-20 years ahead, optimizing the international network, aligning it with the capacity needs of other national, regional and freight traffic and identifying potential logistical bottlenecks and additional investments. It is

a platform working on a Pan-European capacity optimisation study to improve interconnectivity by:

- creating a combination of medium and long distance slots throughout Europe;
- creating hourly patterns as a standard;
- using the shortest routes or infrastructure that grants the fastest journey times;
- creating nodes which foresee in the possibility of alternating paths and optimised transfer times.

A network approach such as EuroLink can help to develop the TEE 2.0 or any other rail service network. EuroLink designs timetable concepts for an optimised network of international rail services and studies the possibilities for step-by-step improvements building on existing transport plans and planned infrastructure projects. Key principles of EuroLink are: high frequencies, shorter journey times, direct connections and optimised transfers.

EuroLink is an open platform where IM's, MoT's and in a later phase also railway undertakings can discuss, study and optimise transport plans for rail to come to a medium- and long-term capacity strategy. These studies can give direction to future network configurations and can help infrastructure managers, policy makers, railway under takings and other stakeholders to create a vision for a European Railway. EuroLink is not (part of) a capacity allocation process. This is where EuroLink is different from and complementary to TTR. EuroLink can aid in designing (the content of) a common strategy content, which can in due time be realized in the actual timetable using the TTR approach (process). IMs and RNE are in contact to align both projects.

3.2.6 Process for developing the network

Any network design should focus on market demands looking at the creation of *core connections and strong hubs with reliable transfer options,* based on the nodes identified by the TEN-T network and market needs by interlinking them into longer routes with attractive travel times in order to offer a wide variety of travel chains within the defined network lines and to other services of the national and regional networks with short and reliable transfer times.

The network defined might differ from the Rail Freight Corridors network, which might not present us with the optimal model for rail passenger transport. European rail freight indeed primarily focus on corridors from ports to industrial areas and markets, whereas in passenger transport the travel patterns are more diverse and free access to certain markets is still lacking.

Building up a network could compose the following steps, beside the analysis of market demand and current offer, discussed later on; in an agile, iterative planning process between the states that has to be open to competition and non-discriminatory:

8. Examine existing and future market demands on the European travel market. Define the most important market potential, especially for city pairs.
9. Use the current services as a possible starting point. Then define step-by-step improvements, learn and re-iterate.
10. Inquire the concept ideas with all stakeholders: by defining these geographic priorities, star-shaped line elements to the nearest neighbouring towns or hubs are created from each country to the next node abroad. These line elements of all countries are collected and compared. The TEN-T network should be taken into account within this step.
11. Integral overview of the network of integrated international train paths and hubs– to provide an overview of the whole network on wider scale.
12. Fine-tune on line level: links are now created to lines and networks and are provided with travel times and/or slots (taking into consideration international freight trains as well). The resulting

lines can be examined both in terms of their technical requirements (rolling stock) and their economic potential. A comparison of the lines is required to show the overall network effect.

13. In depth study of the market conditions, rolling stock requirements and infrastructure by states with consulting IMs and RUs. The studies should also focus on implementation and uniform application of existing legal framework.
14. Summary of the results by the states 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[33] is suggested to boost the network.

Infrastructure managers in consultation with the RUs may aid in the process for steps 1 to 6 above, like in EuroLink. That way we can start with existing expertise, logistical know-how and process skills for the interplay of operators, governmental parties and other stakeholders to come to an actual capacity strategy 5-10-20 years in to the future and develop a step-by-step growth path with systematized train paths to offer for harmonized train paths within the core network[34].

The last phase comprises securing the train paths in line with the network utilization concept and transferring them to the capacity planning system (i.e. TTR). If clock-face systems are applied too strict there's a risk of counter productivity resulting in longer running times for all trains excluded from the TEE 2.0 concept.

The lines identified for the network should be analysed in the framework of the TEN-T Corridors. TEN-T Corridors cover identified strategic nodes and have the objective to be the backbone of the development of a sustainable multimodal transport network. They are therefore a key in the definition of a strong, viable and resilient international rail passenger network.

Improvement of Infrastructure usage:

- Short term: Transport plans have to be optimized for the infrastructure they are running on / Infrastructure has to be used for what it is conceived. EuroLink is conducting this study to build an international structure taking into account existing and decided infrastructure for 2030.
- Long Term: Based on a long-term vision on (inter)national transport plans states and IMs need to further develop their infrastructure to allow an optimal usage.

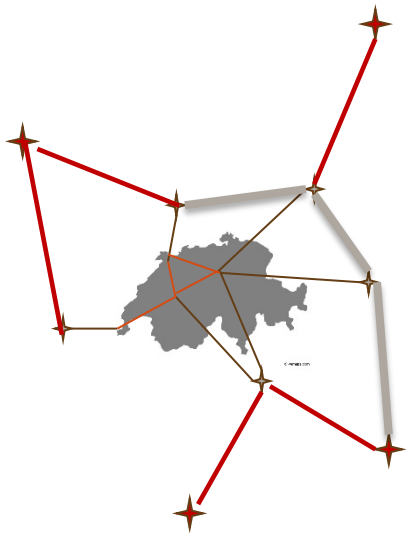
Example Switzerland

From Switzerland, the nearest nodes to reach abroad are Paris, Lyon, Milan, Innsbruck, Munich, Stuttgart and Frankfurt.

These nodes have high relevance from a Swiss perspective, as they can be reached in a travel time of approximately 3 hours from Switzerland. If these nodes are connected to the Swiss railway network, core connections from Switzerland will be created. Within Switzerland, the nodes Zurich, Basel, Geneva, Lausanne and Bern are connected in this way.

These core connections should be served with hourly or two-hourly intervals in daily traffic and offer optimal integration into the international, national and regional networks and timetable. The nodes ensure multiple travel chains to a large number of destinations with attractive and fast transfer connections.

[33] Investment needs in rolling stock should be covered through dedicated existing European funding instruments (e.g. CEF) for the upgrading of rolling stock with multisystem technology for international use.
[34] This phase would also be quite political, so with intensive contact between member states, EC and IMs and with some forms of non-discriminatory information to and consultation with market parties.



Where the used train paths continue beyond these nodes of the core connections abroad, specific trains can continue to operate. These extensions can directly develop tourist potential abroad up to 7 hours travel time from Switzerland.

Some destinations such as Berlin, Amsterdam or Vienna for example could be part of those core connections. Other destinations, such as Grisons with Chur, Bernese Oberland with Interlaken, Valais with Brig and Sion, and Ticino with Lugano and Bellinzona would be part of the tourist regions.

In addition, some other destinations could be reached regularly and with attractive journey times from Switzerland by means of transfer connections from the nodes of the core connections. Such destinations could for example be London, Brussels and Amsterdam, with a change in Paris, or Nuremberg with a change in Stuttgart.

Short- medium and long-distance lines should work as a cohesive network, with feeders and outflow to national services **in nodes** and **hubs** based on passenger flows in order to offer a wide variety of travel chains and to the national and regional services with attractive and reliable transfer times. These hubs and nodes would be based on those of the TEN-T Network and on the "Swiss method", which allows to discuss with all stakeholders and to identify geographic priorities.

Additionally, connecting the network to airports, the combination multimodal approach will provide combined air-rail journeys for customers and will contribute to more sustainable and economic transport within Europe.The lines and the network should offer attractive travel times and good and reliable connections in comparison to European short-distance flights. This also solves the problem of congested major European airports like LHR, AMS, FRA and CDG.

The MS (affected by the first 'roll out') should facilitate the network development which is crucial for success. The IRP platform may help with the coordination. All partners should play their respective roles more actively. We need to strengthen the cooperation between Ministries of Transports (MoT), IMs and RUs:

- Multilateral/Bilateral discussions between MoTs / IMs of two or more countries / preferably pan-European discussions for optimizing nodes / core connections and cross-border regional

routes, RUs provide input to these discussions about their long term capacity demand based on the TEN-T network[35].

- International train paths for establishing the core and TEE 2.0 international connections by the joint IMs, like in EuroLink.
- Optimising the network by integrating lines and hubs into a consistent and reliable network by IMs in an independent advisory role to MS and RU's.
- Integration into European network perspective via IRP.
- RUs / applicants making use of the European Passenger Network. IMs offer suitably (e. g. systemised train paths) to fulfil commercial needs of specific market ventures.

Market analysis is an important tool to understand the market demand and to estimate the economic viability of the connections for international rail passenger transport. This *core connection* approach could also help with elaboration of market study, because this would make it easier to define city pairs for study by creating lowest common denominator of border-crossing traffic flow. Nevertheless, it is also worth including important intermediate stations between the urban hubs of the core network (e.g. Dresden on the line Prague-Berlin). Part of the concept should also be journeys of which the long-haul part is done by air and the short-haul part by train. This can be further studied, but regional hubs like Dresden are important both to the traveller and to the operator to have a viable product. The study should also examine the competing air, car and long-distance bus routes in order to get the complete picture. This market analysis of the network should be performed at the European level, in order to have the full vision and avoid duplication of works. Next to the market analysis new routes and business models could derivate from entrepreneurs and innovators.

Meanwhile the interoperable issues between the countries should be deviated to facilitate the operations: like the implementation of ERTMS, removal of redundant national rules, reducing the language barriers, harmonization of Track Access Charges or facilitating a European rolling stock market. Moreover, the budget for ERA should not be reduced as it is necessary to strengthening the efficiency of ERA in the redesign of Europe-wide rolling stock approvals.

3.2.7 Technology and Operations

To date, there is still a lack of interoperability in rolling stocks that needs to be addressed. For this reason, the Member States asked the European Commission in the context of the Ministerial Rail Conference on 21 September 2020, to develop an EU funding programme within the European Green Deal for investments in interoperable (cross border) rolling stock. The investment needs in rolling stock should be covered through dedicated existing European funding instruments (e.g. CEF) for the upgrading of rolling stock with multisystem technology for international use. Such funding must be very thoroughly formulated in order not to be discriminatory. Incumbent RUs might have the resources to invest in new rolling stock whereas smaller RUs and newcomers can only afford leasing. The programme could be extended to overnight trains.

New services and night train traffic would also benefit from the improvement of following framework conditions which are further detailed in the reports of the Subgroups B and C:

- Establishing a level playing field for international rail passenger traffic.
- Better use of ERTMS, not only for signalling and control, but also for the communications.
- Reducing the language barrier (drivers, infrastructure staff, network statements).
- Foster better rolling stock availability.

[35] Building the network means linking many more services across many borders in the timetable, so to find optimal solutions that work we need to work together multilaterally – so for instance North and East of France, Germany, Switzerland, Benelux and Eurotunnel – London are interconnected. We need to find practical ways to break-up the work geographically without losing overview.

- Strengthen the efficiency of ERA in the redesign of Europe-wide rolling stock approvals. Given its importance, the ERA budget has to be adapted and raised accordingly and put on the level of responsibilities.
- Improvement of performance issues (quality, punctuality…) of the infrastructure.
- Harmonization of track access charges need also to be taken into consideration.
- Ensure the necessary link with the results of the current EU Shift2Rail Joint Undertaking and the future EU rail Research and Innovation programme, e.g. in European traffic management, MaaS, addressing the language barrier, and integrate and accelerate deployment of such innovative railway solutions to improve technical interoperability, e.g. by participating in the Shift2Rail JU and its successor implementation pilots/demonstration program for the period 2021-2027.

3.2.8 Governance

Vision

European rail passenger services need an initial governmental impetus as well as the removal of barriers and improvement of the enabling framework to flourish. Only when Member States cooperate and jointly build upon the legal and market framework for an integrated network (wherein both PSO and open access regimes are possible) with equal service level, international rail passenger services will be able to compete with other transport modes in line with the EU legislation. To avoid fragmentation, multi-country legislation should be developed in a European context.

It is clear that only with active governmental policy to support, by removing barriers and improving framework conditions and in a pan European perspective, the creation and development of a solid network can be achieved, instead of a patchwork network with some bilateral initiatives, historic railway operators' cooperation and some commercial services. There is a need to look further than just the other end of state borders and to redevelop networks which are more than just one-border-crossing services. The new international railway structure should be a common European vision on international transport plans.

To do so a joint vision should be developed in which the governments might take the lead to draft the network taking account of existing services, discuss the conditions, and develop the flanking policies and supporting mechanisms. For the realization of the network the RUs then need open access and non-discriminatory market conditions. The governments should collaborate with all the relevant stakeholders, at national and international level, in order to achieve a coherent, market-oriented program, which answers the needs of the market. This overall principle should be incorporated on bilateral or trilateral level Europe wide.

Operating models to run international services

Governance need to develop additional mechanisms between Ministries of Transports (MoT) and IMs on the one side and commercial ventures consisting of RUs on the other side. States and IMs are supposed to take a more active part in this setting. Currently different governance models exist which are described in more detail in the report of Subgroup D, namely: *Open access – franchise model – PSO contracts.*

Establishing a governance model for an International Passenger Rail Network

Within the different mentioned governance models Member States are encouraged to discuss bilaterally or trilaterally to optimizing nodes and core connections and cross-border regional routes based on the TEN-T network.

For example, the inclusion of international services into the national schemes ensures the synergy between international and domestic customers demand and offer regular train connections both

nationally and across the border without any additional requests on the infrastructure capacity. Stopping of these international trains in the national centres along the route bring significant quality improvement also at national level and especially for secondary regional centres. This system appears to be particularly suitable for conventional lines, and for middle-to-smaller sized European Union member states where international and domestic markets are strongly intertwined. This is one of many approaches, how one can build a European Passenger Rail Network. However, other alternatives could also be implemented.

The RUs and other applicants would provide the necessary information and requirements (notwithstanding any commercially sensitive information of the RUs) to enrich the bilateral discussions and for organizing the multilateral connections. Once the services are launched the participating RUs should organize themselves to offer and to operate the European Passenger Network.

3.2.9 Capacity Allocation

Topic introduction

As a bottom-up approach, the 'Timetabling and Capacity Redesign' (TTR) project of RailNetEurope (RNE) aims at an improvement of the current timetabling and capacity management process including the trans-national coordination of awarding capacity and construction of the timetables, as the SERA directive already impose IMs to coordinate their timetables.

Is the problem here rather poor implementation of the existing legal framework in the EU? This in itself helps by reducing unnecessary suboptimalities but doesn't automatically lead to optimal international timetabling. This can be improved if we design the international timetable first and prioritize it in the allocation process. The priorities rules are regarded differently per country: a more holistic view is required to harmonize the country specific approach to prioritization of train paths. Integration of all interest is essential to provide all operators opportunity to optimize their services. Member states and IMs should balance the interests of all operators.

TTR aims at a harmonization of the national capacity management processes throughout Europe. It also aims to implement a process to better plan capacities in advance, provide better products fitting to the different market needs (such as passenger services and ad-hoc freight services), ensures a quick allocation of capacities and overall increases the efficiency and reliability of timetables.

Overall vision

An integrated capacity management and timetabling process which boosts the competitiveness of railways should be implemented in a common international approach:

- Process implementation focussing on passenger and freight market needs with optimised request deadlines.
- Improved reliability and stability including better coordination of temporary capacity restrictions (TCRs).
- Implementation and application of the redesigned timetabling and capacity management process.
- Increased efficiency (capacities, resources) in order to avoid duplication of work and planning efforts.

Barriers

National particularities, lack of common IT standards and processes and diverging national legislation (or different implementation of the relevant EU Directives) hinder the implementation of a common process. These obstacles must be overcome to fully access possible benefits of TTR. Moreover, MS and the sector may first evaluate whether the European legal framework

incorporates measures to base capacity allocation on pre-planned clock face timetables and systematized train paths in a non-discriminatory way.

The programme for the necessary investments of states and IM (or other allocating bodies) as well as central European IT systems in missing digital capabilities to realize real-time path construction, optimization of capacity use and automated timetable coordination is still open. These mentioned investments would both optimize the IM's hard and software[36].

Enabling actions to be taken by MS, EC, sector

Bilateral and multilateral coordination of capacity allocation on TEE 2.0 core and multi-country connections are needed. Implementation of the TAP/TSI regulation (EU 2016/797) is one of the main enablers for both TTR and all kind of international coordination both in capacity management and operations.

However, this will, most probably, not be ready for implementation on a full European level by the end of 2021 as stipulated. TTR has launched several pilot projects to ensure the national implementation although these pilot projects do not yet generally have legal backing and, due to this, not fully provided the desired output. All stakeholders are invited to participate in these projects. It is important to have enough focus on the international aspects of capacity management to ensure cross-border planning processes. The pilot project help to discover national particularities which hinder such processes. These must be avoided or removed to the maximum possible extent. The integration of international services to the national planning processes could be helpful, too. Adequate financing must also be secured for the implementation of TTR, particularly of the digitalization of capacity management as investments in software are more economically feasible than infrastructure. TTR and digital capacity management (DCM) are part of the capacity defining digital infrastructure as ERTMS.

The ongoing discussions on TimeTableRedesign (TTR) contain i. a. options for integrated capacity management, covering all time horizons from long term to short term, covering all traffic segments and providing international coordination, taking into consideration that many aspects are still to be resolved when it comes to common central IT systems, commercial conditions and legal requirements. Supporting that is the Digital Capacity Management (DCM) which - once implemented for all planning horizons – opens up the potential of a higher capacity usage of physical infrastructure at all time horizons for the sector and facilitate flexible response to capacity requirements of RUs / applicants and forms the basis for the European Integrated TimeTable (EITT) as network of National Integrated TimeTables (NITT) ["Europatakt"]. However too rigidly applied EITT will have a huge effect not only on international trains but also on national trains by limiting the flexibility in path allocation.

IMs participate in the FTE meetings, but a more active participation of IM is required for the development of the network. Moreover, member states and IMs are encouraged to develop and promote optimal network use and connections as demonstrated with EuroLink.

The strategy development stage and the capacity allocation stage should be distinguished, since the number of parties, degrees of freedom and range of both opportunities and choices vary a lot between both. Including everything in a one-process-for-everything will make TTR unwieldy, inflexible and potentially unworkable. If Member States and/or operators supply their input 5 years ahead to actually go to market that should be sufficient in time.

36 For the moment real-time path construction is mainly beneficial for freight RUs due to the shorter time perspective they operate within. Due to this, passenger RUs don't use the German "click and ride" function.

In TTR, passenger services get an earlier path allocation than today (draft offer six months and a half before timetable change). To provide this acceleration, pre-planning of capacities and digital support such as DCM for all planning stages is required. Therefore, the partitioning of known capacity needs is reflected in models created for all main lines – the "Capacity Models". These models are created until 1.5 years before an annual timetable, which takes into account the capacity needs of both sides of the border. Therefore, it is crucial, that capacity related activities for international passenger connections are in line with the TTR Regime. Many networks involved in the TEE 2.0 concept intend to introduce TTR components even earlier or are already running pilots.

It must be explored whether further development of European and national legislations around capacity management is necessary taking into account clock face and systematized timetables. Clock-face timetabling is a method to make rail services more attractive for the users and might help in congested networks. However, clock face timetabling is not a prerequisite for TTR.

On the long run, more destinations may be offered according to market demands. That can be achieved by:

- Optimizing connections by improving the timetable coordination between carriers (EuroLink, TEE 2.0 etc).
- Developing infrastructure in order to offer more connections in each direction through more traffic nodes. There is a need for more capacity for trains with a long-distance destination, with the current popular destinations (in general, independent of modality) being improved first. Taking into consideration that TTR optimizes the existing and planned infrastructure capacities, which is only a component of this goal. EuroLink's optimization study can identify feature constraints and bottlenecks. These studies can be used as advices/suggestions for future infrastructural investments.
- Ensure the necessary link with the future Europe's Rail partnership activities on European Traffic Management Layer to achieve the TTR, converging the sector to work together, and in this respect participate in the Shift2Rail JU and its successor implementation pilots/demonstration program for the period 2021-2027 in order to accelerate deployment of innovative solutions improving capacity allocation.

Possible open and/or controversial issues that require further analysis

TTR provides the means of planning capacities, but the planning parameters need to be provided by the stakeholders of the process. Planning railway capacities must be in integrated process. Most of the rail infrastructure in Europe contains mixed traffic. Both, passenger and freight traffic must be considered with their respective market needs and IMs are legally obliged that infrastructure allows safe operation. These three main aspects are interlinked. The IMs should further integrate all these market needs. Commonly agreed and applied commercial conditions for booking, modifying and cancelling rail capacity has been one of the most challenging tasks in the TTR project and are progressing continuously, with the stakeholders working intensively to achieve a common solution.

In different countries different planning methods are used regarding for instance standard stoppage time, headway, safety margins for crossing and approaching stations, margins for irregularities in operations as well as different management in case of unexpected hindrances or calamities. These differences should be carefully studied and as far as is practical reduced to a minimum.

3.3 C – EU Green Deal

3.3.1 Introduction

The Platform has set up Platform subgroups to identify actions for the European agenda in the following areas:

E. Customer experience, Digitalization.
F. Defining a network of International Passenger services, including market analysis, the usage of existing TEN-T corridors and matters of capacity allocation.
G. Green Deal. Identify infrastructure bottlenecks, missing links and interoperability issues that once alleviated can substantially contribute to the growth of international rail passenger services.
H. Regulatory framework, including financial support measures for international rail passenger services. Public Service Obligations, support measures for rolling stock, and framework conditions for infrastructure charging are key topics.

In the following paragraphs, the MS vision and recommendations regarding the Green Deal are set forth, based on the MS own findings and taking into account findings from the infrastructure managers (IMs) and the sector.

3.3.2 Vision

In order for the EU to achieve its environmental targets as laid down in the Green Deal, international railway passenger transportation can be boosted by making optimal use of the TEN-T network and its interoperability standards. The international rail passenger network should be based on international railway passenger hubs, which integrate international railway connections with other modes of public transport. In order to achieve the efficient operation of international passenger services on the TEN-T network, it is essential to facilitate the correct implementation of the EU rail acquis which targets technical, administrative and procedural harmonization. Either bilateral cooperation or a supra-national structure which improves functioning of the market. Railway passengers and aviation work closely together and offer combined attractive services in a seamless way. For passengers the conditions for such offers are attractive and support intermodality. The European Commission has put forward a proposal to establish a new European Partnership on Rail Research & Innovation, whose programme should also be supportive in its different aspects to match the present vision.

Facts and figures
A market analysis is necessary in order to define the interesting connections on which the platform could work and facilitate the cooperation between the concerned Member States. This should include the identification of the current infrastructure bottlenecks, missing links and interoperability issues to get a clear view on the current situation and possible approaches to make sure the best actions are taken.

3.3.3 Completing the TEN-T network

For rail to play a decisive role in decarbonising transport, efforts are needed to further develop the European railway network and to increase its standards, including to the benefit of long-distance passenger rail traffic. To this end, the Member States have defined together with the European Parliament a cross-border railway passenger network of European importance, as central component of the trans-European transport network (TEN-T)37: the TEN-T core rail network for passengers. This network is a priority in terms of infrastructure development for the Union. When

[37] Regulation (EU) No 1315/2013 of the European Parliament and of the Council of 11 December 2013 on Union guidelines for the development of the trans-European transport network and repealing Decision No 661/2010/EU, OJ L 348, 20.12.2013, p. 1-128

completed, the Union will have a coherent, interoperable and high-performance network, equipped with high standards. This is about building new lines or sections, modernising existing ones, bridging missing links and removing bottlenecks, in particular in terms of capacity. This is also about further digitalising the network, in particular through the large-scale deployment of ERTMS. Although an important focus is set on cross-border links and long-distance transport – at EU level territorial continuity often means creating or improving railway connections between Member States – specific attention is also paid to decongesting urban nodes, efficient connections with other modes within urban nodes, including rail links to airports.

The Member States are thus at the center of the TEN-T policy, identifying together with the European Coordinators and the Commission the issues to solve in priority as well as the measures to implement to this end. This includes the bottlenecks to be removed with a view to fostering long-distance passenger rail transport. The Member States are in particular commenting and approving the Coordinators' work plans, where the priorities for the development of the corridors are set.

In this regard, the Member States will/should continue to conduct a constructive dialogue with the Commission and the European Coordinators in the context of the 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.

In parallel, the Commission is expected to propose in September 2020 a revision of the TEN-T Regulation, as part of the Green Deal initiatives. The position of long-distance passenger rail within the TEN-T can be looked at in this context. The question of further requirements (considering the impacts on i.a. traffic and budget as well) for passenger lines, or the development of passenger hubs, can be discussed on this occasion.

For rail passenger transport, MS identify, in close cooperation with the railway sector, particular impediments, even as the introduction of international rail passenger hubs on the TEN-T network is suggested. Different levels of infrastructure development in different MS persist. Therefore, Member States should show a strong ambition on how to best proceed and on how to reach agreement on implementation deadlines to harmonize cross-border infrastructure developments. Some places lack high-speed infrastructure, and direct connections between major cities and hubs are absent. A long-term consensus is needed pertaining to priorities and investments in (high-speed/performance) infrastructure.

Best practices in this regard depend on national and international political consensus of long-term investment plans or dealt with by the sector on its own. These should be properly financed, when appropriate making use of the EU[38] funding.

The TEN-T core network railway passengers includes presently standards on ERTMS implementation and electrification and defines on top - specially built high speed lines equipped for speeds equal to or greater than 250 km/h & specially upgraded conventional lines equipped for speeds of 200 km/h; (art. 11. 2 of the EU Reg. 1315/2013). Work is necessary to see whether additional TEN T requirements are desirable for the core network passenger corridors, firstly train speed (relation with TSI INF speed classes e.g. D4) and possibly train length. I.a. budgetary impact and benefits of such changes should also be considered.

[38] The "Proposal for a Regulation of the European Parliament and of the Council establishing the Connecting Europe Facility and repealing Regulations (EU) No 1316/2013 and (EU) No 283/2014" could be an option

3.3.4 International railway passenger hubs & urban nodes

Long-distance international railway passenger services should connect passenger hubs throughout Europe. Example could also be a large multimodal hub such as Roissy Charles De Gaulle in France, in order to stimulate air-rail intermodality, as shown in the following. These hubs should be located at the centre of major cities or metropolitan areas, ideally with good intermodal integration with local rail services and other modes of transport, promoting easy accessibility (including PRM) to the whole city or metropolitan area. These hubs could be well the urban nodes as defined in the TenT concept; especially as the number of urban nodes will be revised and extended in the TenT regulation review. Therefor the revised definition of urban nodes should facilitate international railway transport. This, in addition to the rail connection to airports, is already encapsulated in the concept of urban nodes within TEN-T network, and should contribute to replacing short and medium haul flights by rail. The concept of passenger hubs builds on the urban nodes, but adds additional requirements to facilitate international rail passenger transport.

Thus, in any new defined hub system, the main hubs would require intermodal links, with possibilities to transfer from international train to regional trains, bus, taxi, plane in any possible order, as well as certain minimum service levels. Moreover, should aim for the availability of intermodal through ticketing solutions. What is therefore required is the identification of a future service network, including all major international railway services that are needed for this system to effectively compete. Infrastructure Managers should, on the basis of a market needs expressed by RUs and other reviews, offer attractive long-term capacity between railway hubs. Under consideration is currently how an EU Takt could be implemented while respecting EU legislation. Member States should facilitate this. Based on international rail hubs (which must include all EU capitals with rail services) a monitoring system may be defined to show the quality / quantity / impact of international services with connecting hubs up to e.g. 500km. The 500km distance is also relevant in the context of the objective stated in the EC Smart and Sustainable Mobility strategy to ensure carbon neutral collective transport up to 500km by 2030. That means in practice a shift from air and private car to rail or other less-polluting modes.

Example of international hubs in the TEN-T network in relation to the infra bottlenecks.

The key condition for a large city becoming a hub is its interconnectivity with other large cities. In case of the Czech Republic, Prague is well connected to many cities in the region with regular services (mostly 120 minutes interval) enabling also short connections if needed. Similarly, Brno and Ostrava both located on TEN-T corridors are well-connected and may serve as an international hub. The biggest hurdle for the further improvement of hubs is insufficient infrastructure in terms of speed and capacity, especially in direction towards Munich and Wroclaw. Both of them have been identified as a bottleneck. The role of Prague as a railway hub will grow after development of high-speed network in 2030's. Therefore also the railway link to the airport is planned.

Identification of international rail passenger hubs into or based on the revision of the TEN-T regulation (apart from major urban nodes), as well as for the expected outcomes of introducing such hubs on the TEN-T network, 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 forthcoming letter of intent Trans Europe Express 2.0 whereas it is important to remember that the largest commercial potential for international rail lies between hubs that are up to 4-5h apart.

Taking into consideration that the hub should also include (a performance plan with) connections of other means of transport (local transit networks) next to the integration with local rail and PT

modes. An international long-distance train can be efficiently complemented by though-through connections in the destination country.

3.3.5 Governance structure

In addition, a rail passenger (specific) governance structure/cooperation is considered to promote and facilitate international rail passenger transport, as well as supporting technical measures for enhancing rail passenger specific interoperability. Taking into account that a governance structure should deal with organizational issues, interoperability issues, capacity and traffic management, market issues, etc. whereas the TenT network focus on the infrastructure development. The inception of new or the improvement of existing governance structures requires consideration by MS on what these structures look like in a consensus-model.

International rail passenger transport will increase by a harmonised network (technically, operationally and administratively harmonised); but also with an increased cooperation between the authorities to promote the development of the international rail passenger network.

For the moment the structure of cross-border passenger services is characterised as a patchwork of different cooperation forms and services, like open access operators, bilateral agreements and incumbents running services on historical agreements (renewed regularly - every 5-10 years - depending on the MS) or making use of national PSO subsidies for international services. Up to now the open access regime only few new connections have been launched, however the ambition of the Ministries is to increase this total number or services, the quality and to improve the integration of the network.

It is recognised that the MS cannot transform the international network on their own, but should cooperate closely with their neighbouring countries or within a group of countries to support building up the network, so a closer cooperation of the member states is necessary to promote new services Governance must at least look at:

- Market analysis, monitoring and regulatory framework;
- Infrastructure status / capacity , bottlenecks and planning;
- Interoperability factors determining international rail passenger capacity;
- Cooperation on capacity allocation framework;
- Connections domestic services and intermodal connections
- Innovation.
- Bbut also on financing the required services in PSO contracts.

Although there is no common understanding how an international network should be organised, the Members States recognise that the current patchwork is hindering their ambition – the lack of cross-border connections needs improvement and that a careful analysis of the reasons leading to this situation is needed. Several initiatives at national levels are launched with different success levels. Following cooperation models have been elaborated to understand better the different advantages and disadvantages: (a) do nothing, (b) starting with some pilots, (c) integrated in Rail Freight Corridors or (d) separate governance. As suggested by numerous stakeholders, a long list of arguments is included in favour or against these cooperation models.

(a) Do nothing scenario

In this scenario no dedicated governance structure is established to support development of new international rail passenger services. If any issues arise from railway undertakings or other stakeholders, these will be resolved ad hoc between parties concerned, like the market is currently organised.

Pros

- No additional structure, budgets, efforts are needed, the status quo in guaranteed. No legal amendments to EU Regulation is necessary.
- Deleting current bottlenecks to start international passenger services within the open access regime is priority to many stakeholders: integrating tariffs, common EU access of rolling stock, new infrastructure. This will already provide such a boost to the market, that open access services will take off and no additional incentives via new structures are needed.

Cons

- It is realised that the current situation for international rail passenger transport is sub-optimal. The open access to the international passenger market only resulted in few new services over the last decade. It is not foreseen that this situation will change in the nearby future, especially as the railway undertakings will need all in-house resources over the coming years to survive the effects of the COVID crisis. Therefor it is not realistic that without governmental initiatives many new international services are going to be launched.
- The current situation is sub-optimal. The required modal split to rail is not going to happen if governments do not take action to support the international railway market.

(b) Pilots, without additional legal basis at EU level

Several initiatives at national levels are launched with different success levels. Regarding the discussion as to whether the interconnection of hubs should be achieved through a corridor or network based approach, the latter definitely stands out as the better alternative, however the corridor approach would allow to start the connection between identified hubs more rapidly.

The <15> pilots, as proposed by the EC, can then be an important building block for developing the network. In this respect the last TEN-T revision based on geographical principles perfectly fits to organisation of passenger flows. It should be noticed that once a connexion is identified as interesting after a market analysis, operators might be more willing to invest in this line and cooperate with neighbouring operators, only if this does not happen, governments should take the proposed action.

This (starting informal) governance structure should be there to implement also the foreseen <15> pilots mentioned in the EC communication on smart and sustainable transport strategy and can then be an important building block for developing the network. Financial support from European Commission to launch these pilots will greatly help to accelerate the initiatives as indicated in the EC Smart and Sustainable Mobility strategy.

These bi-national cooperation structures to combine networks via major hubs. Longer traffic streams could be taken care off by a light corridor cooperation of countries.

Pros for starting with pilots

- The Member States can decide to tailor-made the governance structure per service, per line or per country. The pilots can start directly once the bilateral agreement is established.
- Moverover, pilots will be organised voluntary, that is a guarantee of committed stakeholders
- Working in pilots will benefit gaining European experience with improving frameworks for international pass rail.
- Pilots can be organised within existing structures, so no new entities are needed

Cons for starting with pilots

- The member states should take their own initiative and their neighbours should be willing to act in the same speed, same efforts and with same budgets.
- A patchwork of initiatives might arise if each initiative develops its own governance structure, all with their own time horizon, requirements and service levels and ticketing systems. Integrating different services or lines might be difficult and the operators will need to understand per line/country the requirements.

(c) Integrated structure rail passengers with Rail Freight Corridors, amending the RFC regulation on their role and tasks

The example of governance from the RFC Boards is discussed in depth, being a good example for organising international rail passenger services. The amended RFC structure could be responsible for:

- Market analysis and monitoring; Infrastructure status / capacity , bottlenecks and planning A close cooperation/synergy TEN-T governance/rail passenger governance should have to be set up so that infra development and operations go hand in hand.
- Interoperability factors determining international rail passenger capacity
- Cooperation on a capacity allocation framework for international passenger transport
- Coordination on Market regulatory mix (such as quality conditions including access to ticketing systems, infrastructure charging, access rolling stock, economic equilibrium test, non-PSO levies, PSO contracts)

Within the governance structure distinction shall be made between strategic tasks (by the Ministries) and infrastructure, - capacity management and traffic control tasks (by the Infrastructure Managers) and other tasks.

Pros for integrating passenger transport in the RFCs

- The RFC will provide one place to coordinate a capacity strategy for mixed use of international railway lines
- Transparency is guaranteed for allocating infrastructure capacity using the best practices gained over the last years within the RFC's
- RFCs have put in place some good practices: path allocation at corridor level, one stop shop, cooperation of traffic management projects, in capacity management and in contingency management are some examples of practices that can be taken into account.
- The organisation and collaboration within the RFCs allows to highlight several issues, and to bring them to the attention of national and European instances in order to solve them. Moreover, RFCs also allowed to think on a more international scale, rather than to focus only on a national point of view.
- RFCs integrate IMs from different countries and help them to reach common decisions, offer attractive capacity allocation solutions, and allow trains to use paths along a whole corridor.
- EU-Reg 913/2010 points out that IMs have to take into account all needs of passenger traffic as well.
- Passenger RUs would participate in a specific 'passenger' RU Advisory Group and similar to the Terminal Advisory Group on the freight side there would be a dedicated Advisory Group for parties involved in the transport chain on the passenger side.
- A doubling of corridors would be inefficient in terms of resources as well, as.:
  - Capacity requests for both passenger and freight are dealt with by the IM.
  - TTR capacity models will have to meet the requirements/needs of both sides.
  - Serious conflicts could/have to be discussed in the ExBo, because of political links.
- The only way to combine RFCs with passenger would be to create bi-national cooperation structures to combine networks via major hubs. Longer traffic streams could be taken care

off by a light corridor cooperation of countries. Very few freight trains run the full length of RFCs. Most traffic are cross-border. Instead of creating passenger services running with one train set through three or more countries, customers will appreciate attractive schedules with at least hourly trains during peak times.

Cons for integrating passenger transport in the RFCs

A corridor approach similar to the Rail Freight Corridors is regarded as less practical.

- Rail freight is primarily focused on corridors from ports to industrial areas and markets, whereas in passenger transport the travel patterns are more diverse.
- The RFCs have a well elaborated but complicated structure. Integrating passenger transports within this structure could bring more difficulties than opportunities, both for passenger and freight traffic.
- Passenger and freight traffic follow completely different market conditions as the transport of passengers cannot be compared to the transport of goods. Therefore it is not possible to apply the same structure for both.
- RFCs have a clear focus on freight. Capacity allocation for passenger and freight must be part of the capacity process of TTR. Capacity will continue to be managed by IMs. RFCs are under the responsibility of MS while CNCs are managed by the EC. Having passenger and freight traffic under one roof might lead to complicated decisions on which type of traffic takes priority. The risk should be avoided that passenger transport will be the main focus to the detriment of rail freight
- The RFC mechanism will become too "heavy" for the passenger transport. RFC is a typical corridor/linear approach whereas the connectivity system of national hubs requires more a network solution. Trying to merge those two will lead to confusion.

(d) Separate governance rail passengers only structure with legal basis

A parallel organisation, with a lighter structure and a more pragmatic playing field, could be considered to facilitate international passenger transport and organise this market. This scenario assumes a legal EU basis. Open is whether MS must participate or can use the framework voluntarily.

The advantages – collaboration between actors and international-centred thinking - should be kept in the governance structure that will be put in place for the international rail passenger traffic. In the end the Rail Corridors could be put under the roof of the Core Network Corridors (in the revision of the TENT regulation that is now being carried by the EC, thought is given to enhancing the coherence between the Rail Freight Corridors (RFCs) and the Core Network Corridors (CNCs), in line with this idea). In addition it can be an advantage to have passenger and freight RUs deal with each other directly under the roof of a "rail corridor".

Pros to establish a separate structure

- Clear focus on developing rail passengers transport within a single structure
- New structures will focus on international scale, rather than to focus only on a national point of view.
- These structures will be responsible for the increase of the number of services and the quality level. A single 'window' for all stakeholders to address international railway passenger issues and responsible to organise this market
- This structure will manage to distribute the increasing resources which will decrease issues hindering international railway transport;
- Possible solution for coordination of the activities would be a European coordinator supported by the Commission. The comprehensive catalogue of tasks described here (see governance) would need strong involvement of MSs, NSAs IMs and RUs.

Cons to establish a separate structure

- With separate structure rail freight and rail passengers there is need for cooperation because of overlapping competences (e.g. allocation of capacity)
- The establishment of two organizations in parallel generates a duplication of activities with consequently inefficiency in the use of the available resources and entails additional costs
- Not enough experience in practice to provide examples for an EU legal instrument
- Not yet crystallised whether these structure should be established bilateral or on corridor level. And whether all cross border trains should be included or only the long distance trains from hub to hub
- RFC concentrate on facilitating the rail freight services whereas this structure should also organise the market to assure that the services are going to be implemented
- There is limited consensus within the Member States that this structure is needed and neither is there appetite for legal reform to provide this structure legal basis

To be assessed whether the RFC C-OSS model can benefit international rail passenger services.
Within the Ministries there is no preferred governance structure. Currently the EC is developing/proposing some pilot projects as mentioned in the EC Smart and Sustainable Mobility Strategy. These pilot projects can test all kind of issues hampering international passenger transport, including governance structure. Within this pilots projects the governance structure is not defined, but most probably different structures can be tested/evaluated afterwards. These developments are welcomed by the member states and the Ministries support this steps.

After considering the various options and their Pros/Cons, we as the Subgroup C propose to concentrate – at least as a first step - on the Lite approach to governance as suggested in the option (b). This will give enough space for gaining experience and finding the right method how to deal with this matter. Setting a solid structure upfront without analysing experience from real projects may create wide discussion with focus on governance rather than on results.

3.3.6 Technical interoperability

The TEN-T standards are developed to harmonize the different MS standards into a European interoperability standard to achieve interoperable infrastructure on the TEN-T network by 2030 (core network) and 2050 (comprehensive network). However, the TEN-T definition for passenger services is limited to ERTMS and electrification by 2030 for core network and technical parameters (more related to interoperability TSI's with in general have binding implementation date) are not appropriate for efficient, competitive, modern rail passenger services. We would need to consider what are the main passenger flows in EU, what are expectation of the passengers, what they would expect to turn to rail from other modes and having in depth consideration on that we would need to shape such high quality services – regardless the traditional/national operators/undertakings plans. We shall seek best services for our inhabitants and the best conditions for national undertakings which might overlap. If not, the passenger/inhabitants needs will prevail.

When shaping the network based on the above mentioned approach, we would firstly need to adjust the TEN-T requirements for passenger services. This may include adding advanced derogations concerning the grey area between conventional and high speed lines (140 – 160 km/h range). The implementation of such network could be linked to higher EU co-financing for correct implementation of requirements. Where the network is planned to cross the territory of MS, the government of such MS should be incentivized to commit to the timing of modernisation of the respective infrastructure.

There is an insufficient focus on cross border impact of infrastructure condition on international passenger services. This concerns the factors defining capacity for international rail passenger services. Example: intentions to reduce travel time Amsterdam-Berlin train requires confirmation of electricity / voltage change status, platform lengths and axle load limits for speeds up to 140kmph in the Netherlands and 230 km/h in Germany (not only 100kmph).

Difficulties and differences in speed in de deployment of ERTMS across the different member states hamper the development of international train services. This is due to the high costs associated with the rollout of ERTMS but also supplier capacity to deliver solutions and products is not on par with the technical and operational challenges met in the field. Aligning all stakeholders to implement ERTMS on the cross border sections has also proven to be a challenge due to differences in engineering, procedural and legal approaches. This could only be achieved by instituting bilateral/multilateral working groups to discuss and unblock situations. Like the bilateral ERTMs working groups between RFI/OEBB INFRA, RFI /SZ INFRA, RFI/SBB INFRA. Duplication of activities should be avoided.

Existing technical bottlenecks in Europe are different railway gauge in some countries, different catenary voltages, different signaling and command systems. Impact for railway undertakings (in particular OBU requirements) of ERTMS implementation and Class B decommissioning strategy must be defined for international rail passenger connections. Key Financing, testing, authorization framework for ERTMS OBU's must be transparent, and best practices from the RFC's can be copied. Issue log book for rail freight can be good practice for rail passengers also. Are there (horizontal / network wide) interoperability issues defining the capacity for international rail passenger services; Categorized in 'hardware' that cannot easily be harmonised and 'software' which might be quicker to harmonise. Hardware topics are: Different track gauges, axle loads, signaling systems, catenary voltage. Transition strategies must take into account impacts (both trackside and trains).

The examples show that the issues to be solved for international rail passenger operations can go beyond only technical interoperability. Alternative fuel-traction with battery or hydrogen-powered trains can be a good short-term alternative to costly and time-consuming electrification of missing links, like parts of Regensburg – Praha.

Best practices in border crossing include ongoing infrastructure projects, which are aligned between neighbouring countries, ERTMS deployment plans. Harmonisation of infrastructure technical specifications (electrification, axle-loads, etc.), deployment of ERTMS. Ensure the necessary link with the results of the current EU Shift2Rail Joint Undertaking and the new European Partnership on Rail Research and Innovation, e.g. in European traffic management, addressing the language barrier, and integrate and accelerate deployment of such innovative railway solutions to improve technical interoperability, e.g. by participating in the Shift2Rail JU and its successor implementation pilots/demonstration program for the period 2021-2027.

It is important to understand that the international services should be a single service for the passengers, not two separately managed projects. Prague – Vienna services represent an example of good practice, where both companies (ČD and ÖBB) run very similar vehicles and the whole line is presented as the seamless common Czech-Austrian project. It is also well integrated into other services in both countries. Moreover this way of cooperation brings also significantly better quality, which shows that cooperation does not hinder efficient competition and can result in very well-planned and good offers for the customers. There are also other good examples in area of international trains (for example RegioJet trains) that are operated by the same operator on the both sides of the border. Likewise, international high-speed rail passenger services, such as the

Eurostar between Amsterdam and London and between France and Spain are often operated by a single party.

3.3.7 Capacity allocation

The Time Table Redesign (TTR) expects to provide great benefits for international rail passenger services especially to allocate the annual capacity in advance allowing the ticket selling compatible with the competitors (planes, buses) as it will be introduced in 2025. Infrastructure capacity for international rail services must be reserved for a multiannual period with attractive characteristics (speed / punctuality) and frequencies taking into account the expected demand as well as timetable requirements for freight services. In addition to the instrument of the Framework Agreement currently in use, the concept of multiannual capacity refers to the rolling planning requests that relates mostly to freight traffic. Also high quality cooperation as regards temporary capacity restrictions (Annex VII and ICM) must be ensured.

TTR – Time Tabling Redesign seems to be a relevant step to improve the coordination the allocation of capacity and to free capacity without huge investments in infrastructure. That issue shall be analysed at already developed services e. g. high speed international trains, special – occasional rail services – e. g. Simplon express etc.

From the operator's point of view, one of the biggest problems is that the plans for closures/reductions in capacity (due to construction and modernization works on the TEN T network) are not announced in sufficient time before the work starts. This issue is also taken up in the rail freight corridors, whereas the legal framework has been defined in 2017/2075/EU (EU Directive 34/2012 annex VII). This situation has had, of course, a negative impact on the reliability of the timetable and therefore on the perception of the attractiveness of rail transport. Extensive modernization works might cause that train services are often forced to take a detour instead of their regular route, which significantly impacts the commercial success of international trains. E.g. a lot of long-distance seamless sections might be interrupted due to the lack of coordination during heavy construction works/closure of lines. This may significantly influence the business case and tends to result in a loss of passengers in favor of other transport modes. Therefore at least minimalistic solution – through trains – should be kept – e.g. Zagreb – Graz (instead of Villach) – Zurich due to Karavanken tunnel closure, or. 2 pairs of trains Berlin – Prague – Wien/Budapest which will remain in operation in 2021 onwards despite the significant detour due to closure of the main line northwards of Brno. Better coordination is needed, both on cross-border and national levels, regarding the long-term planning of closures and keeping the announced deadlines.

Integration of international services in the national timetable might have benefits (and would need to be done in such a way that it complies with EU legislation) but has operational implications which might punish attractiveness of the timetable (for example the current Amsterdam – Berlin services) and which impacts the choice of rolling stock (with possible implications on seat capacity, max speeds, comfort). Therefore, there is a need for vehicle authorization under responsibility of ERA of the rolling stock in the both countries.

3.3.8 Rolling stock

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 are less economically attractive for the railway undertakings.

The most hindering issue in implementation of international connections poses the enormous amount of regulations and restrictions in terms of rolling stock and in terms of providing such communication. The time-consuming process of getting the vehicle authorization for the rolling stock causes is costly and takes time which might have been used for quicker reaching the desired effect (in this case organizing the international train service). The new role of ERA with the implementation of 4th RP should reduce this timely process. In addition, the lengthy administrative process leads to considerable cost increases.

Financing of rolling stock is primarily the responsibility of the operators. Specific financing can be supported or facilitated (favorable loan conditions, equal for all operators, by public authorities but is in many cases governed by state aid rules. The implementation of new technologies or systems related to safety EU wide accepted will decrease the rolling stock costs for cross border services. This funding must be linked to an improvement in the overall efficiency of the sector. Increased investment needs in rolling stock should be covered through dedicated existing European funding instruments for the upgrading of rolling stock with multisystem technology for international use.

Additional comments could be draw from the discussions:

- Rolling stock costs and associated financial risks are a major barrier for the development of the international open access market. Investors need guarantees to ensure return on their investment. Member States are encouraged to ratify the Luxembourg Rail Protocol which recognizes and enforces securities in railway rolling stock ;International rolling stock is substantially more expensive than domestic rolling stock due to additional national requirements
- We have a common interest to define interoperable rolling stock that is able to use wide parts of the European network
- Within the context of PSOs, innovative means of financing and investment guarantees may be devised. Also, measures to improve the functioning of the second hand market should be considered.

Very important aspect when financing the rolling stock is the stability and predictability of the future market development and governmental support (if applicable). Considering specificities in each MSs, the legal framework applicable and the various approach local situation could led to, further discussions could be considered by the appropriate subgroup. Therefore, as perceived presently by the operators investment without running the service under PSO regime (esp. into the new rolling stock) is extremely difficult and without PSO is possible only on the top main lines, where the demand for transportation is high enough. The market analysis should provide the authority and operators better predictability on the existing or potential traffic flows and justify international train services supported with a PSO. On the other hand, railway operators are commercial companies and their financial health is a good indicator for qualifying for receiving loans. This gives a secondary guarantee that the companies providing public services are strong enough to qualify for mutli year service provision.

Co-financing is an option when investing into the new safer, internationally compatible and "greener and internationally usable" rolling-stock. This means there should be financial instruments and tools, but the work (ability to reach this co-financing) should be organised by railway operators instead of the public authorities to avoid additional tasks for the public authorities.

Iincreased investment needs in rolling stock should be covered through dedicated existing European funding instruments (e.g. CEF, the use of the Recovery and Resilience Facility RRF by the MS) for the upgrading of rolling stock with multisystem technology for international use.

3.4 D – Regulatory framework

3.4.1 Introduction

The Platform has set up Platform subgroups to identify actions for the European agenda in the following areas:

A. Customer experience, Digitalization.
B. Defining a network of International Passenger services, including market analysis, the usage of existing TEN-T corridors and matters of capacity allocation.
C. Green Deal. Identify infrastructure bottlenecks, missing links and interoperability issues that once alleviated can substantially contribute to the growth of international rail passenger services.
D. Regulatory framework, including financial support measures for international rail passenger services. Public Service Obligations, support measures for rolling stock, and framework conditions for infrastructure charging are key topics.

3.4.2 Vision

In the near future, especially when the current COVID-crisis has subdued, a renewed customer interest in rail is foreseen. This pertains to long-distance international services as well as for national services. A positive public opinion on the rail passenger sector especially on national level and more multimodal travel will also lead to an increased demand for international rail services, especially on routes that are otherwise served by short-haul flights. Customer demand for more sustainable modes of transport fits well in the Green Deal and SSMS.

Therefore, the national governments feel the need of developing an integrated vision, within the current regulatory framework. Such framework shall enable the development of an integrated international rail passenger network, connecting all European hubs, with integrated services. Ideally, services would run on regular intervals as much as possible, but the potential to materialize this is limited due to population density, geography, and most importantly customer demand (implying that not all situations are receptive).

In this sub group report, we lay down our vision and recommendations on such a regulatory framework. As the current market organization and commercial framework conditions do not sufficiently foster development of the required services on a range of train lines, the MS' vision includes market support, including financial support measures for international rail passenger services, as well as Public Service Obligations (PSOs), support measures for rolling stock, and framework conditions for infrastructure charging are key topics. 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. A significant increase in the amount and diversity of railway services is necessary to allow this increase in railway travelers, as well more attractive customer services.

3.4.3 Background

Lacking implementation of the European regulatory framework and the economic and technical framework conditions for rail passenger transport are not sufficiently conducive to the development of new international services; the number of open access services is marginal at EU level and mostly concentrated on the high-speed lines connecting Brussels to other nearby capitals, extensions from the German national system, the relation Italy – France and from the Czech Republic to the neighbouring countries. Especially in countries that do not dispose of separate cross border e.g. infrastructure for international rail passenger services, these open access services are not picking up. 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. Before the COVID-crisis a limited number of initiatives had been launched and some new initiatives were planned, especially on the high speed network.

3.4.4 Structure of the report

To understand the bottlenecks when organizing cross-border passenger transport, this report outlines the different structures and organizational models of the market that are currently present.. Showing these models already makes clear that since national rail services represent the vast majority of market share in Europe compared to international services, the market in most cases is organized from a national perspective, with national tools, instead of an international perspective. The identification of barriers and bottlenecks leads to some recommendations as to what should be analysed further. However, caution is warranted when interpreting the following models, for a number of reasons. First, different participating countries find themselves at different stages of market openness, and are characterized by different interests and railway-related modus operandi. Second, the timeframe on which these models are based is still quite limited since truly integrated inter-European railway networks in some MS are still in their early phases. This fact warrants caution when diagnosing the reasons for current challenges and, subsequently, suggesting solutions.

3.4.5 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. The following example, of the service Zurich – Budapest, provides for an illustration:

The Zurich – Budapest service is promoted to the customer (marketing and sales) as one service, and operated as a common project of (incumbent) national railway operators. However, it is organized internally by the different operators in the following way:

- *The Swiss part of the route is integrated in the Swiss national concession of SBB.*
- *The Austrian stretch in Vorarlberg and Tirol falls under the national PSO contract of Austrian incumbent ÖBB.*
- *The stretch Salzburg – Vienna – Austrian/Hungarian border falls under an open access regime and is run by ÖBB.*
- *The Hungarian part of the route is integrated in the national concession of Hungarian Railways MAV.*

As shown in the Zurich – Budapest example, the inclusion of international services into the national PSO schemes ensures the synergy[39] between international and domestic customer demand and may offer regular connections both nationally and cross-border without the need for any additional request for infrastructural capacity. However, when the service is organised on operators' level (as the Zurich-Budapest service), the authorities cannot influence the service level, unless the service is part of a PSO contract or concession obligation (authorities can only influence the PSO leg, especially if they would provide the financing). In most cases several models for organizing the international passenger market (i.e. open access, PSO) are encountered. From the operators'

[39] Alternatives exist as well, based on discrimination-free sharing of timetable and fare data, ticket re-sell agreements and increased competition to drive innovation and cost-effectiveness.

perspective (subgroup A focuses on passengers perspective), this typically leads to the following models for organization of international services:

- An integrated model, where the operator integrates the international service into the national network
- A national/regional operator runs the service under PSO contract, up to the first local railway station after crossing the respective border.
- The operator runs the national services under PSO contract, and extends these services on a commercial basis over the border
- The service is contracted by neighbouring authorities in two separate cross-border PSO contracts
- Open-access operators with on-the-track competition organize the services on both sides of the border. Alternatively, the same single operator caries out the entire service (i.e. on both sides and across the border(s)).

Where open access market initiative has not developed and is unlikely to develop in a way that is required by the Member States the authorities can cooperate in order to organize PSO contracts for international services as outlined below. We stress that open access market initiatives prevail; an additional analysis of Open Access conditions could foster more details – The EC execute currently this study. But if Open Access is not commencing, authorities could cooperate following to foster the required international passenger service:

5) Cooperation on operators level, two PSCs:

   Both services, in MS A and B, are organized under a PSO regime, with different public service contracts (PSCs) awarded by each MS's competent authority. The authorities oblige the operators to work together, such as on exchange of rolling stock, connecting services, etc. (the depth of this cooperation may vary, authorities only define a general framework for this cooperation).

6) Cooperation on authority level, two PSCs:

   Both competent authorities, in MS A and B, work together beforehand in the definition of the services to be awarded in two different PSCs. The services are awarded by the competent authority of each MS for its particular scope, involving either two different operators or a single one. Consequently, the cooperation takes place at the level of the authorities before awarding the service contract and not at the level of the operators (main difference to 1)

7) Cooperation on authorities' level, one PSC:

   Both competent authorities, in MS A and B, plan and define the services together in order to award one single PSC:

   a) The authorities sign a contract defining the details and obligations which need to be imposed on the potential operator. Consequently, one of the authorities awards the bilateral PSC (for both territories).
   b) The authorities award a single bilateral PSC together, each authority being responsible for its territory, to a single operator and through a single contract.

8) In the franchise model, in line with the PSC Regulation, on-the-track competition is foreseen, but within the framework and conditions set by the competent authority (similar to general rules within a PSO approach and in line with Regulation 1370/2007), in order to assure that the service fits in the national transport policy. This may include ensuring

regular departures throughout the day, as opposed to clustering towards peak hours, establishment of connections to other regional and interregional services, or better utilization of infrastructure capacity.

Advantages of both the PSO regime and Open Access

First and foremost, it should be noted that any implementation of a PSO service is only possible if the market situation indicates that open access services do not meet passenger demands.

If open access services do not meet established demand, PSO regulated services can 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 provides a significant quality improvement at national level and especially for regional centres. This however is of course due to the desired travelling time of direct high speed connections between such international hubs, forbidding too many regional stops. Moreover it should be elaborated on how open access services could be better integrated in the other public transport services. Last but not least: up until now clear consensus on the use and desired nature of PSOs or Open Access Regimes between MS is lacking, and this deficit will need to be addressed if further progress is to be made.

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 applying the rules of the PSO regulation. It means, for example, acceptation of national integrated tariffs, ensuring connecting services in key railway hubs (incorporation of services into national integrated timetables – Takt) or optimizing the use of infrastructure capacity.

Open access, on the other hand, could lead to some improvement of service quality and – at peak times - service frequency and a reduction of fares and the budgetary cost for Member States. Consequently, open access might increase the attractiveness and hence the modal share of rail. However, services in open access regimes are typically less predictable, can be withdrawn easily, and often imply competition for capacity on prime time on congested tracks when there is no separated infrastructure available. Also, open access could drive up fares and result in a decline in the quality of service. Ways by which governments can subvert the risk of a cancellation of services by commercial actors is by introducing cancellation fees or obliging RUs to obtain a train path long in advance. The main challenge remains combining the advantages of open access with the national transport policies/requirements (e.g. integration into a national timetable).

3.4.6 Barriers

Focussing on the barriers for the organization of international rail passenger services, several prominent issues are described below.

Technical specifications

Technical specifications and consequently equipment are still not the same in all countries, although there are a number of exceptions (technical systems are fully compatible between Sweden and Norway and between Slovakia and the Czech Republic). National technical rules can make internationally operating rolling stock more costly, however the industry is becoming more experienced in finding more cost-effective solutions. Despite an important decrease in recent years, national rules are in many cases still an important barrier and Member States should ensure transparency and notifications of such rules as per the EU legal requirements.

National contact points and need for cooperation

At present, outside a PSO approach 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. Within the different countries, it sometimes is just unclear who is responsible for organizing international passenger services: the ministries, PSO contractors, or regional authorities. This makes it difficult to address the competent authorities regarding international services in neighbouring countries, not only for operators, but even for authorities themselves. It has proven difficult to understand who is responsible for organising/facilitating cross border PSO contracts on the other side of the border.

Cross-border services may require some 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 markups. Commercial open access services are particularly successful on stretches of separate high speed infrastructure (and especially point to point connections) with large passenger demand, which facilitates to compensate additional costs for rolling stock certification, technical requirements, staff, and infrastructure access, that come along with cross-border services. Due to different tariff levels, passenger demands and mobility policies, it can happen that one MS needs to finance the service via PSO, whilst across the border open access service without any PSO compensation is possible.

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, and that procurement systems differ widely between MS. Best practices from the current tender procedures are the German regional tenders in regional cross-border services or services between Sweden and Denmark.

Experience in operating cross-border services

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 national timetables and funding schemes. However, the 4th railway package has the aim that any operating actor can operate cross-border more efficient in the future, since the transfer of trains across operators has become much easier and trains can easily be integrated into the MS' national systems.

Implementation of night trains

Night trains are particularly interesting for both national and international connections. However, it is generally difficult to make night train services profitable, as they entail high capital and maintenance costs, have few places per carriage, and seats in sleeping cars can only be sold once per journey. In addition, demand for night trains often varies over the year, and there are relatively high infrastructure costs due to the long distance. As most countries do not have PSO compensation schemes in place and investment costs are high, commercial viability of new services is difficult to achieve, however only a few new open access services have started in recent years, with some more announced for 2022.

Infrastructure capacity issues
In general, the availability of adequate infrastructure is key when it comes to defining service levels and the use of operators. One example is international high-speed trains, which are separated from other passenger and freight trains only where separate high-speed lines are available. 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). Especially in countries with mixed infrastructure, capacity is often already fully allocated on the 'popular' connections, which makes it more difficult to organize new services.

As many of the foreseen international services will run on the most congested routes, this has a major impact on organization, either as PSO or as non-PSO/open access services. If long-range international services come in addition to other services and use separate infrastructure, they can easily be installed or cancelled on an open access basis (no need for regular services), whereas if those services are integrated in the basic domestic supply and replace existing services, there is an intrinsic necessity to provide those services regularly.

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. Still, the issue of rolling stock lies at the absence of Single European Railway Area. Because of this absence there exists a discrepancy in MS infrastructure and their rules and systems with regard to railways, which drives up the cost of rolling stock acquisition since rolling stock is fabricated per country, resulting in high supply costs and small pools of (second-hand) rolling stock.

Quality standards
High quality of services is 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. MS authorities can influence service levels through PSO contracts, in which quality requirements are specified. Often the quality is measured based on KPIs on several quality standards such as punctuality, transit time, and customer satisfaction. Alternatively, basic quality standards are given by legislation (information systems for passengers, PRM transport or technical parameters of vehicles). However, standards might deviate between different countries. It would be desired to consider in a next phase, after formulating the recommendations and defining the necessary steps, to establish and review KPIs.

3.4.7 Recommendations

The recommendations by the MS are directly connected to the barriers as set forth above, so as to provide ideas of how to overcome them.

Authorities on both sides of the border should cooperate
It takes two to tango, if the market situation demonstrates that the service cannot be provided commercially, competent authorities on both sides of the border should cooperate (analyse the obstacles, introduce transportation plan) in order to define, regulate and finance the required services. If the service is not commercially viable on either side of the border, an agreement is needed between both MS. 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. Cooperation should never be obligatory, as MS may have different policies and viewpoints as to what services should be provided by the market and what under a PSO. The current platform initiative from the MS already is a positive action. However, common initiatives could be developed in order to secure that cross border services are organized on both sides of the particular border. Additional legislation appears not necessary since Regulation 1370/2007 and Directive 2012/34 (regarding train paths) can be regarded as sufficient.

National contact points
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.. These national contact points could be responsible for international network development in case of a cross-border or multi-country PSO, and organizing cross-border PSO contracts, and could be in regular contact with neighboring counterparts.

Cross-border services may require financial incentives
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 or subsidized via an EU fund for new services, perhaps comparable to the Marco Polo program for promoting new intermodal rail freight services. The terms and conditions should be drafted at a later stage. 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. In addition, some adjustments to charging principles could be introduced for long-distance international services, including night trains, provided that appropriate financial incentives are introduced to compensate IMs.

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

Technical specifications
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 (such as interoperability rules and taxation) to remove market barriers and to ensure the full establishment of the Single European Rail Area.

Infrastructure capacity issues
Infrastructure on the main lines to the hubs is quite often already congested. Additional services are difficult to integrate in the existing timetables. The modernisation and the enhancement of the current network, especially through the deployment of ERTMS and digitalisation, should be the priority for capacity issues as it will have a strong impact on the quality of all rail. One possible way to tackle this challenge is by using alternative routes. The results of the TTR project and the need for coordinated prioritization rules should be taken into account.

Services - Rolling stock
The different technical specifications on country level mentioned above lead to considerable additional costs for adjusting new rolling stock for cross border services. One solution could be that MS 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'). To ensure non-discriminatory access to publically funded rolling stock, there can be provisions on taking over rolling stock after changing operator in the PSO contract or other equivalent measures. Another option could be to use the upcoming revision of the 2008 State Aid Guidelines in order to streamline the rules and revise an EU wide framework for the financing of rolling stock. Rolling stock used for open access traffic is usually financed by the rail operators without support from the state. Possible ways of resolving these challenges are the pooling of rolling stock or a horizontal support scheme to lower the operating and/or investment costs in line with state aid rules. However, where open-access market services are not sustainable, it may be necessary to establish new PSO contracts to purchase a better quality rolling stock. This would eventually lead to overall better service.

Quality standards

Standards set in contracts by different competent authorities concerning cross border services should be coordinated beforehand, but only when this can be regarded as appropriate and when it is in relation to PSO/PSC.

Other recommendations especially on rail/air cooperation

Air/Rail frameworks. In order to reduce short-haul air passenger transport within Europe (such as short flights connecting to a larger international airport), a wider European legal / economic / logistics Air-Rail framework, involving MS, airlines and railway undertakings, could help to incentivise more efficient air-rail connections. Currently, several railway undertakings have already set up Air/Rail cooperation with airlines: NS (railway undertaking) and KLM (airline) are working together on the execution of an "action agenda Air/Rail" in the Netherlands. Also Austrian (airline) and ÖBB-PV AG (railway undertaking) work together in offering domestic "flights" (with flight numbers) on trains. In France, SNCF has agreements with twelve airlines to ensure connections for passengers between Paris airports and twenty train stations. Belgium bears similar examples. Most recently in Germany DB Fernverkehr AG (railway undertaking) and Lufthansa (airline) have also established a cooperation branded "Lufthansa Express Rail". Current barriers include questions of liability, compensation and handling of delays, baggage handling and ticketing.

Some countries are conducting a market analysis on international rail passenger connections. Focus of the study is to examine which connections are likely to be provided in open access, and which connections might need PSO contracts. Moreover these studies should provide also insight in the taxation level between the modes, to assure the level playing field.

Whereas air/rail cooperation concentrates on the long haul (from the rail perspective), the integration between rail and other public transport modes and bikes, MAAS models and car sharing, should be integrated as well, to facilitate last mile transport.

Annex 5 – Terms of Reference for the IRP

Platform for the Development of International Rail Passengers Services (IRP)

Terms of Reference

As adopted in written (silence) procedure by Platform representatives, 1 September 2021

These Terms of Reference do not create any legal or financial obligations for any Member or observer of the Platform. The terms of reference replace the version adopted 8th December 2020.

Background
This Platform is set up on the basis of the "Political statement for coalition of the willing development international rail passenger transport" from 2 June 20201 on the development of International Rail Passenger Services, which includes the decision on the establishment of the Platform; states that the Platform should support a European agenda on international rail passenger transport as part of the EU Green Deal; and that the Platform will work together with all signing EU Member States and signing third countries, European Commission, European Railway Agency, Shift2Rail, OTIF and rail sector organisations. The progress report was sent by letter to all signatory Ministers 25 May 2021 and presented to the EU Transport council 3rd June 2021. The progress report provides an overview of barriers to developing international rail passengers services and identifies scenario's / tools for solving these barriers. The sector statement from 30 March 2021 was annexed to this progress report.

The Platform will build upon the existing EU railway acquis and policy (Single European Railway Area, TEN-T, Innovation, etc) and COTIF rules.

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 Ministers of Transportation 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, avoiding doing double work. It will initiate actions if applicable. The monitoring of actions is already ongoing (2020 onwards).

(6) 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.

Article 2 Membership in the Platform

(1) Members are European countries that have supported the 2 June Ministerial Declaration on International Rail Passengers transport. Members of the Platform are entitled to vote on decisions of the Platform. The member list is annexed.
(2)
(3) European countries that have not adopted the Ministerial Declaration can attend the Platform meetings as observers without having the right to vote on decisions of the Platform. European countries not being Member of the platform may join the Platform at any point in time by adopting the Ministerial Declaration.It is possible for a country to approve the declaration retrospectively and thereby obtain the right to vote.

(4) The European Commission (EC), the European Union Agency for the Railways (ERA), Shift2Rail and the Intergovernmental Organisation for International Carriage by Rail (OTIF) and the Organization for Cooperation of Railways (OSJD) are invited to participate in the Platform without having the right to vote on decisions of the Platform.

(5) European rail passenger sector representatives and their customer organisations, who organised via the Platform Sector Mirror Group are invited to attend the Platform meetings as observers without having the right to vote on decisions. The Platform works closely with this SMG.

Article 3 Activities

In line with the purpose and scope outlined above, the activities of the Platform may include:

(1) Work within Platform subgroups to identify and monitor and where necessary implement actions for the European agenda in the following areas from the 2021 Progress report:

a. **Customer experience**, Digitalization;
b. Defining a **network of International Passenger services**, including market analysis, TEE 2.0 concept, the usage of existing TEN-T corridors and matters of capacity allocation;
c. **Green Deal**. Identify **infrastructure bottlenecks**, missing links and interoperability issues that once alleviated can substantially contribute to the growth of international rail passenger services;
d. **Regulatory framework,** including financial support measures for international rail passenger services. Public Service Obligations, support measures for rolling stock, and framework conditions for infrastructure charging are key topics.

The Platform may create additional Subgroups or remove them at any time.

One or multiple Platform Member(s) will chair the subgroups. Platform Member representatives, observers, EU institutions and OTIF are free to attend. The Platform cooperates with the sector to define agenda for the subgroups. Platform Sector Mirror Group will also be represented as observers. The Chair of the subgroup is acting as the office of the Subgroup.

The Platform may create for a limited period of time Task Forces or Working Groups to examine topics defined by the Platform. The provisions on Subgroups apply to these Task Forces and Working Groups.

Delegated Members of associations of Sector Mirror Group may also participate in Subgroups and Platform meetings providing first-hand experience of the sector.

The subgroups shall meet based on an agenda and:

- Will take into account the items from the indicative work plan of the Platform;
- Can collect and share relevant public information from national authorities;
- Can evaluate, propose and develop initiatives aimed at disseminating good practices that will be presented to the Platform;
- Can elaborate preliminary working documents / reports to be submitted to the Platform for further discussion;
- Will report regularly to the platform.

(2) Monitoring the development of international rail passenger services, taking into account the Commission initiative of developing a connectivity index. Where necessary develop a set of KPI's for international rail passenger transport.

(3) Providing a forum in which the Member States represented can freely discuss their respective priorities.

(4) Exchange of views with the IRP sector mirror group.

(5) To share information presented at relevant conferences on rail passengers.

Article 4 Working practices

The Platform will aim to meet at least twice a year, where possible to coincide with SERAC meetings.

- The Chair will draw up draft agendas for the meetings of the Platform at the latest 3 weeks before the meeting. In that period, Platform Members can approve the agenda or propose to add new agenda items. The agenda will be adopted as first agenda item in the meeting. The Chair has to consider all amendments and statements to the agenda made by Members until the meeting.
- Proposals for recommendations to be adopted will be circulated at least 2 weeks in advance of meetings. At least 4 weeks in advance, a first draft version will be circulated. If these deadlines are not met, the deadlines for the (written) voting procedure will be extended accordingly unless Members of the platform mutually agreed otherwise.
- Any other document (other than presentations for the meeting) provided as input to the meeting must be provided at the latest one week before the meeting to ensure Members and Observers have ample time to examine them. Any such document not provided at least one week before the meeting will be considered as invalid for discussion and not taken into account in the meeting, unless Members of the platform mutually agreed otherwise).
- The Platform will take into account the views from the delegated members of the associations of the SMG.
- The documents of the Platform and subgroups will be made available to the Platform members, observers and sector representatives where possible on a (password protected) internet based platform. The Chair is responsible for providing all documents according to the deadlines.
- By mutual consent of the Members of the Platform, the Platform shall designate one or two Platform Members to fulfil chairing and secretariat functions. The term of office shall be one year and can be extended.

- The provision of the resources required to fulfil the chairing and secretariat functions remains in the responsibility of the concerned Platform Members.

    - The Members of the platform take all decisions unanimously. Only Members present in the meeting are entitled to cast an eligible vote;
    - A unanimous decision is reached when all Member States present in the meeting and the votes cast as proxy by a Member States have cast an identical vote. A unanimous decision is also reached if one or more Member States abstained or acting as proxy abstained in the voting procedure;
    - Recommendations and reports of the Platform shall be published. The Chair has to publish recommendations and reports of the Platform at the latest one week after the Platform has decided positively on them;
    - The chair can decide on a written voting procedure where appropriate, taking into account the aforementioned deadlines on supplying documents;
    - Member States not represented at a meeting can delegate in writing their vote to another Member State ("proxy") or vote in writing to the Chair, sent no later than the day before the date of the meeting;
    - Member State(s) shall be informed in advance of the meeting on proxies concerned or at the latest before votes are cast.

- The platform reports to the Transport Council regularly and will prepare a report to be put to ministers by mid-2022 and mid-2023.

The subgroups of the Platform will meet regularly and as often as necessary to fulfil the activities described under *Activities.* Up to now two to three, (virtual) meetings between the meetings of the platform have proven to be effective.

- In preparation of the subgroup meetings, the same deadlines as for the Platform meetings shall apply;
- The provisions for designating the Chairs of the Platform will also apply to the subgroups;
- The Chairs of the subgroups are responsible to draft and distribute the agenda of the meetings, to facilitate and host the meetings as well as to draft and distribute minutes of the meeting;
- The Chairs of the subgroups are responsible to organise all the necessary steps to elaborate working documents / reports which will be submitted to the Platform;
- The Chairs of the subgroups will further report regularly to the Platform on the current state of work.

All technical decisions on recommendations or reports in the Platform shall be prepared and discussed in the respective Subgroups.

Article 5 Revision and Termination Clause

(1) The Platform is not created as an indefinite body. The Platform members may propose to the Ministers who signed the Ministerial declaration to terminate the work of the platform at a given point of time.

(2) Any Platform Member or Observer may leave at any time the Platform. Platform member may then wish to consider withdrawing from the Ministerial declaration. The Member State or Observer will in such a case notify the Chair, other Member States and Observers in writing.

(3) The Terms of Reference may be amended and revised in accordance with a revision procedure agreed upon by unanimous decision by the Member States eligible to vote.

Annex. List of EU Member States and European countries that have endorsed the 2 June Ministers declaration

(Date: September 2021)
- 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;

Other participants to the platform:
- European Commission;
- European Railway Agency;
- OTIF secretariat;
- Shift2Rail;

Sector observers:
- Members of the Platform Mirror Group.