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Independent Regulators' Group – Rail

Working group Access

Report on the state of development of the TTR project: potential regulatory concerns in the TTR allocation process

May 2021

A. Introduction

1. Experience since liberalization of the European railway market shows that passenger and freight traffic have shown significant differences in terms of capacity needs. This results in different requirements and demand for infrastructure capacity. TTR seeks to address this by taking into account the wish for more flexibility allowed in requesting capacity, especially in the freight sector, and by creating the possibility for earlier commercial use of paths, e.g. earlier ticket sales, desired by the passenger sector.
2. Cross-border traffic has become more and more important for the rail sector, but progress is hampered by the current timetabling system which often leads to unnecessary delays due to poorly coordinated construction works and timetable clashes.
3. In this context, RailNetEurope (RNE) and Forum Train Europe (FTE), supported by the European Rail Freight Association (ERFA), launched in 2014 the overall redesign of the path allocation process in Europe - the "Timetabling Redesign" (TTR) project. TTR is developed to improve the way the supply of infrastructural capacity meets the demand for capacity and to resolve problems with harmonisation of timetabling procedures between European countries, as well as to facilitate cooperation at international level.
4. In 2020 IRG-Rail published a "report on the state of development of the TTR project and its pilots" (IRG-Rail (20) 4)¹. In this document, IRG-Rail drew some initial conclusions about the development and progress of the TTR project and its pilots and outlined important issues to be addressed that could be raised by the redesign of timetable allocation processes in Europe.
5. The aim of this report is to provide the regulatory bodies' perspective on unresolved key regulatory questions and challenges related to TTR, especially the regulatory aspects of the proposed allocation process.
6. IRG-Rail working group Access produced an interview guide asking associations of railway undertakings (ERFA, AllRail and FTE) for information on their experiences of and expectations on TTR. The interview guide was used as a basis for discussions which took place between March and April 2021. This report is based on the outcomes of this dialogue with stakeholders and experiences of regulatory bodies of monitoring capacity allocation. It outlines the aims of the TTR project (section B), describes recent TTR developments of relevance to the proposed allocation process (section C), examines the potential role of regulators in the new system of capacity allocation (section D) and identifies conclusions and important issues to address (section E).

B. Aims of the TTR project

7. The main goal of the TTR process is to optimize the usage of existing railway infrastructure in Europe. In order to achieve this goal, the program has directed its efforts toward resolving several issues including i) temporary capacity restrictions (TCRs) and the international coordination of such restrictions, ii) the revision of the allocation process for train paths, and iii)

¹ <https://www.irg-rail.eu/download/5/740/IRG-Rail204-ReportonthestateofdevelopmentoftheTTRprojectanditspilots.pdf>.

the development of “commercial conditions” incentivizing applicants and infrastructure managers to plan their needs in a proper way. The efficient use of the infrastructure is a crucial driver for the competitiveness of rail transport. Railways showed increasing trends for both passenger and freight traffic before 2020, and demonstrated some resilience during the Covid pandemic, in respect of the freight market.

8. Railway Undertakings (RUs) need a reliable process that allocates high quality capacity across European countries. In particular, applicants of the freight sector require good quality capacity available at short notice before the running of the train. In order to be competitive with road transport they request a more dynamic and flexible allocation system that ensures better capacity allocation both in terms of quality and timeframe. On the other hand, most passenger RUs require to be able to anticipate the release of the final version of the annual timetable, so to have a stable timetable at least six months before the date of the annual timetable (ATT) in order to start selling tickets in advance and improve the competitiveness of rail vis-à-vis other transport modes (e.g. road and air transport).
9. Infrastructure Managers (IMs) want to make their workflow more efficient while designing reliable timetables, so that the impact of modifying allocated train paths on the timetable is minimised. They are looking at optimising and maximizing the use of capacity, with the aim to improve the stability and reliability over time of the timetabling process and significantly reduce the number of timetable change requests which are affecting the current process.

C. TTR: recent developments

10. The TTR project has changed its organisation several times in a way which influences the implementation of TTR and the involvement of regulatory bodies. In December 2020 the RNE General Assembly adopted a new organisation for the TTR Programme under the title TTR Migration Concept², as well as a new long-form name for the TTR Programme.
11. The new name, *Timetabling and Capacity Redesign*, reflects a widening of the scope of TTR from timetabling to broader capacity issues such as Temporary Capacity Restrictions (TCRs) and advanced planning which takes a full view on capacity. The alignment of TCRs with the proposed TTR allocation process is also reflected in the 2.0 version of the TTR process description, dated 7 April 2021.³
12. The TTR Migration Concept entails a new set-up with 11 countries/IMs becoming *first-wave implementers* and running implementation pilots to test and introduce, on a permanent basis, components of the TTR in a stepwise approach and in parallel with the national implementation projects which involve all RNE members.
13. The implementation pilots will be based on the concept of *Minimum Viable Products (MVPs)*. An MVP is a version of a product with just enough features and a high business value so that early customers can use it as a first practical step of the TTR Migration Concept. Some of the previous TTR pilots do not fit readily into the MVP format and may be continued in parallel with the implementation pilots. Meanwhile, all RNE members proceed with national

² https://rne.eu/wp-content/uploads/TTR-Migration-Concept_V1.0.pdf

³ https://cms.rne.eu/system/files/long_description_of_the_ttr_process_v2.0_2.pdf

implementation of TTR. National Implementation has been going on since the end of 2019, with National Implementation Managers (NPIMs) being appointed and asked to provide national risk logs, timelines and organisation schedules. National implementation proceeds through a number of implementation packages leading up to planned full implementation in the 2025 timetable (2025 TT). The first process phase identified and to be implemented is the Capacity Strategy for August 2021.

14. For each TTR phase, the necessary preconditions need to be in place. The preconditions consist of the following elements: legal framework, IT landscape, commercial conditions and funding.
15. The legal framework should enable the deployment of TTR. In early 2021 the European Commission set up a working group with Member State representatives to discuss TTR developments, including a gap analysis prepared by the TTR Legal Task Force which points to areas of the current legal framework which needs to be amended to enable TTR. The European Commission has indicated that it would be preferable and perhaps necessary to amend directive 2012/34/EU to deploy TTR. Legislative proposals can be expected in the first half of 2022.

D. The proposed TTR allocation process and the requirements of a well-functioning railway market

17. The implementation of TTR implies not only changes in the capacity allocation process for several IRG-Rail member states, but also modifies the monitoring scope and functions of regulatory bodies. The current system foresees the possibility to book multiannual capacity with framework agreements, and consists of an annual timetable process in accordance with Annex VII Directive 2012/34/EU, based on individual requests for capacity by applicants to the infrastructure manager, plus reserve capacity for ad hoc traffic according to Art. 48 (2) of Directive 2012/34/EU. Applicants have the right to complain to their national regulatory body under the Directive. Regulatory bodies are empowered to control in particular the infrastructure manager's decisions on network statements and criteria's set out in it, the allocation process and the charging scheme. This process is likely to change in depth with the introduction of TTR.
18. In this respect, IRG-Rail has involved representatives of rail freight and passenger rail service stakeholders to discuss the challenges of the TTR project. The following paragraphs were informed by the outcomes of these dialogues (1.) and an overview of the core elements of the TTR process (2.). This leads to the implications for the regulatory bodies (3.).
 - a. **Views on TTR expressed by associations representing Railway Undertakings**
19. In general the representatives of stakeholders IRG-Rail spoke to agreed that TTR addresses important problems such as lack of coordination, lack of harmonised priority rules, non-availability of high-quality train paths etc. They demand that the railway industry should be involved in the process. They have also raised questions regarding the implications for competition, the lack of capacity, the allocation process, the management of TCRs and the construction of the timetable. They have pointed out that applicants need more information on TCRs and rolling planning.
20. The exchange with the rail freight representatives suggests that they so far have had little practical experience of TTR e.g. through pilot projects. In determining capacity for expected

border traffic, the main significant difficulty for some pilot lines appears to be the lack of international coordination of TCRs. In addition, the current legal situation does not provide legal certainty for pilots in order in particular to test a safeguarded rolling planning concept. However, without a continuous field testing in order to prove the effectiveness of the influencing factors, many questions about the concepts cannot be answered conclusively at the moment.

21. In this respect the rail freight representatives appear not to focus primarily on the complete implementation of TTR in the 2025 TT, but rather on a step-by-step implementation based on MVPs.
22. The exchange with Allrail as a representative of new entrants in passenger transport suggests a limited engagement with TTR so far with this group of applicants. Some fundamental questions remain open and issues on various aspects should be considered in the impact assessment for this market segment.
23. Explicit reference was made to the future establishment of new entrants and the alignment of the priority rules in the allocation guidelines for the new timetable process. In this context, the need for integration of service facilities in the TTR project seems to be a key issue for meeting the needs not only of the established public service operators, but also of new market participants to plan services with rotations with safeguarded capacities. Allrail expressed concern about the already growing competition problems in the PSO sector, which could be intensified by the TTR redesign project and the related pre-constructed capacity allocation process.
24. Moreover, the concept of the economic equilibrium test (EET) for new passenger services shows that requiring new companies to announce their plans 18 months in advance hinder the opening of new services at short notice. The combination of EET and TTR with its even longer planning phase could bring additional challenges for passenger services.

b. The proposed TTR allocation process

25. Based on the views of the stakeholders' representatives and the description of the new timetable process presented in the TTR Project Description document (TTR PD)⁴, IRG-Rail has identified challenges in the core elements of TTR, especially with regard to the mechanisms for conflict resolution and ensuring transparency.
26. The following process steps with the associated deadlines are taken from the document "TTR Description of the Redesigned Timetabling Process version 2.00" dated 7 April 2021. In the table below, the first three columns summarise, on the basis of the TTR process description, the role and task of the IM, the core element of the process step, and the role of applicants. The fourth column contains indications of regulatory issues which may need to be addressed in the implementation of TTR.
27. The report is focused on the new process steps in the TTR advance planning: capacity strategy, capacity model, and capacity planning/supply. The report does not deal in depth with TCR planning, path modification/alteration, or requests in ATT/rolling planning/ad hoc.

⁴ TTR Description of the Redesigned Timetabling Process version 2.00:
[long description of the ttr process v2.0 2.pdf \(rne.eu\)](#), last update: 7 April 2021.

Capacity strategy X-60 – X-36

IM	Core elements	RUs and non-RU applicants	Possible challenges identified by IRG-Rail
<p>IMs start with long-term plan and gives a first rough overview of future capacity demands (demand forecast).</p> <p>IMs create and update the strategy, consult with stakeholders, meet with relevant IMs for harmonisation, sign the final strategy.⁵</p> <p>IMs ask competent authorities to provide key input on</p> <ul style="list-style-type: none"> political requirements on future positive and negative changes in the available capacity intended future development in the PSO transport available financial resources for future investments and maintenance⁶ 	<p>A long-term harmonised plan taking into account</p> <ul style="list-style-type: none"> demand forecast (incl. own requirements for maintenance/known works) assignment of the demand on lines/network capacity analysis capacity investment scenarios, in case the above analysis has revealed any bottlenecks. <p>Scope of the capacity strategy:</p> <ul style="list-style-type: none"> Geography: complete network with the possible exception of regional lines/feeders/outflows with a single applicant. Unit: complete network or for various geographical areas (e.g. per corridor, per axis, per region). 	<p>Applicants are</p> <ul style="list-style-type: none"> Informed about the state of the document and content between X-54 and X-36 and before the final publication.⁷ consulted.⁸ 	<p>The capacity strategy phase involves only limited interaction between IMs and applicants. However, certain factors shaping the market are defined early on in long-term planning, which could play an important role in the later process.</p> <ul style="list-style-type: none"> How can transparency be safeguarded in the collection of information and methods for forecasting demand and determining the principles for capacity allocation? To what extent should different stakeholders be allowed to influence the available capacity and the planning principles?
	<p>Main focus points:</p> <ul style="list-style-type: none"> Expected capacity of infrastructure Principles for capacity allocation to TCRs Main principles for planning traffic flows in capacity model. 		

⁵ TTR Process description version 2.00, Annex 2: Definition of Roles (Including Responsibilities and Tasks of Leading Entities), v 1.3.

⁶ TTR Process description version 2.00, p. 18.

⁷ TTR Process description version 2.00, Annex 3.1: Roadmap to Capacity Strategy (Including Basic Requirements). See also TTR Process description version 2.00, p. 18.

⁸ TTR Process description version 2.00, Annex 2: Definition of Roles (Including Responsibilities and Tasks of Leading Entities), v1.3

Capacity model (X-36 - X-18):

IM	Core elements	RUs and non-RU applicants	Possible challenges identified by IRG-Rail
<p>The tasks of the IM consist in</p> <ol style="list-style-type: none"> 1) constructing a clear picture of the available infrastructure on its network three years in advance. 2) making plans about how the infrastructure will be used in the future <p>This planning requires the calculation of volumes for different market segments and translating these calculations into design parameters for future timetables.</p> <p>This can be done by taking into account:</p> <ul style="list-style-type: none"> • information provided by the competent authorities in the capacity strategy phase, • placed multi-annual Rolling Planning requests, • data about train services operated in the current or previous year, • estimation and own hypothesis of future market developments, • capacity needs announcements, • framework agreements. 	<p>The Capacity Model is a visualisation of volumes of capacity for commercial traffic and volumes of capacity to be used for TCR. It is an intermediate step, which is used by IMs to help the transformation of expectations about future demand into capacity products that can be planned, safeguarded, and offered to customers.⁹</p> <p>Scope of the capacity model:</p> <ul style="list-style-type: none"> • <i>Geography</i>: the complete network with the possible exception of regional lines/feeders/outflows with a single applicant. • <i>Unit</i>: “train path line sections”, defined by each IM. • <i>Time-TCRs</i>: at least for a timetabling year. • <i>Time-traffic</i>: at least in a 24h-overview of traffic volumes per each market segment on a standard non-TCR day.¹⁰ 	<p>Until X-24 applicants may indicate their needs for capacity in Capacity Needs Announcements (CNA). The input can be expressed in different ways:</p> <ul style="list-style-type: none"> • Indication ‘Status quo’ if no changes to the current offer are intended • Indication ‘Status quo’ with adaptations <p>New traffic (as much detailed and reliable input as possible such as parameters, stops, rough timetable requirements).</p> <p>Following the submission of CNAs, applicants will be consulted on various issues, namely:</p> <ul style="list-style-type: none"> » TCRs » Capacity Needs Announcements » Capacity Models » Network Statements » Capacity Supply¹¹ 	<p>Capacity needs announcements:</p> <p>CNAs are the main means for applicants to influence the capacity model and ensure that their demand for capacity will be represented in the capacity supply at X-11. CNAs are a new element in the planning process which raises a number of potential regulatory issues:</p> <ul style="list-style-type: none"> • If CNAs are not binding for applicants, how can IMs deal with the risk of applicants exaggerating demand? Are the proposed “plausibility checks” sufficient? • If CNAs are binding for applicants, how can IMs deal with traffic with uncertain demand, new traffic, and new entrants? <p>Transparency in planning methodology and design parameters</p> <p>The current capacity model and capacity planning/supply gives a strong mandate to IMs to shape the use of the railway infrastructure. Does the process need to be transformed to allow a more collaborative approach? How can TTR safeguard transparency and non-discrimination in situations where</p>

⁹ TTR Process description version 2.00, p. 24

¹⁰ TTR Process description version 2.00, p. 19.

¹¹ TTR Process description version 2.00, p. 11.

<p>X-24 to X-21 IMs analyse the collected data (plausibility check of data, detection of multiple data entries for the same train service, comparison with own traffic forecast hypothesis, etc.). Draft internationally harmonised Capacity Models are finished.</p> <p>X-21 to X-18 IMs consult the applicants of which capacity needs cannot be fully considered in the models and try to find alternative solutions. IMs fine-tune the Capacity Models.</p> <p>X-18 Capacity partitioning Publication of final capacity model including annual requests for both passenger and freight (very stable traffic), Rolling Planning requests, Ad hoc requests, and TCRs.¹²</p>	<p>Objects of the capacity model:</p> <ul style="list-style-type: none"> • Expected volume of ATT requests – passenger trains, broken down into <ul style="list-style-type: none"> ○ categories (high-speed/long-distance/express regional/regional) ○ parameters (high-level stopping pattern, acceleration, speed, max length) • Expected volume of ATT requests – freight trains, broken down into <ul style="list-style-type: none"> ○ categories (domestic or international; wagonload/block/ combined transport train) ○ parameters (max weight; max length, speed, dangerous goods or extraordinary consignments). • Expected volume of RP requests • Expected volume ad hoc requests • Maintenance window/ TCR • Unplanned capacity <p>A capacity model could have an added value in case of</p> <ul style="list-style-type: none"> • congested lines; • expected substantial volume of Rolling Planning requests; • lines with mixed traffic • lines with international traffic; <p>lines with an expected high volume of TCRs</p>	<p>X-24 to X-21: Be available for contact by IM for clarification (e.g. in case of lack of plausibility). X-21 to X-18: participate in consultation process if the CNA could not be fully taken into account (due to missing capacity, assessment of alternatives, etc.).</p>	<ul style="list-style-type: none"> • capacity model parameters are designed to the disadvantage of an applicant's needs? • There is a need for resolution of conflicts between different demands. <p>Consultation, coordination and dispute resolution In the TTR process, many of the capacity allocation issues which are currently resolved in the consultation and coordination stages of the Annual Time Table under the rules in e.g. art. 45.3–4 and 46 of directive 2012/34/EU.</p> <ul style="list-style-type: none"> • How big is the need for similar detailed safeguards concerning consultation and coordination in each stage of the TTR process? • How should dispute resolution processes and priority criteria be designed and applied to this early stage, where there aren't any detailed path requests yet? <p>Role of Regulatory Bodies With a lot of planning and conflict resolution taking place during advance planning, what will be the role of Regulatory Bodies in monitoring non-discrimination, transparency and efficiency and dealing with appeals in the different process steps?¹³</p> <p>Economic equilibrium test How will the necessity for some applicants to adhere to notify planned traffic 18 months in advance for an economic equilibrium test be dealt with under TTR?</p>
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¹² TTR Process description version 2.00, p. 28.

¹³ TTR Process description version 2.00, Annex 2, p. 70.

Capacity planning/supply (X-18 to X-11)

IM	Core elements	RUs and non-RU applicants	Possible challenges identified by IRG-Rail
<p>Based on the partitioned Capacity Model, a feasible timetable according to axis characteristics will be elaborated and published as Capacity Supply. The Capacity Supply is a 365-day overview that shows all the elements in the capacity diagram – TCRs, maintenance windows, pre-planned paths, bandwidths and empty spaces for tailor-made requests. All objects shall be harmonised between IMs.¹⁴</p> <p>On the basis of the capacity partitioning, at the latest from X-16, IMs will work on the complete timetable by combining pre-planned paths, system paths, bandwidths and empty spaces. The result is a feasible timetable according to lines and/or network characteristics. In the case of cross-border lines, these activities shall be harmonised with the neighbouring IM(s) by using the Capacity Hub</p>	<p>The capacity supply consists of a 365-days overview – capacity diagram, where object as pre-planned paths and or wider bandwidths with the number of available slots are displayed.</p> <p>The objects of the capacity supply are:</p> <ul style="list-style-type: none"> • Capacity for Annual Timetable requests <ul style="list-style-type: none"> ○ Pre-planned paths ○ Bandwidths for requests (including potential number of slots) ○ Empty space for tailor-made requests (unplanned capacity) • Capacity for Rolling Planning <ul style="list-style-type: none"> ○ Safeguarded pre-planned path ○ Bandwidths for requests (including safeguarded number of slots) 	<p>X-18 to X-11 Be available to the IMs for <i>consultation</i> on particular parts of the Capacity Supply.¹⁵</p> <p>From X-15 to X-12 applicants can request <i>feasibility studies</i>. This will enable applicants to examine the feasibility of new or amended service concepts, using an iterative process with IMs and/or partner applicants to develop them further with a view to ordering paths for the annual or running timetable.</p> <p>X-16 <i>Network Statement consultation</i>: IM would present the intended changes in comparison with the previous version, Applicants are invited to give feedback by X-15.</p> <p>X-11 gets access to the Capacity Supply. Applicant is given the possibility to notify inconsistencies.¹⁶</p>	<p>Confidentiality</p> <p>The need for applicants to reveal their business plans in CNAs at X-24 rather than during the ATT may create new challenges during the consultation of the capacity model and especially the capacity supply:</p> <ul style="list-style-type: none"> • How can the confidentiality of applicants' plans be safeguarded? • How can procedures for planning and consultation be designed in a way which does not expose significant information about new or changed traffic which may enable for competitors to act on this information to emulate or prevent the business approach, while at the same time allowing transparent processes? • For vertically integrated companies, will applicants have sufficient trust that information is not transmitted from an IM branch to a RU branch?

¹⁴ TTR Process description version 2.00, p. 11.

¹⁵ TTR Process description version 2.00, Annex 3.3: Roadmap to Capacity Supply (Including Basic Requirements), p. 75.

¹⁶ TTR Process description version 2.00, Annex 3.3: Roadmap to Capacity Supply (Including Basic Requirements), p. 75.

<p>At X-11 IMs will publish an internationally harmonised Capacity Supply including maintenance windows for minor and late TCRs.</p> <p>The capacity planning/supply also includes the consultation and finalisation of the <i>Network Statement (NS)</i> which should contain information allowing known applicants, potential new applicants and other involved stakeholders to know their obligations and possibilities within the TTR process. The consultation of the NS has to be carried out for all networks and the timeline for consultation harmonised. X-16 IMs should present (or make publicly available) the intended changes in comparison with the previous version of the network statements. Applicants are invited to give their feedback. At X-15 Observations by applicants related to the Network Statement consultation. IMs/ABs will analyse them. The decision to take them into account is the responsibility of the IMs. At X-12 Publication of the final version of the network statements.</p>	<ul style="list-style-type: none"> • Capacity for ad hoc <ul style="list-style-type: none"> ○ Safeguarded pre-planned paths ○ Bandwidths for requests (including safeguarded number of slots) ○ Empty space for tailor-made requests (unplanned capacity) • Negative capacity <ul style="list-style-type: none"> ○ Known and published TCRs ○ Fixed rectangle or trapezium for a maintenance window (to be used for minor, late TCRs) 		<p>Transparency in planning methodology and design parametres (See above under capacity model.)</p> <p>Consultation, coordination, and dispute resolution (See above under capacity model.)</p> <p>Framework agreements In the capacity planning IMs will need to take into account capacity dedicated to framework agreements.</p> <p>Role of regulatory bodies (See above under capacity model.)</p>
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c. Implications for regulatory bodies

28. The considerations presented in the column to the right in the table above suggest that the proposed allocation process raises a large number of regulatory issues. The regulatory bodies of IRG-Rail consider the monitoring of new developments in the railway market as a common task and emphasise the importance of appropriate conditions for market participants as part of the redesign of timetabling and capacity allocation.
29. The published process description, however, does not show to what extent or at which stage the rule-making processes presented in the TTR Description become binding. From the published process description, many consequences of the regulations for the affected sectors cannot yet be assessed and too many issues are still open. For example, it is not clear to what extent or at what stage the regulatory processes, information obligations, planning of TCRs, balancing of interests and capacity offers outlined in the TTR description will become mandatory.
30. One railway representative expressed fears that TTR extended by the EET could be the end of the open access doctrine and could become a barrier especially for newcomers to the railway market. The requirement of EET to notify 18-months in advance hampers short-term expansion of open-access traffic. In this respect, the stakeholder suggested that there might be a role for regulatory bodies not only to perform the test but also to assess the validity and the justification of the PSO contract.
31. All railway representatives support the aim of TTR to harmonise the allocation process, achieve a proper international planning procedure and optimise the national ones. At the same time, they consider that the legal process for introducing TTR is unclear and that it would take too much time to carry out a complete revision of the legislative process at the European level. The railway market may benefit from faster solutions especially relating the main components of TTR. In this respect the regulatory bodies are requested to pay more attention to the partial implementation of TTR through MVPs.
32. The railway representatives suggested to the regulatory bodies that service facilities should also be safeguarded in the TTR project to safeguard efficient circulation and protect access for newcomers. It is necessary to integrate the allocation of capacity of all the relevant service facilities into the TTR process, as access to service facilities can well represent a market barrier for new entrants. If an applicant obtains the requested path without adequate guarantee of access to all required services, it might be forced to surrender the path.
33. An appeal by an applicant at the time of the rejection of a path request may have little chance of success. This is because a rejection by the IM is usually based on the fact that fundamental decisions have been taken during earlier pre-planning stages when the capacity available for the annual timetable is determined. When the application is actually rejected e.g. at a later stage of the rolling planning process, the preliminary planning process that has previously taken place over past years can probably no longer be called into question - this would in any case contradict the idea of continuity expressed in the TTR process description where it states that the current planning step is based on the results of the upstream planning step and will be continued.
34. Presumably, a preliminary planning step (capacity strategy, capacity model, capacity allocation, capacity planning and publication) would be binding for the next (preliminary) planning step or for the actual train path allocation at a certain point in time. Also, for the

actual train path allocation it seems partly unclear whether the level of detail of a planning step is sufficient to serve as a basis for the subsequent planning step. Other open questions are linked to the connection between IMs in cases where an applicant needs capacity from an IM that applies TTR and one that does not (for example in hybrid situations during the rollout of TTR or when a main IM and a small IM is involved). Similar issues exist when it comes to accessing service facilities, the integration of which has not been fully explored in the TTR project. As applicants need to plan not just singular train paths but the full circulation of their trains, interdependences like these will have to be taken into account in the development of the TTR model.

35. Thus, any new legal framework must provide effective regulatory protection for the applicants, in line with the current powers under Article 56 Directive 2012/34/EU.

E. Conclusion and important issues to address

36. In 2021, RNE members will take their first steps towards implementation of. In the second half of the year, all RNE members will begin working on the capacity strategies for the 2025 Timetable. Those members which have agreed to be part of the first-wave implementation intend to begin introducing key components of TTR in the form of MVPs (and other implementation pilots).
37. At the same time, IRG-Rail takes note that several aspects of TTR remain unresolved. The legal framework requires adaptation, and even though the European Commission has announced its intention to adapt the European legal framework to enable TTR (which is likely to entail amending directive 2012/34/EU) the outcome of this process is uncertain.
38. The detailed planning, implementation and operational steps still need to be worked out. The redesign of the international timetabling process and the change in the allocation of capacity process mark the start of a paradigm shift for the European railway market, which also means a change in the approach of applicants to requesting capacity.
39. Some key elements of TTR, notably commercial conditions, have proven very difficult to agree upon and put into practice. The new working arrangements based on MVPs will need to prove the viability of those key concepts of TTR which have so far not been tested in the pilots.
40. Having discussed these issues with railway representatives, IRG-Rail observes – acknowledging the need to improve the capacity allocation and timetabling processes to take into account 20 years of experience of liberalisation – that there is no full agreement that the TTR project, as it is defined to date, is the best possible solution to reform the capacity allocation and timetabling processes as required by the rail market.
41. If the revision of the legal framework and the further trials with MVPs proceed in a way that leads to a broad and full implementation of TTR in Europe, a key challenge will be to prepare all market players, especially RUs and other applicants, for the new regulations and all related principles at an early stage, so that they can optimise their logistics and make their business processes more effective. IRG-Rail believes an early involvement of the railway market is needed for a successful implementation of TTR and an acceptance by the RUs and other applicants of the new approach. This new system could bring considerable benefits if it

is well designed. Nevertheless, there is a risk that the individual products and services offered do not sufficiently fit meet market needs. It is important to understand whether the TTR development, testing and implementation is being carried out with a sufficient degree of involvement and participation with end users of railway networks.

42. For the future development of TTR and the proposed allocation process, IRG-Rail suggests that further attention is paid to the regulatory issues identified above in section D of this report, in particular:
- a. **Transparency** in planning methodology and design parameters at all stages.
 - b. A process for **capacity needs announcements** which balances the needs of plannable and unplannable traffic.
 - c. Clear procedures for **consultation, coordination and dispute resolution**.
 - d. An adequate treatment of **confidential business information**.
 - e. A timely procedure for **consultation and publication of network statements**.
 - f. A well-defined **monitoring role for regulatory bodies**.
43. IRG-Rail will continue monitoring the TTR project and engage with relevant stakeholders.