Market Input to

Advance Capacity Planning

Common RNE-FTE Management Understanding

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Content

Management Summary

RailNetEurope (RNE) and Forum Train Europe (FTE) have worked together for several years on the programme “TTR for Smart Capacity Management” to create a completely overhauled Capacity Management process to replace the insufficient legacy process. A common approach for advance planning is a key condition to support this new management of capacity.

The ongoing gradual implementation of TTR brought up some issues, which require IMs and Applicants to cooperate closely to provide applicable processes and reach the original TTR goals.

To manage the increasing complexity of capacity allocation and organise safeguarded capacity for different market needs, Applicants and IMs identified the need for advance planning, which can ultimately lead to capacity supply, for example in the form of path catalogues. Advance planning facilitates all market segments - be it open access, PSO, concession models - and production models - individual services, and regular-interval/clock-face timetables for national and cross-border services.

These capacity supply/catalogues are aimed to be guidance for Applicants during the ordering period but requests outside of the supplies are not prohibited – they may have certain binding aspects while allowing some flexibility during the request phase. Bindingness may increase depending on the saturation, but also due to other factors. Not adhering to the capacity supply/catalogue may come with some effects, to allow the IM to keep the pre-planned partitioning. This also means that no path request shall be rejected upfront for not matching any catalogue.

For the bindingness effects to be acceptable by Applicants, advance planning must involve Applicants in a way which allows them to impact the planning, transparently participate in the process, and understand the decisions made by IMs. Optimisation subsequently to original input shall be possible.

Through this participation, Applicants can provide some essential information unknown to the IMs to achieve genuine planning which fits the needs of operators and end customers (development of the offer, use of resources such as different rolling stock, economic constraints). The IMs can combine all these inputs to a global view, identifying potential solutions together with potential Applicants earlier than today. This participation shall not be considered as pre-allocation. The process shall not lead to a non-processable amount of information.

Safeguarding of capacity becomes possible with advance planning, thus guaranteeing high-quality capacity and allowing Applicants with volatile needs to book later, once these needs are stable. This safeguarding shall be sufficiently flexible upfront to not lead to capacity waste. RNE and FTE support investigating ways of the safeguarding that allow flexibility for ATT requests, optimal planning of differently saturated relations/network sections, keeps minimum volumes and qualities safeguarded for later requests, and allows the IMs to handle these at reasonable efforts.

This Common Understanding paper describes these principles as a guideline for the upcoming work.

Preamble

To make rail infrastructure capacity management fit to the EU Green Deal, with demands growing faster than physical infrastructure can be built, and changing market needs, the way of working for IMs and Applicants must change, even if implementation steps can be challenging. A frank, goal-oriented cooperation among RUs/FTE and IMs/RNE is needed on critical items – some of which are described in this paper.

With first Capacity Management steps as defined in the TTR programme now being brought to life and with an extensive legal framework on this subject being drafted by the European Commission, RNE and FTE take the opportunity to clearer define the market involvement, including bindingness of deliverables and flexibility, in the Advance Capacity Management process. As first step of this deep dive, both associations' managements agree on a basic framework for this important development. This document provides experts and other stakeholders a first insight into this development and an outlook on the items to be tackled.

Common understanding seems particularly necessary on:

- Bringing together the reliability and flexibility required for different market needs while allowing optimized and maximized use of infrastructure. This needs to be brought into a concept defining the degree of bindingness of **Advance Planning instruments** in path allocation (to what extent can Applicants and IMs deviate from pre-planned concepts in later stages?).
- Building common trust in the Advance Planning beyond the legal aspect. This needs to be brought into well-defined **market involvement in Advance Planning**.
- **Safeguarding capacity** with high quality for requests after the annual request phase, including Rolling Planning by balancing it with flexibility in all allocation phases.

This paper aims to identify common grounds on which the RU and IM community can largely agree. It shall serve as a basis for future work in the regulatory framework and/or the TTR Programme. The approach is to list items that both parties (Applicants and IMs) can agree to. Items with disagreement will not be on the list and will be collected separately.

1 Bindingness and Relevance of Advance Planning (Demand vs Supply based)

1.1 Introduction and Goals

TTR aims at a variety of capacity products with different attributes and booking horizons to cover all market needs. To enable such a mix, careful preparatory work is necessary to provide each market segment with adequate capacity, which fits the expected quality and quantity to ensure viability of traffics as much as possible. This groundwork is reflected in the Advance Planning phase which leads in the end to the “Capacity Supply”.

Therefore, Advance Capacity Planning must…

… provide transparency on foreseen available commercial capacity
… allow for optimized and maximized infrastructure usage in accordance with expectations from Applicants (time positioning, journey time, differentiated stopping patterns, train parameters, …) by supporting common solutions between IMs and future Applicants
… provide internationally harmonized cross-border-capacities with origin-destination-view
… include market orientation, respecting the flexibility for market needs with short-term lead times and the possibility for adjustments during the allocation phase
… provide predictability, which includes safeguarded capacity for later requests and TCRs with high relevance for planning capacity
… provide a framework to better utilize the capacity on saturated lines incl. alternative solutions

However, to ensure that the efforts put into the Advance Capacity Planning serve the balance between flexibility and intended purpose, certain aspects of planning products must have a binding character.

1.2 Clarifications and Challenges

Advance planning will already provide a solution in case of capacity shortages before proceeding to the allocation of paths. The higher the saturation of a relation/network section, the more a higher detail level of Advance Planning might be of help to better use the infrastructure. The highest possible flexibility must be provided to Applicants and IMs to adapt to their production needs, enable competition, allow new-entrants, and react to changed market needs before and during the timetable period, and notably between the Advance Planning and path request phase.

Applicants must be able to place any path request. Advance Planning shall enable the IMs to identify the best possible offers by using flexibility which is defined in commonly agreed guidelines, respecting TCRs, the minimum traffic mix and safeguarded capacity (see also chapter 3 on safeguarded capacity). The latter is necessary to keep short-term traffics possible and to motivate Applicants with short-term needs to not place vague Annual Requests just to be on the safe side and the high risk of capacity being wasted.

These key aspects require reliable Advance Planning that Applicants and IMs can build their businesses on. Consequently:

- The Capacity Supply must be designed based on market needs (including the Capacity Needs Announcements of Applicants), which are expressed by Applicants and can be challenged by IMs based on available data and information.

- the rules and principles for solving (potential) capacity conflicts when creating the Capacity Supply must be made transparent by the IMs in Network Statements, at best following a common legal framework

Advance Planning must:

- allow all market models, thus any approach remains feasible (open access, PSO, concession models; individual services, regular-interval/clock-face timetables),
- strike the best possible answer to freight and passenger market needs also building on Applicants' inputs, allowing market variety (differentiated services, stopping patterns) and service design of Applicants and/or Public authorities
- be the base for a balanced traffic mix incl. minimum quality while allowing for tailor-made requests and subsequent optimization to allow traffic growth
- identify potential scarcity of capacity at early stages on a given infrastructure incl. foreseen TCR and allow time to find common Applicant-IM solutions
- support national and international harmonization

Even if Advance Planning shall protect safeguarded capacity and the traffic mix, it must:

- not be understood as a rigid path catalogue for the complete network from which the Applicants must book without any alternative request possibility
- give no ground for refusing a path request upfront for not completely fitting to the Advance Planning. Advance Planning must not prevent solving path request conflicts during the allocation phase through dialogue between the involved parties
- provide guidance for Applicants during the path request phases while allowing flexibility for later stages
- not be understood as an advance allocation, i.e. regardless of the market involvement in Advance Planning a path can be booked no earlier than the allocation phase by any Applicant with fitting train characteristic (exceptions: Framework Agreements or multi-annual Rolling Planning are already concluded)

RNE and FTE agree to work on specific solutions in line with above mentioned principles regarding:

- the elements of the Capacity Supply that are binding for IMs and Applicants in the later capacity allocation phases, especially during the Annual Timetable phase
- the degree of priority given to paths compliant with the Capacity Supply in case of conflicts
- the principles to be applied to ensure international coordination of capacity supplies, especially when state-design concepts exist

2 Market Involvement in Advance Planning

2.1 Introduction and Goals

TTR aims at higher attractiveness of railways in the modal split and consequently to a higher market share in the European transportation market. Market players – to be understood here as bodies designing rail services and expressing capacity needs such as Applicants, Public Authorities and shippers – must be included in the design of capacity products during the Advance Capacity Planning process.

Therefore, market involvement shall…

… ensure a market-oriented Advance Planning result in capacity partitioning, involving Applicants, Public Authorities, and shippers in identifying and pre-solving potential capacity conflicts and setting capacity products for being as close as possible to the needs of the market
… provide relevant information to the IM to ensure capacity is planned in accordance with RU production models and economic constraints faced by future Applicants
… incorporate new technology and methods which can further improve capacity and end products (e.g. high-performance engines, faster passenger flows at stops)
… help to avoid capacity waste by supporting Applicants needs which includes updates / optimization when required

2.2 Clarifications and Challenges

Market involvement is key for the designing of capacity in Advance Planning and its general acceptance by the Applicants:

- Applicants expect Advance Capacity Planning to result in having the best suitable solution fitting their needs in market positioning and production constraints, and thus need to be provided with harmonized and transparent ways of participation in the planning processes. Cooperation in creating Advance Planning also creates trust among Applicants and IMs and avoids capacity waste.
- IMs require input from Applicants to design capacity in Advance Planning to create it as close as possible to market needs.
- IMs need to consider and outweigh also other factors:
    - Own needs for TCR/Maintenance must be included
    - Applicants not (yet) participating in the Advance Capacity Planning process
    - Applicants in competition providing redundant input on the same business
    - Applicants' input may vary from very detailed to very vague

These key aspects require market involvement that generates input which is valuable for Applicants' and IMs' businesses. Consequently:

- Different sources of inputs are available for conducting advance planning: needs expressed by Applicants, historical figures, market studies. Among these sources, inputs from Applicants should remain a main source, especially as the key input for open access in capacity production including Advance Planning phases. The IM can use other sources to challenge inputs from Applicants in the dialogue or explain deviation from initial inputs.
- Applicants providing input to Advance Planning shall be involved by the IMs in case it is foreseeable that inputs cannot be incorporated. This shall serve to identify alternative

solutions in capacity partitioning making use of the knowledge of the Applicants and the IMs. A formal process is needed, that can allow for different methods.

- Applicants providing input (via CNAs and/or via other methods) need to transparently see to which extent their input could be taken into consideration. However, CNAs and input to the capacity strategies are not to be used to replace feasibility studies nor as any form of pre-allocation.
- The dialogue between Applicant and IM should support all parties in checking if service design foreseen by Applicants is suitable with capacity as foreseen at the stage of advance planning. It does not imply any pre-allocation or rights of the Applicants over this capacity. The joint dialogue should therefore been set up to allow sufficient time to take into account these remarks and bring corrections.
- Clear deadlines are needed to enable the IMs to create and align the Advance Planning. These deadlines must allow IMs to take into account the needs before doing the planning. These deadlines must also allow the Applicants to have already relevant commercial forecasts.
- At the same time, possibilities for later optimization must be available for IMs and Applicants to react on market changes. This can mean adding or changing of information and the disappearance/withdrawal of traffic needs between planning stages (Capacity Model – Capacity Supply – Request…).

the Capacity Needs Announcement (CNA) process was created as the main instrument for market input. RNE and FTE will use the learnings made so far to improve and streamline the market involvement process together, taking into account the above principles, and extend the possibility for market involvement to the Capacity Strategy process as well.

RNE and FTE agree to work on specific solutions in line with above mentioned principles regarding:

- The principles for market involvement in all Advance Capacity Planning Phases (Capacity Strategy, Capacity Model and Capacity Supply Creation phase) leading to a formalised dialogue. This dialogue is supported by milestones for inputs and documents, as well as common meetings or platforms. This dialogue may in practice change from one territory to another and from one phase to the other but should follow common principles.
- The processing of CNAs by IMs including the ways to ensure traceability which is a key condition in fulfilling a transparent and non-discriminatory process, while also...
- … leaving the data to be processed on a reasonable level.
- The priority given to CNAs compared to other sources such as historical data and market studies, the latter being usable to challenge input from applicants.
- The possibilities to consider Applicants who are unable to participate in the CNA process (e.g. due to unavailable resources).
- The characteristics of inputs and eligibility conditions to be processed within the capacity model and capacity supply, finding the balance between a manageable workload and the benefits of finding a more robust solution by including a larger volume of needs.
- The articulation with feasibility study process, which needs clarification of scope and objectives.

3 Flexibility and Safeguarding, incl. Rolling Planning

3.1 Introduction and Goals

In TTR, the market needs are reflected in the capacity products provided to the market. Those are designed to suit various aspects:

- Capacity relevant path details (e.g. train weight, length, speed): Known long in advance or shortly before the request
- Train operation period: From every day to limited periods to spot traffic
- Stability of market needs: From early binding timings (e.g. for passenger traffic) to volatile market needs
- Etc.

As the legacy capacity management process was based on requesting long in advance, later requests were solely based on residual (“leftover”) capacity. In contrast, the TTR range of capacity products is based on the possibility to request capacity also later with capacity still being kept from early booking to maintain high-quality offers for such late requests.

Therefore, safeguarded capacity shall…

- support reliable quality capacity for traffic needs emerging after annual timetable request deadlines
- not be consumed during the annual timetable elaboration while remaining flexible for optimization
- motivate those Applicants not having clear needs during annual timetable elaboration to only request paths when the needs are known, thus avoiding unnecessary blockage and unnecessary workloads for IMs and other Applicants.

3.2 Clarifications and Challenges

A proper balance of safeguarded capacity and flexibility per relation/network section is required. This needs to be established during Advance Planning, when safeguarded capacity is evaluated, and requires re-evaluation when market needs change.

To remedy this, the safeguarding must follow some principles:

- quantity and quality shall be developed in dialogue between IMs and Applicants as well as other market players (see market involvement)
- regular re-evaluation must be done by IMs, involving Applicants and market representatives, to adapt to new or changed needs both in the annual repetition of the creation and after the provision of the capacity supply
- safeguarding shall not unduly block the development of traffic which is known to be needed earlier (e.g. in annual timetable)

Further principles:

- The safeguarding of capacity shall not lead to an annual timetable request being automatically rejected upfront, e.g. as they touch safeguarded capacity. For such requests, the IM should search for a solution with the relevant Applicant, with the offer respecting the safeguarding of capacity.
- The current concept of safeguarding in TTR can be understood

a) in very strict ways, i.e. specific paths pre-planned and not available in ATT. This would allow IMs to define on highly saturated to congested lines the continued provision of capacity for later requests despite the highly used capacity
b) in more flexible ways, e.g. certain volumes of traffic with minimum qualities to be accommodated within a given timespan;
this would allow the IMs to move the Rolling Planning path during the ATT construction if this optimizes the already placed ATT requests, while not reducing the safeguarded Rolling Planning capacities

For safeguarding capacity, including Rolling Planning, the concepts will need to be further detailed in the future. RNE and FTE support investigating ways of safeguarding that allow flexibility for ATT requests, optimal planning of differently saturated relations/network sections, keeping volumes and qualities safeguarded for later requests, and allowing IMs to handle these at reasonable expenses.

RNE and FTE agree to work on specific solutions in line with above mentioned principles regarding:

- The principles for selecting which capacity should be safeguarded.
- The level of flexibility allowed to accommodate other traffics while maintaining the benefits of safeguarded capacity.

Annex I: Explanations

Advance Planning (encompassing its iterative stages of Capacity Strategies, Models and Supplies):

- Planning of theoretically feasible/potential timetables to identify potential shortages and possible solutions in capacity partitioning for a maximized infrastructure usage before the annual timetable elaboration and identify better usage of existing infrastructure
    - Gradual build-up from rough information to volumes to partitioning of capacity into capacity products
    - Repeating process for each timetable period to annually improve the products
- In Capacity Models and Supply the available Capacity is partitioned for different request phases (notably annual timetable and safeguarded capacities for later requests) before specific path requests are placed, taking into account most impactful TCRs

Safeguarded capacity:

- Shall be available for traffic needs coming up at later stages, i.e. requests placed after the annual request deadline
- Can not be used/allocated in the annual timetable allocation phase. It may be strict in all its components adjustable in some of its components (typically time-positioning)
- Shall be of foreseeable quality and thus improved in comparison to today's attribution of residual capacity ("leftovers")

Market Input:

- RUs, Non-RU-Applicants together with other stakeholders (e.g., shippers, PSO authorities) provide relevant information to the IM on future traffic needs
- is collected in a structured, non-discriminatory and transparent manner
- is provided in good faith, i.e. at best knowledge at the time and in reasonable manner

Capacity Waste (in relation to Advance Planning phase):

- Capacity that cannot be used for traffic due to:
    - Safeguarding by IMs based on unfitting characteristics and not used by any Applicant
    - Requests by Applicants without a train run, which was requested just-in-case instead of using the later request possibilities

Rolling Planning Requests:

- capacity for requests placed later than the annual timetable, with usually re-current operation days
- can be within one remaining timetable period or over several periods ("multi-annual" with a defined time limit), to better cover customer contract durations vis-à-vis other modes of transport and reduce complexity in request for Applicants by placing one request only
- currently foreseen to be available for ordering between 4 and 1 month prior to the first day of traffic

Ad hoc Requests:

- request possibility after the annual timetable process ended
- ranging from recurrent operation days to capacity for spot traffic or other specific short-term needs
- for trains within the limits of one timetable period

Currently, all traffic requested less than 1 month before the day of operation will be Ad hoc traffic. Other specific traffics not fitting to Rolling Planning can also be ordered in Ad hoc earlier than one month before (but earliest after the annual timetable process is closed)

Further summaries of the TTR components can be found in the TTR Fact Sheets: https://rne.eu/wp-content/uploads/2022/10/ttr_fact_sheets_v2.pdf