

## 4.9. TTR FOR SMART CAPACITY MANAGEMENT

### 4.9.1 Objectives of TTR

RailNetEurope (RNE) and Forum Train Europe (FTE), supported by European Rail Freight Association (ERFA) are working on a project TTR. The objective of TTR is to harmonize and improve the European rail timetabling system to significantly increase the competitiveness of railway transports.

TTR consists of different components, including in particular an improved planning of the distribution of infrastructure capacity (including temporary capacity restrictions) and the introduction of new capacity allocation processes.

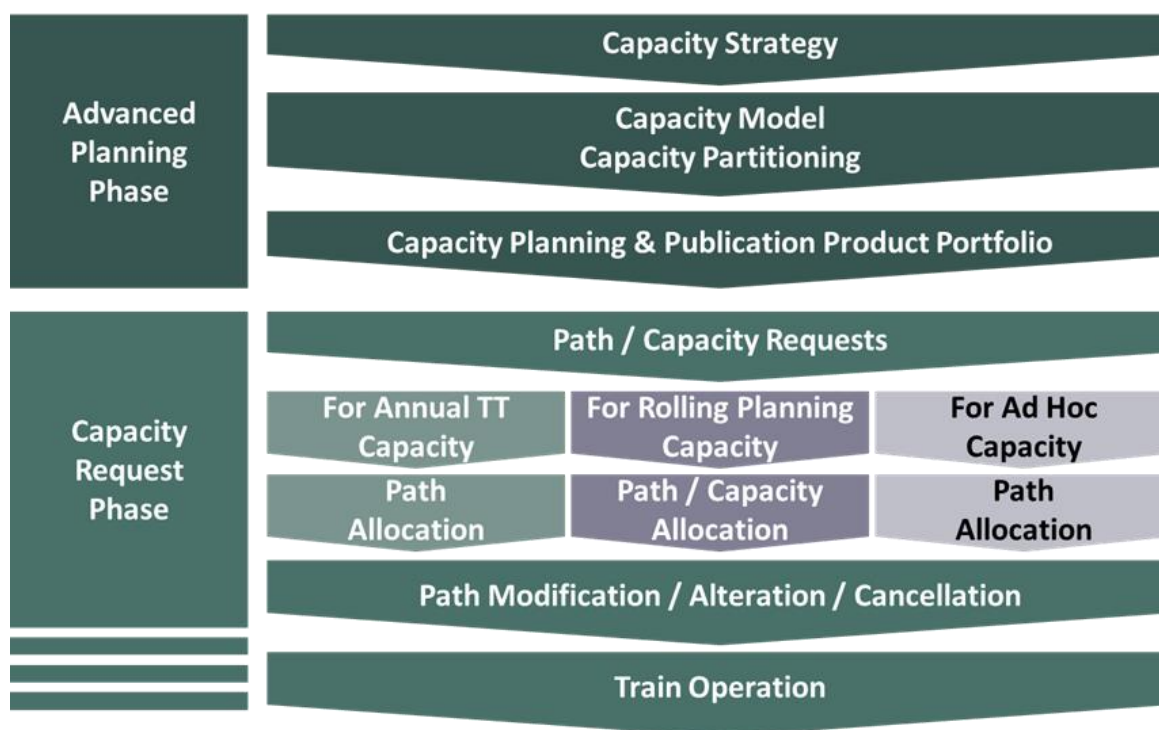
The purpose is to better serve all market needs and lead to an optimised use of existing infrastructure capacity. In particular for passenger traffic it will mean earlier availability of the final timetable allowing passengers sooner and more reliable ticket purchase. For the majority of freight traffic, it will mean more possibilities for short term path requests and thus more flexibility to better meet customers' needs.

Detailed information on the project can be found on the website [ttr.rne.eu](http://ttr.rne.eu), and <http://www.forumtraineurope.eu/services/ttr/> as well as on the ŽSR's website: [please add link, if applicable].

TTR is planned to be partially implemented for the timetable 2025 provided that the TTR process components to be applied are supported by the European and national legal framework, if needed.

### 4.9.2 Process Components

The TTR process is built around the following components:



The essential ones are described in further detail below.

- Capacity Strategy (X\*-60 to X\*-36 months): The capacity strategy is the long-term capacity planning of the IM for a dedicated line, a part of a network or entire network. The major aim of the capacity strategy is to provide a first overview of available capacity on the infrastructure in the future and of future capacity needs.

It enables the IM to share future capacity needs with neighbouring IMs and applicants and agree on the main principles to be used in the construction of the capacity model.

- Capacity Model (X\*-36 to X\*-18 months) with Capacity Partitioning: The capacity model gives a more detailed definition of the demand forecast, and the partitioning of capacity into Annual Planning, Rolling Planning, and Temporary Capacity Restrictions and unplanned capacity (where available). Applicants have the possibility to give input into the capacity model by announcing their capacity needs and can provide their reaction on the proposed capacity partitioning. The capacity needs announcements and the capacity model are described respectively in chapters 4.9.3.1 and 4.9.3.2.
- International alignment on TCRs: Temporary Capacity Restrictions (TCR) may occur in case of maintenance, renewal, or building of the infrastructure or other restrictions of use, which have an impact on the available capacity on a line. They refer to TCRs with major, high, medium and minor impact as well as to possessions (unavailability of paths due to e.g. maintenance). TCR are necessary to keep the infrastructure and its equipment in good condition and to allow infrastructure development in accordance with market needs (see chapter 4.3 for more information).
- Capacity for Annual requests: Capacity to be coordinated at a defined deadline or made available for requests placed after this deadline.
- Capacity for Rolling Planning requests: Dedicated capacity based on capacity bands for a defined time window or paths, all these being used with specific requesting deadlines.
- Capacity for ad- hoc requests: Unplanned capacity or residual capacity for requests submitted after X – 2.

**Infrastructure capacity for short-term ad hoc requests:** Unplanned infrastructure capacity or residual infrastructure capacity for requests submitted less than 30 days before implementation.

\*X stands for the day of timetable change 2025

### 4.9.3 Implementation

ŽSR participates in the project implementation at national level according to the common timeline as described in the following graph. The TTR approach, especially the innovative process components are tested in pilots and / or through an approach based on minimum viable product - MVP (see chapter 4.9.4) with the goal of evaluating the system and provide possible adjustment or improvement to the project before national TTR process implementation (for more information see chapter 4.9.4).

As a first step of the national process implementation, [IM's name] plans to elaborated some capacity models for one or several line(s), part of a network or the entire network during timetables 2022 and 2023.

[Provide the implementation timeline in form of a graph here (see below general RNE TTR implementation plan, which is only as an example for demonstration purposes in the NS CS). To be provided by the TTR national implementation managers based on the **national** TTR project/implementation plans.]



For more information, you may contact the TTR national implementation manager of ŽSR: [add contact details or refer to chapter 1.6 Contacts]

#### 4.9.3.1 Capacity Needs Announcements

Applicants can announce their capacity needs to ŽSR 24 months (December 2023) for timetable 2025/2026 by means of [please specify, e.g. contact person/department within IM where the announcements can be placed; IT tool or template to be used].

Applicants should provide the following information in their capacity needs announcements:

- Type of information 1,
- Type of information 2,
- etc. [please complete the list applicable to your IM].

Capacity needs announcements are considered as non-binding indications of applicants about expected future capacity needs.

In case ŽSR identifies overlapping capacity needs announcements, he will discuss with the applicants concerned with a view to identify possible solutions. The ŽSR will use the information provided as input to the capacity model (for more information about the capacity model see chapter 4.9.3.2). Under no circumstances the ŽSR can guarantee the inclusion of all expressed capacity needs announcements into the final capacity model, nor can capacity needs announcements result in any priority in the following capacity allocation process.

\*X stands for the day of timetable change 2025

#### 4.9.3.2 Capacity model and the allocation of infrastructure capacity

The capacity model is based on the ŽSR's capacity strategy (see chapter 4.9.2.1), market requirements (e.g. new service plans) and TCRs (Temporary Capacity Restrictions, see chapter 4.9.2.3) and serves as the baseline for the preparation of the capacity provision. To fulfil this purpose, it assigns the capacity to the various commercial and technical needs, which generally are:

- Capacity required for TCRs;
- Infrastructure capacity for commercial transport.
- After evaluating the infrastructure capacity already consumed by the TCR, the available commercial infrastructure capacity will be split between:
  - Capacity available for annual requests (see chapter 4.9.2);
  - Capacity safeguarded for Rolling Planning requests (see chapter 4.9.2);
  - (if available) unplanned infrastructure capacity to be used later for ad-hoc requests .

#### 4.9.3.3 Infrastructure capacity provision

Based on the infrastructure capacity allocation of approx. X-18, ŽSR will work to define the provision of infrastructure capacity through a combination of pre-planned train paths, system train paths, a band of rolling planning and consideration of continuous planning of multi-year capacity commitments, and allocated requirements under the Framework Agreement from previous years, according to the results of practice to cover many different commercial needs. Infrastructure capacity supply may also include unscheduled infrastructure capacity.

In the case of cross-border train paths, these activities shall be coordinated with neighbouring IMs.

In order to enable applicants to plan and harmonise their applications, ŽSR will publish the infrastructure capacity provision for annual timetable and continuous planning (in terms of band/slots/catalogue train paths) by X-11 at the latest on the ŽSR website: [www.zsr.sk](http://www.zsr.sk) in the section "Railway Undertakings/Infrastructure/TTR in SR".

Applicants will receive a draft infrastructure capacity provision for consultation before final publication.