

Redesign of the International Timetabling Process (TTR)

TTR: Concept for Pilot Phase 2 “Capacity publication and capacity requests” (Version 1.0)

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Version history

Version	Date	Description
0.1	12 March 2018	Document created by Philipp Koiser based on the inputs from the TTR Pilot Board meeting (5 February 2018)
0.2	29 March 2018	Updated version based on feedback by the TTR Pilot Board (13 March 2018)
0.3	11 April 2018	Minor corrections
1.0	18 May 2018	Agreed by the RNE General Assembly (16 May 2018)

1. Introduction

The RNE General Assembly and FTE Plenary Assembly agreed to implement TTR. This implementation plan contained the need to conduct pilots to test new TTR components. According to the implementation plan, the preparation started in June 2017. The TTR Pilot phase 1 started in December 2018.

Goals of the TTR pilot are:

- Proof of the business reference model's accuracy
- Definition and specification of data reference model for capacity
- Input for process steering methods (e.g. priority rules, commercial conditions)
- Input for performance reference model
 - o Comparing capacity model with actual requests
 - o Number of modifications/alterations
 - o Percentage of safeguarded capacity vs. residual capacity usage

The pilot itself will be conducted in three phases:

- Phase 1: Capacity partitioning and capacity planning
- Phase 2: Capacity publication and capacity requests
- Phase 3: Running timetable

After a nomination process conducted together with the Rail Freight Corridors, three pilot lines have been defined. It was their task to define the requirements to launch pilot phase 1 in December 2017.

This document contains the concept for pilot phase 2, which includes these principles.

2. Concept for pilot phase 2 “Capacity publication and capacity requests”

2.1 Goal/deliverables

The goal of pilot phase 2 is to test capacity requests for timetable 2020 based on the capacity models created in pilot phase 1. The methods of the pilot lines are similar to each other to allow a comparison of the results. The goals are:

- The proof of the business concept, specifically the correlation of annual timetabling capacity (ATT), capacity for TCRs (in line with the recast Annex VII) and safeguarded capacity for Rolling Planning.
- Inputs for improving the process
- Inputs for the IT landscape (definition of requirements for IT systems)
- Inputs for the Commercial Conditions and Allocation Rules (requirements for steering the process, particularly for safeguarding capacity and shifting to Rolling Planning requests)

2.1 Scope

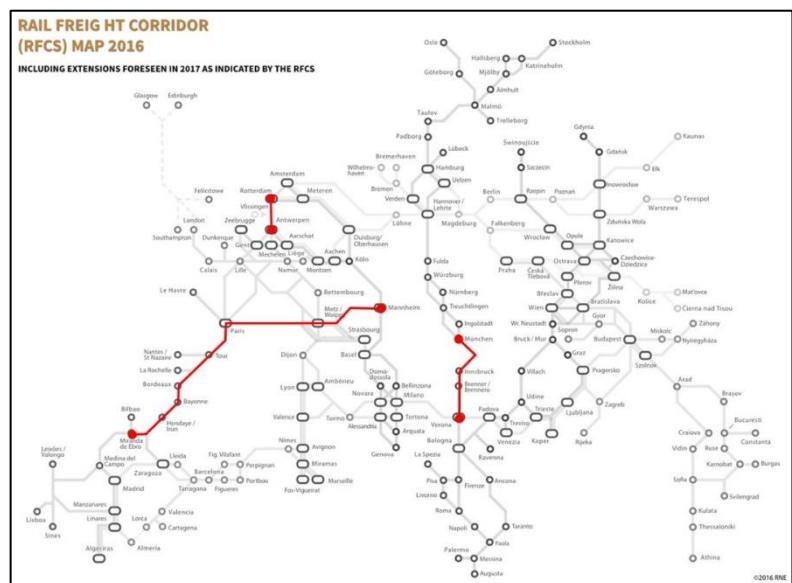
The pilots will provide capacity to be requested for Rolling Planning. This capacity has to be safeguarded for such requests.

There will be no change of the current ATT process. The TCR process is subject of the implementation of the recast of Annex VII (Regulation 2012/34) on the complete network and is no explicit subject of the TTR pilot.

2.2 General setup and organization of the pilot

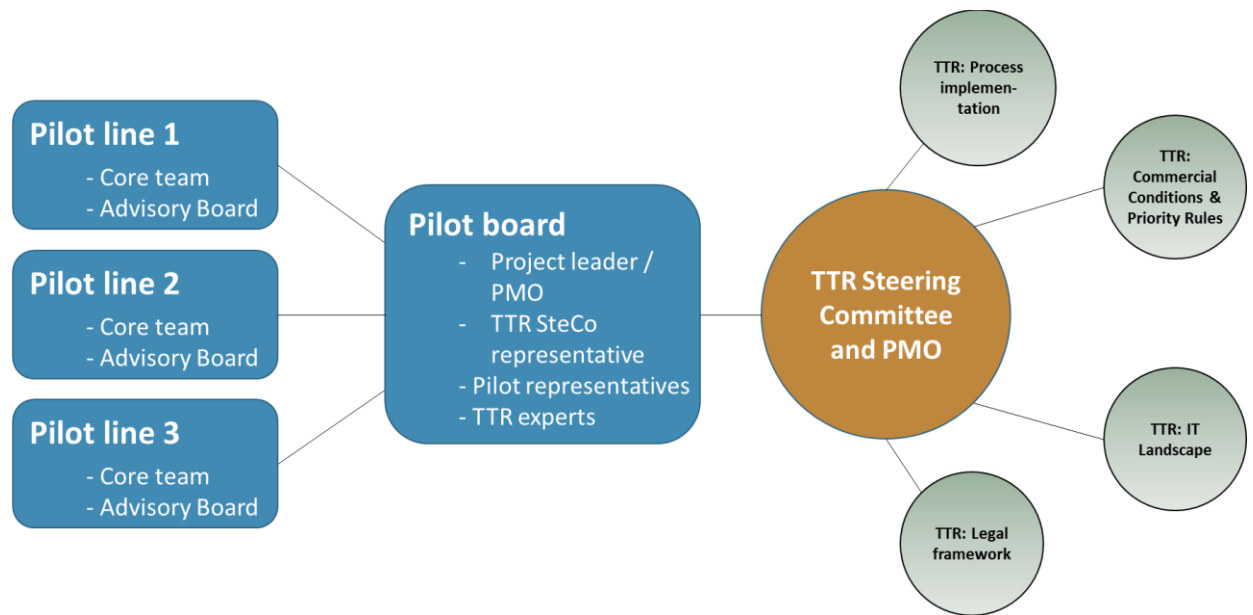
The pilots will be conducted on three lines. Each line has a representative, who also acts as project leader on the respective pilot line. The pilot lines are:

- Mannheim – Miranda de Ebro (represented by Michel Dupuis)
- Munich – Verona (represented by Andri Kopperschmidt)
- Rotterdam – Antwerp (represented by Floris Visser and Freddy Van Der Cruyssen)



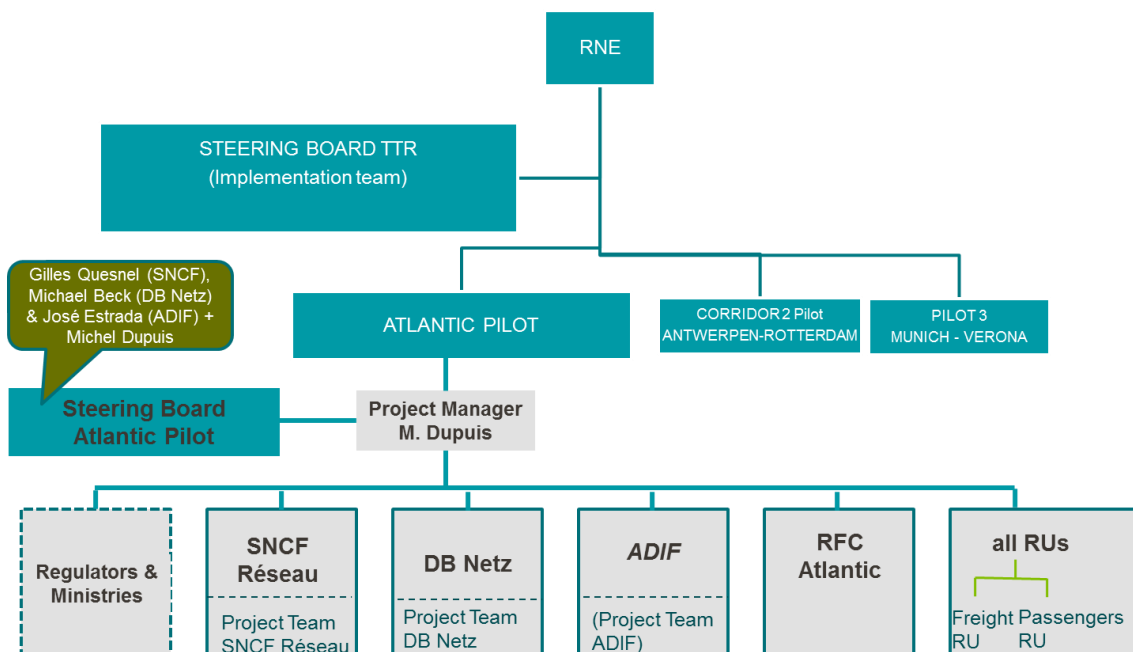
Each pilot is organized in core teams and advisory boards, in which all stakeholders are included with their specific project role. To steer the three pilots with common parameters, a pilot board has been set up. It consists of:

- The project leader (Philipp Koiser, Peter Jäggy)
- A representative of the TTR Steering Committee (Guus de Mol)
- The pilot line representatives
- Experts from other TTR projects (project leaders and deputies)
- Representatives of IRG Rail

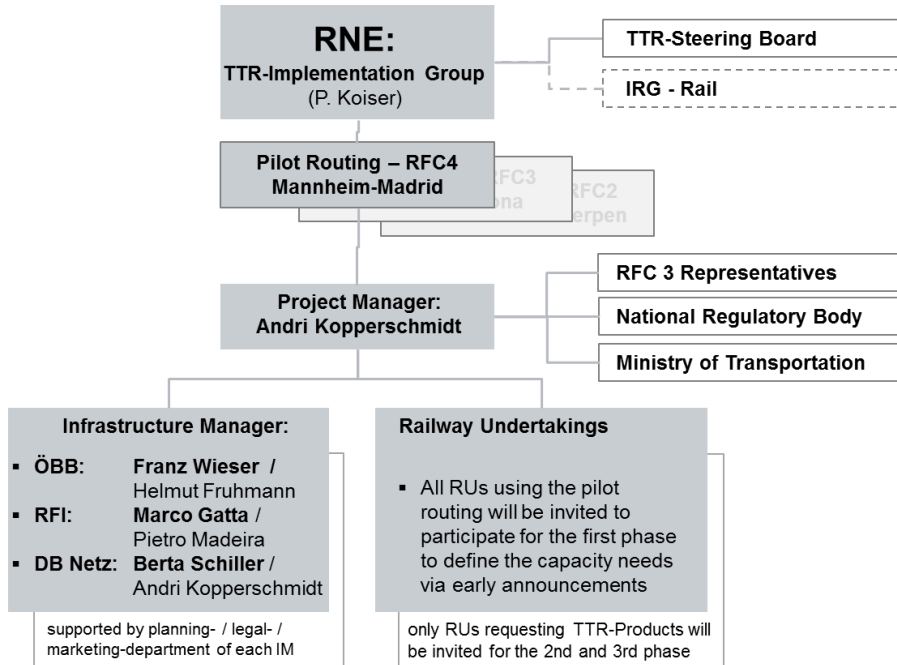


2.3 Organization of the pilot lines

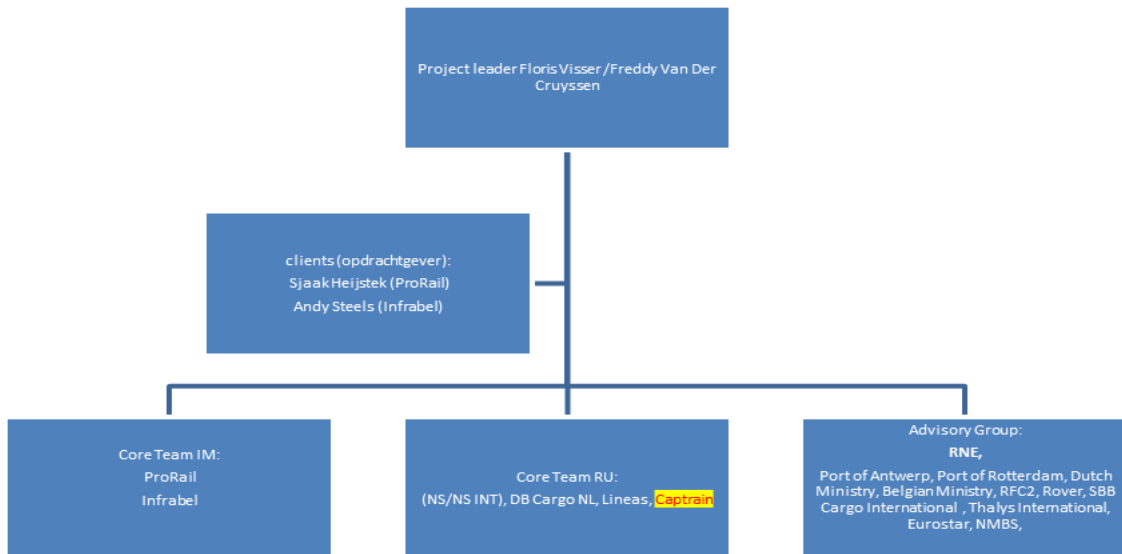
2.3.1 Pilot line Mannheim – Miranda de Ebro



2.3.2 Pilot line Munich – Verona



2.3.3 Pilot line Rotterdam - Antwerp



2.4 Timeline

- June 2018: Start of preparation of pilot phase 2
- September 2018:
 - o End of consultation, presentation of draft capacity models to the TTR Steering Committee

- Definition of method and common process for managing consistent answers to rolling planning requests
 - December 2018: Finalization of Capacity Model
 - January 2019: First publication of capacity
 - April 2019: Deadline for submission of ATT requests
 - August 2019: Start of RP requests (including updates of the published capacity)
 - November 2019: First report of consummation of the rolling planning capacity
 - January-March 2020: Evaluation of pilot phase 2 results

2.5 Working methods

The pilot lines are organized in:

- Core teams: Meetings to prepare and agree on the capacity model
- Advisory boards: Meetings to find acceptance; Newsletters for information

All IMs have to confirm their commitment to manage the pilot process in their production systems and internal processes (by November 2018).

In the preparation of pilot phase 2, specific aspects concerning the common approach need to be defined, such as:

- Involvement of Rail Freight Corridors / C-OSS
- Publication of capacity as well as capacity request methods

2.6 Final evaluation method

Analysis of:

- Satisfaction with performance and answering times for rolling planning
- Measure of reduction of modifications, alterations and cancellations
- Satisfaction of RUs/Applicants
- Comparison of ATT requests 2019 to 2020 and late/ad-hoc/RP requests 2019 to 2020
- Workload at IMs
- Management of dynamic process (keeping RP capacity up to date)
- Reduction of unused application
- Fit of the capacity model to the demand/requests (on qualitative level)

2.7 Involvement of stakeholders

The IMs on the pilot lines have to ensure that all stakeholders are involved. This can be achieved either by:

- RUs/applicants actively participate in the project in the core team
- RUs/applicants are being informed via the advisory boards of the pilot lines

All RUs/applicants have the information of how to participate via the IMs' Network Statements. In addition, the TTR PMO supports in the distribution of the information to the applicants not actively involved in the project. The pilot line managers provide the contact details to the TTR PMO.

A list of involved RUs/applicants on the pilot lines can be found in Annex I of this document

Other stakeholders – such as ministries and Regulatory Bodies – have to be approached to participate in the pilot lines' core teams or advisory boards. The TTR Pilot Board will include a representative of IRG Rail.

2.8 Connection to pilot phase 3

The request for Rolling Planning capacity is an ongoing process, which extends into the running timetable. Therefore, Rolling Planning requests will continue into pilot phase 3.

2.9 IT System

Each pilot line will make sure that IT systems are available to the required extent without major developments. To use synergies, the Pilot Board will provide the platform to exchange information on available IT. The TTR IT Landscape project will ensure that IT already developed is available for all pilot lines.

Results of IT being developed within the pilot lines will be shared with the TTR IT Landscape project, which will base its concepts on this input.

2.10 Legal framework

The TTR Legal Framework project provided the analysis of the legal framework on international and national basis. As such, the concept for pilot phase 2 is based on the possibilities detected in this evaluation and will focus on the safeguarding of capacity for Rolling Planning. Baseline for this decision is the possibility to keep capacity available for ad-hoc requests and the possibility to define reserve capacity on the Rail Freight Corridors.

The Network Statements shall contain all information about procedures to request capacity, including rolling planning capacity. The capacity partitioning – especially the capacity available for Rolling Planning requests – will be published in January 2019 and updated permanently.

As described in chapter 2.7 the goal of the pilots is to involve all RUs/applicants currently running traffic on the line as well as interested RUs/applicants.

2.11 Extension of the TTR pilots

The TTR project considers the extension of the TTR pilots beyond TT 2020. Several aspects have been listed:

- Benefits
 - o The possibility to include KPIs
 - o The possibility to include multi-annual planning for Rolling Planning requests
 - o The possibility to improve the process
 - o The possibility to test established IT and improve it
 - o Avoiding the effort to go back to the previous process
 - o The learning effect to completely implement TTR
 - o Seamless implementation of TTR already on the pilot lines
 - o Better acceptance of the process due to the sector willingness to implement TTR
- Disadvantages
 - o Overlapping work (simultaneous pilot phases)

- Maintaining the higher work load (e.g. due to the hybrid situation)

The TTR Steering Committee will agree on a recommendation and will approach the pilot line projects in due time.

Annex I: List of RUs/applicants involved in the TTR pilot line projects

Participating RU	Passenger Traffic	Freight Traffic	TTR Pilot Core Team	Advisory Group	Not Participating RUs
Rotterdam-Antwerp					
NS Reizigers/NS International	X		X		
NMBS/NMBS International	X		X		
Thalys International	X		X		
DB Cargo Nederland		X	X		
Captrain		X	X		
Lineas		X	X		
SBB Cargo International		X		X	
Eurostar	X			X	
Arriva Nederland	X				
Rurtalbahn Benelux		X			X
Kombirail Europe		X			X
LTE Nederland BV		X			X
Rheincargo		X			X
Ready Reserve Force (RRF)		X			X
TX Logistics		X			X
Crossrail		X			X
Railtraxx		X			X
Trainsport		X			X
SNCF Fret		X			X
Mannheim-Paris-Miranda de Ebro					
SNCF Mobilités	X		X		
SNCF Fret		X	X		
DB Fernverkehr	X		X		
DB Cargo Deutschland		X	X		
Verona-Brenner-Munich					
TX Logistics Deutschland		X	X		
TX Logistics Austria		X	X		
TX Logistics Italia		X	X		
Rail Cargo Austria		X	X		
Rail Cargo Carrier Italia		X	X		
Lokomotion		X	X		
DB Cargo Deutschland		X	X		
DB Cargo Austria		X	X		
DB Cargo Italia		X	X		
DB Fernverkehr	X		X		
ÖBB Personenverkehr	X		X		

Mercitalia Rail		X	X		
Captrain Italia		X	X		
SAD	X		X		
Arriva Italia	X		X		
Trenitalia Pianificazione Network	X		X		
Rail Traction Company		X	X		
SBB Cargo Italia		X	X		
Trenord	X		X		
Nuovo Trasporto Viaggiatori (NTV)	X		X		
Meridian Bayerische Oberlandbahn	X				X

Annex II: Description of Rolling Planning

1. Various kinds of customer requirements

a) Stable demand without impact to the path

In passenger and freight traffic, there are trains running by using a more or less identical paths for many years. This stability allows the IM to pre-construct these paths in the preparation of the annual timetable. The pre-construction is based either on the inputs from the RUs received in the Capacity Needs Announcement process or by the IMs own view for an optimal usage of the capacity. In general, this traffic is more supply than demand driven.

b) Stable demand for a longer period but with impact to the path

Especially in the freight business, RUs have in many cases a contract with their customers for a defined period which is independent from any fixed timetable year. In addition, behaviour and demand for a transport of an RUs customer is unpredictable. Despite a contract there is often a need to change something in the production concept during the term of the contract (e.g. different slot in the terminal). In addition, also RUs have a need to modify the path (e.g. switch of intermediate location for drive change to increase the efficiency).

c) Stable demand for a shorter period but with impact to the path

Similar to b) but the period of operation is shorter. Nevertheless, it might involve even two timetable years (e.g. operation from November to February).

d) Demand for a short period

Today known as ad-hoc (or short-term or spot) traffic for a very limited number of operational days (mostly for a single train run).

2. Difference between Annual Timetable and Rolling Planning traffic

As the Annual Timetable is in many cases driven by the supply of an offer, it is the RU that chooses the period of operation. Therefore, a timetable change with a fixed date can be accepted easily from the RU point of view.

In the demand driven traffic, it is the RU's customer who decides on the first day of operation. It is quite understandable that the RU's customer does not worry about any timetable change dates.

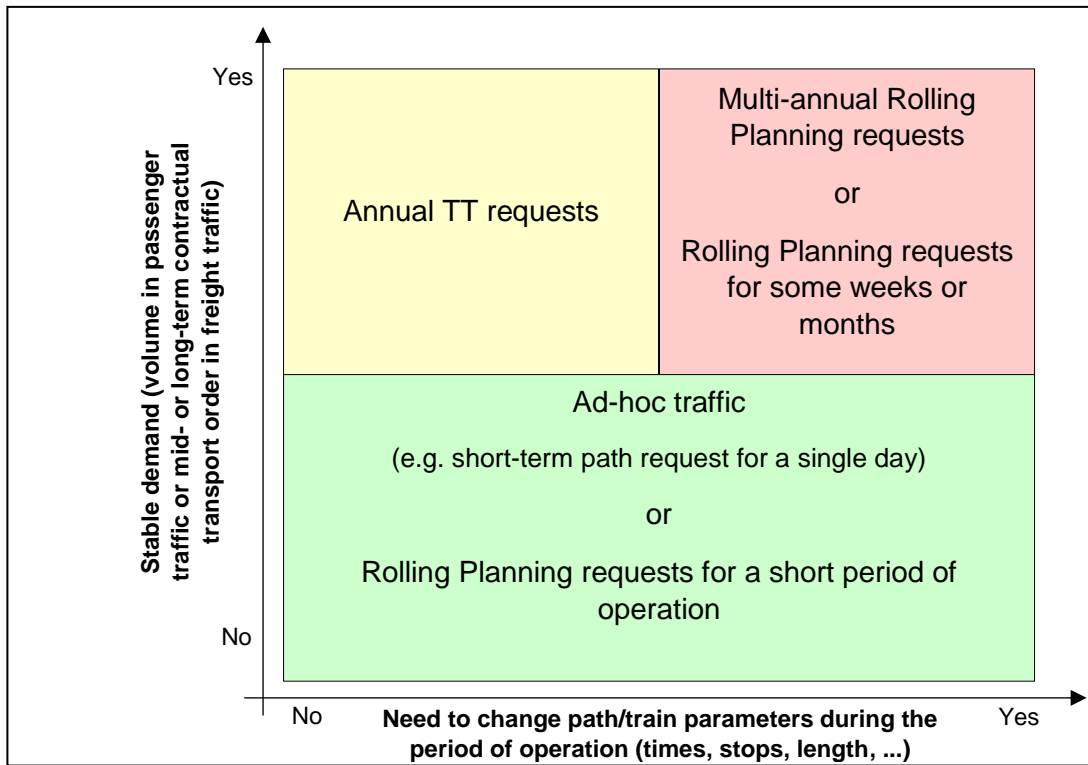
It is therefore the idea of Rolling Planning to start and end a train operation irrelevant of any timetable change. In addition, Rolling Planning enables an RU to request capacity for the term of the contract, up to 36 months. In today's situation, where RUs that are running trains on saturated infrastructure must fear that they receive a totally different slot in the following timetable year, despite a binding contract with their customer. The Rolling Planning approach reduces this risk for not receiving a similar path as in the previous timetable year(s).

3. Target group for Rolling Planning

The Rolling Planning product covers the following market needs:

- Production details for a new traffic that are relevant for the preparation of the path request are not known a lot of months ahead of start of operation.
- Very first day of operation does in most cases not correspond with a timetable change.
- RU is interested to receive a quick response (draft offer) in order to confirm the timetable towards its customer.
- RU has a contract with its customer for a defined period and is therefore highly interested to request and receive capacity for the entire term of the contract.
- Although, there is a contract, there is a need to modify the path during the term of the contract.

4. Visualisation of the boundary between Annual Timetable and Rolling Planning



5. Use cases for different kinds of Rolling Planning requests

Can be found in a specific annex