National Implementation Project
Switzerland

Capacity Strategy 2025 Timetable

(15.12.2024 – 13.12.2025)

As at:	**23.06.2022**
Status:	**Approved**
Compiled by:	**SBB AG, Infrastructure - Timetable and Operations, Concepts**
In collaboration with:	**BLS Netz AG**
Distribution list:	**RNE, TTR@CH, BLS Netz AG, SBB AG - Infrastructure**

TTR
Redesign of the international Timetabling Process

Contents

Version	St.*	Date	Name	Amendment / comment
0.1	1	05.01.2022	C. Bürgi	Initial version
0.2	1	07.02.2022	C. Bürgi	Comparison of capacity changes with A+I matrix as at 01/2022
0.3	1	22.03.2022	C. Bürgi	Including the results of the DB / RFI harmonisation
0.4	1	30.03.2022	R. Saurer	Section 2.1 now includes Switzerland's planning principles
0.5	1	26.04.2022	C. Bürgi	Incorporation of crucial major TCRs
0.6	2	31.05.2022	C. Bürgi	Version for consultation with BLS Netz
0.7	2	14.06.2022	C. Bürgi	Version for consultation with SBB I-FUB-KOP
1.0	3	23.06.2022	C. Bürgi	Definitive version

*Status: 1 = in progress; 2 = for review; 3 = approved

Management summary

Capacity Strategy 2025 is being drawn up in accordance with RNE directives[1] and in line with the jointly agreed definition of "Minimal Viable Product“ (MVP)[2]; its purpose is to coordinate cross-border capacity management. This capacity strategy is not legally binding and is not a means for ensuring capacity. The network usage concept and the network usage plan continue to be binding for ensuring capacity on the Swiss national rail network.

The capacity strategy which is drawn up annually includes any infrastructure capacity changes (upgrades / decommissioning work) compared to the previous year's capacity strategy, planning principles for temporary capacity restrictions (TCRs) and restrictions on the use of their associated facilities, principles of traffic planning and traffic flows, as well as validation of the strategy by neighbouring, international infrastructure managers (IMs). Within Switzerland, these aspects relate to the approved and published network usage plan (NNP) for the relevant timetable year.

The benefit of having a capacity strategy is that cross-border capacities are coordinated and published internationally at an early stage.

Furthermore, the MVP concept defines guidelines for the national implementation of the Capacity Strategy. The following was agreed:

- The Capacity Strategy to be developed as part of the MVP should include the years 2025 and 2026 (initial publication for 2025 in June 2022, update for 2026 in December 2022).
- Capacity Strategy 2025 should also include the infrastructure-related capacity changes for 2022, 2023 and 2024 so that there is no "information gap" regarding the current situation between now and 2025.
- The structure for the published capacity changes.
- The structure for the published crucial major TCRs.

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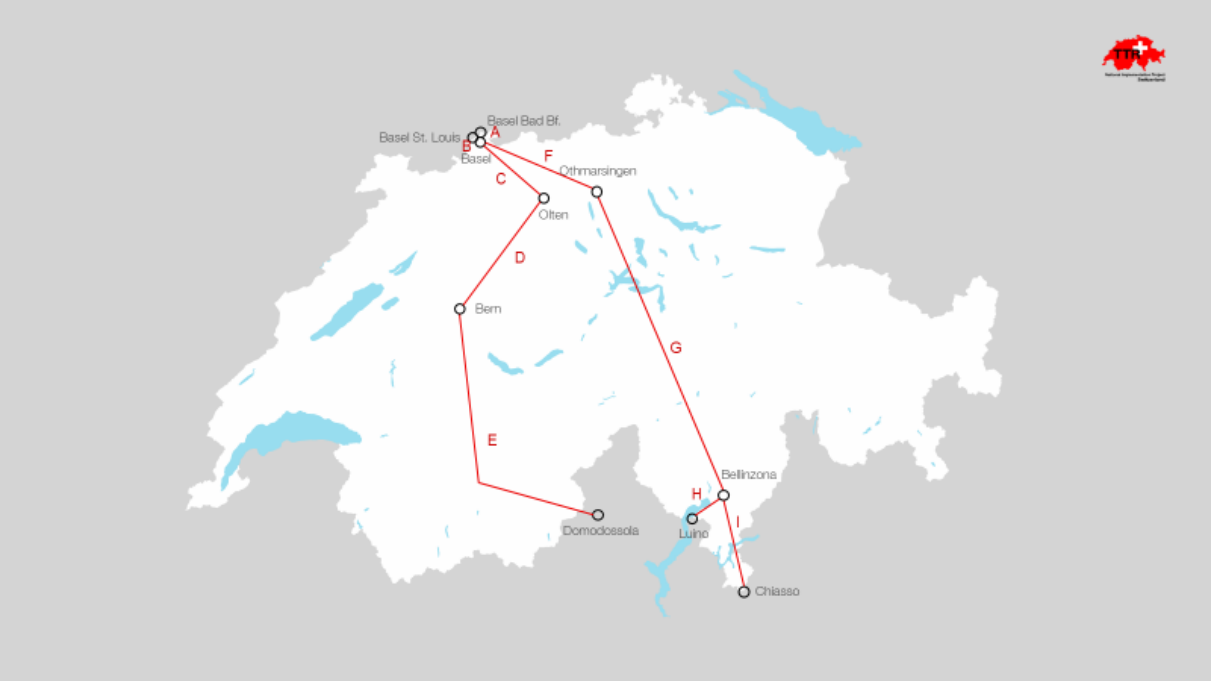
[1] The RNE Capacity Strategy Handbook, Version 3.0
[2] The MVP Capacity Strategy Concept. The Infrastructure Managers involved: Infrabel, ProRail, ACF, DB Netz, SBB Infrastructure, BLS Netz, ÖBB Infrastructure and RFI.

Chapter 0: Geographical scope

As part of the conceptual work for TTR@CH[3] it was decided that in the initial phase the scope of the capacity strategy should be limited to the north/south corridors, i.e. to the Rail Freight Corridors (RFCs). This focus makes it possible to gain initial experience of the capacity strategy while optimising the use and efficiency of resources. If necessary, the organisational unit responsible for producing the capacity strategies for each of the following years can expand the scope of the capacity strategy.

This **Capacity Strategy 2025** as well as the Capacity Strategy 2026 for the North/South corridors which will be drawn up in the second half of 2022 cover the following routes:



0.1 The routes and border points

Lötschberg-Simplon corridor

- A: Basel Bad – Basel
- B: Basel St. Johann – Basel
- C: Basel – Olten
- D: Olten – Bern
- E: Bern – Brig – Domodossola

Gotthard corridor

- A: Basel Bad – Basel
- B: Basel St. Johann – Basel
- F: Basel – Othmarsingen
- G: Othmarsingen – Bellinzona
- H: Bellinzona – Luino
- I: Bellinzona – Chiasso

Adjacent infrastructure managers (IMs):

DB Netz (A), SNCF Réseau (B), RFI (E,H,I), BLS Netz (E), SBB Infrastructure (A-I)

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[3] Decision by the TTR@CH Steering Committee dated 1.12.2021

Chapter 1: Infrastructure capacity changes, 2025 timetable

This chapter contains the information which is available about the expected, permanently usable, positive (additional) impacts on capacity and the expected, permanently negative impacts on capacity compared to the previous year. Capacity changes can result both from upgrades (capacity increases) and from decommissioning of facilities (capacity decreases). **The 2025 Capacity Strategy also includes any infrastructure capacity changes planned for 2022, 2023 and 2024,** so that no "information gaps" arise between today and 2025.

Country	Network Segment	Description	Effect	Impact on capacity as of	Remark
Switzerland	Basel SBB RB	Train routes bypassing North and Central	Improved RB performance.	06/2023	
Switzerland	Chiasso	Expansion and modernisation of Chiasso	Freight traffic: 5 tracks extended to 750m length. Fascio U: completion of electrification of the tracks for southbound departures.	09/2023	
Switzerland	Basel SBB RB	Basel SBB RB; brake testing facility	Improved RB performance.	09/2023	
Switzerland	Maroggia - Capolago	GSM-R frequency doubling	Elimination of stability risks.	12/2023	
Switzerland	Basel SBB GB	Upgrade of stabling facilities, Basel South | SBB	Creation of necessary stabling capacities for additional S-Bahn trains and longer long-distance trains.	02/2024	
Switzerland	Chiasso	Sidings	Stabling areas for regional services.	09/2024	
Switzerland	Basel SBB RB	Basel SBB RB; locomotive stabling areas	Improved RB performance.	12/2024	
Switzerland	Vezia - Capolago	Reduction of train headways incl. extension of Track 3 in Capolago for 750m trains	Elimination of stability risks.	05/2025	

Sources:

- BLS Infrastructure: Data controlling projects, BLS-IAN dated 24.01.2022
- SBB Infrastructure: A+I matrix of 01/2022 / Implementation planning as at 12/2021 (23.03.22) / May 2022 update

Chapter 2: Temporary Capacity Restrictions (TCRs)

The TCRs published in this section should be regarded as advance notice. They are not legally binding, i.e. it is permissible if certain aspects such as deadline postponements or project changes are not definitive; similarly, there is no requirement for an alternative concept for the TCR. The existing information channels for fulfilling the requirements set out in Art. 11b RailNAO are still binding; the contents of the capacity strategy should therefore be interpreted as best-effort additional information.

2.1 TCR planning principles

The legal basis for capacity restrictions due to construction work can be found in Art. 11b of the Rail Network Access Ordinance (RailNAO). According to this Article, the infrastructure manager (IM) must notify any construction work on a line if it will result in more than one third of the daily traffic volume being subject to restriction for more than seven consecutive days; such notification must be published at least 24 months before the start of the affected timetable period and updated at least 12 months beforehand. Furthermore, the IM must give the affected railway undertakings and the operators of any affected private sidings three months' notice of weekend closures and extended night closures.

Within Switzerland, it is the network usage plan (NNP) which secures capacities for the individual modes of transport. The NNP for each timetable year is drawn up by the IM and approved by the Federal Office of Transport (FOT). Essentially, capacity restrictions due to construction work are identified in the NNP, if they are continuous closures of at least 30 days or repeated, identical individual closures of at least 30 days. Shorter possessions with major consequences for capacity are also taken into account.

Network usage concept / network usage plans:

https://www.bav.admin.ch/bav/de/home/verkehrsmittel/eisenbahn/fachinformationen/netznutzungskonzept-plaene.html

Although Annex VII is not directly applicable to Switzerland, in practice a procedure is used that is largely in line with the deadlines set out in Annex VII. As regards Switzerland, the effect on the transit corridors is shown below:

	Major impact TCR	**High impact TCR**
Definition according to Annex 7 (EU directive)	>30 days, more than 50% of traffic affected	>7 consecutive days, more than 30% of traffic affected
Definition according to RailNAO Art. 11b	-	>7 consecutive days, more than one third of traffic affected
Publication of line closure according to RailNAO Art. 11b	24 months before timetable change, updated 12 months before timetable change	

The relevant capacity restrictions are published by the IMs in the OneStopShop by the specified deadlines:

https://company.sbb.ch/de/sbb-als-geschaeftspartner/leistungen-evu/onestopshop/kapazitaetseinschraenkungen.html

The relevant capacity restrictions for the timetable year 2025 will therefore be published in the appropriate section of the OneStopShop for the first time in December 2022 and updated in December 2023.

The purpose of the capacity strategy is to give advance notice of the most severe capacity restrictions. For Switzerland's TTR@CH capacity strategy, this means that as a rule only individual **"crucial major"** or "once-in-a-lifetime" TCRs will be published. The following criteria apply to the giving of advance notice of capacity restrictions in the TTR@CH capacity strategy:

TCR >90 days and more than 50% capacity restrictions.

2.2 Expected "Crucial Major“ TCR

Country	Network Segment	Purpose	Duration	Start (at quarterly level)	Impact (total closure, single-track closure, speed restrictions)
Switzerland	Basel SBB RB D Group	Track extensions, D group	332 days	01/2025	Partial closure in the range of approx. 50 - 60%. Plan not yet fully worked out. Trains will be diverted via the other groups, resulting either in timetable adjustments or reduced capacity.

Chapter 3: Traffic planning and traffic flows

Capacity planning under TTR will continue to be based on the existing national tools at our disposal, i.e. the network usage concept (NNK) and network usage plan (NNP). The contents of the NNP fully cover the requirements in the "Traffic planning and traffic flows" section. According to the RNE, capacity strategies are to be aligned with each of the respective neighbouring countries.

3.1 Traffic planning principles

This section describes the main principles for each rail line; these principles will be used later on, when planning those aspects to be included in the capacity models and when planning the capacity available for use.

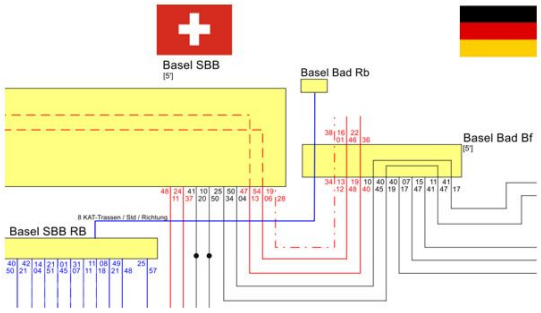
According to TTR, it is possible, in the capacity strategy for individual routes, to define whether they should be classified as "pre-planned" (all planned capacities as ready-made capacity products - similar to today's train path catalogue), as "semi-pre-planned" (ready-made capacity products as well as residual capacities for tailor-made orders) or as "non-pre-planned" (no ready-made capacity products, only tailor-made orders). Since it would be necessary to define the maximum capacity of a route for the "pre-planned" variant, something which in practice is very difficult to achieve, **TTR@CH envisages focusing on the "semi-pre-planned" variant in its capacity strategy.** In this way, for example, those train paths guaranteed in the NNP can be identified in the capacity model and in the subsequent train path catalogue as ready-made products; if there are further capacity needs, customer-oriented solutions can then still be found within any residual capacities which may be available.

As mentioned above, the NNP 2025 already covers the TTR requirements for the "Transport planning and traffic flows" sections. The NNP sets out in writing the planned capacity distribution between long-distance traffic, regional traffic, freight traffic and other traffic types (e.g. car-carrying trains). The NNP contains the capacities available in a standard hour and during passenger traffic peak hours (06.00-09.00 and 16.00-19.00, Monday to Friday, excluding public holidays) that are guaranteed for allocating train paths in the 2025 timetable. Timings to the precise minute as well as connections and connecting services shown on the network charts are not binding. The number of train paths shown on the route sections equates to the maximum number of train paths guaranteed for a particular type of traffic on this entire route section. Subsections of this route section may have fewer train paths. The NNP 2025 does not yet list any restrictions due to possessions. **Link to the published NNP 2025** *(as at: 02.12.2019*)
https://www.bav.admin.ch/dam/bav/de/dokumente/verkehrstraeger/eisenbahn/nnp/nnp-2025.pdf.download.pdf/NNP%202025.pdf

3.2 Traffic flows

The summary below shows, in respect of every MVP route, those train categories / capacities which are used in the capacity model. Note: Only those train paths which cross via the designated border point are taken into account and coordinated. If the traffic flows at the border are not identical, the reason must be clearly explained.

DE / CH: «Basel Bad Bf.»



Basel SBB / Basel RB – Basel Bad Bahnhof

Verkehrsart	Anzahl Trassen		Zusätzliche Angaben
	Regelstunde	HVZ	
Fernverkehr	2	3	
Regionalverkehr	2	2	
Güterverkehr	8	8	

Information provided by DB Netz

Border point	Passenger train paths per hour per direction		Freight train paths per hour
	Long distance	Regional	
Basel Bad / Basel Bad Rbf (D) – Basel SBB / Basel SBB RB (CH)	1.5	2	5

There are differences between DB Netz's and SBB Infrastructure's train path capacities for long-distance traffic and freight traffic; these differences can be explained as follows:

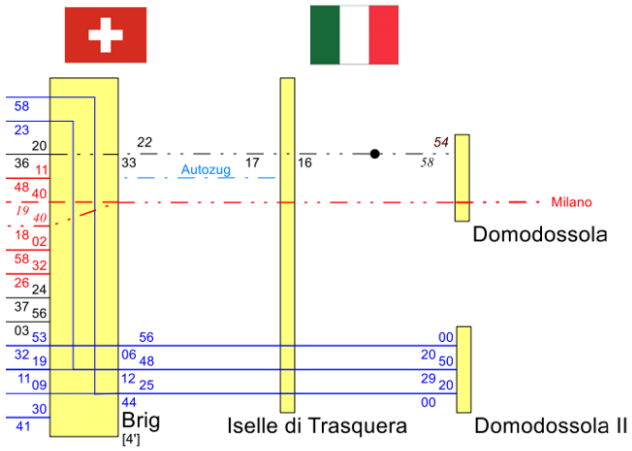
The following currently applies in Switzerland: The only basis for the TTR capacity strategy is the most recent planning status, assuming it has gone through the regular NNP process and been approved by the Federal Office of Transport (FOT). To be precise, the NNP for 2025 was approved in 2019 based on the NNK 2025. In the meantime, the NNK 2025 has been replaced by the NNK 2035. This means that, if the NNK 2035 which applies at present is taken into account, passenger traffic capacity (only looking at standard service hours) is the same as for DB, namely 1.5 train paths for long-distance traffic and 2 train paths for regional traffic.

There is a difference between DB's freight capacity (5 train paths per hour/direction) and that of SBB (8 train paths per hour/direction). According to the DB statement, until the work in the Basel Bad Bf area to upgrade the Basel to Karlsruhe Rhine valley line to four tracks is complete, freight traffic capacity must be reduced by 3 train paths to 5 train paths per hour and direction until approx. 2028. This information was not available in Switzerland in this form at the time the NNP was drawn up and was therefore not included in the corresponding NNP.

The outcome after harmonisation:

➔ Long-distance traffic: 1.5 train paths; regional traffic: 2 train paths; and freight traffic: 5 train paths per hour/direction.

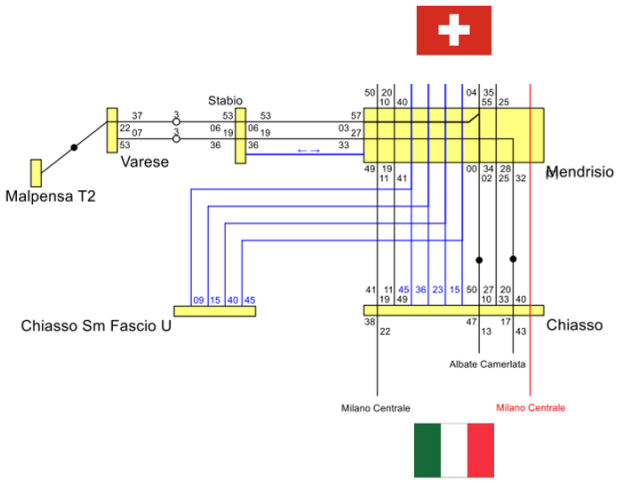
IT / CH: «Domodossola»



Spiez – LBT – Brig – Domodossola

Verkehrsart	Anzahl Trassen		Zusätzliche Angaben
	Regelstunde	HVZ	
Fernverkehr	5	5	Spiez – Frutigen: 2 Trassen, eine davon zweistündlich Frutigen – Visp: 2 Trassen, eine davon zweistündlich Visp – Brig: 5 Trassen, eine davon zweistündlich Brig – Domodossola: 1 Trasse zu gewissen Stunden
Regionalverkehr	2	2	Spiez – Frutigen: 1 Trasse Frutigen-Visp: 0 Trassen Brig – Domodossola: 1 Trasse zu gewissen Stunden HVZ: Spiez – Frutigen: +1 Trasse
Güterverkehr	4	4	Davon 2 SIM-Trassen Gemeinsame Betrachtung mit Bergstrecke Spiez – Brig: 3 Trassen Fahrrichtung Nord-Süd: Stunde A: 2 via LBT (1 SIM) – 1 via Bergstrecke (1 SIM) Stunde B: 3 via LBT (2 SIM) – 0 via Bergstrecke Fahrrichtung Süd-Nord: 1 via LBT (SIM) – 2 via Bergstrecke (1 SIM) 4. Trasse nach Domodossola II nur fahrbar, wenn die RoLa-Trasse nach Domodossola FS verkehrt (gilt auch für Gegenrichtung. Kapazitätsteilung nach Domodossola FS und Domodossola II. 4. Trasse in Kapazitätsteilung mit Fernverkehr. Wenn fahrbar, steht die vierte G-Trasse prioritär dem Güterverkehr zur Verfügung.
Andere	<1>	<1>	Autozug im 90-Minuten Takt Spiez – Brig und Iselle – Domodossola: 0 Trassen

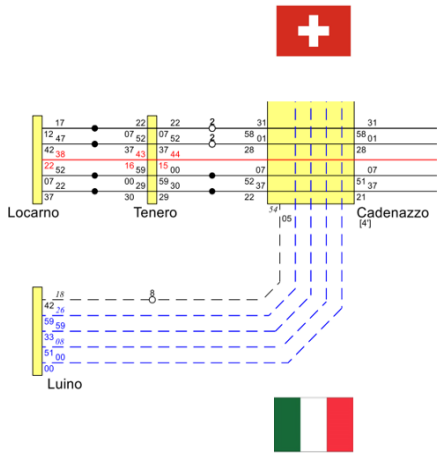
IT / CH: «Chiasso»



Castione – Bellinzona – Giubiasco – Chiasso

modalità di traffico	Numero di tracce		informazioni aggiuntive
	Ora di regola	Odp	
Lunga percorrenza	3	3	Castione-Arbedo – Giubiasco: 3 tracce Ceneri-Bergstrecke: 0 traccia CBT: 2 tracce Lugano – Chiasso: 1 traccia
Traffico regionale	5	5	Castione-Arbedo – Bellinzona: 4 tracce Bellinzona - Giubiasco: 4 tracce Ceneri-Bergstrecke: 2 tracce CBT: 4 tracce Lugano – Chiasso: Lugano – Mendrisio: 4 tracce Mendrisio – Chiasso: 5 tracce
Traffico merci	6	6	Castione-Arbedo – Giubiasco: 6 tracce Ceneri-Bergstrecke: 1 traccia CBT: 4 tracce Lugano – Chiasso: 4 tracce

IT / CH: «Luino»



Cadenazzo – Luino

modalità di traffico	Numero di tracce		informazioni aggiuntive
	Ora di regola	Odp	
Lunga percorrenza	0	0	
Traffico regionale	1	1	Ogni due ore
Traffico merci	2	2	

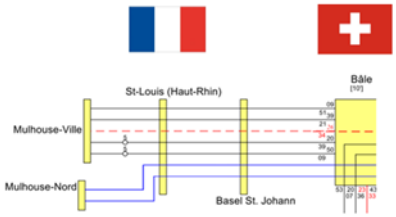
Information provided by RFI

Border-crossing system paths per hour per direction (daytime)						
Border point	Passenger train paths per hour				Freight train paths per hour	
	High speed	Long distance	Regional express	Regional	International	Regional and service trains
Domodossola (Iselle) - CH	--	0.5	--	--	3.5	Sporadic service trains
Luino - CH	--	--	--	0.5	2	Sporadic service trains
Chiasso - CH	--	1	1	2	4	Sporadic service trains

After mutual harmonisation between RFI and SBB Infrastructure, there remains a difference in the train path capacity for freight traffic; this can be explained as follows:

Domodossola border crossing: the 3.5 freight traffic train paths represents the average of the 3 or at times 4 possible train paths.

FR / CH: «St. Louis / Basel St. Johann»



Basel SBB – St. Louis (France)

Mode de transport	Nombre de sillons		informations supplémentaires
	Heure de référence	Hdp	
Grandes lignes	3	3	1 Trasse zweistündlich (TGV)
Trafic régional	2	2	
Trafic marchandises	2	2	

SNCF Réseau does not take part in the MVP Concept Capacity strategy. Consequently, there was no need to coordinate the content of the strategy.

Chapter 4: Validation

1) National

This capacity strategy is approved by the two infrastructure managers (IMs) involved, BLS AG and SBB AG.

Approved by SBB Infrastructure	Approved by BLS Netz
FT KOP: 21.06.2022	Head of Planning, Operations & Services: 23.06.2022

2) International

SBB Infrastructure confirms that it has discussed and validated the border capacities with its neighbouring countries.