ÖBB-Infrastruktur AG

Capacity Strategy

Timetable 2026

Version 1

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0 Introduction

Together with the European Rail Freight Organisation (ERFA), Railnet Europe (RNE) and Forum Train Europe (FTE) have started the “Timetabling and Capacity Redesign” (TTR) project to standardise and improve capacity management processes in European countries with the aim of improving the competitiveness of the rail sector.

The capacity strategy is the first TTR planning instrument, which is published 3 years (X-36) before the scheduled timetable change. Strategic and internationally coordinated information about infrastructure, construction projects and traffic are made available. The capacity strategy relates to the whole ÖBB-Infrastrukture AG network for the timetable 2026. After X-36 relevant new insights or amendments referring to timetable 2026 will be published in the subsequent TTR planning elements. The document is based on the RNE handbook Capacity Strategy Version 2.1.

0.1 Information on maket involvement

Framework plan

Chapter 1 – Infrastructure is based on the information contained in the framework plan. The framework plan of the Austrian Federal Railways (ÖBB) represents the planning and financing instrument of the Federal Government for investments in the ÖBB-Infrastruktur AG network. Section 42 of the Austrian Federal Railways Act represents the legal foundation of this. Applicants also have the option to be informed about the grant contracts (Zuschussverträge) (the annex of which is the framework plan) before the contracts are concluded and to state their opinion about it (Railway Act, Section 55b, para. 3).

ETCS

Subsection 1.4 is based on the national ERTMS implementation plan (European Rail Traffic Management System), which contains information about ETCS upgrades that is coordinated across Europe. Preparation of the implementation plan is part of a more comprehensive strategic planning and implementation process of the Federal Ministry for Climate Protection, Environment, Energy, Mobility, Innovation and Technology (BMK). In the future, the BMK will carry out consultation processes with applicants regarding ERTMS upgrades.

1 Infrastructure

1.1 Effects of route and station expansion on infrastructure capacity

The ÖBB-Infrastruktur AG network expansion program is set out annually in a framework plan and ccordinated with the BMK as owner. Therefore, the framework plan is a presentation of the planned projects and their investment sums which are scheduled for implementation within the respective 6-year period. The following diagram shows the most important new construction and expansion projects in the framework plan that is currently valid for 2023–2028, shown in extracts.

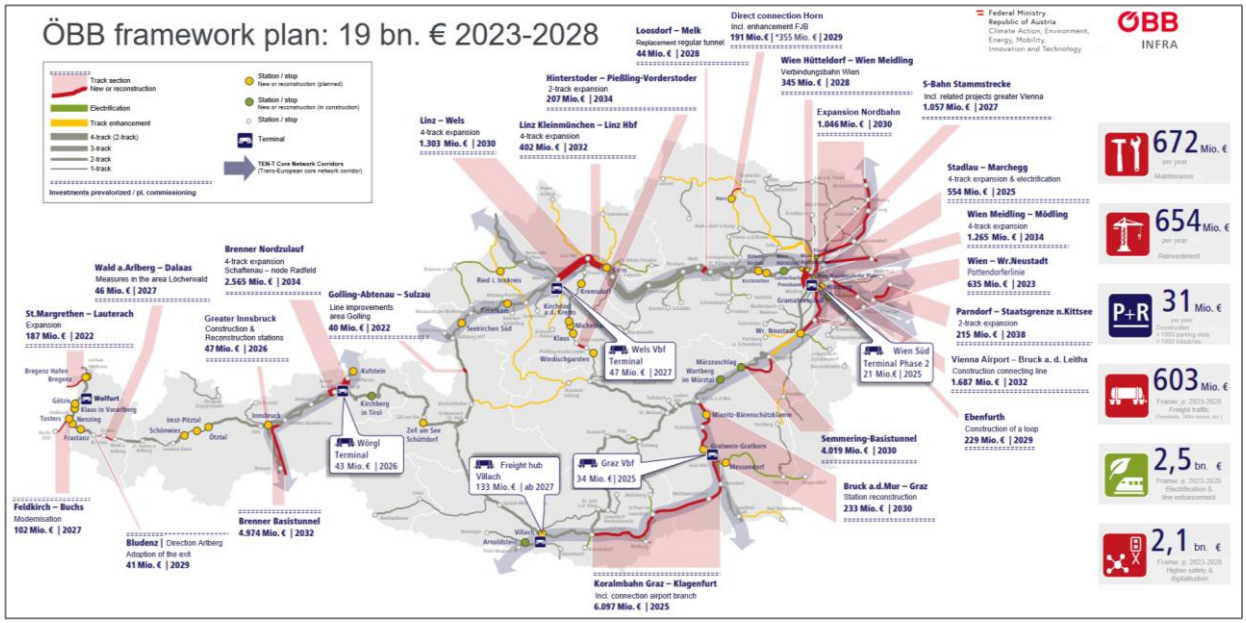

Figure 1: Map display of the 2023–2028 framework plan

The table 1 below lists the major construction and expansion projects along with their effects on capacity that should be put into operation before 2026 according to the 2023–2028 framework plan. A full list of construction and expansion projects, which also contains those projects that do not have any notable effects on capacity, can be found in the published framework plan.

Project description	Effects on capacity	Completion by the end of the year
Western axis		
Unterpurkersdorf, Tullnerbach-Pressbaum: Station refurbishments	Adapting infrastructure to local passenger traffic requirements and setting up a 760-m-track in Unterpurkersdorf	2025
Seekirchen Süd; setting up a bus stop incl. transfer point and block post	Construction of a new stop, additional block post and transfer point	2025
Gramatneusiedl, station refurbishment	Increasing switch speeds, erecting 760-m-tracks	2025
Stadlau–national border near Marchegg; electrification and double-track upgrade	2-track upgrade, raise speed up to 200 km/h, station refurbishments	2025
Southern axis		
Vienna Meidling–Altmannsdorf junction, 2-track upgrade	2-track upgrade	2025
Vienna Blumental–Wampersdorf, 2-track upgrade of Pottendorfer line	2-track upgrade, raise speed up to 200 km/h, station refurbishments	2025
Wampersdorf–Wiener Neustadt Hbf, raise attractiveness of line section	Raise speed up to 160 km/h, station refurbishments	2025
Wartberg im Mürztal, station refurbishment	Construction of 760-m-tracks	2024
Peggau-Deutschfeistritz, station refurbishment (phase 2)	Construction of 760-m-tracks	2024
Graz–Weitendorf, needs-based upgrade (module 1)	4-track upgrade Graz–Feldkirchen, extension of track lengths at Puntigam station	2025
Graz–Klagenfurt; Koralm Railway	Construction of Graz–Klagenfurt high-capacity line	2025
Arnoldstein, station refurbishment	Construction of tracks for freight trains (760 m)	2025
Pyhrn axis		
Spital am Pyhrn–Ardning, overhaul of the Bosrucktunnel	Elimination of slow speed limit area, increasing security	2023
Brenner axis		
Kufstein, construction of turnaround option	Provision of new turnaround option for passenger traffic	2024
Construction of Vomp overtaking station	Construction of overtaking track (760 m) for freight trains	2025

Arlberg axis		
St. Margrethen–Lauterach; upgrade for local services and enhancement	selective 2-track upgrade, raise speed up to 130 km/h	2023
Other core and supplementary network matters		
Linz Hbf–Summerau, enhancement	Enhancement and adapting the tracks in stations	2024
Klagenfurt - Weizelsdorf, electrification and necessary route amendment	Enhancement, electrification and construction of an additional crossing option	2023

Table 1: List of capacity-relevant construction and expansion projects to be commissioned by end of year 2025 as per the ÖBB framework plan for 2023–2028

1.2 Transit times

In long-distance passenger traffic, the node-edge-node model is the basis of the regular interval timetable used across Austria that is being introduced gradually into the network. The regular interval timetable should ensure that optimal connections are available in all directions within the central nodes in rail transport – at the same and therefore easily remembered departure minute where possible – and that the transfer time to other trains and modes of transport is reduced as far as possible.

The node-edge-node model for 2026 includes capacity and travel time-relevant infrastructure measures that should be put into service before the scheduled timetable change for 2025/2026 (see Chapter 1.1). The model for 2026 thus acts as an interim step on the way to nationwide implementation of regular interval timetable as per Target Network 2025+.

Note: The node-edge-node model only shows those lines that serve nodes at defined node times and thus act as central lines. In addition, other lines outside the regular interval timetable framework may operate between the nodes but are not considered part of the model. A fuller illustration of traffic is shown in the network diagram in Chapter 3.

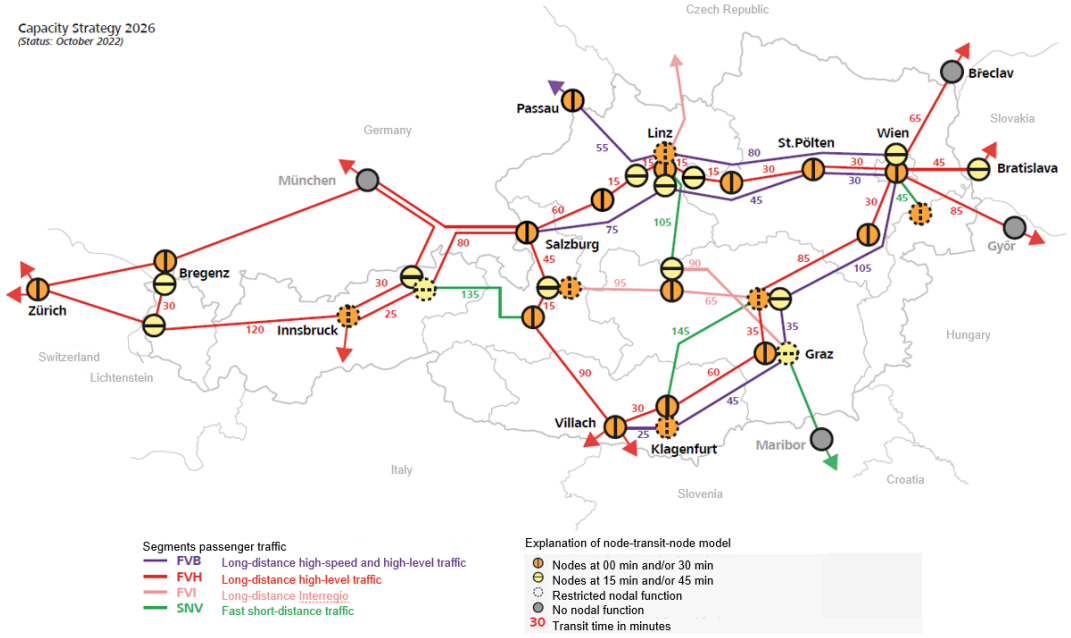

Figure 2: Node-edge-node model timetable 2026

The “rail ring” within Austria in the 2026 node-edge-node model is of significant importance at national level. As a result, the Tauern line is linked to the Southern line, and Villach becomes the third system-relevant node on the Austrian regular interval timetable alongside Salzburg and Vienna.

Completion of the Koralm section will result in significantly shorter travel times between Graz and Carinthia respectically Vienna and Carinthia and is expected to trigger a significant increase in demand. In order to shorten the transit time on the Tauern line in the Salzburg–Villach section, measures such as reorganisation of the stop pattern in high-level long-distance traffic are also necessary.

The intra-Alpine links are connected via the Bischofshofen node in the direction of Salzburg and Bruck an der Mur in the direction of Vienna. Passengers can reach their connections towards Vienna and Graz from the Mur Valley via Bruck an der Mur with scheduled InterRegio and local transport connections.

By fully upgrading the Stadlau–Marchegg route, the international Vienna–Bratislava connection can also be integrated into the regular interval timetable, shortening travel times to Slovakia. However, this option will require upgrading of the Slovakian infrastructure.

1.3 Electrifications

ÖBB-Infrastruktur AG continues to electrify lines of the network as part of its electrification strategy which goes along with decarbonisation. Electrification of the following routes is planned by the timetable 2026 according to the ÖBB framework plan for 2023–2028.

Federal State	Route	Completion by the end of the year
Carinthia	Klagenfurt–Weizelsdorf	2023
Carinthia/ Styria	Koralm Graz–Klagenfurt	2025
Carinthia	Wolfsberg–St. Paul/Lavanttal	2025
Carinthia	Bleiburg Loop: Junction Lav 5–Bleiburg–Mittlern	2025
Vienna/LA	Stadlau–Marchegg–national border near Marchegg	2022

Table 2: List of route electrifications to be commissioned by end of year 2025 as per the ÖBB framework plan for 2023–2028

1.4 Train control system/ETCS

For timetable 2026 operation of PZB, LZB, ETCS Level 1 and Level 2 is scheduled as shown below. The attachment contains an outlook for end of year 2029.

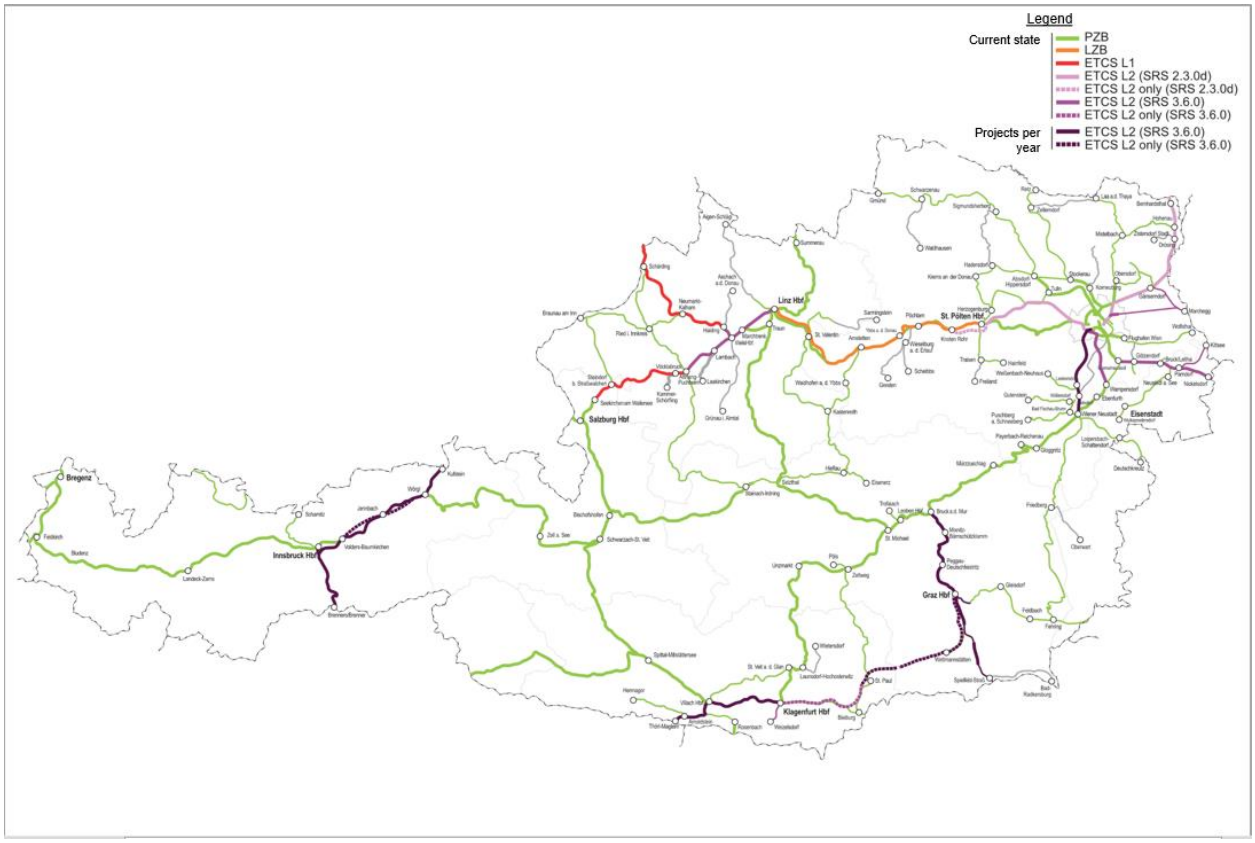

Figure 3: Train control systems planned to be in operation on Austrian network by end of 2025

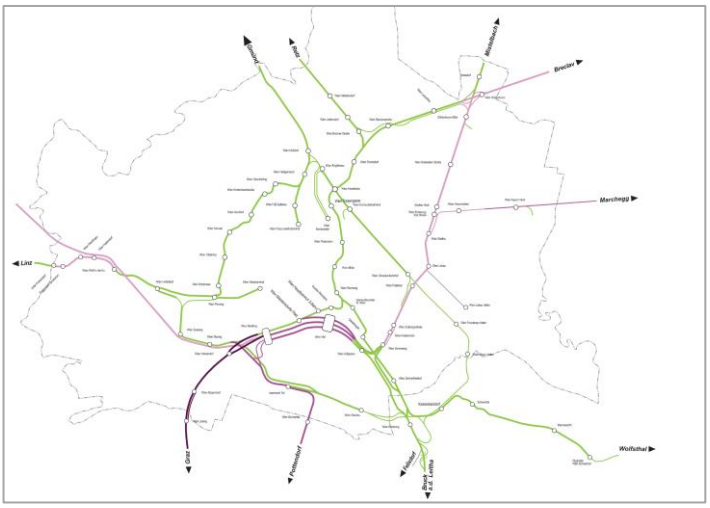

Figure 4: Train control systems planned to be in operation on Viennese network by end of 2025

On the following line sections commissioning of ETCS Level 2 is planned for 2025

ETCS Level 2 – Planned commissioning 2025		
Operational management centres	**Section**	**Planned commissioning**
Villach	Klagenfurt Hbf (a) - Staatsgrenze n. Thörl-Maglern	27.04.2025
Villach	Graz Hbf (a) - Graz Stadion Liebenau (e)	27.04.2025
Villach	Bruck/Mur (e) - Graz Hbf (a)	27.04.2025
Villach	Graz Hbf (e) - Staatsgrenze n. Spielfeld Str.	27.04.2025
Villach	Weststeiermark (a) - Lavanttal (Koralm) (a)	27.04.2025
Vienna	Wien Hbf Lückenschluss	27.07.2025
Innsbruck	Wörgl Hbf (e) - Hall i. Tirol (a)	14.12.2025
Innsbruck	Radfeld (e) - Baumkirchen (e)	14.12.2025
Innsbruck	Kufstein (e)- Wörgl Hbf (a)	14.12.2025
Innsbruck	bzw FW2 (e) - Abzw 11 (Umfahrung Innsbruck) (e)	14.12.2025
Innsbruck	Abzw 11 (a) - Staatsgrenze n. Steinach i. Tirol	14.12.2025

Table 3: List of the line section of planned ECTS Level 2 commissioning in 2025 as per the ÖBB framework plan for 2023–2028

1.5 Service facilities (terminals, shunting services and facilities, sidings, other technical facilities)

The framework plan for 2023–2028 also contains projects on service facilities and production systems for passenger and freight traffic. The table below lists all projects that have a direct impact on the production of passenger traffic or freight traffic RUs, such as storage sidings or upgrades of terminals.

Project description	Effect	Completion by the end of the year
Terminal Wörgl	Upgrade of ROLA and construction of a main track at Kundl, spatial segregation of ROLA and wagon loading systems	2025
Terminal Inzersdorf (phase 2)	Increasing handling capacity by upgrading the wagon loading and combined traffic systems	2025
Floridsdorf railway station	Expansion of siding capacity for local passenger traffic	2025

Table 4: List of construction and expansion projects on production and service facilities until end of year 2025 as per the ÖBB framework plan for 2023–2028

2 Temporary Capacity Restrictions (TCRs)

2.1 Methodical approach

2.1.1 Categorisation and publication of restrictions

The effects of railway infrastructure restrictions are largely dependent on the railway infrastructure that is available and the specific timetable framework.

Based on the provisions from Annex VII of "EU Directive 2012/34/EU for establishing a single European railway area", expected restrictions are categorised as follows.

		Amount of train paths cancelled or re-routed per day			
		< 10%	**10% – 30%**	**30% - 50%**	**> 50%**
Duration of TCR	**> 30 days**	Kat IV	Kat III	Kat II	Kat I
	7 days – 30 days	Kat IV	Kat III	Kat II	Kat II
	24h – 7 days	Kat IV	Kat III	Kat III	Kat III
	< 24h	Kat IV	Kat IV	Kat IV	Kat IV

Figure 5: Categorisation of restrictions

The deadlines as per Annex VII EU Directive 2012/34/EU are used for publication of restrictions in the network statements.

Capacity restrictions with impact on more that one network are coordinated between the relevant infrastructure managers. The deadlines for concluding coordination can be found in the diagram below. Every publication in the network statements takes place after a consultation with the applicants and the service facilities operators.

		Date of publication				
		X-24	**X-18**	**X-13,5**	**X-12**	**X-6**
Category	**Kat I**	First publication	Coordination concluded		Second Publication	Update
	Kat II	First publication		Coordination concluded	Second Publication	Update
	Kat III			Coordination concluded	First publication	Update
	Kat IV					First publication

Figure 6: Publication deadlines as per Annex VII

Only "Category I – Major Impact TCRs" restrictions are handled in the capacity strategy.

2.1.2 Monitoring restrictions in the respective timetable

TCRs are classified as relevant for the timetable if at least one of the two criteria below is met when planning capacities on railway infrastructure.

- Amendments to planned capacity on infrastructure are required
  - Train cancellation
  - Diversion
  - Temporary change in schedule
- Amendments of train parameters are required
  - Train length
  - Traction type
  - Train profiles
  - etc.

Infrastructure restrictions only causing delays are not considered relevant for the timetable. TCRs that are relevant for the timetable are either already adjusted in the annual timetable or handled later with temporary amendments in the construction or ad-hoc timetable.

Year-round capacity restrictions are to be considered in the annual timetable and are therefore included in the Capacity Model Baseline.

All other major and high impact TCRs are taken into account in "***Capacity Model TCR Periods"***, provided that they are already known at the time of creation and that their impact on infrastructure capacity can be assessed at this point.

2.1.3 Premises in planning restrictions within railway infrastructure

Measures for maintenance, inspection, servicing and renewal of facilities, as well as construction and expansion of the network are carried out in line with the "construction operations planning" process that corresponds with the provisions of Annex VII in EU Directive 2012/34.

ÖBB-Infrastruktur AG carries out scheduled construction work such that the effects on rail services are kept to a minimum.

When planning restrictions, it is carried out in accordance with the below premises:

1. Type of closure
   - Total closure (route closures) on double-track routes are only planned if it is wholly inevitable due to structural reasons and/or for employee protection reasons, and no other construction methods can be chosen at that point.
2. Importance of the route in the network / function of the route
   - On international axes (with focus on the connection aspect), restrictions are kept as brief as possible so that the impacts on rail operations are minimised in terms of time.
   - For routes on the remainder of the core network, as well as routes on the supplementary network (with focus on the access aspect), blocks are planned such that the access aspect (particularly for freight RUs) is maintained as far as possible. This is generally linked to a longer working period, or a longer period where restrictions apply.

3. Bundling construction measures

   - If a restriction makes it necessary to temporarily amend the scheduled timetable for long-distance passenger traffic and use a back-up timetable (temporary schedule change), then other temporary capacity restrictions are bundled together in terms of time and location on the affected route section or axis so that the amended scheduled timetable with journey times that are generally longer can be ideally exploited.
   - If a restriction makes it necessary to temporarily reduce volumes in the scheduled timetable (cancellations and/or diversions for local passenger traffic or freight traffic), then other temporary capacity restrictions are bundled together in terms of time and location on the affected route section or axis so that reduced capacity requirements can be ideally used for further restrictions.

4. Use of periods with reduced demand

   - When planning restrictions, periods with lower capacity utilisation (nights, weekends) are given priority. This should ensure that the effects on rail traffic are kept to a minimum.

5. Particular market requirements

   - Specific customer requirements are already consciously included in the planning, if already known at the time of planning the restrictions.

2.2 Crucial major impact and major impact TCRs 2026

Route	Description	Duration	Start	**Effect on capacity** (total closure / single-track / speed reduction)
Himberg	Station reconstruction	TT 2025 TT 2026	Q1– Q4	Single-track operation in alternating sections
Ebenfurth	Construction of loop	TT 2025 TT 2026	Q1–Q4	Occasional single-track operation
Nordeinfahrt Wr. Neustadt	Four-track upgrade	TT 2025 TT 2026	Q1–Q4	Single-track operation
Linz–Wels	Four-track upgrade	ongoing	Q1–Q4	Temporary single-track operation
Connecting railway (Vienna Meidling–Vienna Hütteldorf/ Vienna Penzing)	Line extension	TT 2026	Q1–Q3	Single-track operation in alternating sections
Suburban main city railway route Floridsdorf–Vienna Meidling	Modernisation	TT 2026 TT 2027	Q4	Temporary total closures
Feldkirch–Buchs	Line extension	TT 2026	Monat 06–10	Temporary total closures (06/2026–10/2026)
Gänserndorf–National border near Bernhardsthal	Line extension	TT 2026	Q1–Q4	Single-track operation in alternating sections

Table 5: Crucial major impact and major impact TCRs 2026

3 Traffic

3.1 Methodical approach

Existing infrastructure (for the 2023 timetable) is supplemented by:

- Known amendments to the infrastructure for the timetable 2026
- Known infrastructure restrictions that presumably have to be taken into account for the timetable 2026

The current 2022 timetable is supplemented by the following:

- Known requests for the scheduled timetable for 2023
- Known expansion of services in passenger traffic for the timetable 2026
- Approx. 8% increase for freight traffic 2022–2026, rounded up to entire trains (2% per year)
- Adjustments in the scheduled timetable that are triggered due to new infrastructure (e.g. commissioning construction and expansion plans)
- Adjustments in the scheduled timetable that are triggered due to infrastructure restrictions that presumably have to be taken into account for the 2026 timetable

3.2 Capacity utilisation in 2026

The utilisation level for each route is determined by compression of all occupancy times on possible capacity slots over 24h for 2026 according to the method recommended by UIC (“leaflet method” or “compression method”) in accordance with UIC leaflet 406.

In this case, a quality factor (25%–75% of the occupancy time) is added depending on the train mix.

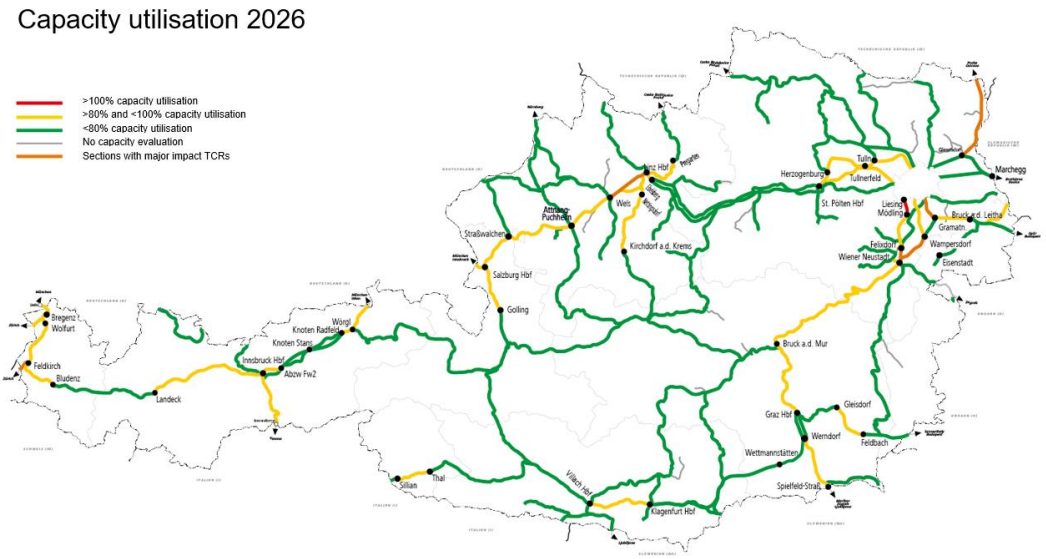

Figure 7: Capacity utilisation in Austria in 2026

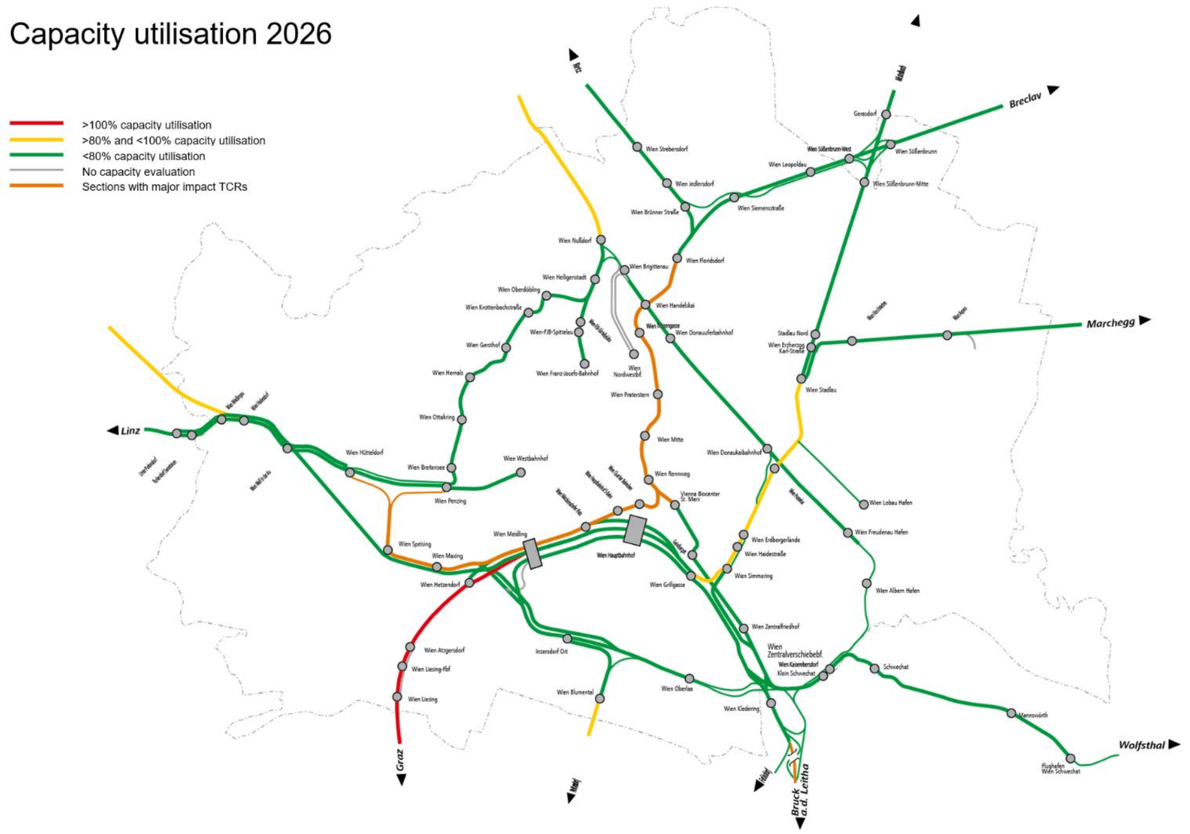

Figure 8: Capacity utilisation in Vienna in 2026

3.3 2026 traffic volumes

The enclosed network diagrams for passenger and freight traffic show the forecast number of paths per hour during the day (06:00–22:00h).

3.4 International transport

The diagram below shows international transport in trains per hour. There is no regular interval timetable at some border points. These points are labelled as “non-systematic”.

Country	Border crossing	Passenger traffic per hour		Freight traffic per hour	Status
		Long-distance traffic	Regional traffic		
SK	Marchegg–Devinska Nova	1	1	non systematic	informed
	Kittsee–Bratislava Petrzalka	0.5	1	1	informed
HU	Nickelsdorf–Hegyeshalom	1	1	2	informed
	Neusiedl am See–Fertöszentmiklos	0	1	0	informed
	Mattersburg–Sopron	0	2	non systematic	informed
	Fehring–Szentgotthard	0	1	non systematic	informed
SL	Spielfeld-Straß–Sentilj	non systematic	0.5	1.5	aligned
	Bleiburg–Prevalje	0	non systematic	0	aligned
	Rosenbach–Jesenice	0.5	0	1	aligned
IT	Arnoldstein–Tarvisio Boscoverde	non systematic	non systematic	2	aligned
	Silian–San Cardido/Innichen	0	1.5	non systematic	informed
	Brennersee Terminal–Brennero	0.5	0[1]	3	aligned
LT	Tosters–Nendeln	0.5	non systematic	0.5	informed
CH	Lustenau–St. Margrethen	0.5	2.5	non systematic	informed

D	Lochau-Hörbranz–Lindau-Reutin	0.5	2	0.5	aligned
	Vils–Pfronten-Steinach	0	1	0	informed
	Scharnitz–Mittenwald	0	1	non systematic	informed
	Kufstein–Kiefersfelden	2	2	3	aligned
	Salzburg–Freilassing	3	6	2[2]	aligned
	Braunau am Inn–Simbach	0	1	non systematic	informed
	Schärding–Passau	0.5	1	3,5	aligned
CZ	Summerau–Horni Dvoriste	non systematic	0	0.5	aligned
	Gmünd–Ceske Velenice	0	0.5	non systematic	aligned
	Retz–Satov	0	1	non systematic	aligned
	Bernhardsthal–Breclav	1	1	2	aligned

1) Regional traffic from Austria (1 path/hour) terminates at the border station Brennero/Brenner
2) Up to 4 freight trains per hour may be possible to Salzburg Liefering

Table 6: International transport