



Infrastruktura

SŽ-Infrastruktura, d.o.o.



CAPACITY STRATEGY 2025



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INTRODUCTION – GEOGRAPHICAL AREA

This Capacity Strategy concerns all main lines in the Republic of Slovenia and the regional lines below which are used for re-routing purposes in case of major disruptions to train services:

- *Route 70 Jesenice – Sežana*
- *Route 80 Ljubljana – Metlika – d. m.*

The Capacity Strategy includes the main border crossing points on public rail infrastructure in Slovenia:

- *Austria – Jesenice/Rosenbach, Šentilj/Spielfeld-Straß*
- *Italy – Sežana/Villa Opicina, Nova Gorica/Gorizia*
- *Croatia – Dobova/Savski Marof, Ilirska Bistrica/Šapjane*
- *Hungary – Hodoš/Oriszentpeter*

The information contained hereunder includes the data for 2025.

1. EXPECTED INFRASTRUCTURE CAPACITY IN TT 2025

Below is a list of infrastructure projects currently underway on the main lines in the Republic of Slovenia which will increase availability and improve efficiency of the infrastructure:

1.1. ENHANCEMENT OF LJUBLJANA – SEŽANA SECTION

The works will be carried out in several phases, upgrading the entire section and constructing grade separated passages to platforms at all train stations, building new substations in Borovnica and Pivka, and installing automatic block signalling (ABS) on the entire section.

1.2. ENHANCEMENT OF MARIBOR – ŠENTILJ – D. M. SECTION

The project comprises:

- *Building a new track on Počehova – Pesnica section to prepare for track doubling*
- *Building a new tunnel (Pekel Tunnel)*
- *Building a new bridge (Pesnica Viaduct)*

Once complete, the project will improve route capacity from the current 63 to 84 trains per day while increasing annual throughout capacity from 7.1m to 8.89m tonnes.

1.3. ENHANCEMENT OF THE PRAGERSKO NODE

The project comprises:

- *Upgrading and modernising the Pragersko station*
- *Upgrading the track and track-side installations, signalling, telecommunications and the overhead line equipment*
- *Building two platforms and the associated pedestrian access routes*
- *Building a road underpass through Pragersko*
- *Installing sound barriers*



Once complete, the project will upgrade the line's loading class to D4 and - through technical and technological upgrades to the station and node - provide an appropriate connection to the Pragersko – Ormož – Hodoš line.

1.4. SIGNALLING UPGRADES

The project comprises:

- Modernising the route control centres in Maribor, Postojna and Ljubljana, which includes renewal of the signalling and improvement of the level crossing protection*
- Introducing centralised traffic control on the sections between Ljubljana and Dobova and between Zidani Most and Šentilj*
- Building grade separated access routes to station platforms*

Once complete, the project will improve safety and ease crowding on routes while making stations and stop-off points more passenger friendly through new IT equipment.

1.5. ENHANCEMENT OF THE LJUBLJANA RAIL HUB

The first phase will bring upgrades to the track and platform infrastructure and deepen the track area at the station. This will remove a bottleneck at the junction of major traffic flows in transit across the Republic of Slovenia.

1.6. TRACK DOUBLING ON DIVAČA – KOPER SECTION

Building a second track between Divača and Koper is the biggest rail infrastructure project in the Republic of Slovenia. Once complete, the project will notably improve route capacity to better serve the port of Koper while boosting the port's traffic.

The project is presently on-going, with works expected to complete in 2026.

1.7. REGIONAL LINES

Engineering work is underway on Ljubljana – Metlika – d.m. line to upgrade the track and build new island platforms with pedestrian underpasses at Grosuplje station. This improvement will reduce congestion by allowing trains to enter the station from both directions at the same time while improving passenger experience and the quality of life for local communities with new facilities such as the station building, parking space, canopies and noise barriers.

A project is in the pipeline on Jesenice – Sežana line to build new station track and platform infrastructure and install new signalling protection at Nova Gorica train station while also building a new line (triangle) at Šempeter node to connect with Gorizia (Italy) – Prvačina line.

Other enhancements in the pipeline include a project to introduce centralised traffic control on all stations so that train movements on regional lines can be controlled from a central location instead of locally, which will notably improve route capacity.

1.8. BORDER CROSSING SECTIONS

No infrastructure projects are planned on interchange stations until 2025 except for the works to upgrade Šempeter pri Gorici node (a part of the Nova Gorica station enhancement project), which will build a new direct connection to Italy via Sežana.



SŽ - Infrastruktura is active in projects led by RailNetEurope (RNE) and initiatives concerning rail freight corridors which aim to cut red tape and remove bottlenecks at interchange stations (points where trains cross a state border).

2. TEMPORARY CAPACITY RESTRICTIONS

Large-scale infrastructure projects are planned in a way which minimizes their impact on infrastructure availability.

In cases where rerouting does not provide enough capacity to accommodate scheduled freight services of the original route, passenger trains are replaced by buses to free up capacity for freight traffic, with efforts made to minimize the impact on international and seasonal train services and trains running at peak hours.

When project works impact on available capacity to the extent which requires significant changes to train operating conditions, a temporary timetable is produced for the period such disruptions are in effect, but no longer than two months. To this end, the Infrastructure Agency of the Republic of Slovenia provides data on temporary capacity restrictions in time frames set out under Annex VII of Directive 2012/34.

Maintenance of the network is delivered during regular planned engineering work and temporary closures, which are published monthly at least two months before the start of activities. Maintenance projects on double-track lines are planned in a way to keep one track open to traffic where possible, with the work typically carried out in the daytime.

Below is a list of planned large-scale enhancement projects which will impact on infrastructure availability in 2025:

- *Enhancement of Ljubljana rail hub*
- *Line 10 Dobova – Ljubljana: station upgrades on Ljubljana Zalog – Zidani Most and Zidani Most – Dobova sections;*
- *Line 20 Ljubljana – Jesenice: station upgrades on Ljubljana Šiška – Kranj section together with improvements on specific line sections;*
- *Line 50: station and track upgrades on Borovnica – Postojna section.*

3. TRAFFIC PLANNING PRINCIPLES AND TRAFFIC FLOWS

3.1. TRAFFIC PLANNING PRINCIPLES

When planning trains, the available infrastructure capacity will be allocated by market segments, taking account of the current traffic flows and planned capacity restrictions. After setting out the restrictions of use required to deliver large-scale engineering works, the available capacity will be classified in the capacity model by segments and level of priority:

- a) *Capacity for annual train path requests:*
 - *capacity for long distance passenger trains operated as part of a public service obligation (PSO)*
 - *capacity for regional passenger trains operated as part of a public service obligation*
 - *capacity for other passenger trains*
 - *capacity for freight trains running on priority freight corridors (Pre-arranged Paths - PaPs)*
 - *capacity for freight trains with known running days*



- b) *Capacity for rolling planning:*
- *capacity for freight trains with a flexible running days*
 - *capacity for ad hoc planning of passenger and freight trains*

For border crossing sections, the capacity model will include pre-arranged paths for international and cross-border passenger services and for freight services contained in the annual timetable. The capacity for rolling planning and capacity for ad hoc path requests will be available as time slots.

The available capacity will be planned so as to allow for freight services to run at peak times, also.

On regional lines, the capacity model will be produced only for sections where there are bottlenecks. The model will contain train paths prepared specifically for passenger trains, with all freight services included in the framework of capacities for rolling planning and capacities for ad hoc needs. Planning is not required on regional sections which are not declared as congested infrastructure. Because capacity models will not be produced for such sections, all capacities will be available for all types of orders.

3.2. TRAFFIC FLOWS

The majority of freight services - around three quarters of all trains - on SŽ rail network (excluding industrial rail lines) consists of international trains in transit across Slovenia and of traffic on route to or from the port of Koper.

The main traffic flows which transit through Slovenia move between Italy (Sežana/Villa Opicina border crossing) and Croatia (Dobova/Savski Marof), with smaller portions also in transit from/to Hungary (Hodoš/Oriszentpeter).

The share of freight services on route to or from the port of Koper by segment:

- *44% with Austria via Jesenice and Šentilj*
- *23% with Hungary via Hodoš*
- *8% with Italy via Sežana*
- *25% with Slovenia's interior areas*

Passenger transport has a market share of 57%, and is mostly comprised of inland passenger services.

The expected volume of path requests is estimated according to current traffic data. The table below shows the average daily volume by market segment for line sections where capacity will be allocated under a capacity model.



| SECTION \ TRAFFIC TYPE | ANNUAL PLANNING | | | | ROLLING PLANNING AD-HOC |
|--------------------------|-------------------------|--------------------|-----------------------|---------------|-------------------------|
| | INTERNATIONAL PASSENGER | REGIONAL PASSENGER | INTERNATIONAL FREIGHT | LOCAL FREIGHT | |
| Ljubljana - Zidani Most | 14 | 100 | 32 | 9 | 24 |
| Zidani Most - Dobova | 8 | 37 | 8 | 0 | 16 |
| Zidani Most - Pragersko | 8 | 60 | 24 | 8 | 11 |
| Pragersko - Maribor | 6 | 85 | 16 | 11 | 8 |
| Pragersko - Hodoš | 4 | 35 | 14 | 4 | 5 |
| Ljubljana - Jesenice | 10 | 34 | 28 | 6 | 8 |
| Ljubljana - Sežana | 2 | 50 | 50 | 22 | 34 |
| Pivka - Ilirska Bistrica | 4 | 15 | 0 | 2 | 4 |
| Divača - Koper | 0 | 10 | 40 | 18 | 14 |

The table below shows the traffic volume on cross-border sections where capacity will be coordinated with the neighbouring Infrastructure Managers:

| BORDER CROSSING \ TRAFFIC TYPE | ANNUAL PLANNING | | | ROLLING PLANNING AD-HOC |
|--------------------------------|-------------------------|--------------------|-----------------------|-------------------------|
| | INTERNATIONAL PASSENGER | REGIONAL PASSENGER | INTERNATIONAL FREIGHT | |
| Sežana / Villa Opicina | 2 | 14 | 10 | 12 |
| Jesenice / Rosenbach | 10 | 2 | 27 | 4 |
| Dobova / Savski Marof | 8 | 0 | 8 | 16 |
| Hodoš / Oriszentpeter | 4 | 7 | 14 | 5 |
| Šentilj / Spielfeld Strass | 6 | 16 | 16 | 8 |
| Ilirska Bistrica / Šapjane | 4 | 0 | 0 | 4 |

Indicative daily available capacities for the 2025 timetable by different market segments are shown in the schematic overview below.

