

D.T1.4.2 - PRIORITY LIST OF ACTIONS & COST ESTIMATION - STYRIA

Report

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1) Introduction

Thanks to extensive harmonisation of the transport infrastructure and mostly good opportunities for shipping companies, freight forwarders and rail operators, main challenges arise from the existing rail infrastructure.

As such, the biggest bottlenecks in Styrian rail freight transport are missing connections and lack of capacity in the main rail network. By closing these gaps and eliminating capacity bottlenecks on the main rail network, freight transport on the subordinate network will also benefit.

Styria misses a high-capacity rail connection from the economic centres in central and the Northwest of Europe (including the North Sea harbours) to Southeast Europe, particularly to the Harbours of Koper and Rijeka as well as to the east Adriatic and Western Balkan region. The Pyhrn-Schober axis - a high-level rail link connects Austria's strongest industrial regions Styria and Upper Austria with each other and links them to the strong economic sites of central Europe - is the most important rail connection for the export of Styrian products. Further, imports of Styria are handled almost uniquely via the Adriatic ports. In case of a stronger Pyhrn-Schober-axis, importing goods via the port of Hamburg would be possible at reasonable costs. At present, the rail connection between the Upper Styrian industrial region and the central region of Upper Austria is for long stretches only available via single-track lines and the mountain route to the Bosruck tunnel. The Bosruck tunnel is relatively steep for railways, more concretely, it is only passable for freight trains up to a maximum weight of 1,000 tons due to the steepness of up to 21‰. This bottleneck severely restricts the capacity of transportable goods in rail traffic. **The upgrading of the Pyhrn-Schober axis and in particular the construction of the new Bosruck tunnel with flat ramps can solve this problem, which has an essential impact to the whole corridor.**

With the operational start of the Koralm railway line (2025), the section Bruck an der Mur - Graz will be at the limit of capacity, as several transport corridors (Baltic-Adriatic, Pyhrn-Schober and the regional transport between Leoben and Kapfenberg) pass along this track. More than 400 trains per day are predicted on this section - this is a value far above the usual capacity utilisation for a double-track railway line. Over the next 20 years, a massive increase in freight traffic is expected from the Adriatic ports of Trieste, Koper and Rijeka heading north. In connection with regional and international passenger transport, the capacity of the almost continuous single-track line between Werndorf (in the south of Graz) and Spielfeld and respectively further to Maribor will therefore also represent a bottleneck in the rail network. An effective shift from road to rail will thus not be possible. To achieve the required capacity for commuter trains, passenger trains and freight trains, **the construction of additional tracks on the line between Bruck/Mur and Graz as well as for the area between Werndorf and Spielfeld or Maribor is necessary.**

The **Cargo Center Graz-Werndorf rail-road-terminal (CCG)** is Styria's most important logistic node for national and international freight transport and the most up-to-date cargo transport center south of the Alps. Via a neutral logistics platform, CCG provides every-day access to combined transport routes heading for Koper, Trieste, Neuss and the Northern Ports (Hamburg, Bremerhaven, Rotterdam, Antwerp). At present, the capacity limit of the terminal (230.000 TEU/a) with its four tracks (700 m each), the two gantry cranes, mobile cargo handling equipment and storage space is reached. With the operational start of the Koralm Railway line the freight volume will increase. Due to the already existing full capacity utilization, no additional capacities can be taken up. There is an immanent risk of modal shift to the road. An expansion of the terminal up to about 500.000 TEU/a is essential to increase the freight loading capacity for rail transport. A new facility with four tracks, new gantry-cranes and container storage areas is planned which is connected to the Koralmbahn and Southern Railway (Südbahn).



The **Steirische Ostbahn** is a single-track railway line with diesel operation from Graz to the national border at Szentgotthárd (HU). In combination with the Koralm Railway, the Styrian East Railway can provide a high-level transport connection between Italy, Austria, Hungary and, subsequently, the EU member states Romania and Bulgaria as well as the Ukraine. On the regional scale important industrial sites in the Graz central region do not have sufficient railway connections. The section between Koralmbahn and Gleisdorf is still insufficiently equipped for an efficient railway line that meets the requirements of a dense and fast commuter train service and for effective freight transport on rail. Continuous freight trains currently have to pass through the Graz city area and have to change their direction in Graz. The existing line is not suitable for heavy goods traffic, either because of the permissible speeds or because of the existing gradients. In the longer term, capacity bottlenecks are also to be expected due to the planned and forecasted traffic. A new railway line connecting the future Koralm Railway line and the Steirische Ostbahn solves the capacity problems and establishes a sufficient railway connection between important co-working automotive cluster industries. It provides a direct and high-quality connection of the largest industrial company in the Graz area (MAGNA) to the international rail network and to suppliers in the region.



2) Priority list of actions

The following table describes priority actions for the Styrian region and their costs estimates.

Action	Priority area	Challenges/ results, impact of action	Priority level	Area/level	Timeframe (start of action)	Estimated costs	Potential indicators to measure the success of the action	Responsible entity
Name of action	- Transport infrastructure - Rolling stock / machinery - Services /operations - Legislation/ administration - Other: _____	What the action will improve?	-high (H) -low (L) - medium (M)	- country - region, - municipality, -	- Short term – S (in 1-2 years) - Medium term – M (in 3-5 years) - Long term – L (in more than 5 years)	In EUR	- increased capacity - shorter travel time - lower maintenance costs - lower operational costs -	-region, - railway infrastructure manager, - port authority, -
Construction of the new Bosruck tunnel	Transport infrastructure	Increases loading capacity of freight trains by 50% and operation speed up to 100 km/h, shortens transport times and reduces operational costs	H	Styria/Upper Austria	Planning: S Construction: L	1.500.000.000	- increased capacity - shorter transport times - lower operational costs	ÖBB Infrastructure AG and Austrian Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology
Upgrading of the Railway Line Bruck/Mur-Graz-Spielfeld-Maribor	Transport infrastructure	Improves timetable stability, increases capacity for commuter trains, passenger trains and freight trains	H	Styria/Slovenia	Planning: S Construction: L	n.a.	- increased capacity shorter travel time	ÖBB Infrastructure AG and Austrian Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology
Expansion of the Cargo Center Graz-Werndorf (CCG) Terminal	Transport infrastructure	Increases the freight loading capacity of the terminal from 230.000 TEU/a up to 500.000 TEU/a	H	Styria	Planning: and Construction: S	97.000.000	- increased capacity	Terminal Operator and State Government of Styria
New railway line connecting the future Koralm Railway line and the Steirische Ostbahn	Transport infrastructure	Increases capacity for commuter trains and freight trains, shortens transport times and reduces operational costs	H/M	Styria	Planning: S Construction: L	850.000.000	- increased capacity - shorter transport times - lower operational costs	ÖBB Infrastructure AG and Austrian Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology

3) Process, responsibilities and lessons learnt

Following list provides answers concerning planning and implementation of selected priority actions:

- (1) Which organisations/stakeholders were consulted in the selection of priorities? What were their priorities and how were they involved?
 - ÖBB-Infrastructure AG: Due to the planning competence of these big infrastructure projects the ÖBB-Infrastructure AG has all information about the projects. This relevant information was provided by the ÖBB-Infrastructure AG
 - Austrian Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK): The ministry in its competence is the main decisionmaker in ranking the railway projects in Austria. Due to the huge investment sums the ministry hesitates to decide. The new railway line connecting the future Koralm Railway line and the Steirische Ostbahn in particular is not ranked very high in its priority. The priority list was communicated to the ministry on several occasions.
 - Terminal Operator Cargo Center Graz-Werndorf (CCG): The main priority is to enlarge the capacities, i.e. a new terminal with four tracks and a gantry crane in order to adapt to the additional cargo-volumes triggered by the Koralm Railway and new developments of the Adriatic ports. Further, (pilot) projects for shifting wood transports from road to rail are important especially in order to raise the export rate of Styria to China and other oversea destinations. The priorities of the terminal operator coincide with the priorities of the State Government of Styria and the other stakeholders in Styria.
 - Styrian Interest groups / Social Partners (Chamber of Commerce, Representation of Industry's Interests, Employee representations): Due to several workshops concerning the Styrian railway network and its needs there is maximum agreement on the projects and their priorities.
 - State Government of Styria: The State Government of Styria It is the central point of contact for prioritising the projects and communicating with the Ministry and ÖBB-Infrastructure AG.
- (2) Who will ensure that the priority list will be followed up when investment decisions are taken and how (referring to responsible entities in the list of actions table)?

The corresponding priorities and the implementation of the projects can only be ensured by the national ministry. The Styrian provincial government and the stakeholders in Styria will work to ensure that the ministry sees the priorities in the same way and implements the projects in this way.

- (3) What lessons were learnt when the priority list was selected/negotiated?

For the Styrian government and the stakeholders in Styria, the priorities of the projects in Styria are clearly the same. From the negotiations with the Ministry and ÖBB-Infrastruktur AG it is noticeable that the priorities of the projects mentioned basically coincide. As far as the wishes from Styria regarding the implementation periods are concerned, these are seen as much longer-term from the point of view of the Ministry and ÖBB. For this reason, there is 100% agreement only on the terminal project, as responsibility for this lies solely with Styria.

(4) Which constraints are expected in its realization?

- Main constraint is the lack of money for investments in railway infrastructure. It is anticipated that most rail infrastructure measures will be postponed, because of lack of funding.
- Current developments, more concretely the operational start of the Koralmbahn at the end of 2025, however accentuate the need for taking actions and eliminating the Styrian bottlenecks in the near future.

4) Conclusion

All actions described in the section above contribute to connect the Styrian economic regions with the main economic European centres.

The upgrading of the Pyhrn-Schober axis and in particular the construction of the new Bosruck tunnel ensures the connection of Styria to the economic centres in central and the Northwest of Europe to Southeast Europe, particularly to the Harbours of Koper and Rijeka as well as to the eastern Adriatic and Western Balkan region. Within Austria, a better connection between the Styrian and Upper Austrian economic areas is ensured.

Also on the connection between Northwest and Southeast-Europe the upgrading of the railway sections Bruck an der Mur - Graz as well as between Werndorf (in the south of Graz) and Spielfeld and respectively further to Maribor will improve the connection of the Styrian economic areas to the Adriatic ports of Trieste, Koper and Rijeka ports. At the same time, it also strengthens the connection of the three ports to Styria and Central Europe.

A new railway line connecting the future Koralm railway with the Steirische Ostbahn solves capacity problems and establishes a sufficient railway connection between important co-working automotive cluster industries. It provides a direct and high-quality connection of the largest industrial company in the Graz area (MAGNA) to the international rail network and to suppliers in the region. The upgrading of the Styrian East Railway improves Styria's connection to some important railway junctions and economic centres of Hungary as Körmend, Szombathely, Porpác, Celldömölk, Pápa and Győr. In combination with the Koralm Railway, an upgraded Styrian East Railway can provide a high-level transport connection between Italy, Austria, Hungary and, subsequently, the EU member states Romania and Bulgaria as well as the Ukraine.

The expansion of the Cargo Center Graz Terminal (CCG) is essential to increase the freight handling capacity for rail transports linked to the expected raise in freight volumes related to the operation of the Koralm railway.

By closing the gaps and eliminating capacity bottlenecks on the main rail network, freight transport on the subordinate network will also benefit. The improvement of the high-level rail network and the provision of related services thus directly contributes to preventing the further closing of railway lines in the subordinate network.