



Rail Freight Corridor Rhine-Danube

Corridor Information Document

Implementation Plan

V1.5 18-12-2023



Co-funded by
the European Union

VERSION CONTROL

VERSION	AUTHOR	DATE	CHANGES
0.1	PMO, WGs	09-01-2020	Creation of the first draft
0.2	PMO	03-03-2020	Incorporation of MB comments and essential elements of the TMS
1.0	MB	07-04-2020	Official MB-approval of version 1.0.
1.0.0	ExBo	16-04-2020	ExBo meeting
1.0.1.	ExBo	29-05-2020	ExBo comments
1.0.2.	PMO	24-09-2020	Addition of ExBo and MB comments
1.1	PMO, Working Groups Infrastructure and Interoperability	02-06-2023	<p>Updates to chapters 2 Corridor Description 3 Market Analysis Study 4 List of Measures 5 Objectives and Performance of the Corridor 6 Investment Plan All annexes</p> <p>Adding new chapter 7 Cooperation with Other Corridors and RNE Adding new annex 6.1b about congested lines</p>
1.3	PMO	08-09-2023	<p>Changes to the following chapters based on the comments and proposals of the Austrian and Hungarian MoTs: 2.3 Bottlenecks 5 Objectives and Performance of the Corridor</p>
1.4	Infrastructure WG	24-10-2023	Annex 6.2 List of projects (further updates by GYSEV and MÁV)
1.5	Consultation with the RU Advisory Group	21-11-2023	<p>4 List of Measures 5 Performance and Objectives of the Corridor</p>
2.0	Approval by Executive Board	18-12-2023	

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1 Introduction

In 2010 the European Parliament and the Council adopted Regulation (EU) No 913/2010 concerning a European rail network for competitive freight, which entered into force on 9th November 2010 (hereinafter referred to as Regulation), providing for the establishment of international Rail Freight Corridors (hereinafter referred to as Corridors). The purpose of creating Corridors is to increase international rail freight transport by making it more attractive and efficient. In Annex I to the Regulation, there were nine initial Corridors.

Annex II of Regulation (EU) No 1316/2013 of the European Parliament and of the Council concerning the establishment of the Connecting Europe Facility replaced the above-mentioned Annex of Regulation (EU) No 913/2010. In line with the amended list of initial Corridors, Rail Freight Corridor Rhine-Danube (hereinafter referred to as the Corridor) was established and became operational on 10 November 2020.

The Corridor connects the following nodes:

- Strasbourg-Mannheim-Frankfurt-Nürnberg-Wels
- Strasbourg-Stuttgart-München-Salzburg-Wels-Wien-Bratislava-Budapest-Arad-Braşov/Craiova-Bucureşti-Constanţa
- Čierna and Tisou (Slovak/ Ukrainian border) -Košice-Žilina-Horní Lideč-Praha-München/Nürnberg

The aim of the Corridor is to provide a high-quality service including a seamless crossing of national borders. Cooperation among Infrastructure Managers/Allocation Bodies is realised by harmonising capacity allocation, coordinating temporary capacity restrictions, traffic management, and investment planning along the Corridor.

The principal guidelines specified by the Regulation focus on:

- establishing a single contact point for designated capacity allocation on each Corridor;
- closer cooperation and harmonisation between Infrastructure Managers/Allocation Bodies and Member States both for the operational management of the infrastructures and for investments, in particular by putting in place a governance structure for each Corridor;
- increased coordination between the network and terminals (maritime and inland ports and marshalling yards);
- stable and reliable provision of the necessary infrastructure capacity allocated to international rail freight.

The purpose of this update to this document, which is part of the Corridor Information Document (hereinafter referred to as CID), is as follows:

- to present the current and known planned main characteristics of the Corridor and
- to create an inventory of the measures that are necessary for the further implementation of the Regulation and the further development of the Corridor.

This document was consulted with the Railway Undertaking and Terminal Advisory Group (hereinafter referred to as Advisory Groups) of the Corridor via a written procedure, then in an Advisory Group meeting on 21 November 2023. This final document was approved by the Executive Board (a requirement of Article 9 of the Regulation) of the Corridor comprising the representatives of the ministries in charge of transport on 18 December 2023.

2 Corridor Description

2.1 Key Parameters of Corridor Lines

The Corridor is the transport backbone linking West, Central, and Eastern Europe by connecting France, Germany, Austria, the Czech Republic, Slovakia, Hungary, and Romania. The Corridor runs from the Strasbourg area and South-West Germany to the Romanian port of Constanta at the Black Sea and (in two distinct branches) at the Slovak-Ukrainian border. According to the results of the Transport Market Study (hereinafter referred to as TMS) elaborated for the operation of the Corridor, the Management Board (hereinafter referred to as MB) agreed on the following routing consisting of principal lines, possible diversionary lines and connecting lines according to the traffic flows.

The key parameters of the Corridor lines are displayed in the the Customer Information Platform: <https://cip.rne.eu>.

Country	Character	Line section / Terminal / Marshalling yard	Length of the line section / City of the terminal or marshalling yard
Austria	Principal lines	Salzburg-Steindorf bei Straßwalchen-Vöcklabruck-Wels	101 km
		Passau-Grieskirchen-Wels	81 km
		Wels-Linz-Enns-Amstetten-St. Pölten-Wien-Bruck a. d. Leitha-Parndorf-Kittsee	282 km
		Parndorf-Nickelsdorf-Hegyeshalom	24 km
		Wien-Ebenfurth-Baumgarten	54 km
	Diversionary line	Marchtrenk-Traun-Linz	21 km
	Connecting line	Tullnerfeld - Krems Terminal	46 km
	Terminals	Wels Vbf CCT/ROLA, ÖBB Infrastruktur AG	Wels
		LINZ AG für Energie, Telekommunikation, Verkehr und Kommunale Dienste	Linz
		Container Terminal Enns GmbH	Mauthausen
		METRANS Terminal Krems an der Donau	Krems an der Donau
		CTS Container Terminal Salzburg GmbH	Salzburg
		Wiencont Container Terminal GmbH	Wien
Czech Republic	Principal lines	Schirnding/Cheb – Cheb	11 km
		Cheb-Plzeň	106 km
		Furth im Wald/Česká Kubice – Domažlice	16 km
		Domažlice-Plzeň	57 km
		Plzeň-Beroun-Praha-Poříčany	144 km
		Praha-Malešice – Praha-Libeň – Praha-Běchovice	11 km

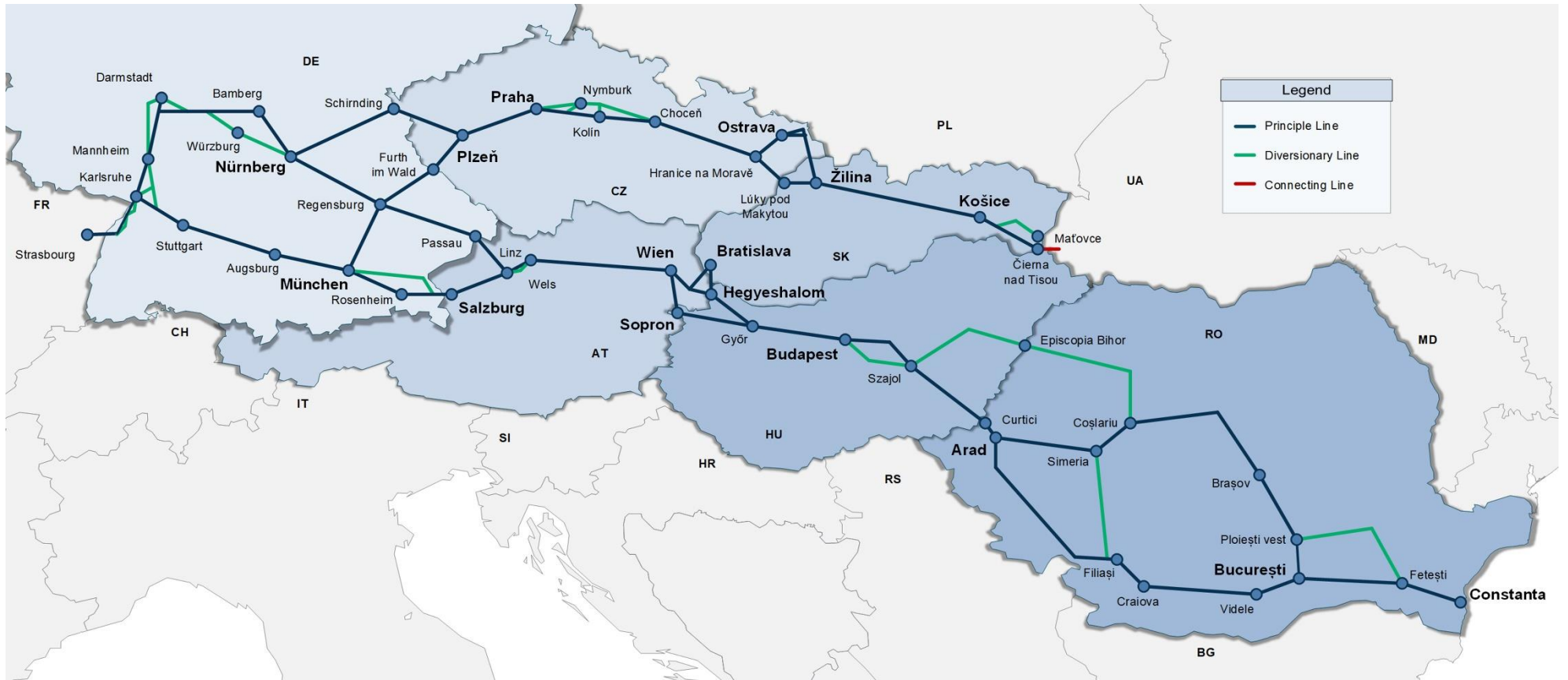
		Poříčany-Kolín-Pardubice	65 km	
		Pardubice-Choceň-Česká Třebová	60 km	
		Česká Třebová-Olomouc-Přerov-Hranice na Moravě	136 km	
		Hranice na Moravě-Horní Lideč/Lúky pod Makytou	70 km	
		Hranice na Moravě-Ostrava-Dětmárovice-Český Těšín-Mosty u Jablunkova-Čadca	126 km	
		Ostrava-Český Těšín	38 km	
	Diversionary lines	Poříčany-Nymburk	15 km	
		Praha-Lysá nad Labem- Nymburk-Velký Osek-Kolín	72 km	
		Velký Osek-Hradec Králové-Choceň	96 km	
	Terminals	Terminal Ostrava-Paskov	Vratimov	
		Metrans-Terminal Ostrava - Šenov	Havířov	
		Terminal Ostrava-Mošnov	Ostrava	
		Contargo-Terminal Plzeň	Plzeň	
		Metrans-Terminal Plzeň – Nýřany	Plzeň-Nýřany	
		Metrans-Terminal Praha-Uhříněves	Praha-Uhříněves	
		Terminal Pardubice	Pardubice	
		Rail Hub Terminal Česká Třebová	Česká Třebová	
		RCO-CSKD Terminal Přerov	Přerov	
		Metrans-Terminal Zlín - Želechovice/Lípa nad Dřevnicí	Lípa nad Dřevnicí	
		Terminal Agro Bohemia Kopřivnice	Kopřivnice	
		Port Mělník	Mělník	
		DUSS Terminal Lovosice	Lovosice	
	Marshalling yards	Cheb seř. obvod 2	Cheb	
		Plzeň seř. n.	Plzeň	
		Beroun seř. n.	Beroun	
		Praha-Libeň	Praha	
		Kolín seř. nádraží	Kolín	
		Pardubice	Pardubice	
		Česká Třebová směr. sk.	Česká Třebová	
		Olomouc pravé předn.	Olomouc	
		Přerov předn.	Přerov	
		Valašské Meziříčí	Valašské Meziříčí	
		Ostrava-Kunčice	Ostrava	
		Bohumín-Vrbice	Bohumín	
		Ostrava pravé n.	Ostrava	
		Ostrava levé n.	Ostrava	
		France	Principal lines	Strasbourg-Kehl
	Terminals		Port Autonome de Strasbourg	Strasbourg
		Hausbergen marshalling yard	Strasbourg	
	Germany	Principal lines	Kehl-Appenweier-Rastatt Süd (via 4000)	50 km
			Rastatt Süd-Rastatt-Durmshheim (via 4020)-Karlsruhe	40 km
			Karlsruhe-Hockenheim-Mannheim-Darmstadt-Aschaffenburg	140 km
Aschaffenburg-Gemünden-Waigolshausen-Bamberg-Nürnberg			220 km	
Nürnberg-Regensburg-München			238 km	

		Regensburg-Passau	117 km
		Karlsruhe-Pforzheim-Mühlacker	40 km
		Mühlacker-Ludwigsburg-Stuttgart-Ulm-Augsburg-München	287 km
		München-Rosenheim-Freilassing-Salzburg	148 km
		Nürnberg-Marktredwitz-Schirnding-Cheb	140 km
		Regensburg-Schwandorf-Furth im Wald-Domažlice	74 km
	Diversionsary lines	Appenweier-Rastatt Süd (via 4280)	40 km
		Rastatt-Ettlingen West (via 4000)-Karlsruhe-Bruchsal-Heidelberg-Mannheim	93 km
		Darmstadt-Frankfurt am Main, Mannheim-Groß Gerau-Frankfurt am Main-Hanau-Aschaffenburg	27 km, 98 km
		Gemünden-Würzburg-Nürnberg	132 km
		Bruchsal-Mühlacker	32 km
		München-Mühdorf am Inn-Freilassing	140 km
	Terminals	Contargo Karlsruhe Rheinhafen	Karlsruhe
		Klump + Müller GmbH & Co. KG	Kehl
		ETK Euro Terminal Kehl GmbH	Kehl
		DUSS-Terminal Karlsruhe by DB	Karlsruhe
		Fruchtcargo Container-Depot Wörth	Karlsruhe
		Container Yard Speyer Contargo	Karlsruhe
		Contargo Wörth	Karlsruhe
		DP World Germersheim	Mannheim
		DUSS-Terminal Mannheim-Handelshafen	Mannheim
		RoRo-Terminal Mannheim	Mannheim
		Kobler Container Depot	Mannheim
		Contargo Rhein-Neckar Mannheim	Mannheim
		Kombi-Terminal Ludwigshafen KTL	Ludwigshafen
		Mannheimer Tankwagenreinigung Container Depot	Mannheim
		Cotac Depot Mannheim	Mannheim
		Terminal Worms, Rhenania Worms AG	Mannheim
		Hempt Container-Depot Worms	Mannheim
		GUT Gernsheimer Umschlags-und Terminalbetriebsgesellschaft GmbH & Co. KG	Gernsheim
		DUSS-Terminal Frankfurt/Main-Ost	Frankfurt am Main
		Trimodal Container terminal Aschaffenburg -TCA	Frankfurt am Main
Contargo Rhein-Main GmbH, Contargo Frankfurt-Ost	Frankfurt am Main		
Contargo Industriepark Frankfurt - Höchst GmbH	Frankfurt am Main		
Frankenbach Container Terminals GmbH	Mainz		
TriCon Container Terminal Nürnberg	Nürnberg		
DB Cargo AG	Nürnberg		
CDN Container Depot Nürnberg GmbH	Nürnberg		

		DUSS-Terminal Stuttgart Hafen	Stuttgart
		SCT Stuttgarter Container Terminal GmbH	Stuttgart
		DUSS-Terminal Kornwestheim	Kornwestheim (Stuttgart region)
		DUSS-Terminal Augsburg-Oberhausen	Augsburg
		Container Terminal Regensburg (CTR)	Regensburg
		DUSS-Terminal Regensburg-Ost	Regensburg
		Cargo Center Bayern -Wiesau	Wiesau
		baymodal Bamberg GmbH	Bamberg
		Kloiber Container Depot Augsburg	Augsburg
		DUSS-Terminal Ulm	Ulm
		CDM Container Depot München GmbH & Co. Service KG	München
		DUSS-Terminal München-Riem	München
		TRANSLOG Transport + Logistik GmbH	Schweinfurt
		DUSS-Terminal Landshut	Landshut
		Parsdorfer Tankwagenreinigung Container Depot	München
Hungary	Principal lines	Baumgarten-Sopron-Győr	93 km
		Rajka-Hegyeshalom	13 km
		Hegyeshalom-Győr-Tata-Budapest-Újszász-Szolnok	285 km
		Szolnok-Szajol-Békéscsaba-Lőkösháza-Curtici	136 km
	Diversionary lines	Budapest-Cegléd-Szolnok	88 km
		Szajol-Püspökladány-Biharkeresztes-Episcopia Bihor	130 km
	Terminals	Terminal ÁTI Győr by ÁTI DEPO Zrt.	Győr
		Port of Győr-Gönyű Logistics Center	Győr
		Sopron container terminal by GYSEV CARGO Zrt.	Sopron
		Metrans Terminal Budapest by METRANS, a.s.	Budapest
		Mahart Container Center	Budapest
		Rail Cargo Terminal BILK Budapest by BILK Kombiterminal Co. Ltd.	Budapest
		Port of Budapest Logistics Center	Budapest
		Ro-Ro Terminal Baja	Baja
	Szolnok Industrial Park and Logistics Service Centre	Szolnok	
Marshalling yards	Ferencváros-Rendező	Budapest	
	Szolnok-Rendező	Szolnok	
Romania	Principal lines	Lőköshaza/Curtici (HU/RO)	11 km
		Curtici - Arad	17 km
		Arad - Timisoara	57 km
		Timisoara - Orsova	187 km
		Orsova - Filiashi	102 km
		Filiashi - Craiova	36 km
		Arad - Simeria	157 km
		Simeria - Coslariu	69 km
		Coslariu - Sighisoara	98 km
Sighisoara - Brasov	129 km		

		Brasov - Predeal	26 km
		Predeal - Brazi	92 km
		Brazi - Chitila (Bucuresti)	52 km
		Chitila (Bucuresti) - Fetesti	147 km
		Fetesti - Constanta	78 km
	Diversiory lines	Biharkeresztes - Oradea Est (HU/RO)	22 km
		Oradea Est - Cluj Napoca Est	155 km
		Cluj Napoca Est - Coslariu	99 km
		Craiova - Videle	158 km
		Videle - Chitila (Bucuresti)	50 km
		Simeria - Filiasi	202 km
		Ploiești Triaj – Buzău – Făurei – Fetesti	204 km
	Connecting line	Făurei – Galați	92 km
	Terminals	Railport Arad	Arad
		Oradea Intermodal Vest	Oradea
		Cluj Napoca	Cluj Napoca
		Turda - Rofersped	Turda
		Semenic (Timișoara Sud)	Timisoara
		Allianso Terminal Ploiești	Ploiesti
		București Sud	București, Ilfov
		Tibbett Logistics	Bucuresti, Ilfov
		Bucharest International Rail Freight Terminal (BIRFT)	București, Ilfov
		Bucharest Intermodal Terminal by Yusen Logistics Co., Ltd.	București, Ilfov
		UMEX Terminal Constanta	Constanta
		APM Terminal Constanta	Constanta
		DP World Constanta	Constanta
SOCEP Terminal Constanta		Constanta	
Marshalling yards	Chitila	Chitila (București)	
	Brașov	Brașov	
	București	București	
	Ploiești	Ploiești	
	Craiova	Craiova	
	Simeria	Simeria	
Slovakia	Principal lines	Čadca-Žilina	30 km
		Lúky pod Makyitou-Púchov-Žilina	64 km
		Žilina-Vrútky-Liptovský Mikuláš-Poprad-Spišská Nová Ves-Kysak-Košice	243 km
		Barca-Vých. Slivník (Vých.8)	33 km
		Vých. Slivník (Vých.8)-Čierna nad Tisou	57 km
		Barca-Košice (via Košice predmestie)	4 km
		Barca-Haniska pri Košiciach	6 km
		Kittsee-Bratislava Petržalka-Rusovce-Rajka	17 km
	Diversiory line	Vých. Slivník (Vých.8) -Maťovce	56 km
	Connecting line	Čierna nad Tisou-UA border (Chop)	4 km
	Terminals	TIP Žilina (Metrans)	Žilina - Teplička
		RCO Žilina	Žilina
		RCO Košice	Košice
		Metrans-Terminal Košice	Košice - Haniska pri Košiciach

		TKD Dobra	Dobra
		Bratislava Palenisko by Slovenská plavba a prístavy (SPaP) a.s.	Bratislava
		UKV Terminal Bratislava ÚNS	Bratislava
		Metrans Dunajská Streda	Dunajská Streda
		MLC Maťovce (Premako)	Maťovce
		RCO Ružomberok (Lisková)	Ružomberok



2.2 Corridor Terminals

All terminals along designated lines have been determined as part of the Corridor as well, except if a terminal does not have any relevance for the traffic on the Corridor. The marshalling yards, major rail-connected freight terminals, rail-connected intermodal terminals in seaports, airports and inland waterways belong to the terminals listed in chapter 2.1. Terminals are also displayed in the CIP accessible via <https://cip.rne.eu>.

2.3 Bottlenecks

The bottlenecks which hinder smooth and competitive rail freight transport can be grouped into the following categories:

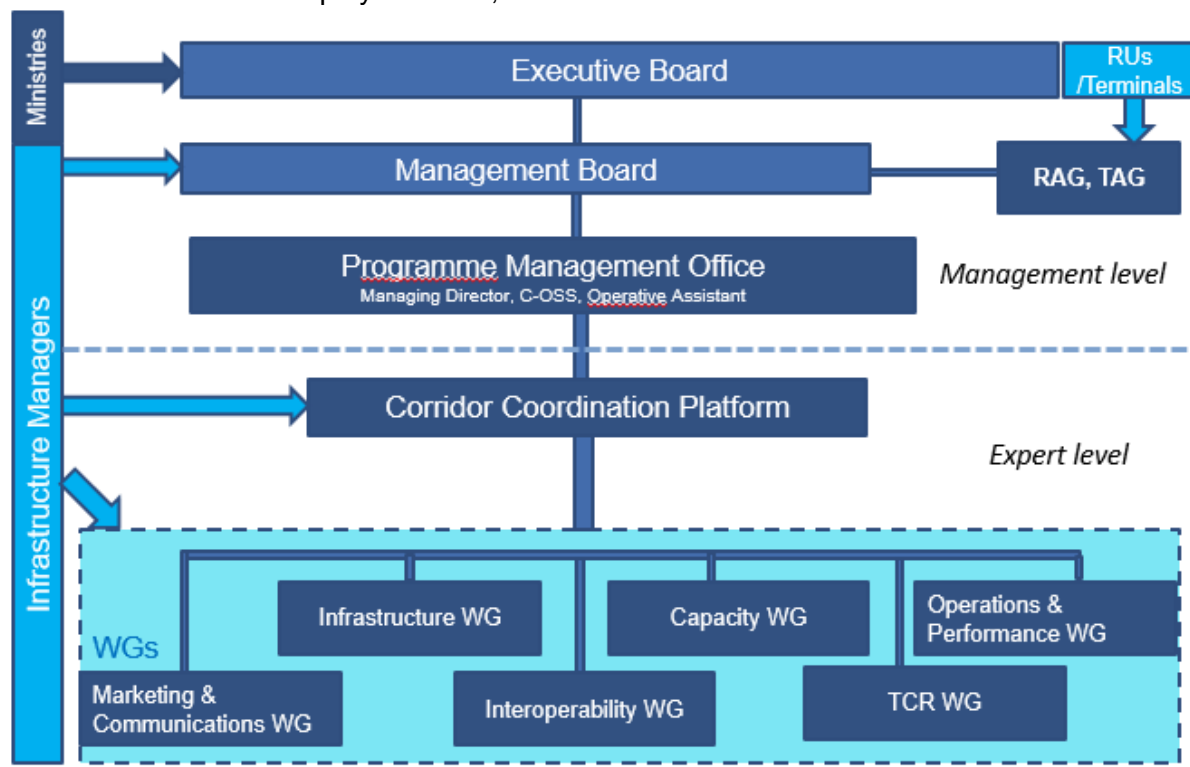
- infrastructural bottlenecks
 - Sections which do not meet the TEN-T requirements specified in Article 39 (2a) of the Regulation (EU) No 1315/2013 of the European Parliament and of the Council.
- operational bottlenecks
 - Capacity and traffic management issues during the train run.
- administrative bottlenecks
 - Effects of non-harmonised rules and procedures.
- capacity bottlenecks
 - Issues in relation with capacity planning and path allocation. This includes on the one hand, the lack of multi-annual planning works due to missing multi-annual financing environment, on the other hand, congested infrastructure, too, which is defined in Art. 47 of Directive 2012/34/EU.

The detailed list of already identified infrastructural and capacity bottlenecks together with the suggested measures towards their removal can be found in the Capacity Management Plan included in Annex 6.1.a.

The list of congested lines is included in Annex 6.1.b.

2.4 Corridor Governance

Information about the current governance structure of the Corridor can be found in chapter 1.4 of the CID and is displayed below, too.



3 Market Analysis Study

The first Transport Market Study (TMS) of the Corridor was conducted in 2020 and can be found on its website: <https://rfc-rhine-danube.eu/documents/>.

Its major finding was that the Corridor has a highly important strategic role, being one of the main East-West links across Continental Europe.

The Corridor is planning to update its TMS within the framework of a joint project of all Corridors, which is coordinated by RailNetEurope (RNE). The main benefits of the common project are as follows: more efficient use of resources of all participating stakeholders and comparable TMSs over all corridors.

The baseline of the common basis to be used for the updates of the individual TMSs are

- a feasibility study approved by the RNE General Assembly (GA) in December 2022 and
- commonly agreed Guidelines approved by the RNE GA in May 2023.

The timeline of the common project is as follows:

Milestone	Deadline	Responsible body
Elaborating on common Guidelines for the updates of the TMSs of the Corridors	January 2023	RNE Joint Office and TMS experts of Corridors
Tendering	May 2023	RNE Joint Office
Conducting the common basis for the update	November 2023	Consultant and RNE Joint Office
Executing the updates to the individual TMSs of the Corridors	May 2024	Corridor
Post-processing of the results of the updated TMS	November 2024	Corridor
Publishing the results of the updated TMS	December 2024	Corridor

4 List of Measures

This chapter lists the schedule of the measures necessary for the further implementation and development of the Corridor.

Measures for the further implementation of the Regulation:

In order for the continuous and full implementation of the Regulation, the Corridor is planning to deliver the following output. The implementation is financially supported by the EU grant agreement referred to in chapter 6.4.

Deliverable	Additional information	Deadline
Updated Implementation Plan	Incl. specially the main conclusions of the updated Transport Market Study	next scheduled update by the end of 2024
Updated Transport Market Study	Incl. observed and expected changes in the traffic on the Corridor, as a consequence of its being established, covering the different types of traffic, both regarding the transport of freight and the transport of passengers	next scheduled update by the end of 2024
More frequent updates to the document including the planned temporary capacity restrictions	The Advisory Groups were consulted on their needs and expectations regarding the frequency of publication in October 2022.	implementation target by the end of 2023, but latest by the end of 2024 depending on feasibility
Promoting procedures for optimal coordination between the operation of the railway infrastructure and the terminals	Between IMs, RUs, and terminals along the Corridor by evaluating existing procedures and participating in the Rail Collaborative Decision-Making project.	by the end of 2024
Promoting the compatibility between the performance schemes of the IMs along the corridor	By analysing if there are any problematic differences between the currently applicable schemes and investigating the need and room for higher compatibility.	by the end of 2024

Measures for the further development of the Corridor:

The Corridor will continue with activities for the further development of rail freight traffic as follows.

a) Cross-border cooperation:

Primarily, such activities comprise the strengthening of cross-border cooperation between neighbouring IMs, the RUs using the border sections concerned, and the terminals operating at and feeding the border sections concerned. The aim is to remove barriers at the borders, thus create an as efficient, fast, and seamless crossing of trains at the borders as possible. To this end, IMs, RUs, and terminals are working in close cooperation with each other. Regular monitoring and meetings are conducted to jointly identify the obstacles, create concrete improvement measures, and ultimately to implement them. An important indicator for assessing the quality of international rail freight traffic at the borders is the KPI measuring the dwell time.

Massive work needs to be done on monitoring and reducing the dwell times at these borders:

- Passau – Schärding (DB Netz – ÖBB Infra)
- Lőkösháza – Curtici (MÁV – CFR; common border section and cross-border cooperation group with OEM)
- Rajka - Rusovce (GYSEV – ZSR; common border section with OEM)

In case of need, strengthening cross-border cooperation on further border sections will be considered, too, depending on the dwell time and the number of international freight trains per border.

In order to complement the above activities, upon the request of the Advisory Group, an analysis of cross-border procedures should be conducted along the Corridor and a to-do list should be delivered in order to improve the processes, thus to increase international rail freight business. This activity should start in 2024.

b) Coordination of procedures in traffic management

Furthermore, in order for a further optimised coordination of traffic management between the IMs, the terminals, as well as the RUs, the Corridor participates in the Rail Collaborative Decision-Making (hereinafter referred to as R-CDM) project coordinated by RailNetEurope.

c) Coordination of planned temporary capacity restrictions

Upon the request of the RU Advisory Group, improvement actions should be defined by identifying best practices.

4.1 Coordination of Planned Temporary Capacity Restrictions

The currently applicable processes are described in chapter 4.4 of the CID.

As an additional measure for further development, the following IMs along the Corridor started using the TCR tool operated by RNE in 2023: SNCF Réseau, MÁV, SZCZ, ZSR. This tool provides for a user-friendly overview via a digital map displaying the TCRs uploaded by the IMs. Implementation of the usage of the tool is ongoing by the other IMs.

4.2 Corridor OSS

The tasks of the C-OSS, the legal background, and the related documentation are described in section 4.2 of the CID.

4.3 Capacity Allocation Principles

The currently applicable processes including specific rules related to the overlapping sections between the Corridor and the Rail Freight Corridor Orient / East – Med (hereinafter referred to as the OEM Corridor), are described in detail in Chapter 4.3 of the CID.

4.4 Applicants

The currently applicable processes are described in point 4.3.2 of the CID.

4.5 Traffic Management

IMs coordinate international traffic with neighbouring IMs on a bilateral level. In this manner, they ensure that all traffic on the network is managed in the most optimal way.

Detailed rules and procedures regarding traffic management along the Corridor are described in Chapter 4.5 of the CID.

4.6 Traffic Management in Event of Disturbance

The communication procedure and the available tools are described in Chapter 4.5.3 of the CID.

4.7 Quality Evaluation

The provisions of Article 19 of the Regulation set requirements regarding the quality evaluation of rail freight services on the Corridor.

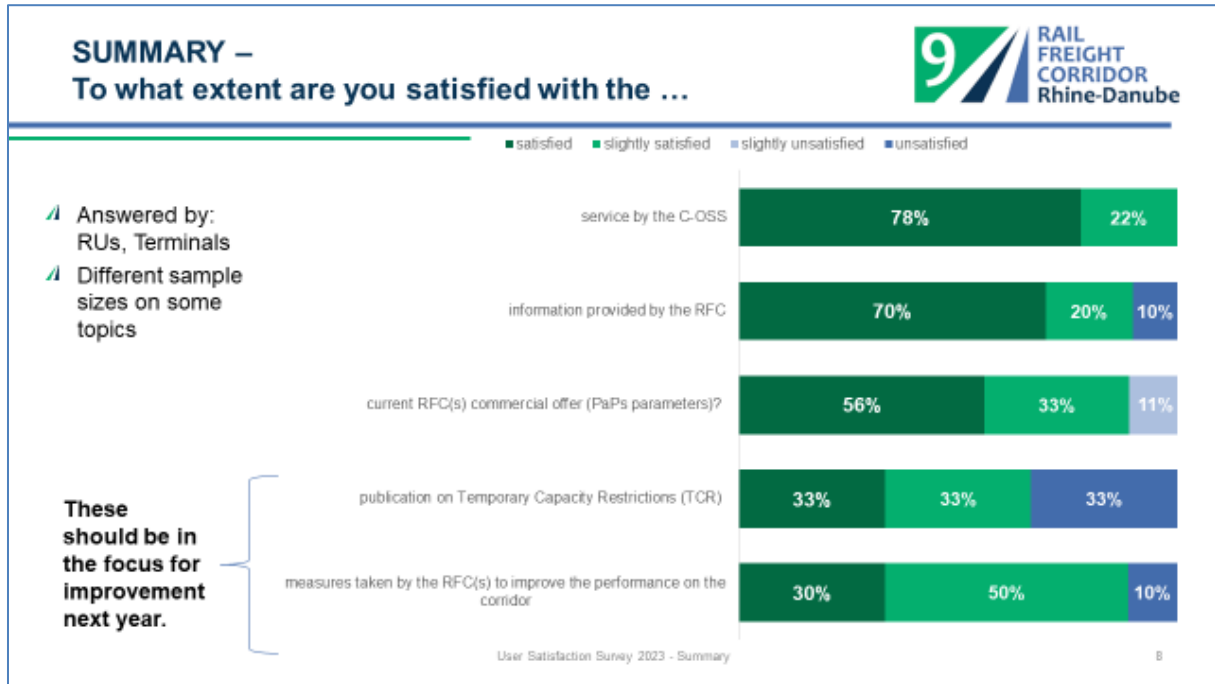
The performance of the Corridor is measured through key performance indicators listed in Chapter 5 and targeted customer satisfaction surveys mentioned in Chapter 4.7.2.

4.7.1 Performance Monitoring Report

According to Article 19 (2) of the Regulation the MB monitors the performance of rail freight services on the Corridor and publishes the results once a year.

4.7.2 User Satisfaction Survey

According to Article 19 of the Regulation the quality of service on the Corridor is also measured through user satisfaction surveys conducted on a yearly basis. Inputs for this survey are delivered by the RAG/TAG members. The results are published on the website of the Corridor. The Corridor prepares an action plan in order to find solutions for the top areas in which most of the respondents request improvement.



4.8 Corridor Information Document

The Corridor Information Document is published by the 2nd Monday of January every year together with the PaP catalogue and is kept regularly up-to-date. It complies with the Corridor Information Document Common Texts and Structure of RailNetEurope. It is published on the website of the Corridor (<https://rfc-rhine-danube.eu/cid-books/>), as well as in the CIP (<https://cip.rne.eu>).

5 Objectives and Performance of the Corridor

The objectives of the Corridor have been harmonised with the objectives of RFC Orient/East-Med and the two corridors are closely cooperating with each other in order to achieve them.

In general, the objectives of the Corridor are as follows:

- Increasing the modal share of rail freight,
- Improving procedures and facilitating accessibility of railways, and
- Providing better, more reliable services.

The Corridor aims to reach these objectives by

- Attracting customers with the services of the C-OSS, providing easier access for customers in order to reduce the drawback of different national systems.
- Facilitating solving issues that need higher level attention especially when out of the transport sector.
- Continuous improvement of processes concerning the operation of the railway infrastructure.

In particular, the objectives specific to the core processes capacity management and train performance management are described below:

Punctuality:

Improving the punctuality of freight trains running on the Corridor is essential in order to increase the share of rail in the modal split. Therefore, one of the Corridor’s focal points is to

undertake effective measures to further enhance Train Performance Management (hereinafter referred to as TPM) including setting of quality targets and thereby shifting the focus of TPM activities from monitoring to management of punctuality.

Generally, the punctuality of a train is measured on the basis of comparisons between the time planned in the timetable of a train identified by its train number and the actual running time at certain measuring points. A measuring point is a specific location on the route, where the trains running data is recorded. The comparison should always be done with an internationally agreed timetable for the whole train run.

Punctuality is calculated as the percentage of punctual trains out of the total number of trains.

The calculation is done for two thresholds: 30 minutes and 15 minutes.

The codified reasons for delay, in accordance with UIC leaflet 450-2, is used for continuous and systematic monitoring. The monthly punctuality reports are uploaded to the website of the Corridor.

Dwell time:

Besides punctuality, another factor requiring high attention is the dwell time of international freight trains at the borders and the reduction of this dwell time, with special regard to the critical border sections – facing both long dwell time and a high number of trains. In order to facilitate the objective of operational efficiency and seamless crossing of the borders, this particular factor needs continuous cooperation between both IMs and RUs in removing operational barriers.

Target:

- 120 minutes on average where currently above this target,
- further decrease annually where below 120 minutes.

Strengthening cross-border cooperation:

In order to facilitate the above objectives regarding punctuality and dwell time, the Corridor promotes cross-border cooperation groups comprising neighbouring IMs, RUs, and eventually terminals regarding the critical border sections. Further information about the continuous at the border sections concerned can be found in chapter 4.2 Measures for the further development of the Corridor.

More information about train performance management can be found in Chapter 6 of the CID and in the TPM Handbook published on the website of the Corridor.

In general, the Corridor uses regular performance reports, analyses them, and the results are used as basis for potential improvement actions. In particular, more detailed monitoring, specifically needed at the border sections on which cross-border cooperation groups have been set up, is done as well.

Capacity:

The C-OSS handles exclusively the capacity products on the Corridor (Pre-arranged Paths (hereinafter referred to as PaPs), Reserve Capacity etc.). PaPs for the annual timetable are provided by the IMs/AB to the C-OSS. The PaPs are based on standard parameters for rail freight and previously coordinated between the IMs/AB at the borders so to enable for attractive running times. The path catalogue of PaPs is published by the C-OSS by the 2nd Monday of January of each year for the next timetable period. Reserve Capacity on the Corridor is available from October of each year on, to allow for ad-hoc path applications. The offer of the C-OSS is displayed in the IT-application PCS (Path Coordination System) provided by RNE. According to the Regulation, the aim is to offer capacity via the C-OSS is to have “one face to

the customer” for international path requests along the Corridor and at the end harmonized path offers across at least one border. Furthermore, the decision on the PaP pre-allocation is done by the C-OSS by the end of April for the entire international PaP segment on basis of one harmonized allocation rule. As a result, the RUs will get an earlier information about the PaP pre-allocation.

KPIs:

To measure the fulfillment of the above objectives and steer performance, the MB has adapted the following KPIs, which are commonly applicable to all other Corridors.

Name of KPI	Calculation formula	Source of data	Timing of calculation	Target
Volume of requested capacity (PaPs)	Km*days requested	PAMT report in PCS	At X-8	Increase four-year moving average by 4.5% each year
Volume of pre-booked capacity (PaPs)	Km*days (pre-booking phase)	PAMT report in PCS	At X-7.5	Increase four-year moving average by 4.5% each year
Ratio of pre-booked capacity – PaPs (to the volume of capacity offered at x-11)	Km*days offered	PAMT report in PCS	At X-7.5	increase ratio each year
Average planned speed of PaPs	Average of the planned commercial speed of the PaPs on the O/D pair concerned per direction	PAMT report in PCS	At X-11	when classified into four categories (divided by 30, 40 and 50 km/h), at least one category step-up each year
Punctuality at origin	The share of all RFC-related trains at RFC entry with a delay less than, or equal to, the threshold compared to all RFC-related trains at RFC entry.	TIS	At the end of January after the timetable year concerned	difference of the two not exceeding 10%
Punctuality at destination	The share of all RFC-related trains at RFC exit with a delay less than, or equal to, the threshold compared to all RFC-related trains at RFC exit.	TIS	At the end of January after the timetable year concerned	

Number of Trains crossing a border along the RFC	Total number of train runs having a RA on selected pairs of border points	TIS	At the end of January after the timetable year concerned	annual increase of 4.5%
Train kilometres of Trains crossing a Border along the RFC	Sum of O/D distances of all trains crossing a border along the RFC	TIS	At the end of January after the timetable year concerned	annual increase of 4.5%
Dwell times in border sections – planned dwell	Average planned dwell time of all international freight trains crossing the RFC border in the main measuring points, where border crossing related procedures usually occurs	TIS	At the end of January after the timetable year concerned	- 120 minutes on average where currently above this target, - further decrease annually where below 120 minutes.
Dwell times in border sections – real dwell	Average real dwell time of all international freight trains crossing the border along the RFC in the main measuring points, where border crossing related procedures usually occurs	TIS	At the end of January after the timetable year concerned	- 120 minutes on average where currently above this target, - further decrease annually where below 120 minutes.

Upon the request of the RU Advisory Group, the Corridor will investigate the feasibility of the following proposed KPI in 2024: real commercial speed of the trains which later use the PaPs and RC during the active timetable year.

Besides the above KPIs, the Corridor measures the quality of services and monitors the achievement of the objectives via the annual user satisfaction survey, too, the results of which are published on its website and in the CIP.

On the one hand, the above KPIs will be published in the yearly performance monitoring reports published on the website of the Corridor. On the other hand, a yearly customer satisfaction survey is conducted. The reports are published on the website of the Corridor and in the CIP.

6 Investment Plan

6.1 Capacity Management Plan

The Corridor's Capacity Management Plan can be found in Annex 6.1.a.

6.2. List of Projects

The members of the Infrastructure Working Group have elaborated a list of projects, which is composed of all projects foreseen for development, modernisation, upgrade, and renewal of the railway infrastructure along the whole the Corridor.

The list of planned infrastructure development projects along the Corridor can be found in Annex 6.2.

This latest update of the projects allows us to follow-up the realization of the Corridor-related investments run in our Member States. The projects have different categoric types, there are renewal of tracks, signalling system, bridges, and other elements. Each project will achieve benefits in the following area:

- Maintenance, modernization of the track → ensure better infra parameters
- Electrification → ensure TEN-T parameter
- Safety and Security (ETCS implementation) → ensure interoperability
- Bridge renewal → ensure better connection
- Switches renewal

Thanks to these investments we are able to cease bottlenecks and make better quality of our infrastructure services, increase the commercial speed, and develop our performance.

We also monitor and follow up analyzes and outcomes made in connection with the CNC Work Plan, what are the main developments and focuses on the investment planning.

Last but not least, we give a regular update for our customers about the planned Corridor-related investments at our TAG/RAG meetings.

6.3 Deployment Plan

The ERTMS Deployment Plan of the Corridor can be found in Annex 6.3.

6.4 Reference to Union Contribution

The Corridor has benefited from EU co-financing for several years.

Currently, the Corridor is granted with CEF Technical Assistance for the period of July 2022 – December 2024. The grant agreement includes a specific list of deliverables which are listed in chapter 4 of this document.

7 Cooperation with Other Corridors and RNE

7.1 Cooperation with the RFC Network and RNE

To ensure coordination of the main processes and achieve harmonisation to the extent possible, the Corridor will continue actively participating on the following common platforms:

- RFC Network
- C-OSS Community

In addition, the Corridor will continue contributing to the work of the joint high level and working groups comprising all 11 RFCs, aiming at further harmonising processes and documents to the extent possible:

- RNE Network Statement and Corridor Information Document Working Group
- RNE Performance Management Working Group
- RNE/RFC High Level Group
- RFC KPI Coordination Group
- RFC User Satisfaction Survey Group

Furthermore, the Corridor will continue participating in the following common projects, too, both of which are coordinated by RNE:

- Transport Market Study
- Rail Collaborative Decision-Making
- Revision of the Handbook for International Contingency Management

7.2 Cooperation with OEM Corridor

Due to the big geographical overlap with the OEM Corridor, the MBs and the Executive Boards of the two Corridors decided to establish closer co-operation between them. The following steps have been implemented so far:

- the C-OSS closely cooperates with the C-OSS of the OEM Corridor to collect, analyse, and harmonise the capacity wishes of all existing and potential applicants,
- the C-OSS provides joint capacity offers with the C-OSS of the OEM Corridor,
- the C-OSS cooperates with the C-OSS of the OEM Corridor for the publication of the joint and harmonized draft and final PaP offer,
- arranging joint meetings of the working groups, the Advisory Groups, and the Executive Boards,
- jointly working in cross-border cooperation groups, as a first step on the common border section Lökösháza – Curtici,
- coordinating updates of the implementation plans including a common bottleneck analysis on the overlapping sections,
- setting common objectives for both Corridors,
- harmonising the more frequent updating schedules of the TCRs published by both Corridor,
- introducing common sessions of the meetings of the MBs of the two Corridors, which are dedicated to the commonly prepared matters.

Further common activities to be implemented:

- promoting the compatibility of the performance schemes,
- due to the alignment of the Corridor with the OEM Corridor foreseen in the draft Regulation about the European Transport Corridors, the common activities will expectedly be further enhanced.

Annexes

No.	Title
6.1.a	Capacity Management Plan
6.1.b	List of Congested Lines
6.2	List of Projects
6.3	Deployment Plan

Germany

IM	Section		Bottleneck	Reasons	Suggestions How to Remove Bottlenecks			
	From	To			Project Name and Description	End Date	Costs in mil. of Euro	Financial Sources
DB Netz	Kehl	Appenweier	Travel time	Agreement between DE/FR to reduce travel time	ABS Kehl - Appenweier	2028	79	State budget
DB Netz	Wendlingen	Ulm	Capacity	More capacity for passenger and freight trains is needed in this relation	NBS Wendlingen - Ulm	2025	3959	State budget
DB Netz	Ulm	Augsburg	Capacity	More capacity for passenger and freight trains is needed in this relation	ABS/NBS Ulm - Augsburg	Beyond 2030	1907	State budget
DB Netz	Nürnberg	Schirnding	No electrification	Not electrified	ABS Nürnberg - Marktredwitz - Border DE/CZ (- Cheb)	on hold	1195	State budget
DB Netz	Markt Schwaben	Freilassing	Capacity	Not electrified and more capacity for freight trains is needed between Munich and AT	ABS München - Mühldorf - Freilassing	Beyond 2030	2323	State budget

Austria

IM	Section		Bottleneck	Reasons	Suggestions How to Remove Bottlenecks			
	From	To			Project Name and Description	End Date	Costs in mil. of Euro	Financial Sources
ÖBB Infrastruktur	Salzburg	Attnang-P.	Track length	Capacity optimization required	Attnang - Salzburg upgrade; 740m sidings in some stations	2029	160	State budget
ÖBB Infrastruktur	Salzburg	Steindorf bei Strasswalchen	2 track section on a predominant 4 track route	Timetable based capacity overload	4 track upgrade	Beyond 2030	154 (planning only)	State budget
ÖBB Infrastruktur	Wels	Linz	2 track section on a predominant 4 track route	Timetable based capacity overload	4 track upgrade	2030	1303	State budget
ÖBB Infrastruktur	Linz	Enns	Only a short 2 track section between Linz Hbf and Linz Kleinmünchen on a predominant 4 track route	Timetable based capacity overload	4 track upgrade	2032	402	State budget
ÖBB Infrastruktur	Wien	Bruck a. d. Leitha	Track length	Capacity optimization required	Gramatneusiedl; 740m sidings and quicker station entering/leaving	2024	86	State budget
ÖBB Infrastruktur	Wien	Bruck a. d. Leitha	Track length	Capacity optimization required	Himberg; 740m sidings	2027	53	State budget
ÖBB Infrastruktur	Parndorf	Kittsee	Single track line	Capacity optimization required	2 track upgrade	2038	215	State budget
ÖBB Infrastruktur	Wien	Ebenfurth	Handling capacity increase required	Less capacity	Wien Süd Terminal, Stage 2; handling capacity increase ITE	2025	21	State budget
ÖBB Infrastruktur	Wien	Ebenfurth	Train movements in Ebenfurth necessary to reach GYSEV line	Missing connection link between Vienna and Sopron	Junction Ebenfurth	2029	229	State budget

Czech Republic

IM	Section		Bottleneck	Reasons	Suggestions How to Remove Bottlenecks			
	From	To			Project Name and Description	End Date	Costs in mil. of Euro	Financial Sources
SZCZ	Praha	Česká Třebová	Line capacity consumption	5:00-20:00 capacity over 100 %	Modernisation of the line Velký Osek Kanín - Hradec Králové - Choceň, HSL project	2030	n/a	n/a
SZCZ	Velký Osek	Choceň	Capacity, max. speed 80 km/h between Újezd u Chocně – Choceň, Axle load C3 (20t) between Hradec Králové – Týniště nad Orlicí	Single track, level-crossings	Modernisation of the line Velký Osek Kanín - Hradec Králové - Choceň, HSL project	2030	n/a	n/a
SZCZ	Brodek u Přerova	Přerov	Capacity	Mutual interference of oncoming trains in the direction Olomouc - Hranice na Moravě with trains Přerov - Olomouc	Reconstruction of railway station Přerov	2027	n/a	n/a
SZCZ	Choceň	Uhersko	Unsatisfactory current state of the infrastructure	Unsatisfactory current state of the infrastructure	Removing selected bottlenecks on pre-identified sections on the Core Network Corridors	2031	n/a	Co-financed by the EIB
SZCZ	Lipník nad Bečvou	Drahotuše	Unsatisfactory current state of the infrastructure	Unsatisfactory current state of the infrastructure	Removing selected bottlenecks on pre-identified sections on the Core Network Corridors	2027	n/a	Co-financed by the EIB
SZCZ	Polom	Suchdol nad Odrou	Unsatisfactory current state of the infrastructure	Unsatisfactory current state of the infrastructure	Removing selected bottlenecks on pre-identified sections on the Core Network Corridors	2029	n/a	Co-financed by the EIB
SZCZ	Plzeň-Jižní Předm.	Furth im Wald/Česká Kubice	Axle load C3 (20t), not electrified, max.speed 80 km/h between Česká Kubice – st.border	n/a	Modernisation of the line Plzeň - Domažlice - Česká Kubice - st.border	2030	n/a	Co-financed by the EU
SZCZ	Poříčany	Nymburk st.3	Axle load C3 (20t), Max. speed 70 km/h between Nymburk město – Nymburk st. 3	n/a	Modernisation and double track in line Poříčany - Nymburk (under HSR Praha-Běchovice - Poříčany project)	2031	n/a	n/a
SZCZ	Kolín	Pardubice	P/C 72/391	n/a	n/a	n/a	n/a	n/a

IM	Section				Suggestions How to Remove Bottlenecks			
	From	To	Bottleneck	Reasons	Project Name and Description	End Date	Costs in mil. of Euro	Financial Sources
SZCZ	Hranice na Moravě	Horní Lideč/Lúky pod Makytou	P/C 67/391, max.speed <100 km/h in some segments	n/a	n/a	n/a	n/a	n/a
SZCZ	Schirnding/Cheb	Cheb	Not electrified	n/a	n/a	n/a	n/a	n/a
SZCZ	Odb Závodiště	Praha-Libeň/Praha-Běchovice	Max. speed 75-80 km/h, capacity	n/a	Doubling of the line Branický bridge - Praha-Krč - Spořilov, Doubling of the line odb. Spořilov - Praha-Zahradní Město, Modernisation of the line Praha-Libeň - Praha-Malešice	2028	n/a	n/a
SZCZ	Vých Polanka n.Odrou/Ostrava-Svinov	Ostrava-Kunčice	Max. speed 80 km/h	n/a	Optimization of line Ostrava-Svinov - Ostrava-Kunčice	2029	n/a	n/a

Slovakia

IM	Section		Bottleneck	Reasons	Suggestions How to Remove Bottlenecks			
	From	To			Project Name and Description	End Date	Costs in mil. of Euro	Financial Sources
ŽSR	Žilina zr.st	Žilina	Reduced speed	Tracks	Modernisation of railway node Žilina	2024	n/a	CEF
ŽSR	Liptovský Mikuláš	Štrba	Reduced weight of the train, additional loco is required	Geological character of the landscape	Modernisation of railway line Žilina – Košice	2030	n/a	CEF
ŽSR	Štrba	Poprad-Tatry	Reduced weight of the train, additional loco is required	Geological character of the landscape	Modernisation of railway line Žilina – Košice, implementation phase Poprad-Tatry – Lučivná	2024	n/a	CEF
ŽSR	Košice	Košice nákl.st.	Reduced length of the trains	Character of the Košice nákl. st. station	n/a	Beyond 2030	n/a	n/a
ŽSR	Nižná Myšľa	Ruskov	Reduced weight of the train, additional loco is required	Geological character of the landscape	n/a	Beyond 2030	n/a	n/a
ŽSR	Ruskov	Kuzmice	Reduced weight of the train, additional loco is required	Geological character of the landscape	n/a	Beyond 2030	n/a	n/a
ŽSR	Čierna nad Tisou	Čop (UA)	Reduced Capacity	Customs inspections on the wide gauge track	Out of competence	Beyond 2030	n/a	n/a

Hungary

IM	Section		Bottleneck	Reasons	Suggestions How to Remove Bottlenecks			
	From	To			Project Name and Description	End Date	Costs in mil. of Euro	Financial Sources
MÁV	Kelenföld	Ferencváros	Lack of capacity	Reconstruction, modernization of the track	Southern circle railway. In order to develop a railway connection between Kelenföld and Ferencváros stations, construction of three-tracks connection and new suburban stops	2025	n/a	Cohesion fund/IKOP
MÁV	Békéscsaba	Lőkősháza	Lack of capacity	Reconstruction, modernization of the track	Preparation of the construction of 2nd track between Békéscsaba and Lőkősháza	2025	5,23	CEF
GYSEV	Rajka	Hegyeshalom	Capacity, speed, axle load	Single track; max. 100 km/h track speed; max. 21 t axle load; track conditions deteriorating	Reconstruction, modernization of the track Preparation finished in Q4 2019, to be tendered	2028	n/a	EU (CEF, Coh. Found)
GYSEV	Sopron	Győr	Capacity, speed, axle load	Single track line; max. 100 km/h track speed; max. 21 t axle load; at least hourly regular interval commuter trains; every two hours Intercity trains; no ETCS/ERTMS	Reconstruction, modernization of the track Phase 0: Sopron - Harka 2nd track 2023 - 2025, Phase 2B: Sopron - Harka 3rd track 2028 -2033	2027	n/a	EU (CEF, Coh. Found)
GYSEV	Sopron	Győr	Capacity, speed, axle load	Single track line; max. 100 km/h track speed; max. 21 t axle load; at least hourly regular interval commuter trains; every two hours Intercity trains; no ETCS/ERTMS	Reconstruction, modernization of the track Phase 2B: Sopron - Harka - Fertőboz new double track alignment	Beyond 2030	n/a	EU (CEF, Coh. Found)
GYSEV	Sopron	Győr	Capacity, speed, axle load	single track line; max. 120 km/h track speed; max. 21 t axle load; at least hourly regular interval commuter trains; every two hours Intercity trains; no ETCS/ERTMS	Reconstruction, modernization of the track Phase 2A: (Fertőboz) - Pinye - Csorna partially double track	Beyond 2030	n/a	EU (CEF, Coh. Found)
GYSEV	Sopron	Győr	Capacity, speed, axle load	Single track line; max. 100 km/h track speed; max. 21 t axle load; at least hourly regular interval commuter trains; every two hours Intercity trains; no ETCS/ERTMS	Reconstruction, modernization of the track Phase 2A: (Fertőboz) - Pinye - Csorna partially double track	Beyond 2030	n/a	EU (CEF, Coh. Found)
GYSEV	Sopron	Győr	Capacity, speed, axle load	Single track line; max. 100 km/h track speed; max. 21 t axle load; at least hourly regular interval commuter trains; every two hours Intercity trains; no ETCS/ERTMS	Reconstruction, modernization of the track Phase 2A: (Fertőboz) - Pinye - Csorna partially double track	Beyond 2030	n/a	EU (CEF, Coh. Found)
GYSEV	Sopron	Győr	Capacity, speed, axle load	Single track line; max. 120 km/h track speed; max. 21 t axle load; high density of passenger trains at least hourly regular interval commuter trains; every hours Intercity trains; no ETCS/ERTMS	Reconstruction, modernization of the track Phase 1 of Győr - Sopron upgrade: priority project: single track, capacity problems, new 2nd track	Beyond 2030	n/a	EU (CEF, Coh. Found)

Romania

IM	Section		Bottleneck	Reasons	Suggestions How to Remove Bottlenecks			
	From	To			Project Name and Description	End Date	Costs in mil. of Euro	Financial Sources
CFR	Border HU/RO	Curtici	<ul style="list-style-type: none"> - Rehabilitated corridor section equipped with ERTMS-ETCS Level 2/GSM-R, which is not in operation; - Long waiting time in Curtici station. - The double track open line does not continue in Hungary. 	<ul style="list-style-type: none"> - Trains are not handed over on trust (ATTI); - The Curtici station is not fully equipped with electronic interlocking system; - The Curtici station is not equipped with an electronic gauge control gate; - The border crossing operational rules between CFR and MAV are not harmonized (e.g. the buffer wagons); - The Intergovernmental Railway Agreement Romania-Hungary is not updated (harmonization of the control performed by the state authorities); - Commissioning of ERTMS/GSM-R is under preparation. 	Equipping of Curtici station with an electronic gauge control gate	Proposals	Proposals	Proposals
CFR	Border HU/RO	Curtici	<ul style="list-style-type: none"> - Rehabilitated corridor section equipped with ERTMS-ETCS Level 2/GSM-R, which is not in operation; - Long waiting time in Curtici station. - The double track open line does not continue in Hungary. 	<ul style="list-style-type: none"> - Trains are not handed over on trust (ATTI); - The Curtici station is not fully equipped with electronic interlocking system; - The Curtici station is not equipped with an electronic gauge control gate; - The border crossing operational rules between CFR and MAV are not harmonized (e.g. the buffer wagons); - The Intergovernmental Railway Agreement Romania-Hungary is not updated (harmonization of the control performed by the state authorities); - Commissioning of ERTMS/GSM-R is under preparation. 	Harmonization of the border crossing operational rules between CFR and MAV	Proposals	Proposals	Proposals
CFR	Border HU/RO	Curtici	<ul style="list-style-type: none"> - Rehabilitated corridor section equipped with ERTMS-ETCS Level 2/GSM-R, which is not in operation; - Long waiting time in Curtici station. - The double track open line does not continue in Hungary. 	<ul style="list-style-type: none"> - Trains are not handed over on trust (ATTI); - The Curtici station is not fully equipped with electronic interlocking system; - The Curtici station is not equipped with an electronic gauge control gate; - The border crossing operational rules between CFR and MAV are not harmonized (e.g. the buffer wagons); - The Intergovernmental Railway Agreement Romania-Hungary is not updated (harmonization of the control performed by the state authorities); - Commissioning of ERTMS/GSM-R is under preparation. 	Updating of the Intergovernmental Railway Agreement between Romania and Hungary	Proposals	Proposals	Proposals
CFR	Km 614 (Radna)	Simeria	Corridor section under rehabilitation, with ERTMS-ETCS Level 2/GSM-R under construction.	Rehabilitation of the railway line Border – Curtici – Simeria, component part of the IV European corridor for the trains circulation with a maximum speed of 160 km/h: Section 2: km 614 - Gurasada and Section 3: Gurasada - Simeria <ul style="list-style-type: none"> - The rehabilitation works are under execution; - Maximum train length (632 m - Deva station). 	Rehabilitation of Km 614 (Radna) - Simeria line section at corridor level	2025	1965,12 (Eligible costs are only for works)	LIOP 2014-2020 (Cohesion Funds) + State Budget
CFR	Sighișoara	Brașov	Corridor section not rehabilitated and without ERTMS-ETCS Level 2/GSM-R.	Rehabilitation of the railway line Brașov – Simeria, component part of the IV European corridor for the trains circulation with a maximum speed of 160 km/h, Section Sighișoara - Brașov <ul style="list-style-type: none"> - The rehabilitation works are in the tendering/awarding stage; - Maximum train length (600 m); - Speed restrictions. 	Rehabilitation of Sighișoara - Brașov line section at corridor level	2025	1285,81 (Eligible costs are only for works)	CEF (Cohesion Funds) + State Budget

IM	Section		Bottleneck	Reasons	Suggestions How to Remove Bottlenecks			
	From	To			Project Name and Description	End Date	Costs in mil. of Euro	Financial Sources
CFR	Braşov	Predeal	Corridor section not rehabilitated and without ERTMS-ETCS Level 2/GSM-R.	Feasibility Study for the modernization of the railway infrastructure Predeal - Braşov - Maximum train length (640 m); - Maximum tonnage permitted on the line section; - Traffic restrictions for oversized transports due to existing tunnels.	Rehabilitation of Braşov - Predeal line section at corridor level	2024	1046 (Eligible costs are estimated for works. The FS cost is 25,8 mil euro)	CEF (Cohesion Funds) + State Budget - for the feasibility study TP 2021-2027 (Cohesion Funds) + State Budget - for works
CFR	Predeal	Constanţa	Rehabilitated corridor section equipped with ERTMS-ETCS Level 1/GSM-R, which is not in operation.	Implementation of the measures necessary for the operation of the ERTMS system on the Predeal-Bucuresti-Constanţa railway section and the extension of the GSM-R system on the primary railway transport network" - Feasibility study - The Feasibility Study for solution of commissioning ERTMS/GSM-R on Predeal-Bucureşti-Constanţa line section is on going; - Scarce capacity on Ploieşti Triaj - Brazi line section; - Tonnage restrictions on Feteşti - Saligny (2.200 t).	Commissioning the ERTMS/GSM-R (ETCS Level 1 or possible migration to ETCS Level 2) on Predeal - Bucureşti - Constanţa line section	2028	200 (Costs are estimated for works. The FS cost is 0,89 mil euro)	LIOP 2014-2020 (Cohesion Funds) + State Budget - for the feasibility study Unidentified financing source for works
CFR	Arad	Timişoara	Corridor section not rehabilitated and without ERTMS-ETCS Level 2/GSM-R.	Modernization of the railway line section Arad - Caransebeş - Detailed designs for works for the line rehabilitation (Lot Arad - Ronaţ and Lot Ronaţ - Timişoara Est) are ongoing - Single track line; - Speed restrictions.	Rehabilitation of Arad - Timişoara line section at corridor level	2026	681,85	NRRP + State Budget
CFR	Timişoara	Caransebeş	Corridor section not rehabilitated and without ERTMS-ETCS Level 2/GSM-R.	Modernization of the railway line section Arad - Caransebeş - Detailed design works for the line rehabilitation (lot Timisoara Est - Lugoj) is on going and 1 lot Lugoj - Caransebeş is in procurement phase; - Single-track line; - Speed restrictions.	Rehabilitation of Timişoara - Caransebeş line section at corridor level	2026	736,87	NRRP + State Budget
CFR	Caransebeş	Craiova	Corridor section not rehabilitated and without ERTMS-ETCS Level 2/GSM-R.	Rehabilitation of the railway line section Caransebeş - Craiova - Works are in procurement phase - Single track line (Caransebeş - Strehaia); - Speed restrictions; - Tonnage restrictions (Balota 1.000 t).	Rehabilitation of Caransebeş - Craiova line section at corridor level	2026	2188,36	TP + State Budget
CFR	Craiova	Bucureşti (Pajura Hm) (Pajura Hm)	Corridor section not rehabilitated and without ERTMS-ETCS Level 2/GSM-R.	- The works contracts for removal of speed restrictions in punctual sections are on going; - Speed restrictions; - Track I closed on Malu Mare - Banu Mărăcine line section for rehabilitation works.	Removal of the speed restrictions on Craiova - Bucureşti (Pajura Hm) line section	2026	85,48682563	NRPP
CFR	Craiova	Bucureşti (Pajura Hm) (Pajura Hm)	Corridor section not rehabilitated and without ERTMS-ETCS Level 2/GSM-R.	- The Feasibility Study for rehabilitation is under elaboration; - Speed restrictions.	Rehabilitation of Craiova - Bucureşti (Hm Pajura) line section at corridor level	2025	836 (Is an estimated cost for works)	CEF + State Budget
CFR	Ploieşti Triaj	Buzău	Line section not rehabilitated and without ERTMS-ETCS Level 2/GSM-R.	- The contract for the Feasibility study of the railway line Ploiesti - Buzău - Focşani is ongoing. Project preparation on going	Rehabilitation of Ploieşti Triaj - Buzău - Focşani line section	2023	1612,55	Cohesion funds + State Budget

IM	Section		Bottleneck	Reasons	Suggestions How to Remove Bottlenecks			
	From	To			Project Name and Description	End Date	Costs in mil. of Euro	Financial Sources
				- Maximum train length permitted on the line section (Valea Călugărească - Buzău 650 m).				
CFR	Buzău	Fetești	Line section not rehabilitated and without ERTMS-ETCS Level 2/GSM-R.	- The project for rehabilitation has not been promoted yet; - Speed limitations and restrictions; - Maximum train length permitted on the line section (540 m).	Rehabilitation of Buzău - Fetești line section	2029	516	n/a
CFR	Simeria	Filiași	Line section not rehabilitated and without ERTMS-ETCS Level 2/GSM-R.	- The works contracts for removal of speed restrictions in punctual sections are on going; - Single track line (Livezeni - Tg. Jiu); - Maximum train length permitted on the line section (600 m); - Tonnage restrictions (Tg, Cărbunești 2.000 t).	Rehabilitation of Simeria - Petroșani - Filiași line section	2026	11,3563969	NRPP
CFR	Coșlariu/Pod Mureș	Cluj	Line section not rehabilitated and without ERTMS-ETCS Level 2/GSM-R.	- The Feasibility Study for rehabilitation is under elaboration.	Rehabilitation of Coșlariu/Pod Mureș - Teiuș - Cluj line section	2029	562 (Costs are estimated for works. The FS cost is 22,93 mil euro)	CEF (Cohesion Funds) + State Budget - for the feasibility study unidentified financing sources - for works
CFR	Cluj	Border RO/HU	- Line section not rehabilitated and without ERTMS-ETCS Level 2/GSM-R.	- Detailed design for works for the line rehabilitation are in the tenders evaluation stage; - Single track line (Poieni - Aleșd); - Diesel traction (non-electrified line); - Stations equipped with SBW systems; - Lack of Automatic Block System in the open line.	Rehabilitation of Cluj - Episcopia Bihor - Border RO/HU line section	2026	1561,47 (costs are only for works)	NRRP + State Budget

Congested Lines: Romania

IM	Section From	Section To
CFR	Vințu de Jos	Coșlariu
CFR	Micășasa	Coșlariu
CFR	Vințu de Jos	Simeria
CFR	Simeria	Glogovăț
CFR	Brașov	Sighișoara

Congested lines have not been declared by the IMs in the other countries along the Corridor.

Germany

Status	IM	Section		Category	Project name	Specification	Note	Start		End		Estimated Financial Requirements [mil. of EUR]	Financial Sources	Reached parameters						
		From	To					Month	Year	Month	Year			Maximum speed [km*h-1]	Axle load [t] / Line category	Maximum Train Length [m]	Traction power	ETCS Level	Track clearance	Intern. Code
Planned	DB Netz	Kehl	Appenweier	Principal line	ABS Kehl - Appenweier	ETCS Implementation	Speed increase	n/a	n/a	n/a	2028	79	state budget	160	22,5	740	Electrified	Level 2	1435 mm	P/C 410/80
Under Construction	DB Netz	Karlsruhe	Offenburg	Principal line	Line upgrade / new line Karlsruhe – Basel (StA 1)	Other	Construction of a new tunnel near Rastatt incl. ETCS	n/a	n/a	n/a	2025	1332	state budget	200	22,5	740	Electrified	Level 2	1435 mm	P/C 410/80
Planned	DB Netz	Mannheim	Karlsruhe	Principal line	New line / Line upgrade Mannheim – Karlsruhe	Other	New construction of 2 new tracks	n/a	n/a	n/a	Beyond 2030	open	state budget	300	22,5	740	Electrified	Level 2	1435 mm	P/C 410/80
Planned	DB Netz	Frankfurt	Mannheim	Diversionsary line	New line Frankfurt - Mannheim	Other	New line	n/a	n/a	n/a	Beyond 2030	2183	state budget	250	22,5	740	Electrified	Level 2	1435 mm	P/C 410/80
Under Construction	DB Netz	Wendlingen	Ulm	Principal line	NBS Wendlingen - Ulm	Other	New construction of this line increases capacity on the existing freight traffic line between Stuttgart and Ulm	n/a	n/a	n/a	2025	3959	state budget	250	22,5	740	Electrified	Level 2	1435 mm	P/C 410/80
Planned	DB Netz	Ulm	Augsburg	Principal line	ABS/NBS Ulm - Augsburg	Other	Partly new construction	n/a	n/a	n/a	Beyond 2030	1907	state budget	250	22,5	740	Electrified	Level 2	1435 mm	P/C 410/80
Planned	DB Netz	Nürnberg	Schirnding	Principal line	ABS Nürnberg - Marktredwitz - Border DE/CZ (- Cheb)	Electrification	n/a	n/a	n/a	n/a	Beyond 2030	1195	state budget	160	22,5	740	Electrified	Level 2	1435 mm	P/C 410/80
Planned	DB Netz	Markt Schwaben	Freilassing	Diversionsary line	ABS Müchen - Mühldorf - Freilassing	Electrification	Double tracks	n/a	n/a	n/a	Beyond 2030	2323	state budget	160	22,5	740	Electrified	Level 2	1435 mm	P/C 410/80
Planned	DB Netz	München - Trudering	Rosenheim	Principal line	München - Rosenheim (- Kiefersfelden - Border DE/AT)	Other	Partly 2 new tracks	n/a	n/a	n/a	Beyond 2030	open	state budget	250	22,5	740	Electrified	Level 2	1435 mm	P/C 410/80
Under Construction	DB Netz	dto.	dto.	Principal line	740 m-program	Other	Single projects to increase capacity on the Corridor	n/a	n/a	n/a	Should be mainly completed until 2030	839	state budget	n/a	n/a	740	n/a	n/a	n/a	n/a
Planned	DB Netz	Siegelsdorf	Fürth	Principal line	ABS Burgsinn – Gemünden – Würzburg – Nürnberg	Other	Third track between Siegeldorf - Fürth	n/a	n/a	n/a	Beyond 2030	223	BVWP	n/a	22,5	740	n/a	Level 2	1435 mm	P/C 410/80

Status	IM	Section		Category	Project name	Specification	Note	Reached parameters				Estimated Financial Requirements [mil. of EUR]	Financial Sources	Maximum speed [km*h-1]	Axle load [t] / Line category	Maximum Train Length [m]	Traction power	ETCS Level	Track clearance	Intern. Code
		From	To					Start		End										
								Month	Year	Month	Year									
Planned	DB Netz	Regensburg	Grenze D/CZ	Principal line	ABS Nürnberg – Schwandorf/München – Regensburg – Furth im Wald – Grenze D/CZ	Electrification	Speed increase	n/a	n/a	n/a	Beyond 2030	706	BVWP	160	22,5	740	n/a	Level 2	1435 mm	P/C 410/80

Austria

Status	IM	Section		Category	Project name	Specification	Note	Start		End		Reached parameters								
		From	To					Month	Year	Month	Year	Estimated Financial Requirements [mil. of EUR]	Financial Sources	Maximum speed [km·h ⁻¹]	Axle load [t] / Line category	Maximum Train Length [m]	Traction power	ETCS Level	Track clearance	Intern. Code
Under construction	ÖBB Infrastruktur	Salzburg	Steindorf bei Strasswalchen	Principal line	Attnang-P. - Salzburg; upgrade	740m sidings in some stations	Capacity raise	n/a	n/a	n/a	2029	160	State budget	160	22,5 / D4	740	15 kV AC	Level 2	GA, G1, G2	P/C 80/410
planned	ÖBB Infrastruktur	Steindorf bei Strasswalchen	Attnang-P.	Principal line	Neumarkt K. - Salzburg; 4 track upgrade; (planning only)	reconstruction, modernization of the track	Speed raise, capacity raise	n/a	n/a	n/a	Beyond 2030	154 (planning only)	State budget	250	22,5 / D4	740	15 kV AC	Level 2	GA, G1, G2	P/C 80/410
Under construction	ÖBB Infrastruktur	Wels	Linz	Principal line	Wels Terminal	Train formation yard redesign	n/a	n/a	n/a	n/a	2027	47	State budget	n/a	n/a	n/a	n/a	n/a	GA, G1, G2	n/a
Under construction	ÖBB Infrastruktur	Wels	Linz	Principal line	Linz - Wels; 4 track upgrade	reconstruction, modernization of the track	Speed raise, capacity raise	n/a	n/a	n/a	2030	1303	State budget	230	22,5 / D4	740	15 kV AC	Level 2	GA, G1, G2	P/C 80/410
Under construction	ÖBB Infrastruktur	Linz	Enns	Principal line	Linz Kleinmünchen - Linz Hbf; 4 track upgrade	reconstruction, modernization of the track	Capacity raise	n/a	n/a	n/a	2032	402	State budget	160	22,5 / D4	740	15 kV AC	Level 2	GA, G1, G2	P/C 80/410
Under construction	ÖBB Infrastruktur	Wien	Bruck a. d. Leitha	Principal line	Gramatneusiedl; station upgrade	740m sidings, station entering and leaving faster	Capacity raise	n/a	n/a	n/a	2024	86	State budget	140	22,5 / D4	740	15 kV AC	Level 2	GA, G1, G2	P/C 80/410
Under construction	ÖBB Infrastruktur	Wien	Bruck a. d. Leitha	Principal line	Himberg; station upgrade	740m sidings	Capacity raise	n/a	n/a	n/a	2027	53	State budget	140	22,5 / D4	740	15 kV AC	Level 2	GA, G1, G2	P/C 80/410
planned	ÖBB Infrastruktur	Parndorf	Kittsee	Principal line	2 track upgrade	Double track upgrade	Capacity raise	n/a	n/a	n/a	2038	215	State budget	160	22,5 / D4	740	15 kV AC	Level 2	GA, G1, G2	P/C 80/410
planned	ÖBB Infrastruktur	Wien	Ebenfurth	Principal line	Junction Ebenfurth	Bypass	Connection optimization	n/a	n/a	n/a	2029	229	State budget	100	22,5 / D4	740	15 kV AC	Level 2	n/a	P/C 80/410

Czech Republic

Status	IM	Section		Category	Project name	Specification	Note	Start		End		Reached parameters								
		From	To					Month	Year	Month	Year	Estimated Financial Requirements [mil. of EUR]	Financial Sources	Maximum speed [km*h-1]	Axle load [t] / Line category	Maximum Train Length [m]	Traction power	ETCS Level	Track clearance	Interm. Code
Planned	SZCZ	Praha-Libeň	Praha-Hostivař	Principal line	Modernisation of the line Praha-Libeň - Praha-Malešice, Doubling of track Praha-Malešice – Praha-Hostivař	Reconstruction, modernization of the track	Line modernisation, construction of a 2nd track and of a new tunnel, which will allow a higher capacity.	n/a	2025	n/a	2028	n/a	n/a	61-80	D3	695	3 kV DC	-	GC	P/C 80/410
Under construction	SZCZ	Odb Tunel (Praha-Radotín)	Beroun	Principal line	New double-track line Praha-Smíchov - Beroun	Reconstruction, modernization of the track	Construction of a new double-track line and a 24,7km long tunnel that will also be connected to HSL in the future.	n/a	2028	n/a	2035	n/a	n/a	61-80	D3	680	3 kV DC	-	GC	P/C 78/402
Planned	SZCZ	Ejovice	Plzeň	Principal line	Higher speed in line Ejovice (except) - Plzeň (except)	Reconstruction, modernization of the track	Modification of traction and interlocking equipment, higher max.speed.	n/a	2027	n/a	2027	n/a	n/a	>120	D4	700	25 kV AC	-	GC	P/C 78/402
Planned	SZCZ	Plzeň	Česká Kubice - st.border	Principal line	Modernisation of the line Plzeň - Domažlice - Česká Kubice - st.border	Reconstruction, modernization of the track	The existing line will be optimized and electrified. The current lines Stod - Holýšov and Blížejov - Domažlice will be replaced by a new double-track line counting with max. speed 200 km/h.	n/a	2024	n/a	2030	n/a	Co-financed by the EU	61-80	C3	660	-	-	GC	P/C 78/402
Under construction	SZCZ	Praha Vysočany	Čelákovice	Diversorary line	Optimization of line Praha Vysočany – Mstětice – Čelákovice	Reconstruction, modernization of the track	The project will improve technologic state of the line and therefor max. speed.	n/a	2020	n/a	2025	n/a	Co-financed by the EU	81-100	D3	729	3 kV DC	-	GC	P/C 80/410

Status	IM	Section		Category	Project name	Specification	Note	Start		End		Reached parameters								
		From	To					Month	Year	Month	Year	Estimated Financial Requirements [mil. of EUR]	Financial Sources	Maximum speed [km*h-1]	Axle load [t] / Line category	Maximum Train Length [m]	Traction power	ETCS Level	Track clearance	Intern. Code
Planned	SZCZ	Lysá nad Labem	Kolín	Diversionsary line	Modernisation of the line Kolín - Všetaty - Děčín (Kolín - Nymburk hl.n. - Lysá nad Labem - Mělník)	Reconstruction, modernization of the track	Complex line reconstruction will include a construction of 3rd track between Libice nad Cidlinou and Odb. Babín, Nymburk hl.n. and Lysá nad Labem, and Všetaty and Mělník, a prolongation of tracks for freight trains of 740m in some stations, and a construction of direct connection to Hradec Králové.	n/a	2025	n/a	2033	n/a	n/a	101-120	D4	680	3 kV DC	-	GC	P/C 80/410
Planned	SZCZ	Poříčany	Nymburk	Diversionsary line	Modernisation and double track in line Poříčany - Nymburk (under HSR Praha-Běchovice - Poříčany project)	Reconstruction, modernization of the track	2nd track will be constructed between Poříčany and Nymburk.	n/a	2026	n/a	2031	n/a	n/a	81-100	C3	689	3 kV DC	-	GC	P/C 80/410

Status	IM	Section		Category	Project name	Specification	Note	Start		End		Reached parameters								
		From	To					Month	Year	Month	Year	Estimated Financial Requirements [mil. of EUR]	Financial Sources	Maximum speed [km*h-1]	Axle load [t] / Line category	Maximum Train Length [m]	Traction power	ETCS Level	Track clearance	Intern. Code
Planned	SZCZ	Velký Osek-Kanín	Choceň	Diversiory line	Modernisation of the line Kanín - Chlumeč nad Cidlinou - Hradec Králové - Týniště nad Orlicí - Choceň	Reconstruction, modernization of the track	Diversiory line between Velký Osek and Choceň is a single-track line. A second track will be constructed, 5 level-crossings will be replaced by alternatives. This will allow higher capacity and higher max. speed.	n/a	2026	n/a	2030	n/a	n/a	61-80	C3	680	3 kV DC	Level 2	GC	P/C 80/410
Planned	SZCZ	Choceň	Ústí nad Orlicí	Principal line	Construction of a new line Choceň - Ústí nad Orlicí	Reconstruction, modernization of the track	Construction of a new line between Choceň and Ústí nad Orlicí parallel to the existing line in order to increase capacity. The line will be shorter and counts with max. speed 200 km/h.	n/a	2030	n/a	2034	n/a	n/a	>120	D4	700	3 kV DC	Level 2	GC	P/C 80/410
Under construction	SZCZ	Pardubice	Pardubice	Principal line	Modernisation of the Pardubice railway junction	Reconstruction, modernization of the track	The project's scope is mainly an increase of max. speed up to 160 km/h and an improvement of conditions for passage of 740 m long trains. Traction, signalling and interlocking equipment will be modernized.	n/a	2020	n/a	2024	n/a	Co-financed by the EU	>120	D4	700	3 kV DC	-	GC	P/C 80/410

Status	IM	Section		Category	Project name	Specification	Note	Start		End		Reached parameters								
		From	To					Month	Year	Month	Year	Estimated Financial Requirements [mil. of EUR]	Financial Sources	Maximum speed [km*h-1]	Axle load [t] / Line category	Maximum Train Length [m]	Traction power	ETCS Level	Track clearance	Intern. Code
Under construction	SZCZ	Pardubice	Choceň	Principal line	Reconstruction of the line Pardubice - Uhersko - Choceň	Reconstruction, modernization of the track	Max. speed will increase up to 200 km/h.	n/a	2029	n/a	2034	n/a	n/a	>120	D4	700	3 kV DC	Level 2	GC	P/C 80/410
Planned	SZCZ	Česká Třebová	Česká Třebová	Principal line	Modernisation of the Česká Třebová railway junction	Reconstruction, modernization of the track	The project will allow an increase of the max. speed, traction and signalling and interlocking equipment will be reconstructed.	n/a	2024	n/a	2031	n/a	n/a	<=60	D4	678	3 kV DC	Level 2	GC	P/C 80/410
Planned	SZCZ	Brodek u Přerova	Vyh. Dluhonice	Principal line	Reconstruction of railway station Přerov	Reconstruction, modernization of the track	An off-grade crossing will eliminate mutual interference of oncoming trains in the direction Olomouc - Hranice na Moravě with trains Přerov - Olomouc.	n/a	2025	n/a	2027	n/a	n/a	>120	D4	700	3 kV DC	Level 2	GC	P/C 80/410
Planned	SZCZ	Ostrava-Svinov	Ostrava-Kunčice	Principal line	Optimization of line Ostrava-Svinov - Ostrava-Kunčice	Reconstruction, modernization of the track	Max. speed will increase up to 120 km/h.	n/a	2026	n/a	2029	n/a	n/a	120	D4	700	3 kV DC	-	GB,GC	P/C 80/410
Planned	SZCZ	Ostrava-hl.n.	Ostrava-Svinov	Principal line	Modernization of the Ostrava railway junction	Reconstruction, modernization of the track	Complex line reconstruction, 3rd track between Ostrava hl.n. and Ostrava-Svinov, a new crossing → higher capacity.	n/a	2028	n/a	2034	n/a	n/a	>120	D4	700	3 kV DC	Level 2	GC	P/C 80/410

Status	IM	Section		Category	Project name	Specification	Note	Start		End		Reached parameters								
		From	To					Month	Year	Month	Year	Estimated Financial Requirements [mil. of EUR]	Financial Sources	Maximum speed [km*h-1]	Axle load [t] / Line category	Maximum Train Length [m]	Traction power	ETCS Level	Track clearance	Intern. Code
Planned	SZCZ	Havířov	Český Těšín	Principal line	Optimization of line Havířov - Albrechtice u Českého Těšína - Český Těšín	Reconstruction, modernization of the track	Complex line modernisation, max. speed will increase up to 140 km/h between Albrechtice u Českého Těšína and Český Těšín.	n/a	2023	n/a	2030	n/a	n/a	140	D4	700	3 kV DC	-	GB	P/C 80/410
Planned	SZCZ	Praha-Vysočany	Lysá nad Labem	Diversionary line	ETCS Milovice - Praha hl.n.	ETCS Implementation	ETCS deployment in line Milovice - Lysá nad Labem - Praha-Vysočany - Praha hl.n.	n/a	2024	n/a	2026	n/a	Co-financed by the EU	81-100	D3	729	3 kV DC	-	GC	P/C 80/410

Slovakia

Status	IM	Section		Category	Project name	Specification	Note	Start		End		Reached parameters								
		From	To					Month	Year	Month	Year	Estimated Financial Requirements [mil. of EUR]	Financial Sources	Maximum speed [km*h-1]	Axle load [t] / Line category	Maximum Train Length [m]	Traction power	ETCS Level	Track clearance	Interm. Code
Planned	ŽSR	Čadca	Krásno nad Kysucou (outside)	Principal line	Modernisation of railway corridor State border CZ/SK – Čadca – Krásno nad Kysucou, section Čadca - Krásno nad Kysucou (outside)	Modernization - project documentation phase	n/a	1	2022	3	2025	n/a	n/a	140	22,5	740	25 kV AC	Level 2	n/a	P/C 70/400
Planned	ŽSR	Bratislava	Bratislava	Principal line	Rail Node Bratislava - Works	Reconstruction, modernization of the track	Complex solution for rail node Bratislava	1	2026	12	Beyond 2030	TBD	n/a	n/a	n/a	n/a	n/a	n/a	n/a	P/C 70/400
Partly completed	ŽSR	Púchov	Lúky pod Makytou (CZ)	Principal line	Complex reconstruction of tracks	Reconstruction, modernization of the track	n/a	n/a	2020	12	2025	n/a	State budget	90	22,5	740	25 kV AC	n/a	n/a	P/C 70/400

Hungary

Status	IM	Section		Category	Project name	Specification	Note	Start		End		Estimated Financial Requirements [mil. of EUR]	Financial Sources	Reached parameters						
		From	To					Month	Year	Month	Year			Maximum speed [km*h-1]	Axle load [t] / Line category	Maximum Train Length [m]	Traction power	ETCS Level	Track clearance	Intern Code
Under Construction	MÁV	Almásfüzitő	Komárom	Principal line	Preparing for elimination of bottlenecks on the MÁV network. Almásfüzitő - Komárom railway line section. Preparatory project.	160 km/h speed and 225 kN axle load on the whole line section (including curve correction at Szőny). Upgrading of passenger service facilities. Upgrading of catenary, power and interlocking system.	Completed	7	2020	12	2022	N.A	Cohesion fund/IKOP	160	22,5	750	25 kV, 50 Hz	Level 1	GC	P/C 80/410
Under Construction	MÁV	Kelenföld	Budaörs	Principal line	Preparing for elimination of bottlenecks on the MÁV network. Kelenföld - Budaörs railway line section. Preparatory project.	Construction of tracks 3 and 4 between Kelenföld and Törökbálint stations, reconstruction and modernisation of passenger service facilities, construction of new platforms at Kelenföld station, design of a new connecting track to the railway line to Kelenföld station - Déli pu., construction of a new stop: Budaörs-Szilvás (IMCS)	preparation is in progress	2	2020	12	2024	N.A	Cohesion fund/IKOP	120/140	22,5	750	25 kV, 50 Hz	Level 1	GC	P/C 80/410
Under Construction	MÁV	Szajol	Debrecen	Principal line	ETCS 2 installation between Szajol and Debrecen. Implementing project.	Implementation of ETCS L2 system.	Ongoing	10	2019	12	2024	N.A	Cohesion fund/IKOP	160	22,5	750	25 kV, 50 Hz	Level 2	GC	P/C 80/410
Under Construction	MÁV	Kelenföld	Ferencváros	Principal line	Southern Circular Railway project. Construction of a third track, safety equipment and overhead line upgrades. Implementation project.	Construction of a third track between Kelenföld and Ferencváros stations. Design of the Közvágóhid and Nádorkert stations, design of a four-track section on the Buda side (one section length), covering all kind of professional works.	Ongoing	12	2021	12	2027	N.A	CEF	80	22,5	750	25 kV, 50 Hz	Level 2	GC	P/C 80/410

Status	IM	Section		Category	Project name	Specification	Note	Start		End		Estimated Financial Requirements [mil. of EUR]	Financial Sources	Reached parameters						
		From	To					Month	Year	Month	Year			Maximum speed [km*h-1]	Axle load [t] / Line category	Maximum Train Length [m]	Traction power	ETCS Level	Track clearance	Interm Code
Under Construction	MÁV	Püspökladány	Biharkeresztes border	Diversionary line	Elimination of bottlenecks and electrification. Implementing project.	Electrification, new signalling and KÖFI system. Track construction on the section Püspökladány (incl.) - Berettyóújfalú (excl.) (additional section rebuilt by MÁV)	Ongoing	9	2020	12	2023	185,4	Cohesion fund/IKOP	160	22,5	750	25 kV, 50 Hz	N.A	GC	P/C 80/410
Under Construction	MÁV	Nagykátá	Újszász	Principal line	Nagykátá - Újszász railway track section. Preparatory project.	Reconstruction, modernization of the track. 120 km/h speed, axle load increase, sub- and superstructure renewal, catenary and power supply system upgrades;	Completed	7	2020	6	2023	N.A	Cohesion fund/IKOP	120	22,5	750	25 kV, 50 Hz	N.A	GC	P/C 80/410
Under Construction	MÁV	Gyoma	Békéscsaba	Principal line	Gyoma (excl.) - Békéscsaba (incl.) railway line section, signaling and telecommunication works and installation of ETCS system. Implementing project.	Modernisation of signaling system between Gyoma and Békéscsaba and Békéscsaba railway station, installation of Ferencváros - Lökösháza ETCS L2 - phased project	under construction	10	2013	12	2023	51,4	Cohesion fund/IKOP	120	22,5	750	25 kV, 50 Hz	Level 2	GC	P/C 80/410
Under Construction	MÁV	Békéscsaba	Lökösháza	Principal line	Construction of 2nd track between Békéscsaba and Lökösháza, upgrading the signaling and catenary system. Implementing project.	225 kN axle load, speed of 160 km/h, upgrading of the entire catenary and power supply system, two stations renewal with barrier-free access, ETCS L2 deployment.	preparation is in progress	9	2021	6	2025	5,23	CEF	160	22,5	750	25 kV, 50 Hz	Level 2	GC	P/C 80/410
planned	GYSEV	Rajka s.b.	Hegyeshalom	Principal line	Modernization, upgrade of railway infrastructure	Reconstruction, modernization of the track	CEF 2 proposal under evaluation	n/a	2026	n/a	2028	n/a	EU (CEF, Coh. Found)	100/120	22,5	750	25 kV AC	Level 1	n/a	P/C 70/400
planned	GYSEV	Sopron-Rendező	Harka	Principal line	Modernization, upgrade of railway infrastructure	Reconstruction, modernization of the track	Phase 0: Sopron - Harka 2nd track 2025 -2027	n/a	n/a	n/a	n/a	n/a	EU (CEF, Coh. Found)	80/100	22,5	750	25 kV AC	n/a	n/a	P/C 70/400
planned	GYSEV	Harka	Pinnye	Principal line	Modernization, upgrade of railway infrastructure	Reconstruction, modernization of the track	Phase 2B: Sopron - Harka - Fertőboz new double track alignment	n/a	n/a	n/a	Beyond 2030	n/a	EU (CEF, Coh. Found)	160	22,5	750	25 kV AC	Level 2	n/a	P/C 70/400

Status	IM	Section		Category	Project name	Specification	Note	Start		End		Estimated Financial Requirements [mil. of EUR]	Financial Sources	Reached parameters							
		From	To					Month	Year	Month	Year			Maximum speed [km*h-1]	Axle load [t] / Line category	Maximum Train Length [m]	Traction power	ETCS Level	Track clearance	Interm Code	
planned	GYSEV	Pinnye	Fertőszentmiklós	Principal line	Modernization, upgrade of railway infrastructure	Reconstruction, modernization of the track	Phase 2A: (Fertőboz) - Pinnye - Csorna partially double track	n/a	n/a	n/a	Beyond 2030	n/a	EU (CEF, Coh. Found)	160	22,5	750	25 kV AC	Level 2	n/a	P/C 70/400	
planned	GYSEV	Fertőszentmiklós	Petőháza	Principal line	Modernization, upgrade of railway infrastructure	Reconstruction, modernization of the track	Phase 2A: (Fertőboz) - Pinnye - Csorna partially double track	n/a	n/a	n/a	Beyond 2030	n/a	EU (CEF, Coh. Found)	160	22,5	750	25 kV AC	Level 2	n/a	P/C 70/400	
planned	GYSEV	Petőháza	Csorna	Principal line	Modernization, upgrade of railway infrastructure	Reconstruction, modernization of the track	Phase 2A: (Fertőboz) - Pinnye - Csorna partially double track	n/a	n/a	n/a	Beyond 2030	n/a	EU (CEF, Coh. Found)	160	22,5	750	25 kV AC	Level 2	n/a	P/C 70/400	
planned	GYSEV	Csorna	Győr	Principal line	Modernization, upgrade of railway infrastructure	Reconstruction, modernization of the track	Phase 1 of Győr - Sopron upgrade: priority project: single track, capacity problems, new 2nd track	n/a	n/a	n/a	Beyond 2030	n/a	EU (CEF, Coh. Found)	160	22,5	750	25 kV AC	Level 2	n/a	P/C 70/400	
Under construction	GYSEV	Sopron	Győr	Principal line	Modernization, upgrade of railway infrastructure	GSM-R implementation	Phase II of Hungarian GSM-R network	n/a	n/a	n/a	n/a	n/a	EU	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Romania

Status	IM	Section		Category	Project name	Specification	Note	Start		End		Estimated Financial Requirements [mil. of EUR]	Financial Sources	Reached parameters						
		From	To					Month	Year	Month	Year			Maximum speed [km ³ h ⁻¹]	Axle load [t] / Line category	Maximum Train Length [m]	Traction power	ETCS Level	Track clearance	Intern. Code
Under construction	CFR	Km 614 (Radna)	Bârzava	Principal line	Rehabilitation of the railway line Border – Curtici – Simeria, component part of the IV European corridor for the trains circulation with a maximum speed of 160 km/h: Section 2: km 614 - Gurasada and Section 3: Gurasada - Simeria	Modernization of the existing conventional electrified double track for increased speed; Implementation of electronic interlocking, ETCS-Level 2 and GSM-R	Works for infrastructure and suprastructure	7	2017	4	2024	434,45	LIOP 2014-2020 (Cohesion Funds) + State Budget	120 km/h for freight trains and 160 km/h for passenger trains	22,5 / C4	750	25 kV AC	Level 2	GC	P/C 45/375
Under construction	CFR	Bârzava	Ilteu	Principal line	Rehabilitation of the railway line Border – Curtici – Simeria, component part of the IV European corridor for the trains circulation with a maximum speed of 160 km/h: Section 2: km 614 - Gurasada and Section 3: Gurasada - Simeria	Modernization of the existing conventional electrified double track for increased speed; Implementation of electronic interlocking, ETCS-Level 2 and GSM-R	Works for infrastructure and suprastructure	7	2017	5	2025	453,35	LIOP 2014-2020 (Cohesion Funds) + State Budget	120 km/h for freight trains and 160 km/h for passenger trains	22,5 / C4	750	25 kV AC	Level 2	GC	P/C 45/375
Under construction	CFR	Ilteu	Gurasada	Principal line	Rehabilitation of the railway line Border – Curtici – Simeria, component part of the IV European corridor for the trains circulation with a maximum speed of 160 km/h: Section 2: km 614 - Gurasada and Section 3: Gurasada - Simeria	Modernization of the existing conventional electrified double track for increased speed; Implementation of electronic interlocking, ETCS-Level 2 and GSM-R	Works for infrastructure and suprastructure	12	2017	9	2025	403,20	LIOP 2014-2020 (Cohesion Funds) + State Budget	120 km/h for freight trains and 160 km/h for passenger trains	22,5 / C4	750	25 kV AC	Level 2	GC	P/C 45/375

Status	IM	Section		Category	Project name	Specification	Note	Start		End		Estimated Financial Requirements [mil. of EUR]	Financial Sources	Reached parameters						
		From	To					Month	Year	Month	Year			Maximum speed [km*h-1]	Axle load [t] / Line category	Maximum Train Length [m]	Traction power	ETCS Level	Track clearance	Intern. Code
Under construction	CFR	Gurasada	Simeria	Principal line	Rehabilitation of the railway line Border – Curtici – Simeria, component part of the IV European corridor for the trains circulation with a maximum speed of 160 km/h: Section 2: km 614 - Gurasada and Section 3: Gurasada - Simeria	Modernization of the existing conventional electrified double track for increased speed; Implementation of electronic interlocking, ETCS-Level 2 and GSM-R	Works for infrastructure and suprastructure	9	2017	1	2024	674,13	LIOP 2014-2020 (Cohesion Funds) + State Budget	120 km/h for freight trains and 160 km/h for passenger trains	22,5 / C4	750	25 kV AC	Level 2	GC	P/C 45/375
Under construction	CFR	Sighișoara	Cața	Principal line	Rehabilitation of the railway line Brașov – Simeria, component part of the IV European corridor for the trains circulation with a maximum speed of 160 km/h, Section Sighișoara - Brașov	Modernization of the existing conventional electrified double track for increased speed; Implementation of electronic interlocking, ETCS-Level 2 and GSM-R	Works for infrastructure and suprastructure	4	2020	12	2025	676,62	CEF (Cohesion Funds)+ State Budget	120 km/h for freight trains and 160 km/h for passenger trains	22,5 / C4	750	25 kV AC	Level 2	GC	P/C 45/375
Under construction	CFR	Apața	Brașov	Principal line				11	2020	12	2025	609,19	CEF (Cohesion Funds)+ State Budget	120 km/h for freight trains and 160 km/h for passenger trains	22,5 / C4	750	25 kV AC	Level 2	GC	P/C 45/375
Under construction	CFR	Cața	Apața	Principal line	Rehabilitation of the railway line Brașov – Simeria, component part of the IV European corridor for the trains circulation with a maximum speed of 160 km/h, Section Sighișoara - Brașov	Modernization of the existing conventional electrified double track for increased speed; Implementation of electronic interlocking, ETCS-Level 2 and GSM-R	Works for infrastructure and suprastructure	11	2020	12	2025	609,19	CEF (Cohesion Funds)+ State Budget	120 km/h for freight trains and 160 km/h for passenger trains	22,5 / C4	750	25 kV AC	Level 2	GC	P/C 45/375

Status	IM	Section		Category	Project name	Specification	Note	Start		End		Reached parameters									
		From	To					Month	Year	Month	Year	Estimated Financial Requirements [mil. of EUR]	Financial Sources	Maximum speed [km*h-1]	Axle load [t] / Line category	Maximum Train Length [m]	Traction power	ETCS Level	Track clearance	Intern. Code	
Under tendering	CFR	Constanța	Constanța Port	Principal line	Modernization of the railway infrastructure in Constanța Port - stage I, Valu lui Traian	Modernization of the railway infrastructure in Valu lui Traian Marshalling Yard and in the related railway station, including infrastructure modernization, electrification, introducing the centralized electronic signalization and other auxiliary works	The works are in procurement phase.	n/a	n/a	n/a	n/a	86,97	CEF (Cohesion Funds)+ State Budget	100 km/h for freight trains	22,5 / C4	750	25 kV AC	Level 2	GC	P/C 45/375	
Under construction	CFR	Constanța	Constanța Port	Principal line	Modernization of the railway infrastructure in Constanța Port - stage II	Improving the local railway connections of the Port of Constanța, consisting of: o Valu lui Traian - Palas connection line, including crossing bridge; o Doubling the access line to Constanța Port Ferry Boat; o Modernization of the railway station related to Agigea Lock on Danube-Black Sea Channel.	The application for financing investment is under evaluation phase at CINEA.	n/a	n/a	n/a	n/a	189,52	CEF + State Budget (proposal under evaluation)	100 km/h for freight trains	22,5 / C4	750	25 kV AC	Level 2	GC	P/C 45/376	
Under construction	CFR	Constanța	Constanța Port	Principal line	Modernization of the railway infrastructure in Constanța Port - stage III	Modernization of the line device in the Constanța Port Zone A, Constanța Port Zone B, Constanța Port Mol V, Constanța Port Ferry Boat stations, access line to Constanța Port Ferry Boat, Agigea Sud station	Is under preparation the application for financing the investment	n/a	n/a	n/a	n/a	695,00	CEF (Cohesion Funds) + State Budget (to be proposed)	100 km/h for freight trains	22,5 / C4	750	25 kV AC	Level 2	GC	P/C 45/377	

Status	IM	Section		Category	Project name	Specification	Note	Start		End		Estimated Financial Requirements [mil. of EUR]	Financial Sources	Reached parameters						
		From	To					Month	Year	Month	Year			Maximum speed [km ^h -1]	Axle load [t] / Line category	Maximum Train Length [m]	Traction power	ETCS Level	Track clearance	Intern. Code
Under construction	CFR	Arad	Rontař Marshalling Yard	Principal line	Modernization of the railway line section Arad - Caransebeř	Modernization of the existing conventional electrified single/double track for increased speed; Implementation of electronic interlocking, ETCS-Level 2 and GSM-R	Detailed design under preparation. After its approval works will start	12	2022	12	2026	292,29	NRRP+State Budget	120 km/h for freight trains and 160 km/h for passenger trains	22,5 / C4	750	25 kV AC	Level 2	GC	P/C 45/375
Under construction	CFR	Rontař Marshalling Yard	Timiřoara Est	Principal line	Modernization of the railway line section Arad - Caransebeř	Modernization of the existing conventional electrified single/double track for increased speed; Implementation of electronic interlocking, ETCS-Level 2 and GSM-R	Detailed design under preparation. After its approval works will start	12	2022	12	2026	389,56	NRRP+State Budget	120 km/h for freight trains and 160 km/h for passenger trains	22,5 / C4	750	25 kV AC	Level 2	GC	P/C 45/375
Under construction	CFR	Timiřoara Est	Lugoj	Principal line	Modernization of the railway line section Arad - Caransebeř	Modernization of the existing conventional electrified single/double track for increased speed; Implementation of electronic interlocking, ETCS-Level 2 and GSM-R	Detailed design under preparation. After its approval works will start	12	2022	12	2026	292,84	NRRP+State Budget	120 km/h for freight trains and 160 km/h for passenger trains	22,5 / C4	750	25 kV AC	Level 2	GC	P/C 45/375
Under tendering	CFR	Lugoj	Caransebeř	Principal line	Modernization of the railway line section Arad - Caransebeř	Modernization of the existing conventional electrified single/double track for increased speed; Implementation of electronic interlocking, ETCS-Level 2 and GSM-R	The contract for design and works execution is under re-evaluation phase (the procurement procedure was contested)	n/a	n/a	12	2026	444,04	NRRP+State Budget	120 km/h for freight trains and 160 km/h for passenger trains	22,5 / C4	750	25 kV AC	Level 2	GC	P/C 45/375

Status	IM	Section		Category	Project name	Specification	Note	Start		End		Estimated Financial Requirements [mil. of EUR]	Financial Sources	Reached parameters						
		From	To					Month	Year	Month	Year			Maximum speed [km ³ h ⁻¹]	Axle load [t] / Line category	Maximum Train Length [m]	Traction power	ETCS Level	Track clearance	Intern. Code
In procurement	CFR	Caransebeș	Craiova	Principal line	Rehabilitation of the railway line section Caransebeș - Craiova	Modernization of the existing conventional electrified single/double track for increased speed; Implementation of electronic interlocking, ETCS-Level 2 and GSM-R	The tender documentation for the acquisition of works are in preparation.	12	2023	12	2030	2188,36	TP 2021-2027 (Cohesion Funds) + State Budget	120 km/h for freight trains and 160 km/h for passenger trains	22,5 / C4	750	25 kV AC	Level 2	GB + GC	P/C 45/375
Under construction	CFR	Cluj-Napoca	Aghireș	Diversiory line	Electrification and rehabilitation of the railway line section Cluj - Oradea - Episcopia Bihor - Border RO/HU	Modernization of the existing conventional electrified single/double track for increased speed; Implementation of electronic interlocking, ETCS-Level 2 and GSM-R	Detailed design under preparation. After its approval works will start	1	2023	12	2026	327,61	NRRP + State Budget	80 km/h for freight trains and 120 km/h for passenger trains	22,5 / C4	750	25 kV AC	Level 2	GC	P/C 45/375
Under construction	CFR	Aghireș	Poieni	Diversiory line	Electrification and rehabilitation of the railway line section Cluj - Oradea - Episcopia Bihor - Border RO/HU	Modernization of the existing conventional electrified single/double track for increased speed; Implementation of electronic interlocking, ETCS-Level 2 and GSM-R	Detailed design under preparation. After its approval works will start	1	2023	12	2026	312,10	NRRP + State Budget	80 km/h for freight trains and 120 km/h for passenger trains	22,5 / C4	750	25 kV AC	Level 2	GC	P/C 45/375
Under construction	CFR	Poieni	Aleșd	Diversiory line	Electrification and rehabilitation of the railway line section Cluj - Oradea - Episcopia Bihor - Border RO/HU	Modernization of the existing conventional electrified single/double track for increased speed; Implementation of electronic interlocking, ETCS-Level 2 and GSM-R	Detailed design under preparation. After its approval works will start	1	2023	12	2026	430,41	NRRP + State Budget	80 km/h for freight trains and 120 km/h for passenger trains	22,5 / C4	750	25 kV AC	Level 2	GC	P/C 45/375

Status	IM	Section		Category	Project name	Specification	Note	Start		End		Estimated Financial Requirements [mil. of EUR]	Financial Sources	Reached parameters						
		From	To					Month	Year	Month	Year			Maximum speed [km*h-1]	Axle load [t] / Line category	Maximum Train Length [m]	Traction power	ETCS Level	Track clearance	Intern. Code
Under construction	CFR	Aleșd	Border RO/HU	Diversionsary line	Electrification and rehabilitation of the railway line section Cluj - Oradea - Episcopia Bihor - Border RO/HU	Modernization of the existing conventional electrified single/double track for increased speed; Implementation of electronic interlocking, ETCS-Level 2 and GSM-R	Detailed design under preparation. After its approval works will start	1	2023	12	2026	491,34	NRRP + State Budget	80 km/h for freight trains and 120 km/h for passenger trains	22,5 / C4	750	25 kV AC	Level 2	GC	P/C 45/375
Under construction	CFR	Simeria	Filiași	Diversionsary line	Speed restrictions removal (quick wins) on Livezeni - Simeria line section	Removal of speed restrictions	Works for bottlenecks elimination (quick-wins)	11	2022	11	2024	11,49	NRRP + State Budget	100 km/h for freight trains	22,5 / C4	750	25 kV AC	-	n/a	n/a

France

Line (current situation)							GSM-R		Status of GSM-R				ETCS			Status of ETCS			
No.	From	To	Type	Length of line (km)	Number of tracks	Current train control system	Yes	No	Under realization		Planned		L1	L2	L3	Under realization		Planned	
									Start	Finalization	Start	Finalization				Start	Finalization	Start	Finalization
1.	Strasbourg	Kehl (DE border)	Principal	5	2	NS + GSM-R	x		In operation				-	-	-	-	-	-	-

Germany

No.	Line (current situation)									GSM-R		Status of GSM-R				ETCS			Status of ETCS				
	From	To	Type	From km	To km	Length of line (km)	Number of tracks	VZG	Current train control system	Yes	No	Under realization		Planned		L1	L2	L3	Under realization		note	Planned	
												Start	Finalization	Start	Finalization				Start	Finalization		Start	Finalization
1	Kehl Grenze DE/FR	Appenweier	Principal	0	14,2	14,2	2	4260	PZB	x							x		2026	2028			
2	Appenweier	Rastatt-Süd (via 4000)	Principal	138	102	36	2	4000	PZB	x							x			2025			
3	Appenweier	Rastatt-Süd (via 4280)	Diversionsary	138	102	36	2	4280	PZB; LZB	x							x			2025			
4	Rastatt-Süd	Rastatt	Principal	102	97	5	2	4000	PZB	x							x			2025			
5	Rastatt	Durmshheim (via 4020)	Principal	82,93	74,143	9	2	4020	PZB	x							x			2025			
6	Durmshheim	Karlsruhe	Principal	74,143	60,659	13	2	4020	PZB; LZB	x							x			2025		n.a.	
7	Rastatt	Ettlingen West (via 4000)	Diversionsary	96,501	79,649	17	2	4000	PZB	x							x			2025			
8	Ettlingen West	Karlsruhe	Diversionsary	79,649	72,898	6	2	4000	PZB	x							x			2025			
9	Karlsruhe	Bruchsal	Diversionsary	72,898	51,633	22	2	4000	PZB	x													aft
10	Bruchsal	Heidelberg	Diversionsary	51,633	19,103	33	2	4000	PZB	x													aft
11	Heidelberg	Mannheim	Diversionsary	19,103	0	18	2	4000	PZB	x												tbd	aft
12	Karlsruhe	Hockenheim	Principal	60,659	21,65	39	2	4020	PZB	x							x			2030			
13	Hockenheim	Mannheim	Principal	21,65	0	22	2	4020	PZB	x							x			2030			
14	Mannheim	Darmstadt	Principal			58	2	3601	PZB	x							x		2023	2027			
15	Darmstadt	Aschaffenburg	Principal	33,36	77,7	44		3540	PZB	x													aft
16	Darmstadt	Frankfurt am Main	Diversionsary	27,727	0	28	2	3601	PZB	x							x			2027		tbd	
17	Mannheim	Groß Gerau	Diversionsary	0	56	54	2	4010	PZB; LZB	x							x		2024	2024			

No.	Line (current situation)									GSM-R		Status of GSM-R				ETCS			Status of ETCS				
	From	To	Type	From km	To km	Length of line (km)	Number of tracks	VZG	Current train control system	Yes	No	Under realization		Planned		L1	L2	L3	Under realization		note	Planned	
												Start	Finalization	Start	Finalization				Start	Finalization		Start	Finalization
18	Groß Gerau	Frankfurt am Main	Diversionsary	56	80	25	2	4010	PZB	x							x		2024	2024			
19	Frankfurt am Main	Hanau	Diversionsary	0	22	23	2	3660	PZB	x													aft
20	Hanau	Aschaffenburg	Diversionsary	22	43,2	21	2	3660	PZB	x													aft
21	Aschaffenburg	Gemünden	Principal	89,326	37,797	51	2	5200	PZB	x													aft
22	Gemünden	Waigolshausen	Principal	39,435	0	40	2	5230	PZB	x													aft
23	Waigolshausen	Bamberg	Principal	68,223	0	68	2	5102	PZB	x							x			2030	some parts Bamberg - Ebelsbach-Eltmann		
24	Bamberg	Nürnberg	Principal	62,4	0	62	2	5900	PZB	x							x			2030			
25	Gemünden	Würzburg	Diversionsary	291	327,362	38	2	1733	LZB; PZB	x													aft
26	Würzburg	Nürnberg	Diversionsary			102	2	5910/5900	PZB; LZB	x							x		2028	2030			
27	Nürnberg	Regensburg	Principal	100,57	0	101	2	5850	PZB	x							x		2028	2030			
28	München	Marzling	Principal	0,017	45,47	44	2	5500	PZB	x							x		2030	2033			
29	Marzling	Hagelstadt	Principal	45,47	121,283	77	2	5500	PZB	x												tbd	aft
30	Hagelstadt	Regensburg	Principal	121,28	138,131	17	2	5500	PZB	x							x			2030			
31	Regensburg	Passau	Principal			118	2/2	5500/5830	PZB	x							x			2030		2019	
32	Karlsruhe	Pforzheim	Principal	-4,625	26,262	31	2	4200	PZB	x												tbd	aft
33	Pforzheim	Mühlacker	Principal	26,262	38,903	13	2	4200	PZB	x												tbd	aft
34	Bruchsal	Mühlacker	Diversionsary			33	2/2	4130/4800	PZB	x												tbd	aft
35	Mühlacker	Ludwigsburg	Principal			33	2	4800	PZB	x							x			2030			

No.	Line (current situation)									GSM-R		Status of GSM-R				ETCS			Status of ETCS				
	From	To	Type	From km	To km	Length of line (km)	Number of tracks	VZG	Current train control system	Yes	No	Under realization		Planned		L1	L2	L3	Under realization		note	Planned	
												Start	Finalization	Start	Finalization				Start	Finalization		Start	Finalization
36	Ludwigsburg	Stuttgart	Principal			14	2	4800	PZB	x							x			2030			
37	Stuttgart	Ulm	Principal	0	86	86	2	4813 (SFS)	ETCS only	x							x			2025			
38	Ulm	Augsburg	Principal	85,8	0	86	2	5302	PZB;LZB	x							x		2030	2033			
39	Augsburg	München	Principal	0,017	61,885	62	2	5503	PZB;LZB	x							x		2030	2033			
40	München	Mühldorf am Inn	Diversionsary			85	2/2(1 on 43km)	5510/5600	PZB	x							x		2027	2033			
41	Mühldorf am Inn	Freilassing	Diversionsary	0	65,578	65	1	5723	PZB	x							x		2030	2031			
42	München	Rosenheim	Principal	0,016	64,874	65	2	5510	PZB	x									2027	2030			
43	Rosenheim	Freilassing	Principal	0	81,711	82	2	5703	PZB	x							x		2027	2030			
44	Freilassing	Salzburg	Principal	81,711	88,551	3	2	5703	PZB	x							x		2027	2030			
45	Nürnberg	Marktredwitz	Principal	0,002	124,206	124	2	5903	PZB	x							x		2030	2033			
46	Marktredwitz	Schirnding	Principal	124,21	138,28	14	2	5903	PZB	x							x		2025	2031			
47	Schirnding	Cheb	Principal	138,28	151,468	10	1	5903	PZB	x							x		2019	2025			
48	Regensburg	Schwandorf	Principal	0	42,6	43	2	5860	PZB	x												tbd	aft

Line (current situation)										GSM-R		Status of GSM-R				ETCS			Status of ETCS				
No.	From	To	Type	From km	To km	Length of line (km)	Number of tracks	VZG	Current train control system	Yes	No	Under realization		Planned		L1	L2	L3	Under realization		note	Planned	
												Start	Finalization	Start	Finalization				Start	Finalization		Start	Finalization
49	Schwandorf	Furth im Wald	Principal	0	67,203	68	1	5800	PZB	x												tbd	aft
50	Furth im Wald Germany	Domažlice	Principal	190,83	168,066	23	1	5801	PZB	x												tbd	aft

Czech Republic

Line (current situation)							GSM-R		Status of GSM-R				ETCS			Status of ETCS			
No.	From	To	Type	Length of line (km)	Number of tracks	Current train control system	Yes	No	Under realization		Planned		L1	L2	L3	Under realization		Planned	
									Start	Finalization	Start	Finalization				Start	Finalization	Start	Finalization
1	Česká Kubice st.hr.	Domažlice	Principal	16	1	-		x				after 2023							after 2023
2	Domažlice	Plzeň hl.n.	Principal	60	1	LS Plzeň - Stod		x				after 2023							after 2023
3	Cheb st.hr	Cheb	Principal	12,1	1	INDUSI/PZB	x		-	-	-	-					01/2024		12/2024
4	Cheb	Plzeň hl.n.	Principal	105,9	1/2	LS	x		-	-	-	-		x		11/2019		10/2023	
5	Plzeň hl.n.	Beroun os.n.	Principal	64	2	LS	x		-	-	-	-		x		12/2021		11/2023	
6	Beroun os.n.	Praha - Radotín	Principal	29,2	2	-	x		-	-	-	-							after 2023*
7	Praha - Radotín	Praha Krč	Principal	9,2	1/2	-	x		-	-	-	-							after 2023*
8	Praha Krč	Praha Zahr.město	Principal	5,3	1	-	x		-	-	-	-							after 2023*
9	Praha Zahr.město	Praha Malešice	Principal	4	1	LS	x		-	-	-	-							after 2023*
10	Praha Malešice	Praha-Libeň	Principal	3,9	1	-	x		-	-	-	-							after 2023*
11	Praha Malešice	Praha - Běchovice	Principal	4,3	2	LS	x		-	-	-	-		x					
12	Praha-Libeň	Český Brod	Principal	27,47	3	LS	x		-	-	-	-		x					
13	Český Brod	Kolín	Principal	29,27	3/2		x		-	-	-	-				06/2020		12/2023	
14	Kolín	Česká Třebová	Principal	102	2	LS	x							x					
15	Poříčany	Nymburk hl.n.	Diversiary	15,7	1	-	x												after 2023*
16	Praha-Libeň	Praha Vysočany	Diversiary	1,23	1	LS	x											01/2024	11/2025
17	Praha Vysočany	Lysá nad Labem	Diversiary	29,1	2	-	x											01/2024	11/2025
18	Lysá nad Labem	Nymburk hl.n.	Diversiary	15,3	2	LS	x												after 2023*
19	Nymburk hl.n.	Velký Osek	Diversiary	15	2	LS	x												after 2023*
20	Velký Osek	Kolín	Diversiary	9	2	LS	x												after 2023*
21	Velký Osek	Hradec Králové	Diversiary	51	1	-		x				after 2023							after 2023*
22	Hradec Králové	Choceň	Diversiary	45	1	-		x				after 2023							after 2023*
23	Česká Třebová	Olomouc	Principal	110	2	LS	x							x					
24	Olomouc	Dluhonice	Principal	19	2	LS	x									08/2018		04/2023	
25	Dluhonice	Prosenice	Principal	8,8	2	LS	x									08/2018		04/2023	
26	Prosenice	Hranice na Moravě	Principal	20,4	2	LS	x							x					
27	Dluhonice	Přerov os.n.	Principal	3,4	2	LS	x									08/2018		04/2023	

Line (current situation)							GSM-R		Status of GSM-R				ETCS			Status of ETCS			
No.	From	To	Type	Length of line (km)	Number of tracks	Current train control system	Yes	No	Under realization		Planned		L1	L2	L3	Under realization		Planned	
									Start	Finalization	Start	Finalization				Start	Finalization	Start	Finalization
28	Přerov os.n.	Přerov přednádraží	Principal	1,7	2	LS	x							x					
29	Přerov os.n.	Prosenice	Principal	7,9	2	LS	x							x					
30	Hranice na Moravě	Horní Lideč	Principal	63	2	LS**		x			10/2024	02/2027				10/2024	02/2027		
31	Horní Lideč	Střelná st.hr.	Principal	7	2	LS		x			10/2024	02/2027				10/2024	02/2027		
32	Hranice na Moravě	Ostrava hl.n.	Principal	55,4	2	LS	x							x					
33	Ostrava hl.n.	Dětmorovice	Principal	17,2	2	LS	x							x					
34	Dětmorovice	Český Těšín	Principal	21,1	2	LS	x									05/2022	06/2023		
35	Český Těšín	Mosty u Jablunkova	Principal	29,05	2	LS	x									05/2022	06/2023		
36	Mosty u Jablunkova	Mosty u Jabl. st. hr.	Principal	3,69	2	LS	x									05/2022	06/2023		
37	Výhybna Polanka n/O	Odbočka Odra	Principal	2,1	1	LS	x												after 2023*
38	Ostrava Svinov	Odbočka Odra	Principal	3,64	1	LS	x												after 2023*
39	Odbočka Odra	Odbočka Chotěbuz	Principal	32,03	2	LS	x												after 2023*

*	to be precised in new Czech ERTMS National Implementation Plan conected to TSI CCS 2023
**	except section Hranice na Moravě - Hranice na Moravě město

Slovakia

Line (current situation)							GSM-R		Status of GSM-R				ETCS			Status of ETCS			
No.	From	To	Type	Length of line (km)	Number of tracks	Current train control system	Yes	No	Under realization		Planned		L1	L2	L3	Under realization		Planned	
									Start	Finalization	Start	Finalization				Start	Finalization	Start	Finalization
1	Čadca št.hr.	Žilina	Principal	37	2	ETCS L2 + GSM-R	x		In operation					x		In operation			
2	Lúky pod Makytou	Púchov	Principal	21	2	NS		x	-	-	TBD	2030				-	-	-	2030
3	Púchov	Považská Teplá	Principal	15	2	ETCS L1 + GSM-R	x		In operation				x			In operation			
3	Považská Teplá	Žilina	Principal	27	2	ETCS L1 + GSM-R			In operation				x			In operation			
4	Žilina	Vrútky (Varín)	Principal	21	2	NS		x	2022	2024	-	-		x		2022	2024	-	-
5	Vrútky	Liptovský Mikuláš	Principal	62	2	NS		x	2023	2024	-	-		x		-	-	TBD	2030
6	Liptovský Mikuláš (Lučivná)	Poprad	Principal	58	2	NS		x	2023	2024	-	-		x		2021	2024		
7	Poprad	Spišská Nová Ves	Principal	26	2	NS		x	2023	2024	-	-		x		-	-	TBD	2030
8	Spišská Nová Ves	Kysak	Principal	58	2	NS		x	2023	2024	-	-		x		-	-	TBD	2030
9	Kysak	Košice	Principal	16	2	NS		x	2023	2024	-	-		x		-	-	TBD	2030
10	Košice	Čierna nad Tisou	Principal	94	2	NS		x	2023	2024	-	-		x		-	-	TBD	2030
11	Čierna nad Tisou	Chop (SK-UA border)	Feeder	8	1	NS		x	-	-	TBD	TBD		x		-	-	TBD	TBD
12	Barca	Košice	Feeder	5	2	NS		x	-	-	TBD	2023		x		-	-	TBD	2030
13	Barca	Haniska pri Košiciach	Connecting	6	2	NS		x	-	-	TBD	2050		x		-	-	TBD	2050
14	Vých. Slivník	Maťovce	Diversiary	55	1	NS	PZB	x	-	-	TBD	TBD		x		-	-	TBD	TBD
15	AT-SK border	Bratislava Petržalka	Principal	2	1	NS + GSM-R	x		In operation					x		-	-	TBD	2030
16	Bratislava Peržalka	Rusovce (SK-HU border)	Principal	14	1	NS + GSM-R	x		In operation					x		-	-	TBD	2030

Austria

Line (current situation)							GSM-R		Status of GSM-R				ETCS			Status of ETCS			
No.	From	To	Type	Length of line (km)	Number of tracks	Current train control system	Yes	No	Under realization		Planned		L1	L2	L3	Under realization		Planned	
									Start	Finalization	Start	Finalization				Start	Finalization	Start	Finalization
1	Salzburg	Hallwang E.	Principal	7,5	2	NS	X		In operation					X				2025	2028
2	Hallwang E.	Vöcklabruck	Principal	57,5	2	ETCS/NS	X		In operation					X				2025	2028
3	Vöcklabruck	Wels	Principal	35,2	2	ETCS/NS	X		In operation					X		2021	2023		
4	Passau Germany	Wels	Principal	79,6	2	ETCS/NS	X		In operation					X				2024	2027
7	Wels	Linz	Principal	21,5	2	NS	X		In operation					X		2021	2023		
8	Linz	St. Valentin	Principal	74,5	4	NS	X		In operation					X				2026	2029
9	St. Valentin	Knoten Rohr	Principal	175	4	NS	X		In operation					X				2027	2030
10	Knoten Rohr	St. Pölten	Principal	13,3	3	ETCS/NS	X		In operation					X				2023	2026
11	St. Pölten	Wien	Principal	66,4	2	ETCS/NS	X		In operation					X			x		
12	Wien	Gramatneusiedl	Principal	22,6	2	NS	X		In operation					X				2023	2026
13	Gramatneusiedl	Parndorf	Principal	32	2	NS	X		In operation					X		2021	2024		
15	Parndorf	Kittsee to border	Principal	21	1	NS	X		In operation					X		2021	2024		
16	Parndorf	Nickelsdorf to border	Principal	17	2	NS	X		In operation					X		2021	2024		
17	Wien	Ebenfurth	diversionary				X		In operation										
18	Ebenfurth	Sopron (HU)	diversionary																

Hungary – GYSEV

Line (current situation)							GSM-R		Status of GSM-R				ETCS			Status of ETCS			
No.	From	To	Type	Length of line (km)	Number of tracks	Current train control system	Yes	No	Under realization		Planned		L1	L2	L3	Under realization		Planned	
									Start	Finalization	Start	Finalization				Start	Finalization	Start	Finalization
1	Hegyeshalom	Rajka	Principal	13	1	ETCS L1	x				n/a	n/a	x						
2	Ebenfurth	Sopron	Principal	30	1	INDUSI/PZB		x			n/a	n/a						n/a	n/a
3	Sopron	Győr	Principal	85	1	EVM		x	2019	2022	n/a	n/a						n/a	n/a

Hungary – MÁV

No.	Line (current situation)						GSM-R		Status of GSM-R				ETCS			Status of ETCS				Remark
	From	To	Type	Length of line (km)	Number of tracks	Current train control system	Yes	No	Under realization		Planned		L1	L2	L3	Under realization		Planned		
									Start	Finalization	Start	Finalization				Start	Finalization	Start	Finalization	
1	Hegyeshalom border AT/HU	Hegyeshalom	Principal	4,7	2	EVM	x	-	-	-	-	-	x	-	-	2021	2024	-	-	ETCS L1 2.2.2 version has been switched off because of the upgrade to 3.6.0
2	Hegyeshalom	Győr	Principal	46,5	2	EVM	x	-	-	-	-	-	x	-	-	2021	2024	-	-	ETCS L1 2.2.2 version has been switched off because of the upgrade to 3.6.0
3	Győr	Komárom	Principal	37,4	2	EVM	x	-	-	-	-	-	x	-	-	2021	2024	-	-	ETCS L1 2.2.2 version has been switched off because of the upgrade to 3.6.0
4	Komárom	Tata	Principal	20,1	2	EVM	x	-	-	-	-	-	x	-	-	2021	2024	-	-	ETCS L1 2.2.2 version has been switched off because of the upgrade to 3.6.0
5	Tata	Kelenföld	Principal	68,5	2	EVM	x	-	-	-	-	-	x	-	-	2021	2024	-	-	ETCS L1 2.2.2 version has been switched off because of the upgrade to 3.6.0
6	Kelenföld	Ferencváros	Principal	5,7	2	EVM, ETCS L2	x	-	-	-	-	-	-	x	-	-	-	-	-	-
7	Ferencváros	Kőbánya felső	Principal	4,7	2	EVM	x	-	-	-	-	-	-	x	-	-	-	-	2030	-
8	Kőbánya felső	Rákos	Principal	3,3	2	EVM	x	-	-	-	-	-	-	x	-	-	-	-	2030	-
9	Rákos	Újszász	Principal	76,1	2	EVM	-	x	2018	-	-	-	-	x	-	-	-	-	2050	GSM-R project is paused for an uncertain period of time
10	Újszász	Szolnok	Principal	17,3	2	EVM	-	x	2018	-	-	-	-	x	-	-	-	-	2050	GSM-R project is paused for an uncertain period of time
11	Szolnok	Szajol	Principal	10,3	2	EVM	x	-	-	-	-	-	-	x	-	2014	2024	-	-	-
12	Szajol	Békéscsaba	Principal	85,3	2	EVM	x	-	-	-	-	-	-	x	-	2014	2024	-	-	-
13	Békéscsaba	Lőkösháza	Principal	29	1	EVM	x	-	-	-	-	-	-	x	-	2021	2025	-	-	-
14	Lőkösháza	Lőkösháza border HU/RO	Principal	2,7	1	without	x	-	-	-	-	-	x	-	-	2021	2025	-	-	-

Line (current situation)							GSM-R		Status of GSM-R				ETCS			Status of ETCS				Remark
No.	From	To	Type	Length of line (km)	Number of tracks	Current train control system	Yes	No	Under realization		Planned		L1	L2	L3	Under realization		Planned		
									Start	Finalization	Start	Finalization				Start	Finalization	Start	Finalization	
15	Szajol	Püspökladány	diversionary	67	2	EVM	x	-	-	-	-	-	-	x	-	2019	2024	-	-	
16	Püspökladány	Biharkeresztes	diversionary	50,1	1	without	-	x	2018	-	-	-	-	x	-	-	-	-	2050	GSM-R project is paused for an uncertain period of time
17	Biharkeresztes	Biharkeresztes border HU/RO	diversionary	6,7	1	without	-	x	2018	-	-	-	-	x	-	-	-	-	2050	GSM-R project is paused for an uncertain period of time
18	Ferencváros	Soroksári út	diversionary	1,8	2	EVM	x	-	-	-	-	-	-	x	-	2021	2025	-	-	
19	Soroksári út	Soroksár	diversionary	7,1	1	EVM	x	-	-	-	-	-	-	x	-	2021	2025	-	-	
20	Soroksár	Soroksár-Terminál	diversionary	3,5	1	EVM	x	-	-	-	-	-	-	x	-	2021	2025	-	-	
21	Ferencváros	Kőbánya-Kispest	diversionary	5,1	2	EVM	x	-	-	-	-	-	-	x	-	2014	2024	-	-	
22	Kőbánya-Kispest	Szolnok	diversionary	89,6	2	EVM	x	-	-	-	-	-	-	x	-	2014	2024	-	-	

Romania

Line (current situation)							GSM-R		Status of GSM-R				ETCS			Status of ETCS				Remark
No.	From	To	Type	Length of line (km)	Number of tracks	Current train control system	Yes	No	Under realization		Planned		L1	L2	L3	Under realization		Planned		
									Start	Finalization	Start	Finalization				Start	Finalization	Start	Finalization	
1	Border RO/HU	Km.614	Principal	41,185	2	NS, ETCS L2 + GSM-R not in operation	x		2012	2023				x		2012	2023			In authorisation process to obtain putting in operation
2	Km.614	Ilteu	Principal	78,499	2	NS	x		2018	2024				x		2018	2024			
	Ilteu	Gurasada	Principal	24,531	2	NS	x		2018	2024				x		2018	2024			
	Gurasada	Simeria	Principal	38,546	2	NS	x		2014	2024				x		2014	2024			
3	Simeria	Coşlariu	Principal	91,5	2	NS	x		2014	2024				x		2014	2024			
	Coşlariu	Sighișoara	Principal	72,5	2	NS	x		2014	2024				x		2014	2024			
4	Sighișoara	Cața	Principal	45,061	2	NS	x		2022	2026				x		2022	2026			
	Cața	Apața	Principal	45,721	2	NS	x		2022	2026				x		2022	2026			
	Apața	Brașov	Principal	37,83	2	NS	x		2022	2026				x		2022	2026			
5	Brașov	Predeal	Principal	26,236	2	NS	x				2025	2029		x				2025	2029	
6	Predeal	Câmpina	Principal	50,273	2	NS	x				2024	2028		x				2024	2028	
	Câmpina	Brazi	Principal	41,898	2	NS, ETCS L1 2.2.2 not in operation	x				2024	2028		x				2024	2028	
	Brazi	Buftea	Principal	34,565	2	NS, ETCS L2 + GSM-R in operation	x		2011	2022				x		2011	2022			ETCS L2 + GSM-R putting in operation in 2022
7	Buftea	Chitila	Principal	7,436	2	NS, ETCS L1 2.2.2 not Commissioning	x				2024	2028		x				2024	2028	
	Chitila	Pajura	Principal	3,86	2	NS, ETCS L1 2.2.2 not Commissioning	x				2024	2028		x				2024	2028	
	Pajura	București Băneasa	Principal	1,11	1	NS, ETCS L1 2.3.0d not Commissioning	x				2024	2028		x				2024	2028	
	București Băneasa	Constanța	Principal	218,225	2	NS, ETCS L1 2.3.0d not in operation	x				2024	2028		x				2024	2028	
8	Pajura	București Nord	Principal	5,46	3	NS, ETCS L1 2.3.0d not in operation	x				2025	2029		x						
8	București Nord	București Băneasa	Principal	6,608	1	NS, ETCS L1 2.3.0d not in operation	x				2025	2029		x				2025	2029	
9	Caransebeș	Lugoj	Principal	39,38	1	NS	x		2023	2027				x		2023	2027			
	Lugoj	Timișoara EST	Principal	53,91	1	NS	x		2023	2027				x		2023	2027			

Line (current situation)							GSM-R		Status of GSM-R				ETCS			Status of ETCS				Remark
No.	From	To	Type	Length of line (km)	Number of tracks	Current train control system	Yes	No	Under realization		Planned		L1	L2	L3	Under realization		Planned		
									Start	Finalization	Start	Finalization				Start	Finalization	Start	Finalization	
	Timișoara EST	Ronat Triaj Gr. D	Principal	13,86	1	NS	x		2023	2027				x		2023	2027			
	Ronat Triaj Gr. D	Arad	Principal	54,86	1	NS	x		2023	2027				x		2023	2027			
10	Caransebeș	Strehaia	Principal	166,257	1	NS	x				2024	2028		x				2024	2028	
11	Strehaia	Craiova	Principal	59,916	2	NS	x				2024	2028		x				2024	2028	
12	Craiova	Chitila	Principal	202,862	2	NS	x				no planned date	no planned date		x				no planned date	no planned date	
13	Ploiești	Buzău	diversionary	71,47	2	NS	x				2024	2028		x				2024	2028	
14	Buzău	Făurei	diversionary	40,459	2	NS	x				no planned date	no planned date	x	x				no planned date	no planned date	installation of ETCS level 1 or ETCS level 2 will be decided after feasibility study (according to NIP Romania)
15	Făurei	Fetești	diversionary	89,07	2	NS	x				no planned date	no planned date	x	x				no planned date	no planned date	installation of ETCS level 1 or ETCS level 2 will be decided after feasibility study (according to NIP Romania)
16	Simeria	Livezeni	diversionary	84,306	2	NS	x				no planned date	no planned date	x	x				no planned date	no planned date	installation of ETCS level 1 or ETCS level 2 will be decided after feasibility study (according to NIP Romania)
17	Livezeni	Târgu Jiu	diversionary	48,058	1	NS	x				no planned date	no planned date	x	x				no planned date	no planned date	installation of ETCS level 1 or ETCS level 2 will be decided after feasibility study (according to NIP Romania)

Line (current situation)							GSM-R		Status of GSM-R				ETCS			Status of ETCS				Remark
No.	From	To	Type	Length of line (km)	Number of tracks	Current train control system	Yes	No	Under realization		Planned		L1	L2	L3	Under realization		Planned		
									Start	Finalization	Start	Finalization				Start	Finalization	Start	Finalization	
18	Târgu Jiu	Filiasi	diversionary	70,287	1	NS	x				no planned date	no planned date	x	x				no planned date	no planned date	installation of ETCS level 1 or ETCS level 2 will be decided after feasibility study (according to NIP Romania)
19	Coșlariu	Cluj	diversionary	106,327	2	NS	x				2025	2029		x				2025	2029	
20	Cluj	Aghireș	diversionary	30,41	2	NS	x		2023	2027				x		2023	2027			
	Aghireș	Poieni	diversionary	36,53	2	NS	x		2023	2027				x		2023	2027			
	Poieni	Aleșd	diversionary	52,74	1	NS	x		2023	2027				x		2023	2027			
	Aleșd	Episcopie	diversionary	39,55	2	NS	x		2023	2027				x		2023	2027			
	Episcopie	Border RO/HU	diversionary	7,08	1	NS	x		2023	2027				x		2023	2027			