



Mobility Consultants

Assessment of the rail market in the Western Balkans in terms of capacities, policies, economic and technical level of development of freight and passenger transport segments

MC Mobility Consultants GmbH

Mariahilfer Straße 196/Top 18
A-1150 Wien
office@vienna-mc.com
www.vienna-mc.com



Rail Road Water Air



Ports Green Logistics Logistics Multimodal

Task 2 Report

Client reference number: PS/SRV/RMA/003/2020

Project No. 20010-2

Date: 19092023

Version: 4.0



Management: DI (FH) Holger Eiletz

FN 370345 a Commercial court Vienna, VAT No. = ATU66791046, EORI: ATEOS1000054749

Bank details: Erste Bank AG Wien, Kto-Nr. 29711712000, BIZ: 20111, IBAN: AT132011129711712000, BIC: GIBAATWWXXX

230707_Task 2 Report_Main_Text_V4.0 TCT Status: 230919, Editor: KIRE DIMANOSKI

Project sheet

Project number	P20010-2		
Project title	Assessment of the rail market in the Western Balkans in terms of capacities, policies, economic and technical level of development of freight and passenger transport segments		
Allocation/budget line	TCT Secretariat Fund		
Awarded on	16.09.2022		
	Revision:	Editor:	Date:
	V0.1 – Outline of Report prepared	Wolfgang Rohrer-Schausberger	230224
	V0.2 - Draft Report	TL, KEs	230509
	V1.0 – Delivery to Client	TL	230510
	V1.1 – Revised Draft Report based on the comments received from TCT Secretariat	TL, KEs	230613
Quality Check:		Vassilis Evmolpidis	15.06.2023
	V2.0 – Final Report – Delivery to Client	TL, KEs	16.06.2023
	V3.0 – Revised Final Report – Delivery to Client	TL, KEs	07.07.2023
	V4.0 – Revised by TCT	KD	19.09.2023
	Client	Contractor	Implementing partner
Name:	The Transport Community, represented by the Permanent Secretariat of the Transport Community	MC Mobility Consultants GmbH	
Address:	“Beogradjanka” building, Masarikova 5, 8th floor, 11000 Belgrade, Republic of Serbia	Keiβlergasse 1/3 A-1140 Vienna, Austria	
Tel. number:	+381 11 3131 799/800	+4318923600	
Contact person:	Dejan Lasica Kire Dimanoski	Holger Eiletz	
Email address:	dlasica@transport-community.org kdimanoski@transport-community.org	Holger.eiletz@vienna-mc.com	
Signatures:			
Date:	230707		
Name of the Experts:	Klaus Uhl, Team Leader / EU Acquis Gordan Stojic, Rail Market Monitoring Expert Wolfgang Rohrer-Schausberger, Rail Market Expert/EU Transport acquis Frank Jost, EU Transport acquis Expert Vassilis Evmolpidis, Quality Assurance/Quality Control Expert Andy Zhugli, Local Expert Albania		

	Aleksandar Blagojevic, Local Expert Bosnia and Herzegovina
	Xhevat Ramosaj, Local Expert Kosovo*
	Miroslav Kukavacic, Local Expert Montenegro
	Nikolce Nikoloski, Local Expert North Macedonia
	Sanjin Milinkovic, Local Expert Serbia

* This designation is without prejudice to positions on status and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence.

Content

Project sheet.....	2
Content	4
List of Figures	6
List of Tables	7
Abbreviations	8
Executive summary	11
Recommendations.....	16
1. Introduction	21
1.1. Aim of the Task 2 Report	21
1.2. Legal background	21
1.2.1. The Transport Community Treaty (TCT)	21
1.2.2. Regulation (EU) 913/2010.....	22
1.2.3. Rail freight corridors in the West Balkans region	34
1.3. The competitive position of the West Balkans corridors	35
1.3.1. Logistics Performance Index	36
1.3.2. Corruption Perception Index.....	38
2. Corridor description	38
2.1. Designation of lines and terminals	38
2.2. List of potential railway lines for the RFC in WB	42
2.3. List of potential terminals for the RFC in WB	42
2.3.1. Definition of „terminal“	42
2.3.2. Potential terminals	45
2.4. Bottlenecks	46
2.5. Description of planned changes / improvements	47
2.5.1. North Macedonia	47
2.5.2. Bosnia and Hercegovina	48
2.5.3. Montenegro	49
2.5.4. Serbia	52
2.5.5. Kosovo.....	55
2.5.6. Albania.....	56
2.6. TEN-T Technical Parameters for rail freight corridors	57
2.7. Governance of Rail Freight Corridors.....	59
2.8. Streamlining measures for the TEN-T network	62
3. Transport Market Study	63
3.1. Introduction	63
3.2. Historical development of rail freight corridors in the SEEP	63
3.3. Alpine-Western Balkan Rail Freight Corridor Transport Market Study	64
3.4. Main outcomes of the industry interviews	64
3.4.1. Selection criteria for freight rail transport.....	64
3.4.2. Terminals in the Western Balkans	66
3.4.3. Human resources	66

3.5.	Rail border crossings	67
3.6.	International freight trains	70
3.7.	National transport statistics as forecast basis	71
3.7.1.	Transport statistics	71
3.7.2.	Tentative forecast based on historical statistics	75
3.8.	Forecast scenarios for 2025 and 2030.....	77
3.8.1.	„Business as usual“ scenario	78
3.8.2.	Market-oriented scenario.....	79
3.9.	Summary of Transport Market Study.....	82
4.	List of measures required for RFC	87
4.1.	Coordination of planned temporary capacity restrictions	88
4.1.1.	Lietuvos geležinkelių's case on TCR.....	91
4.2.	Corridor One Stop Shop (OSS).....	92
4.2.1.	Legal tasks and obligations of the C-OSS	92
4.2.2.	The Transport Community Treaty (TCT) and Regulation (EU) 913/2010	93
4.3.	Capacity allocation principles	94
4.4.	Applicants for rail infrastructure capacity.....	94
4.5.	Traffic management.....	95
4.6.	Traffic management in event of disturbance	96
4.7.	Information to be provided.....	96
4.8.	Quality evaluation and new legal operational parameters	97
4.8.1.	Performance Monitoring Report	98
4.8.2.	User Satisfaction Survey	98
4.8.3.	Recommendations.....	99

The Annexes as well as four Appendices are attached as separate files:

- Annex 1 Article 13 of Directive 2012/34/EU as in force
- Annex 2 List of potential railway lines for the RFC in WB
- Annex 3 List of Bottlenecks
- Annex 4 Alpine-Western Balkan Rail Freight Corridor Transport Market Study
- Annex 5 Industry interviews

- Appendix 1: Governance of a Rail Freight Corridor
- Appendix 2: Measures
- Appendix 3 Quality of service on the Rail Freight Corridor
- Appendix 4 Inventory of rail freight facilities

List of Figures

Figure 1 Rail Freight Corridor map 2022	24
Figure 2 Parts of the Implementation Plan	25
Figure 3 Competitive position of the Western Balkan corridors	36
Figure 4 Possible principal routes of Western Balkan RFC	39
Figure 5 Tentative alignment of the Western Balkan European Transport Corridors according to the European Commission	40
Figure 6 Tentative alignment of the Western Balkan European Transport Corridors according to the Council of the European Union	41
Figure 7 Governance structure of a Rail Freight Corridor	59
Figure 8 Organisational structure of Alpine-Western Balkan Rail Freight Corridor	60
Figure 9 Infrastructure managers having founded the Alpine-Western Balkan Rail Freight Corridor	61
Figure 10 Rail freight modal share	72
Figure 11 Rail freight transport performance	72
Figure 12 Cumulated rail freight modal share	73
Figure 13 Total rail freight performance	74
Figure 14 Total road freight performance (2008-2020), without XK and BA)	74
Figure 15 "Business as usual" scenario: average number of international freight trains per country 2025	83
Figure 16 "Business as usual" scenario: average number of international freight trains per country 2030	83
Figure 17 Market-oriented scenario: average number of international freight trains per country 2025 ...	84
Figure 18 Market-oriented scenario: average number of international freight trains per country 2030 ...	84
Figure 19 Competitive position of the Western Balkan corridors	86
Figure 20 Support material on rail freight corridors for Infrastructure Managers provided by RNE	88
Figure 21 Impact of TCR 2024	89
Figure 22 Top ten focus topics of AWB RFC user survey	99

List of Tables

Table 1 Logistics Performance Index 2023 of selected countries	38
Table 2 Corruption Perception Index 2022 of selected countries	38
Table 3 Potential terminals	45
Table 4 Planned future activities on RFC in North Macedonia	47
Table 5 Planned future projects, in case capacity utilisation is over 80%, in North Macedonia	47
Table 6 Description of planned changes/improvements and foreseen implementation period, Bosnia and Herzegovina	48
Table 7 Investment plan 2017-2022, Montenegro	50
Table 8 Planned investment for the next three years, Montenegro	51
Table 9 Current and planned projects for reconstruction and modernisation of rail sections on the network of „Serbian Railways Infrastructure“ JSC	54
Table 10 Description of planned changes/improvements and foreseen implementation period, Kosovo	56
Table 11 Description of planned changes/improvements and foreseen implementation period, Albania	57
Table 12 List of technical parameters required under the TEN-T Regulation: Summary	58
Table 13 Compliance with required technical parameters	58
Table 14 Number of daily trains per border crossing point	70
Table 15 Rail freight modal share	71
Table 16 Rail freight transport performance	71
Table 17 Forecast at country level based on historical developments since 2008	76
Table 18 Assumed input parameters for forecast of international train numbers	76
Table 19 Estimated number of trains 2025 (scenario based on historical transport performance)	77
Table 20 Estimated number of trains 2030 (scenario based on historical transport performance)	77
Table 21 Estimated number of trains 2025, “business as usual” scenario, based on transport performance and adjusted for actual train numbers	78
Table 22 Estimated number of trains 2030, “business as usual” scenario, based on transport performance and adjusted for actual train numbers	79
Table 23 Estimated number of trains 2025 (market-oriented scenario, based on realistic scenario with added market potential from the industry interviews)	81
Table 24 Estimated number of trains 2030 (market-oriented scenario, based on realistic scenario with added market potential from the industry interviews)	81
Table 25 Number of daily trains per border crossing point	82

Abbreviations

Abbreviation	Description
ARGE	Arbeitsgemeinschaft [working group, consortium]
AWB RFC	Alpine-Western Balkan Rail Freight Corridor
BCP	Border crossing point
BiH	Bosna i Hercegovina (Bosnia and Hercegovina)
CEF	Connecting Europe Facility
CEFTA	Central European Free Trade Agreement
CID	Corridor Information Document
CNC	Core Network Corridors
COSCO	China Ocean Shipping Company
C-OSS	Corridor one-stop shop
CPI	Corruption Perception Index
DG MOVE	Directorate-General Mobility and Transport
EBRD	European Bank for Reconstruction and Development
EC	European Commission
EIB	European Investment Bank
EIM	European Rail Infrastructure Managers
ERTMS	European Rail Traffic Management System
ETC	European Transport Corridors
ETCS	European Train Control System
EU	European Union
GA	General Approach
GSM-R	Global System for Mobile Communication-Railway
HSH	Hekurudha Shqiptare (Albanian Railways)
IFI	International Financing Institutions
IM	Infrastructure manager
INF TSI	Technical specifications for interoperability infrastructure
IPA	Instrument for Pre-Accession Assistance
IT	Information technology
KE	Key Expert
L	Length
LPI	Logistics Performance Index
MC	MC Mobility Consultants GmbH
MoU	Memorandum of Understanding
MZ	Makedonski Železnici (Macedonian Railways)
MS	Member State (of EU)
NKE	Non-key Expert
NSA	National Safety Authority
OSE	Organismos Sidirodromon Ellados (Hellenic Railways Organisation)
OSJD	Организация Сотрудничества Железных Дорог (Organisation for Cooperation of Railways)
OSS	One Stop Shop
PAP	Prearranged path
PCS	Path Coordination System
PMB	Preliminary Management Board
REBIS	Regional Balkans Infrastructure Study
RFC	Rail Freight Corridor
RNE	RailNetEurope
RRT	Rail-road-terminals
RU	Railway undertaking
SDG	Sustainable Development Goal
SEEP	South East European Parties
SEETO	South-east Europe Transport Observatory
TAF TSI	Technical specifications for interoperability telematics applications for freight services
TCCCom	Traffic Control Centres Communication

Abbreviation	Description
TCT Secretariat	Transport Community Permanent Secretariat
TCR	Temporary Capacity Restrictions
TC-RW	Technical Committee on Railways
TIS	Train Information System
tkm	Tonne-kilometres
TMS	Transport Market Study
TODIS	Transport Observatory Database Information System
TOM TSI	Technical specifications for interoperability traffic operation and management
ToR	Terms of Reference
TRAN	Transport and Tourism Committee of the European Parliament
TSI	Technical specifications for interoperability
UIC	Union Internationale des Chemins de fer (International Union of Railways)
UN	United Nations
UNECE	United Nations Economic Commission for Europe
V_{max}	Maximum velocity
WB	Western Balkan
WBIF	Western Balkans Investment Framework
ZF Bosnia and Hercegovina	Željeznice Federacije Bosne i Hercegovine
ZRS	Željeznice Republike Srpske
ZRSM	Železnici na Republika Severna Makedonija Transport (Railways of North Macedonia [ZRSM Infrastructure and ZRSM Transport])
ZS	Železnice Srbije
ZTP	Železničko Transportno Preduzeće

The Study uses the **two-letter ISO country codes**:

- AL Albania
- AT Austria
- BA Bosnia and Hercegovina
- BG Bulgaria
- CZ Czech Republic
- DE Germany
- GR Greece
- HR Croatia
- HU Hungary
- IT Italy
- MD Moldova
- ME Montenegro
- MK North Macedonia
- RO Romania
- RS Serbia
- RU Russia
- SI Slovenia
- SK Slovakia
- TR Turkey
- UA Ukraine
- XK Kosovo

Executive summary

The Task 2 Report is part of the wider Project on the “*Assessment of the rail market in the Western Balkans in terms of capacities, policies, economic and technical level of development of freight and passenger transport segments*”.

The Report updates the 2017 Preliminary Implementation Plan, the Transport Market Study, and the Inventory of Rail Freight Facilities for the indicative extension of the Rail Freight Corridors to the Western Balkans with 2021 data and, wherever possible, 2022 data. The predecessor study was carried out by Safège. It was based on 2015 data.

The Report includes the status of transposition of the Regulation (EU) 913/2010 which shall facilitate the inclusion of the Western Balkans in the European Union Rail Freight Corridor network.

Moreover, the Consultant carried out interviews with shippers, logistics operators, railway undertakings/intermodal operators in the SEEP as part of the Transport Market Study to find out the qualitative criteria for network and terminal operation that such decision-makers would require for a shift to rail. Based on such information, a market-oriented forecast was developed for 2025 and 2030.

Finally, the report includes recommendation to address the obstacles in rail services development which were identified during the activities carried out for Task 2.

Updating of corridor and terminal infrastructure inventory

Concerning the inventory of the rail infrastructure and the rail freight facilities, improvement activities happened such as the total overhaul of lines in Serbia and Kosovo and, to a smaller degree, in the other SEEP.

Concerning terminal infrastructure and access to the terminals, only Serbia reported improvement with the upgrading or new establishment of terminals in the Nis and Belgrade industrial areas.

Transport Market Study

43 shippers, logistics operators and railway undertakings/intermodal operators in the SEEP were interviewed to find out the conditions for shifting goods from road to rail. Since the Consultant had recently undertaken interviews in Greece and Central Europe with the same type of questionnaire and is presently carrying out interviews in Romania, Moldova, and Ukraine, the information of more than 100 views and opinions have flown into the market evaluation.

It is interesting to state that the below-mentioned assessment from the market interviews of the SEEP has produced very similar results as those from the neighbouring EU Member States/Ukraine and Moldova:

- Interviews with the decision-makers are very important to know what they wish the rail to offer to shift goods from road to rail.
- Such decision-makers are the ones who at the end of the day render investments in rail infrastructure and terminals attractive, useful, and profitable through their decisions on using rail infrastructure and terminals. Otherwise, investments in rail infrastructure and terminals shall be stranded costs or White Elephants.
- Their principle is: the product shall arrive at the right time, at the right location, in the right condition, at the right price, with a minimum administrative burden.
- **Terminals are decisive for a successful shift to rail.** They are the gateways to the corridors. They are like little streams that make a river – the corridor -.
- Therefore, the **last mile** to the terminals and the shippers' factories – the industrial track - is a decisive element for the shift to rail. Without a satisfactory last-mile rail infrastructure, the best and most expensive investments in the corridors will be wasted money.
- Terminal operators and shippers are ready to co-finance and provide the last miles.
- Internationally attractive terminals should offer at least one (1) train per day in Albania, Kosovo, Montenegro, and North Macedonia, as well as 2-3 trains per day in Bosnia and Hercegovina and Serbia.
- A successful shift to rail would imply a total transport price reduction of 20 % to 30%.

- Lastly, the demand for highly qualified logisticians is a *conditio sine qua non* to lay the ground for further strengthening of the rail sector in the Western Balkans.

In order to avoid the so-called “hockey stick phenomenon”, i.e., even stagnant or declining tendencies start producing growth whenever a forecasting study is carried out, the Consultant applied two approaches for the forecast:

- The “**business as usual**” approach based on historical data starting in 2008, immediately after the Financial Crisis,
- The **market-oriented** approach which used the historical scenario but added the information on future international freight train movements collected through the interviews and from the Consultant’s own market knowledge.

The “**business as usual**” scenario clearly indicates:

- If the historical evolution of international train numbers continues at the same speed as it has happened since 2008 (150 international trains per day at the SEEP borders) and especially since 2018 (90 international trains per day at the SEEP borders), the international train movements inside the SEEP and with the neighbouring countries will further decline to 45-50 trains in 2025 and 30 trains in 2030.
- The proclaimed shift from road to rail will not happen; on the contrary, the shift from rail to road will intensify.

The **market-oriented scenario** clearly indicates:

- The interviews and the market observation have shown a certain readiness of the decision-makers to invest in terminals and to operate new international trains, mostly container trains, in particular shuttle trains with fixed departure and arrival times.
- If such potential is realised, the declining trend can be stopped for most border crossings and the present overall level (2022: 55-60 international trains per day at the SEEP borders) can be maintained and slightly increased (65-70 trains in 2025, 70-75 trains in 2030).

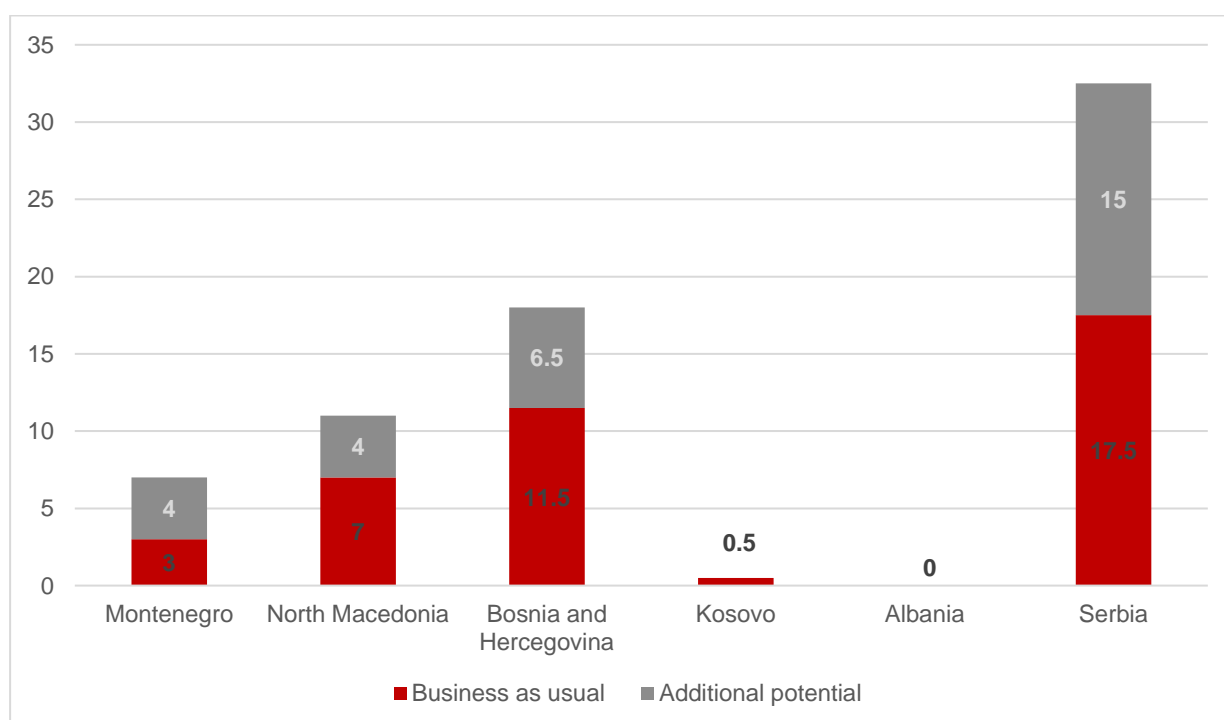


Figure Market-oriented scenario: average number of international freight trains per country 2025

Source: MC Mobility Consultants.

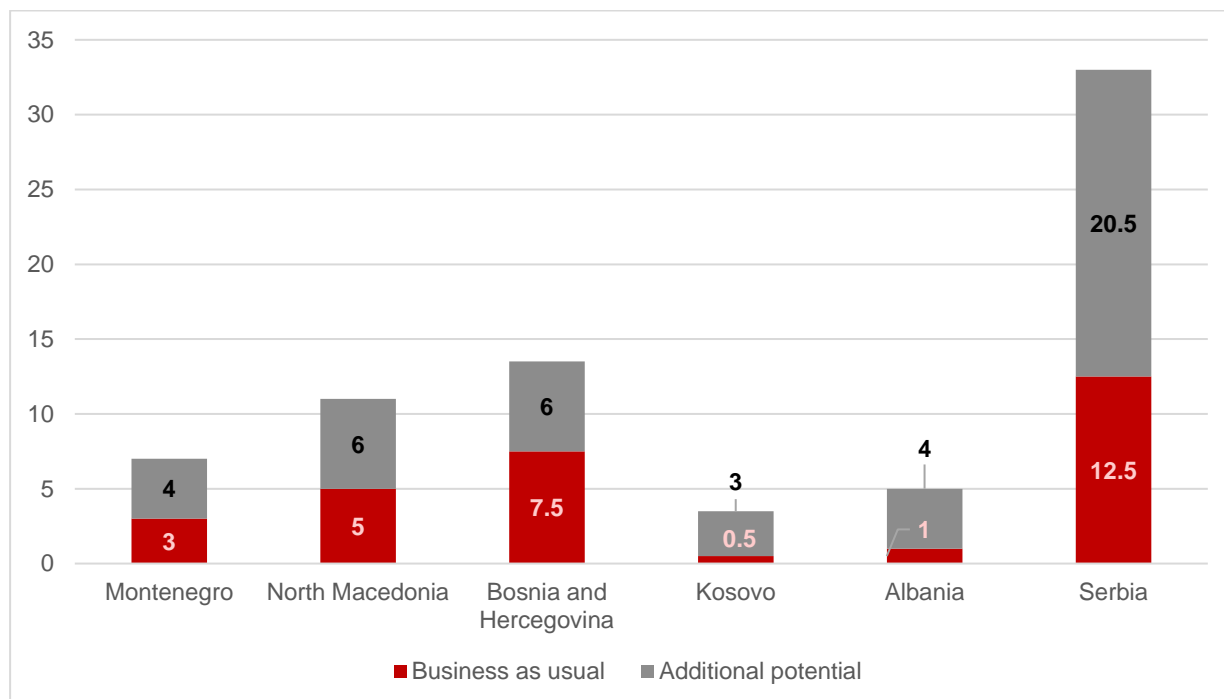


Figure Market-oriented scenario: average number of international freight trains per country 2030

Source: MC Mobility Consultants.

In conclusion:

- The historical scenario indicates a shrinking tendency in modal share and transport performance for international train movements.
- The market information for the second scenario shows that even under a status quo situation, new rail products and initiatives are in preparation, in particular container trains. This tendency shall at least guarantee a certain stability for the future.
- With a fast implementation, even of low-cost investment measures such as last miles and terminal infrastructure improvement, elimination of infrastructure bottlenecks, the future shall show a slight upwards tendency.
- A condition sine qua non is that the market (decision-makers) participate in the decision-making process for investment measures financed and funded by public authorities.
- However, it is important to mention that such future potential international train movements bear a risk due to the fact that there exists sufficient competition with other rail corridors, not to mention the road.

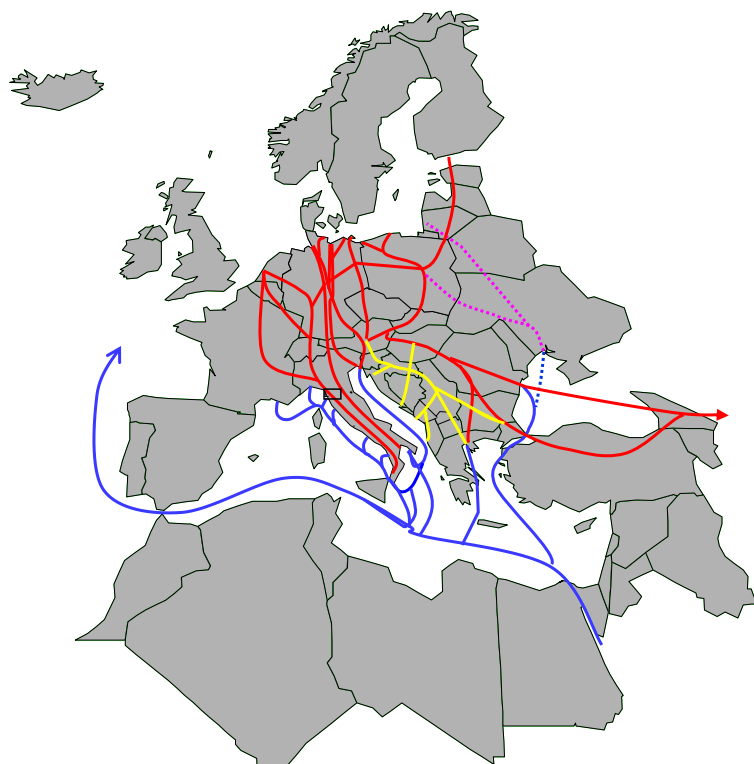


Figure Competitive position of the Western Balkan corridors

Source: MC Mobility Consultants

Update of the 2017 Preliminary Implementation Plan

The EU concept is that the infrastructure managers of a tentative rail freight corridor (RFC) have to draw up a preliminary implementation plan. Such plan shall be approved by the respective EU Member State(s) which also apply for this new RFC that, in turn, shall be approved by the European Commission.

Introduction of the Alpine-Western Balkans Rail Freight Corridor

The Alpine-Western Balkans (AWB) RFC includes a non-EU-Member State, Serbia. The AWB RFC has passed this process, implementation plan has been approved and published.

AWB RFC started operations in January 2020¹.

The purpose of updating the 2017 Preliminary Implementation Plan is to facilitate the extension of the AWB RFC to the entire SEEP transport network and the terminals.

Changes in the EU legal framework

The main legal acts for an RFC are Regulation (EU) 913/2010 on a competitive rail freight network and Directive 2012/34/EU on a Single European Railway Area.

Although Regulation (EU) 913/2010 amended with Regulation (EU) 1316/2013 has need for additional amendments since the legal framework has considerably evolved.

The recast Directive 2012/34/EU, initially adopted in 2012, was significantly amended under the 4th Railway Package in 2016.

Most relevant for the implementation plan is Annex VII on the handling of train paths across borders and the delegated decision of the European Commission in 2017 amending the consultation and capacity allocation process in the case of temporary capacity restrictions.

RailNetEurope (RNE) aligned its user guides for RFC implementation. The Commission's Delegated Decision to replace Annex VII has been drafted in close consultation with RNE.

¹ [Inauguration Day of Alpine - Western Balkan Rail Freight Corridor | AWB RFC \(rfc-awb.eu\)](https://www.rfc-awb.eu/)

Upcoming amendment of the Rail Freight Corridor Regulation (EU) 913/2010 and consequences for the implementation plan

In 2023, the two co-legislators of the EU, the Council of the EU and the European Parliament, completed their first reading of the Commission Proposal to amend the RFC Regulation (EU) 913/2010 as part of the amendment of the TEN-T Regulation (EU) 1315/2013.

The Council's General Approach and the Parliament's Compromise Amendments give some idea of how the measures of the implementation plan should be designed in the near future, probably 2024 or 2025.

Where necessary, the present Report makes reference to these draft legal amendments.

Consequences for the RFC management board

EU Council and European Parliament propose to update the implementation plan every two or four years, whilst Regulation (EU) 913/2010 as in force only provides for 'regular' updates, without further specification. If coming into force, RFC management boards may thus have to update the implementation plans more frequently than in the past.

The implementation plan shall take into account the development of terminals to meet the needs of rail freight by acting as intermodal nodes along the freight corridors. As a consequence, the management board shall take measures to cooperate with regional and/or local administrations in respect of the implementation plan.

The Western Balkans Transport Network, as it will be adopted with the amendments of the TEN-T Regulation, does not include rail-road terminals. However, RFCs and their implementation plans need to include terminals, notably rail-road terminals, sea-rail terminals and inland waterway-rail terminals.

The management board shall introduce consultation mechanisms with a view to the proper participation of the applicants likely to use the freight corridor. In particular, it shall ensure that applicants are consulted before the implementation plan is submitted to the executive board.

Consequences for the RFC infrastructure managers

The infrastructure managers shall focus on the following measures of the Implementation Plan:

- The description of the characteristics of the RFC, notably the terminal access conditions and their publication in a corridor information document.
- The coordination of works to synchronise necessary temporary capacity restrictions on a corridor. Annex VII of Directive 2012/34/EU stipulates in detail the timelines for consultation and capacity allocation during the process of planning these restrictions. The timelines are set taking into consideration the yearly timetable change in early December.
- The allocation of pre-arranged train paths (under the annual timetable planning) and of reserve capacity (for ad-hoc train paths) by the one-stop shop.
- Having in mind the EU accession plans of the SEEPs, the coordination between infrastructure managers regarding traffic management of freight trains running on an RFC line when approaching another network. The Commission proposal stipulates a maximum dwelling time and the arrival in time of a given percentage of freight trains and this shall be goal of the SEEPs as well.
- Traffic management in case of disturbance:
- The use of performance objectives measured through published performance indicators to bring service quality for freight trains up to a desired level. User satisfaction surveys should be carried out.

Pursuant to past or forthcoming amendments, regional infrastructure managers can envisage the following measure as non-priority:

- The recast Directive 2012/34/EU replaced the term 'authorised applicant' with a more accurate definition of applicant, thus taking away previous leeway of the management board to permit or not an entity as applicant.

Recommendations

The recommendations are divided into:

- Recommendations coming from the market (see interviews in the Transport Market Study)
- Recommendations coming from the regulatory side, in particular Regulation (EU) No 913/2010

Recommendations coming from the market:

Recommendation 1: Market network

Enter into direct contact with the market players to build up a network consisting of the regional transport decision-makers that will produce market-oriented information.

- As a result of the contacts, an **advisory group** at TCT level could be developed to regularly exchange proposals and ideas which might result in investment measures.
- **Awareness meetings** should be organised at regular intervals in the SEEP with market decision-makers to discuss investment measures and listen to their advice.

Recommendation 2: Investment measures and last mile

Consult the decision-makers in the market before proposing investment measures financed/funded by public entities to ensure that they receive backing from the market in the investment decision processes.

Finance the last mile between the corridors and the terminals with the possibility of co-financing by the terminal operators in order to ensure an efficient feeder infrastructure to the corridors.

Parts of it have already been mentioned in the Transport Community's Rail Action Plan of October 2020, see Action "Organise stakeholder workshops on the streamlining of technical assistance and financing of the reform of the rail sector and rail infrastructure projects in the Western Balkans (ERA, EU Rail JU, IFIs, EU DELs, DG MOVE, DG NEAR, EU MS...)" (p. 31).

Recommendation 3: The terminal operators

Enter into contact with the SEEP terminal operators:

- To have regular meetings with them to sound out the market situation, in particular investment measures to:
 - Coordinate the investment measures with the TCT Secretariat investment measures or plans.
 - Sound out co-financing measures.
 - Convince them to make available data on their facilities, be it in the Network Statements, in the Corridor Information Document, EIM's databank of rail facilities or in other types of platforms.
- To organise meetings between SEEP terminal operators and operators in the neighbouring EU states in order to promote closer cooperation between the terminals and encourage them to offer regular international train services (so-called shuttle services).

Recommendation 4: Real-time information on the estimated time of arrival

Foster digitalisation of rail operations and provide real-time information on the estimated time of arrival of trains/containers/consignments to logistics operators, shippers, and other parties.

Recommendation 5: Short-and medium-term infrastructure recommissioning and modernisation needs of the market

Implement the following investment measures:

Albania:

- **Most important:** Reconstruction or new construction of the **railway bridge over the Ishëm River**,

destroyed in 2019. If not carried out, there will be no international freight traffic between the industrial centres around Durres and Elbasan, the existing port terminals at Durres Port, new port terminals at the Port Romano and the remaining Western Balkan regions via Montenegro².

- Improvement of the rail access to Port of Durres and new rail access to the new terminal in Porto Romano. Rail access infrastructure to/from/at the Port of Durres is in an abysmal state. Without such investment, road transport will stay predominant.

Bosnia and Herzegovina:

- Increase in train speed and decrease in time spent on technical and commercial inspection of trains as well as time spent on Bosnia and Herzegovina border crossings (internal and external)
- Improvement of access to Port Terminal Brcko

Kosovo:

- Modernisation of the Miradi Terminal and the planned logistics centre in Pristina. Adaptation to modern logistics requirements
- Reopening of Route 10 between Mitrovica – Lesak – Kraljevo for international traffic³.

Montenegro:

- Improvement of the Port of Bar and hence the rail connections to play a major role as gateway for overseas trade exchange.

North Macedonia:

- Modernisation of terminals in the Skopje area as an important turning plate for international freight traffic between North Macedonia/Kosovo and the Greek ports. At a later stage, turning plate for the corridor Bari-Port of Durres-Sofia.
- Models for public-private partnership (PPP) under consideration, such as a new terminal at Trubarevo, but no concrete private partners mentioned nor negotiations or contracts reported contracts.
- Private terminals already exist such as the Fersped and Blue Bell terminals, which have their own rail access (industrial track) to the main rail network.

Serbia:

- Encourage the most recent private terminal operators in the Belgrade and Nis industrial regions to ensure last mile access to the corridors to become turning plates for the One Road One Belt Central European and other freight traffic.

Recommendations from the regulatory side of RFC:

Recommendation 6: Transposition of Regulation (EU) 913/2010 and its forthcoming amendments

Facilitate the transposition of Regulation 913/2010 by the SEEP.

Pursuant to the above comparison between **Regulation 913/2010** and the likely amendments to be introduced by the Council's General Approach and the European Parliament's Compromise, the following conclusions for the SEEP can be drawn:

- The concept of European Transport Corridors requires a stronger integration of network development and operations.
- Responsibility of States and Commission to consider future market needs when deciding on the future evolution of the ETC is reinforced.
- The rules on the transition from RFC to ETC in the GA are not relevant for SEEP, as AWB lines remain in the ETC; Rail Freight ETC in the West Balkan will soon be accepted in a secondary act issued by the Commission.
- SEEP are individually responsible to designate terminal and facilities relevant for ETC according to the needs for the market. This highlights the importance of the present project.

² The railway line Durres to Montenegro has been approved for EU funding and loan from EBRD for reconstruction.

³ Studies are ongoing for the improvement of the line by WBIF, in Kosovo and in Serbia

Recommendation 7: Transparency and non-discriminatory access to service facilities

Continue monitoring the infrastructure managers regarding implementation of transparent and non-discriminatory access:

- Notably terminal access in network statements, CID and on EU portal www.railfacilitiesportal.eu
-
- Reasoning concerning facility operators:
 - Ownership of land or equipment or the legal status of the facility operator (rental, concessionaire, etc), whether public or private, makes no difference when it comes to meeting those legal obligations. This is a difference to the historic form of railway legislation in the West Balkan region.
 - Users of services in facilities need to know what services are supplied, including the availability, the hours of operation and the contacts. Terminal operators and regulatory bodies may have to join forces to resist pressure to discriminate against new entrants. For example, such pressures can be felt when certain users have strong ties with the supplier of the service for they are owners or have contracted a larger share of the capacity for a long time.
- Publish their clearance gauges to support the railway undertakings in checking the route compatibility. (In case of doubt, the railway undertakings should involve the regulatory bodies.)

Some of the proposed measures have already been mentioned in the Transport Community's Rail Action Plan of October 2020, see Action "Publish Network Statement for service facilities (sea and river ports, terminals)" (p. 30).

Recommendation 8: Mutual recognition of vehicle authorisations and availability of rolling stock

Facilitate the cooperation of national safety authorities (NSA) of the SEEP to foster availability of rolling stock.

- The NSAs should facilitate the authorisation process between the SEEP NSAs in a similar way as it is done by ERA for EU Member States.
- The demand for modern container flat wagons and interoperable traction is rising. Various Western European leasing companies are already testing new traction in Serbia, Montenegro, and North Macedonia to receive vehicle authorisations from the national safety authorities (NSAs).
- Based on the positive results of vehicle authorisations in Serbia, Montenegro and North Macedonia, the second largest market, Bosnia and Herzegovina, should apply the same measures for the Ploče-Serbia route and the Ploče-AWB RFC via Samac.
- The leasing of interoperable traction by railway undertakings should further be promoted in Bosnia and Herzegovina, Albania and Kosovo. Where state-owned railway undertakings hesitate to lease their locomotives, the owners should urge them to make available rolling stock in the leasing market. Leasing generates additional positive cash flow to the owners of the rolling stock.

Some of the proposed measures have already been mentioned in the Transport Community's Rail Action Plan of October 2020, see Actions "Take legislative and/or regulatory measures to achieve mutual recognition at regional level of: operating licenses, train driver licenses, safety certificates, vehicle authorization" and "Establish functioning institutions (regulatory body, licensing body, national safety authority, national investigation body, designated body) – including legal, administrative, and budgetary actions" (p. 30) as well as Actions under "Interoperability" (p. 32).

Recommendation 9: The Model Border Crossing Agreement (BCA)

Promote the model BCA⁴ at all internal SEEP BCPs and adjust the BCAs to the market situation by entering into contact with the competent ministries, thus ensuring full conformity with the EU legislation and open access to the SEEP rail networks.

The action is already included in the Action Plan of TCT Secretariat ("Improving rail border crossing/common crossing operations").

⁴ The model BCA had been conceived in 2008 by the predecessor organisation SEETO and applied. The model was implemented for the first time in 2015 for the rail border crossing between Albania and Montenegro and was recently fully implemented for the border crossing between Kosovo and North Macedonia.

TCT Secretariat should contact the **European Commission** to ask them for assistance to introduce new BCAs at **the BCPs with the neighbouring EU Member States**. The European Commission should support TCT Secretariat to contact the respective ministries of the neighbouring EU Member States.

Some of the proposed measures have already been mentioned in the Transport Community's Rail Action Plan of October 2020, see Actions under "Improving rail border-crossing/common crossing operations" (p. 33).

Recommendation 10: One-stop shop

Infrastructure managers should join permanently to provide one-stop shop services "as if"

- International groupings of applicants need pre-arranged train paths and reserve capacity out of one hand for any cross-border train service.
- Infrastructure managers, possibly coordinated by TCT Secretariat, should cooperate in the process of timetable planning and, even more important, the allocation of ad-hoc train paths, "as if" their corridors were already RFC. The reference could be the C-OSS of AWB RFC.
- The following corridors are proposed. The order of priority is based on the number of international trains that cross regional borders and borders with the neighbouring EU Member States:
 - Corridor X Subotica-Greek border
 - Corridor Vc (HU-HR)-Samac-Bosnia and Hercegovina-Ploce (HR)
 - Route Belgrade-Port of Bar
- One-stop shop and infrastructure managers should offer pre-arranged train paths and reserve capacity to applicants as defined in Directive 2012/34/EU. The AWG RFC should apply the definition and requirements of applicants provided in Directive 2012/34/EU and the relevant implementing acts.

Recommendation 11: Infrastructure managers as partners in a harmonised corridor management

Infrastructure managers (IMs) should cooperate inside the SEEP and with the neighbouring IMs regarding:

Temporary capacity restrictions (TCR):

- To coordinate the TCR in accordance with Art. 12 among IM
Reasoning: Coordination and publication of TCR are low hanging fruits to be reaped before RFC are fully operational.
 - Model 1: the case of model border crossing agreement is a good example that can be followed for coordination and publication of TCR.
 - Model 2: RNE's TCR tool will facilitate coordination and publication in a timely, comprehensive and user-friendly way.

Capacity allocation principles:

- To suggest harmonising capacity allocation principles among the infrastructure managers of one SEEP corridor, if possible, with the neighbouring EU infrastructure managers, in an informal way. Such arrangements could also address issues such as TCR, performance scheme, disturbance management, monitoring scheme, and user satisfaction survey.

Performance scheme:

- To start harmonising performance schemes along the corridor for freight trains.
 - Performance schemes, if calibrated in accordance with the need for punctuality of the different services, should provide effective, consistent and realistic signals to shippers, logistics operators, railway undertakings/intermodal operators, and infrastructure managers.

Managing traffic disturbance on RFC:

- Agree on a procedure to be followed in the event of disturbance in accordance with RNE recommendations.
 - The procedure should be submitted for adoption to a preliminary Management Board, waiting for the establishment of further governance bodies, as the Executive Board of the RFC, which have to approve it.
 - The procedure to be followed in the event of disturbance is subject of an RNE specific guideline, more or less already followed by the regional infrastructure managers in their respective

network statements.

Monitoring scheme:

- Develop, together with a future RFC Management Board or the infrastructure managers individually, a Monitoring Scheme including a set of indicators, and consult their clients on the indicator design. This Monitoring Scheme could become a reference for the other infrastructure managers in the Region.

Service quality evaluation (user satisfaction survey):

- Step up efforts for service quality evaluation on rail freight corridors, consult clients on their needs and publish their assessment of the situation as well as the remedial measures taken or planned. Reason: Due to long waiting times at/or near border crossings in the SEEP and dissatisfactory infrastructure conditions on the corridors. Model: AWB RFC user satisfaction survey

Recommendation 12: Corridor management AWB RFC and future RFC

The Management Board of AWB RFC and future RFC shall improve the level of awareness amongst market decision makers, in particular as immediate measures:

- AWB RFC should provide transparency on its level of service quality, whereby recent dwelling times at borders and transshipment times at terminals should be published in accordance with the revised Regulation and compared with targets. Taking into account the “RNE Guidelines – Key Performance Indicators of Rail Freight Corridors” the dwelling times in border sections should constitute a KPI for all the Rail Freight Corridors, including the AWB RFC.
- AWB should provide financial incentives under a harmonised effective performance scheme. The performance scheme as a whole should reconcile in a realistic manner the punctuality requirements of the shippers with the performance targets of the infrastructure manager and the railway undertakings. Regulatory bodies should ensure that net financial flows between the infrastructure manager and the railway undertaking are balanced in a given period if punctuality targets are achieved in that period, such that the performance scheme would not jeopardize the business model of a service but place an incentive to achieve agreed targets.
- AWB RFC should establish and actively market amongst market decision makers its service quality as a brand. The brand would raise awareness amongst market decision makers of the RFC. The brand stands for the commitment of a joint group of rail service providers rather than an individual infrastructure manager or facility operator. “

Recommendation 13: The SEEP regulatory bodies

Facilitate the exchange of best practice through regular meetings with the regulatory bodies of the SEEP

- To reinforce their cooperation, including their cooperation with regulatory bodies in the Union, with a view to decision making where cases in another SEEP are concerned.
- To enable them, through the meetings, to anticipate and promptly remedy potentially discriminatory behaviour notably regarding charges and access conditions of facilities, respecting confidentiality of their sources.
Reason: Such discriminatory problems may intervene in a country in a different way according to the location of the terminal. The only short-term remedy may be for the service provider or a user to ask informally and promptly the regulatory body to intervene without a formal complaint or without revealing the identity of the aggrieved.
- Regulatory bodies should urge infrastructure managers and facility operators, in particular terminal operators, to publish all access conditions and prices.

Some of the proposed measures have already been mentioned in the Transport Community's Rail Action Plan of October 2020, see Action “Establish functioning institutions (regulatory body, licensing body, national safety authority, national investigation body, designated body) – including legal, administrative, and budgetary actions” (p. 30).

1. Introduction

1.1. Aim of the Task 2 Report

The Task 2 Report is part of the wider Project on the “*Assessment of the rail market in the Western Balkans in terms of capacities, policies, economic and technical level of development of freight and passenger transport segments*”.

The specific objective of the Task 2 Report is the transfer of best practices to the indicative extension of the RFC network to the South East European Parties (SEEP) in the Western Balkans.

The expected outputs are:

- Update of the Transport Market Study and its annexes and appendices,
- Update of the inventory of rail freight facilities on the Core Network Corridors in Western Balkan including the recently proposed Western Balkan Corridor,
- Update of the implementation plan in accordance with Regulation (EU) 913/2010 in order to facilitate the inclusion of the Western Balkans into the Rail Freight Corridor network.
- Identify obstacles in rail services development and provide detailed and concrete recommendations on how to address them, both at regional level and at the level of each Regional Partner,

The Task 2 Report updates the 2017 Preliminary Implementation Plan, the Transport Market Study, and the Inventory of Rail Freight Facilities which were based on 2015 data, for the indicative extension of the Rail Freight Corridors to the Western Balkans with 2021 data and, wherever possible, 2022 data.

1.2. Legal background

1.2.1. The Transport Community Treaty (TCT)

The Transport Community Treaty (TCT) aims at creating a transport community between the EU and the six Western Balkan countries: the Republic of Albania, Bosnia and Herzegovina, the Republic of North Macedonia⁵, Kosovo, Montenegro, and the Republic of Serbia.

The TCT covers road, rail, inland waterways, and maritime transport, and designs a transport network.

The TCT entered into force on 1 May 2019. Before, it had provisionally been applied as of 9 October 2017 with Albania, Bosnia and Herzegovina and Kosovo, and, as of 29 November 2017 with Serbia.

The Council Decision (EU) 2017/1937 of 11 July 2017 on the signing, on behalf of the European Union, and provisional application of the Treaty establishing the Transport Community, is the legal approval to the TCT.

The contracting parties of the TCT and the EU, commit to give rail infrastructure access to their passenger and freight railway undertakings. Before full access has been achieved, the TCT provided for two transitional periods whereby the Council, upon a proposal of the Commission, decided on the timing when a SEEP may enter the second transitional period and then again on the full mutual access with the EU network. During the first transitional period any SEEP would transpose and apply the EU rail acquis providing access to its domestic railway undertakings. Once a SEEP passed into the second transitional period, access to its network is open in addition for the railway undertakings of the SEEP that have reached the same transitional period or access to the EU network. At present, no SEEP has requested

⁵ Previously the former Yugoslav Republic of Macedonia

an assessment by the Commission with regards the implementation of the EU railway acquis.

The SEEP agree to refer any legal disputes to the Court of Justice of the EU and to consult with each other on transport issues handled in international organisations and on regional initiatives.

The TCT supports the Trans-European Transport Network (TEN-T). A 5-year rolling work plan, carried out every two years, shall encourage the development of the TEN-T and identify priority projects.

Under the TCT, the SEEP commit to transpose and implement the relevant EU social, environmental and public procurement body of common law 'acquis'⁶ and to ensure that their state aid and competition legislation, when relevant to transport, are gradually aligned with the EU acquis.

The TCT establishes several bodies to support its implementation:

- A Ministerial Council to provide general policy guidelines and review progress,
- A Regional Steering Committee to administer the treaty with the power to establish technical committees,
- A Permanent Secretariat (TCT Secretariat) based in Belgrade to provide administrative support and act as a transport observatory.

The Task 2 Report was prepared on behalf of TCT Secretariat.

1.2.2. Regulation (EU) 913/2010

Regulation (EU) 913/2010, concerning a European rail network for competitive freight^{7,8}, is a further legal instrument, the implementation of which is a legal requirement of the TCT.

For this reason, the Regulation constitutes the basis for the Task 2 Report in order to align the Regional network to the EU transport network.

1.2.2.1. Objectives

The general objective of Regulation (EU) 913/2010 is to develop a European rail network for competitive freight in order to boost rail freight in terms of volume, market share, quality and reliability.

The aim of the Regulation is therefore to establish a Single European Rail Area for rail freight by allowing a smooth interconnection between national networks, focusing on the main international rail freight routes.

The European Commission, identifying a quality challenge, a cost challenge, a service challenge, a political challenge, and a European challenge for rail freight, uses this Regulation to tackle these challenges.

The general objectives are to:

- Improve the quality, i.e., the reliability and punctuality, of freight services (quality challenge);
- Decrease the train operation costs for cross-border services, by increasing the efficiency of train operations (cost challenge).
- Improve the framework conditions for intermodality and new added-value services to emerge, supported by the use of innovative technology and processes (service challenge).
- Increase the policy-making and administrative awareness towards the challenges faced by rail freight, especially by developing cooperation processes among the relevant authorities and the relevant stakeholders (political challenge).

⁶ Article 2 of the TCT defines acquis as "the corpus of legislation adopted by the European Union in order to fulfil its objectives."

⁷ Regulation (EU) No 913/2010 of the European Parliament and of the Council of 22 September 2010 concerning a European rail network for competitive freight (consolidated version 01.01.2014)

⁸ Articles in this report without explicit mentioning of a legal act shall be understood as referring to Regulation (EU) No 913/2010.

- Eliminate the borders for the users of the rail system, in particular for freight operators in the context of a high and increasing share of cross-border freight traffic (European challenge).

The specific objectives of the Regulation are the following:

- Designate key railway corridor lines for international rail freight in line with market requirements.
- Develop efficient and effective governance structures along corridors to tackle obstacles for rail freight.
- Provide sufficient capacity for international rail freight traffic.
- Facilitate access to infrastructure capacity for international rail freight.
- Develop corridor infrastructure with regard to capacity, standards and interoperability.
- Ensure expedient traffic management for freight traffic across borders.
- Improve corridor customer involvement.
- Monitor the quality of service along corridors.

These objectives are further broken down into operational objectives, i.e., or inputs expected to lead to a number of outputs:

Standards and infrastructure enabling the required commercial speed and journey times:

- Coordination of investment along corridors.
- Coordination of infrastructure works along corridors and their coordination with traffic.

Facilitation of cross-border traffic and improvement of intermodality, improving commercial speed and journey times:

- Dedicated capacity for international freight trains.
- Improvement and harmonisation of the technical standards of railway lines.
- Adequate links to other transport modes through intermodal freight terminals.
- Interconnections with third countries.

Facilitated access to capacity:

- Corridor-One Stop Shop (OSS) for capacity applications.
- Widened scope of entities that can apply for capacity.
- Information for corridor use collected in a single document.
- Defined procedures for allocation of capacity.

Management of the RFCs and coordination with concerned Member States:

- Designated railway lines and terminals to RFCs, including diversionary routes.
- Enabling the modification and setting-up of RFCs.
- Set-up of a governance body for Member States.
- Set-up of a governance body for Infrastructure Managers.
- Set-up of advisory groups for railway undertakings and terminal managers.
- Consulting mechanisms for corridors users.
- Performance monitoring of corridors.
- Customer satisfaction monitoring of corridors.
- Harmonised quality targets and sufficient priority for freight trains.
- Regulatory supervision of the RFCs.⁹

⁹ Evaluation and fitness check (FC) roadmap: Evaluation of Regulation (EU) 913/2010 concerning a European rail network for competitive freight. First quarter 2016. https://ec.europa.eu/smart-regulation/roadmaps/docs/2015_move_112_evaluation_european_rail_network_en.pdf

1.2.2.2. Main provisions and articles

According to Article 1, the Regulation applies to the management of railway infrastructure included in the rail freight corridors indicated in the Figure below.

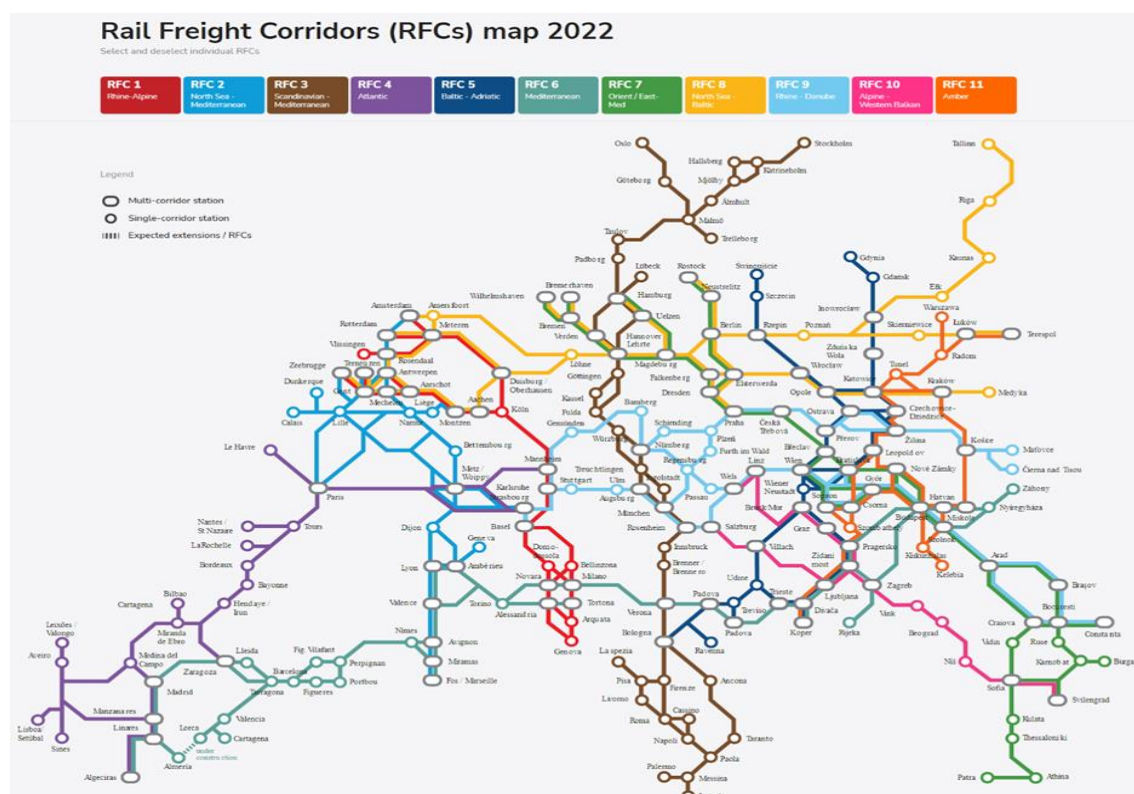


Figure 1 Rail Freight Corridor map 2022 ¹⁰

Article 2 gives definitions, most notably:

- 'Freight corridor'** means all designated railway lines, including railway ferry lines, on the territory of or between Member States, and, where appropriate, European third countries, linking two or more terminals, along a principal route and, where appropriate, diversionary routes and sections connecting them, including the railway infrastructure and its equipment and relevant rail services in accordance with Article 5 of Directive 2001/14/EC 11.
- 'Implementation plan'** means the document presenting the means and the strategy that the parties concerned intend to implement in order to develop over a specified period the measures which are necessary and sufficient to establish the freight corridor.
- 'Terminal'** means the installation provided along the freight corridor which has been specially arranged to allow either the loading and/or the unloading of goods onto/from freight trains, and the integration of rail freight services with road, maritime, river and air services, and either the forming or modification of the composition of freight trains; and, where necessary, performing border procedures at borders with European third countries.

According to Article 9, the management board of the rail freight corridor shall draw up an implementation plan at the latest 6 months before making the freight corridor operational and shall submit it for approval to the executive board. This plan shall include:

¹⁰ RFC Network – RNE

¹¹ Corresponding to Article 13 of Directive 2012/34/EU.

- A description of the characteristics of the freight corridor, including bottlenecks, and the programme of measures necessary for creating the freight corridor.
- The essential elements of the transport market study (see below).
- The objectives for the freight corridors, in particular in terms of performance of the freight corridor expressed as the quality of the service and the capacity of the freight corridor.
- The investment plans.
- The measures to implement the provisions.

The management board shall periodically review the implementation plan taking into account progress made in its implementation, the rail freight market on the freight corridor and performance.

The management board shall carry out and periodically update a transport market study relating to the observed and expected changes in the traffic on the freight 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. This study shall also review, where necessary, the socio-economic costs and benefits stemming from the establishment of the freight corridor.

The implementation plan shall take into account the development of terminals to meet the needs of rail freight running on the freight corridor, in particular by acting as intermodal nodes along the freight corridors.

1.2.2.3. Handbook on the Regulation (EU) 913/2010

The Implementation Plan is further detailed in a 2011 DG MOVE staff working document, the **Handbook on the Regulation**¹².

The Implementation Plan with all its documents shall be completed six months before making the corridor operational. The Transport Market Study plays a central part in the implementation of a corridor.

The picture below provides a visual overview over the parts of the Implementation Plan.

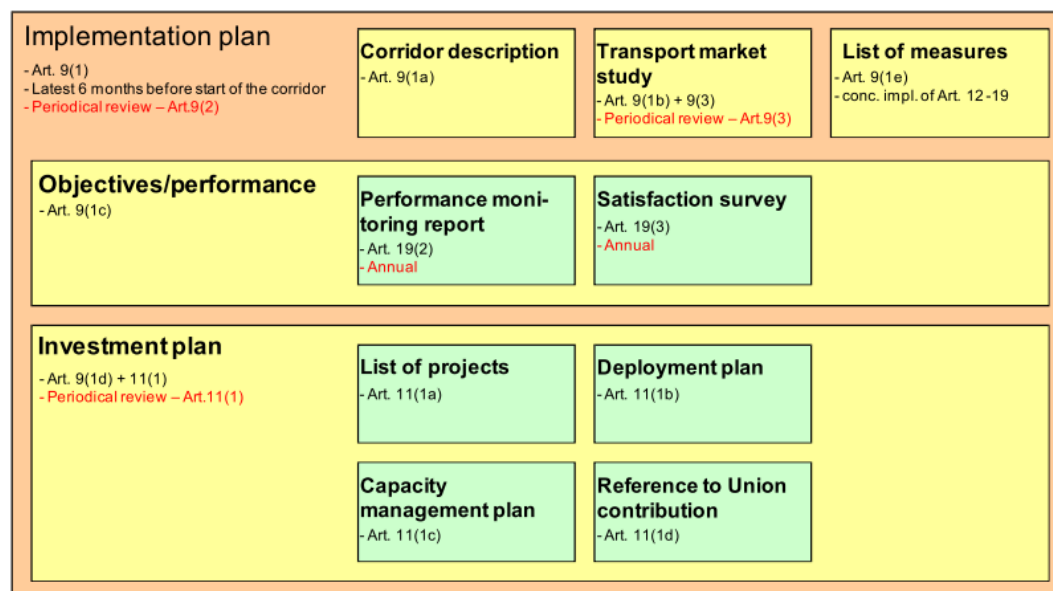


Figure 2 Parts of the Implementation Plan

Source: Handbook on the Regulation concerning a European rail network for competitive freight, Brussels 2011, p. 29

¹² Handbook on the Regulation concerning a European rail network for competitive freight (Regulation EC 913/2010), 30 June 2011.

The Handbook details the elements of the Implementation Plan as outlined in the above figure.

Corridor Description

The description of a corridor should comprise a list of:

- All railway lines/sections designated to a Rail Freight Corridor with precise description of beginning and ending points.
- All terminals designated to a Rail Freight Corridor.

It is recommended to include a map of the Corridor.

The description should also comprise a detailed and systematic description of all infrastructure parameters relevant for rail freight traffic, including, but not limited to:

- a) Maximum train length guaranteeing a flawless run along a whole section of a corridor,
- b) Maximum loading gauge guaranteeing a flawless run along a whole section of a corridor,
- c) The lowest line class on a whole section designated to a corridor,
- d) Maximum gradient in both directions,
- e) Theoretical and practical average path speed for freight trains, defined for a run along a whole section of a corridor (theoretical means for an undisturbed train path),
- f) Type of traction,
- g) Signalling and interlocking systems,
- h) Levels of deployment and compliance with TSIs,

The duration of validity of the information as well as any changes foreseen should be included in the corridor description. Special safety conditions on specific sections of the corridor should be mentioned.

The corridor description should also give detailed information on the capacity that is available and, if relevant, bottlenecks along the Corridor. It should also include an overview over existing and, if known, future traffic patterns (both freight and passenger traffic).

Transport Market Study

The Transport Market Study serves as the basis for the assessment of the customer needs.

Three groups of customers of a corridor are identified and should be taken into account in the study:

- Railway Undertakings and other applicants that operate on the corridor today.
- Railway Undertakings and other applicants which do not operate on the corridor today but might become interested in doing so under conditions to be assessed.
- Other applicants such as shippers, freight forwarders, logistics service providers and other modes' transport operators that are or could be) clients of the Railway Undertakings. In certain cases, transport customers may also be represented as Other Applicants.

Requirements/wishes may be expressed in quantitative terms, for example, but not limited to, journey time, punctuality or in qualitative terms as regards availability of interoperable rolling stocks, simplified procedures for obtaining paths, punctuality track record, train cancellation history etc.

The study should include information on the following aspects:

- The general economic situation in the relevant Member States, and their GDP growth with implications on traffic growth,
- The actual volumes, types of goods, and modal split for the corridor, if meaningful for different sections,
- The expected traffic growth and development of modal split in a corridor,
- The number of trains and their type today and expected in the future,
- The trans-corridor flows, when two or more corridors are connected to each other,
- An analysis of interaction and, if possible and meaningful cooperation with the transport of goods by other modes and their costs/prices,
- Transport customer's (shipper's) requirements regarding today's rail volumes as well as potential future rail volumes,

- Railway undertakings already active along the Rail Freight Corridor by market segment, as well as those potentially interested to operate on the corridor in the future,
- Confidentiality of information has to be ensured, for example by not publishing all information or by only publishing data on an aggregated level,
- The analysis of passenger traffic for the definition of the capacity required at present and in the future,
- The analysis of the current state of the infrastructure in the corridor: characteristics and quality of the infrastructure, identification of bottlenecks and key problems (regarding e.g. interoperability and capacity) along the corridor,
- The analysis of the current supply/traffic production: procedures and their functioning, actual performance and quality (commercial speed, journey time, punctuality....); potential for further improvement,
- The terminal's needs and their development plans, including an analysis of capacities and demand in quantitative and qualitative terms; potential access problems to terminals should also be addressed,
- The rail transport costs, possibly compared with road and inland waterways,
- Quality offered (journey time, commercial speed...), volume transported, and nature of the road traffic.

A comparative analysis of the competitive situation between rail and other modes, primarily road transport should be provided. Road transport in the corridor might be used as a benchmark in terms of quality and costs, if information is available. This would allow to easier identify specific market segments on which rail could better compete if the quality of rail services is improved.

The Transport Market Study could define and address different time-horizons (short, medium, long term) and could include a summary of service plans (without customer details).

When available, information on existing traffic for each section as regards regional/national and international passenger trains (in train per days) and on freight trains (national and international in trains per days) would be useful.

Information on today's journey times and average speeds for freight trains should be given for the entire corridor and/or relevant sections, in particular for cross-border sections.

If available, capacity utilisation of terminals, including variations in utilisation over the day, should be given.

For major marshalling yards information on shortest and average dwell times for wagons for remarshalling between trains should be provided as well as, if relevant, dwell times for trains at border stations. Similarly, information on punctuality should be provided.

Proposed solutions to identified problems that might be incorporated in the Corridor's action plan and timescales for implementing these should also be included.

List of Measures

The Implementation Plan has to contain a list of measures on how the implementation of Articles 12-19 is foreseen (Art.9(1e)). Article 12 concerns the carrying out of works on the infrastructure, Article 13 the establishment of the One-Stop-Shop, Article 14 the framework for the allocation of capacity to freight trains, Article 15 the inclusion of non-railway undertakings among the Authorised Applicants, Article 16 Traffic Management Procedures for the Rail Freight Corridor, Article 17 Traffic Management in the event of disturbance, Article 18 the information to be provided on the conditions of use of the Corridor and Article 19 quality performance schemes along the Corridor.

Performance Monitoring Report

Among the parameters to be provided in the Performance Monitoring Report could be mentioned especially:

- Number of freight trains and total train kilometres.
- Punctuality at specific measuring points (at least the origin and final destination of the trains and all handover points).
- Average speed of freight trains (planned and actual).
- Average number of stops in sidings per 100 train-km.
- Average dwell time in sidings per intermediate stop.
- Deviation in time compared to path request.
- Number of paths rejected (as defined in MoU with EU and Regulatory Bodies) and definitively rejected after the process of conciliation between the OSS and Rus.
- Number of unused paths.
- Response time to ad-hoc path requests.

The Performance Monitoring Report should be published, e.g., on the corridor-OSS website.

The Performance Monitoring Reports should be aligned with the reports on train performance management of RNE in order to ensure a consistent quality of reports.

Satisfaction Survey

The Satisfaction Survey should give a detailed picture of the satisfaction of users with the corridor in quantitative and qualitative terms, addressing the following aspects:

- Network of lines and terminals designated to a corridor (need to add further lines/terminals).
- Infrastructure standards of all designated lines, including diversionary routes, with regards to individual parameters like:
 - train lengths
 - axle loads
 - loading gauges, etc.
- Planned infrastructure maintenance/improvements.
- Provision of information about the corridor.
- Quantity and quality of pre-arranged train paths and ad hoc capacity in terms of e.g., places of origin and destination, journey times, departure- and arrival times.
- Application procedures.
- Traffic management, punctuality, performance regime.
- Handling of complaints.
- Terminal services.
- Scheduling of maintenance works and impact on path allocation.
- Percentage of advisory board opinions taken into consideration by the Management Board of the RFC.
- Comparison with situation before corridor setting up.

The Customer Satisfaction Survey should allow both quantitative (e.g., by a rating scale) and qualitative answers, including the possibility to submit free text comments.

Investment Plan

The Investment Plan has to include an indicative medium-term plan (3-5 years) where the Infrastructure Managers have more precise financial commitments from the Member States and an indicative long-term plan (10 years) indicating the anticipated investments and possible funding options. It shall include the diversionary routes.

Suggested measures to be investigated in the Investment Plan include:

- Longer Trains.
- Heavier axle-loads.
- Increased gross train-weights.
- Larger loading gauges.
- Removal of bottlenecks (additional track, bypasses of congested areas...).

If applicable, the Investment Plan must contain references to financial contributions of the European Union.

Investment Plan

The Investment Plan shall comprise a list of infrastructure projects along a Rail Freight Corridor. This list should also indicate the financial requirements, sources of finance and an indicative time plan for implementation.

Deployment Plan

The Deployment Plan shall provide information on the deployment of interoperable systems along a Rail Freight Corridor, i.e., the implementation of ERTMS.

The Deployment Plan shall fulfil the requirements and technical specifications for interoperability (TSI) and shall be based on a cost-benefit analysis.

Capacity Management Plan

Concrete measures to improve the capacity utilisation should be considered in this plan, e.g.

- Increased train lengths
- Increased loading gauges
- Higher train gross weights
- Increased axle-loads
- Improved speed management

1.2.2.4. Revision of Regulation (EU) 913/2010

The present chapter sets out the outcome of the evaluation of the Regulation. At present, a revision of the closely related TEN-T Regulation, another transport corridor concept, is currently in the legislative process. It has an impact on the present Regulation and might lead either to a subsequent revision of Regulation (EU) 913/2010 or its total substitution.

In the following, a brief description of the revision process is given.

The Regulation (EU) 913/2010 requires the European Commission to submit a report examining the application of the Regulation to the European Parliament and Council by November 2015 (Art. 23). The Commission decided to carry out a **full evaluation** of the Regulation¹³.

The feedback from stakeholders to the public consultation indicated that the RFC concept was the correct approach to tackle challenges in international rail freight. The stakeholders included governance bodies of the RFCs as well as individual customers (freight train operators and other applicants) and other stakeholders from the rail and transport community¹⁴. The feedback also showed support for extending the existing RFCs and the creation of new ones (e.g. RFC 8 North Sea – Baltic).

¹³ Evaluation and fitness check (FC) roadmap: Evaluation of Regulation (EU) 913/2010 concerning a European rail network for competitive freight. First quarter 2016. https://ec.europa.eu/smart-regulation/roadmaps/docs/2015_move_112_evaluation_european_rail_network_en.pdf

¹⁴ Izabela Bacian (European Parliament), Revision of Regulation (EU) 913/2010 concerning a European rail network for competitive freight: Briefing Implementation Appraisal, November 2021.

The legal environment has changed since the adoption of the Regulation in 2010, and includes:

- The development of the Trans-European Transport Network (TEN-T)¹⁵, especially concerning the interrelations and interactions between RFCs and core network corridors on infrastructure development.
- The establishment of the Connecting Europe Facility (CEF)
- The Recast of the First Railway Package¹⁶
- The Fourth Railway Package¹⁷.

Between 2016 and 2018, the share of requested pre-arranged train paths was 33 % to 35 % of the total capacity across the nine freight corridors¹⁸. Where market decision makers do not expect to get capacity under the ad-hoc train path allocation process, the share of PaPs will be higher. Where they are confident to reach capacity just a few days before the train run, railway undertakings will prefer to request ad-hoc train paths. This way, they remain flexible and at the same time minimise the risk of reservation and path cancellation charges for the use of the lines and the terminals.

Furthermore, the rail freight modal share declined between 2011 and 2017 in the majority of Member States. This could signify that the considerable growth potential of trade among the Member States and to their ports had been captured by other modes.¹⁹

Note: In Chapter 3.7.1, the Consultant has come to the same conclusion for the Western Balkan networks.

The 2021 evaluation support study²⁰ co-authored by the Consultant comes to the following conclusions:

- Regulation (EU) 913/2010 has been implemented as far as the designation, governance, investment and management of the freight corridors are concerned.
- In general, the relevant stakeholders have fulfilled the provisions in a formal sense and within their actual scope.
- The Regulation has had a limited impact in achieving its general, specific and operational objectives.

Rail freight corridors had diverse starting positions in terms of capacity use and bottlenecks. Furthermore, they also developed differently: the Rhine Alpine corridor was subject to an unplanned closure for several months in 2017, the Brenner route suffered from partial or complete closure for track maintenance in the period. Whilst rail freight corridors extend over 5 to 10 different networks, international trains will usually not cross more than 3 borders. There is no European market regulator. National regulatory bodies publish little about complaints and decision making on cross border complaints. In sum, methodological constraints, the diversity of capacity use and the partly opaque regulatory situation render difficult general statements across the board of all rail freight corridors.

At present, the Regulation is undergoing a two-step **revision process**. The first step consists of a limited revision, in conjunction with a revision of the Trans-European Transport Network Regulation, focused on European Transport Corridors and investment planning.

a wider revision leading to a recast proposal in near future. To prepare the impact assessment for the second step, the Commission conducted a public consultation on its Better Regulation Portal. 123 citizens, authorities and stakeholders responded. The Commission published a summary of the feedback it received²¹. Stakeholders raised issues such as a lack of coordination in case of planned or unplanned capacity restrictions, uncompetitive prices, poor coordination between line managers and terminals and

¹⁵ Regulation (EU) No 1315/2013 of the European Parliament and of the Council of 11 December 2013 on Union guidelines for the development of the trans-European transport network

¹⁶ Directive 2012/34/EU of the European Parliament and of the Council of 21 November 2012 establishing a single European railway area

¹⁷ The Fourth Railway Package of 2016 The 4th Railway Package was a set of six legislative texts proposed by the European Commission and designed to complete the single market for rail services. (Single European Railway Area). https://transport.ec.europa.eu/transport-modes/rail/railway-packages/fourth-railway-package-2016_en

¹⁸ Izabela Bacian (European Parliament), Revision of Regulation (EU) 913/2010 concerning a European rail network for competitive freight: Briefing Implementation Appraisal, November 2021.

¹⁹ Izabela Bacian (European Parliament), Revision of Regulation (EU) 913/2010 concerning a European rail network for competitive freight: Briefing Implementation Appraisal, November 2021.

²⁰ Evaluation of Regulation (EU) No 913/2010 of the European Parliament and of the Council of 22 September 2010 concerning a European rail network for competitive freight: Evaluation support study: executive summary. 23.04.2021

²¹ [International freight and passenger transport – increasing the share of rail traffic \(europa.eu\)](https://ec.europa.eu/economy_finance/transport/freight/freight_en)

a lack of information and predictability of the time of arrival of shipments. In other words, the issues addressed by the Regulation remain high on the agenda of stakeholders, market decision makers and policy makers.

In detail:

The **European Commission** has issued a proposal for amendment of the Regulation²². It includes the definition of European Transport Corridors that shall replace the Rail Freight Corridors and Core Network Corridors in order to ensure coherence in the network development and enable synergies between the infrastructure and operational aspects of the network as well as to *“avoid duplication, for example the requirement to draw up investment plans under the Rail Freight Corridor Regulation which should be simply removed as such investment plans overlap with the work plans which are regularly prepared by the European TEN-T Coordinators.”* (p. 10-11).

A report by the **European Parliament** can be summarised as such²³:

- Between 2010 and 2012, major market changes occurred that could not have been anticipated, in particular, a change in the commodity structure, with less coal and iron ore transported by rail, higher performance requirements of the rail's customers, the growth of intermodal transport and system digitalisation.
- There are too many corridors such as RFC, TEN-T and ERTMS corridors which are not consistent with each other. They have their own investment plans, deployment of technologies, telematics applications, transport market studies and overlapping responsibilities.
- Lack of a single decision-making body for all freight corridors: Cross-coordination of corridors was not defined in the Regulation.
- National interests, in particular national interests of the monopolistic infrastructure managers did not help rendering corridors attractive.
- The use of the one-stop shop approach was found to be far below expectations as it did not meet the needs of rail freight transport, which required more flexibility. Only 10 % of rail traffic being allocated through one-stop shops.
- Lack of harmonisation at border crossings within the European Union-whereas road and inland waterways do not have borders.
- Lack of existing interfaces between the IT system used by the one-stop shop (path coordination system) and the national systems.
- The existence of separate processes to request train paths, one at national level and one through one-stop shops, with final decision making at national level, did not simplify the use of rail infrastructure.
- Requests for reserve capacity, namely for ad-hoc requests, were found to be unsatisfactory by the railway undertakings, given that many needed to be changed a few days before the actual train runs, and not 30 days before as required.
- Different priority rules in path allocation with some countries favouring passenger transport over freight transport or vice versa, leading to long wait times at the borders.
- Integration of rail freight into multimodal transport had not been enhanced given poor conditions in last-mile connections in need of technological upgrade e.g., loading facilities at terminals.
- No qualitative difference found between freight corridor paths and other paths in terms of journey time, punctuality, and commercial speed.
- Absence of a track and trace system showing the position of trains.
- Lack of coordination between Infrastructure Managers and terminal operators leading to long waiting times.

The European Parliament concludes²⁴: *“While the regulation was conducive to enhanced cooperation*

²² Proposal for a Regulation of the European Parliament and of the Council on Union guidelines for the development of the trans-European transport network, amending Regulation (EU) 2021/1153 and Regulation (EU) No 913/2010 and repealing Regulation (EU) 1315/2013 (COM/2021/812 final), 14.12.2021. <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=COM%3A2021%3A812%3AFIN>

²³ Izabela Bacian (European Parliament), Revision of Regulation (EU) 913/2010 concerning a European rail network for competitive freight: Briefing Implementation Appraisal, November 2021.

²⁴ [https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI\(2021\)694246](https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2021)694246)

across borders, its implementation did not lead to an increase in rail freight transport along the corridors, with insufficient coordination on traffic management and infrastructure works”.

Moreover, the cost of establishing such freight corridors amounted to €55 million of which €35 million had been co-funded by the EU for almost no benefit. A quantitative comparison between the costs that stakeholders had to bear and the benefits resulting from the implementation of the regulation was not possible.

The General Approach of the **Council of Ministers** follows the EC’s idea of integrating RFC and CNC into so-called European Transport Corridors in the revised TEN-T Regulation, which will make it *“necessary to amend Regulation (EU) No 913/2010 in order to adapt its provisions with the view to integrating the Rail Freight Corridors into European Transport Corridors”*²⁵.

Whereas selection process and criteria as well as the procedure to modify RFC is stipulated in the Regulation, the legal base for the definition of European Transport Corridors will be laid out in the new TEN-T Regulation. The Regulation as in force, does not designate terminals not designated, but includes them, where necessary for the functioning of the RFC, in the definition of RFC.

Rail-Road-terminals (RRT) are designated in the TEN-T Regulation under the General Approach, whilst no RRT have been included in the ETC of the WB region. Regulation 913/2010, if amended in accordance with the General Approach, would not change the definition of “freight corridor” significantly, and most other obligations under 913 also remain unaltered. The distinction of a Rail ETC separate for passengers and freight should provide some guarantee that Member States will not lose sight of investments in rail freight infrastructure.

Furthermore, the Regulation, if amended as under the GA, stipulates that freight corridors include “infrastructure and facilities necessary for the freight terminals” in accordance with the list of services as laid down in Annex II of Directive 2012/34. The lines that currently form part of the Alpine West Balkans Rail Freight Corridor remain part of the future European Transport Corridors under the General Approach.

Pursuant to the above comparison between Regulation 913/2010 and the likely amendments to be introduced by the Council’s General Approach, the following **recommendations** for the SEEP can be drawn:

1. The concept of European Transport Corridors will lead to a stronger integration of network development and operations.
2. Responsibility of States and Commission to consider future market needs when deciding on the future evolution of the ETC is reinforced.
3. SEEP should reinforce efforts to transpose Regulation 913/2010.
4. Infrastructure managers in the West Balkan region should publish facility access NOW, notably terminal access in network statements, CID and on EU portal www.railfacilitiesportal.eu . (At this point, only Serbia published 3 RRT on that portal).
5. The rules on the transition from RFC to ETC in the GA are not relevant for SEEP, as AWB lines remain in the ETC; Rail Freight ETC in the West Balkan soon shall be accepted in a secondary act issued by the Commission.
6. Each SEEP is responsible to designate terminal and facilities relevant for ETC according to the needs for the market. This highlights the relevance of the present project.

The Transport and Tourism (TRAN) Committee of the **European Parliament** adopted its Compromise

²⁵ Council of the European Union, Proposal for a Regulation of the European Parliament and of the Council on Union guidelines for the development of the trans-European transport network, amending Regulation (EU) 2021/1153 and Regulation (EU) No 913/2010 and repealing Regulation (EU) 1315/2013 - General Approach. Brussels, 6 December 2022.

Amendments²⁶ to the Commission Proposal for a new TEN-T Regulation on 15 April 2023. Regarding the Terms of Reference, two aspects of that proposal are relevant: Firstly, the amendments to Regulation 913/2010 and secondly, the amendments to the West Balkans Transport Network (maps). The TRAN Committee casted its vote unanimously, so that trilogue of Parliament, Council and Commission could start before the 2023 summer break.

As to Article 9 of Regulation 913 as proposed for amendment, the management board shall carry out and periodically update a transport market study relating to the observed and expected changes in the traffic on the freight corridor, covering the different types of traffic, both regarding the transport of freight and the transport of passengers. This study shall also review, where necessary, the socio-economic costs and benefits stemming from the development of the freight corridor. The TRAN Committee requested to delete both the obligation for the market study and the review of the socio-economic costs and benefits from the development of the freight corridor. Evidently, the deletion would not affect the need or the obligation to carry out such analysis in the process of network development or in the wake of infrastructure projects. The consultant demonstrates, later in this report, why market studies and the consultation of market decision makers are of key importance for the success of the West Balkans Rail Corridor. The TRAN Committee seems to have realised this, given that it reinforces the need for cooperation and consultation of all parties in the process of investment planning in Article 11 (3) of Regulation 913/2010 to be amended. Regarding the same paragraph, the Parliament inserts the need to upgrade infrastructure according to TEN-T requirements in the context of investment planning.

The Compromise Amendment provides for transparency on specific features of service quality of the rail freight corridor. Such a market-oriented approach had successfully been pioneered by the Infrastructure Managers on the South-East axis to attract flows from and to Turkey and Asia by Arge Korridor X. The operators concerned have marketed their services under the brand of “Arge Korridor X” under the form of a legal entity.

Recommendations:

Arge Korridor X concerned a similar axis and a similar transport market as AWB RFC. The interviews conducted by the Consultant revealed that AWB RFC had not yet reached a similar level of awareness amongst market decision makers as the brand Arge Korridor X.

Therefore, the Consultant recommends:

1. AWB RFC should provide transparency on its level of service quality, whereby recent levels of dwelling times at borders and transshipment times at terminals should be published and compared with pre-set targets.
2. AWB should provide financial incentives under a harmonised effective performance scheme. The performance scheme, as a whole, should reconcile in a realistic manner the punctuality requirements of the shippers with the performance targets of the Infrastructure Manager and the railway undertakings. Regulatory bodies should ensure that net financial flows between the Infrastructure Manager and the railway undertaking are balanced in a given period if punctuality targets are achieved in that period, such that the performance scheme would not jeopardize the business model of a service but place an incentive to achieve agreed targets.

AWB RFC should establish, and actively market amongst market decision makers, its service quality under the form of a brand. The brand would raise awareness amongst market decision makers of the RFC. The brand stands for the commitment of a joint group of rail service providers rather than an individual Infrastructure Manager or facility operator. “

With regards to the maps, the Parliament requests mainly three points:

1. Adding the following to the map of European Transport corridors: Prolong the Western Balkans Corridor from Durres (Albania) across the Adriatic Sea to Bari (IT) and connect, via Tirana²⁷ (Albania), to Skopje (North Macedonia) and Sofia (BG). (Amendment 3 of Annex III to the new TEN-T Regulation).

²⁶ [Compromiseamendments-TEN-T_final_EN.pdf \(europa.eu\)](#), COMPROMISE AMENDMENTS on Proposal for a regulation of the European Parliament and of the Council Guidelines for the development of the trans-European transport network, amending Regulation (EU) 2021/1153 and Regulation (EU) No 913/2010 and repealing Regulation (EU) 1315/2013, 2021/0420(COD)

²⁷ In fact, the line from Bari goes from Durres (in future Romano) directly to Rroghozina-Elbasan-Lin-Skopje, and not via Tirana.

2. Adding the following to the corridor Western Balkans: - Sofia - Skopje - Durres - Igoumenitsa (road, rail freight and rail passengers, for the entire section).
3. Upgrading the port of Ploce from the comprehensive to the core transport network.

The map, like the one attached to the Commission proposal, does not include railroad terminals, but only certain ports on the Eastern Adriatic.

Important note: Since the legislative revision process is still underway and the coming into force of a revised Regulation (EU) 913/2010 or any other regulation cannot be forecasted, the Consultant shall continue using Regulation (EU) 913/2010 as in force, as the legal basis for Task 2. References to provisions under amendment will be made in the present report as appropriate and possible in June 2023.

1.2.3. Rail freight corridors in the West Balkans region

Given that Regulation EC 913/2010 concerning the European rail network for competitive freight allows the extension of the RFC also to non-EU countries - upon the condition that EU territories are connected by means of this extension – the establishment of the Rail Freight Corridors in the Western Balkans can become reality with the new TEN-T Regulation.

At this point in fact, RFC 10 Alpine-Western Balkans²⁸ crosses the network of ZS Infrastruktura.

A new rail freight corridor, the Alpine-Western Balkan (AWB RFC), has been formally established in accordance with the Regulation (EU) No 913/2010²⁹. This regulation lays down rules for the establishment and organisation of international rail freight corridors with a view to the development of a European rail network for competitive freight. In accordance with Article 5(5) of Regulation (EU) No 913/2010, the ministries from Austria, Slovenia, Croatia, Serbia, and Bulgaria, responsible for rail transport, jointly sent a letter of intent to the European Commission with a proposal to establish this new rail freight corridor on the territory of these four EU member states and of Serbia. The Commission examined the proposal and adopted the implementing decision (EU) 2018/50030, which represents the basis for the establishment of this corridor. The new Alpine-Western Balkan principal route consists of the following lines:

- Salzburg-Villach-Ljubljana
- Wels/Linz-Graz-Maribor-
- Zagreb-Vinkovci/Vukovar-Tovarnik-Beograd-Sofia-Svilengrad (Bulgarian-Turkish border).

According to Regulation (EU) No 1315/2013³¹, most of the length of the AWB RFC principal route lines on the territory of EU member states is part of the TEN-T core network, and, as regards Serbia, the indicative core network³². The other sections envisaged for implementing the principal route are part of the comprehensive network. In addition, the central part of RNE corridor C11 includes the main route of the proposed rail freight corridor from Salzburg to the Bulgarian/Turkish border. The railway infrastructure along the corridor is therefore subject to the EU TEN-T development legislation and technical interoperability standards for railway infrastructure subsystems (INF TSI), Traffic Operation and Management (TOM TSI) and Telematics Applications for Freight Services (TAF TSI).

The establishment of the new Alpine-Western Balkan RFC is financed with funds from the Connecting Europe Facility (CEF). The four Infrastructure Managers from the EU Member states signed the Grant Agreement No INEA/CEF/TRAN/M2016/PSARFC10 in June 2018. According to the time plan set in the agreement, the new corridor was established and fully functional since June 2019.

²⁸ [Documents | AWB RFC \(rfc-awb.eu\)](#)

²⁹ Regulation (EU) No 913/2010 concerning a European rail network for competitive freight (OJ L 276, 20.10.2010).

³⁰ Commission implementing decision (EU) 2018/500 of 22 March 2018 on the compliance of the proposal to establish the Alpine-Western Balkan rail freight corridor with Article 5 of Regulation (EU) No 913/2010 of the European Parliament and of the Council (OJ L 82, 26.3.2018).

³¹ Regulation (EU) No 1315/2013 of the European Parliament and of the council of 11 December 2013 on Union guidelines for the development of the Trans-European Transport Network and repealing Decision No 661/2010/EU (OJ L 348, 20.12.2013).

³² Commission Delegated Regulation (EU) 2016/758 of 4 February 2016 amending Regulation (EU) No 1315/2013 of the European Parliament and of the Council as regards adapting Annex III thereto (OJ L 126, 14.5.2016).

The aim of this preliminary work is to assist the SEEP to the Transport Community Treaty and the regional stakeholders in the process of extending rail freight corridors in accordance with Regulation (EU) No 913/2010 as last amended (“the Regulation”)³³ to the West Balkans and the Proposal of the European Commission for the new TEN-T Regulation.

The SEEP represented in the TCT Regional Committee have committed to transpose Regulation (EU) 913/2010 as laid down in Annex 1 of the Transport Community Treaty as last amended.

The Regulation requires transposing and implementing:

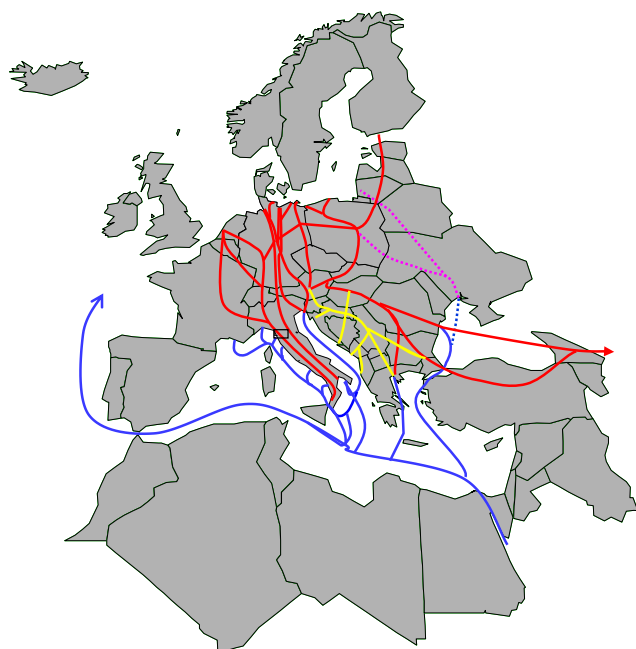
- Directive 2012/34/EU of The European Parliament and of the Council of 21 November 2012 establishing a Single European Railway Area (Recast) as last amended as well as several implementing acts and delegated acts adopted on that basis.
- Regulation (EU) No 1315/2013 of the European Parliament and of the Council. of 11 December 2013 on Union guidelines for the development of the Trans-European transport network and repealing Decision No 661/2010/ EU (Text with EEA relevance)

The European Court of Justice has not published decisions on the Regulation. Decisions of Rail Regulatory Bodies are usually not published.

The European Commission adopted a proposal to amend Regulation (EU) No 1315/2013 in December 2021. The European Commission informed about the Council’s General Approach on those amendments in a news article of 5 December 2022³⁴. According to the ordinary procedure, it will now be up to the European Parliament to deliberate on that General Approach. Although it is speculative at the present stage to anticipate the outcome of the ordinary procedure, the Consultants have hinted in this report where provisions might or might not see amendments.

1.3. The competitive position of the West Balkans corridors

The competitive position of the West Balkan corridors is best illustrated in the following figure.



³³ Legal references in the present report without mentioning of a legal act are meant to refer to Regulation (EU) No 913/2010.

³⁴ [Trans-European transport network: Council agreement paves way for greener, smarter and more resilient transport in Europe \(europa.eu\)](https://ec.europa.eu/transport/en/news/2022/12/05/council-agrees-general-approach-to-amend-transport-guidelines)

Figure 3 Competitive position of the Western Balkan corridors

Source: MC Mobility Consultants

The figure clearly shows that there are many routes and corridors for international supply chains between East Asia, India, Middle East, and Europe, that can avoid the SEEP (in blue and red colours).

Looking at the modal split, the Western Balkan has so far been avoided as a competitive alternative in the international supply chains. The share of maritime transport in modal split is between 80 and 85 % of road transport between 10 and 15 %, and of rail transport between 1 and 3 %.

The only important transcontinental supply chain using the Region's corridors so far has been the COSCO supply chain via the Port of Piraeus in Greece to the Region and the Czech Republic and Austria. The positive aspect is that COSCO uses the rail for about 25 % of its hinterland container transports.

All other transcontinental supply chains which connect the economic powerhouses of Europe with the Asian and African Continents concentrate on the North Adriatic, Ligurian and North Sea ports.

However, as will be shown in Chapter 3.4, the market interviews have indicated that the new global situation may increase the competitiveness of the Region's corridors on the land transport side via container traffic coming from the Southern One Belt One Road routes which are supported by China.

Why have the Region's corridors such a low importance?

The Consultant will present two important benchmarks, the Logistics Performance Index (LPI) and the Corruption Perception Index (CPI), in order to help explain this.

When shippers, logistics operators and moreover, shipping container lines develop services for such transcontinental supply chains, they will closely scrutinise the logistics capacities of the countries they have to cross. If such performance indices indicate logistics or corruption problems, they will be more than hesitant to opt for such countries.

From a logistics point of view, low performance is usually linked with high risk in the realms of reliability, punctuality, security, and higher costs. Even if the costs are low, they are linked with a significant amount of administrative work. The interviews have shown that this is of high concern to the decision-makers.

If corruption is high, the calculated costs for such a supply chain might become volatile due to sudden "cost increases" during the effective transport. Moreover, corruption substantially increases the risk of penal persecution of Western-based industries and logistics operators. The Western anti-corruption legislation also persecutes corruption cases of Western-based companies outside their legal territory. One of the means to minimise corruption in the transcontinental supply chain management is to stay on water as long as possible and to try to avoid as much as possible land transport, in particular with state-owned companies, as much as possible. The above-mentioned modal split is a clear indication.

For these reasons, the Consultant shall present the LPI and CPI for the Region and make comparison with other countries to show at which international level the countries of the Region are situated.

1.3.1. Logistics Performance Index

The Logistics Performance Index (LPI) 2023, issued by the World Bank, is an interactive benchmarking tool created to help countries identify the challenges and opportunities which they face in their performance on trade logistics and what they can do to improve their performance³⁵. The LPI consists of several sub-indices measuring six core components:

- The efficiency of customs and border management clearance, rated from very low (1) to very high (5)

³⁵ <https://lpi.worldbank.org/international/global>

- The quality of trade and transport infrastructure, rated from very low (1) to very high (5)
- The ease of arranging competitively priced shipments, rated from very difficult (1) to very easy (5)
- The competence and quality of logistics services, rated from very low (1) to very high (5)
- The frequency with which shipments reach consignees within scheduled or expected delivery times, rated from hardly ever (1) to nearly always (5)
- The ability to track and trace consignments, rated from very low (1) to very high (5)

The LPI 2023 clearly indicates that the Western Balkan states³⁶:

- Lag considerably behind the EU Member States, even the low-indexed EU Member States. For example, BG or RO (3.2) as the lowest-indexed EU Member States are still higher than the highest-indexed Western Balkan state **North Macedonia (3.1)**,
- **Bosnia and Hercegovina (3.0), Montenegro and Serbia (2.8), Albania (2.5)**, no data for Kosovo: The Western Balkan countries have the level of countries such as Algeria (2.5) and Peru (3.0)
- Are far away from the long-term objective of the average of best performers, which had been defined as Sustainable Development Goal Indicator with 3.8 points for infrastructure quality based on the LPI 2018³⁷,
- Constitute the weak links of the West Balkans corridors, as compared to the North-western (DE, AT, IT, SI, HR) and South-eastern (EL, TR) connecting states,
- Are weaker than the competitive rail Corridor IV via HU, RO, BG.

Rank	Country	Overall score	Customs	Infra-structure	International shipments	Logistics competence and quality	Timeliness	Tracking & Tracing
1	Singapore (best)	4.3	4.2	4.6	4.0	4.4	4.3	4.4
3	Germany	4.1	3.9	4.3	3.7	4.2	4.1	4.2
7	Austria	4.0	3.7	3.9	3.8	4.0	4.3	4.2
19	Greece	3.7	3.2	3.7	3.8	3.8	3.9	3.9
19	Italy	3.7	3.4	3.8	3.4	3.8	3.9	3.9
38	Turkey	3.4	3.0	3.4	3.4	3.5	3.6	3.5
43	Croatia	3.3	3.0	3.0	3.6	3.4	3.2	3.4
43	Slovenia	3.3	3.4	3.6	3.4	3.3	3.3	3.0
51	Bulgaria	3.2	3.1	3.1	3.0	3.3	3.5	3.3
51	Hungary	3.2	2.7	3.1	3.4	3.1	3.6	3.4
51	Romania	3.2	2.7	2.9	3.4	3.3	3.6	3.5
57	North Macedonia	3.1	3.1	3.0	2.8	3.2	3.5	3.2
61	Bosnia and Hercegovina	3.0	2.7	2.6	3.1	2.9	3.2	3.2
61	Peru	3.0	2.6	2.5	3.1	2.7	3.4	3.4
73	Montenegro	2.8	2.6	2.5	2.8	2.8	3.2	3.2
73	Serbia	2.8	2.2	2.4	2.9	2.7	3.4	2.9
79	Ukraine	2.7	2.4	2.4	2.8	2.6	3.1	2.6
97	Albania	2.5	2.4	2.7	2.8	2.3	2.5	2.3
97	Algeria	2.5	2.3	2.1	3.0	2.2	2.6	2.5
97	Moldova	2.5	1.9	1.9	2.7	2.8	3.0	2.8
138	Afghanistan (worst)	1.9	2.1	1.7	1.8	2.0	2.3	1.6
138	Libya (worst)	1.9	1.9	1.7	2.0	1.9	2.2	1.8

³⁶ The World Bank, International Federation for Freight Forwarders Association, University of Turku, Connecting to Compete 2023: Trade Logistics in the Global Economy: The Logistics Performance Index and Its Indicators, p. 32-35.

³⁷ Sustainable Development Report: SDG 9 Indicator: Logistics Performance Index: Quality of trade and transport-related infrastructure

Table 1 Logistics Performance Index 2023 of selected countries

Source: World Bank

1.3.2. Corruption Perception Index

The Corruption Perception Index CPI ranks 180 countries and territories around the world by their perceived levels of public sector corruption. It is the most widely used global corruption ranking in the world. Each country's score is a combination of at least three data sources based on 13 different corruption surveys and assessments. These data sources are collected by institutions like the World Bank and the World Economic Forum. The results are given on a scale of 0 (highly corrupt) to 100 (very clean)³⁸.

As can be seen from the below table reproducing results of the 2022 CPI, the Western Balkan countries are clearly lagging behind the EU Member States. Only Montenegro is ranked better than the "weakest" EU Member State (Bulgaria)³⁹.

Rank	Country	Score
1	Denmark (best)	90
2	Finland	87
2	New Zealand	87
9	Germany	79
21	France	72
41	Italy	56
51	Greece	52
63	Romania	46
65	Cuba	45
65	Montenegro	45
72	Bulgaria	43
84	Kosovo	41
85	India	40
85	North Macedonia	40
101	Albania	36
101	Peru	36
101	Serbia	36
110	Bosnia and Hercegovina	34
110	Indonesia	34
178	South Sudan	13
178	Syria	13
180	Somalia (worst)	12

Table 2 Corruption Perception Index 2022 of selected countries

Source: www.transparency.org

2. Corridor description

2.1. Designation of lines and terminals

The future Extension of RFC to the Western Balkans is roughly oriented North – South. Its principal routes are:

- From the border of Serbia - Hungary, via Subotica and Novi Sad,

³⁸ <https://www.transparency.org/en/news/how-cpi-scores-are-calculated>

³⁹ <https://www.transparency.org/en/cpi/2022>

- From the Croatian border, via Šid, (RFC 10) or
- From the border of Serbia - Romania, via Vršac and Pančevo, to Belgrade.

Then, from Belgrade to:

- Bijelo Polje (Serbia-Montenegro Border) via Resnik, Valjevo, Prijepolje / Vrbnica, then Podgorica and the Port of Bar (Montenegro), or
- Leshak (Serbia-Kosovo Common Crossing Point), via Lapovo, Kraljevo and Rudnica; then to the Miradi Terminal/Pristina and Hani I Elezit (Kosovo – Border with North Macedonia), then to the Tovarna Terminal/Skopje and Gevgelija (North Macedonia- Border GR), then, in Greece, toward the Port of Tessaaloniki, or
- Niš and Ristovac (Serbia-North Macedonia Border) then to Tovarna Terminal, Skopje and to Gevgelija, as above (North Macedonia- Border GR), then, in Greece, toward the Port of Tessaaloniki, or
- Niš and Dimitrovgrad (Border Serbia-BG) then to Sofia and, in BG, toward Kapikule Edirne (Border Bulgaria-Turkey) (RFC 10).

A general map of the possible Principal Routes of the RFC is below. It provided the basis for the 2017 Safège Study.

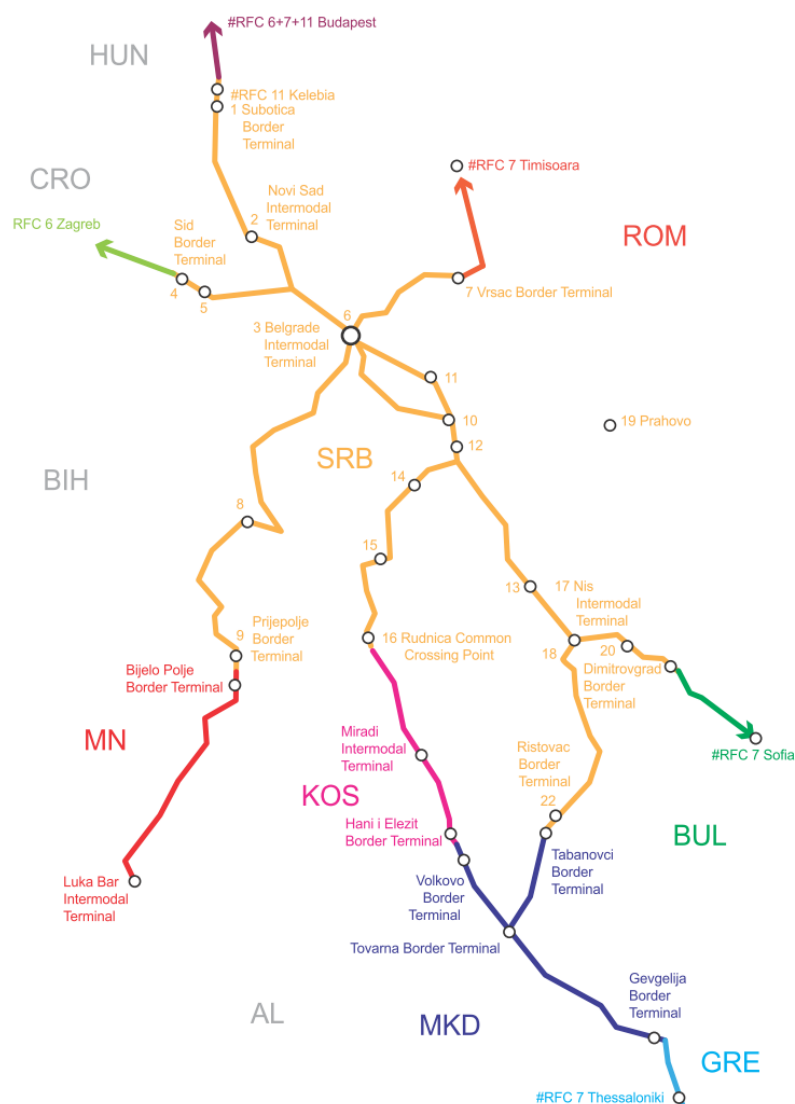


Figure 4 Possible principal routes of Western Balkan RFC

Source: Consortium Safège, Revisiting the SEETO Rail Memorandum of Understanding with a View to Establishing of Rail Freight

Corridor in Western Balkans: Preliminary Implementation Plan, December 2017.

The designation of lines and terminals to the RFC in WB could be amended and updated from time to time based on indications from the Transport Market Study, requests by RUs, comments by Advisory Groups and Applicants, improvements according to the investments in the infrastructure of the corridor and legal changes.

With reference to the ongoing discussion on a possible revision of Regulation (EU) 913/2010 and a new TEN-T Regulation (see Chapter 1.2.2.4), two more maps are added.

The first map below outlines the alignment of the European Transport Corridors that the European Commission proposes for the tentative West Balkan Corridor⁴⁰. It includes the former Corridor Vc (Ploce to RFC 10 in HR via Sarajevo) and the connection of the Albanian railway network to Montenegro.

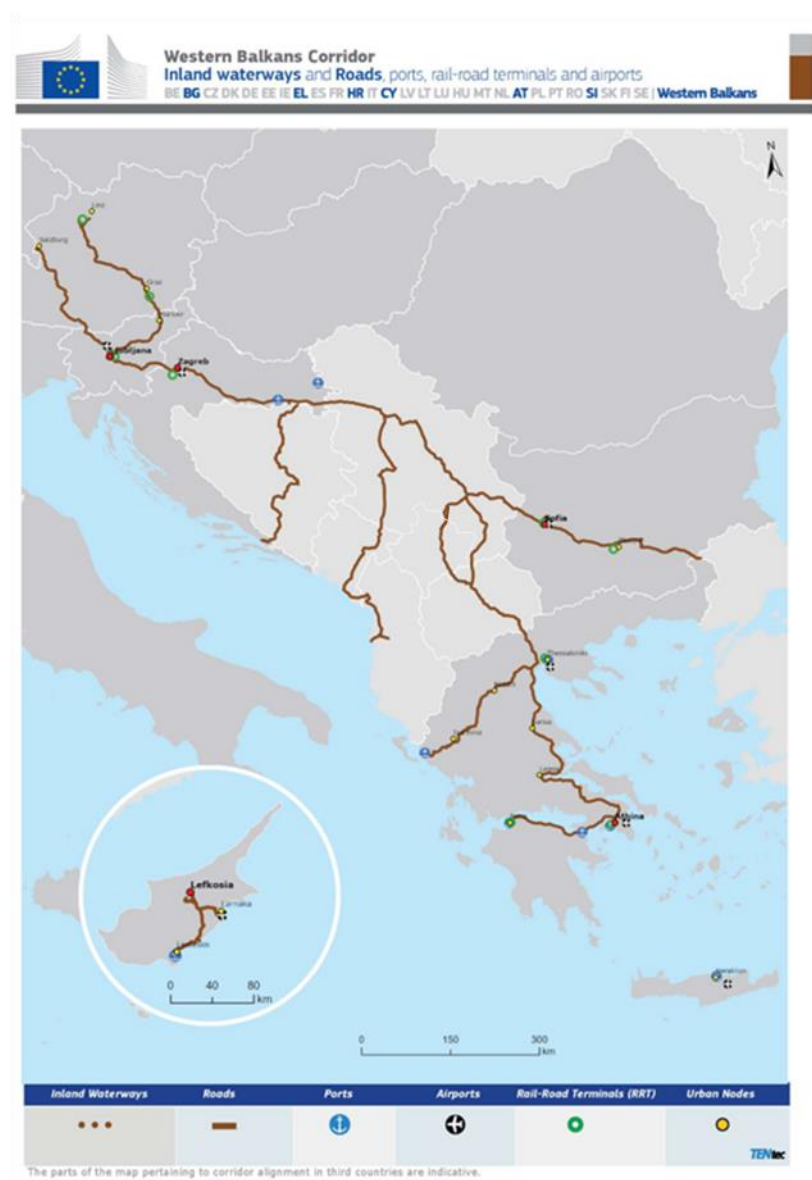


Figure 5 Tentative alignment of the Western Balkan European Transport Corridors according to the European

⁴⁰ Proposal for a Regulation of the European Parliament and of the Council on Union guidelines for the development of the trans-European transport network, amending Regulation (EU) 2021/1153 and Regulation (EU) No 913/2010 and repealing Regulation (EU) 1315/2013 (COM/2021/812 final), Annex III Alignment of the European Transport Corridors, 14.12.2021. <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=COM%3A2021%3A812%3AFIN>

Commission

Source: Proposal for a Regulation of the European Parliament and of the Council on Union guidelines for the development of the trans-European transport network, amending Regulation (EU) 2021/1153 and Regulation (EU) No 913/2010 and repealing Regulation (EU) 1315/2013.

The second map below illustrates the latest status of the ETC in the Region as seen by the General Approach of the Council of Ministers⁴¹ in the trilogue procedure. It furthermore includes the former Corridor VIII from Port of Durres via North Macedonia (Skopje) to Sofia. The new corridor Durres-Sofia added by the Council of Ministers does not yet exist with the exception of a small section between Durres and the Albanian industrial zone of Elbasan.



Figure 6 Tentative alignment of the Western Balkan European Transport Corridors according to the Council of the European Union

Source: Council of the European Union, Annex to the Proposal for a Regulation of the European Parliament and of the Council on Union guidelines for the development of the trans-European transport network, amending Regulation (EU) 2021/1153 and Regulation (EU) No 913/2010 and repealing Regulation (EU) 1315/2013 – General Approach

⁴¹ Council of the European Union, Annex to the Proposal for a Regulation of the European Parliament and of the Council on Union guidelines for the development of the trans-European transport network, amending Regulation (EU) 2021/1153 and Regulation (EU) No 913/2010 and repealing Regulation (EU) 1315/2013 – General Approach. 2021/0420(COD), Brussels, 1 December 2022, Annex III: Alignment of the European Transport Corridors

The Transport Community explicitly supports the Council proposal in a communication from 05.12.2022, illustrating the proposed corridor network in its connection to the neighbouring European corridor network. TCT Secretariat points out that the Proposal would connect several European Union member states (Bulgaria, Greece, Croatia, Italy, Austria, Hungary, and Slovenia) with the Western Balkans⁴².

The Transport and Tourism (TRAN) Committee of the **European Parliament** adopted its Compromise Amendments⁴³ to the Commission Proposal for a new TEN-T Regulation on 15 April 2023. With regards to the maps, the Parliament requests mainly three points:

1. Adding the following to the map of European Transport corridors: Prolong the Western Balkans Corridor from Durres (Albania) across the Adriatic Sea to Bari (IT) and connect, via Tirana (Albania), to Skopje (North Macedonia) and Sofia (BG). (Amendment 3 of Annex III to the new TEN-T Regulation)
2. Adding the following to the corridor Western Balkans: - Sofia - Skopje - Durres - Igoumenitsa (road, rail freight and rail passengers, for the entire section) - Port of Durres
3. Upgrading the Port of Ploce from the comprehensive to the core transport network.

The map, like the one attached to the Commission proposal, does not include rail-road terminals, but only certain ports on the Eastern Adriatic.

As can be seen from the above maps, there are marked differences between the various proposed future WB Corridor alignments. Since the future alignment of the Western Balkans corridors is unclear at the moment, the Consultant will drop the differentiation between designated and tentative corridor lines, made in the 2017 Safege Study. As long as there is no final decision with respect to the future alignment of RFCs in the SEEP, the Consultant has included all existing corridors and routes of the SEEP that might be considered in the future as potential European Rail Corridors.

2.2. List of potential railway lines for the RFC in WB

The list of potential railway lines for the RFC in WB is presented in Annex 2 according to the following subchapters:

- North Macedonia
- Bosnia and Hercegovina
- Montenegro
- Serbia
- Kosovo
- Albania

2.3. List of potential terminals for the RFC in WB

2.3.1. Definition of „Terminal“

Art. 2c of Regulation (EU) 913/2010 defines terminals:

***‘Terminal’** means the installation provided along the freight corridor which has been specially arranged to allow either the loading and/or the unloading of goods onto/from freight trains, and the integration of rail freight services with road, maritime, river and air services, and either the forming or modification of the*

⁴²

<https://www.transport-community.org/news/first-ever-western-balkans-transport-corridor-to-become-reality/>

⁴³ [Compromiseamendments-TEN-T_final_EN.pdf \(europa.eu\)](#), COMPROMISE AMENDMENTS on Proposal for a regulation of the European Parliament and of the Council Guidelines for the development of the trans-European transport network, amending Regulation (EU) 2021/1153 and Regulation (EU) No 913/2010 and repealing Regulation (EU) 1315/2013, 2021/0420(COD)

composition of freight trains; and, where necessary, performing border procedures at borders with European third countries.

The criteria for a terminal are defined in the widest sense:

- Loading/unloading of goods onto/from freight trains (or even mixed trains).
- At least a bimodality with road, inland waterways, maritime, and air, the latter does not exist in the Balkans.
- Border stations at which trains from different states are interchanged.
- Marshalling yards where rail wagons are interchanged for the formation of new trains.

In practical terms, almost every railway station that has a ramp, a road access to the ramp, and some storage space, can therefore be called "terminal".

Another legal definition that comes close to the 913/2010 definition, but considers terminals in a wider sense, is the definition of "service facilities" in Art. 3 (11) of **Directive 2012/34/EU** as in force:

'Service facility' means the installation, including ground area, building and equipment, which has been specially arranged, as a whole or in part, to allow the supply of one or more services referred to in points 2 to 4 of Annex II

It therefore includes access to terminals and further specific services that can be considered as value-added services in the rail sector:

Annex II, points 2-4 mention:

2. Access, including track access, shall be given to the following services facilities, when they exist, and to the services supplied in these facilities:

- (a) *passenger stations, their buildings and other facilities, including travel information display and suitable location for ticketing services;*
- (b) *freight terminals;*
- (c) *marshalling yards and train formation facilities, including shunting facilities;*
- (d) *storage sidings;*
- (e) *maintenance facilities, with the exception of heavy maintenance facilities dedicated to high-speed trains or to other types of rolling stock requiring specific facilities;*
- (f) *other technical facilities, including cleaning and washing facilities;*
- (g) *maritime and inland port facilities which are linked to rail activities;*
- (h) *relief facilities;*
- (i) *refuelling facilities and supply of fuel in these facilities, charges for which shall be shown on the invoices separately.*

3. Additional services may comprise:

- (a) *traction current, charges for which shall be shown on the invoices separately from charges for using the electrical supply equipment, without prejudice to the application of Directive 2009/72/EC;*
- (b) *pre-heating of passenger trains;*
- (c) *tailor-made contracts for:*
 - *control of transport of dangerous goods,*
 - *assistance in running abnormal trains.*

4. Ancillary services may comprise:

- (a) *access to telecommunication networks;*

- (b) *provision of supplementary information;*
- (c) *technical inspection of rolling stock;*
- (d) *ticketing services in passenger stations;*
- (e) *heavy maintenance services supplied in maintenance facilities dedicated to high-speed trains or to other types of rolling stock requiring specific facilities.*

In addition, Art. 13 of the Directive (see Annex 1) stipulates conditions which play an important role for the access to the terminal:

- Non-discriminatory and equitable access to the terminal,
- Non-discriminatory and equitable access to the supply of services,
- If for one or the other reason access to the terminal is refused by the terminal operator, such operator must offer viable alternatives,
- Open access and terminal services can be demanded not only by railway undertakings, but also by any applicant⁴⁴.

Moreover, a terminal can only be considered a “real” terminal, if it is mentioned in the Network Statement (see Annex VII of the Directive)⁴⁵. If a terminal is not mentioned in the Network Statement, there is a high likelihood that it will not be offered by railway undertakings and logistics operators.

With such requirements, the EU legislation has widened the term “terminal” from the purely technical definition of 913/2010 and tried to approach it to a more service-oriented definition.

According to **Regulation (EU) 913/2010**, Art. 8.7, the Management Board shall set up an Advisory Group of managers and owners of the terminals including, where necessary, rail-connected sea and inland waterway ports. This Article makes possible the opportunity to critically revise the terminals in the Region and introduce a more market-oriented selection that will be attractive to the decision-makers such as logistics operators and shippers.

Moreover, Art. 14(9) and 16(2) lays out procedures between Infrastructure Managers of the freight corridor and terminal managers to ensure optimal coordination of capacity allocation and for traffic management. Railway undertakings may become involved in these procedures. For the Region, it would be very important to include terminals into the Network Statement as the EU legislation already requires.

In the modern world of **logistics**, with growing containerisation and integration of terminals in regional or transcontinental supply chains, terminals are defined differently in order to be used by shippers and logistics operators.

Apart from some technical criteria which are mentioned in the above definition, their decision to use a terminal is based on the value-added services offered in a terminal.

Such value-added services, in order of priority for Western Balkans shippers and logistics operators to use a terminal to shift goods from road to rail, are the following (see Annex 5):

Very important:

- Warehousing
- Transhipment of bulk/other non-containerised goods
- Customs services
- Parking tracks
- Wagon repair

⁴⁴ 'applicant' means a railway undertaking or an international grouping of railway undertakings or other persons or legal entities, such as competent authorities under Regulation (EC) No 1370/2007 and shippers, freight forwarders and combined transport operators, with a public-service or commercial interest in procuring infrastructure capacity (Art. 3 (19) of Directive 2012/34/EU)

⁴⁵ Directive 2012/34/EU, Annex IV “Contents of the Network Statement”, Point 6: *A section on information on access to and charging for service facilities referred to in Annex II. Operators of service facilities which are not controlled by the infrastructure manager shall supply information on charges for gaining access to the facility and for the provision of services, and information on technical access conditions for inclusion in the network statement or shall indicate a website where such information is made available free of charge in electronic format.*

- Handling of freight papers

Important/less important:

- Container stripping and stuffing
- Commissioning
- Finishing services (packaging/re-packaging, production)
- Controls (phyto-sanitary, sanitary)

Without such value-added services, the terminal of Regulation 913/2010 is for them a totally unattractive facility.

2.3.2. Potential terminals

The following table gives an overview of the main terminals in the Region that dispose of container handling equipment. Details can be found in Appendix 4.

Country	Container terminal
North Macedonia	Skopje Tovarna
Bosnia and Hercegovina	Brčko
Bosnia and Hercegovina	Sarajevo
Bosnia and Hercegovina	Doboj
Bosnia and Hercegovina	Šamac
Bosnia and Hercegovina	Banja Luka
Bosnia and Hercegovina	Bosanska Poljana
Croatia (for Bosnia and Hercegovina)	Ploče
Montenegro	Luka Bar
Montenegro	Port of Adria, Bar
Serbia	Belgrade Port
Serbia	Belgrade Ranžirna
Serbia	Novi Sad Ranžirna
Serbia	Luka Novi Sad
Serbia	Sremska Mitrovica Luka Leget
Serbia	Nelt Dobanovski
Serbia	Belgrade Žit
Serbia	Niš MBox
Serbia	Pirot
Serbia	DPT Terminal Pančevo
Kosovo	Miradi
Albania	Vlore
Albania	Durres

Table 3 Potential terminals

Source: The Consultant

2.4. Bottlenecks

Similar to the definition of terminals, there is a legal definition of bottleneck stipulated in Article 2 (15) of Regulation (EU) No 1316/2013 of the European Parliament and of the Council of 11 December 2013 establishing the Connecting Europe Facility, amending Regulation (EU) No 913/2010 and repealing Regulations (EC) No 680/2007 and (EC) No 67/2010:

“Bottleneck” in the transport sector means a physical, technical or functional barrier which leads to a system break affecting the continuity of long-distance or cross- border flows and which can be surmounted by creating new infrastructure, or substantially upgrading the existing infrastructure, that could bring significant improvements which will solve the bottleneck constraints;”

The definition is a physical, technical, and operational definition.

The most common bottlenecks are:

- Reduction of number of tracks
- Low capacity
- Speed limits
- Limited length of trains
- Limited axle load
- Non electrified sections
- Changes or lack of adequate signalling and safety equipment.

A list of such bottlenecks as identified by each of the SEEP can be found in Annex 3 “List of Bottlenecks”.

Bottlenecks that influence the decision-makers to use the rail or to shift from road to rail shall be dealt with in Chapter 3.4 on the results of the interviews with shippers, logistics operators and railway undertakings/intermodal operators.

They can be summarised under “Lack of value-added services” in terminals and at border stations such as:

- Customs facilities
- Phyto-sanitary and sanitary facilities
- Warehousing, storage
- Services for containers (reefer, empty container storage)
- Commissioning.

As the interviews have clearly shown, the market decision-makers consider the infrastructure in a bad state and try to cope with such deficiencies.

A major concern is the track length which is not in conformity with the standardised track length of 800 m existing in Europe, at least on the main corridors as well as the last miles between the corridors and the terminals.

2.5. Description of planned changes / improvements

The following chapter summarises information on projects to increase the allowed speed, capacity and overall performance of the railway nodes, rail lines and terminals on the actual and potential RFC in the West Balkans.

2.5.1. North Macedonia

Section	Length	Source of financing and value	Project status	Project description
Tabanovci-Gevgelija	215	Provision of funding is through WBIF 800 000 EUR	Planned	Preparation of prefeasibility study and preliminary design for GSMR and ETCS
Tabanovci-Gevgelija	215	Provision of funding through IPA is under way 500 000 EUR	Planned	From total project value of 2 MEUR for 15 new level crossings, 700 000 EUR is estimated for 5 new level crossings on Corridor 10
Station Tabanovci		Funding source is not defined, the estimated value is 10 MEUR for 4 additional tracks and 1 MEUR for a new level crossing	Planned	Building of 4 new rail tracks in border station Tabanovci is needed to increase the station capacity in order to eliminate present bottleneck (not enough tracks for reception and dispatch of trains) and due to the planned increase of traffic, a new level crossing is needed
Kumanovo-Miladinovci	17 km	Funding source is not defined, the estimated value is 50 MEUR	Planned	A major project for reconstruction of the railway line for speed of 120 km/h was prepared and provided by IPA funds. The reconstruction of this section needs to be done for the speed of 120 km/h
Miladinovci-Ilinden	6.5 km	Funding source is not defined, the estimated value is 3 MEUR	Planned	The renewal of this section is needed
Demir kapija-Miravci	21 km	Funding source is not defined, the estimated value is 10 MEUR	Planned	The renewal of this section is needed

Table 4 Planned future activities on RFC in North Macedonia

Source: The Consultant

Section	Length	Source of financing and value	Project status	Project description
Dracevo – Veles	38.7 km	Funding source is not defined, the estimated value is between 600 – 1,000 MEUR	Planned	A feasibility study was prepared for building a new two-track railway. In the future it is necessary to build a new two-track railway line because of the geological characteristics of surroundings (river gorge) of the existing railway ⁴⁶
Veles – Nogaevci	20 km	Funding source is not defined, the estimated value is 150 mil. Euro	Planned	A major project was prepared for a speed of 120km/h, financed by IPA. In the future it is necessary to make a new tunnel solution to Veles

Table 5 Planned future projects, in case capacity utilisation is over 80%, in North Macedonia

Source: The Consultant

⁴⁶ There are future plans for the construction of an artificial lake on the Vardar River.

2.5.2. Bosnia and Herzegovina

Section	Length	Source of financing and value	Project Description	Project Status
Reconstruction/overhaul of the Sarajevo-Bradina section	33.6 km	25 MEUR	Reconstruction of bridges, tunnels, electrical engineering and telecommunications.	Implementation of projects is ongoing. The works started in 2017
Interlocking Sarajevo-Bradina	33.6	8 MEUR	Installation of station interlocking interstation dependencies and rehabilitation of SS devices on the Sarajevo-Bradina section	Implementation of projects is ongoing. The works started in 2017
Interlocking Banjaluka-Kostajnica	87.7	19 MEUR	Installation of station interlocking interstation dependencies and rehabilitation of SS devices on the Banjaluka-Kostajnica section	Implementation of projects is ongoing. The works started in 2017
Procurement and installation of optical cable from Bradina to Čapljina	120 km	2.5 MEUR	Installation of optical cable and telecommunication active equipment	Implementation of projects is ongoing. The works started in 2018
Reconstruction/overhaul of the Maglaj-Podlugovi section	120 km	3.648 MEUR	Preparation of investment-technical documentation (preliminary and main design, relevant studies, including environmental and social impact studies and feasibility studies, as well as tender dossiers for works) for reconstruction/overhaul, including telecommunications and signalling on railway sections of the two-track railway Maglaj -Jelina-Zenica-Podlugovi,	Implementation of projects is ongoing. The planned completion date of the project is 2023
Reconstruction/overhaul of the existing railway line Tuzla Zvornik	45 km	1.2 MEUR	Preparation of investment-technical documentation (preliminary and main design, relevant studies, including environmental and social impact studies and feasibility studies, as well as tender dossiers for works) for reconstruction/overhaul, including electrification on certain sections, telecommunications and signalling on railway sections.	Implementation of projects is ongoing. The planned completion date of the project is 2023
Reconstruction/overhaul of the existing railway line Banja Luka - Dobrljin	105 km	1.2 MEUR	Preparation of investment-technical documentation (preliminary and main design, relevant studies, including environmental and social impact studies and feasibility studies, as well as tender dossiers for works) for reconstruction/overhaul, including electrification on certain sections, telecommunications and signalling on railway sections.	Implementation of projects is ongoing. The planned completion date of the project is 2023
Reconstruction/overhaul of the Sarajevo-Bradina section	68 km	3 MEUR	Preparation of investment-technical documentation for removing the bottleneck in rail traffic on the Ivan - Bradina rail section on Corridor Vc/Mediterranean Corridor, (new railway Visoko-Konjic) + rail connection to Mostar airport, indicative length 68 km.	Implementation of projects is ongoing. The planned completion date of the project is 2024
Reconstruction/overhaul of the existing railway line (Bihać-Blatna)	49 km	2 MEUR	Electrification of the Una railway (Bihać-Blatna)	The planned completion date of the project is 2025
Level crossing interlocking on the tracks according to priority		2 MEUR	Level crossing interlocking: Tarevci, Trinaestica, Ljeb, Jošavka, Čelinac...	Implementation of projects is ongoing. The works started in 2017

Table 6 Description of planned changes/improvements and foreseen implementation period, Bosnia and Herzegovina

Source: The Public Railway Corporation of Bosnia and Herzegovina (BHŽJK)

2.5.3. Montenegro

Section	Length	Source of financing and value	Project status	Project description
Podgorica station	N/A	WBIF (financing: 50% grant, 50% loan) Value: 6.64 MEUR	The project was contracted in 2017 and completed in 2018.	Replacement of signal – safety devices
Kos – Trebešica	6.744 km	IPA 2014 Value: 5.6 MEUR	The project was contracted in 2018 and completed in 2019.	Overhaul of the superstructure of the railway
Trebešica	N/A	IPA III Value: 3.91 MEUR	The project was contracted in 2016 and completed in 2018.	Dismantling of existing, procurement and installation of new electric traction facility
Border station Bijelo Polje	N/A	IPA Value: 2.2 MEUR	The contract for the development of project documentation started in 2020 and completed in 2021. The contract for the execution of the works was signed in 2021. Completion of works extended to the fourth quarter of 2023 due to expansion of the scope of works.	Preparation of Main designs for urban technical landscaping and performing reconstruction works.
Trebešica – Bratonožići	N/A	WBIF Value: 4.9 MEUR	The project was contracted in 2017 and completed in 2018.	Rehabilitation of 6 slopes section Trebešica – Bratonožići
Kos – Trebešica	N/A	WBIF Value 5.1 MEUR	The project was contracted in 2018 and completed in 2021.	Rehabilitation 5 concrete bridges Kos – Trebešica
Bijelo Polje – Bar	N/A	WBIF Value 3.63 MEUR	The project was contracted in 2019 and completed in 2022.	Rehabilitation 6 concrete bridges Bijelo Polje- Bar
Bijelo Polje – Bar	N/A	WBIF Value 6.42 MEUR	The project was contracted in 2020 and completed in 2022.	Rehabilitation 13 concrete bridges Bijelo Polje- Bar
Kolašin – Bar	N/A	EBRD 0.56 MEUR	The project was contracted in 2017 and completed in 2019.	Rehabilitation of culverts and regulation of water flow in 8 localities.
Trebešica – Lutovo	N/A	WBIF Value: 1 MEUR	The project was contracted in 2018 and completed in 2019	Rehabilitation tunnel number 206
Review of 106 tunnels on the section Bijelo Polje – Bar and preparation of the main projects for the rehabilitation of urgent tunnels	51.6 km	WBIF (grant 100%) Value: 2.5 MEUR	The project was contracted in 2017 and completed in 2021.	The main projects included rehabilitation of 16 tunnels.
Bijelo Polje – Kolašin	N/A	WBIF Value 7,1 MEUR	The contract was signed in 2020, and completion is planned for the first half of 2023.	Rehabilitation 4 concrete tunnels
Kolašin – Podgorica	N/A	WBIF Value 5.35 MEUR	The contract was signed in 2020, and the work was stopped in 2022. Due to sanctions, the contractor will be from Russia.	Rehabilitation 4 tunnels
Bijelo Polje – Bar	7.9 km	WBIF (grant 100%) Value: 3 MEUR	The contract was signed in 2017 and completed in 2019.	Review of 91 concrete bridges on the section Bijelo Polje – Bar and preparation of the main projects for the rehabilitation of urgent bridges Main projects include the rehabilitation of 29 concrete bridges
Bijelo Polje – Podgorica – Bar	N/A	WBIF (grant 100%) Value: 5 MEUR	The contract was signed in 2018 and completed in 2022.	Development of the main projects for the replacement of the signalling and safety system Bijelo Polje – Podgorica – Bar

				and rehabilitation of the Ratac landslide Projects for the replacement of the signalling and safety system completed in 2020 (16 stations), and for the Ratac landslide in 2022
Podgorica border Albania	– with	WBIF (grant 100%) Value: 1.3 MEUR	The contract was signed in 2018 and completed in 2022.	Creation of a feasibility study with a cost-benefit analysis and conceptual solution for the reconstruction and modernisation of the Podgorica – State Border with Albania Railway.

Table 7 Investment plan 2017-2022, Montenegro

Source: Željeznička infrastruktura Crne Gore a.d.

Section	Length	Source of financing and value	Project status	Project description
Kolašin – Podgorica	N/A	WBIF Value 3.04 MEUR	The selection of the contractor according to the tender is in progress. The contract is expected to be signed on September 3, 2023. The deadline for the works is 15 months. Completion is planned for the end of 2024.	Continuation of the work started on the rehabilitation of 4 tunnels that were interrupted in 2022 (contractor from Russia).
Golubovci – Bar	40 km	EIB Value 3 MEUR	Ongoing project (contract signed in 2021, completion expected in November 2023)	Feasibility Study, Conceptual Design, ESIA, Master Design)
Lutovo-Bratonožići-Bioče	N/A	WBIF Value 80 MEUR	Preparation for contract financing. The signing of the contract is planned for the fourth quarter of 2023. Implementation period minimum 5 years. Planned completion at the end of 2028.	Rehabilitation of 13 steel bridges, 8 tunnels and 20 km of overhead machinery on the section Lutovo-Bratonožići-Bioče and reconstruction of depots in Podgorica, Bar and Nikšić.
Trebešica – Lutovo Bioče – Podgorica-Golubovci	35 km	IPA Value 1.4 MEUR	Project in progress. Degree of completion less than 10%. Expected completion second quarter 2025.	Creation of the main reconstruction and modernisation project.
All sections Vrbnica - Bijelo Polje - Bar	N/A	WBIF (grant 100%) Value 0.5 MEUR	Designing in progress. Expected completion in 2024	Detailed design for 21 electric tractions substations of 110/25 kV 12 sectioning plants 25 kV and 8 distribution plants 10/0.4 kV on all Bar- Vrbnica Section)
All sections Vrbnica - Bijelo Polje - Bar	N/A	EBRD Value 11 MEUR	Tender documentation is being prepared. Implementation period 3 years Procurement of railway maintenance machinery. Expected completion at the end of 2025	Procurement of railway maintenance machinery
Virpazar - Sutomore	6.1 km	WBIF (donation 100%) Value 0.9 MEUR	Project approved for financing in June 2023. Expected completion in 2025.	Technical Assistance: Rehabilitation of the Sozina tunnel. Scope of activities: monitoring of the tunnel, site surveys, Detailed Design (including technical review), EIA and Tender Dossier

Podgorica – border with Albania	24.7 km	WBIF (donation 100%) Value 3 MEUR	Project approved for financing in June 2023. Expected completion in 2025.	Technical Assistance: Detailed Design, Option Analysis, ESIA and Tender Dossier. Scope of activities: site surveys, option analysis for the additional tunnel, Detailed design (including technical review), ESIA and Tender Dossier.
Bijelo Polje - Bar	N/A	WBIF Value 150 MEUR	The application in June 2023 was declared premature. The application in June 2023 was declared premature. A new preparation for the WBIF application will follow in February 2024	Investment grant Scope: 1) Replacement of 16 signalling/interlocking devices on the "Vrbnica – Bar" railway line in Montenegro (Secon North: 11 railway stations; Secon South: Centralised Traffic Control Centre Podgorica and 5 railway stations), 2) rehabilitation of sections Trebesica-Lutovo, Bioce-Podgorica and Podgorica-Golubovci, 3) reconstruction of concrete bridges, tunnels and slopes and 4) Management Information System

Table 8 Planned investment for the next three years, Montenegro

Source: : Željeznička infrastruktura Crne Gore a.d.

2.5.4. Serbia

Current and planned projects for reconstruction and modernisation of rail sections on the network of „Serbian Railways Infrastructure“ JSC.

The following table presents current and planned infrastructure projects of rail sections that are located on the future Alpine – Western Balkans rail freight corridor on the territory of the Republic of Serbia, viewed from the border with the Republic of Croatia (Tovarnik/Šid) through Belgrade to the border with the Republic of Bulgaria (Dimitrovgrad/Dragoman)⁴⁷.

Section	Length (m)	Source of financing and value	Project Status	Project description
Golubinci – Ruma (right track)	17.889	Credit of the Russian Federation, value 13,022 MUSD	Completed, October 2015	Section is located on the main, double-track, electrified line Belgrade – Stara Pazova – Šid – State border (Corridor X), with the axle-load of 22.5 t/os and 7.2 t/m. Reconstruction and modernisation of civil and electrical engineering infrastructure was completed. Design speed is 120 km/h.
Belgrade bypass, section Batajnica - Ostružnica - Beograde Marshalling	28.000	62.17 MEUR is the total value of the modernisation and construction project	The project is part of the Study for Belgrade – Nis high speed line. Expected time for project documentation to be finished is year 2024.	Through the Western Balkans Investment Framework (WBIF), the European Union has funded a technical assistance project worth EUR 800,000 covering the reconstruction of the existing and construction of the second track on the Ostružnica – Batajnica rail section of the Belgrade Marshalling Yard. The project is of great strategic importance for the development of the transport network in Serbia and in particular for the reinforcement of the Belgrade Marshalling Yard as an important railway freight node in the Western Balkans. The 22 km long Ostružnica – Batajnica rail section is one of the key railway routes in Serbia, and it is significant for the international and transit traffic, as part of the Pan-European Corridor X crossing Serbia.
Freight railway bypass Beli potok-Vinča-Pancevo with construction of rail-road bridge over the Danube	28.800	The funding source is not defined, the estimated value is 430 MEUR	Planned as a part of the modernisation of the Belgrade Railway Node	Freight railway bypass around the city of Belgrade will be completed after the planned construction of a new line that will enable the relocation of freight traffic from the city centre and to make a new link between Corridor X and Route 4. The rail is designed as a single-track line for design speed of up to 120 km/h, it is electrified and equipped with modern SI and TC devices. The Project also includes construction of a new rail-road bridge over the Danube and the railway triangles Zuce – Bujan Potok – Pančevo Hippodrome – Pančevo Varoš. It is necessary to update prepared project documentation (Preliminary design) and to prepare missing documentation.
Junction G– Rakovica–Resnik	7,444	EBRD V, Contracted value of works 23.7 MEUR	Completed, January 2019	Section is located on the main, double-track, electrified line Beograde - Mladenovac - Niš (Corridor X) with axle-load of 22.5 t/ os and 8 t/m. Reconstruction and modernisation of infrastructure elements for speeds of up to 120 km/h are planned. Works have started on March 3, 2017.
Jajinci – Mala Krsna	57.904	EBRD V, estimated value 30 MEUR	Completed, June 2022	Section is located on the main, single-track, electrified line (Beograd) – Rakovica – Jajinci – Mala Krsna – Velika Plana (Corridor X) with axle-load of 22.5 t/os and

⁴⁷ Continuation from Nis to Presevo: ongoing WBIF project (IPF8 - study 8M) which will lead to investment of ~400 MEUR. The planned max speed is 160km/h.

				8 t/m. A complete reconstruction and modernisation of all infrastructure elements for speeds of up to 120 km/h are planned. Works have started on May 15, 2019.
Mala Krsna station		EBRD V, estimated value 10 MEUR	Completed, September 2021	Station is located on the main, single-track, electrified line (Belgrade) – Rakovica – Jajinci – Mala Krsna – Velika Plana (Corridor X) with axle-load of 22.5 t/os and 8 t/m. Mala Krsna station is a junction station for regional lines Smederevo – Mala Krsna i Mala Krsna – Bor – Junction „2“ (Vražogmac). Reconstruction and modernisation of civil and electrical engineering infrastructure in the stations is planned.
Sopot Kosmajski - Kovačevac	18.389	Credit of the Russian Federation, project value 11,79 MUSD	Completed, September 2015	Section is located on electrified, single-track line Beograd – Mladenovac – Niš (Corridor X), with axle-load on the section of od 20 t/os and 7.2 t/m. Reconstruction and modernisation of civil and electrical engineering infrastructure is completed. Design speed of 120 km/h is on the section Sopot Kosmajskog - Vlačkog Polja and 100 km/h on the section Vlačko Polje - Kovačevac.
Mala Krsna – Velika Plana	29.453	The credit of the Russian Federation, project value 14,91 MUSD	completed, April 2016	Section is located on the main, single-track, electrified line (Belgrade) – Rakovica – Jajinci – Mala Krsna – Velika Plana (Corridor X) with axle-load of 22.5 t/os and 8 t/m. Reconstruction and modernisation of civil and electrical engineering infrastructure for speeds of up to 120 km/h are completed.
Gilje – Đuprija - Paraćin	10,2+0,322	EIB IV, value 45,51 MEUR	completed, January 2017	Section is located on the main, single-track, electrified line (Belgrade) – Rakovica – Jajinci – Mala Krsna – Velika Plana - Niš (Corridor X) with axle-load of 22.5 t/os and 8 t/m. Reconstruction, modernisation and construction of double-track line are being carried out for design speed of up to 160 km/h (substructure and interlocking) and 120 km/h (superstructure). Within the planned works, a new bridge over Velika Morava river was built with the length of 322 m and with two tracks.
Stalać -Đunis	17.770	Financed by EIB, WBIF and the Republic of Serbia; estimated value 105,55 MEUR	Contract to design and construct tunnel No. 4 (L = 3.275 m) was signed in February 2022. Project changes in progress	Section is located on the main, single-track, electrified line (Belgrade) – Rakovica – Jajinci – Mala Krsna – Velika Plana - Niš (Corridor X) with axle-load of 22.5 t/os and 8 t/m. Reconstruction and modernisation of existing and construction of the second track for speed of up 160 km/h is planned.
Railway bypass around the City of Niš	22.400	EIB loan 134 mil €, WBIF grant 73,04 mil €, Budget of the Republic of Serbia 61.24 mil €; estimated value of Component 2 is 74.2 MEUR	Pre-qualification procedure for the selection of the Contractor in progress. Also, part of the project for Belgrade – Nis high speed line.	Revision of the Preliminary design with related studies is in progress. Preliminary design and tender documentation for the construction of modern, single track railway bypass around the city of Niš is financed from IPA fund. Construction of railway bypass will enable unobstructed development of the city of Niš and traffic network, including the airport.
Sićevo – Staničenje -Dimitrovgrad	80.066	EIB loan 134 mil €, WBIF grant 73,04 mil €, Budget of the Republic of Serbia 61.24 mil €; estimated value of Component 1 is 82.38 MEUR	Construction contract signed in October 2022; works are expected to begin in October 2023	Section is located on main, single-track, non-electrified line Niš - Dimitrovgrad State border with Bulgaria (Corridor X). Reconstruction and modernisation of civil and electrical engineering infrastructure for speeds of up to 120 km/h with axle-load of 22.5 t and 8 t/m is planned, as well as preparation works for electrification.

Niš - Dimitrovgrad	96	EIB loan 134 mil €, WBIF grant 73,04 mil €, Budget of the Republic of Serbia 61.24 mil €; estimated value of Component 3 is 93.45 MEUR	Project preparation in progress	Electrification of the section and installation of modern SI and TC devices is planned. The section is the only non-electrified section on Corridor X through Serbia.
Reconstruction and modernisation of the railway line Belgrade (Resnik) – Niš (Trupale)		Project Preparation Facility 9 (PPF9) - 2020/415-787 EU financial package of 2.2 billion EUR to support the modernisation and upgrade of Belgrade – Niš railway.	Project preparation in progress	The reconstruction and modernisation of the line are defined as a priority for the future development of the Serbian railway network, due to the high importance of the railway line, as well as its low technical characteristics which affect regular passenger and freight transport. The modernisation and upgrade of the ca. 230 km-long electrified railway infrastructure section between Belgrade and Niš. The proposed loan will be structured in six tranches to finance. each one of the main Project's sub-sections or components: (i) the first tranche will finance the works of the Stalac-Djunis sub-section; and (ii) five tranches will be committed for remaining sub-sections. The package comprises up to EUR 600 million in EU grants and also includes a EUR 1.1 billion loan from the EIB and a EUR 550 million loan from the European Bank for Reconstruction and Development (EBRD) for which the agreement has been signed in February, when a EUR 82.3 million grant under the Western Balkans Investment Framework was signed.
Reconstruction and Modernisation of the Railway Niš - Brestovac		The Project is funded by grants from the IPA 2015 fund (85%) and the budget of the Republic of Serbia (15%).	The works are to be completed in 33 months (in Q1 2024).	The Project includes reconstruction and modernisation of the railway substructure and superstructure, certain station tracks and platforms and railway crossings, reconstruction, and modernisation of power lines (contact network) and electricity supply system, reconstruction and modernisation of signalling and safety and telecommunication installations, as well as bridges and culverts, roadway and station waterproofing and drainage systems.
Nis - Presevo - Border	15+132.6 km	Total EUR 448,704,502 (Grants=EUR 7,354,502; Loans=EUR 250,000,000) Financed by EIB, WBIF and the Republic of Serbia	to be completed by December 2025.	According to European AGC Agreement, the railway line Nis - Presevo combines the railway lines E-75 and E-80 and has the largest volume of transport operation on the railway lines of JSC "Serbian Railways". It has a total length of 151 km and is electrified using the single-phase 25 kV, 50 Hz system over the whole of its length. With this investment project 92 km of railway track will be fully renovated on the sections Brestovac - Vinarci, Orevo - Vranjska Banja, Ristovac - Bujanovac i Bukarevac – Presevo – border North Macedonia. The WBIF has provided two grants for technical assistance for the preparation of the project for construction, from feasibility study, environmental and social impact assessment, preliminary design, to tender documentation. The project is expected to be completed by December 2025.

Table 9 Current and planned projects for reconstruction and modernisation of rail sections on the network of „Serbian Railways Infrastructure“ JSC

Source: Infrastruktura železnice Srbije

2.5.5. Kosovo

Section	Length	Source of financing and value	Project Status	Project description
Railway Route 120 (border with MK- Fushë Kosovë – Mitrovicë- CCP with Serbia)	150 km	323.765 MEUR WBIF grants, EBRD and EIB loans	General rehabilitation of the Railway Route 10 has started in 2019 and is foreseen to be implemented in three phases: <ul style="list-style-type: none"> - First phase (Fushe Kosove – Border with North Macedonia); - Second phase (Fushe Kosove – Mitrovica); and - Third phase (Mitrovica – CCP with Serbia). <p>There are many delays in project implementation. Civil works for phase 1 expected to be finalised till the end of 2023. Civil works for phase 2 expected to start during Q1 2023. Entire project expected to be completed in the year 2027.</p>	After general rehabilitation and modernisation of the Railway Route 10 this route will fulfil TSIs, ERTMS and ETCS – Level 1 requirements. The project is defined through the Single Project Pipeline (SPP) on the transport sector and as a such belongs to the List of Priority Projects.
Railway Route 7 (Fushe Kosove – Podujeve – CCP with Serbia)	45 Km.	Expected value: 146.485 MEUR	The preliminary project design for general rehabilitation and modernisation has been financed by WBIF and completed in the end of 2021.	After General Rehabilitation and Modernisation of the Railway Route 7 this Route will fulfil TSIs, ERTMS and ETCS – Level 1 requirements. The project is defined through the Single Project Pipeline (SPP) on the transport sector and as a such belongs to the List of Priority Projects. Rail Route 7 connects Railway Route 10 in Kosovo with Corridor X in Serbia.
Construction and modernisation of a Railway Line (Pristina - Fushë Kosovë – Pristina Airport)	17 Km	Expected value: 37.881 MEUR. No funds available	The prefeasibility study for construction and general rehabilitation and modernisation has been completed in the end of 2021	After construction, General Rehabilitation and Modernisation of the Airport line, this line will fulfil TSIs, ERTMS and ETCS – Level 1 with infill requirements. The project is defined through the Single Project Pipeline (SPP) on the transport sector and as a such belongs to the List of Priority Projects.
Construction of the new railway line (Kosovo – Albania) with a length of 30 km in Kosovo	30 Km	Expected value: 95.703 MEUR. No funds available	The feasibility study and conceptual design will start in Q2 2023	After construction, this line will fulfil TSIs, ERTMS and ETCS – Level 1 with infill requirements. The project is defined through the Single Project Pipeline (SPP) on the transport sector and as a such belongs to the List of Priority Projects.
General rehabilitation and modernisation of the Western Railway Line	82 Km	Expected value: 261.395 MEUR. No funds available	The ToR for project design has been completed in 2022	After general rehabilitation and modernisation, this line will fulfil TSIs, ERTMS

(Fushë Kosovë – Klinë – Pejë)				and ETCS – Level 1 requirements. The project is defined through the Single Project Pipeline (SPP) on the transport sector and as a such belongs to the List of Priority Projects.
General rehabilitation and modernisation of the South/West Railway Line (Klinë – Prizren)	59 Km	Expected value: 187.675 MEUR. No funds available	The ToR for project design have been completed in 2022	After general rehabilitation and modernisation, this line will fulfil TSIs, ERTMS and ETCS – Level 1 requirements. The project is defined through the Single Project Pipeline (SPP) on the transport sector and as a such belongs to the List of Priority Projects.
Construction of the Dry Port Pristina (inland port for cargo distribution hub)		Expected value: 30.00 MEUR. No funds available	It is expected that funds will be found for the preparation of the feasibility study and project design	After finalization this hub will fulfil all requirements and standards for distribution of goods. The project is defined through the Single Project Pipeline (SPP) on the transport sector and as a such belongs to the List of Priority Projects.

Table 10 Description of planned changes/improvements and foreseen implementation period, Kosovo

Source: Kosovo Railways

2.5.6. Albania

Section	Length	Source of financing and value	Project Description	Project Status
New Railway Tirana - Durrës and Tirana - Rinas	34.2 km +5.7 km	73.52 MEUR 36.65 MEUR EU grant and 36.87 MEUR EBRD Loan	General rehabilitation of the existing Railway Route Tirana - Durrës (34.2 km) and the construction of a new track from Kashar to Rinas (5.7 km).	The rehabilitation of the Tirana Durrës railway is under way and it is expected to be completed in 2024.
Rehabilitation of the railway Vorë - Hani-i-Hotit	120 km	Expected value: 267 Mil €MEUR, which is co-financed through WBIF from EU and EIB	The project envisages the rehabilitation the and the standardization of the railway with Montenegro and the rehabilitation of 12 stations for passengers and freight.	The project is in a final stage of preparation. The 4.5 MEUR grant approved in December 2016, finances the preparation of the detailed project and tender documents for the rehabilitation works. Tendering procedure is underway. The project is foreseen to be completed in 2027.
New railway Durrës-Prishtine	107 Km	Expected value : 350 MEUR. (300 MEUR Albanian part, 50 MEUR Kosovo part)	The corridor will be from Mjeda or Milot to Prishtina through Morina border crossing.	The feasibility study (for 1.7 MEUR) is under way

Rehabilitation of the Railway Durres - Rrogozhina	33.1 Km	Expected value: 99 MEUR. No funds available	The extension of the route from Shkozet to Rrogozhina, Construction of new bridges in accordance with European standards, Demolition and reconstruction of the Rrogozhina tunnel, with a length of 380 m. Improvement of the body of the track, improvement of its horizontal and vertical track. The project envisages the construction of new station buildings (Golem, Kavajë, Lekaj and Rrogozhinë); Installation of security systems in level crossings and closure of unauthorised crossings. Rehabilitation of the Shkozet triangle in such a way that trains coming from Central Albania (Elbasan) and the south of the country, destined for Tirana and the north of the country, do not pass through Durrës.	The feasibility study was completed in 2019. The update of the feasibility study and the preliminary design and the tender document (for Yellow Book FIDIC contract conditions) were completed by IPF8 in Feb 2022.
Rehabilitation of the existing railway line Rrogozhina - Pogradec	103 km	No financing secured yet	The preparation of the feasibility study for the rehabilitation of the railway line Durrës - Pogradec - Lin as well as the construction of 2.8 km of new railway line between the village of Lin and North Macedonia.	The prefeasibility study was prepared by IPF 4, through a EUR 720,000 EU grant allocated by WBIF, in June 2015.

Table 11 Description of planned changes/improvements and foreseen implementation period, Albania

Source: Albanian Railways

2.6. TEN-T Technical Parameters for rail freight corridors

The infrastructure requirements, key technical parameters, are set in Article 39 of EU Regulation No. 1315/2013, excerpted below. The Commission's proposal to amend the TEN-T Regulation of December 2021 does not amend the required Technical Parameters. They are considered obligatory and common part of the future elements of the transport infrastructure for both passengers and freight transport capacity.

This, combined with the information on lines' capacity, bottlenecks and the already reported Description of Planned Changes / Improvements, can provide the bases to elaborate an Investment Plan that takes into account the priorities coming out from said combined information.

It will be up to the Stakeholders /IMs to pursue enhanced results with projects, commitments and plans to gradually improve the situation reported in the summary table after.

Electrification	The general situation in the region is comparable to the EU average, particularly for the Core Network, even if some of the Principal Route lines are still non-electrified. However, implementation plans and relevant actions are ongoing.
Track Gauge	This requirement is already fulfilled 100% by nearly all the lines in the Region.
ERTMS Implementation	This is one of the most complex requirements to fulfil. Implementation plans, and relevant actions are ongoing in some SEEP.
Operating Speed \geq 100 km/h	Some of the rail lines, particularly on the Principal Routes, already fulfil this criterion. Many works are already planned or ongoing to improve the allowed max. speed of the lines when the geometry allows it. It is worthwhile to note that the difficulties to meet this criterion are greater due to the poor conditions of the lines rather than their geometry.
Axle Load \geq 22.5 t	Several rail lines on the Principal Routes, especially on the Core Network, already fulfil this requirement and while many are already undergoing or are planned to improve the permissible axle load condition.

Train Length $\geq 740\text{m}$

Few of the rail lines, even those on the Principal Routes, are actually compliant. More attention is needed on this concern. The current underutilisation lowers the perception of the importance of this criterion.

Table 12 List of technical parameters required under the TEN-T Regulation: Summary

Source: Consultant, based on information from Infrastructure Managers

Details on the electrification of lines as part of the West Balkans Transport Corridor lines can be found in the section on the Corridor Description of this report.

The use of the standard track gauge is already given on all lines of West Balkan Transport Corridor.

The European Rail Traffic Management System (ERTMS) forms part of Technical Parameters required to be implemented by 2030 on the Core Transport Network of the European Union. ERTMS consists of the European rail Traffic Management System ETCS, the mobile radio GSM-R and the support of timetable planning. ETCS is installed at three different levels, that is Level 1, Level 2 and ETCS Level 3.

ETCS Level 1 has not been installed yet on any of the networks of the SEEP. ETCS Level 2 is planned to be deployed for the Highspeed Line between Belgrade and Novi Sad. GSM-R is operational on the main lines of the Serbian network. The networks of the other SEEP have not yet been fitted with GSM-R. The timetabling function of ERTMS has not been introduced yet in the West Balkan region⁴⁸.

Technical Parameter	Passenger (P), Freight (F)	Unit	Calculation	Target: 2030 for core, 2050 for comprehensive
Electrification	P/F	%	Electrified rail network kms as a proportion of relevant rail network kms	100%
Track Gauge (1.435 mm)	P/F	%	Standard (1,435 mm) track gauge as a proportion (%) of relevant rail network kms	100%
ERTMS Implementation	P/F	%	Length of permanent operation of both ERTMS and GSM-R on rail network, as a proportion of a relevant rail network's kms	100%
Line Speed ($\geq 100\text{ km/h}$)	F	%	Length of freight and combined line with a speed greater than or equal to 100 km/h, as a proportion of a relevant rail network's kms	100%
Axel Load ($\geq 22,5\text{t}$)	F	%	Length of freight and combined line with a permitted axle load greater than or equal to 22,5 tonnes, as a proportion of a relevant rail network's kms	100%
Train Length ($\geq 740\text{m}$)	F	%	Length of freight and combined line with a permitted train length greater than or equal to 740m, as a proportion of relevant rail network's kms	100%

Table 13 Compliance with required technical parameters

Source: Consultant, based on information from Infrastructure Managers

The line speed of at least 100 km/h is another technical parameter. Due to works and poor condition of some lines, the situation on the West Balkan Transport Corridor is subject to frequent change.

The axle load of at least 22.5 t is allowed on all lines of the West Balkans Transport Network.

The train length of 740 m is not possible on many lines.

SEEP undertook efforts to bring the following stretches of their network up to European Technical Parameters:

- The line between Pristina and the border with North Macedonia
- A line on the West Balkan Transport Network in Bosnia and Herzegovina
- The line connecting Belgrade with the Hungarian border near the Serbian town of Subotica.

⁴⁸ [Home - ERTMS](#) and interview with the European Union Rail Agency ERA.

The European Commission's proposal to amend the TEN-T Regulation does not change the technical parameters to be implemented on the future European Transport Corridors for rail freight. The Council's General Approach of December 2022 on the revision of the TEN-T Regulation stipulates timelines for implementation of certain technical parameters on the core transport network. Member States may ask for certain lines to be exempted.

2.7. Governance of Rail Freight Corridors

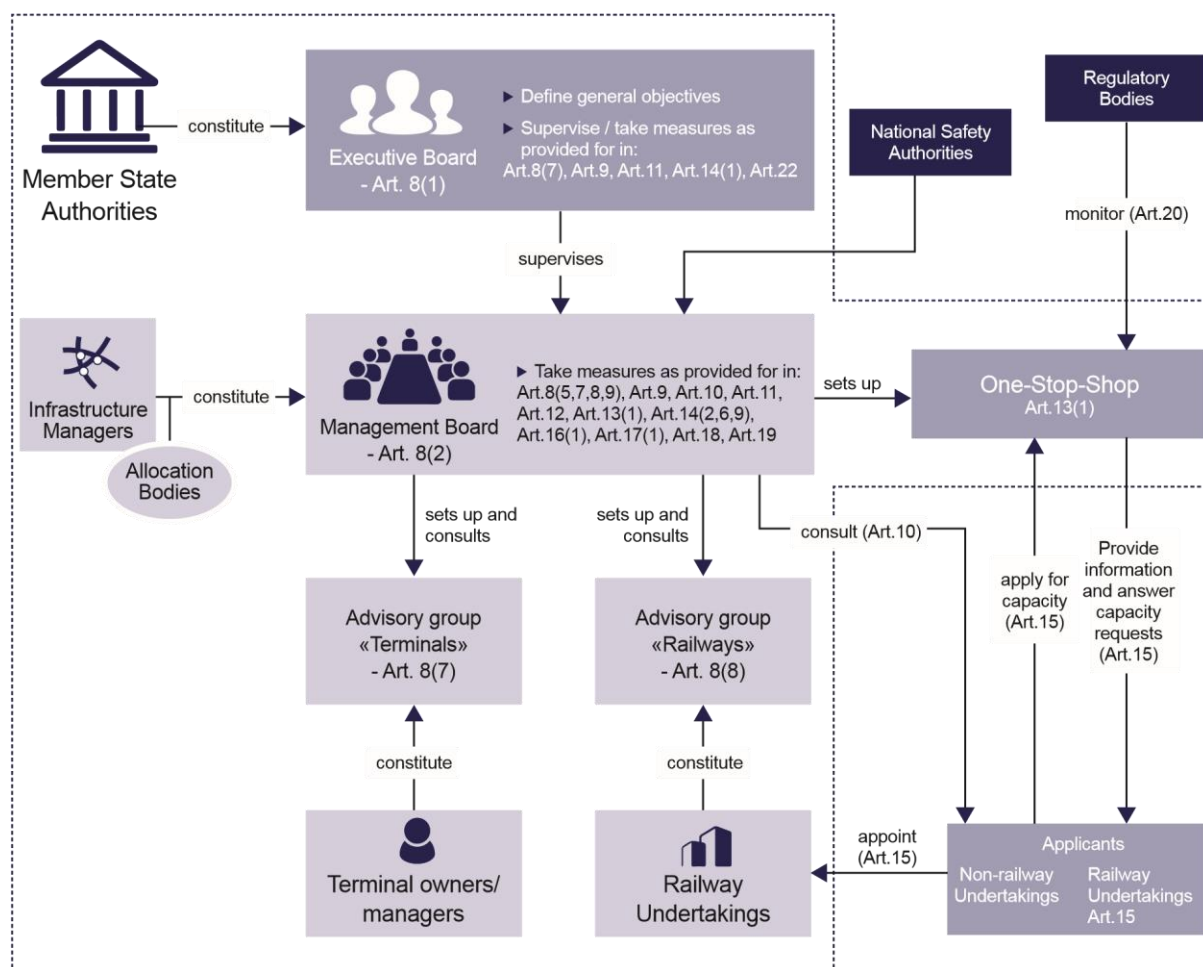


Figure 7 Governance structure of a Rail Freight Corridor

The main tasks of the Management Board are:

- Proposing the lines and terminals to be designated to the corridor establishing its structure (Art. 8(5)) and defining all internal work establishing its structure (Art 8(5)) and defining all internal work procedures setting up an Advisory Group of terminals owners and managers (Art 8(7))
- Setting up an Advisory Group of railway undertakings and taking into account its opinions (Art 8(8))
- The coordination of the use of IT tools for paths requests and traffic management (Art 8(9))
- Drawing up and periodical review of the Implementation Plan and the Transport Market Study (Art 9(1-3))
- Cooperation as appropriate with regional and/or local administrations (Art 9(5))
- Consultation of applicants (Art 10)
- Drawing up the Investment Plan (Art 11)
- Coordination and publication of works (Art 12)

- Setting up or designating the One Stop Shop (Art (13(1)))
- Assessment evaluation of the necessary capacity (Art 14(6))
- Promotion of coordination of priority rules concerning the allocation of capacities (Art 14(6))
- Procedures to ensure optimal coordination of the allocation of capacity between Infrastructure Managers and terminals (Art 14(9))
- Procedures for coordinating traffic management (Art 16(1))
- Adoption of common targets for punctuality (Art 17(1))
- Adoption of guidelines for traffic management in case of disturbances (Art 17(1))
- Publication of a 'Corridor Document' (Art 18)
- Promotion of compatibility between the performance schemes (Art 19)

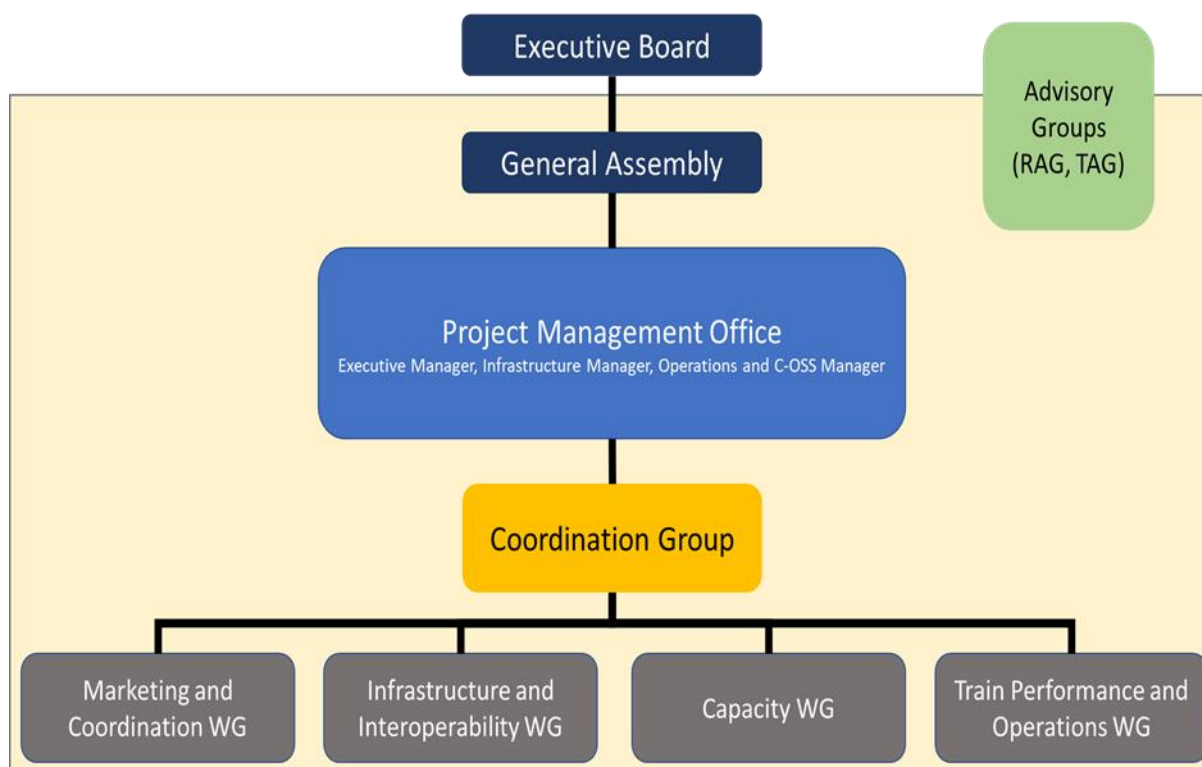


Figure 8 Organisational structure of Alpine-Western Balkan Rail Freight Corridor

Source: Consultant, redrawn from a figure published by the Alpine-Western Balkan Rail Freight Corridor

The Management Board is an operational body. Even if its structure and internal rules are not officially defined and agreed, the Management Board has to prepare its organisation and start its missions immediately.

It sets up Advisory Groups with expert members of the respective Infrastructure Managers to deliver the required measures. In the existing ERTMS corridors there are among others working groups on ERTMS deployment, Operations, Capacity, Traffic Quality, Terminals, and Investments (see organisation charts from ERTMS-corridors A and C below). The roles and duties of the existing working groups could be expanded to accommodate the requirements foreseen in this regulation.

Additional Advisory Groups can be established if needed. They should welcome the view of the users, where relevant, notably those that are not directly represented in the Advisory Groups. A more complete picture on governance can be found in Appendix 1.

The AWB set up an Advisory Group for Railway Undertakings and a separate Advisory Group for Terminal Operators.






State	Logo	Address
Austria		ÖBB-Infrastruktur Aktiengesellschaft Praterstern 3, Wien https://infrastruktur.oebb.at
Slovenia		SŽ – Infrastruktura, d.o.o. Kolodvorska 11, Ljubljana www.slo-zeleznice.si/sl/infrastruktura
Croatia		HŽ – Infrastruktura Mihanovićeve 12, Zagreb http://www.hzinfra.hr/
Serbia		Infrastruktura železnice Srbije a.d. Nemanjina 6, Beograd http://infrazs.rs/
Bulgaria		National railway infrastructure company Maria Luisa Boulevard 110, Sofia https://www.rail-infra.bg

Figure 9 Infrastructure managers having founded the Alpine-Western Balkan Rail Freight Corridor

Source: Alpine-Western Balkan Rail Freight Corridor

The Council's General Approach of December 2022 confirms the governance structure of rail freight corridors for the European Transport Corridors. The General Approach involves the European Coordinator. The Executive Body shall inform the European Coordinator and the regulatory bodies concerned with the ETC of any disagreement between Management Board and Advisory Group. Executive Board and European Coordinator may then issue an opinion to settle the issue with a view to developing freight transport on the corridor in question.

Consultant's suggestions

1. Preliminary Executive Board: SEEP may wish to establish a Preliminary Executive Board and confer the role of Executive Board to the TC-RW established under the TCT. Alternatively, SEEP representatives might individually or collectively join sessions (or certain agenda items thereof) of already established Executive Boards of adjacent rail freight corridors.
2. Preliminary Management Board: Regional Infrastructure Managers may, possibly on the basis of the transposed Regulation, establish a Preliminary Management Board (PMB) for the European Transport Corridor as proposed for the West Balkans by the General Approach. This PMB should carry out its tasks as per Para 3.3 'Setting-up the Management Board' of the Handbook, up to when it is considered possible to involve the bordering Member States (MS).
3. This PMB could have had early / informal relations with the bordering MS interested in the setting up of the RFC in WB. Thus, it is logically up to it to go on with enlarged meetings (official or not) with the bordering MS as per the EC Proposal for the new TEN-T Regulation, in particular presenting them the preliminary findings / results for the RFC in WB crossing the SEEP.
4. Depending upon the preliminary steps already taken, the PMB could be enlarged to the bordering MS interested in the RFC in WB establishment or entering in their organisation, if any.

Obviously, the above general suggestions should adapt to the actual situation, depending on the steps possibly already undertaken, even informally, to set up a Preliminary MB.

2.8. Streamlining measures for the TEN-T network

Directive (EU) 2021/1187 on streamlining measures for advancing the realisation of the trans-European transport network (TEN-T)⁴⁹ covers the following:

- The pre-identified cross-border links and missing links of the TEN-T core network* corridors, as set out in Annex I;
- Projects on the core network corridors exceeding €300 million.

It does not cover projects that exclusively relate to telematics applications, new technology and innovation, as defined in the TEN-T guidelines — Regulation (EU) No 1315/2013.

EU Member States can choose to extend the Directive's scope to include all projects on the core network or even of the comprehensive network. In case a Member State chooses to extend the scope, it should notify the European Commission.

Prioritisation

- Member States shall ensure that national authorities give priority to projects covered by the Directive in granting procedures.
- Where specific permit-granting procedures for priority projects exists under national law, Member States shall ensure that these procedures are used for projects covered by the directive.

Designated authority

By 10 August 2023, each Member State must establish a designated authority which will take responsibility for projects. Its role will include:

- Serving as the point of contact for the project promoter and other relevant authorities.
- Outlining applications to project promoters.
- Overseeing the timeframe for permit-granting procedure.
- Providing guidance where required on the submission of documents and information.
- Taking authorising decisions, if given the power to do so by the respective member state.

Permit-granting procedure

The Directive simplifies the rules for the permit-granting procedure.

- A maximum of 4 years is to be granted for authorisation, although this may be extended in duly justified cases.
- Member States may incorporate stages into the permit-granting process under national law.

Member States' designated authorities shall cooperate on cross-border procedures, with the assistance and oversight of EU coordinators, with a view to coordinating their timetables and agreeing on a joint schedule concerning the permit-granting procedure.

The Directive applies since 9 August 2021 and has to become law in the Member States by 10 August 2023.

⁴⁹ Directive (EU) 2021/1187 of the European Parliament and of the Council of 7 July 2021 on streamlining measures for advancing the realisation of the trans-European transport network (TEN-T) [EUR-Lex - 32021L1187 - EN - EUR-Lex \(europa.eu\)](#)

3. Transport Market Study

3.1. Introduction

Article 9 of Regulation 913/2010 as in force stipulates that the Transport Market Study (TMS) has to deal with the *“the observed and expected changes in the traffic on the freight 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.”*

This TMS has updated the Safège predecessor study of 2017 which included data up to 2015. The TMS also added:

- The results of the interviews.
- The actual development of international trains inside the SEEP and between the SEEP and the neighbouring countries.
- Statistical sources as listed below.
- Other market information coming from the network of the Consultant.

The statistical sources are:

- Eurostat statistics from the statistical yearbooks for Albania, Montenegro, North Macedonia, Serbia
- UNECE for Bosnia and Hercegovina
- Kosovo Railways for Kosovo

As a result, this TMS gives a realistic view of the market as it is seen from the market participants that use the rail infrastructure, the rail service facilities (terminals) and the performance of the railway undertakings.

It is obvious that different sources imply discrepancies, be they macroeconomic or microeconomic. Either they must be disaggregated, sometimes transformed from foreign currencies into Euro, or further transposed into tonnes. There is always the danger of double counting when it comes to international traffic that is counted on a national basis.

3.2. Historical development of rail freight corridors in the SEEP

There have been many initiatives for establishing rail freight corridors in the SEEP. In June 1997 a Pan-European Corridor X with the route Salzburg/Graz/Budapest – Belgrade -Thessaloniki/Sofia was established. In 2001, ARGE Korridor X was founded as an Austrian co-operation constituted under civil law in order to develop “seamless” railway offers on the Pan-European Corridor by intensifying the cooperation among the state-owned railway undertakings from Germany to Greece. In 2008/2009 ARGE Korridor X was transformed into an Association Corridor X PLUS, registered in Austria.

Ever since, the Corridor X PLUS has become a kind of trademark among the market participants in the SEEP. So far, the Corridor X PLUS has not yet become a proper rail freight corridor.

However, following the joint efforts of the competent Ministries and Infrastructure Managers, ÖBB-Infrastruktur AG (AT), SŽ-Infrastruktura, d.o.o. (SI), HŽ Infrastruktura d.o.o. (HR), Infrastruktura železnice Srbije a.d.(Serbia) and National Railway Infrastructure Company (BG), and in line with the Regulation (EU) No 913/2010 and the Commission Implementing Decision (EU) 2018/500 of 22 March 2018⁵⁰, the Alpine-Western Balkan Rail Freight Corridor (AWB RFC) was established. The Corridor started operating on 13th January 2020 when the first Catalogue of Pre-arranged paths (PaPs) was published⁵¹.

⁵⁰ Commission Implementing Decision (EU) 2018/500 of 22 March 2018 on the compliance of the proposal to establish the Alpine-Western Balkan rail freight corridor with Article 5 of Regulation (EU) No 913/2010 of the European Parliament and of the Council

⁵¹ <https://www.rfc-awb.eu/organisation/>

3.3. Alpine-Western Balkan Rail Freight Corridor Transport Market Study

AWB RFC connects five countries, Austria, Slovenia, Croatia, Serbia and Bulgaria. It is part of one of the following two trans-continental land corridors between Eastern Asia and the EU:

- The Southern One Belt One Road China-Kazakhstan-Caspian Sea-Azerbaijan-Georgia-Turkey
- The future planned corridors India-Pakistan-Afghanistan-Turkmenistan-Caspian Sea or Turkmenistan-Iran-Turkey. This corridor is under planning and partial construction.

In other words, AWB RFC will be of significant strategic importance for the future exchange of goods between the Far East and the Indian Subcontinent and Europe, which will come from the Turkish/Bulgarian section, in particular from the important terminal of Halkali near Istanbul.

It is in Halkali where the logistics operators and shippers decide whether to take the route via the AWB RFC or the route via Romania/Hungary to reach the Central European industrial zones.

From a point of view of international train movement, AWB RFC, together with the “old” Corridor X as informal RFC, are the most important rail freight corridors in the SEEP. Around 50 % of international train movements take place on the two corridors, of which 10-15 % on the AWB RFC and ca. 40 % on the routes of the old Corridor X. It confirms again that the Corridor X, from a historical point of view, has been the strongest corridor.

Annex 4 details the main outcome of AWB RFC Transport Market Study, particularly for the Serbian section of the AWB RFC.

3.4. Main outcomes of the industry interviews

The following Chapter presents the views and opinions of 42 decision-makers in the market, the shippers, logistics operators, railway undertakings/intermodal operators that have been interviewed by the Consultant between January and May 2023.

They will finally decide:

- Whether goods will be shifted to rail; and
- Whether the EU policy of “shift to rail” will be a success or a failure

Without their active participation in rail policymaking and investment policies, there might be a high portion of White Elephant projects and wasted money, based on overoptimistic forecasts.

The interviews confirm the decisions parameters for the selection of rail services which have been carried out by the Consultant in Greece, Central Europe, Romania, Moldova, and Ukraine.

In other words, the selection criteria do not differ significantly from those in the SEEP.

3.4.1. Selection criteria for freight rail transport

Decision parameters for the selection of rail services

Logistic operators / shippers

- The choice of the mode of transport is basically triggered by the transport conditions (transport contracts, INCOTERMS⁵²) defined by the shippers or shipping companies.

⁵² Incoterms consists of a set of 11 internationally recognised rules defining the legal responsibilities of sellers and buyers. Incoterms specify who is responsible for paying for and managing the shipment, insurance, documentation, customs clearance, and other logistical activities. Incoterms are regularly revised by the International Trade Association.

- Wagon capacity and quality of wagon material, transport quality (reliability/punctuality) and transport price are the decisive factors for the shippers.
- The terminal is a means to an end.
- Currently, a major criterion for the choice of route is the availability of empty containers, especially for export business. This availability is used by logistics operators and modern -mostly private-railway undertakings to bind shippers. Such situation is reported as very volatile.
- The all-inclusive price (door-to-door) plays an important role in the decision-making process. Before the Covid-19 crisis, price was the decisive factor. Since Covid-19 and the Ukraine War, the breakdown of intercontinental supply chains has shown that reliability and real-time information have substituted the dominance of pricing.
- The type of commodity has only limited effect on the supply chain decisions (transport route and used port). Only in cases when special handling facilities for dangerous or perishable goods are needed, the commodity is a criterion.
- This trend towards more carriers' haulage⁵³ – confirmed by all interviewed – including other interviews in the entire Central European and South-Eastern European region – is of particular interest to shippers with high volumes. Smaller and medium-sized shippers, on the other hand, consider the service quality and the bundling possibilities of the logistics operators to be more important, and therefore opt for merchants' haulage.
- The interviews show that a shift to rail will require considerable reductions in the rail transport prices ranging from 20 to 30% per tonne, m³, or container. The market pricing is a factor often neglected in the "shift-to-rail" discussion, although the price is not the all-decisive factor.
- Often underestimated, the road does not give up easily its share and offers more and more "all-inclusive" packages to the logistics operators and shippers.

Railway undertakings / intermodal operators

- The quality of the rail connection is essential. This is the key factor both, from the customer's point of view (reliability and predictability), and from the point of view of costs (additional expenses).
- Railway undertakings/intermodal operators are faced with qualitative and capacity challenges at the terminals (slots in the terminals, train paths, stabling capacities, additional shunting due to short tracks etc.).
- Currently, the quality of the rail infrastructure in all parts of the Region is an additional problem due to the construction works and/or lacking maintenance resulting in time-consuming low speed in comparison to road transport.
- The quality of infrastructure and operations in the Balkans is generally considered to be very poor.
- The general availability of train paths is not a major problem.
- The new entrant railway undertakings in the Region seem to have understood the message.

Value-added services in terminals

- Functioning structures for **inland** customs clearance and all necessary administrative activities, including their digitalisation, are essential to avoid time losses at the border-crossings.
- For some export shippers and logistics companies, the availability of stuffing services (packing) and wagon repair in the terminals are essential, in addition with the availability of empty containers. This is especially the case when there is a lack of capacity in their own area of operation (e.g., in their own production facility).
- For logistics operators, the reefer services, but above all, the availability of reefer containers (including return options) are important. For shippers, this is only important if the corresponding goods are being transported and return load is available.
- Logistics services such as finishing of products in terminals play a subordinate role in the Region. However, there is potential for value-added services for terminals as a new business.
- Overall, a broad spectrum of service providers for various logistics services in the terminal environment is seen as an advantage by logistic providers and shippers.

⁵³ Carriers Haulage - the shipping company is the central service provider for transport handling, including hinterland transport, vis-à-vis the shipper.

Merchants Haulage - A logistics company is the service provider for the complete transport chain vis-à-vis the shipper.

3.4.2. Terminals in the Western Balkans

Drivers of supply chain

- In most of the cases the entry port and the hinterland connection used are decided by the consignee who pays usually for the transportation of goods (ex-works – INCOTERMS). In many cases the consignee is responsible for the transportation of goods, the route that will be followed is decided by the logistics operator based on cost and quality of service.
- The most important drivers of supply chain routing design are as follows, in order of priority:
 - a) Reliability/real-time information,
 - b) Total transport time,
 - c) Price,
 - d) Accessibility of the port by rail and quality of hinterland connection.
- A serious problem concerns the number of available trains per day which negatively affects their decision-making in selecting terminals. One to two trains per day to the next terminal with further international connections seems to be the minimum requirement for logistics operators to select a terminal and shift to rail. Two trains per day render the terminal competitive.

Importance of terminal-side value-added services

- The key value-added services which are important in a terminal of origin are, in order of priority:
 - a) Customs,
 - b) Handling of freight papers,
 - c) Wagon repair
 - d) Parking tracks
 - e) Shunting services,
- The key value-added services which are important in a terminal of destination are, in order of priority:
 - a) Customs,
 - b) Handling of freight papers,
 - c) Shunting services,
 - d) Parking tracks
 - e) Wagon repair

Conclusion

- Terminals are decisive. They are the gateways to the corridors. They are like little streams that make a river – the corridor.
- Therefore, the **last mile** to the terminals and the shippers' factories – the industrial track - are important.
- Without a satisfactory last-mile infrastructure, the best and most expensive investment in the corridors will be wasted money.
- Terminal operators and shippers are ready to co-finance and provide the last miles.

3.4.3. Human resources

Some interviewed voiced their concern that a main deficiency is the lack of professionally trained logistics experts in

- Transport logistics,
- Transport organisation,
- International cooperation and exchange.

A further concern lies in the quality of decision-making processes. As one interviewed formulated:

- *“Put key experts in key positions with key decision-making powers.”*

Note: In particular in Romania, a major complaint of the interviewed logistics operators and shippers was the lack of qualified personnel in the logistics business, in particular that the state education did not provide such qualifications.

3.5. Rail border crossings

According to Regulation (EU) 913/2010, rail cross-border stations are considered to be terminals.

Such border terminals have a distance of a couple of kilometres between each other. They do not carry out the classical services of terminals. Their services are in reality no value-added services but cost-generating and time-consuming services.

Border crossing services comprise, on **both** sides of the border:

- **Technical dispatching:** Wagons and traction crossing the border from one Infrastructure Manager to another require a technical inspection. If the technical inspector of the receiving railway does not accept the wagon, such wagon has to be taken out of a train and the goods have to be unloaded. Afterwards, they must be stored or reloaded on an acceptable wagon.
- **Operational dispatching:** The two railway undertakings have to operationally agree that the train with a new traction can continue the voyage. This also implies a close cooperation between the two Infrastructure Managers to agree on a joint path, the so-called prearranged path. Operational dispatching is one of the major activities in the RFCs.
- **Commercial dispatching:** The conductor or the traction driver must hand over the commercial documentation such as freight documents, customs documents and many other documents to the receiving personnel, once such commercial papers have gone through the hands of the two border crossing authorities.
- **Customs declaration:** According to the customs procedures, the customs authorities of each country check the customs declarations, even if all declarations have already been treated by the inland customs. With the application of agreed IT services, at least the customs documentation between inland customs authorities and border customs authorities can be paperless.
- **Immigration authorities:** They control the passports or special permits of the rail personnel from the other state.
- **Phytosanitary authorities:** According to the procedures, the phytosanitary authorities of each country check the phytosanitary documents, even if all documents have already been treated by the inland phytosanitary authority. IT application is already used.
- **Sanitary authorities:** According to the procedures, the sanitary authorities of each country check the sanitary documents, even if all documents have already been treated by the inland sanitary authority. IT application is already used.
- **Radioactivity control:** In Serbia, radioactivity checks are also carried out.

From a market point of view, rail border stations are considered to be an obstacle that prevent seamless trading, cost money, time, and reliability. For these reasons, logistics operators and shippers prefer border crossing activities to be transferred to inland terminals as much as possible.

Furthermore, rail border crossings with long standing times are subject to theft and other criminal activities that cannot be neglected and render international freight train services less attractive than road services. It is often forgotten that any damage or theft will have to be paid in a cost- and time-intensive chain of responsibilities by the railway undertaking, logistics operator, shipper, not to mention the difficulties which the sender will have with his client.

Rail border crossings are therefore one more reason why many logistics operators and shippers prefer the maritime solution, if a port is available, to avoid crossing the SEEP.

Some historical facts on border crossing in the Region might help to better understand the challenge.

In the SEEP, when it still was Yugoslavia (except for Albania), there already existed an internal market. However, for the Yugoslav Railways, cross-border stations always existed due to the fact of the almost independent railway transport companies Železničko Transportno Preduzeće (ZTP) in each Federal Republic. Each ZTP jealously took care that its traction material would not disappear in another ZTP.

With the dissolution of Yugoslavia, new border crossings between sovereign states were opened which rendered international rail transport even more complicated.

For this reason, Serbia and the former Serbian ZTP introduced the so-called joint border crossing stations at Dimitrovgrad and Subotica to facilitate rail border crossing with Bulgaria and Hungary. They took as an example the joint border procedures which the Swiss Confederation agreed with the former independent German states in the 1860s and 1870s. Serbia agreed that customs, immigration, phyto-sanitary and other control authorities of the neighbouring states could carry out their sovereign functions on Serbian territory. These measures significantly reduced the border crossing time, and it became a general rule that freight trains would only need less than 90 minutes for border dispatching. However, the reality of how these procedures function is oftentimes much different.

When the neighbouring states of Bulgaria and Hungary joined the European Community, now European Union, at the beginning of the 21st Century, it was no longer possible for national authorities of an EU Member State to carry out sovereign border controls on non-EU territories, which includes Serbia. This meant that rail border crossing operation was “thrown back” to the 20th Century.

The predecessor of TCT Secretariat, SEETO, launched some initiatives to facilitate rail border crossing inside the SEEP and with the neighbouring EU Member States, with two studies in 2008 and 2015. SEETO proposed to the SEEP a new model border crossing agreement with subsequent agreements for the border crossing authorities which was in full alignment with EU legislation.

The first SEETO border crossing agreement was signed between Kosovo and North Macedonia in 2012. However, the subsequent agreements between the border crossing authorities were never signed.

So far, only Albania and Montenegro signed such border crossing agreement with all subsequent agreements, which is fully functional. This agreement eventually led to an increase of border-crossing trains from 1 up to 3 per day until the Earthquake in November 2019 destroyed the strategically important bridge over the Ishëm.

The interviews indicated that border dispatching of international trains, i.e. the technical, operational and commercial dispatching, is considered third in rank of importance for railway undertakings and intermodal operators.

For shippers and logistics providers, customs is considered to be very important.

The interviews, compared with those carried out in 2008 and 2015 for SEETO, the World Bank, EC, EBRD and other funding institutions showed that:

- Rail border crossing operations have not been improved since 2008 and 2015 when the same experts carried out field trips and interviews, visited the border crossing points (BCPs), railway undertakings, shippers, terminal operators, logistics service operators and ports and proposed a Model Border Crossing Agreement (BCA) which is in full conformity with Directive 2012/34/EU.
- Although most of the SEEP have aligned their rail legislation with the EU legislation, they have not aligned their border crossing agreements except for the Albania – Montenegro BCA. What is even more interesting is the fact that the neighbouring EU Member States have not shown any interest to align the border crossing agreements with the SEEP.
- International freight rail performance has significantly diminished since 2009.
- Interestingly, fewer trains have not led to shorter dispatching times at the borders, since the rules and regulations have not changed. According to antiquated technology, normal freight despatching lasts between 90 and 180 minutes, but in reality, it can take longer, depending on various factors (outdated and fault-prone equipment, no coordination on traction on both sides of

the border) or when delays in long-distance international rail transport have disrupted the flow of transport and the reserved paths are no longer allocated.

- The “IT revolution”, with electronic interchange of data among railways and among railways and between the railways and the customs authorities, has not yet fully reached the railways in the Balkans.

The results of the interviews and the comparison with 2009 resp. 2015 provoke the question always asked by those who wish to improve the situation: **why?**

What are the problems in respect to border crossing procedure in rail transport?

Following categories were discussed in interviews: customs process; border police control; migration; operational border procedure; technical border procedure; commercial border procedure.

For the rail border crossing procedures, the opinions range from “*unsatisfactory*” (border between Serbia and BG at Dimitrovgrad with average waiting time around 250-300 minutes, and between GR and North Macedonia at Gevgelija/Idomeni with average waiting time around 200 minutes) to “*satisfactory*” (border crossings inside the Western Balkans).

The major challenges are long waiting times which one interviewed explained with “*non-harmonised procedures and poor technical interoperability [= no standardised digital communication] cause lengthy delays*”.

Locomotives need to be changed between Greece and North Macedonia which leads to delays. Usually locomotives are not available and/or drivers arrive too late on both sides. Nevertheless, some logistics operators and COSCO use the Corridor from Greece via Skopje/Belgrade and beyond without major problems whenever the needed documentation is well prepared.

Solutions given by the interviewed: **The general tenor is that “*integrated border crossing would reduce waiting times*”, but “*border crossing is the least problematic part of rail transport*”.**

Which solutions would you propose?

The question was prepared as an open question to receive different views and opinions. However, most of those interviewed have not replied. One explanation is that border-crossing is a “delicate matter” and voiced opinions could result in repercussions.

A few interviewees mentioned some ideas:

- Joint border stations.
- General enhancement of border crossing procedures.
- More staff of the border authorities at border stations.
- Availability of necessary equipment.
- Improvement of rail infrastructure (telecommunication, signalling, electrification).
- Reduction of waiting times due to customs and border police controls.
- Realistic train schedules with transit times and frequency.

Conclusions:

- Although the proposals and texts for EU aligned border crossing agreement had been prepared and accepted in 2008, the participants have not managed or have not been willing to implement them in order to facilitate border crossing inside the region or with the EU.
- **Therefore, the only – and most important - recommendation is to use the Model Border Crossing Agreement at all rail border crossing points and to adjust it to their situation, thus being in full conformity with the EU legislation and ensure open access to the SEEP rail networks.**

3.6. International freight trains

The following table shows the daily number of freight trains that have crossed the SEEP border since 2009 as a practical indicator of the importance of international train connections. In some cases, when only transport volumes had been received, the volume was divided by 500 net tonnes per train⁵⁴ and by 365 days per year to arrive at daily train numbers.

Number of freight trains per day	AL/ ME	HR/ RS	RS/ MK	MK/ GR	HU/ RS	RS/ BG	RS/ ME	RS/ BA	HR/B A (Sa-mac)	HR/ BA (Ploce)	MK/ XK	RS/ RO
Number of trains/day (in 24h) in 2009 (source: TA SEETO 2008-2009)	0-1	24-32	10-15	20	29	15	8	n/a	14	10-15	6	n/a
Number of trains/day (in 24h) in 2014 (source: Missions Report)	0-1	14	6	6	6	8	6	n/a	4	6 ⁵⁵	4	n/a
2016	0-1	n/a	6	n/a	12	6-7	4	5	14	14	1-2	1-2
2017	1-2	n/a	7	n/a	12	7	5	5-6	15-16	15-16	1	2
2018	0-1	6-7	7	7	12	6-7	4	5	17	17	1	2
2019	1	6-7	7	7	10	6	3	3-4	17	17	1	1-2
2020	0 ⁵⁶	3	7	7	9	5-6	2-3	2	12-13	12-13	1	0-1
2021	0	3	7-8	8	9	5-6	3-4	2-3	n/a	n/a	1	0-1
2022	0	5	5	5	6-7	4-5	4	3	n/a	n/a	0	1

Table 14 Number of daily trains per border crossing point

Source: The Consultant, based on data from Serbia Cargo⁵⁷, Infrakos, MZ, ZFBosnia and Hercegovina, ZRS. If only transport performance or transport volumes are available, a train is estimated at 500 tonnes and 365 days per year.

International freight rail performance has significantly diminished since 2009, in some cases, up to 70% according to persons interviewed at the rail BCP.

As mentioned in Chapter 3.3 on the TMS of AWB RFC, the important AWB RFC has also witnessed a significant decline of 70-80%. The same tendency can be found on the Corridor X.

Concerning Albania/Montenegro, the new border crossing agreement signed in 2015 gave the border crossing a boost from 1 to 3 daily train, mostly with the Port of Durres. However, the Earthquake of 2019 caused a standstill of international trains.

Concerning North Macedonia/Kosovo, in 2022 no international trains ran, due to construction work on Route 10 (Kosovo).

The only relatively stable numbers of trains can be reported on Corridor Vc, from Ploce to Central Europe (Budapest BILK Terminal). It seems that the investment in the Port of Ploce and the BILK Terminal has made this corridor more attractive. The decrease of the border crossing traffic between Montenegro and Serbia comes, among other factors, from the fact that the Fiat automotive factory in Serbia stopped its car production.

The above table shows the dismal and critical situation on international train movements within the SEEP

⁵⁴ 500 tonnes per train were also used by the Safège Study.

⁵⁵ The number of trains as counted on the BiH side. "Bosnian" trains can operate with a maximum of 1050 gross tones while "Croatian" train can operate more than 2000 gross-tonnes. In other words, "Croatian" trains are split up at the border. In "Croatian" terms, there are 2 -3 trains per day.

⁵⁶ Earthquake in Albania in November 2019

⁵⁷ Border crossing is carried out by Serbia Cargo.

and with the neighbouring states. For this reason, it is always surprising if, in a study, suddenly the trend is reversed to a substantial future growth, regardless of the assumptions underlining the growth. It is an unfortunate fact that, in the past 15 years since the Consultant started with the SEETO study in 2008, all other studies have always forecasted a growth scenario that has failed to occur.

3.7. National transport statistics as forecast basis

The 2017 Safège forecasts of rail freight traffic derived future demand from time series of international trade in monetary units. They converted monetary bilateral trade into freight volumes and transport performance, which were then divided by modal split extrapolating past evolution and projecting it to horizons of ten or more years.

The Consultant used a different approach based on extrapolations of Eurostat transport statistics and market consultations. An important advantage was the fact that Eurostat showed statistics in tonne-kilometres and produced realistic modal split figures. This approach makes possible a realistic picture of the future evolution of rail freight on the medium to long run than past trade data in monetary units.

3.7.1. Transport statistics

The following tables show the latest information available to the Consultant⁵⁸.

Rail freight modal share (tkm)													
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Montenegro	57.2 %	35.8 %	47.3 %	57.1 %	49.0 %	61.0 %	43.5 %	44.5 %	48.4 %	62.1 %	59.2 %	61.6 %	58.8 %
North Macedonia	15.7 %	11.0 %	11.0 %	8.2 %	6.8 %	7.6 %	3.7 %	2.7 %	2.1 %	2.5 %	2.8 %	3.3 %	3.1 %
Bosnia and Hercegovina	n/a	36.7 %	37.7 %	36.0 %	34.1 %	31.8 %	29.0 %	27.4 %	n/a	n/a	n/a	n/a	n/a
Kosovo	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Albania	1.3 %	1.0 %	1.4 %	1.3 %	0.8 %	0.7 %	1.1 %	0.7 %	0.3 %	0.7 %	0.6 %	1.2 %	0.7 %
Serbia	63.6 %	56.3 %	57.9 %	55.7 %	47.3 %	46.2 %	44.6 %	45.9 %	37.1 %	36.6 %	31.2 %	24.3 %	24.9 %

Table 15 Rail freight modal share

Source: Eurostat, national statistics offices, state railways.

Rail freight transport performance (btkm)													
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Montenegro	0.183	0.100	0.150	0.136	0.073	0.105	0.094	0.112	0.112	0.169	0.113	0.130	0.130
North Macedonia	0.743	0.497	0.525	0.479	0.423	0.421	0.411	0.278	0.222	0.277	0.307	0.350	0.342
Bosnia and Hercegovina	n/a	0.992	1.232	1.298	1.191	1.242	1.313	1.285	1.143	1.116	1.178	1.260	1.030
Kosovo	n/a	n/a	n/a	n/a	n/a	n/a	0.035	0.026	0.009	0.014	0.013	0.026	0.016
Albania	0.052	0.046	0.066	0.050	0.025	0.023	0.040	0.023	0.009	0.025	0.020	0.043	0.026
Serbia	4.339	2.967	3.522	3.611	2.769	3.022	2.988	3.248	3.087	3.288	3.186	2.865	2.747

Table 16 Rail freight transport performance

Source: Eurostat, national statistics offices, state railways.

⁵⁸ European Commission, Statistical Pocketbook 2022: EU transport in figures

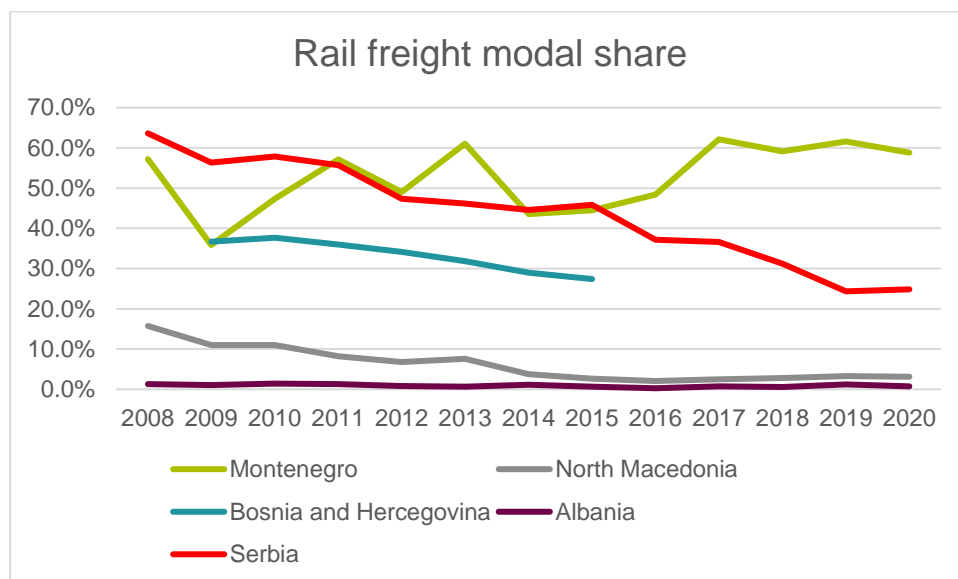


Figure 10 Rail freight modal share

Source: MC Mobility Consultants

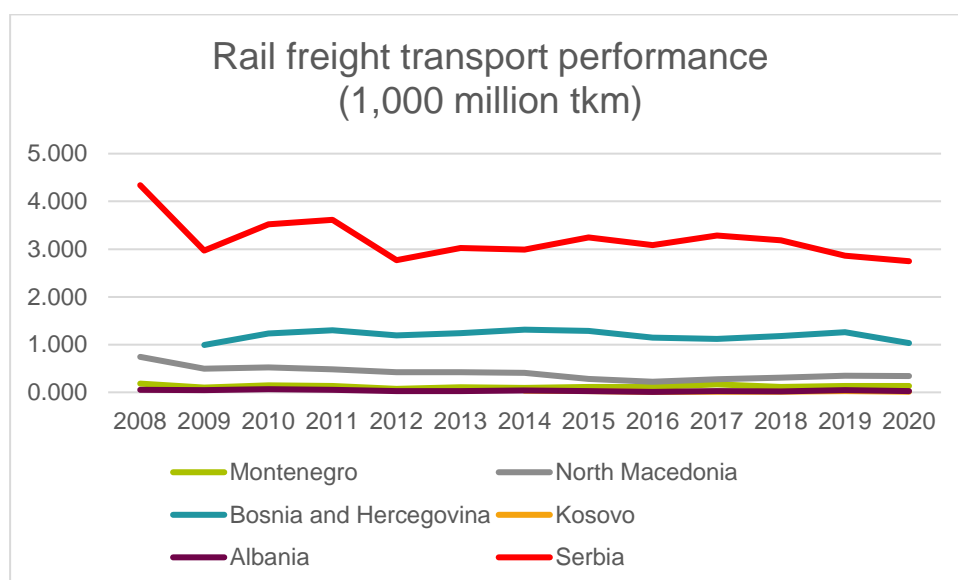


Figure 11 Rail freight transport performance

Source: MC Mobility Consultants

Notes:

Montenegro

Montenegro has a very high rail freight modal share. In the EU, it would belong to the top railway countries, like the Baltic States. However, as can be seen from the transport performance, the volume is minimal.

North Macedonia

The rail sector of North Macedonia has substantially lost traffic for two major reasons:

- Most bilateral traffic from Greek ports is transported by road.
- From a railway point of view, North Macedonia is the transit country on Corridor X that is in strong competition with the Orient/East-Med RFC via BG (former Corridor IV).

Bosnia and Hercegovina

The EU Statistical Pocketbook does not collect the data for Bosnia and Hercegovina. The data source here is UNECE that only shows road data until 2015. However, the Consultant, due to its project experience in Bosnia and Hercegovina, can confirm the continuation of the decline in rail freight modal share.

Kosovo

Although data on the modal split do not exist from Kosovo, the Consultant can confirm from its projects in Kosovo that the modal share has been similar to Albania.

Albania

Due to the deficient rail infrastructure in Albania, rail transport is unattractive. With the earthquake at the end of 2019 (destruction of the Bridge of Ishëm), international rail transport has come to a standstill. Only port traffic to the steel mill Kurum at Elbasan exists, operated in the last few years by a private concession.

Serbia

Serbia has the highest rail freight transport performance, but the rail sector has permanently lost its share against the road.

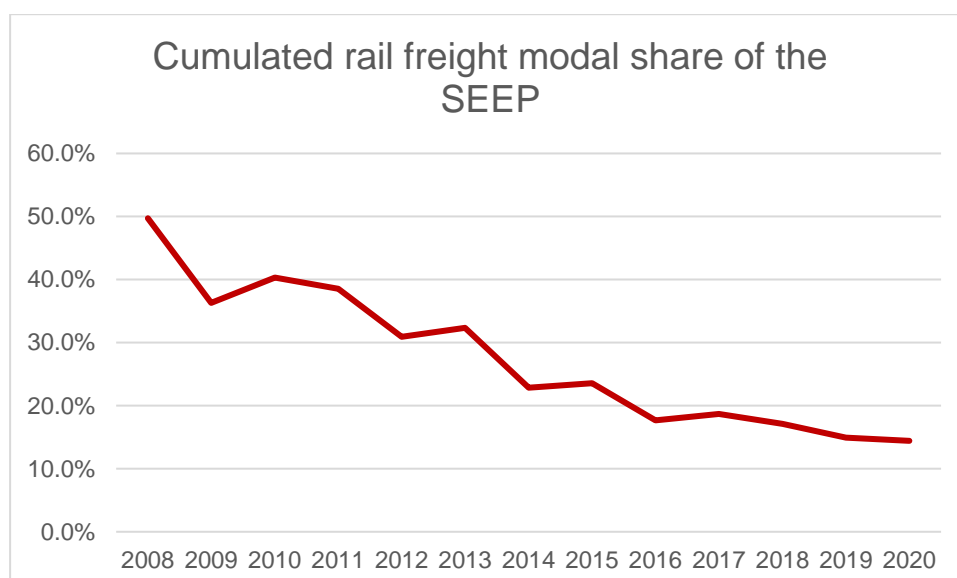


Figure 12 Cumulated rail freight modal share

Source: MC Mobility Consultants

Notes to the table:

- No data for Kosovo; the volumes are, however, very low.
- Bosnia and Hercegovina is only included for the years 2009-2015.

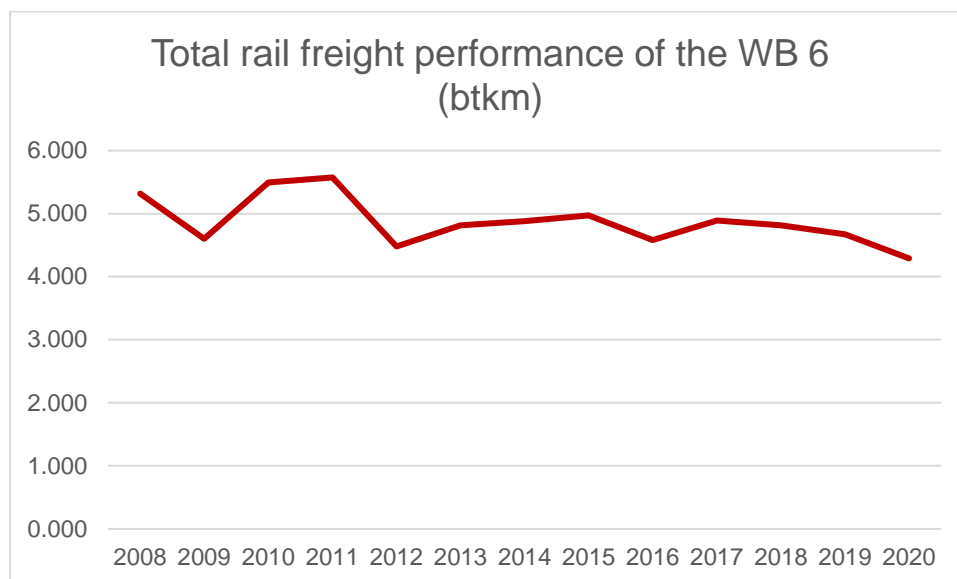


Figure 13 Total rail freight performance

Source: MC Mobility Consultants

Note to the table: For 2008-2013, data from Kosovo are missing. This, however, does not change the graph since volumes were very low as compared to the five other countries.

The cumulated rail freight modal share of the WB 6 shows a permanent decline despite the market opening processes and investments in the rail infrastructure. It has arrived, more or less, at the EU freight rail modal share which hovers around 16-18 %. This comes despite multi-million investments in rail infrastructure. In other words, ironically speaking, the SEEP rail freight modal share has been “successfully aligned” with the EU rail sector.

The following graphs show the development of **road freight performance** since the Financial Crisis 2008⁵⁹. It shows the success story of the road. The road has fully benefitted from the industrial growth and the growing exchange of goods between the SEEP and the EU/overseas countries.

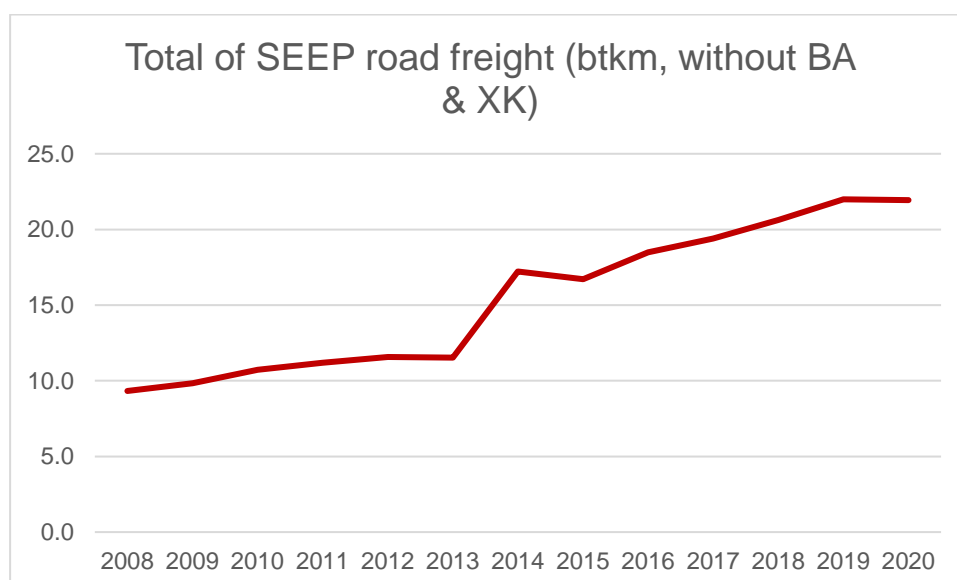


Figure 14 Total road freight performance (2008-2020), without XK and BA)

Source: MC Mobility Consultants

On the average, road freight in the West Balkans grew by one billion tkm p.a. (1,000 million), reaching

⁵⁹ Cumulated for AL, ME, MK, SR. Data on XK and BA were not available.

around 25 billion tkm by 2020⁶⁰.

During the same period, rail freight lost on the average 100 million tkm p.a.

The following rough calculation demonstrates the disastrous situation of the rail sector in the SEEP:

- If, for convenience of calculating, the average transport distance for road is supposed to be **100 km**, 1,000 million net tonne-kilometres of additional yearly road freight transport represent **10 million net tonnes/year** of additional transport volume that is carried by road.
- If a full train is supposed to transport 500 net tonnes, the additional 10 million net tonnes/year correspond to an equivalent of 20,000 fully loaded trains/year⁶¹ or **100 additional fully loaded trains/day**⁶² are “swallowed up” by road freight and lost to rail.
- Even if only **one fifth** (20%; 200 million net-tkm) of this potential could be gained by rail and the average distance of rail transport of such goods is increased to **300 km**⁶³ (i.e. **666,667 net tonnes per year**) with operational days increased to 365, it would still result in **3-4 additional trains/day every year**⁶⁴.

Further playing with the change of the average transport distance, net tonnes of a train or the yearly train operation days would not substantially change the disastrous picture of the rail situation.

Moreover, since the rail freight lost, during this period, on the average 100 million tkm/year, it means that **the rail freight lost on the average, 2 trains per day per year**⁶⁵.

3.7.2. Tentative forecast based on historical statistics

The quantitative and qualitative⁶⁶ market situation which are the basis of the tentative forecast, are:

- In the past 15 years, since the financial crisis, the SEEP have seen a slight decline in rail freight transport performance and a dramatic decline in rail modal share to about one third of the pre-2008 percentage.
- For Serbia, Bosnia and Hercegovina and North Macedonia with their larger volumes, the modal share development seems less erratic and more continuous than for the countries with small transport volumes, Montenegro, Albania, Kosovo, where even one additional train per day might considerably increase the modal share.
- The strongly fluctuating figures for Albania and North Macedonia, clearly show that reasonable predictions can only be done on the basis of statements from market participants (shippers, logistics operators, railway undertakings/intermodal operators⁶⁷), and that methods based on macroeconomic indicators will not work.
- Serbia is the only country with larger volumes and possibly a somewhat broader customer base. But this most important rail sector in WB 6 has been facing a modal share decline ever since.

Conclusion: In terms of transport performance, only Serbia and Bosnia and Hercegovina play a significant role in the rail transport sector.

A tentative forecast can be attempted by a **country-by-country approach**, based on the following

⁶⁰ When estimated volumes for BiH and XK are added.

⁶¹ It would not make any sense in such a hypothetical calculation to include non-revenue generating empty trains since it is very difficult to forecast the percentage of empty trains. For example, container trains have a very high reloading factor compared to trains with special wagons that can only load one particular commodity.

⁶² 200 days of train operation/year are supposed, for convenience's sake.

⁶³ The Consultant has chosen the average distance of 300 km since it is often assumed that for distances from 300 km onwards, train services are more competitive and economically feasible and often used as political and economic arguments for rail freight transport. The shorter distance of 100 km comes from the fact that road freight has a high component of local distribution traffic (retail and construction).

⁶⁴ $666,666.667 \text{ [tonnes p.a.]} / 365 \text{ [operational days p.a.]} / 500 \text{ [tonnes per train]} = 3.653 \text{ [trains per day]}$

⁶⁵ $100,000,000 \text{ [tonne-km p.a.]} / 300 \text{ [km average distance]} / 365 \text{ [operational days p.a.]} / 500 \text{ [tonnes per train]} = 1.826 \text{ [trains per day]}$

⁶⁶ See the evaluation of the interviews in Chapter 3.4 and Annex 5.

⁶⁷ See the interview partners in Chapter Annex 5.

observations:

- Serbia and Bosnia and Hercegovina have a larger transport performance, which, however, is stagnating. Thus, the modal share of rail is continuously going down from relatively high values. Such trends can be extrapolated.
- In North Macedonia, rail transport performance (down to one third since 2008) and modal share (down to one fifth since 2008) are falling very sharply, with a certain stabilisation at very low levels since 2015. Here a trend can be extrapolated, too.
- The transport performance of rail in Kosovo and Albania is insignificantly small and fluctuates very strongly, depending on a few customers. Correspondingly, the modal share of rail is also very low in Albania and Kosovo. Here, possible ranges of fluctuations can be indicated.
- In Montenegro, the modal share of rail is very high and stable, but with transport performance that is about one tenth of that of Bosnia and one twentieth of that of Serbia. Here it can be assumed that the volumes will remain more or less the same.

Country	Rail freight transport performance (btkm)		Rail modal share	
	2025	2030	2025	2030
Montenegro	0.130	0.130	ca. 50% (35-60%)	ca. 50% (35-60%)
North Macedonia	0.350	0.350	2-3%	2-3%
Bosnia and Hercegovina	1.000	1.000	15-20%	10-15%
Kosovo	0.015-0.020	0.015-0.020	1%	1%
Albania	0.020-0.040	0.020-0.040	1%	1%
Serbia	2.500	2.000	20%	15%
Total	ca. 4.028	Ca. 3.528	ca. 13 %	ca. 10%
Total road freight (est.)	ca. 30.000	ca. 35.000		

Table 17 Forecast at country level based on historical developments since 2008

Source: The Consultant.

In the following, the forecast based on net tonne-kilometres is transposed into daily international freight trains, comparing the results with the forecast of the 2017 study.

Assumptions:

As in the 2017 Safège Study, an average payload of 500 tonnes per train is assumed in the following calculations.

The table below lists further, country-specific input parameters for the calculation model.

Country	Average km per (international) freight train	Share of international freight transport
AL	100	N/A
BA	150	65%
ME	150	70%
MK	200	100%
RS	250	80%
XK	70	50%

Table 18 Assumed input parameters for forecast of international train numbers

Source: The Consultant.

Notes:

- In the aftermath of the 2019 earthquake, the international line between Montenegro and Albania was interrupted. It is estimated that the line will not be open in 2025 but that it will be operational in 2030.
- Since the Safège Study does not include a train number estimation for 2025, the Consultant cites average train figures of the period 2020-2022 in the table as reference.
- Transit share of international trains for Serbia and North Macedonia: 50%, to avoid double counting of international trains since such trains cross more than one border.

Country	Fully loaded rail freight trains per day 2025	Fully loaded <u>international</u> rail freight trains per day 2025	Number of international trains per day in 2020-2022
Montenegro	5	3	3-4 p.d. with RS 1 per week with AL (2022 1 per month with AL)
North Macedonia	10-11	10-11	5-7 with RS 7-8 in 2021 with GR
Bosnia and Hercegovina	36	24	12-13 transit trains p.d.
Kosovo	1	0-1	0-1 p.d.
Albania	1-2	0	0-1 p.d. 2021: 1 train per week with ME, 2022 1 train per month with ME
Serbia	55	44	30-35 border-crossing trains p.d.; i.e., ca. 22-27 international trains per day (Declining tendency)

Table 19 Estimated number of trains 2025 (scenario based on historical transport performance)

Source: The Consultant.

Country	Fully loaded rail freight trains per day 2030	Fully loaded <u>international</u> rail freight trains per day 2030	Forecast 2030 for daily international trains from 2017 Study (min/max; figures include estimated empty trains)	Forecast 2030 for daily <u>fully loaded</u> international trains from 2017 Study (min/max; figures adjusted for 50 % empty trains)
Montenegro	5	3	5-10	2-5
North Macedonia	10-11	10-11	19-38	9-19
Bosnia and Hercegovina	36	24	20-40	10-20
Kosovo	1	0-1	7-14	3-7
Albania	1-2	1	10-20	5-10
Serbia	44	35	50-100	25-50

Table 20 Estimated number of trains 2030 (scenario based on historical transport performance)

Source: The Consultant.

However, since the forecast train figures for Serbia, especially for 2025, contradict the strong downward trend from 2018 (45 international trains per day) to 2022 (30 international trains per day), the Consultant will adjust the figures in the following Chapter 3.8.1 in order to set up a more realistic scenario ("business-as-usual"/"do-nothing").

3.8. Forecast scenarios for 2025 and 2030

The Consultant's forecast approach is based upon the following rationale:

All forecasts in the various studies have proved to be overoptimistic. This situation is part of a fallacy that can be described as **the statistical regression fallacy**: a random (hazardous) distribution can be deduced from a time series, i.e. the evolution of the past automatically continues into the future without verification or consultation of the principal actors in the respective markets, i.e., interviews, consultation meetings with the decision-makers in the market.

This is one of the reasons why the Consultant proposed interviews, even if they do not cover all aspects, to shed light into the reality in the transport markets. But the interviewees mentioned potential transport volumes for the future and, at the same time, the risks of not gaining them.

Therefore, points of departure of the forecast scenarios for 2025 and 2030 are:

- The extrapolation of the historical development of national rail freight transport performance since 2008, broken down into train numbers, as given in Chapter 3.7.2.
- The historical evolution of train numbers between 2016/2018 and 2022 illustrated in Chapter 3.6 which have adjusted for transit trains to avoid double counting. Whenever train numbers have not

been available, the statistics for train kilometres have been used for calculating train numbers on the basis of 500 tonnes-trains.

3.8.1. „Business as usual“ scenario

The realistic scenario comprises the “business-as-usual” situation without major changes in the rail sector of the SEEP.

The major reason for such an assumption comes from the fact that, since 2008 until recently, no significant investment and other operational and commercial actions such as terminal infrastructure and terminal service improvement have been carried out in the SEEP to promote a shift from road to rail despite many announcements and studies.

As could be seen from the evolution of trains and transport performance in the past 15 years, there has been a significant negative tendency which shall be extrapolated till 2025 and 2030.

In this way, the realistic forecast will give a realistic picture of the future rail sector if no actions are taken that improve the commercial feasibility and attractiveness of the rail sector.

The interviews have clearly shown that the market will not wait for future actions to be taken. Moreover, if significant improvement happens, it does not mean that the market participants automatically will shift to rail. The interviews have shown that a price reduction of between 20 and 30 % will also be necessary.

The tables below adjust the forecast figures based on historical transport performance (see Chapter 3.7.2) data with actual international train numbers in order to receive a more realistic “calibrated” scenario.

Estimated number of trains 2025 “business as usual” scenario, based on transport performance and adjusted for actual train numbers)

Country	Fully loaded international rail freight trains per day 2025	Number of international trains per day in 2020-2022	Remarks
Montenegro	3	3-4 p.d. with RS 1 per week with AL (2022 1 per month with AL)	Stable 3-4 trains p.d. over a period of 5 years 2018-2022.
North Macedonia	7	5-7 with RS 7-8 in 2021 with GR	2018-2021 stable 7 trains p.d. at RS/MK border; in 2022 reduction to 4-5 trains p.d. at RS/MK border
Bosnia and Hercegovina	11-12	40 border crossing trains in 2018; 28-29 border crossing trains in 2020; i.e., 18-19 international trains p.d. in 2020	Figures resulting from calculation model adjusted for real train numbers 2020. Assumption ca. -9% p.a. following the historical trend since 2018. Adjusted for 50% transit quota for RS/BA, i.e. 75% of RS/BA border crossing trains to avoid double counting. Adjusted for 67 % transit quota for BA/HR, i.e., 67% of RS/HR border crossing trains to avoid double counting.
Kosovo	0-1	0-1 p.d.	
Albania	0	0-1 p.d. 2021: 1 train per week with ME, 2022 1 train per month with ME	Assumption: bridge over the Ishëm River will not be reconstructed by 2025.
Serbia	15-20	30-35 border-crossing trains p.d.; i.e., ca. 22-27 international trains per day (sinking tendency)	Figures resulting from calculation model adjusted for real train numbers 2018-2022. Assumption: ca. -7% p.a. following the historical trend since 2018. Assumption: ca. 50 % transit, i.e., 75% of border crossing trains, to avoid double counting.

Table 21 Estimated number of trains 2025, “business as usual” scenario, based on transport performance and adjusted for actual train numbers

Source: The Consultant.

Estimated number of trains 2030 (“business as usual” scenario, based on transport performance and adjusted for actual train numbers)

Country	Fully loaded international rail freight trains per day 2030	Remarks
Montenegro	3	
North Macedonia	5	
Bosnia and Hercegovina	7-8	Assumption ca. -9% p.a. following the historical trend 2018-2020. Adjusted for 50 % transit quota for RS/BA, i.e., 75 % of RS/BA border crossing trains to avoid double counting. Adjusted for 67 % transit quota for BA/HR; i.e. 67% of RS/HR border crossing trains to avoid double counting.
Kosovo	0-1	
Albania	1	
Serbia	12-13	Figures resulting from calculation model adjusted for real train numbers 2018-2022. Assumption: ca. -7 % p.a. following the historical trend since 2018. Assumption: ca. 50 % transit, i.e., 75 % of border crossing trains, to avoid double counting.

Table 22 Estimated number of trains 2030, “business as usual” scenario, based on transport performance and adjusted for actual train numbers

Source: The Consultant.

3.8.2. Market-oriented scenario

The market-oriented scenario includes potential rail transport that has been given by the interviewees or coming from the Consultant’s market activities in the SEEP and neighbouring countries.

Rail freight potential resulting from interviews and market knowledge:

Serbia/Bosnia and Hercegovina:

2 trains/day (coal trains⁶⁸). As of 2023, coal transport between the Port of Ploce and Serbian powerplants have started operating.

Risk: no risk scenario necessary due to decision of the Serbian Government. How long the transport will last is uncertain.

Bosnia and Hercegovina/Croatia:

2-4 container trains per day (1-2 container trains both directions) due to the increased call of feeder lines in the port of Ploce for transport follows between Ploce and Hungary (mostly BILK) for further distribution in Central Europe.

Risk: logistics operators and shipping lines might transfer the container to other Adriatic ports, mainly Rijeka and Koper.

Albania/Montenegro:

4 trains/day. The already existing traffic, disrupted by earthquake, by the construction industry with its own railway undertaking (one train per day), general cargo between Port of Durres and Serbia operated by private railway undertaking (one container train per day both directions, i.e. 2 trains total), scrap and other metal material from Serbia to Elbasan (operated by a private concession, Kurum) (one train per day).

Risks:

- Scrap metal is subject to volatile pricing.
- Container train is subject to competition with Port of Bar.

Montenegro/Serbia:

1-2 trains/day as of 2024 when the Fiat production will start again in Serbia.

⁶⁸ Empty returns are not counted.

Risk: highly unlikely that the direct route via AWB RFC will be chosen due to lack of seamless transport to IT. Difficult to forecast whether there will be an increase in train frequency.

1 train/day grain transport from UA to Port of Bar. First offers and test trains exist. If reliability and timing with good maritime connections to North Africa is assured, could become regular service according to Ukrainian logistics providers. If successful, 2 trains per day are possible.

Risk: result of war situation in Ukraine and port competition between Bar and Rijeka/Koper.

Serbia/North Macedonia:

Additional 2 container trains per day (1 train both directions) until 2025 and possible 2 container trains/day more for 2030 (1 additional train both directions) from COSCO GR-North Macedonia-Serbia-HR (Corridor X)

Risk: COSCO shall divert Central European traffic to Trieste/Rijeka due to investment in port operations.

Furthermore, full diversion of all COSCO trains from Pireus to Hamburg as soon as COSCO has become port operator at the Port of Hamburg which means the total loss of existing COSCO trains, too. Return trains from CZ and AT might use AWB RFC on return trips due to reloading in AT.

Additional 2 container trains per day (6-10 per week: 3+3 to 5+5 per week) as of 2025 between Nis MBox Terminal and the Port of Thessaloniki

Risk: Port of Thessaloniki is involved in the Nis MBox Terminal, therefore no risk since it is its Serbian product. However, due to the relative lack of attractiveness of the port, container shipping lines might opt for Adriatic Ports. Major clients are CMA-CGA, Maersk, and others, in competition with COSCO trains.

Serbia/Hungary:

Additional 0.5 Trains per day (1-2 trains per week per direction, i.e., 2-4 trains) as of second half of 2023 from Nis MBox to BILK. Additional 2 container trains per day (6-10 per week: 3+3 to 5+5 per week) as of 2024 from Nis MBox to BILK or other Central European destinations.

Clients: CMA-CGA, Maersk, and others, with transfer of containers from Port of Thessaloniki to Central European destinations, and BILK logistics operators grouping Central European goods for Nis and/or Port of Thessaloniki, in competition with COSCO.

Risk: Relatively high risk due to road and possibility of transfer to Adriatic ports, in particular Rijeka/Koper, which have far better rail connections than Thessaloniki. However, the Nis industrial region seems to be an attractive region.

Serbia/Bulgaria:

4 trains (2 container trains per direction) per day from Southern One Belt One Road coming from logistics centre Halkali with direction Munich (BMW)/Stuttgart (Mercedes) and others using AWB RFC. Growth potential possible but in competition with maritime route.

Risk: Unsatisfactory performance on the Turkish rail side, competition with new multimodal services between Georgian Port of Poti and Constanta using the RFC Constanta-Central Europe or competition with corridor via BG/RO.

Kosovo/Serbia:

3 trains per day: The opening of the Mitrovica – Lesak – Kraljevo section of Route 10 to international traffic would further boost rail freight. Unofficially, a potential of 500.000 to 1 million tonnes/year or the equivalent of 3 to 5 full trains per day. **(only beyond 2025).**

Such potential trains could start operating earliest 2023, latest 2024 unless other dates are indicated.

For the future market-oriented scenario, such potential will be added to the realistic scenario with the result that the calculated decline shall be weakened.

Country	Fully loaded international rail freight trains per day 2025	Number of international trains per day in 2020-2022	Remarks
Montenegro	7	3-4 p.d. with RS 1 per week with AL (2022 1 per month with AL)	4 additional trains per day with RS (Fiat, Ukrainian grain)
North Macedonia	11	5-7 with RS 7-8 in 2021 with GR	2 (1+1) additional COSCO container trains per day 2 MBox container trains per day RS-GR
Bosnia and Hercegovina	17-19	40 border crossing trains in 2018; 28-29 border crossing trains in 2020; i.e. 18-19 international trains p.d. in 2020	4 (2+2) additional container trains Ploce-Budapest BILK 2 coal trains per day with Serbia
Kosovo	0-1	0-1 p.d.	
Albania	0	0-1 p.d. 2021: 1 train per week with ME, 2022 1 train per month with ME	
Serbia	30-35	30-35 border-crossing trains p.d.; i.e. ca. 22-27 international trains per day (sinking tendency)	2 coal trains per day with BA 2 Fiat trains per day with ME 1 Ukrainian grain train per day with ME 2 (1+1) COSCO container trains per day with MK 4 (2+2) OBOR container trains per day 2 MBox container trains per day with MK/GR 2.5 MBox container trains per day with HU

Table 23 Estimated number of trains 2025 (market-oriented scenario, based on realistic scenario with added market potential from the industry interviews)

Source: The Consultant.

Country	Fully loaded international rail freight trains per day 2030	Remarks
Montenegro	7	
North Macedonia	11	2 (1+1) additional COSCO container trains per day
Bosnia and Hercegovina	13-14	
Kosovo	3-4	3 trains per day with RS on Route 10
Albania	5	4 trains per day after reopening of bridge
Serbia	32-34	Additionally: 3 trains per day with XK on Route 10 2 (1+1) COSCO container trains per day

Table 24 Estimated number of trains 2030 (market-oriented scenario, based on realistic scenario with added market potential from the industry interviews)

Source: The Consultant.

3.9. Summary of Transport Market Study

The striking result of the Transport Market Study is the fact that international rail freight performance has significantly diminished since 2009, in some cases, up to 70% according to persons interviewed at the rail BCP.

The important AWB RFC has also witnessed a significant decline of 70-80%.

The same tendency can be found on the Corridor X.

Number of freight trains per day	AL/ ME	HR/ RS	RS/ MK	MK/ GR	HU/ RS	RS/ BG	RS/ ME	RS/ BA	HR/B A (Sa-mac)	HR/ BA (Ploce)	MK/ XK	RS/ RO
Number of trains/day (in 24h) in 2009 (source: TA SEETO 2008-2009)	0-1	24-32	10-15	20	29	15	8	n/a	14	10-15	6	n/a
Number of trains/day (in 24h) in 2014 (source: Missions Report)	0-1	14	6	6	6	8	6	n/a	4	6 ⁶⁹	4	n/a
2016	0-1	n/a	6	n/a	12	6-7	4	5	14	14	1-2	1-2
2017	1-2	n/a	7	n/a	12	7	5	5-6	15-16	15-16	1	2
2018	0-1	6-7	7	7	12	6-7	4	5	17	17	1	2
2019	1	6-7	7	7	10	6	3	3-4	17	17	1	1-2
2020	0 ⁷⁰	3	7	7	9	5-6	2-3	2	12-13	12-13	1	0-1
2021	0	3	7-8	8	9	5-6	3-4	2-3	n/a	n/a	1	0-1
2022	0	5	5	5	6-7	4-5	4	3	n/a	n/a	0	1

Table 25 Number of daily trains per border crossing point

Source: The Consultant, based on data from former SEETO reports, Serbia Cargo⁷¹, Infrakos, MZ, ZFBosnia and Hercegovina, ZRS. If only transport performance or transport volumes are available, a train is estimated at 500 tonnes and 365 days per year.

For this reason, it is always surprising if, in a study, suddenly the trend is reversed to a substantial future growth, regardless of the assumptions underlining the growth. It is an unfortunate fact that, in the past 15 years since the Consultant started with the SEETO study in 2008, all other studies have always forecast a growth scenario that has failed to occur.

In order to avoid the so-called “hockey stick phenomenon”, i.e., even stagnant or declining tendencies start producing growth whenever a study carries out forecasts, the Consultant applied two approaches for the forecast:

- The **“business as usual” approach** based on historical data starting in 2008, immediately after the Financial Crisis,
- The **market-oriented approach** which used the historical scenario but added the information on future international freight train movements given by the interviewed and from the Consultant's own market knowledge.

⁶⁹ The number of trains as counted on the BiH side. “Bosnian” trains can operate with a maximum of 1050 gross tonnes while “Croatian” train can operate more than 2000 gross-tonnes. In other words, “Croatian” trains are split up at the border. In “Croatian” terms, there are 2 -3 trains per day.

⁷⁰ Earthquake in Albania in November 2019

⁷¹ Border crossing is carried out by Serbia Cargo.

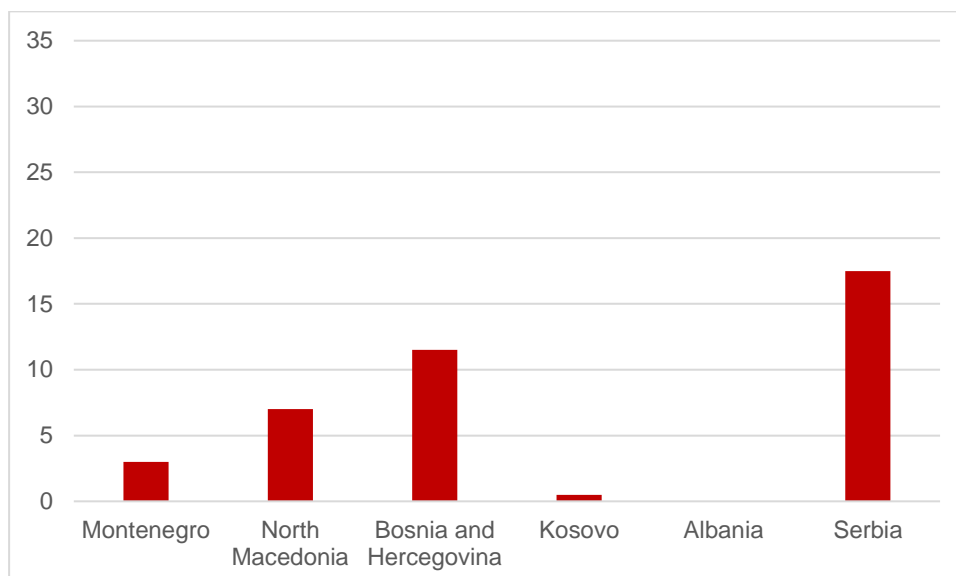


Figure 15 “Business as usual” scenario: average number of international freight trains per country 2025

Source: MC Mobility Consultants.

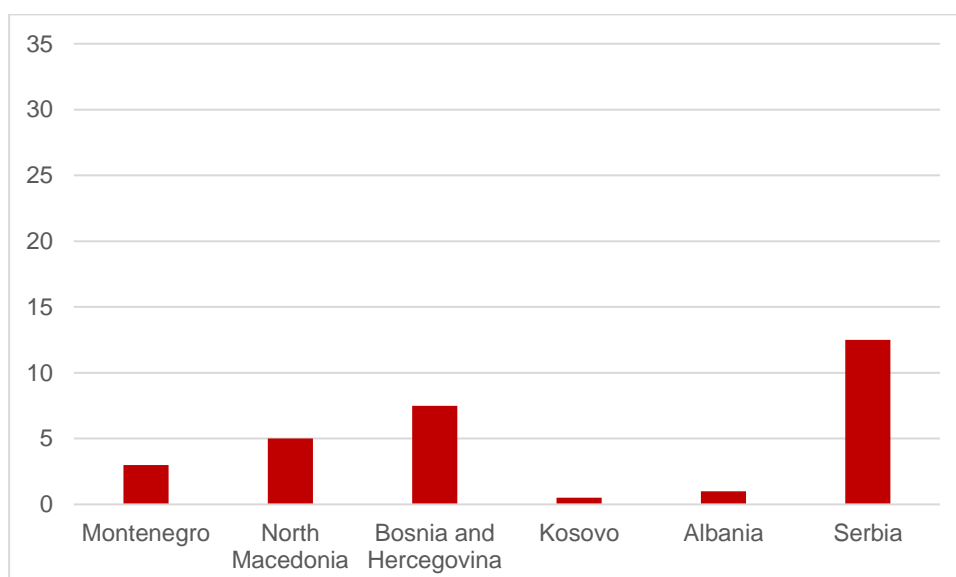


Figure 16 “Business as usual” scenario: average number of international freight trains per country 2030

Source: MC Mobility Consultants.

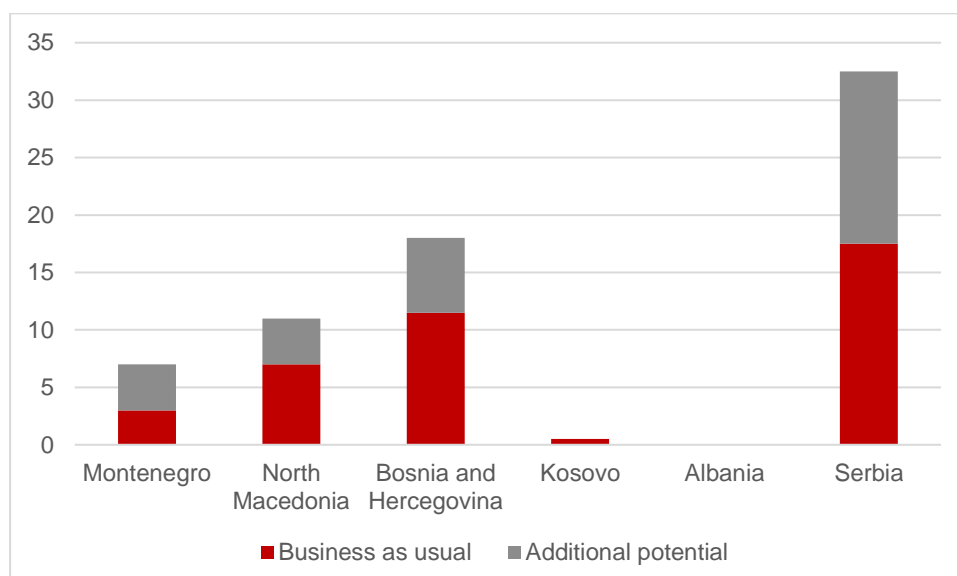


Figure 17 Market-oriented scenario: average number of international freight trains per country 2025

Source: MC Mobility Consultants.

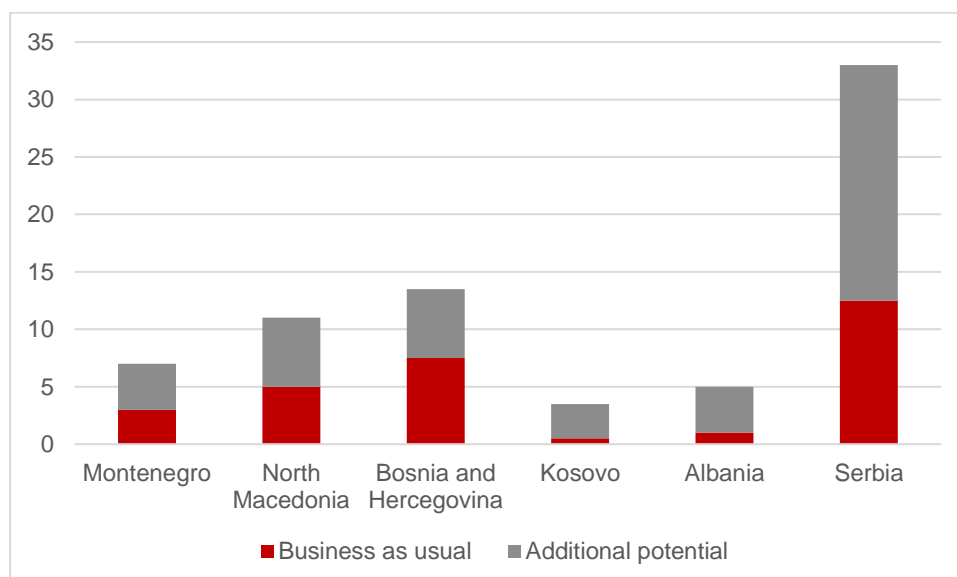


Figure 18 Market-oriented scenario: average number of international freight trains per country 2030

Source: MC Mobility Consultants.

The **“business as usual” scenario** clearly indicates:

- If the historical evolution of international train numbers continues at the same speed as it has happened since 2008 (150 international trains per day at the SEEP borders) and especially since 2018 (90 international trains per day at the SEEP borders), the international train movements inside the SEEP and with the neighbouring countries will further decline to 45-50 trains in 2025 and 30 trains in 2030.
- The proclaimed shift from road to rail will not happen on the contrary, the shift from rail to road will intensify.

The **market-oriented scenario** clearly indicates:

- The interviews and the present market observation have shown a certain readiness of the decision-makers to invest in terminals and to operate new international trains, mostly container trains.
- If such potential is realised, the declining trend can be stopped and the present level (2022: 55-60 international trains per day at the SEEP borders) can be maintained (65-70 trains in 2025, 70-

75 trains in 2030).

Even if the historical scenario shows a sinking tendency in modal share and transport performance for international train movements, the market information for the second scenario shows that even under a status quo situation, new rail products and initiatives are under preparation, in particular container trains in the form of shuttle trains.

Such information indicates at least a certain stability for the future. With a fast implementation, even of low investment measures such as last miles and terminal infrastructure improvement, elimination of infrastructure bottlenecks, a slight upwards tendency might occur in the future.

The estimation of future rail transport volumes is not as easy as it seems at first sight, and has to be interpreted with some caution due to several factors, including:

- Growing modal competition may cause modal shifts in both directions. Unfortunately, in the SEEP, the current trend is for increase in modal shift to road transport.
- Industries might move their geographical location.
- Industries might be closed down due to high energy prices.
- Important infrastructure works stop or hinder traffic for a limited period of time, as is the case for Route 10 in Kosovo and the Corridor X section between Serbia and Hungary.
- Natural catastrophes temporarily force the traffic to stop, as is the case in Albania.

As was mentioned by various logistics operators inside and outside the SEEP, the market situation at present is volatile due to new geopolitical challenges. Therefore, the existing supply chains and those in development are subject to sudden changes which cannot be forecasted.

A condition *sine qua non* is that the market decision-makers should be included in the consultation and decision-making process for investment measures financed and funded by public authorities, which so far has not happened.

The interviews with the decision-makers (shippers, logistics operators, railway undertakings/intermodal operators) show what they wish the rail to do in order to shift goods from road to rail.

The following is a summary of the requirements coming from the decision-makers:

- Decision-makers determine whether investments in rail infrastructure and terminals will become attractive, useful, and profitable if they decide on using rail infrastructure and terminals. Otherwise, investment in rail infrastructure and terminals shall be stranded costs or White Elephants.
- Their principle is: the product shall arrive at the right time, at the right location, in the right condition, at the right price, with a minimum administrative burden.
- **Terminals are decisive for a successful shift to rail.** They are the gateways to the corridors. They are like little streams that make a river – the corridor -.
- Therefore, the **last mile** to the terminals and the shippers' factories – the industrial track - is a decisive element for the shift to rail. Without a satisfactory last-mile rail infrastructure, the best and most expensive investment in the corridors will be wasted money.
- Terminal operators and shippers are ready to co-finance and provide the last miles.
- Internationally attractive terminals should offer at least one (1) train per day in Albania, Kosovo, Montenegro, and North Macedonia, as well as 2-3 trains per day in Bosnia and Hercegovina and Serbia.
- A successful shift to rail would imply a total transport price reduction of 20 % to 30%.

Other interviews in the SEEP and the neighbouring countries such as Central European countries, Greece, Romania, Moldova, and Ukraine, confirm the findings of the interviews carried out in the Region.

It is important to mention that such future potential international train movements bear several risks due to the fact that sufficient corridor competition exists. The following map clearly shows that growth is heavily influenced by trade between Asia and Europe.

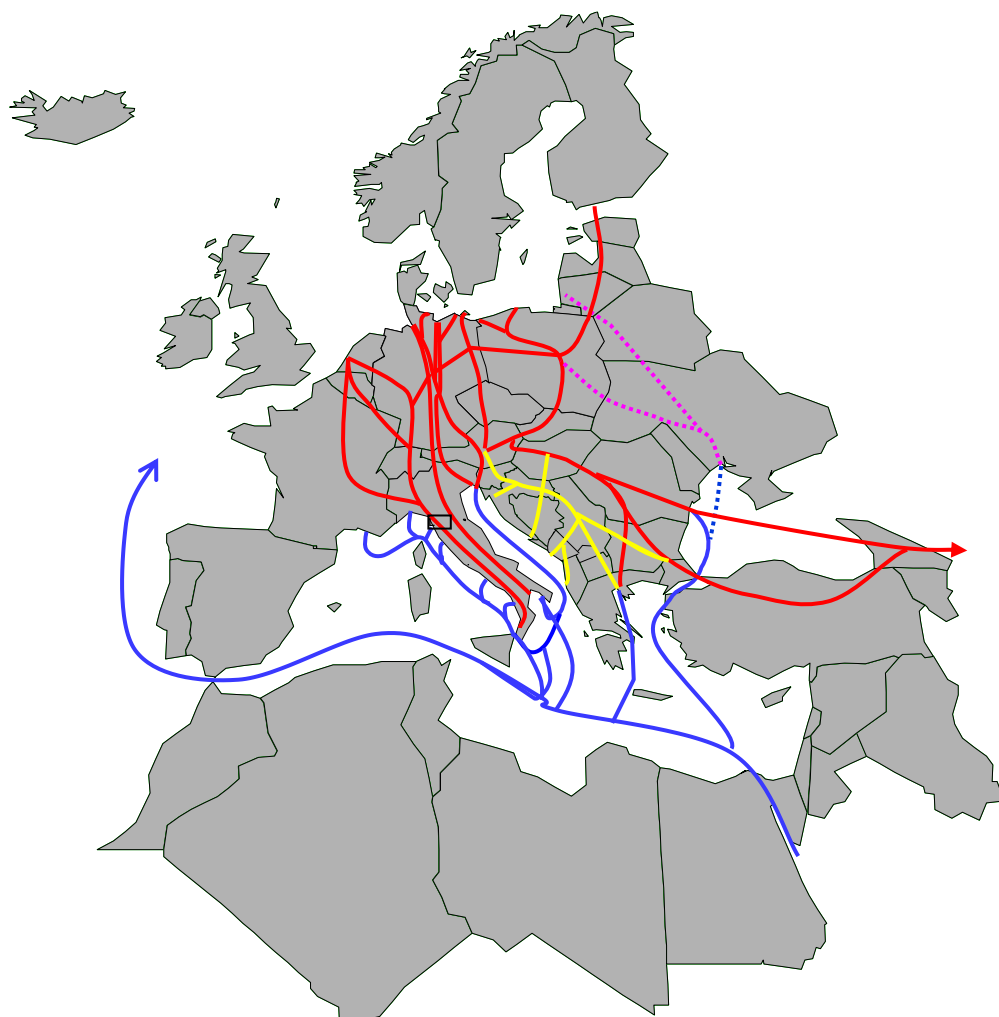


Figure 19 Competitive position of the Western Balkan corridors

Source: MC Mobility Consultants

Since the outbreak of the Russian-Ukrainian War, major freight flows have been disrupted between Europe and Asia. From a railway perspective, grain flows cross different gauges (standard vs OSJD track gauge) by gauge changing facilities or in containers that are transhipped at the borders on flat wagons of different gauge.

The rail sector managed to absorb a considerable share of this additional demand, which made freight flows rise sharply in some routes. Rerouted flows constitute a potential for the SEEP rail networks. New terminals, in particular in the Belgrade and Nis areas, are planned and existing terminals if upgraded in terms of cranes, number tracks or track length may absorb future additional demand.

The West Balkans Transport Corridor, as set out in the Commission Proposal for a new TEN-T regulation, designates a number of border crossing lines as belonging to that corridor the construction of which had not begun at the time of drafting this report. Their financing has yet to be agreed, building permits to be granted, feasibility studies, cost benefit analyses to be completed before construction may start⁷². Usually, after all line sections near a land border on a corridor are commissioned or, after over a year of closure, are recommissioned, the rail sector will usually takes several months to absorb significant shares of cross border freight traffic.

In conclusion, the general tenor of logistics operators and shippers is:

- Market-oriented pricing policy to compete with flexible pricing of the competitors.

⁷² Currently the only such BCP for which all preparations have been completed is the joint BCP between Serbia and North Macedonia, in Tabanovci.

- Fast submission of service offers. The road sector submits offers within hours, the railway undertakings, in particular state-owned ones, within days/weeks.
- Modern freight wagons to replace old, out-dated, or badly maintained wagon material.
- More containerised services.
- Readiness of logistics operators and shippers to co-finance infrastructure and rolling stock respectively or participate in leasing activities by concluding medium-term transport contracts.

4. List of measures required for RFC

The Implementation Plan requires a list of measures on how Article 12-19 of the RFC Regulation (EU) 913/2010 shall be implemented (Art.9(1e)). In order to meet market needs, the methods for establishing a freight corridor should be presented in an implementation plan, which should include identifying and setting a schedule for measures to improve the performance of rail freight.

Furthermore, the plan shall ensure that planned or implemented measures for the establishment of a freight corridor meet the needs or expectations of all users and applicants of the freight corridor. The applicants likely to use the freight corridor must be regularly consulted in accordance with procedures defined by the Management Board.

The Management Board shall prepare the implementation plan and submit it to the Executive Committee at least six months before the latter has scheduled it for adoption.

In this section, the most relevant measures are mentioned, while the complete List of Measures is presented in Appendix 2 – Measures.

The following measures are foreseen for the implementation of Art. 12-19 of Regulation (EU) 913/2010:

- a) Cross-border coordination of infrastructure works – Art.12
- b) Establishment of a One-Stop-Shop – Art.13
- c) Framework for allocation of capacity – Art.14
- d) Inclusion of non-railway undertakings among Applicants – Art.15
- f) Traffic Management Procedures – Art.16
- g) Traffic Management in event of disturbance – Art.17
- h) Information to be provided – Art.18
- i) Quality of service on the freight corridor – Art.19

In any case, any common view (or text) could have to adhere partly or fully to what had already been established by neighbouring MS and/or RFCs. Therefore, the direction of development of the RFC in WB should be decided/agreed before the detailed definition of the content of the List of Measures.

Currently, cooperation of SEEP Infrastructure Managers is based on exchanging information, adjusting plans for regular maintenance, and preparing joint funding applications for regional projects, based on a Memorandum of Understanding signed in 2021.

However, the Infrastructure Managers have not yet achieved the desired operational level of cooperation with respect to the above-mentioned measures. Such cooperation should latest be achieved with the open access at the regional level.

RNE provides considerable support material for corridor management.

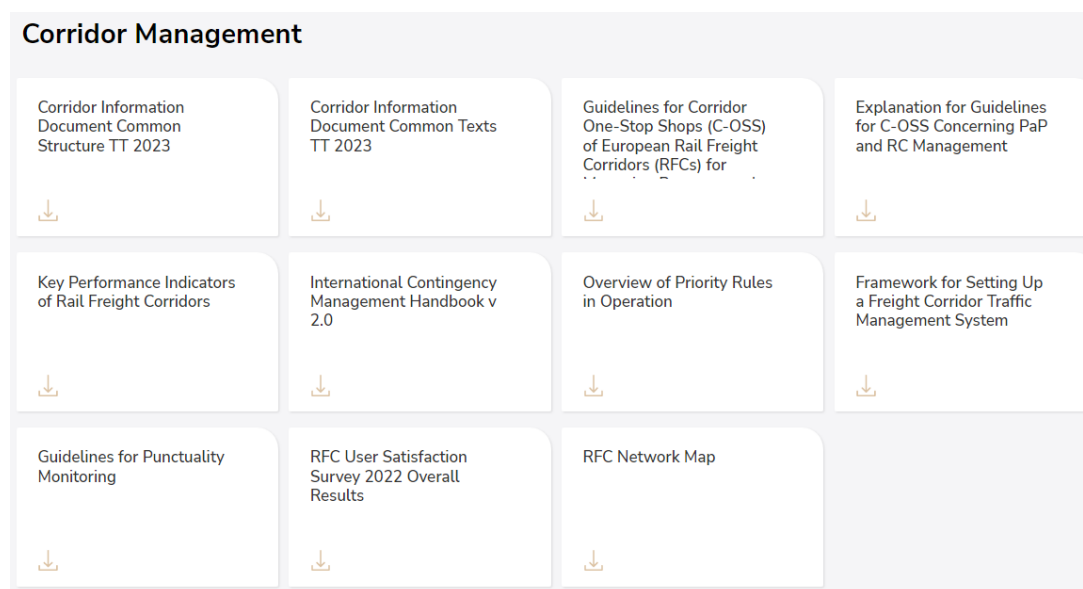


Figure 20 Support material on rail freight corridors for Infrastructure Managers provided by RNE⁷³

Source: RailNet Europe

Moreover, the text of a rolling version of the Implementation Plan⁷⁴ often makes a reference to what was published in other books, which together constitute the whole Corridor Information Document (CID), as below:

- Book 1 – Generalities
- Book 2 – Network Statement Excerpts [Timetabling year Y]
- Book 3 – Terminal Description
- Book 4 – Procedures for Capacity and Traffic Management
- Book 5 – Implementation Plan

As the other books could not be finished at the preliminary stage, more comprehensive information on corridors is provided as possible guidelines in Appendix 2.

4.1. Coordination of planned temporary capacity restrictions

Art. 12 of Regulation (EU) 913/2010 requires the management board to coordinate and ensure the publication in one place, in an appropriate manner, time frame, and schedule for carrying out all the works of the infrastructure and its equipment that would restrict available capacity on the freight sector.

Given the detailed provisions of Directive 2012/34/EU as to the coordination of works applicable to individual Infrastructure Managers, the Regulation requires in addition the coordination (also) by the management boards of each corridor and the publication of all planned works in one place.

The management board, under Art. 18(a) of Regulation (EU) 913/2010, is obliged to publish information relevant for freight trains using the corridor in a corridor information document, including the information on temporary capacity restrictions they are required to publish in their network statement. The information to be provided by the infrastructure in the network statement in accordance with Annex VII (15) of Directive 2012/34/EU – and hence where relevant also in the corridor information document- shall include at least:

⁷³ [Downloads – RNE](#)

⁷⁴ E.g. in the case of RFC 6 (Mediterranean Rail Freight Corridor, MED RFC) and RFC 7 (Orient/East-Med Rail Freight Corridor, RFC OEM).

- The planned day,
- Time of day, and, as soon as it can be set, the hour of the beginning and of the end of the capacity restriction,
- The section of line affected by the restriction, and
- Where applicable, the capacity of diversionary lines.

The Rhine-Alpine Corridor seeks to meet those legal obligations by publishing,

- An overview of the coming up works on lines of the Corridor until 3 years in advance (2021 - 2023).
- Impact Sheets with major works per Infrastructure Manager

The overview of the upcoming works is provided in a table.

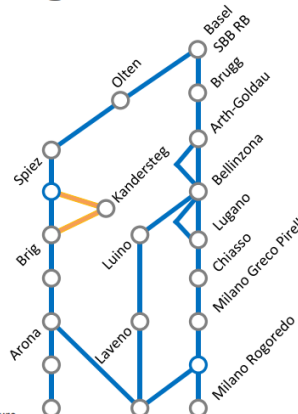
For each TCR, the Infrastructure Manager in question provides details. Furthermore, a condensed graphic form of that information is provided in so-called Impact Sheets. An impact sheet depicts a temporary capacity restriction as to its location in the network context, the residual capacity, whether or not the TCR is included in the annual timetable or just in the working table, profile restrictions, deviations etc. There is one impact sheet for each TCR coming up in the two forthcoming timetable periods.

The following picture serves to illustrate that:

Impact of TCR 2024 at SBB Infra/BLS Netz (1) Section Spiez – Brig (Mountain line)



State of play : 21.11.2022
Disclaimer see front page



2024 Calendar

Single track operation Total closure

January	February	March	April
Mo Tu We Th Fr Sa Su 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	Mo Tu We Th Fr Sa Su 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	Mo Tu We Th Fr Sa Su 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	Mo Tu We Th Fr Sa Su 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
May	June	July	August
Mo Tu We Th Fr Sa Su 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	Mo Tu We Th Fr Sa Su 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	Mo Tu We Th Fr Sa Su 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	Mo Tu We Th Fr Sa Su 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
September	October	November	December
Mo Tu We Th Fr Sa Su 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	Mo Tu We Th Fr Sa Su 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	Mo Tu We Th Fr Sa Su 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	Mo Tu We Th Fr Sa Su 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Major Capacity Restriction

- Section: SPIEZ – BRIG (mountain line)
- Type: ¼ tunnel closure with partially single-track
- Type of Works: Tunnel renewal
- Period: From 31/07/2018 to 21/12/2024

Impact on International Rail Freight

- Reduction of available capacity; possible delays due speed reduction
- Marginal residual capacity during works
- in the annual TT: Yes
- Extra running time max 15 Min
- Profile restrictions No

Figure 21 Impact of TCR 2024

Source: Rhine Alpine Corridor⁷⁵

⁷⁵ [Download - Corridor Rhine-Alpine \(corridor-rhine-alpine.eu\)](https://corridor-rhine-alpine.eu)

To facilitate legal obligations of Infrastructure Managers, RNE provides software free of charge to Infrastructure Managers, the 'TCR Tool'. The TCR Tool is not limited to RFC trains but includes TCR affecting domestic freight trains and passenger trains. The TCR Tool is useful not only for the coordination and publication of TCRs among IMs, but also for the consultation with applicants as it provides them with one single platform on which each applicant can find harmonised information (in contrast to the current situation where applicants must review different Excel lists of various RFCs in order to assess the impact of TCRs on their traffic plans). In addition, the TCR Tool could even be applied at national level, particularly by smaller IMs who have no national tool available to create and publish their TCRs.

Added Value

- System, where IMs can create, coordinate, and publish their TCRs.
- Visualisation of all TCRs on the Gantt and Map view to support coordination between IMs.
- Available for IMs and Applicants (RUs and Non-RUs) to see TCR details.
- Public users can see TCRs' overview on the map.
- Easy communication.

Data export: The TCR Tool provides...

- A platform for handling harmonised international path requests, path studies, path offers and path allocations – without any paperwork.
- Quick, secure and easy communication between all parties (Path Applicants, IMs/ABs, RFCs);
- Flexible system – updated to fulfil future requirements of European legislation.
- International standardisation of the data structure and availability of international timetable data.

Recommendations to SEEP Infrastructure Managers:

1. Coordination on TCR in accordance with Art. 12 of Regulation (EU) 913/2010 amid IMs can start immediately. Coordination and publication of TCR are a low hanging fruit to be reaped before an RFC is fully operational. Most obligations on TCR apply at the level of individual Infrastructure Managers, the additional effort at RFC level is marginal, though very useful in the WB 6 region.
2. It is a good approach to start agreements between Infrastructure Managers on the measures necessary to establish a freight corridor.
3. In fact, such agreements could improve performance even if not supported by general official/procedural steps but only by the specific agreements needed on a case-by-case basis.
4. The cases of the Border Crossing Agreements in the Region are good examples that can be followed for the coordination and publication of TCR.
5. RNE's TCR tool will facilitate coordination and publication in a timely, comprehensive, and user-friendly way.

All SEEP agreed in a stringent way to transpose and apply European competition law by virtue of Stabilisation and Association Agreements⁷⁶. Such agreements have been concluded bilaterally between each candidate country of the West Balkans and the European Union. Whilst Member States have conferred decision making functions to the European Commission, national authorities exert the function of the European Commission in applying competition rules.

Railway lines, from a competition point of view, are an essential facility for transport services. Infrastructure managers are natural monopolies and therefore they hold a dominant position. Capacity restrictions on lines directly impact on service quality and on the capability of railway undertakings to provide transport services. Whilst there is no doubt that capacity restrictions may result from maintenance and renewal works on the infrastructure, there have been cases where Infrastructure Managers unduly restricted line capacity with a view to abuse their dominant position.

Whenever a rail regulatory body suspects abuse, it is obliged to inform competition authorities in accordance with Directive 2012/34/EU. Aggrieved companies, such as shippers or railway undertakings, may file a complaint with their national competition authorities. Penalties collected from the culpable rail

⁷⁶ Under Heading 6 of the SAA, both sides are bound by [competition](#) rules, based on EU law, relating to actions that may affect trade between the 2 parties, see summary at [EUR-Lex - 4314911 - EN - EUR-Lex \(europa.eu\)](#)

operator (Infrastructure Manager, facility operator, railway undertaking) accrue to the state. Once the competition authority established the culpability of the dominant entity, aggrieved companies can expect a positive ruling by civil courts as regards claims of damages, forbearance and/or abatement. Exemptions from the prohibition of the abuse of a dominant position do not exist, nor are possible.

The Consultant recommends:

- That railway undertakings involve their national competition authority, either under an own-initiative procedure or a formal complaint, when their business model is at risk for fear of abuse of dominant position of the Infrastructure Manager.
- That, to avoid irreversible damage to shippers or railway undertakings, rail regulatory bodies closely monitor whether the duration and the severity of capacity restriction are necessary with a view to the intended works on a line or a facility. They should urge the Infrastructure Manager limit severity and duration of capacity restrictions to what is absolutely necessary with regards to what the users of a line can bear. Regulatory bodies should closely cooperate with competition authorities in cases of abuse of a dominant position. They should not hesitate to share the expertise of the rail sector with the competition authority.

Below, a classical case on abuse of temporary capacity restriction dealt with by the General Court of the European Union, resulting from a complaint by a shipper against the Lithuanian state-owned integrated Infrastructure Manager.

4.1.1. Lietuvos geležinkelių's case on TCR

The General Court of the European Union confirms that, as Lietuvos geležinkelių (LG, the Lithuanian state-owned integrated Infrastructure Manager and dominant rail freight undertaking) had a dominant position not only as railway Infrastructure Manager but also on the market (of rail freight services) in question. It had a special responsibility not to impair genuine, undistorted competition on that market. Therefore, when deciding on the solution to the deformation of the track in dispute, Lietuvos geležinkelių (LG) ought to have taken into account its responsibility and avoided eliminating all prospect of the track in dispute being returned to service in the short term. Rather, by removing the entire track in dispute, Lietuvos geležinkelių (LG) did not assume that responsibility since its conduct made access to the market in question more difficult.

As regards the impact of the removal of the track in dispute on Latvian Railways (Latvijas dzelzceļš, LDz)'s (the state railways of neighbouring Latvia) ability to transport Orlen⁷⁷'s oil products destined for seaborne export from the refinery to the Latvian seaports, the General Court finds that the fact of having to use a longer route in Lithuania - which is busier than the Lithuanian section of the short route - involved higher risks for LDz of conflicts in train paths, uncertainty as to the quality and cost of additional rail services as well as risks arising from a lack of information and transparency regarding market entry conditions and, therefore, Orlen was more dependent on the Lithuanian railway Infrastructure Manager. In addition, the General Court notes that, in 2008 and 2009, the costs of transporting Orlen's oil products were higher on the longer routes to the Latvian seaports than on the route to Klaipėda (Lithuania). Consequently, the Commission cannot be accused of any error of assessment in reaching the conclusion that the longer routes to the Latvian seaports would not have been competitive in comparison with the route to Klaipėda. In those circumstances, the General Court dismisses, essentially, Lietuvos geležinkelių (LG)'s action in its entirety. However, in the exercise of its unlimited jurisdiction to set the amount of fines, the General Court, having regard to the gravity and duration of the infringement, considers it appropriate to reduce the amount of the fine imposed on LG from € 27 873 000 to € 20 068 650⁷⁸.

⁷⁷ Polski Koncern Naftowy Orlen Spółka Akcyjna (PKN Orlen SA, Orlen), a Polish multinational oil refiner and petrol retailer with refineries in Lithuania

⁷⁸ European Court of Justice Press Release at [The General Court upholds the Commission's decision finding that the national railway company of Lithuania abused its dominant position on the Lithuanian rail freight market \(europa.eu\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:62017J0081), Judgment in Case T-814/17

4.2. Corridor One Stop Shop (OSS)

The following chapter briefly summarises the legal tasks and obligations of the C-OSS. The details are described in Appendix 2. It also makes recommendations on how to promote the concept of OSS in the Region.

4.2.1. Legal tasks and obligations of the C-OSS

Key legal act is Regulation (EU) No 913/2010 of the European Parliament and of the Council of 22 September 2010 concerning a European rail network for competitive freight.

Article 13 establishes the *One-stop shop for application for infrastructure capacity*. It is a “joint body for applicants to request and to receive answers, in a single place and in a single operation, regarding infrastructure capacity for freight trains crossing at least one border along the freight corridor”.

The C-OSS shall be set up by the Management Board of the RFC.

It shall:

- Function “as a coordination tool, provide basic information concerning the allocation of the infrastructure capacity”. (Article 13.2, first sentence)
- Display infrastructure capacity available at the time of request and its characteristics according to specific parameters like speed, length, loading gauge or axle load (Article 13.2, second sentence)
- Take a decision with regard to applications for pre-arranged train paths, reserve capacity, and inform the national Infrastructure Managers respectively (Article 13.3)
- Forward the application for infrastructure capacity which cannot be met, without any delay to the competent Infrastructure Managers or allocation bodies. They shall communicate their decision to the C-OSS for further processing. (Article 13.4)
- Carry out all its activities in a transparent and non-discriminatory manner (Article 13.5, first sentence)
- Keep a register of requests for infrastructure capacity, applicants and eventual incidents which shall be made freely available to all interested parties (Article 13.5, second sentence)
- Be subject to the control of the regulatory bodies (Article 13.5, third sentence)

Article 14 details the tasks and obligations of the Infrastructure Managers or allocation bodies.

They shall

- *Jointly define and organise international **pre-arranged train paths** for freight trains* following the procedures of path allocation (Article 14.3)
- *Facilitate journey times, frequencies, times of departure and destination and routings suitable for freight transport services* (Article 14.3)
- Publish the pre-arranged train paths not later than *3 months before the final date for receipt of requests for capacity* (Article 14.3)
- Prioritise international freight trains when applying for pre-arranged paths (Article 14.4)
- Jointly define and keep a reserve capacity for international freight trains in their final working timetables until at least 60 days before the scheduled time (Article 14.5)
- Be allowed to introduce an *appropriate, dissuasive, and effective* cancellation fee for unused train paths (Article 14.7). Except for cases of force majeure or emergency, an allocated pre-arranged path may not be cancelled later than two months in advance without the consent of the applicant. In this case, the Infrastructure Manager shall make an equivalent offer to the applicant (Article 14.8)

Further details of the tasks and obligations of the OSS, in particular the path allocation process for pre-arranged paths and non-pre-arranged paths, can be found in Appendix 2.

4.2.2. The Transport Community Treaty (TCT) and Regulation (EU) 913/2010

The European Commission is repeatedly mentioned in the Regulation (EU) 913/2010 in various roles.

- Article 3: Designation of initial freight corridors
- Article 5: Selection of further freight corridors
- Article 6: Modification of further freight corridors
- Article 7: Reconciliation in case two or more Member States do not agree on the establishment or modification of a freight corridor
- Article 22: Monitoring reports shall be presented to the Commission

As a result of the involvement of the EC in RFCs, the EC is already involved in the AWB RFC and therefore directly influences the Serbian corridor section.

The TCT obliges the Western Balkan states to take over the provisions of the Regulation (EU) 913/2010 into their respective national laws as part of the EU Acquis (Annex 1.2). Due to the sovereignty of the SEEP as non-EU Member States, the European Commission cannot take over the above-mentioned roles.

Therefore, the question arises to what extent an institution like the TCT Secretariat could eventually take over some of the roles foreseen for the EC in the Regulation (EU) 913/2010.

Concerning *Article 3: Designation of initial freight corridors*, *Article 5: Selection of further freight corridors*, and *Article 6: Modification of further freight corridors*, TCT Secretariat could propose to the Governments (via the Ministerial Council or then Regional Steering Committee) the designation, selection, and modification of initial or further freight corridors in the Region and prepare the respective negotiations.

With the Transport Market Studies and a well-established network with the main transport-decision-makers in the Region such as shippers, logistics operators and railway undertakings, TCT Secretariat could propose suggestions to the Governments (Art. 28 to 33 of TCT).

Concerning *Article 7: Reconciliation in case two or more Member States do not agree on the establishment or modification of a freight corridor*, such tasks do not seem in the scope of TCT Secretariat. Concerning *Article 22: Monitoring reports shall be presented to the Commission*, TCT Secretariat shall participate in the preparation of the biannual monitoring reports. A direct involvement in any kind of OSS could happen if Governments, Ministerial Council would delegate such tasks to TCT Secretariat.

Concerning infringement procedures, it is highly unlikely that TCT Secretariat would be involved in such a legally and politically delicate matter. However, for example, infringement procedures cannot be initiated by TCT Secretariat.

Since the European Commission is not a member of Management Board or Advisory Board, it is also highly unlikely that TCT Secretariat could take over such tasks. However, the role of an observer would be very helpful to generate an overall picture of the management of corridors in the Region since TCT Secretariat can always initiate recommendations via the Ministerial Council and Regional Steering Committee.

In conclusion, the future role of TCT Secretariat could be a major initiator to foster the idea of competitive rail freight corridors in the Region, benefitting from its direct market knowledge and using the option of TCT for a joint modified transposition of EU law during the pre-accession stage (Article 3(2) of the TCT).

In the Western Balkans, only Serbia actively takes part in a RFC. The AWB RFC started operating on 13 January 2020 when the first catalogue of pre-arranged paths (PaPs) was published⁷⁹. The AWB RFC therefore already has a C-OSS which is managed by the Croatian Infrastructure Manager⁸⁰.

Therefore, there already exist first experiences about the functioning of an OSS in the Region. This could

⁷⁹ <https://www.rfc-awb.eu/organisation/>

⁸⁰ <https://www.rfc-awb.eu/offer/about-the-c-oss/>

be used as a practical reference for establishing similar OSS in the Region, even if there is at present no legal obligation to do so.

Therefore, the Consultant proposes the following measure:

- Gradually introduce similar regional OSS for the regional corridors to render the corridors more attractive and competitive.

The following corridors are proposed. The order of priority is based on the number of international trains that cross regional borders and borders with the neighbouring EU Member States (see Chapter 3.6):

- Corridor Subotica-Greek border;
- Corridor (Hungary-Croatia)-Samac-Bosnia and Hercegovina-Ploce (HR).
- Corridor Belgrade-Port of Bar.

The other corridors like North Macedonia-Kosovo-Serbia, Albania-Montenegro, and Serbia-Bosnia and Hercegovina could, of course, establish OSS, if their governments and Infrastructure Managers are prepared to do so.

4.3. Capacity allocation principles

This Chapter provides an overview on the principles of:

- The supply of pre-arranged paths (PaPs) by the national IMs and Allocation Bodies.
- The allocation of PaPs and RC by the C-OSS.
- Regulatory control.
- Authorised applicants;
- Priority rules.

RNE provides 11 handbooks and 2 process guidelines on different aspects of capacity management⁸¹. With reference to Article 14.1 of the Regulation (EU) 913/2010, the Ministers of Transport should adopt a decision related to capacity allocation by the C-OSS on the future RFC in the Western Balkans. For any timetable year, a revised version has to be drafted and adopted by the representatives of the Executive Board.

The AWB RFC published its framework for capacity allocation⁸² in accordance with Art. 14(1). The Framework for Capacity Allocation constitutes the basis for the capacity allocation via the C-OSS.

Recommendation:

The adoption of Capacity Allocation Principles requires an already set up corridor organisation or, at least detailed decisions and agreements amidst the IMs. It can be suggested to start this activity even in an informal way by pursuing the necessary detailed agreements on the important topics above.

4.4. Applicants for rail infrastructure capacity

Article 15 of the Regulation (EU) 913/2010 stipulates that:

"Notwithstanding Article 16(1) of Directive 2001/14/EC, applicants other than undertakings or the international groupings that they make up, such as shippers, freight forwarders and combined transport operators, may request international pre-arranged train paths specified in Article 14(3) and the reserve capacity specified in Article 14(5). In order to use such a train path for freight transport on the freight corridor, these applicants shall appoint a railway undertaking to conclude an agreement with the infrastructure manager in accordance with Article 10 of Directive 91/440/EEC."

⁸¹ [Downloads – RNE](#)

⁸² [KM_C454e-20200131110333 \(rfc-awb.eu\)](#)

The General Approach would amend Article 15 in that it updates the references to Directive 2012/34/EU as last amended, but otherwise leaves that article unchanged.

Article 3 'Definitions' of Directive 2012/34/EU establishing a single European railway area defines an applicant as: "Applicants: a railway undertaking or an international grouping of railway undertakings or other persons or legal entities, such as competent authorities under Regulation (EC) n°1370/2007 and shippers, freight forwarders and combined transport operators, with a public-service or commercial interest in procuring infrastructure capacity."

The term 'authorised applicant' was eliminated when market access legislation was recast in 2012 and replaced with 'applicant'. Given the exclusive and comprehensive nature of the definition of applicant, Article 15 has been reduced to a reminder to corridor bodies that also entities that are not a railway undertaking may lodge capacity requests with the corridor one-stop shop.

Authorised applicants

The regulation states that corridors are obliged to make international train paths available for authorised applicants. Applicants other than railway undertakings have to designate a railway undertaking before the train run. One of the main goals is to enable partners to apply for international path at a single C-OSS.

If the Executive Board plans to award capacity on the basis of a contract, the rail freight corridor should be a legal entity. The contract should stipulate who levies the charge for unused capacity, in case that contract did not translate into a track access contract with an Infrastructure Manager.

Different rules apply to authorised applicants and railway undertakings (RU) in case of cancelling a train path. e.g., an authorised applicant is obliged to nominate the RU until a certain deadline before the transport takes place, but this deadline can differ in each country. On the other hand, the consequence of not nominating an RU that performs activities on behalf of the authorised applicant may also be different. This may have the undesired effect that a train path of a PaP gets cancelled because the applicant did not designate a railway undertaking while the other trains paths of that PaP are maintained. It is therefore suggested that authorised applicants and railway undertakings should be treated equally in terms of responsibilities and deadlines.

Given the definition of the term 'applicant' is clearly laid down in Directive 2012/34/EU, executive board and management board should refrain from rule setting on who could be considered as applicant at the level of an individual corridor. They should rather apply the definition and requirements of applicants provided in Directive 2012/34/EU and the relevant implementing act.

4.5. Traffic management

Some rail freight corridors have not published how they have implemented their obligation to coordinate traffic management among the infrastructure managers or between the infrastructure managers and the terminals.

At external EU borders and at borders between SEEP, customs authorities use the New Customs Transit System (NCTS) in accordance with the Union Customs Code. NCTS communicates to customs authorities the arrival of a train at a border station about one hour in advance. Regional infrastructure managers and operators of border facilities might find NCTS useful for the purpose of traffic management.

4.6. Traffic management in event of disturbance

'Disturbance', though EU law does not provide a definition, is understood as unplanned and unforeseen incidences that impact the flow of traffic on a railway line and the punctuality of trains. It should be distinguished from temporary capacity restrictions, as referred to in Annex VII of Directive 2012/34/EU as last amended and further explained above.

Where a disturbance happens, the infrastructure manager (IM) concerned should inform the neighbouring IMs and the concerned RU in their own country. This should be stipulated in further detail as part of the bilateral agreements between infrastructure managers. As soon as the concerned IM will be aware a disruption affecting a corridor PaP, it will immediately inform the C-OSS who will ensure the correct communication to the IMs concerned. At this stage we could consider that the address of the C-OSS mailbox is inserted in the incident messages sent by IM's.

According to the gravity of the incident (Evaluation of the consequences to the daily business of the applicant), the C-OSS will communicate with involved applicants and IMs in order to inform and also to find international solutions. The communication procedures among IMs, RUs, Terminals, and OSS need to be described when the corridor organisation will be completely set up. Bilateral agreements and procedures might need updating.

In any case, the management board shall put in place procedures for coordinating traffic management along the freight corridors, including connected freight corridors in accordance with Art. 16(1). Since delays may also impact on the access to terminals and the services provided therein, the infrastructure managers and the advisory group of the terminal operators belonging to a corridor shall put in place procedures to coordinate between infrastructure and terminals.

In the case of trains crossing from one network to another which arrive with a presumed delay of not more than 18 hours, the infrastructure manager of the other network shall not consider the train path cancelled or request application for another train path in accordance with Point 7 of Annex VII of Regulation 2012/34/EU, which states: *"The IMs should agree on a procedure to be followed in the event of disturbance in accordance with RNE recommendations. The procedure should be submitted for adoption to a preliminary Management Board, waiting for the establishment of further governance bodies, as the Executive Board of the RFC, which have to approve it. The procedure to be followed in the event of disturbance is subject of an RNE specific guideline, more or less already followed by the regional infrastructure managers in their respective network statements."*

4.7. Information to be provided

The goal of this section is to facilitate the production of the Corridor Information Document (CID) by offering guidelines to RFCs for the structure and expected content, as well as other recommendations to be used. RNE provides a common structure for the CID⁸³. It has been developed and is annually updated with regards to a new timetable period by the RNE Network Statement and Corridor Information Document Working Group. The aim for applicants is to find the same information at the same place in each CID.

a) Legal Framework

The RNE CID Common Texts and Structure is in line with the requirements of the Regulation (EU) 913/2010.

According to its Article 18, the CID shall contain:

- All the information in relation with the Rail Freight Corridor contained in the Network Statements.
- List and characteristics of terminals.

⁸³ [RNE CID Common Structure TT2023.pdf](#)

- Information on capacity allocation (C-OSS operation) and traffic management, also in the event of disturbance.
- An implementation plan that contains:
 - The characteristics of the Rail Freight Corridor,
 - The essential elements of the transport market study that should be carried out on a regular basis,
 - The objectives for the Rail Freight Corridor,
 - The indicative investment plan.

b) RNE Guidelines and Handbooks

In addition, the following RNE Guidelines and Handbook have an impact on the content of the CID.

- Guidelines for C-OSS concerning PaP and RC Management.
- Guidelines for Coordination / Publication of Planned Temporary Capacity Restrictions for the European Railway Network.
- Guidelines concerning non-RU applicants.
- Handbook for International Contingency Management.

Recommendation:

It can be advised to all the IMs to start to collect, organise and made consistent the required information, even before the time to set up a Corridor Organisation. In particular, the IMs that do not already have a Network Statement can do the above activity for instance by following the RNE guidelines for the Book 2 – ‘Network Statement Excerpts’.

It can be suggested to start this activity even in an informal way and afterwards try to pursue detailed agreements on these important topics.

4.8. Quality evaluation and new legal operational parameters

Quality evaluation is stipulated in Article 19 of Regulation (EU) 913/2010 and further interpreted in a non-binding 2011 Commission Staff Working Document, the Handbook on the Regulation.

The most important details can be found in Appendix 3.

Performance schemes, if calibrated in accordance with punctuality needs of the different services, should provide effective, consistent, and realistic signals to shippers, logistics operators, railway undertakings/intermodal operators, and infrastructure managers. The RFC should promote a harmonised and effective performance scheme along the corridor in accordance with Art. 19.1 of Regulation (EU) 913/2010. The performance scheme is required to be set as part of each infrastructure manager's charging scheme to reward punctual service provision by infrastructure manager and railway undertaking in financial terms.

The Management Board must monitor the performance of the corridor in qualitative and quantitative terms and assess it against the performance targets under Art. 9(1) of Regulation (EU) 913/2010. It shall furthermore consult the Advisory Group and the European Coordinator on the indicators for monitoring in accordance with the General Approach of the Council. The Management Board shall publish an annual report on quality evaluation which provides the results of the monitoring and the views of the advisory groups in separate chapters.

According to point (9) of Article 65 of the Council's General Approach of December 2022⁸⁴, the Management Board shall monitor the performance of the infrastructure managers in providing essential services within the scope of Articles 12 to 18 of Regulation 913/2010.

⁸⁴ [pdf \(europa.eu\)](#) downloaded on 31 March 2023.

It shall monitor the achievement of the targets regarding the 25-minute maximum dwelling time of freight trains at internal European Union borders and the 75 % share of freight trains arriving the destination (or the external European Union border respectively) on time, meaning that they were not delayed for reasons attributable to the infrastructure managers concerned with the train run.

The Management Board shall also monitor the performance of the freight trains on the corridor. It shall share its assessment with the advisory groups.

The assessment and the views of the Advisory Groups shall be presented in the Annual Report of the Management Board, subject to approval by the Executive Board of the rail freight corridor.

Furthermore, RNE presents three different guidelines/survey results⁸⁵ to support quality evaluation of the RFC

- Guideline on performance indicators.
- The results of the user satisfaction survey. (The Council, in its General Approach, skipped the user satisfaction survey).
- The guidelines for punctuality monitoring.

The General Approach of the Council of Ministers on the Commission's proposal to amend the TEN-T Regulation provides for two operational parameters in the form of maximum dwelling times⁸⁶ and a maximum percentage of 75% freight trains crossing one border and arriving with a delay of over 30 mins caused by infrastructure managers. Evidently, such operational parameters, if adopted, present a major challenge and opportunity for freight trains crossing borders also in the West Balkan region.

4.8.1. Performance Monitoring Report

Performance monitoring should cover the design for punctuality indicators, a description of the data collection process, and the action plan the corridor management board intends to implement with a view to improve service quality. The RNE Assembly adopted Guidelines for Freight Corridor Quality⁸⁷ to facilitate transparency and allow Management Boards to easily meet their quality monitoring obligations under the Regulation. Further practical advice for corridor managers can be found in Appendix 3 to this report.

So far, the management board of the AWB RFC has not yet published a performance monitoring report.

4.8.2. User Satisfaction Survey

Since 2020, AWB RFC has regularly published the User Satisfaction Survey. The latest User Satisfaction Survey is of 2022.

For illustration purposes, the Consultant has copied the results of the survey which seem to be the most important.

Since the Consultant has also carried out interviews, it is interesting, as far as it is possible, to make

⁸⁵ [Downloads – RNE](#)

⁸⁶ According to Art. 12a of the General Approach, "Dwelling time" of a train on a cross-border section means the total additional transit time that can be attributed to the existence of the border crossing, irrespective of procedures or considerations of infrastructural, operational, technical and administrative nature. Dwelling time does not include the time that cannot be attributed to the border crossing, such as operational procedures carried out in facilities located in the proximity of the border crossing but not intrinsically related to it;

⁸⁷ [Guideline-Punctuality-Monitoring-V2.0.pdf \(rne.eu\)](#)

comparison or at least to find out whether the opinions of the interviewed in the Satisfaction Survey and the other interviews have some common denominator.

Concerning the sample description, the number of interviewed in the AWB RFC Survey in 2022 are four; the Consultant's sample are 42 for all corridors in the Region, most of the Serbian interviewed using AWB RFC.

SUMMARY – TOP 10 FOCUS TOPICS

All respondents



Figure 22 Top ten focus topics of AWB RFC user survey

Source: RFC User Satisfaction Survey 2022 | RFC 10 Report I

Concerning the top 10 focus topics, some comparisons are possible since the Consultant's interviewees made some comments on the drivers of the supply chain.

- International end-to-end monitoring projects: The Consultant's interviewed considered door-to-door real-time information very important.
- Infrastructure capacity: The Consultant's interviews gave infrastructure capacity (availability of train paths) almost the same rating (80 %).
- Parameters of PaPs: The Consultant's interviews considered it most important (100 %).

As can be seen, the Top 10 focus topics are similar. Further details on the Consultant's industry interviews can be found in Chapter 3.4.

4.8.3. Recommendations

Recommendations by the Consultant:

- Shippers will often favour road over rail because of service quality. The receiver needs assurance of the time of arrival of the consignment at his premisses.
- Where transshipment in terminals is needed, numerous -sometimes competing- players have to cooperate to deliver a reliable and punctual service. In case the carriage is done door-to-door by road, only one to three players in addition to sender and receiver will suffice to organise the carriage. The Regulation (EU) 913/2010 offers a formalised cooperation of the different players in the form of advisory groups not only for terminal operators, but also for railway undertakings,

shippers and forwarders.

- Regulatory bodies should urge infrastructure managers and facility operators, in particular terminal operators, to publish all access conditions and prices.
- Ownership of land or equipment or the legal status of the facility operator (rental, concessionaire, etc), whether public or private, makes no difference when it comes to meeting those legal obligations. This is a difference to the historic form of railway legislation in the West Balkan region.
- Users of services in facilities need to know what services are supplied, including the availability, the hours and the contacts. Terminal operators and regulatory bodies may have to join to resist pressure to discriminate. Such pressures can come in when certain users have strong ties with the supplier of the service of which they are owners or are contract a larger share of the capacity for a long time.
- Infrastructure managers should start to harmonise their performance scheme along the corridor for freight trains. Performance schemes, if calibrated in accordance with punctuality needs of the different services, should provide effective, consistent and realistic signals to shippers, logistics operators, railway undertakings/intermodal operators, and infrastructure managers. TCT Secretariat should initiate such measures.
- The AWB RFC Management Board and its infrastructure should develop a Monitoring Scheme including a set of indicators and consult their clients on the indicator design. This Monitoring Scheme could become a reference for the other infrastructure managers in the Region. TCT Secretariat should initiate such measures by using their future market network.
- Due to long waiting times at/or near border crossings in the region and unsatisfactory infrastructure condition, infrastructure managers should step up efforts for service quality evaluation on rail freight corridors, consult clients on their needs and publish their assessment of the situation as well as the remedial measures taken or planned. TCT Secretariat could support them with their market network since the AWB RFC User Satisfaction Survey with only 4 interviewed, has shown a low participation of customers in the Survey.