

Baltic – Adriatic Rail Freight Corridor 5

Corridor Information Document

Section 5 – Implementation Plan Update 2021

Final Version



Co-financed by the Connecting Europe
Facility of the European Union

CHANGE HISTORY

VERSION	AUTHOR	DATE	CHANGES
0.1	PMO	09.06.2020	First content scheme
1.0	PMO; IOP/INF, Marketing; PM&O WGs	31.07.2020	First version of all Chapters
1.2	PMO; IOP/INF, Marketing; PM&O WGs	14.09.2020	Second version of all Chapters
1.3	PKP PLK	16.10.2020	Specifications/corrections
2	PMO, Slovenian Ministry, Austrian Ministry	12.11.2020	Comments from Slovenian and Austrian Ministries, answers/clarifications from SDL
3	PMO	21/01/2020	Previous comments taken into account, available links added, TMS part completed, bottlenecks tables corrected
3.1	PMO	05/03/2021	Definition of “operational bottlenecks” (section 2.3)
4	SDL	21/05/2021	Map replaced “section 5” replaced with “Book V” Solved comments deleted
4.1	PMO	01/06/2021	Editorial corrections
4.2	PMO/SŽ-I	10/06/2021	Editorial corrections Comments from SŽ-I added page 5,6,9, 14 and 17
5	PMO	15/06/2021	Version after ExBo meeting
6	PMO/ExBo	24/06/2021	Editorial corrections; Strategic Outlook added Most changes accepted
Final	MB/ExBo/PMO	07/07/2021	Date of Approval Links Final Editing

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1 Freight Introduction

The Rail Corridor Baltic-Adriatic (onwards “Baltic-Adriatic RFC”) was established in 2015 as implementation of the Regulation (EU) No 913/2010¹ on a competitive network for rail freight (onwards “EU Freight Regulation”). The aim of the EU Freight Regulation is to enhance the competitiveness of the rail freight transport in order to improve the market share of rail over road.

The EU Freight Regulation lays down rules for the establishment and organization of international rail corridors for competitive rail freight, the so-called “Rail Freight Corridors” (RFCs). These rules encompass the selection, organization, management and the indicative investment planning of freight corridors. The Annex to the EU Freight Regulation provided for the implementation nine initial Rail Freight Corridors to be established in two waves: in 2013 and in 2015, the Baltic-Adriatic Rail RFC belonging to this second wave.

Baltic Adriatic RFC runs through six states of European Union, namely Poland, Czech Republic, Slovakia, Austria, Slovenia and Italy and its members are the respective railway infrastructure managers.

In the spirit of the EU Freight Regulation, the RFCs would represent a cooperation platform for Governments, Infrastructure Managers, Railway Undertakings and Terminals, aimed at harmonizing of all the phases of the transport chain.

As all RFCs, Baltic-Adriatic RFC has three main areas of competence:

- Market definition and analysis, in particular the carrying out of studies aimed at a better knowledge of the market and definition of the most suitable products to be offered.
- Capacity Management, construction of international rail freight capacity. In addition, the Baltic-Adriatic RFC contributes to the coordination of temporary capacity restrictions due to infrastructure works.
- Traffic and Performance Management, Baltic-Adriatic RFC monitors the punctuality of the freight trains crossing the corridor, with the aim to improve it and to identify operational bottlenecks to be solved in order to allow a smoother operation of trains across borders.

On the occasion of the establishment of the Baltic-Adriatic RFC, an Implementation Plan was drawn up, the purpose of which was to:

- Give a detailed description of the corridor in terms of infrastructure and market characteristics;

¹ [Regulation \(EU\) No 913/2010 on a competitive network for rail freight](#)

- Illustrate the measures that were already taken or were going to be taken to set up the corridor structures and start the activities envisaged in the EU Freight Regulation (Sections 5 and 6).

Since then, the Baltic-Adriatic RFC has started and consolidated its structure and operational tasks.

After five years of operation, Baltic-Adriatic RFC has decided to issue a new version of the Implementation plan.

The main features of this new edition are:

- Updated corridor description and information on bottlenecks (Section 2)
- Main outcomes of the updated Transport Market Study (Section 3)
- Updated data on infrastructure and ERTMS investment (Section 6)

Based on the new common structure for the RFC Corridor Information Document (CID), the information regarding the operational measures to set up the RFC is now contained in the other CID Sections and it is updated every year. In order to give a comprehensive information, links to these CID Sections are provided in this document (Sections 4 and 5).

The new CID Section V – Implementation plan was drafted by the RFC competent structure, approved by the Corridor's Executive Board on 1 July 2021 and Management Board/General Assembly on 28 June 2020.

The downloadable version of the document is available here: [Corridor Information Document](#)

2 Corridor Description

The Baltic–Adriatic RFC represents a north – south axis and connects ports in Poland, Slovenia and Italy with main land terminals of all the countries along the corridor.

The routing of the Baltic–Adriatic RFC is the following: Świnoujście / Gdynia – Katowice – Ostrava / Žilina – Bratislava / Vienna / Klagenfurt – Udine – Venice / Trieste / Bologna / Ravenna / Graz – Maribor – Ljubljana – Koper / Trieste.

The Baltic–Adriatic RFC as infrastructure backbone creates connections and supports growing economies in Northern and Southern Europe and along the Corridor's regions. The Baltic–Adriatic RFC and its hinterland connections potentially allow flows of larger volumes of goods between industrial centres along the Corridor and assure larger sea shipping shift to Adriatic and Baltic ports.



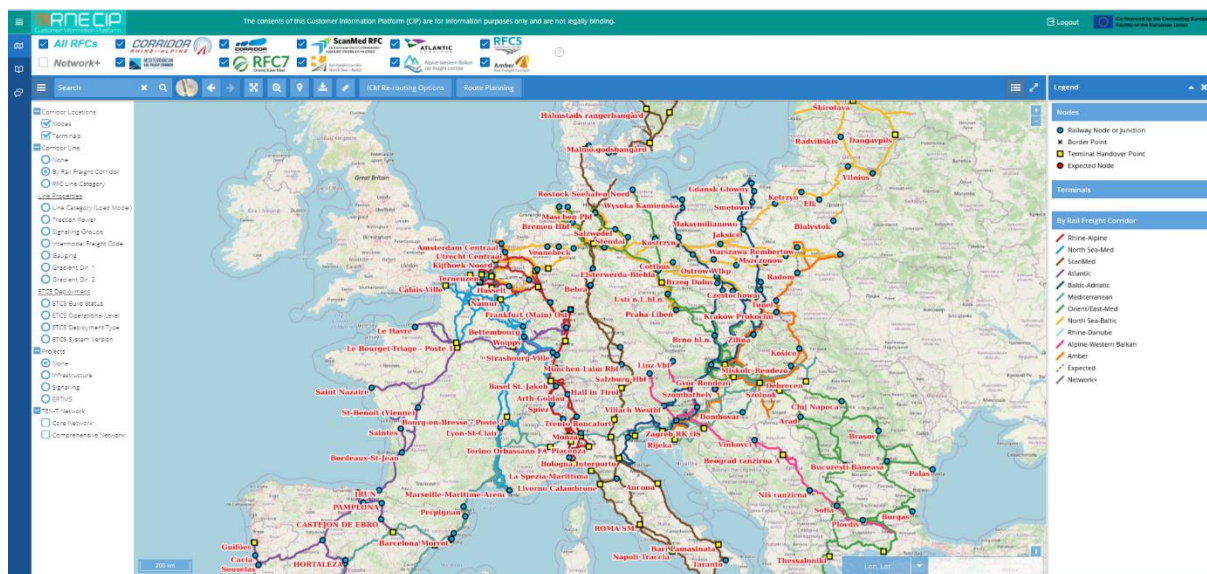
Picture 1 - schematic map of Baltic-Adriatic RFC

2.1 Key Parameters of Corridor Lines

The detailed routing of the Baltic–Adriatic RFC can be explored on our interactive platform, the Customer Information Platform (CIP), where the key parameters *per* section are also displayed. Among other information, you can find information on:

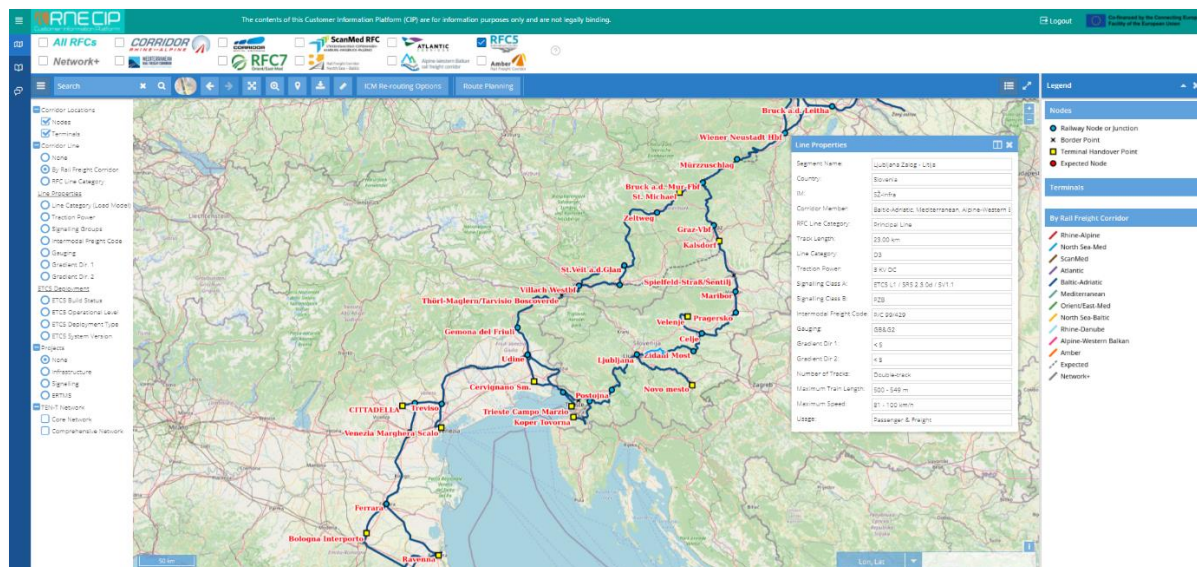
- category of the line - principal, diversionary and connecting,
- chosen section length,
- power supply, type of current and voltage for electrified lines (DC 1.500V, DC 3.000V, AC 15.000V & 25.000V),
- signalling and interlocking systems - type of signalling systems implemented on each line,
- loading gauge - maximum dimension for the freight vehicles, especially in the tunnels.

For accessing the interactive platform, the Customer Information Platform (CIP), just click this link: [Customer Information Platform](#). After accessing the platform, routings of all corridors are displayed, as you can see on the picture 2.



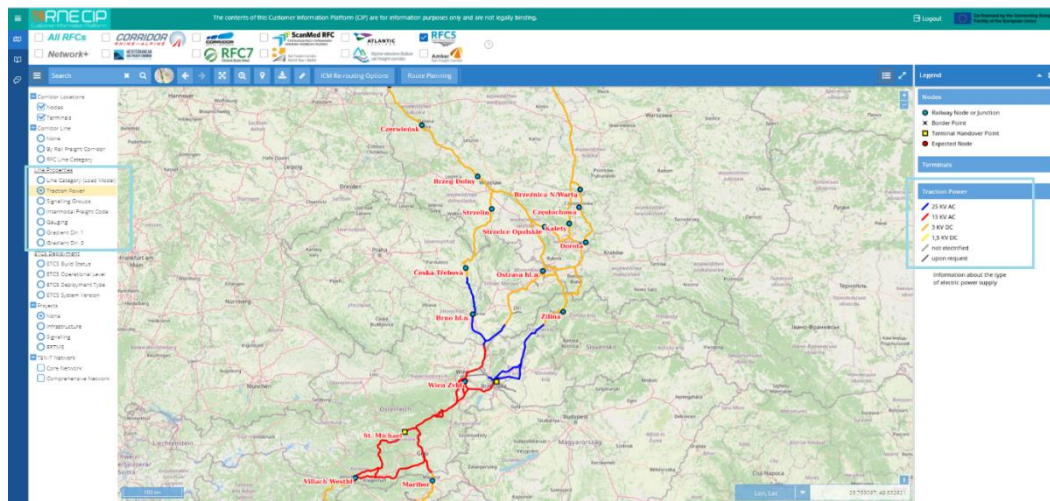
Picture 2 - Corridor's routings in Customer Information Platform

After selecting the RFC 5 in the row above the map and clicking "Set", the routing of just RFC 5 is displayed. After clicking on the chosen segment, the key parameters will appear, as you can see in the picture 3.



Picture 3 - Key parameters of a corridor's line

Besides the possibility to display the key parameters of the chosen segment, the view on the map can be changed according to what Line property (key parameter) you want to see. As you can see in the picture 4, on the left-hand side (blue frame), you can choose the Line property of your interest. On the right-hand side, there is a legend to the displayed information.



Picture 4 - Displaying of chosen line property (key parameter) for corridor lines

2.2 Corridor Terminals

According to Article 2.2.c of Regulation 913/2010/EC, terminals are defined as those facilities provided along the freight corridor, which have been specially arranged to allow either the loading and/or the unloading of goods onto/from freight trains and the integration of rail 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.

The list of actual terminals on RFC Baltic-Adriatic lines can be found in the CID Section 3.2.

The list of operational terminals on corridor lines is changing rather often. To provide you with the most up-to-date information regarding terminals, you can find the complete terminal information in the map view on the RFC Baltic-Adriatic rail freight corridor lines in the interactive platform, the Customer Information Platform (CIP), by just clicking this link: [Customer Information Platform](#).

2.3 Bottlenecks

For the purposes of this document, infrastructure “bottlenecks” are understood here as *“places of not sufficient capacity resulted from temporary bigger traffic needs than current infrastructure capacity”* and in particular for infrastructure bottlenecks: *“Bottlenecks resulting from actual status of the Infrastructure”²*.

Bottlenecks are operational when relating to the following:

² See original [Implementation Plan](#)

- Communication between IMs at the traffic control centres (e.g. English speakers available 24/7);
- Operational rules between RUs and IMs at the borders (e.g. tail lights);
- Flow of communication among RUs and between RUs and IMs at the borders.

An overview of infrastructural bottlenecks (table 1) and operational bottlenecks (table 2), drafted based on the contribution of individual Infrastructure Managers, is presented below. As far as the measures to eliminate or mitigate the effects of the bottlenecks are concerned:

- For the infrastructure bottlenecks, they are represented by the investment that can be found in section 6 of this document;
- For the operational bottlenecks, they are indicated in table 2 below.

2.3.1 Infrastructure bottlenecks

Country	Line/section or station/terminal/junction	Bottleneck
PL	Port Szczecin	Insufficient railway track condition on some sections, bad condition of engineering structures, bottlenecks limiting capacity
PL	Port Gdańsk & Port Gdynia	
PL	Wrocław - Jelcz - Opole	Insufficient track condition on some sections, local speed restrictions caused mainly by bad state of engineering structures, capacity bottlenecks, signalling devices requiring reconstruction
PL	Opole - Kędzierzyn Koźle	Insufficient track condition on some sections, speed restrictions
PL	Katowice - Tychy - Czechowice Dziedzice - Zebrzydowice	Insufficient track condition on some sections, local speed restrictions caused mainly by bad state of engineering structures, bottlenecks restricting capacity
PL	Gdynia - Gdańsk - Tczew	Capacity is exhausted in the current railway operation - possible insufficient capacity
PL	Tczew - Katowice	Insufficient track condition on some sections, local speed restrictions caused mainly by bad state of engineering structures, bottlenecks restricting capacity
PL	Czechowice Dziedzice - Zwardoń border PL/SK	Border crossing Skalité -Zwardoń, Single track, max train length 330/360m
SK	Čadca -Skalité	Border crossing Skalité -Zwardoń, Single track, max train length 330/360m (*)
SK	Junction Bratislava	Tunnels in section Bratislava Lamač – Bratislava hl.st. (often maintenance mostly only one-track available, lack of capacity), low speed - Existing single-track Bratislava hl. St. – Bratislava Nové Mesto – exhausted capacity proposal for doubling. Devínska Nová Ves - Devínska Nová Ves SR/AT border - only diesel (*)
SK	Žilina zr.st - Žilina	Speed restriction - 40 km/h
CZ	Dětmárovice - Petrovice u Karviné state border PKP	Limited capacity during section upgrade

Table 1a – Infrastructure bottlenecks on RFC Baltic-Adriatic...



Country	Line/section or station/terminal/junction	Bottleneck
AT	Gloggnitz-Mürzzuschlag	Bottlenecks regarding infrastructure parameters: very low speed, very large gradients, limited gauge (because of tunnels)
AT	Wien Meidling - Wampersdorf	Possible insufficient capacity (because of section wise single-track line) in a midterm perspective
AT	Wien – Marchegg	Bottlenecks regarding infrastructure parameters: no electrification between Wien-Aspern an border AT/SK, possible insufficient capacity (because of single-track line) in a midterm perspective
AT	Wien Meidling - Mödling	Insufficient capacity, capacity overload
AT	Werndorf - Border AT/SI	Possible insufficient capacity (because of single-track line) in a mid- and long-term perspective
SI	Station Divaca	Insufficient capacity
SI	section Ljubljana - Divača	Short station tracks, lack of capacity
SI	section Divača - Koper	Limitation caused by loading gauge
SI	Station Ljubljana (node)	Insufficient capacity, only single track line
SI	section Zidani Most - Pragersko	Insufficient capacity, short station tracks
IT	Udine Node	Capacity limitation due to one track
IT	Padova – Trieste / Tarvisio Line	Stations conditions and line resulting in limitation of trains length
IT	Trieste Node	Station conditions resulting in limitation of trains length from/to Port of Trieste
IT	Venezia Node	Capacity limitation due to traffic promiscuity (Passenger and freight)
IT	Castelfranco – Treviso - Udine	Capacity limitation due to signalling system

...Table 1b – Infrastructure bottlenecks on RFC Baltic-Adriatic

2.3.2 Operational bottlenecks

Bottleneck	Where	Solution/Measures	Status	Who
Communication between TCCs in case of big disturbances	ALL	Implementation of ICM Handbook ³	Implementation of the revised ICM (approved 19/05/2021)	IMs
		RNE language program ⁴	Ongoing: IM-IM communication and IM-RU communication, 2 pilots with translation tool. Daily telcos btw Slovenia and Austria since Jan 8th 2020.	
		Use two languages predefined messages (TIS incident Management Tool which integrated the former TCCCom)	TIS incident management tool already installed and in use.	
		Recommendation: for the future it would benefit to have English staff 24/7 in the national traffic control centres	English speakers level A2 + by end of 2019 (for PLK, SŽCZ, ŽSR later).	
Locos change at the borders	ALL	Multi-operating locos, faster loco change	In Tarvisio there is a project to allow Italian RUs to drive to Villach Süd. The effect is to have more infrastructure capacity. Timeline is not fixed yet.	RUs
Technical inspection of rolling stocks at borders	ALL	Better trust/cooperation among RUs	It should be investigated within IssueLog 2 ⁵ . Between SLO and AT and IT most trains are on trust (no technical inspection at border).	RUs
Tail lights	Tarvisio, Villa Opicina	Test on lines Brennero-Verona-Vicenza-Treviso-Udine-Tarvisio started on 10 th Dec 2017.	Since March 2021 most of RFI lines are interested by the test.	RUs, RFI

Table 2b –Operational bottlenecks on RFC Baltic-Adriatic ...

³ [International Contingency Management Handbook](#) RNE ®

⁴ See RNE [webpage](#)

⁵ On Operational Issues Logbook, please visit this [page](#)



Bottleneck	Where	Solution/Measures	Status	Who
Communication between cooperating RUs	ALL	To order international train paths instead of two national paths (e.g. via PCS ⁶). From IMs side the task to do is to implement interfaces with PCS	RNE collected PCS interfaces implementation plans: IMs ready by 2024. RFC5 monitors needs for double requests and foster interface development (e.g. PLK-RNE meeting).	RUs, IMs
Cross border system communication	ALL	Usage of TAF-TSI messages for data communication in planning & operations (train composition) between RUs	Ask the Railway Undertaking Advisory Group (RAG) if RUs are using it and if they recognize it as bottleneck.	RUs

Table 2b –Operational bottlenecks on RFC Baltic-Adriatic

⁶ [Path Coordination System](#) RNE ®

2.4 RFC Governance

The Baltic-Adriatic RFC was established in 2015 and took the legal form of a European Economic Interest Grouping (EEIG) in 2016. Its seat was in Warsaw, Poland. The General Assembly of the EEIG took over the tasks of the Management Board of the RFC. In 2019, the seat of the EEIG moved to Venice, Italy.

A few changes in the composition of the governance and operational bodies of the RFC/EEIG have occurred along the years. Related information can be found in Section 1.4 of the CID as well as on the [RFC webpage](#) and in the [Annual Reports](#).

3 Market Analysis Study

The updated Transport Market Study of Baltic-Adriatic RFC was finalised by the end of October 2020.

The aims of the update of the Transport Market Study of the Baltic-Adriatic RFC, conducted by Tplan and finalized in 2020, were:

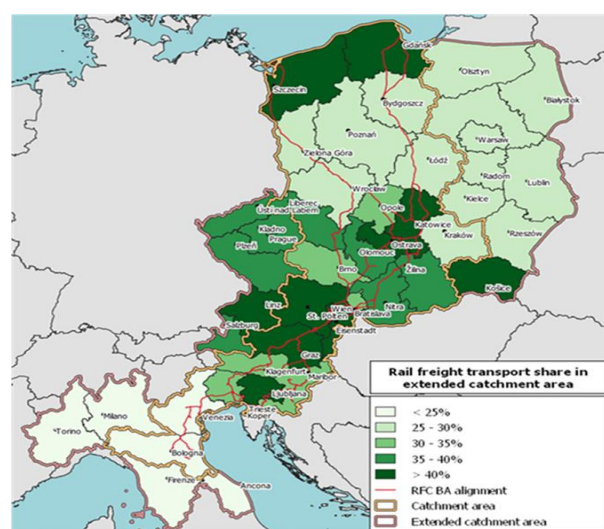
- Analysing the current situation of freight traffic volumes along the RFC;
- Providing an updated knowledge base and recommendations for the development of the rail freight market along the RFC.

An Executive Summary is available for downloading at this [link](#) and more details can be found there. Here, it can be mentioned that the study:

- Identified a catchment area and an extended catchment area;
- Performed an in-depth PEST and market analysis.

It provided several recommendations and data that will be used, among others as input for further activities of the corridor.

For more information about other studies published by or ongoing in the Baltic-Adriatic RFC, please visit the relevant web page: [Studies](#).



Picture 5 - 2018 International rail freight transport share within the extended catchment area (loaded and unloaded tonnes) (Source: Baltic-Adriatic Updated TMS 2020. Tplan own elaboration)



4 List of Measures

As mentioned above, the update of the Implementation Plan does not contain details on the list of measures taken by the Baltic-Adriatic RFC to ensure the execution of the planned activities.

Updated information on these activities can be found in other published documents on the Baltic-Adriatic RFC web page. The links below can be found in the relevant Corridor Information Document paragraphs of the Baltic-Adriatic RFC.

4.1 Coordination of planned temporary capacity restrictions

Information on planned temporary capacity restrictions (TCRs) measures on Baltic-Adriatic RFC can be found in Section IV.4 of the CID.

4.2 Corridor OSS

Information on the Corridor OSS (C-OSS) of Baltic-Adriatic RFC can be found in Section IV.2 of the CID.

4.3 Capacity Allocation Principles

Information on the capacity Allocation principles on Baltic-Adriatic RFC can be found in Section IV.3 of the CID.

4.4 Applicants

Information on how Baltic-Adriatic RFC manages Applicants can be found in Section IV.3 of the CID.

4.5 Traffic Management

Information on Traffic Management measures on Baltic-Adriatic RFC can be found in Section IV.5 of the CID

4.6 Traffic Management in Event of Disturbance

Information on Traffic Management measures in events of disturbance on Baltic-Adriatic RFC can be found in Section IV.5 of the CID

4.7 Quality Evaluation

4.7.1 Performance Monitoring Report

See Chapter 5

4.7.2 User Satisfaction Survey

See Chapter 5

4.7.3 Corridor Information Document

Baltic-Adriatic RFC temporary stores its Corridor Information Documents in CIP. In order to find the correct link (either to the latest version or to one of the old version), please visit the *ad-hoc* page at our [website](#)

Contemporarily, Baltic-Adriatic RFC will also make use of the newly developed (2021) IT Tool called “*Network and Corridor Information Portal*”⁷ – NCI, once it will go live.

⁷ The link will be added once the portal will go live

5 Objectives and performance of the corridor

As objectives of the Baltic-Adriatic Rail Freight Corridor, the Executive Board considered the following:

- Promoting seamless and sustainable rail freight transport:

This is the general aim of the Corridor to efficiently meet region's economic expectations and demand in a business-driven environment. Cooperation required among all the stakeholders on various Corridor levels in this regard will be aimed at achieving higher level of performance of rail freight transport in order to improve sustainability, combat climate change and assure rational use of energy.

- Enhancing transnational rail freight operations:

The RFC structures will seek possibilities for smooth, unhindered interoperability of railway operations on the Corridor by assessing the relevant guidelines and requirements, identifying infrastructural and operational possibilities through NIPs, dedicating efforts to cleaning and harmonising national rules, seeking innovative solutions.

- Involving and engaging stakeholders:

The Corridor governance bodies will assess complex logistics issues along the Corridor (incl. border-crossings) and prepare a separate view on possible solutions for infrastructure and legal barriers as well as barriers related to allocation of infrastructure capacity and traffic management. The activities should result in a commonly agreed strategy for achieving uninterrupted, smooth logistics services on the Corridor without unnecessary stops.

- Monitoring:

The results of the analyses of the above-mentioned activities will be included in the up-coming implementation plans, while the Annual Reports on the implementation of the strategic objectives will be evaluated by the Corridor governance bodies at regular common meetings.

In order to lay down the objectives of the Corridor, the Executive Board of the Baltic-Adriatic RFC has drawn up the mentioned activities in a document called "Strategic Outlook and Expectations of the Corridor Activities" in line with Article 8(1) of Regulation (EU) 913/2010. The document shall present a general, commonly agreed framework to achieve higher competitiveness of rail freight.

Baltic-Adriatic RFC uses different means of performance assessment. The links to our Annual Reports, Performance & KPIs reports, Train Performance Management Reports and User Satisfaction Surveys Reports can be found in the relevant web page: [Performance & Reporting](#)

6 Investment Plan

This section contains the updates regarding the investment plan of the Baltic-Adriatic RFC.

In sub-section 6.1, the approach regarding the Capacity Management Plan is described.

Sub-sections 6.2 and 6.3 provide an update of the information given in the first version of the Implementation Plan by displaying the updated table of the infrastructure investments planned along Baltic-Adriatic RFC (6.2) and the updated information on the plan for the deployment of interoperable systems (6.3), which satisfies the essential requirements and the technical specifications for interoperability which apply to the network as defined in EU Directive 57/2008.

6.1 Capacity Management Plan

As mentioned in sections 2.3 and 2.3.2, the Baltic-Adriatic RFC addresses the issue of operational bottlenecks by their regular monitoring (see mentioned sections for details).

As far as a better use of the capacity is concerned, the Baltic-Adriatic RFC is currently (2020) carrying out a large capacity study, the goal of which is to define tools and methodologies aimed at the optimization of the capacity offer, taking into account all elements, which influence the use and availability of railway capacity. This activity is meant as an innovative pilot as it focuses on the development of a methodology for simulating different scenarios.

Synthesis of results of the study will be made available when the study will be finalized.

6.2 List of Projects

In order to keep the list of the project up-to-date, we put all of the planned projects into the Customer Information Platform, where the projects can be displayed in a map view. You can access the Customer Information Platform by clicking the link: [Customer Information Platform](#).

6.3 Deployment Plan

In 1995, the European Commission defined a global strategy for the development of the European Rail Traffic Management System (ERTMS), with the objective to prepare its future implementation on the European railway network, and incorporated it into the interoperability Directives and subsequently into the Technical Specifications for Interoperability of the Control-Command and Signalling subsystem both for the high-speed and the conventional European railway systems. In this chapter, we would like to provide an update of this information. The complete information regarding ERTMS on the RFC Baltic-Adriatic can be found on Customer Information Platform by clicking this link: [Customer Information Platform](#).

The update of the information was carried out by the Infrastructure & Interoperability Working Group, taking into consideration the National Implementation Plans of each Infrastructure Manager.

The individual National Implementation Plans can be found also by clicking each of the flags below:



6.4 Reference to Union Contribution

Baltic-Adriatic RFC was granted by INEA the European Funding that was used for the setting up, the operation and the improvement actions of the RFC, namely:

- CEF Grant Agreement n. 2014-EU-TM-0335-S: “Studies and activities regarding enhancement of Baltic-Adriatic Rail Freight Corridor 5 offer” which covers the years 2016 to 2020, the beneficiaries in 2016 being the individual RFC’s members, with the coordination of PKP PLK, while from 2017 onwards the EEIG is the sole beneficiary;
- PSA Grant Agreement n. 2016-PSA-RFC05: “Client oriented development and improvement of the efficiency of Baltic-Adriatic Rail Freight Corridor”, the beneficiaries being the Infrastructure Managers and/or Transport Ministries of the Czech Republic, Slovenia, Italy and Poland and the EEIG itself, acting as a Coordinator as well; this action covers the years from 2018 to July 2021.

7 Validity

This document is valid from Timetable 2022 onwards, until a new update is published.

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