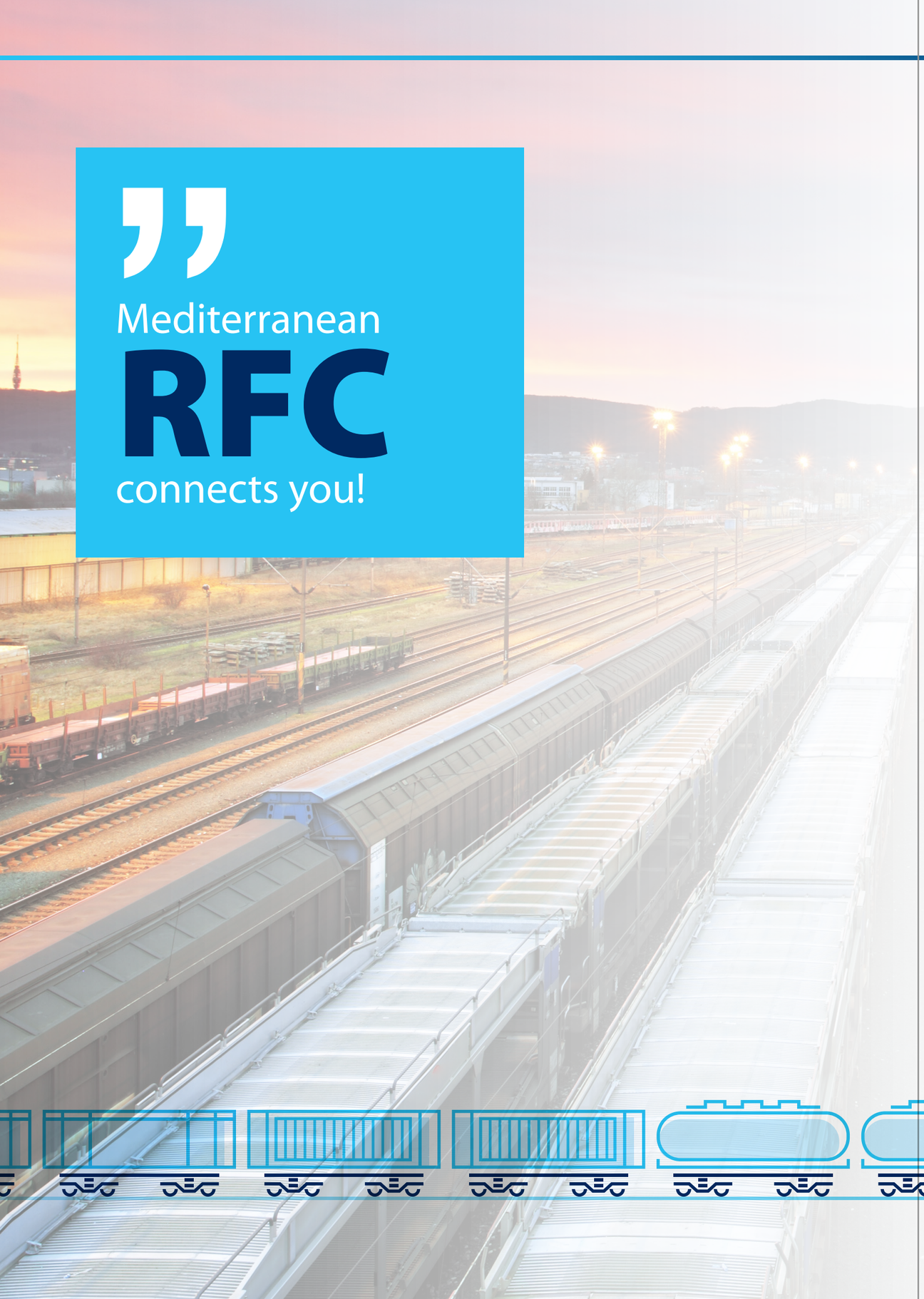
MEDITERRANEAN
RAIL FREIGHT CORRIDOR
Spain-France-Italy-Slovenia-Croatia-Hungary

Annual Report

MEDITERRANEAN
RAIL FREIGHT CORRIDOR
Spain-France-Italy-Slovenia-Croatia-Hungary

Annual Report 2020

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



Mediterranean
RFC
connects you!

Table of Contents

Glossary

AB Allocation Body, is the body or undertaking responsible for allocating railway capacity on the infrastructure.

ADIF Administrador de Infrastructuras Ferroviarias is theSpanish Infrastructure Manager.

CEF Connecting Europe Facility.

CID Corridor Information Document (art. 18 Reg. EU 913/2010).

CIP Customer Information Platform.

COSS Corridor One-Stop-Shop: A joint body designated or set up by the RFC organisations 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 (EU Regulation No 913/2010, Article 13).

EC European Commission.

EEIG European Economic Interest Grouping (Reg. EEC 2137/85).

ERTMS European Rail Traffic Management System.

EXBO Executive Board of the Mediterranean Rail Freight Corridor (art. 8.1 Reg. EU 913/2010).

FCA Framework for Capacity Allocation.

GA General Assembly, the decision making body of the EEIG for Mediterranean Rail Freight Corridor.

HŽI HŽ Infrastruktura d.o.o. is the Croatian Infrastructure Manager.

ICM International contingency management.

IM Infrastructure Manager means any body or undertaking that is responsible for establishing and maintaining railway infrastructure. The functions of the Infrastructure Manager on a network may be allocated to different bodies (see Directive 2012/34/EU).

IP Implementation Plan (art. 9 Reg. EU 913/2010).

LFP Linea Figueras Perpignan S.A., High speed railway line replacing TP Ferro from December 19th 2016.

MÁV Magyar Államvasutak Zártkörűen Működő Részvénytársaság is one of the Hungarian Infrastructure Managers.

MB Management Board of the Mediterranean Rail Freight Corridor (art. 8.2 Reg. EU 913/2010). The General Assembly of the EEIG is the MB of Mediterranean Rail Freight Corridor.

NEXBO Network of the Executive Board.

OC'VIA Oc'Via is the project company for the highspeed railway line between Montpellier and Nimes (France). It is the signatory of the public-private-partnership (PPP) contract concluded with SNCF Rèseau.

PaP(s) Pre-arranged path for which standard priority rules apply (art14 of the FCA offered by a Rail Freight Corridor according to Regulation 913/2010. A PaP may offered either on a whole RFC or on sections of the RFC forming an international path request crossing one or more international borders.

PMO Permanent Management Office.

RAG Railway Undertakings Advisory Group (art. 8.8 Reg. EU 913/2010).

RC Reserve Capacity: e.g. . Pre-arranged paths – kept available during the running timetable period for ad-hoc market needs (Article 14(5) Regulation 913/2010.

Regulation Whenever you find "Regulation" in this document it refers to Regulation EU no 913/2010 (amended by EU Regulation 1316/2013) of the European Parliament and the Council of 22 September 2010 concerning a European rail network for competitive Freight.

RFCs Rail Freight Corridors. The Corridors identified, set up and organized in compliance with Regulation no EU 913/2010 (amended by EU Regulation 1316/2013).

RFC NETWORK The grouping of all the corridors.

Med RFC Mediterranean Rail Freight Corridor.

RFI Rete Ferroviaria Italiana is the Italian Infrastructure Manager.

RNE RailNetEurope.

SNCF Réseau SNCF Réseau is the French Infrastructure Manager.

SŽ-INFRA Slovenske železnice - Infrastruktura d. o. o. is the Slovenian Infrastructure Manager.

TAG Terminal Managers/Owners Advisory Group (art. 8.7 Reg. EU 913/2010).

TIS The Train Information System is a web-based application that supports international train management by delivering real-time train data concerning international passenger and freight trains. The relevant data is obtained directly from the Infrastructure Managers' systems.

TCC Traffic Control Centre.

TCCCom Traffic Control Centre communication – the tool integrated in TIS is a tool to support the international communication among IMs.

VPE Vasúti Pályakapacitás-elosztó Korlátolt Felelősségű Társaság is the Hungarian Rail Capacity Allocation Office, which is responsible for nationwide capacity allocation on the rail network and for determining network access charges.

1. Introduction

2020 has been a difficult year and the Mediterranean rail freight corridor had to face more than one challenge. The sudden outbreak of the Corona Virus (SARS-CoV-2), the exceptional earthquake in Croatia in March, and the disruptions for the bad weather conditions which impacted the lines. Mediterranean RFC was able to face the challenges and carry out its projects thanks to the exceptional dedication of its PMO, IMs and the corridor working groups.

2020 events encouraged to work differently but not less intensely on the realization of the old and new activities; and the outcomes were good. The main objective of the annual report 2020 is to show the Mediterranean RFC dedication through:

1 **Providing an updated analysis on the annual activities of the Mediterranean Rail Freight Corridor despite the crisis, and the final benefits for rail freight in 2020.**

2 **Providing an overview of key figures (KPI) related to the performance of the corridor, also in compliance with the Article 19 of Regulation 913/2010.**

Main Corridor Activities in 2020

- International Contingency Management: Med RFC re-routing overview for TT 2020.
- Execution of the International End to End Rail Freight Traffic Monitoring pilot in collaboration with Politecnico di Milano and in cooperation with ADIF, SNCF Réseau and RFI.
- Update of the Med RFC Transport Market Study, with projection to 2030.
- Villa Opicina taskforce set up and Kick-off.
- New Customer Information Platform (CIP) features for the benefit of the applicants.
- Covid-19 window and updates set-up.
- Consultation with RUs and TMs feedback on Covid-19 impact on the market.
- Participation in the events organized online by RFCs and more.

Updated general MAP of the MED RFC w terminals

2. Mediterranean
RFC at a Glance

- **6** Countries: Spain, France, Italy, Slovenia, Croatia and Hungary;
- **8** Infrastructure Managers and **1** Allocation Body:

The main figures of the Mediterranean Rail Freight Corridor are:

- Total length about **8.000 km** of railway lines
- of which, more than **7.000 km** of principal route
- and about **650 km** of diversionary routes
- More than **100** freight terminals
- **5** European Core Cargo Seaports and **2** important Riverports
- The most interconnected Rail Freight Corridor (**9** RFCs interconnected)
- **3** main manufacturing areas: Catalonia, Auvergne-Rhone-Alpes and Piedmont-Lombardy
- Med RFC includes **18%** of the European population
- and **17%** of European GDP

2.1. Executive Board

The EXBO is chaired by the French Ministry of Transport "Ministère de la Transition Écologique", represented by the President Joseph Lunet de la Malene. In order to exchange the best practices and to define common guidelines, a Network of Executive Boards, "NEXBO", was established in 2017, actively supported by the board. The EXBO met once online in October 2020.

"Rail freight has played a key role in ensuring the continuity of supply to the economic stakeholders during the COVID 19 pandemic. This, on top of the fact that rail transport and modal shift help mitigate our greenhouse gases emissions and overall reduce transport externalities, is yet another sign that it is of utmost importance to sustain our efforts aimed at developing this sector.

The rail freight corridors contribute to this development, ensuring that enough capacity is offered to international rail freight, promoting this mode of transportation and fostering exchanges between railway undertakings, terminals, infrastructure managers and member states.

In particular, the permanent team of the Mediterranean corridor worked hard during this very special 2020 year in order to support rail transport, carrying out various projects such as the international end-to-end freight traffic monitoring pilot and the set up of the Modane "Quality Circle Operations", and helping capacity demand and capacity offer meet: on behalf of the executive board, I want to thank them for their dedication! Now, let's keep on doing our best so as to ensure that in the wake of the sanitary crisis, rail freight transport raises stronger than ever all along the corridor lines".

Joseph Lunet de la Malene, ExBo Chairman

GOVERNANCE CHART

MEDITERRANEAN RAIL FREIGHT CORRIDOR

GENERAL ASSEMBLY
Chairman: Bojan Kekec*

MEMBER	REPRESENTATIVE	DELEGATE
adif	Isabel Pardo De Vera	Manuel Besteiro Galindo
LFP Perthus	Petros Papaghiannakis	Duho Mahic
SNCF RÉSEAU	Luc Lallemand	Claire Hamoniau
Oc'via	Stéphanie Rheims	Kévin Uba
RFI Rete Ferroviaria Italiana – Gruppo Ferrovie dello Stato Italiane	Vera Fiorani**	Andrea Galluzzi
Slovenske železnice SŽ-Infrastruktura	Matjaž Kranjc	Bojan Kekec
HŽ Infrastruktura	Ivan Kršić	Ivana Zanki
MÁV	Róbert Homolya	Lőrinc Czakó
VPE	Réka Németh	Nóra Hobot

EEIG MANAGER

Managing Director	Furio Bombardi
Deputy Director	István Pákozdi
Third Manager	Nikolina Ostrman

PMO

Managing Director	Furio Bombardi
Deputy Director	István Pákozdi
C-OSS leader	Stephane Dastot
Project Manager	Giulia Gargantini
Office Assistant	Pamela Chiarappa

- **INFRASTRUCTURE** Working Group
  - **ERTMS** Working Group
- **TPM / TM** Working Group
- **C-OSS** Working Group
- **COMMUNICATION** Working Group
- **FINANCIAL** Working Group

*Bojan Kekec was the president of the EEIG until 2020, and it was replaced in April 2021 by Manuel Besteiro Galindo.
**In december 2020 Mrs Vera Fiorani was nominated as RFI representative replacing Mr Maurizio Gentile.

2.2. The EEIG

The Management board set up the EEIG for Mediterranean Rail Freight corridor to deal with all the administrative issues related to the activities of the Corridor.

The governing body of the EEIG is the GA, which acts also as corridor MB. Bojan Kekec (SŽ-INFRA) chairs the GA as the president of the MB.

2.3. The PMO

The MB delegated to a Permanent Management Office (PMO) located in Milan, all the operational functions and project related activities of the corridor. During the COVID19 outbreak the team worked efficiently despite the closure, all the actions continued.

FURIO BOMBARDI

Managing Director/EEIG Manager

He is a full-time manager dedicated to the EEIG and the Mediterranean Rail Freight Corridor. He is the head of the PMO and the main coordinator of all corridor related activities. He is responsible for the correct implementation of all tasks and obligations provided in the Regulation.

"Only with rail we will achieve our climate goals. We want more goods to be transported by rail' Angela Merkel, December 2020.

Rail Freight system is very complex, implying the interaction of a many different actors and facing the strong simplicity of Road and Short Sea solutions. The railway sector has however demonstrated throughout the Covid-19 crisis its resilience and adaptability to the new situation and to be a powerful key to support the European logistic and industrial system. And in a fragile environment the rail freight sector is strategic to decarbonize the economy and reach the environmental goals and can play a crucial role in a greener and sustainable multimodal logistic chain."

Furio Bombardi

ISTVÁN PÁKOZDI

Deputy Director/Infrastructure Advisor/EEIG Manager

He is one of the EEIG Managers and a full-time manager dedicated to the EEIG/PMO. He is responsible for the infrastructure activities of the EEIG/PMO, such as:

- Reviewing and updating the Corridor Information Document (CID) Books in line with the actual version of RNE Common Structure;
- Managing and coordinating the Train Performance Monitoring WG;
- Managing and coordinating the development and yearly update of MED RFC ICM Re-Routing Scenarios;
- Managing and coordinating the Corridor Information Platform (CIP) activity, as a member of Change Control Board (CCB) of CIP.

STEPHANE DASTOT

C-OSS leader

The C-OSS Leader is the manager of the single contact point for applicants to request and receive rail infrastructure capacity for freight trains (Time Table 202X and RC) crossing at least one border along the corridor. The C-OSS Leader handles communication process among IMs/ABs, other C-OSSs and Terminals linked to the corridor. He also coordinates and harmonizes TCRs with the IMs of the corridor.

GIULIA GARGANTINI

Project Manager

The Project Manager is responsible for different projects concerning the Corridor development and she is in charge of preparing and coordinating the reporting activity towards the European Commission and the European Climate, Infrastructure and Environment Executive Agency (CINEA), formerly INEA.

In 2020, among others, the Project Manager dealt with the following activities and projects:

- Reporting procedures towards the European Commission for the Connecting Europe Facility funding;
- Customer Information Platform developments and maintenance, as CIP Development group member for MED RFC;
- User Satisfaction Survey management;
- Transport Market study update coordination.

PAMELA CHIARAPPA

PMO Administrative Assistant

She is responsible for the administrative management of the office, she supports the corridor communication related activities and the PMO staff in all the operational and administrative tasks.

2.4. Regulatory Body

As provided for by the Regulation and in the Directive 2012/34/EU, a Regulatory Body has been appointed to supervise the activity of the Mediterranean Rail Freight Corridor, in order to monitor and ensure non-discriminatory access to the corridor and, among other functions, it deals with managing possible appeals from applicants. The Regulatory Body for the Mediterranean Rail Freight Corridor is: Autorità di Regolazione dei Trasporti located in Turin, Italy.

AUTORITÀ DI REGOLAZIONE DEI TRASPORTI (ART)

Via Nizza 230, 10126 Torino
Telefono: +39 011.19212500
E-mail: art@autorita-trasporti.it
PEC: pec@pec.autorita-trasporti.it
C.F.: 97772010019

3. Corridor Documentation

3.1. Corridor Information Document

The Mediterranean Rail Freight Corridor updates the Corridor Information Documents yearly. The documents provide stakeholders and customers all the necessary information for the use of the freight corridor. The complete set of documents is published on the corridor website and since the end of 2018 on the Customer Information Platform (CIP).

The CID Books structure is harmonised according to RailNetEurope (RNE) Common Structure and in 2020 CID Books were further simplified, harmonized and finally merged into one single CID Book; instead of duplicating the same information in the CID the texts have been simplified and shortened, providing links to tools where the information is available such as CIP, NCI, RFP. Finally,Med RFC has achieved 100% of compliance since 2017.

All the RFCs information (that are now available in the corridors CID Book in pdf version) is going to be digitalized to ease the accessibility. Customers will be able to navigate CID documents of all RFCs online through easier, more customer friendly tool to be ready and available by mid- 2021.

https://www.railfreightcorridor6.eu
https://cip.rne.eu

3.2. Customer Information Platform

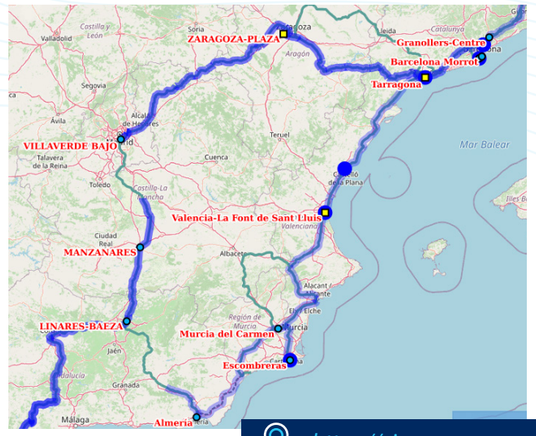
RNE CIP
Customer Information Platform

CIP Updates – What's new on CIP

The Customer Information platform (CIP) is an online platform providing easy access to harmonized information about the Rail Freight Corridors. As of 2020 9 out of 11 RFCs were displaying their lines in CIP and the roll-out to RFC Alpine-Westen Balkan was achieved in December 2020, thus raising the RFC Network coverage in CIP to 10 RFCs. RFC Med joined the platform in December 2018 and since then the information has been continuously improved for the benefit of the stakeholders.

The platform gives an overview on the technical parameters of the lines (among others, traction power, signalling type, intermodal freight code..) in a very accessible way through the interactive map. During 2020, the CIP team worked on the graphical interface update with the objective of simplifying and improving the user experience with the release of a new Graphic interface. Particular focus was put on the improvement of the visualization of the ICM re-routing options and the projects.

Sample view of infrastracture projects in Spain from CIP.
Clicking on the blue line, a pop-up windows appears and the user can get further information about the projects and lines.
In addition to information on infrastructure projects, signalling and ERTMS related projects are also available.



https://cip.rne.eu

4. Corridor Activities 2020

4.1. International End to End Rail Freight Traffic Monitoring

During 2020, the Med RFC conducted, in collaboration with Politecnico di Milano and in cooperation with the Infrastructure Managers ADIF, SNCF Réseau and RFI, a pilot focusing on a sample of international rail freight traffic relations along the RFC. Other than the Infrastructure Managers of the three Countries involved the pilot saw the participation of volunteering Railway undertakings, Terminal Mangers and Freight Forwarders.

The project had several goals:

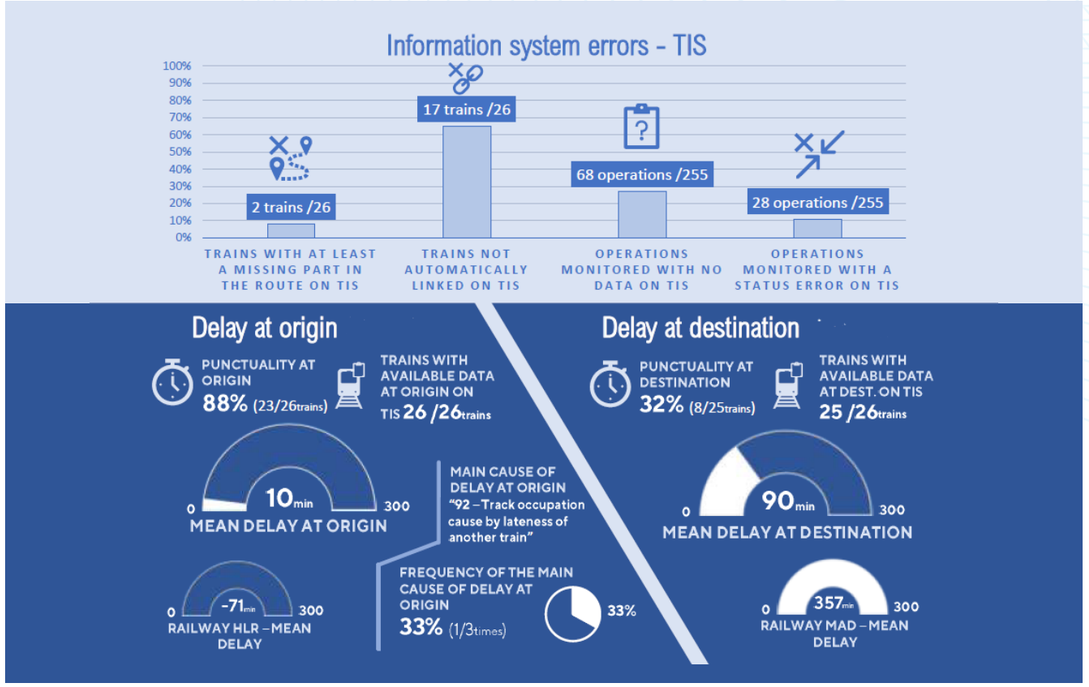
First, to measure thorough pre-defined Key Performance Indicators (KPI), the performance of the international traffic relations;

Second, to evaluate on the field, with real traffic data comparison, the IT tool effectiveness and reliability (in particular TRAIN INFORMATION SYSTEM (TIS)), the web-based application designed to support international train management.

Third, to improve the international cooperation of the rail freight supply chain and eventually find out areas for enhancing rail competitiveness and cooperation among the actors.

For each route, a summary infographic was prepared based on the data collected during the monitoring and displaying: TIS inconsistencies towards real train running information, the state of the train (regular/cancelled etc.) and the punctuality at origin and destination.

Report cover



Example of dashboard of one of the sample relations (direction 1).

FACTS AND FIGURES OF THE PILOT:

IMs involved:

adif · SNCF RÉSEAU · RFI RETE FERROVIARIA ITALIANA GRUPPO FERROVIE DELLO STATO ITALIANE

Involved stakeholders: RFC Med PMO; Infrastructure Managers, including the national and regional Train Control Centers (TCCs); Railway Undertakings; Terminal operators and Freight Forwarders.

Sample international traffic: 6 roundtrip routes

Monitored trains: 131

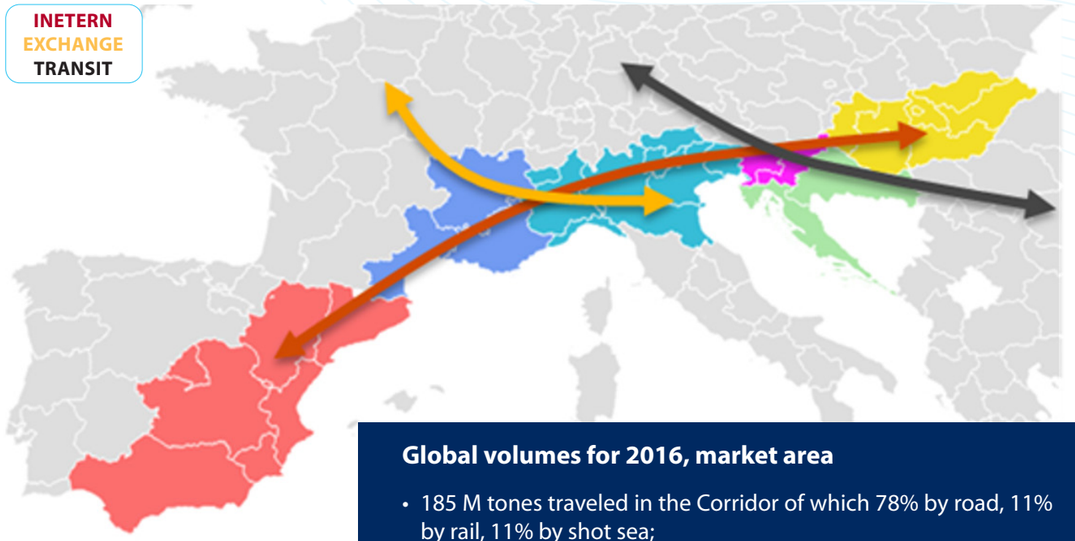
Monitored train operations: 1407

For each relation, the critical points have been highlighted, in some cases these were infrastructural and can only be solved in the medium/long-term. Additionally, the poor usage of TIS was highlighted among the participants (e.g., terminals are mostly not using TIS, so if the delays are accumulated at the departing terminal the other parties are not informed, the same applies for causes due to RUs operations). For delays along the routes > 60' and not displayed in TIS, the monitoring team passed on the information about the delay and ETA to all other stakeholders, bearing in mind that the delay could be re-absorbed during the journey. Another important point which emerged is the still difficult linking of trains across the different border points, which prevents the correct display of all the train's route in TIS and in general prevents the availability of reliable train running information.

At the end of the project a survey was conducted among the participants and the work was generally appreciated. In particular, it raised awareness of the problems and available tools increasing cooperation among the partners. Moreover, the RFC received appreciation for this activity from the RUs during the Advisory Group meetings, and the request to extend this kind of activities. In the wake of this project the Med RFC also decided to activate a Modane taskforce for improving the management of Modane/ Bardonecchia border crossing and Fréjus Tunnel operations until the new tunnel is constructed. This is also an important activity contributing to efficient management of all the works needed to this purpose and limiting the impact on traffic.

4.2. Transport Market Study Update

In 2020 the Corridor performed an update of the Transport Market study, this was performed by PwC Advisory SpA, in partnership with Setec International. The update was organized with the support of all the Infrastructure Managers belonging to the Corridor and with the permanent monitoring of a Steering Committee (composed of Med RFC and IMs representatives). The study base year is 2016, this is mainly due to the robustness of the available data, accompanied by trends to 2019.



Global volumes for 2016, market area

- 185 M tones traveled in the Corridor of which 78% by road, 11% by rail, 11% by shot sea;
- 58% of the flows are in exchange, 27% intern and 15% in transit;
- Traffic had been growing annually 2% for road and 0,6% for rail between 2010-2016 period.

The rail traffic increased annually by 0,6% between 2010 and 2016, but there was a decrease in the corridor internal flows and increase in exchange flows (towards outside the corridor), compared to 2010, slightly rail share was recorded. The maritime market increased strongly between 2010 and 2016, and in 2019 has been stable.

MTons 2016	Intern	Exchange	Transit	Total
Rail	6,4	12,0	2,7	21,1
Road	36,3	83,0	24,7	144,0
Short Sea	7,7	12,3	-	20,0
Total	**50,3**	**107,2**	**27,4**	**185,1**
% rail share	12,7	11,2	9,9	11,4
% evolution since 2010 - rail	-8,3	12,8	0,2	3,9
% evolution since 2010 - road	17,6	14,3	5,8	13,5

Global volumes for 2016, market area - Update Transport Market study 2020

It can be observed that around 185 million tons of international freight were transferred through the Corridor's market area in 2016. Almost 78% of these goods were transported by road, 11% by rail and 11% by short sea. It can be noted that rail and short sea traffic represent similar volumes in the Corridor market area. The reasons of this relatively low share of rail traffic – in comparison with other international flows in Europe, in particular between Benelux or Germany and northern Italy – are threefold:

- the competitiveness of short sea traffic, which is quite specific to the Mediterranean Rail Freight Corridor;
- the structure of the traffic: industrial density of North-Western Europe and strong traffic of the ports of the North range support, for example, the organization of frequent services of combined transport. Even if there are important industrial nodes and ports along the Mediterranean Rail Freight Corridor, flows tend to be more diffused than in the north-south direction;
- still not solved bottlenecks related to transport policy and infrastructure: congestion in main nodes, lack of interoperability (the main problem being the track gauge change with Spain) and insufficient performances on some sections. This explains in great part the low rail market shares but transport policies and organizational issues within railways undertakings can also be invoked.

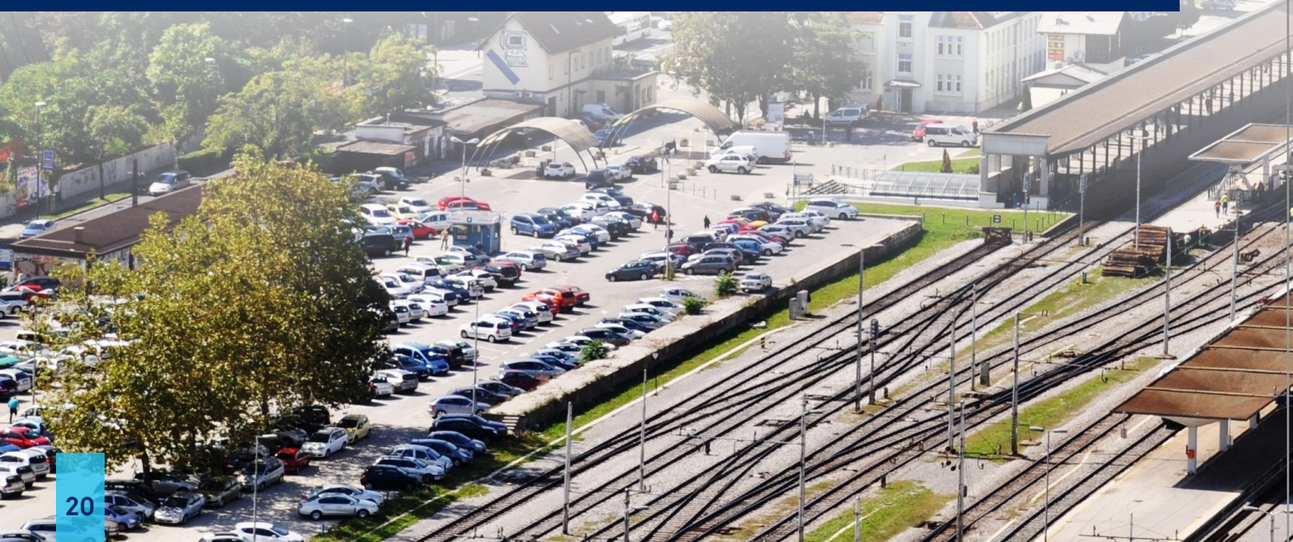
The exchange flows represent almost 58% of the total volume in the market area, meaning that, the majority of the goods are exchanged between a region of the Corridor and a region outside of the Corridor (Catalunya – north-western Germany, Northern France – Lombardia, etc). These flows use parts of the RFC but also other corridors and railways in Europe. The intern traffic, which uses the Mediterranean RFC's infrastructure on the major part of its routes, represents 27% of the total, whereas transit flows counts for 15%. Rail share whether the volumes remain internal to the Corridor, are in exchange or transiting it, respectively from 13% to 11% and 10%.

Rail market evolution

- **11,4% rail share** (peak of 12,7% for internal flows) in slightly decrease compared to 2010;
- **Decreasing internal volumes** transported by rail along the Corridor **while increasing in exchange.**
- **Higher rail share** (~20%) and **stronger growth** (25%-60% from 2016) **on the Eastern** part of the Corridor.

Maritime market evolution

- **+18% global growth** up to 454 Mt between **2010 and 2016.**
- **+34% growth of container traffic** (~5% annually) during the same period.
- **+10%global growth** and **+18% containers traffic** between **2016 and 2018.**
- Stable in 2019.



Forecast Up to 2030

The forecast exercise to 2030 is based on two drivers: the macroeconomic evolution of the Countries included in the Corridor's market area and the transport cost evolution in terms of infrastructure improvements as well as policies development. According to this, each driver, presents three different alternatives of possible evolution, later combined in five scenarios to be simulated. The study also took into consideration the exogenous factor of the effects of Covid-19 pandemic.

International traffic along the Corridor at 2030

Scenario	Volumes [Mt]				Volumes [Mt]	% rail share	Evidences
1	INTERN	14,1	40,1	9,4	233 → +1,7% annually	23,7% → 55,2 Mtons	• In with reference to 2016 global **volume** will grow around **26%,** increasing also the **rail share (+12,3%)**
	EXCHANGE	33,8	84,1	15,3			
	TRANSIT	7,4	28,6	0,0			
2	INTERN	10,1	44,6	8,7	233 → +1,7% annually	16,7% ↘ 38,8 Mtons	• **Modal shift assumptions** play a very important role in the expected growth of rail traffic which means that it is a **key element to boost the traffic growth of the Med RFC** in the hands of the various stakeholders of the Corridor;
	EXCHANGE	23,5	95,4	14,3			
	TRANSIT	5,3	31	0,0			
3	INTERN	16,5	37,4	9,7	233 → +1,7% annually	27,6% ↗ 64,1 Mtons	• Full **implementation of TEN-T standards** and RFC's projects has a **great potential on rail modal share** improving bottlenecks, especially in major urban areas and are needed to fulfit this potential;
	EXCHANGE	39,3	78,2	15,9			
	TRANSIT	8,3	27,5	0,0			
4	INTERN	13,1	37,3	8,7	216 ↘ +1,1% annually	23,7% → 51,5 Mtons	• Evolution of **road costs** is also an important **driver to improve the rail share.**
	EXCHANGE	31,6	78	14,2			
	TRANSIT	6,8	25,8	0,0			
5	INTERN	14,8	42,5	10,0	248 ↗ +2,1% annually	23,7% → 51,5 Mtons	
	EXCHANGE	35,7	89,5	16,4			
	TRANSIT	7,8	31,1	0,00			

Starting from 21 million tons in 2016, the rail deman could vary between 38 and 64 million tons in 2030, and rail share between 16% and 28%.

4.3. Villa Opicina Taskforce

Following feedback collected during Advisory Group meetings and from satisfaction survey the Med RFC, in collaboration with RFI and SZ-I, set up a taskforce in December 2020 to better follow the activities and the emergency on the border at Villa Opicina. The increase of traffic and the closure of the Karawanken tunnel in Slovenia led to severe congestions. This taskforce was set up to strengthen and improve the monitoring of traffic at the border identifying a shared monitoring process, information exchange and mitigation measures for critical events, for short-term planning and traffic management.

4.4. C-OSS Activities

4.4.1 Capacity Management

To simplify the access to the international rail freight capacity a C-OSS was established. The C-OSS is a joint body for applicants to request and receive answers in a single place and in one operation, regarding infrastructure capacity for freight trains. It works in **cooperation with a team of experts appointed by each member** of the Corridor.

The main topics dealt with by the C-OSS in 2020 were:

- RUs consultation for preparing Annual PaPs offer according the customer's capacity wish lists;
- Construction and harmonisation of offers for all products (Offers, Annual Requests, Late Path Requests and Reserve Capacity Requests);
- Coordinating and supporting RUs and IMs during the paths ordering phase;
- Coordinating the collection of needs with neighbouring Corridors;
- Coordinating and performing specific capacity studies required by customers;
- Organizing Meetings with customers like PCS Trainings with other corridors for informing about the corridor offers and news.
- International coordination/publication of works and possessions;
- Review of International Timetabling Process;
- Participating in the "C-OSS community" meetings gathering all C-OSS of all corridors aiming at finding common solutions and processes for all corridors.

Appointed as "Temporary Capacity Restriction coordinator" for Mediterranean RFC, the C-OSS initiates meetings among neighbouring IMs in order to coordinate TCRs and draft the work plan for the publication and coordination of Capacity restriction. All TCR are published on the Mediterranean website and on CIP for the applicants.

The role of the C-OSS is also to follow and contribute to RNE projects related to freight corridors:

The three main products offered by Mediterranean Rail Freight Corridor are:

- **Annual TT offer,Late Path Requests for Annual TT, and RC (Reserved Capacity)** The general principles related to the functioning of the C-OSS are published in the **CID Book 4**.

PaPs are protected against unilateral decision of modification by IMs and AB. During the preparation of the offer, the Mediterranean Rail Freight Corridor C-OSS Managers duly takes into account:

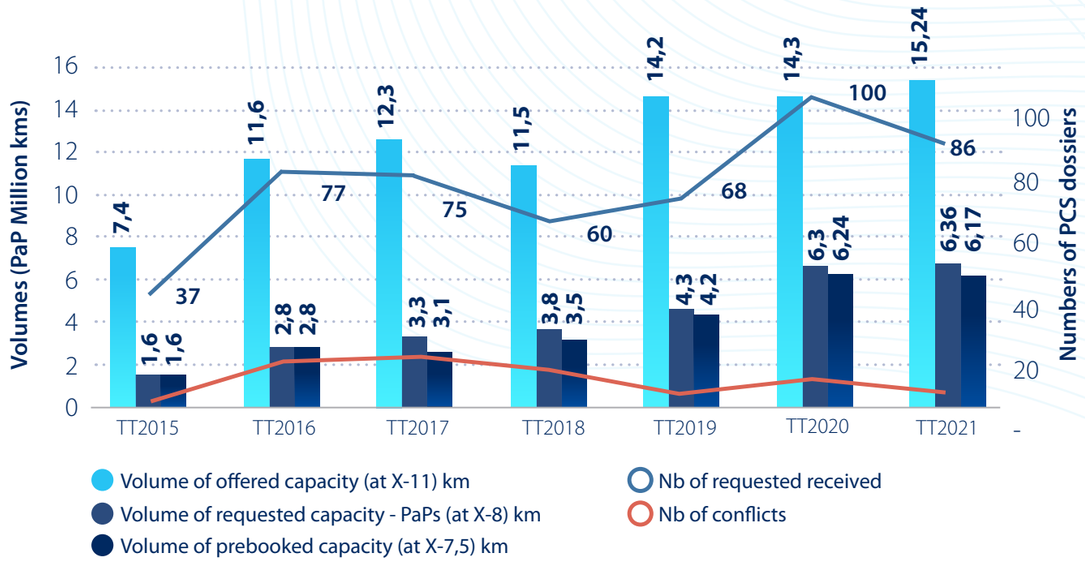
- Customer feedbacks of collection of needs;
- Customers' expectations and needs (e.g. received from the Railway Undertakings Advisory Group);
- Results of the annual customer satisfaction survey on the corridor;
- Experiences from previous years.

4.4.2 Corridor Results - Annual Timetable 2020 – Publication and Requests

The TT 2020 offer was 15,24 Mkm at X-11, the request remained stable compared to the previous year at 6,36 Mkm.

4 requests received were in conflict but were quickly resolved by alternative offers, so just a slight decrease in pre-booked capacity at 6,24 Mkm.

FCA KPIs evolution - Rail Freight Corridor 6

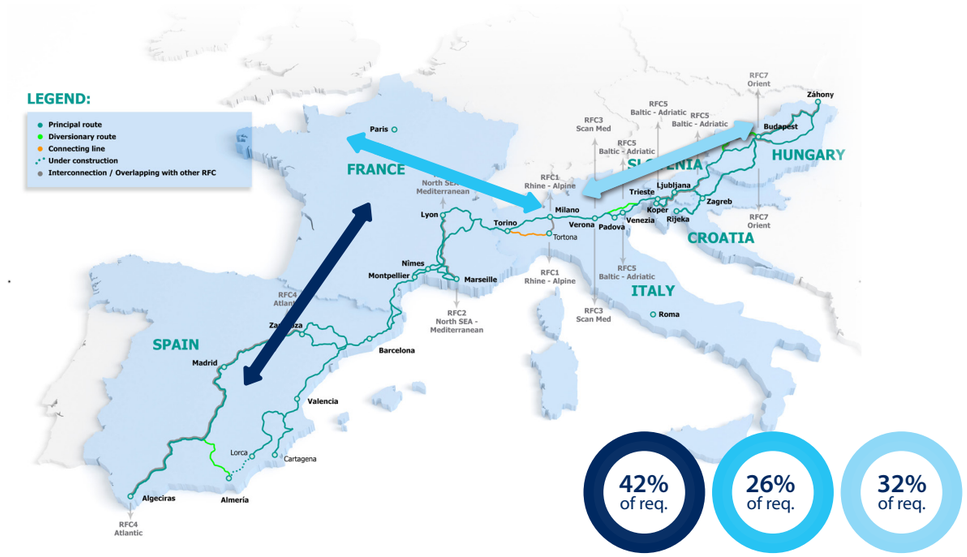


Due the increase of the offer, the percentage of requests was down to 40%, we completed the final offer at the end of September, a delay the fact the Covid situation and a new tool for SNCF R.

The repartition of circulations requested through Annual corridor requests for TT 2020 is as follow:

Despite the same volume requested as the previous year, TT 2020 saw a change in distribution, with an increase in the East, stability in the Center and decrease in the West. As the market changed between the wish list deadline (X-18) and the requests deadline (X-8), applicants adapted the requests according to market needs and availability of drivers and locomotives.

Distribution of running days pre-booked in TT 2021



4.5. Train Performance Management

Since it's opening, the Mediterranean Rail Freight Corridor has been committed, in cooperation with its members and RNE, to define procedures and tools to be used in order to put in place a solid Performance Monitoring System.

The Performance Monitoring of Mediterranean Rail Freight Corridor is carried out in two activities:

1. Monitoring of international freight trains passing through the corridor lines and crossing the borders. In 2020 the Train Performance Monitoring WG:

- Prepared the first **ICM related Re-routing overview for TT2021**. In this document various re-routing scenarios have been elaborated on the network of the member IMs in Spain, France, Italy, Slovenia, Croatia and Hungary. The scenarios are visible in the Customer Information Platform (CIP).
- Checked and analysed the raw data of train runs and, together with RNE, identified the reasons why the trains are not automatically linked and started the elaborations of solutions to improve the linking procedure throughout the definition of the standardized process for linking of trains (who, when, how). It was also explored the possibility of linking the ad-hoc trains in a more user-friendly way.

In 2020 the **TIS system** was completely renewed and a new version (TIS 2020) was introduced. The new TIS system gives an opportunity to reconsider the needs of the RNE Reporting Portfolio; It also checks the outputs after reloading of the data of the corridors. Implementing the reporting functions in TIS 2020, the RFCs were asked to check and analyse the variety of the reports and the Train Performance Management Working Group (TPM WG) of Med RFC tested all the outputs of the reports.

2. Meeting with Railway Undertakings.

Effective from 2019, the TPM WG meets twice a year with the interested RUs for the following reasons:

- to better understand the traffic patterns;
- to identify the weak points;
- to carry out joint analysis of the key problems, especially at the borders and some other effected areas;

Furthermore in 2020 the TPM WG defined and agreed with the RUs a basic work plan for 2021, focusing on the introduction of the Quality Circle Operation (QCO) plan, where the group (TPM WG/ IMs and RUs) is focused on analysing the state of the Italian borders of the Corridor, for instance first at the French/Italian border, Modane and then at the Italian/Slovenian border at Villa Opicina/Sežana. The aim was to optimize cross-border procedures reducing the border barriers and bottlenecks.

4.6. ERTMS

STEFANO MARCOCCIO

ERTMS WG Leader

Regarding the activities linked to the development and harmonization of ERTMS along the Mediterranean RFC, the Deployment of the ERTMS clearly depends on national decisions and negotiations with EC. On the other hand, according to the experience gained in the last years, it has been noted that the deployment of ERTMS can bring problems related to the lack of harmonization between neighboring countries (due to different adopted versions of ERTMS and different technical and operational national rules that have to be taken into account). The Mediterranean RFC is therefore the organization supposed to support the effort at corridor level for the harmonization of ERTMS technical and operational rules. Moreover, according to the inputs coming from RUs, it is necessary to study simplified and harmonized procedures for authorizing the vehicles as far as ERTMS subsystem are concerned and the ERTMS breakthrough initiative proposed by the European Commission with the objective to define short term achievements and the way how to have a reliable and stable ERTMS system is pushing Corridor Organizations to have a proper structure to deal with it.

According to the above mentioned needs several targets have been identified:

- Harmonized operational rules along the corridor;
- Monitoring the status of national implementations;
- Bilateral activities in order to obtain dynamic transition at border;
- Exchange of technical results from National ERTMS implementations;
- Support for RUs.

The ERTMS Working group meets regularly and fully supports any technical request coming from the Operators

4.6.1 ERTMS State of Play

Regarding the state of play of ETCS development, the ERTMS/ETCS implementation is published by each state minister into the national deployment plan.

In Italy, from Torino to Slovenian borders the lines will be equipped with ETCS by end 2023. At the borders it is already operating on SŽ-I.

On the East there is a variety of situation, there are some sections that would be ready by 2023 and other by 2026.

In France the bypass Nimes-Montpellier is in operation. The rest of the deployment on the French section of the Corridor depends on financing which is not defined yet.

The activities related to ERTMS/ETCS implementation can be divided into 3 main pillars/subgroups who have to:

1. monitor the installation in the different Countries,

2. test the interoperability at border points; in this context it was tested the dynamic transition at the SI-HU border in Őriszentpéter. A bilateral group started the dynamic transition from IT-SI and viceversa creating a trackside that gives the possibility to build the dynamic transition for the trains (without the need to stop at border).

3. identify a set of core operational rules to make ETCS work which are valid from Spain up to the last km of Hungary; the target is ambitious but for 2023 the ERTMS leader is confident to reach the goal.

The effect of the work of the groups is visible in many innovations brought during the year:

Concerning the internal interoperability, ERTMS is always in evolution to face all possible risks, and knowing how much it is important to have the right train for the right ETCS trackside, there are several levels and different releases of the same products, for instance different versions of on-board unit. The final goal is to have a ETCS fully integrated with the interlocking so to have a pure digital line.

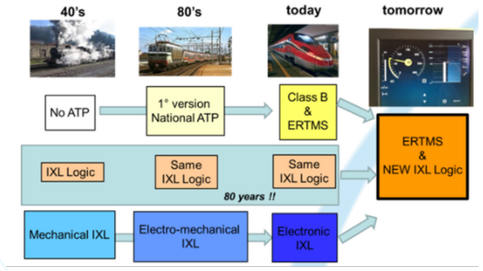
One of the goals to achieve is to reduce the fragmentation and eliminate the necessity to install different Class B system on board and move to one single ETCS OBU, avoiding a loco equipped with several Class B system, but equipped with ETCS only.

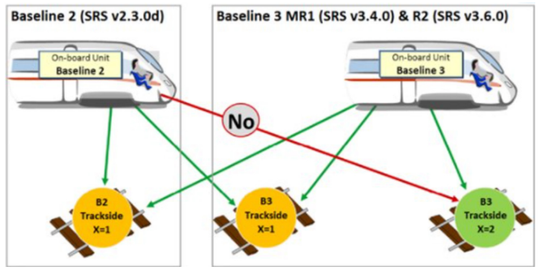
During 2020 the following goals were accomplished:

1. s dynamic test was performed between SI-HU;

2. a MoU was signed between Italy and Slovenia for the cooperation at the borders, possibility for the cooperation in the whole installation along the 2 countries, an Italian ETCS loco will run on Slovenian lines in order to perform integration tests. This is an example of good cooperation.

3. a WG was set up to work on the operational rules for RFC Med.





Interoperability

Status on the lines of the corridor in details:

ETCS in Slovenia

The Mediterranean RFC in Slovenia covers 464 km of track.

- 158 km (38,2 %) is single track and 255 km (61,8 %) is double track

In operation from 2017:

Pilot lines (yellow) ETCS L1 B2 2.3.0.d FS

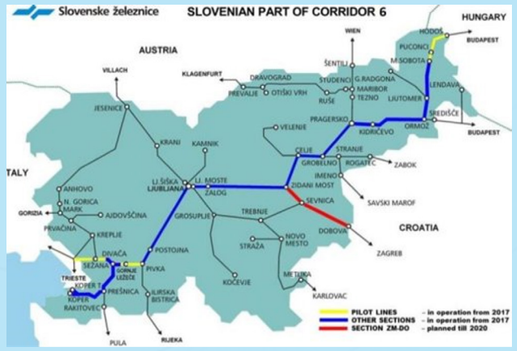
- border ITA – Pivka (without Divača): 25 km
- Murska Sobota – border HUN: 31 km

Other sections (blue) ETCS L1 B2 2.3.0.d FS

- sections cross SLO: 357 km

In operation from 2020:

Section ZM –DO (red) ETCS L1 B3 set 2 FS



ETCS in France

The Mediterranean RFC in France covers 1.515 km of track.

Bypass Nîmes-Montpellier

In operation: 60 km, L1, 2.3.0d

ETCS in Hungary on Med RFC

The Mediterranean RFC in Hungary covers 1.428 km of track.

ETCS baseline: 2.3.0.d.

Main line, west & south parts:

- Hódos (Slovenian border) – Őriszentpéter – Boba* Thales, in operation
- Boba (incl.) – Székesfehérvár (excl.) Estimated ready: 2024.
- Székesfehérvár station Thales, in trial operation (funct. modifications expected)
- Székesfehérvár – Budapest (Ferencváros) Siemens, in operation (funct. modifications expected)
- To Croatia (up to 2030); not tendered yet.

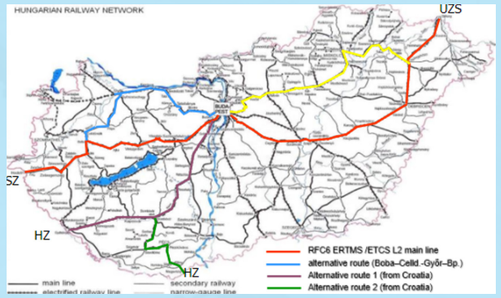
* L1&L2 section between Őriszentpéter and Zalacséb. L1 used as fall-back.

Main line, east parts:

- Budapest (Ferencváros) – Monor (incl.) Thales, estimated ready: 2022.
- Monor (excl.) – Szolnok (excl.) - Szajol (incl.) Siemens, estimated ready: 2022.
- Szolnok station: ETCS L1, up to 2022.
- Szajol (excl.) – Püspökladány (incl.) Thales, estimated ready: 2022.

Up to 2025 (not tendered yet):

- Püspökladány – Debrecen – Nyíregyháza – Záhony border (Ukraine)



ETCS in Croatia

The Mediterranean RFC in Croatia covers 375 km of track.

By 2023

Will be equipped with ETCS level 1 Baseline 2.3.0.d:

- Railway line M102 Zagreb MS – Dugo Selo,
- section Sesvete – Dugo Selo and railway line M201 SB – Botovo – Dugo Selo,
- section Križevci (incl.) – Dugo Selo.

Will be equipped with ETCS level 1 Baseline 3:

- Railway line M201 SB – Botovo – Dugo Selo,
- section SB – Križevci and M202 Zagreb MS – Rijeka,
- section Hrvatski Leskovac – Karlovac

ETCS on LFP

The high speed line at the border between Spain and France.

In operation: 45 km, L1, 2.3.0d

ETCS in Spain

The Mediterranean RFC in Spain covers 3.397 km of track.

ERTMS L1 (2.3.0d version) sections in service: 223 km

- International Section (LFP): 44 km
- Barcelona Area – International Section (Mixed traffic HSL): 134 km
- Hospitalet (Vandellós) – Bif. Calafat: 45 km

ERTMS L1 sections contracted: 272 km

- Castellón - Hospitalet (Vandellós)
- Valencia – Castellón
- Valencia – Xativa – La Encina (Iberian gauge)

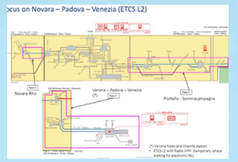
ERTMS L2 sections contracted: 250 km

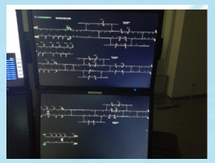
- Barcelona Area – International Section (Mixed traffic HSL)
- Valencia – Xativa – La Encina (Standard gauge)

ETCS in Italy

The Mediterranean RFC in Italy covers 861 km of track.

- Novara– Milano Rho (around 35 km): ERTMS L2 in operation from july 2021.





5. Quality of service on the freight corridor

Performance monitoring

The Article 19 (2) of Regulation (EU) 913/2010 concerning a European rail network for competitive freight requires the Management Boards of the RFCs to monitor the performance of rail freight services on their respective freight corridors and publish the results once a year.

To facilitate the fulfillment of the above obligation, a joint RNE-RFC project team developed a set of KPIs commonly applicable to all RFCs.

These KPIs were included into the Guidelines "Key Performance Indicators of Rail Freight Corridors" and are available since 2017 as harmonized KPIs available for all the corridors (TIS/OBI collected and analyzed RNE).

Performance of the RFCs in the following business areas:

- Capacity management;
- Commercial speed;
- Market development;
- Operation: Number of train runs /Punctuality KPIs.

5.1. Key Performance Indicators Of The Mediterranean Rail Freight Corridor (Art. 19.1)

5.1.1 Capacity Managemente

Volume of offered capacity - PaPs (at X-11)

2020	for TT2021	**15.2 mio (path) km**
2019	for TT2020	14.3 mio (path) km
2018	for TT2019	14.2 mio (path) km

Volume of requested capacity - PaPs (at X-8)

2020	for TT2021	**6.4 mio (path) km**
2019	for TT2020	6.3 mio (path) km
2018	for TT2019	4.3 mio (path) km

RFC6	TT2019	TT2020	TT2021	TT2022
PaP Capacity Offer	14,2	14,3	15,24	14
RFC6	**TT2019**	**TT2020**	**TT2021**	**TT2022**
PaP Capacity Requests	4,3	6,31	6,36	5,3

Volume of requests - PaPs (at X-8)
(number of PCS dossiers)

2020	for TT2021	**86**
2019	for TT2020	100
2018	for TT2019	68

Number of conflicts - PaPs (at X-8)
(number of conflicting PCS dossiers)

2020		**4** for TT2021
2019		9 for TT2020
2018		4 for TT2019

RFC6	TT2019	TT2020	TT2021	TT2022
Number of PaP requests	68	100	86	78
RFC6	**TT2019**	**TT2020**	**TT2021**	**TT2022**
Number of requests in conflict	4	9	4	10

Volume of pre-booked capacity - PaPs (at X-7.5)

2020	for TT2021	**6.2 mio (path) km**
2019	for TT2020	4.2 mio (path) km
2018	for TT2019	4.2 mio (path) km

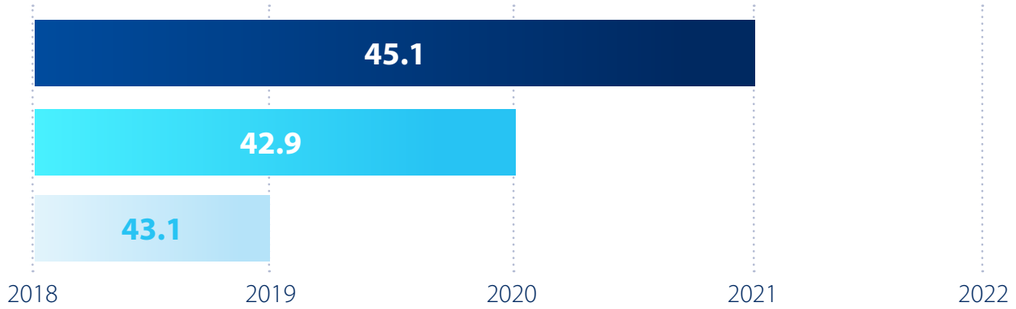
Volume of offered capacity - Reserved Capacity (at X-2)

2020	for TT2021	**3.6 mio (path) km**
2019	for TT2020	5.4 mio (path) km
2018	for TT2019	3.8 mio (path) km

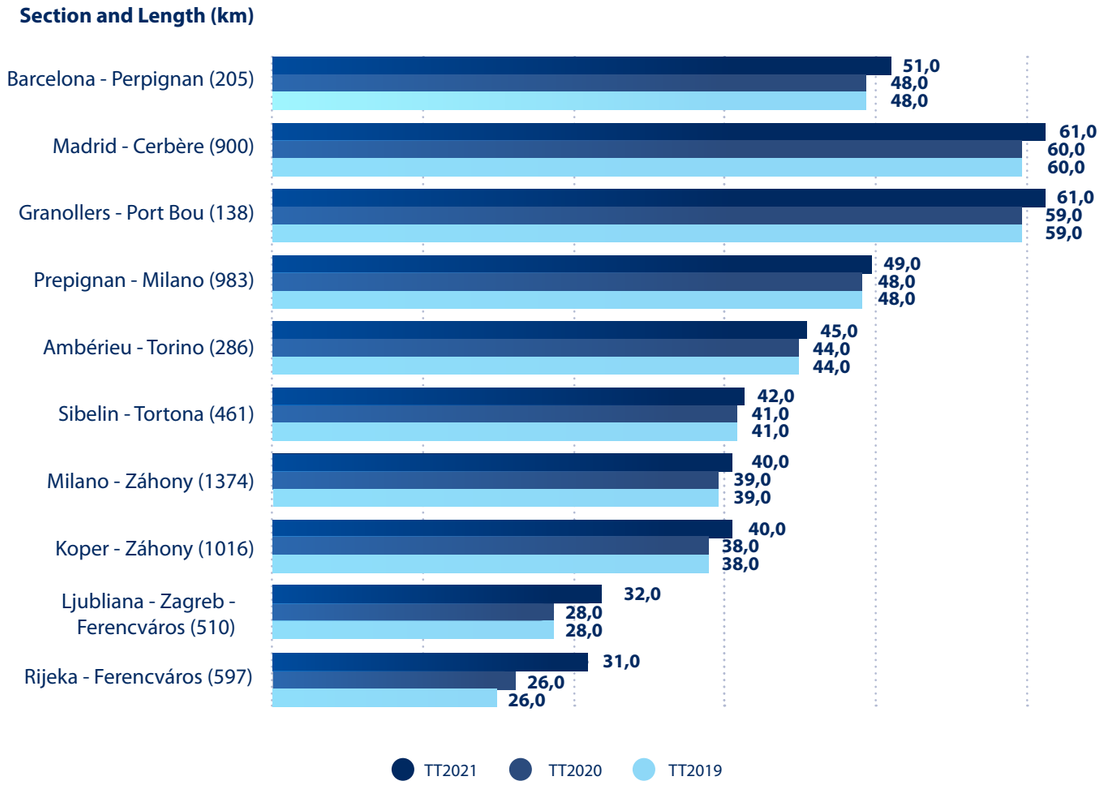
RFC6	TT2019	TT2020	TT2021	TT2022
PaP Capacity pre-booked	4,2	6,24	6,17	5,22
RFC6	**TT2019**	**TT2020**	**TT2021**	**TT2022**
RC Capacity Offer	3,8	5,4	3,6	2,15

5.1.2 Average Commercial Speed

Average Commercial Speed



Average planned speed of PaPs (calculation per O/D pairs, km/h)



*This KPI should be perceived as qualitative as journey times might include commercial and operational stops.

	TT 2019		TT 2020		TT 2021		TT 2022	
		Average transport time						
RFC section	Distance (km)	Average transport time	PaP speed (km/h)	Average transport time	PaP speed (km/h)	Average transport time	PaP speed (km/h)	Average transport time	PaP speed (km/h)
Barcelona - Perpignan (209km)	209 km	4:21	48 km/h	4:21	48 km/h	4:01	51 km/h	4:01:30	52 km/h
Madrid - Cerbere (914km)	914 km	15:07	60 km/h	14:53	60 km/h	15:01	61 km/h	15:27:00	62 km/h
Granollers - Port Bou (138km)	138 km	2:21	59 km/h	2:17	59 km/h	2:16	61 km/h	2:18:30	60 km/h
Perpignan - Milano (1057km)	1057 km	20:32	48 km/h	20:05	48 km/h	20:33	49 km/h	20:34:30	51 km/h
Amberieu - Torino (286km)	286 km	6:33	44 km/h	6:47	44 km/h	6:20	45 km/h	6:44:30	44 km/h
Sibelin - Tortona (461km)	426 km	10:28	41 km/h	10:34	41 km/h	10:11	42 km/h	10:50:00	40 km/h
Milano - Zahony (1374km)	1374 km	11:33	39 km/h	11:27	39 km/h	10:12	40 km/h	35:11:00	35 km/h
Koper - Zahony (1016km)	1025 km	2:51	38 km/h	1:06	38 km/h	1:36	40 km/h	25:25:30	41 km/h
Ljubljana - Zagreb - Ferencvaros (510km)	510 km	18:34	28 km/h	19:39	28 km/h	16:04	32 km/h	16:01:30	32 km/h
Rijeka - Ferencvaros (597km)	597 km	23:21	26 km/h	20:04	26 km/h	19:26	31 km/h	17:46:30	34 km/h
Average Mediterranean RFC			43,1 km/h		42,9 km/h		45,1 km/h		45 km/h

5.1.3 Market Development - Ratio of Allocated Capacity

Here it is compared the ratio of allocated capacity by the corridor (final offer), versus global capacity allocated by the IM at the borders of the RFC (at the start of TT)

- The average for TT 2021 is 30 %.
- Good values in French borders and between Slovenia and Croatia.

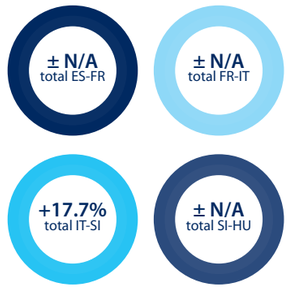
Relation between the capacity allocated by the C-OSS and the total allocated capacity 2020: 30,4%

Between member states		Between operational points		Allocated by C-OSS 2018	Allocated by C-OSS 2019	Allocated by C-OSS 2020
France	Spain	Cerbère	PortBou		56%	66%
France	Spain	RFF - LFP	Límite Adif-TPFerro		38%	53%
France	Italy	Modane	Bardonecchia		56%	66%
Italy	Slovenia	Villa Opicina	Sezana		9%	10%
Slovenia	Hungary	Hodoš	Őriszentpéter		49%	42%
Croatia	Hungary	Botovo	Gyékényes		11%	13%
Slovenia	Croatia	Dobova	Savski Marof		6%	25%
Average				**29,4%**	**27,8%**	**30,4%**

Market Development

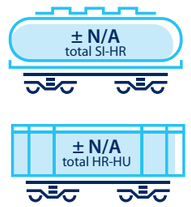
Overall number of trains per border - Part 1*

	2018	2019	2020
Total ES - FR	N/A	N/A	**9,356**
Total FR - IT	N/A	N/A	**7,530**
Total IT - SI	6,839	7,189	**8,455**
Total SI - HU	N/A	N/A	**6,097**



Overall number of trains per border - Part 2*

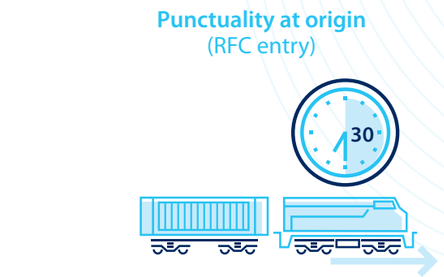
	2018	2019	2020
Total SI - HR	N/A	N/A	**7,300**
Total HR - HU	N/A	N/A	**8,001**

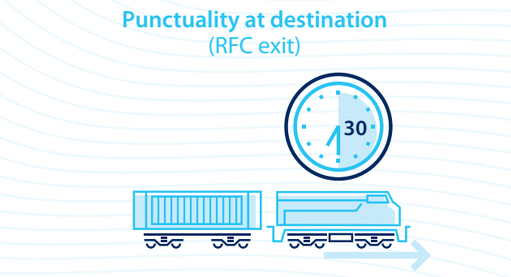


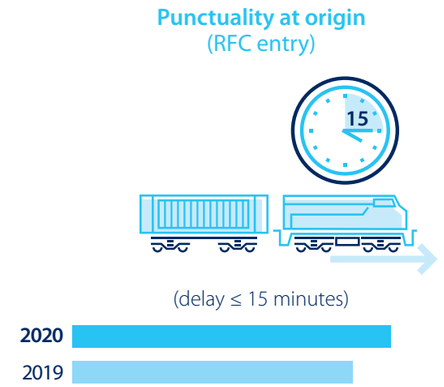
* The calculation of this KPI is based on data in IMs´´ systems. The total sum of the figures per border dose not correspond to the figure of the KPI `Overall number of trains on the RFC´ due to, among other reasons, the potential double-counting of trains crossing more than one border.

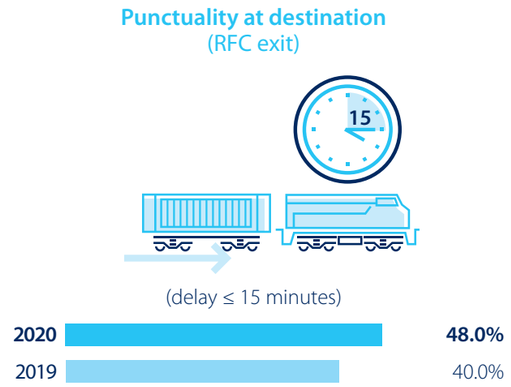
5.1.4 Operation

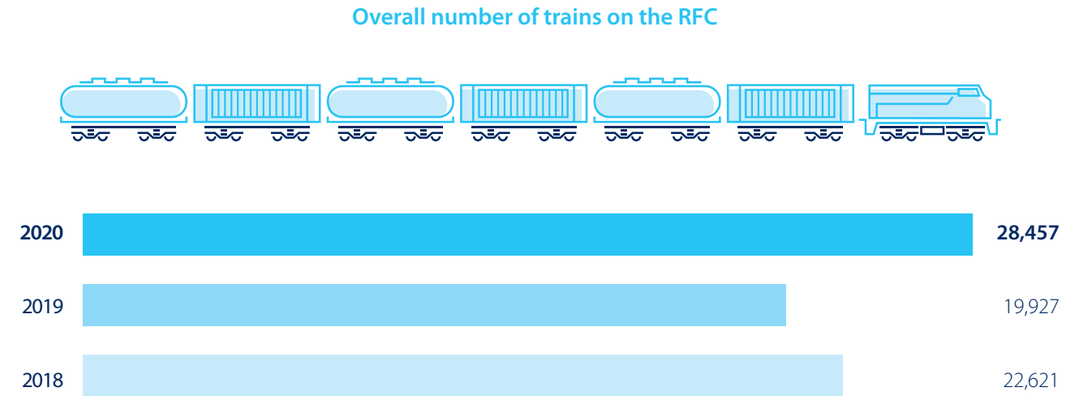
Punctuality at origin and destination











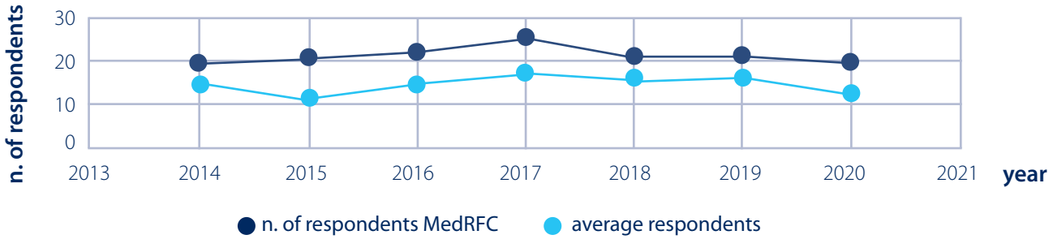
5.2. User Satisfaction Survey Highlight

In line with the Regulation 913/2010, a User Satisfaction Survey (USS) was performed also for 2020. For this year, a common Satisfaction Survey was prepared and conducted by the overall RFC Network, with all the 11 Rail Freight Corridors involved. The survey was conducted using a new platform. The good point of the new survey was the possibility to not only assess the satisfaction of the user, but to better understand the priorities regarding Rail Freight Corridor activities.

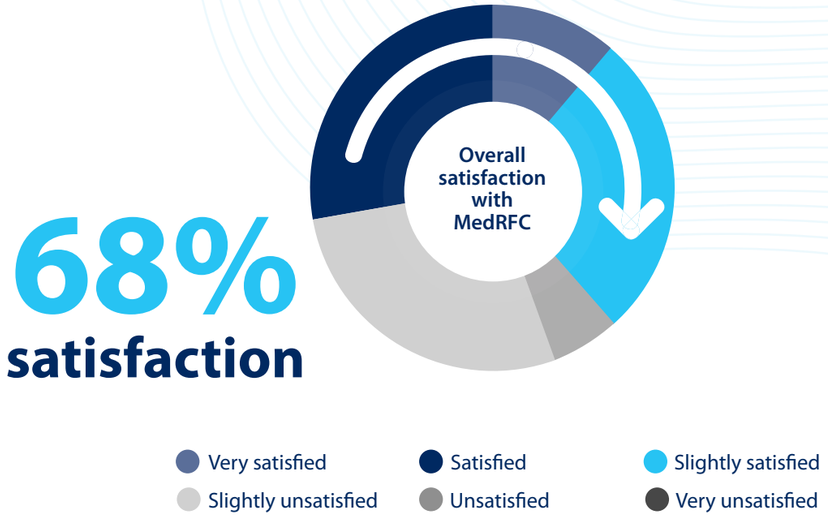
As usual, the User Satisfaction Survey, was launched in September and was closed in October.

The results have been published on the Mediterranean RFC website and CIP, distributed to all the participants and commented during the Advisory Group meeting held online on February 10th 2021.

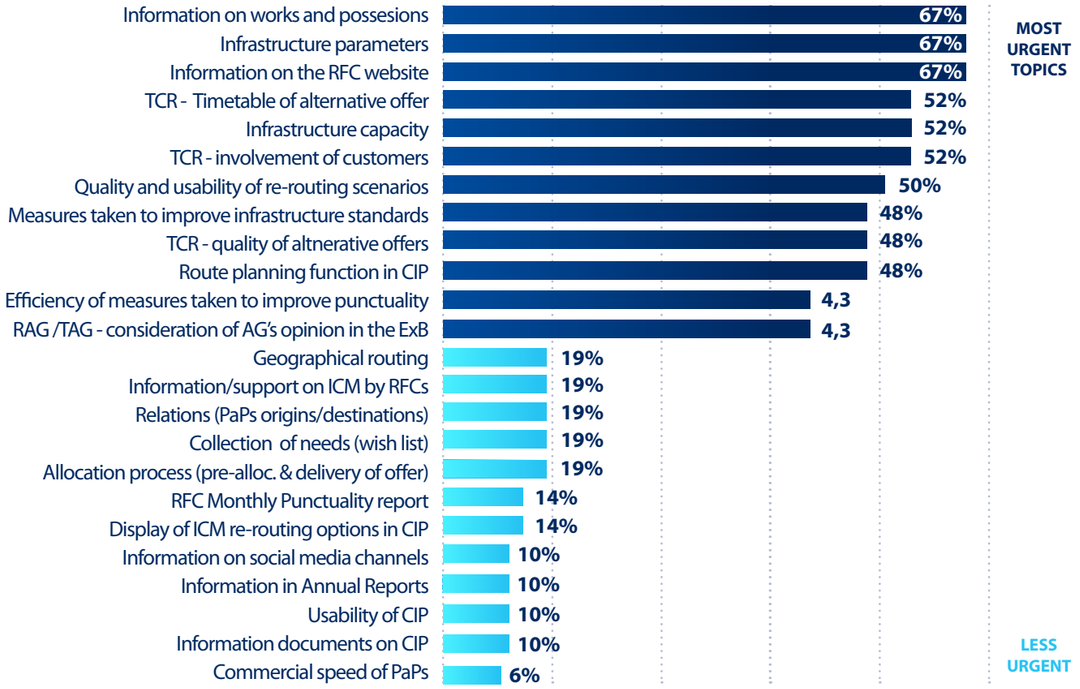
Respondents MedRFC vs RFCs average



The number of respondents is more or less stable compared to last year (19 in 2020; 21 in 2019). The rate of satisfaction for 2020 is about 68%, which is slightly decreasing compared to the previous year, but which is anyway showing a good appreciation for the work of the RFC.



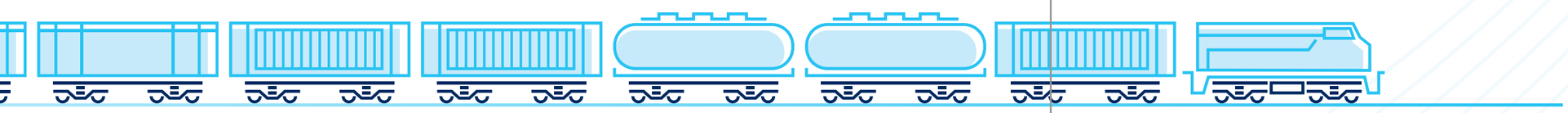
According to the users' feedback, improvements are mostly needed in the following areas: TCRs information, infrastructure parameters/capacity bottlenecks and information provided on the website.



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

MEDITERRANEAN RAIL FREIGHT CORRIDOR

Via Ernesto Breda, 28 20126 Milano
info@railfreightcorridor6.eu
www.railfreightcorridor6.eu



The Members of Mediterranean Rail Freight Corridor are:

adif

LFP Perthus Línea Figueras Perpignan

SNCF RÉSEAU

MÁV

VPE

Oc via CONTOURNEMENT FERROVIAIRE NÎMES - MONTPELLIER

Slovenske železnice SŽ-Infrastruktura

HŽ INFRASTRUKTURA

RFI RETE FERROVIARIA ITALIANA GRUPPO FERROVIE DELLO STATO ITALIANE