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EUROPEAN REGULATION 913/2010  
Rail Freight Corridor “Atlantic”

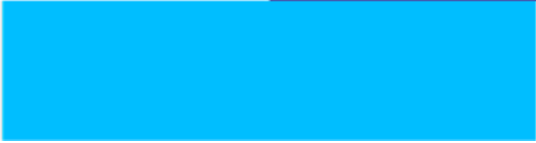
# IMPLEMENTATION PLAN

Annex to CID (Section 5)

TIMETABLE 2025

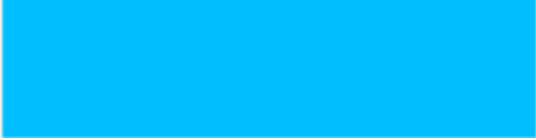
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## VERSION CONTROL

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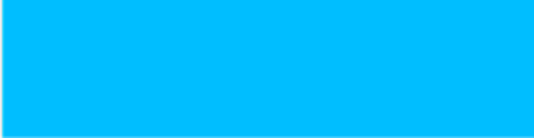
Version	Chapter changed	Changes compared to the previously published version	X marks which part in the chapter concerned has been changed	
			Common part	Corridor-specific part
30.11.2023	all		X	X

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## GLOSSARY

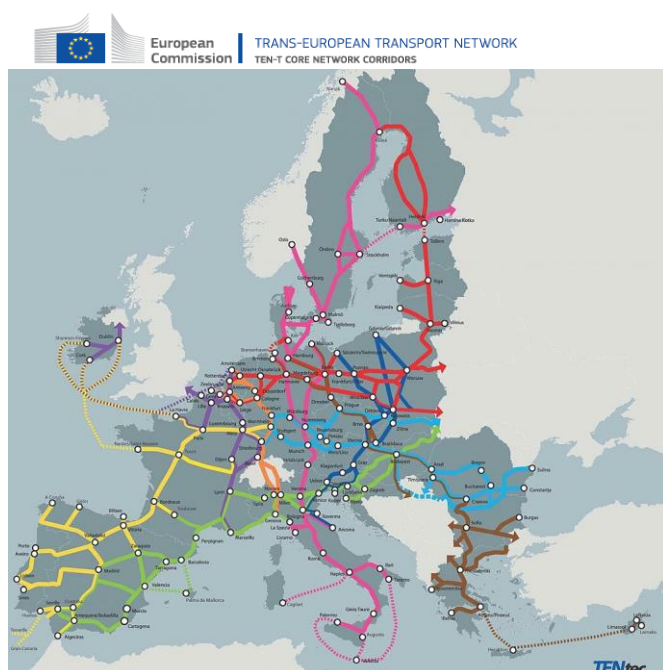
A general glossary which is harmonised over all Corridors is available under the following link: [https://rne.eu/wp-content/uploads/NS\\_CID\\_Glossary\\_2023-Working-file\\_clean-version.xlsx](https://rne.eu/wp-content/uploads/NS_CID_Glossary_2023-Working-file_clean-version.xlsx)

## 1 INTRODUCTION

Within the framework of the European Union new Strategy for jobs and growth, the creation of an internal rail market, in particular with regard to freight transport, is an essential factor in making progress towards sustainable mobility.

Council Directive 91/440/EEC of 29 July 1991 on the development of the Community's railways, Directive 2001/14/EC of the European Parliament and of the Council of 26 February 2001 on the allocation of railway infrastructure capacity and the levying of charges for the use of railway infrastructure and Directive 2012/34/EU of the European Parliament and the Council of 21 November 2012 establishing a single European railway area have been important steps in the creation of the internal rail market.

In order to be competitive with other modes of transport, international and national rail freight services, which have been opened up to competition since 1 January 2007, must be able to benefit from a good quality and sufficiently financed railway infrastructure, namely, one which allows freight transport services to be provided under good conditions in terms of commercial speed and journey times and to be reliable, namely, that the service it provides actually corresponds to the contractual agreements entered into with the railway undertakings (RUs).



In this context, the establishment of international rail corridors for a European rail network for competitive freight on which freight trains can run under good conditions and easily pass from one national network to another would allow for improvements in the conditions of use of the infrastructure.

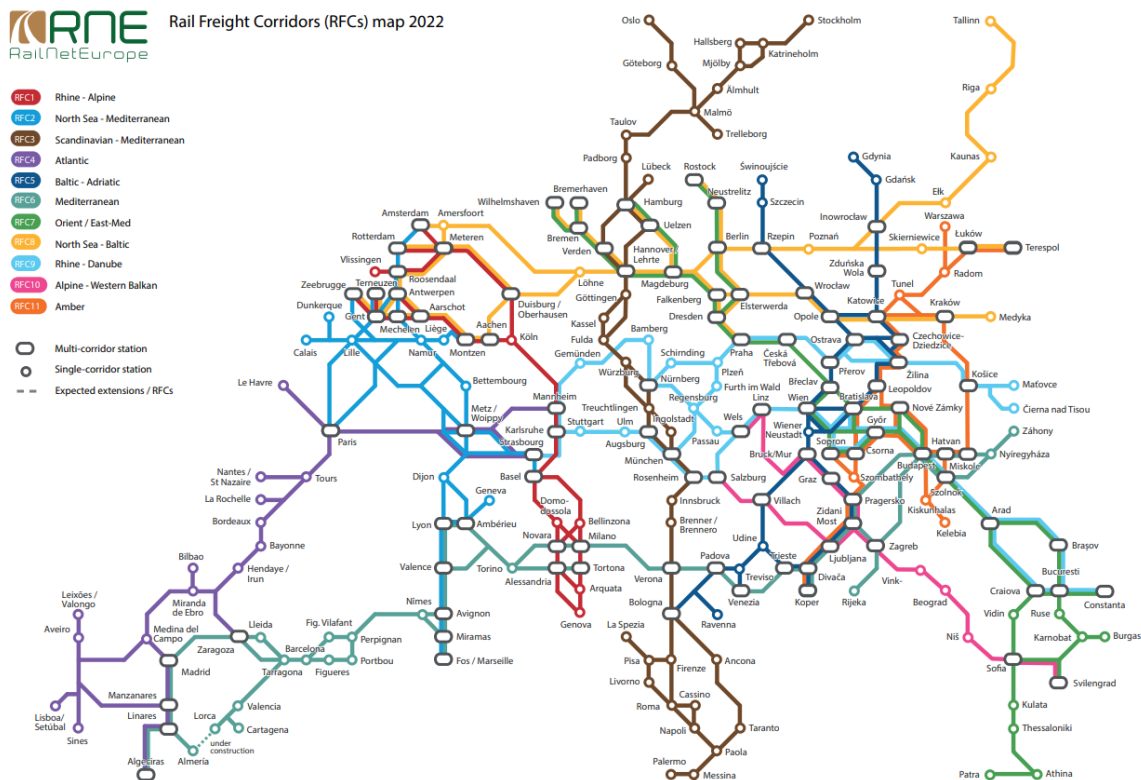
The implementation of international rail freight corridors forming a European rail network for competitive freight should be conducted in a manner consistent with the trans-European Transport Network (TEN-T) and/or the European Railway Traffic Management System (ERTMS) corridors.



The conception of freight corridors should ensure continuity along corridors, insuring the necessary interconnections between the existing rail infrastructures.

Coordination should be ensured between Member States and Infrastructure Managers (IMs) in order to guarantee the most efficient functioning of freight corridors. To allow this, operational measures should be taken in parallel with investments in infrastructure and in technical equipment such as ERTMS that should aim at increasing rail freight capacity and efficiency.

The aim of the Regulation (EU) No 913/2010 of 22 September 2010 is to improve the efficiency of rail freight transport relative to other modes of transport through the creation of 9 European rail freight corridors.



In accordance with the conclusions of Regulation 913/2010, the Rail Freight Corridor N°4 was established on the 10 November 2013. In accordance with the annex II of the Regulation 1316/2013, this corridor was renamed to Rail Freight Corridor “Atlantic” and was extended to Mannheim and Strasbourg.

With regard to the Atlantic coast, the European Commission has selected the Rail Freight Corridor “Atlantic” connecting Portugal, Spain France and Germany, namely the following points: “Sines-Lisbon/Leixões, Sines-Elvas/Algeciras, Madrid-Medina del Campo / Bilbao / San Sebastian-Irun-Bordeaux-Paris / Le Havre / Metz-Strasbourg / Mannheim”, which will constitute the hubs of the corridor.

The Rail Freight Corridor “Atlantic” directly connects four other corridors – Rail Freight Corridor “North Sea – Mediterranean” in Metz Woippy, Rail Freight Corridor “Mediterranean” in Madrid and

Rail Freight Corridor Rhine-Alpine in Mannheim and will in future connect with Rail Freight Corridor Rhine Danube in Strasbourg and Mannheim.

This document is aimed at defining the means and strategy which the parties intend to implement in order to draw up during a given period the necessary and sufficient measures to establish Rail Freight Corridor “Atlantic”.

## 2 CORRIDOR DESCRIPTION

The principal and divisionary lines of the Rail Freight Corridor Atlantic have around **6,200 km** in length and extends over Germany (174 km), France (2,625 km), Spain (2,366 km) and Portugal (1,045 km) running for long part along the Atlantic coast.



It is composed of infrastructure features substantially different, as shown in the simplified chart.



The detailed maps and summary tables of the features of the existing railway network are set out in Annex 5.D the Customer Information Platform in <https://rne.eu/it/rne-applications/cip/>.

The infrastructure managers of the countries covered by Rail Freight Corridor Atlantic are the following:

GERMANY		DB Netz AG Adam-Riese-Str. 11-13 60327 Frankfurt am Main   Deutschland <a href="http://www.dbnetze.com">www.dbnetze.com</a>
FRANCE		Direction Commerciale 15 rue Jean-Philippe Rameau - CS80001 93418 LA PLAINE SAINT DENIS CEDEX   France <a href="http://www.sncf-reseau.fr">www.sncf-reseau.fr</a>
SPAIN		Dirección Internacional C/ Sor Ángela de la Cruz nº 3, planta 2ª 28020-Madrid   España <a href="http://www.adif.es">www.adif.es</a>
PORTUGAL		Departamento de Contratualização e Negócio Ferroviário   Corredor Atlântico Praça da Portagem 2809-013 Almada   Portugal <a href="http://www.infraestruturasdeportugal.pt">www.infraestruturasdeportugal.pt</a>

## 2.1 Key Parameters of Corridor Lines

Here follows a brief description of the existing railway infrastructures and performance-limiting factors of the corridor.

In addition, for a clearer overview of the Corridor characteristics please consult Annex 5.D and the Customer Information Platform in <https://rne.eu/it/rne-applications/cip/>

### 2.1.1 Germany

For the freight traffic, the existing line has respectively:

- a principle line with double track between the French-German border, Saarbrücken and Mannheim via Neunkirchen, Homburg and Ludwigshafen (143 km),
- a diversionary line with double track between Saarbrücken and Homburg via Rohrbach (31 km),

with an UIC gauge, electrified at 15 kV~ and with an axle load of 22.5 tons.

The maximum speed for freight trains is 100 km/h, except for some agglomerations with lower speed limits due to construction works.

The tables below provide detailed characteristics of infrastructures by section.

General information principal line	<ul style="list-style-type: none"> <li>■ Tracks with UIC gauge (1,435 mm)</li> <li>■ Max. load 22.5 tons/axle</li> <li>■ Electrification 15,000V~</li> <li>■ Max. speed 100 – 160 km/h</li> <li>■ Train communication system GSM-R</li> <li>■ Signaling System : Main/preliminary signaling system (H/V) and Combined signaling system (Ks) with PZB</li> <li>■ Length of trains limited to 740 m</li> </ul>
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### 2.1.1.1 French border – Mannheim section

MS1: French border - Saarbrücken - Neunkirchen - Homburg - Mannheim (143 km)	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks,</li> <li>■ Gauge type GB/GC,</li> <li>■ Gross load hauled limited to 3,000 t with a single electric locomotive class 5,600 kW (with a section limited to 1720 t)</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ A train length up to 740 m is possible in principle, may however be impacted by capacity restrictions resulting from timetabling and operations.</li> </ul>
MS2: Saarbrücken - Rohrbach - Homburg (31 km)	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks</li> <li>■ Gauge type GB/GC</li> <li>■ Gross load hauled limited to 3,000 t with a single electric locomotive class 5,600 kW (with a section limited to 1930 t)</li> </ul> <p>Current state – Limiting factors:</p>

	<ul style="list-style-type: none"> <li>■ A train length up to 740 m is possible in principle, may however be impacted by capacity restrictions resulting from timetabling and operations.</li> </ul>
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## 2.1.2 France (2,625 km)

The existing line is a double track with UIC gauge, electrified respectively with:

- 25,000 V~ between Le Havre, Paris, Metz/Woippy, and Strasbourg/Stiring Wendel, between Nantes St Nazaire port and Tours SPDC, La Rochelle port and Poitiers (1,428 Km)
- 1,500 V DC between Paris and Hendaye (804 km)

and diversionary lines (393 km) with single or double track partially non electrified (238 km).

It is equipped with a signalling system of the Automatic Block System (BAL) and Semi automatically Block system (BAPR) type with a Beacon Speed Control (KVB),

The maximum speed of freight trains ranges between 100 and 120 km/h, except for some urban nodes with limits between 40 and 60 km/h.

The crossing of the railway complex Hendaye/Irun is ensured on 2 km by 1 track with an UIC gauge electrified with 1,500V DC and 1 track with an Iberian gauge electrified with 3,000 V DC.

The tables below provide detailed characteristics of infrastructures by section.

General information principal line	<ul style="list-style-type: none"> <li>■ Tracks with UIC gauge (1,435 mm),</li> <li>■ Max. load 22.5 tons/axle,</li> <li>■ Max. gradient 6 to 8‰, except Bayonne-Hendaye section (12‰)</li> <li>■ Length of trains limited to 750 m, apart from Paris-Le Havre (751 to 850 m)</li> <li>■ Signalisation type Automatic Block System (BAL) with Beacon Speed Control (KVB). Some lines have another automatic block system</li> <li>■ Electrification 1,500 V DC between Irun and Sucy-Bonneuil,</li> <li>■ Electrification 25,000 V~ between Sucy-Bonneuil and the triangle of Gagny, between Tours and Nantes St Nazaire, between Poitiers and La Rochelle, between Le Havre and Woippy / Strasbourg and Stiring Wendel (German border).</li> </ul>
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### 2.1.2.1 Paris – Le Havre section

PO3: Mantes la Jolie - Rouen (82.2 km)	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks, except for sections Vernon – Gaillon - Aubevoye and Oissel – Rouen Rive Droite (with 4 tracks)</li> <li>■ Gauge of GB1 type (except Mantes-la-Jolie - Oissel: GB type)</li> <li>■ Line authorised to long trains (751 to 850m long)</li> </ul>
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	<p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Absence of permanent counterflow installations</li> <li>■ Hard spot: Rouen junction</li> <li>■ Frailty of an engineered structure conditioning access to the Port of Rouen</li> </ul>
<p>PO4: Rouen – Motteville – Port du Havre (88.4 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks</li> <li>■ Gauge type GB1</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Absence of permanent counterflow installations between Motteville and Rouen</li> </ul>

### 2.1.2.2 Paris – Metz/Woippy-Stiring Wendel & Lérrouville-Strasbourg section

<p>PE1: Triangle of Gagny – Le Raincy followed by Le Raincy - Lérrouville (278.8 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks, except for Le Raincy - Lagny - Thorigny section with 4 tracks</li> <li>■ Gauge GB1 type (except section Trilport - Epernay: GB type)</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Lack of capacity for the freight paths during rush hour between the triangle of Gagny and Le Raincy</li> <li>■ The sole limitation regards the gauge, between Trilport and Epernay (GB type)</li> </ul>
<p>PE2: Lérrouville - Metz (65 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks</li> <li>■ Gauge type GB1</li> </ul> <p>Current state – Limiting factors: None</p>
<p>PE3: Metz- Stiring Wendel (German border) (74 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks</li> <li>■ Gauge type GB1</li> </ul> <p>Current state – Limiting factors: None</p>
<p>PE4: Metz – Woippy (8.6 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks</li> <li>■ Gauge type GB1</li> </ul>

	<p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ The section between Metz Marchandises and Woippy has a limited capacity.</li> </ul>
<p>PE5: Lérrouville-Strasbourg Port du Rhin (226 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks, 3 tracks between Vandenheim and Strasbourg</li> <li>■ Gauge type GB1, except section Sarrebourg to Saverne (GB)</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Gradient 14‰ and gauge GB between Sarrebourg and Saverne</li> </ul>

### 2.1.2.3 Paris – Hendaye/Irun (border Spain) section and connection to Nantes Saint Nazaire & La Rochelle ports

<p>PS1: Hendaye-Bordeaux (232.8km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks</li> <li>■ Electrification: Non-interoperable catenary of MIDI type</li> <li>■ Gauge GB type (except section Dax-Facture: GB1 type)</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Gauge GB type</li> <li>■ Limited speed passing through the stations of Bordeaux, Dax, Bayonne, Hendaye</li> <li>■ Problem of interoperability of pantograph collector heads of the Midi catenary, requiring the exchange of locomotive at the south of Bordeaux</li> <li>■ Insufficiency of freight lay-by of 750 m</li> <li>■ Few permanent counterflow installations</li> </ul>
<p>PS2: Bordeaux-Poitiers-Saint Pierre des Corps (Tours) (350.8 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks</li> <li>■ Gauge GB1 type between Tours and Poitiers, GB type between Poitiers and Bordeaux</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Gauge GB type between Poitiers and Bordeaux</li> </ul>
<p>PS3 : Poitiers – La Rochelle Port (148 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ Line with double track and some single track section (Lusignan – St Maixent 28,2 km / La Rochelle station – La Rochelle port 5,1 km)</li> <li>■ Electrification 25,000 V~</li> </ul>



	<p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Gauge type GA (FR 3.3) between Poitiers and La Rochelle</li> <li>■ Signalling system BAPR type</li> <li>■ Virtual absence of freight lay-bys with 750 m</li> </ul>
<p>PS4 : Nantes St Nazaire port – Saint Pierre des Corps(Tours) (262 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks</li> <li>■ Electrification 25,000 V~</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Gauge type GB between Tours et Angers,</li> <li>■ Signalling system type BAPR between Tours SPDC and Angers, type BAL between Angers and Nantes Saint Nazaire.</li> <li>■ Line extensively used for passengers traffic TGV (before entry into service HSL BPL) and TER between Nantes and Angers</li> </ul>
<p>PS5: Saint Pierre des Corps (Tours)- Brétigny (201.7 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks; Les Aubrais - Etampes section with 3 tracks; Etampes - Brétigny-sur-Orge section with 4 tracks</li> <li>■ Gauge type GB1</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Line extensively used for passenger traffic (Intercity and TER)</li> <li>■ Few freight lay-bys</li> </ul>

#### 2.1.2.4 Ile de France region

<p>PS6: Brétigny- Juvisy – Valenton (22.9 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 4 tracks; between Juvisy and Valenton, the section is divided by 2 itineraries with 2 tracks.</li> <li>■ Gauge type GB1</li> </ul> <p>Current state – Limiting factors: None</p>
<p>PS7: Valenton - Triangle of Gagny (15.4 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks, near <i>Grande Ceinture</i> Line, dedicated to freight</li> <li>■ Gauge type GB1</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Speed limited to 80 km/h</li> </ul>



<p>PO1: Triangle of Gagny – Val d’Argenteuil (26.6 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks</li> <li>■ Gauge type GB1</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Grande Ceinture Line, dedicated to freight</li> </ul> <p>Speed limited to 80 km/h</p>
<p>PO2: Val d’Argenteuil – Mantes la Jolie (44.6 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks</li> <li>■ Gauge type GB1</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ 2 itineraries are possible, both of them are very used by passenger traffic: by the northern bank of the Seine river (main route via Conflans Ste Honorine), or by the southern bank of the Seine river (via Poissy)</li> <li>■ Lack of capacity for freight paths during rush hour</li> <li>■ The number of tracks on the principal itinerary on the right bank could become insufficient in case of development of passenger traffic from the Ile-de-France region and/or important works.</li> <li>■ The itinerary on the southern bank requires a crossing point at the same level with RER A in Sartrouville</li> </ul>

### 2.1.2.5 Diversionary lines

From Bordeaux to Poitiers through Saintes and Niort (“C.A”)

<p>C.A1: Bordeaux- Saintes-Niort (197.7 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ Line non electrified between Grave d’Ambarès and Niort</li> <li>■ Single track between Saintes and Niort, 2 tracks between Bordeaux and Saintes</li> </ul> <p>Gauge type GA</p> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Single track between Saintes and Niort, lack of electrification between Grave d’Ambarès and Niort.</li> <li>■ Heterogeneous signalling system<sup>1</sup></li> <li>■ Virtual absence of freight lay-bys with 750 m</li> </ul>
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From Conflans Ste Honorine to Motteville through Gisors-Serqueux (“C.B”)

<p>C.B1: Conflans- Gisors (46.2 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks</li> <li>■ Electrification 25,000 V.</li> <li>■ Signalling system BAL type (except for Pontoise-Gisors: BAPR type)</li> <li>■ Gauge GA (FR3.3) type (except for Eragny-Chars GB1 type)</li> </ul> <p>Current state – Limiting factor:</p> <ul style="list-style-type: none"> <li>■ Limited capacity of the section Conflans-Gisors equipped in BAPR and gauge FR3.3</li> </ul>
<p>C.B2: Gisors- Serqueux (50.0 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks</li> <li>■ Non electrified line</li> </ul> <p>Signalling system BAPR type (after renewal, start of operation 2013)</p> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Signalling system BAPR type, sufficient for an alternative axle</li> <li>■ Non electrified line</li> <li>■ Line limited to gauge GB type as a result of a single tunnel</li> </ul>
<p>C.B3: Serqueux-</p>	<p>Current state – Main features:</p>

<sup>1</sup> BAL Signalling system from Bordeaux to St-André-de-Cubzac, then BAPR-DV up to Beillant, BAL up to Saintes and BAPR-VB up to Niort.

Montérolier B. - Motteville (53.4 km)	<ul style="list-style-type: none"> <li>■ 2 tracks between Serqueux and Montérolier-Buchy; 1 track between Montérolier-Buchy and Motteville (35,6 km)</li> <li>■ Electrification 25,000 V.</li> <li>■ Signalling system type BAPR</li> <li>■ Gauge GB1 type (except for Serqueux- Montérolier-B.: GB type)</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Section Montérolier – Motteville (line dedicated to freight) has a single track, high gradient (15 %) with a BAPR signalling system</li> <li>■ The section Serqueux-Montérolier is limited to GB gauge</li> </ul>
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From Lérrouville to Strasbourg through Remilly - Sarrebourg (“C.C”)

C.C1: Remilly – Sarrebourg - Reding (65.2 km)	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks between Remilly and Reding</li> <li>■ Electrification 25,000 V.</li> <li>■ Signalling system type BAL</li> <li>■ Gauge GB1 type.</li> </ul> <p>Current state – Limiting factors: N/A</p>
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### 2.1.3 Spain (2366 km)

The existing line has an Iberian gauge with an axle load of 22.5 tons; it is electrified with 3,000V DC or 25kV according to the following sections:

Between Irun, Medina del Campo and Fuentes de Oñoro (634 km):

- with a 3000V CC electrified double track between Irun and Medina del Campo (433 km),
- with a 25kV electrified single track between Medina del Campo and Salamanca. Salamanca-Fuentes de Oñoro is not electrified (201 km).

Between Alsasua, Pamplona and Zaragoza (238 km):

- with a single track Alsasua and Castejon (139 km),
- with a double track between Castejon and Zaragoza (99 km).

Between Miranda de Ebro and Bilbao (115 km):

- with a single track between Miranda de Ebro and Orduña (52 km),
- with a double track between Orduña and Bilbao (63 km).

Between Medina del Campo, Madrid and Algeciras (974 km through Cordoba):

- with an electrified double track between Medina del Campo and Santa Cruz de Mudela (465 km),
- with an electrified single track between Santa Cruz de Mudela and Bobadilla (333 km),

- with a non-electrified single track between Bobadilla and Algeciras (176 km).

Between Manzanares and Badajoz (405 km):

- with an electrified single track between Manzanares and Puertollano (105 km),
- with a non-electrified single track between Puertollano and Badajoz (300 km).

The maximum speed of freight trains ranges between 80 and 100 km/h, except for some agglomerations with limits between 40 and 60 km/h.

It is equipped with a signalling system of BAB / BAD / BAU / BLAU / BT type (depending on the sections) and ASFA speed control.

The maximum length of trains is included between 550 and 600 m, depending on the sections.

The tables below provide detailed characteristics of infrastructures by sections.

General information principal line	<ul style="list-style-type: none"> <li>■ Tracks with Iberian gauge (1,668 mm)</li> <li>■ Max. load 22.5 tons/axle</li> <li>■ Iberian gauge</li> </ul>
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### 2.1.3.1 Irun/Hendaye (French border) - Madrid section

PS4: Madrid (Hortaleza) - Medina del Campo (210.4 km)	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks</li> <li>■ Electrification 3,000 V</li> <li>■ Signalling system: BAD on the Medina del Campo – Ávila section, BAB with CTC on the Ávila - Madrid (Hortaleza) section</li> <li>■ Connection track-to-train and ASFA</li> <li>■ Gradient: 5-18 ‰</li> <li>■ Gross load hauled between 1,080-1,730 t (with a single electric locomotive class 253)</li> </ul> <p>Train length limited to 600 m</p> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Gross load hauled limited to 1,080 t</li> <li>■ Important suburban traffic on rush hour on Pitis – Pinar de las Rozas – Villalba de Guadarrama section</li> </ul>
PS5: Medina del Campo - Venta de Baños (78.9 km)	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks, except for a single underground track from El Pinar to the entry of Valladolid (3.5 km)</li> <li>■ Electrification 3,000 V</li> <li>■ Signalling system:</li> </ul>

	<ul style="list-style-type: none"> <li>- BAB with CTC</li> <li>- BAU with CTC from El Pinar Sur to El Pinar Norte</li> </ul> <ul style="list-style-type: none"> <li>■ Connection track-to-train and ASFA</li> <li>■ Gradient: 3-10 ‰</li> <li>■ Gross load hauled between 1,730-2,500 t (with a single electric locomotive class 253)</li> <li>■ Train length limited to 550 m</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Electrified single track, underground, over 3.5 km from El Pinar to the entry to Valladolid</li> <li>■ Gross load hauled limited to 1,730 t (maximum value on the main lines in Spain)</li> </ul>
<p>PS6: Venta de Baños - Miranda de Ebro (172.4 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks</li> <li>■ Electrification 3,000 V</li> <li>■ Signalling system: BAB with CTC</li> <li>■ Connection track-to-train and ASFA</li> <li>■ Gradient: 12-15‰</li> <li>■ Gross load hauled limited to 1,240 t (with a single electric locomotive class 253)</li> <li>■ Train length limited to 550 m</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Gross load hauled limited to 1,240 t</li> </ul>
<p>PS7: Miranda de Ebro - Irún (181.5 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks</li> <li>■ Electrification 3,000 V</li> <li>■ Signalling system: <ul style="list-style-type: none"> <li>- BAD between Irún - San Sebastián</li> <li>- BAB with CTC between San Sebastián - Miranda de Ebro</li> </ul> </li> <li>■ Connection track-to-train and ASFA</li> <li>■ Gradient: 9-18 ‰</li> <li>■ Gross load hauled between 1,080-1,730 t (with a single electric locomotive class 253)</li> </ul>

	<ul style="list-style-type: none"> <li>■ Train length limited to 550 m</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ 18‰ grade on the Tolosa – Brinkola section</li> <li>■ Gross load hauled limited to 1,080 t</li> </ul>
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### 2.1.3.2 Madrid – Algeciras section

<p>PS1: Algeciras - Córdoba (305.3 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ Single track</li> <li>■ Electrified with 3,000 V on the Córdoba – Bobadilla section, non electrified on the Bobadilla - Algeciras section</li> <li>■ BA type signalling system with CTC, apart from sections: <ul style="list-style-type: none"> <li>- Torres Cabrera - Fuente de Piedra (BEM type)</li> <li>- Bobadilla - Ronda and Gaucín - Algeciras (BT type)</li> </ul> </li> <li>■ Connection track-to-train and ASFA solely on Córdoba – Bobadilla and Ronda-Gaucín sections</li> <li>■ Gradient: 8-24 ‰</li> <li>■ Gross load hauled ranging between 920 and 1,980 t, with a single electric locomotive class 253 (electrified sections) and a single diesel locomotive class 333.3 (non electrified sections)</li> <li>■ Train length ranging between 550-600 m</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Gross load hauled limited to 1,130 t connected to grades with 17‰ in the first section between Valchillón - Fuente de Piedra.</li> <li>■ On the Bobadilla – Algeciras section, there are the most significant load limitations with values ranging between 920 - 960 t / train connected to grades with 24 ‰</li> <li>■ Section with a 305.3 km single-track line</li> <li>■ Section with a non-electrified line over 176 km</li> </ul>
<p>PS2: Córdoba - Manzanares (244.6 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks between Manzanares - Santa Cruz de Mudela and Vadollano – Linares, single track on the remaining section</li> <li>■ Electrification 3000 V</li> <li>■ Signalling system: <ul style="list-style-type: none"> <li>- BAB with CTC between Manzanares - Sta. Cruz de Mudela and Vadollano - Linares</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>- BAU with CTC on the remaining section</li> <li>■ Connection track-to-train and ASFA</li> <li>■ Gradient: 7-16 ‰</li> <li>■ Gross load hauled between 1,180-2,310 t (with a single electric locomotive class 253)</li> <li>■ Train length limited to 600 m</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Gross load hauled limited to 1,180 t between Santa Cruz de Mudela and Vadollano</li> <li>■ Single-track section over 194 km</li> <li>■ Saturation between Córdoba and Alcolea connected to an important traffic of regional trains to the University.</li> <li>■ Saturation between Alcolea and Espelúy over a period of 3 hours concomitantly with a maintenance period (bare relevance).</li> </ul>
<p>PS3: Manzanares - Madrid (Hortaleza) (213.2 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks, 4 tracks near Madrid region</li> <li>■ Electrification 3,000 V</li> <li>■ Signalling system: BAB type with CTC</li> <li>■ Connection track-to-train and ASFA</li> <li>■ Gradient: 5 - 16 ‰</li> <li>■ Gross load hauled between 1,180-2,310 t (with a single electric locomotive class 253)</li> <li>■ Length of trains ranging between 550-750 m</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Gross load hauled limited to 1,180 t between Hortaleza and Villaverde</li> <li>■ Important suburban passenger traffic on the Villaverde Bajo – Aranjuez section</li> <li>■ Speed limited to 60 km/h on O'Donnell - Vicálvaro and Vallecas - Villaverde Bajo sections</li> </ul>

### 2.1.3.3 Alsasua – Zaragoza section

<p>PS8: Alsasua – Castejon (139,3 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 1 single track</li> <li>■ Electrification 3,000 V</li> <li>■ Signalling system: BAU type with CTC</li> </ul>
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	<ul style="list-style-type: none"> <li>■ Connection track-to-train and ASFA</li> <li>■ Gradient: 17 ‰</li> <li>■ Gross load hauled between 1,130 t (with a single electric locomotive class 253)</li> <li>■ Length of trains ranging 550 m</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Gradient: 17 ‰</li> <li>■ Length of trains ranging &lt;750 m</li> </ul>
<p>PS9: Castejon - Zaragoza (98,8 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks</li> <li>■ Electrification 3,000 V</li> <li>■ Signalling system: BAB type with CTC</li> <li>■ Connection track-to-train and ASFA</li> <li>■ Gradient: 8 - 10 ‰</li> <li>■ Gross load hauled between 1,630 t (with a single electric locomotive class 253)</li> <li>■ Length of trains ranging 575 m</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Length of trains ranging &lt;750 m</li> </ul>

#### 2.1.3.4 Miranda de Ebro – Bilbao section

<p>PS10: Miranda de Ebro - Bilbao (Santurtzi) (114.8 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks on Santurtzi – Orduña section, single track on Orduña - Miranda de Ebro section (62.9 km)</li> <li>■ Electrification 3,000 V</li> <li>■ Signalling system: <ul style="list-style-type: none"> <li>■ BAB with CTC between Santurtzi and Orduña</li> <li>■ BAU with CTC between Orduña and Miranda de Ebro</li> </ul> </li> <li>■ Connection track-to-train and ASFA</li> <li>■ Gradient: 9-18 ‰</li> <li>■ Gross load hauled between 1,080-1,840 t (with a single electric locomotive class 253)</li> <li>■ Train length limited to 500 m</li> </ul> <p>Current state – Limiting factors:</p>
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	<ul style="list-style-type: none"> <li>■ Existence of 2 km of a single, electrified track line with a BA type signalling system on Bif. La Casilla - Aguja Enlace section</li> <li>■ Grade of 18‰ on the single-track section of Orduña - Miranda de Ebro</li> <li>■ Gross load hauled limited to 1,080 t</li> </ul>
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### 2.1.3.5 Medina del Campo – Fuentes de Oñoro section (border Portugal)

PS11: Vilar Formoso - Medina del Campo (201.1 km)	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ Electrified 25 kV~ single track</li> <li>■ Signalling system: BLAU with CTC</li> <li>■ Connection track-to-train and ASFA</li> <li>■ Gradient: 11-18 ‰</li> <li>■ Gross load hauled between 1,210-1,830 t</li> <li>■ Train length limited to 600 m</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Gradient with 18 ‰ on the Salamanca - Fuentes de Oñoro section</li> <li>■ Gross load hauled limited to 1,210 t</li> <li>■ BT type signalling system from Vilar Formoso to Fuentes de Oñoro</li> </ul>
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### 2.1.3.6 Manzanares – Badajoz/Elvas (Portuguese border) section

PS12: Badajoz (Frontera) - Mérida – Ciudad Real - Manzanares (405.3 km)	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ Single track</li> <li>■ Electrified with 3,000 V on the Manzanares – Puertollano section, non-electrified on the Puertollano – Badajoz (Frontera) section</li> <li>■ Signalling system: heterogeneous with three different types (BLA, BA and BT)</li> <li>■ Without connection track-to-train on 5 sections, with ASFA on the whole section</li> <li>■ Gradient: 5-17 ‰</li> <li>■ Gross load hauled ranging between 1,280 and 2,500 t, with a single electric locomotive class 253 (electrified section) and a single diesel locomotive class 333.3 (non-electrified section)</li> <li>■ Train length ranging between 460-515 m</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Gross load hauled limited to 1,280 t on the Caracollera – Almorchón section.</li> <li>■ Sidings limited to 460 m</li> </ul>
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	<ul style="list-style-type: none"> <li>■ BT type signalling system on the Caracollera - Villanueva de la Serena section</li> <li>■ Section with a 405.3 km single-track line</li> <li>■ Section with a non-electrified line over 300 km</li> </ul>
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## 2.1.4 Portugal (1045 km)

The existing line has respectively:

- a single track between Setúbal and Sines (180 km), Elvas and Entroncamento (169 km), Vilar Formoso and Pampilhosa (202 km), Oporto and Leixões (19 km), Feeder line of the Port of Aveiro (9 km), Setil and Águas de Moura (94 km),
- a double track between Lisbon and Entroncamento (118 km), Entroncamento and Pampilhosa (125 km), Pampilhosa and Oporto (107 km), Oporto and Valongo (17 km)

with an Iberian gauge, electrified with 25,000 V~ (except for the non-electrified Abrantes – Elvas section) with an axle load of 22.5 tons.

It is equipped with a signalling system of Reversible Automatic Block (RAB) type with an Automatic Train Control (ATC), except for the Abrantes - Elvas section, equipped with a manual block.

The maximum speed of freight trains is 70 km/h. The maximum length of trains ranges between 350 and 600 m.

The tables below provide detailed characteristics of infrastructures by section.

General information principal line	<ul style="list-style-type: none"> <li>■ Tracks with Iberian gauge (1,668 mm)</li> <li>■ Max. load 22.5 tons/axle</li> <li>■ CPb+ type Iberian gauge (except on section Abrantes – Elvas, with CPb)</li> </ul>
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### 2.1.4.1 Oporto area

P6 : Douro line: Ermesinde – Valongo/São Martinho do Campo (10.9 km)	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks</li> <li>■ Electrification 25,000 V.</li> <li>■ BA signalling system with BO</li> <li>■ Gross load hauled limited to 1,240 t (with a single diesel locomotive type 4000) and 1,100 t (with a single electric locomotive type 4700)</li> <li>■ Typical gradient of 18‰</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Line extensively used by suburban passengers traffic, limiting the available capacity for freight trains in rush hours</li> </ul>
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<p>P1 : Minho line: Oporto (Campanhã) - Ermesinde (8.4 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks (6 tracks between Campanhã- Contumil)</li> <li>■ Electrification 25,000 V.</li> <li>■ BA signalling system with BO</li> <li>■ Gross load hauled limited to 1,350 t (with a single diesel locomotive type 4000) and 1,220 t (with a single electric locomotive type 4700)</li> <li>■ Typical gradient of 16‰</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Line extensively used by suburban passengers traffic, limiting the available capacity for freight trains in rush hours</li> </ul>
<p>P5: Leixões line: Contumil - Leixões (18.9 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 1 track</li> <li>■ Electrification 25,000 V.</li> <li>■ BA signalling system with BO</li> <li>■ Gross load hauled limited to 1,310 t (with a single diesel locomotive type 4000) and 1,010 t (with a single electric locomotive type 4700)</li> <li>■ Typical gradient of 18‰</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Maximum length of train limited to 480 mSingle track, with limited available capacity</li> </ul>

#### 2.1.4.2 Oporto – Pampilhosa – Entroncamento – Lisbon section

<p>P8: Norte Line: Oporto (Campanhã) – Lisbon (Sta. Apolónia) (336.1 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 2 tracks</li> <li>■ Electrification 25,000 V.</li> <li>■ BA signalling system with BOGross load hauled limited to 1,250 t (with a single diesel locomotive type 4000), and limited to 1,100 t (with a single electric locomotive type 4700)</li> <li>■ The typical gradient ranges between 6‰ and 18‰</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Line extensively used by suburban passengers traffic between Oporto and Aveiro and between Azambuja and Lisbon, limiting the available capacity for freight trains in rush hours.</li> <li>■ Typical gradient of 18‰ on the Entroncamento – Alfarelos (92.0km) section</li> </ul>
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	<ul style="list-style-type: none"> <li>■ Needs modernization in some sections</li> </ul>
<p>P90: Feeder line of the Port of Aveiro (8.8 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 1 track</li> <li>■ Electrification 25,000 V.</li> <li>■ BA signalling system with BO</li> <li>■ Gross load hauled limited to 1,820 t with a single diesel locomotive type 4000</li> <li>■ Typical gradient of 13‰</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Maximum speed of 60 km/h</li> </ul>

#### 2.1.4.3 Vilar Formoso/Fuentes de Oñoro (Spanish border) - Pampilhosa section

<p>P20: Beira Alta line: Vilar Formoso - Pampilhosa (201.9 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 1 track (2 tracks between the bifurcation of Pampilhosa – bifurcation of Luso, 7.3 km),</li> <li>■ Electrification 25, 000 V.</li> <li>■ BA signalling system with BO</li> <li>■ Gross load hauled limited to 1,260 t (with a single diesel locomotive type 4000) and 1,000 t (with a single electric locomotive type 4700)</li> <li>■ The typical gradient ranges between 16‰ and 19‰</li> </ul>
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#### 2.1.4.4 Elvas/Badajoz (Spanish border) - Entroncamento section

<p>P25: Beira Baixa line: Abrantes - Entroncamento (28.6 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 1 track</li> <li>■ Electrification 25,000 V.</li> <li>■ BA signalling system with BO</li> <li>■ Gross load hauled limited to 1,670 t (with a single diesel locomotive type 4000) and 1,430 t (with a single electric locomotive type 4700)</li> <li>■ Typical gradient of 13‰</li> </ul>
<p>P27 : Leste line: Elvas - Abrantes (140.7 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 1 track</li> <li>■ Non electrified.</li> <li>■ BT signalling system</li> </ul>

	<ul style="list-style-type: none"> <li>■ Gross load hauled limited to 1,180 t (with a single diesel locomotive type 4000)</li> <li>■ Typical gradient of 17‰</li> </ul>
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#### 2.1.4.5 Lisbon area

<p>P29: Cintura line: Braço de Prata - Alcântara (11.3 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 1 track between Alcântara Mar – Agulha 13 (2.4km), 4 tracks between Sete Rios – Technical terminal of Chelas (3.7km) and 2 tracks on the remaining (5.2 km),</li> <li>■ Electrification 25,000 V.</li> <li>■ BA signalling system with BO</li> <li>■ Gross load hauled limited to 980 t (with a single diesel locomotive type 4000) and 990 t (with a single electric locomotive type 4700)</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Typical gradient of 20‰</li> <li>■ Maximum length of train limited to 350 m</li> <li>■ Line extensively used by suburban passengers traffic and with bottlenecks in Alcântara and between Technical terminal of Chelas and Braço de Prata (2.8 km), limiting the available capacity for freight trains.</li> </ul>
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#### 2.1.4.6 Lisbon – Sines section

<p>P33: Vendas Novas line: Setil – Vendas Novas (64.7 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 1 track</li> <li>■ Electrification 25,000 V.</li> <li>■ BA signalling system with BO</li> <li>■ Gross load hauled limited to 1,370 t (with a single diesel locomotive type 4000) and 1,220 t (with a single electric locomotive type 4700)</li> <li>■ Typical gradient of 15‰</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Single track</li> </ul>
<p>P34: Alentejo line: Vendas Novas - Poceirão (21.3 km)</p>	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 1 track</li> <li>■ Electrification 25,000 V.</li> <li>■ BA signalling system with BO</li> <li>■ Gross load hauled limited to 2,230 t (with a single diesel locomotive type 4000) and 1,800 t (with a single electric locomotive type 4700)</li> </ul>

	<ul style="list-style-type: none"> <li>■ Needs modernization in some sections</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Limited available capacity</li> </ul>
P46: Concordância do Poceirão: (7.7 km)	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ Electrification 25,000 V.</li> <li>■ BA signalling system with BO</li> <li>■ Gross load hauled limited to 1,640 t (with a single diesel locomotive type 4000) and 1,300 t (with a single electric locomotive type 4700)</li> <li>■ Maximum length of the train of 600 m</li> </ul>
P37: Sul line: Setúbal – Ermidas do Sado (99.0 km)	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 1 track</li> <li>■ Electrification 25,000 V.</li> <li>■ BA signalling system with BO</li> <li>■ Gross load hauled limited to 1,500 t (with a single diesel locomotive type 4000) and 1,300 t (with a single electric locomotive type 4700)</li> <li>■ Typical gradient of 15‰</li> </ul>
P38: Sines line: Ermidas do Sado - Sines (50.7 km)	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 1 track</li> <li>■ Electrification 25,000 V.</li> <li>■ BA signalling system with BO</li> <li>■ Gross load hauled limited to 1,190 t (with a single diesel locomotive type 4000) and 1,040 t (with a single electric locomotive type 4700)</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Limited available capacity.</li> <li>■ Typical gradient of 21‰</li> </ul>
P68: Variante de Alcácer (29.7 km)	<p>Current state – Main features:</p> <ul style="list-style-type: none"> <li>■ 1 track</li> <li>■ Electrification 25,000 V, BA signalling system with BO</li> <li>■ Gross load hauled limited to 1,790 t (with a single diesel locomotive type 4000) and 1,430 t (with a single electric locomotive type 4700)</li> </ul> <p>Current state – Limiting factors:</p> <ul style="list-style-type: none"> <li>■ Limited available capacity.</li> </ul>

## 2.2 Corridor Terminals

In accordance with Article 2.2c of the Regulation, ‘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 Implementing Regulation (EU) 2177/2017, operators of service facilities, hence also terminal operators, are obliged to make available detailed information about their facilities to the IMs.

The terminals along the Corridor are also displayed in Annex 5.D and in the CIP: <https://rne.eu/it/rne-applications/cip/>. In addition, Annex 3A of the Corridor Information Document to which this Implementation Plan is an annex to, presents a list of the terminals along the Corridor, together with a detailed terminal description, if provided by the terminal.

## 2.3 Bottlenecks

In terms of infrastructures limitations, the following main points can be noted:

- the different track gauge between the Iberian Peninsula, France and Germany, requiring the freight transfer across the border between France and Spain
- the maximum length of the trains limited to 500 m in Portugal, 550 to 600m in Spain, 750 m to 850 m in France and 740 m in Germany
- the maximum grades reaching 18‰ and more in Spain and Portugal requiring additional traction south of Bayonne, depending on the gross load hauled
- the sections with single-track lines limiting the available capacity, and/or conditioning timetabling
- the sections with non-electrified lines requiring, when appropriate, the exchange of the locomotive
- the disparity in the signalling systems requiring the exchange of machines and drivers at borders,
- the disparity of the power supply requiring rolling stock with dual voltage, triple voltage or thermal,
- the disparity of maintenance periods or works to be carried out on rail infrastructures depending on the country (by day, by night, on weekends) with partial or complete closure of a route.

In terms of exploitation, the duration of freight transfer at the border of Hendaye/Irun is associated with real-time availability of consignment notes and the capacity of transshipment sites, a capacity limited to the means of production available (including the length of tracks); these sites are the following:

- TRANSFESA (rail axle changing, requiring specially a customised management of the limited stock of the different types of axle on site)
- TECO and RAIL SIDER (HENDAYE MANUTENTION) (transshipment of containers)

Therefore, the ordering of international train paths for freight is closely related to the following aspects:

- on the line, to the capacity of the sections with a single-track line, to the passage of certain junction stations on rush hour (Paris, Bordeaux, Madrid, Lisbon, etc.) and to the eventual reinforcement of traction on certain sections with steep grades,
- at the border of Hendaye/Irun, to the capacity of freight transshipment sites and to the operations of reconfiguration of the train length (2 UIC trains = 3 Iberian trains),
- to borders, to the minimum duration of machine and/or driving changes in order to address the gauge conversion, the signalling system and/or electrification.

Different points of Rail Freight Corridor Atlantic can constitute “train bottlenecks” depending on:

- the configuration of existing infrastructures,
- the time of day (specially on passenger movement during rush hours)
- the type and period of servicing and maintenance of rail infrastructures (eventually requiring partial or complete halt of traffic)

There is an ongoing close analysis in order to specify the nature of the action programme to be implemented, and thus eliminate these “rail bottlenecks” in the long term.

## 2.4 Rail Freight Corridor Governance

A detailed description of the RFC Atlantic organization can be found in Section 1, chapter 1.4 of the CID TT 2025 and in the RFC’s webpage: <https://www.atlantic-corridor.eu/our-corridor/our-governance/>. Implementation Update provides the scope of the part each body has in the implementation of the Corridor.

According to the directives of Regulation 913/2010, the necessary measures taken for the creation of the corridor are at several levels:

- European institutions,
- national regulatory bodies,
- infrastructure managers,
- Railway Undertakings and terminal operators.

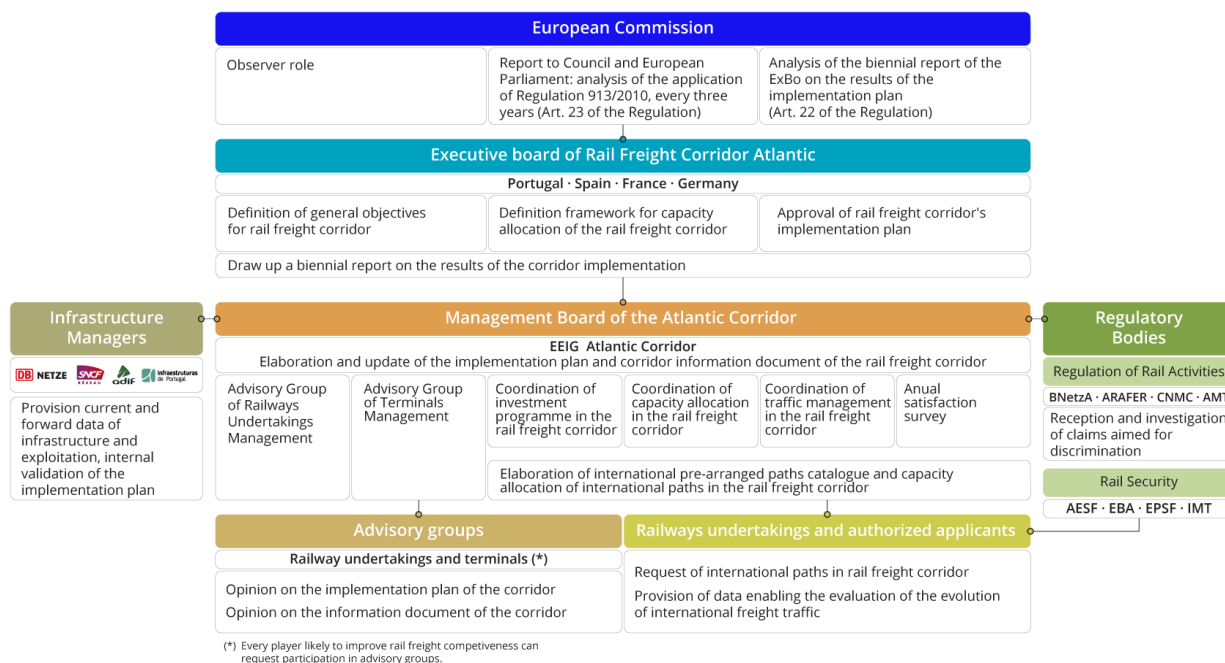
The following chart illustrates the missions of each of these bodies in the context of implementation of the corridor.







## ATLANTIC CORRIDOR FUNCTIONAL ORGANISATION



The European Commission takes action at several levels for the implementation of Regulation (EU) 913/2010, 1315/2013 and 1316/2013 by means of DG MOVE (Directorate-General for Mobility and Transport). It organises regular meetings with the representatives of the Member States and the infrastructure managers in order to assess the progress of the implementation of European freight corridors: meetings including those of the SERAC Rail Freight Corridor Working Group<sup>2</sup>, the TEN-T Core Network Corridor forum and the Corridor Working Group.

### 2.4.1 Executive Board

At Member States level, an Executive Board of Rail Freight Corridor Atlantic has been established between the Ministries of Transport of Germany (BMVI), France (DGITM), Spain (SGPF) and Portugal (DGAE). Regular meetings are held between the representatives of the Ministries involved: during these meetings issues accountable to Member States and the advances of the management board of the corridor regarding the progress of the implementation of the corridor are addressed.

The Members of the Atlantic Corridor ExBo are as follows:

Germany	Bundesministerium für Verkehr und digitale Infrastruktur (BMVI)	Abteilung Eisenbahnpolitik (LA 10) Robert-Schuman-Platz 1 D-53175 Bonn <a href="http://www.bmvi.de">www.bmvi.de</a>
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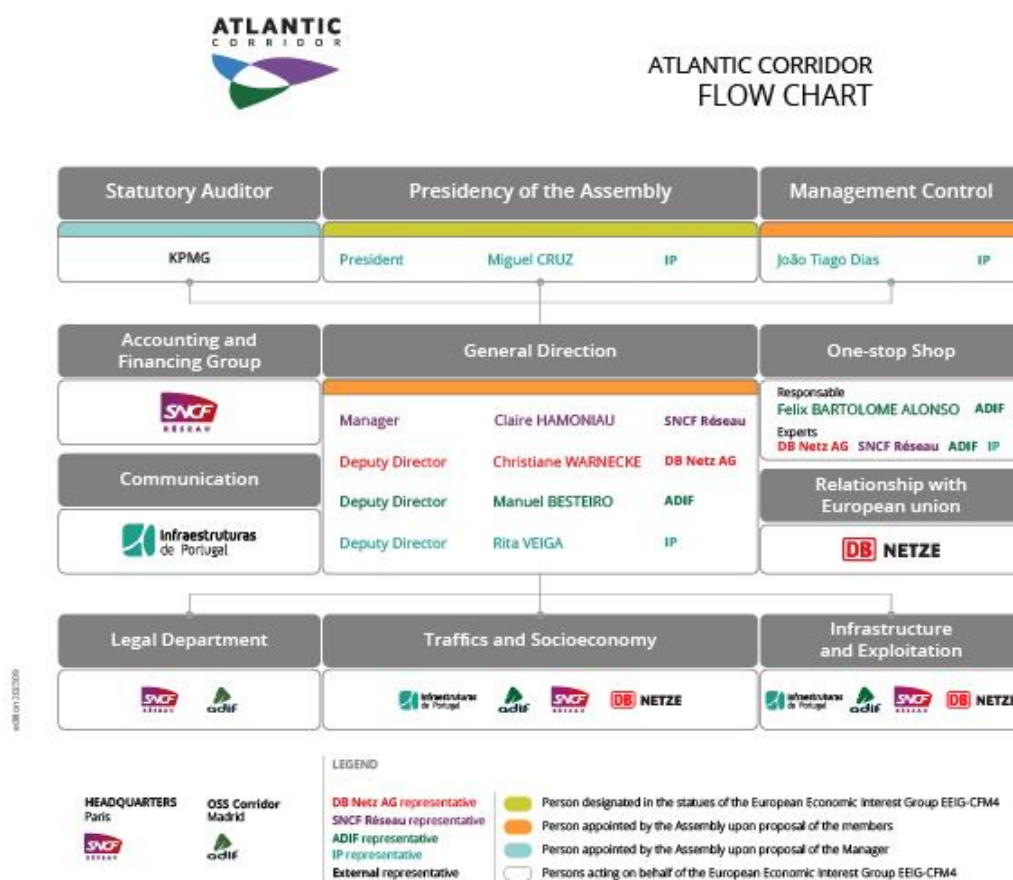
<sup>2</sup> SERAC stands for Single European Railway Area Committee

France	Ministère de la Transition Ecologique et Solidaire	DGITM Tour Séquoia 92000 Puteaux CEDEX <a href="https://www.ecologie.gouv.fr/">https://www.ecologie.gouv.fr/</a>
Spain	Ministerio de Transportes, Movilidad y Agenda Urbana	Subdirección General de Planificación Ferroviaria Plaza de los Sagrados Corazones nº7 28071 MADRID <a href="http://www.mitma.es">www.mitma.es</a>
Portugal	Ministério do Planeamento e das Infraestruturas	IMT – Instituto da Mobilidade e dos Transportes Av. das Forças Armadas, 40 1649-022 Lisboa <a href="http://www.imt-ip.pt">www.imt-ip.pt</a>

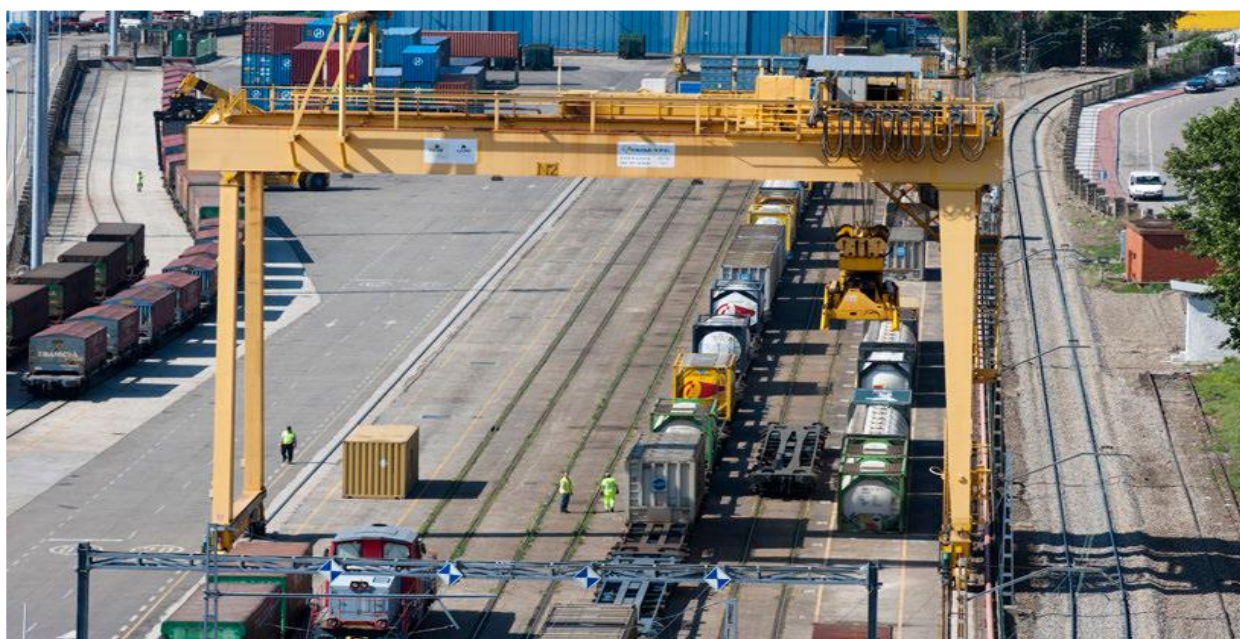
## 2.4.2 Management Board

In terms of Infrastructure Managers, a Management Board of Rail Freight Corridor Atlantic has been implemented; it takes the legal form of a new EEIG designated “European Economic Interest Grouping for Rail Freight Corridor Atlantic” or “EEIG Atlantic Corridor” established on 28th of April 2015 between the rail infrastructure managers in Germany (DB Netz AG), France (SNCF Réseau), Spain (ADIF) and Portugal (IP). The constitutive general assembly of this new EEIG, held on 26th of June 2015 in Frankfurt, has appointed its members as provided for in the statutes.

The flow chart of EEIG Atlantic Corridor is shown below.



## 2.4.3 Advisory Groups



In accordance with the obligations conferred upon it by Regulation 913/2010, the Management Board of Rail Freight Corridor Atlantic invited the following parties to participate in Advisory Groups, namely:

- on one hand, the Railway Undertakings involved on Rail Freight Corridor Atlantic,
- on the other, the Terminal Managers and others Logistic Players located at Rail Freight Corridor Atlantic.

Each of these Advisory Groups may issue an opinion on all proposals of the Management Board of Rail Freight Corridor Atlantic which has direct consequences on all interested companies, particularly on investments and terminal management. It may also issue opinions on its own initiative. The Management Board shall take any of these opinions into account.

Detailed information about the RFC Atlantic Advisory Groups may be found both in Section 1, chapter 1.4 of the CID TT 2025 and on the RFC webpage on <https://www.atlantic-corridor.eu/our-corridor/our-partners-clients/>.

## 3 MARKET ANALYSIS STUDY

### 3.1 Traffic Market Study

The European regulation requires Rail Freight Corridors (RFCs) to carry out and periodically update a transport market study relating to the observed and expected changes in the traffic on their respective freight corridors. In this sense, Atlantic Corridor has participated together with the other 10 RFCs in the “Scoping and feasibility study for a European Transport Market Study (TMS)”

led by RailNetEurope (RNE). This study allowed RFCs and RNE to exchange methodologies and experiences in the development of TMS and to agree a set of standard outputs for the TMS. The study will assess if a European-wide Transport Market Study can be used to update the individual Transport Market Studies of the RFCs.

The study will also provide the guidelines for updating RFCs' transport market studies and the scope of the terms of reference for contracting a European transport Market study. The study will be completed in the beginning of 2023 and will provide the technical inputs required for further stages in order to conduct a European TMS.

Additionally, in December 2022, the RFC Atlantic presented the 2021 TMS to the team of the European Coordinator of the Atlantic Corridor.

All Traffic Market Studies performed by the RFC Atlantic can be downloaded on the website here: <https://www.atlantic-corridor.eu/library/public-documents/?cat=1332>

## 3.2 Other Market relates Studies

In addition to the Traffic Market Study referred to in Chapter 3.1, the EEIG Atlantic Corridor performed several other Market related Studies in order to achieve the goals of the Regulation 913/2010.

All other market related studies performed by the RFC Atlantic can be downloaded on the website here: <https://www.atlantic-corridor.eu/library/public-documents/?cat=1248>

## 4 LIST OF MEASURES

The EEIG Atlantic Corridor has an organisational structure which responds to the terms of Regulation 913/2010 (from Articles 12 to 19).

The management of activities of Rail Freight Corridor Atlantic depends on the EEIG Atlantic Corridor and on the role that each infrastructure manager (IM) plays in a coordinated manner. For each Article mentioned is presented below a summary of the actions established.

### 4.1 Coordination of planned temporary capacity restrictions

In order to ensure the coherence and continuity of the available infrastructural capacity along the freight corridor, all rail infrastructural and equipment works that might restraint the capacity available on Rail Freight Corridor Atlantic will be coordinated at the level of the freight corridor and will be subject to an up-to-date publication.

In this document, the term “works” describes the needs of IM for all activities reducing the capacity of their infrastructure (exp: maintenance, repair, renewal, improvement, construction works).



The coordination of works should enable the consideration of capacity limits in terms of the needs of infrastructure managers and needs from a market point of view by rationalising and optimising the serious impact and duration of the reduction of capacity of infrastructure managers.

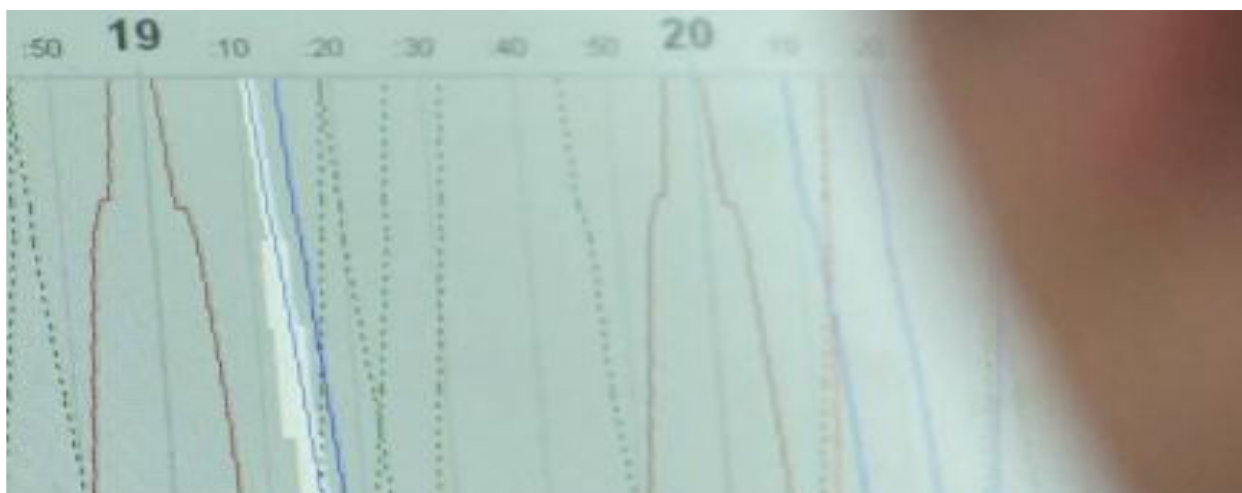
Different types of TCR require a different deadline for final coordination. The deadlines are described in chapter 4.4 Coordination and Publication of planned Temporary Capacity Restrictions of the CID.

The content of the update of information and the decisions of update are a responsibility of the infrastructure managers of Rail Freight Corridor Atlantic. The infrastructure managers may decide to obtain information on these updates at any moment (ex.: per quarter, monthly and at any moment in case of occurrence of modifications).

Further information about TCRs may be found in Chapter 4.4 of Section 4 - Procedures for Capacity, Traffic and Train Performance Management of the CID TT 2025 to which this Implementation Plan is Annexed to. The relevant information about TCRs is also published on the RFC website (here: <https://www.atlantic-corridor.eu/library/public-documents/?cat=1245>) and on the Corridor Information Platform CIP (here: <https://rne.eu/it/rne-applications/cip/>) in the documents section.

## 4.2 Corridor OSS

The Corridor One-Stop Shop (OSS) on Rail Freight Corridor Atlantic is at the disposal of applicants in order to coordinate the process of allocation of capacity, facilitate the provision of basic information on traffic management and facilitate the provision of information on the use of the freight corridor.



Rail Freight Corridor Atlantic has established a Representative OSS, in which ADIF acts on behalf of the IMs. The Atlantic C-OSS is placed in Madrid and is supported by a coordinating IT-tool (Path Coordination System).

Contact data:



Address	<p><i>Félix BARTOLOME</i></p> <p><i>D.G. DE CIRCULACIÓN Y GESTIÓN DE CAPACIDAD</i></p> <p><i>Subdirección de Servicios de Circulación y Calidad</i></p> <p><i>C/ Agustín de Foxá, 50. Edificio 21. Estación de Chamartín.</i></p> <p><i>28036 Madrid</i></p> <p><i>SPAIN</i></p>
Phone	<i>(+34) 917 744 774</i>
Email	<a href="mailto:OSS@atlantic-corridor.eu"><u>OSS@atlantic-corridor.eu</u></a>

The main functions of the one-stop shop of Rail Freight Corridor Atlantic will be the following:

- Provide information on:
  - Access to the infrastructures of the Corridor
  - The conditions of access to the terminals of the Corridor
  - The procedures of allocation of capacity on the Corridor
  - Information on charging schemes in place on the sections of the Corridor
  - Information for access to the reference guide of each IM concerned for the Corridor
  - The procedures of management of traffic of IM of the Corridor, including procedures in case of disturbances
  - Manages and monitors the construction of prearranged train paths in collaboration with the IM of the Corridor
  - Allocate the capacity of the prearranged paths and reserve capacity
  - Establish a record of the demands of capacity on the corridor
  - Establish and maintain processes of communication with IM and the terminals of the Corridor
  - Publish the programme of the works that might limit the available capacity of the freight Corridor
  - Ensure the monitoring of the use of the allocated prearranged train paths

In this sense, the experts of the one-stop shop of Rail Freight Corridor Atlantic have drawn up the catalogue 2025 of prearranged international train paths. Its summary can be downloaded from the Corridor “Atlantic” webpage here: <https://www.atlantic-corridor.eu/library/public-documents/?cat=1244>.

A detailed description of the construction of prearranged paths and the allocation of international capacity will be included in the Corridor Information Document part 4. A summary of these processes is described below:

### 4.2.1 Construction, delivery and publication of PaPs:

With the following inputs:

- Results of the Transport Market Study (TMS)
- Previous timetables information as request for PaPs, other international requests, etc.
- Capacity restrictions due to IMs' own requirements (works, commuter's peak hours, etc).
- Framework agreements between IM and RU.
- Other kinds of traffic (as passenger traffic, national traffic, etc.)

The involved IM coordinated by the C-OSS will construct the prearranged paths for the Corridor catalogue.

Each IM is responsible for the PaPs production in its country. The C-OSS will support and monitor the production and the coordination in the borders of the PaPs.

C-OSS will also support the coordination of the PaPs in the connecting points with other RFCs (North-Sea - Mediterranean and Mediterranean).

The publication of PaPs will be done by the C-OSS via PCS in X-11.

### 4.2.2 Prearranged paths application phase:

Between X-11 and X-8 the PaPs are published and available so that Applicants can submit applications for the annual timetable.

C-OSS tasks in this phase will be to:

- Keep a register of PaPs requested by applicants
- Display PaPs available for Rail Freight Corridor Atlantic
- Receive the paths request for Rail Freight Corridor Atlantic

### 4.2.3 Allocation phase for the annual timetable:

#### 4.2.3.1 Pre-booking phase by C-OSS.

The tasks of the C-OSS in this phase are described below:

- The C-OSS shall keep a register of all activities performed by the C-OSS concerning the allocation of infrastructure capacity, and keep it available for Regulatory Bodies, Ministries and Applicants.
- The C-OSS shall ensure the update of the register and manage access to it for the above-mentioned parties. The content of the register will only be communicated to these interested parties on request.

The C-OSS will decide on the allocation of PaPs requests and communicate the result to the Applicant through PCS.

In case of conflicting PaPs requests, the Corridor OSS shall apply the Rail Freight Corridor Atlantic priority rules defined in the Framework for Capacity Allocation attached in Annex 5.B.

The C-OSS will forward the application to the competent IM if the Applicant which did not obtain the PaP requested does not accept the alternative PaPs or no other PaPs fit with the request.

#### 4.2.3.2 Construction phase

C-OSS will prepare answers to and from IM, C-OSS of others corridors and Applicants according to the path requests placed on time (X-8), including both feeder and outflow paths as well as sections of PaPs and tailor made solutions requested to IM.

The concerned IM will deliver to the C-OSS their results concerning feeder / outflow path, tailor made paths construction and possible PaPs adaptations for fitting. Then the C-OSS will communicate the draft offer to the Applicants.

#### 4.2.3.3 Observations from Applicants

Applicants will check the draft offer and make their remarks or justified objections. Then Applicants will forward their final decision to the C-OSS.

#### 4.2.3.4 Post processing and final allocation for annual Timetable

The C-OSS takes the final allocation decision and is responsible for bringing the final offer and allocation of PaPs to the Applicant, based on the following information given by IM:

- Fulfil answer to the request
- Partial offer agreed with customer
- Different offer agreed with customer
- No offer
- Information on access to terminals.

In case of complaints regarding the allocation of PaPs (e.g. due to a decision based on the priority rules for allocation), the Applicants may address the respective regulatory body.

#### 4.2.5 Application and Allocation phase for ad-hoc path request:

According to Article 14.5 of the Regulation and taking into account the PaPs allocated at X-4, the existing traffic and IMs specific situation, the MB will define a reserve capacity based on prearranged paths and/or capacity slots in order to satisfy the ad-hoc path requests placed by the Applicants between X-2 until X+12 for international freight trains on the Corridor.

The reserve capacity will be displayed at X-2 in PCS and protected from any modification by the IMs.

In this phase (X-2 – X+12), the C-OSS takes the allocation decision for reserve capacity requests according to the rule “first come – first served”.

In case of applications including feeder/outflow paths, tailor made solutions and/or terminal slots, the C-OSS will forward the request to the concerned national IMs and ensure a consistent path construction between the feeder and the Corridor-related path section.



The C-OSS will not answer to any request of PaPs in reserve capacity placed 30 days before the running day. Requests with shorter time limit should be addressed to the national IM directly.

#### 4.2.6 Evaluation phase

The C-OSS will provide some inputs for evaluating the Corridor's performance regarding the use of PaPs and their allocation. It will serve also as inputs for the revision of the pre-arranged path offer for the next available annual timetable and for the report to be published in accordance with Art. 19 (2) in Regulation 913/2010.

### 4.3 Capacity Allocation Principles

The framework for capacity allocation of Rail Freight Corridor Atlantic was defined by the Executive Board. This document is presented in the RFC website (here: <https://www.atlantic-corridor.eu/library/public-documents/?cat=1249>) and on the Corridor Information Platform CIP (here: <https://rne.eu/it/rne-applications/cip/>) in the documents section.

The Corridor Information Document describes in detail the procedures of allocation of capacity in accordance with the abovementioned framework.

The EEIG Atlantic Corridor will review this document annually with the Executive Board in order to obtain the best potential of the freight corridor.

In what concerns the subject Capacity Allocation Principles referred to in Article 9 (1.e) and 14 in Regulation 913/2010, further information about it may be found in Chapter 4.3 of Section 4 - Procedures for Capacity, Traffic and Train Performance Management of the CID TT 2025 to which this Implementation Plan is Annexed to, as well as, here in Annex 5.B.

### 4.4 Applicants

The C-OSS takes into account non-railway undertakings among applicants.

According to Article 15 of the Regulation, an "applicant" can be:

- every railway undertaking or
- every international grouping of railway undertakings or
- other persons or legal entities, shippers, freight forwarders and combined transport operators.

To use the prearranged paths awarded, all applicants are required to provide to the IMs and the C-OSS the name of the railway(s) undertaking(s) which will hold the traction at least 30 days before the train running.

The RU designated to perform traction will execute all contracts with individual IM as necessary according to the regulations of each of the affected networks.

For allocating capacity of a prearranged path by the C-OSS, it will not be necessary to know the railway undertaking that provides traction. However, the failure of communication of this

information to the IM and the C-OSS within the prescribed period will be a reason for the removal of the capacity allocated

In what concerns the subject Applicants referred to in Article 9 (1.e) and 15 in Regulation 913/2010, further information about it may be found in Chapter 4.3.2 of Section 4 - Procedures for Capacity, Traffic and Train Performance Management of the CID TT 2025 to which this Implementation Plan is Annexed to.

## 4.5 Traffic Management



In line with Article 16 of the Regulation, the Management Board of the freight corridor has put in place procedures for coordinating traffic management along the freight corridor.

Traffic management is the prerogative of the national IMs and is subject to national operational rules. The goal of traffic management is to guarantee the safety of train traffic and achieve high quality performance. Daily traffic shall operate as close as possible to the planning.

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

Further information about it may be found in Chapter 4.5 of Section 4 - Procedures for Capacity, Traffic and Train Performance Management of the CID TT 2025 to which this Implementation Plan is Annexed to.

## 4.6 Traffic Management in Event of Disturbance

The goal of traffic management in case of disturbance is to ensure the safety of train traffic, while aiming to quickly restore the normal situation and/or minimise the impact of the disruption. The overall aim should be to minimise the overall network recovery time.

In order to reach the above-mentioned goals, traffic management in case of disturbance needs an efficient communication flow between all involved parties and a good degree of predictability, obtained by applying predefined operational scenarios at the border.

In case of disturbances, IMs work together with the concerned RUs and neighbouring IMs in order to limit the impact as far as possible and to reduce the overall recovery time of the network.

In case of disruptions of international traffic longer than 3 days with a high impact on international traffic, (if 50% of the trains on the affected section need an operational treatment), the initiating IM shall declare a case of International Contingency Management (ICM).

To allow continuation of freight and passenger traffic flows at the highest possible level despite an international disruption and to ensure non-discriminatory treatment of the RUs, transparency of the status of the disruption and its impact on traffic flows for all relevant stakeholders across Europe, the IMs should apply the rules and procedures defined in the [‘Handbook for International Contingency Management’](#) (ICM Handbook) approved by the RNE General Assembly.

According to the ICM Handbook, the Corridors act as facilitators with respect to the disruption management and the communication process.



The infrastructure managers of Rail Freight Corridor Atlantic will review this procedure annually in order to obtain the best potential of freight corridor.

In what concerns the subject Traffic Management in Event of Disturbance referred to in Article 9 (1.e) and 17 and in Regulation 913/2010, further information about it may be found in Chapter

4.5.3 of the Section 4 - Procedures for Capacity, Traffic and Train Performance Management of the CID TT 2025 to which this Implementation Plan is Annexed to, as well as, in the International Contingency Management Handbook from RNE and its application to the RFC Atlantic (download here on the RFC website (<https://www.atlantic-corridor.eu/library/public-documents/?cat=2222>) and on the Corridor Information Platform CIP (here: <https://rne.eu/it/rne-applications/cip/>) in the documents section.

## 4.7 Quality evaluation

In order to monitor the proper implementation of the Rail Freight Corridor Atlantic and the performance of key activities on the Corridor – comparison between the aims drawn up and the real operational figures – the EEIG Atlantic Corridor will regularly publish a report of the performances of the corridor. An **Annual Report** will also be provided with the main results and guidelines <https://www.atlantic-corridor.eu/library/public-documents/?cat=1250> .

The EEIG Atlantic Corridor will publish annually the results of a **User Satisfaction Survey** carried out to the main customers of the Rail Freight Corridor Atlantic, providing a detailed image of the satisfactions of the corridor's users in quantitative and qualitative terms (download here on the website: <https://www.atlantic-corridor.eu/library/public-documents/?cat=1247> ).

All of these documents are public and will thus be published on the website Library of EEIG Atlantic Corridor: <https://www.atlantic-corridor.eu/library/public-documents/>. The interested parties will be encouraged to provide their opinion on the content of these documents and their analysis may be addressed in a new report.

The EEIG Atlantic Corridor works in close collaboration with the organizations of other rail freight corridors in order to promote the harmonization of the performance report with the satisfaction survey. In addition to this action, the EEIG Atlantic Corridor will review annually its processes in order to achieve the best potential of the Rail Freight Corridor Atlantic.

### 4.7.1 Performance Monitoring report

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 fulfilment of the above obligation, in 2015, a joint RNE-RFC project team developed a first set of KPIs commonly applicable to all RFCs. These KPIs were included into the Guidelines 'Key Performance Indicators of Rail Freight Corridors'.

The further development of commonly applicable KPIs was triggered by the Rotterdam Sector Statement of 2016. One of its priority projects was to monitor the quality of freight services by means of implemented and shared KPIs. To meet this requirement, the sector developed certain proposals and those which were proved feasible have been added to the set of commonly applicable RFC KPIs.

The current set of commonly applicable KPIs is displayed below.





In addition, an RNE/RFC KPI Coordination Group has been established, aiming to coordinate the harmonised use of these KPIs and to evaluate their use on a yearly basis.

The RFCs provide a harmonised overview of the figures of their commonly KPIs available [here](#).

### 4.7.2 Satisfaction surveys

Article 19 (3) of Regulation (EU) 913/2010 concerning a European rail network for competitive freight requires the Management Boards of the RFCs to conduct a yearly satisfaction survey among users of the RFCs and to publish the survey's results.

The RFC Network has set up a project group coordinated by the RFC Network Assistant and consisting of all 11 RFC representatives. In 2014, this dedicated project group jointly created a harmonised survey questionnaire which is being revised and updated every year as changes occur in RFCs' business and their internal processes.

RNE and the RFCs have agreed to publish the overall survey results on the RNE website.

- The summarised presentation of the overall RFC Network Survey Results in 2022 can be downloaded [here](#).
- For the specific results of the RFC Atlantic, the results can be found [here](#)

## 4.8 Corridor Information Document: information provided

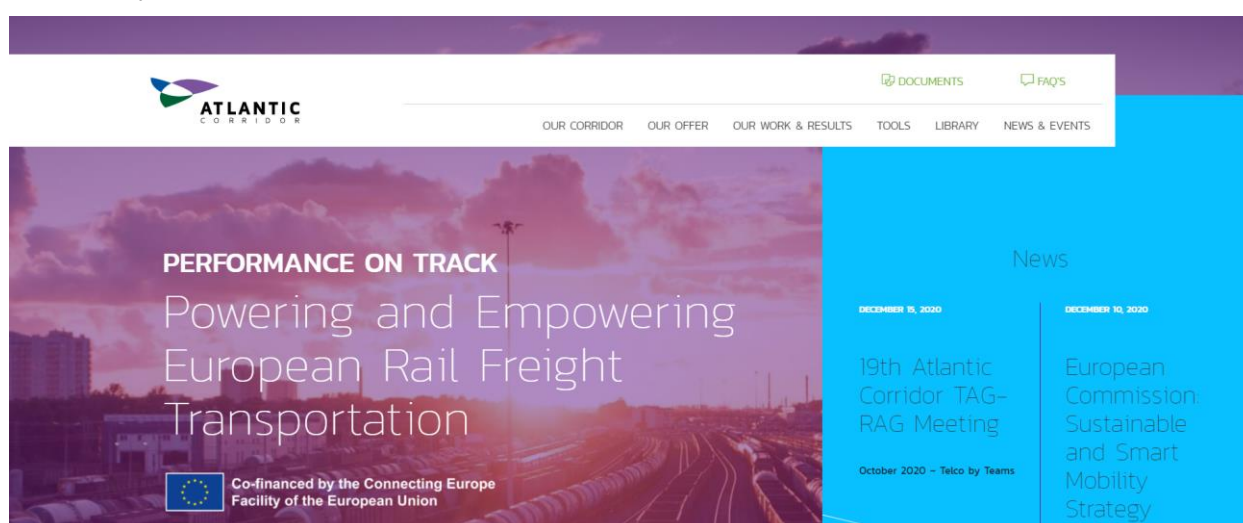
The Corridor Information Document (CID) is set up to provide all corridor-related information and to guide all applicants and other interested parties easily through the workings of the Corridor in line with Article 18 of the Regulation EU 913/2010 and 1316/2013.

This CID applies the RNE CID Common Texts and Structure so that applicants can access similar documents for different corridors and in principle, as in the case of the national Network Statements (NS), find the same information in the same place in each one.

For ease of understanding and in order to respect the particularities of some corridors, common procedures are always written at the beginning of a chapter. The particularities of the Corridor are placed below the common text.

Although the Corridor Information Document is the primary source of information, the library in the website of EEIG Atlantic Corridor ([www.atlantic-corridor.eu](http://www.atlantic-corridor.eu)) includes other additional information inherent to the important possibilities of this communication instrument, such as:

- projects and studies developed by the RFC Atlantic;
- results of surveys and AG meetings;
- TPM monthly reports; and
- any other related news.



The EEIG Atlantic Corridor will also be capable of providing upon demand more detailed information or any other clarification <https://www.atlantic-corridor.eu/our-offer/one-stop-shop/>.

## 5 OBJECTIVES AND PERFORMANCE OF THE CORRIDOR

The general purpose of the EEIG Atlantic Corridor is the significant increase of competitiveness of the rail services of the Rail Freight Corridor Atlantic against the other means of transport. This means having a broad understanding and a control of critical factors, particularly regarding traffic capacity and management, functions clearly attributed to the EEIG Atlantic Corridor.

The general purpose is to multiply by 3.7 the volume of rail freight which will cross the borders of Rail Freight Corridor Atlantic in the next 20 years. According to the results of the Traffic Market Study, it is anticipated a growth from 7 million tons in 2010 to 26 million tons in 2030.

The EEIG Atlantic Corridor has defined 2 strategic objectives that underline the overview for Rail Freight Corridor Atlantic in terms of production of transport on the rail freight corridor.

Strategic Objectives	2023	2029
a) Number of international prearranged freight paths using the corridor (n.) <ul style="list-style-type: none"> <li>• <u>Method</u>: Number of international prearranged paths and/or TTR slots crossing one or two borders available at X-11.</li> <li>• <u>Purpose</u>: Provide a basic production indicator for Rail Freight Corridor Atlantic</li> </ul>	54	+10%
b) Average speed of prearranged paths [km/h], excluding freight transshipment time at the border between France and Spain <ul style="list-style-type: none"> <li>• <u>Method</u>: <math>AvSpeed = \text{Sum (PaP Length)} / \text{Sum (PaP Journey time)}</math></li> <li>• <math>AvSpeed = \text{Average speed of the PaPs}</math></li> <li>• <math>PaP\text{Length} = \text{Complete length of each PaP}</math></li> <li>• <math>PaP\text{Journey time} = \text{Journey time of each PaP}</math></li> <li>• <u>Purpose</u>: Provide a basic production indicator for Rail Freight Corridor Atlantic. The PaP were selected as being the most significant commercial product of Rail Freight Corridor Atlantic.</li> </ul>	52,4 km/h	+10%

Two horizons were chosen: 2023 as the reference year of Rail freight Corridor Atlantic and 2029 as a planned key date for the implementation of new sections of high-speed lines on Rail Freight Corridor Atlantic which will release more capacity for freight traffic on the existing line

The accomplishment of these purposes is partially depending on global economic conditions, as well as on concrete actions performed by the EEIG Atlantic Corridor and IM of Rail Freight Corridor Atlantic. The choice of the 2 abovementioned indicators is aimed at providing a simple and efficient reading of the performance of the Rail Freight Corridor Atlantic which depends, in fact, on several factors. These several factors will be controlled by the EEIG Atlantic Corridor but will not correspond to the purposes published in the Implementation Plan.



With the implementation of performance monitoring and traffic management, the EEIG Atlantic Corridor will strive for the control of the vital aspects of service quality and guide efficiently its actions for a significant improvement of competitiveness of international rail freight.

## 5.1 Train Performance Management

The aim of the Corridor Train Performance Management (TPM) is to measure the performance on the Corridor, analyse weak points and recommend corrective measures, thus managing and improving the train performance of international services. RNE has developed guidelines for train performance management on corridors ([RFC TPM Guidelines](#)) as a recommendation for processes and structures. However, the implementation of the TPM is subject to particular Corridor decision.

A necessary precondition for analysis of TPM is the implementation and use of the RNE Train Information System by all involved IMs.

RFC Atlantic publish in the CIP and on its website a management summary of the [Corridor's monthly punctuality report](#), harmonised among the corridors.

Several different reports have also been developed by RNE for the needs of corridors. Interested parties (applicants, terminals and others) are welcome to contact the Corridor TPM WG leader in case of need for further, specific, detailed analyses.



The list of Corridor TPM WG leaders can be found on the RNE website: <http://www.rne.eu/tm-tpm/tpm-on-rfcs/>. In addition, direct access to the reporting tool can be requested by applicants via the [RNE Joint Office](#).

#### Added Value of The RFC TPM Approach

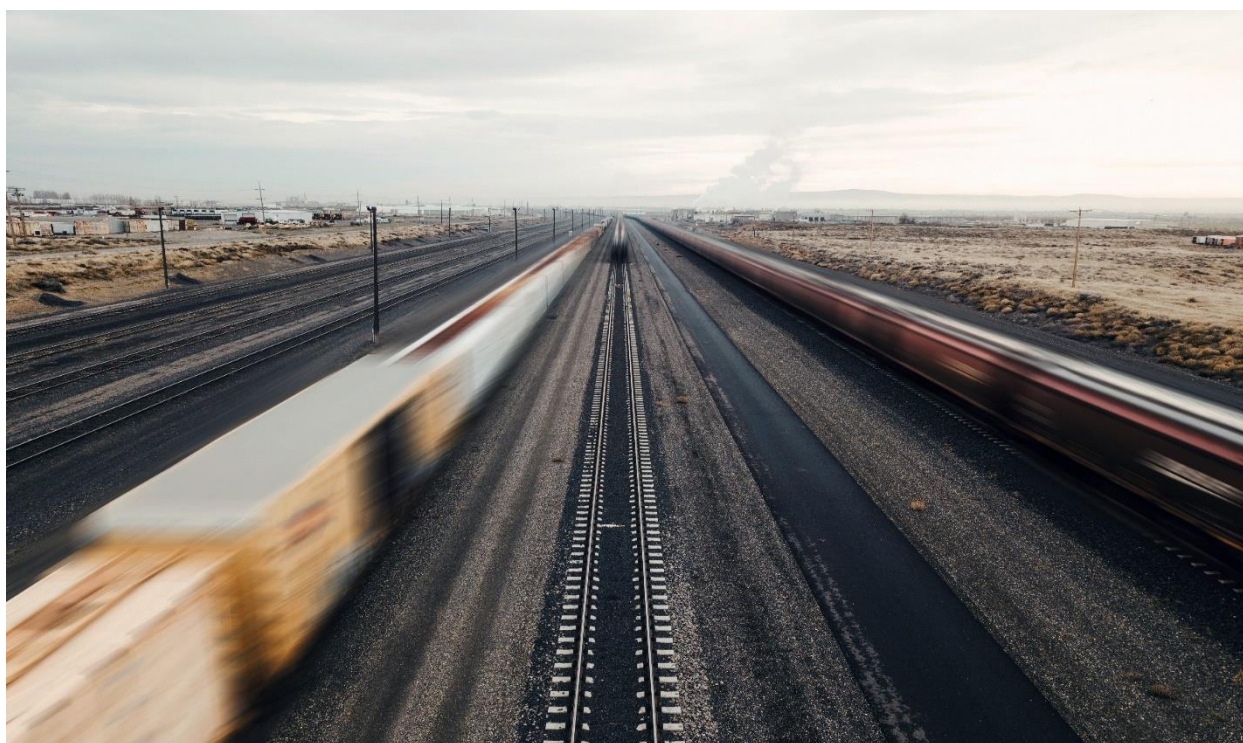
- The international approach to punctuality analysis is designed to improve the quality of train performance on corridors and thereby improve customer satisfaction and attract more traffic to railways.
- A network of experts is now in place.
- Regular international collaboration regarding quality performance (beyond borders) between individual Infrastructure Managers (IMs), and between IMs and Railway Undertakings (RUs), has been established.

To ensure the implementation of TPM processes at RFC level, each RFC has nominated an RFC TPM working group leader. the RFC TPM leader is responsible for the organisation and chairing of the RFC TPM WG meetings and acts as a contact person for RFC TPM-related questions within the RFC organisation and to external bodies, e.g. RAGs, TAGs, etc.

#### RFC TPM Leader Contact Information

RFC	TPM Leader	Phone	E-Mail
RFC 4 Atlantic	António José Mendes Filipe	Tel.: +351 918 912 833	Email

## 6 INVESTMENT PLAN



## 6.1 Capacity Management Plan

The Implementation Plan defined by the EEIG Atlantic Corridor is aimed at improving the efficiency and management of the capacity of freight trains which can circulate on Rail Freight Corridor Atlantic through the investment programme of each country, described in the preceding paragraph, and according to the main purpose for which they are intended. These investments can be grouped as follows:

- uniformity of length of track with UIC gauge and possibility of circulation for trains with 750 m
- suppression of bottlenecks
- creation and/or extension of Terminals
- improvement of the efficiency of the transport system.

### 6.1.1 Uniformity of the length of track with UIC gauge and possibility of circulation for trains with 750 m

Spain and Portugal presently have the major section of tracks of their networks with an Iberian gauge (1,668 mm); within the framework of the Investment Plan of Rail Freight Corridor Atlantic defined over different periods, several projects will enable the unification of the track gauge on the whole Corridor by converting the Iberian gauge into an UIC gauge (1,435 mm) in these two countries.

In conjunction with these works of uniformity of the track length, necessary investments for the circulation of trains with a maximum length of 750 m will be included.

This uniformity will be carried out gradually and in a coordinated manner between each country, establishing as far as practicable itineraries functionally complete and adapted to the financial resources of each country.

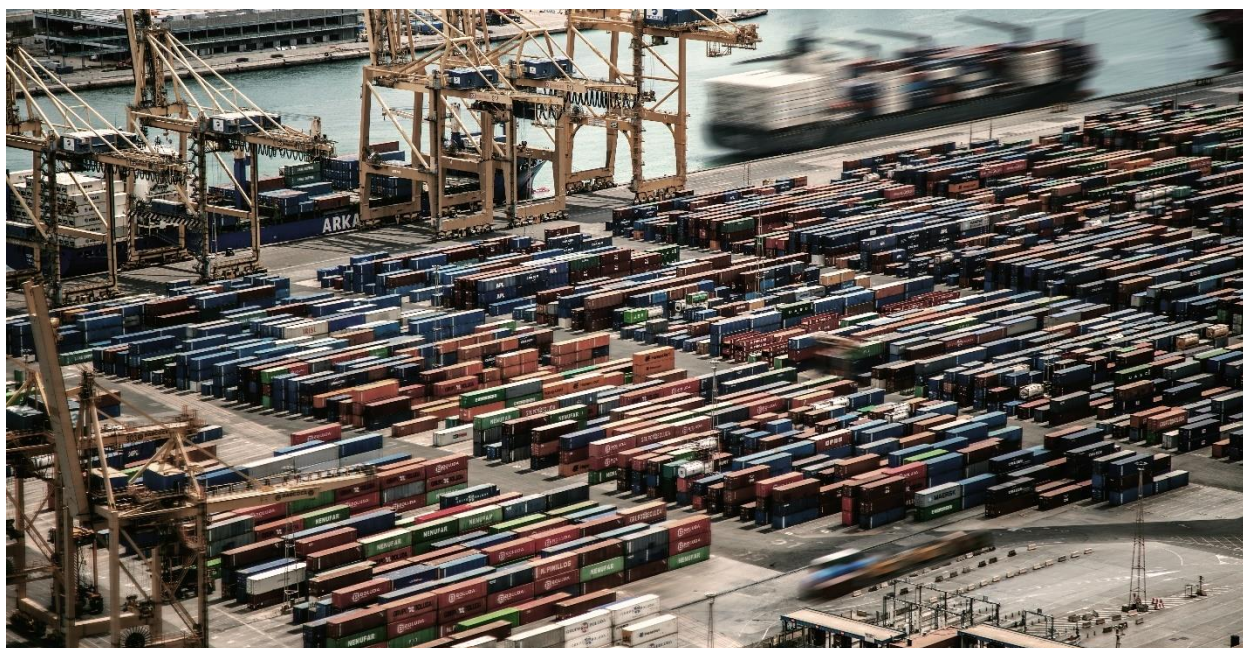
### 6.1.2 Suppression of bottlenecks

In addition to prior investments which will enable in some cases the resolution of bottlenecks by increasing the overall capacity of the Rail Freight Corridor Atlantic with the construction and entry into service of new lines for mixed or high-speed traffic (and consequently the liberation of the capacity for freight traffic on the conventional network), other investments are planned, aimed mainly at removing the current or future bottlenecks on the Corridor.

These investments are mainly planned at the level of the major railway junctions of the corridor, namely: Lisbon, Madrid, the border between Spain and France, Bordeaux and Paris.

### 6.1.3 Creation and/or improvement of Terminals

These investments are aimed at the sectors that create and receive major rail flows, through the development of new Terminals and the adaptation or improvement of existing Terminals.



In addition to conventional freight traffic and combined transport, Terminals may also offer new international rail services of the rolling motorway over long-distance routes type.

New rail freight services expected at short term and medium term on the Atlantic Corridor will be operated with the construction of new terminals and/or reorganisation of existing terminals; some improvements are also forecasted by the development of a new variable axle gauge for freight wagon and the implementation of a variable axle gauge system in Irun at short term.



### 6.1.4 Improvement of the efficiency of the transport system

These investments include those regarding the improvement of the signalling system, as well as the improvement or development of electrification of the different sections depending on:

- the topography of the different sections of the Corridor,
- the length of journeys of freight trains (depending on speed and the maximum load of trains)
- the transport plan of RU (including the working time for train drivers).

## 6.2 List of Projects

**NOTE OF CAUTION:** The list of projects mentioned in the investment plan of the corridor is provided for informational purposes only. Several technical, political and financial factors may affect the implementation of these projects.

It is therefore possible that some operations will be delayed, or achievements could be challenged. Dates and costs presented may be modified according to the Core Network Corridor's Workplan published by the European Commission.

The major part of the projects described in the following pages has been selected in the Core Network Corridor Atlantic Work Plan established by the European Coordinator Carlo SECCHI; this work plan is regularly updated and published by DG MOVE (<https://ec.europa.eu/transport/sites/transport/files/atlworkplanivweb.pdf>).

## 6.2.1 Germany



Velocity upgrade and ETCS equipment of the existing line between Saarbrücken and Ludwigshafen:

This major project aims at reducing an important bottleneck on the rail section between the French-German border, Saarbrücken and Ludwigshafen as part of the east-west European railway axis from Paris to Budapest (continuing on RFC Rhine-Danube), via Eastern France and to Southwest Germany. Also, infrastructure conditions for traffic continuing on RFC Rhine-Alpine are improved.

Works have already upgraded this rail section in order to enable travelling speed up to 200 km/h with ETCS. They primarily included track engineering tasks such as carrying out refined line alignment, improving the clearance of level crossings and widening bridges.

The track's wiring and control and communications technologies are renewed - including equipment of the track with ETCS (European Train Control System). The installation of ETCS technology takes place along the entire rail section from the French-German border to Mannheim.

It is planned to implement ETCS from the French border to Ludwigshafen by the end of 2025, considering the Mannheim node is equipped with ETCS at the latest at the same time.

## 6.2.2 France



SNCF Réseau manages, modernises and develops a network at the heart of Europe. Continuously evolving over more than 150 years, this network requires constant adjustments to respond to the needs of transport of passengers and freight.

Its vision for the rail network in 2030 has five main goals:

- Regeneration of the infrastructure, the basis of which is to continue to guarantee safe operation and safe working conditions.
- A network that adapts to the needs of everyday life (major projects in the Île-de-France region, Metropolitan Express Services (SEM) in the regions).
- A network that is part of Europe's railways, greener and smarter (Trans-European Transport Network).
- Industrial programmes focusing on digitalisation and productivity.
- Increasingly efficient maintenance and operation.

The tables in Annex 5.F present the major projects on the French network concerning the Rail Freight Corridor Atlantic.



### 6.2.3 Spain



The strategic planning of transport infrastructures in Spain is reproduced in Mobility Strategy, presented by the Ministerio de Fomento to the Spanish government in December 2021.

The Mobility Strategy establishes three major strategic goals as the new framework of planning of transport infrastructures:

- **Security:** Guaranteeing greater protection of people and property, improving standards and reducing accidents. It encompasses infrastructure security, operational security, security in cases of emergencies and crises, security against illegal acts and cybersecurity.
- **Social economic and environmental sustainability:** Prioritizing everyday mobility, economic-social equity, energy efficiency, and the fight against climate change, trying to minimize the contribution of transport to polluting emissions, both for travelers and goods. Promoting clean modes, the circular economy, climate resilience and universal mobility.
- **Connectivity:** From three aspects: 1) digitalization and technological advancement, a great opportunity for the transformation of the transport sector, 2) connectivity with Europe and the world, and 3) multimodal connectivity.

The tables in Annex 5.F present the main projects included in the existing planning in Spanish Mobility Strategy, in direct relation to Rail Freight Corridor Atlantic and directed mainly towards the improvement of the competitiveness of rail freight transport.

## 6.2.4 Portugal



The National Investment Program 2030 (PNI) presented in October 2020, defines the strategic investments that Portugal should launch in the next decade, being articulated with the strategic objectives defined for the national plan – Portugal 2030, for which it was possible to reach a broad social, economic and political consensus.

PROGRAMA NACIONAL  
DE INVESTIMENTOS **2030**

The PNI2030 focuses on Mobility and Transport, key factors for the external competitiveness and internal cohesion of our country and on Climate Action / Environment and Energy, areas intrinsically linked to mobility and the challenges of climate change, decarbonization and transition energy.

More recently, the Recovery and Resilience Plan (PRR) was designed, deriving from the Recovery and Resilience Facility (RRF), a temporary instrument that is the centrepiece of NextGenerationEU - the EU's plan to emerge stronger and more resilient from the current crisis. The Recovery and Resilience Plan (PRR) aims to reinforce social, economic and territorial robustness and accelerate the dual digital and climate transition.

IP positions itself in a privileged way, as the largest national agent of the Infrastructure Component to ensure a more competitive and more cohesive territory, specifically, with a great investment effort in accessibility to Business Reception Areas and the reinforcement of essential cross-border



connections the affirmation of the centrality of our interior within the Iberian market as a whole, as well as the completion of missing connections.

In addition to direct connections, most investments contribute to improving accessibility to the main corridors and, thus, to ports and railways, also reducing contextual costs for business activity. Final approval of the PRR, by the Ministers of Finance, was given on July 13, 2021.

The tables in Annex 5.F present the major projects foreseen on Portuguese rail network concerning the Rail Freight Corridor Atlantic.

## 6.3 Deployment Plan

**Interoperability** is defined by Directive 2008/57/EC, article 2, as "**the ability of a rail system to allow the safe and uninterrupted movement of trains which accomplish the required levels of performance for these lines**". This ability depends on all the regulatory, technical and operational conditions which must be met in order to satisfy the essential requirements. Essential requirements mean all the conditions set out in Annex III of Directive 2008/57/EC which must be met by the rail system, the subsystems, and the interoperability constituents, including interfaces".

It covers different areas, including safety, signalling system, track gauges, electric systems, etc., and is subject to the Technical Specifications for Interoperability (TSI) drawn up by the European Railway Agency (ERA), together with the stakeholders.

Due to the heterogeneity of the characteristics of infrastructures of Rail Freight Corridor Atlantic set out in Chapter 9 a plan of concerted actions between Member States and IM shall be defined regarding several aspects of the deployment of interoperable systems:

- the continuity of infrastructures from one country to the other, particularly in terms of the rail gauge, electrification of the existing network and signalling systems,
- the suppression of some bottlenecks which will ultimately lead to the increase in the available capacity for international freight traffic all day,
- the development of exploitation systems enabling information supplied in real time on the situation of international freight traffic, particularly on border points, and on the precise composition of international trains in real time (length, transported tonnage, dangerous materials transported, etc.)
- the adequacy between the optimal travel time depending on the sections, the international transport plan (including driving stages, with reinforcement even change of traction means) and investments to make as a priority (both on infrastructures and rolling stock)

The investment plans described in paragraph 6.2 and in Annex 5.F are a good illustration of this variety of ongoing projects, projects aimed at improving interoperability on Rail Freight Corridor Atlantic, particularly:

- coming on stream of sections of a new line with a UIC gauge fit for freight traffic in Spain, Portugal and France in the short and medium term,
- the gradual adaptation to the UIC gauge of the main existing axles in Spain and Portugal in the short and medium term,

- the electrification of existing lines connecting Spain to Portugal in the medium and long term,
- the performance of operations of decongestion of certain railway junctions and/or increase of capacity, particularly in the border point of Hendaye/Irun
- on a timeframe further in the future, perspectives of deployment of an interoperable signalling system of the ERTMS type, according to the National Deployment Plan of each country of the corridor.

## ANNEXES:

### Annex 5.A Rail Freight Corridor “Atlantic” / Corridor Information Document 2025 – Section 1, 2, 3 and 4

Mentioned in 1 and 4.8

See document available here on the Atlantic Corridor website: <https://www.atlantic-corridor.eu/library/public-documents/?cat=1249> and in the Network and Corridor Information (NCI) portal

Access to the NCI portal is free of charge and without user registration. For accessing the application, as well as for further information, use the following link: <http://nci.rne.eu/>.

### Annex 5.B Framework for Capacity Allocation

Mentioned in 4.2 and 6.1

See document available here on the Atlantic Corridor website:

[https://www.atlantic-corridor.eu/media/1340/cid-2021\\_framework-for-capacity-allocation-signed-in-2019.pdf](https://www.atlantic-corridor.eu/media/1340/cid-2021_framework-for-capacity-allocation-signed-in-2019.pdf)

### Annex 5.C International Contingency Management (ICM)

Mentioned in 4.6

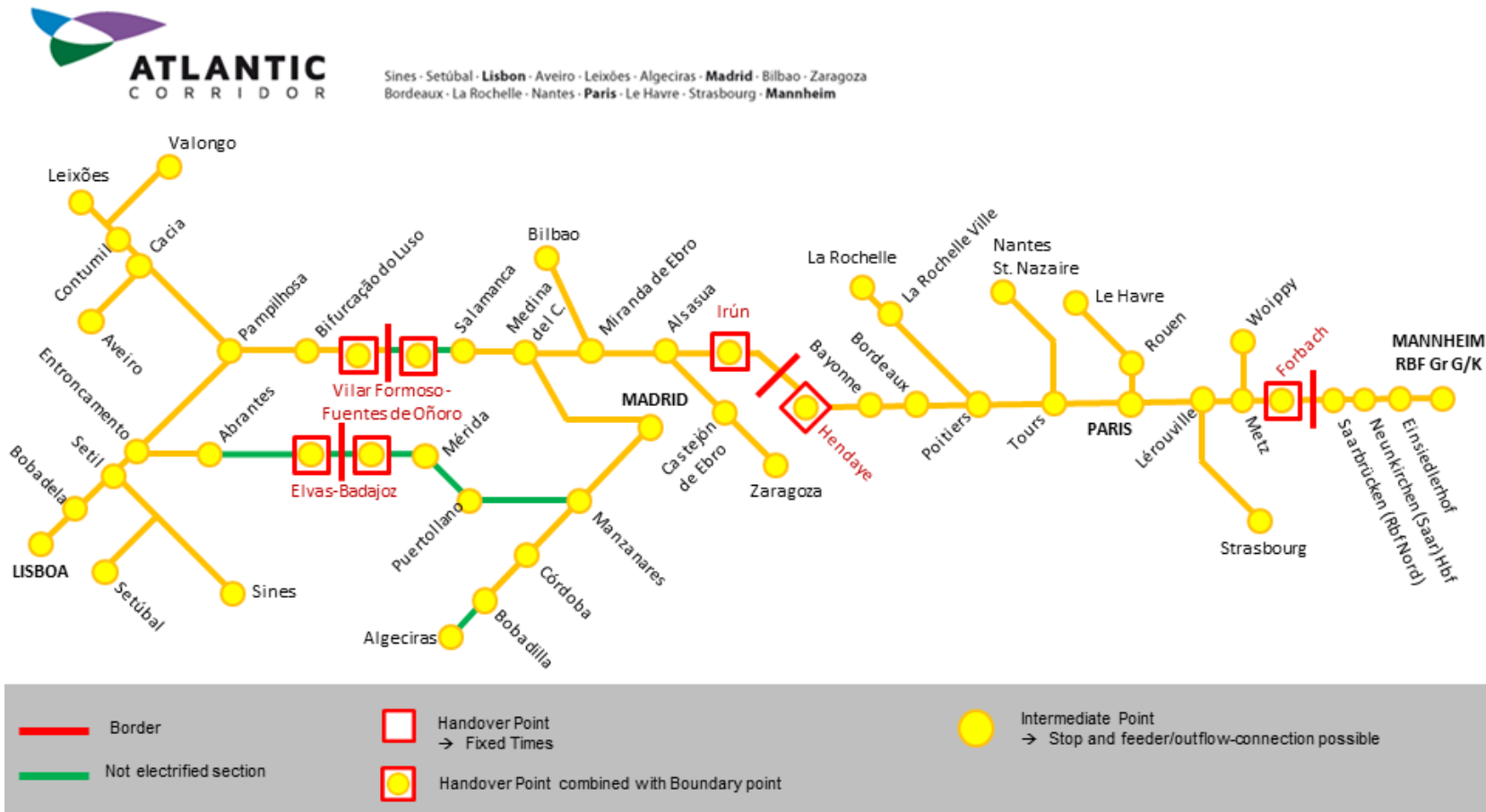
See documents available here on the Atlantic Corridor website: <https://www.atlantic-corridor.eu/library/public-documents/?cat=2222>

## Annex 5.D Key Parameters of Corridor Lines (Maps)

Mentioned in 2, 2.1 and 2.2

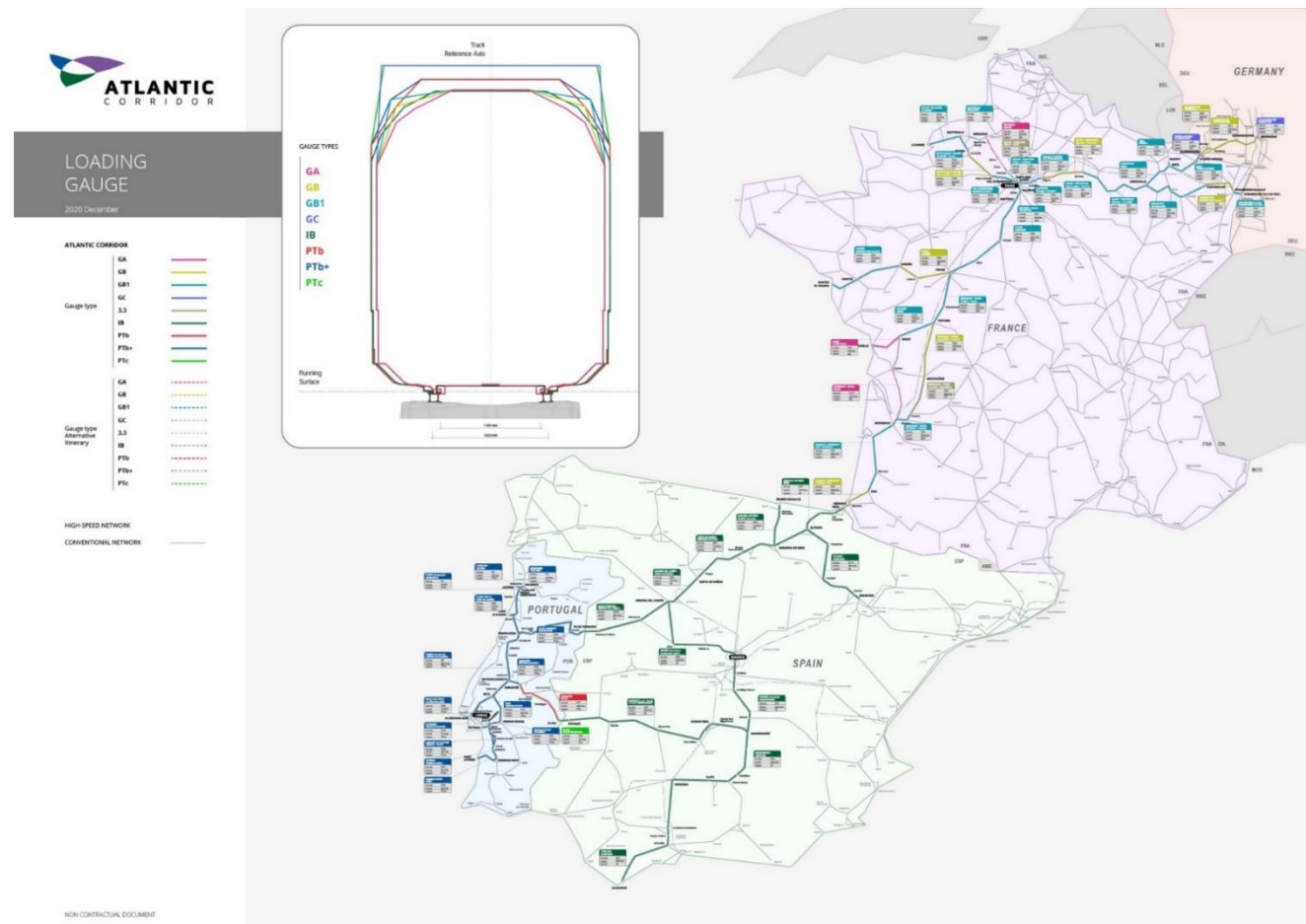
## Annex 5.D.1 Ports and Terminals

Mentioned in 2.2



## Annex 5.D.2 Maps of the existing infrastructures on Rail Freight Corridor Atlantic

Mentioned in 2.1 and 2.2



## Annex 5.D.3 Detailed characteristics of existing infrastructures on Rail Freight Corridor Atlantic

Mentioned in 2.1

See detailed information on the characteristics of existing infrastructures is published in <https://cip-online.rne.eu/>

## Annex 5.E Market Analysis Studies

Mentioned in 3

See documentation available on the Atlantic Corridor website:

### **Traffic Market Study:**

[https://www.atlantic-corridor.eu/media/1499/2021-03-31-rfc-atlantic-study-tms\\_synthesis-final-6sept21.pdf](https://www.atlantic-corridor.eu/media/1499/2021-03-31-rfc-atlantic-study-tms_synthesis-final-6sept21.pdf)

### **Feasibility Study about ERTMS deployment on the French-German Cross-Border Section Woippy – Mannheim**

[https://www.atlantic-corridor.eu/media/1131/rfc-atlantic\\_ertms-study\\_woippy-mannheim\\_website.pdf](https://www.atlantic-corridor.eu/media/1131/rfc-atlantic_ertms-study_woippy-mannheim_website.pdf)

### **Assessment impact of the infrastructure constraints on Railway Undertakings**

[https://www.atlantic-corridor.eu/media/1132/7202-76-atlantic-corridor\\_rn010-deliverable-6-synthesis.pdf](https://www.atlantic-corridor.eu/media/1132/7202-76-atlantic-corridor_rn010-deliverable-6-synthesis.pdf)

### **Assessment optimization of Capacity Management and Operational Coordination**

[https://www.atlantic-corridor.eu/media/1136/20160802\\_rfc4\\_final-report-synthesis-vf-1.pdf](https://www.atlantic-corridor.eu/media/1136/20160802_rfc4_final-report-synthesis-vf-1.pdf)

### **Impact of Atlantic Ports' development on International Rail Freight Traffic**

[https://www.atlantic-corridor.eu/media/1133/20160401\\_cfm4\\_summary-note\\_v20.pdf](https://www.atlantic-corridor.eu/media/1133/20160401_cfm4_summary-note_v20.pdf)

### **Feasibility of Rolling Motorway Service at short, medium and long term on the Atlantic Corridor**

<https://www.atlantic-corridor.eu/media/1134/v-3-at-romo-synthesis.pdf>

### **Implementation of 750 m length trains on the Iberian Peninsula**

[https://www.atlantic-corridor.eu/media/1135/implementation\\_750m\\_length\\_train\\_-\\_synthesis.pdf](https://www.atlantic-corridor.eu/media/1135/implementation_750m_length_train_-_synthesis.pdf)

## Annex 5.F List of Projects

Mentioned in 6.2

Note: Short Term until 2024, Medium Term by 2025, Long Term after 2025. If not otherwise indicated.

### GERMANY

#### ERTMS-ETCS Facilities

ID	Typology				Identification, location and description	Corridor section	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of the works in the corridor
	Track	Structures	Electrification	Signaling			Short term	Medium term	Long term	<50 M€	50 M€ a 500 M€	> 500 M€	
1				x	Installation of ERTMS-ETCS (Border F/G - Ludwigshafen)	Border F/G - Ludwigshafen		X			X		

### FRANCE

#### Orléans- Tours - Bordeaux - Hendaye section

ID	Typology				Identification, location and description	Corridor section	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of the works in the corridor *
	Track	Structures	Electrification	Signaling			Short term	Medium term	Long term	<50 M€	50 M€ a 500 M€	> 500 M€	
1				X	signaling renewal Bordeaux Lamothe	Bordeaux Lamothe			X		x		
2	X				IPCS renewal Villeperdue	Villeperdue		X		X			
3	X				Track renewal Bayonne - Hendaye	Bayonne - Hendaye	X			X			
4	X				track renewal Ruffec to Angoulême	Ruffec à Angoulême		X		X			
5	X				Track renewal Saint-Benoît	Saint-Benoît			X	X			
6			X		Central Sub Station of Bordeaux : renewal & transfert	Bordeaux			X	X			
7			X		renewal Midi catenary between Dax & Bayonne	Dax et Bayonne			X	X			
8	X				Track renewal Aveyres - La Gorp	Aveyres - La Gorp			X	X			
9				X	renewal of CCT Nord	CCT Nord			X		x		
10				X	IT renewal	Bordeaux			X		X		
11	X				Track renewal between Ychoux & Morcenx	Ychoux et Morcenx			X		X		

#### Paris - Strasbourg - Khel et Lérrouville - Forbach

ID	Typology				Identification, location and description	Corridor section	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of the works in the corridor *
	Track	Structures	Electrification	Signaling			Short term	Medium term	Long term	<50 M€	50 M€ a 500 M€	> 500 M€	
12				x	Modernisation between Réding & Saverne	Réding - Saverne	X			X			
13				x	centralised network control	Blainville, Nancy			X		X		
14	x				Track renewal between Toul & Frouard	Toul et Frouard			X				
15				x	signaling renewal between Blainville (Excluded) & Sarrebourg (Excluded)	Blainville - Sarrebourg			X		X		



## Paris - Le Havre

ID	Typology				Identification, location and description	Corridor section	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of the works in the corridor *
	Track	Structures	Electrification	Signaling			Short term	Medium term	Long term	<50 M€	50 M€ a 500 M€	> 500 M€	
16				X	centralised network control				X	X			
17				X	Gare de Oissel :signaling renewal				X	X			
18		X			Tunnel renewal				X	X			

## Paris - Orléans

ID	Typology				Identification, location and description	Corridor section	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of the works in the corridor *
	Track	Structures	Electrification	Signaling			Short term	Medium term	Long term	<50 M€	50 M€ a 500 M€	> 500 M€	
19	X				Track renewal	Boisseaux-Les Aubrais			X	X			
20				X	renewal in Villeneuve-Saint-Georges	Villeneuve-Saint-Georges	X			X			

## Poitiers - La Rochelle

ID	Typology				Identification, location and description	Corridor section	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of the works in the corridor *
	Track	Structures	Electrification	Signaling			Short term	Medium term	Long term	<50 M€	50 M€ a 500 M€	> 500 M€	
21	X				Track renewal				X	X			
22	X				track renewal Poitiers / Niort Phase 3	Poitiers / Niort			X	X			
23	X				Track renewal between St Benoît & Niort	St Benoît & Niort			X		X		

## Tours - Saint-Nazaire

ID	Typology				Identification, location and description	Corridor section	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of the works in the corridor *
	Track	Structures	Electrification	Signaling			Short term	Medium term	Long term	<50 M€	50 M€ a 500 M€	> 500 M€	
24	X				Track renewal Savenay-St Nazaire	Savenay-St Nazaire			X	X			
25	X				Track renewal Tours - Saumur	Tours - Saumur			X		X		

\*The information of the impact of the works on the corridor is published by SNCF Réseau according to chapter 4.3 of its Network Statement.

## SPAIN

### Irún/Hendaya (French border) - Madrid section

ID	Typology				Identification - description - location	Corridor section	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of works on corridor traffic
	Track	Structures	Electrification	Signalling			Short term (around 2025)	Medium term (around 2030)	Long term (beyond 2030)	< 50 M€	From 50 to 500 M€	> 500 M€	
1	X	X	X	X	Línea Alta Velocidad Y Vasca (tráfico mixto). Entrada en ciudades con estación actual y operaciones de integración urbana. Incluye actuaciones en Jundiz y adaptación UIC entre Astigarraga y Irún	Madrid - Irún/Hendaya		X				X	
2		X	X	X	Línea Alta Velocidad Y Vasca (tráfico mixto). Sección Astigarraga-Lezo y conexión con Francia	Madrid - Irún/Hendaya			X			X	
3	X	X	X	X	Instalación en Irún de un Cambiador para Ejes de Ancho Variable	Madrid - Irún/Hendaya	X			X			
4				X	Tramo Burgos - Vitoria BAB	Madrid - Irún/Hendaya		X			X		
5	X	X	X	X	Adecuación infraestructura Burgos - Vitoria (túneles)	Madrid - Irún/Hendaya		X			X		
6	X		X	X	Nueva Terminal de Jundiz (Vitoria)	Madrid - Irún/Hendaya		X			X		
7	X		X	X	Doble vía Pinar de Antequera	Madrid - Irún/Hendaya	Already in service			X			
8	X	X	X	X	Línea Alta Velocidad tramo Valladolid - Burgos (viajeros)	Madrid - Irún/Hendaya	Already in service					X	
9	X	X	X	X	Variante de Valladolid (mercancías) (2 B+acceso norte UIC al complejo=10 km)	Madrid - Irún/Hendaya		X			X		
10	X	X	X	X	Nuevo Complejo de mercancías Valladolid	Madrid - Irún/Hendaya		X		X			
11	X	X	X	X	Puerto Seco de Bilbao en Pancorbo	Madrid - Irún/Hendaya	Already in service			X			
12	X	X	X	X	Línea Alta Velocidad tramo Burgos - Vitoria (viajeros)	Madrid - Irún/Hendaya		X				X	

### Madrid-Algeciras section

ID	Typology				Identification - description - location	Corridor section	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of works on corridor traffic
	Track	Structures	Electrification	Signalling			Short term	Medium term	Long term	< 50 M€	From 50 to 500 M€	> 500 M€	
13	X	X		X	Variante de Almoraima (estación de San Roque)	Madrid - Algeciras	Already in Service			X			
14	X		X	X	Pinto - Villaverde bajo Cuadruplicación de Vías (parcial)	Madrid - Algeciras		X			X		
15	X		X	X	Remodelación Terminales de Vicálvaro (Madrid)	Madrid - Algeciras		X		X			
16				X	Ronda - Bobadilla Bloqueo Automático	Madrid - Algeciras	X				X		
17				X	Bobadilla - Córdoba Bloqueo Automático	Madrid - Algeciras		X			X		
18			X		Algeciras - Bobadilla Electrificación 25kV	Madrid - Algeciras		X		X			

### Miranda de Ebro - Puerto de Bilbao section

ID	Typology				Identification - description - location	Corridor section	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of works on corridor traffic
	Track	Structures	Electrification	Signalling			Short term	Medium term	Long term	< 50 M€	From 50 to 500 M€	> 500 M€	
19	X		X	X	Variante Sur de Acceso al Puerto de Bilbao - Y Vasca	Miranda de Ebro - Bilbao		X		X			

### Medina del Campo - Fuentes de Oñoro (Portuguese border) section

ID	Typology				Identification - description - location	Corridor section	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of works on corridor traffic
	Track	Structures	Electrification	Signalling			Short term	Medium term	Long term	< 50 M€	From 50 to 500 M€	> 500 M€	
20			X	X	Medina del Campo - Salamanca. Electrificación y sistema de señalización	Medina del Campo - Fuentes de Oñoro	Already in Service				X		
21			X	X	Salamanca - Fuentes de Oñoro. Electrificación y sistema de señalización	Medina del Campo - Fuentes de Oñoro	X				X		

## Manzanares - Badajoz/Elvas (Portuguese border) section

ID	Typology				Identification - description - location	Corridor section	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of works on corridor traffic
	Track	Structures	Electrification	Signalling			Short term	Medium term	Long term	< 50 M€	From 50 to 500 M€	> 500 M€	
22	X	X		X	Línea Alta Velocidad Plasencia-Cáceres-Badajoz (1er tramo)	Badajoz - Manzanares - Madrid	X				X		
23	X	X	X	X	Línea Alta Velocidad Extremadura Plasencia-Navalmoral-La Sagra (2º tramo)	Badajoz - Cáceres - Madrid		X				X	
24	X	X	X	X	Enlace línea Alta Velocidad Madrid - Extremadura con vía de mercancías Madrid	Badajoz - Cáceres - Madrid		X				X	

## Alsasua – Pamplona – Zaragoza section

ID	Typology				Identification - description - location	Corridor section	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of works on corridor traffic
	Track	Structures	Electrification	Signalling			Short term	Medium term	Long term	< 50 M€	From 50 to 500 M€	> 500 M€	
25	X		X	X	Tramo Zaragoza-Castejón. Nueva línea AV tráfico mixto	Zaragoza-Alsasua			X		X		
26	X	X	X	X	Tramo Castejón-Pamplona. Nueva línea AV tráfico mixto	Zaragoza-Alsasua		X				X	
27	X	X	X	X	Variante de Pamplona. Nueva estación y conexión factoría Volkswagen	Zaragoza-Alsasua			X		X		
28	X		X	X	Renovación vía Pamplona-Alsasua-Vitoria	Zaragoza-Alsasua			X		X		

## ERTMS deployment

ID	Typology				Identification - description - location	Corridor section	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of works on corridor traffic
	Track	Structures	Electrification	Signalling			Short term	Medium term	Long term	< 50 M€	From 50 to 500 M€	> 500 M€	
29				X	Implantación ERTMS corredor 4 tramo vía doble	Todo el Corredor		X				X	
30				X	Implantación ERTMS corredor 4 tramo vía única	Todo el Corredor		X			X		

## Future Studies

ID	Typology				Identification - descripción - location	Corridor Section	Entry into service			Valuation M€			Impact of works in corridor traffic
	Track	Structures	Electrification	Signalling			Short Term 2025	Medium Term 2030	Beyond 2030	<50 M€	50-500 M€	>500 M€	
1	X	X	X	X	Av. Sevilla-Huelva	Southwest of Iberian Peninsula extension			X			X	
2	X	X	X	X	Av. Y vasca-Pamplona	Zaragoza-Alsasua			X			X	
3	X	X	X	X	Variante sur ferroviaria de Bilbao	Miranda de Ebro-Bilbao			X		X		
4	X	X	X	X	Astigarraga-Lezo	Madrid-Irún/Hendaya		X			X		
5	X	X	X	X	Electrificación Bobadilla-Algeciras	Madrid-Algeciras		X			X		
6	X	X	X	X	Zaragoza-Castejón	Zaragoza-Alsasua			X			X	

## PORTUGAL

### Oporto area

ID	Typology				Identification, location and description	Corridor section	Project status	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of the works in the corridor
	Track	Structures	Electrification	Signalling				Short term	Medium term	Long term	<50 M€	50 M€ a 500 M€	> 500 M€	
1	X	X	X	X	Track quadruplication (Ermesinde and Contumil)	P1 Oporto (Campanhã) - Ermesinde			X		X			
2	X				Upgrading of existing terminal, new terminal and increase train length (Leixões Port)	P5 Contumil - Leixões			X		X			

## Oporto – Pampilhosa – Entroncamento - Lisboa section

ID	Typology				Identification, location and description	Corridor section	Project status	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of the works in the corridor	
	Track	Structures	Electrification	Signaling				Short term	Medium term	Long term	<50 M€	50 M€ a 500 M€	> 500 M€		
3	X	X		X	Modernization (Válega-Porto)	P8 Oporto (Campanhã) - Lisbon (Sta. Apolónia)	on-going	X				X			
4	X	X		X	Modernization (Santana-Cartaxo-Entroncamento)	P8 Oporto (Campanhã) - Lisbon (Sta. Apolónia)	on-going	X			X				
5	X	X	X	X	Track quadruplication (Averca-Azambuja)	P8 Oporto (Campanhã) - Lisbon (Sta. Apolónia)			X		X				

## Vilar Formoso/Fuentes de Oñoro (Spanish border) - Pampilhosa section

ID	Typology				Identification, location and description	Corridor section	Project status	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of the works in the corridor	
	Track	Structures	Electrification	Signaling				Short term	Medium term	Long term	<50 M€	50 M€ a 500 M€	> 500 M€		
6	X		X	X	Construction of the transition between Beira Alta and North lines (Pampilhosa)	P20 Vilar Formoso - Pampilhosa	on-going	X			X				
7	X		X	X	Railway stations Layout (increasing of train lengths)	P20 Vilar Formoso - Pampilhosa	on-going	X			X				
8	X	X	X	X	Profile optimization (grades reduction)	P20 Vilar Formoso - Pampilhosa					X	X			
9	X	X	X	X	Implementation of UIC gauge	P20 Vilar Formoso - Pampilhosa					X		X		

## Elvas/Badajoz (Spanish border) - Entroncamento section

ID	Typology				Identification, location and description	Corridor section	Project status	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of the works in the corridor	
	Track	Structures	Electrification	Signaling				Short term	Medium term	Long term	<50 M€	50 M€ a 500 M€	> 500 M€		
10	X	X	X		Modernization (Entroncamento-Abrantes)	P25 Abrantes - Entroncamento				X	X				
11	X				Modernization (Assumar-Arronche; Torre das Vargens-Crato)	P27 Elvas - Abrantes				X	X				
12	X				Layouts adjustments (Torre das Vargens - Portalegre)	P27 Elvas - Abrantes			X		X				

## Lisboa Area

ID	Typology				Identification, location and description	Corridor section	Project status	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of the works in the corridor	
	Track	Structures	Electrification	Signaling				Short term	Medium term	Long term	<50 M€	50 M€ a 500 M€	> 500 M€		
13	X	X	X	X	Track quadruplication (Areiro - Braço de Prata)	P29 Braço de Prata Alcântara			X			X			
14	X	X	X	X	Construction of fly under on Nó de Alcântara (Alcântara Mar - Campolide)	P29 Braço de Prata Alcântara			X			X			

## Lisbon – Sines section

ID	Typology				Identification, location and description	Corridor section	Project status	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of the works in the corridor	
	Track	Structures	Electrification	Signaling				Short term	Medium term	Long term	<50 M€	50 M€ a 500 M€	> 500 M€		
15	X			X	Full track renovation and layouts adjustments (Setil - Vendas Novas)	P33 Setil – Vendas Novas		X			X				
16	X			X	Full track renovation and track duplication (Poceirão - Bombel)	P34 Vendas Novas - Poceirão			X		X				
17	X	X	X	X	Improving Connection (Sines - Grandola Norte)	P38 Ermidas do Sado - Sines			X		X				
18	X			X	New layouts to Ermidas and C. Caveira stations (Grandola - Ermidas do Sado)	P37 Setúbal – Ermidas do Sado	on-going	X			X				
19	X		X	X	Increasing and upgrading connections to Setúbal Port (Setúbal - Praias do Sado)	P37 Setúbal – Ermidas do Sado		X			X				

## Abrantes – Guarda section

ID	Typology				Identification, location and description	Corridor section	Project status	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of the works in the corridor	
	Track	Structures	Electrification	Signaling				Short term	Medium term	Long term	<50 M€	50 M€ a 500 M€	> 500 M€		
20		X			Reinforcement of structures (Mouriscas - Covilhã)	P25 Abrantes - Guarda				X	X				

## Vendas Novas – Elvas (Spanish border) section

ID	Typology				Identification, location and description	Corridor section	Project status	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of the works in the corridor	
	Track	Structures	Electrification	Signaling				Short term	Medium term	Long term	<50 M€	50 M€ a 500 M€	> 500 M€		
21	X	X	X	X	Modernization (Évora - Évora Norte)	P39 Elvas - Évora - Casa Branca	on-going	X			X				
22	X	X	X	X	New line construction (Évora - Caia)	P39 Elvas - Évora - Casa Branca	on-going	X				X			
23	X	X	X	X	UIC gauge adaptaion (Vendas Novas - Casa Branca)	P34 Casa Branca - Vendas Novas - Poceirão				X	X				
24	X	X	X	X	UIC gauge adaptaion (Casa Branca - Évora)	P39 Elvas - Évora - Casa Branca				X	X				
25	X	X	X	X	UIC gauge adaptaion (Évora - Évora Norte)	P39 Elvas - Évora - Casa Branca			X	X	X				
26	X	X	X	X	UIC gauge adaptaion (Évora Norte - Caia)	P39 Elvas - Évora - Casa Branca			X	X	X				

## ERTMS-ETCS Facilities

ID	Typology				Identification, location and description	Corridor section	Project status	Entry into service			Valuation (M€ <sub>2013</sub> )			Impact of the works in the corridor	
	Track	Structures	Electrification	Signaling				Short term	Medium term	Long term	<50 M€	50 M€ a 500 M€	> 500 M€		
27				X	Installation of ERTMS-ETCS + GSM-R (Sines - Caia)	P39 Elvas - Évora - Casa Branca P34 Casa Branca - Vendas Novas - Poceirão P46 Poceirão – Águas de Moura P37 Setúbal – Ermidas do Sado P38 Ermidas do Sado - Sines			X		X				
28				X	Installation of ERTMS-ETCS + GSM-R (Lisboa - Oporto)	P8 Oporto (Campanhã) – Lisbon (Sta. Apolónia)			X		X				
29				X	Installation of ERTMS-ETCS + GSM-R (Aveiro - Vilar Formoso)	P20 Vilar Formoso - Pampilhosa P90 Feeder line of the Port of Aveiro			X	X	X				
30				X	Installation of ERTMS-ETCS + GSM-R (Lisboa - Poceirão)	P34 Poceirão - Pinhal Novo P37 Pinhal Novo - Lisboa			X	X	X				
31				X	Installation of ERTMS-ETCS + GSM-R (Entroncamento- Caia)	P27 Elvas - Abrantes P25 Abrantes - Entroncamento			X	X	X				



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EEIG | Atlantic Corridor  
c/o SNFC Réseau  
174.Avenue de France | 75013 Paris | France  
+33 153 943 411  
[www.atlantic-corridor.eu](http://www.atlantic-corridor.eu)

Atlantic Corridor | OSS  
c/o ADIF  
C/ Agustín de Foxá, 56. Edificio 22.  
Estacion de Chamartin | 28036 Madrid | Spain  
+34 917 744 774  
[oss@atlantoc-corridor.eu](mailto:oss@atlantoc-corridor.eu)



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