RAIL FREIGHT CORRIDOR 6
THE IMPLEMENTATION PLAN
CONSULTATION OF THE ADVISORY GROUPS

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1 Introduction

Regulation (EU) 913/2010, adopted by the European Parliament and the Council on 22 September 2010, entered into force on 9th November 2010, enacting the establishment of international rail corridors for a European rail network for competitive freight, with the overall purpose of increasing international rail freight's attractiveness and efficiency.

A list of 9 initial corridors is annexed to Regulation, providing their respective latest implementation date (2013 and 2015). Rail Freight Corridors are going to reconcile various types of existing corridors, such as ERTMS- and RNE-corridors (Art. 4(b)). They are also expected to be integrated in the TEN-T Network, in the framework of the new concept of Core Transport Network introduced by the EC proposal "Connecting Europe Facility" of 19th October 2011 which has pre-identified 10 core network corridors for the financing period 2014-2020.

The establishment of international rail corridors for a European rail network can be considered as the most suitable method to meet specific needs in identified segments of the freight market on which freight trains can run under high service quality standards and easily pass from one national network to another thanks to the respect of interoperability requirements

The creation of an European rail freight market is also an essential factor in making progress towards sustainable mobility and its opening, from 1 January 2007, achieved the aim of stimulating competition, making it possible for new operators to enter rail network.

Nevertheless, it seems that market mechanisms are not ensuring a sufficient range of quality of rail freight traffic, so the Rail Freight Corridors Regulation is addressing the need of additional procedures to strengthen cooperation on international capacity allocation thus optimizing the use of the network and improving its reliability.

Coordination between infrastructure managers on investment and on the management of capacities and traffic has to be optimized in order to provide consistency and continuity along the corridors. In that regard specific measures need to be adopted for removing bottlenecks and overcoming cross-border difficulties.

Rail freight services are more and more requiring a high quality and sufficiently financed railway infrastructure, so Rail Freight Corridors are aimed to improve traffic conditions in terms of reliability and punctuality, even in case of disturbance.

The establishment of Rail Freight Corridors has the general objective of improving the conditions for international rail freight by reinforcing cooperation at all levels, and especially among Infrastructure Managers. The main targets are:

- ✓ increasing the infrastructure capacity and performance in order to meet market demand both quantitatively and qualitatively;
- ✓ improving the quality of the service in order to meet customer needs.

Specific objectives can be summarized as follows:

1) increasing the rail competitiveness and market share on the European Transport Market;
2) increasing the modal shift from road towards rail in order to achieve environmental benefits (in terms of reduction of gas emissions and of roads and highways congestion);
3) planning a corridor approach to infrastructure investment, with the aim to overcome cross-border difficulties and to remove bottlenecks;
4) developing intermodal freight terminals;
5) promoting interoperability along the network as defined in Directive 2008/57/EC and its following amendments;
6) coordinating the development of the network, in particular as regards the integration of the international corridors for rail freight into the existing and the future TEN-T corridors;
7) ensuring efficient capacity allocation, through a corridor-oriented One-Stop-Shop applying smooth, flexible and transparent processes for assuring reliable train paths to rail freight undertakings;
8) optimizing the quality of the service and the capacity of the freight corridors, by means of strategies and tools aimed to improve punctuality and to monitor results through performance monitoring and satisfaction surveys;
9) minimising the overall network recovery time through definition of priority rules and optimal coordination of traffic management.

Among the nine initial corridors envisaged by UE Regulation 913/2010, Rail Freight Corridor n. 6 Almería-Valencia/Madrid-Zaragoza/Barcelona-Marseille-Lyon-Turin-Milan-Verona-Padua/Venice-Trieste/Koper-Ljubljana-Budapest-Zahony ("Mediterranean Corridor") is the most interconnected corridor in Europe, since it is crossed by 6 other freight corridors (1,2,3,4,5,7). Given its nature of transversal corridor, it will be particularly affected by the need of finding adequate inter-corridors standardised interfaces and procedures to be proposed to applicants and to be agreed among infrastructure managers and allocation bodies.

The Rail Freight Corridor 6 is expected to become a major European freight corridor, linking South-Western and Eastern EU countries: in fact it represents a key access gateway to Ukraine and therefore has a high potential in diverting part of the Western Europe-Asia traffic flows which

presently are ensured by the road mode. Therefore the traffic development along RFC 6 has to be interpreted also in terms of significant potential increase in the rail market share and consequent reduction of environmental externalities in terms of reduction of gas emissions and reduction of roads and highways congestion.

The following specific targets were fixed for RFC 6:

- ensuring the best integration between Rail Freight Corridor 6 and ERTMS corridor D Valencia-Lyon-Ljubljana-Budapest;
- ensuring the best integration between Rail Freight Corridor 6 and the to-be-established Core Network Corridor 3 (Algeciras-Madrid-Tarragona/Sevilla-Valencia-Tarragona/Tarragona-Barcelona-Perpignan-Lyon-Torino-Milano-Venezia-Ljubljana-Budapest-UA border), as identified in the EC proposal "Union guidelines for the development of the trans-european transport network" of 19th October 2011;
- setting out an appropriate Rail Freight Corridor 6 Management Board, taking into account the governance of Corridor D and its organisational structure;
- Improving the interoperability all along Rail Freight Corridor 6, with particular reference to the operational rules which presently represent an obstacle to cross-border traffic;
- promoting a multi-modal concept for traffic flows along the corridor;
- drawing an efficient and market-oriented Implementation Plan designed to meet the needs of potential customers;
- cooperating with the other Rail Freight Corridor Management Boards in order to harmonise tools and procedures;
- adopting consultation mechanisms ensuring optimal communication with the Railway Undertakings interested in using the corridor and with managers and owners of the terminals;
- developing an internet based platform as a central and flexible tool for communication, publication and consultation aims;
- establishing an efficient and effective corridor-oriented One-Stop-Shop

The measures planned to achieve the targets listed above are described in detail in this Implementation Plan which, according to Art. 9 of Regulation (EU) 913/2010, include the following parts:

- the programme of measures necessary for creating the freight corridor;
- a description of the characteristics of the freight corridor, including bottlenecks;
- the essential elements of the Transport Market Study referred to in art. 9, paragraph 3 of Reg. 913/2010;
- the objectives for the freight corridors, in particular in terms of performance of the freight corridor expressed as the quality of the service and the capacity of the freight corridor in accordance with the provisions of Article 19 of Reg. 913/201;
- the investment plan referred to in Article 11 of Reg. 913/2010;

- the measures to implement the provisions of Articles 12 to 19 of Reg. 913/2010.

This document has been prepared by the Task Force of Rail Freight Corridor 6, with the contribution of experts specifically appointed by the Infrastructure Managers and the Allocation Bodies members of the Management Board of Rail Freight Corridor 6. A detailed task distribution was agreed in order to efficiently prepare the document and a great effort of cooperation was made in order to achieve a common view on the different subjects treated.

The realization of the RFC6 IP is benefiting from **EU co-financing** of 730 k€ (on a total amount of co-financing of 1692 k€ for main corridor activities)

As suggested by art. 4.4.2 of the Handbook on Reg. 913/2010, in order to respect the deadline for submission of the Implementation Plan to the Executive Board, the Management Board of RFC 6 started with a preliminary transport market study, based on available general transport data, to define the Implementation Plan and will develop the full Transport Market Study in parallel to refine the Implementation Plan.

This Implementation Plan is focused on the analysis of the current situation along the countries involved in Rail Freight Corridor 6, aiming at harmonize the overall approach at corridor level.

2 Characteristics of RFC 6 and governance

The definition and exact description of lines and terminals contained in this Rail Freight Corridor, according to the definition of freight corridor (Article 2.2.a), has been a task developed by the Management Board in cooperation with the relevant Infrastructure Managers, and involving the Advisory Groups.

All Rail Freight Corridor 6 locations included in the Annex II of the Regulation have been adequately incorporated to this Corridor.

The designation of lines is one step more in order to harmonize the TEN-T core network with the rail freight corridors, according to the recent directions provided by the European Commission. Moreover, the designation of a line to a RFC, if also belonging to the TEN-T core network, may improve the chances to receive funding under the TEN-T/CEF or other funding sources.

The selection of railway lines and terminals has been based on current and expected traffic patterns and information provided by the Infrastructure Managers and the preliminary results Transport Market Study, currently under development. Especially where various alternative options exist, the lines' suitability to freight traffic with regard to infrastructure parameters like maximum gradients, permitted train-lengths, axle-loads and loading gauges has been taken into account.

Designated lines, given the important traffic flows that already exist, coincide with those largely used today. Besides the main lines along the principal route outlined in the Regulation 913/2010/EC (Almeria-Valencia/Madrid-Zaragoza/Barcelona-Marseille-Lyon-Turin-Milan-Verona-Padua/Venice-Trieste/Bologna/Koper-Ljubljana-Budapest-Zahony), the Corridor includes diversionary routes frequently used for re-routing trains in case of disturbance on the principal lines; and connecting lines, sections linking terminals and freight areas to the main lines.

In some cases parallel railway lines have been included in order to provide sufficient capacity in this corridor. Also lines which may not play an important role for long-haul freight traffic today, but may do so in the future are included.

The transport market study, currently under development, will indicate where other "by-passes" are meaningful.

All railway lines with dedicated capacity and expected to hold pre-arranged train paths, have been designated to this corridor. Furthermore, routes which may not be used for pre-arranged train paths, but could become used in case of traffic disturbances, are also designated to this corridor.

This corridor connects with six other corridors 1, 2, 3, 4, 5 and 7, and some of their sections overlap. Therefore, the following railway lines have been designated to more than one Corridor:

- Rail Freight Corridors 2 & 6: Section Lyon – Ambérieu-en-Bugey
- Rail Freight Corridors 5 & 6: Section Ljubljana – Koper
- Rail Freight Corridors 7 & 6: Section Györ - Budapest

Coordination with existing ERTMS Corridor D and RNE Corridors 6 and 8 has been necessary in the process of lines´ selection.

When it comes to terminals, all terminals along designated lines have been designated to the corridor as well, except if a terminal does not have any relevance for the traffic in the corridor.

Each Port along the corridor has been considered as a single terminal, even in the case that they hold in their facilities more than one rail intermodal or freight yard.

The railway lines of this Corridor connect terminals of relevance to rail freight traffic along the principal route, especially:

- marshalling yards
- major rail-connected freight terminals
- rail-connected intermodal terminals in seaports, airports and inland waterways.

According to Article 9.1.a of Regulation 913/2010/EC, railway lines and terminals designated to this Corridor are exactly and unambiguously described in this Implementation Plan, by the maps and detailed tables included in this document.

The Implementation Plan provides information on the bottlenecks along the Corridor, as well as an overview over existing traffic patterns (both freight and passenger traffic).

The Regulation promotes the harmonization of infrastructure with the specific objectives to remove bottlenecks and to harmonize relevant parameters like: train lengths, train gross weights, axle loads and loading gauges. Reference is made to ERTMS and TEN-T corridors, emphasizing that interoperability is an essential feature of the Rail Freight Corridors. The characterization of the Corridor included in this chapter of the Implementation Plan is essential to achieve these goals.

2.1 Rail Freight Corridor 6 characteristics

The length of the Rail Freight corridor 6 is over 6.600 km, according to the table shown below.

	Total LENGHT	PRINCIPAL ROUTE	DIVERSIONARY	CONNECTING/ FEEDER	UNDER CONSTRUCTION
SPAIN	**2.953**	2.253	558		142
FRANCE	**1.435**	1.435			
ITALY	**748**	636	113		
SLOVENIA	**408**	408			
HUNGARY	**1.097**	878	202	16	
TOTAL	**6.641**	**5.609**	**873**	**16**	**142**

Rail Freight Corridor 6 principal routes constitute about 85% of all lines. Section Almería-Murcia (Spain) is currently under construction.

In Spain, Italy and Hungary 873 km of diversionary routes have been included, for train rerouting in case of disturbance. One of this routes is the alternative corridor selected to by-pass works under development in the Almería-Murcia section.

Also, 101 terminals has been included in Rail Freight Corridor 6, according to the following distribution:

- Spain: 35 terminals
- France: 36 terminals
- Italy: 16 terminals
- Slovenia: 7 terminals
- Hungary: 7 terminals

The description of Rail Freight Corridor 6 includes a list of:

- all railway lines or sections designated to the Corridor, with precise description of beginning and ending points
- all terminals designated to the Corridor

For designated lines, the description comprises a detailed and systematic definition of all infrastructure parameters relevant for rail freight traffic, including:

a) Type of line : principal, diversionary, and connecting/feeder
b) Section length, in kilometers
c) Track gauge: International Standard gage (1435 mm) or Iberian gage (1668 mm)
d) Number of tracks: Single or double track
e) Maximum train length: maximum train length guaranteeing a flawless run along a whole section of the corridor, including traction
f) Axle load: maximum loading gauge guaranteeing a flawless run along a whole section of the corridor
g) Load per meter: Maximum load per meter guaranteeing a flawless run along a whole section of the corridor
h) Train speed: Maximum general speed limit allowed on each line
i) Loading gauge: maximum dimension for the freight and passenger vehicles especially in the tunnels
j) Power supply: Type of current and voltage for electrified lines (DC 1.500V, DC 3.000V & AC 25.000V)
k) Signaling and interlocking systems: Type of signaling systems implemented on each line
l) Gradient: Maximum line gradient in both directions of each line of the corridor (towards NE –Madrid-Almería to Zahony- and towards SW –Zahony to Madrid/Almería)

A series of comprehensive maps of the Corridor according to these relevant parameters is included in chapter 1.1.3 of this document.

A list and a location map of terminals with relevance for traffic flows on the corridor and connected to the designated rail lines have been also included in the Implementation Plan. Accordingly, feeder lines from the corridor main lines to these terminals, and vice versa, have been designated as well.

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

maritime, river and air services, and either the forming or modification of the composition of freight trains; and, where necessary, performing border procedures at borders with European third countries.

Terminals will be described in in the Corridor Information Document by their characteristics, as listed below, once the Transport Market Study be finished and consultation with Advisory Groups accomplished.

Some figures may not not available for all the terminals. Therefore, a webpage link and contacts of the companies that own or manage the terminals will be provided, in order to facilitate access to further information.

a) Trains per day: daily average number of scheduled freight trains services in and out of the terminal
b) Business model: Public (Infrastructure Manager, Railway Undertaking, Port Authorities, Local or Regional Authorities,…) or private ownership, direct management or based on a concession or P3 agreement.
c) Main functions: Characterization of the terminal and identification of operations developed in the facilities (traffic regulation, relay station, marshalling yard, inland or seaport intermodal, load/unload handling, border/customs, gauge change facilities, …)
d) Storage capacity: Total capacity for storage of loading units (TEUs)
e) Handling capacity: Number of loading units handled yearly (TEUs per year)
f) Intermodal traffic: Total number of incoming and outgoing TEUs dispatched per year.
g) Storage utilization: Average storage capacity utilization rate (%)
h) Handling utilization: Average handling capacity utilization rate (%)

Currently research and assessment of these data is under development by Rail Freight Corridor 6 Management Board.

This preliminary designation of lines and terminals in Rail Freight Corridor 6 can change overtime due to infrastructure investments in the corridor. Also comments received from the Advisory Groups and Applicants, and results of the Customer Satisfaction Surveys will be taken into account for further modifications.

2.1.1 RFC 6 Lines

		SECTION LENGHT	LINE TYPE			TRACK GAUGE		DOUBLE TRACK	MAX. TRAIN LENGHT INCL. TRACTION						AXLE LOAD		LOAD PER METRE		TRAIN SPEED			LOADING GAUGE		POWER SUPPLY			SIGNALING SYSTEM						GRADIENT	
		km	PRINCIPAL ROUTE	DIVERSIONARY	CONNECTING/FEEDER	1435 mm	1668 mm		350 m	400 m	450 m	500 m	575 m	600 m	625 m	650 m	750 m	20,0 T/axle	21,0 T/axles	22,5 T/axles	6,4 T/m	7,2 T/m	8,0 T/m	v ≤ 75 km/h	75 < v ≤ 90 km/h	90 < v ≤ 100 km/h	v > 100 km/h	UIC Guideline	Tunnels	DC 1500 V	DC 3000 V	AC 25000 V	ASFA	KVB	BACC	SCMT	ERTMS	ETCS L1	ETCS L2	‰ towards NE	‰ towards SW
SPAIN	ALMERÍA - MURCIA	200	X																																
	ALMERIA - LORCA	142	X																																
	LORCA - MURCIA CARGAS	58	X				X	–			X								X		X			X	45/364	GHE16			X						9	16
	ESCOMBRERAS - MURCIA	81	X				X	20%			X								X		X			X	45/364	GHE16			X						15	16
	ESCOMBRERAS - EL REGUERÓN	65	X				X	–			X								X		X			X	45/364	GHE16			X						15	16
	EL REGUERÓN - MURCIA CARGAS	16	X				X	X			X								X		X			X	45/364	GHE16			X						4	4
	MURCIA - CHINCHILLA		X				X	–			X								X		X			X	45/364	GHE16			X						13	9
	MURCIA CARGAS - CIEZA	44	X				X	–			X								X		X			X	45/364	GHE16			X						13	7
	CIEZA - HELLIN	63	X				X	–			X								X		X			X	45/364	GHE16			X						12	9
	HELLIN - CHINCHILLA	51	X				X	–			X								X		X			X	45/364	GHE16			X						13	8
	CHINCHILLA - VALENCIA	181	X				X	98%			X								X		X			X	45/364	GHE16	X		X						13	14
	CHINCHILLA - LA ENCINA	79	X				X	X				X							X		X			X	45/364	GHE16	X		X						13	13
	LA ENCINA - JATIVA	48	X				X	X				X							X		X			X	45/364	GHE16	X		X						10	14
	JATIVA - VALENCIA FSL	54	X				X	94%				X							X		X			X	45/364	GHE16	X		X						7	11
	LA ENCINA - ALICANTE	78	X				X	–		X									X		X			X	45/364	GHE16	X		X						17	6
	LA ENCINA - ALICANTE	78	X				X	–		X									X		X			X	45/364	GHE16	X		X						17	6
	ALICANTE - EL REGUERON	67	X				X		X										X		X			X	45/364	GHE16			X						12	14
	ALICANTE - EL REGUERON	67	X				X		X										X		X			X	45/364	GHE16			X						12	14
	VALENCIA - CASTELLÓN	70	X				X	X			X								X		X			X	45/364	GHE16	X		X						11	14
	VALENCIA FSL - SAGUNTO	30	X				X	X			X								X		X			X	45/364	GHE16	X		X						11	12
	SAGUNTO - CASTELLON	40	X				X	X			X								X		X			X	45/364	GHE16	X		X						7	14
	CASTELLON - BIF. CALAFAT	145	X				X	X			X								X		X			X	45/364	GHE16	X		X						15	14
	CASTELLON - VINAROZ	77	X				X	X			X								X		X			X	45/364	GHE16	X		X						15	14
	VINAROZ - ALDEA	38	X				X	X			X								X		X			X	45/364	GHE16	X		X						13	12
	ALDEA - BIF. CALAFAT	30	X				X	X			X								X		X			X	45/364	GHE16	X		X						11	12
	BIF. CALAFAT - TARRAGONA	41	X				X	–			X								X		X			X	45/364	GHE16	X		X						12	11
	TARRAGONA - BARCELONA AREA	78	X				X	X		X									X		X			X	45/364	GHE16	X		X						14	13
	TARRAGONA - S VICENTE C	25	X				X	X		X									X		X			X	45/364	GHE16	X		X						9	6
	S VICENTE C - VILLAFRANCA P	24	X				X	X			X								X		X			X	45/364	GHE16	X		X						14	5
	VILLAFRANCA P - MARTORELL	25	X				X	X			X								X		X			X	45/364	GHE16	X		X						14	13
	MARTORELL - CASTELLBISBAL	4	X				X	X			X								X		X			X	45/364	GHE16	X		X						1	7
	MADRID - ZARAGOZA	333	X				X	X			X								X		X			X	45/364	GHE16	X		X						17	16
	MADRID VICÁLVARO - GUADALAJARA	44	X				X	X			X								X		X			X	45/364	GHE16	X		X						8	12
	GUADALAJARA - CALATAYUD	186	X				X	X			X								X		X			X	45/364	GHE16	X		X						14	16
	CALATAYUD - RICLA	36	X				X	–			X								X		X			X	45/364	GHE16	X		X						2	10
	RICLA - GRISÉN	34	X				X	X			X								X		X			X	45/364	GHE16	X		X						2	10
	GRISÉN - CASETAS	13	X				X	X			X								X		X			X	45/364	GHE16	X		X						2	10
	CASETAS - ZARAGOZA PLAZA	21	X				X	X			X								X		X			X	45/364	GHE16	X		X						17	16
	ZARAGOZA - TARRAGONA	583	X				X	5%			X								X		X			X	45/364	GHE16	X		X						17*	16*
	ZARAGOZA PLAZA - BIF CARTUJA	21	X				X	X			X								X		X			X	45/364	GHE16	X		X						17	16
	BIF CARTUJA - TARDIENTA	61	X				X	–			X								X		X			X	45/364	GHE16	X		X						10	18*
	TARDIENTA - SELGUA	70	X				X	–			X								X		X			X	45/364	GHE16	X		X						17	16*
	SELGUA - LÉRIDA	61	X				X	–			X								X		X			X	45/364	GHE16	X		X						16	18*
	LÉRIDA - PLANA	68	X				X	–			X								X		X			X	45/364	GHE16	X		X						17	17*
	PLANA - REUS	21	X				X	–			X								X		X			X	45/364	GHE16	X		X						3	14*
	REUS - TARRAGONA	18	X				X	X			X								X		X			X	45/364	GHE16	X		X						1	15*
	BIF CARTUJA - SAMPER	72	X				X	–			X								X		X			X	45/364	GHE16	X		X						19*	16
	SAMPER - REUS	155	X				X	–			X								X		X			X	45/364	GHE16	X		X						17*	16
	PLANA - S VICENTE C	36	X				X	–			X								X		X			X	45/364	GHE16	X		X						8	14
	BARCELONA AREA	51	X			X	X	X			X								X		X			X	45/364	GHE16	X		X						15	15
	CASTELLBISBAL - MOLLET	25	X			X	X	X			X								X		X			X	45/364	GHE16	X		X					X*		15	15
	BARCELONA CAN - RUBI	25	X			X	X	X			X								X		X			X	45/364	GHE16	X		X					X*		15	15
	BARCELONA AREA - FRENCH BORDER CLASSIC LINE	150	X					X			X								X		X			X	45/364	GHE16	X		X							15	15
	MOLLET - GRANOLLERS	10	X				X	X			X								X		X			X	45/364	GHE16	X		X							12	0
	GRANOLLERS - S CELONI	22	X				X	X			X								X		X			X	45/364	GHE16	X		X							15	14
	S CELONI - MAÇANET M	19	X				X	X			X								X		X			X	45/364	GHE16	X		X							6	12
	MAÇANET M - GERONA	30	X				X	X			X								X		X			X	45/364	GHE16	X		X							10	10
	GERONA - FIGUERAS	41	X				X	X			X								X		X			X	45/364	GHE16	X		X							15	15
	FIGUERAS - PORTBOU	26	X				X	X			X								X		X			X	45/364	GHE16	X		X							15	15
	PORTBOU - CERBERE	2	X				X				X								X		X		X		45/364	GHE16	X	X		X	X					0	8
	BARCELONA AREA - INTERNATIONAL SECTION MIXED TRAFFIC HIGH SPEED LINE	114	X			X		X								X			X		X			X				X		X				X		18	18
	MOLLET - GERONA	76	X			X		X								X			X		X			X	45/364	GHE16			X	X				X		18	18
	GERONA - FIGUERAS VILAFANT	34	X			X		X								X			X		X			X	45/364	GHE16			X	X				X		18	18
	FIGUERAS VILAFANT - INTERNATIONAL SECTION	4	X			X		X								X			X		X			X	45/364	GHE16			X	X				X		18	18
	INTERNATIONAL SECTION	44	X			X		X								X			X		X			X					X					X		18	18
	FIGUERAS - PERPIGNAN	44	X			X		X								X			X		X			X	45/364	GHE16			X						X	18	18
	ALMERIA - MOREDA	123		X				X																													
	MOREDA - HUENAJAR DÓLAR	45		X				X		X									X		X			X	45/364	GHE16			X							22	22
	HUENEJAR DÓLAR - ALMERIA	78		X				X		X									X		X			X	45/364	GHE16			X							28	7
	MOREDA - LINARES	117						X																							X						
		117		X				X		X									X		X			X	45/364	GHE16			X							23	23
	LINARES - MANZANARES	117						X																													
	MANZANARES - SANTA CRUZ DE MUDELA	42		X				X						X					X		X			X	45/364	GHE16			X							7	4
	SANTA CRUZ DE MUDELA - VADOLLANO	67		X				X						X					X		X			X	45/364	GHE16			X							13	16
	VADOLLANO - LINARES	9		X				X											X		X			X	45/364	GHE16			X							13	16
	MANZANARES -ALCAZAR DE SAN JUAN	49						X																													
		49		X				X											X		X			X	45/364	GHE16			X							6	5
	ALCAZAR DE SAN JUAN - VILLAROBLEDO	57						X																													
		57		X				X							X				X		X			X	45/364	GHE16			X							6	6
	VILLAROBLEDO - ALBACETE	74						X																													
		74		X				X							X				X		X			X	45/364	GHE16			X							6	6
	ALBACETE - CHINCHILLA	20						X																													
		20		X				X							X				X		X			X	45/364	GHE16			X							12	12

NOTES

* In Barcelona-Rubí and Castelbisbal-Mollet sections, ETCS L1 is only available for standard gauge trains.

* Portbou-Cerbere section is formed by one track for each gauge. The broad gauge one (ASFA, DC 3 KV) is managed by ADIF and the standard gauge one (KVB, CD 1'5 KV) is managed by RFF.

* In Zaragoza-Tarragona sections, freight trains usually run NE by the Cartuja-Tardienta-Selgua-Lérida-Plana-Reus route, and SW by the Cartuja-Samper-Reus route. Thus, global gradients are considered in this way.

		SECTION LENGHT	PRINCIPAL ROUTE	DIVERSIONARY	CONNECTING/FEEDER	TRACK GAUGE	DOUBLE TRACK	MAX. TRAIN LENGHT INCL. TRACTION	AXLE LOAD	LOAD PER METRE	TRAIN SPEED	LOADING GAUGE	POWER SUPPLY	SIGNALING SYSTEM	GRADIENT	
		km				1.435 mm 1.668 mm		450 m 500 m 550 m 575 m 600 m 625 m 650 m 750 m	20,0 T/axle 21,0 T/axle 22,5 T/axle	6,4 T/m 7,2 T/m 8,0 T/m	V ≤ 75 km/h 75 < V ≤ 100 km/h 100 < V ≤ 120 km/h V > 120 km/h	UIC Guideline Tunnels	DC 1500 V DC 3000 V AC 25000 V	ASFA KVB BACC SCMT ZUB EVM ETCS L1 ETCS L2	‰ towards NE ‰ towards SW	
FRANCE	PORTBOU - PERPIGNAN	43	X			X				X				X	11	14
	PORTBOU - CERBERE	2	X			X*	X*	–	X		X	X		X	5	10
	CERBERE - COLLIOURE	14	X			X	X		X		X	X		X	11	14
	COLLIOURE - PERPIGNAN	27	X			X	X		X		X	X		X	5	5
	INTERNATIONAL SECTION - PERPIGNAN	5	X			X	X		X		X	X	X	X	0	10
	PERPIGNAN - MONTPELLIER	159	X								X			X	5	5
	PERPIGNAN - GRUISSAN	51	X			X	X		X		X	X		X	5	5
	GRUISSAN - NARBONNE	10	X			X	X		X		X	X		X	5	5
	NARBONNE - MONTPELLIER	97	X			X	X		X		X	X		X	5	5
	MONTEPELLIER - AVIGNON	141	X								X			X	8	10
	MONTEPELLIER-NÎMES	50	X			X	X		X		X	X		X	4	4
	A NÎMES - VILLENEUVE-LES-AVIGNON (VIA REMOULINS)	38	X			X	X		X		X	X		X	5	10
	VILLENEUVE-LES-AVIGNON - AVIGNON	5	X			X	X		X		X	X		X		
	B NÎMES - TARASCON	27	X			X	X		X		X	X		X	6	7
	TARASCON - AVIGNON	22	X			X	X		X		X	X		X	8	8
	AVIGNON - LYON	283	X								X			X	12	11
	VILLENEUVE-LES-AVIGNON - PONT ST ESPRIT	44	X			X	X		X		X	X		X	5	6
	PONT ST ESPRIT - PEYRAUD	127	X			X	X		X		X	X		X	5	6
	PEYRAUD - GIVORS	44	X			X	X		X		X	X		X	10	5
	CHASSE SUR RHÔNE - GIVORS	3	X			X	X		X		X	X		X	5	7
	CHASSE SUR RHÔNE - LYON (PART DIEU)	25	X			X	X		X		X	X		X	12	11
	VENISSIEUX - LYON GUILLOTIERE	4	X			X	X		X		X	X		X	5	8
	AVIGNON - LIVRON	107	X			X	X		X		X	X		X	5	5
	LIVRON - VALENCE	17	X			X	X		X		X	X		X	5	5
	VALENCE-CHASSE SUR RHÔNE	85	X			X	X		X		X	X		X	5	5
	VALENCE - MONTMELIAN	152	X								X			X	5	5
	VALENCE - MOIRANS	80	X			X	X		X		X		*	X	5	5
	MOIRANS - GRENOBLE	18	X			X	X		X		X		*	X	5	5
	GRENOBLE - MONTMELIAN	54	X			X	X		X		X		*	X	5	5
	MODANE - LYON	231	X								X			X	30	30
	MODANE - ST. JEAN DE MAURIENNE	28	X			X	X		X		X	X		X	30	30
	ST. JEAN DE MAURIENNE - ST PIERRE D'ALBIGNY	23	X			X	X		X		X	X		X	18	6
	ST PIERRE D'ALBIGNY - CHAMBERY	48	X			X	X		X		X	X		X	10	10
	CHAMBERY - CULOZ	36	X			X	X		X		X	X		X	10	10
	CULOZ - AMBÉRIEU	50	X			X	X		X		X	X		X	12	12
	AMBÉRIEU - LYON (PART DIEU)	46	X			X	X		X		X	X		X	10	8
	MARSEILLE-MIRAMAS	136	X								X			X	13	12
	MARSEILLE ST CHARLES - L'ESTAQUE	10	X			X	X		X		X			X	5	5
	A L'ESTAQUE - LAVALDUC	56	X			X	X		X		X*	3,3	3,3	X	13	12
	LAVALDUC - MIRAMAS	16	X			X	X		X		X	X		X	10	5
	LAVALDUC - FOS-VIGUERAT	12	X			X	X		X		X	X		X	10	5
	B L'ESTAQUE - MIRAMAS (PAR ROGNAC)	42	X			X	X		X		X			X	5	5
	MIRAMAS - AVIGNON	111	X								X			X	11	11
	A MIRAMAS - AVIGNON (PAR CAVAILLON)	65	X			X	X		X		X			X	8	8
	B MIRAMAS - TARASCON	46	X			X	X		X		X	X		X	11	11

NOTES

* Portbou-Cerbere section is formed by one track for each gauge. The broad gauge one (ASFA, DC 3 KV) is managed by ADIF and the standard gauge one (KVB, CD 1'5 KV) is managed by RFF.

* Marseille St Charles - Lavalduc: 9 T/m

		SECTION LENGHT	LINE TYPE			MAX. TRAIN LENGHT INCL. TRACTION								AXLE LOAD			LOAD PER METRE			TRAIN SPEED				LOADING GAUGE		POWER SUPPLY			SIGNALING SYSTEM										GRADIENT	
		km	PRINCIPAL ROUTE	DIVERSIONARY	CONNECTING/FEEDER	450 m	500 m	550 m	575 m	600 m	625 m	650 m	750 m	20,0 T/axle	21,0 T/axle	22,5 T/axle	6,4 T/m	7,2 T/m	8,0 T/m	v ≤ 75 km/h	75 < v ≤ 90 km/h	90 < v ≤ 100 km/h	v > 100 km/h	UIC Guideline	Tunnels	DC 1500 V	DC 3000 V	AC 25000 V	ASFA	KVB	BEM	BCA	BACC	SCMT	PZB	EVM	ETCS L1	ETCS L2	‰ towards NE	‰ towards SW
ITALY	MODANE-TORINO	103	X					X								X			X				X	45/364			X					X	X					30	28
	MODANE-CONFINE FRANCESE	4	X					X								X			X			X		45/364			X					X	X					0	28
	CONFINE FRANCESE-TORINO	98	X							X						X			X				X	45/364			X					X	X					30	0
	TORINO-NOVARA	99	X							X						X			X				X	45/364			X					X	X					14	13
	NOVARA-MILANO	45	X						X							X			X				X	45/364			X					X	X					5	7
	MILANO-VERONA	148	X								X					X			X				X	45/364			X					X	X					6	10
	VERONA-PADOVA	82	X								X					X			X				X	80/400			X					X	X					5	5
	VERONA-VICENZA	52	X								X					X			X				X	80/400			X					X	X					5	5
	VICENZA-PADOVA	30	X								X					X			X				X	80/400			X					X	X					5	3
	VICENZA-PORTOGRUARO (via Cittadella)	113		X				X								X			X			X		80/400			X					X	X					6	7
	VICENZA-CASTELFRANCO V.	36		X				X								X			X			X		80/400			X					X	X					6	7
	CASTELFRANCO V.-TREVISO	25		X					X							X			X			X		80/400			X					X	X					1	4
	TREVISO-PORTOGRUARO	53		X					X							X			X			X		80/400			X					X	X					5	4
	PADOVA-BIVIO D'AURISINA	131	X						X							X			X			X		80/400			X					X	X					9	10
	PADOVA-VENEZIA	29	X								X					X			X				X	80/400			X					X	X					3	3
	VENEZIA-PORTOGRUARO	59	X						X							X			X				X	80/400			X				X		X					8	8
	PORTOGRUARO-BIVIO D'AURISINA	43	X							X						X			X			X		80/400			X				X		X					9	10
	BIVIO D'AURISINA-VILLA OPICINA	15	X							X						X			X			X		80/400			X			X			X					15	0
	BIVIO D'AURISINA-TRIESTE	14	X							X						X			X		X			80/400			X					X	X					14	1

SLOVENIA

	km	LINE TYPE: PRINCIPAL ROUTE	LINE TYPE: DIVERSIONARY	LINE TYPE: CONNECTING/FEEDER	TRACK GAUGE: 1435 mm	TRACK GAUGE: 1668 mm	DOUBLE TRACK	MAX. TRAIN LENGHT INCL. TRACTION: 450 m	500 m	550 m	575 m	600 m	625 m	640 m	650 m	750 m	AXLE LOAD: 20,0 Taxle	21,0 Taxle	22,5 Taxle	LOAD PER METRE: 6,4 T/m	7,2 T/m	8,0 T/m	TRAIN SPEED: v ≤ 75 km/h	75 < v ≤ 90 km/h	90 < v ≤ 100 km/h	v > 100 km/h	LOADING GAUGE: UIC Guideline	Tunnels	POWER SUPPLY: DC 1500 V	DC 3000 V	AC 25000 V	SIGNALING SYSTEM: ASFA	KVB	BACC	SCMT	P2B	EVM	ETCS L1	ETCS L2	GRADIENT: ‰ towards NE	‰ towards SW
VILLA OPICINA (BORDER)-DIVACA	13	X			X		X												X			X					99/429			X							X			10	0
VILLA OPICINA (BORDER)-SEZANA	3	X			X		X						X						X			X					99/429			X							X			10	0
SEZANA- DIVACA	10	X			X		X						X						X			X					99/429			X							X			8	0
KOPER-DIVACA	46	X			X		–	X											X			X					90/410			X							X			25	20
DIVACA-LJUBLJANA	104	X			X		X						X						X			X					82/412			X							X			8	12
LJUBLJANA-HODOS	246	X			X		56%										X		X			X					80/401										X			10	11
LJUBLJANA-PRAGERSKO	137	X			X		X										X				X		X				90/410			X							X			9	9
PRAGERSKO-HODOS	109	X			X		–						X						X			X		X			80/401										X			10	11

NOTES

* Ljubljana-Pragersko: Maximun train lenght 570m

HUNGARY

	km	LINE TYPE: PRINCIPAL ROUTE	LINE TYPE: DIVERSIONARY	LINE TYPE: CONNECTING/FEEDER	TRACK GAUGE: 1435 mm	TRACK GAUGE: 1668 mm	DOUBLE TRACK	MAX. TRAIN LENGHT INCL. TRACTION: 300 m	450 m	500 m	550 m	575 m	600 m	625 m	640 m	750 m	AXLE LOAD: 20,0 Taxle	21,0 Taxle	22,5 Taxle	LOAD PER METRE: 6,4 T/m	7,2 T/m	8,0 T/m	TRAIN SPEED: v ≤ 75 km/h	75 < v ≤ 90 km/h	90 < v ≤ 100 km/h	v > 100 km/h	LOADING GAUGE: UIC Guideline	Tunnels	POWER SUPPLY: DC 1500 V	DC 3000 V	AC 25000 V	SIGNALING SYSTEM: ASFA	KVB	BACC	SCMT	P2B	EVM	ETCS L1	ETCS L2	GRADIENT: ‰ towards NE	‰ towards SW
HODOS-ZALALÖVŐ	20	X			X		–								X				X			X					80/410	80/410			X							X			10,6	10,6
ZALALÖVŐ-BOBA	75	X			X		–								X				X			X					80/410				X							X			10,6	10,6
BOBA-SZÉKESFEHÉRVÁR	115	X			X		–							X					X			X					80/410				X							X			11	11
SZÉKESFEHÉRVÁR-BUDAPEST	63	X			X		56%						X						X		X					X	80/410				X							X			7	7
BUDAPEST-NYÍREGYHÁZA	270	X			X		X									X			X			X				X	80/410				X							X			7,3	7,3
NYÍREGYHÁZA-TUZSÉR	58	X			X		X									X			X			X				X	80/410				X							X			3,1	3,1
TUZSÉR-ZÁHONY	8	X			X		–									X			X			X				X	80/410				X							X			3,1	3,1
BOBA-CELLDÖMÖLK	8		X		X		X						X				X			X						X	80/410				X							X			6,7	6,7
CELLDÖMÖLK-GYŐR	70		X		X		–						X				X			X						X	80/410				X							X			8,5	8,5
GYŐR-BUDAPEST	125		X		X		X								X			X			X					X	80/410				X								X			8	8
BUDAPEST(FERENCVÁROS)-SOROKSÁR TERMINÁL (BILK)	12			X	X										X	X				X				X			70/400				X								X			11,2	11,2
BUDAPEST (FERENCVÁROS)-SOROKSÁRI ÚT KIKÖTŐ	4			X	X			X								X			X			X			X		70/400				X								X			5	5

2.1.2 RFC 6 Terminals

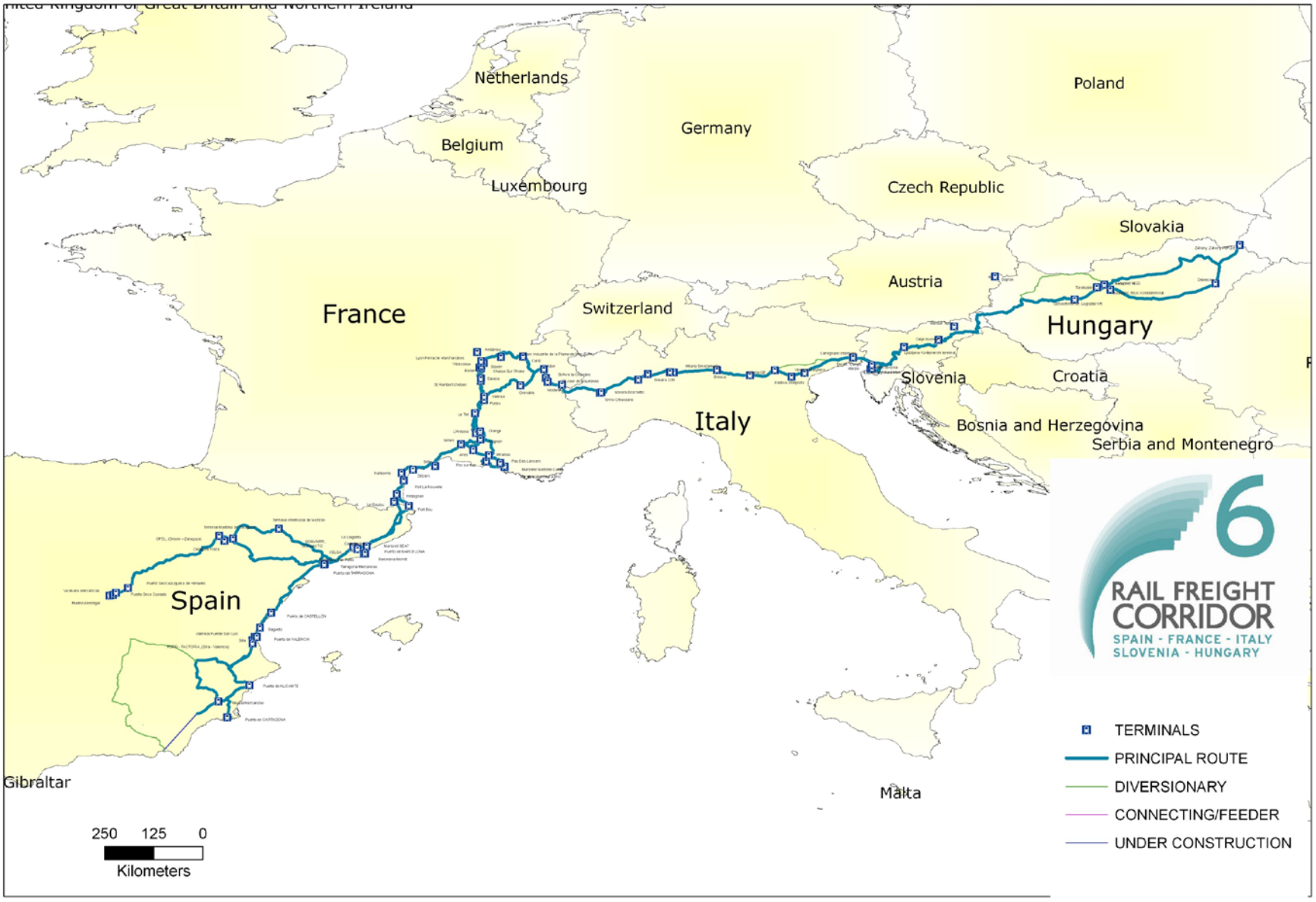
(see the map)

2.1.3 Maps of the Corridor

2.1.3.1 Lines CORRIDOR


Netherlands
Poland
Germany
Belgium
Luxembourg
Czech Republic
Slovakia
Austria
France
Switzerland
Hungary
Slovenia
Croatia
Italy
Bosnia and Herzegovina
Serbia and Montenegr
Spain
Malta
LYON
Ambérieu
Culoz
Vénissieux
Givors-Canal
Chasse-sur-Rhône
Moirans
Peyraud
Grenoble
Modane
Novara
Milano
Verona
Vicenza
Treviso
Padova
Venezia
Torino Porta Susa
Valence-Ville
Livron
Pont St Esprit
Avignon
Nîmes
Montpellier
Lavalduc
Miramas
L'Estaque
Marseille-Saint-Charles
Narbonne
Gruissan
Perpignan
Figueras
Vilademuns
Gerona
Massanet
Barcelona Sants
Tarragona
Bif Calafat
Caldea Amposta
Vinaroz
Castellon
Sagunto
Valencia F.S.Luis
Jativa
La Encina
Alicante
El Regueron
Escombreras
Almeria
Chinchilla
Hellin
Cieza
Murcia Mercancias
Lorca
Tardienta
Selgua
Zaragoza Plaza
Lerida
Grisen
Ricla
Calatayud
Casetas
Villafranca del Penedes
Samper
Guadalajara
Alvaro
Ljubljana
Pragersko
Zalalovo
Budapest
Szekesfehérvár
Miskolc
Nyiregyháza
0
125
250
Kilometers
RAIL FREIGHT CORRIDOR
SPAIN - FRANCE - ITALY
SLOVENIA - HUNGARY
PRINCIPAL ROUTE
DIVERSIONARY
CONNECTING/FEEDER
UNDER CONSTRUCTION

2.1.3.2 RFC 6 Terminals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Poland
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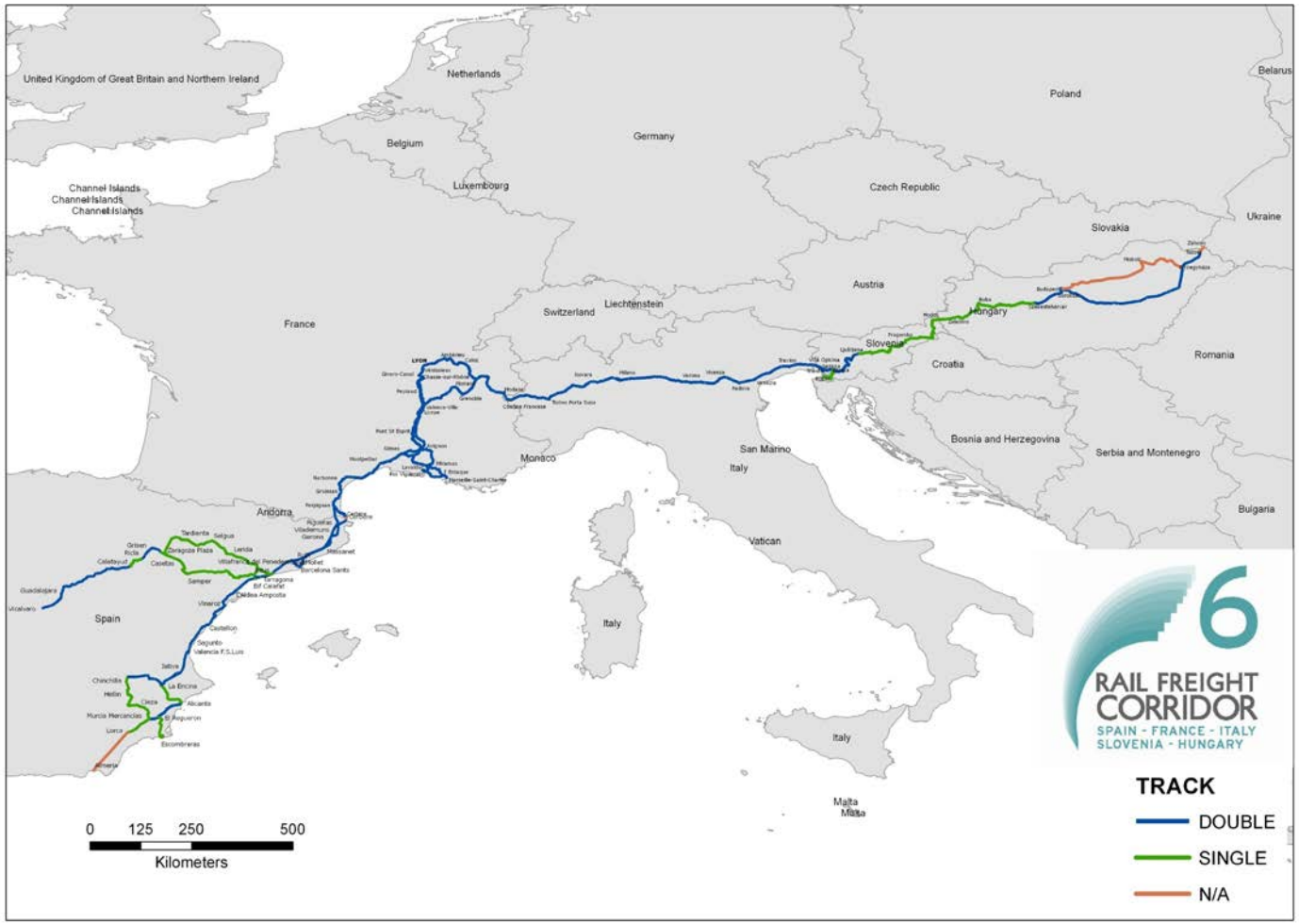
Belgium
Luxembourg
Czech Republic
Slovakia
Austria
France
Switzerland
Hungary
Slovenia
Croatia
Italy
Bosnia and Herzegovina
Serbia and Montenegro
Spain
Gibraltar
Malta
250 125 0
Kilometers
RAIL FREIGHT CORRIDOR
SPAIN - FRANCE - ITALY
SLOVENIA - HUNGARY
TERMINALS
PRINCIPAL ROUTE
DIVERSIONARY
CONNECTING/FEEDER
UNDER CONSTRUCTION

2.1.3.3 Characteristics of the RFC 6

2.1.3.3.1 Double Track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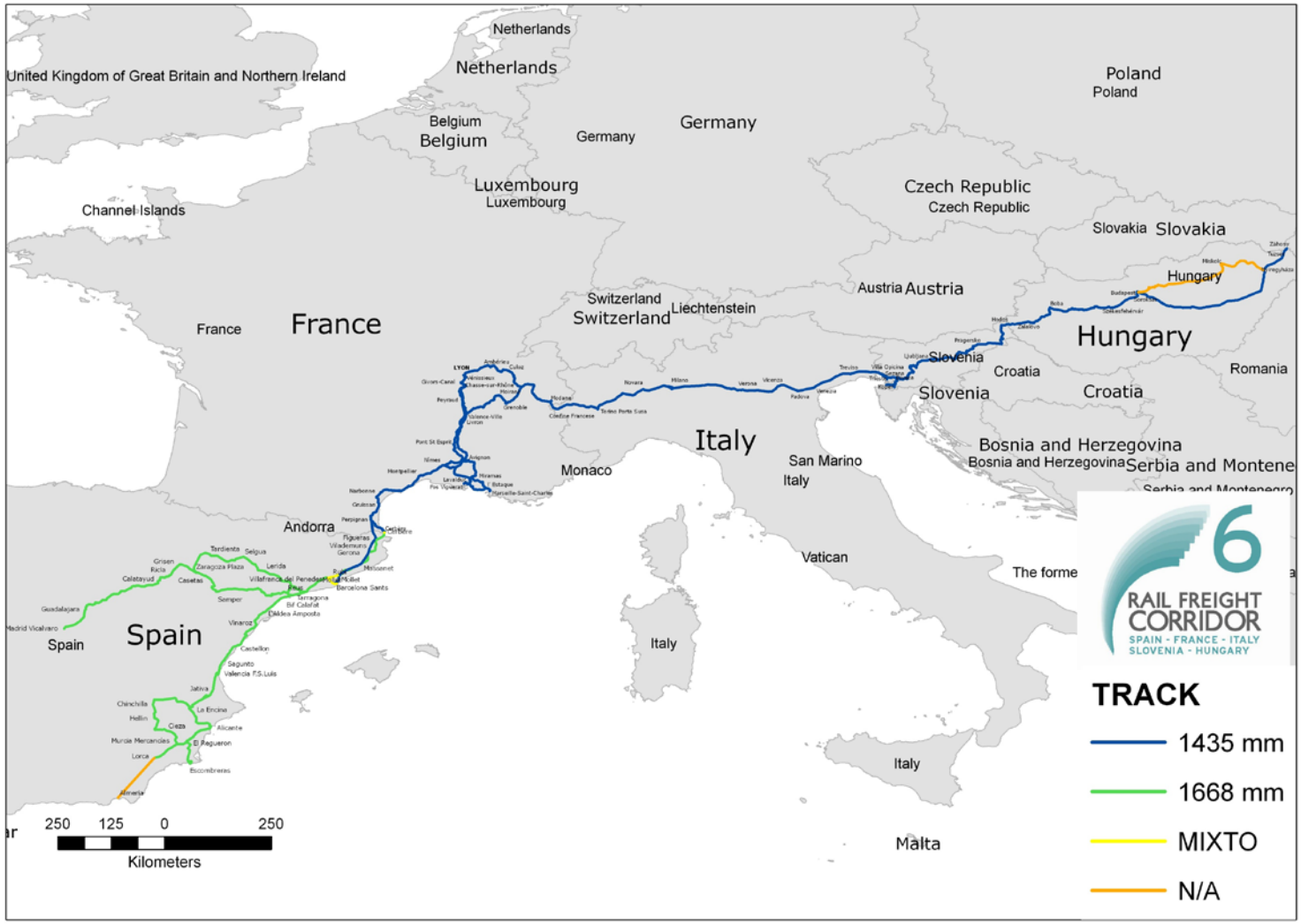
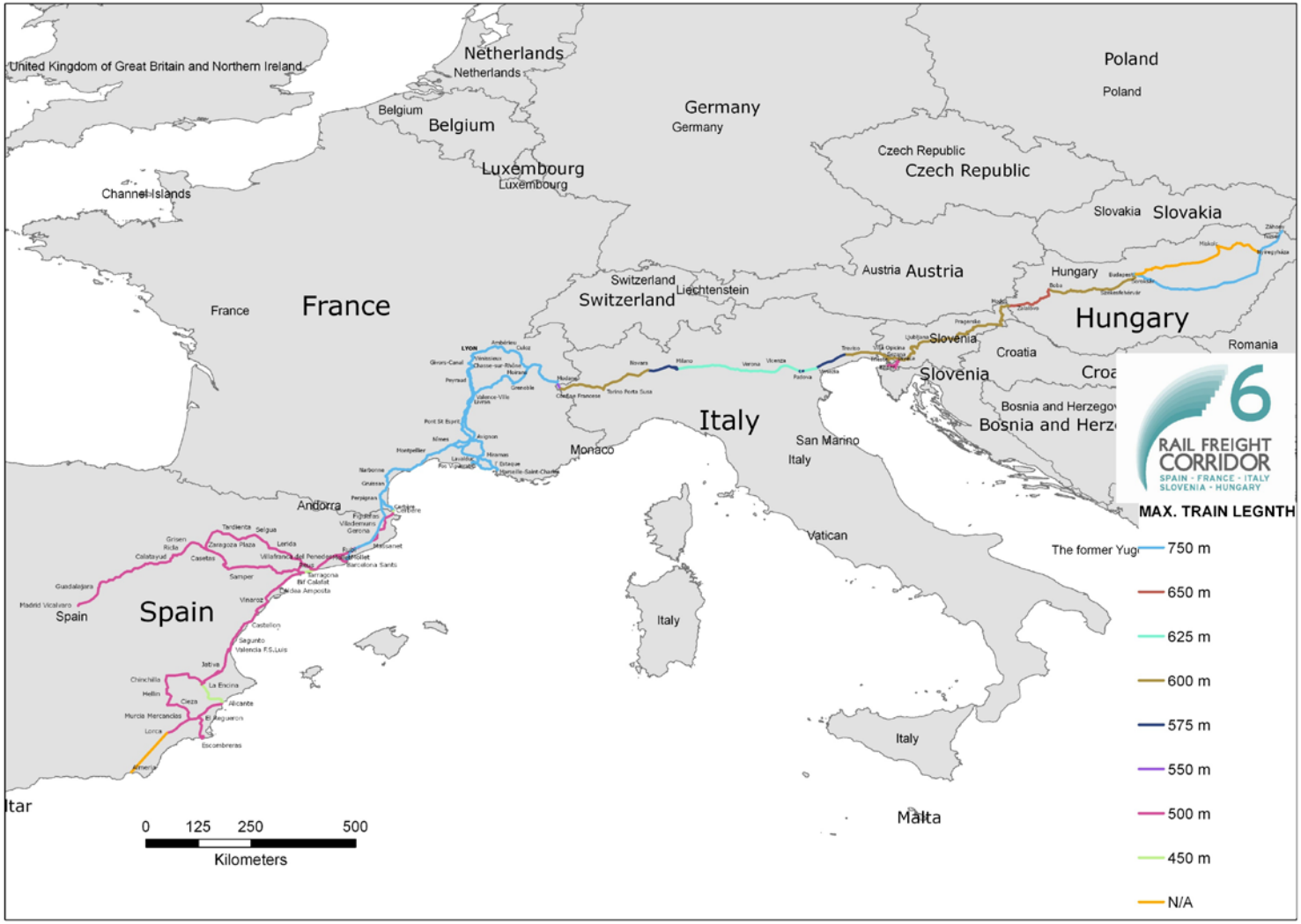
Netherlands
Belgium
Germany
Luxembourg
Poland
Belarus
Czech Republic
Slovakia
Ukraine
Channel Islands
Channel Islands
Channel Islands
France
Switzerland
Liechtenstein
Austria
Hungary
Slovenia
Croatia
Romania
Bosnia and Herzegovina
Serbia and Montenegro
Bulgaria
Monaco
San Marino
Italy
Andorra
Vatican
Spain
Italy
Italy
Malta
Malta
0 125 250 500
Kilometers
RAIL FREIGHT CORRIDOR
SPAIN - FRANCE - ITALY
SLOVENIA - HUNGARY
TRACK
DOUBLE
SINGLE
N/A

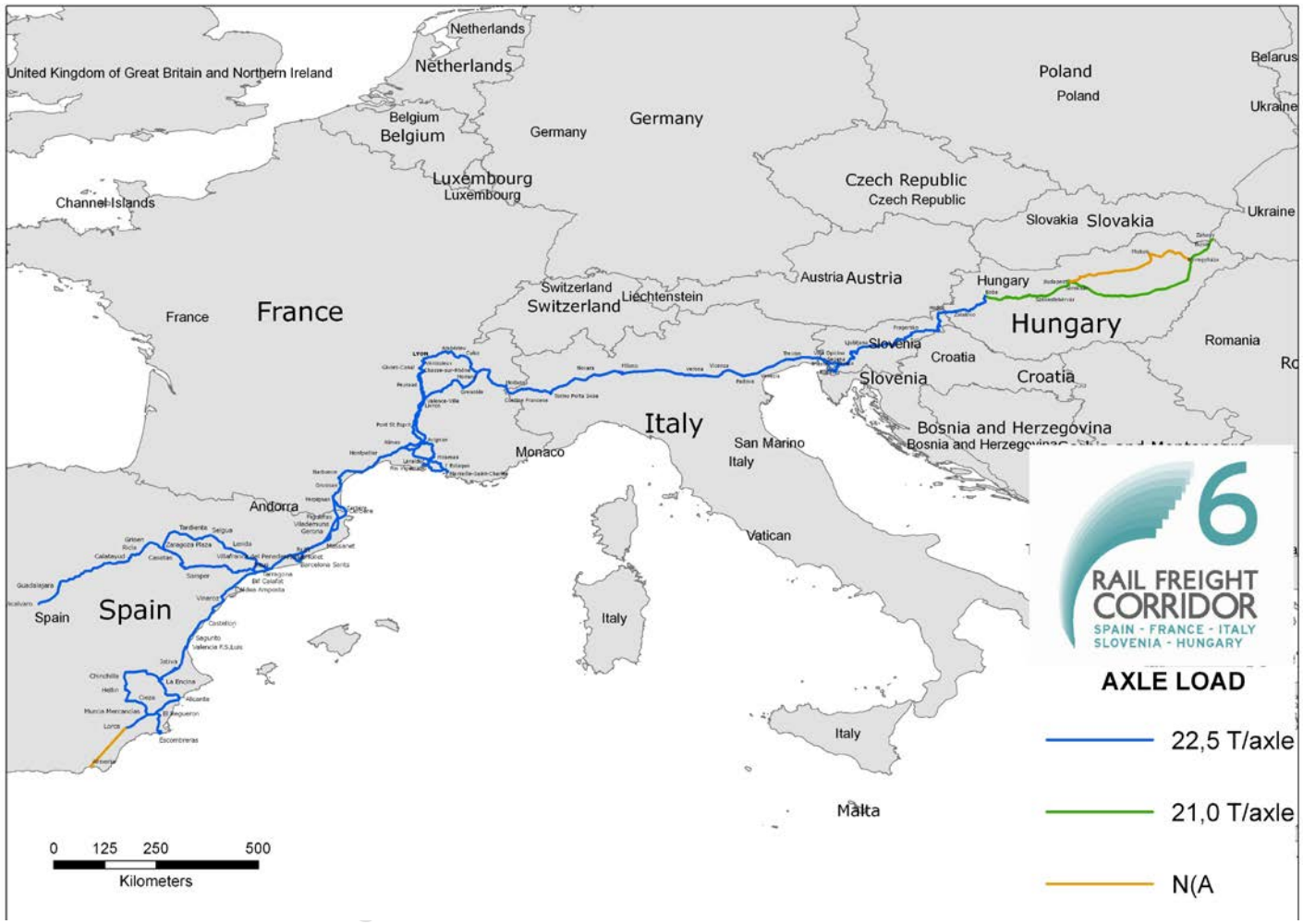
2.1.3.3.2 Track Gauge corridor


Netherlands
United Kingdom of Great Britain and Northern Ireland
Netherlands
Poland
Poland
Belgium
Belgium
Germany
Germany
Luxembourg
Luxembourg
Czech Republic
Czech Republic
Channel Islands
Slovakia
Slovakia
Hungary
Austria
Austria
Switzerland
Switzerland
Liechtenstein
France
France
Hungary
Slovenia
Croatia
Romania
Slovenia
Croatia
Italy
Bosnia and Herzegovina
Bosnia and Herzegovina
Serbia and Montene
San Marino
Monaco
Italy
Andorra
Vatican
The forme
Spain
Spain
Italy
Italy
Malta
250 125 0 250
Kilometers
RAIL FREIGHT CORRIDOR
SPAIN - FRANCE - ITALY
SLOVENIA - HUNGARY
TRACK
1435 mm
1668 mm
MIXTO
N/A

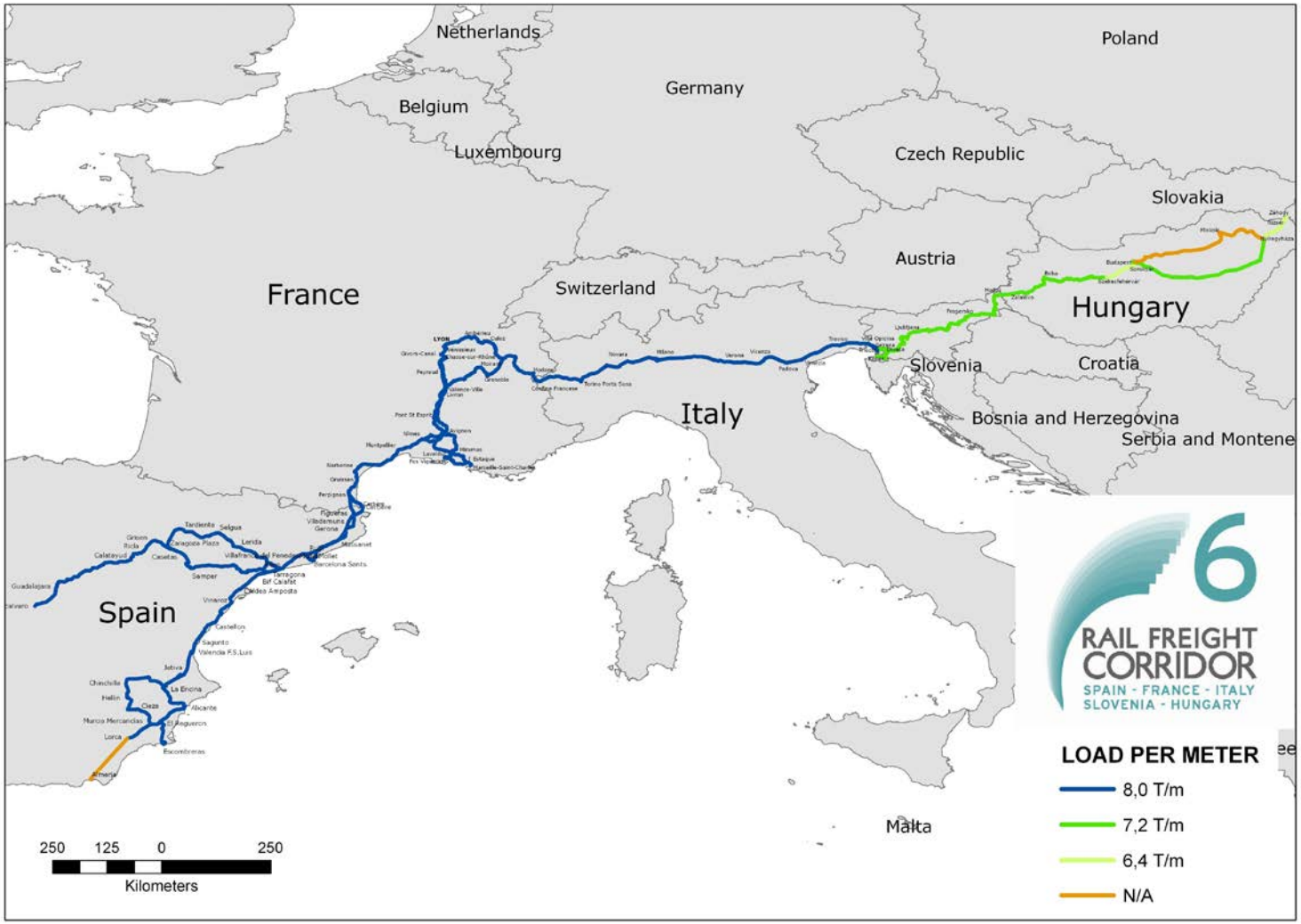
2.1.3.3.3 Maximum Train length along the RFC6


United Kingdom of Great Britain and Northern Ireland
Netherlands
Belgium
Germany
Poland
Czech Republic
Luxembourg
Channel Islands
Slovakia
Austria
Switzerland
Liechtenstein
France
Hungary
Slovenia
Croatia
Romania
Italy
Monaco
San Marino
Vatican
Andorra
Spain
Malta
0 125 250 500
Kilometers
MAX. TRAIN LEGNTH
750 m
650 m
625 m
600 m
575 m
550 m
500 m
450 m
N/A

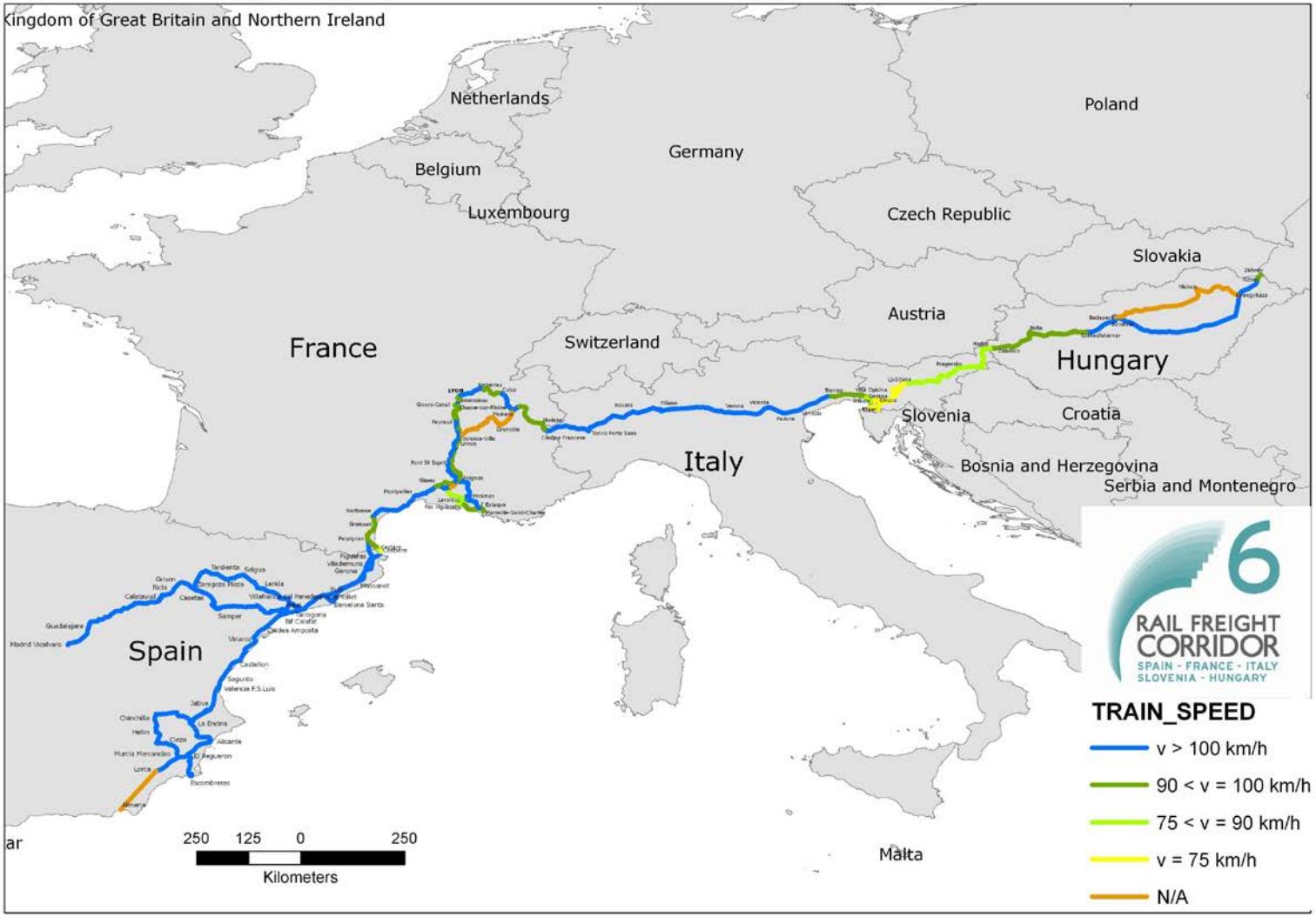
2.1.3.3.4 Axle load


Netherlands
United Kingdom of Great Britain and Northern Ireland
Belgium
Germany
Luxembourg
Channel Islands
France
Switzerland
Liechtenstein
Austria
Czech Republic
Slovakia
Poland
Belarus
Ukraine
Hungary
Slovenia
Croatia
Romania
Bosnia and Herzegovina
Italy
San Marino
Monaco
Andorra
Vatican
Spain
Malta
0 125 250 500
Kilometers
6
RAIL FREIGHT CORRIDOR
SPAIN - FRANCE - ITALY
SLOVENIA - HUNGARY
AXLE LOAD
22,5 T/axle
21,0 T/axle
N(A

2.1.3.3.5 Load per meter


Netherlands
Poland
Germany
Belgium
Luxembourg
Czech Republic
Slovakia
Austria
France
Switzerland
Hungary
Slovenia
Croatia
Italy
Bosnia and Herzegovina
Serbia and Montene
Spain
Malta
250 125 0 250
Kilometers
RAIL FREIGHT CORRIDOR
SPAIN - FRANCE - ITALY
SLOVENIA - HUNGARY
LOAD PER METER
8,0 T/m
7,2 T/m
6,4 T/m
N/A

2.1.3.3.6 Train speed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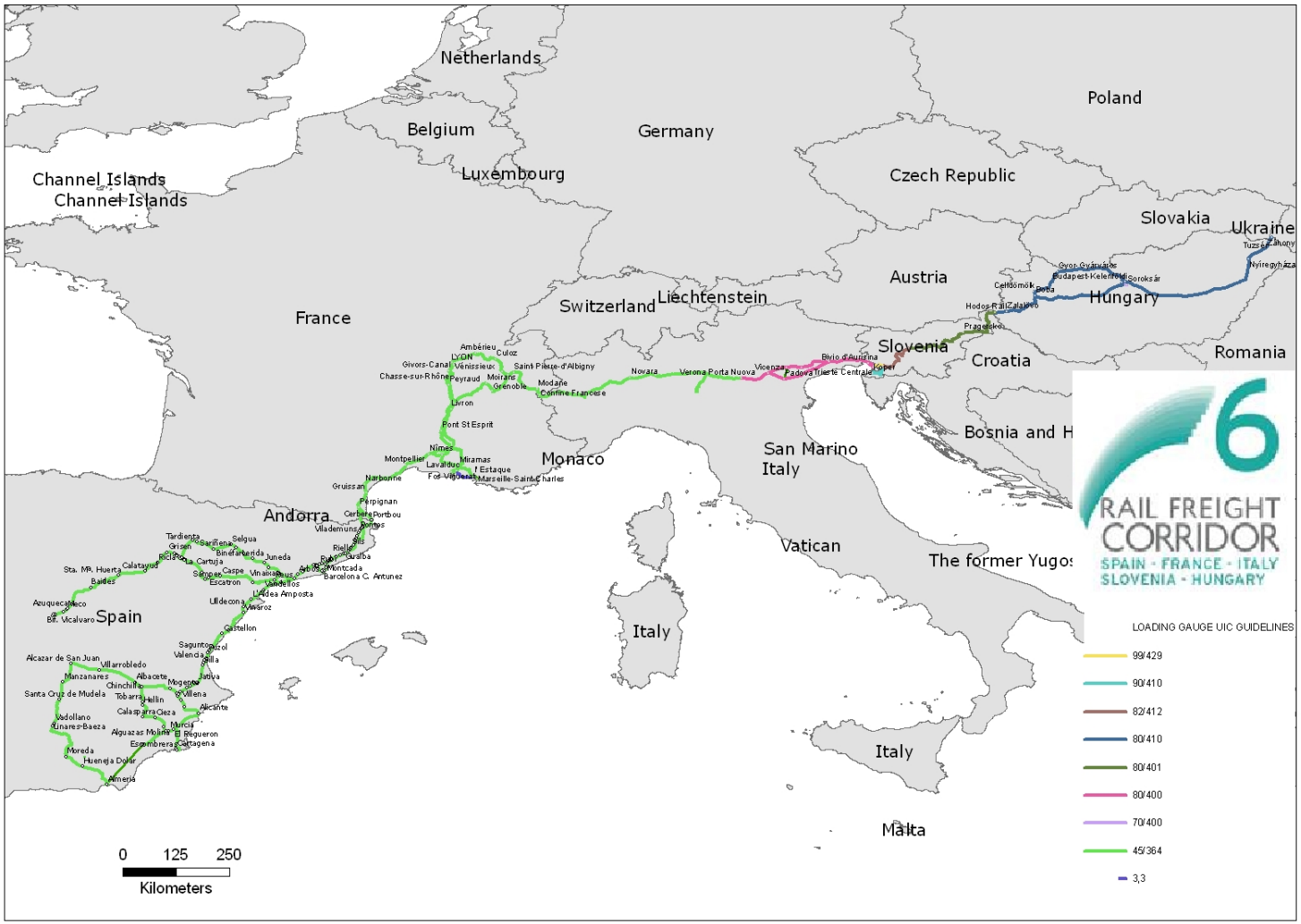
Netherlands
Belgium
Luxembourg
Germany
Poland
Czech Republic
Slovakia
Austria
France
Switzerland
Hungary
Slovenia
Croatia
Italy
Bosnia and Herzegovina
Serbia and Montenegro
Spain
Malta
250 125 0 250
Kilometers
RAIL FREIGHT CORRIDOR
SPAIN - FRANCE - ITALY
SLOVENIA - HUNGARY
TRAIN_SPEED
v > 100 km/h
90 < v = 100 km/h
75 < v = 90 km/h
v = 75 km/h
N/A

2.1.3.3.7 Loading Gauge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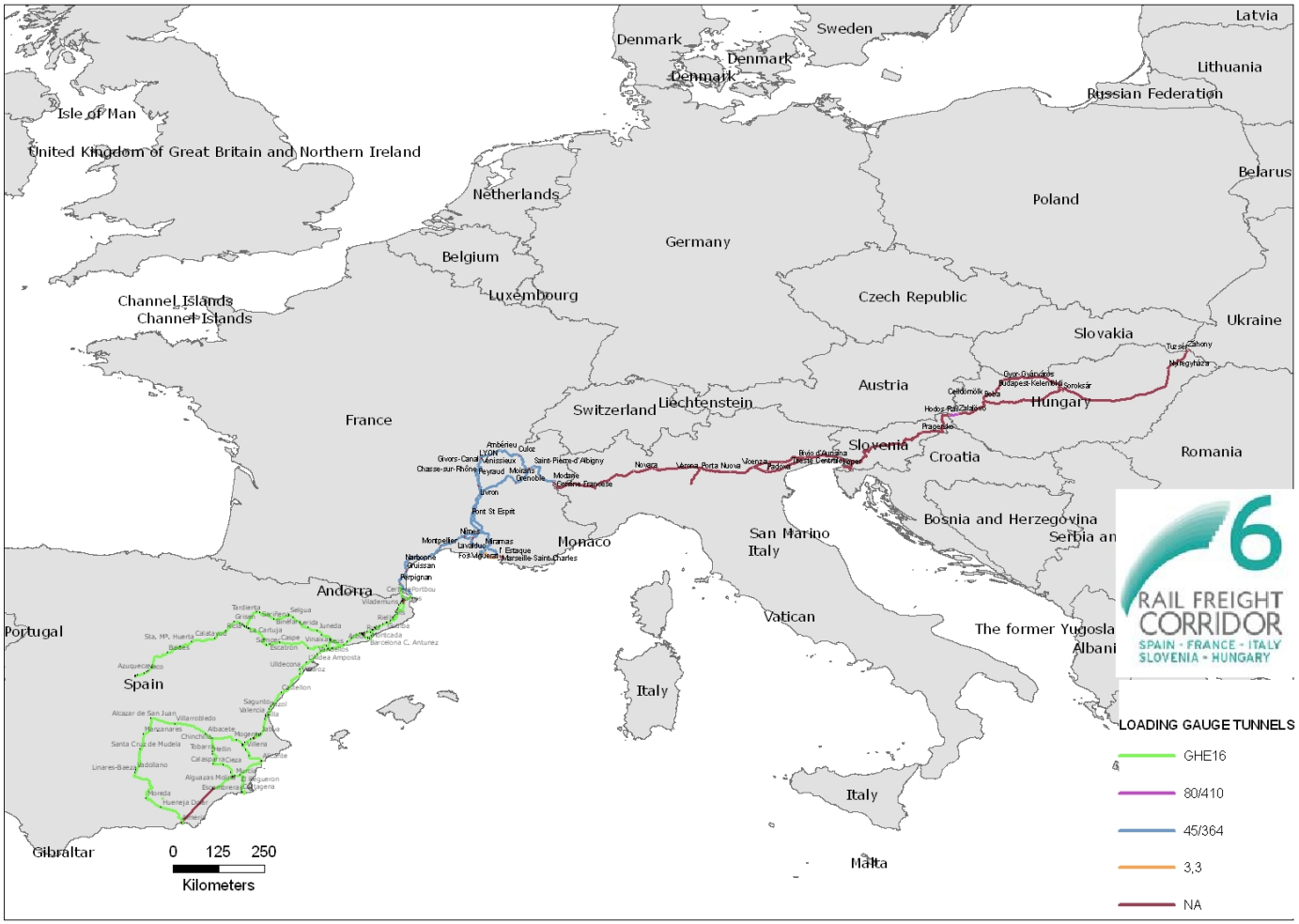
Romania
Bosnia and H
Monaco
San Marino
Italy
Andorra
Vatican
The former Yugos
Spain
Italy
Malta
RAIL FREIGHT CORRIDOR
SPAIN - FRANCE - ITALY
SLOVENIA - HUNGARY
LOADING GAUGE UIC GUIDELINES
99/429
90/410
82/412
80/410
80/401
80/400
70/400
45/364
3,3
0
125
250
Kilometers

2.1.3.3.8 Loading Gauge Tunnels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Sweden
Denmark
Denmark
Denmark
Lithuania
Russian Federation
Isle of Man
United Kingdom of Great Britain and Northern Ireland
Belarus
Netherlands
Poland
Germany
Belgium
Luxembourg
Czech Republic
Channel Islands
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Switzerland
Liechtenstein
France
Slovenia
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Portugal
The former Yugosla
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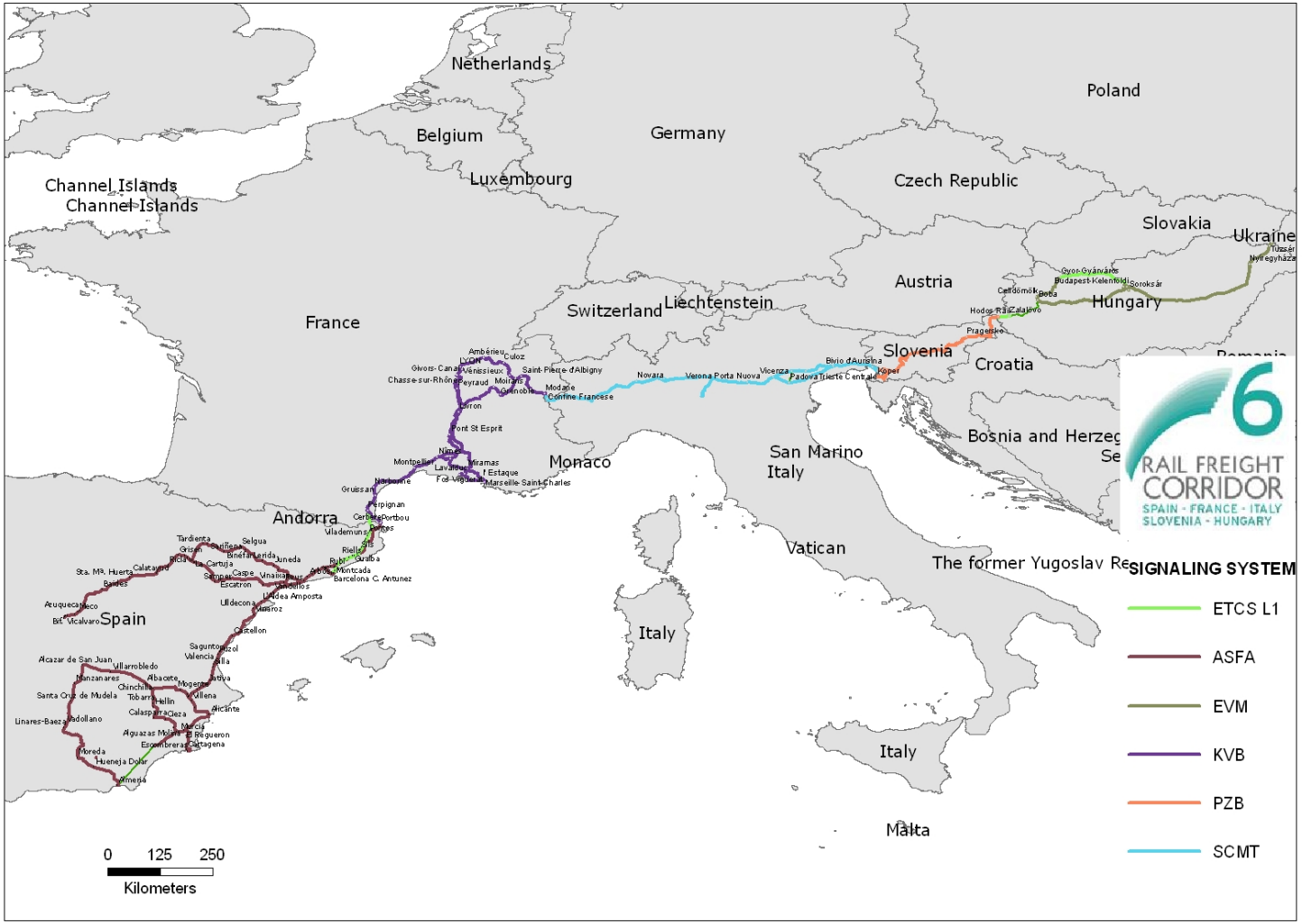
Malta
Gibraltar
0 125 250
Kilometers
LOADING GAUGE TUNNELS
GHE16
80/410
45/364
3,3
NA
RAIL FREIGHT CORRIDOR
SPAIN - FRANCE - ITALY
SLOVENIA - HUNGARY

2.1.3.3.9 Power supply


Netherlands
Belgium
Luxembourg
Germany
Poland
Channel Islands
Channel Islands
Czech Republic
Slovakia
Austria
Hungary
Switzerland
Liechtenstein
France
Slovenia
Croatia
Romania
Bosnia and
San Marino
Italy
Monaco
Andorra
Vatican
Spain
Italy
Italy
Malta
RAIL FREIGHT CORRIDOR
SPAIN - FRANCE - ITALY
SLOVENIA - HUNGARY
POWER SUPPLY
AC 25000 V
DC 1500 V
DC 1500 V/AC 25000 V
DC 3000 V
NO
NA
0
125
250
Kilometers

2.1.3.3.10 Signaling System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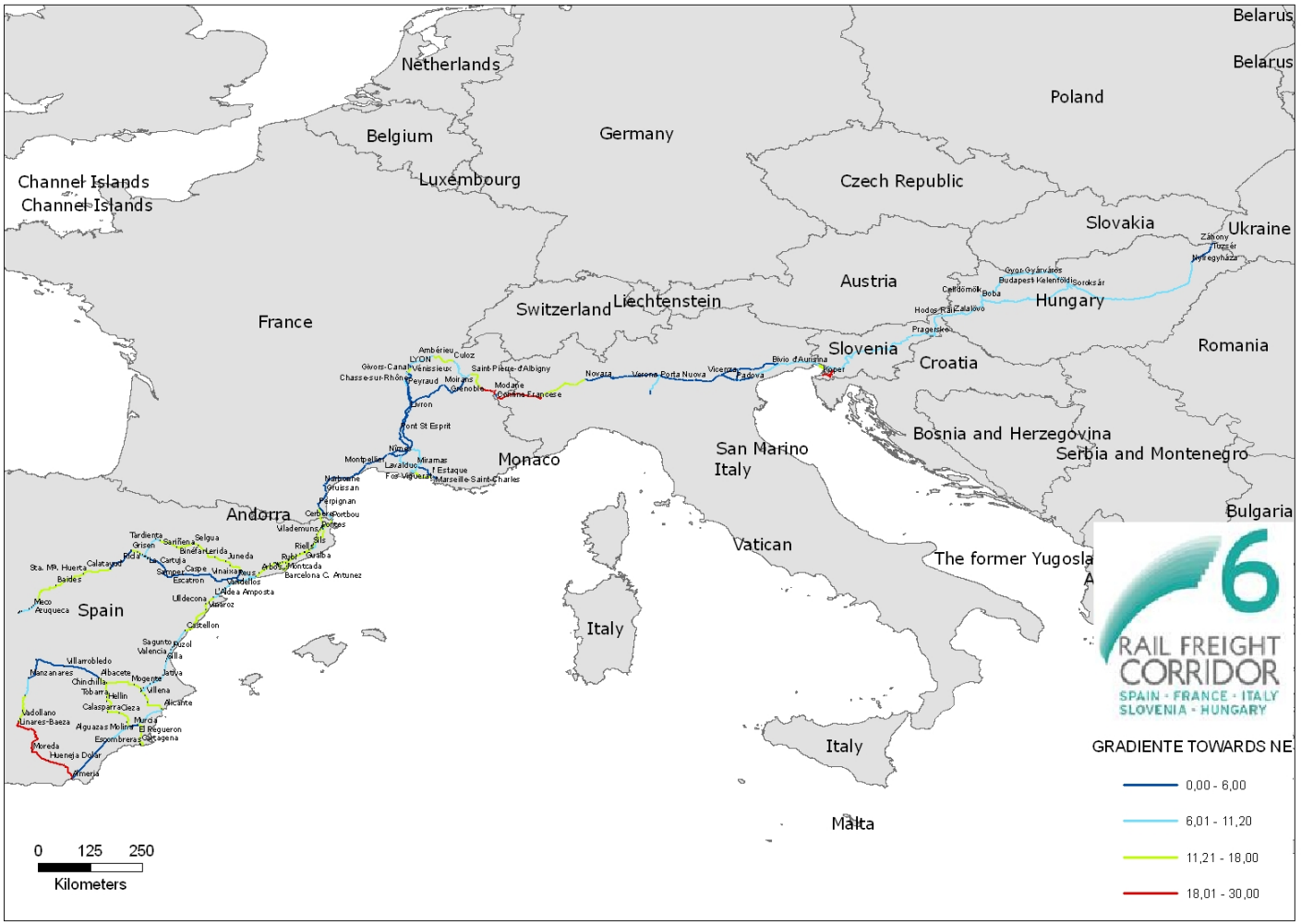
Hungary
Switzerland
Liechtenstein
France
Slovenia
Croatia
Monaco
San Marino
Italy
Andorra
Spain
Vatican
Malta
0 125 250
Kilometers
SIGNALING SYSTEM
ETCS L1
ASFA
EVM
KVB
PZB
SCMT

2.1.3.3.11 Line Gradient N-E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Belarus
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Czech Republic
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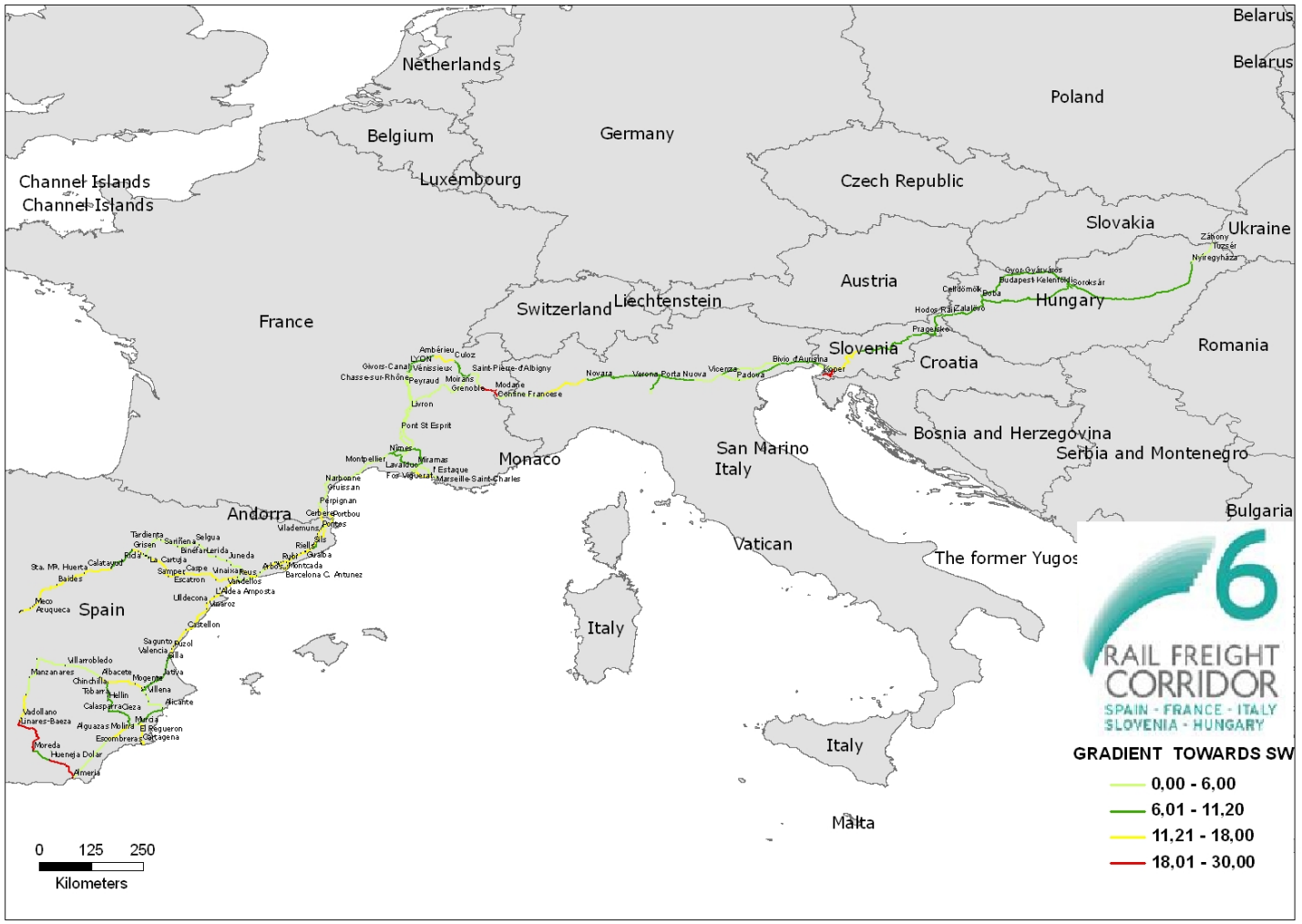
Switzerland
Liechtenstein
France
Slovenia
Croatia
Romania
Bosnia and Herzegovina
Serbia and Montenegro
Monaco
San Marino
Italy
Andorra
Bulgaria
Vatican
The former Yugosla
Spain
Italy
Italy
Malta
RAIL FREIGHT CORRIDOR
SPAIN - FRANCE - ITALY
SLOVENIA - HUNGARY
GRADIENTE TOWARDS NE
0,00 - 6,00
6,01 - 11,20
11,21 - 18,00
18,01 - 30,00
0 125 250
Kilometers

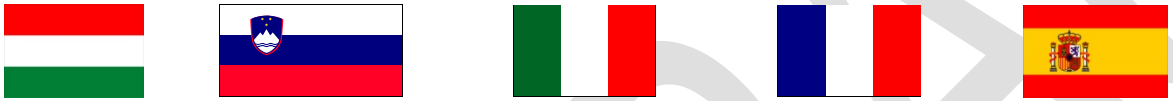
2.1.3.3.12 Line Gradient S-W


Belarus
Belarus
Netherlands
Poland
Belgium
Germany
Channel Islands
Channel Islands
Luxembourg
Czech Republic
Slovakia
Ukraine
Austria
Hungary
Switzerland
Liechtenstein
France
Slovenia
Croatia
Romania
Bosnia and Herzegovina
Serbia and Montenegro
Monaco
San Marino
Italy
Andorra
Bulgaria
Vatican
The former Yugos
Spain
Italy
Italy
Malta
0 125 250
Kilometers
RAIL FREIGHT CORRIDOR
SPAIN - FRANCE - ITALY
SLOVENIA - HUNGARY
GRADIENT TOWARDS SW
0,00 - 6,00
6,01 - 11,20
11,21 - 18,00
18,01 - 30,00

2.2 Measures necessary for creating RFC6

2.2.1 Organisational structures

2.2.1.1 Executive Board



The Executive Board of Rail Freight Corridor 6 was established through an administrative agreement signed in Brussels on 11th March 2013 by the Ministries of Transport of Spain, France, Italy, Slovenia and Hungary. Through this agreement the involved Ministries decided to take over all the tasks and responsibilities of the Executive Board of the ERTMS Corridor D, as instituted by the letters of intent of 12 December 2006 and 12 April 2007.

The Executive Board will be responsible for fulfilling the missions assigned to it according to the Regulation (EU) 913/2010 and will also:

- Ensure jointly with the Management Board that the Rail Freight Corridor 6 is established accordingly to the provisions of the Regulation.
- Support the request of the Management board for European funds which it considers relevant.

- Supervise the progress realised with regard to the implementation plan's measures on the basis of the reporting performed by the Management Board.
- Ask the Management board to report on any matter relating to the smooth functioning of the corridor.
- Issue opinions on any matter of common concern aiming to improve the quality of the corridor, as well as on any matter in connection with the application of the corridor's implementation plan.
- Cooperate with concerned institutions, in particular the European institutions, the national rail safety authorities and the regulatory bodies of its members.
- Reiterate that the Rail Freight Corridor 6, as will be defined in the implementation plan, should be included in the TEN-T Core network.
- Reiterate their commitment for the deployment of ERTMS.
- Encourage Regulatory Bodies to cooperate according to the Regulation.
- Encourage the National Safety Authorities to reinforce their cooperation in order to improve interoperability and seamless cross-border traffic.

The Executive Board of Rail Freight Corridor 6 is chaired by the Ministry of Transport of France and its internal rules were approved in Brussels on 9th April 2013.

2.2.1.2 Management Board

Member	Representative	Deputy
ADIF	Juan Ignacio LEMA	Eduardo MARTINEZ MARTINEZ
TP FERRO	Petros PAPAGHIANNAKIS	Duho MAHIC
RFF	Luc ROGER	Eulalie RODRIGUES
RFI	Stefano CASTRO	Silvia CARLONI
AZP	Boris ZIVEC	Benjamin STEINBACHER-PUSNJAK
SZ	Bojan KEKEC	Danilo SIRNIK
VPE	Réka NÉMETH	Dora KONDASZ
MAV	András NYÍRI	Ágnes KEREKES-LENGYELNÉ

The first step for the setting up of the governance of the Management Board of Rail Freight Corridor 6 was the signature of a Memorandum of Understanding among the 8 (eight) stakeholders involved in Rail Freight Corridor 6: Administrador de

Infraestructuras Ferroviarias (ADIF), Réseau Ferré de France (RFF), Rete Ferroviaria Italiana (RFI), Slovenske *železnice-Infrastruktura d. o. o.,(SZ),* MÁV Hungarian State Railways Private Company Limited by Shares and TP Ferro Concesionaria as Infrastructure Managers concerned and Javna agencija za železniški promet Republike Slovenije (AŽP) and VPE – Hungarian Rail Capacity Allocation Office as relevant Allocation Bodies.

In this MoU, which entered into force on 11th April 2012, the companies mentioned above formalized their commitment to cooperate in order to fulfil the requirements and the aim of the Regulation, to maximize the benefits of cooperation and to agree an appropriate governance structure for the Management Board of RFC 6.

Since Rail Freight Corridor 6 has a principal route which, in its greatest part, coincides with ERTMS corridor D, the migration of Corridor D EEIG towards Rail Freight Corridor 6 appeared to be the most suitable measure to create the governance structure of the Management Board on the basis of the following considerations:

- Corridor D EEIG was established on 19th July 2007 by 4 out of 8 companies concerned by Rail Freight Corridor 6: Administrador de Infraestructuras Ferroviarias (ADIF), Réseau Ferré de France (RFF), Rete Ferroviaria Italiana (RFI), and Slovenske *železnice-Infrastruktura d. o. o.,(SZ),* with the aim to promote amongst its members measures designed to improve interoperability, increase the range of services and implement ERTMS (European Rail Traffic Management System) on the Valencia-Budapest corridor (so called ERTMS corridor D).

- UE Regulation 913/2010 recommends the "*integration of Rail Freight Corridors into the existing TEN-T and the ERTMS corridors*" (par. 10).

- The form of an EEIG as legal entity of the Rail Freight Corridor Management Board is suggested by the art. 8(5) of Regulation and by par. 3.3.1 of the Handbook ("*The existing EEIGs should continue and extend their missions and their membership, when necessary, if the Rail Freight Corridor involves countries not involved in the ERTMS corridor*)".

- The Handbook on the Reg. 913/2010 suggests: "*A suitable and good approach to establish the governance structure for a rail freight corridor is to base it on the governance structure of the existing ERTMS corridor in question*" (par. 2.2.1) and "*Where a governance structure exists for the ERTMS-corridors, the existing Management Board should be the basis of the Management Board of the Rail Freight Corridors, extending or adapting its tasks and its structure, as appropriate, to comply with the Regulation and to avoid duplication of bodies or of tasks"* (par. 3.3.1, "*Existing ERTMS Corridors*").

- The Handbook also suggests that: "*Even if its structure and internal rules are not officially defined and agreed, the Management Board has to prepare its organization and start immediately its missions."* (par. 3.3.1)

So Corridor D EEIG, in cooperation with the other 4 stakeholders involved in Rail Freight Corridor 6, carefully evaluated the following governance migration options in terms of costs and benefits:

1) extension of Corridor D EEIG to Corridor 6 EEIG adapting its mission and membership (entrance of 4 new members)
2) establishment of a new EEIG
3) authorization to Corridor D EEIG to work on behalf of Corridor 6 Management Board until end of 2013

The first option resulted to be the best solution for the following reasons:

a) it avoids duplication of organizational structures
b) it ensures continuity on current corridor work
c) it allows to recover some start-up costs of Corridor D EEIG (estimated at about 21.541 €)
d) it is highly consistent with indications provided by EU documentation: Reg. 913/2010 (par. 10) and Handbook, par. 2.2.1 and 3.3.1

The extension of Corridor D EEIG to Corridor 6 EEIG was formally approved during the preparatory meeting of the Management Board of Rail Freight Corridor 6 held the 7th June 2012 in Rome and the procedure for migration was launched starting from the revision of the Act of Incorporation, to be adapted in its mission and scope. Many efforts were devoted to harmonize legal requirements concerning the 5 countries involved and a strong cooperation among the partners helped to adopt the proper solutions.

The first official meeting of the Management Board of RFC 6 was held in Paris on 21st June 2012. In that occasion the Slovenian Member AZP was appointed as chair partner and the foundations of the governance were laid: the new object of future Rail Freight Corridor 6 EEIG was confirmed ("acting as Management Board of Rail Freight Corridor 6") and important decisions were taken on voting system (2 votes per country), members contribution (sharing on a country-basis) and organizational principles (main bodies, mission and composition of the future corridor Permanent Management Office, dedicated OSS).

The Management Board approved the Act of Incorporation of future "Rail Freight Corridor 6 EEIG" on 13th December 2012 in Rome and its internal rules on 9th April 2013 in Brussels: legal steps for migration have been started in April 2013 and the establishment of the new EEIG is expected in summer 2013.

The Management Board will act as General Assembly of Rail Freight Corridor 6 EEIG when the migration from EEIG Corridor D to EEIG Rail Freight Corridor 6 is accomplished.

The General Assembly of the future Rail Freight Corridor 6 EEIG will meet regularly, at least once a year at the headquarters of the EEIG. It will appoint a Chairman and a Vice-Chairman of the General Assembly and three Managers of the EEIG, one of which as President, for a maximum renewable three years period, among the candidates presented by the Members.

The Managers will be tasked with ensuring that operational and technical tasks incumbent upon the EEIG are duly accomplished**,** in accordance with the relevant provisions of the Regulation (EU) 913/2010, with the decisions and guidelines of the General Assembly and with the opinions and decisions of the Executive Board.

The President of the EEIG will coordinate the activity of the Managers and ensure the respect of the Act of Incorporation, of the nternal Rules and of the Regulation 913/2010.

He will not be full time dedicated to the EEIG; he will have an institutional role and will be entitled to represent the EEIG in international events and before the European Commission, RNE and other European Institutions.

He will supervise the external relations of the EEIG, in cooperation with the Chairman, with the Vice-Chairman of the GA and with the other two Managers, ensuring consistency of different information flows concerning the EEIG (website, publications, press release, leaflets, etc.).

The other two Managers will be the Managing Director and the Deputy Director of the PMO.

2.2.1.3 Task force

Member	**Representative**
Administrador de Infraestructuras Ferroviarias (ADIF)	Juan Ignacio Lema Rial Eduardo Martínez Martínez
Réseau Ferré de France (RFF)	Jean Calio Federico Sala Santamaría
Rete Ferroviaria Italiana (RFI)	Daniela Basile

Slovenske železnice-Infrastruktura d. o. o. (SZ)	Danilo Širnik
Javna agencija za železniški promet Republike Slovenije(AŽP)	Benjamin Steinbacher-Pušnjak
MÁV Hungarian State Railways	Ágnes Lengyelné Kerekes József Bundik
VPE – Hungarian Rail Capacity Allocation Office	László Pósalaki Dóra Kondász
TP Ferro Concesionaria	Petros Papaghiannakis

Due to lack of corridor permanent staff, a Task Force for the establishment of RFC 6 was set up during the preparatory meeting of the Management Board of RFC 6, held in Rome the 7th June 2012. The Task Force of RFC 6 is composed of one or two representatives for each Member; under the coordination of the French partner RFF, it ensures the full involvement of all corridor IMs and ABs in the definition of a common vision of the corridor functioning and development.

The Task Force has been in charge of carrying out some urgent activities up to the creation of a corridor permanent office, such as:

- Prepare the Implementation Plan of Rail Freight Corridor 6
- Adapt the Act of Incorporation of EEIG Corridor D to the needs of Rail Freight Corridor 6 (extension of object, mission, membership)
- Draw up internal rules and organisational documentation of RFC 6 EEIG

- Launch the Transport Market Study, draw up contract for consultancy
- Define characteristics of Lines and Terminals of RFC 6
- Prepare the Corridor Document
- Set up the corridor advisory groups
- Elaborate the budget
- Design the future RFC 6 website
- Define the agreement on Ten-T funding

Since the establishment of the Task Force, meetings among the members were organized quite weekly. These meetings used frequently the videoconference system but there were also physical meetings if it was required.

The Task Force distributed the overall activities, prepared the items to be discussed by the Management Board and followed up the decisions taken. An efficient teamwork and a fair distribution of the tasks, allowed the TF to carry out the necessary steps for the establishment of the Rail Freight Corridor 6.

The Task Force is expected to become a Coordination Group once the Permanent Office will be established (summer 2013). In continuity with the Task Force, it will be leaded by the French partner RFF and will act as link between the permanent staff and the Management Board, in order to ensure that well defined proposals are submitted to the Management Board for decision.

In particular, the Coordination Group is expected to carry out the following activities:

- ensure a high-level general follow-up and coordination of the activities defined by the GA of the EEIG, in cooperation with the Managing Director of the PMO, with the Working Groups and with the Chairman and Vice-Chairman of the GA;
- contribute to prepare decisions of the GA and to their implementation;
- advise and supports the PMO;

- ensure an efficient communication flow between the EEIG (GA, Managers, PMO, Working Groups) and the internal structures of IM/AB Member of the EEIG, acting as contact point between national and corridor level.

2.2.1.4 Advisory Groups

The kick off meeting for the setting up of the Advisory Groups of Rail Freight Corridor 6 was held in Budapest on 30th November 2012.

The preparation of this meeting was based on a wide involvement of the stakeholders interested in the use of Rail Freight Corridor 6, according to the principles of transparency and equality.

A first draft of consultation mechanism was discussed and agreed, mainly based on electronic tools (e-mail and website), on national contact points for operators (in order to facilitate communication and information) and on specific questionnaires to be used for collecting remarks and suggestions from Advisory Groups. This approach responds to the following aims:

- smooth, flexible and transparent communication flow between Management Board and Advisory Groups;
- cost-effective system (1-2 physical meetings per year);
- wide-ranging involvement of Railway Undertakings and Terminal Owners/Operators potentially interested to join Advisory Groups, through publication of documents on the corridor website (invitation, presentations, minutes of meeting, etc.);
- efficient collection of opinions raised by railway operators;
- direct contacts at local level (the use of national language can be very important for small operators mainly on technical matters).

Eight Railway Undertakings were represented at the meeting, coming from Hungary, Austria, France, Slovenia and Italy; a focus was made on the need of operators to be informed on the progress of Transport Market Study, on traffic rules planned for the implementation of the corridor and on the coordination of infrastructure maintenance.

Ten representatives of Terminal Owners/Managers attended the meeting (6 of which from port authorities), coming from Hungary, Slovenia, Spain, France, and Italy, The issues about coordination of infrastructure investments and harmonization of existing investment studies were raised and discussed. The meeting was very fruitful and constructive, representatives from port authorities praised the initiative and appreciated the results of the meeting.

The follow up of the meeting (sending of minutes, preparation of questionnaires, agenda for next meeting, etc.) was ensured by the task force and by the national contact persons for advisory groups. The documentation about the meeting is available at the web address: http://www.corridord.eu/en/further-information.html

In order to facilitate communication with local operators a national contact point is made available for each country concerned by the corridor, in charge of collecting the interests of participation at national level:

Company	Country	Contact name	E-mail address	Telephone
ADIF	Spain	Eduardo Martínez	emmart@adif.es	+34 913006195
TPFERRO	SP/FR	Petros Papaghiannakis	ppapaghiannakis@tpferro.com	+34 972.678.800
RFF	France	Jean Calio	jean.calio@rff.fr	+33 153943456
RFI	Italy	Daniela Basile	da.basile@rfi.it	+39 0644103987
SŽ	Slovenia	Danilo Širnik	danilo.sirnik@slo-zeleznice.si	+38 641608951
MÁV Co.	Hungary	Ágnes Dénesfalvy	denesfalvya@mav.hu	+36 15113215

For consultation of applicants likely to use the corridor (art. 10 of Regulation 913/2010), a first draft of the Implementation Plan was submitted to the Advisory Groups of Rail Freight Corridor 6 the 18th of April 2013 in Barcelona and published on corridor D website on 19th April 2013 for collecting remarks up to 30th April 2013.

All RUs and terminal owners/managers which cannot attend physical meetings but are interested in the use of RFC 6 and/or in the activity of the Advisory Groups, may be involved by means of public information on corridor D website and direct contact with national contact persons. Corridor D website is used to spread information up to the creation of the new Rail Freight Corridor 6 website (which is currently in a planning phase). Moreover, the intention is to invite all the operators to each meeting so that new membership may always be possible. The composition of the Advisory Group is thus open and flexible, membership is not fixed, allowing new comers the possibility to join the activity at any time, as recommended by Regulation 913/2010 and by the Handbook ("*New membership should always be possible and the composition of the Advisory Groups should be revised from time to time to allow an adjustment of the representation." - Handbook, point 3.4.1)*

In order to ensure efficiency to physical meetings**,** attendance may depend on the number of requests ("*Since any operator can claim to be interested in the use of the corridor, the number of possible participating in the Advisory Groups could be too high. Operators of different sizes and with different business models should be represented*" - *Handbook, point 3.4.1-3.4.2).*

According to a decision of the Executive Board of RFC 6, terminal owners/managers not giving the information requested by the Management Board will not be accepted into the Advisory Groups and their terminals can be excluded from the corridor

2.2.1.5 Permanent Management Office (PMO)

A Permanent Management Office (hereafter PMO) for Rail Freight Corridor 6 will be set up in Milan (Italy) in a RFI fenced area during summer 2013 for daily corridor operations, leaded by the Italian partner RFI, to support the implementation of the Rail Freight Corridor 6 and to ensure the functioning of the EEIG.

The selection of staff was made by the Management Board on 9th April 2013 among the candidates promoted by the Members, on the basis of specific evaluation criteria. The PMO will be constituted by 3 full time personnel: one Managing Director from RFI (Italy), one Deputy Director-Infrastructure Manager from MAV (Hungary) and one OSS leader from AZP (Slovenia). Each Member will be responsible for the contractual relationship with its candidates selected for the PMO; terms and conditions of employment for PMO staff will be defined through specific agreements between the EEIG RFC 6 and the Member promoting the candidate

The internationality of the team is considered as a key requirement to ensure a fair balance of representation among the partners and a corridor oriented perspective overcoming national views.

2.2.1.5.1 Managing Director

The PMO will be led by the EEIG Managing Director; he will be a professional full time dedicated to the EEIG, in charge of the day-to-day management of the technical and operational activities of the EEIG.

The objectives and mission of the Managing Director are defined by the General Assembly of the EEIG. Among these objectives, he/she:

- updates the corridor Implementation Plan;
- updates the Corridor Information Document;
- drafts the EEIG yearly budget;
- is responsible for leading and managing the permanent management office (PMO) consisting of full-time dedicated people in line with the budget adopted by the GA
- submits proposals to the GA for recruitment of new permanent staff;
- sets objectives and deadlines to the team of the PMO and provides guidance;
- provides regular and constructive feedback on performance of the team so as to motivate staff and contributes to their professional development;
- coordinates Working Groups' activities;
- leads the Meetings with the Advisory Groups of Railway Undertakings and Terminal Owners/Managers;
- is responsible, for the preparation of bids for European co-financing;
- reports to the GA on the progress of the EEIG activities;
- ensures that appropriate information on decisions taken by the GA and by the Executive Board are timely delivered to all the EEIG operational bodies;
- cooperates with the Chairman and with the Vice-Chairman to the organisation of GA meetings;
- when appropriate, participates to public events aimed at communicating corridor achievements;
- represents, together with the President, the EEIG in the meetings with the Executive Board and the European Commission.

The Managing Director can be substituted in case of necessity by one of the PMO staff upon his authorisation.

2.2.1.5.2 Deputy Director/Infrastructure Adviser

He/she will be a professional full time dedicated to the EEIG, responsible for the tasks described here after concerning the infrastructure activities of the PMO:

- collecting information from the Members on the infrastructure characteristics of the corridor;
- supporting the Managing Director in drafting the geographical description of the corridor, i.e. the corridor routes and the network of terminals;
- following-up the Transport Market Study and ensuring its updating;
- integrating the outcomes of the various studies of the Implementation Plan and especially the Transport Market Study and coordinating them with the other corridors if possible;
- ensuring the production of a Corridor Information Document and its updating, as described in the Regulation (EU) 913/2010;
- supporting the Managing Director in the drafting and updating of the corridor Investment Plan;
- promoting actions towards the Members to ensure the achievement of technical and operational interoperability along the corridor;
- promoting actions towards the members to ensure the coordination of works along the corridor;
- supporting the Managing Director in the meetings with the Advisory Groups;
- carrying out all the infrastructure activities required for the fulfilment of the tasks and duties provided for by Regulation (EU) 913/2010, under the supervision of the Managing Director.

In case of necessity he/she could, upon appropriate authorisation by the Managing Director, replace the Managing Director (reporting to the EC, the GA, the EB…).

2.2.1.5.3 OSS leader

The OSS leader has the following tasks:

- being the single contact point for applicants to request and to receive answers regarding rail infrastructure capacity; this OSS task must be carried out in full cooperation with the existing capacity allocation organizations, entities or structures that exist internally within each country and/or each IM.
- As a coordination tool, providing basic information concerning the allocation of the infrastructure capacity. It shall display infrastructure capacity available at the time of request and its characteristics in accordance to pre-defined parameters for trains running in the freight corridor.
- Deciding about applications for pre-arranged paths both for the yearly timetable and for the running timetable. It allocates in line with Directive 2001/14/EC and with Regulation (EU) 913/2010 and informs the concerned IMs and ABs of these applications and decisions taken without delay.
- Forwarding any request/application of infrastructure capacity which cannot be met by the C-OSS to the competent IM/IMs and ABs and to communicate their decision to the applicant.
- Keeping reserve capacity available within final working timetables to allow for a quick and appropriate response to ad hoc requests for capacity as referred to in Article 13 of Regulation (EU) 913/2010 and in Article 23 of Directive 2001/14/EC.
- Providing information for customers on the content of the Corridor Information Document.
- Keeping an online path request register available to all interested parties.
- Having daily connection with all national OSSs along the corridor and the other RFC C-OSSs.

In a second phase, after 2014, additional people could join the permanent office, according to the decision of the General Assembly of Rail Freight Corridor 6, such as one marketing adviser and one administrative assistant.

2.2.1.6 Working Groups

The Working Groups are expected to be set up during 2013, coordinated by the staff of the Permanent Management Office. Each Working Group is constituted by experts appointed by the Members of the EEIG and led by one representative of them. They assist the PMO and the Coordination Group in their work.

Three Working Groups will be constituted as follows:

2.2.1.6.1 WG Infrastructure

This Working Group will carry out the follow up of the activities related to the ERTMS deployment along the corridor, extending the mission and the tasks of the Corridor D WG. It will also be in charge of the following tasks:

- review and update the Investment Plan along the corridor;
- identify the bottlenecks along the corridor;
- follow, with the Infrastructure Advisor of the PMO, the Capacity Study and the TMS;
- cooperate to the draft of Corridor Information Document;
- update the infrastructure parameters (lines and terminals) constituting the Rail Freight Corridor 6.

Subgroups can be constituted to take care of specific topics such as, for example:

- Train categories
- Change request analysis
- National Values
- Braking curves
- Harmonisation of operational rules

2.2.1.6.2 WG Quality

It will assist the C-OSS in the coordination of the path requests and in the construction of the PaPs (Pre-arranged Paths).

Moreover, it will be in charge of the following tasks:

- define the Priority Rules;
- harmonize national approaches in order to set up a Corridor Model for Traffic Management;
- take care of Customer Satisfaction Surveys;

- analyze the outcomes of the Transport Market Study in order to improve the quality of the corridor;
- promote compatibility between the Performance Schemes along the corridor;
- propose the corridor objectives;
- promote coordination of works along the corridor aiming to minimize traffic disruptions.

2.2.1.6.3 WGMarketing

It will have the task to permanently seek for new traffic opportunities along the entire or a portion of the corridor, taking into consideration the opinion of the Advisory Groups and the outcomes of the Transport Market Study.

It will be in charge of the development of the RFC6 website and will follow the Corridor Information Document.

According to the future needs, the above mentioned Working Groups may be modified or substituted by others. New Working Groups may also be set up when needed in order to deal with further issues which may arise.

3 Essential elements of the Transport Market Study

3.1 Introduction

This document aims to present the essential elements of the Traffic Market Study regarding railway Corridor 6. Different chapters refers to specific thematic areas, with a focus on main parameters that could be considered as fundamental to analyze present and possible future freight market along the Corridor and in its catchment area. The analysis is carried out according to a 3-levels approach:

- **Socio-economic**: this section analyzes socio economic indicators and ratios in order to understand macro-economic and social trends affecting the European economy and, as a consequence, transport demand on Corridor 6;
- **Transport**: this section analyzes transport indicators and ratios, expression of transport demand, as well as infrastructure and services offered to the market;
- **Surveys**: this section presents first results of Focus Group and RP/SP surveys to manufacturing companies located in 5 Countries crossed by Corridor 6.

The different analysis carried out could refer to different geographical areas:

- Europe;
- Catchment area of Corridor 6: NUTS2 zones crossed by Corridor 6 and other zones adjacent to these ones.

3.2 Analysis of the current situation

Present situation is evaluated thanks to on-desk analysis of available data and studies, as Eurostat, Etisplus, CAFT or national/bi-national studies. Preliminary elements about macro-economic framework are based on the overall future parametric performance of the economies of countries crossed by Corridor 6 and, more in general, of Europe; although they might provide some preliminary useful information on the evolution of freight traffic flows, a full forecasts of future flows (as well as of flows on rail along Corridor 6) will be part of next phases of the TMS.

3.2.1 The geographic and socio-economic context

Population of countries has been considered as a proxy of goods consumption. With regards to used data, forecasts for Corridor 6 countries at 2030 are positive (+ 7%) whilst European population is supposed to grow of about 4%; disparities among countries crossed by corridor 6 can be shown: Hungary shows negative relative trends (about 3% reduction), whilst Spain, France, Italy and (at lower rates) Slovenia positive ones. As a consequence, according to population trends, overall transport flows might be expected to move toward west.

Past GDP trends, definitely affected by the 2009 credit crunch and subsequent economic downturn, show an increase in wealth of countries crossed by Corridor 6 slightly lower than the average European growth with Spain, Slovenia and Hungary with the best performances. Despite the negative impact of the economic downturn on historical trends, medium term forecasts (in particular at year 2030) can provide a higher level of consistency, neutralizing short term fluctuations: in real terms, the growth of countries crossed by Corridor 6 is in line with the average European growth, but with strong internal disparities: in 2030 on one side, France will growth in absolute terms of more than 33% versus 2012, whilst Italy, Slovenia and Hungary of about 21-23% (base scenario). Considering countries of Corridor 6 only, at year 2030 the expected GDP is about € 6.100billions, growing about 28% both for countries crossed by Corridor 6 and for Europe.

Table 1 – Social and macro-economic framework

	Population[1] (mln)	GDP[1] (bn €)	GDP per capita[1] (th €)	Production value[2] (bn €)	Industry employees[3] (th)
Europe	521,0	13.042,1	25,9	8.627,9	53.332
5 Countries	183,9	4.671,4	25,9	3.224,8	20.180
Spain	46,2	1.063,4	23,0	684,3	5.630
France	65,0	1.996,6	30,7	1.137,5	6.005
Italy	60,6	1.579,7	26,1	1.280,4	6.955
Slovenia	2,1	36,2	17,6	30,2	343[4]
Hungary	10,0	99,8	10,0	92,4	1.247

Source: elaborations on Eurostat data ([1]: 2011, [2]: 2010, [3]: 2008, [4]: 2007)

Table 2 – Macro-economic framework

	Import (bn €)	Export (bn €)	External dep. ratio
Europe	4.440,5	4.357,9	0,50
5 Countries	1.281,8	1.129,7	0,53
Spain	268,5	220,1	0,55
France	512,8	428,2	0,54
Italy	401,4	375,8	0,52
Slovenia	25,5	25,0	0,51
Hungary	73,6	80,7	0,48

Similar growth rates can be assumed for import of goods and the export of goods, as first proxy on expected traffic flows. At present, Total import of goods for countries crossed by Corridor 6 (including flows among these countries) is about €1.300billions, against a total European import of about €4.400bn; on the contrary, total export is about €1.100billions for countries of Corridor 6 against a total European export of about €4.400billions

Source: elaborations on Eurostat data (2011)

With regard to import and export flows, data presented by Eurostat in its yearbook are collected by Member States and are related to arrivals (for import)

and dispatches (for export). As a consequence, data are not homogeneous and it is not possible to generate a single import/export matrix. According to Eurostat methodology, data does not cover goods on transit.

In 2010 Italy was the main trade partner for all countries but Spain, as it owns a very central position along the Corridor. At the same time, France is the more consistent trade partner for Spain. These geographical reasons do not apply for Slovenia and Hungary whose 2010-trade flows are mostly addressed to biggest countries.

With regard to total arrivals and dispatches flows, France was the first destination of arrivals from Corridor countries, whereas Italy was the first one in terms of dispatches (even if France covered the second place).

Table 3 – Import of goods (Arrivals) (€ millions, 2010)

To/From	Spain	France	Italy	Slovenia	Hungary	Total of arrivals
Spain		27.033,0	17.023,0	195,0	1.805,0	46.056,0
France	30.351,0		36.106,0	1.336,0	3.349,0	71.142,0
Italy	16.737,0	32.171,0		2.164,0	3.606,0	54.678,0
Slovenia	454,0	1.091,0	3.541,0		805,0	5.891,0
Hungary	830,0	2.446,0	2.847,0	654,0		6.777,0

Source: elaborations on Eurostat data (External and Intra-EU trade – A statistical yearbook – Data 1958-2010)

Table 4 – Export of goods (Dispatches) (€ millions, 2010)

From/To	Spain	France	Italy	Slovenia	Hungary	Total of dispatches
Spain		33.949,0	16.295,0	401,0	901,0	51.546,0
France	29.462,0		31.600,0	1.021,0	2.647,0	64.730,0
Italy	19.595,0	39.237,0		3.590,0	3.075,0	65.497,0
Slovenia	244,0	1.509,0	2.656,0		914,0	5.323,0
Hungary	2.281,0	3.595,0	3.990,0	755,0		10.621,0

Source: elaborations on Eurostat data (External and Intra-EU trade – A statistical yearbook – Data 1958-2010)

3.2.2 The transport market characteristics along the corridor

Total length of highways could be considered as representative of the possibility to use road for medium-long range transports of goods: highway's network is distributed evenly in the Corridor 6 countries, if we consider both toll and free network. Density of relevant roads[1] in France, Hungary and Slovenia is more than double the Italian one, while in Spain this data decrease to a very low level; moreover, it is important to note that these data could be affected by different classification of roads at national level. Along Corridor 6, relevant road network is particularly dense in NUTS2 zones of Lombardy, Piemonte and Provence-Alpes-Côte d'Azur.

Table 5 – Corridor 6: length of highways and relevant road

	Lenght of highways* (km)	Density of highways* (km/km²)	Lenght of relevant roads** (km)	Density of relevant roads** (km/km²)
Europe	65.582	0,014	3.507.015	0,721
5 countries	33.765	0,023	1.658.212	1,131
Spain	14.021	0,028	151.396	0,300
France	11.063	0,020	1.030.010	1,883
Italy	6.661	0,022	242.383	0,804
Slovenia	747	0,037	38.178	1,883
Hungary	1.273	0,014	196.245	2,109

Source:* elaborations on Eurostat data (Length of highways, 2009), ** elaboration on Eurostat data (Relevant road, 2009)

Table 6 – Corridor 6: length of tracks

	Length of tracks (km)	Density (km/km²)
Europe	205.920	0,042
5 countries	68.124	0,046
Spain	13.354	0,026
France	29.466	0,054
Italy	16.686	0,055
Slovenia	1.228	0,061
Hungary	7.390	0,079
Corridor 6	6.586*	

Overall railway network density (km of railway lines length/surface area) in 5 Countries is higher than the European average (0,046 km/km^2 vs. 0,042 km/km^2). At national level,

e", "Regional" and "Communal" roads

France and Italy have a density of railway network somewhat higher of the European average, while ratio between Slovenia and Europe is 1,5 and between Hungary and Europe is 1,8. In Spain, density of railway network is lower than the European average (ratio 0,6)

Source: elaborations on Eurostat data (Length of tracks, 2009), *data from IM/AB

Railway infrastructure technical characteristics could reveal strength or weaknesses of the Corridor 6, particularly with regards to some specific parameter variation that could be considered as a technical constraints for International transports and/or affect overall capacity (trains/day).

Most relevant technical characteristics analyzed are:

- *Loading gauge*: this parameter varies between different countries, but there are differences also within 3 of the 5 countries: Italy, France and Slovenia;
- *Axle load*: this parameters assumes 2 different values along the Corridor; it goes down to its minimum in Slovenia and Hungary;
- *Number of tracks*: apart from France where the all part of Corridor 6 has two tracks, in the other 4 Countries sections with a single track have a share between 6% (Italy) to 38% (Spain and Slovenia);
- *Train length*: this parameter varies between countries and also within Spain, Italy, Slovenia and Hungary, with ranges from a minimum of 350 meters (2% of lines in Spain) to a maximum of 750 meters in Spain, France and Hungary. In Italy this parameters assumes 4 different values.

Table 7 – Corridor 6: railways network characteristics

	Loading gauge	Axle load (tons)	Number of tracks	Train length (m)
Spain	45/364 (100%)	22,5 (100%)	Single (38%) Double (61%)	**350 (2%)** **450 (8%)** **500 (72%)** 750 (11%)
France	3,3 (4%) 45/364 (96%)	22,5 (100%)	Double (100%)	750 (100%)
Italy	45/364 (53%) 80/400 (47%)	22,5 (100%)	Single (6%) Double (94%)	550 (5%) 575 (24%) 600 (36%) 625 (35%)
Slovenia	80/401 (27%) 82/412 (25%) 90/410 (45%) 99/429 (3%)	**20,0 (33%)** 22,5 (67%)	Single (38%) Double (62%)	**500 (11%)** 550 (34%) 600 (55%)
Hungary	80/410 (100%)	21,0 (80%) 22,5 (20%)	Single (32%) Double (68%)	600 (24%) 650 (9%) 750 (68%)

Source: data from IM/AB – Percentage share do not consider few missing data. Red text indicates possible technical constraints

Supply overall infrastructure along or nearly Corridor 6, includes also ports and airports but, while ports have direct connections to railway network and/or road network and could guarantee ease of transport to/from inland areas assuming a relevant role in freight mobility along the Corridor 6, airports do not have direct connections with railway lines.

Table 8 – Corridor 6: main freight ports and airports

	Spain	France	Italy	Slovenia	Hungary
Ports	Barcelona	Marseille	Genoa	Koper	Csepel
	Tarragona	Sète	Trieste		
	Valencia		Venice		
Airports	Barcelona	Lyon St-Exupery	Milan Bergamo	Ljubljana	Budapest
	Malaga	Marseille Provence	Milan Linate		
	Madrid Barajas	Nice	Milan Malpensa		
	Valencia		Turin Caselle		
	Zaragoza		Verona/Brescia		
	Alicante				

3.3 Assessment of the market

3.3.1 Actual freight market estimation (by O/D)

Actual freight mobility along the Corridor or paths that influence or could do it, the analysis is carried out with regard to:

- Modes of transport:

Road: transports made on road from Origin to Destination;

Rail (**Sea-IWW**/**Air**): transports made on Rail (or by Sea-IWW or by Air) from Origin to Destination, with other possible connections made with other modes of transport within NUTS zone of Origin and/or Destination;

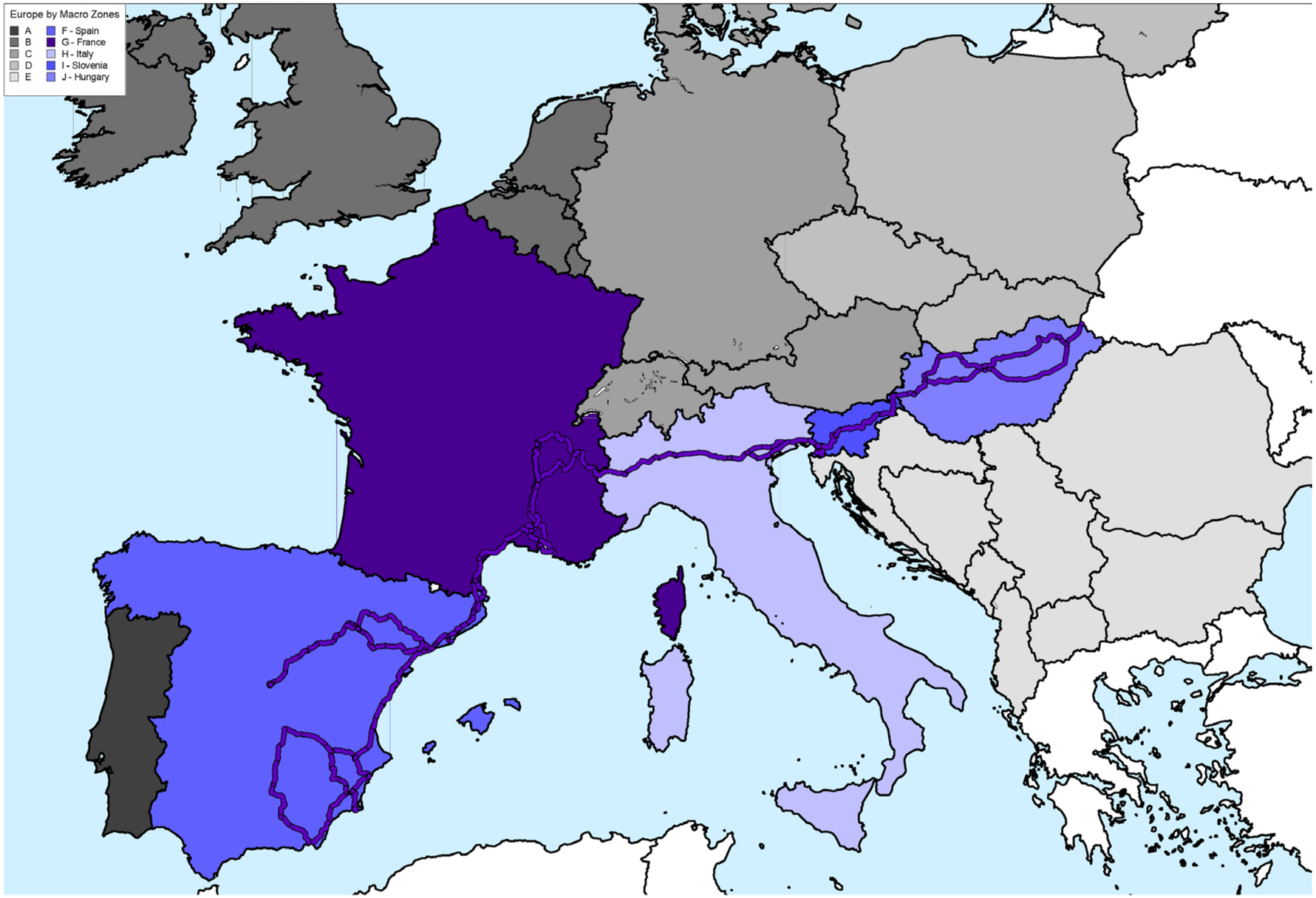
❑ Geographical aggregation:

Europe: including the individual Countries of the macro-zones A, B, C, D, E, Spain, France, Italy, Slovenia and Hungary; Countries such as Russia, Turkey, Morocco, etc.. are considered outside areas;

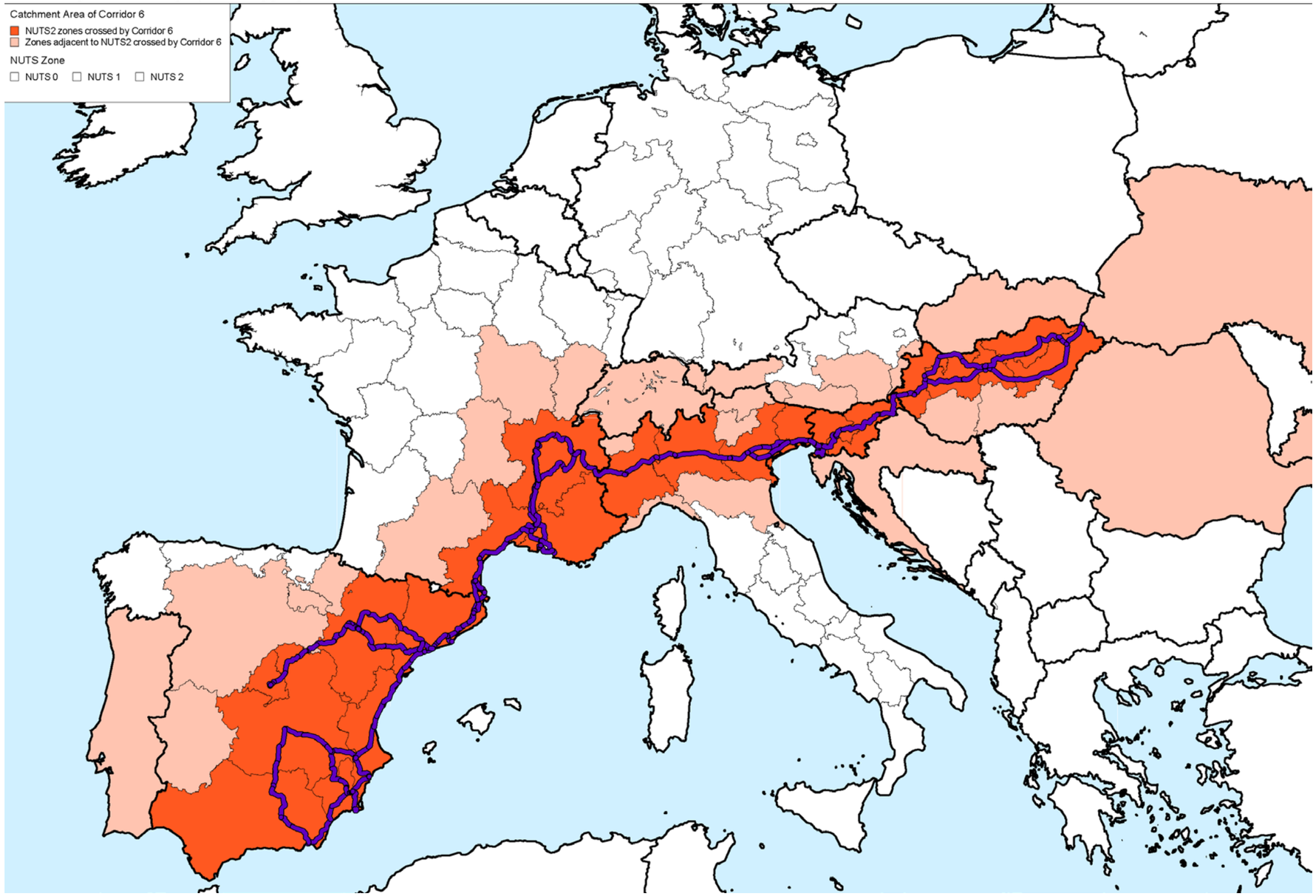
Catchment area of Corridor 6: composed by the NUTS2 zones crossed by the Corridor 6 and the zones[2] adjacent to these ones;

[2] NUTS2 for other zones of Spain, France, Italy, Slovenia, Hungary and Austria, NUTS1 for Germany, NUTS0 for any other Country.

- *Figure 1 –Geographical aggregation: Europe*



- *Figure 2 –Geographical aggregation: Catchment area of Corridor 6*



❑ Spatial Distribution of flows:

INT-INT: Internal-Internal flows are those with both Origin and Destination within the considered geographical aggregation;

These flows are further divided into:

- ❑ National (**INT-INT National**): flows with both Origin and Destination in the same Country
- ❑ International (**INT-INT International**) flows with Origin and Destination in different Countries;

Exchange: transports with Origin (or Destination) within the considered geographical aggregation ("Europe" or "Catchment area of Corridor 6") and Destination (or Origin) outside of it.

3.3.1.1 Transport demand in Europe

The analysis of modal split in freight transport in Europe, reveals the importance of road with 79,5% of market share (15.401 million tons per year); goods transported by Sea or Inland IWW, are double than those shipped by rail (1.246 million tons per year, 6,4% of the total).

o *Figure 3 – Freight flows in Europe by mode of transport (millions of tons)*

Elaboration on Etis and CAFT data

Ratio of flows with Origin and Destination within the same Country, on one side is very high for road (94,2%) and rail transports (74,9%) and on the other side is low for sea/IWW (8,1%) and Air transports (0,3%). With regard to rail transports, 19,6% have origin and Destination in different countries, while 5,6% have Origin or Destination outside Europe.

Table 9 – Freight flows of goods in Europe by O-D links (millions of tons)

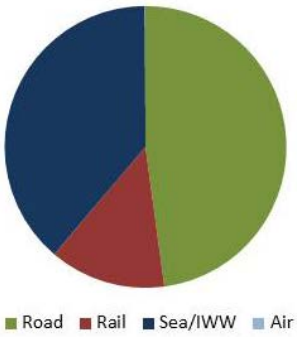
	TOTAL (mln of tons)	INT-INT National (mln of tons)	INT-INT International (mln of tons)	EXCHANGE (mln of tons)
Road	15.401	14.512 (94,2%)	873 (5,7%)	16 (0,1%)
Rail	1.246	933 (74,9%)	244 (19,6%)	69 (5,6%)
Sea/IWW	2.718	220 (8,1%)	706 (26,0%)	1.792 (65,9%)
Air	11,9	0,3 (2,5%)	1,2 (10,1%)	10,4 (87,4%)
Total	19.377	15.665 (80,9%)	1.824 (9,4%)	1.887 (9,7%)

Elaboration on Etis and CAFT data

The analysis of INT-INT International freight flows in Europe, reveals the importance of road transport with 47,8% of market share and of Sea/IWW transport with 38,7%. Regarding freight Exchanges, the analysis shows that Sea/IWW mode is far the most widely used (95%).

- *Figure 4 – INT-INT International freight flows in Europe by mode of transport*

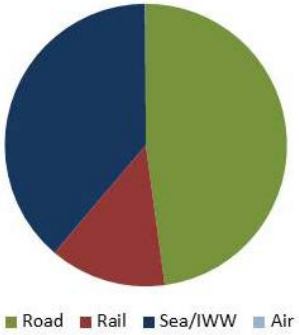
	Freight flows (mln of tons)	Modal split
Road	873	47,8 %
Rail	244	13,4 %
Sea/IWW	706	38,7 %
Air	1,2	0,1 %
Total	1.824	



Elaboration on Etis and CAFT data

- *Figure 5 – Exchange freight flows with Europe by mode of transport*

	Freight flows (mln of tons)	Modal split
Road	16	0,8 %
Rail	69	3,7 %
Sea/IWW	1.792	94,9 %
Air	10,4	0,6 %
Total	1.887	

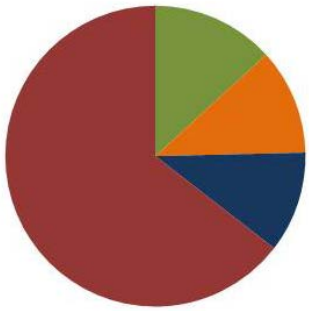


Elaboration on Etis and CAFT data

Those types of goods most transported by road and rail (share higher than 10%), have an important relevance. Concerning "INT-INT international" flows in Europe, 3 types of goods most transported by road are about 35% of the total.

- *Figure 6 – Europe, "INT-INT international": type of goods (NST07) transported by road*

	Millions of tons	%
Food products, beverages and tobacco	115,0	13,2
Chemicals, chemical products, and man-made fibers; rubber and plastic products; nuclear fuel	99,1	11,4
Products of agriculture, hunting, and forestry; fish and other fishing products	94,5	10,9
Other products	561,2	64,5

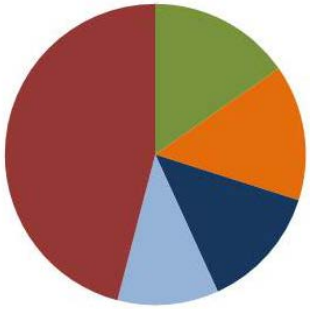


Elaboration on Etis and CAFT data

Concerning "Exchanges" between Europe and other Countries, 4 types of goods most transported by road are about 54% of the total.

- *Figure 7 – Europe, "Exchanges": type of goods (NST07) transported by road*

	Millions of tons	%
Chemicals, chemical products, and man-made fibers; rubber and plastic products; nuclear fuel	2,4	15,3
Products of agriculture, hunting, and forestry; fish and other fishing products	2,3	14,6
Food products, beverages and tobacco	2,1	13,3
Wood and products of wood and cork (except furniture); articles of straw and plaiting materials; pulp, paper and paper products; printed matter and recorded media	1,7	10,9
Other products	7,2	45,9

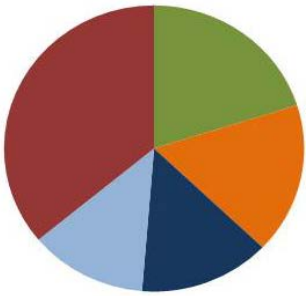


Elaboration on Etis and CAFT data

Concerning "INT-INT international" transports in Europe, 4 types of goods most transported by rail are about 64% of the total.

- *Figure 8 – Europe, "INT-INT international": type of goods (NST1) transported by rail*

	Millions of tons	%
Ores and metal waste	49,2	20,1
Crude and manufactured minerals, building material	41,7	17,0
Machinery, transport equipment, manufactured articles and miscellaneous articles	34,7	14,2
Solid mineral fuels	31,1	12,7
Other products	88,2	36,0

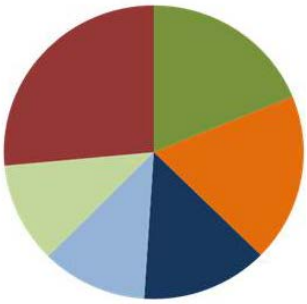


Elaboration on Etis data

Concerning “Exchanges” between Europe and other Countries, 5 types of goods most transported by rail are about 73% of the total.

- *Figure 9 – Europe, “Exchanges”: type of goods (NST1) transported by road*

	Millions of tons	%
Crude and manufactured minerals, building material	12,4	18,8
Solid mineral fuels	12,2	18,5
Ores and metal waste	9,0	13,7
Machinery, transport equipment, manufactured articles and miscellaneous articles	7,5	11,4
Petroleum products	7,3	11,1
Other products	29,8	26,5



Elaboration on Etis data

Road freight O/D matrix reveals that in Europe:

- Countries of Corridor 6 handled about 35% of total goods transported;
- national transport’s share is always really high compared to International transports: the only zone where International flows are relevant is Slovenia (14%), while in the other zones the International transport’s share is between 8% (Hungary) and 1% (zone E);
- France is the country transporting higher volumes of good than any other, but with a very low share for International trade: total export is about 5% (0,9% to Spain and 0,6% to Italy) and total import is about 6% (0,9% from Spain and 0,6% from Italy);

- with regard to flows within 5 Countries of Corridor 6, Italy, Slovenia and most of all Hungary have a balanced distribution of International exchanges with the other countries of the Corridor: exports to the other 4 Countries are between 6% and 59% (Hungary), 6% and 62% (Italy), and 2% and 73% (Slovenia), while imports ranges are 12% to 46% (Hungary), 1% to 56% (Italy), 1% to 66% (Slovenia).

Table 10 – Road freight O/D matrix (thousands of tons)

	A	B	C	D	E	ES	FR	IT	SI	HU	Ext	Tot
A	201.277	628	1.069	158	56	8.869	1.904	521	22	20	23	***214.547***
B	761	2.405.679	68.602	9.845	1.072	4.821	47.810	4.649	297	889	524	***2.544.949***
C	1.061	73.520	4.371.560	45.941	3.692	6.027	29.016	22.914	2.731	5.032	2.078	***4.563.572***
D	179	8.593	51.213	1.599.204	1.937	1.312	4.719	5.550	800	5.583	7.423	***1.686.513***
E	37	876	3.598	997	1.013.847	232	790	3.144	1.628	2.045	594	***1.027.788***
ES	10.462	5.634	7.837	2.599	451	***1.457.590***	***19.414***	***3.785***	***144***	***276***	1.063	***1.509.255***
FR	1.821	36.353	27.166	4.214	677	***18.542***	***1.965.921***	***11.607***	***364***	***312***	338	***2.067.315***
IT	552	4.112	23.727	5.247	2.825	***3.609***	***11.631***	***1.461.734***	***2.508***	***1.080***	297	***1.517.322***
SI	1	346	2.933	864	1.420	***94***	***386***	***3.203***	***59.985***	***682***	76	***69.990***
HU	22	617	5.133	4.796	2.476	***205***	***362***	***1.979***	***797***	***179.541***	208	***196.136***
Ext	6	50	693	1.263	427	533	358	50	0	112	46.983	***50.475***
Tot	***216.179***	***2.536.408***	***4.563.531***	***1.675.128***	***1.028.880***	***1.501.834***	***2.082.311***	***1.519.136***	***69.276***	***195.572***	***59.607***	***15.447.862***

Source: elaborations on Etisplus “Harmonized” road O/D matrix and CAFT data

Rail freight O/D matrix reveals that in Europe:

- those transported within the countries of the Corridor 6 represents only 10% of the total amount of goods;
- according to transports to and from areas of the Corridor 6:
  - France is the country handling more goods, but more than 80% represent national traffic;
  - import of Italy is 35% higher than export;
  - larger interchanges occur between France and Italy (about 3 millions tons), Slovenia and Hungary (about 2.1 millions of tons) and Italy and Hungary (about 1.7 million of tons), while freight flows between Spain and Slovenia/Hungary are not relevant at all;

- macro-zone C is the area with most exchanges with countries of the Corridor.

Table 11 – Rail freight O(D matrix (thousands of tons)

	A	B	C	D	E	ES	FR	IT	SI	HU	Ext	Tot
A	9.295					484						*9.779*
B		129.505	21.699	567	16	186	2.479	4.740	40	330	12	*159.574*
C		7.113	422.036	9.277	1.188	775	2.164	18.313	3.597	3.046	1.190	*468.699*
D		424	21.380	275.161	2.245	15	397	1.045	1.700	2.146	7.160	*311.673*
E		42	463	409	66.300	1	11	1.502	235	2.500	377	*71.840*
ES	917	105	639	5	1	*14.439*	*147*	*112*		*3*	1.055	*17.423*
FR		3.799	3.928	258	51	*696*	*66.103*	*2.240*	*20*	*11*		*77.106*
IT		3.030	11.492	218	111	*65*	*734*	*23.473*	*46*	*245*		*39.414*
SI			5.577	1.407	158		*14*	*130*	*3.520*	*966*	80	*11.852*
HU		327	4.437	992	1.899	*3*	*6*	*1.471*	*1.130*	*10.374*	954	*21.593*
Ext		79	1.555	51.389	106	2.456			19	2.983	21.136	*79.723*
Tot	*10.212*	*144.424*	*493.206*	*339.683*	*72.075*	*19.120*	*72.055*	*53.026*	*10.307*	*22.604*	*31.964*	*1.268.676*

Source: elaborations on Etisplus “Harmonized” Rail Freight by O/D (2010)

With regard to the Mode of Appearance, “liquid bulk goods” have a very high share of (>60%) in Ports of Marseilles, Trieste, Tarragona and Bilbao, while in Valencia we have a very high percentage of Container (78%).

Table 12 – Maritime freight transport demand . Mode of Appearance (MoA)

Port	Large freight containers		Dry bulk goods		Liquid bulk goods		Other cargo		Ro-ro		TOTAL
	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%	Tons
Marseilles	7.999.616	9%	12.746.766	15%	61.339.742	70%	1.816.238	2%	3.131.636	4%	**87.033.998**
Valencia	43.192.551	78%	3.041.695	5%	5.480.918	10%	3.970.931	7%	0	0%	**55.686.095**
Genoa	11.233.156	25%	2.933.640	7%	22.712.250	51%	907.315	2%	6.720.910	15%	**44.507.271**
Trieste	2.363.035	6%	896.347	2%	28.099.713	70%	1.608.905	4%	7.040.225	18%	**40.008.225**
Barcelona	15.411.033	41%	5.058.874	13%	12.157.314	32%	777.723	2%	4.148.895	11%	**37.553.839**
Tarragona	2.442.752	7%	10.079.295	30%	20.598.577	61%	719.928	2%	191.155	1%	**34.031.707**
Venice	1.832.805	6%	10.013.626	35%	12.609.607	44%	4.031.024	14%	415.054	1%	**28.902.116**
Koper	3.692.782	23%	7.591.134	46%	2.862.957	17%	1.724.970	11%	538.978	3%	**16.410.821**
Sete	51.807	1%	1.281.966	33%	2.046.874	53%	202.143	5%	276.295	7%	**3.859.085**
Rotterdam	79.223.038	20%	92.860.740	23%	208.599.680	51%	10.803.165	3%	13.766.628	3%	**405.253.251**
Antwerp	81.767.748	49%	22.049.754	13%	41.736.473	25%	12.706.441	8%	7.791.986	5%	**166.052.402**
Hamburg	61.405.256	56%	28.991.510	27%	15.319.665	14%	2.747.683	3%	867.271	1%	**109.331.385**
Le Havre	19.745.260	20%	19.765.923	20%	54.147.557	56%	1.183.225	1%	1.870.330	2%	**96.712.295**
Bilbao	4.020.485	12%	5.029.456	15%	21.531.955	62%	3.689.215	11%	411.469	1%	**34.682.580**

Source: elaborations on Etisplus “Harmonized Port Freight by OD” (2010)

In any port “Petroleum products” are the most transported type of goods; other type of goods frequently transported are “Machinery, transport equipment, manufactured articles and miscellaneous articles”, “Chemicals” and “Foodstuffs and animal fodder”: these 4 categories represent about 80% of the total.

Table 13 – Maritime freight transport demand . Type of goods

Port	Petroleum products		Machinery		Chemicals		Foodstuffs and animal fodder		Other		TOTAL
	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%	Tons
Marseilles	56.716.972	65%	7.507.895	9%	4.737.794	5%	5.463.357	6%	12.607.980	14%	**87.033.998**
Valencia	8.001.167	14%	18.416.779	33%	13.783.667	25%	8.097.161	15%	7.387.321	13%	**55.686.095**
Genoa	19.998.225	45%	12.707.641	29%	3.428.108	8%	4.680.499	11%	3.692.798	8%	**44.507.271**
Trieste	25.492.967	64%	8.265.731	21%	1.195.683	3%	3.209.463	8%	1.844.381	5%	**40.008.225**
Barcelona	12.182.681	32%	10.971.891	29%	5.183.055	14%	3.700.727	10%	5.515.485	15%	**37.553.839**
Tarragona	19.099.402	56%	1.340.980	4%	1.427.979	4%	2.658.518	8%	9.504.828	28%	**34.031.707**
Venice	12.743.323	44%	1.790.041	6%	1.164.106	4%	2.612.916	9%	10.591.730	37%	**28.902.116**
Koper	2.542.447	15%	3.552.608	22%	1.408.492	9%	2.195.418	13%	6.711.856	41%	**16.410.821**
Sete	1.714.149	45%	425.749	11%	192.116	5%	390.589	10%	1.136.482	29%	**3.859.085**
Rotterdam	187.730.963	46%	41.029.492	10%	40.698.438	10%	45.079.227	11%	90.715.131	22%	**405.253.251**
Antwerp	39.259.468	24%	38.392.960	23%	36.380.715	22%	18.941.951	11%	33.077.308	20%	**166.052.402**
Hamburg	12.967.797	12%	38.504.942	35%	17.230.503	16%	10.924.242	10%	29.703.901	27%	**109.331.385**
Le Havre	51.260.828	53%	12.402.952	13%	6.323.576	7%	7.495.038	8%	19.229.901	20%	**96.712.295**
Bilbao	20.121.069	58%	2.897.801	8%	2.494.601	7%	2.994.710	9%	6.174.399	18%	**34.682.580**

Source: elaborations on Etisplus “Modelled Port Freight by OD” (2010)

The 4 European airports handling highest volumes of goods per year, are those of Frankfurt International, London Heathrow, Amsterdam and Paris Charles de Gaulle with a total of about 6 million/tons. Total flows handled in 16 considered airports along Corridor 6 in terms of transported volumes (airport from Madrid Barajas to Alicante), can be compared to those in transit at Amsterdam, third in Europe.

Table 14 – Air freight transport demand

Country	Airport	Tons/year
Germany	Frankfurt International Airport	2.109.763
United Kingdom	London Heathrow	1.430.482
Netherlands	Amsterdam	1.384.772
France	Paris CGD	1.249.588
Spain	Madrid Barajas	414.795
Italy	Milan Malpensa	399.451
Spain	Barcelona	128.613
Italy	Milan Bergamo	93.239
Hungary	Budapest	71.739
France	Marseille Provence	60.573
Spain	Zaragoza	47.856
France	Lyon St. Exupery	42.659
Italy	Milan Linate	38.135
France	Nice	28.911
Italy	Verona/Brescia	16.945
Spain	Valencia	13.638
Spain	Malaga	10.916
Italy	Turin Caselle	10.819
Slovenia	Ljubljana	7.271
Spain	Alicante	4.552

Source:Etisplus official web site (Etis Project) – Archived Data of Airports (2010)

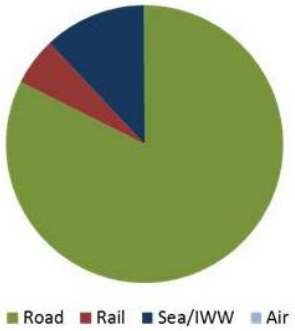
3.3.1.2 Transport demand in the catchment area of Corridor 6

The analysis of modal split of freight flows within the catchment area of Corridor 6, confirms the importance of road transport (82,4%) and reveals also that rail

market share in these part of the 5 countries is near to the rail market share in Europe (5,6% vs. 6,4%); goods transported by rail along the catchment area of Corridor 6 are about 3% of those transported by rail in Europe (277 vs. 1.246 million tons/year).

- *Figure 10 – Freight flows along the Catchment area of Corridor 6 by mode of transport (millions of tons)*

	Freight flows (mln of tons)	Modal split
Road	4.080	82,4 %
Rail	277	5,6 %
Sea/IWW	593	12,0%
Air	2	0,0%
Total	4.952	



Elaboration on Etis and CAFT data

Among those within the catchment area of Corridor 6 53,8% of rail transports have Origin and Destination in the same country, while 10,5% (29 million tons/year) in different ones. Exchanges from catchment area and any other zone (including those in 5 countries not crossed by Corridor 6) are 35,7% (99 million tons/year).

Table 15 – Freight flows to/from the catchment area of Corridor 6, by O-D links (millions of tons)

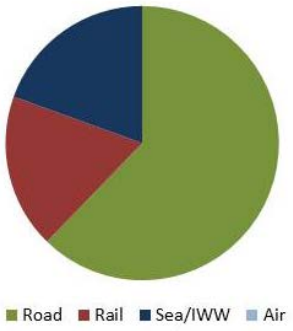
	TOTAL (mln of tons)	INT-INT National (mln of tons)	INT-INT International (mln of tons)	EXCHANGE (mln of tons)
Road	4.080	3.735 (91,6%)	99 (2,4%)	246 (6,0%)
Rail	277	149 (53,8%)	29 (10,5%)	99 (35,7%)
Sea/IWW	593	16 (2,7%)	31 (5,2%)	546 (92,1%)
Air	2	0 (0%)	0 (0%)	2 (100%)
Total	4.952	3.900 (78,8%)	159 (3,2%)	893 (18,0%)

Elaboration on Etis and CAFT data

The analysis of INT-INT International freight flows in the catchment area shows the importance of road transport (62,3% of market share) while Sea/IWW mode has 19,5% of market share and rail mode 18,2%

- *Figure 11 – INT-INT International freight flows in catchment area of Corridor 6 by mode of transport*

	Freight flows (mln of tons)	Modal split
Road	99	62,3 %
Rail	29	18,2 %
Sea/IWW	31	19,5 %
Air	0	0%
Total	159	

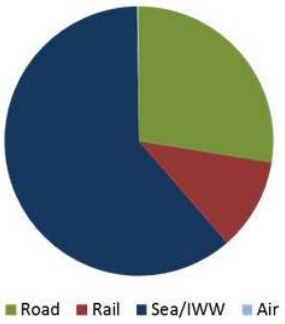


Elaboration on Etis and CAFT data

The analysis of Exchange flows highlights the importance of Sea/IWW transport with 61,1% of market share.

- *Figure 12 – Exchange freight flows with catchment area of Corridor 6 by mode of transport*

	Freight flows (mln of tons)	Modal split
Road	246	27,5 %
Rail	99	11,1 %
Sea/IWW	546	61,1 %
Air	2	0,2 %
Total	893	

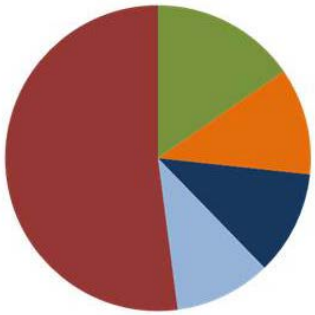


Elaboration on Etis and CAFT data

Those types of goods most transported by road and rail (share higher than 10%), have a clear relevance. Concerning "INT-INT international" flows in catchment area of Corridor 6, 4 types of goods most transported by road are about 40% of the total.

- *Figure 13 – Catchment area of Corridor 6 "INT-INT international": type of goods (NST07) transported by road*

	Millions of tons	%
Products of agriculture, hunting, and forestry; fish and other fishing products	15,1	15,4
Food products, beverages and tobacco	11,1	11,3
Chemicals, chemical products, and man-made fibers; rubber and plastic products ; nuclear fuel	10,8	11,0
Basic metals; fabricated metal products, except machinery and equipment	10,0	10,2
Other products	50,9	52,1

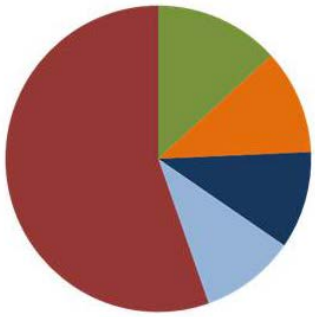


Elaboration on Etis and CAFT data

Concerning “Exchanges” flows between the catchment area of Corridor 6 and other zones, 4 types of goods most transported by road are about 45% of the total.

- *Figure 14 – Catchment area of Corridor 6 “Exchanges”: type of goods (NST07) transported by road*

	Millions of tons	%
Food products, beverages and tobacco	32,4	13,2
Products of agriculture, hunting, and forestry; fish and other fishing products	27,1	11,1
Chemicals, chemical products, and man-made fibers; rubber and plastic products; nuclear fuel	25,1	10,3
Basic metals; fabricated metal products, except machinery and equipment	24,6	10,1
Other products	135,4	55,3

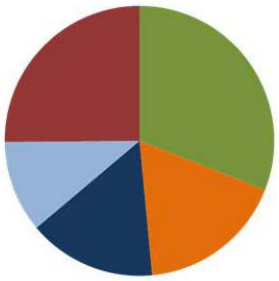


Elaboration on Etis and CAFT data

Concerning “INT-INT international” transports in the catchment area of Corridor 6, 4 types of goods most transported by rail are about 75% of the total.

- *Figure 15 – Catchment area of Corridor 6 "INT-INT international": type of goods (NST1) transported by rail*

	Millions of tons	%
Ores and metal waste	8,9	30,9
Crude and manufactured minerals, building materials	5,1	17,6
Machinery, transport equipment, manufactured articles and miscellaneous articles	4,4	15,4
Petroleum products	3,2	11,0
Other products	7,2	25,1

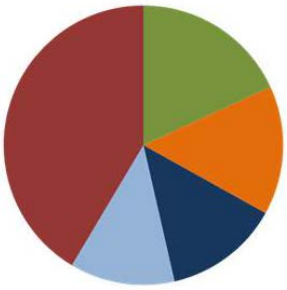


Elaboration on Etis data

Concerning "Exchanges" flows between the catchment area of Corridor 6 and other zones, 4 types of goods most transported by rail are about 60% of the total.

- *Figure 16 – Catchment area of Corridor 6 "Exchanges": type of goods (NST1) transported by rail*

	Millions of tons	%
Crude and manufactured minerals, building materials	17,9	18,2
Machinerym transport equipment, manufactured articles and miscellaneous articles	14,7	14,9
Ores and metal waste	13,2	13,3
Solid mineral fuels	12,0	12,1
Other products	40,9	41,5



Elaboration on Etis data

3.3.1.3 Main flows along the catchment area of Corridor 6

Further analysis is based on **main flows along the catchment area of Corridor 6**. The main flows along the catchment area of Corridor 6 are defined by the following process:

- the starting points are RAIL and ROADO/D matrixes, considered (, separately to find the "RAIL main flows" and "ROAD main flows"; these O/D matrixes refer to the following zoning:
  - NUTS2 zones for Spain, France, Italy, Slovenia, Hungary and Austria[3];
  - NUTS1 zones for Germany;
  - NUTS0 zones for other Countries;
- exclusion of flows that goes for sure along paths that are NOT INTERESTING for Corridor 6, like:
  - flows along paths "far" from Corridor 6, which are clearly NOT INTERESTING for it (for example: flows between Belgium and Finland or between Northern Germany and Paris)
  - exclusion of flows that are maybe "closer" to the Corridor, but that are NOT INTERESTING for it (for example from Slovenia to Greece)
- exclusion of flows that, even if they could go along paths that are interesting for Corridor 6 (it means at least one of the possible paths between Origin and Destination could be along the Corridor 6), ARE NOT "INTERNATIONAL" FLOWS like flows between Turin and Venice or between Portugal and Barcelona. This final exclusion derives from the "European concept" of Corridors, intended to be infrastructure useful to support flows between different countries, and in this specific situation it has to be linked to Corridor 6 so that flows are interesting when they could be made along Corridor 6 and international only when

[3] Austria is in NUTS2 aggregation due to its relevant exchange with the 5 Countries of the Corridor 6.

they assume an international characteristics with regard to the 5 countries crossed by Corridor 6[4],

Remaining flows are then grouped in:

- International Flows with both Origin and Destination within the catchment area, like flows between Barcelona and Milan or between Budapest and Lyon;
- International Flows with:
  - Origin or Destination outside the "catchment area", like flows between Serbia and Milan (exchange flows)
  - Origin and Destination outside the "catchment area" like flows between Bilbao and Greece (transit flows).

The following analysis of main International ROAD or RAIL flows along Corridor 6, refers only to these remaining flows

According to the analysis of main international ROAD freight flows "along" Corridor 6 (by O/D):

- the analysis refers only to flows that could transit through the catchment area of corridor crossing at least one border between 5 Countries, so that could be considered as International flows;
- the analysis considers more than 6.500 O/D pairs;
- "Internationality" of these flows with reference to 5 Countries of Corridor should have to be defined by followed paths, that depend on exact NUTS2 zones Origin or Destination;
- most important International flows within zones of the Catchment Area of the Corridor, are those in Western part of the Corridor, between Spain, France and Italy;
- at NUTS2 level, most important flows within zones of the catchment area of the Corridor are those from Cataluña to Languedoc-Roussillon and vice versa (about 2,3 million of tons/year per direction);
- most important O/D pair is completely within Corridor;

[4] Flows are defined "international and interesting" when going at least along 2 of the 5 Countries of Corridor 6 (Spain, France, Italy, Slovenia and Hungary).

- ratio of the 20 most important O/D pairs is about 9% (18 million tons/year).

Next 4 tables refers respectively to main road or rail flows along or within the catchment area of Corridor 6: in any of these 4 tables, beside data of specific main flows they refer to, are presented also data about the "alternative" mode of transport[5] between the same O/D pairs in order to support an easy comparison of road and rail flows.

In next Table 16, beside the 20 main ROAD flows along the catchment area of Corridor 6 ranked by volumes of goods transported from Origins to Destinations, shows also the volumes of goods transported by rail between the same O/D pairs. These data reveals that, considering the total of goods transported between these 20 most important O/D pairs, road share is about 84% and rail share is about 16%. Rail share increase to 20% if we consider the total of goods transported between the 6.500 O/D pairs considered.

Table 16 – Main international ROAD freight flows "along" the catchment area of Corridor 6 (by O/D)

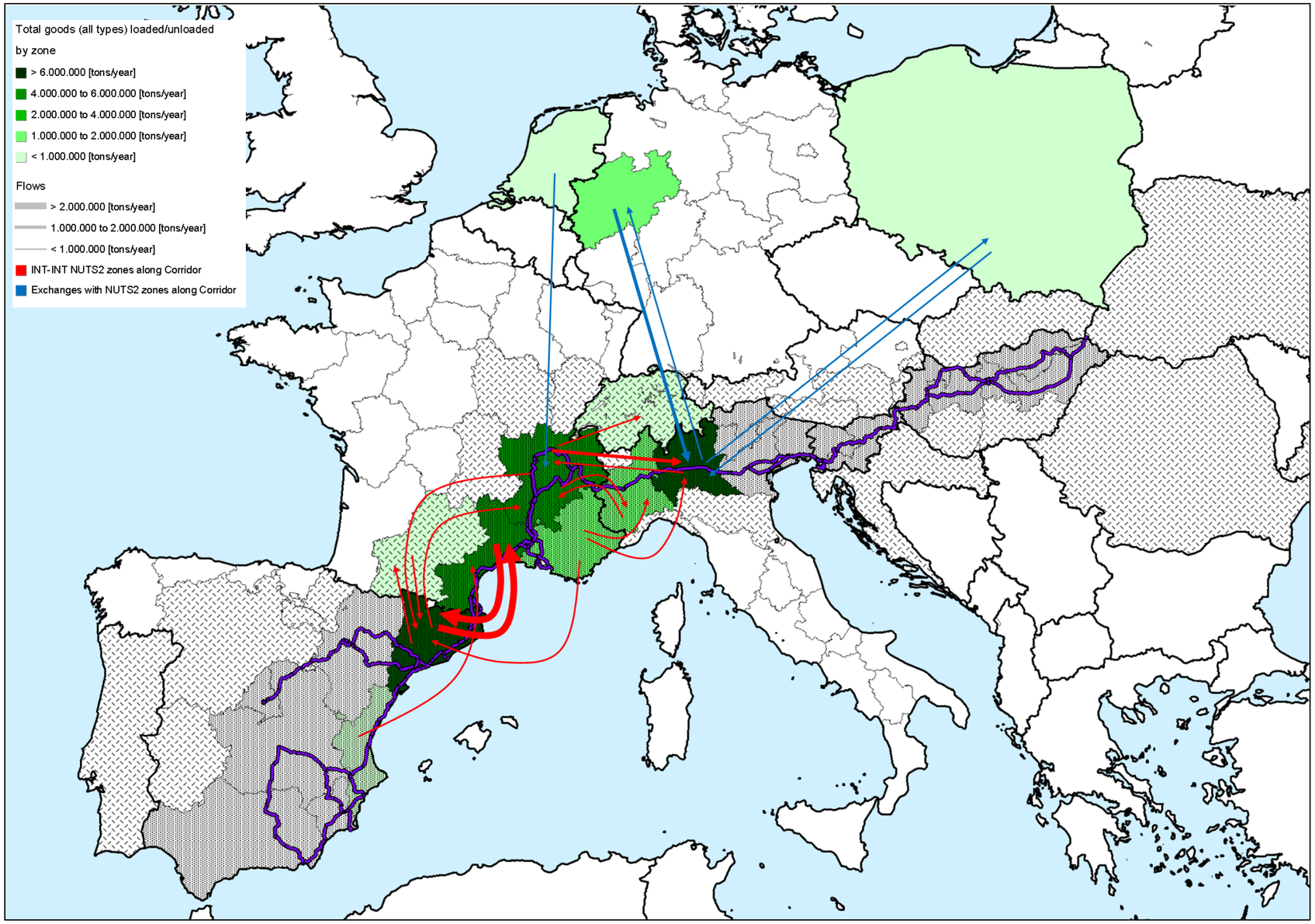
ORIGIN		DESTINATION		ROAD	RAIL
Code	*Name*	*Code*	*Name*	Tons/Year	Tons/Year
ES51	Cataluña	FR81	Languedoc-Roussillon	**2.365.452**	827
FR81	Languedoc-Roussillon	ES51	Cataluña	**2.357.058**	8.820
DEA	Nordrhein-Westfalen	ITC4	Lombardia	**1.107.923**	1.326.670
FR71	Rhône-Alpes	ITC4	Lombardia	**1.019.191**	183.481
ITC4	Lombardia	DEA	Nordrhein-Westfalen	**992.868**	596.218
ITC4	Lombardia	FR71	Rhône-Alpes	**957.302**	102.753
FR62	Midi-Pyrénées	ES51	Cataluña	**864.305**	-
ITC1	Piemonte	FR71	Rhône-Alpes	**783.109**	199.069
ITC4	Lombardia	PL	Poland	**761.736**	10.568
ES51	Cataluña	FR71	Rhône-Alpes	**755.148**	3.002
ES52	Comunidad Valenciana	FR81	Languedoc-Roussillon	**676.939**	307
PL	Poland	ITC4	Lombardia	**645.365**	143.108
FR71	Rhône-Alpes	ITC1	Piemonte	**644.632**	266.768
FR82	Provence-Alpes-Côte d'Azur	ITC4	Lombardia	**641.483**	92.985
FR82	Provence-Alpes-Côte d'Azur	ITC1	Piemonte	**605.841**	52.649
NL	Netherlands	FR71	Rhône-Alpes	**601.536**	56.249
FR71	Rhône-Alpes	ES51	Cataluña	**597.119**	13.767
FR71	Rhône-Alpes	CH	Switzerland	**595.783**	225.272
FR82	Provence-Alpes-Côte d'Azur	ES51	Cataluña	**589.094**	79.985
ES51	Cataluña	FR62	Midi-Pyrénées	**569.295**	610
Total International ROAD freight flows interesting Corridor 6*				**202.250.821**	49.476.829

[5] In this specific tables, the alternative modes of transport considered are only road and rail

Elaboration on Etis and CAFT data

*Data includes International flows within NUTS2 zones of the catchment area of Corridor 6 (for example Madrid to Milan), international and “interesting” Exchanges with zones of the catchment area of Corridor 6 (for example Portugal to Lazio) and international and “interesting” transits through the Corridor (for example Greece to Barcelona). Due to this fact, data are not the same of those listed in previous tables as “Exchanges” with reference to the Corridor, because those one include for example flows like those from Portugal to Madrid that are not international as they are not crossing any border between countries of the Corridor.

o *Figure 17 – Main international ROAD freight flows that could be made "along" Corridor 6 (by O/D)*



Analysis of main international ROAD freight flows within zones of the catchment area of Corridor 6 (by O/D):

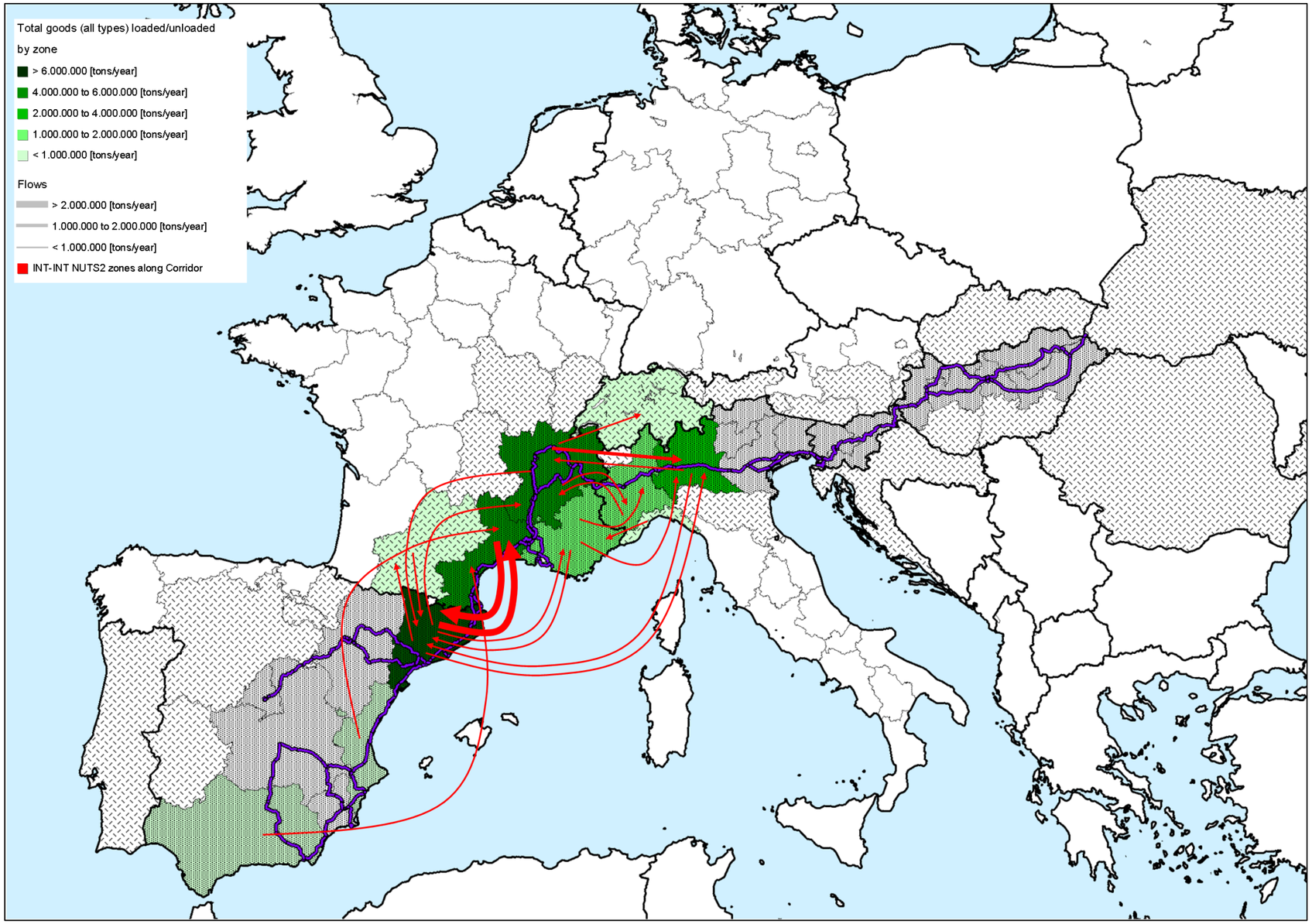
- refers only to flows with Origin and Destination in the zone of the catchment area, that crossing at least one border between 5 Countries;
- considers more than 1.000 O/D pairs;
- reveals that ratio of the 20 most important O/D pairs is about 29% (16 million tons/year);
- reveals that ratio of the 2 most important OD pairs (from Cataluña to Languedoc-Roussillon and vice versa) is about 8% (4,7 million tons/year);

In next Table 17, beside the 20 main ROAD flows within the catchment area of Corridor 6 ranked by volumes of goods transported from Origins to Destinations, shows also the volumes of goods transported by rail between the same O/D pairs. These data reveals that, considering the total of goods transported between these 20 most important O/D pairs, road share is about 93% and rail share is about 7%. Rail share increase to 19% if we consider the total of goods transported between the 1.000 O/D pairs considered.

Table 17 – Main international ROAD freight flows within zones of the Catchment Area (by O/D)

ORIGIN		DESTINATION		ROAD	RAIL
Code	*Name*	*Code*	*Name*	Tons/Year	Tons/Year
ES51	Cataluña	FR81	Languedoc-Roussillon	**2.365.452**	827
FR81	Languedoc-Roussillon	ES51	Cataluña	**2.357.058**	8.820
FR71	Rhône-Alpes	ITC4	Lombardia	**1.019.191**	183.481
ITC4	Lombardia	FR71	Rhône-Alpes	**957.302**	102.753
FR62	Midi-Pyrénées	ES51	Cataluña	**864.305**	-
ITC1	Piemonte	FR71	Rhône-Alpes	**783.109**	199.069
ES51	Cataluña	FR71	Rhône-Alpes	**755.148**	3.002
ES52	Comunidad Valenciana	FR81	Languedoc-Roussillon	**676.939**	307
FR71	Rhône-Alpes	ITC1	Piemonte	**644.632**	266.768
FR82	Provence-Alpes-Côte d'Azur	ITC4	Lombardia	**641.483**	92.985
FR82	Provence-Alpes-Côte d'Azur	ITC1	Piemonte	**605.841**	52.649
FR71	Rhône-Alpes	ES51	Cataluña	**597.119**	13.767
FR71	Rhône-Alpes	CH	Switzerland	**595.783**	225.272
FR82	Provence-Alpes-Côte d'Azur	ES51	Cataluña	**589.094**	79.985
ES51	Cataluña	FR62	Midi-Pyrénées	**569.295**	610
ES61	Andalucia	FR81	Languedoc-Roussillon	**554.860**	-
ITC4	Lombardia	ES51	Cataluña	**473.878**	17.882
ES51	Cataluña	FR82	Provence-Alpes-Côte d'Azur	**457.014**	7.864
ES51	Cataluña	ITC4	Lombardia	**445.086**	38.891
ITC3	Liguria	FR82	Provence-Alpes-Côte d'Azur	**438.043**	34
Total International ROAD freight flows within zones of the Catchment Area				**55.764.822**	12.960.784

o *Figure 18 – Main international ROAD freight flows within zones of the Catchment Area (by O/D)*



According to the analysis of main international RAIL freight flows “along” the catchment area of Corridor 6 (by O/D):

- the analysis refers to flows that could transit through the catchment area of the Corridor, crossing at least one border between 5 Countries.
- the analysis considers more than 1.600 O/D pairs;
- “Internationality” of these flows with reference to 5 Countries of Corridor should have to be defined by followed paths, that depend on exact NUTS2 or NUTS3 zones Origin or Destination of these flows
- most important flows within zones of the Catchment Area of the Corridor are those from Zahodna Slovenjia to Slovakia and vice versa (more or less 2.000.000 tons/year); the analysis of transported volumes (next table) reveals the high ratio of these flows on total flows within the Corridor
- most important International flows within NUTS2 zones of Corridor, are those are those in Eastern part of the Corridor and in particular between Slovenia e Hungary
- most important O/D pair is an “Exchange” with reference to Corridor.
- ratio of the 20 most important O/D pairs is about 34% (17 million tons/year).

Next Table 18, beside the 20 main RAIL flows along the catchment area of Corridor 6 ranked by volumes of goods transported from Origins to Destinations, shows also the volumes of goods transported by road between the same O/D pairs. These data reveals that, considering the total of goods transported between these 20 O/D pairs, road share is about 30% and rail share is about 70%. Rail share decrease to 20% if we consider the total of goods transported between the 1.600 O/D pairs considered.

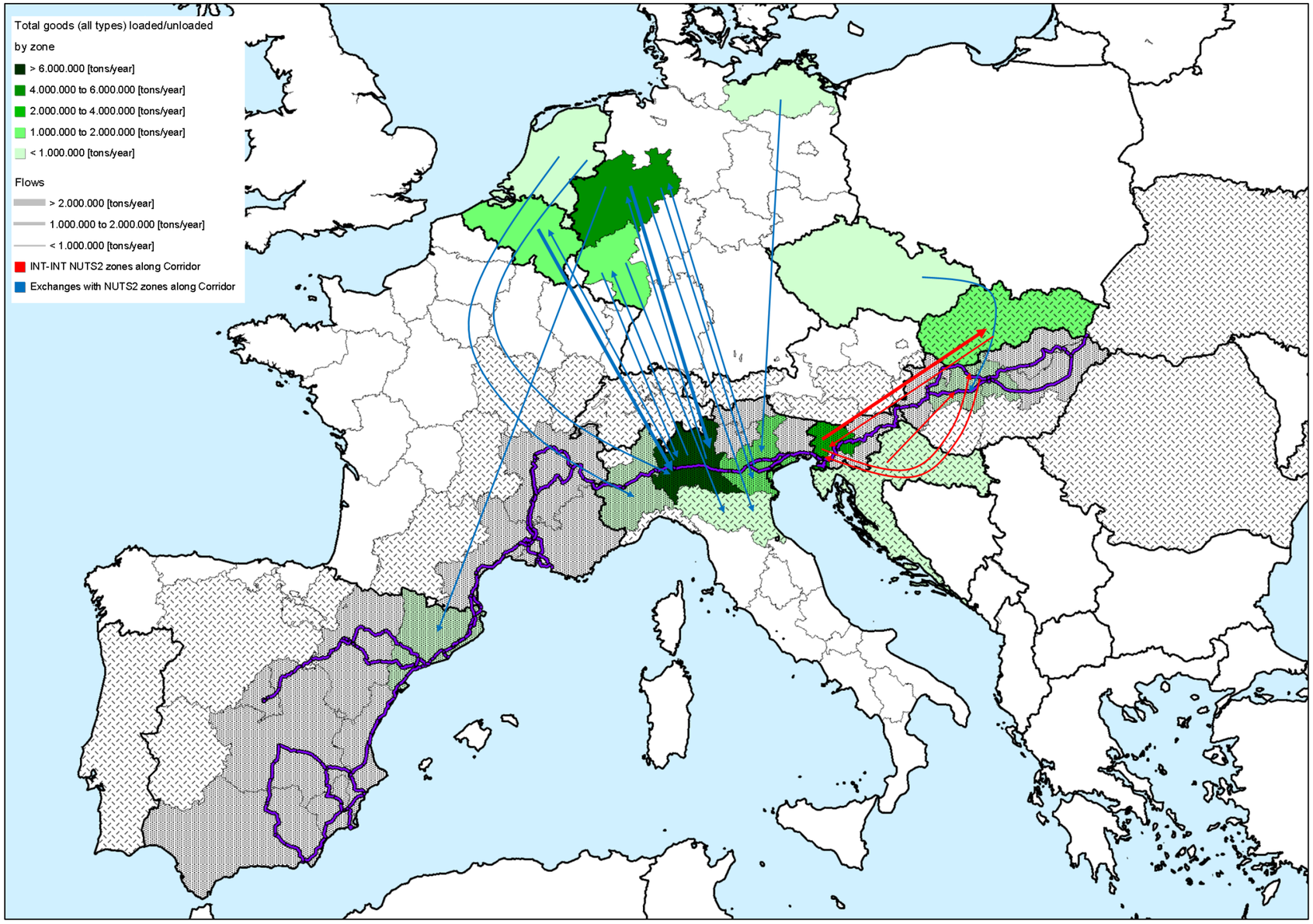
Table 18 – Main international RAIL freight flows "along" the catchment area of Corridor 6 (by O/D)

ORIGIN		DESTINATION		RAIL	ROAD
Code	*Name*	*Code*	*Name*	Tons/Year	Tons/Year
BE	Belgium	ITC4	Lombardia	**1.720.646**	520.263
DEA	Nordrhein-Westfalen	ITC4	Lombardia	**1.326.670**	1.107.923
SI02	Zahodna Slovenija	SK	Slovakia	**1.208.184**	172.833
DEB	Rheinland-Pfalz	ITC4	Lombardia	**998.983**	370.063
ITC4	Lombardia	BE	Belgium	**908.660**	320.449
DEA	Nordrhein-Westfalen	ITD3	Veneto	**873.357**	553.961
HR	Croatia	HU21	Közép-Dunántúl	**832.403**	74.705
SK	Slovakia	SI02	Zahodna Slovenija	**826.248**	85.365
SI02	Zahodna Slovenija	HU10	Közép-Magyarország	**742.323**	104.022
NL	Netherlands	ITC1	Piemonte	**711.368**	208.676
DEB	Rheinland-Pfalz	ITD5	Emilia-Romagna	**698.916**	113.431
HU10	Közép-Magyarország	SI02	Zahodna Slovenija	**694.949**	36.610
ITD3	Veneto	DEA	Nordrhein-Westfalen	**666.475**	514.024
CZ	Czech Republic	HU21	Közép-Dunántúl	**664.038**	219.618
DEA	Nordrhein-Westfalen	ES51	Cataluña	**663.947**	426.101
DEA	Nordrhein-Westfalen	ITD5	Emilia-Romagna	**653.116**	335.408
NL	Netherlands	ITC4	Lombardia	**644.023**	540.889
DE8	Mecklenburg-Vorpommern	ITD3	Veneto	**603.026**	19.671
ITC4	Lombardia	DEB	Rheinland-Pfalz	**599.003**	221.730
ITC4	Lombardia	DEA	Nordrhein-Westfalen	**596.218**	992.868
Total International RAIL freight flows interesting Corridor 6*				**49.476.829**	202.250.821

Elaboration on Etis data

* Data includes International flows within NUTS 2 zones of the catchment area of Corridor 6 (for example Madrid to Milan) international and "interesting" Exchanges with zones of the catchment area of Corridor 6 (for example Portugal to Lazio) and international and "interesting" transits through the Corridor (for example from Greece to Barcelona). Due to this fact, data are not the same of those listed in previous tables as "Exchanges" with reference to the Corridor, because those one include for example flows like those from Portugal to Madrid that are not international as they are not crossing any border between countries of the Corridor.

o *Figure 19 – Main international RAIL freight flows that could be made "along" Corridor 6 (by O/D)*



Analysis of main international RAIL freight flows within zones of the catchment area of Corridor 6 (by O/D):

- refers only to flows with Origin and Destination in the zone of the catchment area, that crossing at least one border between 5 Countries;
- considers about 380 different O/D pairs;
- reveals that ratio of the 20 most important O/D pairs is about 64% (8,3 million tons/year);
- reveals that ratio of the most important OD pair (from Zahodna Slovenia to Slovakia and vice versa) is about 15,7% (2 million tons/year);
- .

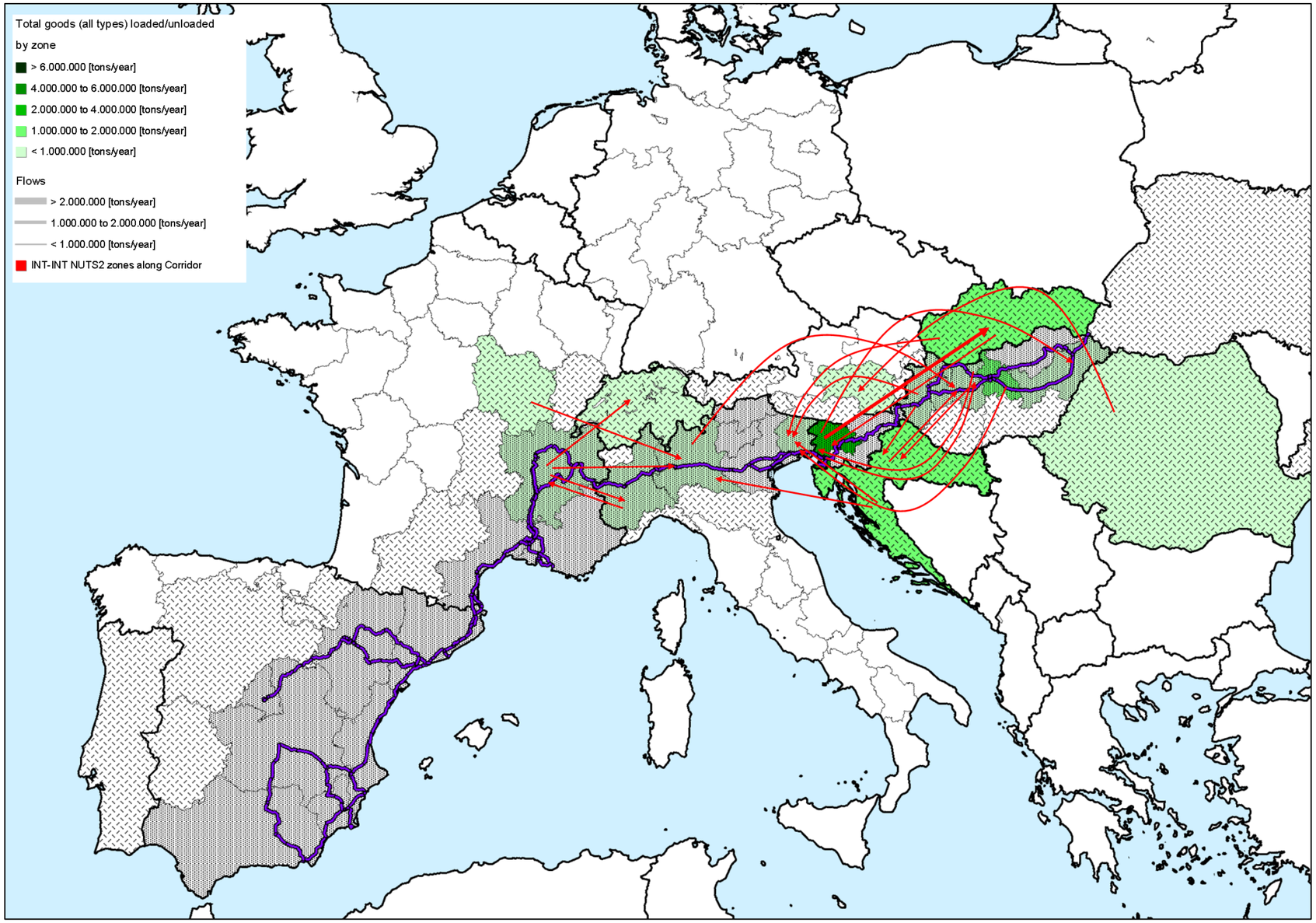
Next Table 19, beside the 20 main RAIL flows within the catchment area of Corridor 6 ranked by volumes of goods transported from Origins to Destinations, shows also the volumes of goods transported by road between the same O/D pairs. These data reveals that, considering the total of goods transported between these 20 O/D pairs, road share is about 35% and rail share is about 65%. Rail share decrease to 20% if we consider the total of goods transported between the 380 O/D pairs considered.

Table 19 – Main international RAIL freight flows within zones of the Catchment Area (by O/D)

ORIGIN		DESTINATION		RAIL	ROAD
Code	*Name*	*Code*	*Name*	Tons/Year	Tons/Year
SI02	Zahodna Slovenija	SK	Slovakia	**1.208.184**	172.833
HR	Croatia	HU21	Közép-Dunántúl	**832.403**	74.705
SK	Slovakia	SI02	Zahodna Slovenija	**826.248**	85.365
SI02	Zahodna Slovenija	HU10	Közép-Magyarország	**742.323**	104.022
HU10	Közép-Magyarország	SI02	Zahodna Slovenija	**694.949**	36.610
HR	Croatia	ITD4	Friuli-Venezia Giulia	**556.484**	149.441
HR	Croatia	ITC4	Lombardia	**549.940**	249.357
HU22	Nyugat-Dunántúl	HR	Croatia	**487.638**	225.667
HU22	Nyugat-Dunántúl	ITD4	Friuli-Venezia Giulia	**386.673**	34.337
FR71	Rhône-Alpes	ITC1	Piemonte	**266.768**	644.632
FR71	Rhône-Alpes	CH	Switzerland	**225.272**	595.783
FR26	Bourgogne	ITC4	Lombardia	**210.032**	222.382
SK	Slovakia	ITD4	Friuli-Venezia Giulia	**203.794**	76.393
ITC1	Piemonte	FR71	Rhône-Alpes	**199.069**	783.109
FR71	Rhône-Alpes	ITC4	Lombardia	**183.481**	1.019.191
RO	Romania	AT22	Steiermark	**172.494**	38.892
ITC4	Lombardia	HU21	Közép-Dunántúl	**165.548**	67.814
HU21	Közép-Dunántúl	HR	Croatia	**140.465**	157.994
HU10	Közép-Magyarország	ITD4	Friuli-Venezia Giulia	**134.494**	9.900
HU32	Észak-Alföld	SI02	Zahodna Slovenija	**131.177**	11.536
Total International RAIL freight flows within zones of the Catchment Area				**12.960.784**	55.764.822

Elaboration on Etis data

- *Figure 20 – Main international RAIL freight flows within zones of the Catchment Area (by O/D)*



3.3.2 Assessment of customer needs (regarding completed surveys)

3.3.2.1 Focus Group

- 2 focus group
- Attendants: logistic manager of manufacturing companies and transport service provider

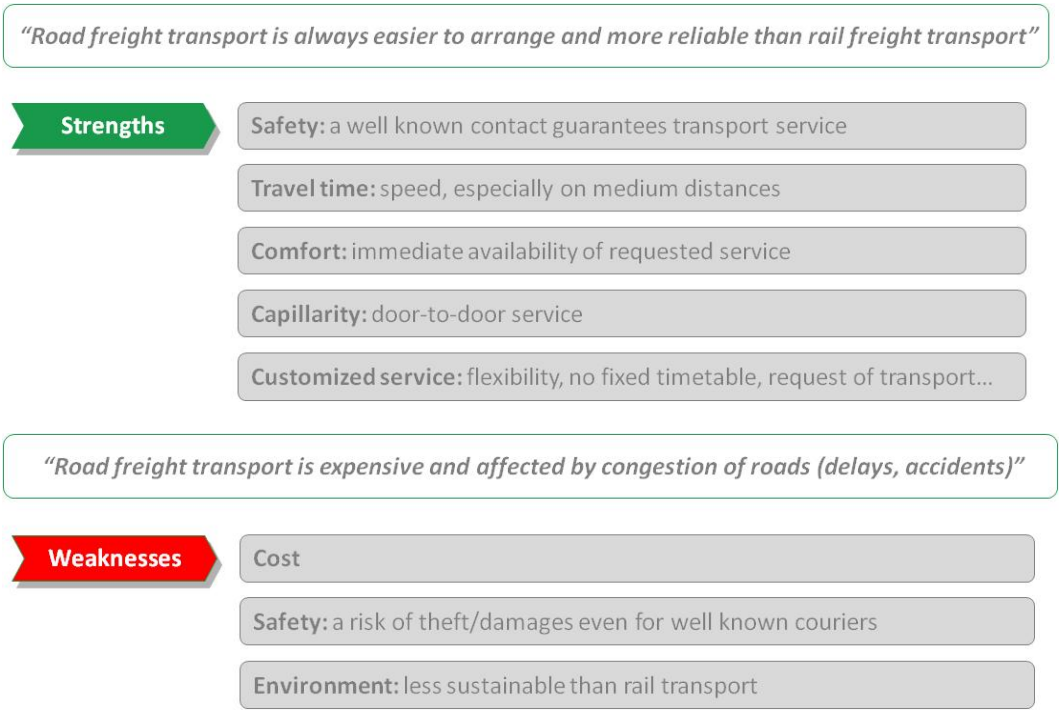
Focus Groups have been arranged to collect information needed to define most relevant parameters affecting the decisions of shippers and transport service providers, related to modes of transport available or to suggest/propose.

- *Figure 21 – Parameters most frequently considered to decide mode of transport*

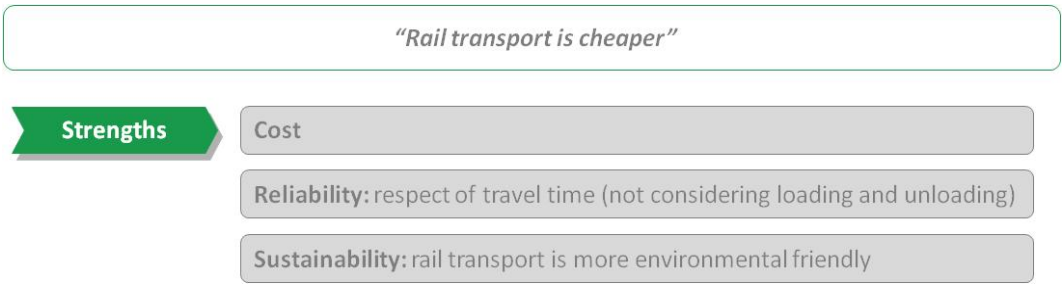
Most important parameters considered by attendants are:

- **Travel time**: it is really important to have a "fast delivery service", most of because in last year it happens more frequently to work with "just in time" production and delivery;
- **Cost**: cost is always considered when asking for or offering a transport service;
- **Reliability of transport**: service has to guarantee delivery of products everywhere with no delays and with no damages, having total responsibility of goods;
- **Possibility to overcome critical aspects**: the transport service provider has to prove is capability to overcome "administrative and bureaucratic issues", especially at some border.

- *Figure 22 – Present road transport services analysis: strength and weaknesses*



- *Figure 23 – Present rail transport services analysis: strength and weaknesses*



"Travel time is really high and we don't have real time information about shipment"

Weaknesses

- **Travel time:** rail transport do not support "sudden" delivery
- **Travel time:** loss of time during load/unload to/from trains
- **Customer services:** lack of a contact person to have information
- **Safety:** different transfer (road/rail/road) increase risks of damage/theft
- **Volumes of goods:** it is good only for high volumes (complete wagons)
- **"Last mile":** rail transport is not a door to door service

- *Figure 24 – Possible actions (suggestions) and expectations of the attendants at Focus Groups*

Possible actions

- **Policy:** strong policy actions "against" road transport would support rail
- **Service provider:** it would be important to have a single service provider taking care of the overall transport, including "last mile" and responsibility

Expectations

- **Cost:** rail transport should have to be 20% cheaper than road transport
- **Capillarity:** door-to-door service (including responsibility of transported goods)
- **Customer services:** it is important to have a contact person to have real time information about shipment

A general analysis of completed Focus group reveals that:

- ❑ road transport has a "better and easier" organization: request of service, time to have the service, contact people, well-known service providers, well-known cost;
- ❑ rail transport service need specific policy actions to increase its market share;
- ❑ rail transport services are not supported by "efficient marketing actions" compared to road transport: all shippers agree on importance to receive information and economical/technical proposal from rail transport service providers;

- rail transport should need to be offered by a well-known service providers and, today, it would be better to see a road transport service provider to offer “also” rail transport, than the opposite;
- rail transport, as any other transport service, should have to include:
  - a door-to-door service, that means to take care also of first and last mile;
  - 100% responsibility of transported goods from initial Origin to Destination final destination;
  - a contact person to have real time information about transport.

3.3.2.2 RP/SP survey’ preliminary results

Among 101 interviewees concerning evaluation of road and rail transport characteristics, very few interviewed people were able to express their own opinion about rail transport characteristics.

	Interviewees	Valid response*
Evaluation of ROAD transport characteristics	101	91 (90%)
Evaluation of RAIL transport characteristics	101	7 (7%)

*different response from “Not applicabile/don’t know”

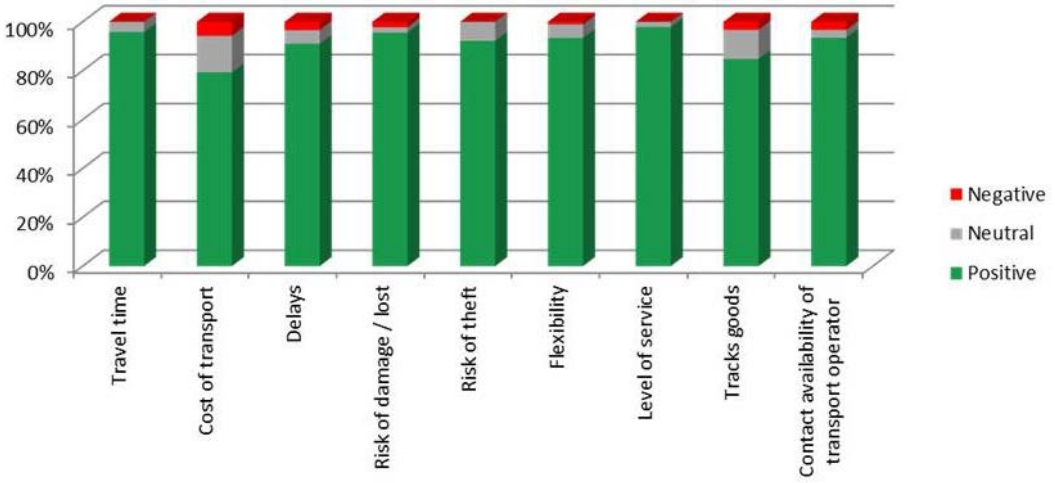
It is observed that there were many interviewees who were unable to express an opinion on the rail transport characteristics

Regarding road transport characteristics, most of people interviewed replied all the questions giving a positive opinion on all items. Two aspects seems to be a little less positive than the others: the “Possibility to contact a person to have information about transport” and, most of all, “Cost of transport”, probably affected also by actual economic situation leading to a continuous research of lower and lower costs. “Cost of transport” is the only items with less than 80% of people “Very satisfied” or “Somewhat satisfied”, but “Very dissatisfied” people (15) are observed with regard also to “Delays” and “Possibility to track goods during transport”.

Table 20 – Road characteristics evaluation: preliminary results

	Very satisfied	Somewhat satisfied	Neutral	Somewhat dissatisfied	Very dissatisfied
Travel time	***46%***	50%	4%	0%	**0%**
Cost of transport	***35%***	44%	15%	5%	**1%**
Delays	***48%***	43%	6%	2%	**1%**
Risk of damage/lost goods	***55%***	41%	2%	2%	**0%**
Risk of theft	***63%***	29%	8%	0%	**0%**
Flexibility (possibility to satisfy requests/needs for transportation)	***50%***	44%	5%	1%	**0%**
General level of service	***49%***	49%	2%	0%	**0%**
Possibility to tracks goods during transport	***41%***	44%	12%	2%	**1%**
Possibility to contact a person to have information about transport	***52%***	42%	3%	3%	**0%**

- *Figure 25 – Road characteristics evaluation: preliminary results*



Among those completed, only 7% of interviews have useful replies to questions related to rail transport characteristics: most of interviewed didn't reply because they even don't know most relevant aspects of this mode of transport.

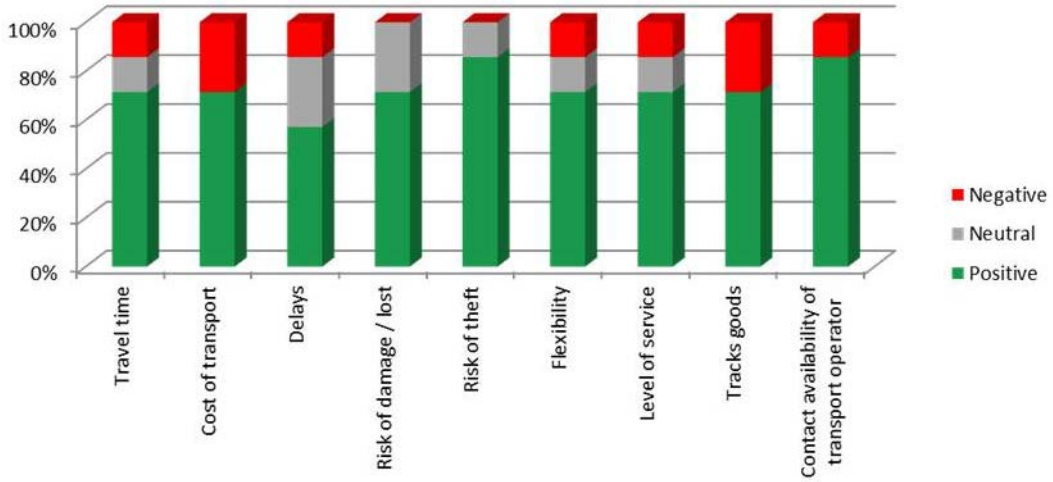
Even if with regard to a limited number of interviews, it is important to underline that share of "Very dissatisfied" people is quite relevant for most of the items, excluding "Risk of damage/lost goods" and "Risk of theft": in these 2 cases, dissatisfaction is not observed at all.

On the other side, completed surveys reveals that people “Very satisfied” about rail transport are only 14% of the total, while most of interviewed people are “Somewhat satisfied” of all the parameters analyzed.

Table 21 – Rail characteristics evaluation: preliminary results

	Very satisfied	Somewhat satisfied	Neutral	Somewhat dissatisfied	Very dissatisfied
Travel time	***14%***	58%	14%	0%	**14%**
Cost of transport	***14%***	58%	0%	14%	**14%**
Delays	***0%***	57%	29%	0,0%	**14%**
Risk of damage/lost goods	***0%***	71%	29%	0%	**0%**
Risk of theft	***14%***	72%	14%	0%	**0%**
Flexibility (possibility to satisfy requests/needs for transportation)	***14%***	58%	14%	0%	**14%**
General level of service	***14%***	58%	14%	0%	**14%**
Possibility to tracks goods during transport	***14%***	58%	0%	14%	**14%**
Possibility to contact a person to have information about transport	***14%***	72%	0%	0%	**14%**

- *Figure 26 – Rail characteristics evaluation: preliminary results*



3.4 5-15year Market projections

This chapter shall be part of the final report of Phase 3 of the Traffic Market Study

3.5 Economic evaluation

3.5.1 Rational of the evaluation

In the first Implementation Plan, RFC6 will not be in a position to propose a CBA : Cost-Benefit Analysis. Indeed, it could be risky to propose a CBA without knowing in the first stage the final cost of the overall investment plan, the benefit that shall be measured not only with the transport market study but also with other quantitative studies, especially regarding the externalities.

The CBA, as referred in official documents, requires an investigation of an amount of project's net impact on economic welfare. This is basically done in five steps:
- observed prices or public tariffs are converted into shadow prices, that better reflect the social opportunity cost of the good;
- externalities are taken into account and given a monetary value;
- indirect effects are included if relevant (i.e. not already captured by shadow prices);
- costs and benefits are discounted with a real social discount rate
- calculation of economic performance indicators: economic net present value (ENPV), economic rate of return (ERR) and the benefit-cost (B/C) ratio.

The socio-economic objectives of transport projects are generally related to the improvement in travel conditions for goods and passengers both inside the study area and to and from the study area (accessibility), as well as an improvement in both the quality of the environment and the well being of the populationserved.

In more detail, the projects will deal with the following type of transport problems:
- reduction of congestion by eliminating capacity constraints on single network links and nodes, or by building new and alternative links or routes;
- improvement of the performance of a network link or node, by increasing travel speeds and by reducing operating costs and accident rates through the adoption of safety measures;
- shift of the transport demand to specific transport modes (many of the investments which have been made in the past few years, where the problem of environmental externalities has arisen as a critical factor, aimed to shift the modes of travel demand in the interest of minimising pollution and limiting the environmental impact);

3.5.2 The Benefits of the Implementation of RFC6

The benefits of the Implementation plan of Rail Freight Corridor 6 will be considered amongst the followings

- time savings for the existing passengers rail traffic and for the existing goods rail traffic, also thanks to the OSS fully dedicated to the RFC6
- costs saving for the existing freight traffic, due to the save of time and the high reduction of the loss of time at the borders (traffic management, investment plan)
- time and operating costs savings for the passenger and freight traffic diverted from road to rail;
- air pollution possible reduction as a result of the shift of freight and passenger traffic from road to rail;
- CO2 emission reduction as a result of the shift of freight and passenger traffic from road to rail
- accident reduction owing to the shift of freight and passenger traffic from road to rail

The economic benefits can be summarized in the following categories:
- changes in consumer's surplus , represented by the changes in users generalised costs;
- changes in producer's surplus (railway operator) and in user's surplus;
- reduction of the negative externalities as a result of the diverted traffic from road to rail (air pollution, CO2 emissions, accidents).

Nonetheless, we advocate to propose in the further stages a SWOT Analysis : Strength, Weakness, Opportunities, Threats in particular with the reference to the ECTS implementation along the corridor.

3.6 Conclusions and recommendations of the study

This chapter will be part of the final report of the Traffic Market Study

4 Objectives of the freight corridors

4.1 Objectives of Performance – Quality of Service

4.1.1 Compatibility between the performance schemes along the freight corridor

Train Performance Management will be established in order to ensure regular performance monitoring and quality improvement of traffic management on the Corridor.

The Management Board shall ensure the agreement on a common methodology by which RFC6 will measure, analyse, and manage the trains' performance.

In order to provide a solid basis for the improvement of performance, the process for its monitoring and analyzing is hereby described .

The goal is to describe the method for regular monitoring and analysing of the international trains performance and to describe the rules for identifying and implementing the measures to improve the performance according to the approach foreseen in the RNE Corridor Management (EPR, TIS, and Train Performance Management). Should RFC 6 decide to develop its own system, this will be harmonized and coherent with other corridors as well as with RNE "Punctuality Monitoring guidelines".

Although the main focus in the first step is on the Corridor Trains Performance Management, all the processes will be developed in such a way that they could be used also for other Trains Performance Management projects.

Implementation of the Trains Performance Management on the corridor level together with the domestic one will complete the whole process of performance management in railway business.

Expected benefits:

- Unique international approach for punctuality analyses to improve the quality of trains performance along the corridor so to improve the Customer-satisfaction and bring more traffic on rail
- to fulfil current and future obligations for corridor punctuality monitoring (e.g. as requested for ERTMS corridors)
- to have a network of experts in place being able to fulfil the requirements for other performance monitoring projects (e.g.: future

EPR development, 3rd railway package, customer oriented quality circles)

- to establish regular international cooperation on the quality performance (looking over the borders) between IMs themselves and also together with the RUs.

As basis for the Train Performance Management along the Corridor the RNEIT-tool named Train information System (TIS) will be used as the main source of data. TIS supports the international trains' management by delivering real-time trains data. The relevant data are then processed by the concerned Infrastructure Managers.

The use of the TIS supports the fulfilment of the requirement, mentioned in previous chapter and also delivers automatically-generated performance monitoring reports, as well as detailed reports needed for performance analysis.

4.1.2 Monitoring of the performance of rail freight services

Key performance indicators (KPI) will be used to evaluate te performance of RFC6 activities.

Performance indicator selection is closely associated with the use of various techniques to assess the present state of the business, and its key activities. These assessments lead to the identification of potential improvements; and as a consequence, performance indicators are routinely associated with 'performance improvement' initiatives.

The procedure for a comprehensive monitoring of the performance of trains, from an operational perspective, is described in the mentioned RNE Guidelines for Punctuality Monitoring.

RFC6 will take such Guidelines into account while setting up its own monitoring procedures. The following sections describe a preliminary statement of how the RFC6´s trains performance management will look like and it is valid until RNE´s recommendations are analysed and implemented, in so far as the RFC6 decide to implement them.

4.1.2.1 Choosing KPIs

A very common way for choosing KPIs is to apply a management framework such as a balanced scorecard. There are four perspectives considered for choosing KPIs.

- Financial: encourages the identification of a few relevant high-level financial measures. In particular, designers were encouraged to choose measures that helped inform the answer to the question "How do we look to shareholders?"
- Customer: encourages the identification of measures that answer the question "How do customers see us?"
- Internal business processes: encourages the identification of measures that answer the question "What must we excel at?"
- Learning and growth: encourages the identification of measures that answer the question "How can we continue to improve and create value?"

Based on above mentioned considerations, a list of potential KPI, to be duly monitored, has been made, considering four principles:

- KPI are related to the operational field
- the object of measure is described in details
- the measurement definition is based on historical data
- consistency among corridor is pursued as much as possible

The KPI are listed in order of priority:

- number of planned vs. number of operated trains
- programmed train*km per corridor section
- punctuality (in terms of % of trains arrived within the fixed thresholds)
- average planned commercial speed (speed in timetables net of commercial or operational stops)
- cancellations (to be spitted per timeframe)

4.1.2.2 Description of the Indicators

Number of trains

The counting shall be done at defined points within a given timeframe. The measuring points will be defined considering the sections in which major changes in the number of trains can be expected (e.g. main hubs). The trains, monitored by this indicator, will fulfil following conditions:

- the international freight trains must start and/or end in the Corridor or enter and/or leave the Corridor,
- must cross at least one border within the Corridor,
- must run a main part on the Corridor and
- only the trains planned in annual timetable are considered.

Train-km

This indicator will be used to monitor traffic flow trends along the Corridor. The indicator should include the same trains as in the previous paragraph. Only the train kilometres running on the Corridor are taken into account.

Punctuality reports

Punctuality reports are done on base of average delay. It is calculated according to the formula:

$Ad = D_{min} / T$

Abbreviations:

Ad – average delay

D_{min} – total minutes of delay

T – number of monitored trains

Only a sample of trains will be monitored by this indicator. The sample will consist of trains running on the entire RFC6. Also ad – hoc trains will be considered.

If necessary, this sample will be updated in the end of 2013.

Trains that are running punctually are not considered. So are taken into account the entire negative and the positive data of the punctuality values.

To establish impact of processes on interchange stations on , the lateness occurred between border stations in a particular country will be shown separately. (or from beginning of Corridor to the border station / from border station to the end of Corridor).

For the punctuality measure on the network, the following measuring points have been defined.

Country / IM	Punctuality measuring points
Spain	Tbd
TPFerro	tbd
France	Cerbere, Perpignan, Miramas, Sibelin, Modane

Italy	Torino Orbassano, Novara Boschetto, Milano Smistamento, Verona P.N. / Verona Q.E., Cervignano Smistamento and Villa Opicina
Slovenia	Sežana, Koper, Ljubljana, Celje, Pragersko, Hodoš
Hungary	Őriszentpéter, Záhony, Ukk, Kelenföld, Ferencváros, Szajol, Fényeslitke

Average speed

The same sample as in the punctuality reports will be monitored. Average speed will be calculated according to the formula:

As = D / J_t (km/h)

Abbreviations:

As – average speed

J_t– journey time

D – run distance of train

Only the journey time from one border station to the next (or from beginning of Corridor to the border station / from border station to the end of Corridor) are considered. Border crossing times are not taken into account.

Cancellations

This indicator includes all cancellations of train paths planned in the annual timetable. It also includes unused train paths that have not been cancelled.

Only the data of cancellations of a single train runs on specific days will be taken into account. Cancellations of the allocated paths for the rest of the timetable will not be considered.

The same sample of trains as in the first indicator will be taken into account.

The cancelled paths will be counted on the same sample on which the number of trains is defined (see first indicator). So there will be a basis for comparison between number of cancelled paths and number of trains which ran indeed.

The cancelled paths will be identified by the cause of cancellation: RUS, damages on the infrastructure, bad coordination of works, weather conditions, etc.

4.1.3 Collection of data

For purpose of analysing the train performance on RFC 6 a questionnaire has been made. Collated data will be used in order to manage and improve train performance on RFC 6.

Before submitting the questionnaire to the stakeholders, it will be verified if and which data are already available from other sources of information (for example, from surveys on the same subjects that are currently being carried out within RNE´s framework).

The measurement shall be done preferably within timeframe of quarters of year. The national trains will not be taken into account.As principle, only the trains, requested directly to the Corridor OSS will be included. All measures will be monitored separately by direction (west to east / east to west).

First draft of questionnaire - Train performance management on RFC 6:

RAIL FREIGHT CORRIDOR 6 Almería-Valencia/Madrid-Zaragoza/Barcelona-Marseille-Lyon-Turin-Milan-Verona-Padua/Venice-Trieste/Koper-Ljubljana-Budapest-Zahony (Hungarian-Ukrainian border)	Spain / ADIF		France / RFF		Italy / RFI		Slovenia / SŽ / AŽP		Hungary / MAV / VPE	
Questions / Data	***Data***	***Comments***	***Data***	***Comments***	***Data***	***Comments***	***Data***	***Comments***	***Data***	***Comments***
NUMBER OF TRAINS[1]	**0**		**0**		**0**		**216**		**0**	
Direction west to east							115			
Direction east to west							101			
TRAIN - KM[1]	**0**		**0**		**0**		**75473**		**0**	
Direction west to east							40372			
Direction east to west							35101			
PUNCTUALITY REPORTS [1][2]										
Direction west to east - number of trains							**18**			
minutes of delay - entering the country							6062			

RAIL FREIGHT CORRIDOR 6 Almería-Valencia/Madrid-Zaragoza/Barcelona-Marseille-Lyon-Turin-Milan-Verona-Padua/Venice-Trieste/Koper-Ljubljana-Budapest-Zahony (Hungarian-Ukrainian border)	Spain / ADIF		France / RFF		Italy / RFI		Slovenia / SŽ / AŽP		Hungary / MAV / VPE	
Questions / Data	***Data***	***Comments***	***Data***	***Comments***	***Data***	***Comments***	***Data***	***Comments***	***Data***	***Comments***
minutes of delay in particular country							1023			
minutes of delay exiting the country							17163			
average delay in particular country	**#DEL/0!**		**#DEL/0!**		**#DEL/0!**		**56,83**		**#DEL/0!**	
average delay on interchange stations	**#DEL/0!**		**#DEL/0!**		**#DEL/0!**		**559,89**		**#DEL/0!**	
Direction east to west - number of trains							**11**			
minutes of delay - entering the country							373			
minutes of delay in particular country							128			
minutes of delay exiting the country							4223			
average delay in particular country	**#DEL/0!**		**#DEL/0!**		**#DEL/0!**		**11,64**		**#DEL/0!**	

RAIL FREIGHT CORRIDOR 6 Almería-Valencia/Madrid-Zaragoza/Barcelona-Marseille-Lyon-Turin-Milan-Verona-Padua/Venice-Trieste/Koper-Ljubljana-Budapest-Zahony (Hungarian-Ukrainian border)	Spain / ADIF		France / RFF		Italy / RFI		Slovenia / SŽ / AŽP		Hungary / MAV / VPE	
Questions / Data	***Data***	***Comments***	***Data***	***Comments***	***Data***	***Comments***	***Data***	***Comments***	***Data***	***Comments***
average delay on interchange stations	**#DEL/0!**		**#DEL/0!**		**#DEL/0!**				**#DEL/0!**	
AVERAGE SPEED[1]										
Direction west to east							**38 km/h**			
Direction east to west							**31 km/h**			
CANCELLATIONS[1]										
CAUSED BY RU										
Cancelations							**2**			
non – usage							**1**			
CAUSED BY IM										
Cancelations							**0**			

RAIL FREIGHT CORRIDOR 6 Almería-Valencia/Madrid-Zaragoza/Barcelona-Marseille-Lyon-Turin-Milan-Verona-Padua/Venice-Trieste/Koper-Ljubljana-Budapest-Zahony (Hungarian-Ukrainian border)	Spain / ADIF		France / RFF		Italy / RFI		Slovenia / SŽ / AŽP		Hungary / MAV / VPE	
Questions / Data	***Data***	***Comments***	***Data***	***Comments***	***Data***	***Comments***	***Data***	***Comments***	***Data***	***Comments***
non – usage							**0**			
EXTERNAL CAUSES										
Cancelations							**0**			
non – usage							**0**			

[1]SAMPLE OF TRAINS TO BE MONITORED:
Number of trains includes international freight trains, which:

- ☐ must start and/or end in a Corridor or enter and/or leave the Corridor,
- ☐ must cross at least one border within the Corridor,
- ☐ must run a main part on the Corridor and
- ☐ only the trains planned in annual timetable are considered.

Train-km - the same sample as in number of trains (only the train kilometres running on the Corridor will be taken into account).

Punctuality reports will include trains running entire RFC6 course through particular country including ad – hoc trains

Average speed - the same sample as in the punctuality reports.

Cancellations - the same sample as in number of trains.

4.2 Punctuality objectives

According to EU Regulation 913/2010:

1. The management board of the RFC 6 must promote compatibility between the performance schemes along the freight corridor, as referred to in Article 11 of Directive 2001/14/EC.

2. The management board must monitor the performance of rail freight services on the freight corridor and publish the results of this monitoring once a year.

3. The management board shall organise a satisfaction survey of the users of the freight corridor and shall publish the results of it once a year.

In order to establish and improve quality of service RFC6 will use model of surveys currently used in the context of the Transport Market Study and add the intention to cooperate with other corridors in order to develop a common form of satisfaction surveys.

The described collection and analysis of reliable data shall optimise the processes in Corridor and develop targets of punctuality.

In order to establish and improve high level punctuality in international traffic it is necessary to measure punctuality of trains and to identify the causes for delays and cancelled services in a common way. While the allocation of causes is a task of the Infrastructure Manager (IM), it will be necessary that the Railway Undertakings (RU) validate these causes. If the IM is operating the train he has the role of the RU for some specific trains such as (Special, auxiliary trains, official trains) is responsible for all delays.

Thus a commonly accepted and applied view of performance measurement will be established, to be used by IMs and RUs to get a common picture of actual performance and to develop actions to improve performance.

Punctuality of a train will be measured on the basis of comparisons between the time planned in the timetable of a train identified by its train number and the actual running time at certain measuring points. A measuring point is a specific location on route where the trains running data are captured. One can choose to measure the departure, arrival or run through time. The comparison should always be done against an internationally agreed timetable for the whole train

run. If IM allocate a new timetable in case of delays.it will be certified by C-OSS that either a new timetable is allocated for the whole remaining part of the train run or the comparison is made against the originally planned timetable. If neither is possible the train run should not be considered.

When a train enters into the corridor with delay superior than a specific value (eg. 60 min.) this train should not be considered for punctuality monitoring.

Punctuality will be measured by setting a threshold up to which trains will be considered as punctual and building a percentage:

- Number of all trains that are measured <= threshold (Threshold means that all trains are considered as punctual if they increase the delay between the agreed points of measuring less than 30 minutes.) It is intended to set this threshold to 30 minutes.
- Punctuality = percentage of all measured trains that are punctual

Possible variations of the mentioned values may be considered, provided that the following topics in order to achieve consistent information must be adequaely addressed:

Points and train status to be considered:

1. Clarification of timetable behaviour
2. Uniform behaviour in rounding seconds
3. Threshold for punctuality

The divergences between the scheduled timetable and the actual running times will be usually reported in minutes.

The result of measurements on the defined measurement points will be a value in minutes and seconds that is rounded to minutes.

Known ways to manage the rounding are:

Round down until 29'', round up from 30'' on – 4:30 is considered as 5

The possible causes of delays will be listed in the coding table. This coding table will provide a basic overview on the causes which influence train performance. The coding table will distinguish between primary causes and secondary causes. Each primary cause will be allocated to a responsible body, which can be the IM, RU or an external influence.

Primary causes will describe the original event which led to a delay. Secondary causes will describe the consequences of an already existing delay – either of the same train which is further delayed or of another train.

These consequences will be describe in the secondary delay causes and mainly consist of:

Track occupation

1. Turnaround of personnel and vehicles
2. Connections

The measurements will be done by the following IT tools developed by RNE.

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

TIS monitors international trains from origin to destination on the involved IMs' networks. It serves as information source for international performance reports and quality analysis and standardises the exchange of data between different players. TIS also allows the identification of problems due to different national processes (for international trains) and triggers appropriate corrective actions. The main goal of the TIS is to help RUs with their own production system and to support IMs in the field of train running management. RUs have unlimited access to their own trains and to those operated in cooperation with an existing data exchange agreement.

C-OSS will check all data inserted in TIS and if needed will ask IMs for further explanations.

If some IM do not have TIS they will have to collect data manually and send to C-OSS every month for validation.

The main reason for identifying the delay causes is to enable follow up actions to diminish or avoid the occurrence of same causes in the future. In case the delay is caused by RU the consequences for other trains will have to be coded as secondary delays.

For IM- and external causes primary causes are applicable on the whole network of the IM. If delays could not be traced back to the primary cause, secondary causes have to be used.

When comparing the delay causes of several networks the differences in data collection will be considered.

Circumstances which are influencing the results are:

- Density of measuring points on domestic level: If a comparison to the timetable is only made every 50 km more intermediate delay minutes will be unnoticed than if measured every 2 km. Recovery time will make up for at least part of the delay.

- Threshold for coding delays: The thresholds for identifying the cause in a single incident differ. It makes a difference if every single delay minute is allocated or if allocation starts at a delay of 5 minutes. In the 2nd case more delay causes will be unnoticed because they are made up for by recovery time.

  It is recommended to give a delay cause from 2 minutes on.
- Amount of undocumented delay minutes: It should not exceed 5 % of all the delay minutes. Especially for the use of performance analyses these differences have to be well considered.

The codes described should also be used to describe the causes of cancellation on the whole or just on the part of the route.

In the event of rerouting of the trains, if a commercial stop is missed on the original train path, it is considered as a cancelled service. A replacement road service - either for the whole line or for sections of it – shall be considered as a train cancellation too.

Punctuality target: Objective, 0' - 30' = 60 %

A basic punctuality goal of 60% of all measured trains will be set. (Increase of delay less than 30 min between points provided for measure).

The codified reasons for delay will be used for the continuous and systematic monitoring by computer of the delays and cancelled services occurring in freight traffic.

Main reasons for delays will be divided into 7 main groups: Operational planning management, Infrastructure installations, Civil engineering reasons, Commercial reasons, Rolling stock, External causes, Secondary causes, Cancelled service owing to refusal by adjacent IM, Cancelled service account of temporary cancellation by costumers.

The content of the report and procedures for its drafting and delivering will be established according to RNE Guidelines in so far these fit with the RFC6 specific situation and needs.

4.3 Capacity objectives

Article 14.1 of Regulation 913/2010 ("the Regulation") requires the Executive Board to establish a corridor framework for capacity allocation. The framework for capacity allocation on the corridor concerns the mandatory aspects of the Regulation regarding the capacity allocation.

This framework for capacity allocation on the corridor ("Corridor-Framework") concerns only the allocation linked to the prearranged train paths (PaPs) and to the reserve capacity given to the Corridor One-Stop-Shop ("C-OSS") for freight trains, crossing at least one border on a corridor as foreseen by article 14.4 of the Regulation, namely where the allocation of capacity by the C-OSS is mandatory, according to article 13 of the Regulation.

The framework shall apply to Infrastructure Managers and Allocation Bodies (IMs/ABs) in order to install clear and transparent principles for the allocation process of PaPs and reserve capacity by the C-OSS. IMs and ABs will enforce the implementation of the framework by including the relevant provisions in their network statements.

Indicators to be monitored on an bi-annual basis (period 1: mid December till mid June, period 2: mid June to mid December (change of timetable):

Pre-arranged train path:

- number of offered pre-arranged train paths X-11 per section
- the number of requests period X-11 till X-8 and X-8 (-1 day) till X-2 (without feeder/outflow sections)
- number of train paths which are allocated by C-OSS
- number of train paths which reached active timetable phase
- number of conflicting applications (double booking at X-8)
- Indicator for reserve capacity to be allocated by C-OSS at X-2 :
- train paths offered;
- train paths allocated;
- train paths reaching the status of active timetable.

The capacity offer on Rail Freight Corridors will have to address a wide range of market demands. Two parameters with strong influence on the path supply and the processes to be developed are the duration and predictability of the capacity needs, which depend to a high degree on the type of traffic and to some extent the type of rail freight service (production method), see figure below.

The capacity offer on the Rail Freight Corridors will take into account the varying character of capacity demand, both in order to address the market needs of the end customers (as shippers) and for reasons of neutrality towards different Railway Undertakings, since different Railway Undertakings may address different market segments. Therefore the Regulation demands both pre-arranged train paths available in the annual timetable, as well as reserve capacity, which is available at short notice.

The Regulation foresees the supply of capacity on the Rail Freight Corridors in form of 1) pre-arranged train paths and 2) reserve capacity.

Pre-arranged train paths address in first hand medium-to long-term capacity needs, while reserve capacity addresses temporary capacity needs at rather short notice. In order to address the applicants capacity needs in an optimal way it is suggested to establish three request processes:

- - Requests in the annual timetable
- - Late requests
- - Ad-Hoc requests

While the two first-mentioned ones concern the PaPs, the latter one concerns the reserve capacity.

The quantification of capacity needs in form of PaPs as well as reserve capacity should be based on an analysis of current traffic patterns and paths recently used, the Transport Market Study, consultations with the Advisory Groups, which should be involved in an early stage, and, after the establishment of a Rail Freight Corridor, results from the Satisfaction Survey.

When it comes to the reserve capacity, the current share of train paths allocated in recent timetable-periods may serve as an indicator for the quantification of reserve capacity in relation to the capacity supplied in form of PaPs.

It is suggested that reserve capacity is calculated either as a percentage of the allocated PaPs or a fixed number of train paths to be offered in addition to the allocated PaPs. This means that the reserve capacity needs to be defined in form of concrete train paths first when the pre-arranged train paths are allocated. With this approach an “over-supply” of train-paths, blocking capacity for other traffic, can be avoided. Since the reserve capacity is intended to address short-term ad-hoc capacity needs, it appears neither necessary to publish reserve train paths as long time in advance as PaPs.

However, for practical reasons it is suggested that the reserve capacity in first hand should consist of PaPs, which have not been allocated within the On-time and Late path application processes. Furthermore it has to be ensured that the reserve capacity is published a reasonable time (e.g. 4 weeks) in advance of the time from which on the reserve capacity not any longer needs to be reserved. This latter time must not exceed a maximum of 60 days (Art.14 (5)). This means in practice that the reserve capacity has to be published at least the following number of days in advance of the timetable-change:

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

- - increased train lengths
- - increased loading gauges
- - higher train gross weights
- - increased axle-loads
- - improved speed management

- - increase capacity of train stations
- - remove of identified bottlenecks
- - improvement of occupancy rates on the lines
- - extension of the station opening hours,
- - harmonization, coordination and publication of major works and possessions.

4.4 Interoperability objectives

The competitiveness of the railway system on the RFC6 will be increased with the elimination of differences on Corridor in terms of stock, technology, signalling systems axle load, the train length and safety regulations. With the focuses on establishing common standards for signalling and control systems, telematic systems for freight services, the operation and management of rolling stock intended for international freight, and staff qualifications.

The challenge is to establish the conditions to be met to achieve interoperability within the RFC6 in a manner compatible with the provisions of Directive 2004/49/EC concern the design, construction, placing in service, upgrading, renewal, operation and maintenance of the parts of this system as well as the professional qualifications and health and safety conditions of the staff who contribute to its operation and maintenance.

The new Directive 2008/57/EC of 17 June 2008 introduces the new conditions.

The goal of RFC6 is:

- To contribute to the progressive creation of the internal market in equipment and services for the construction, renewal, upgrading and operation of the rail system within the RFC6
- To contribute to the interoperability of the rail system within RFC6

The interoperability concerns three main subsystems: infrastructure, energy and signalling.

The interoperability involves:

- infrastructure and energy (electrification system);
- control and command and signalling: the equipment necessary to ensure safety and to regulate movements of trains authorised to travel on the network;

- operation and traffic management (including telematic applications): procedures and related equipment enabling a coherent operation of the different structural subsystems and professional qualifications required for carrying out cross-border services;
- rolling stock: vehicle dynamics and superstructure, command and control system for all train equipment, current-collection devices, traction and energy conversion units, braking, coupling and running gear and suspension, doors, man/machine interfaces, passive or active safety devices and requisites for the health of passengers and on-board staff;
- maintenance: procedures, associated equipment, logistics centres for maintenance work

Railway interoperability is developed through the introduction of Technical Specifications of Interoperability (TSIs) concerning the specific subsystems; TSIs are also related to security issues, even though security and interoperability are, at present, regulated by different normative initiatives. The European Railway Agency is directly involved in the interoperability process with the role of advising and assisting the process; moreover, the Agency is in charge for the development of some TSIs.

Obstacles to railway interoperability at macro level, concerns three main subsystems:

1. infrastructure: in particular, the presence of non-standard gauges in Spain the differences of axle load, tunnel gauges, train length;

2. energy: presence of different power systems (A.C. systems and D.C. systems or without electrification) and different pantograph;

3. signalling: presence of different signalling and train control systems (in general, one or more system per national network).

The presence of several signalling and train control systems impacts negatively on:

- costs: (brand-new) interoperable locomotive must be equipped with the specific signalling interface of every single national network where it is allowed to operate;

- reliability: the presence of several systems and interfaces reduce the possibility of introducing redundancies, with consequent possible higher number of breakdowns;
- safety, intended as drivers' "interoperability": drivers must familiarise with several systems and interfaces to be allowed driving trains on different national networks. This can lead to a reduction in the overall safety levels and higher human errors rate;
- interoperability of existing rolling stock: existing rolling stock must be retrofitted with further system and interfaces; this has proven to be difficult in several cases. In fact, once locomotives have been designed it is extremely expensive and sometimes impossible to add more on board systems.

Other obstacles to interoperability, especially on beginning of RFC6 operation, do exist also at micro level and reflect differences in the present national technical specifications, i.e. for tracks micro-design, fire extinguisher on board, back lights and so on. The modification of these specifications in the direction of higher levels of interoperability is often refused or delayed by national authorities (sometimes on the basis of possible problems in terms of safety). If, on one side, such behaviours could "hide" para-protectionist policies, on the other side it is important to remind how possible modifications to these elements should allow, at the same time, the operation on the same network with interoperable and non-interoperable (complying with national standards only) rolling stock.

According to Directive 2004/50/CE, some derogation to application of TSIs are possible; the derogation should be identified and explained the generation of short run benefits (i.e. compatibility with the national railway system), in the medium run they must be eliminated to prevent a further obstacle to the full interoperability of the RFC6.

5 The Investment Plan

5.1 Investment plan

5.1.1 Plan description

5.1.1.1 Methodology

For this first investment plan, The Management Board advocates to gather the national investment Plan of each Member States. The list of projects were defined in a common way and the aim is to emphasize the projects that have a positive impact to improve the efficiency and the competitiveness of rail freight services along the corridor.

The kind of projects was agreed in the 5th MB meeting in Paris on February 22.

The description of the plan is also split by kind of project, by benefits for the RFC6, by kind of funder.

5.1.1.2 Nature of the projects

a) Renewal of tracks

b) The renewal of signalling system

c) The renewal of tunnel, bridge etc..

d) The electrification

e) The creation of siding, passing tracks, extra tracks

f) The creation of a new structure (line, bridge, tunnel, leapfrog)

g) Adjustment of the gauge

h) The enhancement in signalling (especially ERTMS that will constitute a specifically issue)

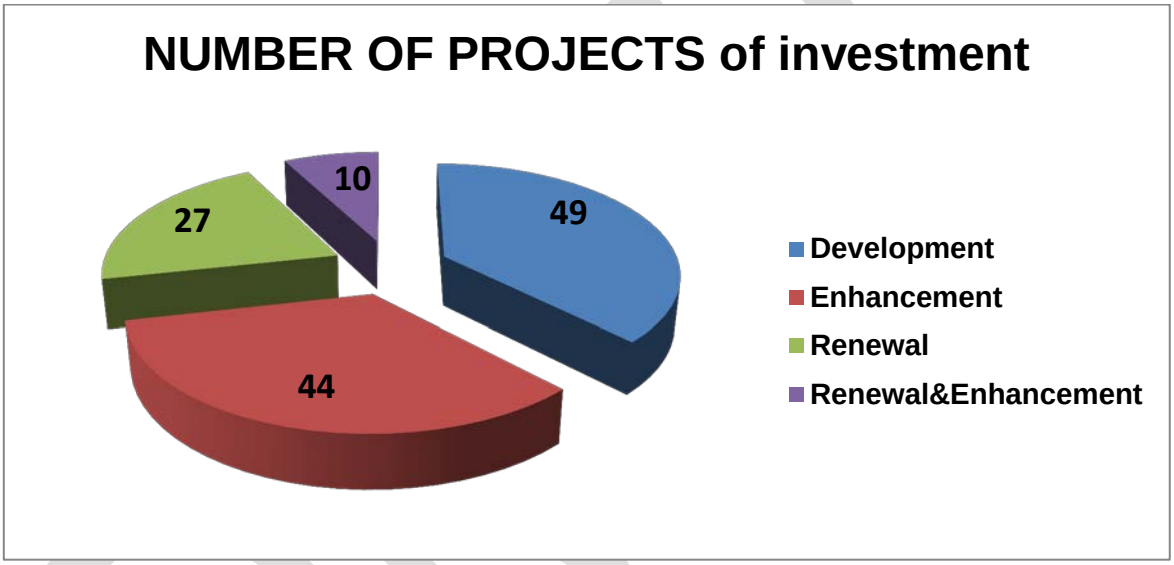
i) The track enhancement

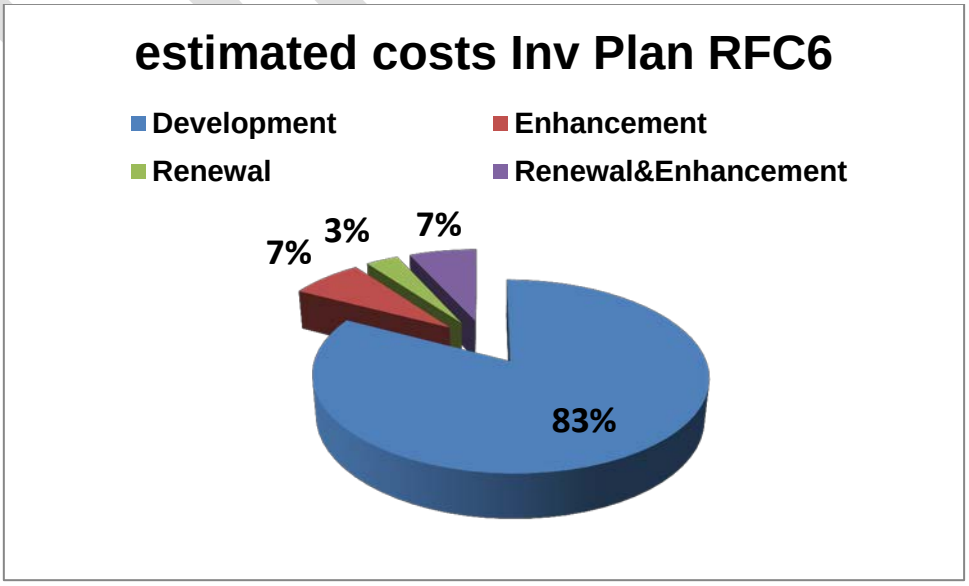
j) The level crossings

k) The noise reduction

l) Other projects

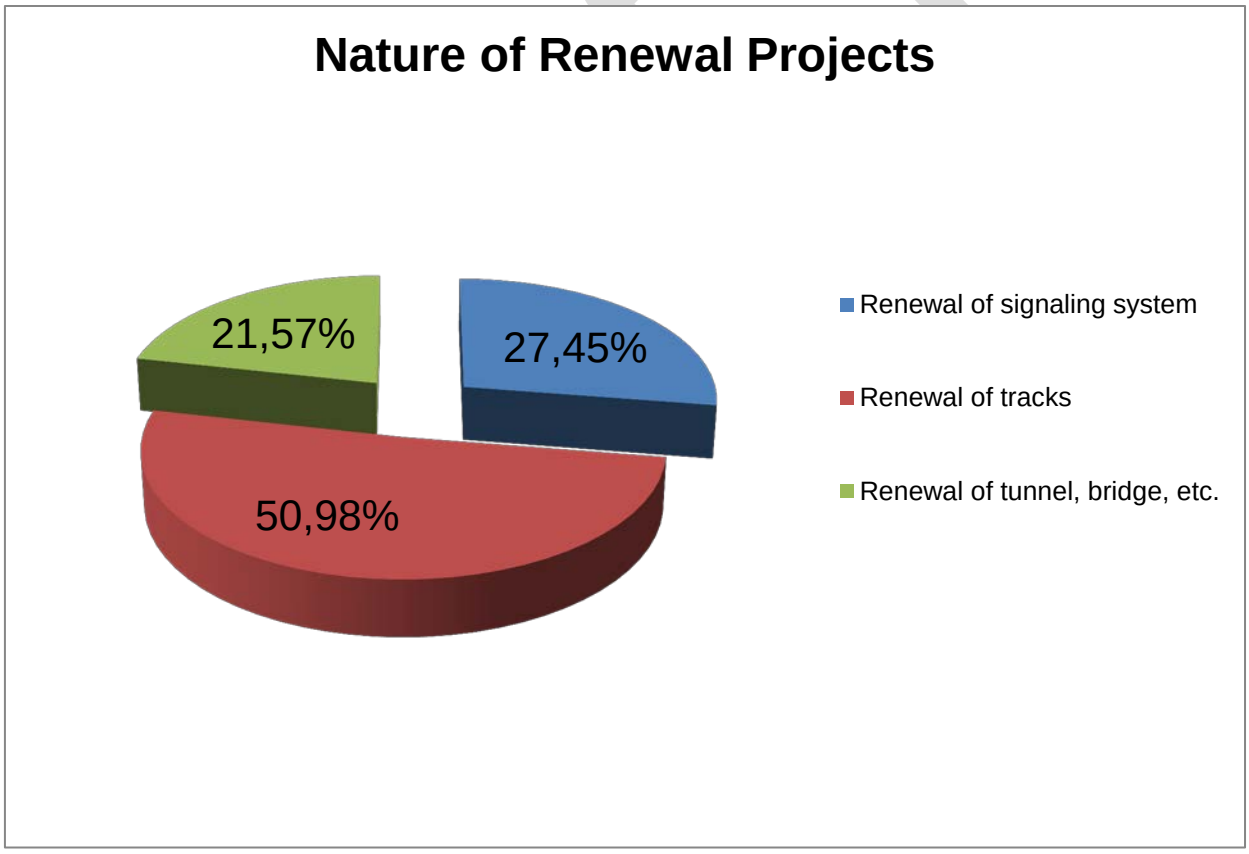
These kinds of projects have been split according to the following categories: renewal, enhancement and edvelopment.





5.1.1.2.1 Renewal projects breakdown.

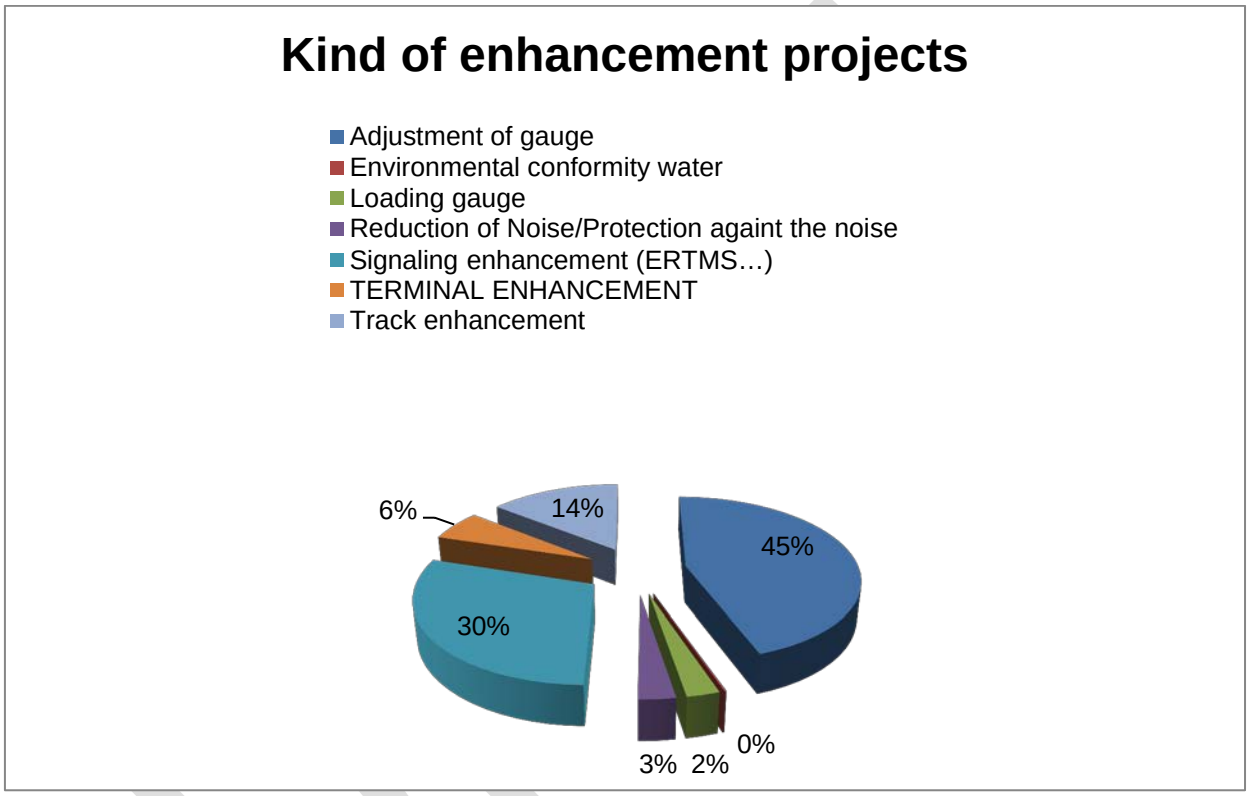
The investment over renewal projects is mainly concentrated over the renewal of tracks especially in France with the High Project of Modernization of the French network. In addition the renewal of signalling system is developed primarily in Hungary on projects of short and middle term. The total costs for the renewal of the network is 2 600 M€.



5.1.1.2.2 Enhancement projects breakdown

Related to the enhancement projects, we can find that most of them are concentrated over the signalling system, especially on the ERTMS deployment, which, as we can see in the following chart, constitutes more of the 50% of the investments for the enhancement of the corridor lines.

The overall costs of enhancement reach for the entire RFC6 quite 6 000 Millions €



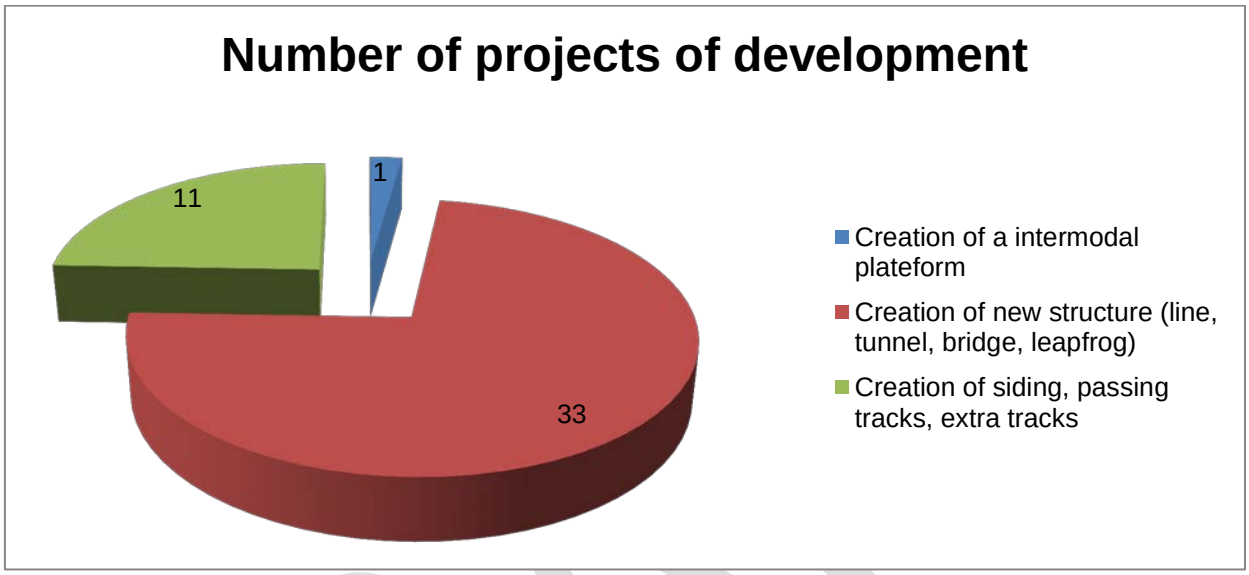
5.1.1.2.3 Development projects breakdown

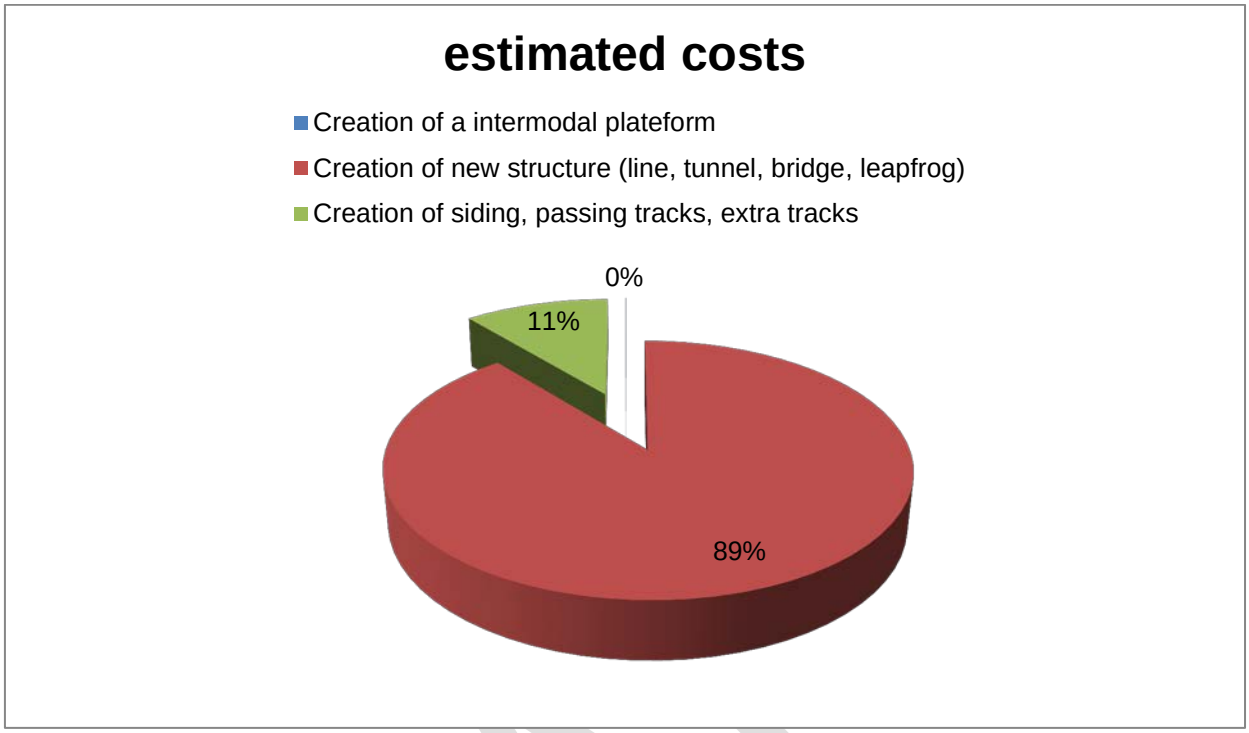
Concerning the development projects, the Investment Plan includes until 33 projects of new structure creation. As new structure we understand line, tunnels, bridges or leapfrogs. Into this concept, the activity which retains the biggest amounts of

investments is the new lines development like the one under the Alpes between France and Italy.

These new lines creation are concentrated mainly in France and Italy.

The overall costs are about 65 000 M€.





5.1.1.3 Benefits of the projects

Each project may have one or several benefits amongst these main benefits :

a. Bottleneck relief in order to make the infrastructure more available
b. Safety/security
c. Environment in order to comply with national laws but also to make the projects more acceptable
d. Higher speed to increase competitiveness , especially regarding the road transportation
e. Interoperability to increase also competitiveness
f. Punctuality improvement, as provided by the surveys made for the TMS. It's one of the key point
g. Maintenance of performance: especially the renewal of tracks is essential to maintain the performance. If not the performance will become worst
h. Capacity improvement

5.1.1.4 Breakdown per country

France	Number of projects	Estimation of the costs in M €
Adjustment of gauge	3	65
Adjustment of gauge, track enhancement	1	4
Creation of a intermodal plateform	1	12
Creation of siding, passing tracks, extra tracks	1	3560
Environmental conformity water	1	9
Loading gauge	2	154
New Line	4	19778
Noise reduction	1	4
Reduction of Noise/Protection againt the noise	1	169
Renewal of tracks	10	990
Renewal of tunnel, bridge, etc.	10	639
Signaling enhancement Track enhancement	1	124
signaling enhancement, traffic control	4	302
Total	**40**	**25810**

France - Italy	Somme de Valeur	Somme de Estimation of the costs in M€
New line	1	8500
Total	**1**	**8500**

Italy	Number of projects	Estimation of the costs in M €
Adjustment of gauge	1	10
Creation of new structure (line, tunnel, bridge, leapfrog)	11	24801
Creation of siding, passing tracks, extra tracks	4	247
Signaling enhancement (ERTMS…)	9	1036
Track enhancement	2	65
Total	**27**	**26159**

Slovenia	Number of Projects	Estimation of the costs in M €
Creation of new structure (line, tunnel, bridge, leapfrog)	4	940
Creation of siding, passing tracks, extra tracks	4	2821
Electrification,Creation of siding, passing tracks, extra tracks	1	413
Renewal of tracks	2	81

Signaling enhancement (ERTMS…)	1	57
Telecomunication enhancement (GSM-R)	1	150
Total	**13**	**4462**

Hungary	**Number of Projects**	**Estimation of the costs in M €**
Enhancement	2	68
Renewal	5	882
Renewal&Enhancement	10	5362
Total	**17**	**6312**

5.1.1.4.1 Investment Plan in Spain

N°	Country	Railway section	Nature of Projects	Benefits for RFC 6	Start date of the works	End date of the works	Actual step	Estimation of the costs in M€
1	SP	BARCELONE PORT ACCESS	Creation of new structure (line, tunnel, bridge, leapfrog)	BOTTLENECK RELIEF, INTEROPERABILITY, CAPACITY IMPROVEMENT, PUNCTUALLITY IMPROVEMENT			TECHNICAL STUDY	118 M€
2	SP	BARCELONE PORT ACCESS	Creation of new structure (line, tunnel, bridge, leapfrog)	BOTTLENECK RELIEF, INTEROPERABILITY, CAPACITY IMPROVEMENT, PUNCTUALLITY IMPROVEMENT			TECHNICAL STUDY	148 M€
3	SP	VILLASECA-CASTELBISBAL	adjustement of gauge	BOTTLENECK RELIEF, INTEROPERABILITY			APPROVED AND FINANCED (BUT WORKS HAVE NOT STARTED YET)	386 M€
4	SP	VANDELLÓS-VILLASECA	Creation of new structure (line, tunnel, bridge, leapfrog)	BOTTLENECK RELIEF, INTEROPERABILITY, CAPACITY IMPROVEMENT, PUNCTUALLITY IMPROVEMENT, HIGHER SPEED			WORKS PHASE	659 M€
5	SP	CASTELLÓN-VANDELLÓS	adjustement of gauge	BOTTLENECK RELIEF, INTEROPERABILITY			TECHNICAL STUDY	154 M€
6	SP	VALENCIA-CASTELLÓN	adjustement of gauge	BOTTLENECK RELIEF,			TECHNICAL STUDY	247 M€

				INTEROPERABILITY				
7	SP	ALMUSAFES-VALENCIA	Creation of new structure (line, tunnel, bridge, leapfrog)	BOTTLENECK RELIEF, INTEROPERABILITY, CAPACITY IMPROVEMENT, PUNCTUALLITY IMPROVEMENT			WORKS PHASE	66 M€
8	SP	JÁTIVA-ALMUSAFES	adjustement of gauge	BOTTLENECK RELIEF, INTEROPERABILITY			TECHNICAL STUDY	1 345 M€
9	SP	LA ENCINA-JÁTIVA	Creation of new structure (line, tunnel, bridge, leapfrog)	BOTTLENECK RELIEF, INTEROPERABILITY, CAPACITY IMPROVEMENT, PUNCTUALLITY IMPROVEMENT			WORKS PHASE	
10	SP	LA ENCINA-JÁTIVA	adjustement of gauge	BOTTLENECK RELIEF, INTEROPERABILITY			TECHNICAL STUDY	
11	SP	ALICANTE-LA ENCINA	adjustement of gauge	BOTTLENECK RELIEF, INTEROPERABILITY			TECHNICAL STUDY	145 M€
12	SP	SAN ISIDRO-ALICANTE	adjustement of gauge	BOTTLENECK RELIEF, INTEROPERABILITY			TECHNICAL STUDY	66 M€
13	SP	EL REGUERÓN-SAN ISIDRO	Track enhancement	BOTTLENECK RELIEF, INTEROPERABILITY, CAPACITY IMPROVEMENT, PUNCTUALLITY IMPROVEMENT, HIGHER SPEED			WORKS PHASE	615 M€
14	SP	MURCIA-EL REGUERON	adjustement of gauge	BOTTLENECK RELIEF, INTEROPERABILITY, CAPACITY IMPROVEMENT, PUNCTUALLITY IMPROVEMENT, HIGHER SPEED			TECHNICAL STUDY	127 M€
15	SP	ESCOMBRERAS-EL REGUERON	adjustement of gauge	BOTTLENECK RELIEF, INTEROPERABILITY			TECHNICAL STUDY	143 M€
16	SP	CASTELLÓN PORT ACCESS	Creation of new structure (line, tunnel, bridge,	BOTTLENECK RELIEF, INTEROPERABILITY, CAPACITY IMPROVEMENT, PUNCTUALLITY			TECHNICAL STUDY	124 M€

			leapfrog)	IMPROVEMENT				
17	SP	SAGUNTO PORT ACCESS	Creation of new structure (line, tunnel, bridge, leapfrog)	BOTTLENECK RELIEF, INTEROPERABILITY, CAPACITY IMPROVEMENT, PUNCTUALLITY IMPROVEMENT			TECHNICAL STUDY	20 M€
18	SP	ALICANTE PORT AND FREIGHT TERMINAL ACCESS	Creation of new structure (line, tunnel, bridge, leapfrog)	BOTTLENECK RELIEF, INTEROPERABILITY, CAPACITY IMPROVEMENT, PUNCTUALLITY IMPROVEMENT			WORKS PHASE	*
19	SP	ESCOMBRERAS PORT ACCESS	Creation of new structure (line, tunnel, bridge, leapfrog)	BOTTLENECK RELIEF, INTEROPERABILITY, CAPACITY IMPROVEMENT, PUNCTUALLITY IMPROVEMENT			TECHNICAL STUDY	31 M€
20	SP	ALMERÍA-MURCIA	Creation of new structure (line, tunnel, bridge, leapfrog)	BOTTLENECK RELIEF, INTEROPERABILITY, CAPACITY IMPROVEMENT, PUNCTUALLITY IMPROVEMENT, HIGHER SPEED			WORKS PHASE	2 480 M€
22	SP	POZO CAÑADA-VILLAR DE CHINCHILLA	Creation of new structure (line, tunnel, bridge, leapfrog)	CAPACITY IMPROVEMENT, PUNCTUALLITY IMPROVEMENT			TECHNICAL STUDY	4 M€
23	SP	ALMERÍA PORT ACCESS	Creation of new structure (line, tunnel, bridge, leapfrog)	BOTTLENECK RELIEF, INTEROPERABILITY, CAPACITY IMPROVEMENT, PUNCTUALLITY IMPROVEMENT			TECHNICAL STUDY	4 M€
24	SP	LINARES-ALCÁZAR	Track enhancement	BOTTLENECK RELIEF, INTEROPERABILITY			TECHNICAL STUDY	6 M€
25	SP	ALCÁZAR-VALENCIA	Track enhancement	BOTTLENECK RELIEF, INTEROPERABILITY			TECHNICAL STUDY	20 M€

26	SP	MANZANARES-ALCÁZAR	Track enhancement	BOTTLENECK RELIEF, INTEROPERABILITY, HIGHER SPEED			WORKS PHASE	105 M€
27	SP	MADRID-ZARAGOZA-BARCELONA-PORTBOU	Track enhancement	BOTTLENECK RELIEF, INTEROPERABILITY			TECHNICAL STUDY	50 M€
28	SP	VICÁLVARO-SAN FERNANDO	Creation of siding, extratracks	CAPACITY IMPROVEMENT, PUNCTUALLITY IMPROVEMENT			TECHNICAL STUDY	40 M€
29	SP	PLASENCIA DE JALÓN-PLAZA	Creation of new structure (line, tunnel, bridge, leapfrog)	CAPACITY IMPROVEMENT, PUNCTUALLITY IMPROVEMENT			TECHNICAL STUDY	175 M€
30	SP	VALENCIA FUENTE DE SAN LUIS TERMINAL	TERMINAL ENHANCEMENT	BOTTLENECK RELIEF, INTEROPERABILITY, CAPACITY IMPROVEMENT			TECHNICAL STUDY	*
31	SP	MADRID VICÁLVARO TERMINAL	TERMINAL ENHANCEMENT	BOTTLENECK RELIEF, INTEROPERABILITY, CAPACITY IMPROVEMENT			TECHNICAL STUDY	357 M€
32	SP	BARCELONA-FIGUERAS	IMPLEMENTATION ERTMS-	INTEROPERABILITY, CAPACITY IMPROVEMENT			WORKS PHASE	20 M€
33	SP	BARCELONA-PORT-BOU	IMPLEMENTATION ERTMS-	INTEROPERABILITY, CAPACITY IMPROVEMENT			WORKS PHASE	27 M€

5.1.1.4.2 Investment Plan in France

The main sources of the investment plan is constituted by

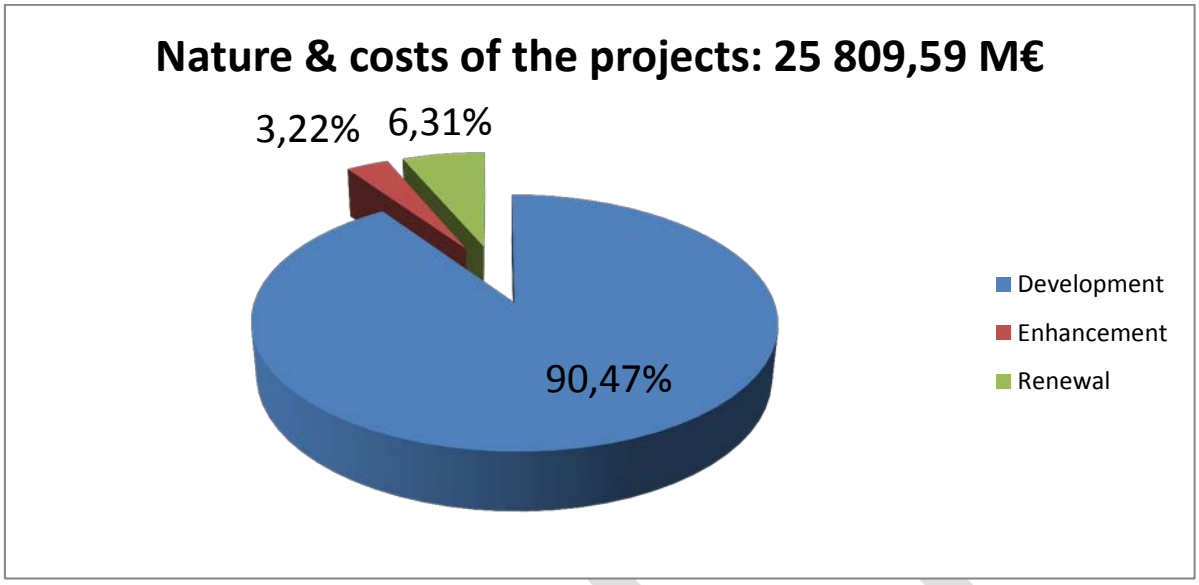
a) The internal forecast of renewal tracks by RFF

b) The project already decided with the ministry and local government

c) The great Project : new tracks that are included in the French National Infrastructure of Transportation Scheme

Never the less, in October 2012 the French ministry advocated to have a HPMFN: High Plan of Modernisation of the French Network that will be submitted in mid April to French Ministry of Transportation. This plan shall be part of the final Investment Plan with a view about 12 years of modernisation of the French Network.
It allows to build a view of short and mid term with and industrial policy of infrastructure. The scope is to manage the existing network as we manage the High Speed Lines. The HPMFN shall be a good way to realize innovation in the railways operations in particular.

The breakdown of the French investments according to the kind of projects without including the New Line under the Alps St jean de Maurienne (FR)- Suas (IT) is:



The complete French investment Plan is here after

INVESTMENT PLAN RFC 6														
N°	**Country**	***Region (if required)***	**Railway section**	**Nature of Projects**	**Benefits for RFC 6**	**Start date of the works**	**End date of the works**	**Actual step**	**Estimation of the costs in M€**	**Funder 1**	**Funder 2**	**Funder 3**	**Funder 4**	**Comments**
1	FR	LR	CERBERE - NÎMES	Renewal of tracks	Safety / Security Maintenance of performance	2013	2017	Works phase	208,96	IM				
2	FR	LR-PACA	NÎMES-AVIGNON (via Remoulins)	Renewal of tracks	Safety / Security Maintenance of performance	2015	2015	Works phase	0,44	IM				
3	FR	LR-PACA	NÎMES-AVIGNON (via Tarascon)	Renewal of tracks	Safety / Security Maintenance of performance	2014	2016	Works phase	9,86	IM				
4	FR	PACA-RAA	AVIGNON-LYON (via Le Teil-Givors)	Renewal of tracks	Safety / Security Maintenance of performance	2013	2017	Works phase	151,81	IM				
5	FR	PACA-RAA	AVIGNON-LYON (via Valence)	Renewal of tracks	Safety / Security Maintenance of performance	2013	2017	Works phase	173,12	IM				

6	FR	PACA	MARSEILLE-FOS-MIRAMAS	Renewal of tracks	Safety / Security Maintenance of performance	2013	2017	Works phase	78,47	IM
7	FR	PACA	MIRAMAS-TARASCON	Renewal of tracks	Safety / Security Maintenance of performance	2013	2014	Works phase	8,75	IM
8	FR	PACA	MIRAMAS-AVIGNON (via Rognac)	Renewal of tracks	Safety / Security Maintenance of performance	2015	2015	Works phase	10,05	IM
9	FR	RAA	VALENCE-MONTMELIAN	Renewal of tracks	Safety / Security Maintenance of performance	2013	2017	Works phase	126,76	IM
10	FR	RAA	LYON-MODANE	Renewal of tracks	Safety / Security Maintenance of performance	2013	2017	Works phase	221,91	IM
11	FR	LR	CERBERE - NÎMES	Renewal of tunnel, bridge, etc.	Safety / Security Capacity improvement Maintenance of performance	2011	2033	Works phase	36,32	IM
12	FR	LR-PACA	NÎMES-AVIGNON (via Remoulins)	Renewal of tunnel, bridge, etc.	Safety / Security Capacity improvement Maintenance of performance	2013	2023	Approved and financed (but works	19,18	IM

								have not started yet)		
13	FR	LR-PACA	NÎMES-AVIGNON (via Tarascon)	Renewal of tunnel, bridge, etc.	Safety / Security Capacity improvement Maintenance of performance	2011	2030	Works phase	2,66	IM
14	FR	PACA-RAA	AVIGNON-LYON (via Le Teil-Givors)	Renewal of tunnel, bridge, etc.	Safety / Security Capacity improvement Maintenance of performance	2011	2040	Works phase	84,95	IM
15	FR	PACA-RAA	AVIGNON-LYON (via Valence)	Renewal of tunnel, bridge, etc.	Safety / Security Capacity improvement Maintenance of performance	2011	2044	Works phase	243,02	IM
16	FR	PACA	MARSEILLE-FOS-MIRAMAS	Renewal of tunnel, bridge, etc.	Safety / Security Capacity improvement Maintenance of performance	2010	2046	Works phase	107,54	IM
17	FR	PACA	MIRAMAS-TARASCON	Renewal of tunnel, bridge, etc.	Safety / Security Capacity improvement Maintenance of performance	2013	2037	Technical study	4,28	IM

18	FR	PACA	MIRAMAS-AVIGNON (via Rognac)	Renewal of tunnel, bridge, etc.	Safety / Security Capacity improvement Maintenance of performance	2015	2025	Technical study	37,83	IM					
19	FR	RAA	VALENCE-MONTMELIAN	Renewal of tunnel, bridge, etc.	Safety / Security Capacity improvement Maintenance of performance	2031	2046	Preliminary study	31,00	IM					
20	FR	RAA	LYON-MODANE	Renewal of tunnel, bridge, etc.	Safety / Security Capacity improvement Maintenance of performance	2010	2044	Works phase	71,91	IM					
21	FR	RAA	AVRESSIEUS - SAINT JEAN DE MAURIENNE	New Line	Capacity improvement	2017	2025	Technical study	3200	EU	State	IM	Local Government		
22	FR	RAA	Rive Gauche du Rhône (gabarit AFPL)	Loading gauge	Capacity improvement	2007	2012	Work phase	9,04						
23	FR	RAA	GRENAY	Creation of a intermodal plateform	Modal Shift	2014	2016	Technical study	11,5	State	EU			Concession	
24	FR	RAA	Sillon alpin sud (Valence TGV - Moirans / Gières - Montmélian)	Adjustment of gauge	Modal Shift	2011	2014	Work phase	50	State					
25	FR	RAA	Sillon alpin sud (sud Valence et nord	Adjustment of gauge	Modal Shift	2013	2016	Preliminary	11	State					

			Moirans)					study						
26	FR	RAA	Ambérieu - Modane (GB1 tunnels)	Loading gauge	Capacity improvement	2007	2011	Work phase	145	EU	State	Local Government	IM	
27	FR	RAA	Rhone Alpes Line of RFC6	Reduction of Noise/Protection againt the noise	Environmenta conformity			In search of financing	169,40					
28	FR	RAA	Rhone Alpes Line of RFC6	Environmental conformity water	Environmenta conformity			In search of financing	9,32					
29	FR	RAA	French Access to New Line under the Alps (French Italian Project)	New Line	Safety / Security Higher speed Punctuality improvement Maintenance of performance Capacity improvement Interoperability	2017	2025	Technical study	7990	EU	State	IM	Local Government	
30	FR	RAA	By Pass of Lyon	Creation of siding, passing tracks, extra tracks	Safety / Security Higher speed Punctuality improvement Maintenance of performance Capacity	2017	20XX	Technical study	3560	EU	State	IM	Local Government	ligne nouvelle

					improvement Interoperability									
31	FR	RAA	By pass of Nimes and Montpellier	New Line	Safety / Security Higher speed Punctuality improvement Maintenance of performance Capacity improvement Interoperability	2011	2017	Work phase	2288	EU	State	IM	Local Government	Public Private partnership
32	FR	RAA	New Line Montpellier Perpignan	New Line	Safety / Security Higher speed Punctuality improvement Maintenance of performance Capacity improvement Interoperability	2017	20XX	Technical study	6300	EU	State	IM	Local Government	
34	FR	PACA	La Nerthe Tunnel	Adjustment of gauge	*Safety / Security* *Capacity improvement* *Maintenance of performance*	2011	2014	Works phase	3,50	IM	State			
35	FR	LR	Montpellier Perpignan	Signaling enhancement	Interoperability Capacity	2013	2017	Work phase	124,00	IM	State			

				Track enhancement	Improvement						
36	FR	PACA	Gauge for the motorway highway	Adjustment of gauge, track enhancement	Capacity and performance improvement,	?	?	Work phase	4,00	IM	State
37	FR	LR	Hanging screens	Noise reduction	Environment	2010	?	Technical study	4,00	IM	
38	FR	LR	Centralized Network Control System Nimes	signaling enhancement, traffic control	capacity and performance improvement	2010	2013	Works phase	50,30	IM	
39	FR	RAA	Centralized Network Control System Lyon perrache	signaling enhancement, traffic control	capacity and performance improvement	2014	2016	Technical ctudy	119,70	IM	
40	FR	RAA	Centralized Network Control System Rive Gauche	signaling enhancement, traffic control	capacity and performance improvement	2013	2020	Works phase	113,00	IM	
41	FR	RAA	Luminous automatic Block Vienne St Fons	signaling enhancement, traffic control	capacity and performance improvement	2012	2014	Works phase	19,00	IM	

5.1.1.4.3 Investment France – Italy

N°	Country	*Region (if required)*	Railway section	Nature of Projects	Benefits for RFC 6	Start date of the works	End date of the works	Actual step	Estimation of the costs in M€	Funder 1	Funder 2	Funder 3	Funder 4	Comments
1	FR-IT		New Line under the Alps St jean de Maurienne (FR)- Suas (IT)	New line	Safety / Security Higher speed Punctuality improvement Maintenance of performance Capacity improvement Interoperability	2015	20XX	Technical study	8500	EU	Italian state	French state		

5.1.1.4.4 Investment Plan in Italy

INVESTMENT PLAN RFC 6															
N°	**Country**	***ion (if required)***	**Railway section**	**Nature of Projects**	**Benefits for RFC 6**	**Start date of the works**	–	**End date of the works**	**Actual step**	**Estimation of the costs in M€**	**Funder 1**	**Funder 2**	**Funder 3**	**Funder 4**	**Comments**
1	Italy		Railway junction of Torino	Creation of new structure (line, tunnel, bridge, leapfrog)	Capacity improvement	2000		2015	Works phase	1 041	State	EU			Quadruplication line Porta Susa-Stura
2	Italy		Venezia Mestre-Portogruaro	Signaling enhancement (ERTMS…)	Punctuality improvement	2012		2014	Works phase	22	State				Completion of SCC (Remote control &command system)
3	Italy		Bussoleno	Signaling enhancement (ERTMS…)	Bottleneck relief	2013		2015	Works phase	8	State				ACC (station traffic control and management system) Bussoleno
4	Italy		Torino-Trieste	Signaling enhancement (ERTMS…)	Interoperability	2013		2015	Technical study	55	State	EU			ERTMS deployment
5	Italy		Railway junction of MILANO	Signaling enhancement (ERTMS…)	Capacity improvement	2013		2015	Preliminary study	21	State				Technological upgrading for capacity increase
6	Italy		TREVIGLIO-BRESCIA	Creation of new structure (line, tunnel, bridge, leapfrog)	Capacity improvement	2011		2016	Works phase	2 050	State	EU			High Speed/High capacity line Treviglio - Brescia
7	Italy		TORINO-PADOVA	Signaling enhancement (ERTMS…)	Capacity improvement	2010		2016	Works phase	708	State	EU			Technologiocal upgrading Torino-Padova line
8	Italy		TORINO-BRESCIA	Adjustment of gauge	Capacity improvement	2013	(*)	2016	Preliminary study	10	State				Maximum loading gauge upgrading
9	Italy		Railway junction of MILANO	Creation of siding, passing tracks, extra tracks	Capacity improvement	2015	(*)	2020	Preliminary study	100	State				Upgrading node of Milano Lambrate
10	Italy		RHO-PIOLTELLO	Signaling enhancement (ERTMS…)	Capacity improvement	2014	(*)	2020	Preliminary study	49	State				Technological upgrading for capacity increase
11	Italy		BRESCIA-PADOVA	Track enhancement	Higher speed	2013	(*)	2016	Preliminary study	5	State				Speed increase of Brescia-Padova line

12	Italy	VICENZA-TRIESTE e BORDER-TORINO	Creation of siding, passing tracks, extra tracks	Capacity improvement	2013	(*)	2017	Preliminary study	35	State		Increase of maximum track length
13	Italy	BORDER (MODANE)-BORDER(DIVACA)	Signaling enhancement (ERTMS…)	Interoperability	2018	(*)	2020	Preliminary study	15	State		ERTMS deployment
14	Italy	LATISANA-BIVIO SAN POLO	Track enhancement	Higher speed	2015	(*)	2020	Preliminary study	60	State		Speed increase on the Venezia-Villa Opicina line : section Latisana-bivio S.Polo*
15	Italy	VERONA	Signaling enhancement (ERTMS…)	Capacity improvement	2016	(*)	2020	Preliminary study	90	State		Upgrading node of Verona Porta Nuova
16	Italy	Railway junction of VENICE	Creation of new structure (line, tunnel, bridge, leapfrog)	Capacity improvement	2015	(*)	2020	Preliminary study	230	State		Bypass node of Venezia
17	Italy	MONFALCONE-BIVIO SAN POLO	Creation of siding, passing tracks, extra tracks	Capacity improvement	2015	(*)	2020	Preliminary study	30	State		Doubling of siding on the line San Polo-Monfalcone and upgrading node of Monfalcone
18	Italy	PORTOGRUARO-TRIESTE	Signaling enhancement (ERTMS…)	Punctuality improvement	2018	(*)	2025	Preliminary study	68	State		Completion of SCC (Remote control &command system)
19	Italy	TREVIGLIO	Creation of siding, passing tracks, extra tracks	Bottleneck relief	2017	(*)	2020	Preliminary study	82	State		Upgrading node of Treviglio
20	Italy	BRESCIA-VERONA	Creation of new structure (line, tunnel, bridge, leapfrog)	Capacity improvement	2016	(*)	2022	Preliminary study	2 800	State		High Speed/High Capacity line Brescia - Verona
21	Italy	AVIGLIANA-ORBASSANO	Creation of new structure (line, tunnel, bridge, leapfrog)	Capacity improvement	2017	(*)	2025	Preliminary study	2 180	State	EU	By pass node of Torino (priority phase)
22	Italy	VERONA-PADOVA	Creation of new structure (line, tunnel, bridge, leapfrog)	Capacity improvement	2020	(*)	2027	Preliminary study	5 130	State		High Speed/High Capacity line Verona-Padova
23	Italy	Railway junction of VERONA	Creation of new structure (line, tunnel, bridge, leapfrog)	Capacity improvement	2020	(*)	2027	Preliminary study	670	State		Upgrading Node of Verona for High Speed line
24	Italy-Slovenia	TRIESTE-BORDER (DIVACA)	Creation of new structure (line, tunnel, bridge, leapfrog)	Capacity improvement	2025	(*)	> 2030	Preliminary study	1 040	State	EU	New line Trieste-Divaca
25	Italy	BUSSOLENO-SETTIMO T.	Creation of new structure (line, tunnel, bridge, leapfrog)	Capacity improvement	2025	(*)	> 2030	Preliminary study	2 213	State		By pass node of Torino (completion phase)
26	Italy	VENEZIA-RONCHI	Creation of new structure (line, tunnel, bridge, leapfrog)	Capacity improvement	2025	(*)	> 2030	Preliminary study	5 701	State	EU	High Speed/High Capacity line Venezia - Ronchi
27	Italy	RONCHI-TRIESTE	Creation of new structure (line, tunnel, bridge, leapfrog)	Capacity improvement	2025	(*)	> 2030	Preliminary study	1 746	State	EU	High Speed/High Capacity line Ronchi-Trieste

(*) Funding partially or not secured, therefore start and/or end date of the project are only indicative and may be subject to sustantial changes

5.1.1.4.5 Investment Plan in Slovenia

INVESTMENT PLAN RFC 6														
N°	**Country**	***Region (if required)***	**Railway section**	**Nature of Projects**	**Benefits for RFC 6**	**Start date of the works**	**End date of the works**	**Actual step**	**Estimation of the costs in M€**	**Funder 1**	**Funder 2**	**Funder 3**	**Funder 4**	**Comments**
1	SL		Dolga Gora-Poljčane	Renewal of tracks	Bottleneck relief	2010	2014	Works phase	45,43	EU	State			
2	SL		Station Poljčane	Creation of siding, passing tracks, extra tracks	Capacity improvement	2012	2015	Works phase	26,30	EU	State			
3	SL		Divača-Koper	Creation of siding, passing tracks, extra tracks	Capacity improvement	2003	2015	Works phase	194,01	EU	State			
4	SL		Slovenska Bistrica-Pragersko	Renewal of tracks	Bottleneck relief	2011	2015	Approved and financed (but works have not started yet)	35,64	EU	State			
5	SL		Sežana/Koper-Ljubljana-Hodoš	Signaling enhancement (ERTMS…)	Interoperability	2008	2015	Work phase	56,97	EU	State			
6	SL		Pragersko-Hodoš	Electrification,Creation of siding, passing tracks, extra tracks	Bottleneck relief	2005	2015	Work phase	412,96	EU	State			
7	SL		Sežana/Koper-Ljubljana-Hodoš	Telecomunication enhancement (GSM-R)	Interoperability	2006	2015	Approved and financed (but works have not started yet)	149,55	EU	State			
8	SL		Trst-Divača	Creation of new structure (line, tunnel, bridge, leapfrog)	Capacity improvement	2008	2016	Preliminary study	35,58	EU	State			
9	SL		Divača-Koper	Creation of new structure (line, tunnel, bridge, leapfrog)	Capacity improvement	2004	2018	Technical study	903,51	EU	State			
10	SL		Divača-Ljubljana	Creation of new structure (line, tunnel, bridge, leapfrog)	Capacity improvement	2009	2013	Preliminary study	0,56	State				End date of the works means only for Preliminary study
11	SL		Ljubljana-Zidani Most	Creation of new structure (line, tunnel, bridge, leapfrog)	Capacity improvement	2009	2013	Preliminary study	0,60	State				End date of the works means only for Preliminary

										study
12	SL	Station Pragersko	Creation of siding, passing tracks, extra tracks	Capacity improvement	2010	2016	Preliminary study	0,60	State	End date of the works means only for Preliminary study
13	SL	Ljubljana knot	Creation of siding, passing tracks, extra tracks	Bottleneck relief	2010	2016	Preliminary study	2 600,00	State	End date of the works means only for Preliminary study

5.1.1.4.6 Investment Plan in Hungary

INVESTMENT PLAN RFC 6														
N°	**Country**	***Region (if required)***	**Railway section**	**Nature of Projects**	**Benefits for RFC 6**	**Start date of the works**	**End date of the works**	**Actual step**	**Estimation of the costs in M€**	**Funder 1**	**Funder 2**	**Funder 3**	**Funder 4**	**Comments**
1	HU		Bajánsenye - Boba	Signaling enhancement (ERTMS…)	Interoperability	2012	2015	Works phase	24	EU	State			
2	HU		Boba - Székesfehérvár	Renewal of tracks Renewal of signaling system Signaling enhancement (ERTMS…)	Safety / Security Higher speed Punctuality improvement Maintenance of performance Capacity improvement Interoperability	2015	2019	Technical study	528	EU	State			
3	HU		Székesfehérvár station	Renewal of tracks Renewal of signaling system	Punctuality improvement Maintenance of performance Capacity improvement Bottleneck relief	2013	2016	Technical study	114	EU	State			

4	HU	Székesfehérvár - Budapest (Kelenföld)	Renewal of tracks Renewal of signaling system Signaling enhancement (ERTMS…)	Safety / Security Higher speed Punctuality improvement Maintenance of performance Capacity improvement Interoperability	2009	2015	Works phase	476	EU	State
5	HU	Déli összekötő vasúti híd	Renewal of tunnel, bridge, etc.	Bottleneck relief	2017	2020	Preliminary study	109	EU	State
6	HU	Szolnok station	Renewal of tracks Renewal of signaling system	Punctuality improvement Maintenance of performance Capacity improvement Bottleneck relief	2016	2019	Technical study	110	EU	State
7	HU	Szolnok - Szajol	Renewal of tracks Renewal of signaling system	Safety / Security Higher speed Punctuality improvement Maintenance of performance Capacity improvement Bottleneck relief	2013	2015	Approved and financed (but works have not started yet)	66	EU	State

8	HU	Szajol - Püspökladány	Renewal of tracks Renewal of signaling system Signaling enhancement (ERTMS…)	Safety / Security Higher speed Punctuality improvement Maintenance of performance Capacity improvement Interoperability	2010	2015	Works phase	545	EU	State
9	HU	Püspökladány - Debrecen	Renewal of tracksRenewal of signaling systemSignaling enhancement (ERTMS…)	Safety / SecurityHigher speedPunctuality improvementMaintenance of performanceCapacity improvementInteroperability	2016	2018	Technical study	379	EU	State
10	HU	Debrecen - Nyíregyháza	Renewal of tracks Renewal of signaling system Signaling enhancement (ERTMS…)	Safety / Security Higher speed Punctuality improvement Maintenance of performance Capacity improvement Interoperability	2017	2020	Technical study	377	EU	State

11	HU	Nyíregyháza - Záhony	Renewal of tracks Renewal of signaling system Signaling enhancement (ERTMS…)	Safety / Security Higher speed Punctuality improvement Maintenance of performance Capacity improvement Interoperability	2018	2020	Technical study	482	EU	State
12	HU	Győr - Pápa - Celldömölk	Renewal of tracks Renewal of signaling system Signaling enhancement (ERTMS…)	Safety / Security Higher speed Punctuality improvement Maintenance of performance Capacity improvement Interoperability	-	-	Technical study	245	EU	State
13	HU	Budapest - Hegyeshalom	Signaling enhancement (ERTMS…)	Interoperability	2015	2019	Preliminary study	44	EU	State
14	HU	Biatorbágy - Tata	Renewal of tracks Renewal of signaling system	Safety / Security Higher speed Punctuality improvement Maintenance of performance Capacity improvement	2015	2019	Technical study	483	EU	State

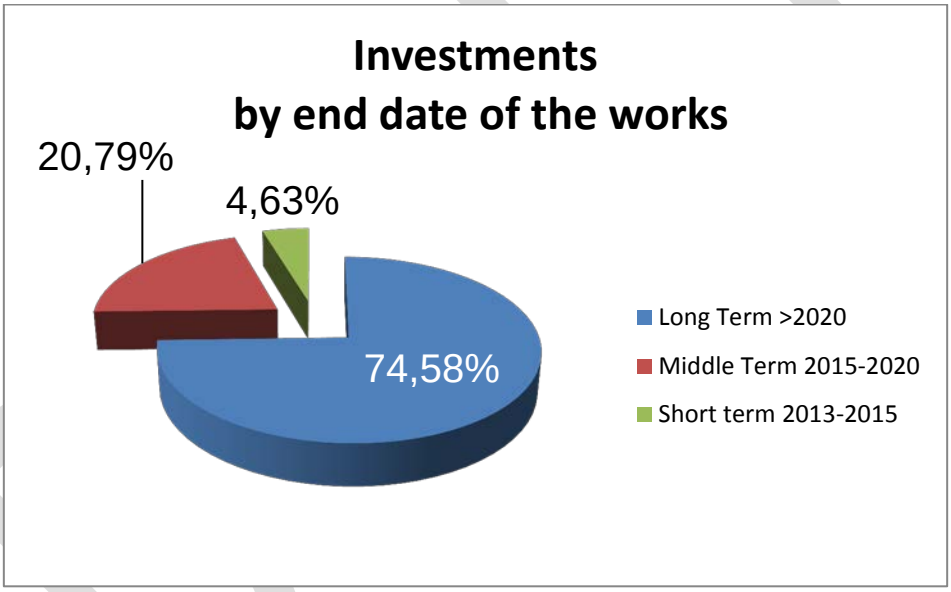
16	HU	Rákos - Hatvan	Renewal of tracks Renewal of signaling system Signaling enhancement (ERTMS…)	Safety / Security Higher speed Punctuality improvement Maintenance of performance Capacity improvement Interoperability	2015	2019	Technical study	501	EU	State
17	HU	Hatvan - Miskolc	Renewal of tracksRenewal of signaling systemSignaling enhancement (ERTMS…)	Safety / SecurityHigher speedPunctuality improvementMaintenance of performanceCapacity improvementInteroperability	2015	2019	Technical study	1 087	EU	State
18	HU	Miskolc - Nyíregyháza	Renewal of tracks Renewal of signaling system Signaling enhancement (ERTMS…)	Safety / Security Higher speed Punctuality improvement Maintenance of performance Capacity improvement Interoperability	2017	2020	Technical study	743	EU	State

5.1.2 Breakdown per periods.

We shall consider here two kinds of period

The short and mid term investments that are already planned : before 2020 and the projects after 2020 where Member states are not in position to define a clear date of realization.

In the end , the Spanish partner hasn't p^rovided yet the periods regarding the end of the works

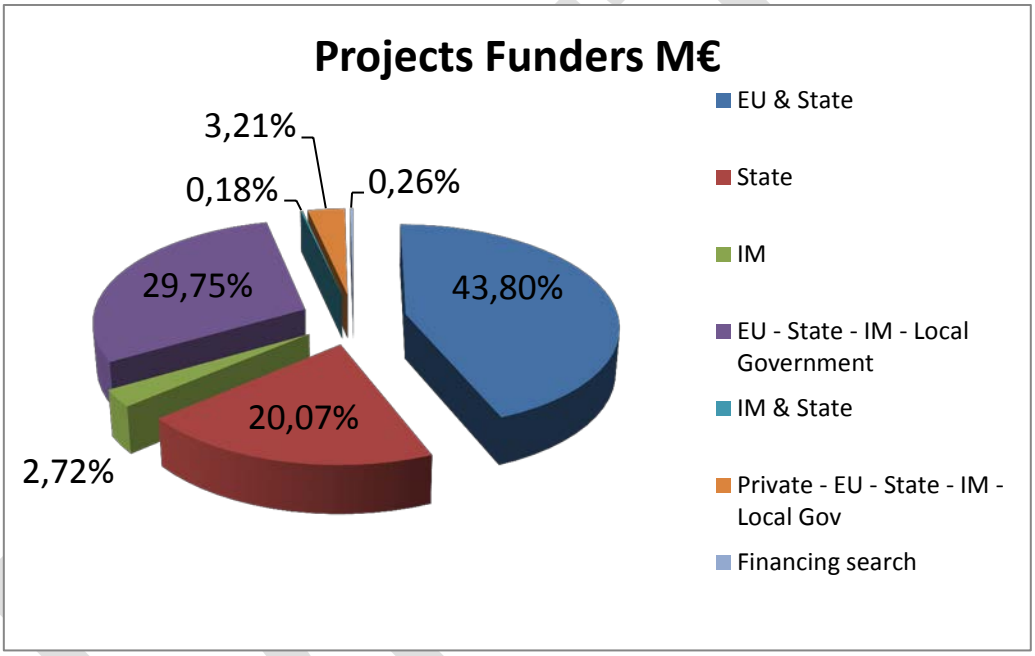


5.1.3 Costs and funding

The overall cost of the investment plan concerning Rail Freight Corridor 6 reach 71 Billions € (not included Spain Investment) (€ 2012) (without spansih investment Plan)

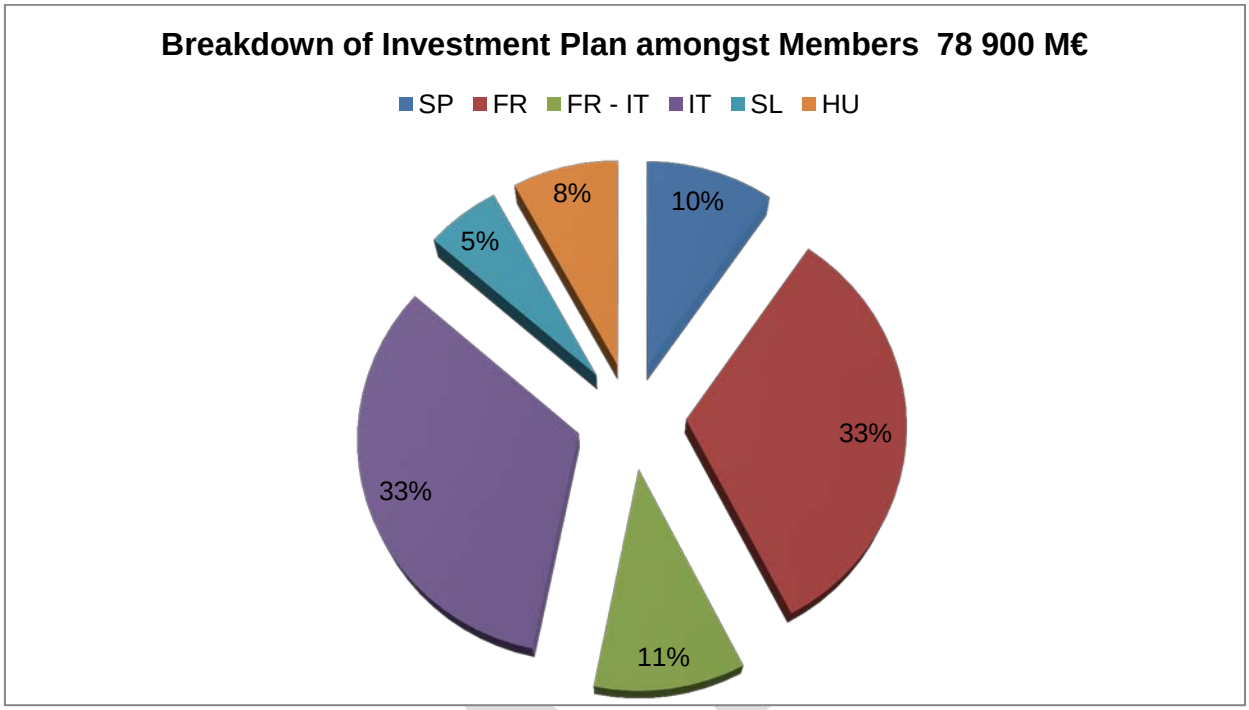
Projects Funders M€	M €

EU & State	31205
State	14301
IM	1935
EU - State - IM - Local Government	21195
IM & State	132
Private - EU - State - IM - Local Gov	2288
Financing search	188
	71243



As we can see in the chart the biggest part of the financing is got form the States Governmen or the States in collaboration with the European Union. The independency of each one of the States members of the RFC 6 shows different ways of financing the projects including the participation of the Infrastructure Managers, Local Governments but also private capital like in PPP or concessions.

The split amongst countries of these overall costs (quite 79 000 M€) is here followed


Breakdown of Investment Plan amongst Members 78 900 M€
SP
FR
FR - IT
IT
SL
HU
10%
33%
11%
33%
5%
8%

5.2 ERTMS strategy along the corridor

Rail Freight Corridor 6 already complies with the interoperability criteria defined in Directive 2008/57/EC as far as loading gauge, axle load, train speed and train length are concerned. To comply with the control command technical specifications for interoperability, Rail Freight Corridor 6 is currently deploying ETCS (European Train Control System) on its lines.

5.2.1 ETCS strategy along the corridor

The implementation of ETCS on Corridor routes is one of the fundamental goals which led to the creation of the ERTMS Corridors, including Corridor D which has subsequently been renamed Rail Freight Corridor 6. The creation of ERTMS corridors was itself inspired by the obligations set by the TSI CCS (Control Command System).

This European train control-command system is designed to eventually replace national legacy systems, imposing specific equipment on engines running on several networks.

The ETCS specifications are drawn up under the aegis of the European Railway Agency (ERA), in collaboration with representatives of the railway sector such as EIM, CER and UNIFE. One of the main problems is building a system capable of adapting to networks whose braking and signalling philosophies and operating rules have been developed on national bases which are sometimes very different from one another.

Following a period of stabilisation of the specifications, version 2.3.0d was made official and, until end of 2012, was the only version that could be implemented from both an infrastructure / track and rolling stock perspectives.

At a technical level, ETCS level 1 uses a specific transmission mode, eurobalises installed on tracks, to send information from track to on-board, while level 2 uses the GSM-R to exchange information bi-directionally between track and on-board. So far, level 1 has typically been superimposed on traditional national lateral signals, while level 2 was used for new lines.

Equipping the Corridor with ETCS depends on national projects incorporated into national ETCS deployment strategies. These projects did not start at the same time and each project has its own planning. The ETCS deployment realised through these national projects is not limited to corridor sections.

Once ETCS is installed, the deactivation of national legacy systems has to be decided on a country per country basis.

- The TP Ferro section is equipped only with ETCS. Trains using this infrastructure must be equipped with ETCS;
- In France, it is intended that on-board ETCS will be compulsory for a train to be allowed to run on a railway line 10 years after it has been equipped with in-track ETCS;
- In Slovenia, the mandatory use of ETCS on the Corridor is expected to be enforced three years after its installation in-track;
- In Hungary, it is expected that use of ETCS will be made compulsory on the corridors lines. No date has been set yet.

5.2.2 ERTMS deployment plans

5.2.2.1 The ERTMS deployment plan on Spanish part of Corridor 6 ((RFC6)

Mixed Traffic Line (Barcelona-Figueres).

ERTMS Level 1.

Section Figueres Vilafant - TP Ferro: Put in service in December 2010.
Section Bif. Mollet-Figueres: Put in service in December 2012.
Section Barcelona Sants - Bif. Mollet: Date scheduled for completion of the works: April 2013.

ERTMS Level 2.

Section Barcelona Sants - Figueres: Date scheduled for completion of the works: 2014
Section Figueres - TP Ferro: Pending of the recruitment to migration to version 2.3.0d

Conventional Line (Can Tunis - Castellbisbal- Nudo de Mollet y Bif. Gerona Mercaderies-Vilamaya-Figueres Vilafant)

ERTMS Level 1.

Section Can Tunis - Castellbisbal- Nudo de Mollet (double track with third rail): Finished works. Pending authorization to put in service

Section Bif. Gerona Mercaderies-Vilamaya-Figueres Vilafant (single track with third rail): Finished works. Pending authorization to put in service.

5.2.2.2 The ERTMS deployment plan on French part of Corridor 6 ((RFC6)

In France a common project includes the deployment of ETCS on the French parts of RFC 2 and RFC6.

The call for tender was issued in 2008 and a contract was signed in late 2009 with Alstom, to develop the signalling principles, adapt their standard products to the French network specificities, produce prototypes then equip about 2200 km of lines (representing around 4400 signals). Additional contracts followed, covering the project management (SNCF Engineering) and the OQA activities (Bureau Veritas).

Version 2.3.0 was at the time of signature the only official version. Once version 2.3.0d was released and became the only legal one, the project switched to that version.

Technically the choice was made to deploy ETCS level 1 overlaid on the national legacy system, KVB.

The project and the relevant contracts are split in two main parts.

- The first part covers the development of the signalling principles, the adaptation of the products to the French network technical and normative conditions, the supply of prototypes and the ETCS "type commissioning" by the French National Safety Authority, EPSF (Établissement Public de Sécurité Ferroviaire). It includes the deployment of ETCS on two pilot sites of around 20 km each, located at the borders with Luxembourg and Belgium.
- The second part covers the deployment of ETCS on the French sections of RFC2 and RFC6.

  Priority is given to the Basel-Bettembourg branch on RFC2 as this branch is the more active with international freight trains.

As for RFC6, it is scheduled that the deployment in France should start from Perpignan, leading north to Lyon on the conventional line, in order to connect to the TP Ferro section through the Pyrénées, which is already fitted with ETCS. The new bypass between Nîmes and Montpellier, designed for mixed traffic, shall be equipped with both ETCS1 and KVB. The equipment of the section Lyon-Modane (to Italy) shall start with an offset. The Lyon node is expected to be equipped the latest as it will be the more difficult area to address, and all the experience gained so far will have to be taken into account.

The planning for the ETCS deployment on RFC6 is shown below. It is based on the availability of resources and the relevant level of financing.

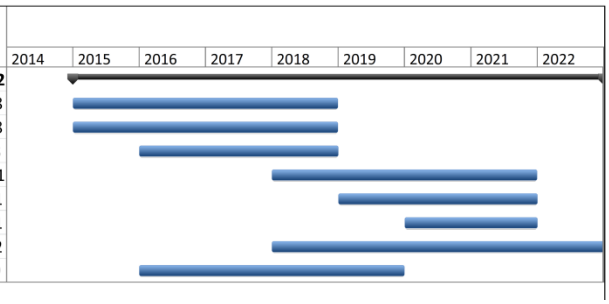
The first part of the project has experienced a significant delay, due mainly to an unexpected level of difficulty to define the signalling principles and the associated technical procedures. The French network is actually based on an important numbers of technologies and many rules. ETCS has to be adapted to each of these technologies, whereas no comprehensive referentiel was available to ease this process.

In March 2013 the financing of the second part of the project is not secured. The level of participation from the State is still to be defined. In parallel, the subsidies granted by the Commission for the Perpignan-Montpellier section, initially thought to be finalised by end 2013, will be lost because of the delay explained above. The level of European subvention to be expected for the next financing period is unknown.

This present lack of visibility in the financing level does not allow yet defining at which rate the deployment of ETCS will be realised on RFC6. The planning shown below must then be considered as indicative.

The present time plan for the French part of ERTMS deployment on RFC6 is as follows:

N°	Nom de la tâche	Début	Fin
1	**ERTMS DEPLOYMENT on French Part of RFC6**	**Jeu 01/01/15**	**Ven 30/12/22**
2	Perpignan - Montpellier	Jeu 01/01/15	Ven 28/12/18
3	Montpellier - Limite régions Lyon/Montpellier	Jeu 01/01/15	Ven 28/12/18
4	Limite régions Lyon/Chambéry - Chambéry	Ven 01/01/16	Lun 31/12/18
5	Chambéry - Modane	Lun 01/01/18	Mer 29/12/21
6	Limite régions Lyon/Montpellier - Lyon Sibelin	Mer 02/01/19	Ven 31/12/21
7	Limite régions Chambéry/Lyon - Lyon St Clair	Jeu 02/01/20	Ven 31/12/21
8	Corridor C&D : Nœud Lyonnais	Lun 01/01/18	Ven 30/12/22
9	Marseille Corridor D	Ven 01/01/16	Lun 30/12/19



The financial plan for the French part of ERTMS Deployment on RFC6 is as follows (Exc.taxes):

Activities	2013	2014	2015	2016	2017	2018	TOTAL
ETCS Implementation Le Soler-Montpellier section	0	0	10.830.000	10.830.000	10.830.000	10.790.000	43.280.000
ETCS Implementation Corridor D/6 on remaining sections of Corridor	0	0	6.050.000	29.140.000	29.140.000	42.270.000	106.600.000
TOTAL	0	0	16.880.000	39.970.000	39.970.000	53.060.000	149.880.000

5.2.2.3 The ERTMS deployment plan on the Italian part of Corridor 6

The ERTMS deployment plan relevant to the Italian line sections designated to be part of Rail Freight Corridor 6 is basically driven by the obligations deriving from the TSI CCS EDP presently in place.

However, some adjustments in the time planning of ERTMS deployment are proposed in order to ensure a harmonised trans-border implementation. In fact, only continuous trackside ERTMS coverage along the principal European lines will create the necessary incentives for train operating companies to invest in onboard ERTMS equipment.

The corridor lines (principal and diversionary lines) of the Italian part of Corridor 6 with obligation for ERTMS implementation as required by TSI CCS (EDP) are presented in the table below.

	2015	2020
Italian sections of RFC 6	Bardonecchia-Torino-Milano-Verona-Vicenza-Cittadelle-Castelfranco Veneto-Treviso-Portogruaro-Trieste-Villa Opicina	Vicenza-Padova, Padova-Venezia Mestre/Venezia Porto Marghera, Venezia Mestre-Portogruaro

A revised time planning notified to the Commission by the Italian Ministry of Transport in compliance with art.7.3.2.5 of TSI CCS, substantially confirms the above mentioned time lines, with the exception of the Bardonecchia-Torino-Novara line, whose equipment with ERTMS will be realistically completed by 2020, in line with the trans-border ERTMS implementation programmes on the French side.

ERTMS implementation in the hubs of Novara, Milano, Verona, Padova and Trieste (with limitation to the node internal routings utilised for the connection between freight areas and corridor designated lines) is confirmed for 2015, while Venezia hub (with limitation to the node internal routings utilised for the connection between relevant freight areas and the principal and/or diversionary corridor line) will be equipped by 2020.

On the technical side, ERTMS implementation along the Italian sections of rail freight corridor 6 foresees the superposition of ERTMS to the existing legal Class B systems. The choice of the ERTMS Level on the different sections of the Corridor will be made on the basis of two criteria. The first one is based on the Control Command System in use.

On lines with existing SCMT + BACC, that means a continuous Control Command System, ERTMS Level 2 will be implemented.

On lines with SCMT Stand Alone, that means a discontinuous Control Command System, it will be applied second criteria based on an evaluation about:

- Costs
- Performances
- Maintenance

On the basis of the mentioned criteria it will be possible to have two ERTMS Level implementations:

- Level 1 + Infill Radio;
- Level 2.

The ERTMS Baseline implemented Trackside will be:

- for Level 2 the Baseline 2 (as specified for the Version 1.1 in the Baseline 3)

- and for the Level1+Infill Radio the Baseline 3 (to take advantage from the optimised functionality specified for the Infill by Radio).

It is to be mentioned however that on a relevant part of the Torino – Villa Opicina line, more precisely on the Torino – Padova section, a substantial Project of upgrading of the existing equipment is presently in progress.

Among the other activities, all the interlockings will be renewed and in some cases "concentrated", thanks to the "ACC-Multi-station" technology. New buildings will be realized and all the equipment will have an "ERTMS interface" to ease the installation of the Radio Block Centre (level 2 ERTMS).

The on-going activities of the ERTMS Pilot Line deployment will be taken into account for the realization of ERTMS on freight corridor 6. The Pilot Line will consist in the installation of a fully interoperable system inside corridor D route based on ERTMS Level 2 in accordance with SRS ETCS Baseline 3, in parallel to the existing National system (SCMT). It will be realised on a section of the Torino – Villa Opicina line, more precisely between the stations of Milano Lambrate and Treviglio, where it will be possible to simulate most of the Corridors cases as there are both electronic and electromechanical interlocking's in service. The total length is about 40 km.

Activities	2013	2014	2015	2016	2017	2018	TOTAL
ETCS Pilot line installation between Milano Lambrate-Treviglio	280.000	4.000.000	1.640.000				5.920.000
ETCS deployment (estimated on the entire Torino-Villa Opicina section as per UE Decision 2009-60122-P)	0	15.300.000	35.700.000				51.000.000
TOTAL	280.000	19.300.000	37.340.000				56.920.000

5.2.2.4 The ERTMS deployment plan on Slovenian part of Corridor 6 ((RFC6)

According to section 7.3.2.5 of the Commission Decision of 25 January 2012 on the technical specification for interoperability relating to control-command and signalling subsystem of the trans-European rail system, the Slovenian Ministry declare with notification to the EU DG Mobility and Transport on 21 December 2012 the progress of implementation the ERTMS on Corridor D section in Slovenia, which is located with RFC6.

Slovene part of ERTMS deployment on RFC6 is part of project »Deployment of ERTMS/ETCS on Corridor D«, for which the European Commission with the Decision C (2008) 7888 of 10.12.2008 and in an annex to that Decision no. C (2011) 3250 of 6.5.2011 named as project no. 2007-EU-60120-P and project no. 2009-EU-60122-P approved funding for the TEN-T co-financing in the Republic of Slovenia.

The trackside deployment of the ETCS requested level 1 with version 2.3.0d, overlaid with existing INDUSI I60 national signalling system. The transition period of 3 years will allow using ETCS level 1 and/or INDUSI I60 indifferently.

The Infrastructure Manager (SŽ/IM) together with the Directorate for the implementation of investment in rail infrastructure (DŽI), created the conditions for the following tenders:

- The implementation of ETCS on the Slovenian part of the Corridor D, which includes two pilot section (Italian border-Gornje Ležeče and Murska Sobota-Hungarian border) and other rail sections between the stations Gornje Ležeče and Murska Sobota and Divača-Koper line.
- Notified Body (NOBO) for infrastructure project.

In 2009, all tenders were published.

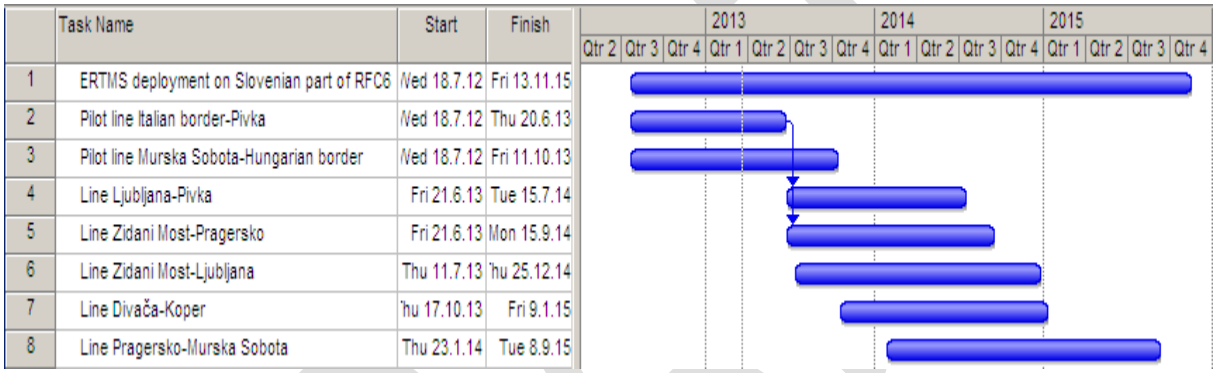
The infrastructure project has been subject to a number of auditing requests, in accordance with the Auditing of Public Procurement Procedures Act (Official Gazette of the RS, no. 94/07; hereinafter APPA-UPB5), so that the process of selecting the most advantageous contractor delayed to 2012.

For the infrastructure project in July 2012 was signed a contract for the ETCS implementation of the two pilot sections, as well as other sections in the Slovenian part of Corridor D. The Contract deals with the ETCS implementation on pilot sections with completion by the end of 2013, which is in line with the Decision under project no. 2007-EU-60120-P. Other sections of the Slovenian part of Corridor D will be completed

in 2015. According to the contract with the constructor, the deadline for end of works is 30 November 2015.

The contract with the NOBO is effective from the date of signing the contract for the infrastructure project in July 2012.

The present time plan for the Slovenian part of ERTMS deployment on RFC6 is as follows:



	Task Name	Start	Finish
1	ERTMS deployment on Slovenian part of RFC6	Wed 18.7.12	Fri 13.11.15
2	Pilot line Italian border-Pivka	Wed 18.7.12	Thu 20.6.13
3	Pilot line Murska Sobota-Hungarian border	Wed 18.7.12	Fri 11.10.13
4	Line Ljubljana-Pivka	Fri 21.6.13	Tue 15.7.14
5	Line Zidani Most-Pragersko	Fri 21.6.13	Mon 15.9.14
6	Line Zidani Most-Ljubljana	Thu 11.7.13	Thu 25.12.14
7	Line Divača-Koper	Thu 17.10.13	Fri 9.1.15
8	Line Pragersko-Murska Sobota	Thu 23.1.14	Tue 8.9.15

The financial plan for the slovenian part of ERTMS Deployment on RFC6 is as follows (Exc.taxes):

Activities	**2012**	**2013**	**2014**	**2015**	**TOTAL**
Pilot installation in Slovenia-DŽI	4.270.000	3.750.000	0	0	8.020.000
SŽ/IM ETCS level 1: deployment and certification.	0	0	20.424.198	18.619.302	39.043.500
TOTAL	4.270.000	3.750.000	20.424.198	18.619.302	47.063.500

GSM-R:

The GSM-R project is in the stage of public procurement for selection of the contractor that will provide the railway network with the GSM-R in Slovenia. All sections of the

RFC6 will be equipped with GSM-R. The conclusion of public procurement procedure is envisaged for the first half of 2013, the end of works is envisaged by end of 2015

5.2.2.5 The ERTMS deployment plan on Hungarian part of Corridor 6 ((RFC6)

A National deployment Plan was approved in 2007 for ETCS implementation only on the Corridor. The plan will be up to 2020. The complete switch has not been planned yet.

For the next twenty years, the two systems (the legacy and the ETCS system) will be installed both in parallel.

Concerning the Corridor 6

Section [border to Slovenia]–Őriszentpéter–Boba (102 km)

The rail link between Slovenia and Hungary was established in 2000, when a new rail line was built to cover the 19 km long gap along the Hungarian side of the border. The old rail link hasn't been in use since the Second World War, and in the period of pre-accession to the EU the re-establishing of a rail connection with Slovenia became a priority.

The cross-border freight flow on the single track line is moderate compared to ERTMS corridor E, which is a more established route. It amounted to 4,2 million gross tonnes and 3 814 freight trains in 2012. With regard to the lower traffic the line is single track.

The 19 km long section connected to the border was newly built between 1998 and 2000. The remaining 83 km long part has been reconstructed and significantly upgraded from a former branch line. Reconstruction works were carried out co-financed by the Instrument for Structural Policies for Pre-Accession (hereinafter: ISPA), projects 2000/HU/16/P/PT/003 and 2000/HU/16/P/PT/003-V. It is considered therefore that the line is subject to point 7.3.2.4. of the CCS TSI. Following the upgrading the line now has electronic interlocking installed on its whole length.

Neither the newly built part, nor the upgraded section has the legacy train control system (hereinafter: EVM) installed. Instead, an ETCS level 1 system was equipped on the newly built line in 2004. In line with the national ERTMS strategy EVM hasn't been added later on the upgraded section either, since the section was previously not equipped with it. As a result, ERTMS will be the only train control system utilised on the line.

ETCS level 2 is being installed on the whole length of the line, i.e. the old level 1 section will also be upgraded. ETCS implementation is carried out within the project described in point 4.5, while for GSM-R point 4.1 applies.

Section Boba–Celldömölk–Győr (82 km)

The 82 km long line provides a temporary alternative alignment of TEN-T priority project 6, as noted in point 6.3 of the Annual Activity Report 2009-2010 for PP6 (Brussels, July 2010). In line with the above strategy Corridor D was directed via Celldömölk and Győr. For the ERTMS corridor the temporary alignment offered a route that cuts the length of the required ERTMS installation by 30% compared to the direct link between Boba and Budapest using the already equipped line of Corridor E from Győr.

GSM-R will be able to benefit from that advantage, and is going to be equipped within the project described in point 4.1. Report on the timeline of implementation of ERTMS corridors D and E on the territory of Hungary 6 / 11.

The line is single track with the exception of a 10 km long section, allowed speed is 100 km/h. Freight flows are split at Boba between this section and the direct line to Budapest. Freight flows on the line amounted to 2,3 million gross tonnes and just under 2 500 freight trains in 2012 including domestic traffic.

Reconstruction of the line hasn't been commenced yet. Subsequently, only four out of eleven interlocking systems on the line are capable of providing standardised interfaces for ETCS. Installing ETCS under the present technical circumstances would require to virtually rebuild the system in case of a future track reconstruction.

However, point 3.1.3.1.1. of Annex IV of ministerial decree no. 103/2003. of the Ministry of Economy and Transport on the interoperability of the conventional rail system only requires the installation of a train control system, if the allowed speed is over 100 km/h. Trains can therefore run without a requirement for on-board train control equipment of any type, and basic interoperability remains maintained.

The direct line to Budapest via Székesfehérvár is now listed in the annex to the proposal for a regulation establishing the Connecting Europe Facility. As a result, it is likely that the direct route has regained priority for the reconstruction considering that the assumed faster implementation of ETCS on the section Boba–Celldömölk–Győr can't be applied. Track reconstruction, GSM-R and ETCS installation will all be carried out in a single project during the next multiannual financial framework.

5.2.2.6 Cost Benefit Analysis

5.2.2.6.1 Costs

The costs are incurred at national level; when available, they have been described in the sections above.

5.2.2.6.2 Benefits

5.2.2.6.2.1 Interoperability

Until the deployment of ETCS, railway undertakings have to change their locomotives every time they cross a border or they have to equip these locomotives with multiple expensive on-board control command systems. The first choice has a negative impact on travel time and on rolling stock management. The second is expensive.

With ETCS, they will be able to use locomotives that can run from the origin to destination with a single on board control command system. This will facilitate asset management, save journey time and reduce costs.

On top of that, ETCS will enable a driver to run an international train with the sole knowledge of ETCS related driving rules. In contrast, with the current situation were a driver is allowed to run in several countries only if he/she has been trained to use each national legacy system.

5.2.2.6.2.2 National legacy systems ("Class B") renewal

All the Infrastructure Managers of Corridor 6 consider that ETCS will replace in the mid run or in the long run, the national Control Command systems in use, and will hence provide a solution to the obsolescence of these legacy systems. However the deadline is not the same among infrastructure managers.

This benefit however should not be overestimated as the deployment of ETCS will not be as simple as the mere renewal of legacy systems. The complexity will depend on the characteristics of the legacy systems but in some cases, the new and the old systems will have to cohabit for many years and the old system may even have to be renewed after the deployment of ETCS.

5.2.2.6.2.3 Increased competition

ETCS is an opportunity for a Railway Undertaking to use its own rolling stock and act with open access, opening up competition and potentially bringing prices at market level

5.2.2.6.2.4 Reduction of externalities

With cost savings and increased competition, the railway mode should become more attractive and gain market share, hence reducing road congestion, greenhouse effect emissions and air pollution. On top of that, players who will switch from road to rail will enjoy cost savings or journey time reduction.

5.2.2.6.2.5 Safety (To be completed by May- Nov 2013)

ETCS is a state of the art tool as far as safety is concerned and, at various degrees and its deployment provides infrastructure managers with benefits from an increase of safety compared to the safety provided by their legacy systems.

5.2.2.6.2.6 Recovery in the event of disturbances

In France, ETCS will allow a faster recovery in the event of disturbances compared to the current KVB legacy system which is driven by the so called VISA driving principle. Consequently, the deployment should lead to more robust performances

5.2.2.7 Conclusion

The computation of a monetary value for the benefits listed above is difficult, as corridor members/partners use different methods to assess them. This is specifically the case for the assessment of safety improvement. On top of that, the value of time saved thanks to ETCS when operating a railway node is a factor that cannot be determined, as it is sensitive to the node characteristics, and the time and conditions of operation.

All in all, corridor members and partners share the view that the ground deployment of ETCS does not provide an immediate financial return on investment nor a positive socio economic net asset value. The traffic gains induced by the use of ERTMS are presently difficult to assess, especially in the starting phase when few trains will be running in ETCS mode.

What is more, the socio economic benefits of ETCS vary a lot from one country to another as it depends on the characteristics of the legacy control command system and on the size of the country.

5.3 Capacity management plan

At the time being, only the Slovenian Infrastructure Manager is in a position to provide a complete view on this relevant issue.

5.3.1 Bottleneck removals

5.3.1.1 Lack of capacity in the line

a) On the line section Divača – Koper

On the existent line Nr.60 Divača-cepišče Prešnica and Nr.61 cepišče Prešnica-Koper (section Divača-Koper) there are investment in work and in program regarding the renewal of tracks, Creation of siding, Passing tracks, Extension of station tracks (up to 750 m), renewal of signalling system. The benefits for RFC6 are Bottleneck relief, Capacity improvement (Modernisation of the signal-safety devices, Extension of station tracks, modernize of the power supply stations). Time period is 2003 till 2015 with estimation of the costs 194 M€ with VAT. Regarding the description demands »Investment plan RFC 6-Table« is this project mentioned for Slovenia (SL) as Nr. 3.

There are also in plan new second track Divača-Koper with the benefits for RFC6 Bottleneck relief, Higher speed, and Capacity improvement. Time period is 2004 till 2018 with 903,51 M€ with VAT. Regarding the description demands »Investment plan RFC 6-Table« is this project mentioned for Slovenia (SL) as Nr. 9.

b) On the line section Sežana border - Ljubljana

On the section Divača-Ljubljana there is in plan new railway line Divača-Ljubljana with the benefits for RFC6 Bottleneck relief, Higher speed, and Capacity improvement. At the moment is the mentioned project phase as a preliminary study (Time period for preliminary study 2009-2013; 1.572,93 M€ with VAT- for the investment). Regarding the description demands »Investment plan RFC 6-Table« is this project mentioned for Slovenia (SL) as Nr. 10.

There is also in investment plan a new railway line Trst-Divača. This is a creation of new railway line on Trieste-Divača section. Benefits for RFC6 are Bottleneck relief, Higher speed, Capacity improvement. At the moment is the mentioned project in phase as s preliminary study and technical designing (Time period for preliminary study and technical designing 2008-2016; 310,93 M€ with VAT- for the investment). Regarding the description demands »Investment plan RFC 6-Table« is this project mentioned for Slovenia (SL) as Nr. 8.

In investment plan is also the reconstruction of knot Ljubljana. Benefits for RFC6 are Bottleneck relief, Capacity improvement. At the moment is the mentioned project in phase as s preliminary study (Time period for preliminary study 2008-2016; 2.600 M€ with VAT - for the investment). Regarding the description demands »Investment plan RFC 6-Table« is this project mentioned for Slovenia (SL) as Nr. 13.

c) On the line section Ljubljana – Zidani Most

On the section Ljubljana-Zidani Most there is in plan new railway line Ljubljana-Zidani Most with the benefits for RFC6 Bottleneck relief, Higher speed, and Capacity improvement. At the moment is the mentioned project in phase as a preliminary study (Time period for preliminary study 2009-2013; 1.843,35 M€ with VAT- for the investment). Regarding the description demands »Investment plan RFC 6-Table« is this project mentioned for Slovenia (SL) as Nr. 11.

5.3.2 Axle loads and train weight limits

a) On the line section Zidani Most-Pragersko

On the section Dolga Gora-Poljčane there is in working phase renewal of tracks. Benefits for RFC6 are Bottleneck relief, Rising of the category from C4 to D4 (8,0 t/m and 22,5 t), Increase of the transport capacity. Time period is 2010 till 2014 with estimation of the costs 45,43 M€ with VAT. Regarding the description demands »Investment plan RFC 6-Table« is this project mentioned for Slovenia (SL) as Nr. 1.

In working phase is also renewal of station Poljčane. The benefits for RFC6 are Bottleneck relief and also Rising of the category to D4. Time period is 2012 till 2015 with estimation of the costs 26,3 M€ with VAT. Regarding the description demands »Investment plan RFC 6-Table« is this project mentioned for Slovenia (SL) as Nr. 2.

On the section Slovenska Bistrica-Pragersko there is in working phase renewal of tracks. Benefits for RFC6 are Bottleneck relief, Rising of the category from C4 to D4, Increase of the transport capacity. Time period is 2011 till 2015 with estimation of the costs 35,64 M€ with VAT. Regarding the description demands »Investment plan RFC6-Table« is this project mentioned for Slovenia (SL) as Nr. 4.

b) On the line section Pragersko-Murska Sobota

On the line section Pragersko-Murska Sobota it is to be mentioned the project »Electrification, Renewal of tracks, Track enhancement, Abolition of level crossings« in working phase sub-project »Upgrading line Pragersko-Murska Sobota - 2.stage«. Benefits for RFC6 are with reconstruction of some sections on the line also rising of the category to D4. Time period for this sub-project is 2010 till 2014 with estimation of the costs 55,17 M€ with VAT. Regarding the description demands »Investment plan RFC 6-Table« is this project mentioned for Slovenia (SL) as Nr. 6.

In investment plan is also the reconstruction of station Pragersko. The benefits for RCF6 are Bottleneck relief, and also Rising of the category from to D4. At the moment is the mentioned project phase as a preliminary study (Time period for preliminary study 2010-2016; 0,6 M€ with VAT-for preliminary study). Regarding the description demands »Investment plan RFC6-Table« is this project mentioned for Slovenia (SL) as Nr. 12.

5.3.3 Traction

a) On the line section Pragersko-Hodoš

Regarding the Traction on line section Pragersko-Hodoš there is in working phase reconstruction of line section Pragersko – Hodoš. The entire volume of the project is Electrification, Renewal of tracks, Creation of siding, Passing tracks, Extension of station tracks (to 750m length), Abolition of level crossings, Noise reduction with estimation of the costs 412,96 M€ with VAT. One part of the project is Electrification of a nominal voltage of 3 kV. Benefits for RFC6 are uniformity of the Electric traction, Lower specific energy consumption and lower CO2 emission and noise. Time period is 2005 till 2015 with estimation of the costs 236,12 M€ with VAT. Regarding the description demands »Investment plan RFC 6-Table« is this project mentioned for Slovenia (SL) as Nr. 6.

5.3.4 Interoperability

a) on the section Sežana/Koper-Ljubljana-Hodoš (entire Slovenian part of RFC6-Corridor)

A Signalling enhancement project »ERTMS/ETCS on the D Corridor« is planned. Benefits for RFC6 are assurance of interoperability, Higher speed, Reestablishment of the railway transport without the border in accordance with the EC directive. Time

period is 2008 till 2015 with estimation of the costs 56,97M€ with VAT. The project is in work phase. Regarding the description demands »Investment plan RFC 6-Table« is this project mentioned for Slovenia (SL) as Nr. 5.

A further project is related to the telecommunication enhancement (GSM-R Digital radio network). Benefits for RFC6 are assurance of Interoperability, Safety, and Renewal of telecommunication system (exchange of the old -fashioned analogue system for the operative radio communications). Time period is 2006 till 2015 with estimation of the costs 149,55M€ with VAT. The project is in Tendering phase. Regarding the description demands »Investment plan RFC 6-Table« is this project mentioned for Slovenia (SL) as Nr. 7.

5.3.5 Train length increase

Regarding the train length increase the goal is to increase the length on all lines on the rail freight corridor to 750m. There are in plan following projects:

a) On the line section Divača – Koper

On the existent line section Divača-Koper there are investments in work and in program also regarding the train length increase. The benefits for RFC6 are also extension of tracks (up to 750m). Time period is 2003 till 2015 with estimation of the costs 194 M€ with VAT. Regarding the description demands »Investment plan RFC 6-Table« is this project mentioned for Slovenia (SL) as Nr. 3.

There are also in plan new second track Divača-Koper with the benefits for RFC6 - Bottleneck relief - train length increase. Time period is 2004 till 2018 with 903,51 M€ with VAT. Regarding the description demands »Investment plan RFC 6-Table« is this project mentioned for Slovenia (SL) as Nr. 9.

b) On the line section Sežana border – Ljubljana

On the section Divača-Ljubljana there is in plan new railway line Divača-Ljubljana with the benefits for RFC6 Bottleneck relief- extension of station tracks (up to 750m). At the moment is the mentioned project phase as a preliminary study (Time period for preliminary study 2009-2013; 1.572,93 M€ with VAT - for the investment). Regarding the description demands »Investment plan RFC 6-Table« is this project mentioned for Slovenia (SL) as Nr. 10.

There is also in investment plan a new railway line Trst-Divača. This is a creation of new railway line on Trieste-Divača section. Benefits for RFC6 are also Bottelneck relief- extension of tracks (up to 750m). At the moment is the mentioned project in phase as s preliminary study and technical designing (Time period for preliminary study 2008-2016; 310,93 M€ with VAT- for the investment). Regarding the description demands »Investment plan RFC 6-Table« is this project mentioned for Slovenia (SL) as Nr. 8.

c) On the line section Ljubljana – Zidani Most

On the section Ljubljana-Zidani Most there is in plan new railway line Ljubljana-Zidani Most with the benefits for RFC6 Bottleneck relief- train length increase. At the moment is the mentioned project in phase as a preliminary study (Time period for preliminary study 2009-2013; 1.843,35 M€ with VAT- for the investment). Regarding the description demands »Investment plan RFC 6-Table« is this project mentioned for Slovenia (SL) as Nr. 11.

d) On the line section Zidani Most-Pragersko

On the station Poljčane there is in working phase renewal of station. Benefits for RFC6 are also - Bottleneck relief- train length increase. Time period is 2012 till 2015 with estimation of the costs 26,3 M€ with VAT. Regarding the description demands »Investment plan RFC 6-Table« is this project mentioned for Slovenia (SL) as Nr. 2.

e) On the line section Pragersko – Ormož – Hodoš

Regarding the train length increase on line section Pragersko-Hodoš there is in working phase reconstruction of line section Pragersko – Hodoš. The entire volume of project is Electrification, Renewal of tracks, Creation of siding, passing tracks, extension of station tracks (to 750m length), Abolition of level crossings, Noise reduction with estimation of the costs 412,96 M€ with VAT. One part of the project is Electrification on the line and reconstruction of stations of the line. Benefits for RFC6 are also Bottleneck relief- train length increase. Time period is 2005 till 2015 with estimation of the costs 236,12 M€ with VAT. Regarding the description demands »Investment plan RFC 6-Table« is this project mentioned for Slovenia (SL) as Nr. 6.

Regarding the station Pragersko there is in program also renewal of station. Benefits for RFC6 are also - Bottleneck relief- train length increase. At the moment is the mentioned project phase as a preliminary study (Time period for preliminary study

2010-2016; 0,6 M€ with VAT-for preliminary study). Regarding the description demands »Investment plan RFC 6-Table« is this project mentioned for Slovenia (SL) as Nr. 12.

5.3.6 Loading gauge increase

Regarding the loading gauge increase there are plans regarding the tunnel restriction on the line section Gornje Ležeče – Pivka:

a) On the line section Divača – Ljubljana

On the section Divača-Ljubljana there is in plan new railway line Divača-Ljubljana. At the moment is the mentioned project phase as a preliminary study (Time period for preliminary study 2009-2013; 1.572,93 M€ with VAT- for the investment). Regarding the description demands »Investment plan RFC6-Table« is this project mentioned for Slovenia (SL) as Nr. 10.

6 Measures

6.1 Coordination of works

6.1.1 Introduction

Based on the European Regulation 913/2010, the Guidelines for coordination/publications of possessions provide recommendations for the process of coordinating and publishing activities reducing the available capacity on a Rail Freight Corridor. The aim is to use a common tool for gathering and publishing necessary information about capacity restrictions.

In this Guideline the term „possession" will be used instead of „works", because the term better describes the need of the IMs to use their infrastructure for any activities reducing the infrastructure capacity (e. g. maintenance, repair, renewal, enhancement, construction works).

All works on the infrastructure and its equipment that would restrict the available capacity on the corridor shall also be coordinated at the level of the freight corridor and be the subject of updated publication.

6.1.2 Main elements of this document

- Coordination
- Publishing
- Procedure in accordance with the RNE Guideline
- Characteristics of process
- Proposals

6.1.3 Coordination

Aim of coordination: minimize the restriction on the capacity of International passengers and freight trains and optimize the potentiality al long the corridor.

Principles of coordination:

- The planning of works should have the minimum negative impact on the capacity;
- Works should be planned through a corridor approach.

Both IMs and RUs have long realized to need for better coordination of rehabilitation works and possessions along the corridor in order to:

- Reduce the overall impact on traffic
- Harmonize the communication from IMs of rehabilitation works affecting corridor traffic
- Coordinate the processes and timelines at IMs for long and short term planning of timetables and train consequences

6.1.4 Publishing

IMs shall publish an overwiew of construction works that are expected to impact freight traffic at border cross points. We consider it is not necessary to set a concrete value from which it is necessary to publish the information regarding the construction works. It may be enough to communicate the works which have a significative impact on the international freight traffic.

The construction works overview (e. g.long term plans for the next TT year) shall be published in the Corridor Information Document.

A mechanism for interconnecting the IMs and get the RUs quickly informed will be set up.

Information will be published on the corridor's website and have monthly update (if there any changes).

A common unified Excel-table and with a map about the line section will be used. The table will specify:

- o Place
- o Start time

- o End time
- o Short description of works
- o Consequences for traffic on the pre-arranged paths of the corridor (or reserved capacity).
- o The extent of international coordination among IMs.

6.1.5 Procedure in accordance with the RNE Guidelines

- X-24 Initial publication (e. g. for the TT year 2015/2016 planning should start in 2013 October - November at the latest)
- X-17 prior to constructing pre-arranged paths
- X-12 prior to publications of pre-arranged paths at X-11
- X-9 prior to deadline for path request at X-8
- X-4 prior to final allocation

These deadlines define the long term planned possessions, that shall be published in the Corridor Information Document.

6.1.6 Characteristics of the process

- Regular international meetings, normally 2 per year, (i.e. March and September) or at any time for urgent needs.
- Meeting of September (year X): sharing information about main works expected.
- Meeting of March (year X+1): updating of information exchanged in previous meeting and communication about works planned for the second semester of the current year.

Contents of information to be shared:

- Details about schedule of maintenance
- Details about works bringing about interruptions which affect the planning of timetable
- Analysis of the planning and of the consequences of the works on the transport service, check of any incompatibility

Results of the process

- Decisions shared between the Infra Managers concerned on the periods of works.
- Decisions about the best way to coordinate works taking into consideration the consequences on the commercial offer.
- Agreement on schedule needed to ensure the process of communications addressed to RUs and the adaptation of the timetable.
- Agreement on the formal procedure to be adopted for the common planning of capacity programme.
- Every IM designate a main contact person to coordinate the communication between IMs.
- The IM responsible for the construction work will prepare a notice of the international freight trains related consequences for the rehabilitation works up to and including the border crossing points.
- The IM responsible for the construction work will prepare a notice of the international freight trains related consequences for the rehabilitation works up to and including the border crossing points

6.2 One Stop Shop

6.2.1 Glossary/abbreviations

AB	Allocation Body In this document, only the term Infrastructure Manager (IM) is applied. It refers to IMs and also – if applicable – to Allocation Bodies (ABs).
Allocation	Means the allocation of railway infrastructure capacity by an Infrastructure Manager or Allocation Body. When the Corridor OSS takes the allocation decision as specified in Art. 13(3) of 913/2010, the allocation itself is done by the Corridor OSS on behalf of the concerned IMs, which conclude individual national contracts for the use of infrastructure based on national network access conditions.
Applicant/Applicants	Definition in Directive 2012/34/EU: a railway undertaking or an international grouping of railway undertakings or other persons or legal entities, such as competent authorities under Regulation (EC) No 1370/2007 and shippers, freight forwarders and combined transport operators, with a public-service or commercial interest in procuring infrastructure capacity.
Catalogue path (CP)	Any kind of pre-constructed path if it is not a prearranged path on a Rail Freight Corridor according to Regulation 913/2010.
Connecting point	A point in the network where a Corridor cross another Corridor and it is possible to shift the services applied for from one Corridor to the other.
Corridor OSS	A joint body designated or set up by the RFC organisations for Applicants to request and to receive answers, in a single place and in a single operation, regarding infrastructure capacity for freight trains crossing at least one border along the freight Corridor (EU Regulation No 913/2010, Art. 13). The Corridor One-Stop Shop.
Dedicated capacity	Capacity which has to be foreseen by the Corridor Organisations to fulfil the requirements of Regulation 913/2010. It refers to pre-arranged paths and reserve capacity.
Feeder and outflow	Any path/path section prior to reaching an operation point

path	on RFC (feeder path) or any path/path section after leaving the RFC at an operation point (outflow path). The feeder and/or outflow path may also cross a border section which is not a part of a defined RFC.
Flexible approach	When an Applicant requests adjustments to a pre-arranged path, as e.g. different station for change of drivers or shunting, that is not indicated in the path publication. Also if the Applicant requests feeder and/or outflow paths connected to the pre-arranged path and/or a connecting path between different RFCs, these requests will be handled with a flexible approach.
Handover point	Point where the responsibility changes from one IM/AB to another.
IM	Infrastructure Manager In this document, only the term Infrastructure Manager (IM) is applied. It refers to IMs and also – if applicable – to Allocation Bodies (ABs).
Interchange point	Location where the transfer of responsibility for the wagons, engine(s) and the load of a train goes from one RU to another RU. Regarding a train running, the train is taken over from one RU by the other RU, which owns the path for the next journey section.
MB	Management Board
Overlapping section	National infrastructure sections where two or more Corridors share the same infrastructure.
PCS	Path Coordination System, formerly known as Pathfinder.
Pre-arranged path (PaP)	A pre-constructed path on a Rail Freight Corridor according to the Regulation 913/2010. A PaP may be offered either on a whole RFC or on sections of the RFC forming an international path request crossing one or more international borders.
Pre-constructed path product	Any Kind of pre-constructed path, i.e. a path constructed in advance of any path request and offered by IMs; applicants can then select a product and submit a path request. Pre-constructed path products are either: - Pre-arranged paths (PaP) on Rail Freight Corridors or

	- Catalogue paths (CP) for all other purposes
RB	Regulatory Body
Reserve capacity (RC)	Capacity – e.g.Pre-arranged paths kept available during the running timetable period for ad-hoc market needs (Art. 14 (5) Regulation 913/2010).
RFC	Rail Freight corridor. A Corridor organised and set up in accordance with Regulation 913/2010. A "List of initial freight corridors" is provided in the Annex of the Regulation.
RFC-Handbook (DG MOVE working document)	Handbook on Regulation concerning a European rail network for competitive freight.
RU	Railway Undertaking
TMS	Transport Market Study
X-8 (months)	Deadline for requesting paths for the annual timetable (Annex VII, Directive 2012/34/EU).
X-11 (months)	Deadline for publication of pre-arranged paths (Annex VII, Directive 2012/34/EU).

6.2.2 Background

The Regulation (EU) 913/2010 of the European Parliament and the Council of 22 September 2010 lays down rules for the establishment and organisation of international rail corridors for competitive rail freight with a view to the development of a European rail network for competitive freight and it sets out rules for the selection, organisation, management and the indicative investment planning of freight corridors.

The railway Infrastructure Managers (IMs) and Allocation Bodies (ABs) of Spain, France, Italy, Slovenia and Hungary established the Management Board (MB) of Rail Freight Corridor 6 (RFC 6) – Mediterranean Corridor by signature of a Memorandum of Understanding in April 2012.

According to Article 13(1) of the Regulation, the management board for a freight corridor shall designate or set up a joint body for applicants to request and to receive answers, in a single place and in a single operation, regarding infrastructure capacity for freight trains crossing at least one border along the freight corridor (hereinafter referred to as a 'one-stop shop').

According to the decision of the RFC 6 MB, the parties agreed that the C-OSS of RFC 6 will take its role in the Permanent Management Office (PMO) in Milan as a Dedicated OSS, which means a joint body set up or designated by a Corridor organization supported by a coordinating IT-tool. The C-OSS of RFC 6 is appointed by the General Assembly, for a maximum renewable three years period. Corridor OSS related tasks/liability is detailed in the Internal Rules of RFC 6.

The working language of the C-OSS is English, prepared documents and possible meetings are held in English in the framework of C-OSS activity.

6.2.3 Requirements

6.2.3.1 Defined by Regulation 913/2010

According to Art. 13 of the Regulation 913/2010, the requirements for the Corridor OSS's role are defined as follows:

- Contact point for Applicants to request and receive answers regarding infrastructure capacity for freight trains crossing at least one border along a Corridor
- As a coordination tool provide basic information concerning the allocation of the infrastructure capacity. It shall display the infrastructure capacity available at the time of request and its characteristics in accordance to pre-defined parameters for trains running in the freight Corridor
- Shall take a decision regarding applications for pre-arranged paths and reserve capacity
- Forwarding any request/application for infrastructure capacity which cannot be met by the Corridor OSS to the competent IM(s) and communicating their decision to the Applicant
- Keeping a path request register available to all interested parties.

The Corridor OSS shall provide the information referred in article 18, included in the Corridor Information Document drawn up, regularly updated and published by the RFC MB:

- Information contained in the Network Statements regarding railway lines designated as a Rail Freight Corridor
- A list and characteristics of terminals, in particular information concerning the conditions and methods of accessing the terminal
- Information about procedures for:

o Set up of the Corridor OSS
o Allocation of Pre-Arranged Paths and Reserve Capacity
o Applicants
o Coordination of Traffic management along the freight corridor and between freight corridors .

- Information regarding the Implementation Plan with all connected documents.

6.2.3.2 Described in the Handbook to Regulation 913/2010

In addition to the Regulation, the European Commission published a Handbook in which a number of recommendations regarding the tasks to be carried out by the Corridor OSS are made.
Although the Handbook is not legally binding (it has only an advisory and supportive character), there is no reason to not refer to it at all. RFC 6 will of course fulfil the binding requirements of the Regulation but, if applicable, will also refer to proposals/concepts described in the Handbook.

6.2.4 Documentation related to the C-OSS

Documents, which could contribute to the C-OSS operation, are as follows:

- EU Regulation 913/2010 (including the Handbook to the Regulation): spells out the overall framework for setting up the Corridor OSSs
- EU Directive 2012/34 Establishing a single European railway area
- RNE Process Handbook for International Path allocation (For Infrastructure Managers)
- RNE Guidelines for Pre-Arranged Paths
- RNE Guidelines for the Coordination and Publication of Works on the European Rail Freight Corridors.
- RNE Guidelines for Punctuality Targets.
- RNE Guidelines for Freight Corridor Traffic Management
- RNE PCS Process Guidelines
- RNE Guidelines for C-OSS

6.2.5 Applicants

According to Article 15 of Regulation 913/2010 an Applicant may directly apply to the C-OSS for the allocation of PaPs/reserve capacity. If the PaP/reserve capacity was allocated by the C-OSS accordingly, the Applicant should appoint to the C-OSS within the time, as decided by the MB, the designated railway undertaking(s), which will use the path/reserve capacity on behalf of the Applicant. The designated railway

undertaking has therefore to conclude the necessary individual contracts with the IMs or ABs concerned relying on the respective national network access conditions. The rights and obligations of Applicants will be described in the Corridor Information Document.

6.2.6 Tasks of the C-OSS

6.2.6.1 Based on Article 12 of Regulation 913/2010

As the Corridor OSS shall display infrastructure available at the time of request (Art. 13.2), it would be practical if the Corridor OSS was involved at an early stage in this process and could communicate the impact on the available capacity on Corridor sections as an input for MB decisions regarding the number of pre-arranged paths (PaPs) to be published.

6.2.6.2 Based on Article 13 of Regulation 913/2010

According to Article 13 the tasks of the Corridor OSS are to:

- Give information regarding access to the Corridor infrastructure
- Give information regarding conditions and methods of accessing terminals attached to the Corridor
- Give information regarding procedures for the allocation of dedicated capacity on the Corridor
- Give information regarding infrastructure charges on the Corridor sections
- Give information on all that is relevant for the Corridor in the national network statements and extracted for the Corridor Information Document
- Allocate the Corridor pre-arranged paths, as described in Art. 14(3), and the reserve capacity, as described in Art. 14(5) and communicate with the IM of the Corridor regarding the allocation (please see Section 7 for further description)
- Keep a register of the contents described in Art. 13(5)
- Establish and maintain communication processes between Corridor OSS and IM, Corridor OSS and Terminals attached to the Corridor, as well as between Corridor OSSs.
- Report to the MB regarding the applications, allocation and use of the pre-arranged paths, as input for the report by the MB, referred to in Art. 19(3).

6.2.6.3 Based on Article 16 of Regulation 913/2010

- The Corridor OSS shall be able to provide information regarding traffic management procedures on the Corridor; this information will be based on the

documentation drawn up by the MB and on the RNE Guidelines for Freight Corridors Traffic Management.

6.2.6.4 Based on Article 17 of Regulation 913/2010

- The Corridor OSS shall be able to provide information regarding traffic management procedures in the event of disturbances on the Corridor; this information will be based on the documentation drawn up by the MB and on the RNE Guidelines for Freight Corridors Traffic Management.

6.2.6.5 Based on Article 18 of Regulation 913/2010

Mandatory tasks for the Corridor OSS based on Art. 18 are to:

- Give information regarding access to the Corridor infrastructure
- Give information regarding conditions and methods of accessing terminals attached to the Corridor
- Give information regarding procedures for allocation of dedicated capacity on the Corridor
- Give information regarding infrastructure charges
- Give information on all that is relevant for the Corridor in the national network statements and extracted for the Corridor Information Document
- Give information concerning procedures referred to in Articles 13,14,15,16 and 17 of Regulation 913/2010.

6.2.6.6 Based on Article 19 of Regulation 913/2010

- The Article lays down the requirements that the MB shall monitor the performance of rail freight services on the Corridor (Art. 19(2)) and shall perform a customer survey (Art. 19(3)). The results shall be published once a year.

6.2.6.7 Customer Confidentiality

- The Corridor OSS is carrying out his assigned working task on behalf of the Management Board consistent of cooperating IM in a RFC. The task shall be carried out in a non discriminatory way and under customer confidentiality keeping in mind that the applicants are competing in many cases for the same capacity and transports. The functionality of the Corridor OSS is based on trust between all involved stakeholders.

6.2.7 Allocation of pre-arranged paths (hereinafter PaPs) on RFC 6

The basic requirements regarding PaPs are laid down in Article 14 of Regulation 913/2010.

Also the RNE Guidelines for Pre-Arranged Paths establish rules for the setup and allocation of PaPs and the related responsibilities. But if the MB considers the whole life cycle of the PaPs, it is recommended to include additional phases.

The life cycle can be broken down into the following 6 phases:
Preparation phase X-19 – X-16
Coordination/Construction phase X-16 – X-12
Delivery and publication phase X-12 – X-11
PaP application phase X-11 – X-8 for the annual timetable
Allocation phase X-8 – X+12 (with sub phases below):

- Pre-booking phase by C-OSS X-8 – X-7,5
- C-OSS gives back non-requested PaPs to IMs based on MB decision X-7,5
- Constructing tailor made solution X-7,5 – X-5,5
- Publication deadline of draft offer to the Applicants X-5
- IMs forward non-used PaPs to C-OSS to be used for late path requests X-5
- Observations from Applicants X-5 – X-4
- Post processing and final allocation for annual timetable X-4 – X-3,5
- Allocation phase for late path request X-4 – X-2
- Publication reserve capacity for ad-hoc traffic X-2
- Allocation phase for ad hoc path requets X-2 – X+12

Evaluation phase X+12 – X+15

Date/period	Activity	C-OSS	IM	Applicant
X-19 – X-16	Preparation phase (based on TMS results involving Advisory Groups)	X	X	
X-16 – X-12	Coordination/Construction phase	X	X	
X-12 – X-11	Delivery for MB approval	X		
X-11	Publication of PaPs provided by the IMs	X		
X-11 – X-8	PaP application phase			X
X-8	Deadline for submitting path requests			X
X-8 – X-7,5	Pre-booking phase by C-OSS	X		
X-7.5	Forwarding requests with feeder/outflow path sections (e.g. first/last mile) or “special	X	X	

Date/period	Activity	C-OSS	IM	Applicant
	treatments" to IMs Possible returning of some remaining (unused) pre-arranged paths to the competent IMs – based on the decision of the Corridor MB – for use during the elaboration of the annual timetable by the IMs			
X-7,5 – X-5,5	Path Construction phase		X	
X-7,5	Update catalogue in PCS for PaPs kept by the C-OSS	X		
X-5,5	Finalisation of path construction for requested feeder/outflow path sections by the IMs and delivering of the results to Corridor OSS for information and development of the draft timetable		X	
X-5	Publication of the pre-arranged paths draft offers – including sections provided by the IMs for requested "flexible approaches" by the C-OSS IMs forward non-used PaPs to C-OSS to be used for late path requests	X	X	
X-5 – X-4	Observations from applicants			X
X-4 – X-3,5	Post-processing and final allocation for annual timetable	X	X	
X-8 – X-4	Late path request application phase			X
X-4 - X- 2	Late path request allocation phase	X	X	
X-4 – X-2	Planning (production) reserve capacity for ad-hoc traffic in case of non remaining PaPs	X	X	
X-2	Publication reserve capacity for ad-hoc traffic	X		
X-2 – X+12	Allocation phase for ad hoc path requests	X		
X+12 – X+15	Evaluation phase	X		

6.2.7.1 Preparation phase X-19 – X-16

Inputs for this phase include:

- the outcome of the Transport Market Study (TMS)
- the available capacity, both in respect of overall capacity as well as capacity restrictions due to IMs' own requirements – as defined in the RNE Guidelines for the Coordination / Publication of Works.

An IM with agreed framework agreements should take the requirements of these agreements into consideration when planning and publishing the PaPs in accordance with Art. 14 (2) of the Regulation.
The evaluation of previously timetable-operated traffic, if it is not covered by the Transport Market Study, such as e.g. passenger traffic, effects on the number of PaPs can also serve as an input for the preparation of the paths – especially because the Regulation establishes that also other modes of traffic shall be respected.
This forms the basis for the MB decision on the number of PaPs to be produced on the Corridor sections.
The Corridor OSS could, depending on decisions of the MB, be responsible for preparing the decision paper for the MB and communicating the decision to IMs in the Corridor.

6.2.7.2 Construction and coordination phase X-16 – X-12

The input for this phase is the decision taken by the MB regarding the number of Corridor PaPs to be constructed.
Here, the Corridor OSS role depends on the decisions of the MB. The IM(s) are responsible for the production and the border coordination of Corridor PaPs. But if the MB decides so, the Corridor OSS could serve as a support and monitoring of the production and report to the MB regarding the progress of the work. The IM is responsible for the actual production of PaPs, but the responsibility for that there is PaPs produced rests on the MB. The Corridor OSS could in that perspective support the MB in their responsibility.
The Corridor OSS could also be given the task of monitoring the paths due to PCS import requirements and verifying if the paths are in line with MB decisions and if they are harmonised at the border points. The C-OSS is monitoring this phase in cooperating with the IM(s) in order to facilitate the timetable harmonization of the PaP catalogue.

6.2.7.3 Delivery and publication phase X-12 – X-11

Before publication, a formal approval by the MB has to be made, which states that the IMs have produced PaPs that meet the MB decisions regarding the number of paths, and that they meet the requirements of the Corridor. After this endorsement, the PaPs should be published.

The publication of PaPs is a mandatory task for C-OSS via PCS.

The publication task includes making PaPs ready to be imported into PCS as long as production is not entirely done within the tool itself.

6.2.7.4 PaPs application phase X-11 – X-8

From X-11 the PaPs shall be published and available so that Applicants can submit applications for the annual timetable. PaPs can only be requested through the PCS tool.
Corridor OSS tasks in this phase will be to:

- Keep a register in PCS accordance with Art. 13(5)
- Display PaPs made available for the Corridor by the IMs
- Receive and collect the applications for PaPs
- Be responsible for the verification of the right to place a path request, based on information presented by the IM in a general form accessible for the Corridor OSS
- Check the quality of the content in the path request and inform Applicants if updating is needed

6.2.7.5 Allocation phase X-8 – X+12 (with sub-phases)

6.2.7.5.1 Pre-booking phase by C-OSS X-8 – X-7,5

This is the allocation phase concerning requests for PaPS for the annual timetable.
The tasks of the Corridor OSS in this phase are described below:

- The Corridor OSS shall keep a register, based on Article 13 (5), of all activities performed by the Corridor OSS concerning the allocation of infrastructure capacity, and keep it available for Regulatory Bodies, ministries and Applicants.
- The Corridor OSS shall ensure the ongoing 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.

Allocation of PaPs to Applicants by the Corridor OSS

This task contains elements of allocation, communication and interaction between Corridor OSSs, IMs and Applicants. The Corridor OSS shall decide on the allocation of

PaPs requests and communicate the result to the Applicant through PCS following the timeline for allocation agreed by all IMs within RNE International Timetable Calendar.
In case of conflicting PaPs requests, the Corridor OSS shall base its decisions:

- according to Articles 45 and 46 of Directive 2012/34/EU and
- applying the Corridors common priority rules (as stated in RNE C-OSS Guidelines)

and forward the application to the competent IMs if this Applicant does not accept the alternative PaPs or no other PaPs fit the customer request.

The Corridor OSS shall communicate with Terminals regarding the allocation of Corridor PaPs – if the Terminal is acting in the function of an IM and the PaP starts or ends within the terminal area – and forward the application to the IM if the Terminal is not a part of the PaP.

If the Corridor OSS is unable to meet any application for PaPs submitted to the Corridor OSS for the annual timetable between X-8 and X-7,5, the Corridor OSS forwards the application to the competent IMs, then these IMs must consider the application as sent on time (as before the X-8 deadline), these IMs should handle the application and then communicate the related offer to the Corridor OSS via PCS.

If not all published PaPs have been requested at X-8, the Management Board will decide which of the non-requested PaPs will be returned to the IMs at X-7.5.
Each year between X-8 and X-7,5, the MB has to make a decision about which PaPs to be kept at X-7,5. The MB should decide at that time, if it hands on decision power to the C-OSS (in the following procedure this is the case). The decision of which PaP to keep and which to return to the IMs, will depend on the after “booking situation”.
The IM may then use the capacity for other requests received at X-8 or in the late path request phase, thereby ensuring the availability of sufficient reserve capacity at X-2.

6.2.7.5.2 Construction phase X-7,5 – X-5,5

During this phase the Corridor OSS will prepare answers to and from IMs, other Corridor OSSs and Applicants regarding path requests placed on time (X-8), including both feeder and outflow paths as well as sections of PaPs.
The Corridor OSS will ensure and facilitate the cooperation process between IMs concerning requests containing feeder and outflow paths placed by X-8.
At X- 5,5 the concerned IMs delivers their results concerning feeder / outflow path construction to the Corridor OSS, so that the Corridor OSS can communicate the draft offer to the Applicants.
The IMs are responsible for the construction and allocation of the connecting paths.

6.2.7.5.3 Publication deadline of draft offer to the Applicants X-5

Publication of draft timetable:

- PaPs,
- sections provided by the IMs (feeder/outflow)

The C-OSS is responsible for providing the draft offer to the Applicant, based on the information given by IMs.
At X-5 IMs forward the non-used PaPs to C-OSS to be used for late path requests.

6.2.7.5.4 Observations from Applicants X-5 – X-4

Applicant checks the draft offer, and makes its remarks. Then Applicant forwards its decision to the C-OSS.

6.2.7.5.5 Post processing and final allocation for annual timetable X-4 – X-3,5

The Corridor OSS is responsible for bringing the final offer and allocation of PaP to the Applicant, based on the information given by IMs:

- Fulfil the management of 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.

The Corridor OSS will also communicate with other Corridor OSSs regarding allocation involving several Corridors and IMs for connecting points.

6.2.7.5.6 Allocation phase for late path request X-8 – X-2 and ad hoc path request X-2 – X+12

The C-OSS is responsible for updating the PaP catalogue in PCS, according to actions made at X-7,5 and to the MB decision.

Based on MB decision the Corridor OSS may also receives late path requests referring to the PaPs kept by the C-OSS at X-7,5. These requests may be placed after X-8.

The C-OSS is responsible for their allocation based on the process for late path requests following the principle “first come - first served”

If the late path request cannot be met by the C-OSS and there is no other/suitable alternative PaP or if a flexible approach is needed, the Corridor OSS forwards the application to the competent IMs. The concerned IMs deliver their results to the Corridor OSS, so that the Corridor OSS can communicate the final offer to the Applicants.

The C-OSS is responsible for the continuous updating of the PaP catalogue in PCS.

According to Article 14.5 of the Regulation, the IMs jointly define this reserve capacity for international freight trains on the Corridor.

At X-4 – X-2 Planning (production) reserve capacity for ad hoc traffic.
At X-2.5 the MB should be informed by the IMs about the outline of the reserve capacity.

Reserve capacity may consist in non-requested PaPs, or a PaP constructed out of remaining capacity by the IMs after the draft network timetable development or other defined capacity on the RFC 6. The reserve capacity should be displayed at X-2 in PCS and protected from any modification by the IMs.

The MB shall define the time limit by which the reserve capacity has to be locked in national working timetables (maximum 60 days)**.** If it is displayed in national systems as well, the concerned national IM has to ensure consistency with PCS.

Applications for reserve capacity referring to PaP(s) shall be placed to the Corridor OSS through PCS only. Neither national systems nor any other communication channels to the Corridor OSS will be allowed.

The Corridor OSS takes the allocation decision for reserve capacity requests according to the rule first come – first served (X-2 – X+12). In addition to automatically updating in PCS, the Corridor OSS has to supervise the use of the reserve capacity (updating path register).

In case of applications including feeder/outflow paths and/or Terminal slots, the Corridor 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.

Applications requiring modifications to the displayed reserve capacity on the Corridor section (e.g. differing parameters, additional stops etc.) cannot be handled by the Corridor OSS. Therefore they should be forwarded to the national IMs directly. The

concerned IMs deliver their results to the Corridor OSS, so that the Corridor OSS can communicate the final offer to the Applicants.

The Corridor OSS will not treat applications for reserve capacity with a shorter time limit to the first day of operation day is earlier than the time limit defined by the MB (shorter than 60 days). Requests with shorter time limit should be addressed to the national IMs directly through PCS.

Applicants will be informed about the result of the path allocation immediately through PCS.

The Corridor OSS will also forward applications to the concerned IMs in case no more reserve capacity is available on the Corridor (offer 'sold out').

If the MB decides so, the Corridor OSS could monitor the performance of reserve capacity.

6.2.7.6 Evaluation phase X+12 – X+15

Based on MB decisions and on the RNE Draft Guidelines for Punctuality Targets, the Corridor OSS could provide with input for evaluating the Corridor's performance regarding the use of PaPs and their allocation. This may serve as an input for the revision of the pre-arranged path offer for the next available annual timetable. This can also serve as an input for the report to be published in accordance with Art. 19 (2) in Regulation 913/2010.

Also depending on decisions taken in the MB, the Corridor OSS could be given the task to organise a satisfaction survey of the users of the Corridor and send the results of the survey to the MB, to be published in accordance with Art. 19 (3) in Regulation 913/2010.

6.2.8 Tools for the Corridor OSS

The main working tools for the Corridor OSS are the three RNE IT tools: Path Coordination System PCS, Train Information System TIS and Charging Information System CIS.
In order to enjoy the full benefits of these tools, it is in the interest of all involved stakeholders that their national systems are connected to them. The use of these tools is not only related to day-to-day business, but also to additional functions such as reports.

6.2.9 Priority criteria for the allocation of pre-arranged paths

Basic priority criteria are needed for the Corridor OSS in order to allocate pre-arranged paths on a Corridor for the annual timetable.

A value calculated according to the total length of the requested path (including feeder and outflow paths and connecting point or sections between corridors) in combination with the length of the requested pre-arranged path and running days can enable the comparison of different applications with each other.

First step: only the path travelled along the Rail Freight Corridor (L_{PAP}) and the running days (Y_{RD}) are taken into account:
$L_{PAP} \times Y_{RD} = K$

Second step: if the first step results the same priority value (K), the complete length of the requested path (L_{TP}) has to be taken into consideration and the full formula has to be used:
$(L_{PAP} + L_{TP}) \times Y_{RD} = K$

Third step: if the second step results the same priority value (K) “first come-first served” logic will be applied.

In the case of conflict on an overlapping section among more than one corridor above mentioned formulas could be used. Each RFC C-OSS calculates their own value according to the path request. The Applicant, who has higher priority value, will get the conflicted path section.

6.2.10 Availability of the Corridor OSS

It shall be mandatory for all Applicants to use PCS when they request pre-arranged paths. This requires a decision of the MB.
Other questions can be submitted via e-mail or telephone and be answered accordingly.

As the Corridor OSS will not be active less than 60 days before the day of operation, there is no need for a facility staffed 24 hours a day, 7 days a week. Regular office hours would be sufficient from the point of view of availability.

6.3 Capacity (TO BE COMPLETED FOLLOWING MB/EB DISCUSSION and TMS RESULTS)

6.4 Authorised applicants

Based on the European Regulation 913/2010, and the Directive 2012/34/EU of the European Parliament and of the Council, here are the definitions of the authorised applicant:

» Art.15:Authorised applicants (Reg. 913/2010.)
Notwithstanding Article16(1) of Directive 2001/14/EC, applicants other than railway undertakings or the international groupings that they make up, such as shippers, freightforwarders and combinedtransport operators, may request international pre-arranged trainpaths specified inArticle 14(3) and the reserve capacity specified in Article 14(5). In order to use such a trainpath for freigh ttransport on the freight corridor these applicants shall appoint a railway under taking to conclude an agreement with the infrastructure manager in accordance withArticle10(5) of Directive 91/440/EEC.

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

As the legal basis of authorised applicant seems hardly harmonisable, it is expected that the EB will jointly achieve a common corridor authorised applicant definition.

Here folllowing, a brief description of the rules in place for the IM operating in RFC6 is given.

6.4.1 Who can be an authorised applicant in each country

ADIF

RU with a License or an international RU group. There may also be Public Authority Applicants with transport service powers who may be interested insupplying certain railway transport services, as well as other corporations, which without having the condition of RU are interested in operating the service, such as transport agents, carriers and combined transport operators.

RFI

A licensed Railway Undertaking and/or an international grouping of railway undertakings, each one holding a licence, and other individuals and/or corporations with a public service or commercial interest in acquiring infrastructure capacity, for the purpose of providing transport services by rail, concluding a specific “Framework Agreement” with the IM, and which does not carry out a brokerage business in respect of the capacity acquired under the framework agreement; Applicants also include the regions and autonomous provinces, limitedly to the provision of the services for which they are responsible.

RFF

The article L.2122-12 of National Code of transportation indicates that« Other people than RUs may be authorized to ask for paths in or der to make these paths used by one RU ».

The Art 19 of the decree 2003-194 concerning the use of the french network rail makes an overall description of the bodies that can use paths. Thus, in addition to RU, international grouping of RUs, IMs, Allocation Bodies the following entities can ask for paths

- Combined transport Operators

- Public entities that organize a freight service of transportation on the national network ,included Port authorities managing railways ;
- Public bodies and grouping for a contract including a service of transport for their needs ;
- From 14 december 2008, public bodies organizing a public service of passengers transportations and the STIF (organizing public passenger transportation of the Capital Region).

SZ+AZP

Regarding answer on this question we must give you short term description because in our legislation we don't have direct explanation »authorised applicant«:

a. National Railway act – term »applicant« (meaning: railway undertaking or any other legal subject, who from public interest (state, local community, provider of public service obligation) or commercial interest (railway undertaking, forwarding agent, or transporter in combine traffic) needed the train path);

b. National Order about capacity allocation and the levying of charges for the use of public rail infrastructure – term »any other interested parties« (meaning: subjects from which live and business, the rail service activities from rail transporters, have the influence, e.g. local community, industrial undertakings etc.).

In this meaning in our national legislation instead of the term »authorised applicant« we use the term »any other interested parties«.

MÁV+VPE

Thedefinition 'Authorised Applicant' does not exist anymore, as we consider now the relevant Directive 2012/34/EU instead of Directive

2001/14/EC, the definition for 'Applicant '. For their identification and management we think that a solution would be preferable on a higher level. This is a crucial point, every country has different explanation on the definition of Applicant.

6.4.2 What is the legalbasis of the procedure

RFI

D.Lgs. 188/03

ADIF

- Law 39/2003, of 17th November, the railway Industry. (Art. 43)
- Royal Decree 2387/2004 of 30th December, approving the Railway Industry Regulation (Article 79)

RFF

The network statement of RFF indicates in chapter 4 the procedure

4.1.3. Contracts for the allocation of train paths on the national rail network

Railway undertakings can use contracts for use of the infrastructure of the national rail network which ensure that they can be allocated train paths.

Before train paths on the national rail network can be allocated to a beneficiary other than a railway undertaking that wishes to place them at the disposal of one or several railway undertakings to provide the transport services that it organises, a contract will first have to be signed between RéseauFerré de France and the said beneficiary regarding train path allocation on the national rail network. The general conditions applicable to such contracts on the date of publication of this document are given in Appendix 3.1 and a specimen of the corresponding special conditions in Appendix 3.2.2.

Such contracts must be signed before the beneficiary informs RéseauFerré de France of the name(s) of the railway undertaking(s) that will provide the transport service.

4.1.4. Responsibilities of applicants

Applicants prepare train path applications on their own responsibility.

Each request consists of information about the applicant and the requested route, the originating station, any intermediate stops, the destination station and the requested convoy for calculation purposes.

Applicants are also responsible, whether a railway undertaking or an authorised applicant, for indicating if the particular details of capacity requests may have an effect on the construction of a train path or on the network's conditions of use, stated particularly in §§ **4.7.1** to **4.7.3** below.

Note that prior to submitting a capacity request applicants must also verify, under the conditions of § **2.7.2** above, that the rolling stock used is compatible with the infrastructure of the lines used, with the versions of the Technical Information in force and the local operating instructions (supplemented if necessary by compatibility certificates drawn up by RéseauFerré France while waiting for these to be updated).

Prior to submitting a capacity request, applicants are also requested to verify the availability of the infrastructure elements made available to them, so that the request may be made in full knowledge of the facts (any extra opening of lines, stations and signal boxes, windows and track possessions, temporary speed limits, etc.).

Specific responsibilities of authorised applicants

Authorised applicants must ensure that they have sufficient resources (human, technical and financial) to manage the organisation required (particularly in terms of access to information) for dealing with capacity requests.

In contractual terms (Article 5.2.1 of Appendix 3.1 of this document), authorised applicants shall guarantee RFF that the railway undertakings selected are capable of meeting the traffic timetable they have been sent by RFF as regards capacity allocation, other than in exceptional cases for which provision is made in the regulations. To this end the authorised applicant shall pass on the information he possesses to the railway undertaking enabling the latter to deploy trains compatible with the characteristics of the train path allotted and, in particular, to ensure that his

train(s) pass the designated landmarks on this train path at the appointed time in each case.

Specific responsibilities of railway undertakings

Regardless of the nature of the applicant, the railway undertaking that will use the train path shall be responsible for only deploying trains compatible with the characteristics of the train path allocated (traction, weight, length, dangerous goods, exceptional consignments, etc.) and, in particular, ensuring that his train(s) pass the designated landmarks on this train path at the appointed time in each case.

If the train path does not have the appropriate characteristics, the applicant, whether railway undertaking or authorised applicant, will have to request that the train path allocated be changed to account for the actual restrictions of the train.

In addition, railway undertakings are responsible for meeting the obligations to provide information prior to running that are laid down in the documents "Provisions concerning traffic management on the national rail network", appended to this document (Appendix 5).

SZ+AZP

The legal basis for the procedure is the Regulation (EU) No 913/2010 which is binding and entered into force directly by all member states (of course also national Railway act and other related legal acts).

MÁV+VPE

2005. CLXXXIII. Law onRailwayTransport

Network Statement

6.4.3 What conditions shall be satisfied to be an authorised applicant

RFI

The conditions are clearly specified in the above mentioned definition (according to the D.Lgs 188/03).

ADIF

Article 62.- Royal Decree 2387/2004.

General qualifications for RU.

1. The granting of the license as a railway undertaking to provide any of the services mentioned in the previous article, requires, in any case, that the applicant demonstrates, as provided in the Law 39/2003 and these Regulations(Royal Decree 2387/2004), compliance the following requirements:

a. Take the form of a corporation, in accordance with Spanish law and without prejudice to the already established, regarding the public company RENFE-Operator, in the third additional measures of the the Law 39/2003. In any case, the company must have been established for an indefinite period, their shares shall be nominative and their main goal shall be the provision of railway services.

b. Have the financial capacity to meet its present and future obligations. The requirement for financial capacity will be fulfilled when the entity applying for the license of RU counts on economic resources to cope with the obligations referred to in Article 46 of the Law 39/2003

c. Ensuring the professional competence of its managerial and technical staff and the safety on the services that wants to provide.

d. Must have covered the civil liabilities that may be required.

2. The entities where there are some of the cases referred to in Article 45.3 of the Law 39/2003 shall not be licensed railway undertakings

Article 82.Requirements for obtaining the authorization.

To obtain the authorizations referred to in the preceding article must meet the following requirements:

a. Take the form of a corporation, in accordance with Spanish law, for an indefinite period, and with nominative shares.

b. Not be subject to any of the causes of incapability to have a license RU, set down in Article 45.3 of the Law 39/2003.

c. Make a statement of activity, indicating the type of service and the annual traffic foreseen by applying for capacity

d. Ensuring the request of capacity for a minimum annual traffic, (trains x Km) and it must be based on traffic level of its statement of activity . It may not, in any case, be less than 50,000 trains x Km

e. Having, at the time of the beginning of its activities, operational communication systems. Those systems must be capable of delivering information with appropriate conditions of speed and reliability both to the Directorate General of Railways and to the rail infrastructure manager.

g. Sufficient resources to meet the fixed and operational costs, resulting from the operations of its business.

h. Must have covered the civil liabilities that may be required.

RFF

But the article 4.1.4 here above, no other conditions contrary to the Railway undertakings that should have a licence and a safety certificate.

SZ+AZP

The condition: the subject shouldn’t be / isn't railway undertaking and don't provide the rail transport services. For using the train path on freight corridor this applicant shall appoint the railway undertaking.

MÁV+VPE

6.4.4 Which organisation is responsible for it

RFI

The Infrastructure Manager (RFI) and, in case of disagreement, the Regulatory Body.

ADIF

Ministry of Public Works

RFF

The State is responsible for it (art 17 Decree n°2003-194)

SZ+AZP

Ministry of Infrastructure and Spatial Planning of the Republic of Slovenia and Public Agency of the Republic of Slovenia for Railway Transport.

MÁV+VPE

National Transport Authority

6.4.5 Any other information about this topic

RFI

In accordance with the national law, the Authorised Applicant is allowed to submit applications only for long-term infrastructure capacity, for the purpose of entering into a Framework Agreement.

ADIF

Law 39/2003, of 17 November, the railway Industry.
- Royal Decree 2387/2004, of 30 December, the Railway Industry Regulation

- Network Statement

RFF

No.

SZ+AZP

In Slovenia the term “authorised applicant” shall be implemented in the national legislation (Regulation (EU) No 913/2010 - with one from the next legal acts changes).

MÁV+VPE

Network Statement Appendix

6.5 Traffic management

6.5.1 Introduction

The present document's aim is to set up an overall framework of standard procedures in the traffic management along the freight corridors. These procedures represent the fulfilment of the requirements contained in the EU Regulation (EU Reg. 913/2010), the so-called Freight Regulationin articles 16, 17 and 19. :

All IMs and ABs on the RFC6 are members of the association RailNetEurope.

The document "Guidelines for freight corridor traffic management" doesn't suggest exact thresholds and conditions that make the coordination procedures for traffic management necessary, therefore they should be determined by the IMs or ABs on the corridor. The exact knowledge of the state of the traffic is the basis to take correct decisions for the traffic management, both for RUs and IMs, and to possibly estimate the development of the situation in case of disturbances.

The main focus is given to the standardization of communication and coordination of procedures. In addition, the basics to set up an harmonized procedure for traffic management in case of disturbance are described. This RNE Guideline is suitable for the common use on the RFC6, but they must be adjusted and in fact RNE is currently managing an update.

The main issues of the traffic management:

- Corridor train definition and priority rules
- Coordination of traffic management along the corridor and with Terminals
- Traffic management in the event of disturbance
- Traffic management- in case of deviations from timetable
- Punctuality targets and performance objectives

The following sections describe the way the RFC6 intends to manage the above listed items. The procedures and principles described in this Implementation Plan are a preliminary framework that will be further developed on the basis of a deeper analysis of the RNE offered services and information basis (already delivered Guidelines and other documents, like the “Overview of Priority rules in operations” as well as newly delivered documents and tools, as outcomes of the currently managed RNE projects). RNE recommendations will be applied in so far they are fitting with RFC6 strategy and needs.

6.5.2 Corridor train definition

The infrastructure managers of the freight corridors shall jointly define and organise international pre-arranged train paths for freight trains.

The C-OSS define pre-arranged paths and these paths shall be allocated first to freight trains which cross at least one border (Art. 14(4)), but we have to define, what we would like to call as a corridor train.

The corridor train is a high priority international freight train in the group of the freight trains. This train should be the „product” of the corridor. This is what the RUs will „buy” from the C-OSS.

Possible criteria (decision need by the MB):

- It runs on the network of at least 3 different member states or 2 different member states plus 800 kms on the RFC and
- It uses capacity allocated by C-OSS and
- The capacity is allocated from pre-arranged path.

6.5.3 Priority rules

The position of DG MOVE about Priority rules is as follows

- RFC Regulation (913/2010/EU) does not require detailed priority rules on corridor level.
- It could be enough if corridors collect the different priority rules IM by IM, but must ensure the common punctuality targets on corridor level.
- The priority rules of each IM will be published in the Corridor Information Document.

General principles of prioritization on RFC6

Reference will be made to the information contained in RNE overview.

As first position, the following order of priority of train types will be considered on RFC6:

1. Emergency trains (breakdown, rescue, fire-fighting trains)
2. Long-distance passenger trains with higher service level (e.g. RJ, EC,IC,EN, Interregio, Regio)
3. Passenger trains
4. Corridor trains (but faster other trains have principally priority to slower corridor trains)
5. Other freight trains
6. Service trains

Along the corridor, every IM has a different legal basis in connection with the priority rules – in some States these rules regulated by the Ministry, but some States it is in the internal rules - so it is hardly possible at this stage to create common priority rules on the corridor. The following criteria should be treated as a possible framework.

6.5.4 Coordination of traffic management along the corridor and with terminals

Among the IMs and between the IM and Terminal to coordinate and monitor the traffic, the following RNE IT will be used as a basis:

» Train Information System (TIS): a web-based application monitoring international traffic on real time and providing historical information through its reporting function; not all involved parties are currently using such a tool, but a roll-out to other partners is foreseen;
» Traffic Control Centres Communication (TCCCom): the TCCComtool that allows a better communication between cross border dispatching centres.

The presented tools and procedures shall be applied for all cross border traffic.

The main strategy is to improve already the existing means in order to ensure that all communication needs are fulfilled and that the used tools are integrated and user-friendly at the maximum possible extent.

- TIS – Train Information System: as an RNE tool can be useful for the IMs
- If all of the members will use TIS, each IM can follow the trains along the corridor
- Till the full implementation of the TIS on the whole corridor line, members could use TCCCOM between dispatching centres and „TIS Light" to inform each other
- TIS Light – manual data entry

6.5.5 Traffic management in the event of disturbance

Events what could have influence on traffic (of course it is a non-exhaustive list)

- Disturbances with big influence and consequences on the traffic (accidents)
- Line interruption
- Heavy capacity reduction (for lines, stations and shunting yards)

Communication between the parties:

- IMs – where the event happened - must inform the next IM about the deviation from the timetable
- The informed IM must inform the inland RU about the deviation from the timetable
- The inland terminals get the information from the concerning IM
  The reason is this sentence, that both of the C-OSS and the national OSS don't have a non-stop working hours. This is why we suggest to IM, who is giving information for the Terminal. Every IM has a non-stop operational service what could be suitable for giving information.
- Along the Corridor every IMs should report the train's delay for the next IM on the route of the train if it is more than 60 minutes.

Main targets in case of deviation from the timetable for the traffic operation:

- Best possible use of the capacity of the Corridor
- To guarantee the fluidity of operations
- To improve punctuality of all trains
- To get back to the regular state as soon as possible.

6.5.6 Traffic management- in case of deviations from timetable

New path request in the event of disturbance:

- In the event of disturbance, when an RU wants to deviate from the pre-arranged path, RU should request a new path and thereby renounce the quality requirements (delay, alternative routes)
- IM suggests the new path, if the RU accepts, automatically accepts the quality requirements of the new path allocation in operation
- In the case of emergency, IM informs the RUs about the circumstances on the way mentioned above.

6.5.7 Diversion of trains

- In the event of non-planned events, trains use alternative routes to destination
- When a train delay more than 60 minutes, IMs must inform the concerned RUs directly or through information systems (e. g. TIS).

6.5.8 Punctuality targets and performance objectives

Punctuality targets:

- A corridor train is punctual if it has maximum 60 minutes delay on the terminal, on the shunting yards where the train will manipulated or at the final station.

  We have to create a not too ambicioustreshold for the international delay, so 60 minutes could be acceptable for all of us.
- Scheduled time for corridor trains is 10 minutes (until 10 minutes delay we should say that this train is on time)
- At least 75 % of the corridor trains should be punctual on the terminal/start of origin, or on the shunting yards and the final station.

Performance objectives:

- Number of corridor trains per month
- Number of the border crossing allocated/used path corridor trains
- Length of path.

6.6 Corridor Information document

6.6.1 Book 1

6.6.1.1 I. Introduction

The Regulation (EU) 913/2010 of the European Parliament and the Council of 22 September 2010 lays down rules for the establishment and organisation of international rail corridors for competitive rail freight with a view to the development of a European rail network for competitive freight and it sets out rules for the selection, organisation, management and the indicative investment planning of freight corridors.

The Corridor Information Document provides all information in one document in relation with Rail Freight Corridor 6, 'Mediterranean Corridor' (hereinafter RFC 6 – among Railway Infrastructure Managers and Allocation Bodies of Spain, France, Italy, Slovenia and Hungary) from the national network statements. This document ensures the existence of the Corridor and gives the overall, basic structure of the applicable rules, procedures and available data of RFC 6.
The creation of the Corridor contributes to the development of the international freight market. As for the comparison of the other modes of transport, the competitiveness of the railway sector is essential; therefore a proper railway infrastructure and good quality regarding the freight transport services should be applied and generated along the Corridor. According to the fulfilment of the Regulation (EU) 913/2010 the cooperation of the Infrastructure Managers and Allocation Bodies is indispensable at international level.

6.6.1.2 Structure of the Corridor Information Document

On the basis of the RailNet Europe (RNE) structure, the Corridor Information Document, which is a single document, consists of 5 different Books. There are proposed structures available for each book; the Network Statement Excerpts part follows the structure of national Network Statements.

The Corridor Information Document is built up as follows:

- Book 1 – Generalities

- Book 2 – Network Statement Excerpts
- Book 3 – Terminal Description
- Book 4 – Procedures for Capacity and Traffic Management
- Book 5 – Implementation Plan

All Books can be executed under different processes but the Network Statement Excerpts part should be drawn up in accordance with the procedure set out in Directive 2012/34/EU.

The Corridor Information Document shall contain:

- all the information in relation with the freight corridor from the national network statements
- information on terminals
- information on capacity allocation (OSS operation) and traffic management, also in the event of disturbance
- the implementation plan that contains:
  - the characteristics of the freight corridor
  - the essential elements of the transport market study that should be carried out on a regular basis
  - the objectives for the freight corridor
  - the investment plan described in the regulation
  - measures to implement the provisions for co-ordination of work, capacity allocation (OSS), traffic management etc.

The Corridor Information Document is an international document, therefore it will be written in English language.

6.6.1.3 Corridor Description

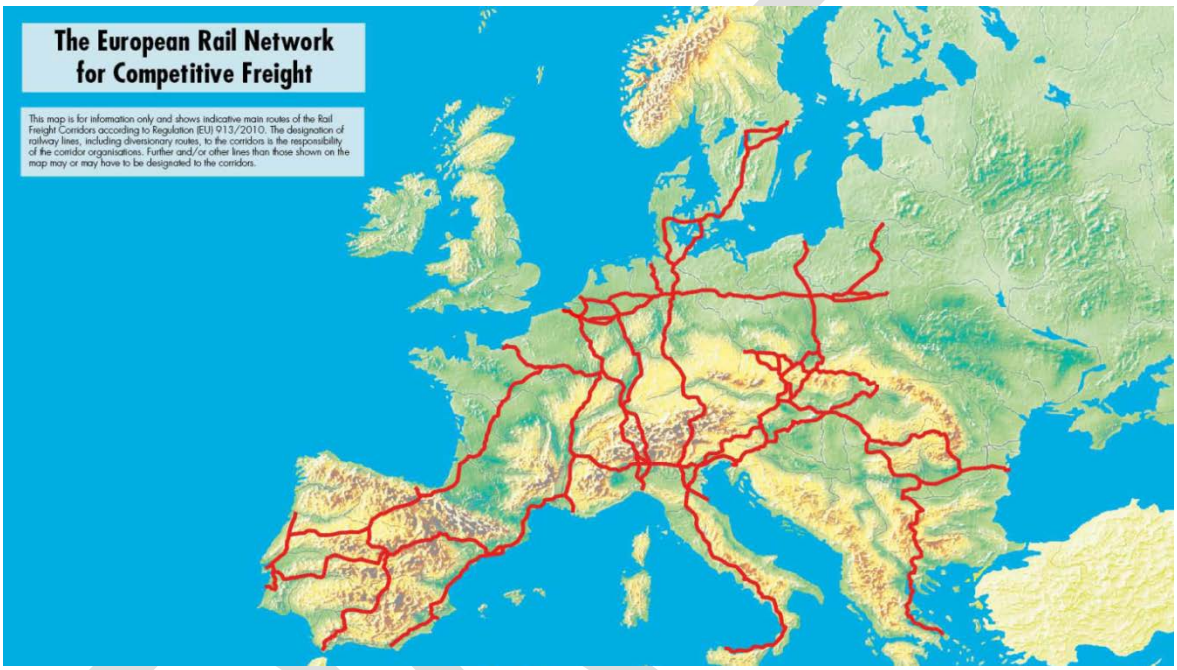
Detailed description will be available in Book 2 of the Corridor Information Document.

Actually, RFC 6 has the following connections with other RFCs:

- in Madrid with Rail Freight Corridor 4 (to be set up by 10 November 2013)
- in Lyon and Ambérieu-en-Bugej with Rail Freight Corridor 2 (to be set up by 10 November 2015)
- in Milano with Rail Freight Corridor 1 (to be set up by 10 November 2013)

- in Verona with Rail Freight Corridor 3 (to be set up by 10 November 2015)
- in Venice and Koper with Rail Freight Corridor 5 (to be set up by 10 November 2015)
- in Győr and Budapest with Rail Freight Corridor 7 (to be set up by 10 November 2013)

The initial network formed by Rail Freight Corridors is drafted as follows:



6.6.1.4 Corridor organization

Please refer to chapter 2.

6.6.1.5 Contacts

The following national contact persons are available for give further information regarding the Corridor Statement:

Company	Representative	E-mail address	Phone number
ADIF (ES)	Rafael Cordon	rcordon@adif.es	+34 917744424
TP Ferro (ES/FR)			

RFF (FR)	Marie Sainson	marie.sainson@rff.fr	+33 01 53 94 93 10
RFI (IT)	Marco Giovannini	ma.giovannini@rfi.it	+39 0647 309 033, +39 313 809 6486
SZ (SI)	Uros Zupan	uros.zupan@slo-zeleznice.si	+386 1 29 13 226
AZP (SI)	Zdenko Zemljic	zdenko.zemljic@azp.si	+386 2 2341481
MÁV (HU)	Krisztián Urvald	urvaldk@mav.hu	+36 1 511 4096
VPE (HU)	Dóra Kondász	kondaszd@vpe.hu	+36 1 301 9928

Missing data will be completed when the information is available.

6.6.1.6 Legal Framework

The main international regulations to be considered in relations with Rail Freight Corridors are Regulation 913/2010/EU of the European Parliament and of the Council of 22 September 2010 concerning a European Rail Network for Competitive Freight; and Directive 2012/34/EU of the European Parliament and of the Council of 21 November 2012 Establishing a single European railway area (recast).

The framework for the allocation of infrastructure capacity on the RFC has to be defined by the Executive Board of each Rail Freight Corridor according to Article 14 (1) of the Regulation (EU) 913/2010.

Further applicable legislations and regulations are indicated in Book 2 of this Corridor Information Document.

6.6.1.7 Legal Status

The designation of a joint body by the Management Board for applicants to request and to receive answers, in a single place and in a single operation, regarding infrastructure capacity for freight trains crossing at least one border along the freight corridor is legally binding.

According to the decision of the RFC 6 Management Board, the parties agreed on that the C-OSS of RFC 6 will be operated as a 'dedicated C-OSS'[6] in the PMO in Milan.

[6] On the basis of one of the suggested RNE proposal. The Dedicated C-OSS: a joint body set up or designated by the Management Board (MB). (supported by IT tool)

6.6.1.8 Validity and Updating process

The Regulation (EU) 913/2010 states that the Corridor Information Document should be drawn up, published and regularly updated by the Management Board of the RFC.

The validity and the updating process in details are currently under consultation.

6.6.1.9 Publishing

All 5 books of the Corridor Information Document are independent but integrated. All 5 books have different updating needs. Rules for the publication of the Corridor Information Document are under consultation.

6.6.2 Book 2 - Network statement excerpts (To be completed by Nov 2013)

6.6.3 Book 3 – Terminal Description (To be completed by Nov 2013)

6.6.4 Book 4 – Procedures for capacity and traffic management (To be completed by Nov 2013)

6.6.5 Book 5 – Implementation plan

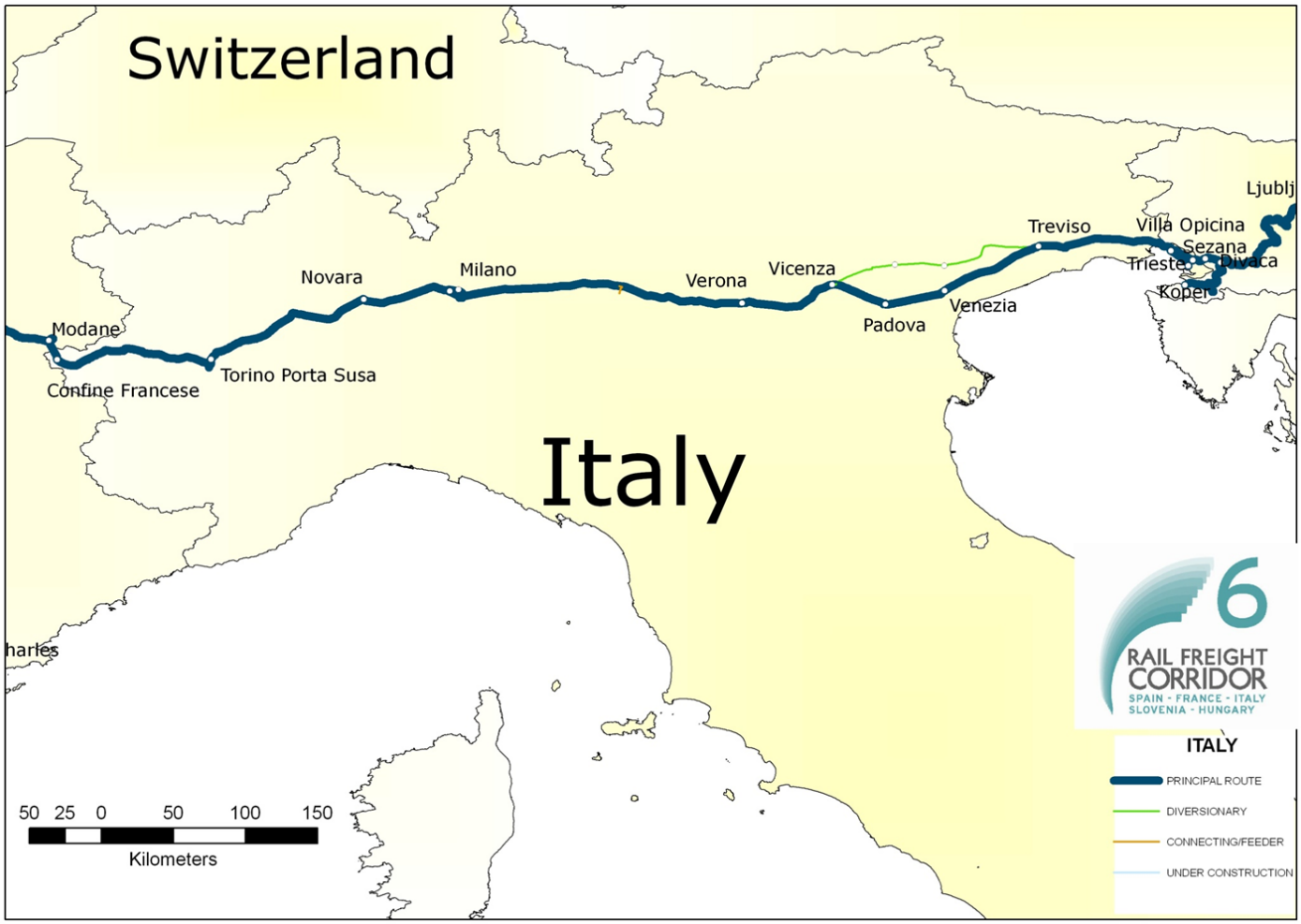
6.7 **Quality of service (TO BE COMPLETED BY NOVEMBER 2013)**

7 Annex

7.1 Map of the Rail Freight Corridor 6


Spain
Narbonne
Gruissan
Perpignan
Collioure
Cerbere
Figueras
Vilademuns
Gerona
Massanet
Tardienta
Selgua
Grisen
Ricla
Zaragoza Plaza
Lerida
Calatayud
Casetas
Villafranca del Penedes
Mollet
Barcelona Sants
Samper
Tarragona
Bif Calafat
Guadalajara
Madrid Vicalvaro
Vinaroz
Castellon
Sagunto
Valencia F.S.Luis
Alcazar de San Juan
Villarrobledo
Manzanares
Albacete
Jativa
Santa Cruz de Mudela
Chinchilla
La Encina
Hellin
Cieza
Alicante
Vadollano
Linares-Baeza
Murcia Mercancías
El Regueron
Lorca
Moreda
Escombreras
Hueneja Dolar
Almeria
0
125
250
Kilometers
RAIL FREIGHT CORRIDOR
SPAIN - FRANCE - ITALY
SLOVENIA - HUNGARY
SPAIN
PRINCIPAL ROUTE
DIVERSIONARY
CONNECTING/FEEDER
UNDER CONSTRUCTION


Switzerland
Ambérieu
LYON
Culoz
Vénissieux
Givors-Canal
Chasse-sur-Rhône
Moirans
Peyraud
Modane
France
Grenoble
Italy
Tori
Valence-Ville
Livron
Confine Francese
Pont St Esprit
Avignon
Nîmes
Montpellier
Miramas
Lavalduc
l' Estaque
Fos Viguerat
Narbonne
Marseille-Saint-Charles
Gruissan
Perpignan
Cerbère
Cerbere
Figueras
Spain
50 25 0 50 100
Kilometers
FRANCE
PRINCIPAL ROUTE
DIVERSIONARY
CONNECTING/FEEDER
UNDER CONSTRUCTION

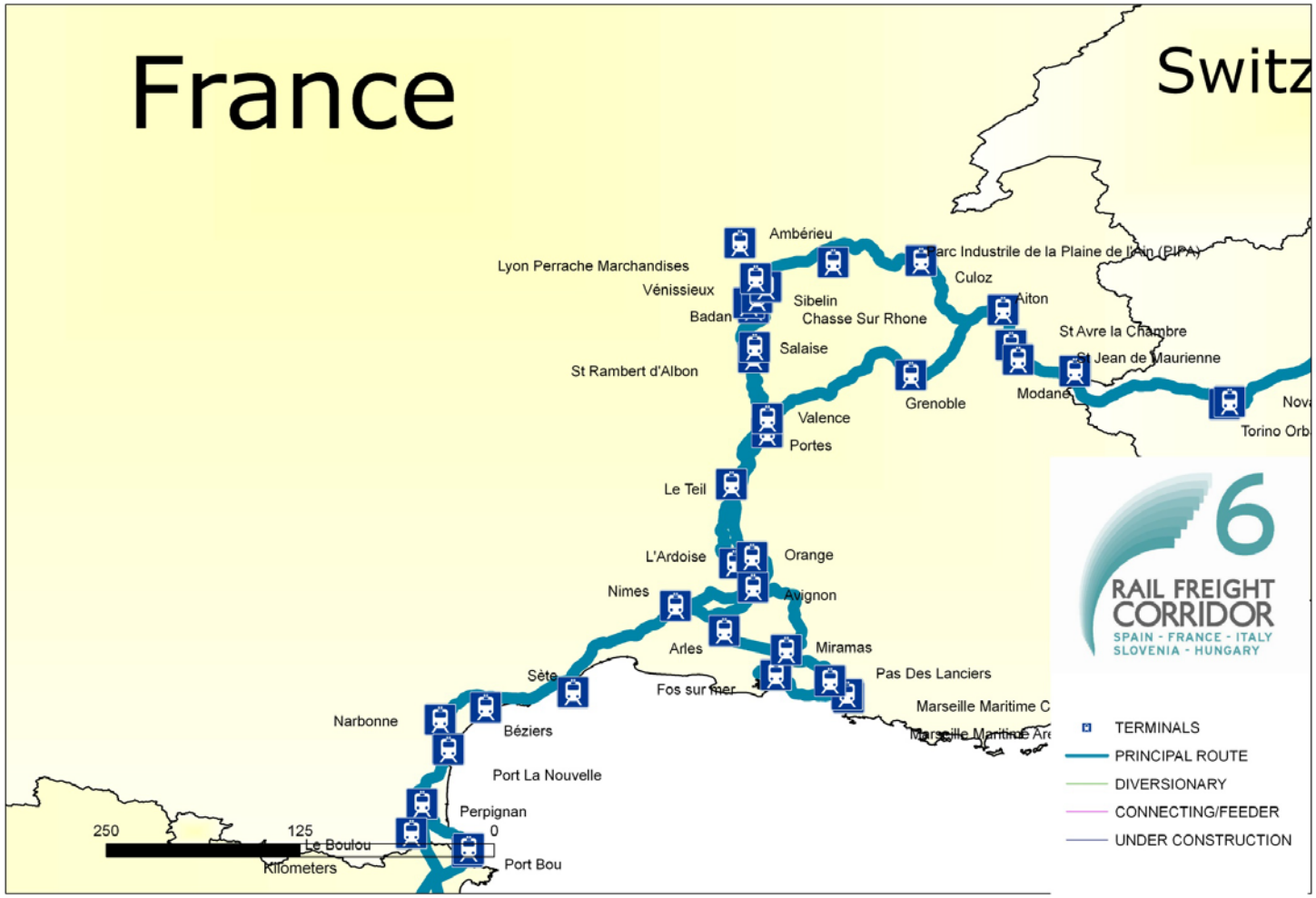

Switzerland
Italy
Ljublj
Treviso
Villa Opicina
Sezana
Trieste
Divaca
Koper
Vicenza
Verona
Milano
Novara
Modane
Torino Porta Susa
Confine Francese
Venezia
Padova
harles
50 25 0 50 100 150
Kilometers
RAIL FREIGHT CORRIDOR
SPAIN - FRANCE - ITALY
SLOVENIA - HUNGARY
ITALY
PRINCIPAL ROUTE
DIVERSIONARY
CONNECTING/FEEDER
UNDER CONSTRUCTION


Hodos
Zala
Pragersko
Ljubljana
iso
Villa Opicina
Sezana
Trieste
Divaca
Koper
Slovenia
0 25 50 100 150
Kilometers
6
RAIL FREIGHT CORRIDOR
SPAIN - FRANCE - ITALY
SLOVENIA - HUNGARY
SLOVENIA
PRINCIPAL ROUTE
DIVERSIONARY
CONNECTING/FEEDER
UNDER CONSTRUCTION


Slovakia
Záhony
Tuzsér
Miskolc
Nyíregyháza
Budapest
Soroksár
Boba
Székesfehérvár
Hodos
Zalalövo
Hungary
Croatia
0 25 50 100 150 200 250 300
Kilometers
RAIL FREIGHT CORRIDOR
SPAIN - FRANCE - ITALY
SLOVENIA - HUNGARY
HUNGARY
PRINCIPAL ROUTE
CONNECTING/FEEDER
DIVERSIONARY
UNDER CONSTRUCTION

7.2 Map of the Terminals of Rail Freight Corridor 6


Spain
Narbonne
Béziers
Port La Nouvelle
Perpignan
Le Boulou
Port Bou
Terminal Intermodal de Monzón
Terminal Maritima de Zaragoza
OPEL, (Grisen – Zaragoza)
Zaragoza Plaza
GONVARRI, GONVAUTO
La Llagosta
CELSA
Martorell SEAT
Puerto de BARCELONA
Barcelona Morrot
Tarragona Mercancias
Puerto de TARRAGONA
Puerto Seco Azuqueca de Henares
Vicalvaro Mercancias
Puerto Seco Coslada
Madrid Abroñigal
Puerto de CASTELLÓN
Sagunto
Valencia Fuente San Luis
Silla
Puerto de VALENCIA
FORD - FACTORIA, (Silla - Valencia)
Puerto de ALICANTE
Murcia Mercancias
Puerto de CARTAGENA
250
125
0
Kilometers
RAIL FREIGHT CORRIDOR
SPAIN - FRANCE - ITALY
SLOVENIA - HUNGARY
TERMINALS
PRINCIPAL ROUTE
DIVERSIONARY
CONNECTING/FEEDER
UNDER CONSTRUCTION


France
Switz
Ambérieu
Lyon Perrache Marchandises
Vénissieux
Badan
Sibelin
Chasse Sur Rhone
Culoz
Salaise
St Rambert d'Albon
Valence
Portes
Grenoble
Modane
St Avre la Chambre
St Jean de Maurienne
Le Teil
L'Ardoise
Orange
Nimes
Avignon
Arles
Miramas
Pas Des Lanciers
Sète
Fos sur mer
Narbonne
Béziers
Port La Nouvelle
Perpignan
Le Boulou
Port Bou
250
125
0
Kilometers
TERMINALS
PRINCIPAL ROUTE
DIVERSIONARY
CONNECTING/FEEDER
UNDER CONSTRUCTION


Switzerland
Italy
la Plaine de l'Ain (PIPA)
St Avre la Chambre
St Jean de Maurienne
Torino Orbassano
Novara Boschetto
Novara CIM
Milano Smistamento
Brescia
Verona QE
Padova Interporto
Venezia Marghera
Trieste Campo Marzio
Cervignano Interporto
250
125
0
Kilometers
RAIL FREIGHT CORRIDOR
SPAIN - FRANCE - ITALY
SLOVENIA - HUNGARY
TERMINALS
PRINCIPAL ROUTE
DIVERSIONARY
CONNECTING/FEEDER
UNDER CONSTRUCTION


Maribor Tezno
Celje tovorna
Ljubljana Kontejnerski terminal
Koper tovorna
Koper-luka-harbor
Slovenia
125
62,5
0 Kilometers
Kilometers
RAIL FREIGHT CORRIDOR
SPAIN - FRANCE - ITALY
SLOVENIA - HUNGARY
TERMINALS
PRINCIPAL ROUTE
DIVERSIONARY
CONNECTING/FEEDER
UNDER CONSTRUCTION


Slovakia
Záhony, Záhony Port Zrt
Sopron
Debrecen
Budapest MCC
Törökbálint
Budapest, BILK Kombiterminál
Székesfehérvár, Logisztár Kft.
Hungary
Croatia
250
125
Kilometers
RAIL FREIGHT CORRIDOR
SPAIN - FRANCE - ITALY
SLOVENIA - HUNGARY
TERMINALS
PRINCIPAL ROUTE
DIVERSIONARY
CONNECTING/FEEDER
UNDER CONSTRUCTION

7.3 Timetable 2014 : Catalog paths of RNE Corridor 8 and RNE Corridor 6

In the present path catalogue, the infrastructure companies concerned have published the status of preliminary plans for border-crossing freight paths in the forthcoming annual timetable, in the sense set out by Art. 15 and Annex 3, Point 4 in the EU Directive 2001/14. The published paths are only valid for the listed characteristics and may be modified in the course of the annual timetable design process, in particular owing to the border co-ordination of international freight and passenger traffic within the framework of this annual timetabling process. There is therefore no entitlement to the allocation of a catalogue path.

http://www.rne.eu/corridor-info/items/Corridor_6.html

http://www.rne.eu/corridor-info/items/Corridor_8.html