

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



Potential and Challenges of the European Rail Freight Corridors

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Today perspective for the European Rail Freight Transport

Many results have been already achieved but the development of the rail modal shift has not yet happened and rail system has to increase the capability of rail transportation to properly answer to market request

In 2018 ...



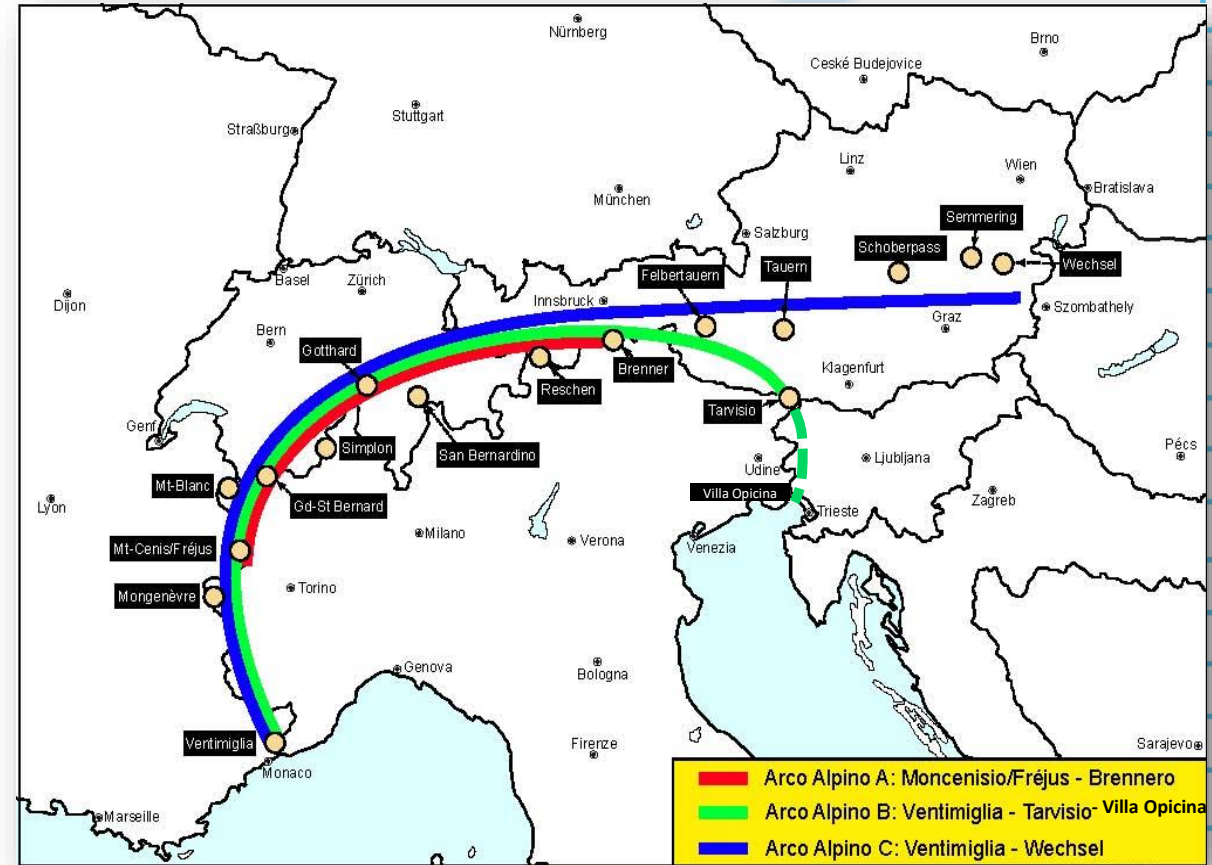
224 Million tons of freight crossed the Alps
Maximum value since 1999 (Road + Rail)
+3,4% vs 2017



11.4 Million of heavy vehicles crossed the Alps
Record value also for number of heavy vehicles
+500.000 vs 2017



Rail modal share continues its decrease to 31.2%
Rail modal share reaches a new all-time low, from 32.1% in 2017. **Road volumes** increases by +4.7% to 153.7 million tons (a new record level)



Source: EU DG MOVE - Confédération suisse Office fédéral des transports (OFT): Observation et analyse des flux de transports de marchandises transalpins, 2019

2018 freight flows through the Alps

Evolution of transalpine freight transport – 2019 Report

Road 2018 vs 2017: +4.7%
 Rail 2018 vs 2017: +0.6%
 Total France: -1.1%

Flows 2018 through French Border: 45 Million Tons, 3.4 of which on rail (7.4%)

		2018						
		Road		Rail				
				Total	WL	UCT	ACT	
		KHGV	Kt	Kt	Kt	Kt	Kt	KHGV
France	Ventimiglia	1'504.1	20'056.6	738.2	412.7	325.5		
	Montgenèvre	63.3	651.8					
	Fréjus/Mont Cenis	786.3	11'817.4	2'635.1	1'106.4	1'504.1	24.6	0.9
	Mont Blanc	622.2	9'456.4					
	Total France	2'975.9	41'982.3	3'373.4	1'519.1	1'829.6	24.6	0.9
Switzerland	Gd St-Bernard	33.8	399.5					
	Simplon	86.3	1'040.6	12'608.9	1'642.5	9'531.1	1'435.3	90.2
	Gotthard	677.1	8'416.1	15'320.2	5'650.6	9'552.8	116.8	6.9
	San Bernardino	143.8	1'841.3					
	Total Switzerland	941.0	11'697.5	27'929.1	7'293.1	19'083.9	1'552.1	97.1
Austria	Reschen	107.3	928.8					
	Brenner	2'494.2	38'826.5	14'048.1	3'412.9	7'501.3	3'133.9	143.1
	Felbertauern	61.3	682.9					
	Tauern	1'199.1	15'583.8	8'317.5	5'616.0	2'644.6	56.9	3.8
	Schoberpass	1'608.5	19'932.9	4'653.2	3'687.5	631.2	334.5	23.2
	Semmering	518.4	6'008.6	11'377.5	7'327.9	4'049.6		
	Wechsel	1'457.6	18'048.1	108.9	57.2	51.7		
Total Austria	7'446.4	100'011.6	38'505.2	20'101.5	14'878.4	3'525.3	170.1	
Total 3 countries	11'363.3	153'691.4	69'807.7	28'913.7	35'791.9	5'102.1	268.1	

Overall Land flows 2018: 224 Million Tons

		Difference 2017/2018 in percent						
		Road		Rail				
				Total	WL	UCT	ACT	
		KHGV	Kt	Kt	Kt	Kt	Kt	KHGV
France	Ventimiglia	+2.7%	+2.7%	+9.7%	-3.8%	+33.6%		
	Montgenèvre	+11.5%	+11.5%					
	Fréjus/Mont Cenis	+6.2%	+6.2%	-3.8%	-11.0%	+2.8%	-25.9%	-33.4%
	Mont Blanc	+0.1%	+0.1%					
	Total France	+3.2%	+3.2%	-1.1%	-9.1%	+7.2%	-25.9%	-33.4%
Switzerland	Gd St-Bernard	+32.3%	+33.1%					
	Simplon	+7.0%	+5.7%	-7.2%	+5.0%	-8.2%	-12.7%	-10.0%
	Gotthard	-2.9%	-1.8%	+13.0%	+3.3%	+20.4%	-26.4%	-21.7%
	San Bernardino	-4.3%	-1.2%					
	Total Switzerland	-1.4%	-0.2%	+2.9%	+3.7%	+4.2%	-13.9%	-11.0%
Austria	Reschen	-1.3%	-2.8%					
	Brenner	+6.4%	+6.8%	-4.8%	-7.6%	-1.0%	-10.2%	-10.3%
	Felbertauern	+1.3%	-11.0%					
	Tauern	+2.8%	+2.8%	-8.5%	-14.6%	+8.2%	-15.7%	-13.6%
	Schoberpass	+5.9%	+6.1%	+13.7%	+15.8%	+20.5%	-13.2%	-13.4%
	Semmering	+6.3%	+7.1%	+6.0%	-4.7%	+33.1%		
	Wechsel	+6.8%	+8.0%	-39.8%	-39.7%	-39.8%		
Total Austria	+5.6%	+6.0%	-0.9%	-5.3%	+8.8%	-10.5%	-10.8%	
Total 3 countries	+4.4%	+4.7%	+0.6%	-3.4%	+6.2%	-11.8%	-11.0%	

Challenges ahead – constraints to rail freight development

The first obstacle to development of rail freight traffic is represented by **technical constraints** within the rail-network and mainly at **cross-borders rail connections**. The main constraints, having a relevant impact of performance and cost of rail transportation, are represented by:

- **Track gauge:** International Standard gauge (1435 mm) or Iberian gauge (1668 mm);
- **Maximum train length:** maximum train length guaranteeing a flawless run along a whole section of the corridor, including traction;
- **Axle load:** maximum loading gauge guaranteeing a flawless run along a whole section of the corridor;
- **Loading gauge:** maximum dimension for the freight and passenger vehicles especially in the tunnels;
- **Power supply:** Type of current and voltage for electrified lines (DC 1.500V, DC 3.000V & AC 25.000V);
- **Signaling and interlocking systems:** Type of signaling systems implemented on each line;

The second obstacle is **the access to the network**. The development of proper and easy connections with the served territory is a key factor to increase the rail modal share. Ports and Intermodal terminals are the strategic access points to the Rail Freight Corridors. For both of them an adequate infrastructural development, an integrated rail planning and flexible procedures allowing an easy access to the rail network are needed.

Ports and Inland Terminals: the main access points to the Rail Freight Corridor



- The development of **proper connections with the served territory** is a key factor to increase the Corridor's flows
- **The Ports** are the main access points for the European import/export flows; The **Intermodal Terminals** are the interchange points with the main European industrial and urban areas:
- For both of them an **adequate infrastructural development**, an **integrated rail planning** and **flexible procedures** allowing an easy access to the rail network are needed.

- **Last Mile project** had the goal to monitor the state of play of infrastructural rail connections and support development of optimal solutions
- The development of an **integrated rail capacity offer** with the involved ports and intermodal terminals
- The development of projects for better understanding **Terminals' and End Users' needs** and focused on developing **shared policies**



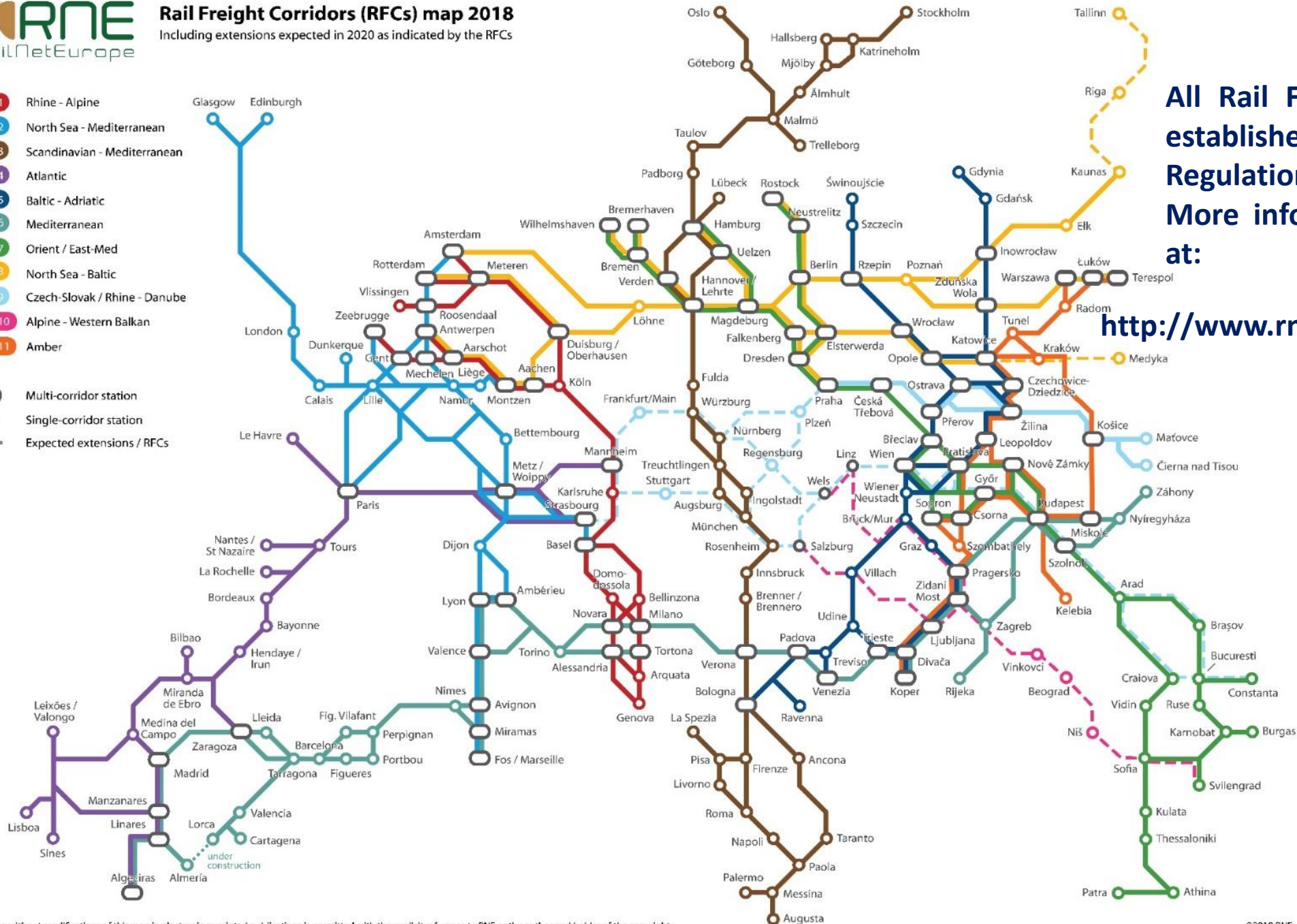


**To overcome these constraints
a European Network of eleven Rail Freight Corridors
has been created**

supported by RailNetEurope

- RFC1 Rhine - Alpine
- RFC2 North Sea - Mediterranean
- RFC3 Scandinavian - Mediterranean
- RFC4 Atlantic
- RFC5 Baltic - Adriatic
- RFC6 Mediterranean
- RFC7 Orient / East-Med
- RFC8 North Sea - Baltic
- RFC9 Czech-Slovak / Rhine - Danube
- RFC10 Alpine - Western Balkan
- RFC11 Amber

- Multi-corridor station
- Single-corridor station
- - - Expected extensions / RFCs



All Rail Freight Corridors were established according to the Regulation (EU) No 913/2010. More information are available at:

<http://www.rne.eu/rfc-corridors.html>

The European transport policy: not only a matter of environment

The **TEN-T transport network** is at the heart of European politics of transport development, whose objective is to improve **intermodality, interoperability** and **economic and environmental performance** of the networks of transport. This network, dedicated to the international transportation of goods and passengers over long distances, arranges for each type of infrastructure, technical specifications aimed at particular for the railway mode: **intermodal gauge, axial load, train length, signaling and communications system**, etc.

The goal is to create an international rail network **modern** and **high capacity** (**740 m trains**, weighing **2,000 m tons, 4-meter gauge**), able to offer one **reliable alternative to road transport**.

Transferring goods to the train is one of the objectives of the European transport policy, but unlike that some may think, it is not "just" a **environmental objective**. Although the potential CO2 reduction which triggers rail transport is undoubtedly important, **other strategic factors** are equally to be consider, such as the **reduction of accidents and congestion** which are just some of the external costs inevitable and growing in road mode. Furthermore the long distance rail transport is the only solutions able to provide **effective connections among the ports and inland terminals**, able to properly support **European logistics and import/export flows**.

What is Rail Freight Corridors' added value?

All Rail Freight Corridors were established according to the Regulation (EU) **No 913/2010**.

The **Rail Freight Corridors** (RFCs) and the **Core Network Corridors** (CNCs) are two complementary tools of EU transport policy sharing an important objective: making transport more efficient and sustainable by developing inter alia international rail freight within a seamless multimodal logistics system.

Rail Freight Corridors are mainly focused on the following goals:

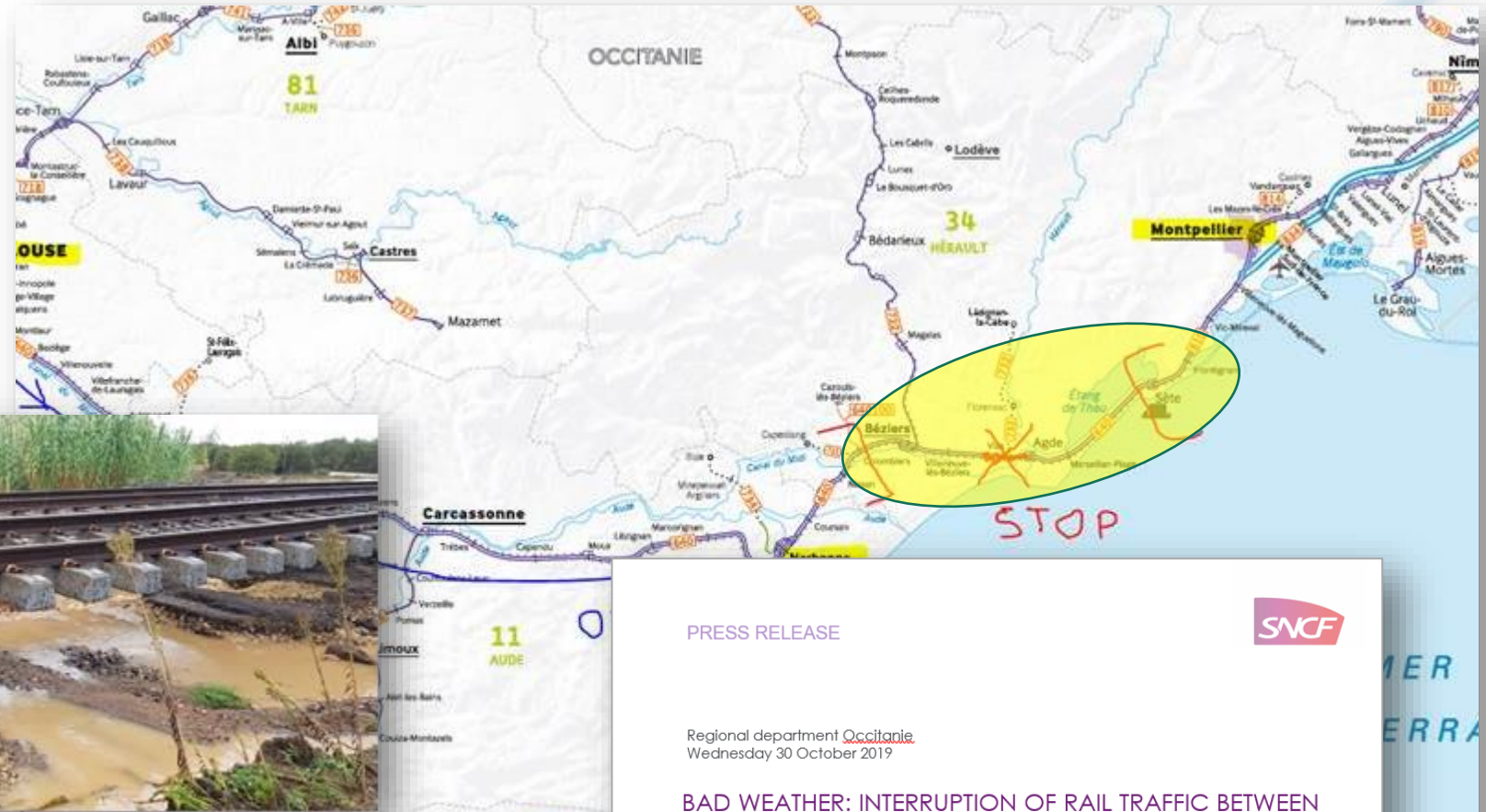
- Trigger **cooperation** between **national rail infrastructure networks** for **more competitive international rail freight services**
- Foster the **dialogue** with **Terminals, Railway Undertakings** and **End users** for a **smoother rail logistic chain**
- **Offer a single entry point** for the Customer to **facilitate access** to international rail **capacity** (“Corridor One-Stop-Shop”)
- Develop **common IT-tools** along the **customer journey** to facilitate international journey planning, capacity booking, traffic management and quality monitoring

What are Rail Freight Corridors final goals?

The **Eleven Priorities** from the **Rotterdam Sector Statement**:

1. **Redesign** of a more flexible and stable **international timetable process TTR**;
2. **New market oriented concepts** for **capacity offer** on RFCs;
3. Improving **coordination** on **Temporary Capacity Restraints (TCR)**;
4. **Enhancing the use of Path Coordination System (PCS)**;
5. Improving **Harmonization of Processes at Border**;
6. **Train tracking** and **Expected Time of Arrival (ETA)**;
7. Prioritisation, funding instruments, and monitoring of **TEN-T parameters**;
8. Facilitating concrete **ERTMS Implementation**;
9. **Monitoring the quality of freight services** with implemented and shared **KPIs**;
10. Harmonising the **Corridor Information Document (CID)**;
11. **Internal Contingency Planning (ICM)**.

Rail is a powerful but fragile infrastructure, based on a network



Le Monde.fr

Intempéries : la SNCF interrompt les lignes entre Montpellier et Toulouse ou l'Espagne jusqu'au...

De puissants orages ont provoqué des inondations qui ont arraché des voies ferrées. Une septuagénaire a été transportée à...

| 23.10.2019 à 06:51

PRESS RELEASE



Regional department Occitanie
Wednesday 30 October 2019

BAD WEATHER: INTERRUPTION OF RAIL TRAFFIC BETWEEN SÈTE AND BÉZIERS

The exceptional rainfall on 22 and 23 October in the departments of Aude and Hérault caused very serious damage to railway infrastructure. In the Villeneuve-lès-Béziers sector, the track platform and catenary installations were severely damaged for nearly one kilometre, requiring a total interruption of rail traffic.

TRAFFIC RESUMPTION PLANNING

Two lines are affected by the interruption of traffic: the coastal artery and the Béziers-Neussargues line.

- On the coast
Between Agde and Sète, traffic will resume from 31 October.

Between Béziers and Agde, the section of track that has suffered the most damage, traffic will be able to resume on one track on 25 November and on both tracks from 2 December.



Second Eurasian Connectivity and Infrastructure Cooperation Forum (Europe)



Spain France Italy Slovenia Croatia Hungary

Challenges ahead – attention points and opportunities to be developed

- ❑ **Work Coordination:** even well designed train path can be severely damaged by Temporary Capacity Restrictions not properly harmonized among neighbouring IMs and without reliable alternatives during the works duration.
- ❑ **Partial Interoperability:** even when the track gauge become the same, as with Figueras Perpignan new tunnel, different signalling systems and different electrical currents between the two rail networks, significantly increase the traction costs.
- ❑ **Reduced Harmonisation:** in cross-borders rail connections operating and safety procedures are still not fully harmonised and low operational performance may strongly impact on train path planning: 60% of trains between Italy and Slovenia is managed at operational level.



- ❑ **Integrated Rail Capacity planning:** harmonized with last mile connections, using advanced ICT monitoring tools (Corridors' Freight Flows Observatories) and planning systems (ELETA)
- ❑ A stronger role in the Rail Freight Corridors of **Ports as Entry/Exit Points** and of the **Intermodal Terminals as interchange Gates with Territory.**
- ❑ Increase of **quality and reliability** of the rail offer through “**Performance Pacts**” among all the actors of the Rail System (IMs, RUs and Ports/Terminals)



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