

# Capacity Strategy 2028

Mature Draft September 2024



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# 1 Introduction

Within TTR, each Infrastructure Manager is expected to publish until X-30 its Capacity Strategy for Timetable 2028. General aim of the Capacity Strategy is to provide indication on key values of capacity planning, i.e., changes in infrastructure availability, temporary capacity restrictions (“negative capacity”) as well as minimum bookable capacity (“positive capacity”) for a given timetable.

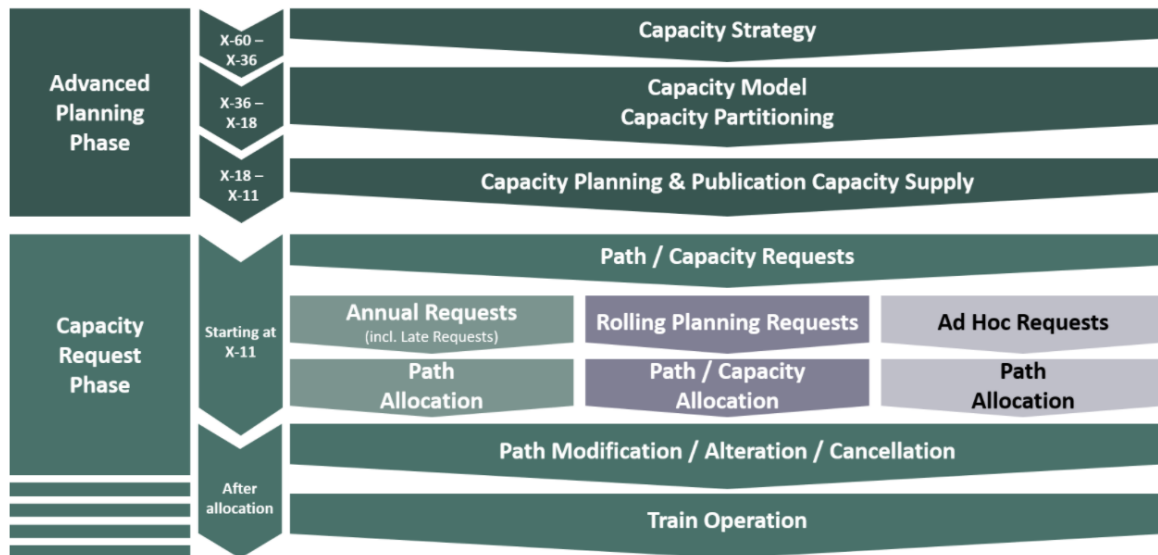


Figure 1: Steps of the TTR process (Source: RNE)

The present document :

- ▶ meets the requirements of RNE’s Capacity Strategy Handbook, version 3.0<sup>1</sup> ;
- ▶ focuses for Timetable 2028 on lines of international relevance ;
- ▶ encloses, beyond the description of the geographical scope, three main chapters:
  - Expected permanent changes in Infrastructure Capacity,
  - Expected Temporary Capacity Restrictions with major impact,
  - Expected Traffic Flows, whereby the values displayed are focused for Timetable 2028 on relevant border points within the geographical scope.

The Capacity Strategy targets Applicants as well as their end customers, Service Facilities and Terminals, Policy decision makers as well as any other stakeholder of rail capacity planning and allocation.

**The present document is non-binding. It applies to Timetable 2028.**

<sup>1</sup> [https://rne.eu/wp-content/uploads/2022/12/HB\\_Capacity\\_Strategy\\_2.0.pdf](https://rne.eu/wp-content/uploads/2022/12/HB_Capacity_Strategy_2.0.pdf)

## 2 Geographical scope

### 2.1 Relevant border points

The lines with international relevance were selected on basis of experience, starting from border points with the highest volume of international traffic, both passenger and freight. It concerns RFC and main lines:

UIC line number	Section	RFC	Electric power	Block Signal	Gauge	Speed in km/h
001000	Paris - Mulhouse			BAL/BAPR/BM	GB/GB1	160
001306	Racc de l'Evangile	2	25000v	BAL		
031950	Saut de mouton de Chaudenay	2	25000v	BAL		
032000	Toul - Culmont Chalindrey	2	25000v	BAL	GA	120/160
039000	Toul - Frouard		25000v	BAL	GA	160
005000	LGV Est		25000v	TVM+ETCS 2	GC	320
070000	Paris - Strasbourg	2	25000v	BAL	GA/GB/GB1	120/160
085000	Conflan-Jarny - Hagondange	2	25000v	BAL	GB	100
085306	Racc de Mondelange	2	25000v	BAL		
089000	Metz - Lérouville	2	25000v	BAL	GA	120/160
090000	Novéant - Nancy	2	25000v	BAL	GA	120/160
095000	Longuyon - Onville	2	25000v	BAL	GA	100/120
115000	Strasbourg - St Louis	2	25000v	BAL	GB/GB1	220/160
120000	Colmar - Neuf-Brisach	2				100
124000	Mulhouse - Chalampé	2	25000v	BAL	GB1	100
125000	Lutterbach - Rixheim (Mulhouse)	2	25000v			
138000	Graffenstaden - Hausbergen	2	25000v	BAL	GB1	220
140000	Metz - Reding	2	25000v	BAL	GB1	120
141000	Graffenstaden - Strasbourg Neudorf	2	25000v	BAL	GB1	
141306	Strasbourg-Neudorf - Strasbourg KS	2	25000v	BAL	GB1	
142000	Strasbourg - Kehl	9	25000v	BAL	GB1	
143000	Voie du Port de Strasbourg	2				
172000	Rémilly - Forbach	2	25000v	BAL	GB1	120/160
178000	Thionville - Apach		25000v	BAL	GA/GB1	
180000	Metz Ville - Zoufftgen	2	25000v	BAL	GA	120/160
192000	Ceinture de Metz	2	25000v	BAL		
202000	Longuyon - Mont St Martin (XB)	2	25000v	BAL	GA	100
202100	Mont St Martin (XL)	2	25000v	BAL	GA	100
204000	Thionville - Mohon	2	25000v	BAL	GA/GB	100/120
205000	Mohon - Charleville-Mézières	2	25000v	BAL	GA	120
205316	Racc de Charleville-Mézières	2	25000v	BAL	GA	
212000	Hirson - Liart	2	25000v	BAL	GA	120
216000	LGV Lille Europe - Tunnel de Fréthun	2	25000v	TVM	GC	300
216312	Fréthun - Tunnel	2	25000v	TVM	GC	300
222000	Liart - Tournes	2	25000v	BAL	GA	120
223000	Tournes - Charleville-Mézières	2	25000v	BAL	GA	120
226000	LGV Nord		25000v	TVM	GC	300
229000	Paris - Hirson	2		BAL/BAPR/BM		100/120
229306	Racc du Bourget	2	25000v	BAL		
232000	Racc de Longueuil - Ormoy	2	25000v	BAL		
242000	Creil - Jeumont	2	25000v	BAL	GB1	120

242316	Racc de Busigny	2	25000v	BAL		
243300	Racc de Longueuil sud	2	25000v	BAL		
245300	Racc de Longueuil nord	2	25000v	BAL		
247000	Aulnoye - Feignies		25000v	BAL	GB1	120
250000	Somain - Busigny	2	25000v	BAL	GB	120
259000	St Just en Chaussée - Douai	2	25000v	BAL	GB	120
262000	Douai - Valenciennes	2	25000v	BAL	GB	120
263300	Racc de Beuvrages	2	25000v	BAL		
266300	Racc de Lezennes	2	25000v	BAL		
267000	Lille - Hirson	2	25000v	BAL	GA	120/160
267306	Racc d'Aulnoye-Aymeries	2	25000v	BAL		
269000	Lille - Baisieux	2	25000v	BAL	GB1	120
272000	Paris - Lille	2	25000v	BAL	GA/GB1	120/160
272311	Racc de La Chapelle-Charbons	2	25000v	BAL		
272321	Racc de Pierrefitte Stains	2	25000v	BAL		
272326	Racc de Douai	2	25000v	BAL		
273300	Racc de Ronchin	2	25000v	BAL		
273308	Racc voie RV de Lille	2	25000v	BAL		
278000	Lille - Mouscron	2	25000v	BAL	GB1	100
278306	Racc de Rougebarre	2	25000v	BAL		
284000	Racc de la Cité Montgré	2	25000v	BAL		
284306	Racc de Sallaumines	2	25000v	BAL		
284311	Racc d'Ostricourt	2	25000v	BAL		
286000	Don-Sainghin - Lens	2	25000v	BAL	GB1	100
289000	Racc de Santes - Don-Sainghin	2	25000v	BAL		
289306	Racc de Santes	2	25000v	BAL		
292000	Racc de St André - Racc de Santes	2	25000v	BAL		
292306	Racc de St André	2	25000v	BAL		
295000	Calais - Lille	2	25000v	BAL	GC	120/160
301000	Racc d'Avion - Arras	2	25000v	BAL		
301301	Racc d'Avion	2	25000v	BAL		
301306	Racc de l'Yser	2	25000v	BAL		
304000	Calais - Dunkerque	2	25000v	BAL	GB1	120/160
311000	Longueau - Boulogne	2		BAL	GB	160
314000	Calais - Boulogne	2	25000v	BAL/BAPR		160
314306	Racc des Fontinettes	2	25000v	BAL		
321000	Amiens - Serqueux		25000v	BAPR	GB	160
330000	Pontoise - Serqueux	2	25000v	BAPR	GB	100
334000	Argenteuil - Le Havre	2	25000v	BAL	GB1	160
336000	Conflan - Pontoise	2	25000v	BAL		120
340000	Mantes - Le Havre	2	25000v	BAL	GB1	160
354000	Serqueux - Montérolier- Buchy	2	25000v	BAPR	GB/GB1	100
431000	LGV Sud-Ouest		25000v	TVM	GC	300
500000	Nantes - Bordeaux	4		BAPR/BM		120/160
515000	Nantes - Tours	4	25000v	BAL/BAPR	GB/GB1	160/220
538000	La Rochelle - Poitiers	4	25000v	BAL/BAPR		120/160
539000	La Rochelle - La Palice	4				
566000	LGV SEA		25000v	TVM	GC	320
570000	Juvisy - Bordeaux	4	1500v	BAL	GB/GB1	160/220
579000	Angoulême - Saintes	4		BAPR/BM		120
590000	Les Aubrais - Montauban		1500v	BAL		120/160
640000	Bordeaux - Narbonne	4	1500v	BAL/BAPR	GB/GB1	160

650000	Bayonne - Bayonne-Mouguerre	4	1500v	BAL		
655000	Bordeaux - Hendaye	4	1500v	BAL	GB/GB1	100/160
677000	Narbonne - Cerbère	4	1500v	BAL	GA/GB	100/160
679000	La Tour de Carol - Perpignan	4	1500v	BAPR/BM		60/100
679305	Racc TGV du Soler	4	1500/25000v	TVM	GC	320
680000	Elne - Le Boulou	4	1500v		GA	100
746000	Melun - Montereau via Héricy		1500v	BAL	GB	120/160
750000	Badan - Lyon Perrache	4	1500v	BAL	GA	120
750316	Racc de Badan à Chasse	4	1500v	BAL	GA	60
752000	LGV Sud Est		25000v	TVM	GC	300
797000	Traversée du Rhône (Peyraud)		1500v	BAL	GA	60
800000	Miramas - L'Estaque	4	1500v	BAL	GB1	120/160
800390	Racc de St Gervasy (CNM)		25000v	BAL	GA	
810000	Tarascon - Sète	4	1500v	BAL	GA	120
811000	Peypade - Sète-Méditerranée	4	1500v			
824000	Villeneuve lès Avignon - Avignon	4	1500v	BAL	GA	
824301	Racc Villeneuve sud	4	1500v	BAL	GA	
824306	Racc Villeneuve nord	4	1500v	BAL	GA	
830000	Paris -Dijon		1500v	BAL	GA	160
830000	Dijon - Marseille	4	1500v	BAL	GA	
830331	Racc de St Fons	4	1500v	BAL	GA	
830336	Racc de Chasse sur Rhône	4	1500v	BAL	GA	
830646	Voie mère de Pierrelatte	4	1500v	BAL		
830900	Dijon - Gevrey Chambertin	4	1500v	BAL		
834000	Contournement Nîmes - Montpellier		25000v	TVM	GC	220
843000	Is sur Tille - Culmont Chalindrey	4	25000v	BAL	GA	160
844300	Racc de Culmont	4	25000v	BAL	GA	
849000	Is sur Tille - Dijon	4	25000v	BAL	GA	160
850000	Dijon - Vallorbe	4	1500/25000v	BAL		120/160
860000	Perrigny - St Amour	4	1500v	BAL	GA	160
861301	Racc de Lyon	4	1500v	BAL	GA	
862300	Racc sup de Longvic	4	1500v	BAL	GA	
862310	Racc de Perrigny	4	1500v	BAL	GA	
863300	Racc de St Amour	4	1500v	BAL	GA	
880000	St Amour - Bourg en Bresse	4	1500v	BAL	GA	120/160
883000	Bourg en Bresse - Ambérieu en Bugey	4	1500v	BAL	GA	160
883306	Racc d'Ambérieu	4	1500v	BAL	GA	
890000	Lyon - Genève	4	1500v	BAL		100/120/160
893000	Collonges - Lyon Guillotière	4	1500v	BAL	GA	100
900000	Culoz - Modane	4	1500v	BAL	GA	100/120/160
905000	Lyon Perrache - Grenoble	4	25000v	BAL	GB	120/160
905606	Voie mère de Vénissieux	4	1500v	BAL		
906000	Traversée du Rhône (Givors)	4	1500v	BAL	GA	60
908000	Valence - Moirans	4	25000v	BAPR	GA	120/160
909000	Grenoble - Montmélian	4	25000v	BAL	GB1	120/160
909306	Racc de Montmélian	4	1500v	BAL		
913000	Traversée du Rhône (La Voulte)		1500v	BAL	GA	60
925000	Avignon - Miramas	4	1500v	BAL	GA	160/220
930000	Marseille Vintimille		25000v	BAL	GB	100/120/160
934100	Desserte de Moureplane	4	1500v	BAL		
935000	Miramas - L'Estaque	4	1500v	BAL	GB1	160
935606	Martigues - Lavéra	4	1500v	BAPR		120

935901	Lavalduc - Fos Coussoul	6	1500v	BAL	GB1	100
935902	Desserte de Fos	6	1500v			
935903	Desserte de St Louis du Rhône	6	1500v			
939000	L'Estaque - Marseille Joliette	6	1500v	BAL		
939001	L'Estaque - Marseille St Charles	6	1500v	BAL	GB	
939306	Racc de L'Estaque-Joliette	6	1500v	BAL		
940100	Marseille Arenç - Marseille Canet	6	1500v			
956306	Racc de Sucy (GC)	6	25000v	BAL	GB1	100
957000	Bobigny - Sucy	6	25000v	BAL	GB1	100
957316	Racc de Sucy n°3	6	25000v	BAL	GB1	100
962000	Gennevilliers - St Ouen	6	25000v	BAL	GB1	100
963000	La Plaine - Ermont-Eaubonne	6	25000v	BAL	GB1	100
963506	Port de Gennevilliers	6	25000v		GB1	100
990000	La Grande Ceinture de Paris	6	1500/25000v	BAL	GB1	100
990316	Villeneuve St Georges - Valenton	6	1500v	BAL	GB1	100
991301	Noisy le Sec - Gagny	6	25000v	BAL	GB1	100

The relevant border points are listed in the following table:

	InfraBel	DB Netz	SBB	RFI	ACF	ADIF
<b>SNCF Réseau</b>	Feignies/Quévy, Jeumont/Erquelinnes, Baisieux/Blandain, Tourcoing/Mouscron	Apach/Perl, Forbach/Saarbrücken, Port du Rhin/Kehl, Lauterbourg/Berg, Neuenburg/Mulheim	St Louis/ Basel, Les Longevilles/Vallorbe, Pougny-Chancy/La Plaine	Modane/Bardonecchia, Vintimille/Ventimiglia	Mont-Saint Martin/Aubange, Zoufftgen/Bettembourg	Hendaye/Irun, Cerbère/Port Bou, Le Perthus/El Perthus

Table 1: Selected border crossings for 2028

## 2.2 Service facilities

Terminals and services facilities are described in chapter 7 of the Network Statement: <https://www.sncf-reseau.com/fr/document-reference-reseau/horaires-service-2025>

## 2.3 Map

The above-mentioned border points connect in a network as shown in the following map ([https://www.sncf-reseau.com/medias-publics/2024-01/geographical\\_scope.pdf](https://www.sncf-reseau.com/medias-publics/2024-01/geographical_scope.pdf)):

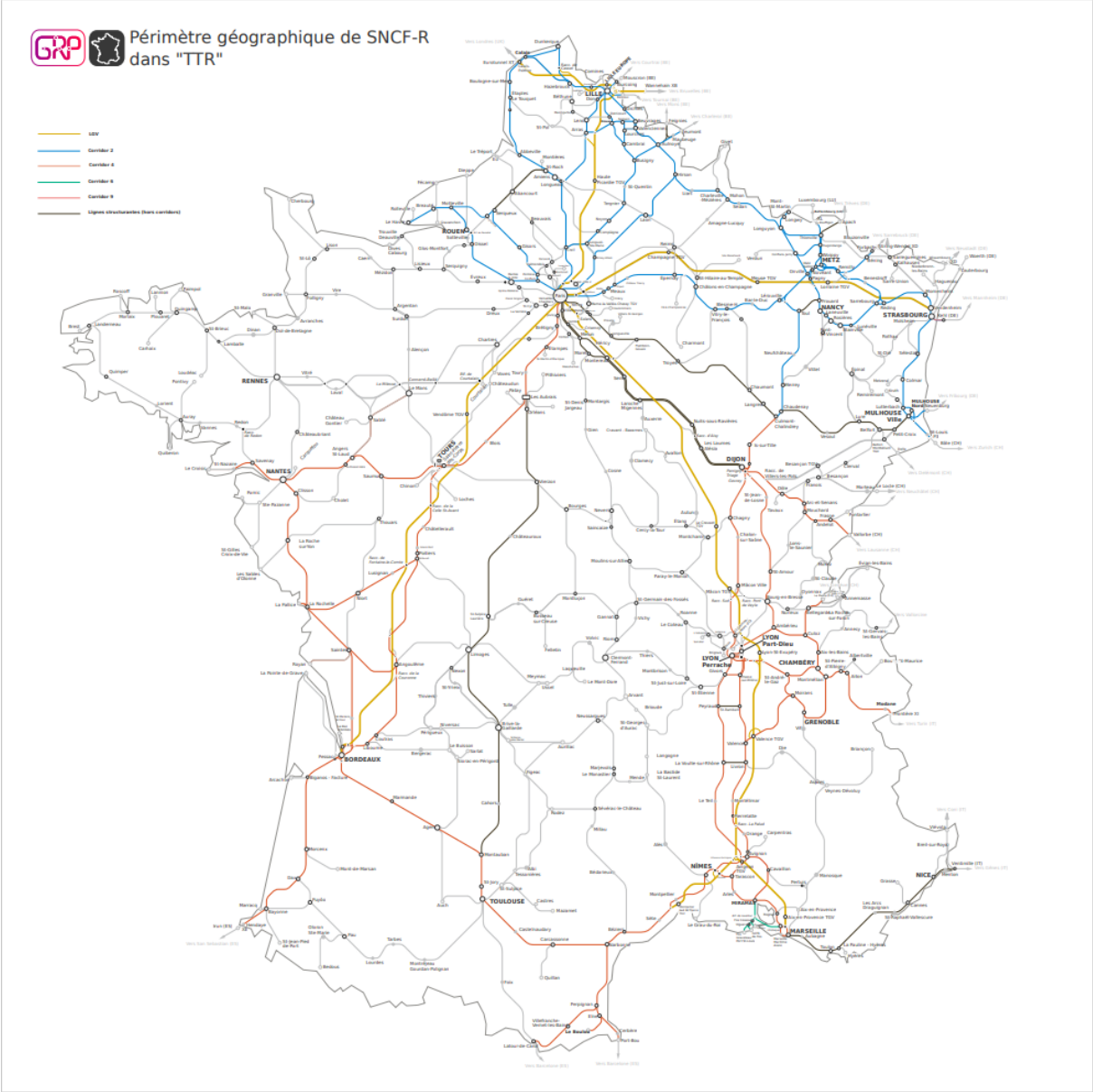


Figure 2: Schematic Map Capacity Strategy

## 3 Expected capacity of the infrastructure

### 3.1 General principles

The present chapter provides an overview on any significant positive or negative changes to the available capacity. The projects listed in this chapter fulfill the following criteria:

- ▶ The project has a permanent impact on the available capacity, unlike TCRs (Chapter 2);
- ▶ The projects have a significant size and are located on network segments relevant for international traffic, whereby each Infrastructure Manager evaluates the fulfillment of this criteria on its own.

### 3.2 Additional available capacity

The following projects fulfill the above listed criteria:

Country	ID	Network Segment	Description	Effect	Impact on capacity as of	Project approved	Project approved by the IM's management
France	1020	Hendaye / Irun	Y Basque	Capacity increase	2028	Yes	Yes

Table 2: List of relevant infrastructure projects with positive capacity effects expected active by TT2028

### 3.3 Reduced available capacity

Country	ID	Network Segment	Description	Estimated effects on capacity	Capacity reduced since
France		None			

Table 3: List of relevant infrastructure projects with negative capacity effects expected active by TT2028

## 4 Expected Temporary Capacity Restrictions with major impact

### 4.1 General principles

Infrastructure Managers are required to plan TCRs following “Annex VII”<sup>2</sup>.

Annex VII sets the frame for TCR-planning, the aim of which is to promote early planning, international coordination among Infrastructure Managers, transparency towards customers and planning stability, thereby pursuing the goal of an increased performance and competitiveness of rail services.

The TCRs listed in this Chapter fulfill the following criteria:

- ▶ The TCR falls in the category of major TCRs in Figure 3,
- ▶ Within this category, the TCR is expected to have a significant impact on international traffic due to its duration, its volume and/or location, whereby each Infrastructure Manager evaluates the fulfillment of this criteria on its own,
- ▶ The TCR will impact capacity of Timetable 2028, regardless of its start and completion date.

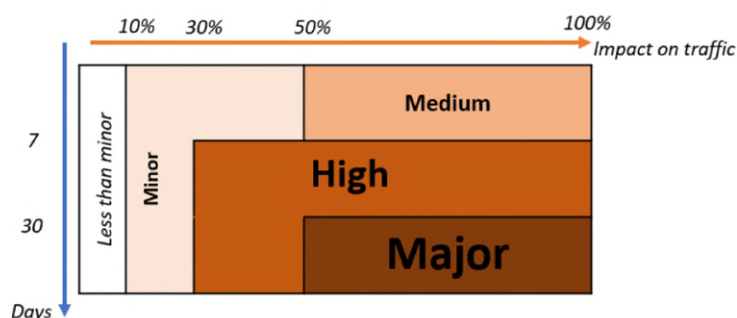


Figure 3: Overview of Annex VII-categories of TCRs (Source: RNE)

### 4.2 National specificities

The process of allocation capacities is based on fragmentation, depending on the timetable : a site is divided into windows.

A major TCR at X-24 can thus have as a result several high or medium windows at X-12. In addition, the restriction can be optimized by positioning one or more TCRs in the shadow of the main site, without additional impact on traffic.

SNCF Réseau offers two permanent alternatives:

- ▶ The first is a modify request outside the periods impacted by TCRs.
- ▶ The second is a modify request for alternative path: The impact of TCRs is limited by using alternative routes when the infrastructure facilities allow it. The general principle is to keep always at least one of the paths open. The two courses can be not equal in time, tracks number or speed limit. It is then necessary to apply compensation.

<sup>2</sup> [COMMISSION DELEGATED DECISION \(EU\) 2017/ 2075 - of 4 September 2017 - replacing Annex VII to Directive 2012/ 34/ EU of the European Parliament and of the Council establishing a single European railway area \(europa.eu\)](#)

## 4.3 TCR Windows & Regular TCR's

The capacities allocated for works needs are the object of "works windows" defined on sections with windows. Several types are available:

- ▶ « **Regular windows** » corresponding to capacity for the most common works carried out during periods of reduced commercial demand.
  - « générique »: 6 h usually at night;
  - « corrective »: from Sunday night to Monday morning;
  - « surveillance »: 1 h during the day for maintenance.
- ▶ « **Distorted windows** » applied to a limited number of weeks and likely to have a significant impact on train paths.
  - « déformé »: 8h. The pattern is based on a « générique » window with extended hours;
  - « capacité »: limited inside a station to a few tracks;
  - « poreuse »: which literally means « porous ». It is SNCF Réseau's method to avoid the total closure of a line, by working on one of the two tracks, while running the trains in batteries or sequences on the other track, either uphill or downhill. The transition from one direction to another is decided at the last moment, which makes this type of intervention an **operational management**. As trains are treated in the most derogatory conditions (opposite direction), the separation times are increased, as the traffic flow reduces (SNCF Réseau regulation AR30190). In a limited number, the paths are drawn within the range of the works, without conflict (SNCF Réseau regulation AR30240). This additional time allows, depending on the direction given, to be able to rework the train paths without further impacts (SNCF Réseau regulation AR30190). These impacts would have already been regulated during Capacity Supply timeline.

For such operations, SNCF Réseau will base its decisions case-by-case, on efforts to strike the best possible technical and economic balance, which may result in the following operational measures:

- ▶ total stoppage of traffic for a given period on the track concerned or on both tracks, if necessary;
- ▶ temporary speed restrictions (TSR) on the track concerned and on adjacent tracks.

## 4.4 Consultation process

SNCF Réseau communicates to candidates before November Y-3 the category 1 RTCs planned on the national railway network. At the request of the candidates, SNCF Réseau must provide a comparison of the conditions encountered, with at least two capacity restriction scenarios. SNCF Réseau draws up these alternative scenarios based on the information provided by the candidates at the time of their requests and jointly with them. The comparison must, for each scenario, include the following elements at the very least:

- ▶ the duration of the capacity restriction;
- ▶ the indicative amount of infrastructure user fees;
- ▶ the available capacity on the diversion routes;
- ▶ the alternative routes available;

- ▶ the indicative travel times.

Before making a choice between alternative capacity restriction scenarios, SNCF Réseau consults with the candidates concerned and takes into account the impact of different scenarios on these candidates and on the users of services.

All candidates (including AOTs) may participate in the works consultation bodies (presentations of works portfolios, consultations on generic windows/exclusion days/alternative routes, reviews of macro axes and consultations of high capacity impact (FIC) work sites, preparatory meetings, work impacts consultation bodies (RPO, etc.), regional technical committees) according to the following conditions, while it should be remembered, in accordance with the law, that SNCF Réseau shall remain, in the final analysis, the sole party able to decide on the allocation of capacities and the planning of work:

- ▶ Only candidates that have formulated expressions of needs of commercial capacities (or, as a minimum, have sent a prior letter of intent to SNCF Réseau for the order of capacities for the timetables concerned by such bodies) are able to speak at such meetings. In the event that several representatives (e.g., AOT and railway undertaking) express the same need, only one of them (to be appointed between them) will be authorised to take a final position, with the other nevertheless able to speak during discussions;
- ▶ The other candidates (i.e. those who have not formulated expressions of needs as indicated above) may attend discussions as observers.

**SNCF Réseau shall remain the sole decision-maker with regard to capacity allocation and the planning of works.**

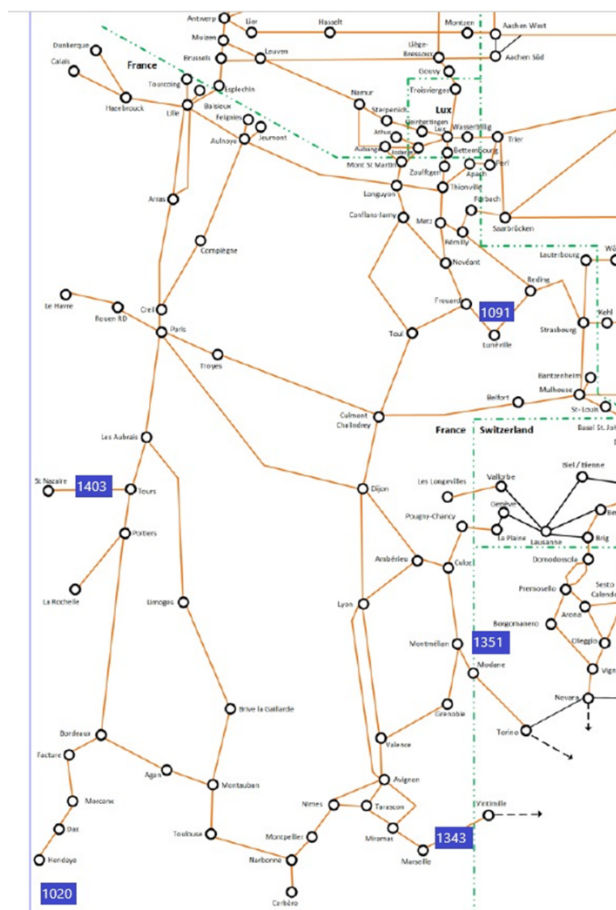
The following table lists, based on what already exists at the date of publication of this Network Statement, these bodies, the pilot body within SNCF Réseau and the deadlines for holding the discussions. These bodies may change over time, with regard to developments in the associated processes.

If they wish to participate in these bodies, candidates are invited to contact their dedicated national or regional account manager or, if there is no identified contact person, the One Stop Shop to find out about the procedures for participation.

## 4.5 Major Impact TCRs

Country	ID	Network segment	Purpose	Time of execution	Start (quarterly basis)	Impact (total closure/single track operation/speed restriction)	Impact to passenger & freight traffic <sup>3</sup>	Project approved by the IM's management
France	1403	Nantes	Supersrtructure renewal	2028	Q2 2028	Miscellaneous	Yes	Yes
France	1351	TELT St Jean de Maurienne	Phase 3 Torino tunnel	2028	Q3 2028	?	No	Yes
France	1343	CCR Marseille Vintimille	Control center modification	2028		?	Yes	Yes
France	1091	CCR Blainville Nancy	Control center modification	2028	2027	Major	Yes	Yes
France	1020	Double tracks 1435mm Hendaye Irun	Improvement cross border capacity	2028	Q4 2028	?	Yes	Yes

Table 4: List of relevant Crucial Major Impact TCRs with temporary capacity impacts during TT2028



<sup>3</sup> If the information on "Time of execution" and "Impact to passenger & freight traffic" is not available during the creation of Capacity Strategy, then the field to be filled by "not available" or "N/A"

## 5 Expected traffic flows

### 5.1 General Principles

Traffic flows are quantified in the present document at border points. Figures derive from national estimates and respond to no methodology that would be common to the involved Infrastructure Managers.

Unless stated otherwise, the figures are harmonized and correspond to average values per traffic type per hour, without a differentiation between peak and off-peak hours.

Though non-binding, they provide an estimate of the minimum bookable capacity for Timetable 2028. Further assessment and more detailed differentiation will occur with the Capacity Model and the Capacity Supply.

### 5.2 National Specificities

To present the Capacity Strategy, we are using the reticular documents, elaborated in one hand with our historical data, and on the other hand with the forecasts provided from the marketing department, in link with our main business partners.

We share then these data with our neighbors, to coordinate the result. For the different train categories, several parameters are included in the table below:

Train categories	Speed	Length	Weight
Freight Train	100 Km/h	750 m	1800 t
High Speed Train	320 Km/h	400 m	800t
Long Distance Train	160/200 Km/h	680 m	1200 t
Regional Express	140 Km/h	300 m	700 t
Regional Passenger	140 Km/h	120 m	200 t

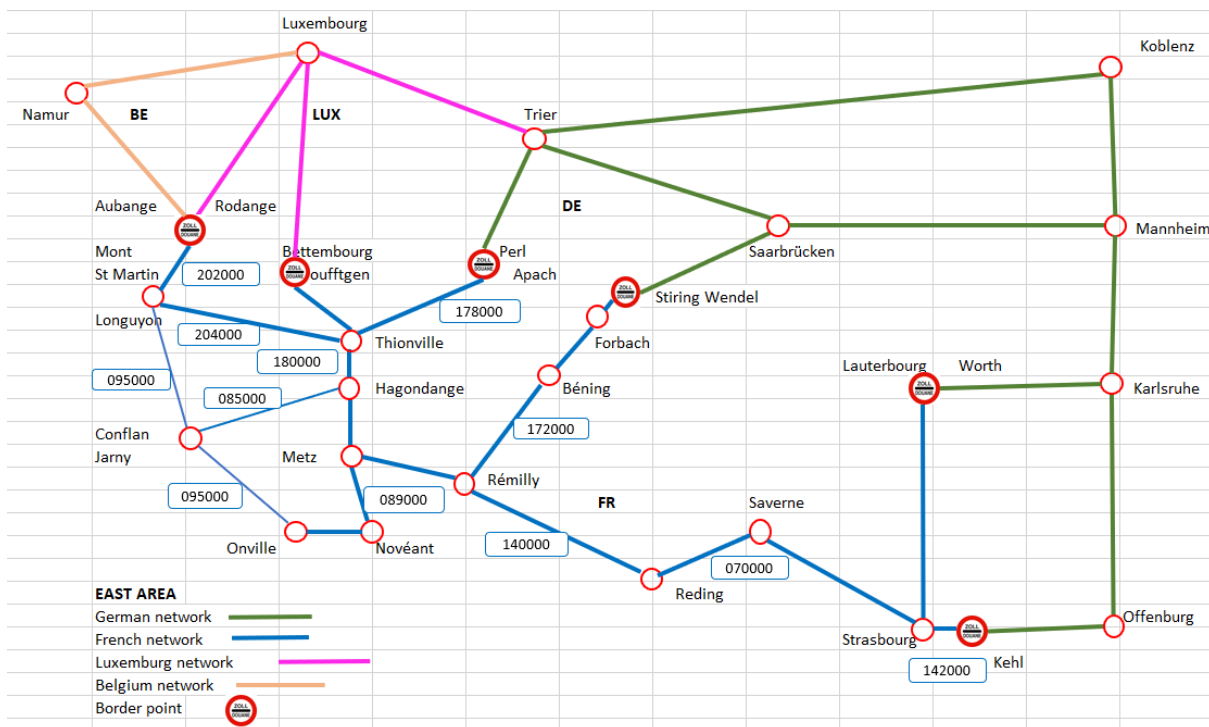
## 5.3 Traffic flows with SNCF Réseau

### 5.3.1 DB IGO

Border point	Passenger train paths per hour		Freight train paths per hour
	Long distance	Regional	
Apach / Perl	-	0,5	0,5
Forbach / Saarbrücken	0,5	1	2
Port du Rhin / Kehl	1	2	1,5
Lauterbourg / Berg	-	1	-
Neuenburg / Mulheim		1	Non systemic

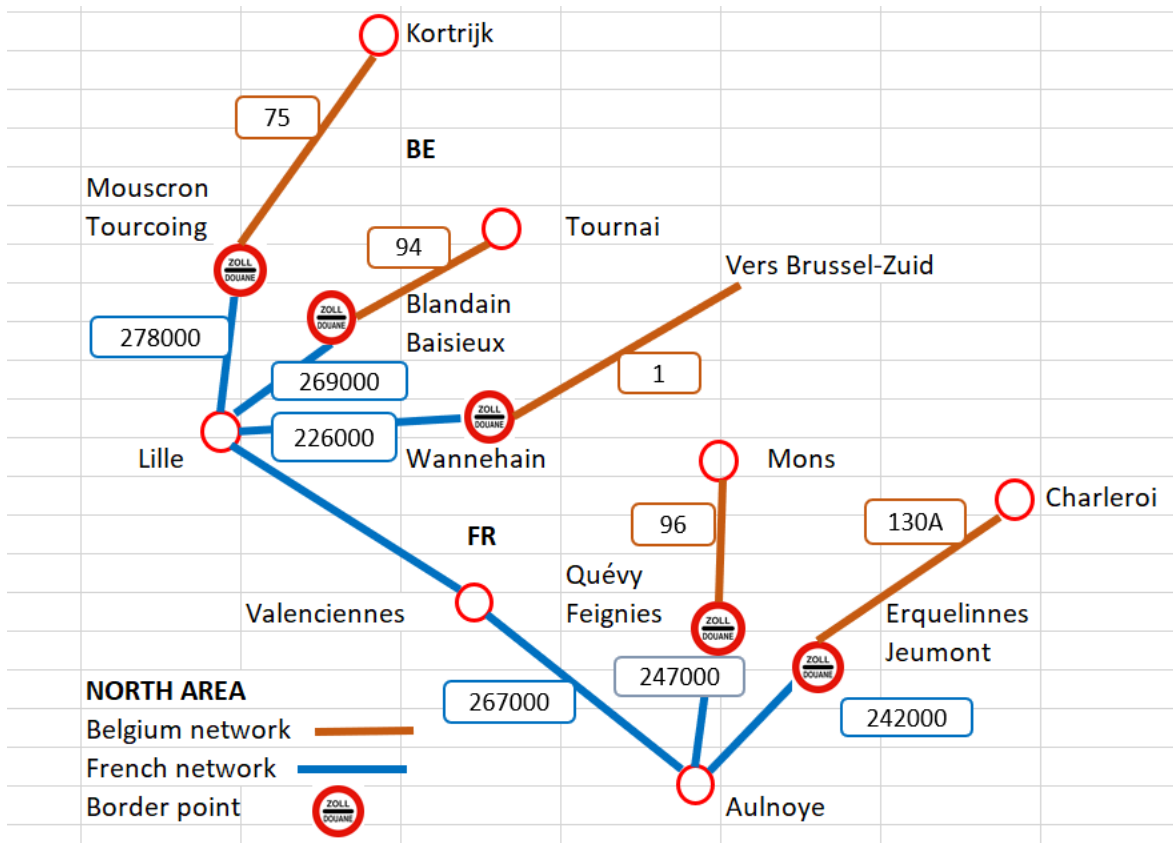
### 5.3.2 ACF

Border point	Passenger train paths per hour		Freight train paths per hour
	Long distance	Regional	
Zoufftgen / Bettembourg	1	5	-
Mont St Martin / Rodange	-	-	-



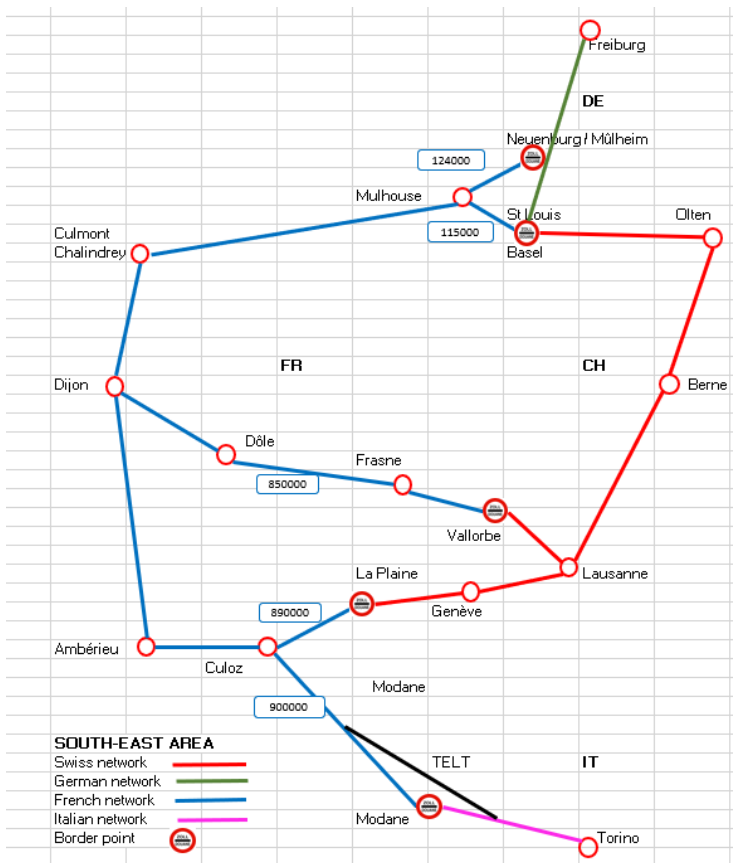
### 5.3.3 Infrabel

Border point	Passenger train paths per hour		Freight train paths per hour
	Long distance	Regional	
Feignies / Quévy	1	0	1
Tourcoing / Mouscron	-	1	0
Jeumont / Erquelinnes	-	1	0
Baisieux / Blandain	-	1	0
Mont St Martin / Aubange	-	-	0
Wannehain / Esplechin	5	-	-



### 5.3.4 SBB

Border point	Passenger train paths per hour		Freight train paths per hour
	Long distance	Regional	
St Louis/ Basel	0,5	4	2
Pougny-Chancy/La Plaine (Genève)	0,5	3	-
Les Longevilles/ Vallorbe	0,5	0	-

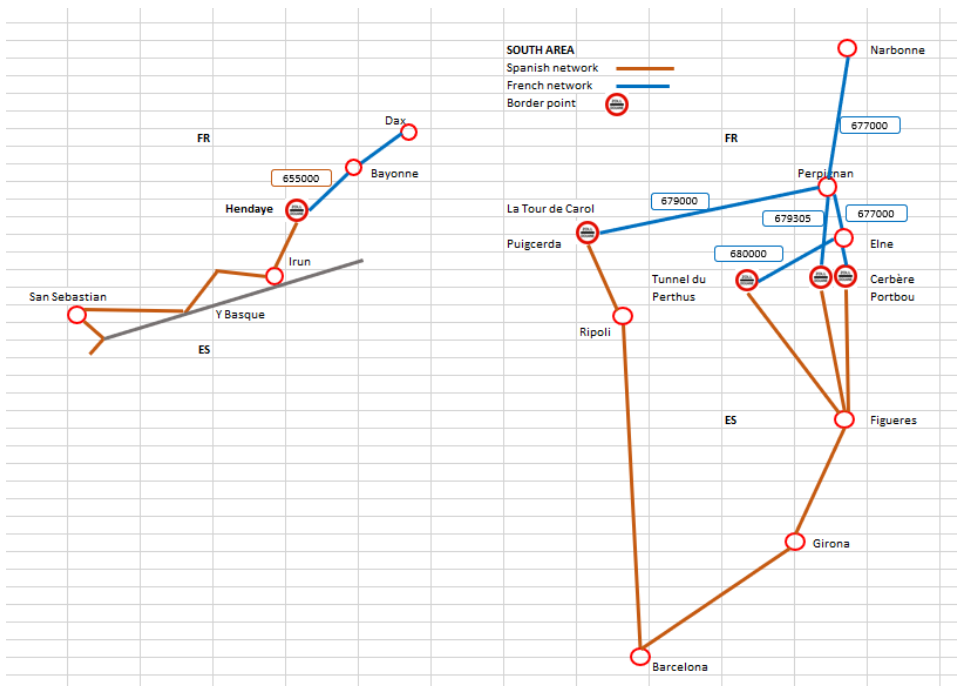


### 5.3.5 RFI

Border point	Passenger train paths per hour		Freight train paths per hour
	Long distance	Regional	
Modane/ Bardonecchia	1	1	1,5
Vintimille/ Ventimiglia	1	2	1
TELT tunnel Lyon-Torino			

### 5.3.6 ADIF

Border point	Passenger train paths per hour		Freight train paths per hour
	Long distance	Regional	
Cerbère / Port Bou	0	2	2
Hendaye/ Irun	0	1	2
Le Perthus/ El Perthus (tunnel TP Ferro)	2	-	1
La Tour de Carol - Puigcerdá	-	1	-



### 5.4 Validation & Publication

The table below describes the need for harmonisation between IMs with regard to border flows.

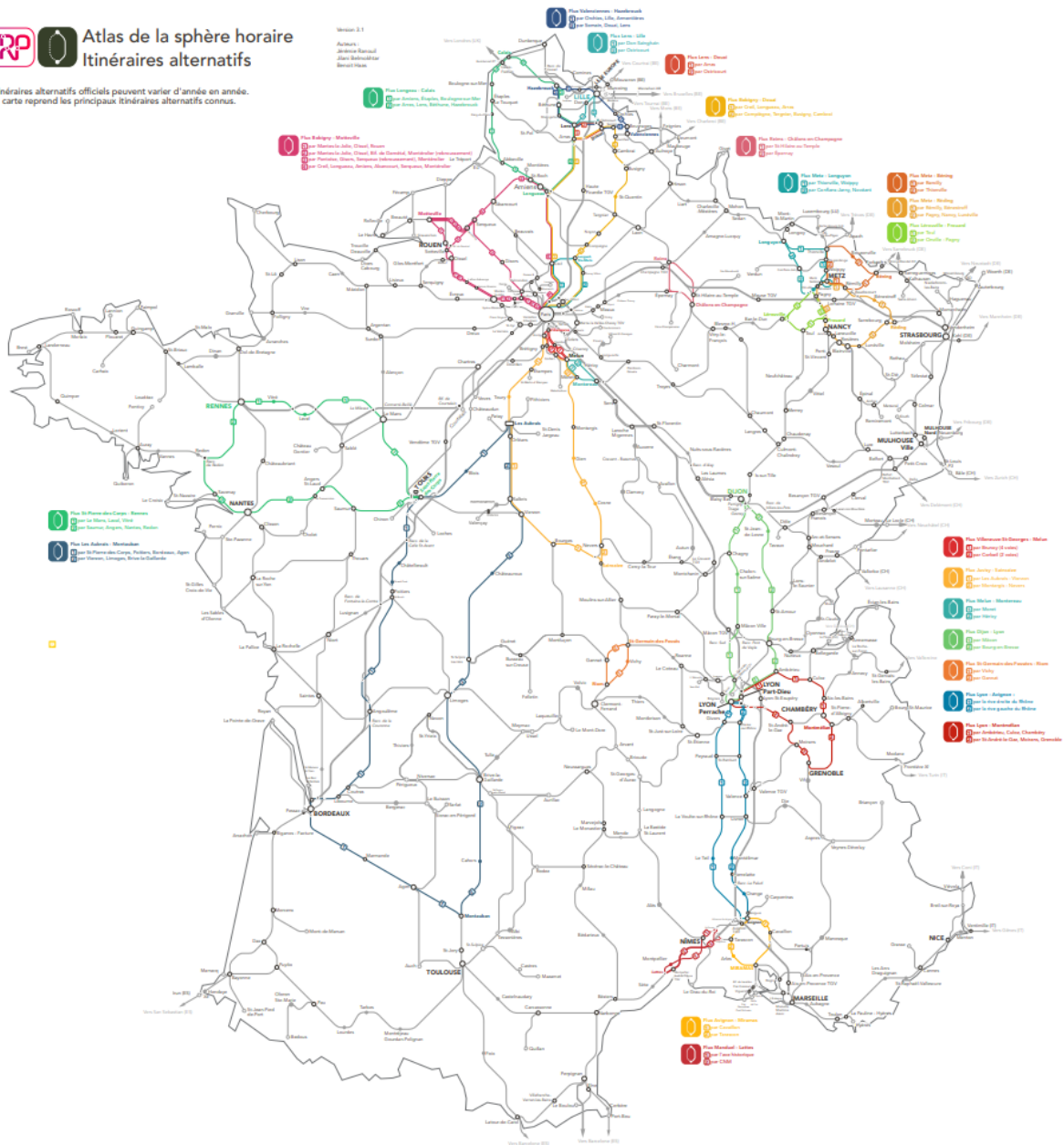
IM	Validation	Comments
DB IGO	20/09/2024	
Infrabel	08/08/2024	
ACF		Not this year
SBB	14/05/2024	
ADIF	19/09/2024	
RFI	17/09/2024	

# 6 Annex: Alternative routes



## Atlas de la sphère horaire Itinéraires alternatifs

Les itinéraires alternatifs officiels peuvent varier d'année en année. Cette carte reprend les principaux itinéraires alternatifs connus.



## 7 Annex: Table comparing alternative routes

Flow	RFC	Line section	UIC line Number	Electrical power	Block system	Gauge	Speed	Number of tracks	Distance in km	Travel time	Compensatory time	Planned TCR	Constraints
Secteur Picardie - Nord Pas de Calais													
Paris - Le Havre	2	Bobigny Eragny	354000	25000v	BAL	GA/GB1	120/160	2					
		Eragny Pontoise	338000	25000v	BAL	GB	160	2					
		Pontoise Serqueux	330000	25000v	BAPR	GB	160	2					
		Serqueux Montérolier	353/354000	25000v	VU	GB/GB1	100	1					Voie unique/Single track
		Montérolier Le Havre	340000	25000v	BAL	GB1	160	2	243	05h11	Most important delay		
		Bobigny Longueau	272000	25000v	BAL	GA/GB1	120/160	4					
		Longueau St Roch	311000	25000v	BAL	GB	160	2					
		St Roch Serqueux	321000	25000v	BAPR	GB	160	2					
		Serqueux Montérolier	353/354000	25000v	VU	GB/GB1	100	1					Voie unique/Single track
		Montérolier Le Havre	340000	25000v	BAL	GB1	160	2	311	04h54	17'		
		Bobigny Longueau	272000	25000v	BAL	GA/GB1	120/160	4					
		Longueau St Roch	311000	25000v	BAL	GB	160	2					
		St Roch Serqueux	321000	25000v	BAPR	GB	160	2					
		Serqueux Darnétal	321000	25000v	BAPR	GB	160	2					Forte pente
		Darnétal Le Havre	340000	25000v	BAL	GB1	160	2	262	04h37	34'		
		Bobigny Mantes la Jolie	990000	1500/25000v	BAL	GB1	100	2					
		Mantes la Jolie Rouen	340000	25000v	BAL	GB1	160	2					

		Rouen Le Havre	340000	25000v	BAL	GB1	160	2	233	04h23	48'		Le Havre Soquence --> FA = Voie unique/Single track
Paris - Lille	2	Bobigny Creil	272000	25000v	BAL	GA/GB1	120/160	2				Jour/Day	
		Creil Tergnier	242000	25000v	BAL	GB1	120	2					
		Tergnier Busigny	242000	25000v	BAL	GB1	120	2					
		Busigny Somain	250000	25000v	BAL	GB	120	2					
		Somain Arras	259/272000	25000v	BAL	GA/GB1	120/160	2					
		Arras Don	286000	25000v	BAL	GB1	140/100	2					
		Don Lille	289000	25000v	BAL		100	2	307	04h17	Temps le plus péjorant		
		Ormy Tergnier	229000	25000v	BAL/BAPR/BM		100/120	2					
		Tergnier Busigny	232/242000	25000v	BAL	GB1	120	2					
		Busigny Somain	250000	25000v	BAL	GB	120	2					
		Somain Arras	259/272000	25000v	BAL	GA/GB1	120/160	2					
		Arras Don	286000	25000v	BAL	GB1	140/100	2					
		Don Lille	289000	25000v	BAL		100	2	292	03h34	43'		
		Bobigny Creil	272000	25000v	BAL	GA/GB1	120/160	2				Jour/Day	
		Creil Longueau	272000	25000v	BAL	GA/GB1	120/160	2					
		Longueau Arras	272000	25000v	BAL	GA/GB1	120/160	2					
		Arras Don	286000	25000v	BAL	GB	140/100	2					
		Don Lille	289000	25000v	BAL		100	2	240	03h10	57'		
		Bobigny Creil	272000	25000v	BAL	GA/GB1	120/160	2					
		Creil Longueau	272000	25000v	BAL	GA/GB1	120/160	2					
		Longueau Lens	286000	25000v	BAL	GB1	100	2					
		Lens Ostricourt	301000	25000v	BAL		90	2				Nuit/Night	
		Ostricourt Lille	272000	25000v	BAL	GA/GB1	120/160	2	235	03h04	1h03		
Valenciennes - Hazebrouck	2	Valenciennes Somain	267/262000	25000v	BAL	GB	120	2					Attention aux heures d'ouverture

		Somain Arras	262000	25000v	BAL	GB	120	2				Jour/Day	
		Arras Lens	286000	25000v	BAL	GB1	100	2				Jour/Day	
		Lens Hazebrouck	301000	25000v	BAL		140/120	2	124	02h26	Most important delay		
		Valenciennes Somain	267/262000	25000v	BAL	GB	120	2					
		Somain Douai	262000	25000v	BAL	GB	120	2					
		Douai Ostricourt	272000	25000v	BAL	GA/GB1	120/160	2				Nuit/Night	
		Ostricourt Lens	301000	25000v	BAL		90	2					
		Lens Hazebrouck	301000	25000v	BAL		140/120	2	113	02h34	12'		
		Valenciennes Orchies	267000	25000v	BAL	GA	120/160	2					
		Orchies Lille	267000	25000v	BAL	GA	120/160	2					
		Lille Hazebrouck	295000	25000v	BAL	GC	120/160	2	98	01h14	01h22		
<b>Secteur Est - ALCA</b>													
Bâle - Woippy AN	2	Mulhouse Saverne	115/070000	25000v	BAL	GB/GB1	220/160	2					
		Saverne Frouard	70000	25000v	BAL	GA/GB/GB1	120/160	2					
		Frouard Metz Marchandises	095/089000	25000v	BAL	GA	120/160	2					
		Metz March. Woippy	191300	25000v	BAL		110	2	315	05h30	Most important delay		
		Mulhouse Saverne	115/070000	25000v	BAL	GB/GB1	220/160	2					
		Saverne Rémillly	070/140000	25000v	BAL	GB1	120	2					
		Rémilly Metz L3	140/192000	25000v	BAL	GB1	150/140	2					
		Metz L3 Woippy	192000	25000v	BAL		100	2	269	04h00	01h30		
Dijon - Metz AO	2	Dijon Toul	849/843/832000	25000v	BAL		140/100	2					
		Toul Frouard	70000	25000v	BAL	GA/GB/GB1	120/160	2					
		Frouard Novéant	90000	25000v	BAL	GA	120/160	2					
		Novéant Metz	89000	25000v	BAL	GA	120/160	2	256	03h30	Temps le plus péjorant		

		Dijon Toul	849/843/832000	25000v	BAL		140/100	2					
		Toul Lérrouville	70000	25000v	BAL	GA/GB/GB1	120/160	2					
		Lérrouville Novéant	89000	25000v	BAL	GA	120/160	2					
		Novéant Metz	89000	25000v	BAL	GA	120/160	2	272	03h17	12'		
Château-Thierry - Metz	2	Château-Thierry Lérrouville	70000	25000v	BAL	GA/GB/GB1	120/160	2					
		Lérrouville Frouard	70000	25000v	BAL	GA/GB/GB1	120/160	2					
		Frouard Novéant	90000	25000v	BAL	GA	120/160	2					
		Novéant Metz	89000	25000v	BAL	GA	120/160	2	259	03h35	Most important delay		
		Château-Thierry Lérrouville	70000	25000v	BAL	GA/GB/GB1	120/160	2					
		Lérrouville Novéant	70000	25000v	BAL	GA/GB/GB1	120/160	2					
		Novéant Metz	89000	25000v	BAL	GA	120/160	2	257	02h55	50'		
Metz - Longuyon	2	Metz Onville	89000	25000v	BAL	GA	120/160	2					
		Onville Conflans-Jarny	95000	25000v	BAL	GA	100/120	2					
		Conflans-Jarny Longuyon	95000	25000v	BAL	GA	100/120	2	84	01h32	Temps le plus péjorant		
		Metz Thionville	180000	25000v	BAL	GA	120/160	2					
		Thionville Longuyon	204000	25000v	BAL	GA/GB	100/120	2	78	01h20	12'		
<b>Secteur Sud-Est</b>													
Villeneuve - Melun	4	Villeneuve Juvisy	745000	1500v	BAL	GB	120/160	4					
		Juvisy Corbeil	745000	1500v	BAL	GB	120/160	2				Nuit/Night	
		Corbeil Melun	746000	1500v	BAL	GB	120/160	2	41	45'	Most important delay	Nuit/Night	
		Villeneuve Brunoy	830000	1500v	BAL	GA	160	4					
		Brunoy Melun	830000	1500v	BAL	GA	160	4	30	16'	29'		

Melun - Montereau	4	Melun Héricy	746000	1500v	BAL	GB	120/160	2					
		Héricy Montereau	746000	1500v	BAL	GB	120/160	2	36	31'	Temps le plus péjorant		
		Melun Moret	830000	1500v	BAL	GA	160	2				Nuit/Night	
		Moret Montereau	830000	1500v	BAL	GA	160	2	34	21'	10'		
Dijon - Lyon 7P	6	Dijon Bourg en Bresse	860/880000	1500v	BAL	GA	120/160	2				Jour/Day	Limitation à 4 circulations en simultané
		Bourg en Bresse Ambérieu	883000	1500v	BAL	GA	160	2					
		Ambérieu Lyon	890000	1500v	BAL		100/120/160	2	220	03h00	Most important delay		
		Dijon Mâcon	830000	1500v	BAL	GA	160	2				Nuit/Night	
		Mâcon St Germain MO	830000	1500v	BAL	GA	160	2					
		St Germain MO Lyon	830000	1500v	BAL	GA	160	4	198	02h42	15'		
Lyon - Avignon	6	Lyon Givors	800000	1500v	BAL	GB1	120/160	4					
		Givors Peyraud	800000	1500v	BAL	GB1	120/160	2					
		Peyraud La Voulte	800000	1500v	BAL	GB1	120/160	2					
		La Voulte Villeneuve	800000	1500v	BAL	GB1	120/160	2					
		Villeneuve Avignon	824000	1500v	BAL	GA	140	2	223	02h45			Tête à queue possible selon suite de l'itinéraire
		Lyon Chasse/Rhône	830000	1500v	BAL	GA	160	4				Nuit/Night	
		Chasse St Rambert	830000	1500v	BAL	GA	160	2					
		St Rambert Livron	830000	1500v	BAL	GA	160	2					
		Livron Orange	830000	1500v	BAL	GA	160	2					
		Orange Avignon	830000	1500v	BAL	GA	160	2	234	02h45			
Avignon - Nîmes	6	Avignon Tarascon	830000	1500v	BAL	GA	160	2				Nuit/Night	

		Tarascon Nîmes	810000	1500v	BAL	GA	120	2	49	50'	Most important delay		
		Avignon Villeneuve	824301	1500v	BAL	GA	140	2					
		Villeneuve Nîmes	800000	1500v	BAL	GB1	120/160	2	47	30'	20'	Jour/Day	
Avignon - Miramas	6	Avignon Cavaillon	925000	1500v	BAL	GA	160/220	2				Jour/Day	
		Cavaillon Miramas	925000	1500v	BAL	GA	160/220	2	71	01h10	Temps le plus péjorant		Tête à queue possible selon suite de l'itinéraire
		Avignon Tarascon	830000	1500v	BAL	GA	160	2				Nuit/Night	
		Tarascon Miramas	830000	1500v	BAL	GA	160	2	67	55'	15'		