

Annual Performance Report **2018**





Content

- Introduction
- Choosing performance indicators
- Update on Corridor Traffic
 - KPI 01: Traffic Volume (Total)
 - KPI 02: Corridor Punctuality
 - OM 01: Traffic Volume (Per Corridor Border)
- Update on Corridor capacity
 - KPI 03: Planned Average Speed of Corridor Capacity
 - KPI 04: Volume of offered capacity
 - KPI 05: Volume of requested capacity
 - KPI 06: Volume of pre-allocated capacity
 - KPI 07: Relation between capacity allocated by the C-OSS and total (scheduled) traffic
 - OM 03: Volume of requests + OM 04: Number of conflicts
 - OM 05: Relation between results capacity wishes survey, the published and the requested capacity



Introduction

In the Implementation Plan of the Corridor, published as Book 5 of the Corridor Information Document on the 14th of January 2019, a number of KPI's and Other Measurements (OM) are described that are being monitored to be able to follow the overall performance of the Corridor. To be able to easily understand the figures in this report, a clear explanation is foreseen on how the calculation was made and what is measured for each indicator.

To be able to compare, the list of indicators described in this document is similar to those used in the previous Annual Performance Reports.

The indicators can be divided into two business fields. The information on Corridor traffic, and the information on the Corridor capacity offered and allocated by the C-OSS. Each of these groups consists of Key Performance Indicators (KPI), for which clear objectives have been defined, and Other Measurements (OM), that give an insight into what is happening on the corridor, but to which no objective can be linked.



Choosing performance indicators

The KPIs and OMs in this performance monitoring report were chosen on the basis of the following parameters:

- Measurability: performance should be measurable with the tools and resources available on the corridor
- Clarity: KPI/OM should be understandable to the public it is designed for
- Comparability: KPI/OM should be comparable across time and region
- Relevance and empowerment: KPI/OM should provide information on which project decisions can be based





easier, faster, safer

Update on Corridor Traffic

The following pages will provide insight into the trains running on the Corridor. For this, it is necessary to know when a train is labelled as a corridor train:

The following criteria have to be met:

- An international freight train
- Crossing at least one border of the Corridor
- Running at least 70 KM on Corridor lines



The data used to calculate the given KPIs and OMs, comes from the national IM databases and the international TIS database, managed by RNE. More details are given per KPI or OM.

Where available, information is provided on the main causes of the evolutions displayed.



KPI 01 – Traffic Volume (Total) (1)

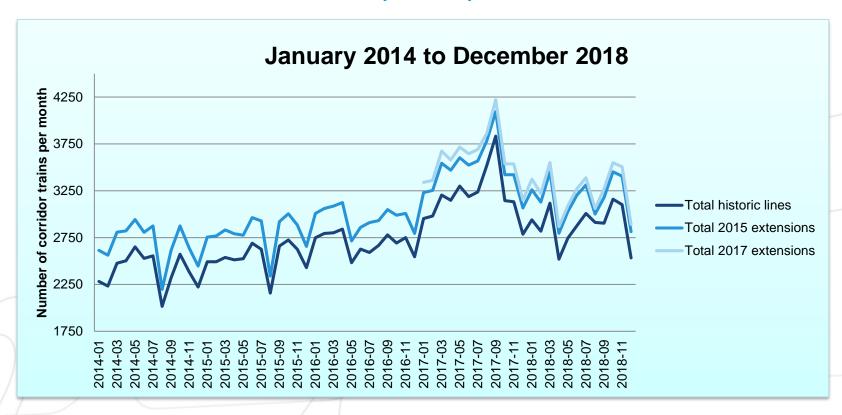
KPI 01 displays all corridor trains on the Rail Freight Corridor North Sea – Mediterranean. Trains that pass more than one border are counted only once. The data used per border is the following:

- > Essen/Roosendaal: Infrabel data
- Mouscron/Tourcoing: Infrabel data
- > Aubange/Rodange: Infrabel data
- Aubange/Mont-Saint-Martin: Infrabel data
- Baisieux/Blandain: Infrabel data
- Erquelinnes/Jeumont: Infrabel data
- Bettembourg/Zoufftgen: CFL data
- St.Louis/Basel: SNCF-réseau data
- > Calais-Fréthun: SNCF-réseau data

Several graphs and tables are provided. The first graph gives an overview of the number of trains over the last five years, the second shows the 12-month evolution over the last four years, while the first table compares each month of 2018 with the corresponding months of the previous year.



KPI 01 – Traffic Volume (Total) (2)



Comparison to last year

	Jan 18 vs 17	Feb 18 vs 17	Mar 18 vs 17	April 18 vs 17	May 18 vs 17	June 18 vs 17	Jul 18 vs 17	Aug 18 vs 17	Sep 18 vs 17	Oct 18 vs 17	Nov 18 vs 17	Dec 18 vs 17	18 vs 17
Total	101%	96%	97%	80%	83%	90%	92%	79%	77%	100%	99%	92%	90%

NORTH SEA - MEDITERRANEAN

Green: increase

Dark green: increase by more than 20% Red: decrease by more than 20%

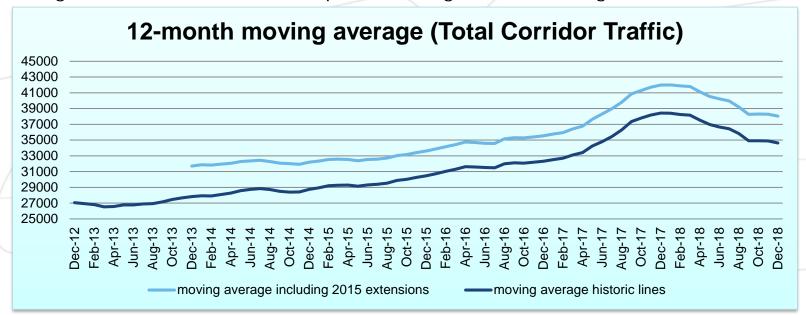
Orange: decrease

KPI 01 – Traffic Volume (Total) (3)

12-month moving average

The moving average is displayed to smooth out short-term fluctuations and highlight longer-term trends or cycles. Each figure shows the number of train runs during the last 12 months preceding the last day of the given month.

The impact of the strikes in France during the period April – June 2018 can easily be spotted in the figures shown, while the last quarter the figures stabilise again to the level of 2017.





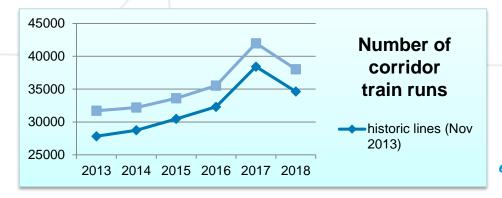
KPI 01 – Traffic Volume (Total) (4)

The evolution of the total amount of Corridor traffic is influenced heavily by the economic growth of the Corridor region. However, the Corridor aims to increase the amount of Corridor trains in the following matter, compared to the year 2013, taking into account a low economic growth:

RFC NSM Objective	2020	2030
historic lines (Nov 2013)	+3%	+9%

Evolution compared to 2013 (start RFC NSM)	2013	2014	2015	2016	2017	2018
historic lines (Nov 2013)	27,835	+3%	+9%	+16%	+38%	+24%
1st extension (Jan 2015)	31,711	+2%	+6%	+12%	+32%	+20%

For the year 2014, there was already a rise in Corridor traffic of **3%** compared to 2013. For 2015 and 2016, the rise continued (**+9%** and **+14%** compared to 2013). For 2017, the biggest rise so far could be noted (**+38%** compared to 2013). For 2018, unfortunately, part of the increase of 2017 was lost again.







KPI 02 – Punctuality (1)

KPI 03 measures the average punctuality of trains running on the corridor on a fixed number of locations. A train will be added to this train list if it meets the following criteria:

- Passing a Corridor border point <u>AND</u>
- > Passing one of the predefined measuring points along the Corridor

This means that from 2017, the global corridor punctuality figure is no longer calculated on the basis of a fixed list of regular trains, but on all trains meeting the above described standard.

A corridor train is punctual when having a delay of maximum 30 minutes.

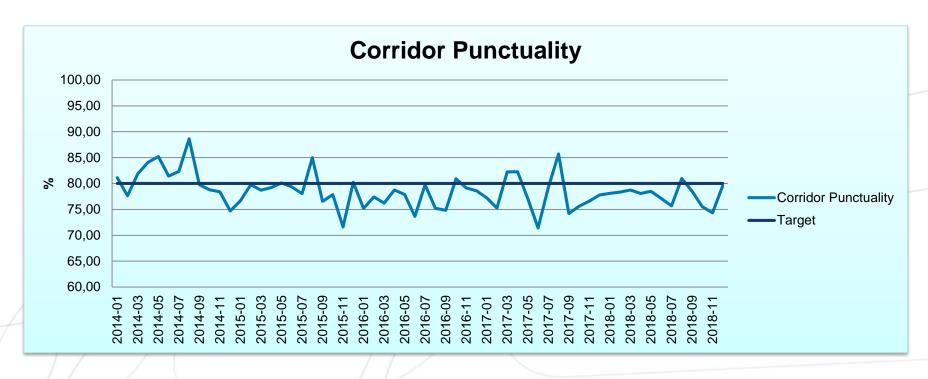
The data is displayed via two graphs and three tables:

- Overview of the average punctuality per month over the last four years
- Comparison of every month of 2018 with the corresponding month of 2017
- > 12-month evolution over the last three years
- > Yearly punctuality figure compared to first year of the Corridor (2013)
- Average punctuality at entry and exit of the Corridor

The follow-up of this punctuality report is done via the Train Performance Management Working Group, to which Corridor users might be invited in case of recurrent issues.



KPI 02 : Punctuality (2)



Com	parison	to	last	vear

	Jan 18 vs 17	Feb 18 vs 17	Mar 18 vs 17	April 18 vs 17	May 18 vs 17	June 18 vs 17	July 18 vs 17	August 18 vs 17	Sep 18 vs 17	Oct 18 vs 17	Nov 18 vs 17	Dec 18 vs 17	2018 vs 2017
Total	101%	104%	96%	95%	102%	108%	96%	94%	106%	100%	97%	102%	100.4%



Light Green: small increase Orange: small decrease

Dark green: increase by more than 20% Red: decrease by more than 20%

easier, faster, safer

KPI 02: Punctuality (3)

12-month moving average (average complete corridor)

The moving average is displayed to smooth out short-term fluctuations and highlight longer-term trends or cycles. Each figure shows the average punctuality during the last 12 months preceding the last day of the given month.





KPI 02: Punctuality (4)

Evolution since start Corridor

RFC North Sea – Med continues its efforts to reach the objective of 80% punctuality in the future. Unfortunately we were not yet able to reach this objective. For 2018, the global corridor punctuality figure increased slightly compared to previous year, however, it remains to be almost exactly on the level of 2013, at the start of the Corridor.

Yearly RFC NSM punctuality (30min on selected corridor trains)	2013	2014	2015	2016	2017	2018
punctuality evolution compared to TT2013	77.9%	+1%	+1%	-1%	H	=



KPI 02 : Punctuality (5)

Punctuality at RFC entry and exit

Yearly punctuality KPI 2018	15 minutes threshold	30 minutes threshold
At Origin (RFC Entry)	69%	78%
At Destination (RFC Exit)	60%	70%

The table above shows that – given a 30 minute threshold – on average, 8% punctuality is lost on the corridor. This – in general – is a good result. However, we should also take into account the figures on KPI 3 (Planned Average Speed of Corridor Capacity, p21) which show a quite low commercial speed of the paths on the corridor, this also means that quite some buffer time is usually foreseen in the planning of the paths, and that the figures are somewhat lower than last year (7% lost at 30 minutes, from 80% to 73%).

An extra element to take into account is that the number of trains considered has drastically increased compared to the previous years after the solving of some important data quality issues.



OM 01 – Traffic Volume (Per Corridor Border) (1)

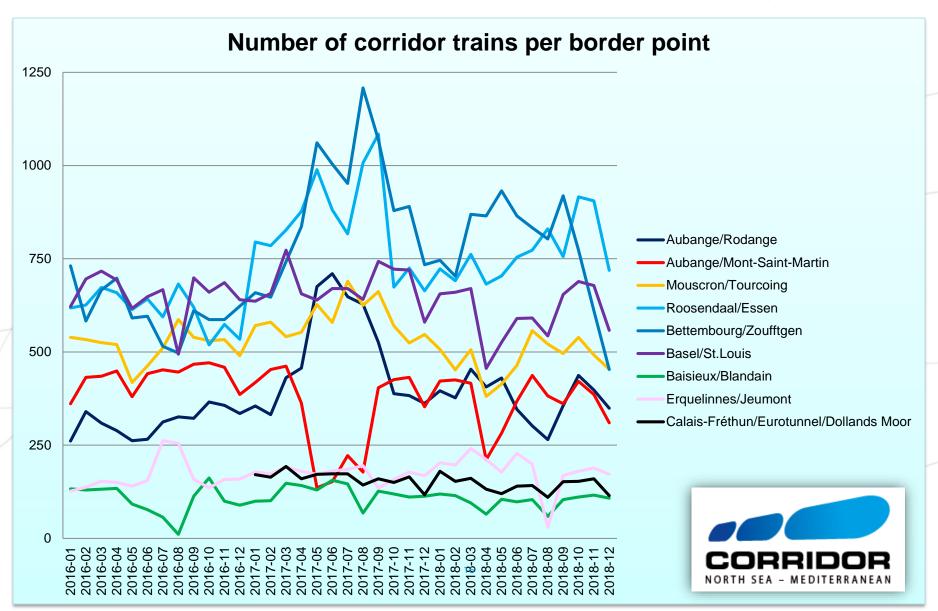
OM 01 displays all corridor trains on the Rail Freight Corridor North Sea – Mediterranean, per border. Trains that pass more than one border are thus counted several times. The data used per border is the following:

- > Essen/Roosendaal: Infrabel data
- Mouscron/Tourcoing: Infrabel data
- > Aubange/Rodange: Infrabel data
- Aubange/Mont-Saint-Martin: Infrabel data
- Baisieux/Blandain: Infrabel data
- Erquelinnes/Jeumont: Infrabel data
- Bettembourg/Zoufftgen: CFL data
- > St.Louis/Basel: SNCF-réseau data
- > Calais-Fréthun: SNCF-réseau data

The data is displayed via two graphs and one table. The first graph gives an overview of the number of trains over the last three years, the second shows the 12-month evolution over the same period, and the table compares every month of 2018 with the corresponding month of the previous year.



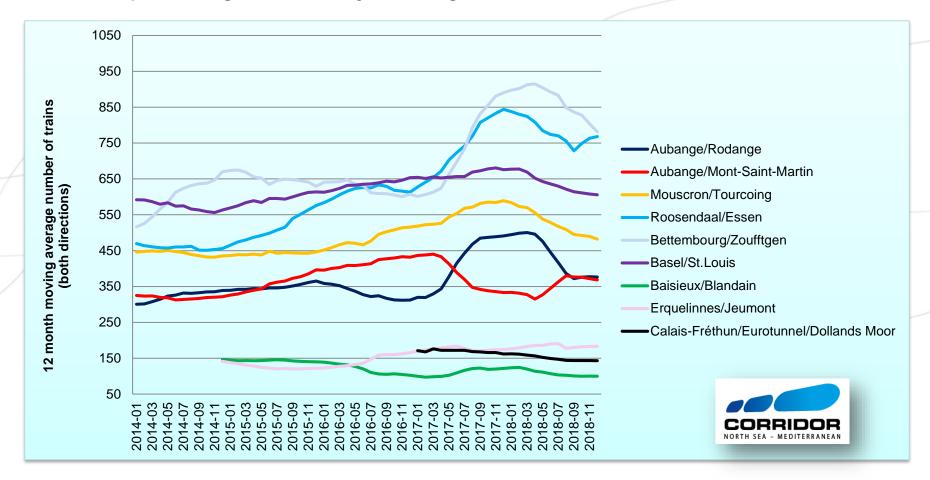
OM 01 – Traffic Volume (Per Corridor Border) (2)



OM 01 – Traffic Volume (Per Corridor Border) (3)

12-month moving average

The moving average is displayed to smooth out short-term fluctuations and highlight longer-term trends or cycles. Each figure shows the average number of corridor trains passing each border during the last 12 months, per month, preceding the last day of the given month.



OM 01 – Traffic Volume (Per Corridor Border) (3)

2018 vs 2017

The table below provides an overview on the evolution of the number of trains at the given border compared to last year.

Traffic per border	2018 vs 2017	Total number of trains in 2018
Bettembourg/Zoufftgen	-12%	9372
Roosendaal/Essen	-9%	9215
Basel/St.Louis	-10%	7271
Mouscron/Tourcoing	-18%	5783
Aubange/Rodange	-23%	4516
Aubange/Mont-Saint-Martin	+11%	4421
Erquelinnes/Jeumont	+5%	2198
Calais-Fréthun/Eurotunnel/Dollands Moor	-11%	1718
Baisieux/Blandain	-18%	1199



OM 01 – Traffic Volume (Per Corridor Border) (4)

2018 vs start RFC NSM (2013)

The table below provides an overview on the evolution of the number of trains at the RFC NSM borders since the start of the Corridor.

Traffic per border	2017 vs start RFC NSM	Total number of trains in 2018		
Bettembourg/Zoufftgen	+54%	9372		
Roosendaal/Essen	+61%	9215		
Basel/St.Louis	+2%	7271		
Mouscron/Tourcoing	+9%	5783		
Aubange/Rodange	+27%	4516		
Aubange/Mont-Saint-Martin	+14%	4421		



Update on Corridor Capacity

The following pages will provide insight into the capacity that has been published by the C-OSS of the Corridor, and the requests that have been received for this capacity.

Capacity on the Corridor is published under the form of PaPs, via the online platform PCS. Only requests that have been placed via this tool can be taken

into account.





KPIO3 – Planned Average Speed of Corridor Capacity (1)

KPI 03 compares the average speed of pre-arranged paths on predefined Rail Freight Corridor North Sea – Mediterranean routes with the pre-arranged paths on the corresponding lines for the previous year.

Per corridor route, an objective has been defined in the Corridor Implementation Plan, which is displayed in the table provided.

The goal of this KPI is to be able to determine the evolution of the speed of the PaPs over time.





KPI03 – Planned Average Speed of Corridor Capacity (2)

			KM	/H per	Corri	dor R	oute				
Route including	Length	Catalogue TT 2013	Catalogue TT 2014	Catalogue TT 2015	Catalogue TT 2016	Catalogue TT 2017	Catalogue TT 2018	Catalogue TT 2019	Catalogue TT 2020	Objective catalogue TT 2018 to 2020	Objective catalogue TT 2025
Antwerp - Basel	748.8	57.0	51.4	55.2	53.8	54.3	53.3	52.2	55.1	55	58
Antwerp - Bettembourg	343.7	60.7	59.7	61.6	58.1	58.3	59.3	57.8	57.4	60	62
Mont-St-Martin - Basel	425.9	51.4	44.6	48.5	48.7	48.4	48.2	46.4	50.5	50	54
Rotterdam - Antwerp	74.3	53.4	58.7	71.3	63.7	65.1	56.4	64.6	64.1	70	72,5
Antwerp - Lyon	890.7	NA	NA	51.8	59.7	57.4	62.9	56.8	59.3	62,5	65
Antwerp - Lille	125.4	50.2	52.4	56.2	44.2	62.7	60.7	51.4	49.2	56	60
Lille/Somain - Paris	247.3	NA	NA	NA	63.3	73.5	69.7	69.2	68.5	72,5	75
Metz - Lyon	454.1	NA	NA	57.8	61.9	69.9	72.7	69.2	65.3	70	72,5
Dunkerque - Liège	311.1	NA	NA	NA	43.7	56.1	55.7	55.1	58.7	57,5	60
London - Calais	230.4	NA	NA	NA	NA	38.5	38.5	40.7	40.7	60	68
Calais - Metz	454.7	NA	NA	NA	69.9	62.4	79.0	75.0	75.1	65	68

→ Journey times include commercial and operational stops



KPIO3 – Planned Average Speed of Corridor Capacity (3)

We can see that for timetable 2020, the average commercial speed of the PaPs, compared to the preceding timetable, was generally stable. A positive evolution could be noted:

- For the route between Antwerp and Basel, the speed went considerably up, in essence due to the better results on the French part of the route
- For the route between Dunkerque and Liège

The results of the following O/Ds went down:

- Antwerp Lille: the heavy traffic on the lines between Ghent and Antwerp makes it hard to provide better results for now
- Metz Lyon: the PaPs have built in stops in the region of Dijon, which tend to be somewhat longer than the previous years

Overall, there is again a high volume of PaPs offered for timetable 2020, offering all preconstructed connections available for the given ODs. This means automatically that PaPs with short and longer stops have been offered, running outside of TCR impacted sections, or inside, which off course has a severe impact on the average result.

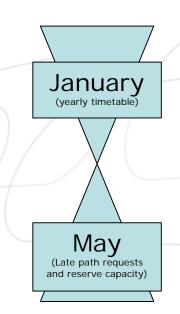
The journey times also include commercial stops, up to 4 hours, based on the outcome of the capacity wishes survey.



KPI04 - Volume of offered capacity

KPI 04 displays all the PaPs (KMs per year) that have been published by the C-OSS of the Corridor in January 2019, for the **annual timetable 2020**, and in May 2018, as Reserve Capacity for late path requests and ad hoc requests for timetable 2019.

It must be noted that most PaPs run Monday to Friday, but some might have more (7) or less (minimum 3) running days, or that a given PaP might not be available on some days throughout the year.



A total of 24,7 million KMs were published for TT2020

(+16% compared to TT2018)

- → 21,3 million for TT2019
- → 12,6 million for TT2018
- → 15,1 million for TT2017
- → 9,2 million for TT2016
- → 7,3 million for TT2015

A total of **4,9 million KMs** were published as RC for TT2019

(**+105**% compared to TT2018)

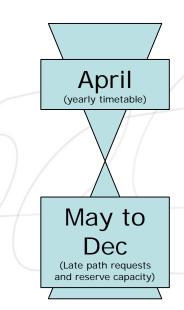
- → 2,4 million for TT2018
- → 3,9 million for TT2017
- → 2,0 million for TT2016
- → 2,8 million for TT2015



KPI05 – Volume of requested capacity

KPI 05 displays all the requests for PaPs (KMs per year) that have been received by the C-OSS of the Corridor for the annual timetable 2019 (up to

December 2018).



A total of **13,5 million KMs** were requested for TT2019 before the deadline of April (**+84.2%**)

- → 7,3 million for TT2018
- → 7,1 million for TT2017
- → 6,1 million for TT2016
- → 2,8 million for TT2015

A total of **260 dossiers** were submitted via PCS to the C-OSS before the deadline of April

- → 137 for TT2018
- → 134 for TT2017
- → 118 for TT2016
- → 51 for TT2015

No paths were requested between May and December 2018 for TT2019 so far

- → 0,16 million for TT2018
- → 0,47 million for TT2017
- → 0,13 million for TT2016
- → 0,40 million for TT2015

No dossiers were submitted via PCS to the C-OSS between May and December 2018 for TT2019 so far

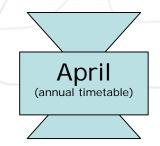
- → 9 for TT2018
- → 14 for TT2017
- → 5 for TT2016
- → 11 for TT2015



KPI06 – Volume of pre-allocated capacity

KPI 06 shows the number of PaPs which have been (pre-) allocated by the C-OSS in the second half of April 2018. This means that the PaP sections requested were allocated, but only under the condition that possible feeder/outflow sections, which appear in most of the requests, can be constructed by the concerned IMs/ABs and that these proposals will be accepted by the applicant, and/or that the applicant does not withdraw its request before active timetable (end of August). The KPI is displayed as KMs per year.

If the volume of requested capacity is close to the volume of pre-allocated capacity, this means that there are very little conflicting requests, and that thus the PaP offer can be perceived as adequate (13,5 vs 13,0 million KMs for TT2019).

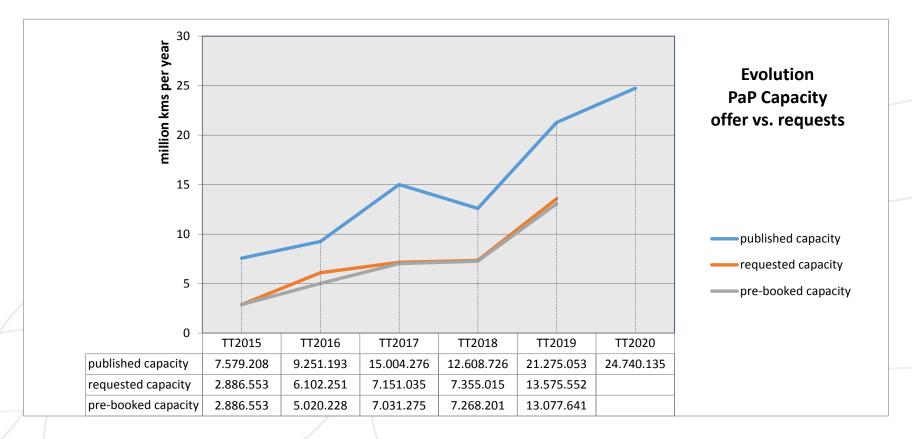


A total of **13,0 million KMs** were pre-allocated for TT2019 in April 2018 (+79,5%)

- → 7,3 million for TT2018
- → 7,0 million for TT2017
- → 5 million for TT2016
- → 2,8 million for TT2015



KPI04 / KPI05 / KPI06 Overview (1)



TT2019 vs TT2018	published	requested	pre-booked		
	capacity	capacity	capacity		
	+68.7%	+84.2%	+79.5%		



KPI04 / KPI05 / KPI06 Overview (1)



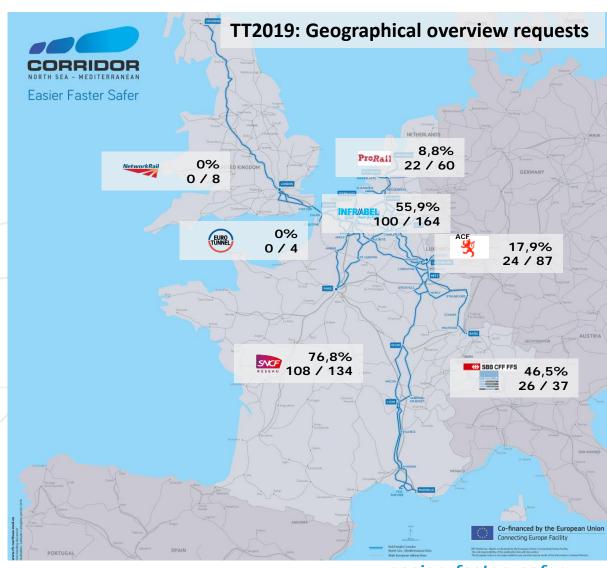


KPI04 / KPI05 / KPI06 Overview (2)

Per Infrastructure Manager are indicated:

Percentage of capacity requested in April which was offered in January

Number of PaPs at least partly requested in April / PaPs published in January





easier, faster, safer

KPI 07: Relation between capacity allocated by the C-OSS and total (scheduled) traffic (1)

KPI 07 provides information on the share of trains running on the corridor which were ordered via the C-OSS, compared to the total amount of corridor circulation.

To have an idea of this, we have analysed the number of <u>scheduled</u> international freight train runs at the RFC NSM borders for timetable 2016, 2017, 2018 and 2019 (<u>as per start of timetable</u>), to be able to compare these figures to the number of train runs foreseen for timetable 2016, 2017, 2018 and 2019 as ordered and allocated via the RFC NSM OSS (<u>end of August</u>)

- This means a border crossing <u>via PaP</u>
- Or via <u>feeder/outflow</u>

Figures can only be regarded as an indication:

- Works or last minute demands from the customer might lead to changing timetables, routing or calendar; partly or entirely
- Cancellations (between allocation by C-OSS and start of timetable; partly or entirely)



KPI 07: Relation between capacity allocated by the C-OSS and total (scheduled) traffic (2)



		<u> </u>							
		RFC NSM border	Share of scheduled trains allocated via the C-OSS (X-3)						
			TT 2016	TT 2017	TT 2018	TT 2019			
	1	Basel/St.Louis	53%	47%	44%	78%			
	2	Blandain/Baisieux	51%	21%	46%	141%			
	3	Erquelinnes/Jeumont	5%	0%	26%	32%			
	4	Aubange/Rodange	39%	47%	68%	96%			
	5	Aubange/Mont-St-Martin	84%	56%	60%	117%			
	6	Zoufftgen/Bettembourg	16%	14%	15%	36%			
	7	Mouscron/Tourcoing	64%	43%	37%	94%			
	8	Essen/Roosendaal	8%	18%	38%	27%			
1	9	CalaisFréthun-tunnel			50%	48%			
		all (weighted average)	41%	33%	41%	64%			

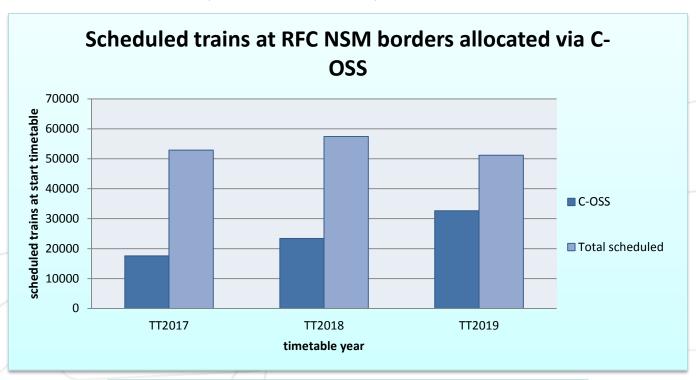
The figures above for Blandain (141%) and Mont-St.-Martin (117%) clearly show that an important amount of

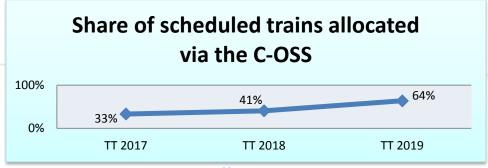
requested trains are being cancelled in the period between August and the start of the timetable. For Baisieux, given the low amount of trains, a cancellation of one train run per week already has a big impact. For Mont-St.Martin, the changing scheduling of

TCRs has lead to a high number of rerouted trains.

easier, faster, safer

KPI 07: Relation between capacity allocated by the C-OSS and total (scheduled) traffic (3)







OM 03: Volume of requests - OM 04: Number of conflicts

OM 03 (volume of requests) and OM 04 (number of conflicts) cannot be analysed separately.

It is important to stress that a request means one dossier in PCS. Such a dossier can have the following characteristics:

A request for:

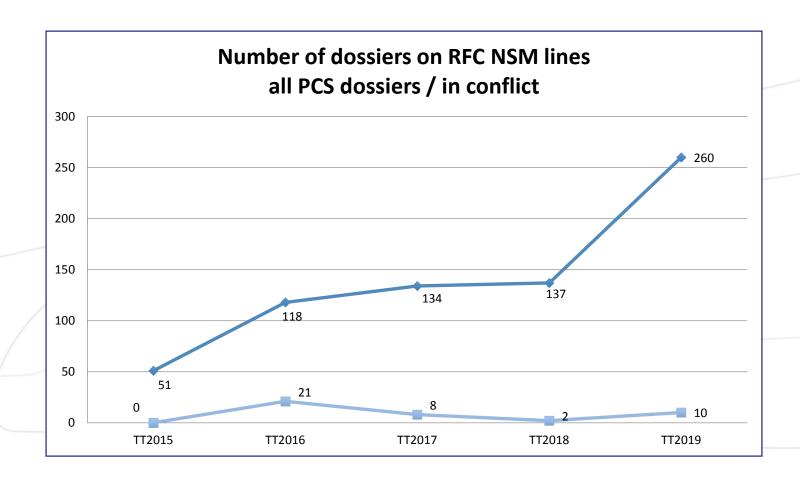
- ➤ A PaP running one day of the year ←→ A PaP running all days of the year
- ➤ A PaP running on one section ←→ A PaP running on ten sections
- ➤ A PaP with feeder/outflow sections ←→ A pure PaP
- ➤ A PaP on one Corridor ←→ A PaP on several Corridors
- ➤ A PaP crossing a border on another Corridor ←→ A PaP crossing a Rail Freight Corridor North Sea – Mediterranean border

For this reason, the number of requests in itself doesn't tell a lot. However, to be able to analyse and understand the level of conflicts (conflicting requests placed between January and April), this figure should be known.

OM 04 provides information on the number of conflicts for timetable 2019 at X-8, for which the priority rule had to be applied.



OM 03: Volume of requests - OM 04: Number of conflicts





OM 05: Relation between results capacity wishes survey, the published and the requested capacity

OM 05 compares for each timetable year, for a given Corridor O/D, the following:

- the average number of paths per day, that were expressed as capacity need
- the average number of PaPs per day, that were published in the PaP Catalogue
- The average number of paths per day requested in April via the C-OSS, via PaP or feeder/outflow.

The goal of this KPI is to be as transparent as possible in the analysis if what is published as a PaP meets market demands.



OM 05: Relation between results capacity wishes survey, the published and the requested capacity

	TT 2015		TT 2016			π 2017			TT2018			ТТ2019			
Route	Offer per Corridor Route	Requested per Corridor Route (PaP and/or f/o)	Expressed Capacity Wishes per Corridor Route	Offer per Corridor Route	Requested per Corridor Route (PaP and/or f/o)	Expressed Capacity Wishes per Corridor Route	Offer per Corridor Route	Requested per Corridor Route (PaP and/or f/o)	Expressed Capacity Wishes per Corridor Route	Offer per Corridor Route	Requested per Corridor Route (PaP and/or f/o)	Expressed Capacity Wishes per Corridor Route	Offer per Corridor Route	Requested per Corridor Route (PaP and/or f/o)	
Including		Average paths per day, both directions combined													
Antwerp - Basel	22	9	18	18	13	18	23	11	22	18	15	23	26	11	
Antwerp - Bettembourg	12	1	8	27	11	8	38	11	5	33	9	5	40	20	
Mont-St-Martin - Basel	18	9	18	15	12	18	21	6	17	9	9	24	20	20	
Rotterdam - Antwerp	36	0	2	36	3	0	29	1	6	31	3	8	37	5	
Antwerp - Lyon	2	0	16	2	3	2	2	1	15	2	1	8	4	7	
Antwerp - Lille	14	5	52	27	13	6	25	11	38	20	8	30	19	22	
Lille/Somain - Paris		2	8	2	4	4	10	7	29	6	6	16	13	9	
Metz - Lyon	6	0	26	11	10	10	15	13	24	18	11	47	29	13	
Dunkerque - Liège	N.A.	0	6	3	2	4	4	2	2	2	2	2	2	2	
London - Calais	N.A.	0	0	N.A.	1	10	4	5	0	4	2	0	6	0	
Calais - Metz	N.A.	0	4	2	3	12	6	11	8	5	4	12	6	5	



The sole responsibility of this publication lies with the author.

The European Union is not responsible for any use that may be made of the information contained there in.

Contact oss@rfc2.eu www.rfc-northsea-med.eu

















