

RFC North Sea – Baltic Performance Monitoring Report 2021





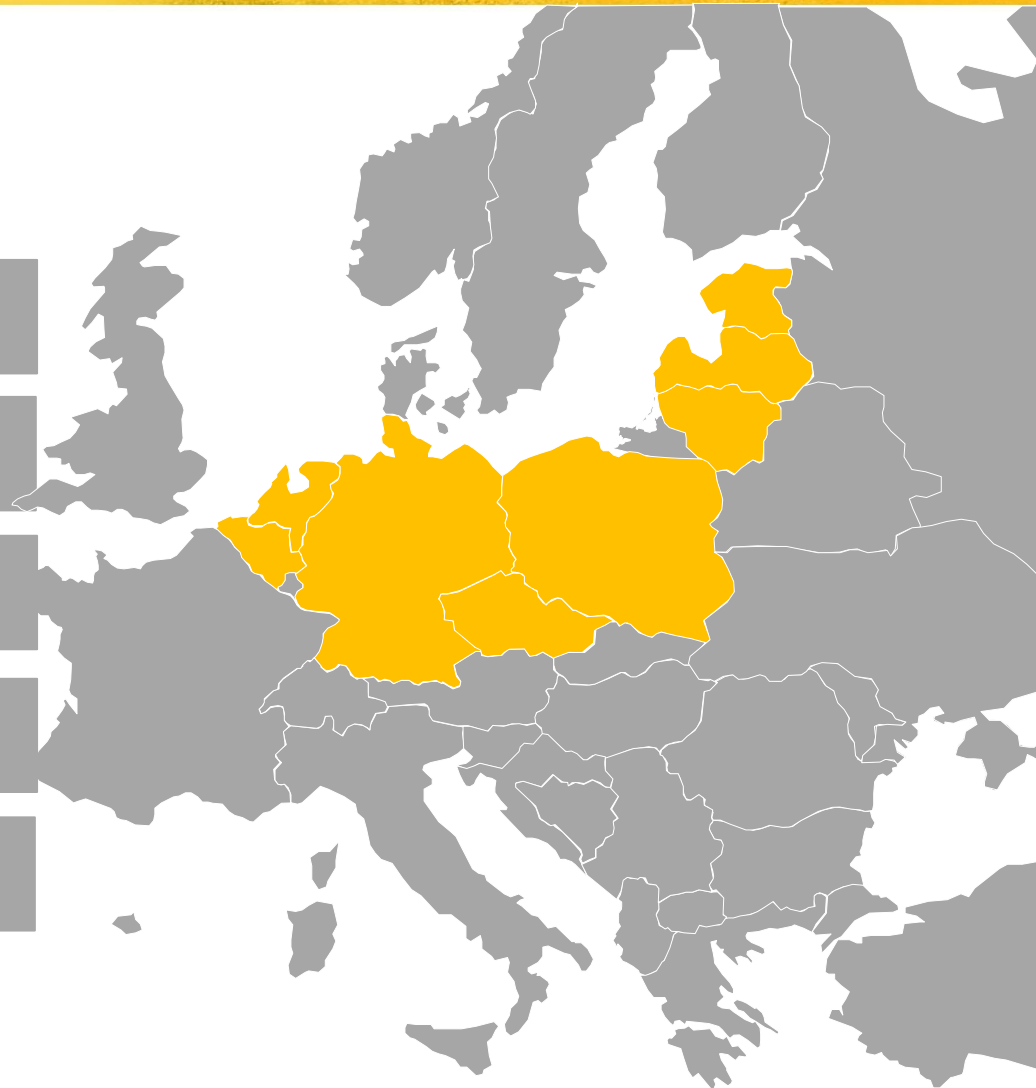
Introduction

Performance indicators

KPIs for Operations

KPIs for Capacity Management

KPIs for Market Development



Introduction

- A set of commonly applicable KPIs has been agreed by all Rail Freight Corridors and published on RailNetEurope's (RNE) website. The KPIs, their definition and source of data can be found in the RNE guidelines for KPIs of Rail Freight Corridors, (link: http://rne.eu/wp-content/uploads/RNE_Guidelines_KPIs_of_RFCs.pdf).
- The results can be found in this Performance Monitoring Report, by which all our stakeholders are informed about the progress of the Corridor on a yearly basis and on the RNE website ([RFC KPIS - Railnet Europe, Rail Net Europe \(rne.eu\)](#)).

Some of the KPIs are also published in the Annual Report.
- Capacity KPIs are also described in the Framework for Capacity Allocation on the Rail Freight Corridor North Sea–Baltic approved by the Executive Board.



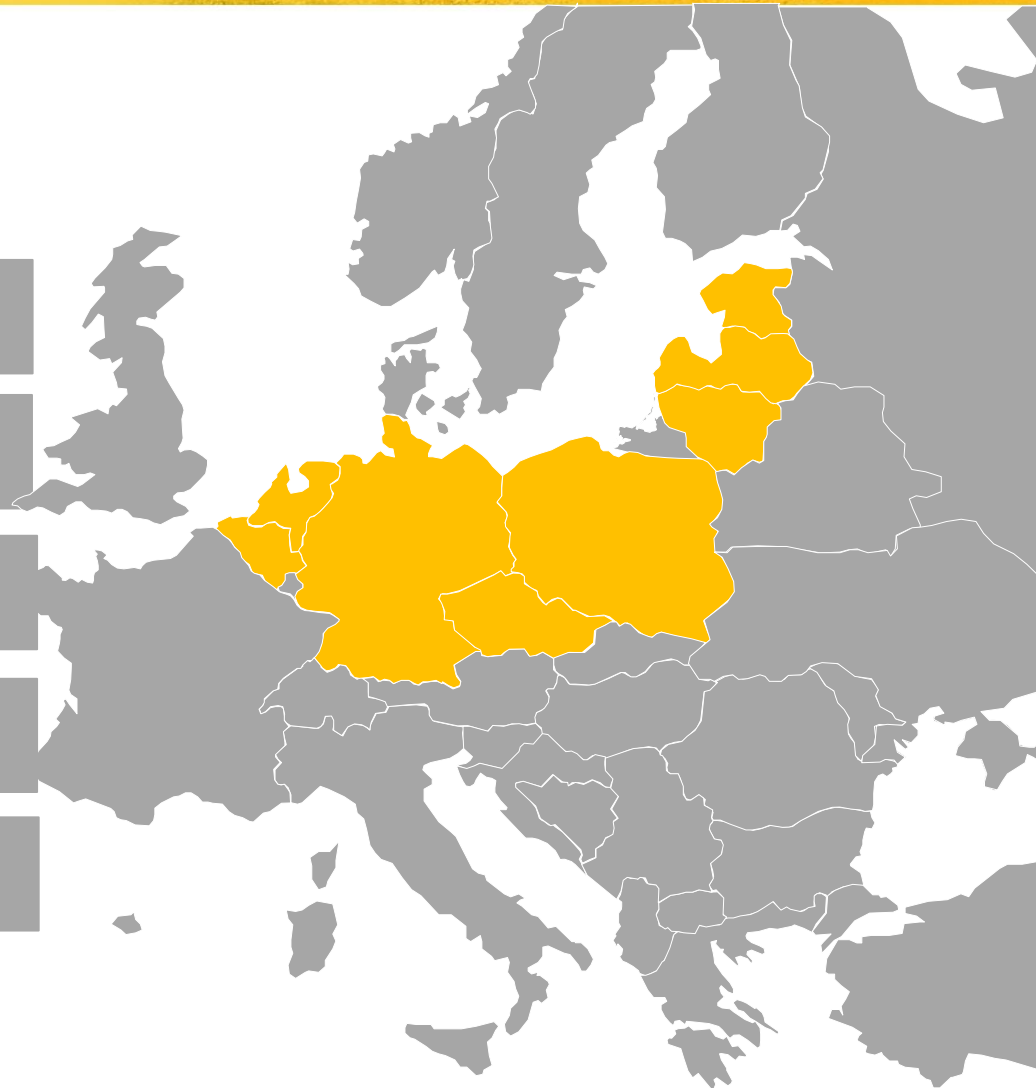
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Performance Indicators

The KPIs in this Performance Monitoring Report were chosen based on the following parameters:

- ✓ Measurability: performance should be measurable with the tools and resources available on the Corridor;
 - ✓ Clarity: KPIs should be understandable to the public it is designed for;
 - ✓ Comparability: KPIs should be comparable across time and region;
 - ✓ Relevance and empowerment: KPIs should provide information on which project decisions can be based.
- To be able to easily understand the figures in this report, a clear explanation is provided on how the calculation was made and what is measured for each indicator.
 - The indicators can be divided into three business fields: Operations, Capacity Management and Market Development.



Introduction

Performance indicators

KPIs for Operations

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KPIs for Market Development



KPIs for Operations

In the category Operations the following KPIs are published:

- KPI 01: Number of trains crossing a border along the RFC
- KPI 02: Punctuality

The following slides provide insight into the trains running on the Corridor. Punctuality is measured for reporting purposes at entry (origin) or exit (destination) of the Corridor. RFC North Sea-Baltic measures all international freight trains at specific chosen border points.

The following criteria must be met for a train to be considered as a corridor train:

- International freight train;
- Crossing at least one border of the Corridor.

The data used to calculate KPI Operations comes from the international Train Information System (TIS) database, managed by RailNetEurope (RNE). More details on the calculation are given per KPI.

The WG PM&O is aware there are issues with the data in TIS due mainly to IM/RU operational behaviour and data quality issues. However, the group feels the figures reflect the real situation on the Corridor adequately to warrant their use in the yearly report.

Please note, information relevant for all graphs and data published for KPI Operations for RFC North Sea-Baltic:

1. For 2021 the figures do not include trains from Venlo-Kaldenkirchen as these no longer belong to RFC North Sea-Baltic
2. For 2021 trains from Estonia, Latvia and Lithuania are not included as these members are not yet using TIS

KPI 01: Number of trains crossing a border along the RFC

KPI 01 displays the number of all international trains crossing at least one border along RFC North Sea–Baltic

At present we are not able to differentiate between trains running on PaPs or trains running on a normal international timetable (TT). Therefore, we measure all international trains that are running on the corridor infrastructure. Trains that pass more than one border on the Corridor are counted only once, to do this each train gets a unique identifier.

The border crossings considered for this KPI are as follows:

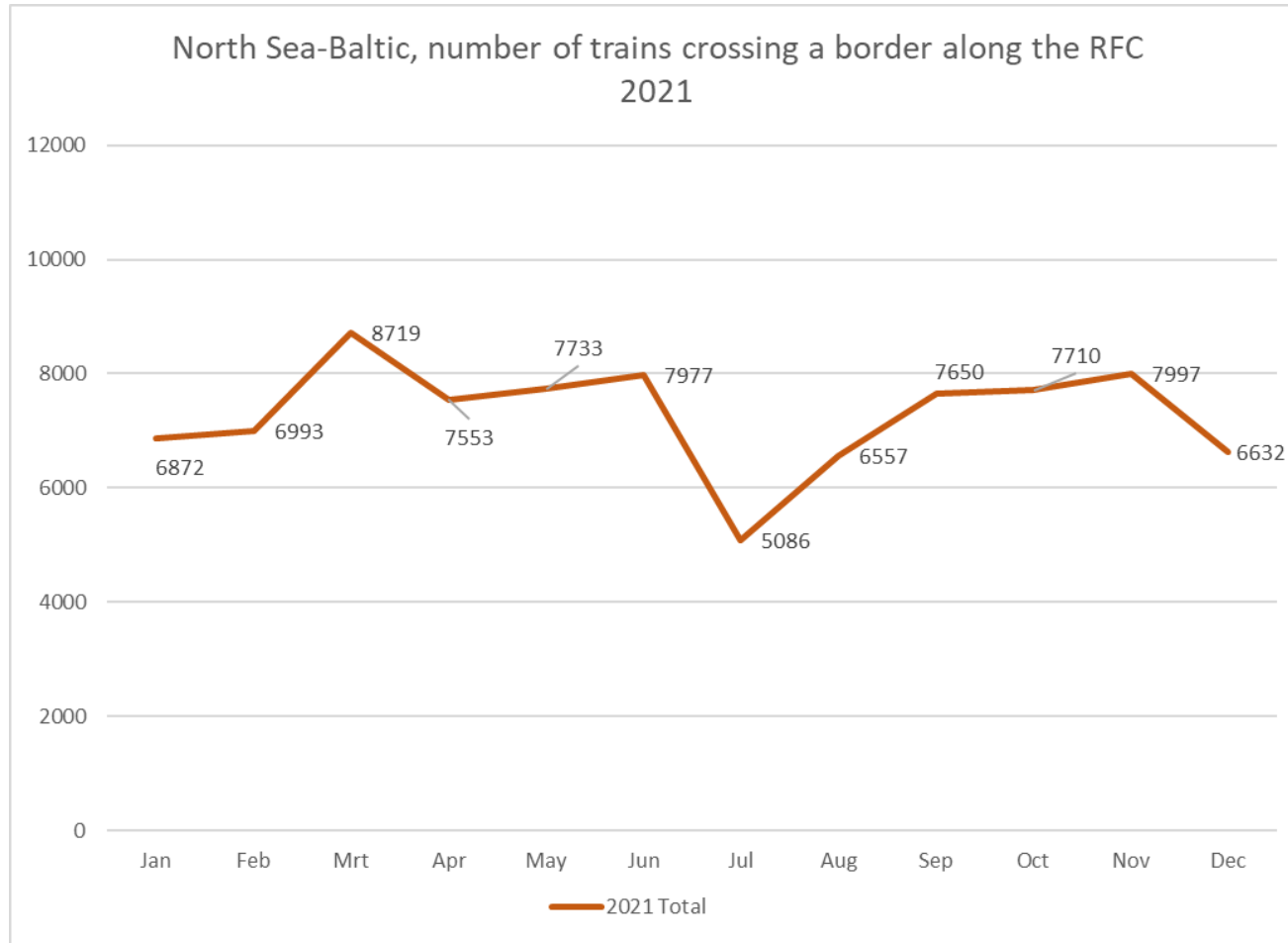
- Montzen – Aachen
- Essen – Roosendaal
- Zevenaar – Emmerich
- Oldenzaal - Bad Bentheim
- Frankfurt Oderbrücke - Kunowice/Rzepin
- Węglińiec/Bielawa Dolna - Horka
- Bad Schandau - Děčín
- Mockava – Trakiszki*

* Trains are only measured at Mockava as Lithuania is not using TIS yet.

KPI 01: Number of trains crossing a border along the RFC

This graph gives an overview of the total number of trains in 2021, on a monthly basis.

Total amount of trains for 2021 is 87.484.



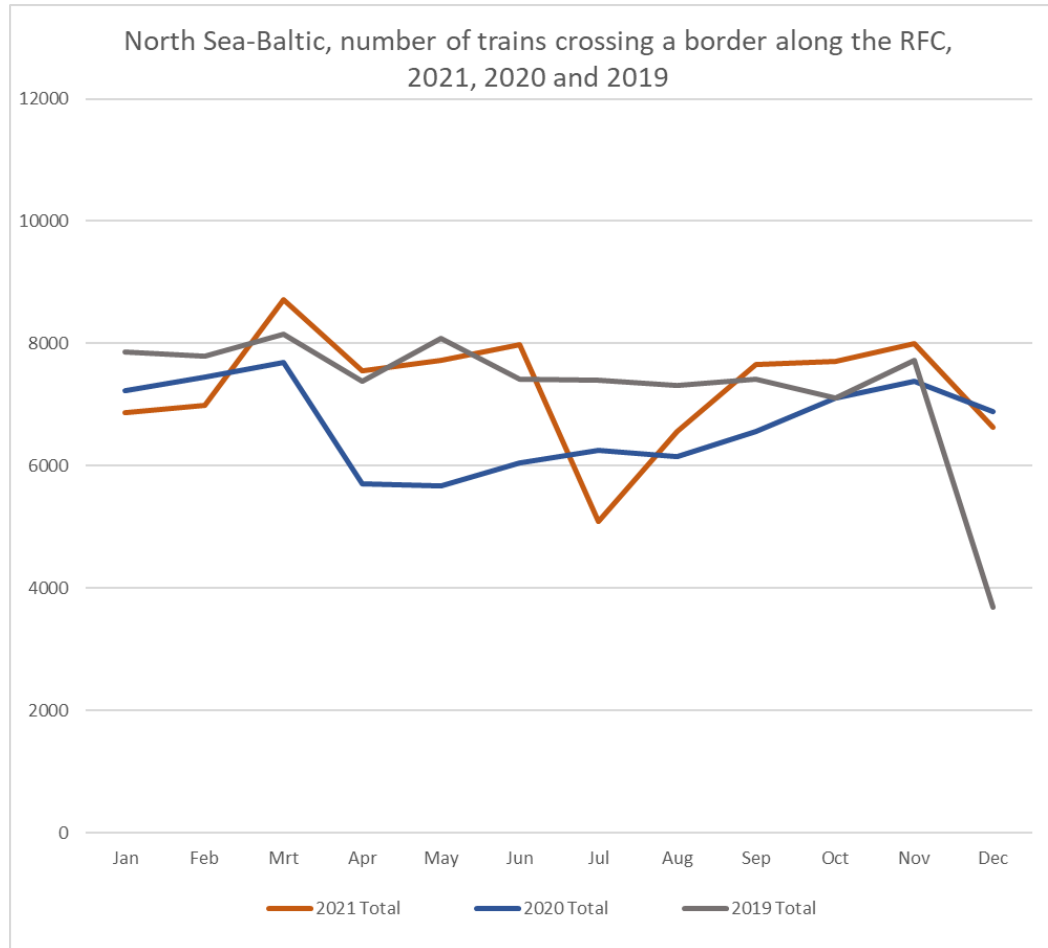
2021:

- Increase in traffic in March as more trains were running due to temporary recovery from previous months Covid19 situation.
- Fall in July due to great impact of floods in Belgium, Germany and Czech Republic on the train operations.



KPI 01: Number of trains crossing a border along the RFC

Graphs of the general evolution of the corridor traffic on a yearly basis are shown on the following two slides. This graph illustrates the evolution of the corridor traffic monthly for 2021, 2020 and 2019



2021:

- Rise in traffic in March, temporary recovery from Covid19 situation.
- Fall in July, floods in Belgium, Germany and Czech Republic.

2020:

- General decrease in traffic due to impact of Covid19 situation.

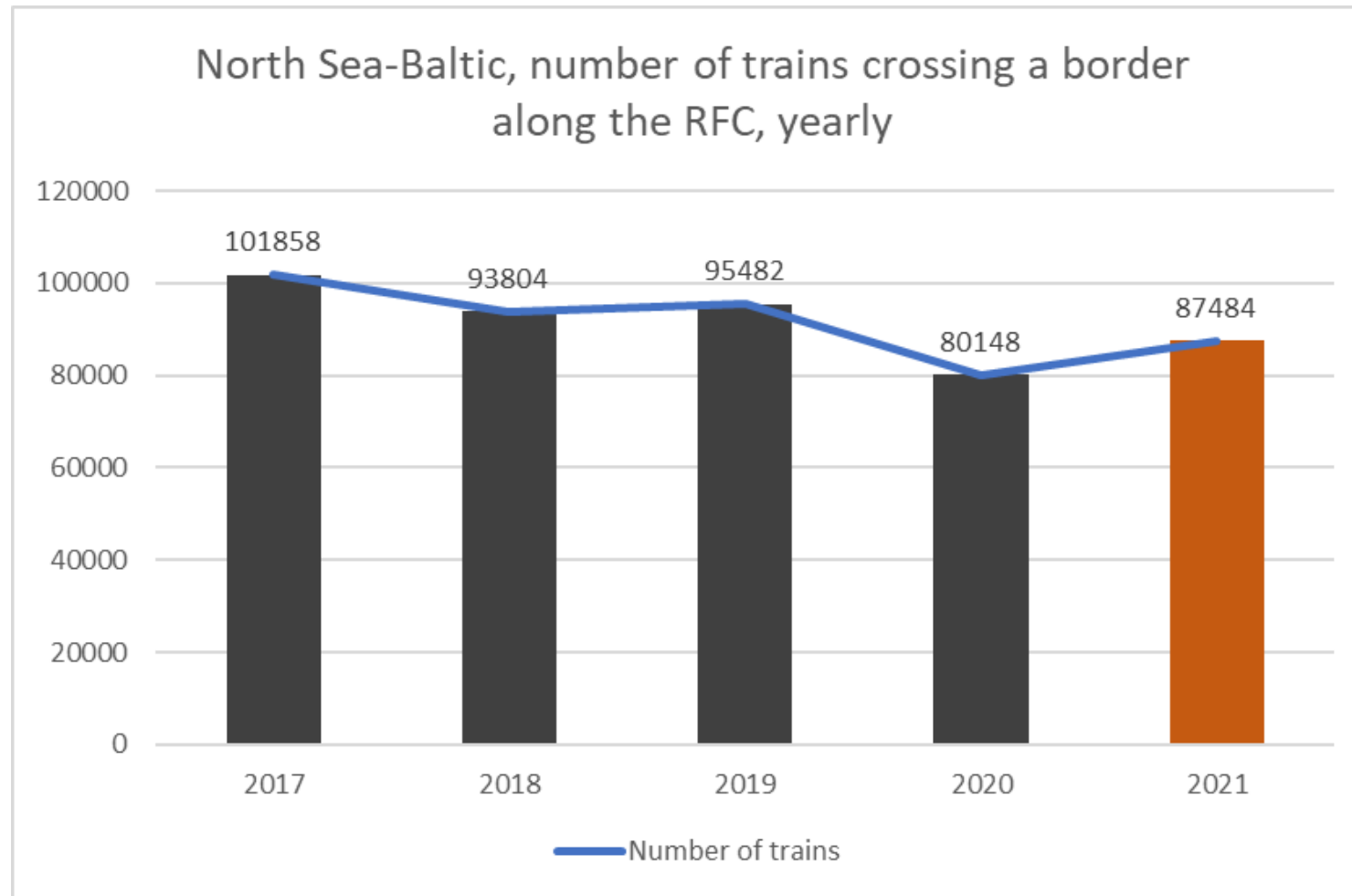
2019:

- Measurement of KPI is based on TT year (mid dec-mid dec). From 2020 onwards it is measured on calendar year.



KPI 01: Number of trains crossing a border along the RFC

This graph illustrates the yearly evolution of corridor traffic for 2017 to 2021



2021

- 9,15% increase in trains compared to 2020
- Definite increase but not yet reached the level of pre-Covid19 figures.

KPI 02: Punctuality

KPI 02 shows the average punctuality of trains running on the Corridor, measured at RFC Entry and RFC Exit.

- RFC Entry—first point in the train run, which belongs to chosen RFC.
- RFC Exit—last point in the train run, which belongs to chosen RFC.

The points shown on the detailed point-list define the chosen RFC. This point-list is a comprehensive overview of points found in TIS and registering where a train can enter/exit the corridor, on the network of one of the IMs of the RFC North Sea- Baltic. The graphs shown in the punctuality slides in the Performance Report indicate the punctuality measured at RFC entry/exit and are based on TIS data.

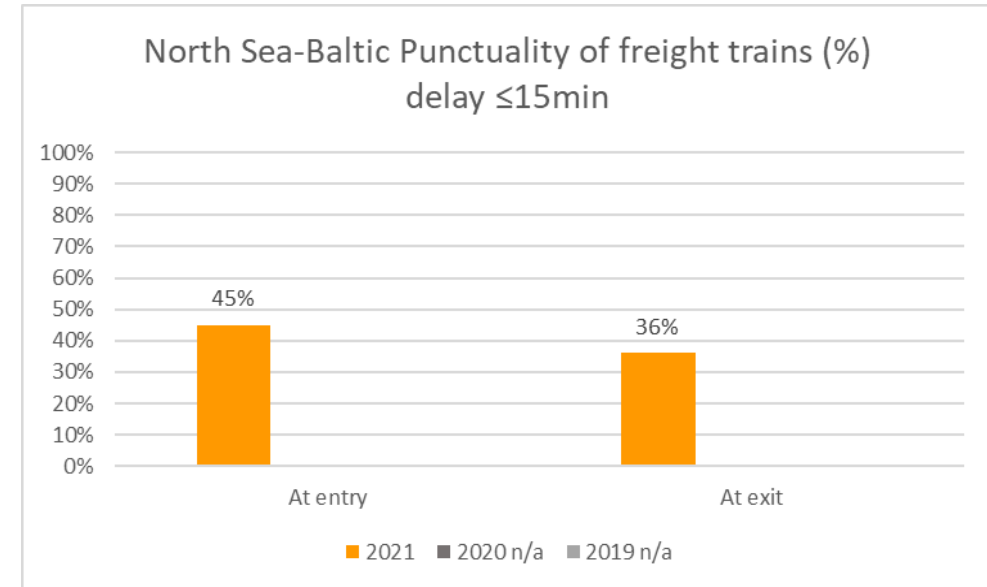
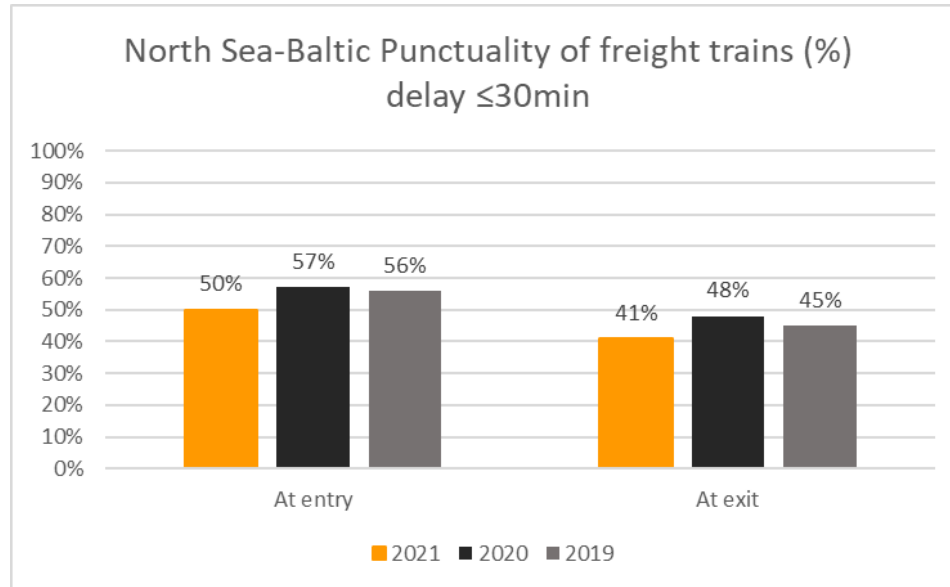
A corridor train is considered punctual when it has a delay of 30 minutes or less ($\leq 30\text{min}$). For KPI reporting purposes punctuality is also measured at a delay of 15 minutes or less ($\leq 15\text{min}$). As all international RFC's Working groups are publishing a 15-minute threshold for punctuality, RFC North Sea-Baltic will also do this from 2021.

Trains considered for the measurement of punctuality must meet the following basic criteria:

- International freight train;
- At least one running advice in the whole train run
- Train must be passing at least one pair of points from the basic point list

Monthly train punctuality reports are generated from TIS data at RNE and are published on the RFC North Sea-Baltic website. Monitoring and follow-up of the punctuality reports is done by the Working Group Performance Management and Operations, during their regular meetings. Punctuality issues are discussed bilaterally with the WG and corridor users, on a case-by-case basis.

KPI 02 Punctuality – RFC Entry and Exit (30 min/15 min)

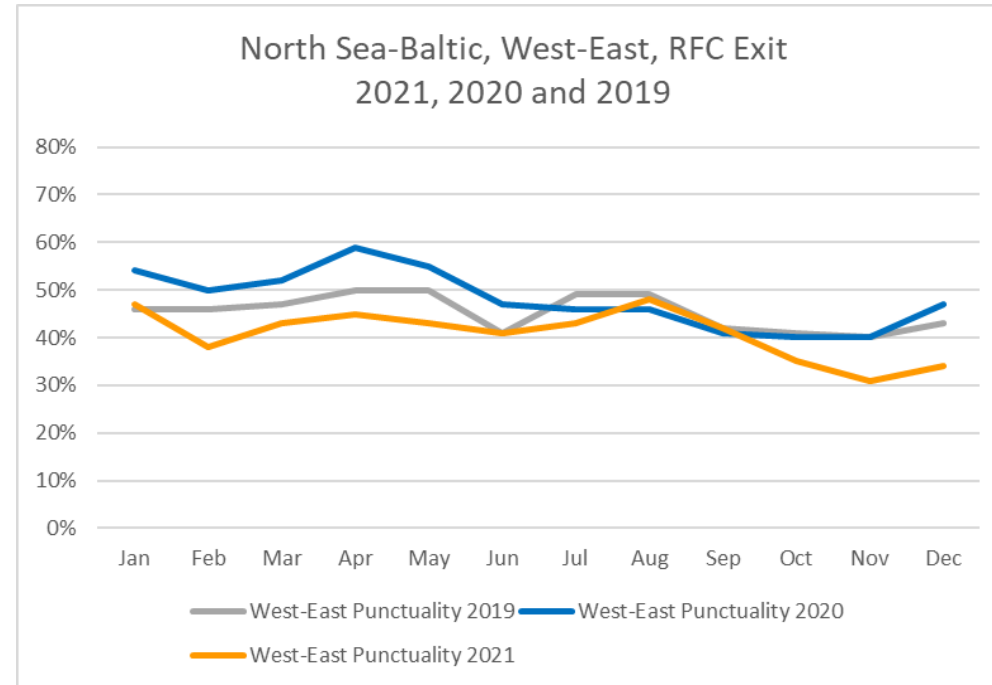
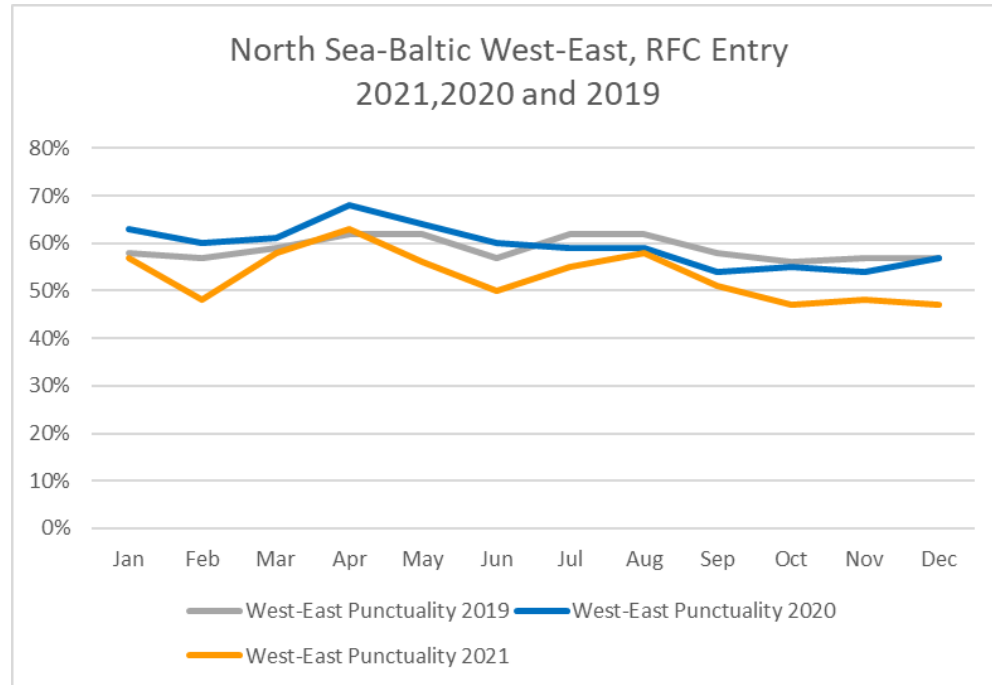


- In the following slides, only punctuality ≤ 30 min is considered more into detail in the Performance Report 2021
- Punctuality ≤ 15 min is not applicable to 2019 and 2020 and is not published in yearly reports before 2021

2021 Punctuality ≤ 30 minutes:

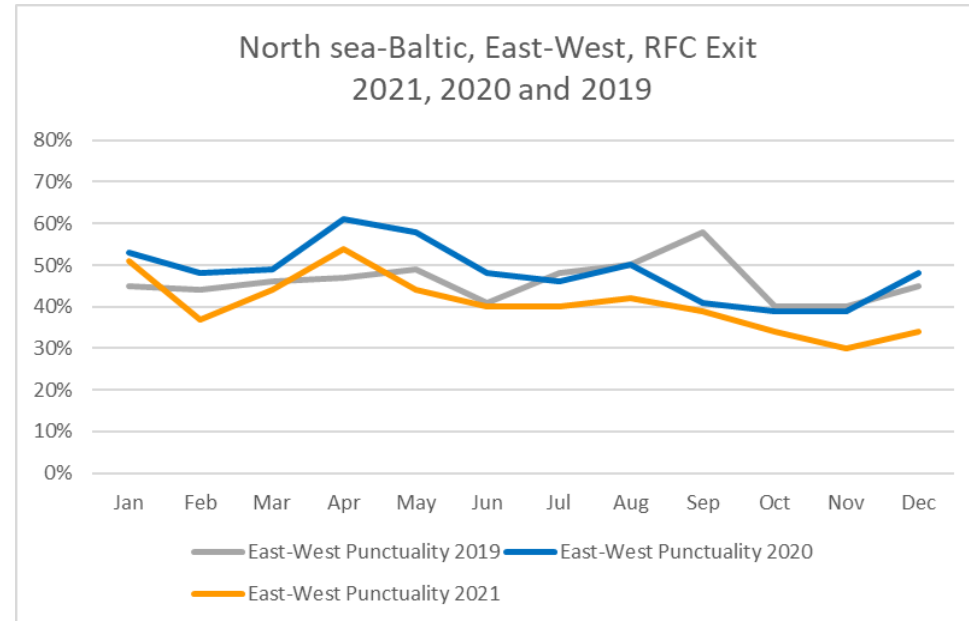
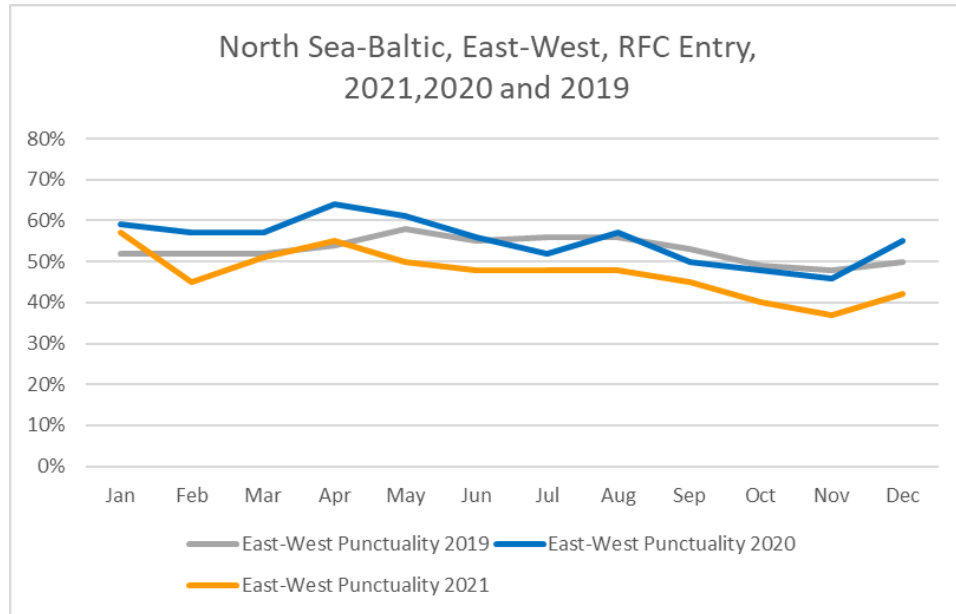
After an improvement in 2020 the punctuality figures dropped again in 2021. This was caused mainly by works, strikes and extreme weather conditions. More detailed information on delay reasons from all the RFC North-Sea Baltic individual IM networks is published in the RFC North Sea-Baltic Annual Report 2021.

KPI 02 Punctuality – Entry and exit, per direction (West – East)



Avg. punctuality	2019	2020	2021
At entry W-E	59%	59%	53%
At exit W-E	45%	48%	41%

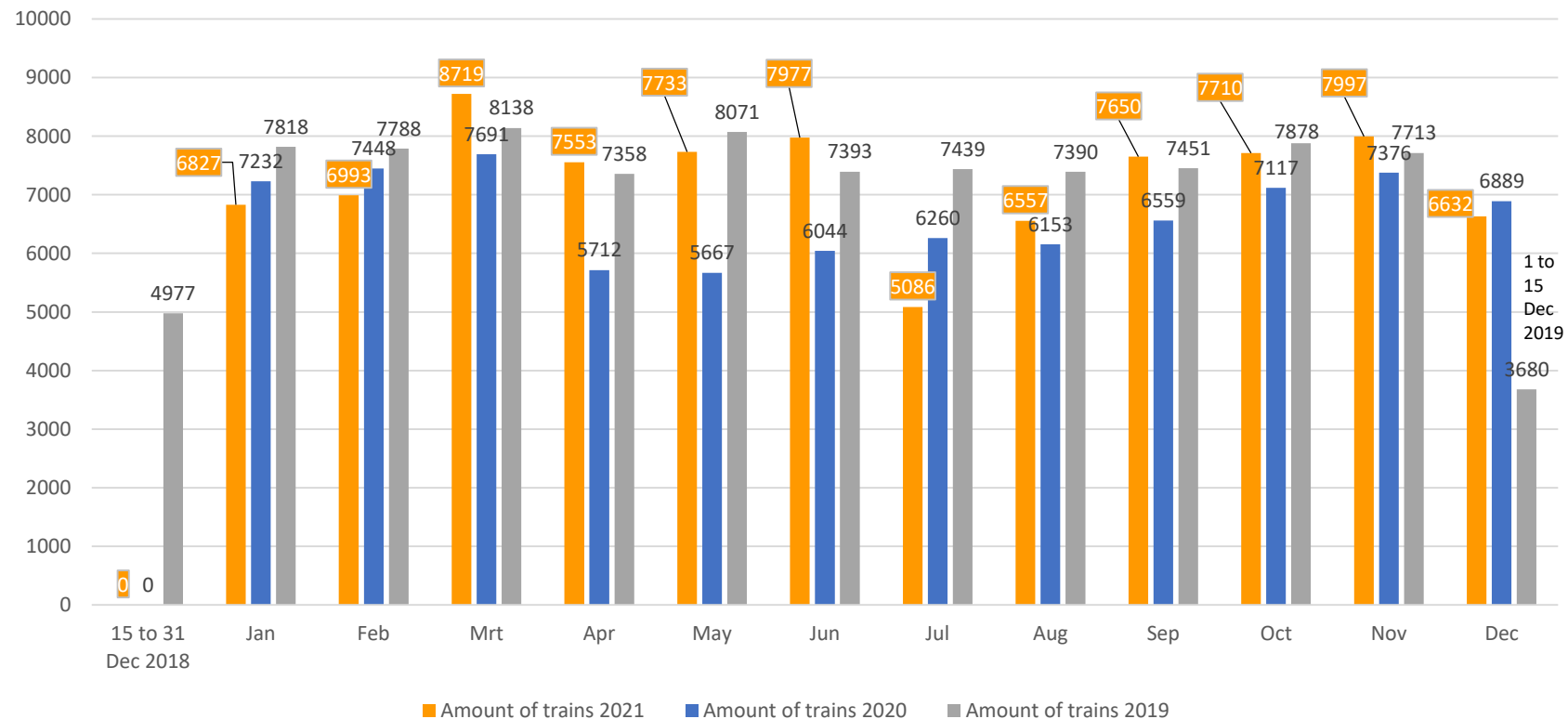
KPI 02 Punctuality, Entry and Exit, per direction (East – West)



Avg. Punctuality	2019	2020	2021
E-W entry	53%	55%	47%
E-W exit	45%	48%	41%

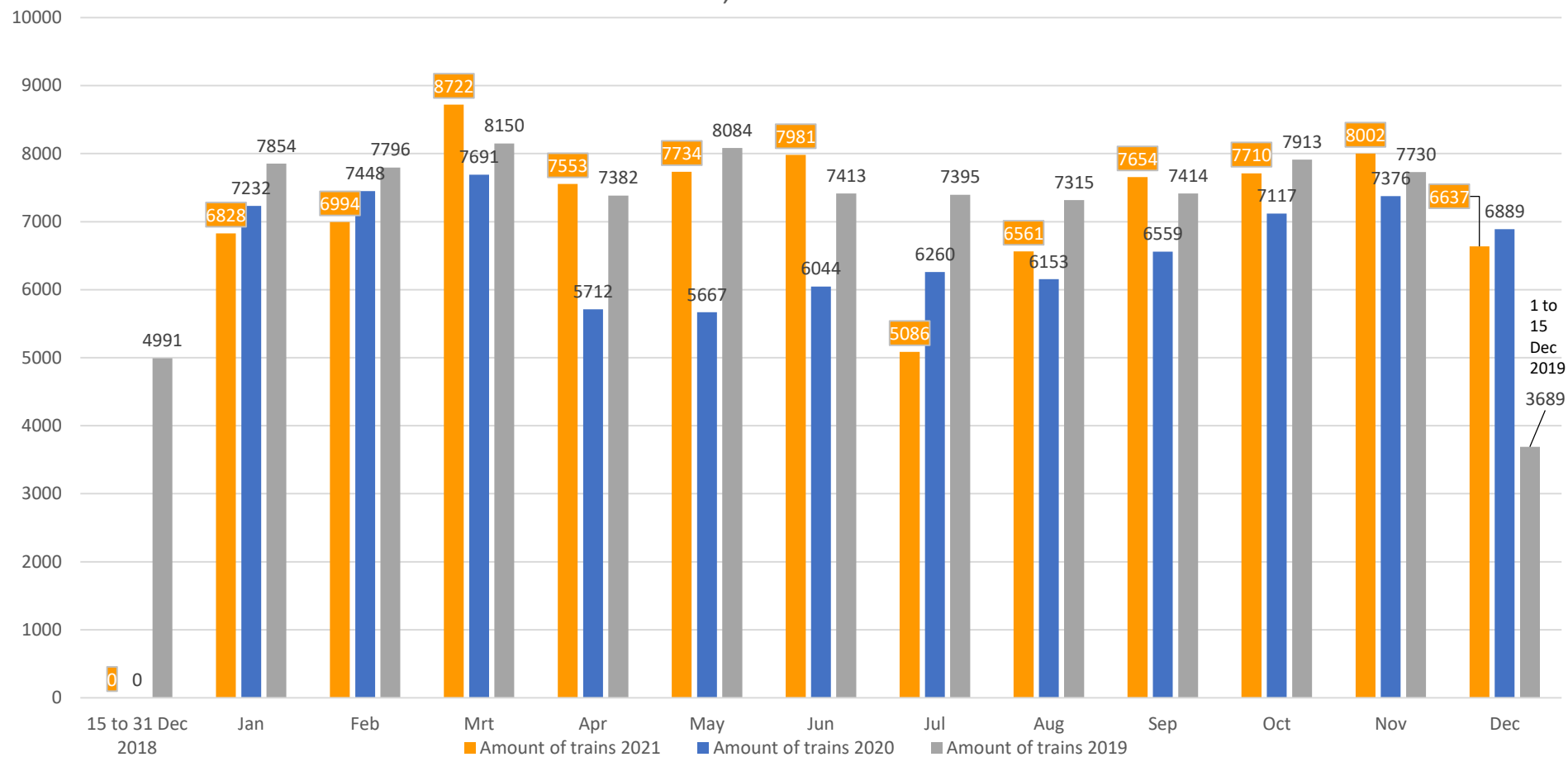
KPI 02 Punctuality, RFC entry, total amount of trains

North Sea-Baltic, monthly number of calculated trains for Punctuality at origin RFC Entry, 2021, 2020 and 2019



KPI 02 Punctuality, RFC entry, total amount of trains

North Sea- Baltic, monthly number of calculated trains for Punctuality RFC Exit, 2021, 2020 and 2019





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KPIs for Capacity management

- To monitor the performance on the Corridor regarding capacity, a number of KPIs are described on the following slides which will provide insight into the capacity that has been offered, requested, allocated and monitored by the C-OSS:

KPIs for Capacity Management (TT 2022 offered in 2021):

- KPI 01: Volume of offered capacity (PaPs)
 - KPI 02: Volume of requested capacity (PaPs)
 - KPI 03: Volume of pre-booked capacity (PaPs)
 - KPI 04: Ratio of pre-booked capacity (PaPs)*
 - KPI 05: Number of requests (PaPs)
 - KPI 06: Number of conflicts (PaPs)
 - KPI 07: Volume of offered capacity (RC), volume of requested capacity (RC), Number of requests (RC)
 - KPI 08: Average planned speed of PaPs (including figures for TT2023)
- Most of these KPIs stem from the Framework for Capacity Allocation (FCA). Others were commonly agreed and are described in the RNE KPI guidelines

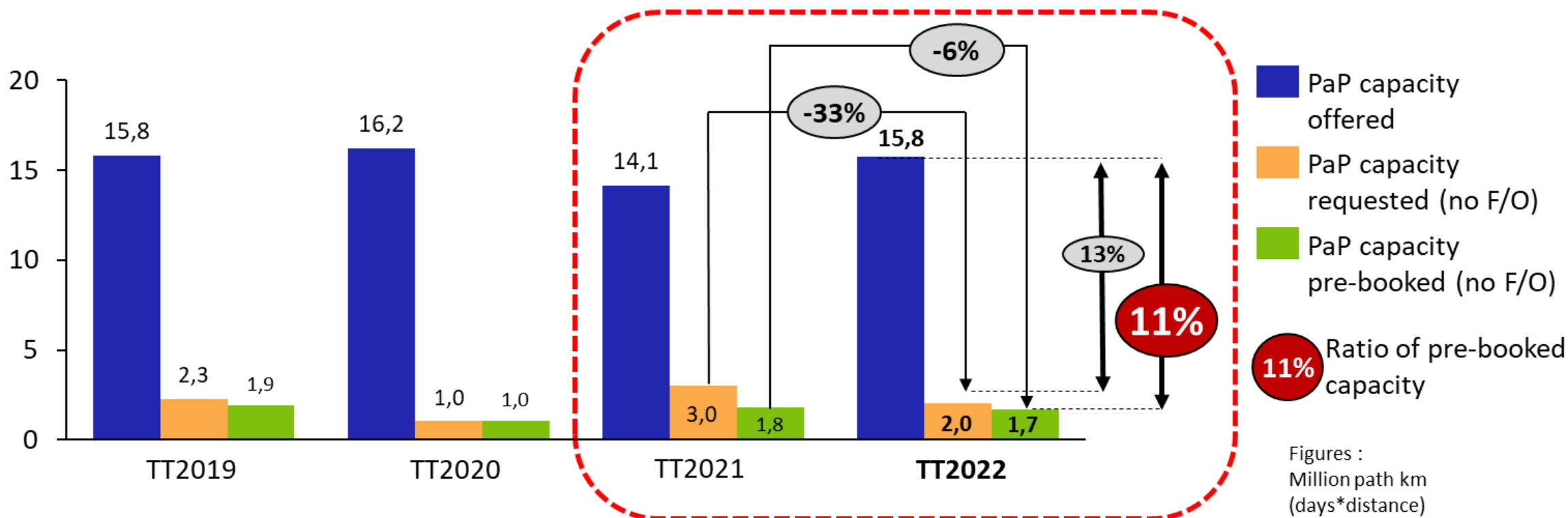
*new KPI published on a voluntary basis, requested by the RNE/RFCs High Level Group in order to display in a transparent manner the relation between the two mandatory KPIs required pursuant to the Framework for Capacity Allocation (FCA), which are the 'Volume of Offered Capacity (PaPs)' and the 'Volume of Pre-booked Capacity'.

KPI 01: Volume of offered capacity (PaPs)

KPI 02: Volume of requested capacity (PaPs)

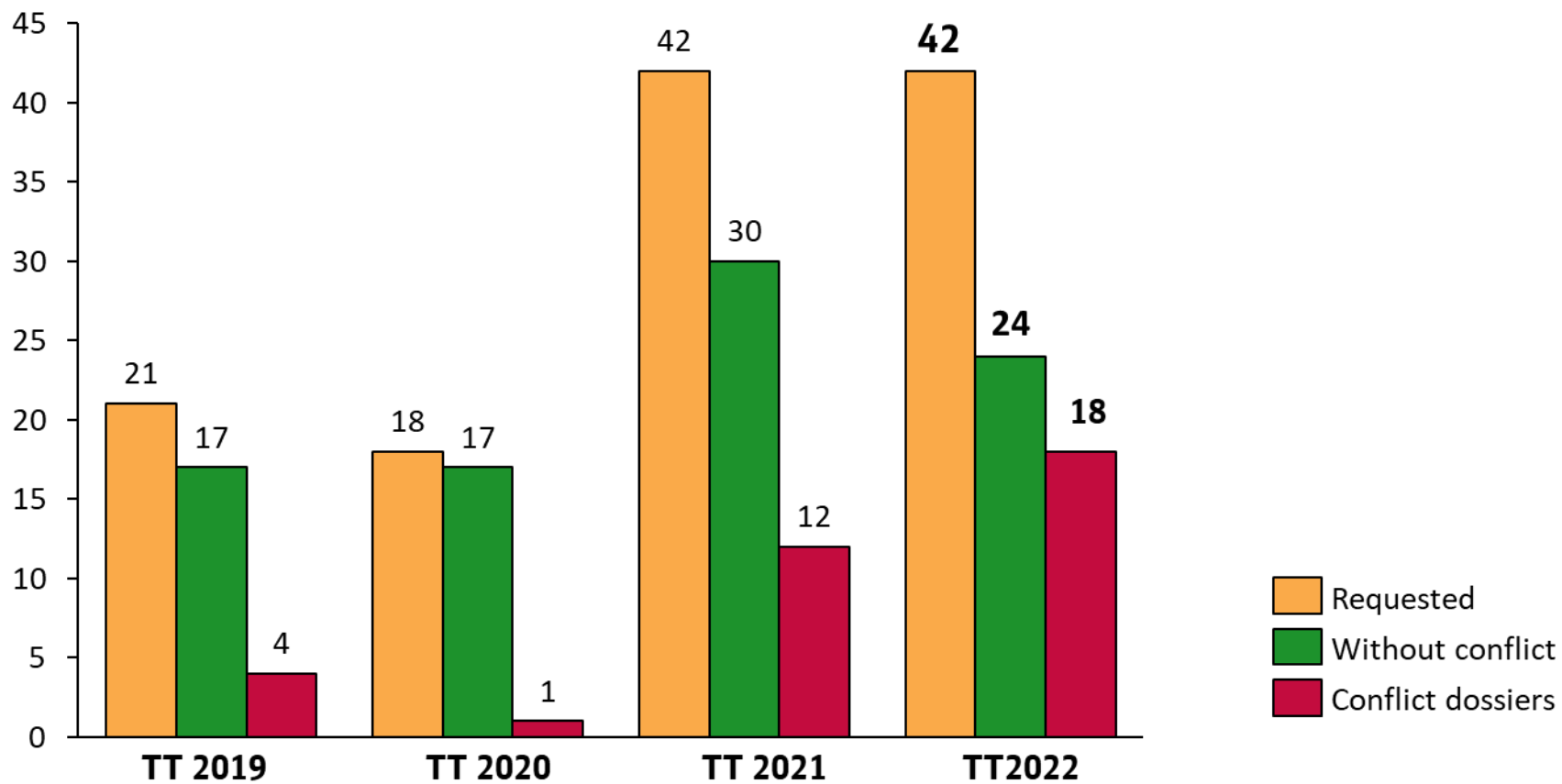
KPI 03: Volume of pre-booked capacity (PaPs)

KPI 04: Ratio of pre-booked capacity (PaPs)



KPI 05: Number of requests (PaPs)

KPI 06: Number of conflicts (PaPs)



KPI 07: Volume of offered capacity (RC), Volume of requested capacity (RC), Number of requests (RC)

- Reserve Capacity for ad hoc requests has been published by the C-OSS in October 2020, for the TT2021 starting in December 2020.
- Reserve Capacity is offered as a flexible approach, in the form of capacity slots per day and direction, requested until 30 days before the running day.
- The volume of offered Reserve Capacity increased for TT2021 due to the corridor extension to Latvia and Estonia and the route from Kaunas to Tallinn (Ülemiste).
- No Reserve Capacity was requested for TT2021.

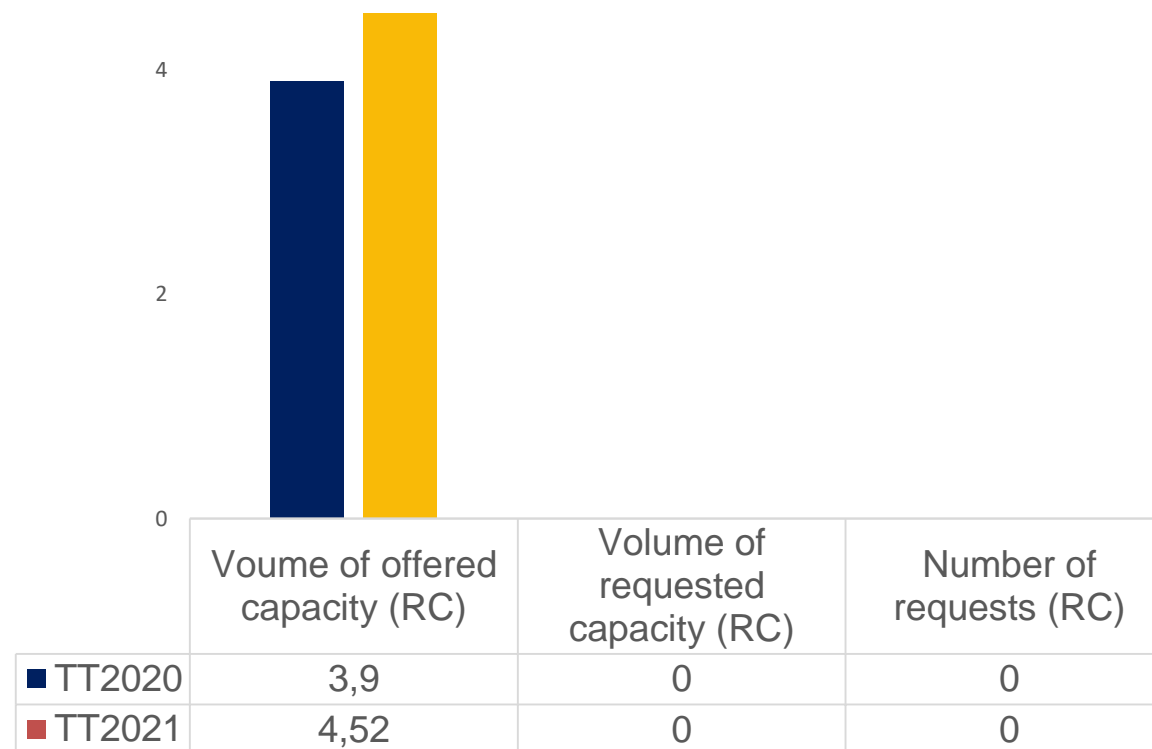
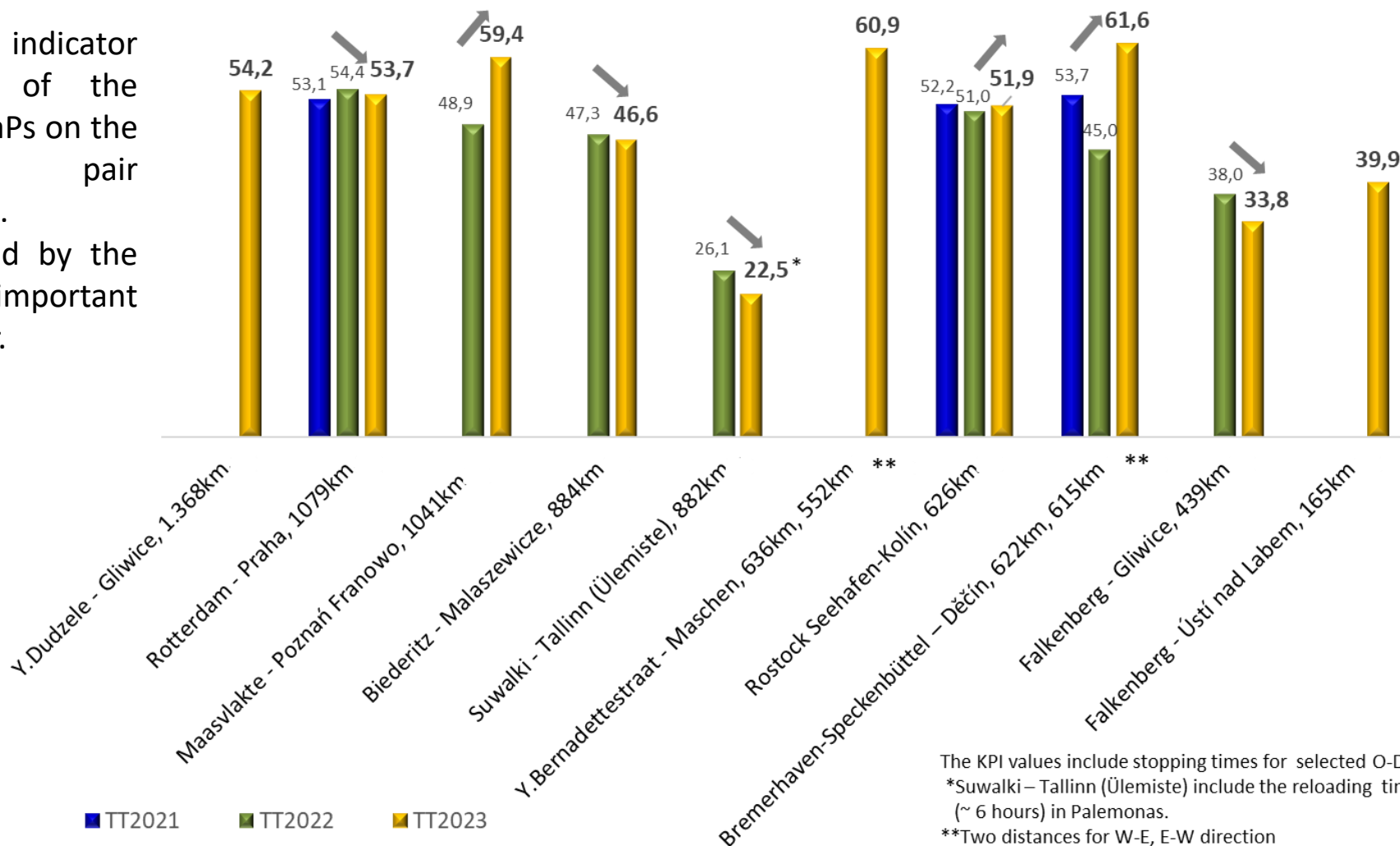


Figure Volume: Million path km (days*distance)

KPI 08: Average planned speed of PaPs

- This performance indicator shows the average of the planned speed of the PaPs on the Origin/Destination pair concerned per direction.
- O/D pairs were defined by the Corridor as the most important sections on the Corridor.



The KPI values include stopping times for selected O-D.
 *Suwalki – Tallinn (Ülemiste) include the reloading time (~ 6 hours) in Palemonas.
 **Two distances for W-E, E-W direction



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KPIs for Market Development

In the category “Market development” the following KPIs are published:

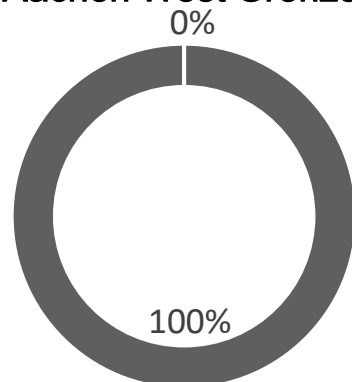
- KPI 01: Ratio of the capacity allocated by the C-OSS to total allocated capacity TT2022
- KPI 02: Number of trains per border 2021

KPI 01: Ratio of the capacity allocated by the C-OSS to total allocated capacity TT2022

On the next slides KPI Ratio of the capacity allocated by the C-OSS to total allocated capacity is presented. This KPI displays the number of train runs allocated in the yearly timetable by the C-OSS per RFC border/the total number of allocated international freight train runs in the yearly timetable per RFC border. Source of data is PCS for RFC capacity and national IMs’ tools for total allocated capacity.

KPI 01: Ratio of the capacity allocated by the C-OSS to total allocated capacity TT2022

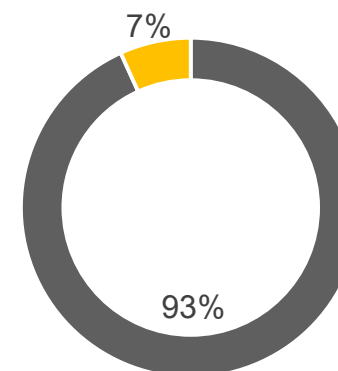
Montzen Frontière /
Aachen West Grenze



- Total allocated capacity (incl. RFC RALP)
- % Total allocated capacity RFC NSB

Number of allocated international freight trains	
Total (incl. RFC RALP)	C-OSS RFC NSB
30.306	0

Roosendaal Grens / Essen-Grens

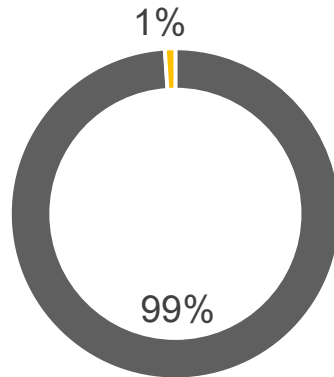


- % Total allocated capacity IM (incl. RFC NSM)

Number of allocated international freight trains	
Total (incl. RFC NSM)	C-OSS RFC NSB
14.740	998

KPI 01: Ratio of the capacity allocated by the C-OSS to total allocated capacity TT2022

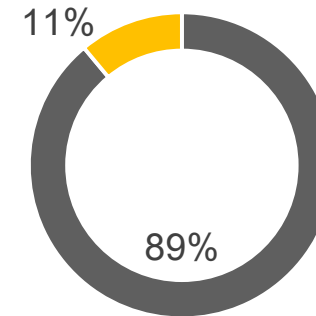
Zenvenaar Grens / Emmerich



- % Total allocated capacity IM (incl. RFC RALP)
- % Total allocated capacity RFC NSB

Number of allocated international freight trains	
Total (incl. RFC RALP)	C-OSS RFC NSB
38.324	390

Oldenzaal Grens /
Bad Bentheim Grenze

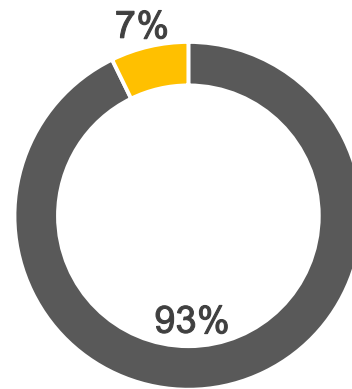


- % Total allocated capacity IM
- % Total allocated capacity RFC NSB

Number of allocated international freight trains	
Total	C-OSS RFC NSB
8.024	843

KPI 01: Ratio of the capacity allocated by the C-OSS to total allocated capacity TT2022

Bad Schandau Gr / Děčín st.hr.)

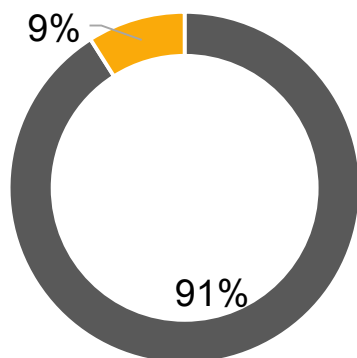


- % Total allocated capacity IM (incl. OEM)
- % Total allocated capacity RFC NSB

Number of allocated international freight trains	
Total (incl. RFC OEM)	C-OSS RFC NSB
41.739	3.019

KPI 01: Ratio of the capacity allocated by the C-OSS to total allocated capacity TT2022

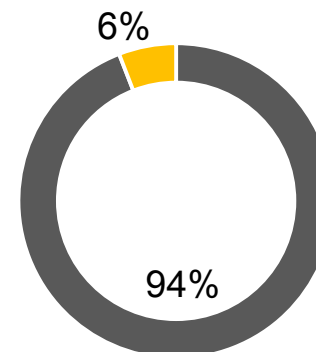
Horka / Bielawala Dolna (Gr)



- % Total allocated capacity IM
- % Total allocated capacity RFC NSB

Number of allocated international freight trains	
Total	C-OSS RFC NSB
5.671	510

Frankfurt (Oder) Oderbrücke /
Kunowice (Gr)



- % Total allocated capacity IM
- % Total allocated capacity RFC NSB

Number of allocated international freight trains	
Total	C-OSS RFC NSB
11.346	669



KPI 01: Ratio of the capacity allocated by the C-OSS to total allocated capacity TT2022

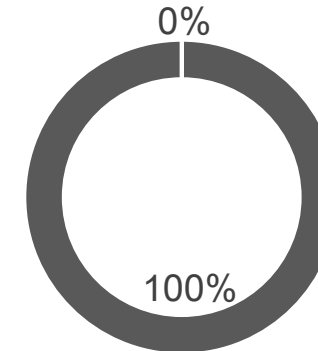
Trakiszki (Gr) / Mockava Pasienis



- % Total allocated capacity IM
- % Total allocated capacity RFC NSB

Number of allocated international freight trains	
Total	C-OSS RFC NSB
1.456	728

Joniškis Pasienis /
Meitene-eksp. (State border)

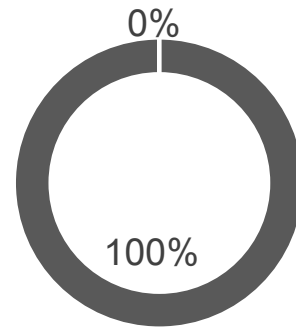


- % Total allocated capacity IM

Number of allocated international freight trains	
Total	C-OSS RFC NSB
4.368	0

KPI 01: Ratio of the capacity allocated by the C-OSS to total allocated capacity TT2022

Lugaži-eksp. (State border) /
Valga state border



- % Total allocated capacity IM
- % Total allocated capacity RFC 8

Number of allocated international freight trains	
Total	C-OSS RFC NSB
3.536	0

KPI 02: Number of trains per border 2021

KPI 02: Number of trains per border presents the number of commercial freight trains crossing selected border points. The source of the data is the IM's national tools. KPI 02 displays corridor trains on RFC North Sea–Baltic, per border. Trains that pass more than one border are counted at each border

Border pairs taken into consideration for this KPI:

- Montzen – Aachen
- Essen – Roosendaal
- Zevenaar – Emmerich
- Oldenzaal - Bad Bentheim
- Venlo – Kaldenkirchen
- Frankfurt Oderbrücke - Kunowice/Rzepin
- Węglińiec/Bielawa Dolna – Horka
- Bad Schandau - Děčín
- Mockava – Trakiszki
- Meitene-Joniskis
- Lugazi-Valga
- Kurcums-Turmantas

KPI 02: Number of trains per border 2021

2021 Number of trains	Direction		Total trains		
Border pairs	WEST-EAST	EAST-WEST	Total trains 2021	Total trains 2020	% 2021 compare to 2020
Montzen-Aachen	11.654	11.792	23 446	19 694	19%
Roosendaal-Essen	4 362	4 161	8 523	9 400	-9%
Zevenaar-Emmerich	12.036	11.546	23 582	20,985	12%
Oldenzaal-Bad Bentheim	3.772	3.844	7 616	6 548	16%
Venlo-Kaldenkirchen	7.582	7.395	14 977	16 013	-6%
Frankfurt-Kunowice/Rzepin	9.007	8.750	17 757	17 785	-0,15%
Horka-Wegliniec/Bielawa Dolna	4.878	4.720	9 598	5 267	82%
Bad Schandau-Decin	14,348	14389	28 737	30 408	-5,5%
Trakiszki-Mockava	624	615	1 239	768	60%
Meitene-Joniskis	359	615	974	n/a	n/a
Lugazi-Valga	830	767	1 597	n/a	n/a
Kurcums-Turmantas	31	30	61	n/a	n/a

2021 information:

- New borders pairs of Estonia, Latvia and Lithuania, per 2021
- Venlo-Kaldenkirchen are measured for this KPI as North Sea-Baltic trains can be re-routed using these border-pairs

KPI 02: Number of trains per border 2021

Comparison 2021, with 2020 and 2019, total number of trains, per border

