

1. Maximalization of train parameters on RFC8 lines
2. Codification of the lines of PKP PLK for intermodal consignments
3. New legislations regarding RFC corridors

View of the whole corridor - possibilities, limitation, expectation



North Sea-Baltic Core Network Corridor: 3rd Work Plan of the Coordinator



Rail Freight Corridor
North Sea – Baltic



The total railway network of the Corridor is 5,986 km long. The table presents the summary of technical compliance for rail (year 2014) and detailed analysis of each technical requirement is provided below the table.

Table 1. Compliance with TEN-T requirements (2014): Railways

RAILWAYS		All entries: Share of all sections fulfilling the respective standard								Corridor
TEN-T parameters		BE	NL	DE	PL	LT	LV	EE	FI	
Length of all sections	Km	397	477	1 783	1 442	848	594	442	3	5 986
Electrification	Electrified	100%	100%	97%	91%	18%	11%	17%	100%	75%
track gauge	1,435mm	100%	100%	100%	100%	13%	0%	0%	0%	76%
line (core lines)	speed freight ≥100km/h	80%	100%	100%	9%	25%	0%	0%	N/A	61%
Axle (core lines)	Load freight 22.5t	100%	100%	100%	99%	100%	100%	100%	N/A	100%
Train (core lines)	length freight min. 740m	100% ⁴	100%	100% ⁵	38%	100%	100%	100%	N/A	85%
ERTMS/signalling system	YES	32%	43%	0%	0%	0%	0%	0%	0%	7%

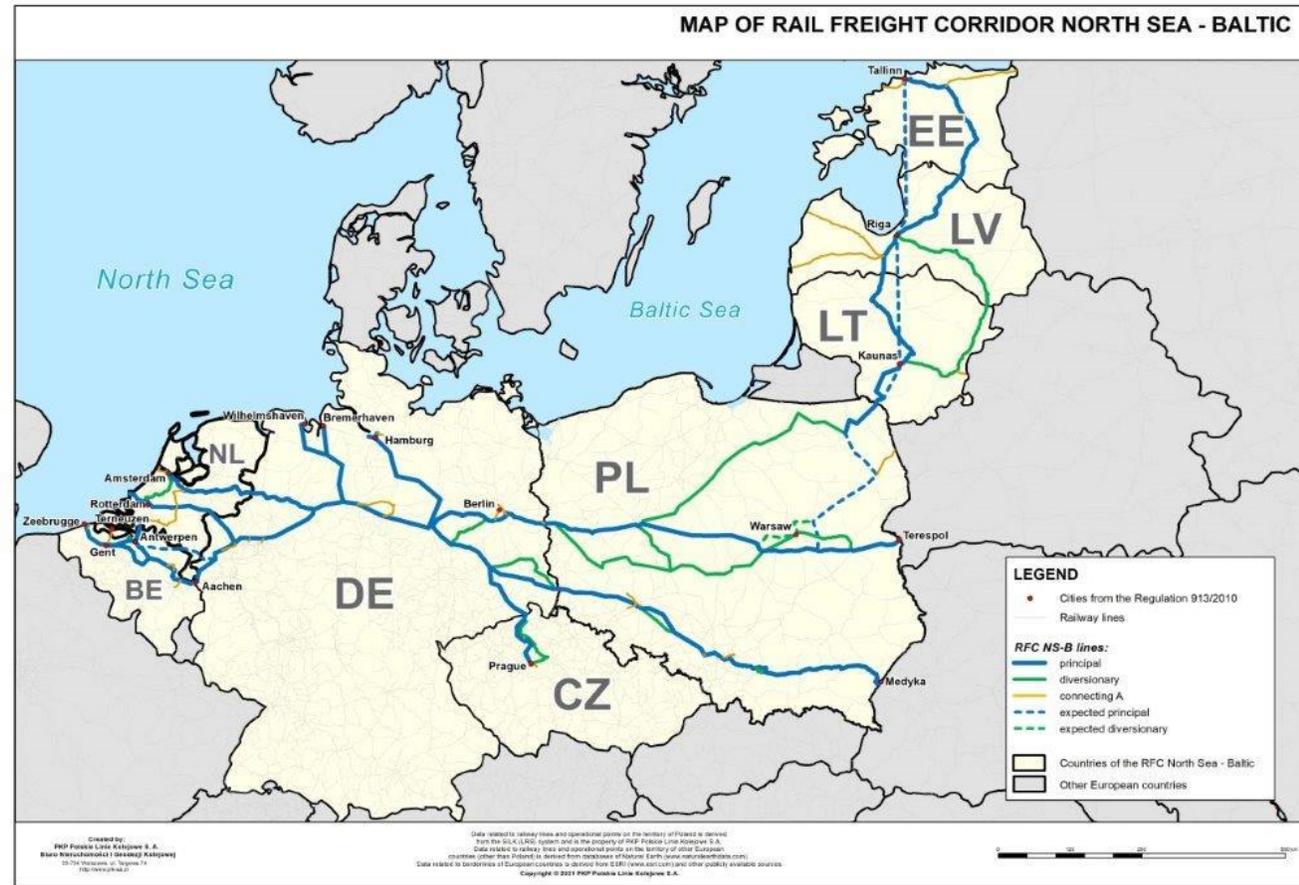
- Operation of 740m long trains is theoretically possible in **Belgium** and **Germany**
- Restriction e.g. due to **capacity bottlenecks** during peak hours are likely to occur
- However, it is not possible to mathematically measure the impact of these restrictions on the compliance, hence the 100% compliance rate in the table

View of the whole corridor - possibilities, limitation, expectation



– Example route Brest/Małaszewicze - Hamburg Hafen

- Brest – Małaszewicze 600m/750m*
- **via Małaszewicze Południowe PKP PLK*
- Małaszewicze – Swarzędz 750m
- Swarzędz – Oderbrücke 680m
- Oderbrücke station 600m / 740m**
- ***740m possible only with restrictions regarding limited standing time and using main tracks*
- Oderbrücke – Hamburg mainly 600m/740***
- **** 740m only for some stretches*



Carbon footprint - comparison

Emission CO2 - basic information

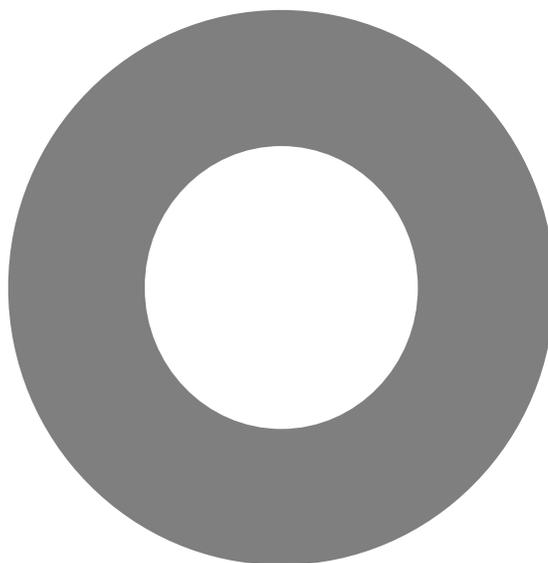
According to the calculations of experts, the average CO2 emission per tone-kilometer (tkm) is:

Rail transport

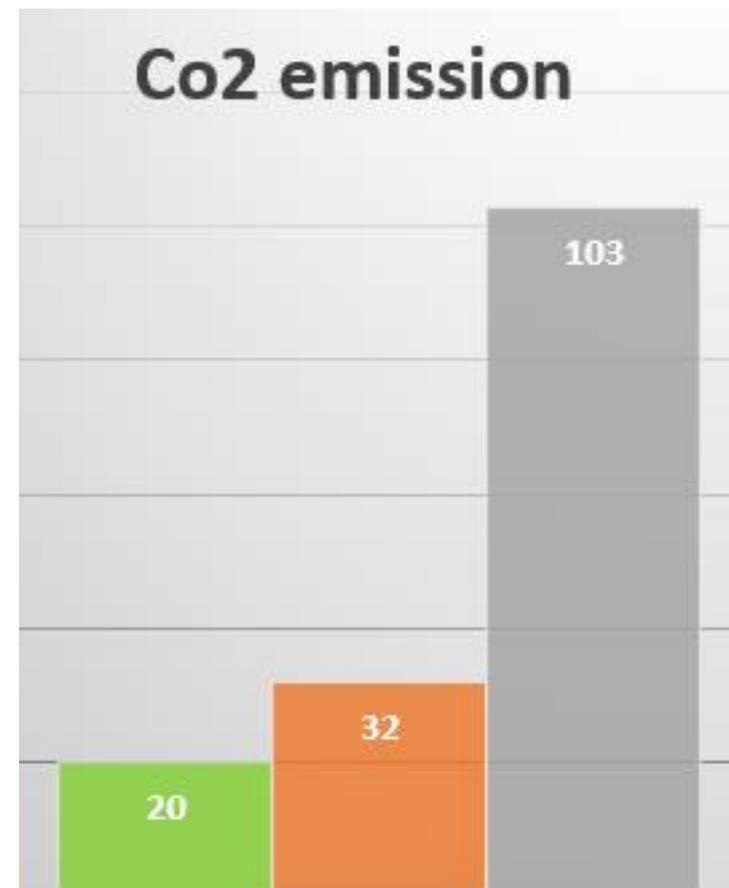


20 g / tkm

Road transport



103 g / tkm

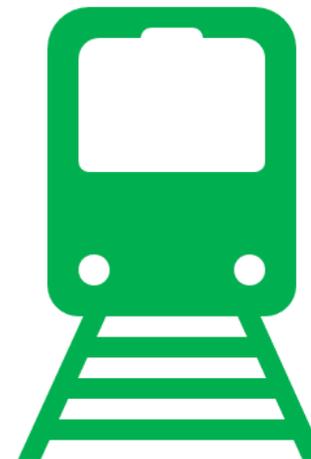


Carbon footprint - comparison

Carbon footprint on the Małaszewicze – Hamburg (truck) = $103\text{g/tkm} \times 20\text{tons} \times 1025\text{km} = \mathbf{2,1\ tons}$



Carbon footprint on the Małaszewicze – Hamburg (rail) = $20\text{g/tkm} \times 20\text{tons} \times 1120\text{km} = \mathbf{0,45\ tons}$



– Assumptions:

- 1 container = 20 tons
- Małaszewicze – Hamburg (for truck) $\approx 1025\text{ km}$
- Małaszewicze – Hamburg (for rail) $\approx 1120\text{ km}$
- Emission CO₂ (truck) = 103g/tkm
- Emission CO₂ (rail) = 20g/tkm

Carbon footprint - comparison

- Current length of the stretch Malaszewicze – Hamburg  (wagon set)
- Expected length  720 m (wagon set)
- 120 m extra train length  approx. 5 more wagons  10 containers more

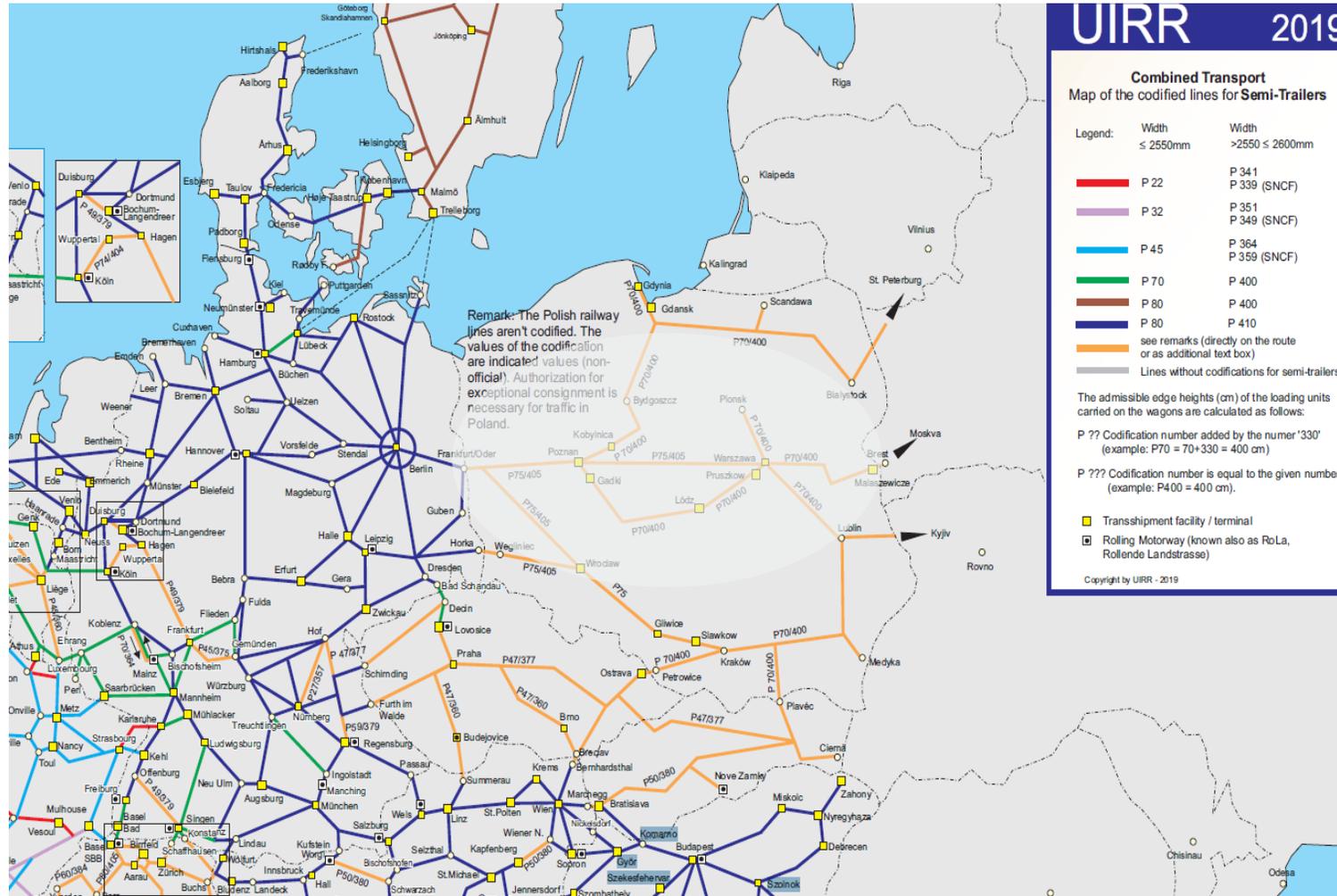


$$103 \times 20 \times 1025 = 2,1 \text{ tons} \times 10 = 21 \text{ tons}$$



$$20 \times 20 \times 1120 = 0,45 \text{ tons} \times 10 = 4,5 \text{ tons}$$

Codification of lines = simplification of international intermodal transport



Poland is a blank spot on the European railway coded lines map.

This means that any over-gauge load transport requires the **approval of the IM** !

Line codification means:

- simpler procedures
- ✓ faster organization of transport
- ✓ easier identification of shipments
- ✓ dimensions

It is a European standard that should also be implemented in Poland.

Codification of lines = simplification of international intermodal transport

3.4.3. Exceptional Consignments Carriage

1. The train runs with exceptional consignments are carried out by PLK under RRJ / IRJ, as applicable, pursuant to a prior establishment of each exceptional consignment carriage by rail.
2. Before applying for an exceptional consignment carriage capacity, the RU to carry the exceptional consignment shall apply for an exceptional consignment approval with the Centrum Zarządzania Ruchem Kolejowym PLK [PLK Railway Traffic Management Centre] as follows:
 - 1) For domestic train runs to be performed only on the railway lines under management of PLK or other domestic IMs, the exceptional consignment approval application shall be submitted at least 20 calendar days in prior of the train run or the submission deadline for train path allocation under RRJ or the RRJ update date. The application shall be submitted to the Centrum Zarządzania Ruchem Kolejowym PLK [PLK Railway Traffic Management Centre] regional department of jurisdiction over the train run start and identified in **Annex 4.3**;
 - 2) For international train runs, the exceptional consignment approval application shall be submitted at least 40 calendar days in prior of the train run or the submission deadline for train path allocation under RRJ or the RRJ update date. The application shall be submitted to:
PKP Polskie Linie Kolejowe S.A.
Centrum Zarządzania Ruchem Kolejowym
Przewóz Przesyłek Nadzwyczajnych
ul. Targowa 74, 03-734 Warszawa
e-mail: id.nadzwyczajne@plk-sa.pl
city tel.: (00 48) 22 473 35 67 or (00 48) 22 473 27 00
railway tel.: (922) 473 35 67 or (922) 473 27 00
city fax: (00 48) 22 473 35 68; railway fax: (922) 473 35 68

- In fact these procedures are faster, nevertheless they are still required, they obstruct the work and extend the process of starting the train
- Another issue concerns the procedure: if there is no **exceptional consignment approval**, the shipment should be accepted by a committee with the participation of a representative of PKP PLK SA at the border. Theoretically, each shipment should be measured. **This means that if there are 90 20`containers on the train, then 90 measurements should be made.**
- We propose to codify the main lines of the corridor first and then constantly extend the codification on other lines
- When can we expect the standardization of such a regulation in Poland?