RFC-NSB
2019 TMS Update

Interim results – Advisory Group Meeting

Study objectives and tasks

RFC-NSB 2019 TMS UPDATE

Study objectives

TMS update expected results to fulfil the requirements from the Regulation 913/2010

- o Short socio-economic analysis of the corridor and updating of the existing PEST analysis

Analysis of the current rail freight traffic/volumes and passenger traffic on the RFC NS-B routes (2017)

Prognosis for rail freight traffic/volumes on the RFC NS-B routes (2022)

Study tasks

Task 1
- Definition of the corridor catchment area

Task 2
- General socio-economic development on the corridor

Task 3
- Analysis of the **current** transport market on the corridor

Task 4
- Evaluation of the **future** transport market development on the corridor

Task 5
- Conclusions and executive summary

Task 1: Definition of the corridor catchment area

ALIGNMENT, TERMINALS AND BORDER CROSSING POINTS

Schematic Map and Corridor Extensions

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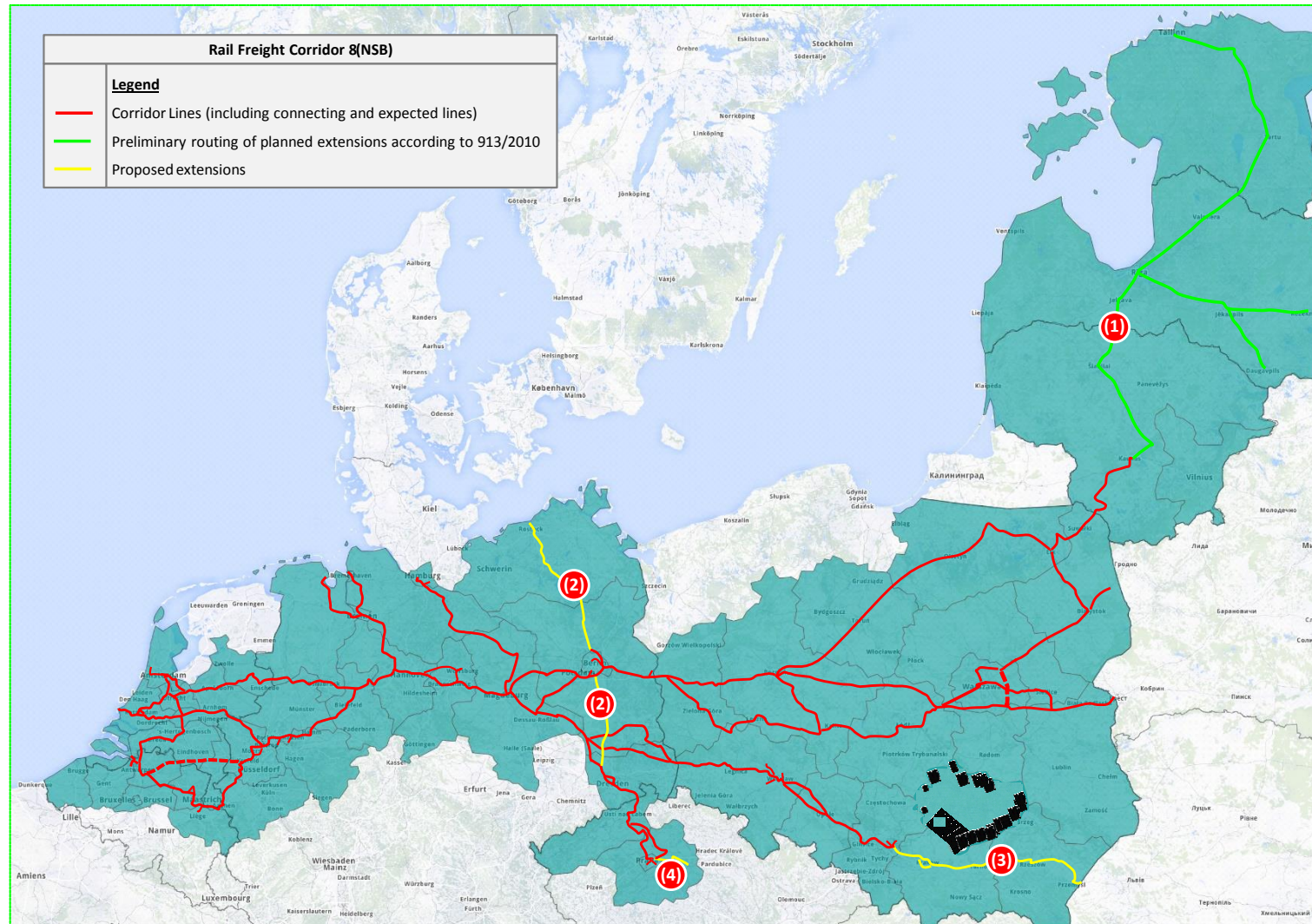
Corridor alignment

For the planned extension **(1)** from Kaunas to Riga and Tallinn, the corridor alignment refers to the proposed preliminary 1,520mm lines in the Baltic States.

Proposed extensions:

- **(2)** Rostock – Berlin to Priestewitz / Dresden (DE);
- **(3)** Katowice – Medyka (PL);
- **(4)** Praha – Kolin (CZ).

Additionally, the "Iron-Rhine" has been visualised in dotted.

Source: own elaboration based on information from CIP, CID and consultation with the Infrastructure Managers, February 2019

Corridor Border Crossing Points

BCPs along the RFC NS-B

The table below lists the corridor BCPs, including the ones on the lines currently in operation between Lithuania, Latvia and Estonia.

Bordering Member States		Cross Border section
BE	NL	Essen (BE) / Roosendaal (NL)
BE	NL	Hamont (BE) / Budel (NL)*
BE	DE	Botzelaer (BE) / Aachen West (DE)
NL	DE	Venlo (NL) / Kaldenkirchen (DE)*
NL	DE	Zevenaar (NL) / Emmerich (DE)
NL	DE	Oldenzaal (NL) / Bad Bentheim (DE)
DE	CZ	Bad Schandau (DE) / Děčín (CZ)
DE	PL	Fankfurt (Oder) (DE) / Rzepin (PL)
DE	PL	Horka (DE) / Węgliniec (PL)
PL	LT	Trakiszki (PL) / Mockava (LT)
LT	LV	Joniškis (LT) / Meitene (LV)
LV	EE	Lugaži (LV) / Valga (EE)

*Source: Customer Information Platform, Corridor Information Documents, Book 5, own analysis; Note: * BCPs relating to the Iron-Rhine section, not in use on the RFC NS-B at present*

# Task 2: General socio-economic development on the corridor

UPDATE OF THE PEST ANALYSIS

PEST analysis

| Political & Institutional	Socioeconomic	Technical

Political & Institutional

- **The European Corridors**
  - Ten Rail Freight Corridors (RFCs) are currently in operation, RFC 10 is under development/implementation (expected to be operational 2020)
  - A dual-layer (core and comprehensive) TEN-T network including 9 CNC corridors, with foreseen extensions in the upcoming revision of the CEF regulation
- **Eurasia Land Bridge/OBOR Initiative**
 - The RFC NS-B represent the main access route for the growing EU-China rail traffic
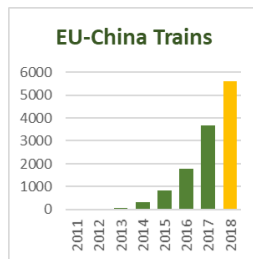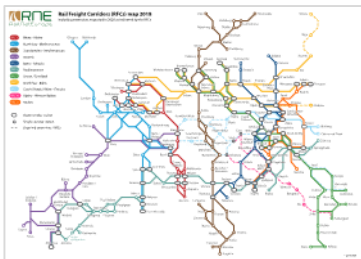
Socioeconomic

- **Short term outlook**
  - The outlook is characterised by an overall GDP growth at all territorial scales, albeit with decreasing annual rates (1.7% in average for the RCF NSB member states).
  - No other socio-economic variables are identified having either a positive or negative effect on the definition for the market of the RFC NS-B in the short term
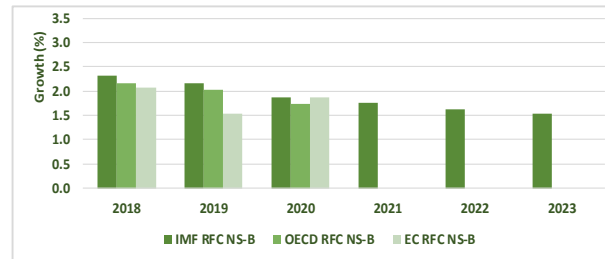
Technical

- **Corridor characteristics**
  - Efforts are required to improve the characteristics (axle load, train length, speed, ERTMS) of the corridor in the Eastern Member States - most of the needed investments are in Poland
- **Planned developments**
  - Infrastructure improvements are foreseen, but no market impact is expected due to major projects in the short term
  - In the long term, potential impact of Rail Baltica Global Project
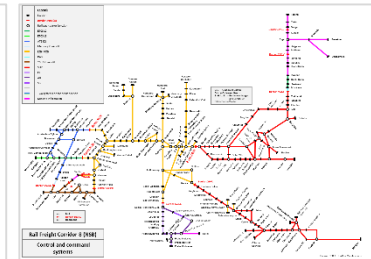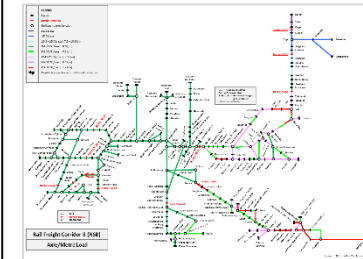
Task 3: Analysis of the current transport market on the corridor

ANALYSIS OF MAIN TRANSPORT STATISTICS

Modal split between the MSs along the RFC NS-B

**Modal split along the corridor**

- o Road is the dominant transport mode with 47% of the share of total transported tonnes between the MSs of the RFC NS-B

- o IWW transport is absent for many O/D relations but represents 33% of the total freight moved between the corridor MSs (essentially BE, NL, DE)

- o Both rail and maritime transport register a 10% share of the total freight moved

Main transport relations between corridor MSs

- o According to the total tonnes moved between the RFC NS-B MSs in 2017, equalling 716 million tonnes, over 66% of the volumes are moved between Belgium, the Netherlands and Germany. Another 21% is moved between Germany, the Czech Republic and Poland

Main trends

- o The trend of transport volumes of freights between the corridor MSs in the 2013-2017 period is growing for road transport, overall steady for rail and IWW modes and slightly declining for maritime transport

- o Trends related to rail and road transport volumes between the corridor MSs and UAR countries show a relevant growth especially in the West-East direction
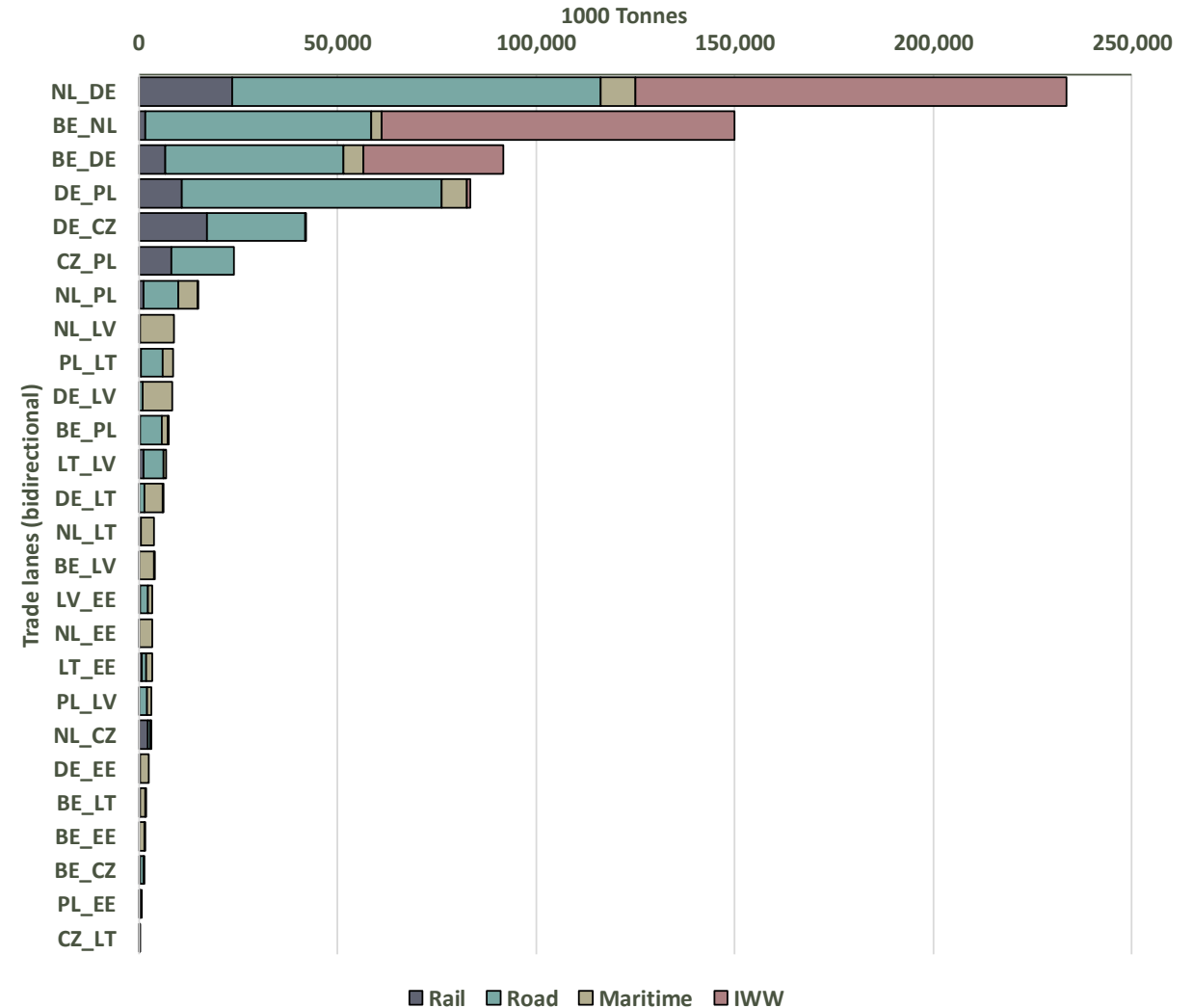
Source: Eurostat; Note: Figures relate to total transport at the country level

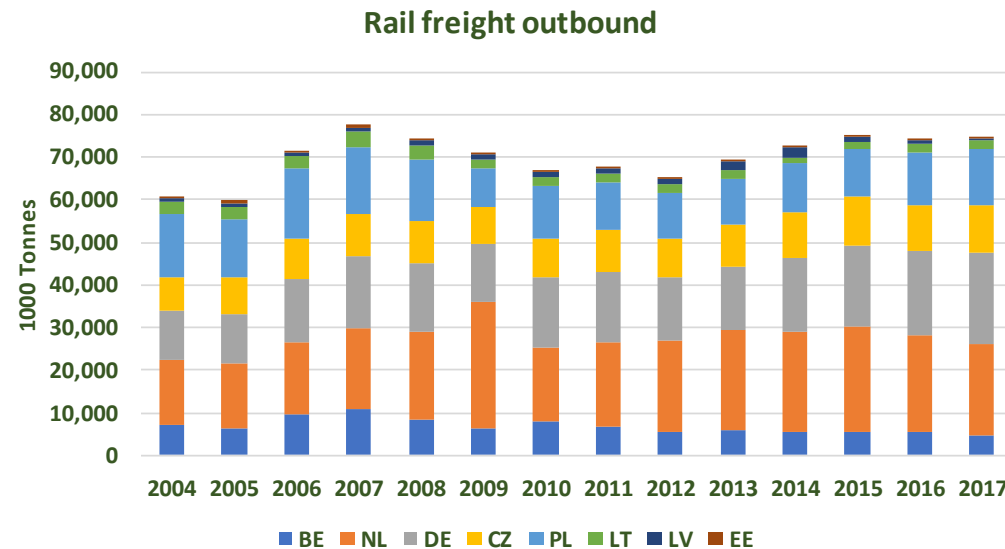# Rail freight transport between Corridor MSs

Main rail trade lanes

o Netherlands – Germany (more than 23 million tonnes)

o Czech Republic and Germany (17 million tonnes)

o Poland and Germany (almost 11 million tonnes)

## Inbound and outbound flows

o Outbound flows are comparable between Germany and the Netherlands

o Germany is largely the prevalent attractor among the corridor MSs

2017 data	Unloading Country							
1000 Tonnes	BE	NL	DE	CZ	PL	LT	LV	EE
BE	-	867	3,824	117	75	-	-	-
NL	677	-	18,495	1,298	596	-	-	-
DE	2,826	4,903	-	9,432	4,343	10	-	-
CZ	71	958	7,772	-	2,515	1	-	-
PL	86	609	6,506	5,686	-	55	5	1
LT	-	-	6	4	418	-	1,056	734
LV	-	-	-	-	20	141	-	95
EE	-	-	-	-	-	26	192	-

(Loading Country — row labels)

Source: Eurostat; Note: Figures relate to total traffic at the country level

Rail freight outbound

Rail freight inbound

Source: Eurostat; Note: Figures relate to total traffic at the country level
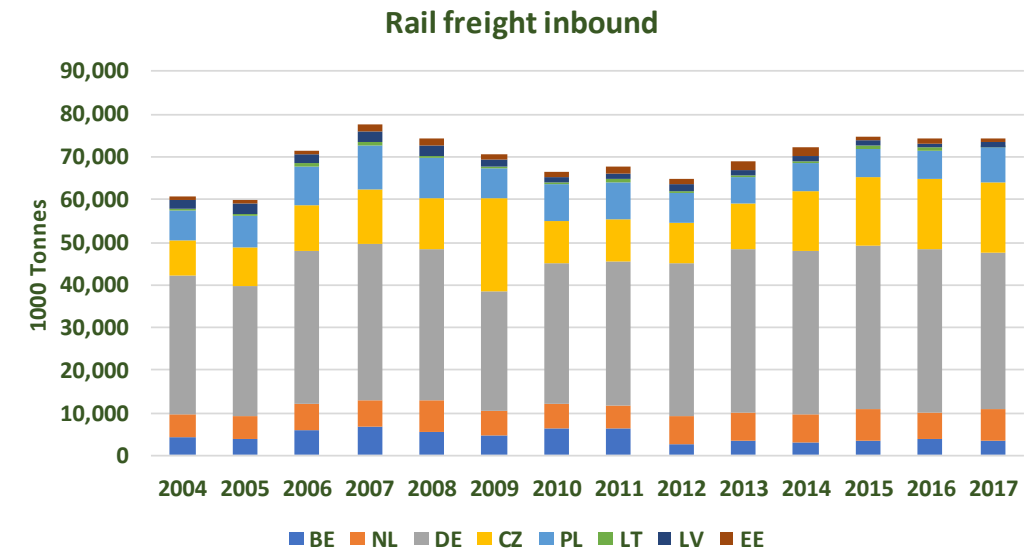
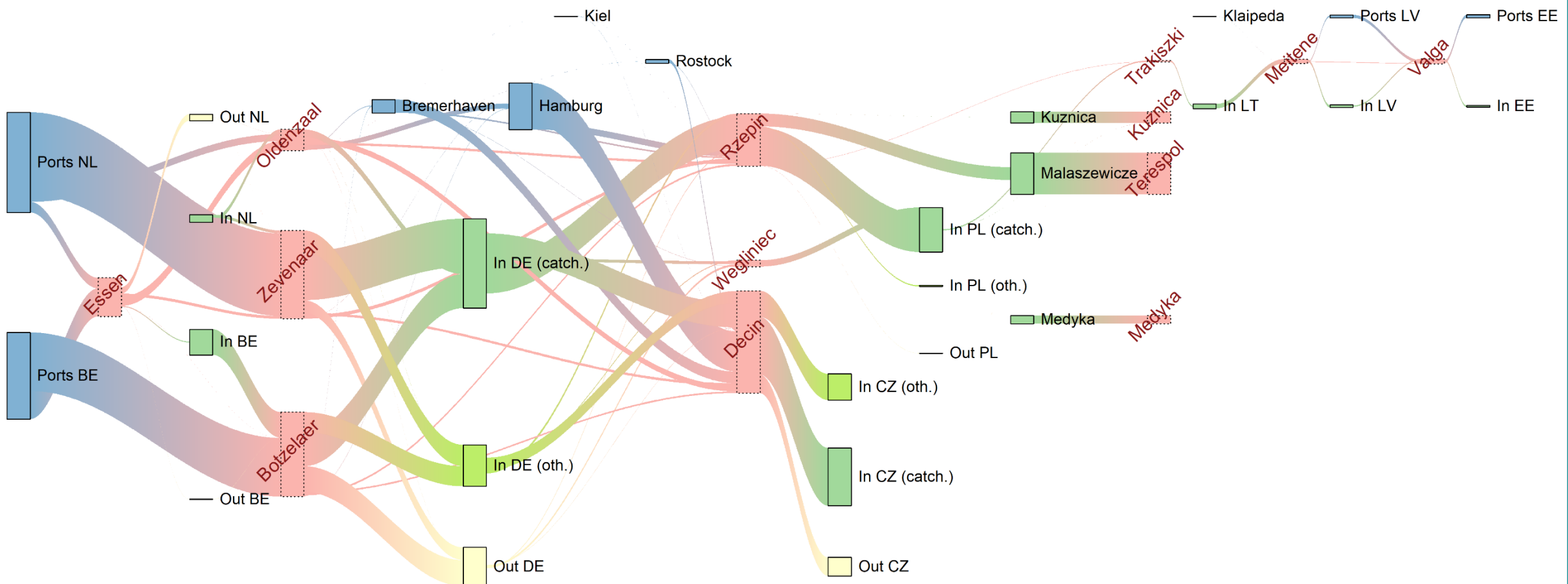*Source: Eurostat; Note: Figures relate to total traffic at the country level*

Task 3: Analysis of the current transport market on the corridor

ANALYSIS OF TRAIN DATA PROVIDED BY IMs

Flows of international trains along the corridor

Legend

- ▨ Corridor BCP
- ▨ Port in the catchment area
- ▨ National destination within the NS-B catchment area
- ▨ National destination outside the NS-B catchment area
- ▨ International destination through non NS-B BCPs

Source: own elaboration on 2017 data provided by the IMs – only trains crossing at least one BCP are included in this diagram

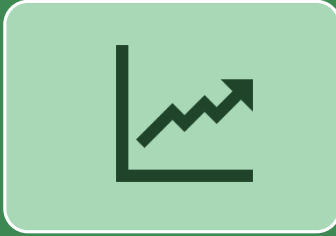# Task 4: Analysis of the future transport market on the corridor

METHODOLOGY

Task 4 – Original methodology

Projection of the future volumes based on the application of growth factors to the 2017 base volumes, on the basis of GDP/trade available forecasts for the short term period and elaboration of corresponding matrices and transport volumes for all transport modes as well as estimation of corridor and possibly additional trains for rail freight transport

139 questionnaires submitted, 15 received

▪Submission of detailed interviews to the most relevant stakeholders to collect their views on the market, information on their investment plans and strategies, as well as suggestions about short terms improvements with an impact on the market share of railway transport on the Corridor

Definition of a "most probable" 2022 scenario based on existing matrices and their future socio-economic projections, corroborated by means of consideration of the statements and views of the stakeholders on their operations and likely development of the market

2019 TMS Survey

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Survey sample composition

Stakeholders	BE	NL	DE	CZ	PL	LT	LV	EE	Totals
Inland Terminals	3	3	5	5	15	3	1	0	**35**
Logistics Service Providers	1	3	11	4	10	2	2	0	**33**
Port Authorities	1	2	4	0	0	0	0	2	**9**
Railway Undertakings	2	3	7	3	10	2	3	2	**32**
Shippers	3	3	2	5	13	4	0	0	**30**
Totals	**10**	**14**	**29**	**17**	**48**	**11**	**6**	**4**	**139**

Questionnaires responded

Stakeholders	Responded
Inland Terminals	4
Logistics Service Providers	2
Port Authorities	3
Railway Undertakings	6
Shippers	0
Totals	**15**

Survey period: February - May 2019. questionnaires submitted via email, followed by reminders by email and phone

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Overall methodology and assumptions 1/2

Given the low response rate of the survey to the logistics and transport operators, a top-down approach has been used to develop the short-term (2022) market forecast for the RFC NS-B, based on the analysis of historical time series

The following outputs – corresponding to the equivalent data available about the transport market at the base year – have been estimated:

o Annual flows of goods along all RFC NS-B **trade lanes** for road and rail modes;

o Annual **train traffic flows** on all RFC NS-B relations crossing at least one corridor BCP, and the corresponding annual flows at corridor BCPs.
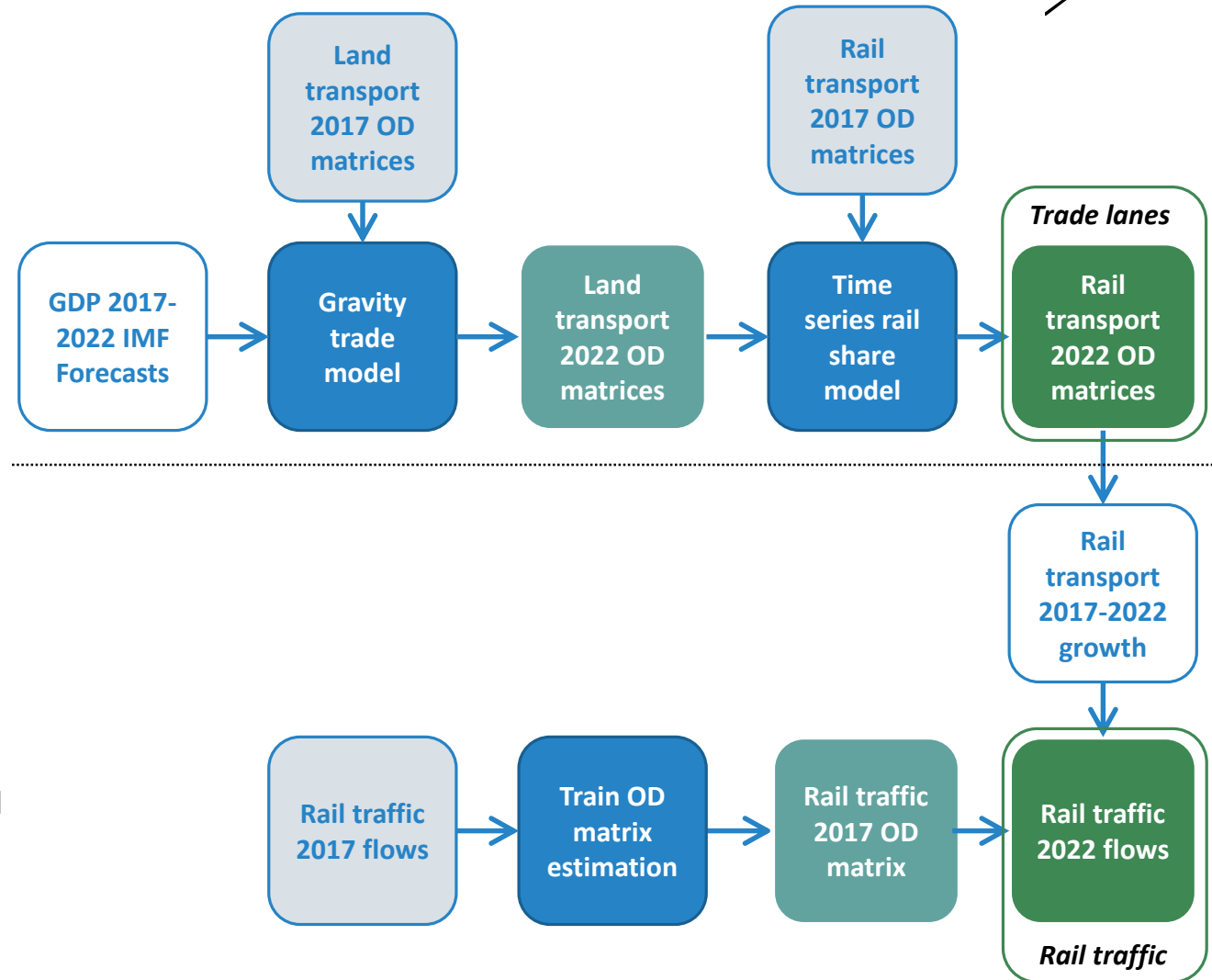
Overall methodology and assumptions 2/2

The top-down modelling process first deals with multi-modal (road and rail) **trade lanes** at the national level:

- The **gravity trade model** applies to the base year (2017) matrices the GDP elasticity estimated based on the historical trend to the projections published by the IMF, generating the short term (2022) land transport OD matrices (in thousand tonnes);

- A **time series rail share** model is then applied to the OD matrix to predict the rail share in the short term (2022) based on the historical performance of each trade lane;

- The **output** of the trade-lane modelling steps is the rail transport 2022 OD matrices (in thousand tonnes per year).

The forecasting process for estimating **rail traffic flows** is also based on two main steps:

- First, the **OD train matrix** is estimated from the train flows data at BCPs elaborated on the basis of the data provided by IMs, applying a weighted least square statistical regression procedure on a rail network connecting origins and destinations in the study area;

- Then, **growth rates** estimated by the trade-lane model are applied to each OD of the rail traffic matrix to estimate the short term traffic;

- The **output** of the rail-traffic modelling steps is the rail traffic at the corridor BCPs by main traffic zones (in trains per year).

Project schedule

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Project Time Schedule

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PROJECT TIME SCHEDULE	2018		2019										
November 2018/October 2019	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Contract signature													
Task 1 Definition of the corridor catchment area													
Task 2 General socio-economic development on the corridor													
Task 3 Analysis of the current transport market on the corridor													
Task 4 Evaluation of the future transport market development on the corridor													
Task 5 Conclusions and executive summary													

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