



**Railway Consulting  
and Engineering**

A long, green freight train is captured in motion, blurred horizontally, as it travels along a railway track. The scene is set during a golden sunset or sunrise, with the sun low on the horizon to the left, casting a warm glow over the landscape. The sky is filled with soft, colorful clouds. To the left of the tracks, there is a grassy embankment with some bare trees. Overhead power lines and poles run parallel to the tracks.

## **Company Presentation**

October 2024



# Who we are

## facts & figures



Founded in 2001



To our customers  
count companies,  
Private investors, public  
authorities, Banks and more...



Offices in Wiesbaden, Dessau,  
and Berlin, Representatives in the  
the Netherlands, Turkey and  
Romania



60+ permanent employees



Worldwide projects in over  
50 countries



Independent, 100% in  
Private property (GmbH)

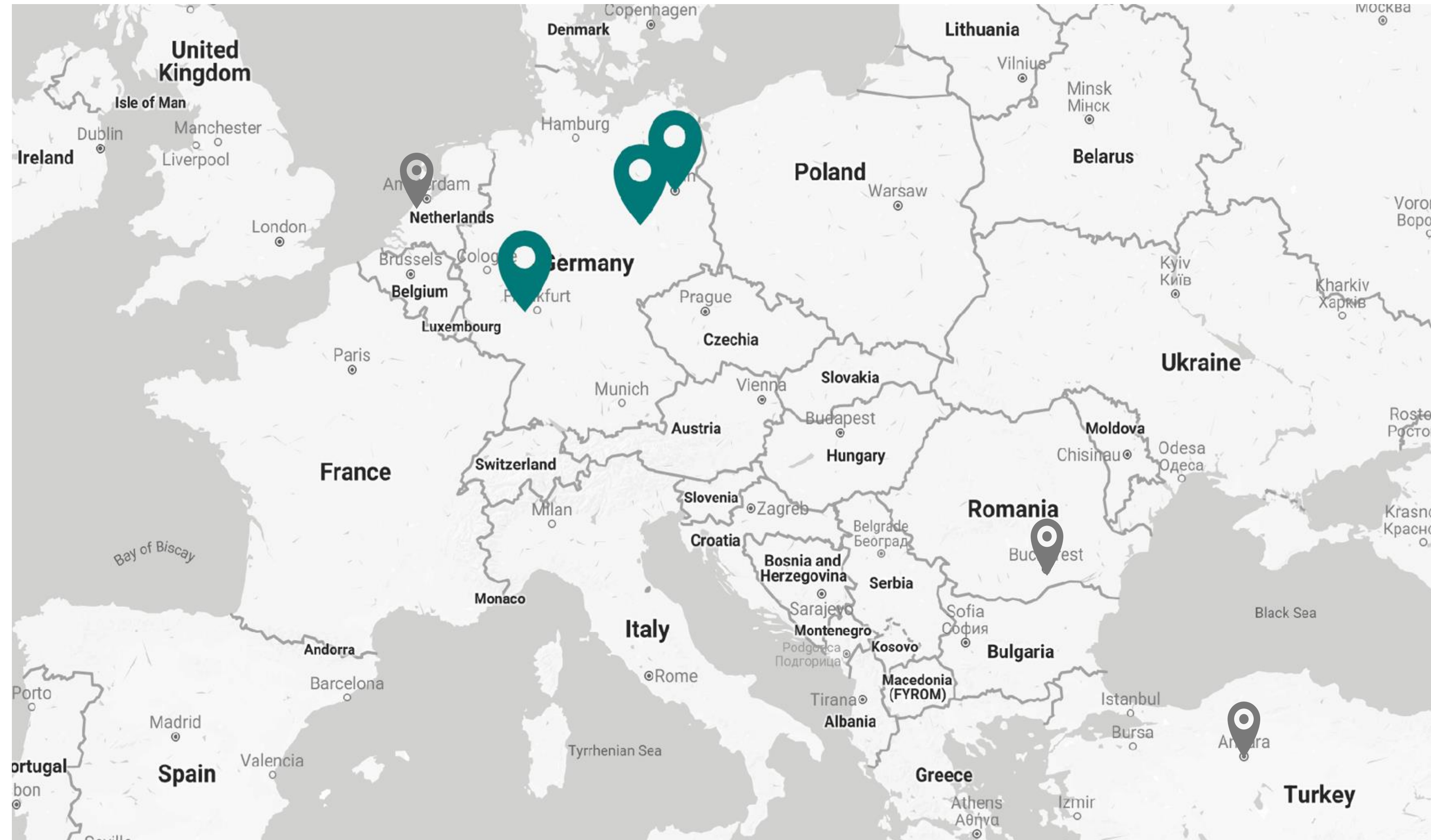
# Where we are

## Locations

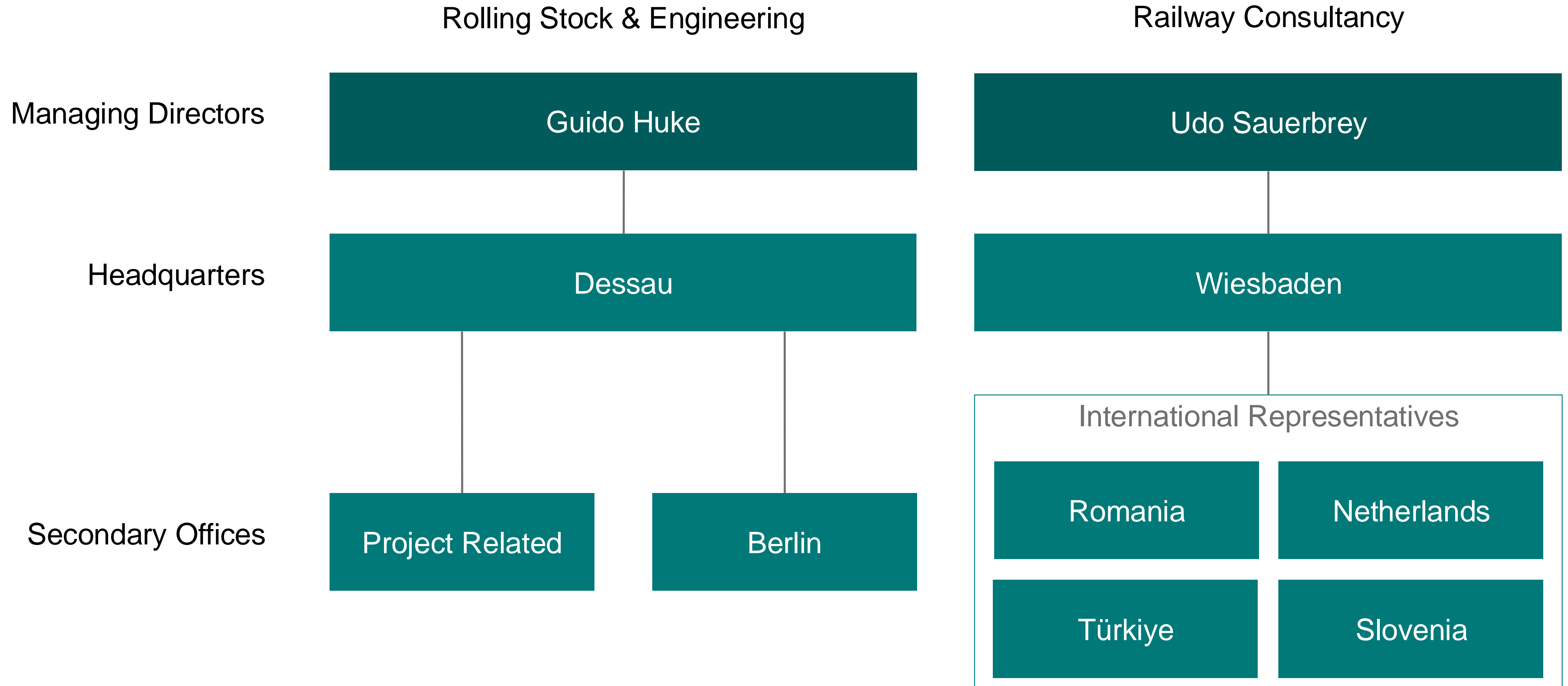
- ▶ Wiesbaden
- ▶ Dessau
- ▶ Berlin

## Representations

- ▶ Netherlands
- ▶ Romania
- ▶ Turkey
- ▶ Slovenia



# How we are organized





## Rolling Stock & Workshop



### Vehicle & Workshop Concept

- Concept development for rolling stock, components & maintenance
- Workshop concept
- Definition of specifications
- Support in tenders



### Design & Production Monitoring

- Monitoring of vehicle development, construction, homologation & commissioning
- Preparation & monitoring of general inspections modernizations & repairs
- Workshop audits



### Technical Controlling / Asset Management

- Technical & commercial fleet controlling
- Vehicle inspections, Monitoring of maintenance management & workshops
- Error & deviations' analysis
- „End of Term“-Management



### Commercial Valuations

- Fleet, vehicle & workshop analysis
- Value development forecasts
- Value preservation concepts
- M&A support
- Market studies

## Operations



### Restructuring & Organization

- Modernization & strategic control of operations



### Rail Operations

- Efficient, competitive & optimised. We refine railway operations worldwide.



### Infrastructure & Terminals

- We have the tools & knowledge to upgrade the very backbone of railways: to keep you & your operations moving forward.

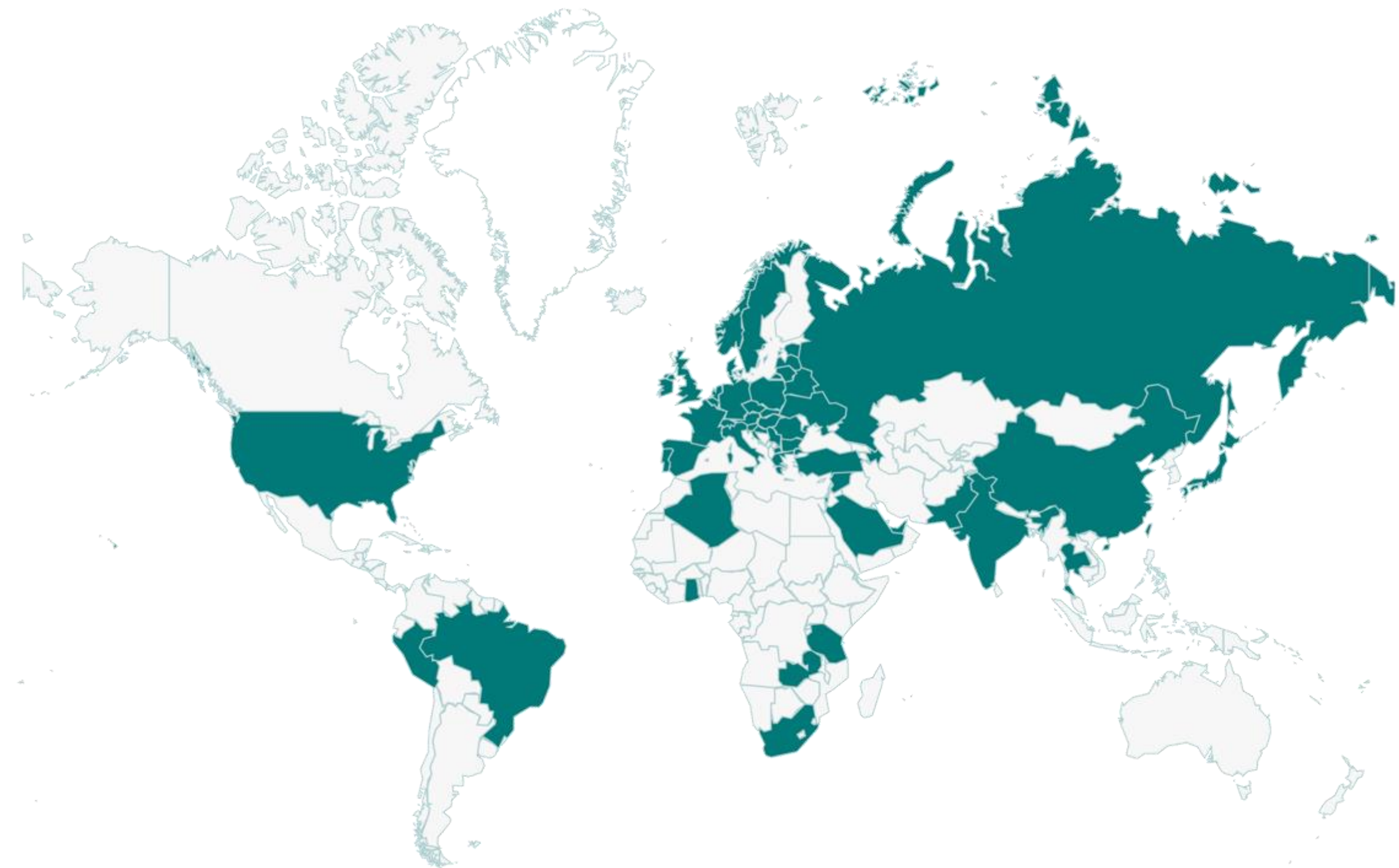


### IT & Research

- Railways, modernized. We seamlessly integrate new technologies into existing systems to keep one step ahead in the rapidly changing world.

# International projects

- ▶ National and international transport companies
- ▶ Cities, municipalities, states and transport associations
- ▶ Supply and component industry
- ▶ Companies from the financial sector and public institutions
- ▶ Industrial and trading companies as well as ports and shippers





# Infrastructure & Capacities

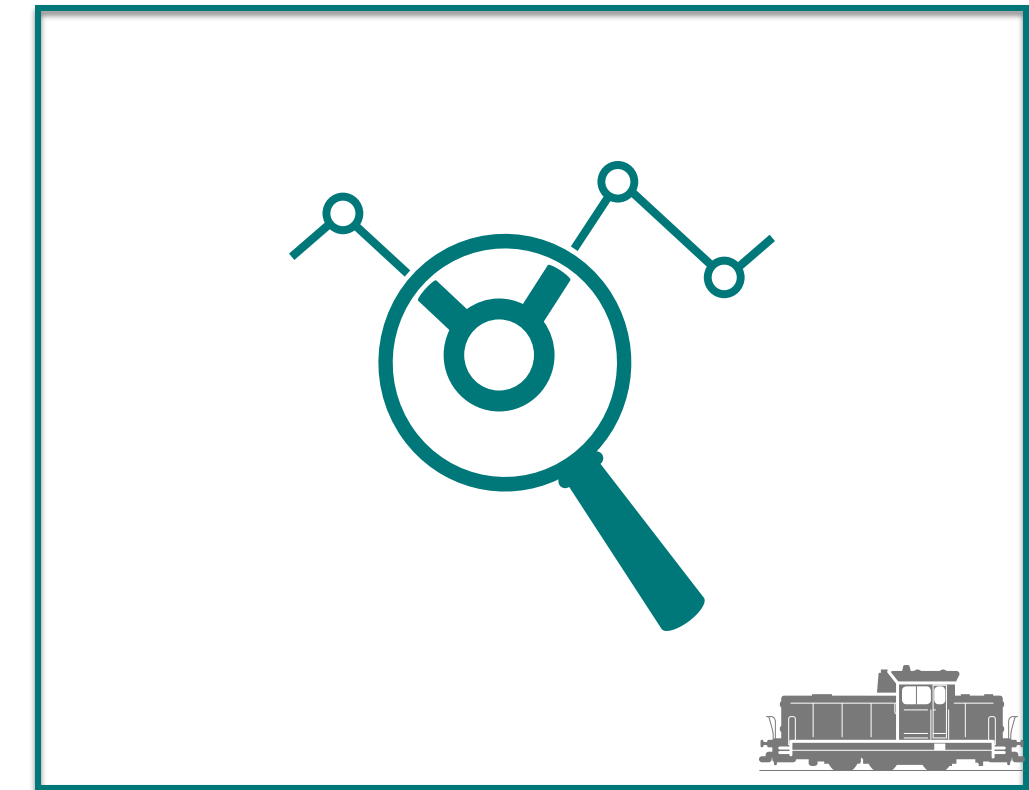
# Infrastructure & capacities



**Investment cost  
estimates for  
infrastructure projects**



**Evaluation of the  
condition of  
infrastructure**



**Capacity analyses for  
main lines, factory and  
port railways**



# Infrastructure & capacities

## Example projects

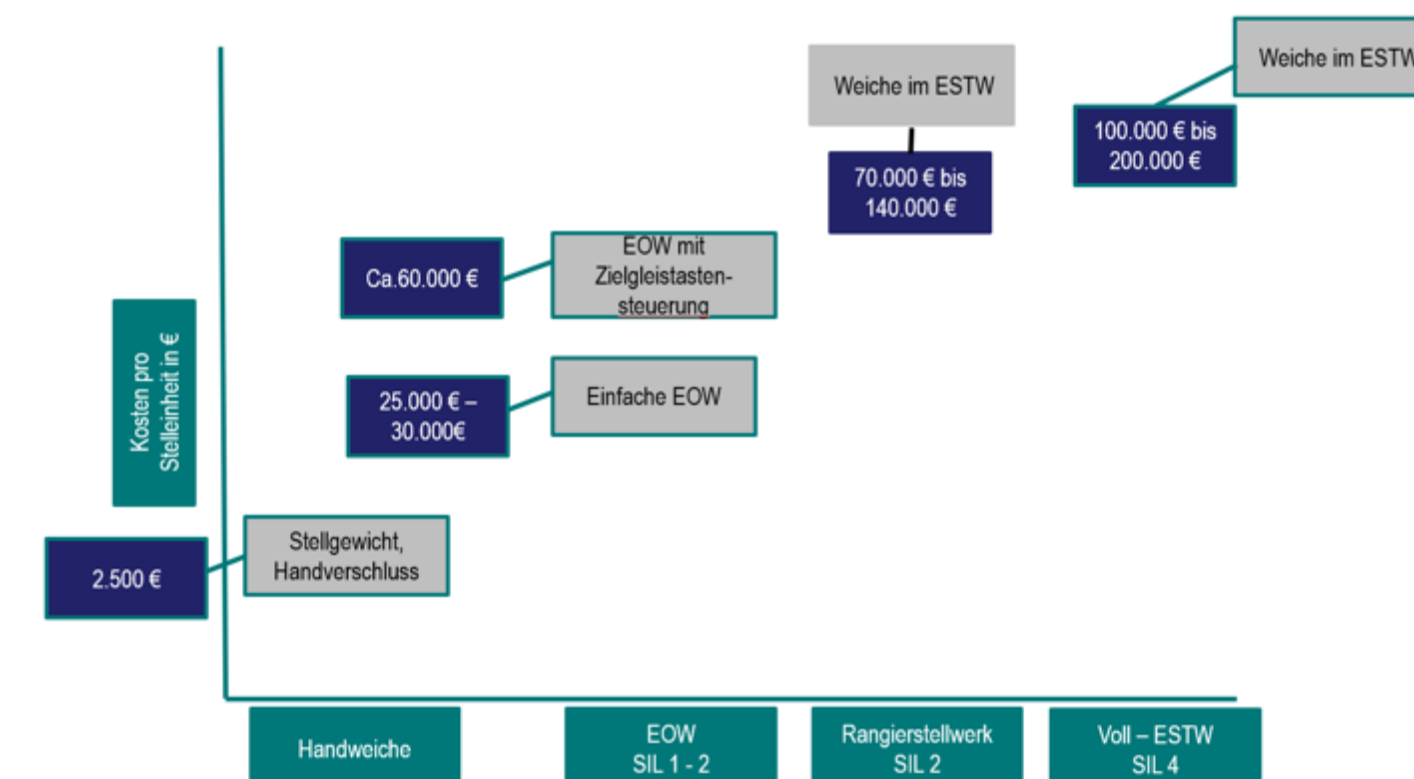
### Assessment of the state of rail infrastructure

- Track inspections
- Prioritisation of measures
- Determination of the structural engineering effort
- Coordination with authorities
- Preparation of expert opinions



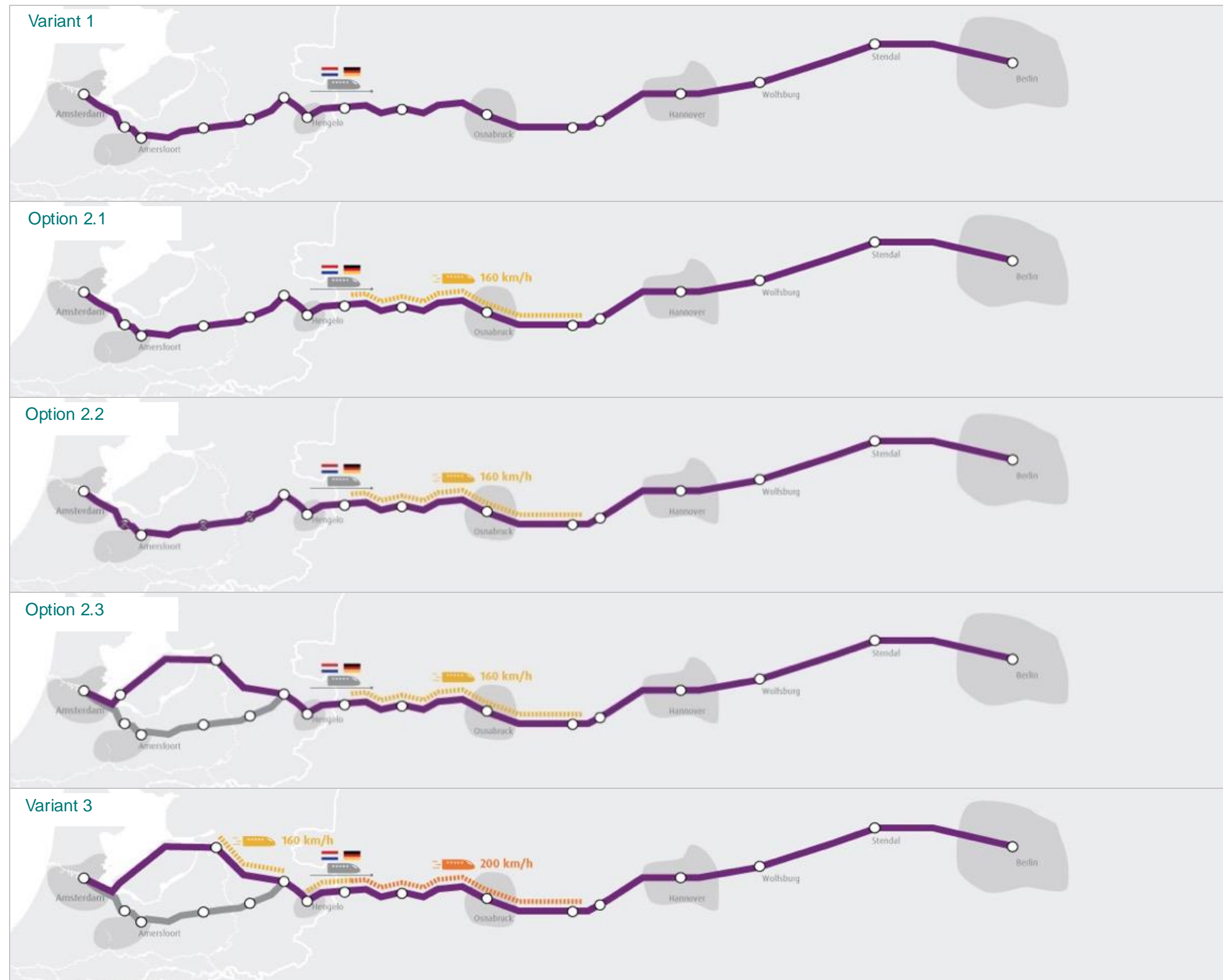
### Estimate of investment costs

- Rough determination of investment costs for railway infrastructure
- Application of the DB cost characteristics catalogue for national projects
- Determination of the costs of railway safety technology



# Infrastructure & capacities

## Example projects



Variante	Variante 1	Variante 2.1	Variante 2.2	Variante 2.3	Variante 3
Intraregionale Erreichbarkeit	+	++	++	++	++
Interregionale Erreichbarkeit	+	+	+	++	+++
Zuverlässigkeit/ Machbarkeit	O	+	+	-	+
Reisenden- entwicklung	+	+	++	+++	++++
Modal Split	+	+	++	+++	++++
Umweltaspekte	+	+	++	+++	++++
Investitions- kosten		€ 358 - € 458 Mio.	€ 358 - € 458 Mio.	€ 358 - € 458 Mio. *	€ 1.978 - € 2.561 Mio.
Betriebskosten	+	+	+	+	+++

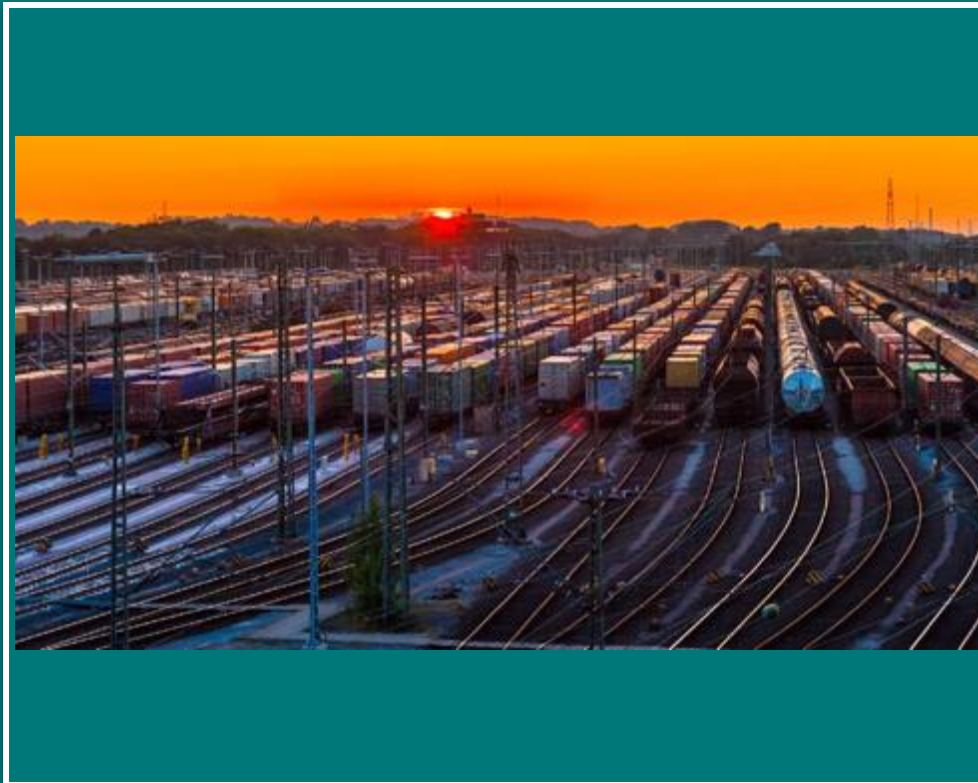
### Evaluation of infrastructure projects

- Estimate of operating and investment costs
- Use and sales forecasts
- Economic and financial benefit-cost analyses

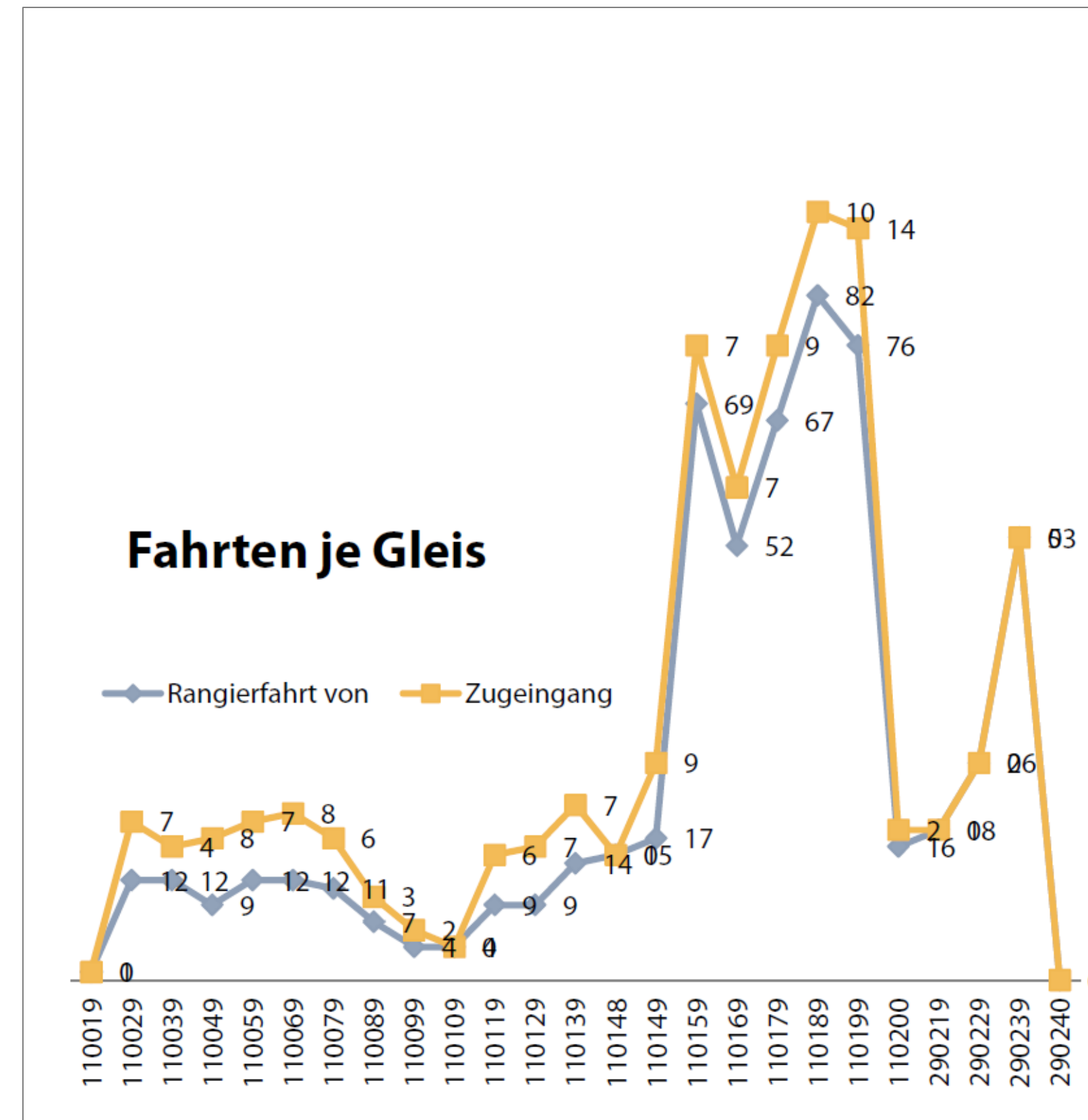


# Infrastructure & capacities

## Example projects



Capacity analyses for  
factory and port  
railways



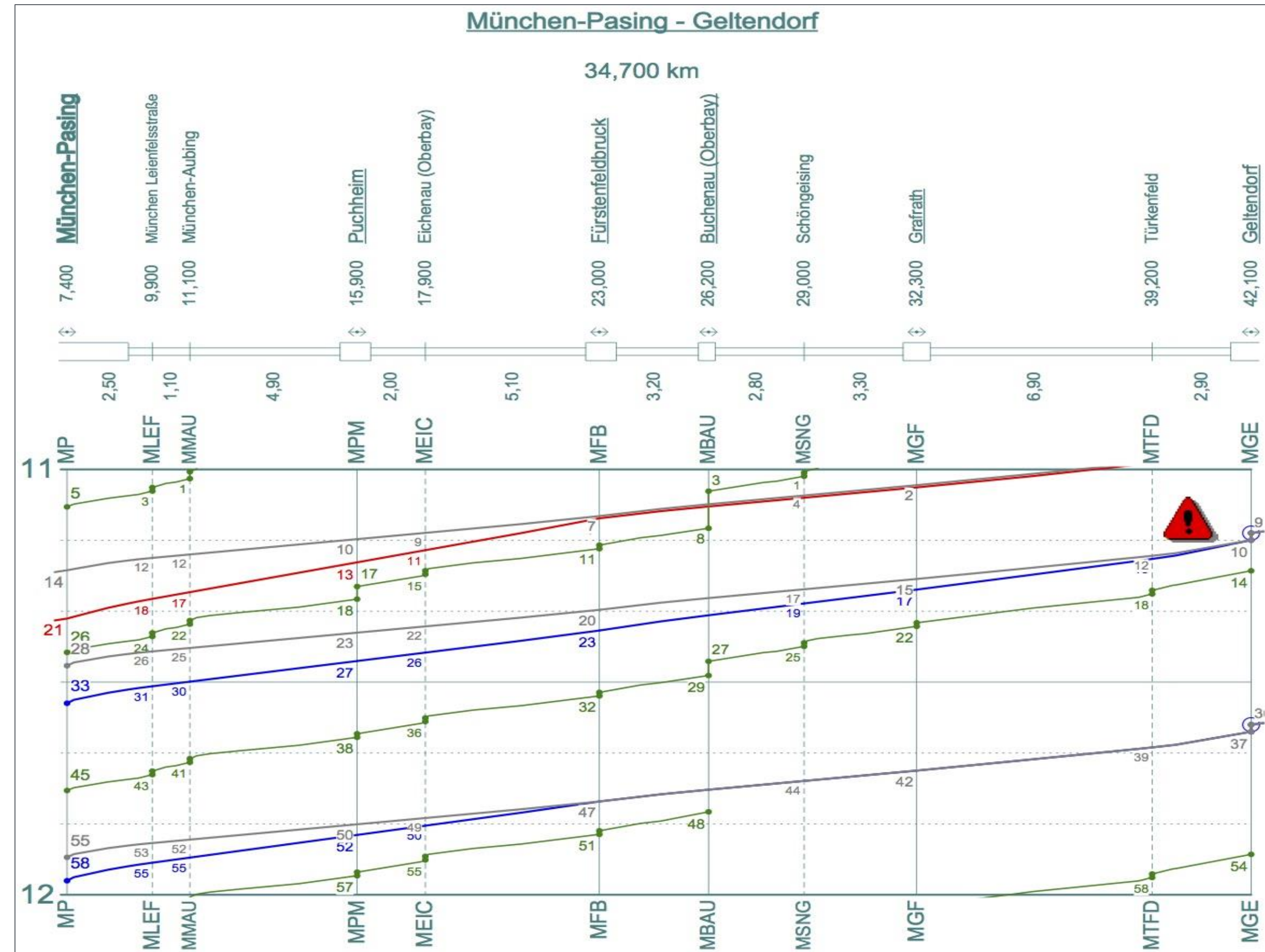


# Infrastructure & capacities

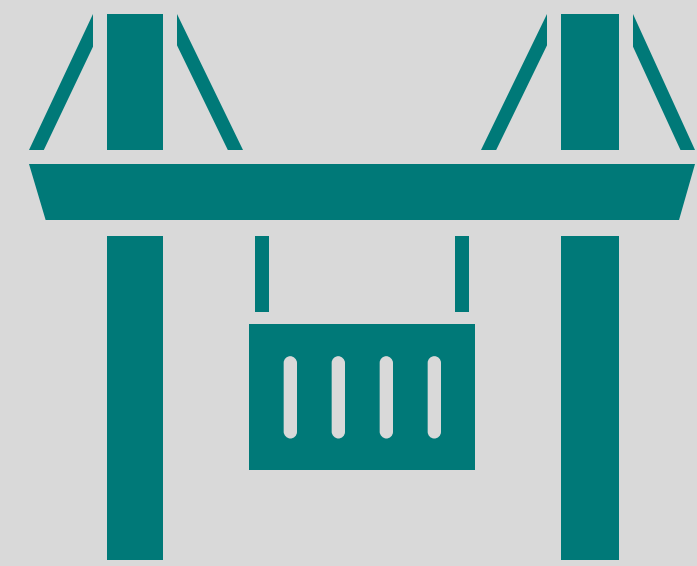
## Example projects



Capacity analyses for  
main lines







# Terminals

# Terminals

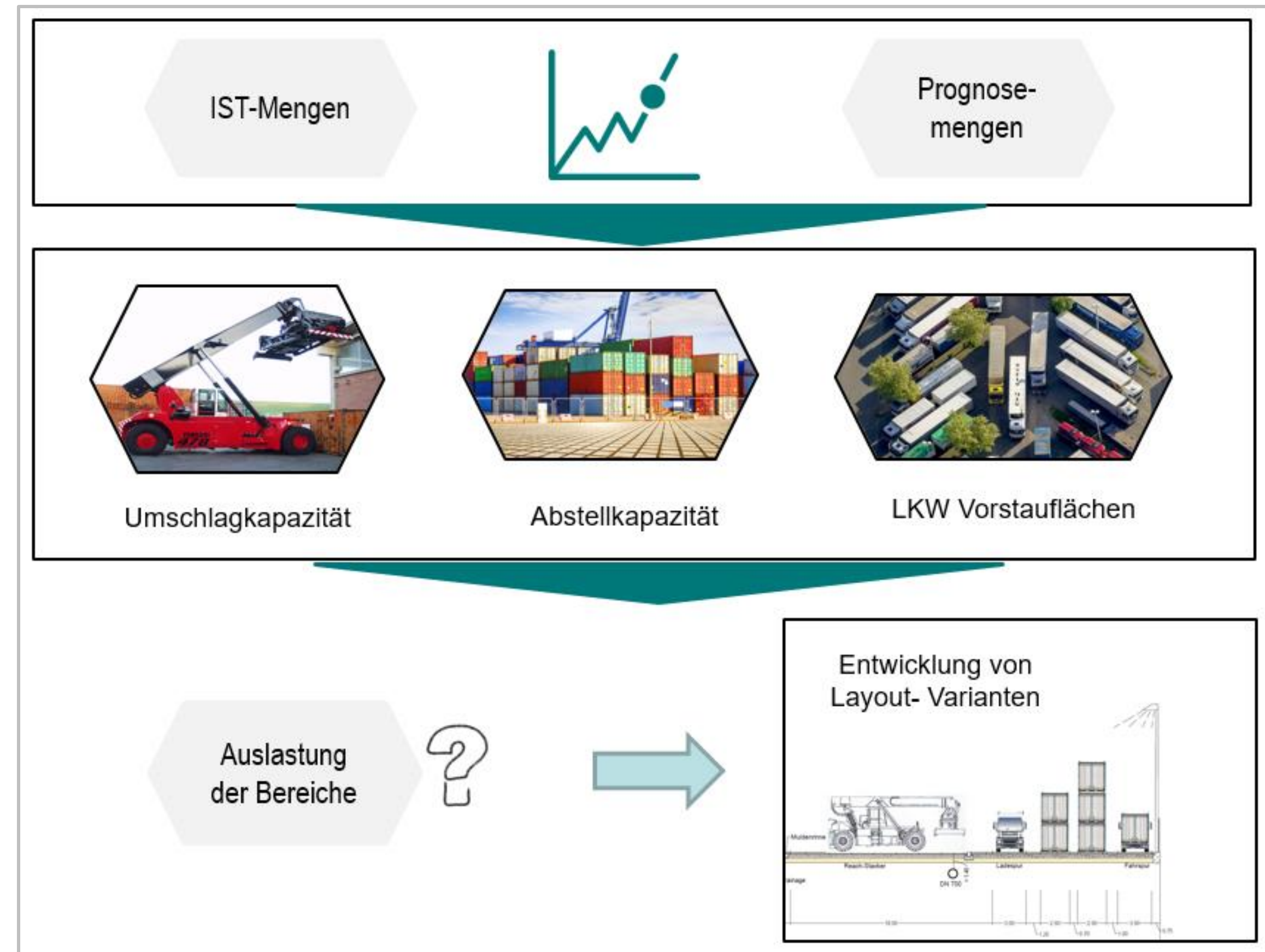


**Terminal planning**

**Planning support**

**Economic efficiency  
analysis/ business  
plan preparation**

**Layout/process  
optimization**





# Terminals



**Determination of  
handling and  
intermediate storage  
capacities**

**development of  
Possible solutions for  
Bottleneck removal**

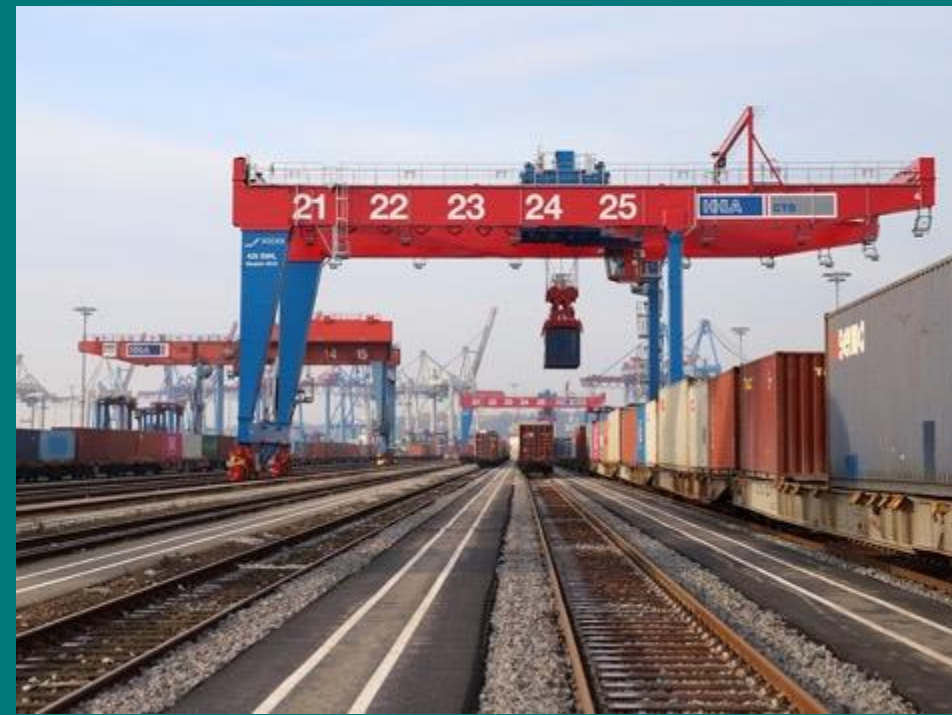
Bedarf an Abstellkapazitäten (Gefahrgüter)	
Transportaufkommen Schiene p.a. in TEU (Jahr 9)	19.610
Bemessungsfaktor Gateway	
Umschlagaufkommen p.a.	19.610
Anzahl Verkehrstage	250
Umschlagvolumen VT	78
Anteil abgestellter LE	100%
Durchschnittliche Abstelldauer	24
Bedarf an Abstellkapazität/VT in TEU	78
Faktor TEU in LE	1,30
Bedarf an Abstellkapazität/ VT in LE	60,34

Bedarf an Abstellkapazitäten (Reefer)	
Transportaufkommen Schiene p.a. in TEU (Jahr 9)	24.809
Bemessungsfaktor Gateway	
Umschlagaufkommen p.a.	24.809
Anzahl Verkehrstage	250
Umschlagvolumen VT	99
Anteil abgestellter LE	100%
Durchschnittliche Abstelldauer	60
Bedarf an Abstellkapazität/VT in TEU	248
Faktor TEU in LE	1,20
Bedarf an Abstellkapazität/ VT in LE	206,74

Bedarf an Abstellkapazitäten (Konventionell)	
Transportaufkommen Schiene p.a. in TEU (Jahr 9)	90.439
Bemessungsfaktor Gateway	
Umschlagaufkommen p.a.	90.439
Anzahl Verkehrstage	250
Umschlagvolumen VT	362
Anteil abgestellter LE	100%
Durchschnittliche Abstelldauer	72
Bedarf an Abstellkapazität/VT in TEU	1.085
Faktor TEU in LE	1,70
Bedarf an Abstellkapazität/ VT in LE	638,39



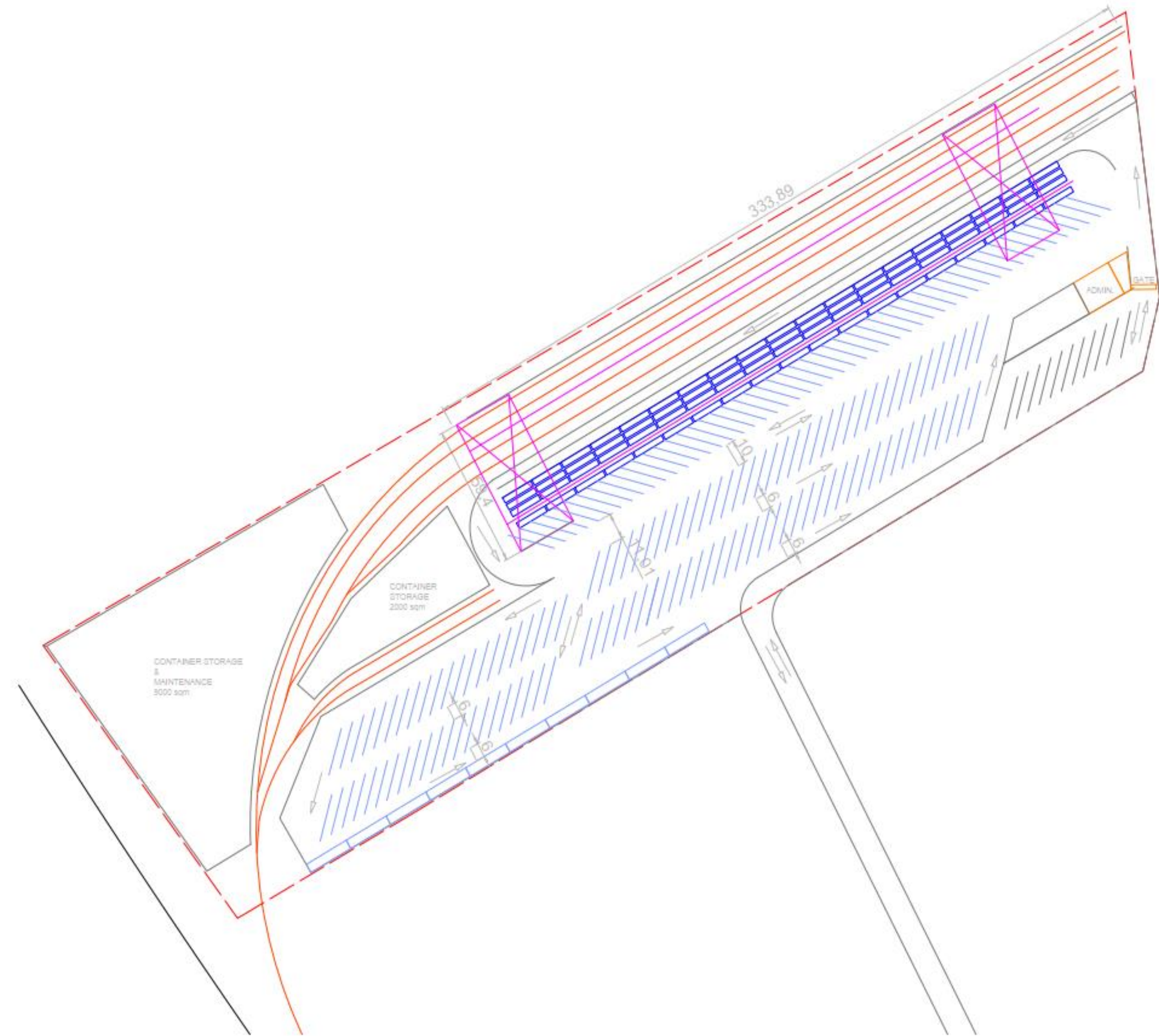
# Terminals



**Rough planning with  
CAD**

**Infrastructural  
connection**

**Further service  
facilities**







# Subsidy check/ funding radar

# Subsidy check

## Methodical procedure

### Before submitting an application

- **Examination of planned activities** with regard to eligibility
- Presentation of the **results in a workshop** and joint identification of the relevant projects

### During the application process

- Date with the funding agency
- Explanatory report on the projects and economic feasibility study
- Railistics acts as interface

### After the application

- Examination of the grant decision
- Clarification of all other questions from the funding agency
- Support for the call for subsidies

Funding database of the federal government

Funding database of the Länder

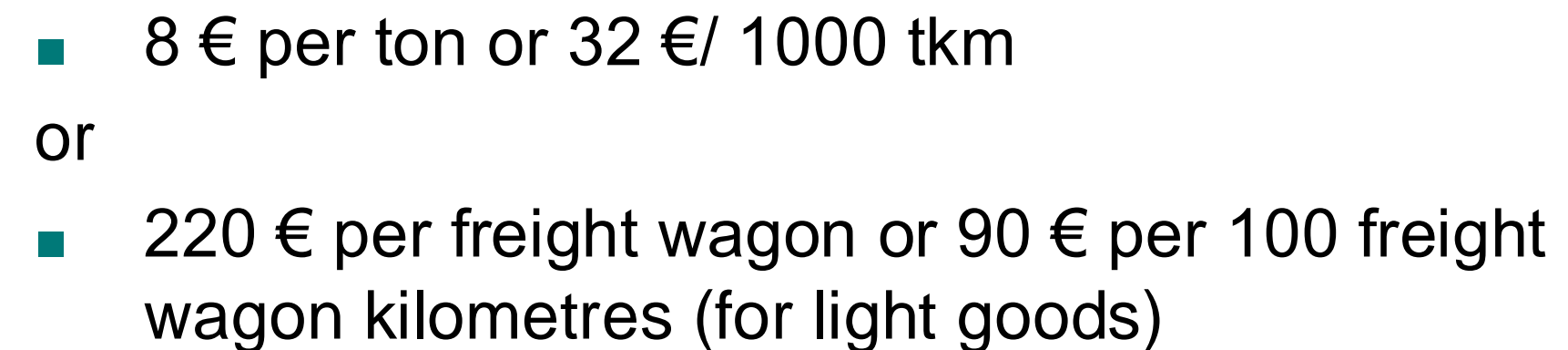
Funding database of the European Union

Experience of Railistics

Fördermatrix	Gleisanschluss-förderung des Bundes	CO <sub>2</sub> -Förderung Niedersachsen	IHATEC	Förderprogramm <u>alternativer</u> Schienenverkehr	Förderrichtlinie des Kombinierten Verkehrs
Erweiterung Terminal		×			×
Schiebebühne	×				
Stranggleis	×				
Zusätzliches Gleis Vorbahnhof	×				
Remotorisierung Loks				(×)	
Umweltfreundliche Taxen			×		
IT-System			×		
Schallschutz Vorbahnhof	×				
Hybridlokomotiven				×	

- New funding guidelines **since 31 January 2017**
- Aid of **up to 50 %** of eligible costs for **reactivation, extension or new construction and for capacity improvement**

## Uniform rate of aid





# Subsidy check

## Long-distance Rail Freight Network Promotion Act (SGFFG)

### Scope of application



- Replacement investments in railway infrastructure of public non-federally owned railways
- Minimum requirements EBA (licensing authority):
  - Long-distance rail freight transport takes place on the route (> 50 km)
  - Maximum speed is at least 30 km/h (exception: service facilities)
  - wheelset load is at least 20 tons

### Level of support



- Federal grant:
  - Max. 50 % of eligible investments in replacement (non-repayable building grants) and 13 % of planning costs
- State subsidy conceivable: e.g. a further 40 % of eligible costs in Lower Saxony (granting authority: LNVG)

# Subsidy check

## Federal funding guidelines for CT

### Scope of application



- Eligible applicants are companies under private law
- Support for the construction and expansion of combined transport terminals and transshipment facilities
- Promotion of the replacement of transshipment equipment and vehicles

### Level of support



- Support of up to 80 % of eligible costs with a non-repayable direct grant
- Proof of the use of the funds to the funding agency



# Subsidy check

## Exemplary funding topics in the future

### Alternative Rail Transport Promotion Programme (Federal Government)



- Support programme to start in this legislative period (draft of the directive available)
- Promotion of alternative propulsion systems in rail transport
- Objective: Reduction of pollutant emissions



Source: Volkswagen Aktiengesellschaft

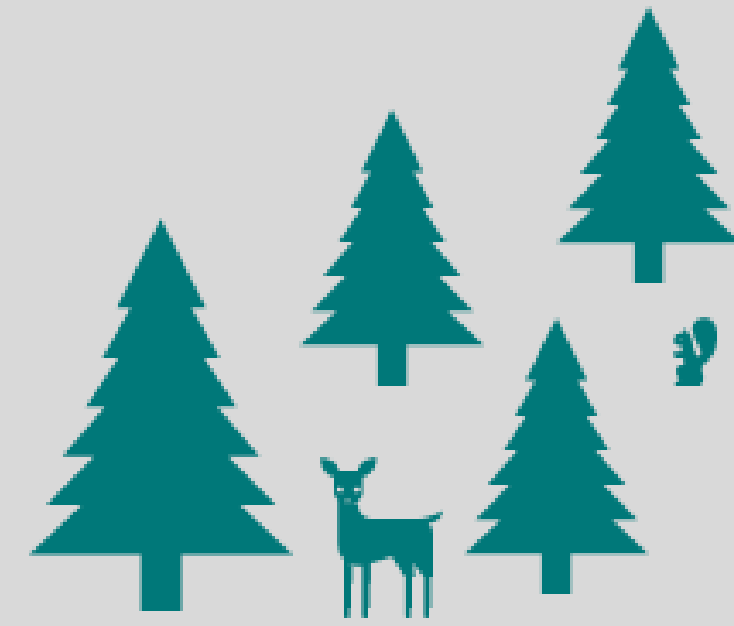
### Innovative port technologies (if 4. call )



- Innovative technologies in sea and inland ports
- Main topics transport, handling, environment, security and infrastructure
- Two-stage procedure with project outline and funding application



**Projektträgerschaft  
Innovative  
Hafentechnologien**



# Preparation of CO2 balances along the supply chain and in rail passenger transport

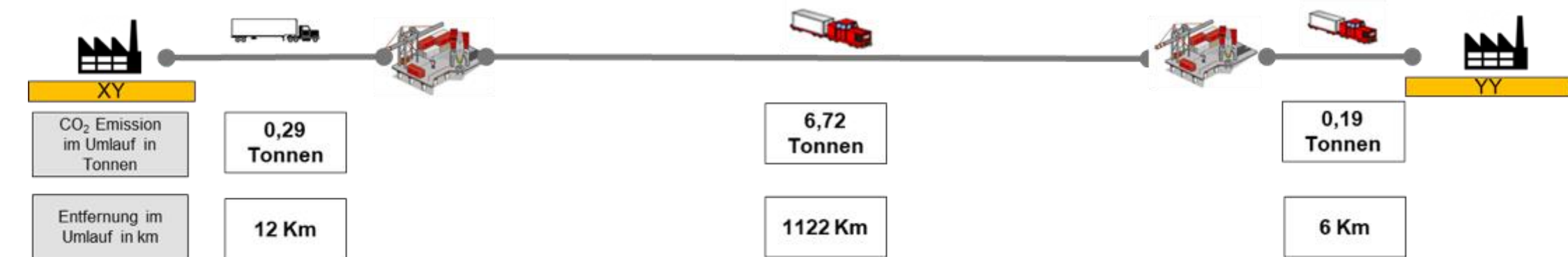


# Preparation of CO<sub>2</sub>-balances

## Exemplary selection

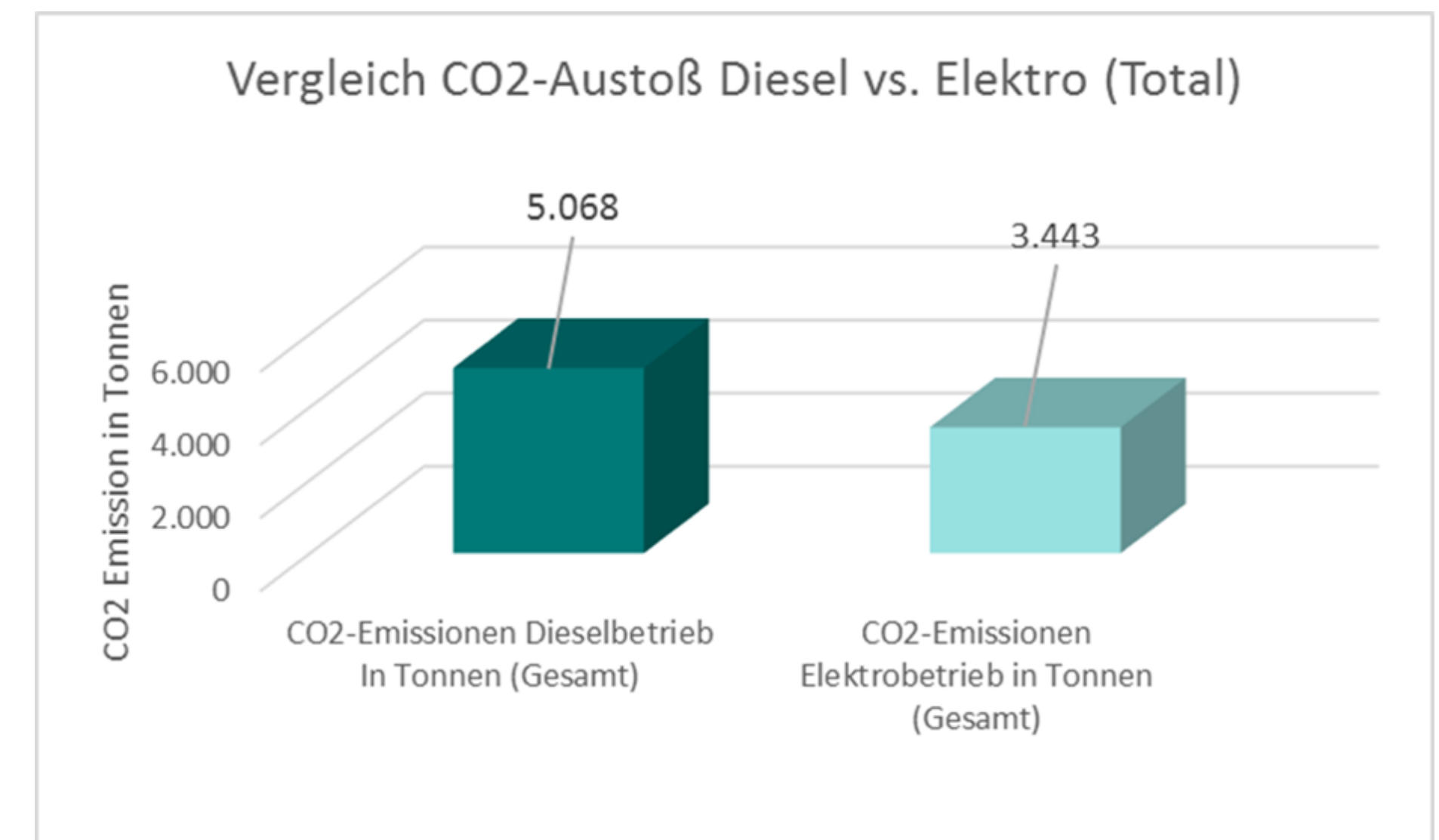
### Determination of the CO<sub>2</sub>-balances in freight transport

- Calculation of CO<sub>2</sub>-emissions in the ACTUAL case
- Calculation of savings by using alternative modes of transport, taking into account the entire transport chain (rail, road, ship and transshipment)



### Determination of the CO<sub>2</sub>-balances in rail passenger transport

- Decisive in determining the benefits of line electrification
- Comparison of CO<sub>2</sub>-emissions when using diesel traction and electric traction
- Monetisation of savings to determine the economic benefit





# Market analyses & Studies



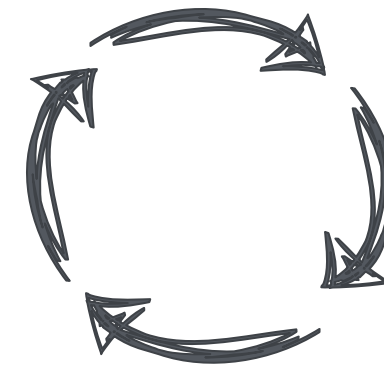
# Market analyses and studies

## Studies and expert reports for authorities

- Port concepts
- Freight transport concepts
- Feasibility studies

## Studies with focus on rail freight transport

- Competition analyses
- Portfolio analyses and market fields
- Trends and innovations



## Potential analyses

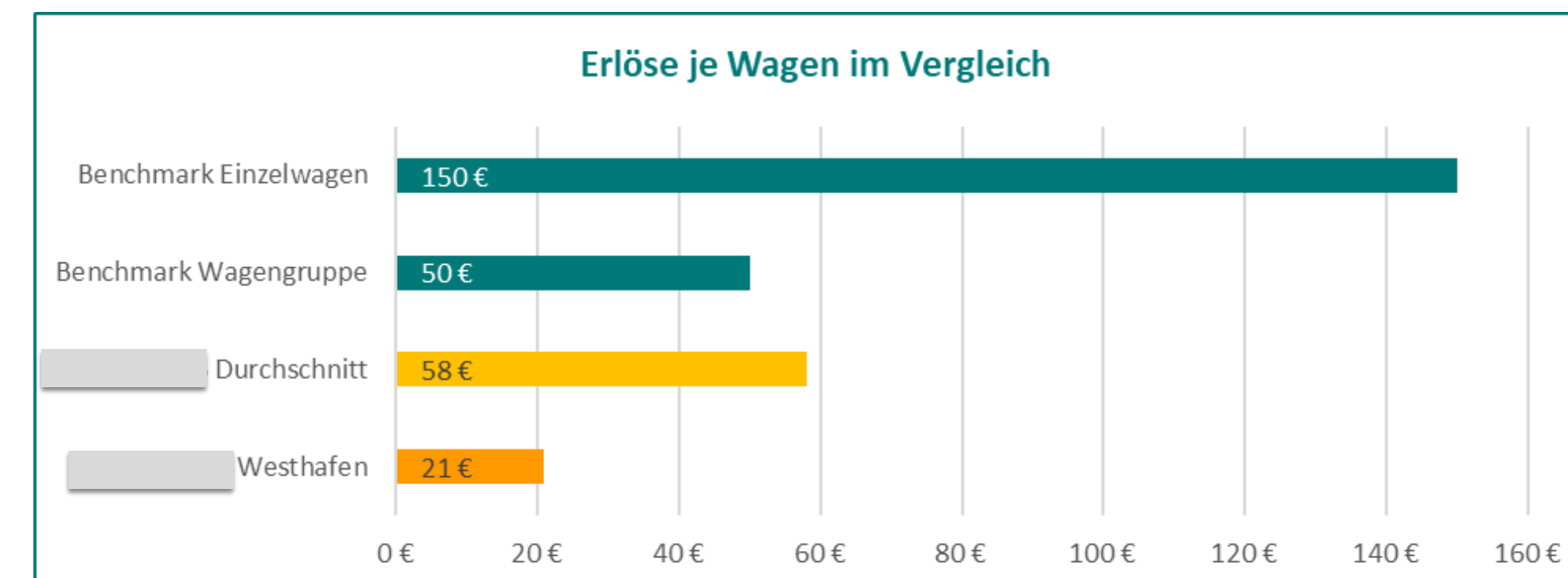
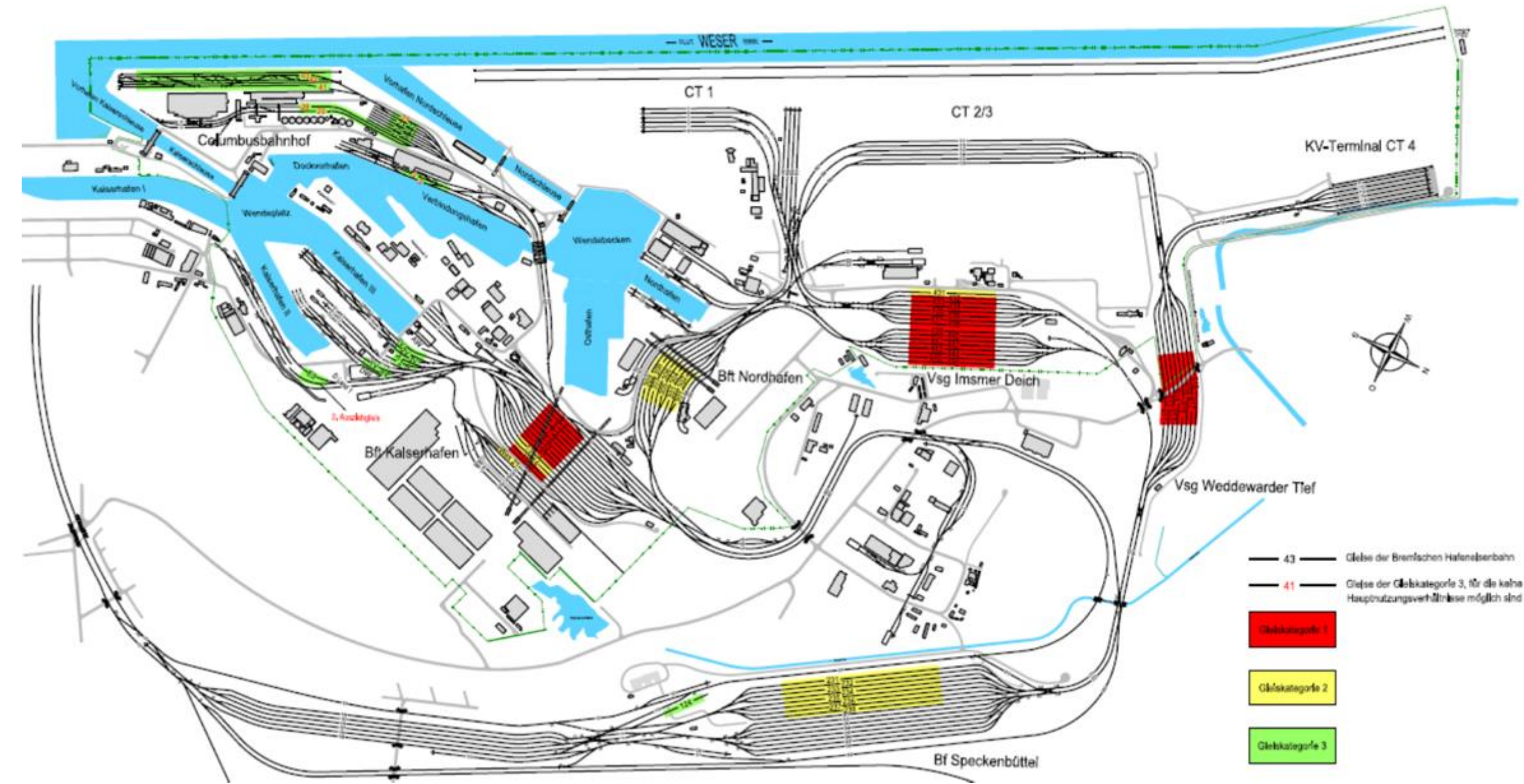
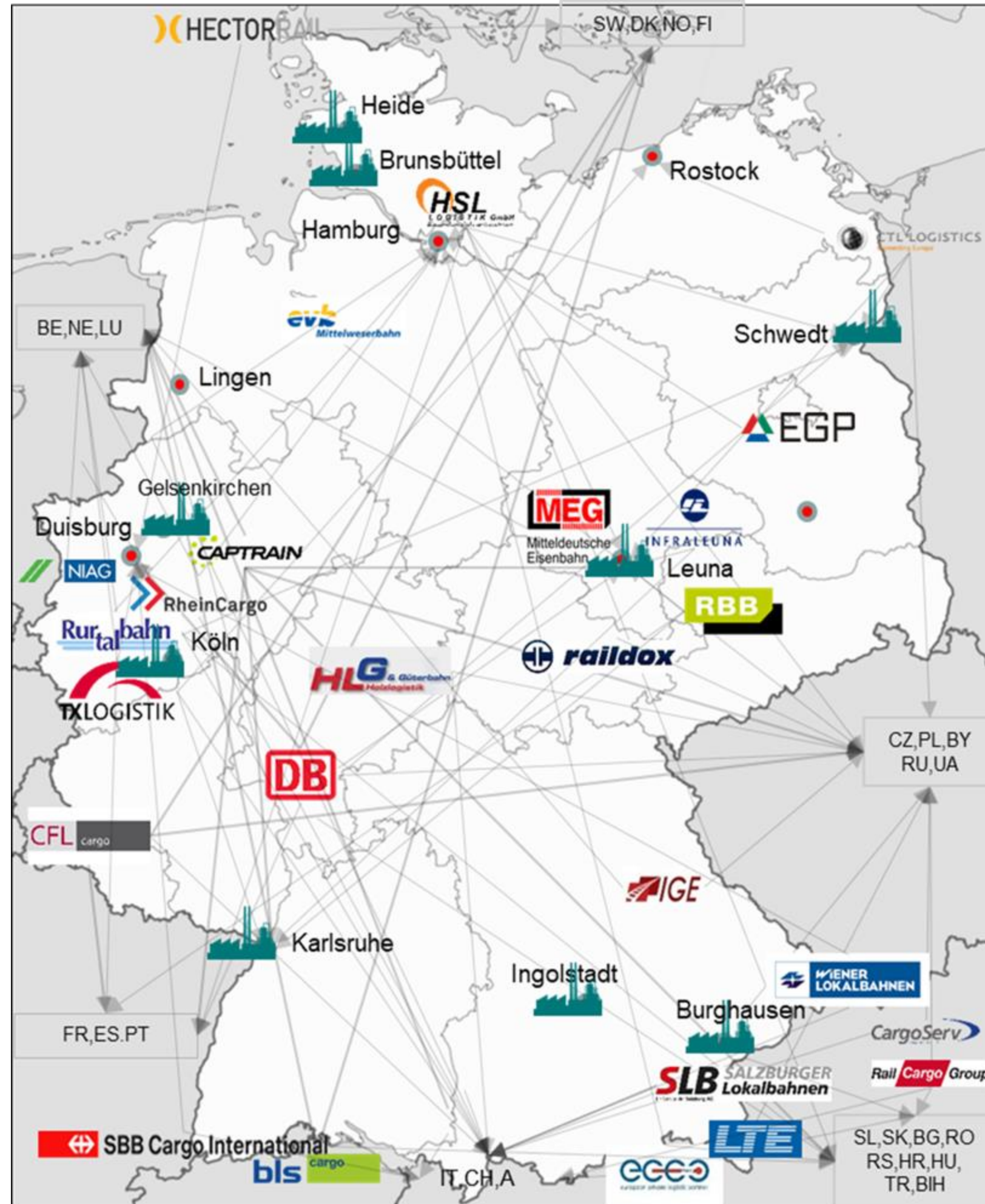
- Turnover potential
- Determination of number of travelers
- Market potentials in SGV

## Studies on the focus on rail passenger transport

- Competition analyses
- market introduction concepts
- Local and long-distance rail passenger transport



# Market analyses and studies







**Transport concepts**

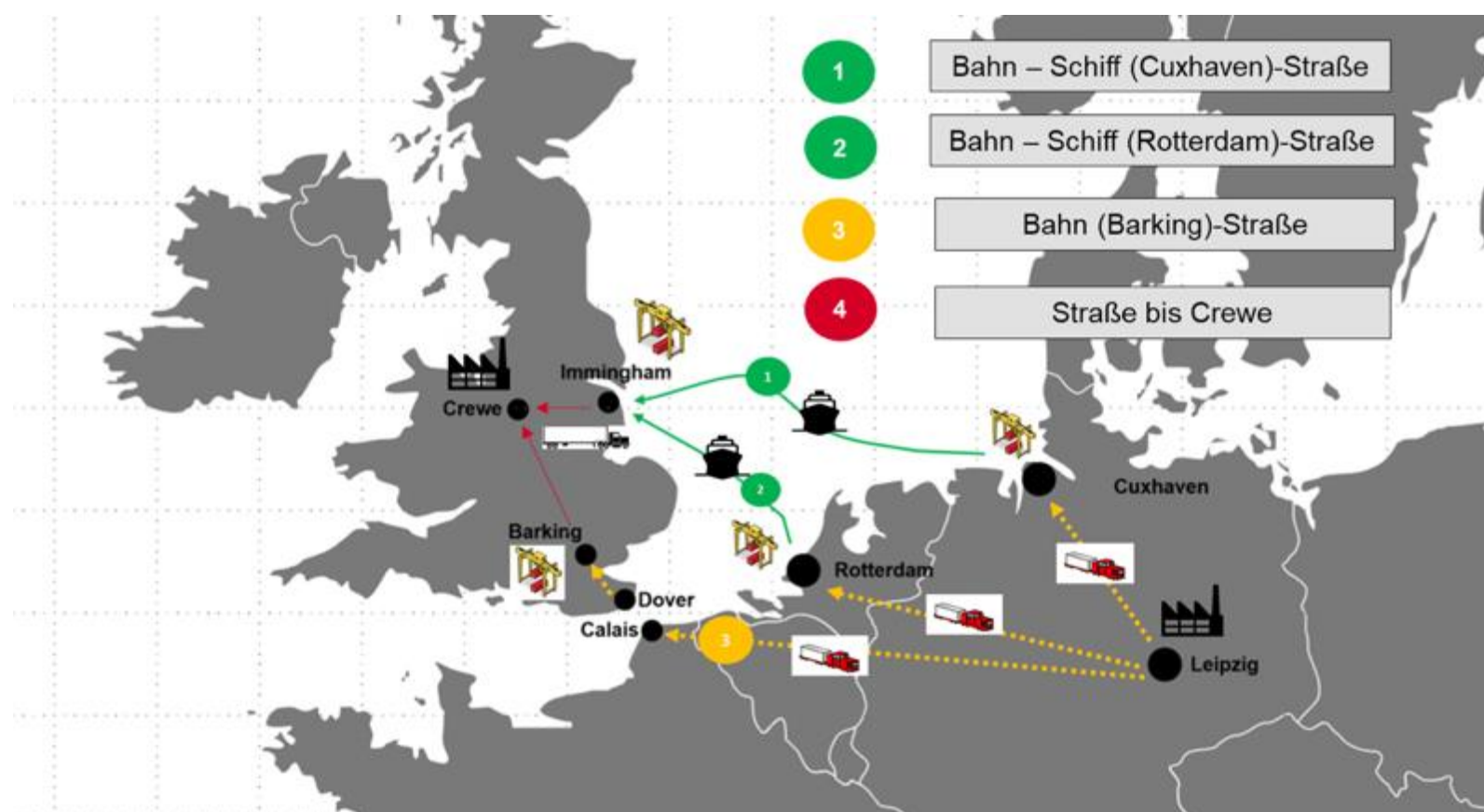
**Modal shift**

**Profitability analysis**

# Transport concepts

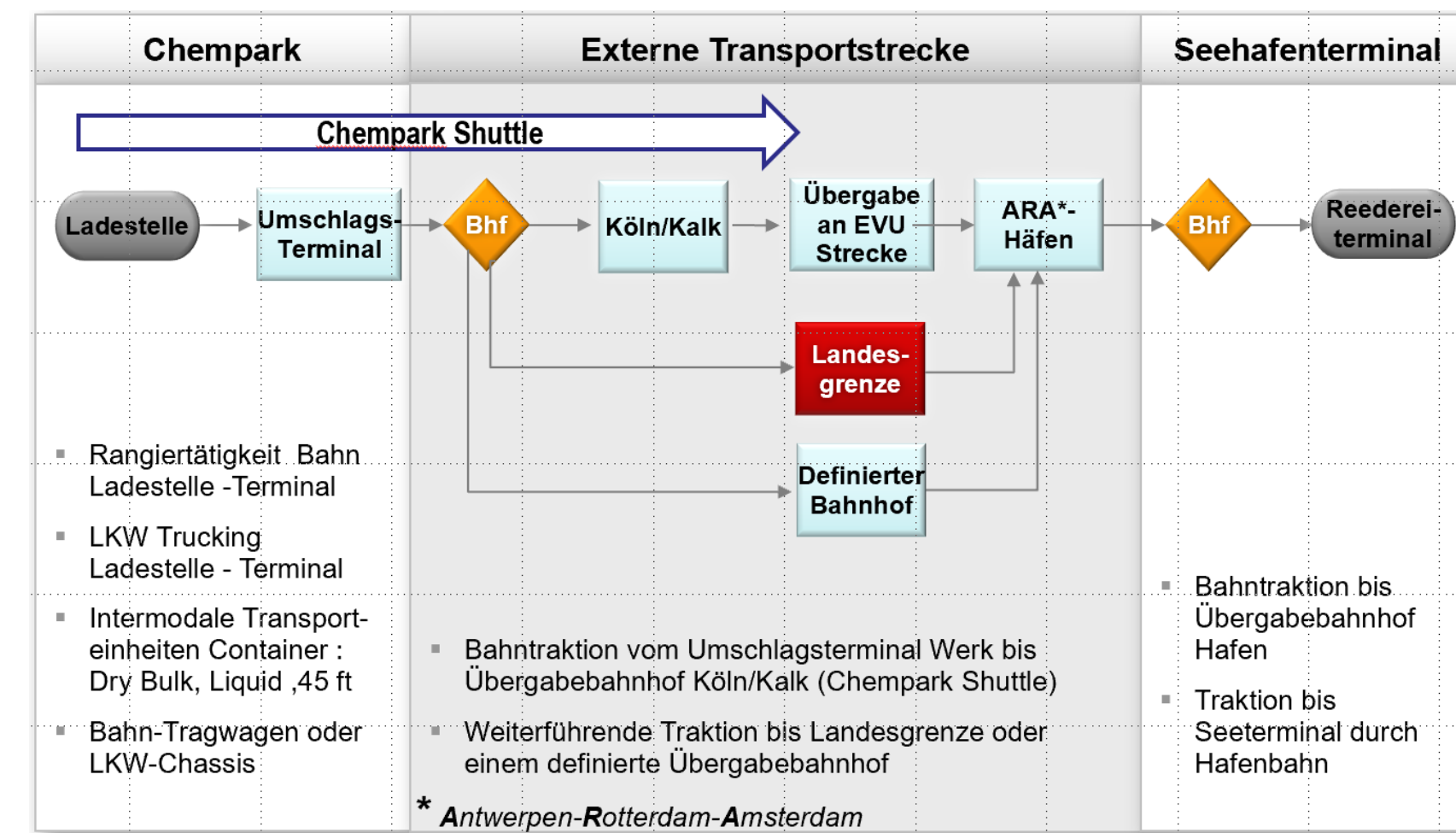
## Modal shift from road to other modes of transport

### Automotive logistics



- Volume flow analyses for the identification of bundling potentials
- Development of back-up solutions
- Specifications for specific offers with subsequent evaluation
- Discussions with railway undertakings and shipping companies
- Preparation of CO<sub>2</sub>-balances in direct comparison of modes of transport

### chemical industry



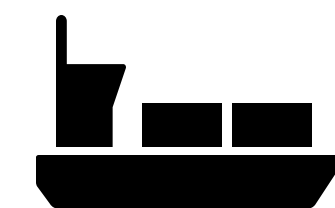
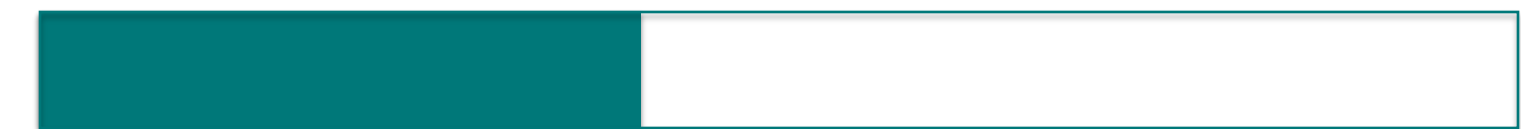
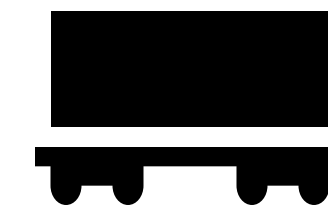
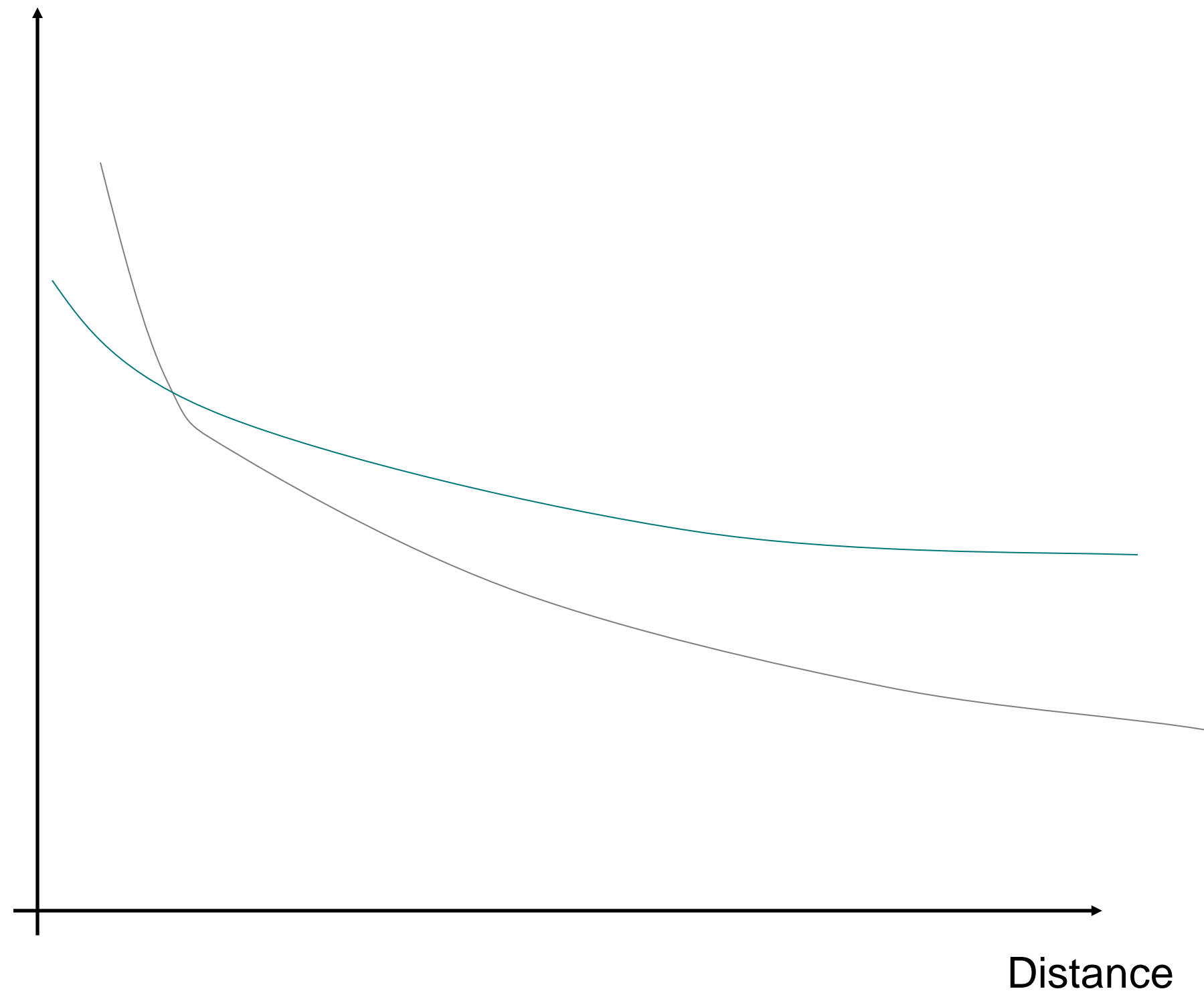
- Creation of transport concepts on the basis of the quantity structures
- Talks with shippers and rail transport companies
- Train cost calculation to assess the competitiveness of rail vs. truck
- Request and evaluation of concrete offers from railway undertakings



# Transport concepts

## Economic feasibility studies

Unit costs



### Determining the costs of modes of transport in comparison

- Cost comparison of individual means of transport under consideration of
- Distance
- Load type
- Available infrastructure



# Restructuring Business plans



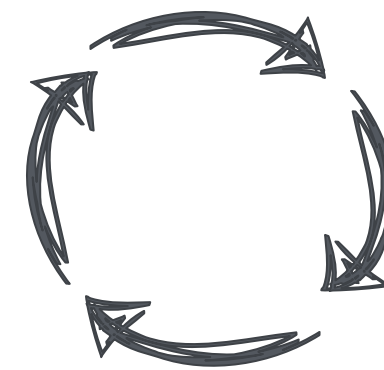
# Restructuring & Business Plans

## Restructuring issues

- Organization charts and role assignments including job descriptions
- Aspect of Lean Management with examination of outsourcing possibilities
- change management

## Business plans for RUs and EIUs

- Identification of KPIs
- Determination and comparison of key figures
- Payback periods of measures



## Benchmarking

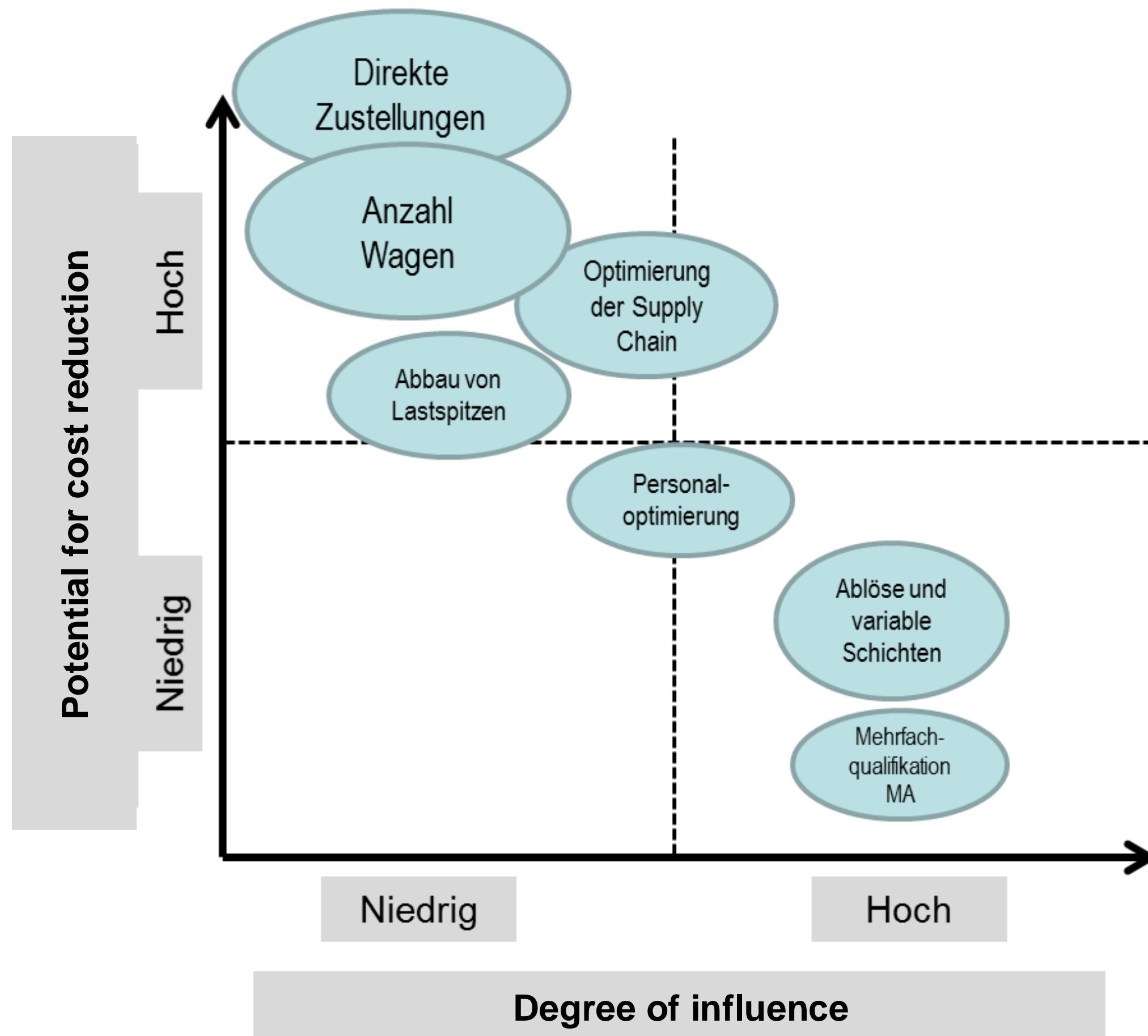
- Identification of cost drivers
- best practice benchmarking
- Competitive benchmarking in compliance with compliance regulations

## Economic and competitive analyses

- Cost-benefit analyses of measures
- Profitability comparison of investments
- Use of strategic planning instruments (e.g. SWOT, Porter)

# Restructuring & Business Plans

## Restructuring and benchmarking of plant railways



**Strategic analysis of problem areas**



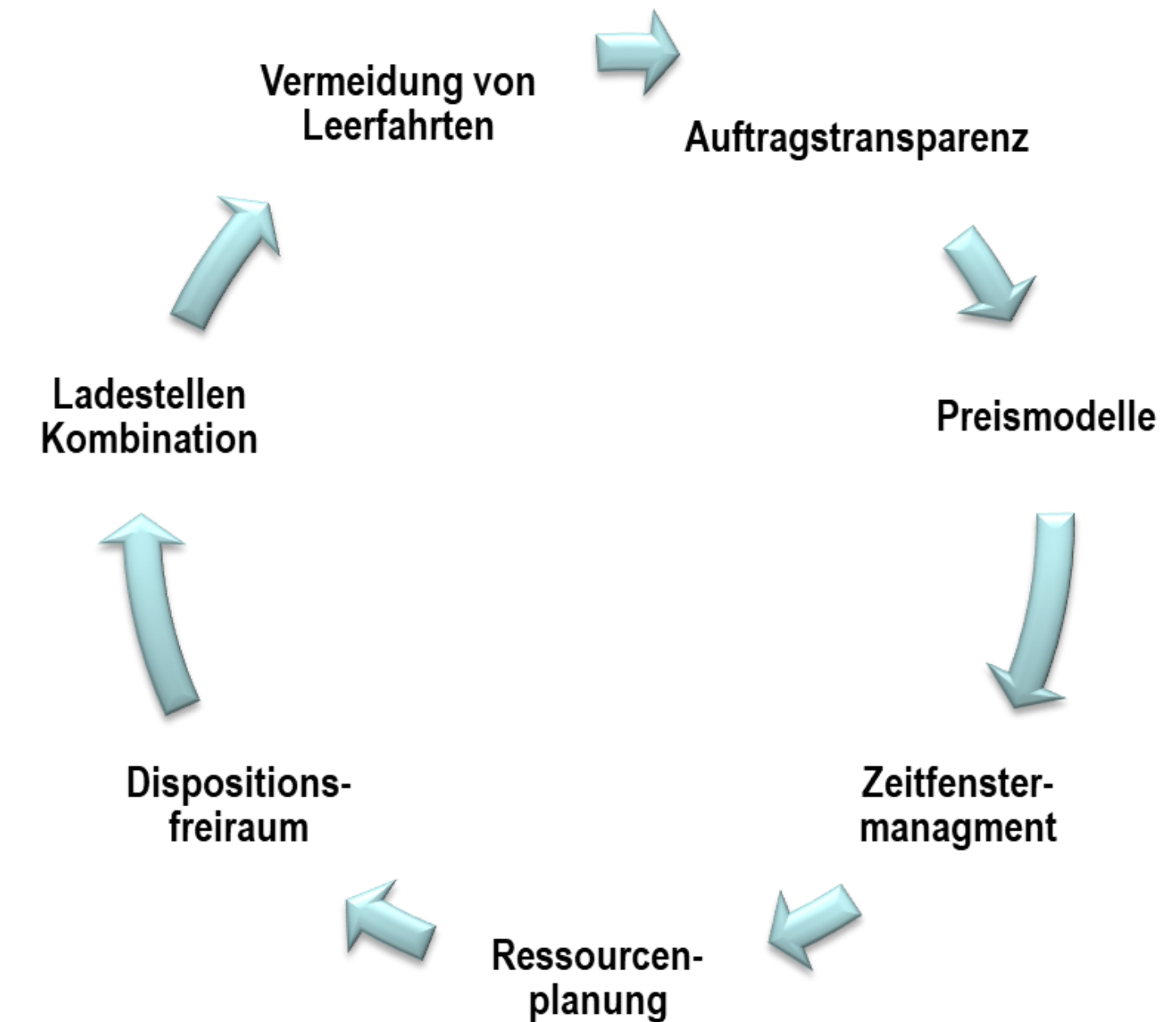
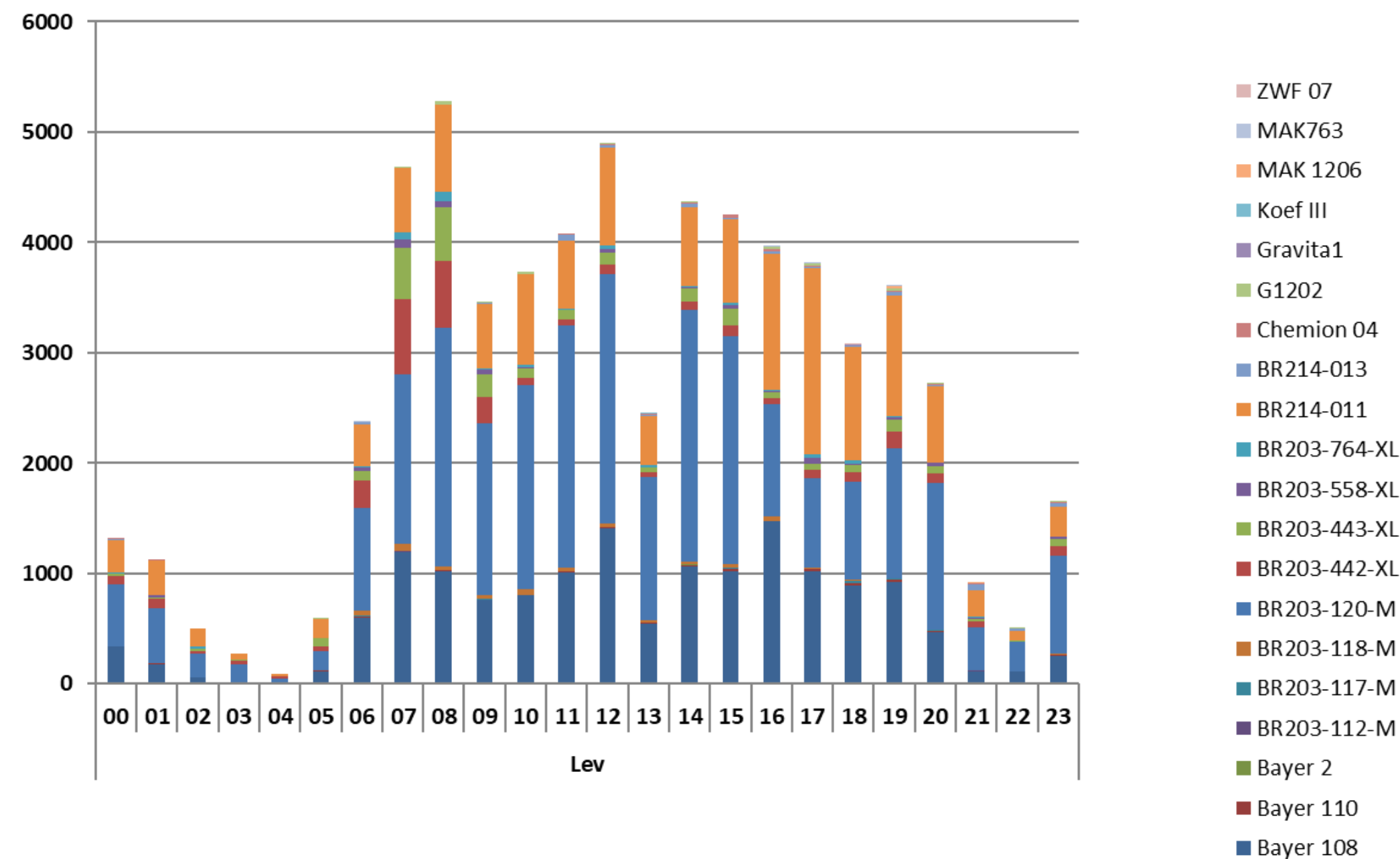
**Structured processing and determination of cost drivers**



**Concrete proposals for solutions**



# Restructuring & Business Plans



Liquiditätsrechnung (ohne Steuern)	Jahr 1	Jahr 2	Jahr 3	Jahr 4	Jahr 5	Jahr 6	Jahr 7	Jahr 8	Jahr 9	Jahr 10
<b>Einzahlungen</b>										
Pacht von Betreiber	0,00 €	0,00 €	0,00 €	536.410,00 €	572.320,00 €	608.230,00 €	952.730,00 €	988.640,00 €	988.640,00 €	1.024.550,00 €
Erträge durch Vermietung Gleise	0,00 €	0,00 €	0,00 €	180.000,00 €	180.000,00 €	180.000,00 €	180.000,00 €	180.000,00 €	180.000,00 €	180.000,00 €
Instandhaltung	0,00 €	0,00 €	0,00 €	160.075,20 €	160.075,20 €	160.075,20 €	160.075,20 €	160.075,20 €	400.188,00 €	400.188,00 €
Förderung Invest	5.724.166,00 €	13.883.173,50 €	13.145.552,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €
Fremdkapital	1.226.607,00 €	2.974.965,75 €	2.816.904,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €
Eigenkapital	1.226.607,00 €	2.974.965,75 €	2.816.904,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €
Gleisanschlussgebühr	0,00 €	0,00 €	0,00 €	50.000,00 €	51.150,00 €	52.326,45 €	53.529,96 €	54.761,15 €	56.020,65 €	57.309,13 €
<b>Summe</b>	<b>8.177.380,00 €</b>	<b>19.833.105,00 €</b>	<b>18.779.360,00 €</b>	<b>926.485,20 €</b>	<b>963.545,20 €</b>	<b>1.000.631,65 €</b>	<b>1.346.335,16 €</b>	<b>1.383.476,35 €</b>	<b>1.624.848,65 €</b>	<b>1.662.047,13 €</b>
<b>Auszahlungen</b>										
Instandhaltung	0,00 €	0,00 €	0,00 €	160.075,20 €	160.075,20 €	160.075,20 €	160.075,20 €	160.075,20 €	400.188,00 €	400.188,00 €
Zinsen	30.665,18	105.039,32	175.461,92	163.764,46	152.067,00	140.369,54	128.672,07	116.974,61	105.277,15	93.579,69
Tilgung	0,00	0,00	0,00	467.898,45	467.898,45	467.898,45	467.898,45	467.898,45	467.898,45	467.898,45
Kosten Verwaltung	135.000,00 €	138.105,00 €	141.281,42 €	144.530,89 €	147.855,10 €	151.255,77 €	154.734,65 €	158.293,54 €	161.934,30 €	165.658,79 €
Gleisanschlussgebühr Pro Rail	0,00 €	0,00 €	0,00 €	50.000,00 €	51.150,00 €	52.326,45 €	53.529,96 €	54.761,15 €	56.020,65 €	57.309,13 €
Investitionen	8.177.380,00	19.833.105,00	18.779.360,00	0	0	0	0	0	0	0
<b>Summe</b>	<b>8.343.045,18 €</b>	<b>20.076.249,32 €</b>	<b>19.096.103,33 €</b>	<b>986.269,00 €</b>	<b>979.045,74 €</b>	<b>971.925,40 €</b>	<b>964.910,33 €</b>	<b>958.002,95 €</b>	<b>1.191.318,55 €</b>	<b>1.184.634,05 €</b>
<b>Cash-Flow</b>	<b>-165.665,18 €</b>	<b>-243.144,32 €</b>	<b>-316.743,33 €</b>	<b>-59.783,80 €</b>	<b>-15.500,54 €</b>	<b>28.706,25 €</b>	<b>381.424,83 €</b>	<b>425.473,39 €</b>	<b>433.530,10 €</b>	<b>477.413,07 €</b>
<b>Cash-Flow kumuliert</b>	<b>-165.665,18 €</b>	<b>-408.809,49 €</b>	<b>-725.552,83 €</b>	<b>-785.336,62 €</b>	<b>-800.837,17 €</b>	<b>-772.130,92 €</b>	<b>-390.706,09 €</b>	<b>34.767,30 €</b>	<b>468.297,41 €</b>	<b>945.710,48 €</b>





# Rolling Stock

# Rolling Stock





# Rolling Stock

Railistics accompanies rail vehicles for its clients throughout its entire life cycle

## Pre-Sales Services

Support for procuring optimal rolling stock

- Strategic fleet development, market & risk analyses, vehicle valuations, value projections
- Development of specifications
- Tendering of vehicles
- Evaluation of offers
- Cost-benefit analyses
- Accompaniment / support contract negotiations

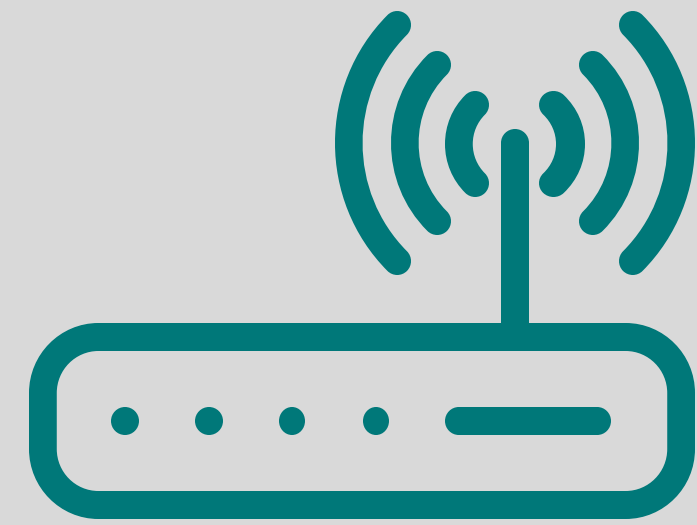
## After-Sales Services

Monitoring of contractually compliant development, production & delivery

- Development and approval monitoring
- Production monitoring
- Monitoring vehicle acceptance / commissioning

Management of vehicle value maintenance during operation & change of operator

- Vehicle condition monitoring & Maintenance
- Operational data monitoring & analysis
- Optimisation of maintenance quality & efficiency
- Quality capability testing & auditing of maintenance staff
- Preparation & monitoring of revision & repairs
- Support of contract transfer processes



# IT & Research

# IT & Research NEAR2050

- EU research project

 **NEAR2050**


Future challenges  
of the railway sector





# IT & Research

## NEAR2050

	<p>Project</p> <p><b>NEAR2050</b></p> <p>Future challenges of the railway sector</p>
<p>Duration</p> <p>18 months October 2016 - April 2018</p>	<p>Project content</p> <p>Long-term needs of the railway sector:</p> <p>Trend analysis 2022, 2030 and 2050</p>

### Project Statement

*“The intensive cooperation between engineers from different disciplines, trend researchers and scientists has provided a fascinating insight into the future of rail transport that was previously unavailable.”*

*Clear trends for future operation with freight trains and the technical design of the wagons are confronted with open questions in the field of railway infrastructure.*



### Approach & Solution

The overall objective of NEAR2050 was to identify the long-term needs of the different actors in the railway sector.

Through interviews with experts, workshops and focus groups, opinions were collected on the development of the railway sector in terms of rolling stock, operations management, IT developments, infrastructure design, and others. A distinction was made between the sub-markets of passenger and freight transport. Influencing factors and trends were derived from these findings in order to draw a picture of what the railway sector will look like in 2050.

### Lessons learned



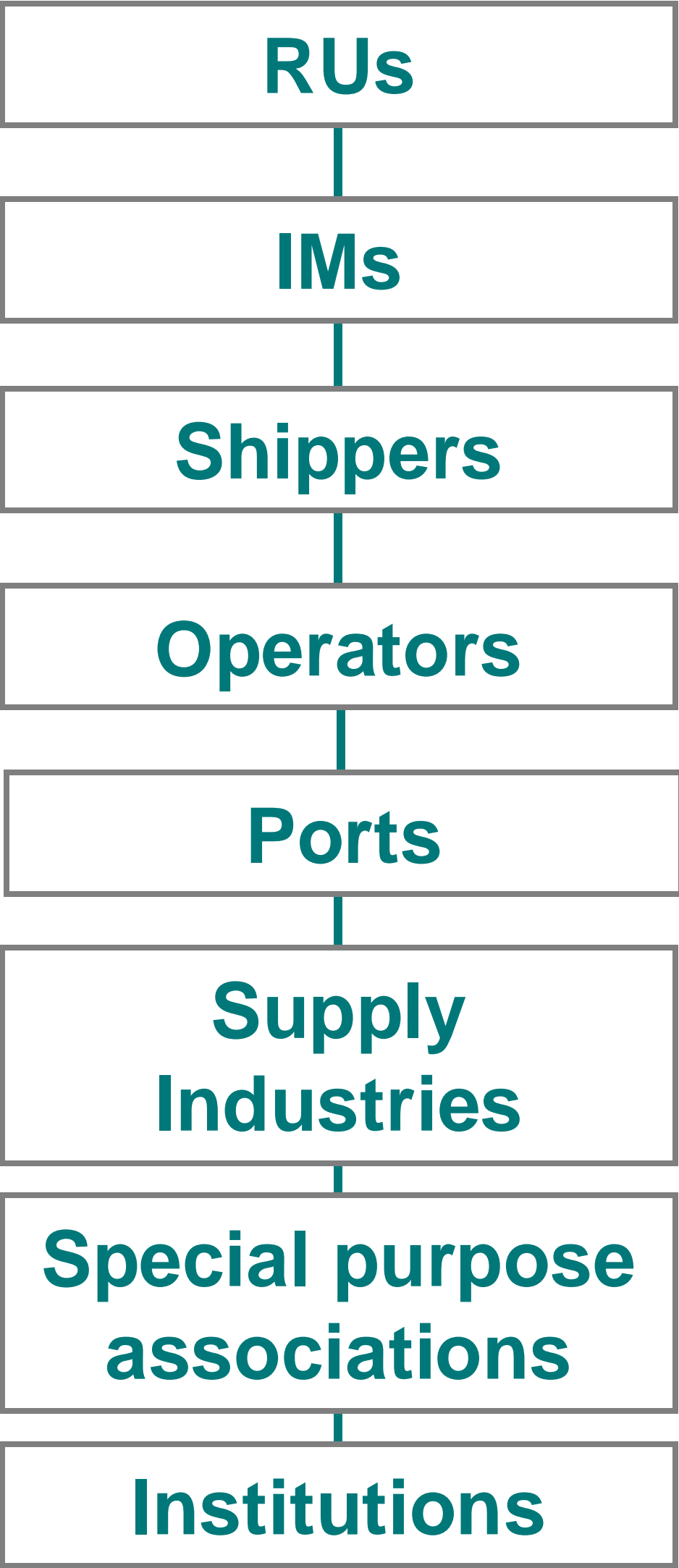
The findings of the project work were used to derive influencing factors and trends that give a picture of what the European railway sector will look like in 2050.

The findings include the essential pictures of the future handling of rail freight traffic and the technical requirements for future rail vehicles.



# Our customers

# Our customers are our focus



...and many more





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