EPCA

INTERMODAL TRANSPORTATION
a way to meet 3 future challenges!

ITN WORKSHOP

23 April 2024
08:30 - 18:00
Brussels, Belgium!

epca.eu/itn

brought to you by EPCA's
Supply Chain
Program Committee

EPCA

Agenda

08.30-09.00	Badge collection and welcome coffee
09.00-10.15	**Introduction & keynote**
10.15-10.30	Coffee break
10.30-12.00	**Align on challenges -** Breakout into stakeholder groups to identify specific obstacles
12.00-13.00	Lunch break
13.00-13.30	**Keynote from Dirk Stahl**, CEO of BLS Cargo AG
13.30-15.15	**Develop solutions** - Mix stakeholder groups to brainstorm solutions to the challenges identified
15.15-15.30	Coffee Break
15.30-16.30	**Action planning**
16.30-17.00	**Closing**
18.30-21.30	Optional dinner

EPCA

These checklists are intended for the good conduct of EPCA Organized Meetings but their principles should be complied with also when discussions take place outside the framework of EPCA Organized Meetings. The checklists are non-exhaustive.

DO'S

Do ensure strict compliance as follows:

SUPERVISION

- Have an EPCA staff member at each EPCA organized meeting.
- Consult with company counsel/specialized external counsel on all questions related to competition law.
- Limit discussions at the meeting to agenda topics.
- Provide each attendee with a copy of these checklists and have a copy available at all meetings
- Remind meeting participants of the importance of competition law compliance, also when discussions may continue or occur outside meetings.

RECORD KEEPING

- Have an agenda and minutes that accurately reflect what is discussed, as well as an attendance list, and ensure that these documents are kept.
- Ensure the review of agendas, minutes and other important documents by appropriate staff and/or external legal counsel, in advance of distribution.
- Fully describe the purposes, structures and authorities of the groups, meetings and specific projects.

VIGILANCE

- Immediately protest against any discussion or meeting activities that appear to violate these checklists and may raise competition law concerns.
- Have this protest recorded in the minutes
- Ask for those discussions/activities to be stopped so that appropriate legal checks can be made by external counsel
- Actively dissociate yourself from any such discussion or activities.
- Leave any meeting in which these activities continue despite protest and have your departure minuted.

DON'TS

Do not attend EPCA organized meetings if no EPCA staff member is present.

Do not discuss or exchange with competitors any sensitive competitive information that would normally not be publicly disclosed by a company, including for example information on:

PRICES

- Individual company/industry prices, price changes, price differentials, discounts, allowances & credit terms
- Individual company data on costs, production, capacity (other than nameplate capacities), inventories & sales

PRODUCTION

- Plans/strategy of individual companies concerning the design, production, distribution or marketing of particular products, including proposed territories of customers
- Changes in production capacities (other than nameplate capacities) or inventories

TRANSPORTATION RATES & POLICIES

- Rates or rate policies for individual shipments, including basing point systems, zone prices & freight

MARKET PROCEDURES

- Company bids on contracts for particular products; company procedures for responding to bid invitations
- Matters relating to actual or potential individual suppliers or customers
- Plans to discriminate against or blacklist or boycott customers, suppliers or competitors
- Prohibited discussion topics apply equally to social gatherings incidental to EPCA Organized Meetings.

epca.eu/dos-donts

EPCA

ITN core team

Sanja C. Magdeburg
Director Supply Chain– Base Chemical Solutions
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EPCA – Keynote

Intermodal transportation: potential and challenges

by Deloitte.

Agenda

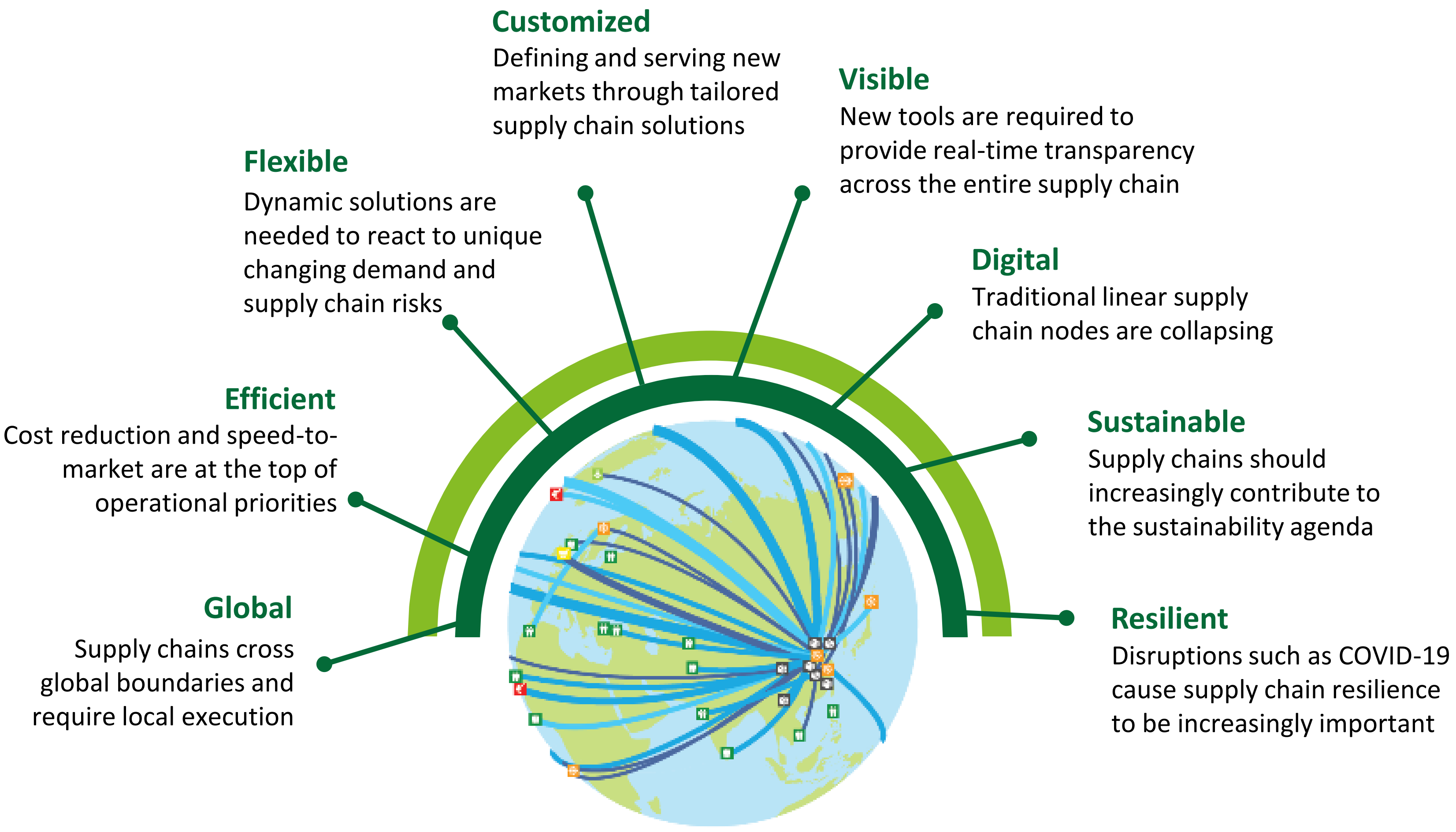
1. Need for change to transform to intermodal
2. Considerations and challenges for intermodal (based on EPCA survey)

Need for change to transform to intermodal

Supply chain and logistics trends

Supply chains have to be nimbler and more responsive than ever before, driving the need for a well-defined logistics strategy and network with strong LSP partnerships

Today’s supply chains have to-be **nimbler than ever before**. More global. More transparent. Faster-paced. **Resilient**. All while meeting new demands for **lower costs** and **increased productivity and sustainability** in a ferociously competitive and increasingly vulnerable global environment



The need for logistics transformation

Transport optimization is becoming increasingly important to respond to cost pressure, capacity constraints and sustainability targets

Need for logistics transformation

Cost pressure

High inflation rates, increased fuel cost and capacity constraints drive transportation rates up. High transportation cost significantly impacts the total cost structure

Driver shortage

Driver shortage reduces transportation capacity, increasing freight costs, impacting growth ambitions, flexibility and customer service

Saturation in road networks

Heavy road congestion leads to saturated networks and large transportation times

Increased customer expectations

Rising customer requirements to improve delivery reliability are intensifying pressure on the supply chain

Sustainability

Ambitious company targets and increased demand for sustainable operations in which transporters have to provide “green” services and products

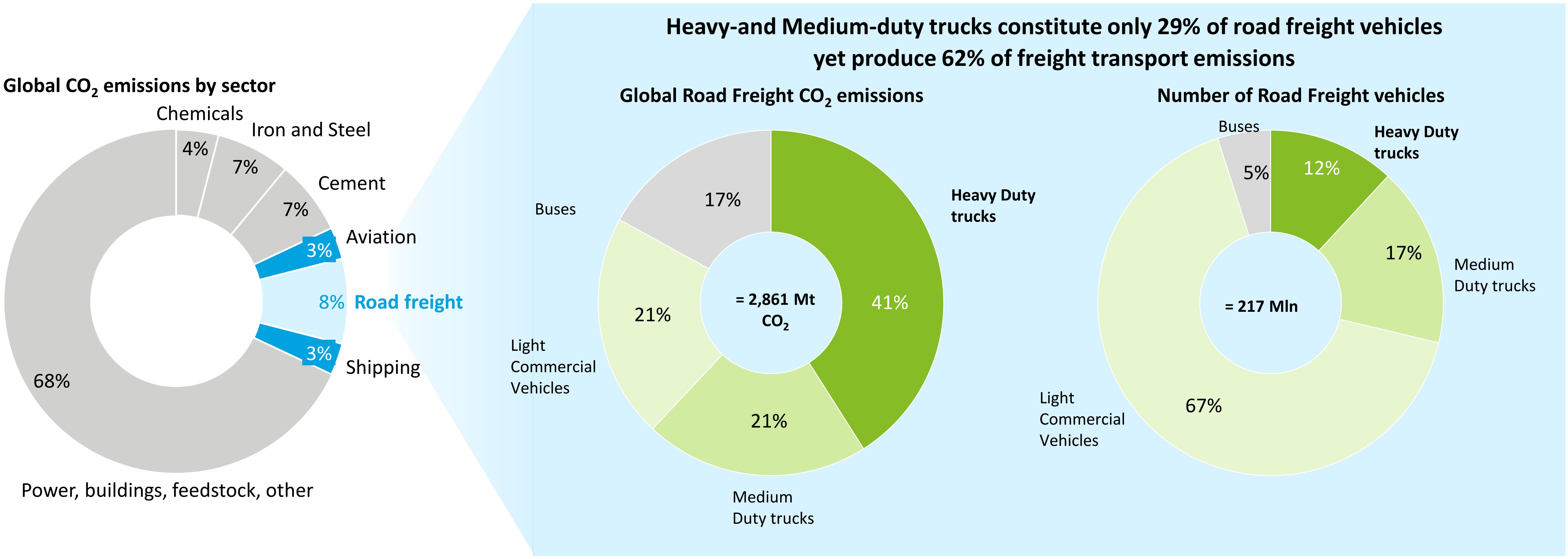
Tightening regulations

Sustainability regulations & reporting requirements are tightening, increasing pressure to monitor impact and claim improvements

Transport is one of the largest sectors in terms of GHG emissions

Transport accounts for 14% of global GHG emissions. The significantly increasing transportation volumes make it one of the largest hard-to-abate sectors

Road freight has significant impact on Global CO_2 emissions

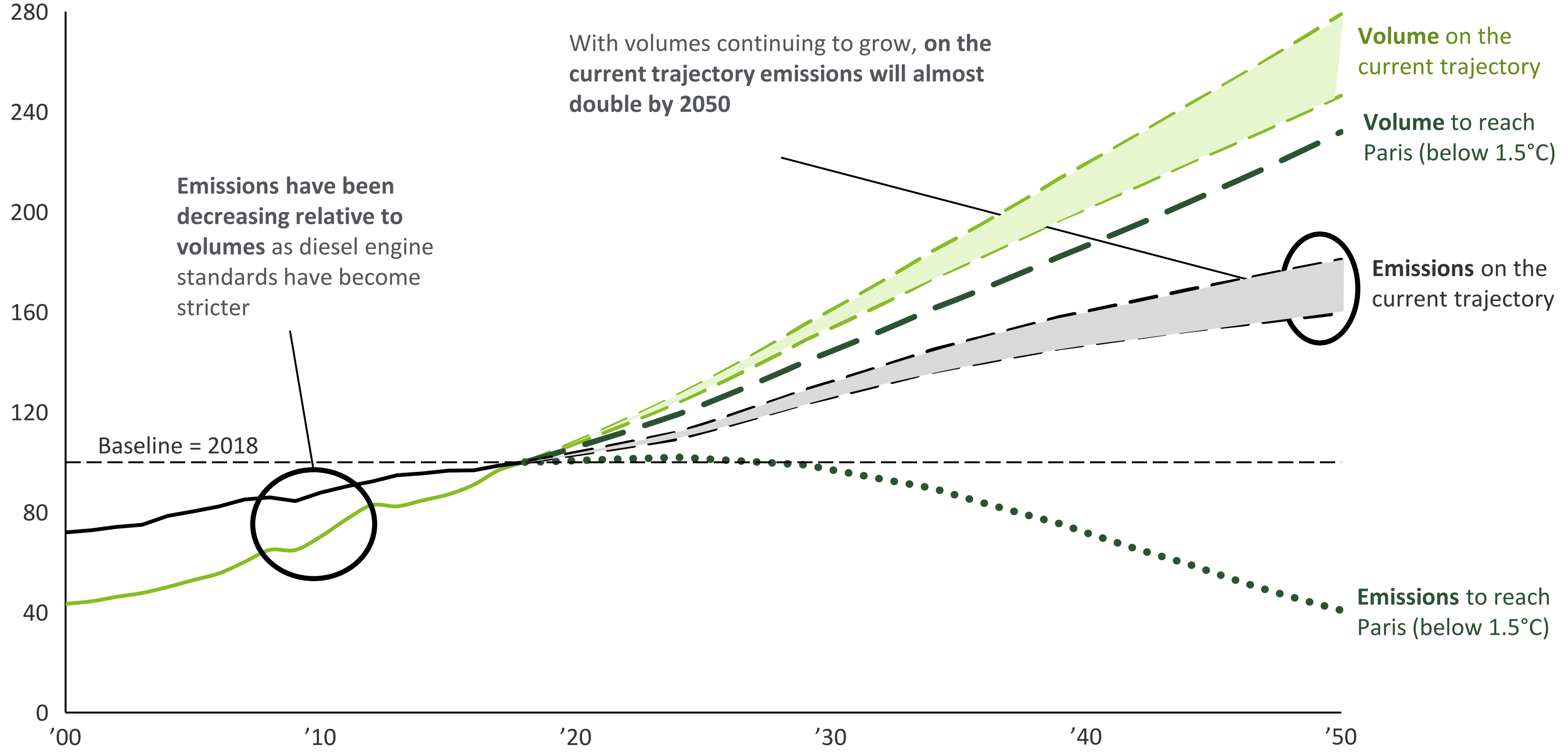


Sources: Deloitte - Decarbonization of Road Freight – getting into Gear (2021), IEA Future of Trucks, OECD; IEA Energy Technology Perspectives; IEA Tracking Transport 2020; IEA CO_2 emissions by sector 1990–2018; CO_2 emissions from industry, transport and heavy-duty vehicles in the Sustainable Development Scenario 2000-2030

Notes: 1) Including LCVs, MDTs, HDTs and 1.5% from buses

On the current trajectory, emissions will far exceed the Paris Agreement

Deep dive into road freight, where emissions must decrease in intensity by 82%



Freight in the global economy

- The volume represents the transportation of 1 Ton of goods over 1 Km of distance via road
- This is said to increase by 70% towards 2030
- As the volume of the transported goods increases, the emissions increase
- This accounts for **8% of global CO_2 emissions**
- To meet 1.5°C agreement on a global, **82% net reduction in emissions** is needed **by 2050**, and 33% by 2030

Sources: Decarbonizing Road Freight – Getting into Gear (2021); European Commission (2021)
Notes: 1) Volume is depicted as TKMs, emissions as CO_2

Regulatory barriers are rapidly addressed by the EU and its countries

What is happening on EU level for Logistics & Distribution?

European Green Deal

EU countries are committed to achieving climate neutrality by 2050, delivering on the commitments under the Paris Agreement. The European Green Deal is the EU's strategy for reaching the 2050 goal

Sustainable & Smart Mobility Strategy

Strategy to help reaching a 90% cut in emissions by 2050 delivered by a smart, competitive, safe, accessible & affordable transport system

Climate Law

European Climate Law regulations turns the political ambition of reaching climate neutrality by 2050 into a legal obligation for EU

German Supply Chain Act

Requires German-registered companies / subsidiaries to report on social and environmental standards in their supply chain and those of their direct suppliers. It also includes expectations for corporate policies

Fit for 55 Package

Set of proposals to revise & update EU legislation to reach EU's target to reduce net greenhouse gas emissions by 55% by 2030

Winter Package

As part of the European Semester Cycle, where the European Commission sets out general social & economical priorities for EU & provide EU countries with policy guidance for following year

REpower EU

In response to the hardships and global energy market disruption, the European Commission presented the REpowerEU Plan

Corp. Sustainability Reporting Directive

The CSRD aims to update and amend the non-financial reporting requirements for companies based in the EU. More companies are part of the scope, and the information companies need to report on is increased

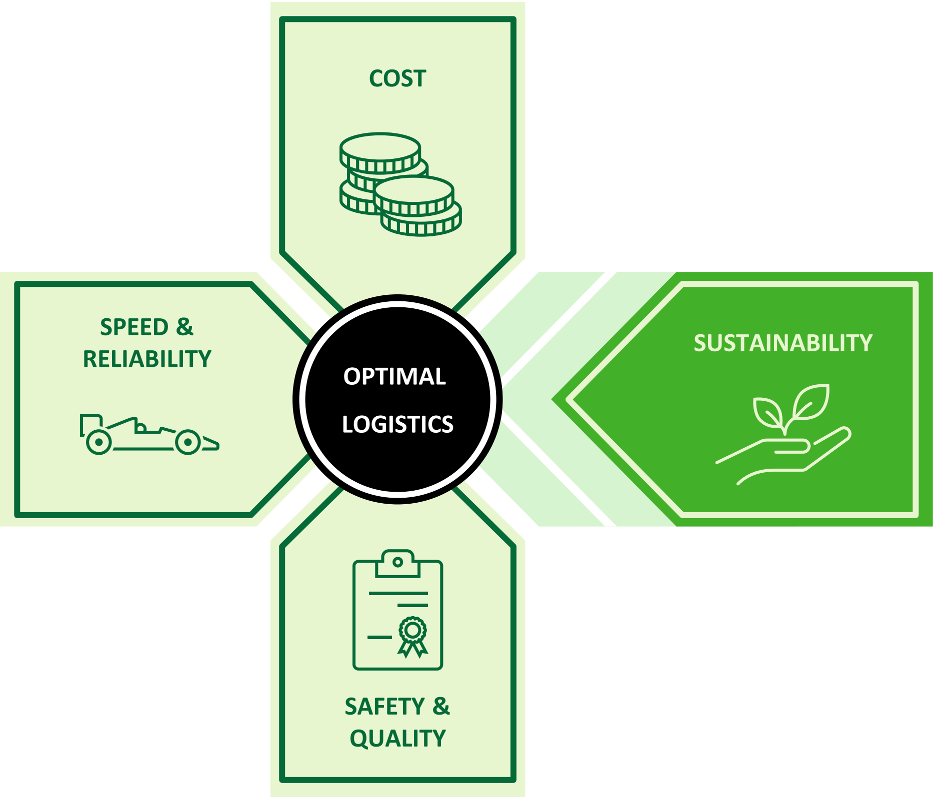
57% Greenhouse Gas Emission reduction by 2030 & Climate neutral by 2050

Sustainability is changing optimization of logistics

The perspective on optimal logistics is changing by adding sustainability to the equation, a range of levers exist from strategy to operations to improve on this front

Next to optimizing logistics for cost, speed, reliability, safety and quality, sustainability is adding requirements to the equation…

Logistics optimization is a complex balancing act



… to optimize for sustainable and efficient logistics, there are key levers to turn from strategy to operations

Key levers and their impact on environmental sustainability

Strategy → Operation

Network design	A sustainable supply network optimizes locations to minimize emissions
Technology switch	Transitioning from traditional technologies (e.g., combustion engine) to green innovation
Product design	Sustainable product (and packaging) design decreases the emissions by weight by distance
Modality switch	Setting up your operations in such a way to optimize for greener modalities (e.g., minimize air transport)
Customer engagement	Motivate clients to pick greener transport or refrain from express deliveries and give options to do so
Route optimization	With optimizing routes for environmental impact, emissions can be reduced
Fill-rate optimization	Use product or process design to reduce product's volume and/or weight and leverage technology to optimize loading efficiency

Sustainable and efficient logistics in simple objectives

Sustainable and efficient logistics will require smart network configuration, modal shift, technological innovation, operational optimization, strategic collaboration and customer commercial policies

1.

Redesign Supply Chain footprint to decrease transport length

2.

Convert to intermodal (rail, barge) and avoid airfreight

3.

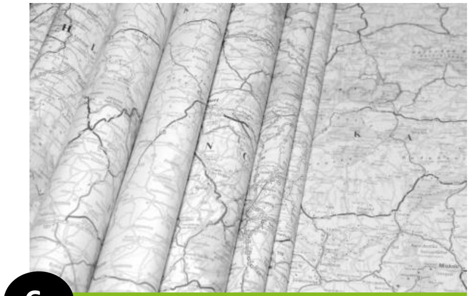
Convert to alternative fuel and technologies

4.

Decrease product & packaging volume and transport weight through design

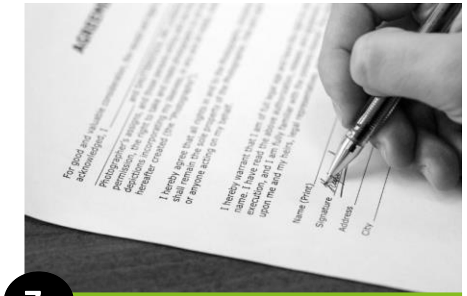
5.

Increase vehicle fill rate and avoid empty miles, e.g. (internal) collaboration



6.

Reduce distance travelled and optimize routes / trips



7.

Longer term contracts with carriers and intensified collaboration

8.

Customers changing buying behavior and commercial policies towards sustainable options

Transport commodity comparison

While waterway and rail transport have very low emissions compared to road transport, these transport modes may not be suitable for all transport tasks

[1] Emissions per modality gCO2 per tonne-km

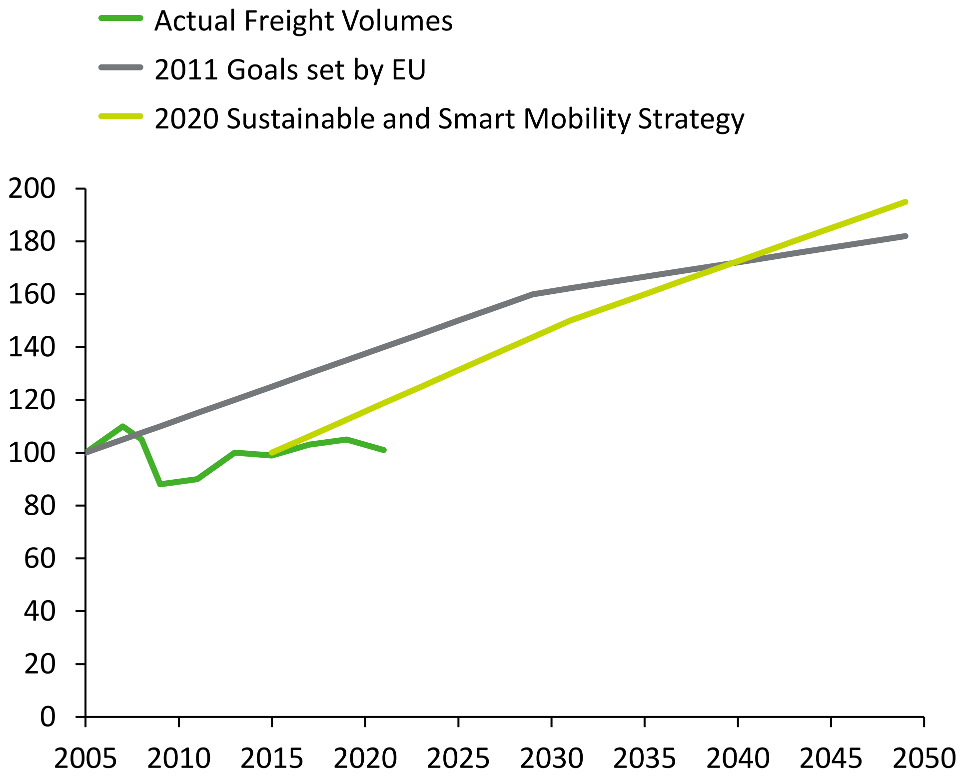
Road	Rail	Inland waterways
137	33	24
Greatest reliability and transparency in schedule and on-time-deliveries	**Lowest reliability and transparency** in schedule and on-time-deliveries	**Average reliability and transparency** in schedule and on-time-deliveries
Greatest flexibility in transportation scheduling and in pick-up and delivery locations due to use of regular road network, yet	Relatively best connectivity in Benelux and western Germany area, but **less dense network in hinterland**	**Large variations in the density of waterway networks** across the EU geography
More frequent need for maintenance compared to rail and inland waterways	**High level of technological maturity**, few technical advances required for mass development	Relatively **low maintenance demand** (compared to e.g. rail)
Quickest on short distances per unit of volume (e.g. TEU)	**Relatively quick on longer distances** for large volumes	Significantly **longer transport** times
Small volumes shipped per units of labor, coupled with shortage of truck drivers	**Large volumes shipped per unit of labour**	**Large volumes shipped per unit of labour**
Unpredictability due to traffic congestions or accidents	**Differences in national railway standards** pose obstacles for international cross-border deliveries	Effective for moving large and heavy products across **long distances**
Hard-to-abate sector requiring large capital investment to achieve net zero-emissions	Rail transport running on **100% renewable electricity**, enables complete abatement of emissions	**No zero emissions** on the short to medium term

Source: Decarbonising Road Freight – Getting into Gear (2021), A decarbonised transport model for Spain in 2050 (June 2017); 1) Rail and waterborne — best for low-carbon motorised transport (European Environment Agency, March 2021), Deloitte analysis

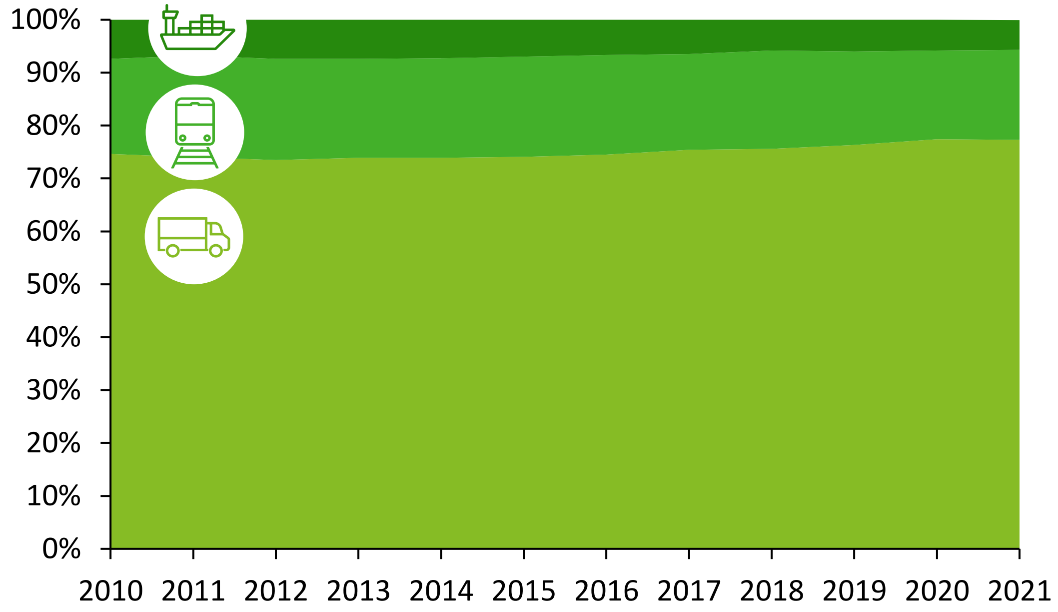
The development of modal split of inland freight transportation over the years in the European Union[1]

While intermodal transport has received a lot of attention in the last decade, road transport still had the upper hand

Although the EU had large ambitions for intermodal transportation…



… it did not result in a significant shift in modality split



[1]Consists of 27 countries

Source: https://ec.europa.eu/eurostat/databrowser/view/TRAN_HV_FRMOD__custom_2638682/bookmark/table?lang=en&bookmarkId=3e403bfe-127c-4f06-a03a-394c07702a78

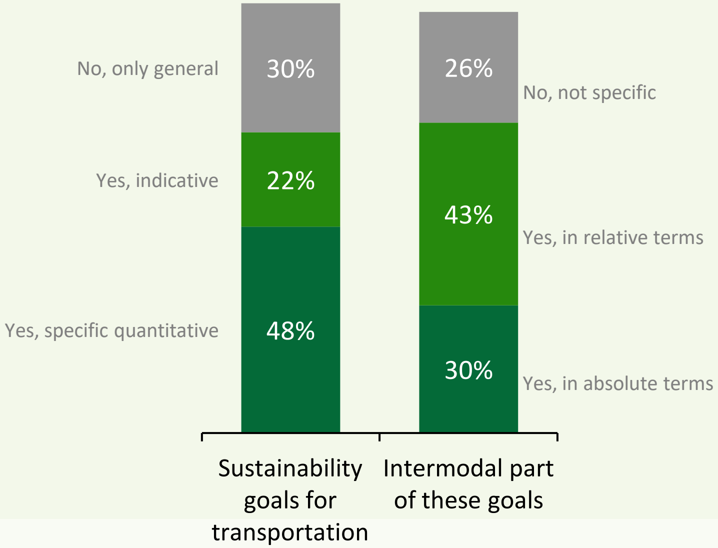
Considerations and challenges for intermodal (based on EPCA survey)

Leveraging the potential of intermodal transport

The majority of the survey respondents is committed to leverage the potential of intermodal transport and increase its use, which to date has not been fully exploited

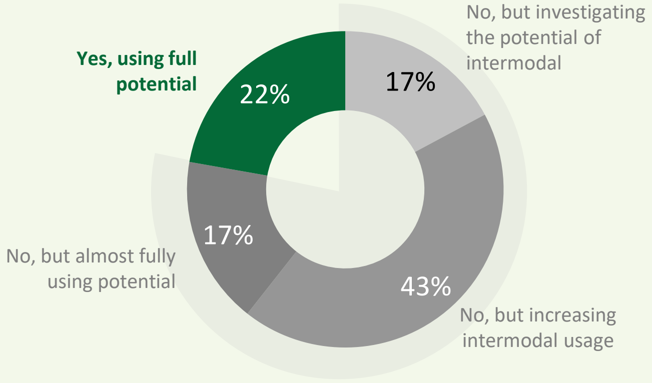
SUSTAINABILITY GOALS FOR TRANSPORTATION

- 70% of respondents indicated they have **specific or indicative sustainability goals** for transportation
- 73% stated the goals are **focused on intermodal** transport in absolute or relative terms



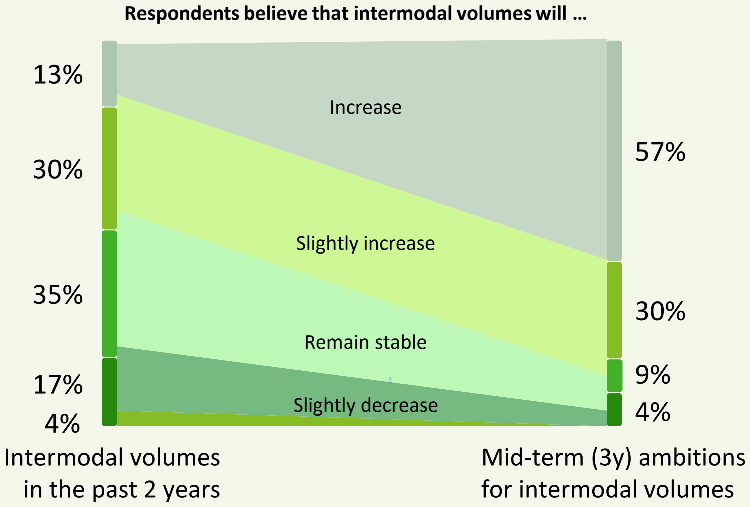
INTERMODAL POTENTIAL UTILIZATION

- **78%** believes full potential of intermodal transport is not yet utilized



INTERMODAL VOLUMES

- Only **43%** of the respondents stated that intermodal volumes (slightly) increased during the past 2 years
- However, **87% believes intermodal volumes will (slightly) increase** over the coming 3 years



Source: Deloitte Survey Analysis

What are the main priorities in transportation

Clearly cost, reliability, and safety are most critical in transportation mode decisions

FROM THE SURVEY, THESE CRITERIA ARE KEY IN MODAL SPLIT DECISION

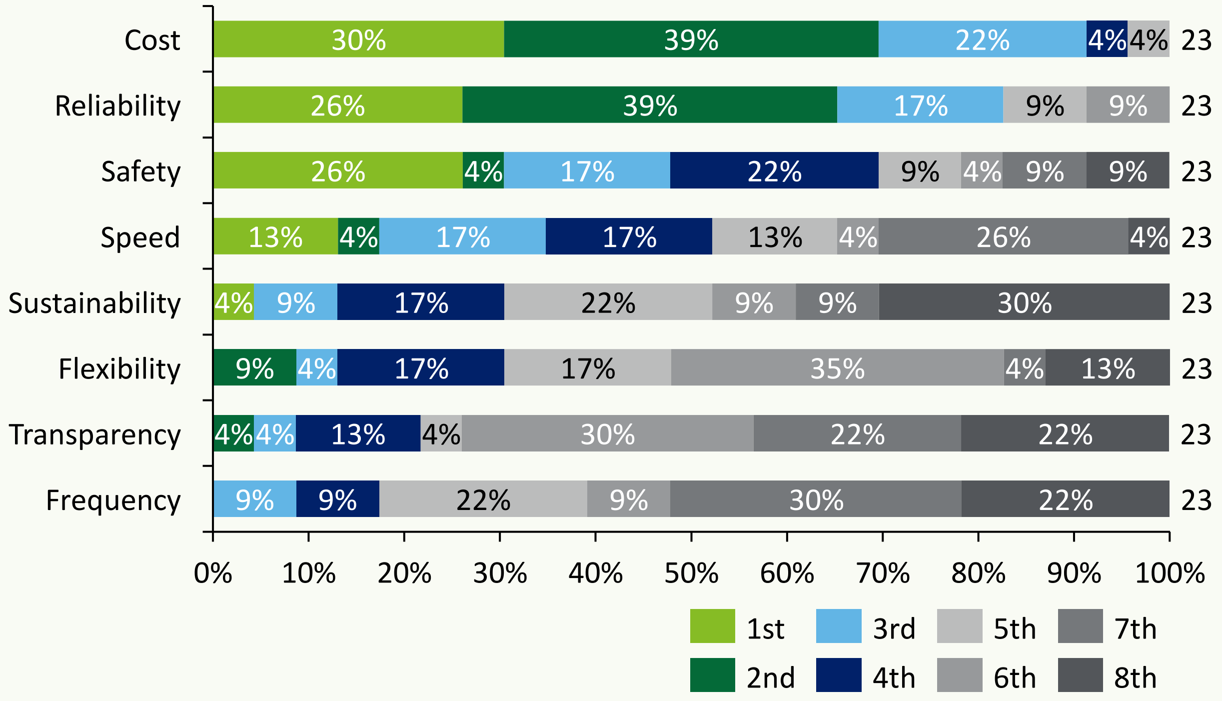
1. **Cost and reliability are most critical** regarding intermodal transportation (65-70% first or second priority)

2. **Safety is seen as an important factor** in modal split decision

3. **Sustainability, Flexibility, and Transparency are seen as minor priorities**

4. **Frequency of intermodal transportation** is not seen as an immediate priority for modal shift

PRIORITIZED CRITERIA FOR MODAL SPLIT DECISIONS



Source: Deloitte Survey Analysis

Drivers for change to intermodal

GHG regulation and greater investment in rail are expected to have the most impact

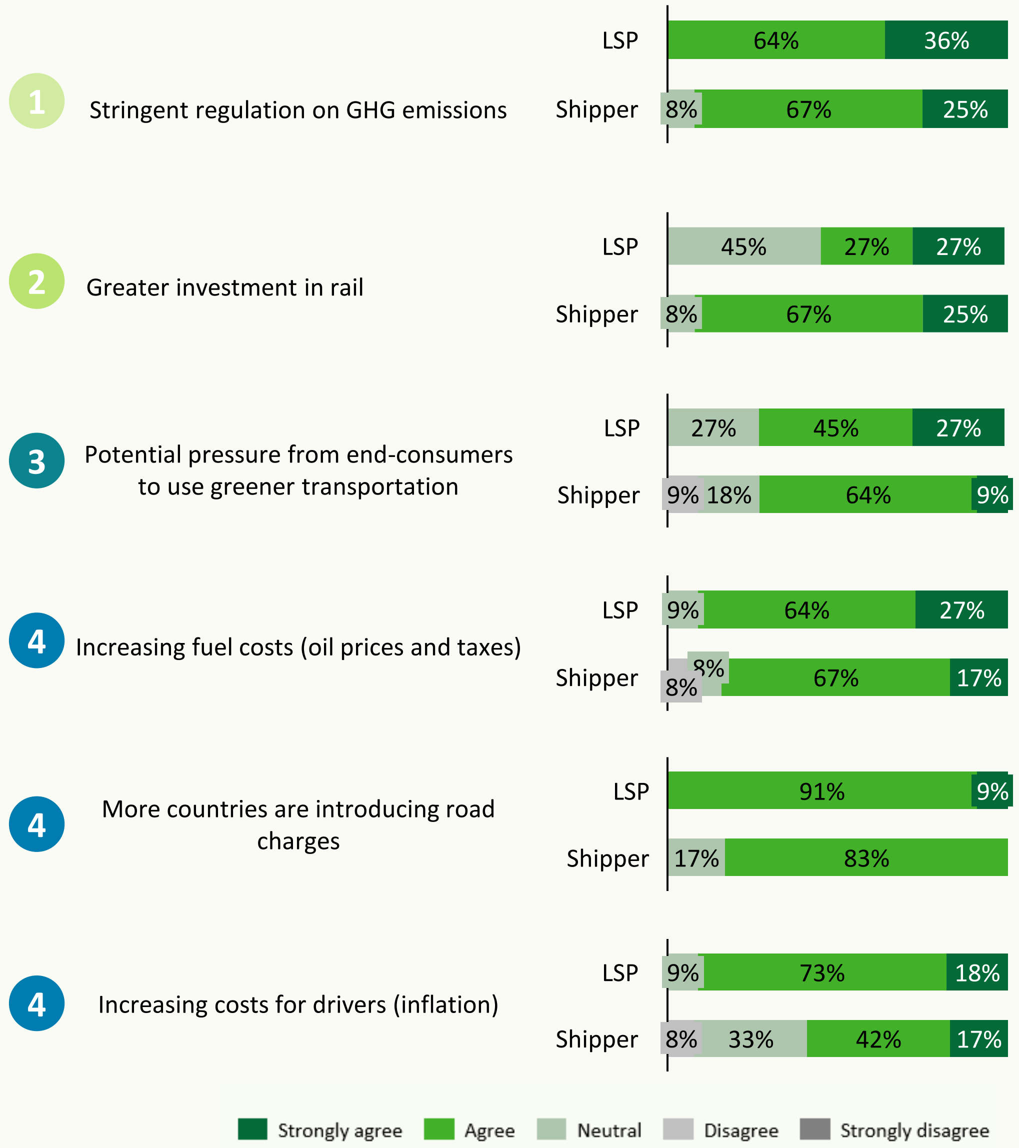
1 **Stringent regulation on GHG emissions** is mostly seen as a driver for change to intermodal by both LSPs and shippers

2 **Greater investment in rail** will also be a key driver to intermodal**.** However, shippers are more convinced of the importance of rail investments than LSPs

3 Most shippers and LSPs believe that the **pressure from end-consumers to use greener transportation** will impact the move to intermodal

4 **Increasing cost for road transportation** due to fuel prices, labor cost and road charges) is considered as a key driver for change to intermodal according to most shippers and LSPs

Will the expected impact of these trends/regulations change your transportation operations?



Source: Deloitte Survey Analysis

Challenges for intermodal transport

Evaluating the survey indicates that these challenges also are on top of your mind…

1. An overwhelming majority agrees that intermodal transportation is **not reliable and transparent enough**

2. Most respondents agree that extensive use of intermodal transportation is hindered by **more goods in transit due to longer travel times, with negative working capital impact** and **no short-term deliveries possible**

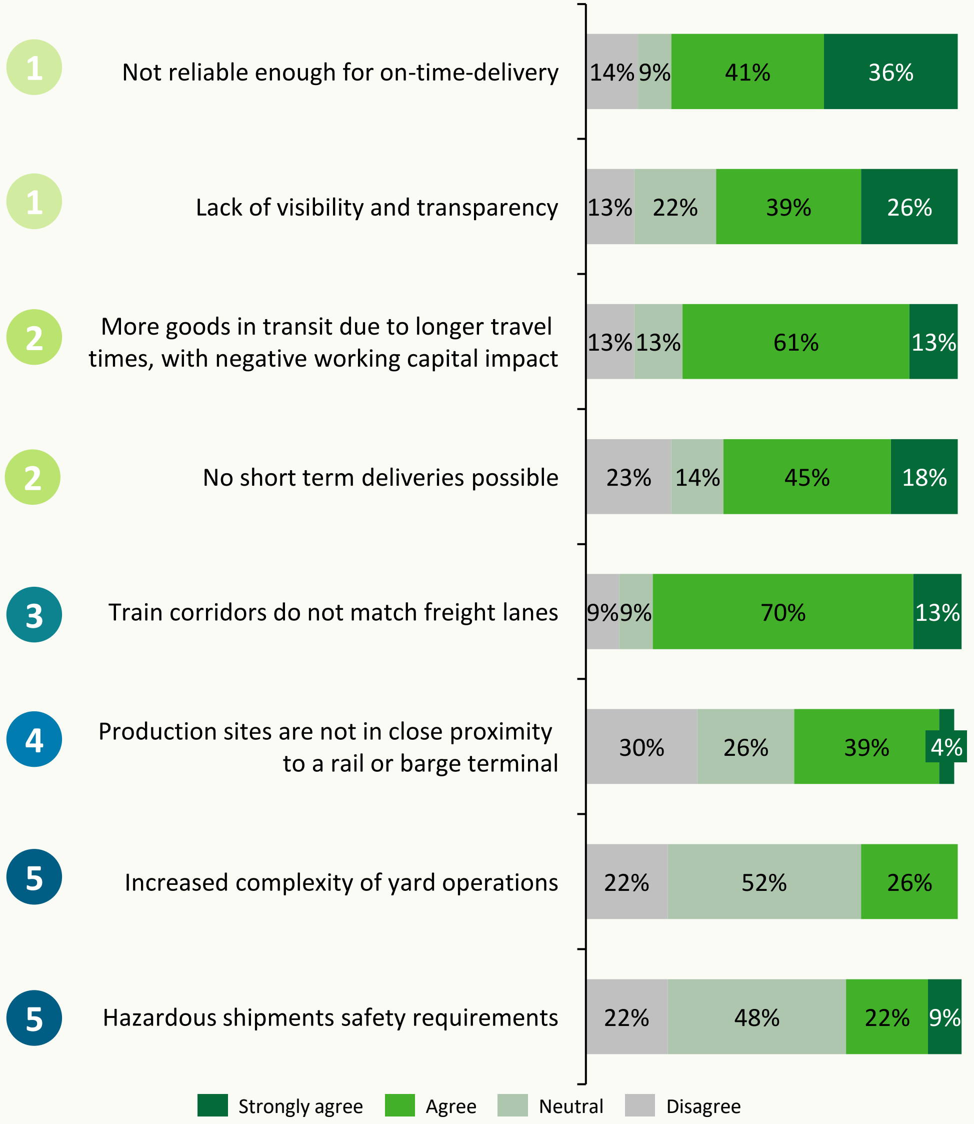
3. Respondents agree on the hinder of **train corridors that do not match freight lanes** in extensively using intermodal transportation

4. The statement **production sites and customers are not in close proximity to a rail or barge terminal** is not considered as a key challenge by most respondents

5. Respondents are divided on the statement that **increased complexity of yard operations** and **hazardous shipments safety requirements** present obstacles

Source: Deloitte Survey Analysis

Please indicate to which extent below statements hinder the extensive use of intermodal transportation:



Discussion:
Challenges with intermodal transportation

Exercise:
Cluster the challenges

Keynote EPCA ITN workshop

Dr. Dirk Stahl, CEO BLS Cargo, President ERFA
22 April 2024, Brussels

Content of presentation

1. Perspective BLS Cargo and ERFA
2. Development Intermodal Traffic and shift to rail (CH, EU)
3. Main conditions for an efficient rail system (infrastructure, competition, financing)
4. Chances
5. Challenges
6. Development of competitive RU
7. Conclusion

1. Perspective BLS Cargo Group

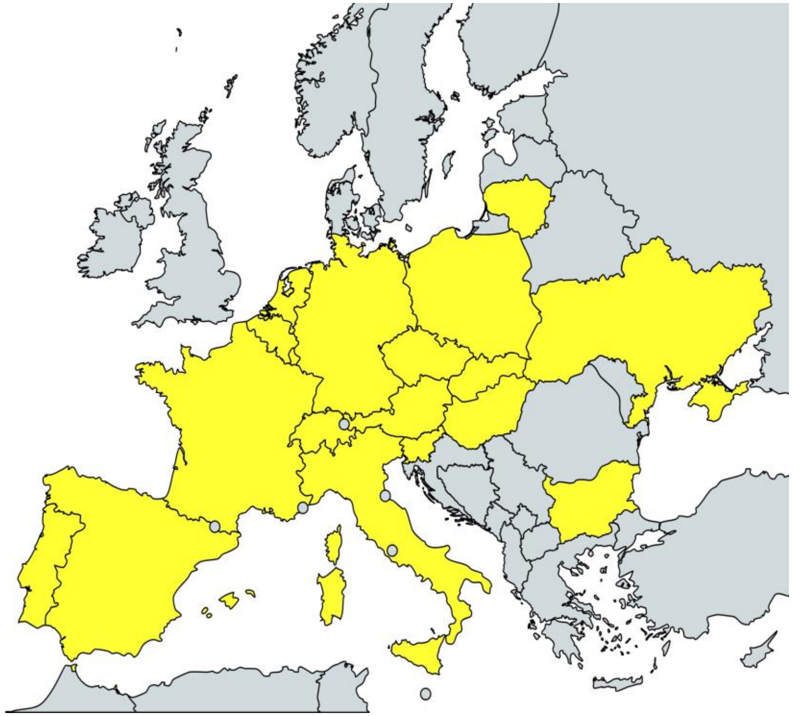
- BLS Cargo AG founded 2001
- Shareholders: BLS (52%), Captrain Holding (45%) und Ambrogio Trasporti (3%)
- Tochtergesellschaften:
  – Crossrail Benelux N.V. (100%; 2019)
  – BLS Cargo Deutschland GmbH (100%; 2007)
  – BLS Cargo Italia S.r.l. (100%, 2006)
- > 400 Employees
- 22.000 trains/year

1. Perspective ERFA (European Rail Freight Association)

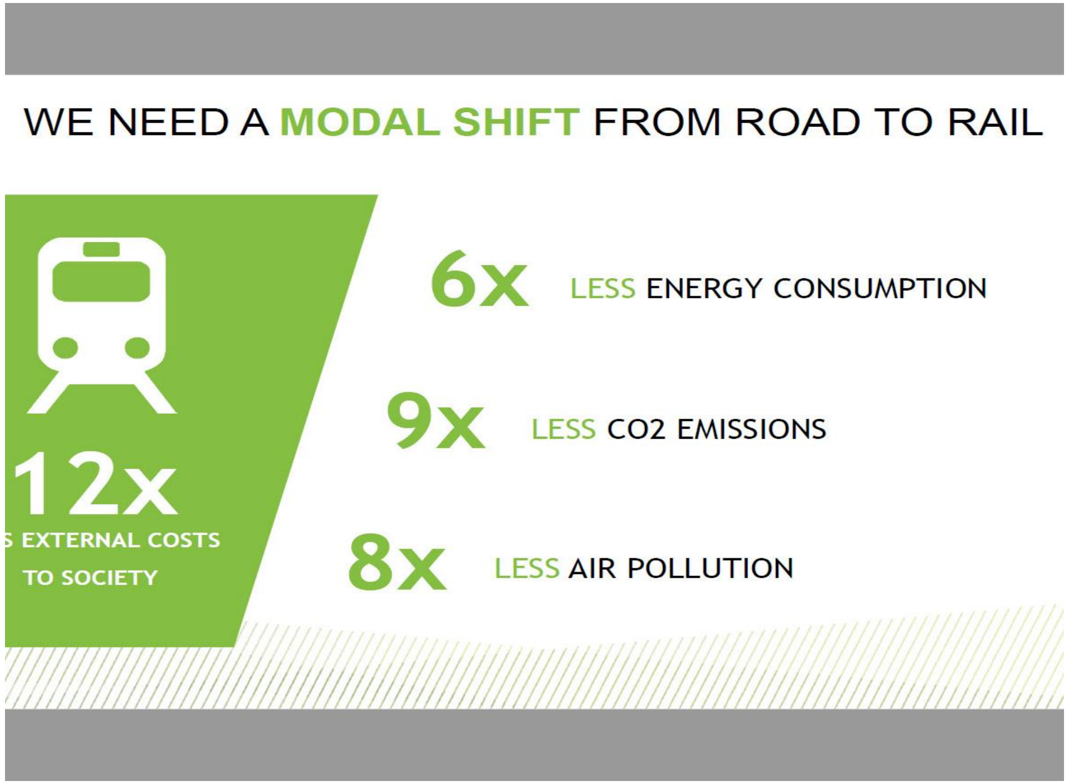
«We represent the voice of private and independent rail freight companies in Europe»

ERFA

akiem
APEF
BERTSCHI
bls cargo
CAPTRAIN
DIE GÜTERBAHNEN
duisport rail
EUROPORTE
FER CARGO
GG RAIL est. 1961
HELROM Trailer Rail
HUPAC
IGTL Izba Gospodarcza Transportu Lądowego
LTE logistics & transport
MEDWAY Transporte & Logística
MEV Independent Railway Services TEX GROUP
OST-WEST LOGISTIK
AMBROGIO INTERMODAL ONLY
Touax Global Container Solutions
TRANSACHEMA Koncerno „Achemos grupė" narė
VTG
ŽESNAD.CZ Sdružení železničních nákladních dopravců České republiky, z.s.
Związek Niezależnych Przewoźników Kolejowych



2. Why shift good on rail?



Source: Rail Freight Forward Initiative

2. Shift to rail successfully done in Switzerland market share rail in transit traffic 72%

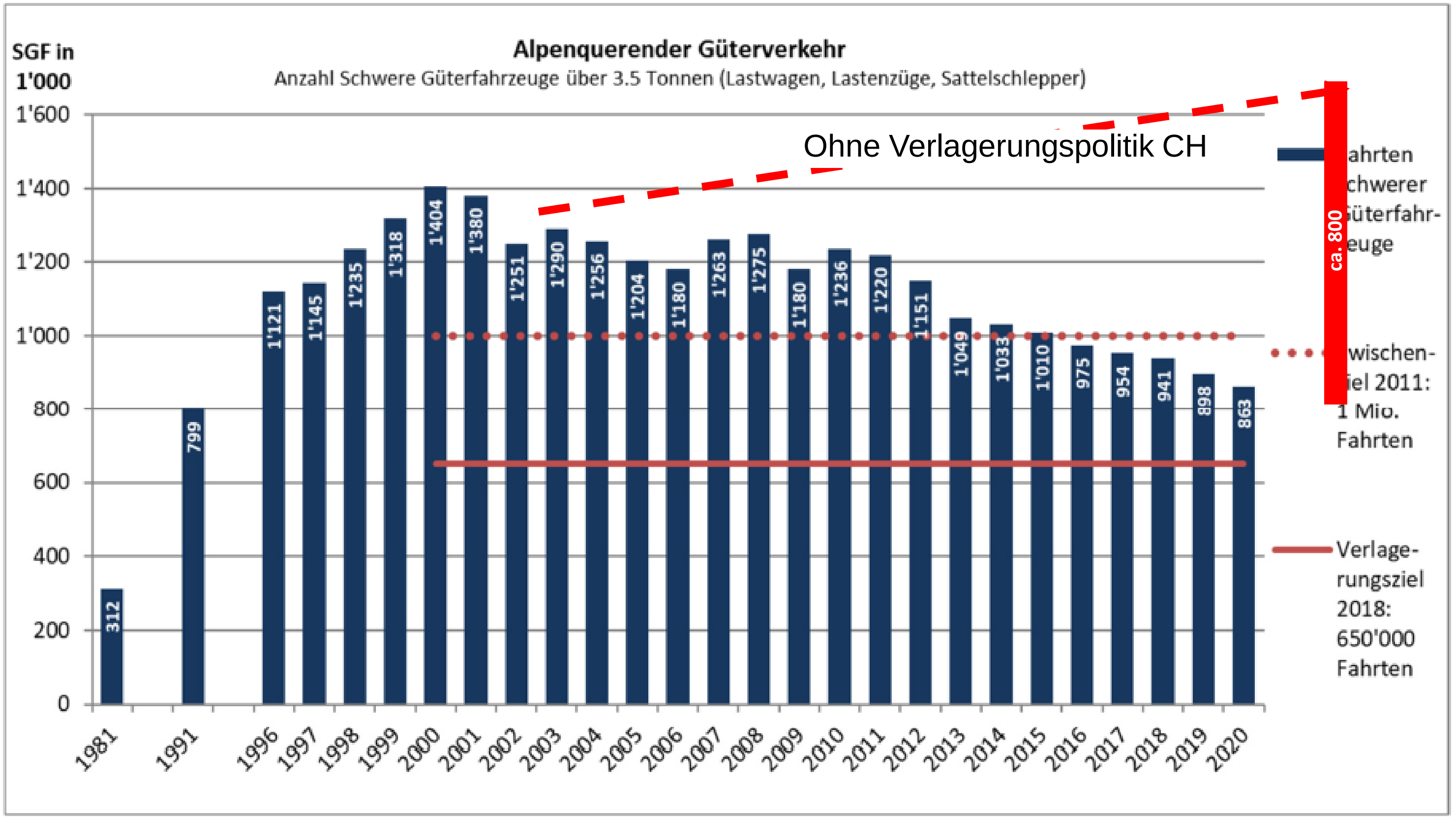
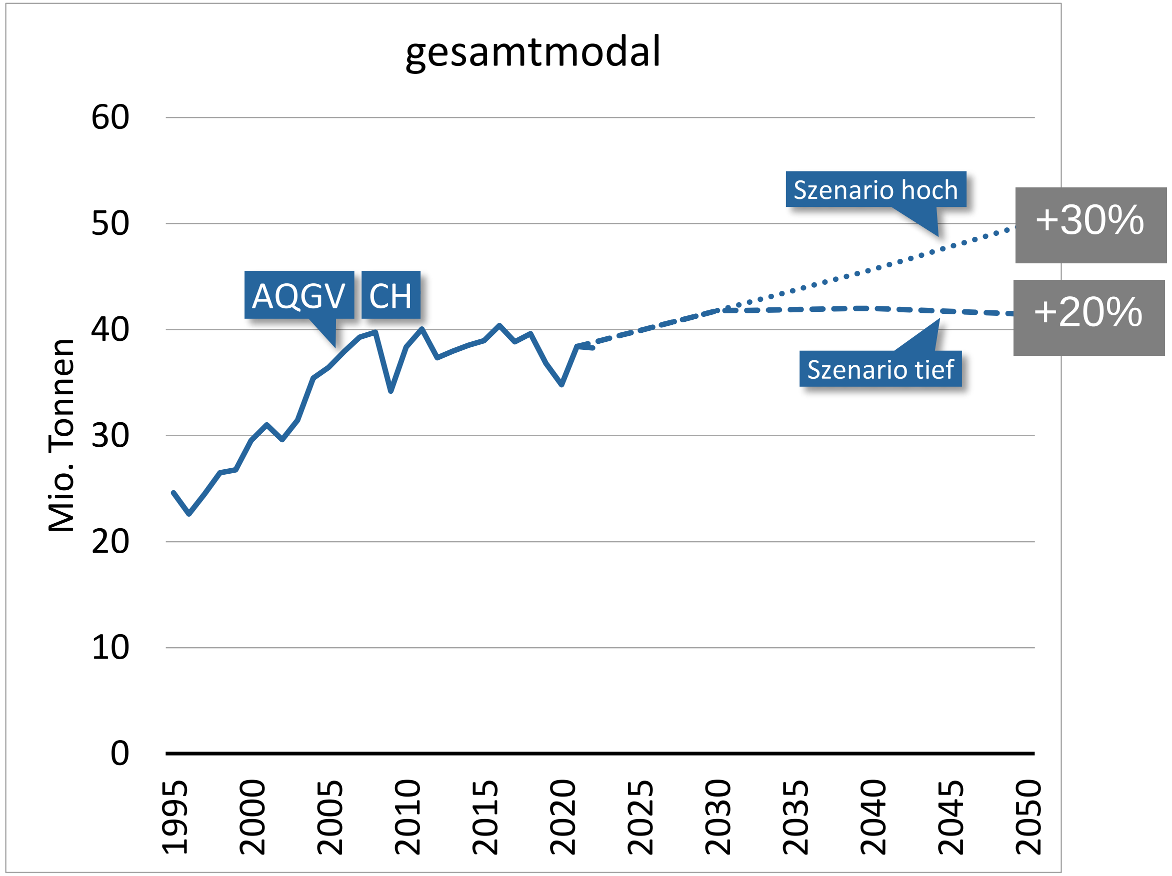
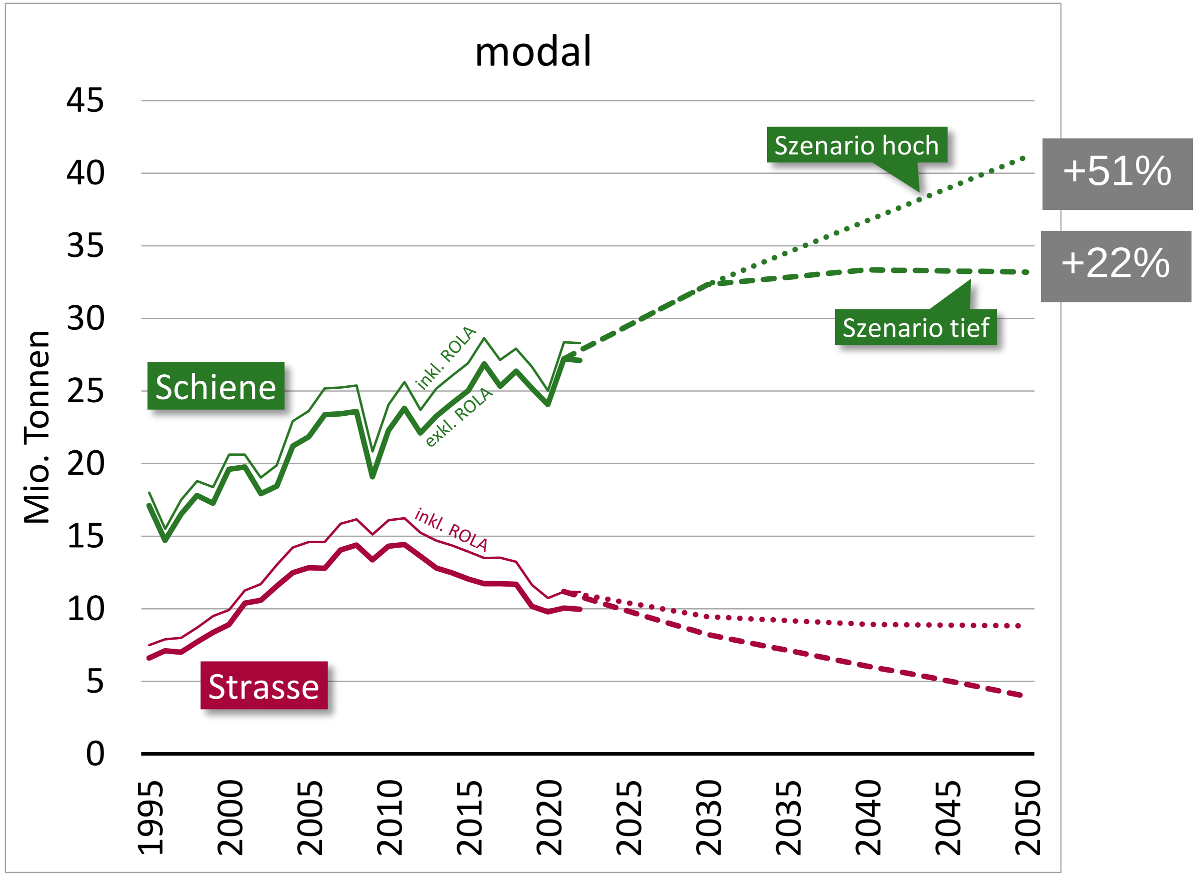


Abbildung 1: Entwicklung alpenquerender Güterverkehr auf der Strasse 1981 bis 2020.

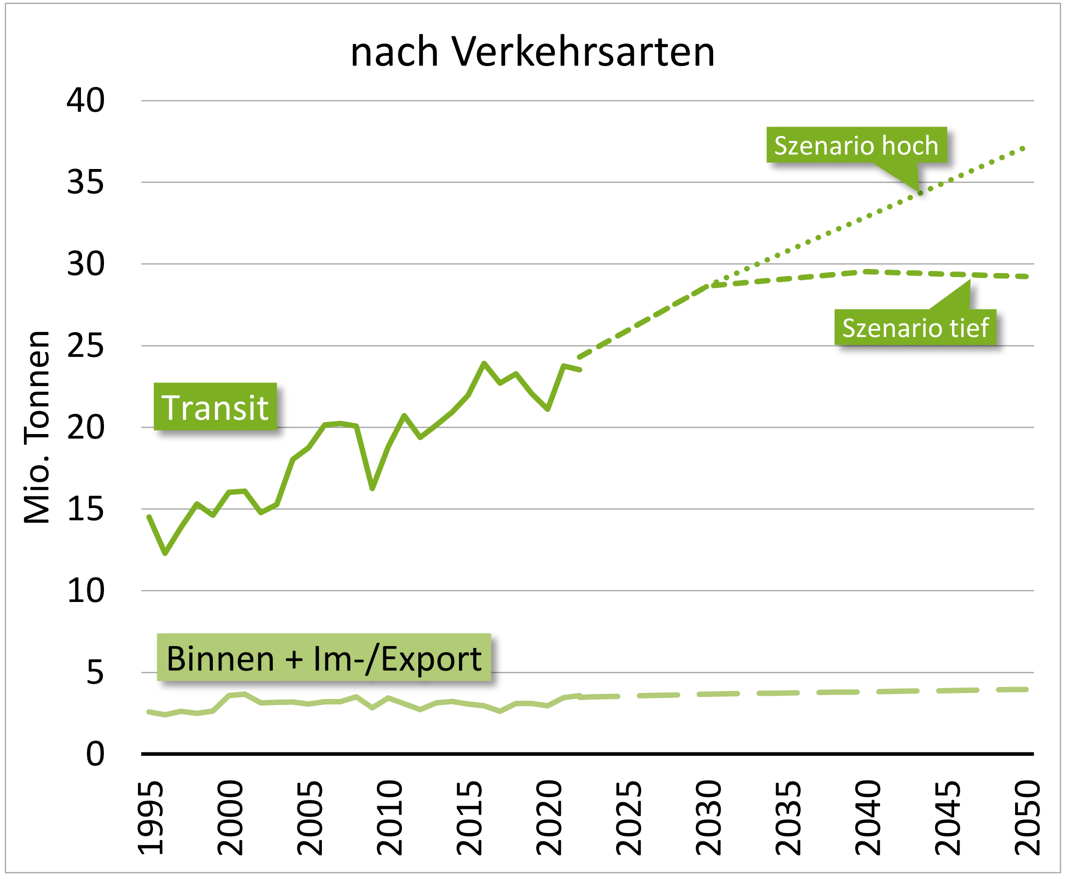
Source: BAV Verlagerungsbericht 2021

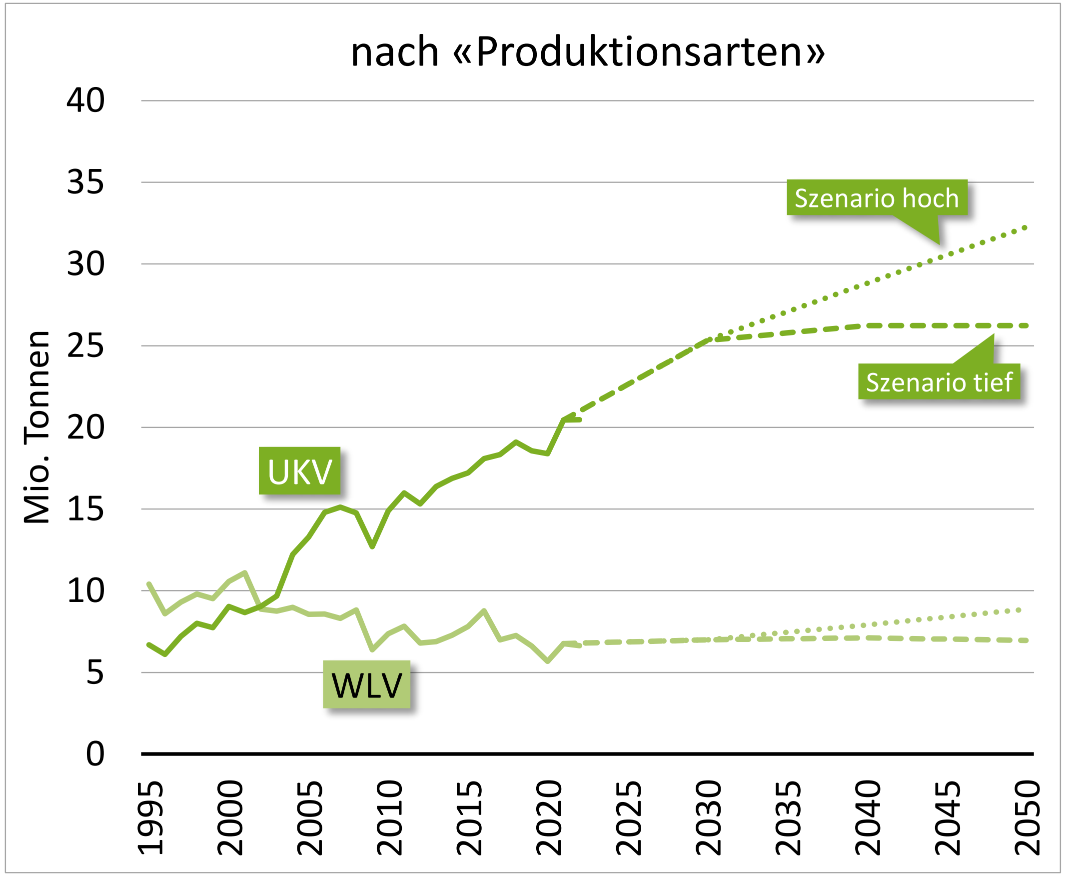
2. Prognoses Alp Transit Switzerland 2050 (2023)





2. Prognoses Alp Transit Switzerland 2050 (2023) strong growth in Intermodal traffic





3. Main conditions for an efficient rail system

Performance quality of freight railroads and infrastructure

- Sufficient transport capacity, 750m trains, P400 profile
- Punctuality, reliability
- Flexibility in the event of market volatility
- Competitive price level

Functioning competition on the railways

- Choice of providers, pressure on price/performance
- Sustainable freight railways
- No distortion of competition
  between Incumbants and Challengers

Level Playing Field

- Fair allocation of external costs
- Fair infrastructure costs (TAC/ toll))

Initiatives on EU Regulation

Performance quality of freight railroads and infrastructure

- TEN-T Regulation
- Capacity Management Regulation
- Temporary Capacity Restrictions (TCR)

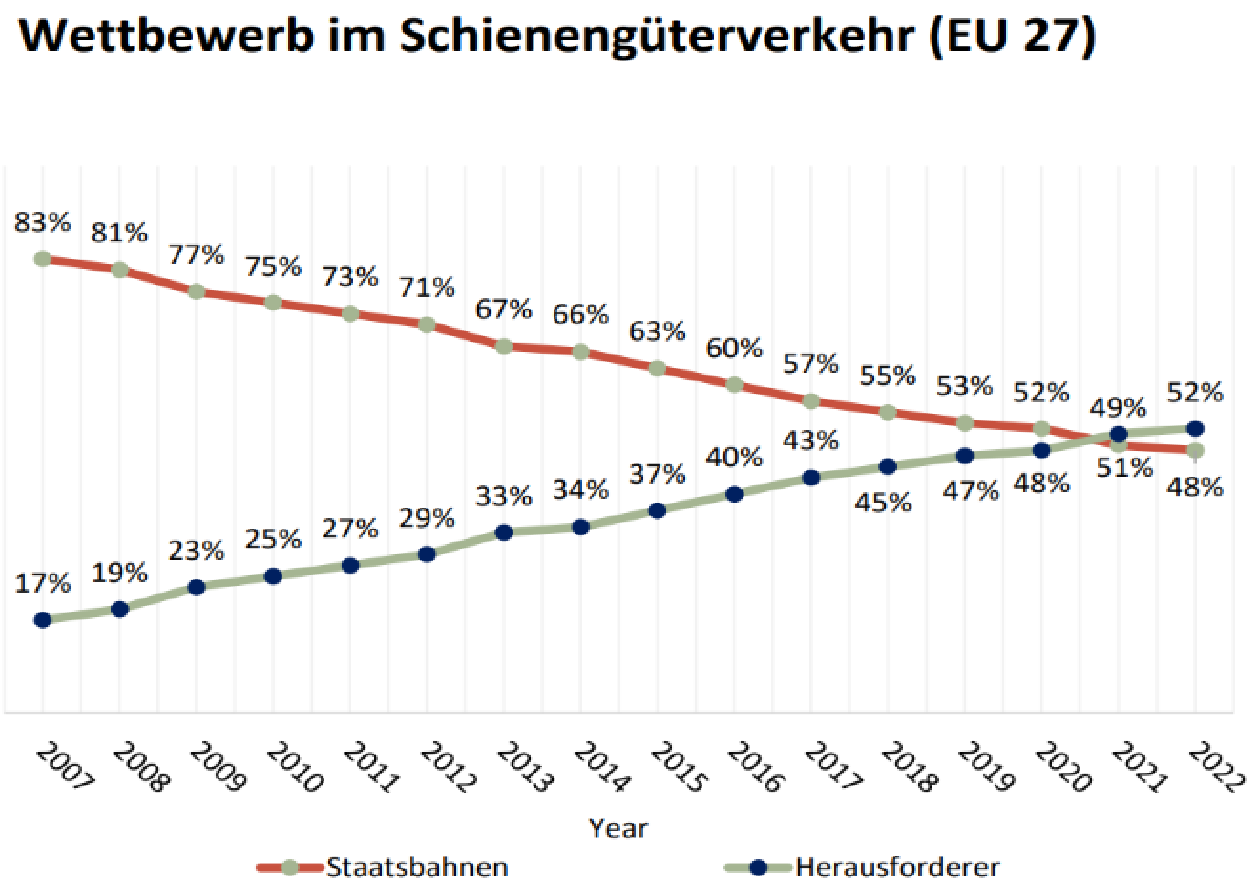
Functioning competition on the railways

- State Aid Guidelines
- Subisidy scheme on Single Wagon Traffic

Level Playing Field

- Combined Transport Directive
- Weight & Dimensions Directive
- Count Emissions EU Directive
- Track access charges

Functioning competition on the railways



- Strong competition between established national providers and "challengers" in the European rail freight market

- The trend over the last 15 years has been towards greater diversification of the market, with "challengers" taking over the state railroads in their home markets in 2021

- "Challengers" particularly strong in block train markets such as intermodal transport

4. Chances

EU – Green Deal

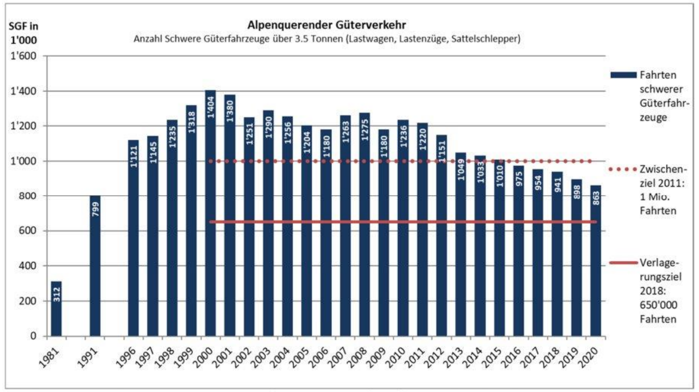
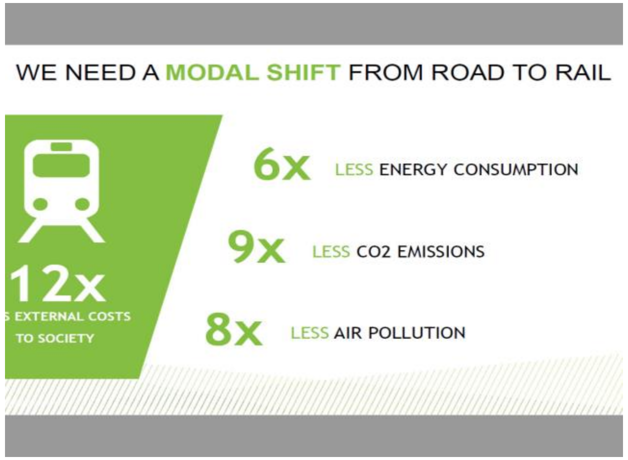


Abbildung 1: Entwicklung alpenquerender Güterverkehr auf der Strasse 1981 bis 2020.

Verlagerungspolitik CH

Market Growth Intermodal- und Logistics



Climate friendly rail freight

Infrastructure investments

New customers – logistical concepts

Infrastructure DB on massive investment plan

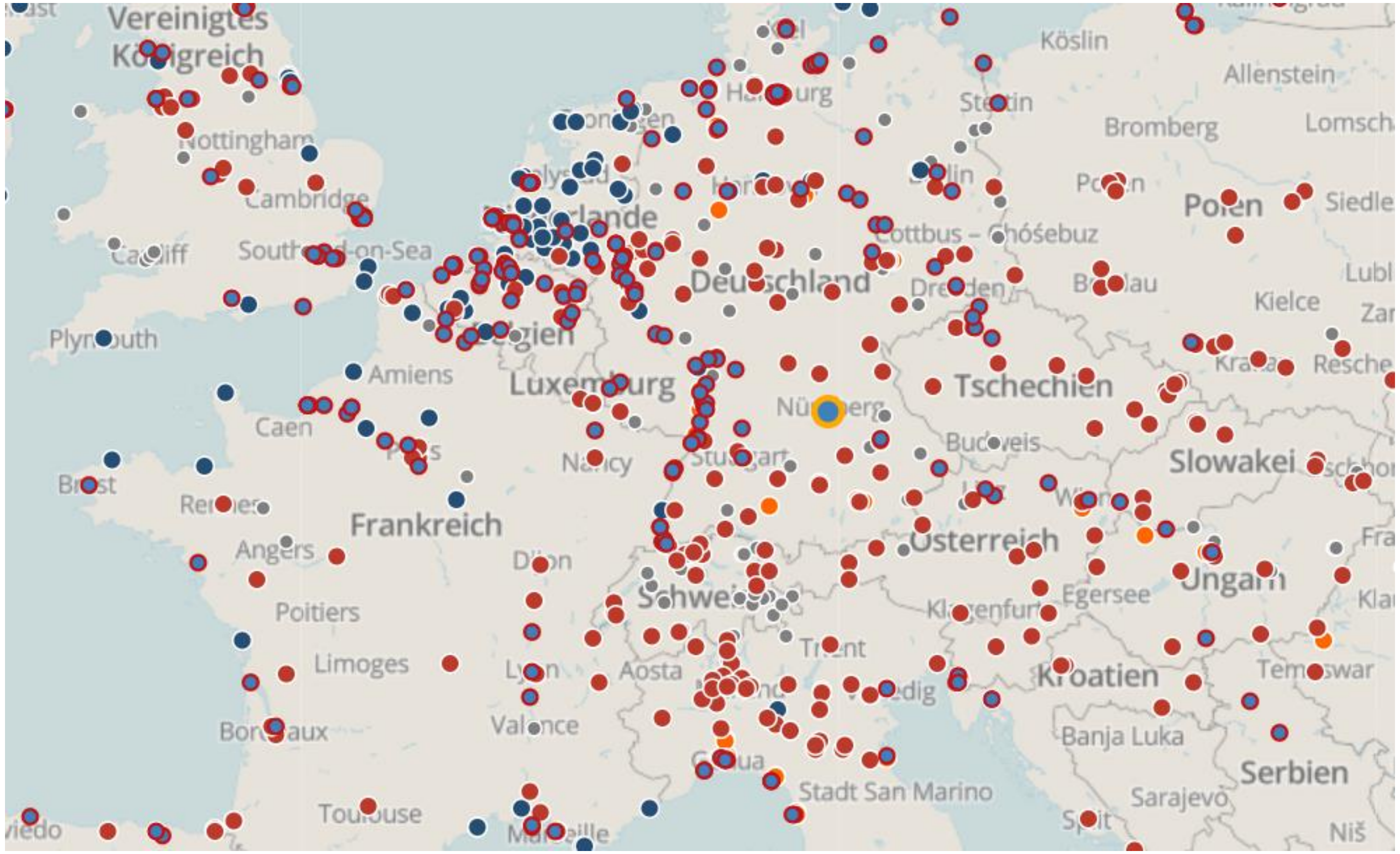
- Massive construction sites planned on the German network until 2035 with full closure of main lines (Hochleistungskorridore)

- Construction sites are already overloading the system and increase system complexity.

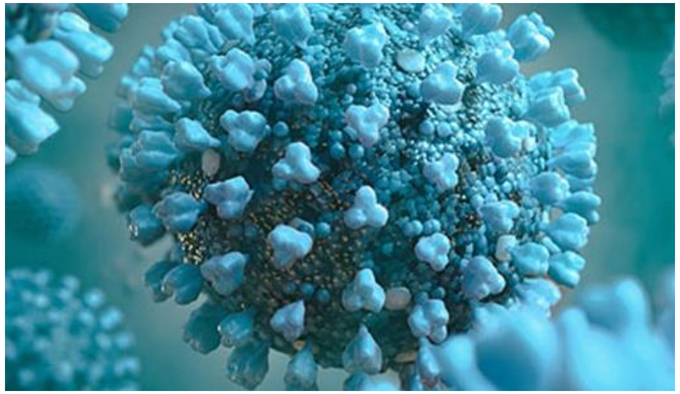
- Alternative routes for today's traffic and its route-specific requirements challenging

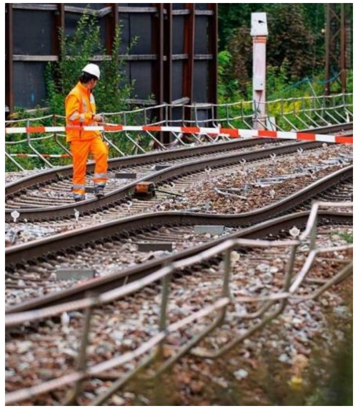
- Important expansions to the rail network in Germany (Karlsruhe - Basel) are currently running behind schedule.

Terminal infrastructure for Intermodal broad and developing



5. Challenges 2015 - 2023


Covid 2020


Rastatt 2017/2024


Energy prices 2022


Accident Gotthard 2023

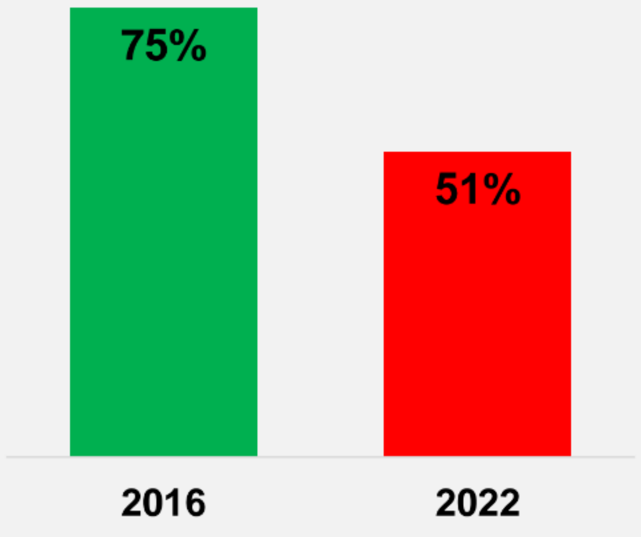

Legislation / vehicle authorisation (ERTMS)


Market volatility

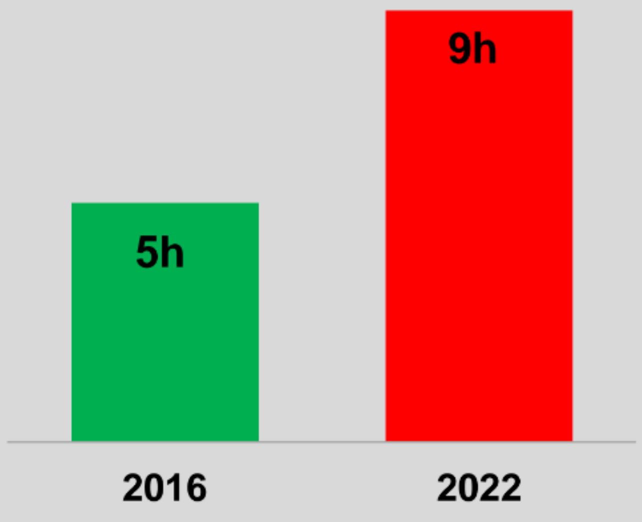
Destabilisation quality 2018-2023 (source Hupac)

Situation vor/nach Rastatt

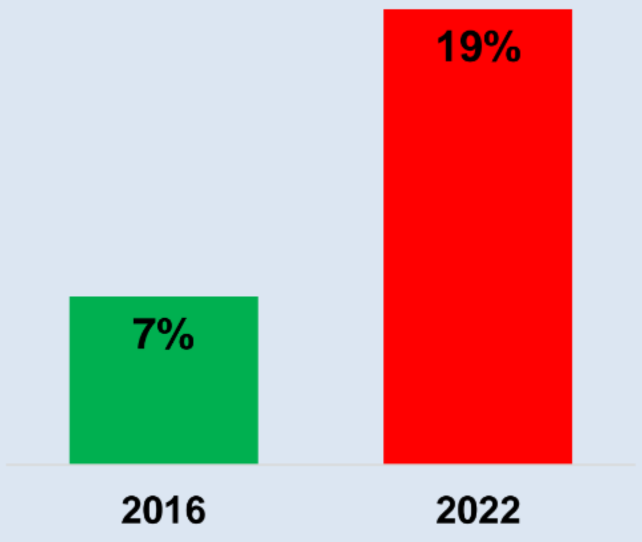
Pünktlichkeit der transalpinen Hupac-Züge (Verspätung < 1h)



Durchschnittliche Ankunfts-verspätung der transalpinen Hupac-Züge im Süden

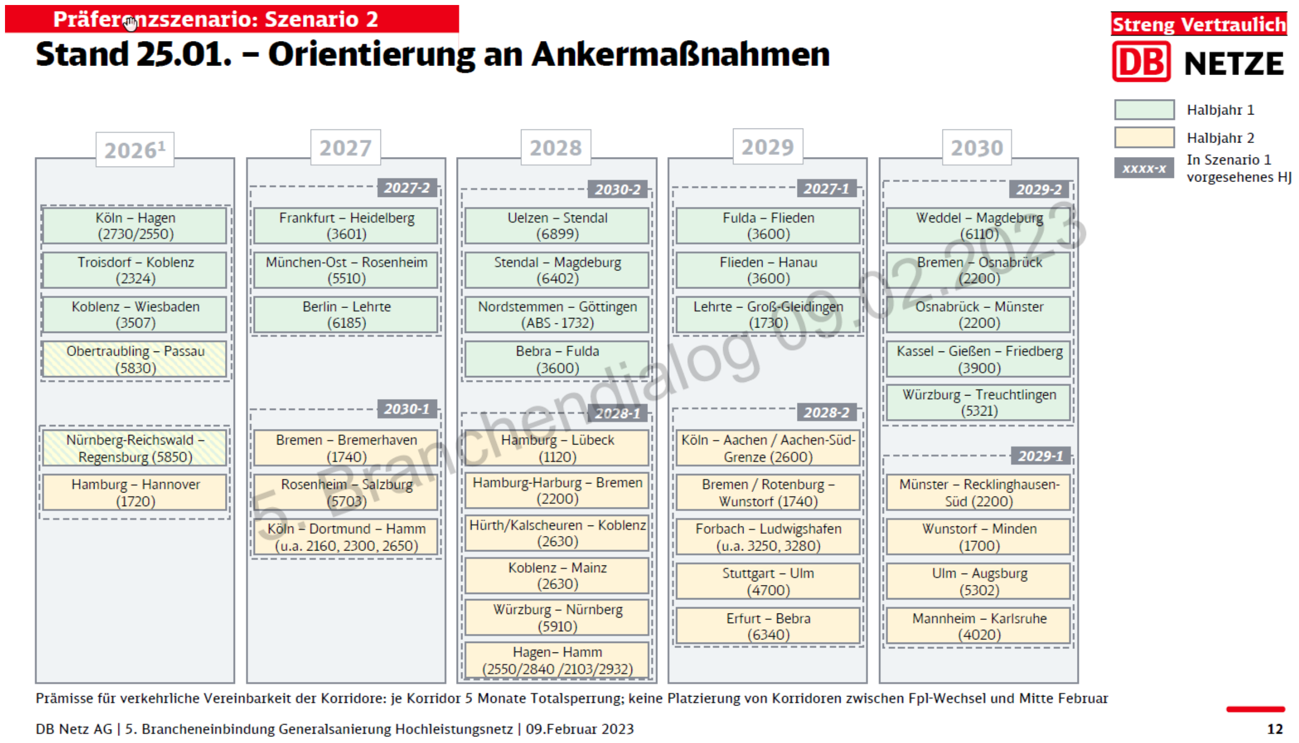


Zugsausfälle gegenüber Planung



Challenge: stabilisation and resilience

DE: Hochleistungsnetz / Korridorsanierung bis 2030



- Intensive planning jointly with infrastrcture managers to coordinate internationally the construction works
- New planning with partly longer transport times, more buffers and stabilisation on production
- Coordination of terminal capacities and opening times, wagon sets and joint transport plans with customers.
- Pre-planning for rerouting in case of planned and unplanned route closures.

6. Development of competitive RU

- Focus on optimisation of clear and optimised business model (f.eg. corridor specialist)
- High productivity of personal and locomotive ressources, especially broder crossing traction and longer and heavier trains (750m, 2000t)
- Build up resiliance to react on planned and unplanned traffic interruptions and market volatility
- Customer orientation with one stop shop, proactive customer information and capability to develop joint solutions
- Digitalisation (planning/disposition, track/trace, preventive maintenace, ERTMS)

7. Conclusion

Performance quality of freight railroads and infrastructure

- Regulation Ten-T, Capacity Management and increased infrastructure investment positive
- Intensity of construction works and interruptions critical
- Competitive RU prepare for optimisation and resilience

Functioning competition on the railways

- Challengers decisive for intermodal transport, fair competition towards incumbants important
- Subsidies (direct/indirect, TAC, SWL) to be implemented non discriminating

Level Playing Field

- New weight & dimensions directive critical, will increase competiveness of road.
- Indications on TAC in Germany (2025) negative

Thank you!

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Questions?

Exercise: Develop Solutions

Next Steps: 5-5-5 Framework

Wrap-up and Q&A

EPCA

INTERMODAL TRANSPORTATION
a way to meet 3 future challenges!

Thank you!

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Supply Chain
Program Committee