

# **CONTEMPORARY CHALLENGES IN COMBINED TRANSPORT FROM A POLICY AND BUSINESS PERSPECTIVE**

**UIC COMBINED TRANSPORT  
OCTOBER 12<sup>TH</sup>, 2023**

**WEBINAR START AT 10.00H**





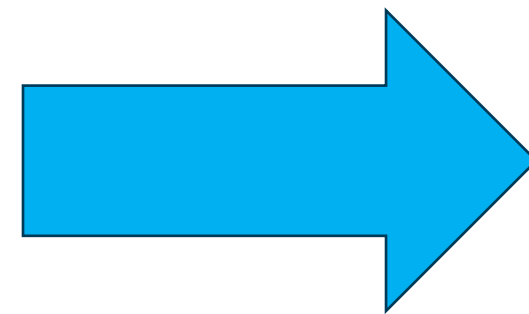
INTERNATIONAL UNION  
OF RAILWAYS

- **WEBINAR CONTEMPORARY CHALLENGES IN  
COMBINED TRANSPORT**
- **NEW GUIDELINE ON COMBINED TRANSPORT**  
**OCTOBER 12TH, 2023**  
**10.00H – 12.15H**

# Guidelines on Combined Transport

To the question of why economic actors do not use Combined Transport, the 2 most frequently cited answers are:

- I don't know how it works
- It seems complicated



**These guidelines explain what CT is and demonstrate that it's not as complicated as it seems to be**



UIC FREIGHT DEPARTMENT  
**Guidelines for Combined Transport**

October 2023



INTERNATIONAL UNION  
OF RAILWAYS



# These guidelines, jointly developed with the members of the UIC CT Transport Special Group describes the following aspects:

- ✓ Combined Transport terminology
- ✓ The different with the other modes of transport
- ✓ The different stakeholders in CT
- ✓ The roles and responsibilities of different actors
- ✓ Standardisation landscape in Europe
- ✓ A step-by-step approach when starting CT operations
- ✓ How UIC's TC group helps its member in realising safe and efficient CT operations

**All of this explained in an "easy-to-use" way, with pictures and diagrams**







# CONTEMPORARY CHALLENGES IN COMBINED TRANSPORT FROM A POLICY AND BUSINESS PERSPECTIVE

COMBINED TRANSPORT IN THE NEW BUSINESS  
CONTEXT  
OCTOBER 12<sup>TH</sup>, 2023



# Program

## 10.00 – 10.15 Introduction

*Barbara Chevalier – CEO CFL Multimodal*

*Philip Van den bosch – UIC*

## 10.15 – 11.00 Presenting the current trends on Combined Transport in Europe

Trends & evolutions on CT in Europe

*Philip Van den bosch – Deputy Director Freight - UIC*

The Role of Combined transport in current logistics operations and how it has changed (or not)

*Eric Feyen – Technical Director - UIRR*

The new handbook on Combined Transport

*Eric Lambert – Former chairman Combined Transport Group - UIC*

## 11.00 – 11.30 Combined Transport in a new business context

Presentation of the new study on direct shipment between rail and waterborne transport

*UIC & Louis Descamps - University of Antwerp*

Role of combined transport from a customer perspective

*Tobia Mazzi - Transportation Purchasing Senior Manager - Arcese Trasporti*

## 11.30 – 12.00 Combined Transport in a new legislative and political context

Presentation of the latest legislative initiatives

*Jacques Dirand - Head of Rail Freight Services – CER*

Stakeholder debate on the new legislative era

Combined transport in the new Eastern Europe reality

*Andrius Sinkevičius - Business Development - LTG Cargo*

## 12.00 – 12.15 Conclusions





University of Antwerp  
| TPR | Department of Transport  
and Regional Economics

# Developments and opportunities of direct transshipment between rail and waterborne transport

**Louis Descamps**

Maritime and Logistics Management

12 October 2023



# Agenda

- Problem definition
- Research design
- Typology
- Methodology
- Challenges and opportunities
- Results
- Conclusion
- Recommendations



# Problem definition



- UIC – International Union of Railways
  - Direct transshipment between rail and waterborne transport
- Intermodal sea-rail terminals
  - Intermodal loading units (containers, swap bodies, semi-trailers)
  - Connection between ports and rail network
- Quay tracks → potential barrier to port operations?



# Research design

- **Purpose:** developments and opportunities direct transshipment → seaports & inland ports
- Distinction between direct, semi-direct and indirect transshipment
- **Research questions**
  - What are the opportunities and challenges of direct transshipment?
  - Can lead times be reduced when using direct transshipment?
  - Can the total port cost be reduced because of the direct transshipment method?



# Typology

- 3 types sea-rail transshipment
- Distribution based on various factors
  - Dwell time
  - Storage area
  - Vehicle movements
- Sea ports vs. Inland ports

|                          | <b>Direct</b> | <b>Semi-direct</b> | <b>Indirect</b>    |
|--------------------------|---------------|--------------------|--------------------|
| <b>Dwell time</b>        | <b>0 days</b> | <b>&lt; 2 days</b> | <b>&gt; 2 days</b> |
| <b>Storage area</b>      | <b>No</b>     | <b>Yes</b>         | <b>Yes</b>         |
| <b>Vehicle movements</b> | <b>1</b>      | <b>Multiple</b>    | <b>Multiple</b>    |



# Methodology

- Literature review: transshipment from ship to train
- Interviews with inland ports (2)
- Cases
  - Sea ports: Hamburg, Antwerp and Gothenburg
  - Inland ports: Genk and Lille
- Port model (chain cost model University of Antwerp)



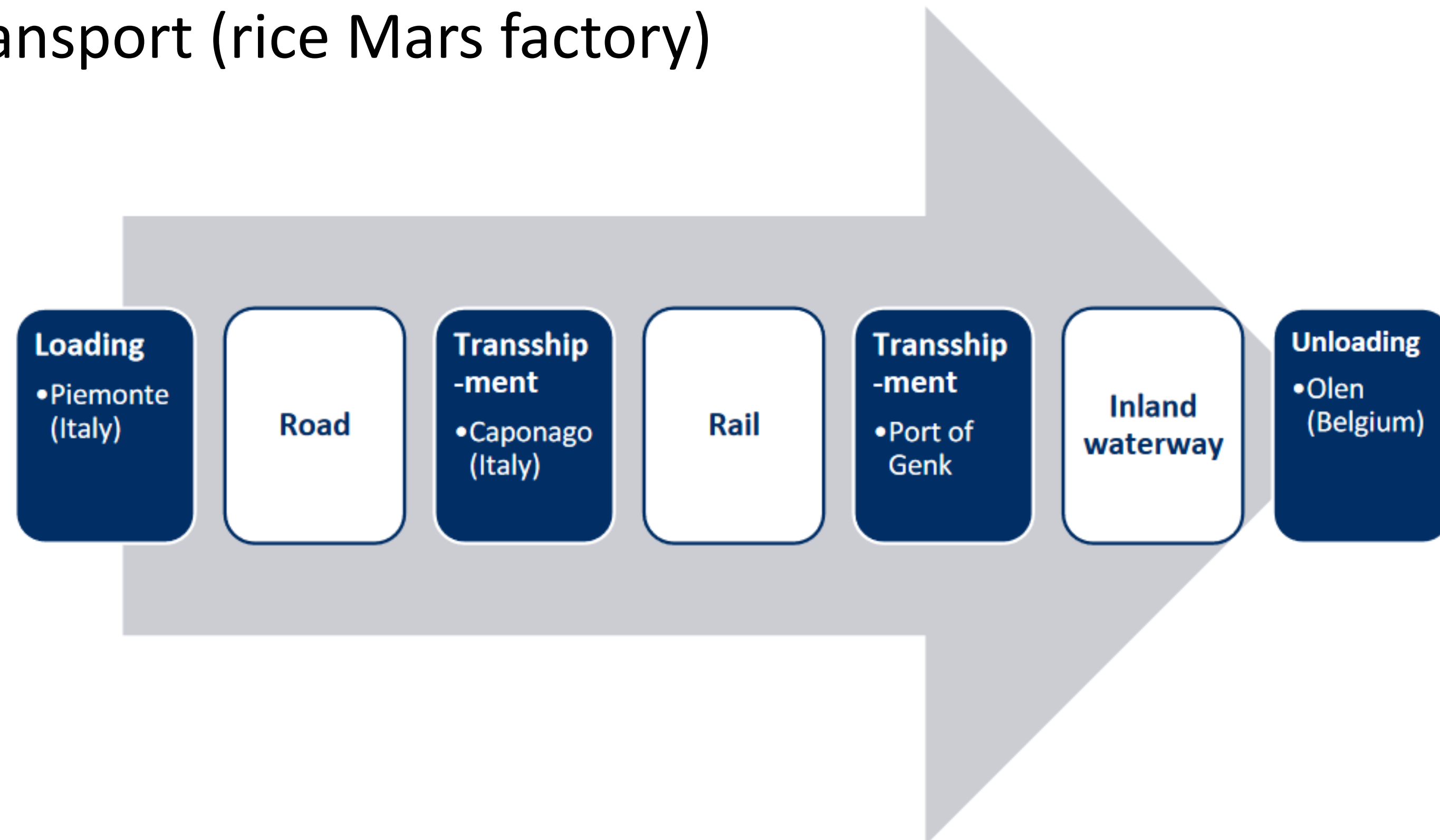
# Port of Lille

- General manager
- 20 trains → Bordeaux, Toulouse, Marseille, Aix-en-Provence
- Direct transshipment containers rail-barge?
- No demand → Rennes-Lille-Antwerp?
  - Reach stackers → mix containers and swap bodies
  - Waiting times



# Port of Genk

- Operations manager
- No direct transshipment containers rail-barge?
  - <-> bulk transport (rice Mars factory)

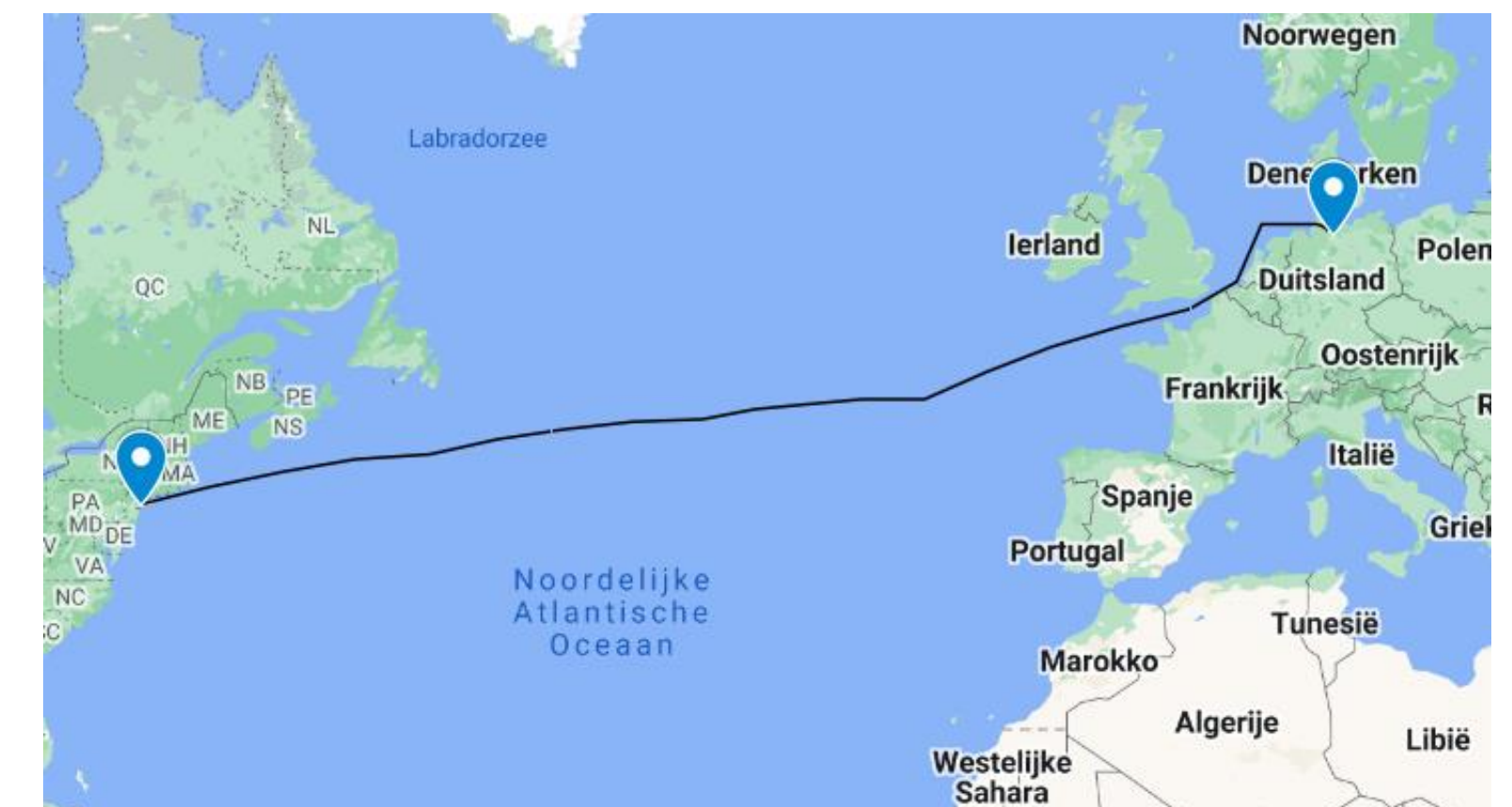




# Port model

| Transshipment | Direct | Semi-direct | Indirect |
|---------------|--------|-------------|----------|
| Dwell time    | 0 days | 2 days      | 5 days   |

- New York → Hamburg
- Port of Hamburg
  - Direct transshipment containers
  - Total port cost and port time optimal



# Opportunities and challenges

## Opportunities

- Less handling material
- Less transfer costs
- Less congestion
- Less use of space

## Challenges

- High infrastructure cost
- Synchronisation between the two transport modes
- Technically difficult to implement
- Defects → process disrupted



# Results

- Variety → development of sea-rail transshipment in ports
- **Port of Hamburg and Gothenburg**
  - Semi-direct transshipment
  - Rail facilities within the terminal area
- **Port of Antwerp-Bruges**
  - Indirect transshipment
- **Inland ports Genk en Lille**
  - Direct transshipment of bulk goods

|                     | <b>Direct</b>  | <b>Semi-direct</b>                             | <b>Indirect</b>               |
|---------------------|--|--|-------------------------------|
| <b>Sea ports</b>    | /  | <b>Port of Hamburg,<br/>Port of Gothenburg</b> | <b>Port of Antwerp-Bruges</b> |
| <b>Inland ports</b> | <b>Port of Genk<br/>Port of Lille<br/>(dry bulk)</b> | /  | /                             |

# Conclusion

- **Direct transshipment of containers**
  - European seaports → no direct transshipment method of containers
    - Opportunities for implementation rise increase → increase rail share
    - Opportunity to reduce waiting times



# Recommendations

- Separate legal framework
- Definition 'direct transshipment'



University of Antwerp  
| TPR | Department of Transport  
and Regional Economics

**Thank you for your attention.**







# Program

## Presentation by Tobia Mazzi



# **CONTEMPORARY CHALLENGES IN COMBINED TRANSPORT FROM A POLICY AND BUSINESS PERSPECTIVE**

**COMBINED TRANSPORT IN THE NEW LEGISLATIVE AND  
POLITICAL CONTEXT  
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## **UIC & CFL Combined Transport Seminar**

**Panel 3:** Combined Transport in  
a new legislative and political  
context

ONLINE

12 October 2023




Jacques DIRAND

Head of Rail Freight Services



# Weights & Dimensions

## Legislative Proposal

| For ROAD-ONLY transport...   |  |   |
|--|--|---|
| Current Rule   | Proposed NEW Rule: 2 tons extra <b>Weight</b> + 90cm extra <b>Length</b> ...                             |   |
|  <p>40t / 42t ZEV</p> |  <p>40t / 44t ZEV</p> |  <p>90cm ZEV</p> |

| For COMBINED Transport...  |  |   |
|--|--|---|
| Current Rule   | Proposed NEW Rule: 2 tons extra <b>Weight</b> + 30cm extra <b>Height</b> ...                               |   |
|  <p>44t / 46t ZEV</p> |  <p>44t / 48t ZEV</p> |  |

**WARNING:** The 2-tons extra weight for batteries may be used for payload if, over time, technological developments allow to reduce batteries' weights !



## Cross-border acceptance of Gigaliners & 44 tons – COUNTERPRODUCTIVE !

### GIGALINERS



### COUNTER ARGUMENTS

- Cross-border acceptance of longer/heavier trucks will, de facto, **increase their long-distance use**
  - at the expense of “7-times more energy-efficient” RAIL !
  - **REVERSE MODAL SHIFT:**
    - **38%** Single Wagonload / -**13%** Combined Transport
  - at the expense of the environment and of Europe’s energy independence → **More cargo on road** = big overall increase of energy consumption – modest energy saving per ton

### 44-TONS TRUCKS



- It is also **counterproductive**, as extending the use of overweight and oversized combustion vehicles will reduce the incentive to move to “electric” traction.

**TRADE OFF: 4 tons...** For **Goods**? Or for **Batteries**?

## 2-Tons extra Weight for Batteries? NOT NEEDED AT ALL

### ROAD-ONLY Transport

### COMBINED Transport

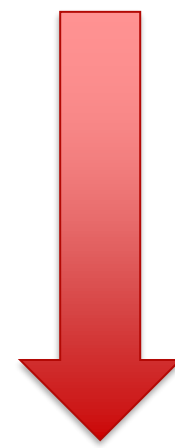
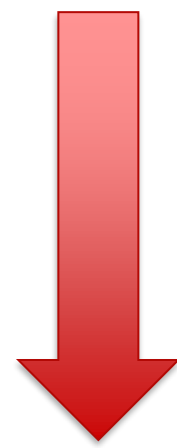
### COUNTER ARGUMENTS



40t / 42t ZEV



44t / 46t ZEV



40t / 44t ZEV



44t / 48t ZEV

- Extra allowance of 2 tons has already been granted in the 2015 revision.
  - This is sufficient for short distances
  - e.g. for the road legs of Combined Transport
- Push extra allowance to 4 tons will only serve long-distance road transport
  - at the expense of "7-times more energy-efficient" RAIL !
  - at the expense of the environment (use of more rare metals – more extraction and processing)



# CER analysis (3)

- **Reverse modal shift** from rail back to road.
- 30 cm more height may be incompatible with most rail loading gauges
- Limit truck use to short distances **preserves drivers work-life balance**
- ... + **addresses drivers' shortage** (1 train drivers = 40 truck drivers)
- Continuous enforcement monitoring (via onboard sensors linked to tachograph)
- **Proposal does not address rail-road interoperability!** (e.g. *cranability, resistance to rail aerodynamic forces, protruding devices...*)
- **Rail 7 times more energy-efficient** than road!

**Need to revise W&DD in combination with CTD !**

# Boost multimodality... via a coordinated and simultaneous revision of CTD and W&DD



**Position Paper** ([2-page-long](#)) - **FINAL**  
Brussels, 19 September 2022

**Combined Transport AND road vehicles Weights & Dimensions, the 2 sides of the same coin... 10 GUIDING PRINCIPLES for the Revision of the Multimodal Regulatory Framework**

**CTD**

**Promote a full life-cycle approach to assess performance of transport chains:**

- **Short term** - 2 criteria: "Energy Consumption" and "CO2 Emissions" based on a "well-to-wheel" approach ("CountEmissions")
- **Medium term** - evolve towards a full well-to-wheel lifecycle assessment referring to the Commission's Handbook on External Costs of Transport (incl. 1. Energy Consumption; 2. CO2 Emissions; 3. NOx; 4. Particulates; 5. Land Use; 6. Road Congestion; 7. Road Accidents, 8. Noise)

**W&D**

**Promote combinations of road units that optimise multimodal chains:** Cross-border acceptance of gicaliners Would de facto allow their circulation on long distances, hence cannibilising rail freight. Gicaliners should only be allowed on the road leg of multimodal chains where rail (IWW SSS) is used on the main leg.

**Promote road-rail compatibility and interoperability to ensure that multimodal chains work.** Rail-road interoperability can be enhanced via intelligent adaptations of road vehicles' type approval characteristics: weights, sizes, shapes, cranability, resistance to on-rail air forces, retractability & foldability of protruding devices (type approval regulations: e.g.: Reg 1230/2012...).





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# Thank you

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# Program

## Debate





# Combined transport in the new Eastern Europe reality

Andrius Sinkevicius, „LTG Cargo“ Business Development





# Content

- ▶ 1. THE NEW REALITY
- ▶ 2. NEED FOR CHANGE
- ▶ 3. OUR SERVICES TODAY
- ▶ 4. FUTURE VISION

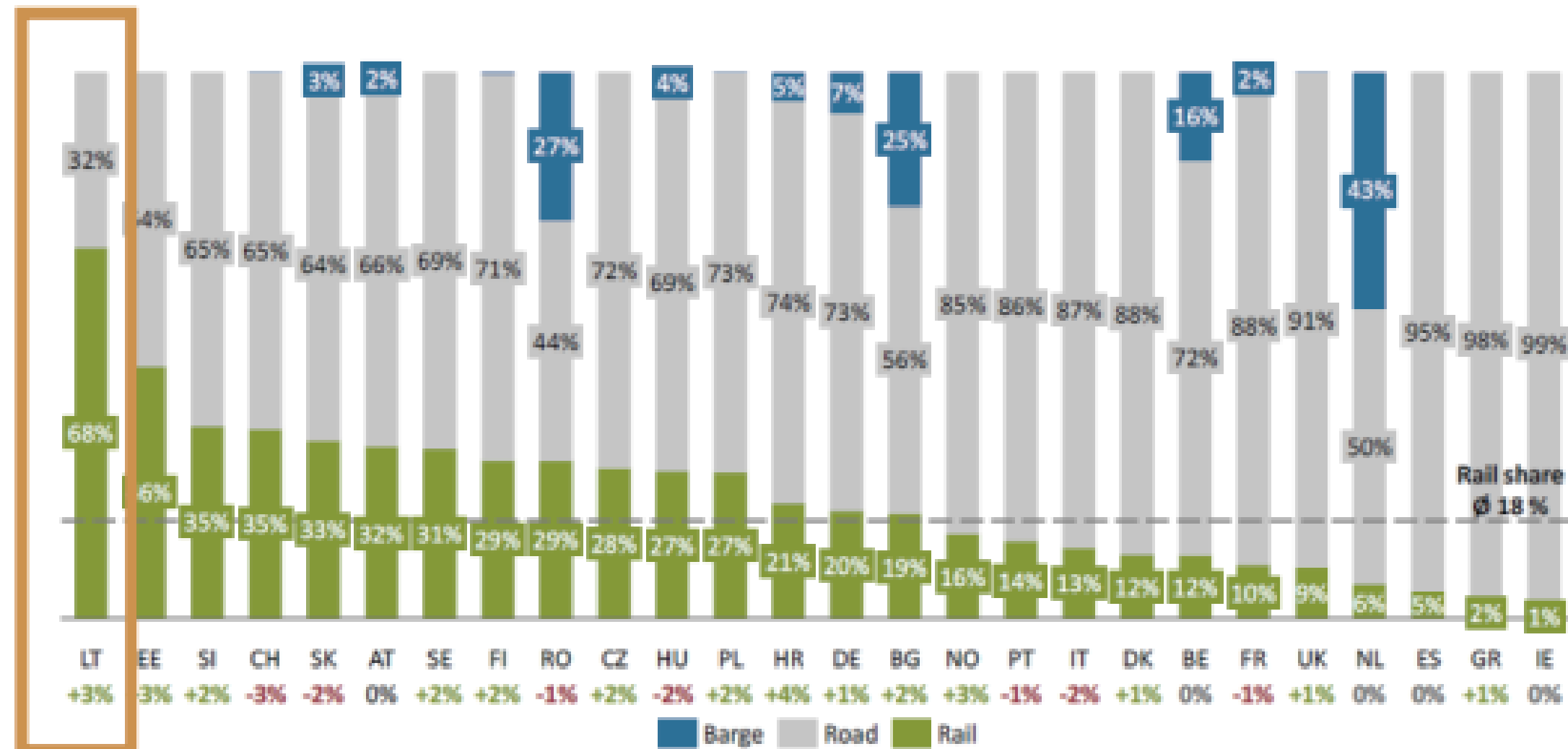


LTG CARGO



# The situation in Lithuania 2020

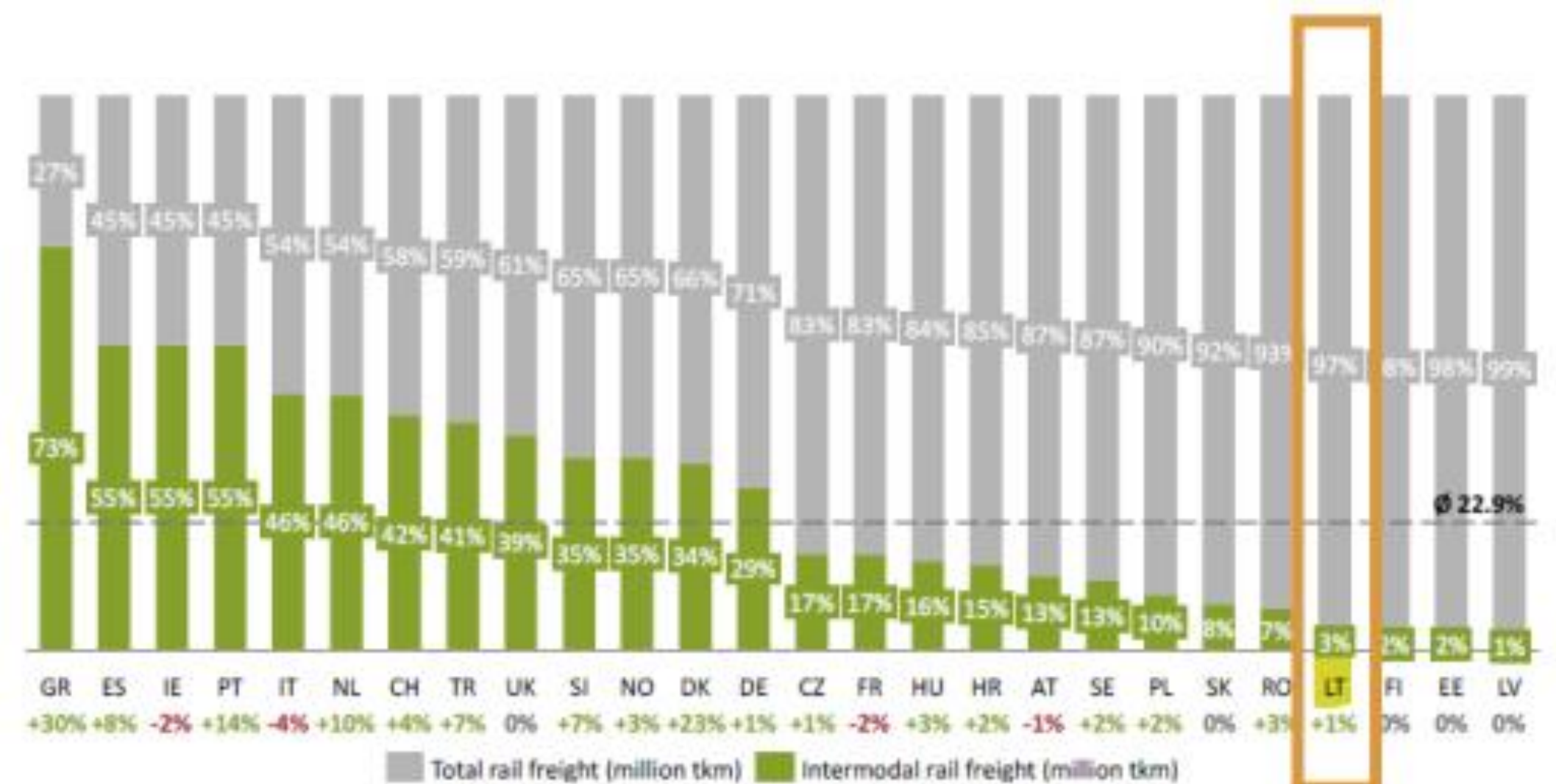
Freight breakdown by type (% tkm), comparing 2018 with 2016



Note: Selection of countries based on data availability and in line with previous report editions. Rounding differences may occur.

Source: Eurostat (2020), last database update by Eurostat: modal split (tran\_hv\_fmod) April 1, 2020.

Intermodal freight distribution on railways by country (% tkm), comparing 2018 with 2016



Note: Selection of countries based on data availability and in line with previous report editions. Rounding differences may occur.

Source: Eurostat (2020), last database update by Eurostat: intermodal rail freight (rail\_go\_contwgt) 24 September 2020, total rail freight (rail\_go\_typeall) 25 September 2020.2

LT ranks first in the EU for rail freight (68%)

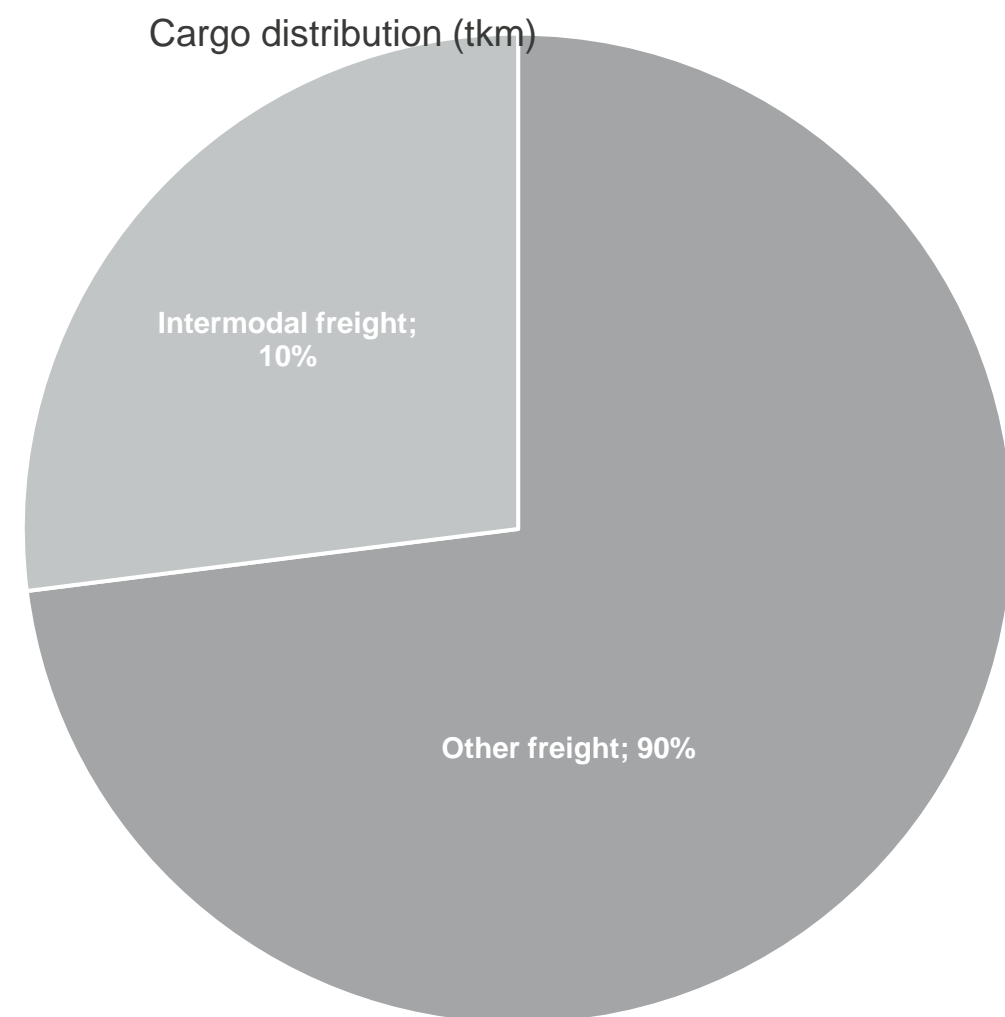
LT is almost last in the ranking with only 3% of intermodal freight carried by rail



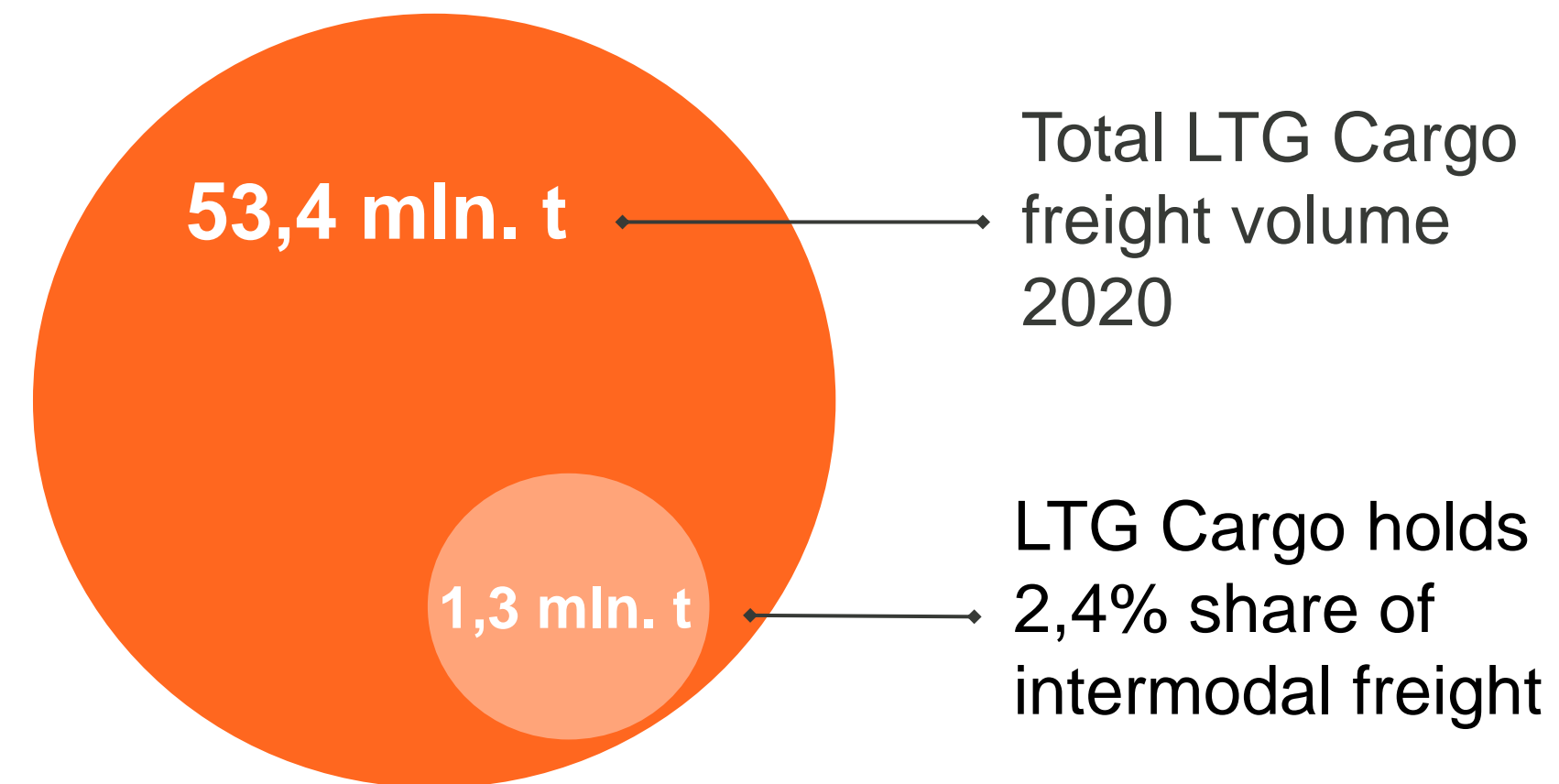
# The change is needed



## INTERMODAL POLAND



## LTG CARGO INTERMODAL FREIGHT SHARE



## INSIGHTS

- Intermodal transport is not fully developed in the country.
- The orientation of the country's businesses towards sustainability and greener logistics is low.
- EU forecasts significant growth in intermodal freight.

LTG Cargo's expansion into foreign (Western) markets is vital for the development of intermodal transport, as there is a lack of capacity in Lithuania to ensure sufficient organic growth of this mode of freight.



# To the West: how and where to?



**"Know how"**



**Market specifics**



**Infrastructure**



**Technology**



**Change management**



# LTG Cargo solution



**Lithuania:** International company providing railway transportation services in Europe on 1435 and 1520 gauges



**Poland:** development in Poland with "LTG Cargo Polska" – connecting Lithuania with Western and Southern Europe



**Ukraine:** "LTG Cargo Ukraine" is an operator of transports between Ukraine and Lithuania





# FIRST regular direct train Kaunas-Tilburg

- Transfers **started in July 2021**. The **Kaunas Intermodal Terminal** was connected to the European standard gauge.
- The shipments were transported **directly terminal to terminal**.
- Target: **1,700 km in 50 hours**, 2 roundtrips per week from Kaunas to Tilburg.
- One train has a capacity of **1800 t, 36 semi-trailers or 72 TEU**.





# Lessons learned and solutions



## ACHIEVEMENTS

- Amount of freight transported – **1000 TEU**.
- **~1500 t less CO2** emissions.
- Increased train occupancy **from 20% to 90%**.



## CHALLENGES

- Partners **adapting to change**.
- Keeping to the **timetable**.
- Timely **communication**.
- Crossing **3 countries**.



## SOLUTIONS

- Developing **in-house capacity** in other countries.
- **Additional train departures**.
- **Agreements with partners** on additional capacity and other connections.



### 3. OUR SERVICES TODAY



## Route development to Duisburg, Germany



5 330 TEU of intermodal freight to/from Duisburg in 2022.

We started going to Duisburg, Germany, 4 times a week.

We made a test shipment to Trieste, Italy.

Testing a stopover in Poznan, Poland.

- From April 2021;
- 36 semi-trailers or containers;
- 1520 km, in 3 days;
- 4 times a week.



### 3. OUR SERVICES TODAY



# 2020 – 2022 (+25%)

## Kaunas–Prushkow–Sławków–Kaunas

- 44 containers;
- 740 km;
- Faster than 2 days;
- 2 times a week.

## Baltic Gates train (Vilnius/Kaunas–Klaipeda)

- 20 semi-trailers and 15 containers;
- The service is being developed with a partner;
- LTG Cargo developed equipment;
- 350 km in 12 hours;
- 6 times a week.

## Amber train (Kaunas–Muuga)

- Test trains 2022 09 and 2023 03;
- 20 semi-trailers and 15 containers;
- Project between LT, EE, LV;
- Equipment developed by LTG Cargo;
- 671 km in 1 day.



### 3. OUR SERVICES TODAY

## Routes from Ukraine through Poland to Lithuania

- LTG Cargo Ukraine is developing **2 routes**:
  - Yahodyn - Dorohusk
  - Mostyska II - Medyka
- Since June 2022, **full container trains** (40, 44 or 60 TEU) have been transported to Klaipeda port terminals and back;
- **Cargo types:** corn, sunflower oil, rapeseed, wheat, Back cardboard, pet granules, fertilizers, fuel, metal products.
- **Projects:** wagon and rails transportation, fuel transfer.





# The importance of CO2 reduction

## GREEN KILOMETRES CERTIFICATE 2022

**155** Certificates were given to customers

**67 500** tonnes of CO<sub>2</sub>e saved by transporting intermodal freight

**940 000** tonnes of CO<sub>2</sub>e saved by transporting a wide range of goods by rail



LTG Cargo's intermodal customers collectively

saved  
**67,5K tonnes of CO<sub>2</sub>e**

by transporting goods with LTG Cargo in 2022

LTG Cargo certifies that in 2022 LTG Cargo's intermodal customers, by opting to transport their goods by rail with LTG Cargo, collectively saved 67,5K t of CO<sub>2</sub> emissions compared to the CO<sub>2</sub> quantity which would have been released into the environment when transporting goods by road. The calculations were made according to the Methodology for the Assessment of Greenhouse Gas Emissions from Intermodal Freight Transport No. M/FN13/LTG/6 AB, developed and approved by Lietuvos geležinkeliai AB. The greenhouse gas assessment indicated in the methodology complies with the provisions of the LST EN 16258:2013 standard.



Certificate No. 2022

Eglė Šimė  
CEO of LTG Cargo





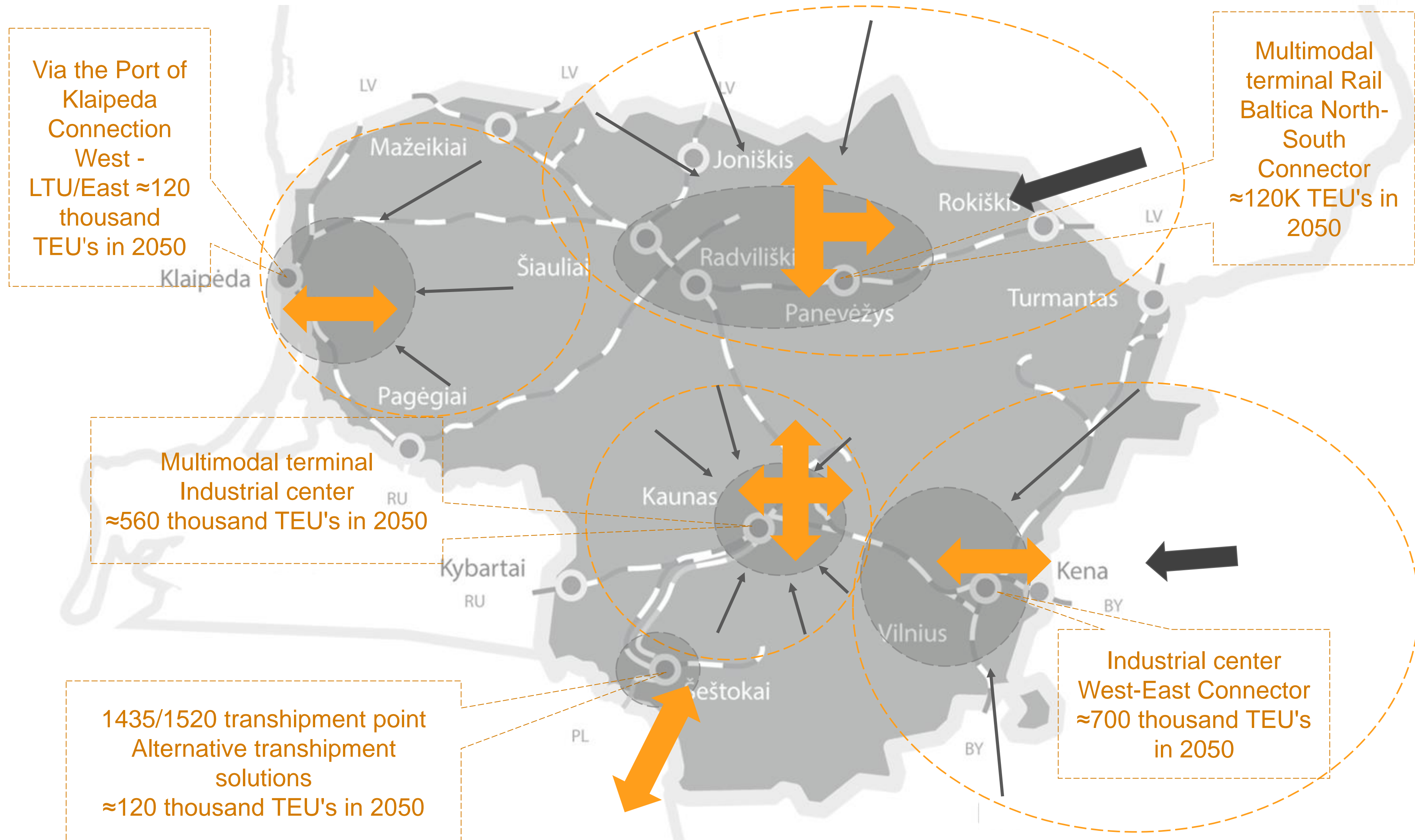
# Future challenges for intermodal transport

1. Provide reliable services.
2. Lack of flexibility in transport chain.
3. Infrastructure limitations.
4. Profitability of projects.
5. New customer tendencies: smaller volumes with shorter notice.





# Terminals in 2050 and Rail Baltica

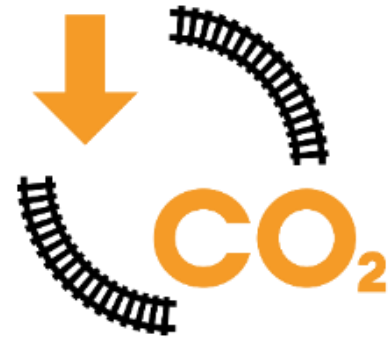




# Positive expectations



From **2024 road tolls** in Lithuania will increase, which will promote intermodal railway transportations.



From **2027** the EU will **tax carbon emissions** from transport and heating, which aims for a climate-neutral economy by 2050.



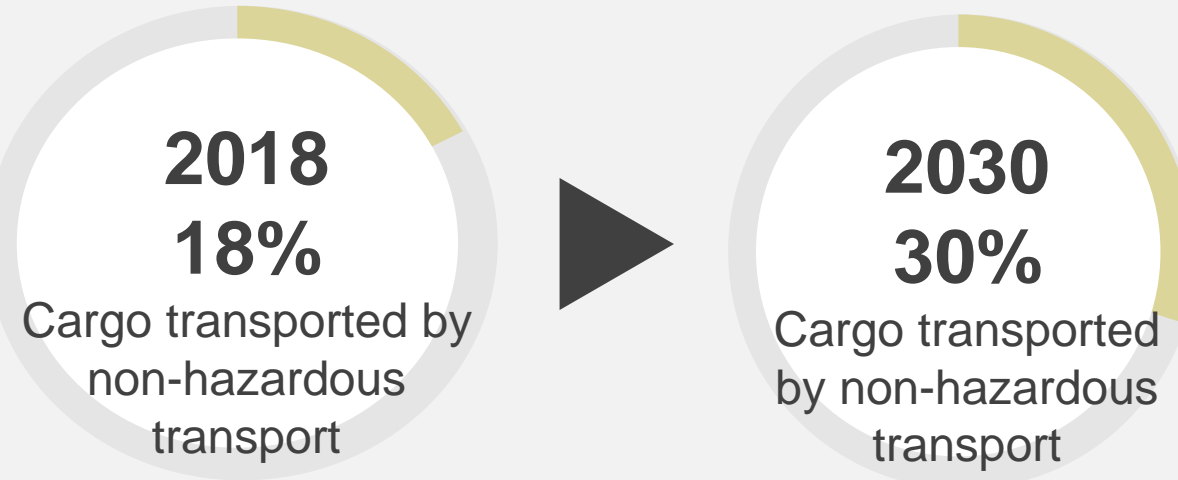
Newly adopted **EU ESG requirements** (Environmental, Social & Governance), which are already mandatory from **2023**:

- **SFDR (Sustainable Finance Disclosure Regulation)**
- **CSRD (Corporate Sustainability Reporting Directive)**
- **The EU Taxonomy.**

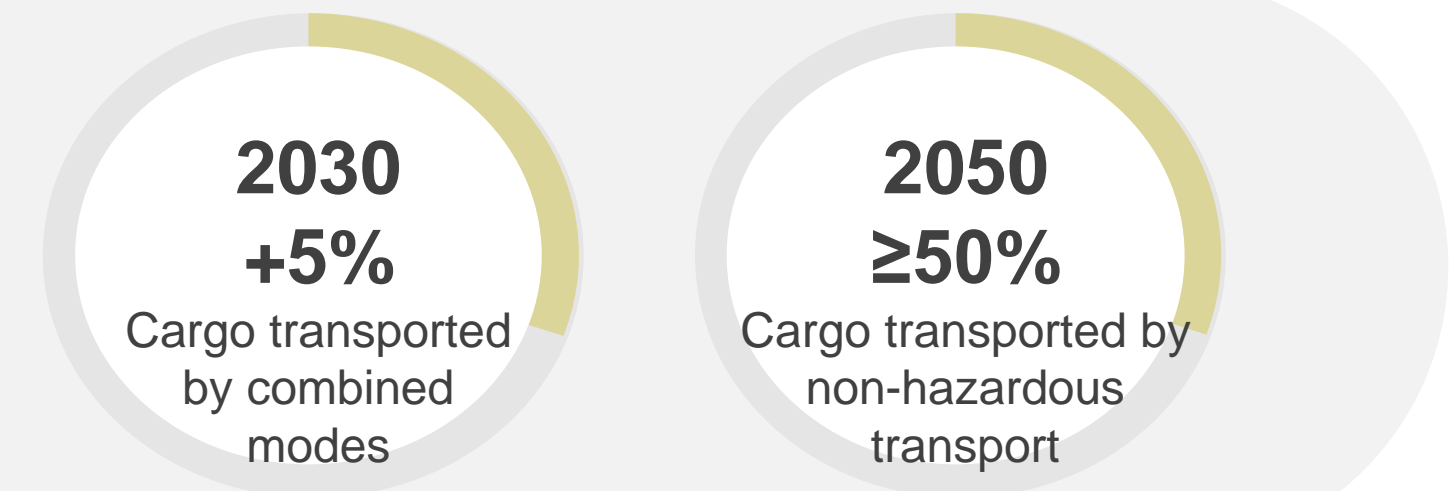


# Why it matters...

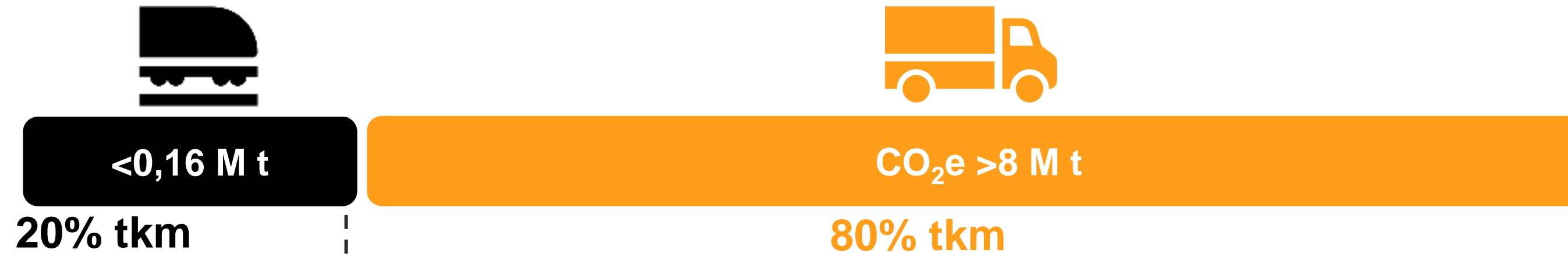
The European Green Deal: 30by2030



Policies and action plans of LT Government



Cargo CO<sub>2</sub>e in Lithuania exceeds 8.2 million tonnes in 2021



Achieving 30% rail transport would result in CO<sub>2</sub>e of 7,3 mln. t



Achieving 50% rail transport would result in CO<sub>2</sub>e of 5,4 mln. t





**Thank you for attention**



# CONTEMPORARY CHALLENGES IN COMBINED TRANSPORT FROM A POLICY AND BUSINESS PERSPECTIVE

CONCLUSIONS  
OCTOBER 12<sup>TH</sup>, 2023





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**#UICrail**

**Thank you for your kind attention.**