




# UIC Symposium

30 November – 1 December 2021



# EUROPEAN FOCUS

## Round Table 1: What new paradigm for 2030?

- Moderator: Mr. Simon Fletcher, UIC Director Europe
- Mr. Keir Fitch, Head of Unit, DG for Mobility and Transport, European Commission
- Ms. Daniela Gerd tom Markotten, Board member for Digitalization, Deutsche Bahn
- Ms. Anna Deparnay-Gruneneberg, MEP for the Greens/EFA
- Mr. Georges Gilkinet, Deputy Prime Minister, Minister for Mobility, Belgium (video message)
- Mr. Alberto Mazzola, Executive Director, CER
- Mr. Yuwei Li, Director, UNECE Sustainable Transport Division





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Mr. Keir Fitch, Head of Unit, DG for Mobility and Transport, European Commission





# EU initiatives for more people and goods on rail

Keir Fitch

Head of Unit "Rail Safety and  
Interoperability", DG MOVE



# Setting the context

- Green Deal calls for a **90% reduction in greenhouse gas emissions** from transport by 2050
- Transport (incl. rail) amongst sectors hardest hit by the COVID-19 pandemic
- We need to continue help European transport to recover and be resilient, while becoming more sustainable and smarter
- Our vision is in the [Strategy for Sustainable and Smart Mobility](#)  
**9 Dec 2020**

# Rail – a central role in the Mobility Strategy

- Ambitious milestones for rail:

- ✓ **High-speed rail traffic across Europe**

- ✓ 2x by 2030

- 3x by 2050.

- ✓ **Rail freight to increase by:**

- ✓ >50% by 2030

- >200% by 2050.

- ✓ Rail should be able to **compete on a level-playing with road-only transport by 2030** when it comes to the internalisation of external costs.



# European Year of Rail 2021 – lessons learnt from the CEE



# Key initiatives to boost rail - 2021

- Review of TEN-T Guidelines, incl. high-speed lines and better alignment of TEN-T corridors and rail freight corridors, 160kmh and P400, advancing of dates to 2040.
- Timetabling and Capacity Redesign project (TTR)
- Commission Action Plan on long distance cross-border passenger services will identify obstacles and propose solutions
- Single Basic Act for research partnerships:  
→ new Joint Undertaking “Europe’s Rail” and the rail system approach



# Key initiatives to boost rail – 2022 onwards

- Digital and green rail revision of the Technical Specifications for Interoperability (2022)
- Revision of the Train Drivers legislation (2022)
- Commission proposal for multimodal digital services
- The European Year of Youth 2022

## Beyond 2022

- Deployment of electrification & increased use of hydrogen and batteries where electrification is not possible
- Migration to new technologies such as digital coupling & automation (2026) and more flexible IT traffic management solutions
- Electronic multimodal tickets (2030)



**Thank you for  
your attention**





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Ms. Daniela Gerd tom Markotten, Board member for Digitalization, Deutsche Bahn



A person is shown from the chest up, wearing a VR headset with glowing blue lights. They are looking upwards and to the left. The background is a blurred cityscape at night with neon lights and a large digital display showing the number '05'.

**We need to be  
CUSTOMER-FOCUSED!**



# What do customers expect from us?

Travel  
Time



*Not slower than  
an airplane*

Service  
Level



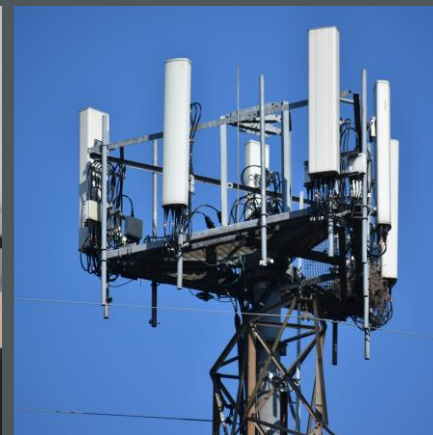
*Same as a five  
star hotel*

Work  
Environment



*Comparable to  
WeWork*

Connectivity



*Uninterrupted  
5G network*

Emission



*Zero*



**Mission Impossible? No, we have a solution!**







**This is green.**

**Our vision of rail 2030 needs  
to be **SUSTAINABLE** & **SMART****





The background of the slide is a composite image. The top half shows a futuristic city skyline at night, with several tall buildings outlined in glowing neon (pink, blue, and yellow). The sky is dark blue with a grid of small, glowing white stars. The bottom half shows the interior of a train, with a central set of double doors and several windows on either side. The train's interior is dimly lit, and the windows reflect the cityscape outside. A large, dark grey, semi-transparent rectangular box is overlaid on the middle of the image, containing the text.

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Ms. Anna Deparnay-Gruneneberg, MEP for the Greens/EFA



# Me as a member of the European Parliament

Committee on  
Transport and  
Tourism

(TRAN)

Committee on  
Regional  
Development

(REGI)

Committee on  
Agriculture and  
Rural Development

(AGRI)

Europe on site:

Offices in  
Stuttgart & Freiburg



Delegations:  
EFTA, Mercosur

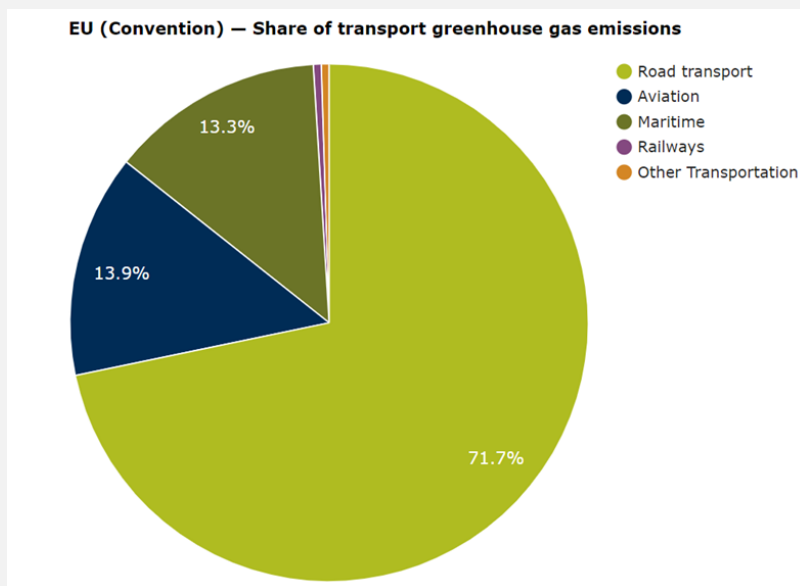
German-French  
cooperation

Economy for  
common good

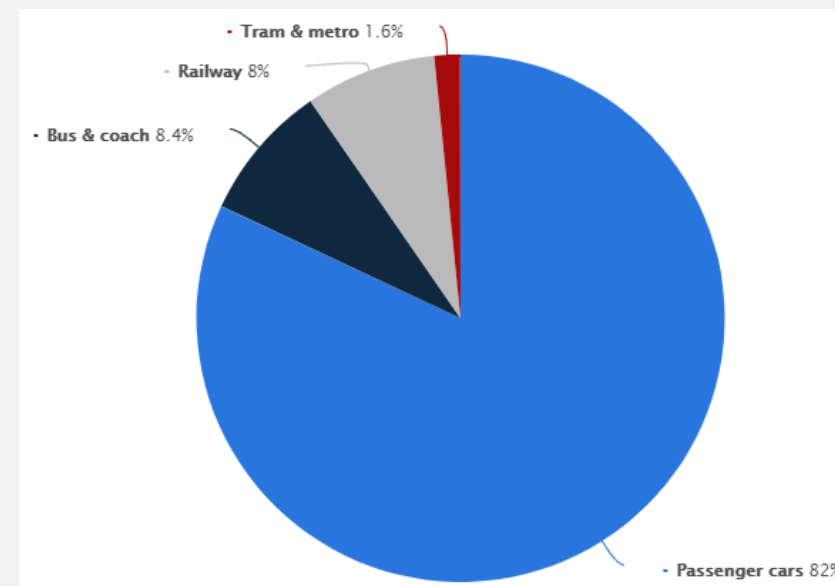


# The great ecological potential of Modal Shift

Railways are responsible for **0,4 %** of the greenhouse gas emissions in the transport sector



... while they transport **8 %** of the passengers

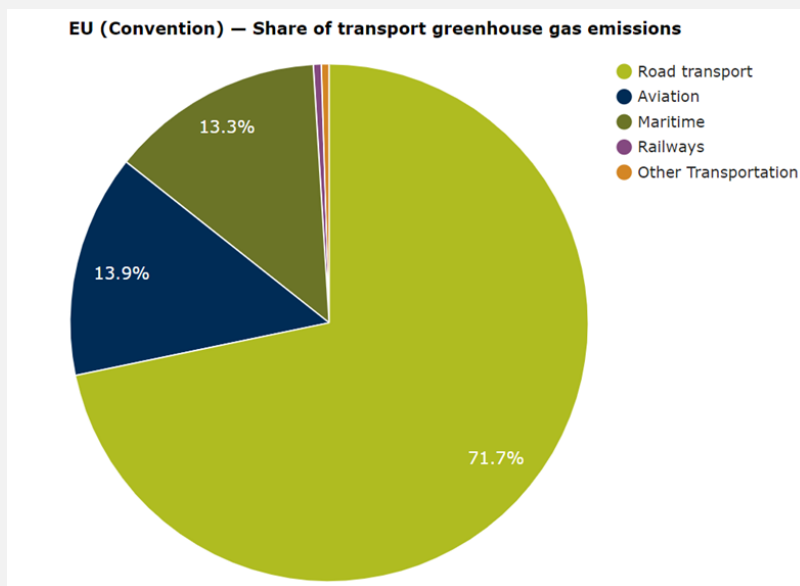


*(quarter of total EU greenhouse emissions)*



# The great ecological potential of Modal Shift

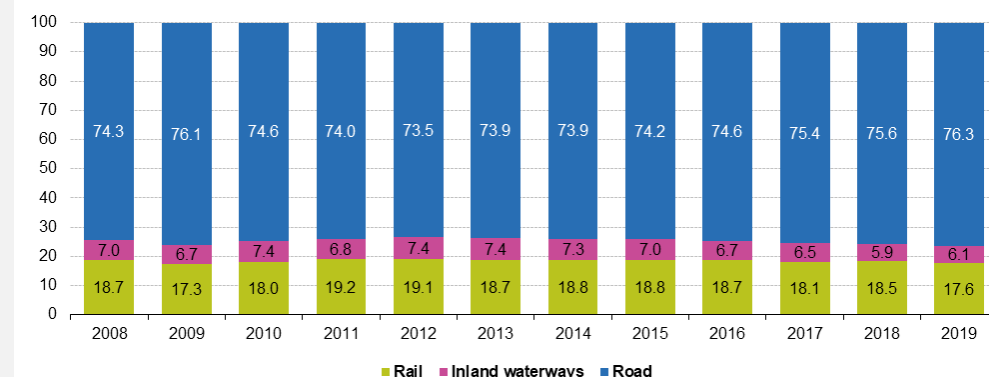
Railways are responsible for **0,4 %** of the greenhouse gas emissions in the transport sector



*(quarter of total EU greenhouse emissions)*

and around **18 %** of the freight.

**Modal split of inland freight transport, EU, 2008-2019**  
(% share in tonne-kilometres)



# A new paradigm for successful railway traffic in 2030

fair  
competition



Think as a network  
instead of a patchwork.

cross-border  
network



technical  
standards



through  
ticketing



passenger  
rights







**Thank you for  
your attention**





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Mr. Georges Gilkinet, Deputy Prime Minister, Minister for Mobility, Belgium (video message)





Hello everybody





# UIC Symposium

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Mr. Alberto Mazzola, Executive Director, CER



# Modal share desirability: how?

Making modal share desirable means

- ▶ Being able to increase the attractiveness of rail travelling by raising awareness on the aspects of **safety, affordability, ease of use, sustainability**
- ▶ Give **visibility to rail sustainability credentials** – also via ecolabelling of transport services
- ▶ Make further efforts to invest on passenger services, offering **better ticketing and a TEN-T network fit for high-speed links** between European capitals and major cities, and for efficient **rail freight corridors**
- ▶ Ensure a wide **digitalization of the rail system**, deploying ERTMS, Digital Automatic Coupling solutions, other digital solutions for freight

# Rail sustainability is undoubted – but deserves visibility

Rail is **9x less CO<sub>2</sub>** intensive than road for freight and air travel for passengers.

## Passenger

 **Rail** (28gCO<sub>2</sub>/pkm)

 **Road** (102gCO<sub>2</sub>/pkm)

 **Air** (244gCO<sub>2</sub>/pkm)

## Freight

 **Rail** (16gCO<sub>2</sub>/tkm)

 **Inland waterways** (51gCO<sub>2</sub>/tkm)

 **Road** (140gCO<sub>2</sub>/tkm)

Rail is **7x more energy-efficient** than road due to physical advantages such as lower rolling and air resistance.



Distance per energy unit consumed

Rail accounts for **just 2% of total EU energy consumption in transport**, while it carried 18% of freight and 8% of passengers of all transport modes in 2018

Rail emits **9x less CO<sub>2</sub>**



Rail pollutes **8x less**



Rail is **7x more energy efficient**





# Ever better ticketing for a wider, happier market

The adopted **CER Ticketing Roadmap** foresees by 2025:

- More up to date timetables, and the possibility to buy train tickets at least 6 and up to 12 months in advance
- More up to date tariff exchange, enabling through tickets & standardized API for selling train tickets
- Increased harmonization of ticketing conditions & full digitalization of tickets
- Real time information during the journey & better support during disruptions and delays

# An improved TEN-T network for passengers and freight

With **TEN-T**

- Current projects must be completed!
- Cooperation between governing bodies of **Rail Freight Corridors and Core Network Corridors** must to be improved
- A European **high-speed network** linking European major cities must be defined
- Further integration of **urban nodes** and **freight terminals** in TEN-T, further to ports and airports
- Facilitating the operation of trains with a **P/C 400 loading gauge**
- **No to general 160km/h** minimum speed for passenger trains but trains as fast as required by the timetable!



# Digitalization is the top priority

- **ERTMS** onboard and on tracks
- **Satellite positioning** (Galileo)
- **Digital Capacity Management**
- European digital ecosystem for **rail freight**
- **Digital Automatic Coupling**

## IMPLEMENTING 5 TECHNOLOGIES MAKING RAIL FREIGHT

SEAMLESS



DIGITAL  
PLATFORMS  
(DP)

BORDERLESS



EUROPEAN RAIL  
TRAFFIC  
MANAGEMENT SYSTEM  
(ERTMS)

FLEXIBLE



DIGITAL  
CAPACITY  
MANAGEMENT  
(DCM)

EASIER



AUTONOMOUS  
TRAIN  
OPERATION  
(ATO)

FASTER



DIGITAL  
AUTOMATIC  
COUPLING  
(DAC)

# Smarter, cleaner, connected: the future is rail







**Thank you for  
your attention**





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Mr. Yuwei Li, Director, UNECE Sustainable Transport Division



# 2030 Agenda - SDGs

- SDG 3.6: 50% reduction of deaths on road – shift of car user, passenger and cargo to rail;
  - SDG 7.3: increase energy efficiency – combined transport with increased use of rail;
  - SDG 9.1: resilient infrastructure – intermodal system with major role of rail;
  - SDG 11.2: expanding public transport – increased use of rail;
  - SDG 13: combat climate change – modal shift to rail.
- 
- New paradigm the world wants for 2030: integrated intermodal transport systems with increased role of public transport and railway transport

# UNECE AGC and AGTC network





# Other UNECE rail agreements

- International Convention to Facilitate the Crossing of Frontiers for Passengers and Baggage carried by Rail;
- International Convention to Facilitate the Crossing of Frontiers for Goods Carried by Rail;
- Customs Convention concerning Spare Parts Used for Repairing Europ Wagons;
- Customs Conventions on Containers;
- European Convention on Customs Treatment of Pallets Used in International Transport;
- International Convention on the Harmonization of Frontier Controls of Goods;
- Convention on Customs Treatment of Pool Containers Used in International Transport;
- Convention on International Customs Transit Procedures for the Carriage of Goods by Rail under Cover of SMGS Consignment Notes;
- Convention on the facilitation of border crossing procedures for passengers, luggage and load-luggage carried in international traffic by rail.

# Intermodal/rail transport at UNECE

- Working Party on Rail Transport (SC.2)
- Working Party on Intermodal Transport and Logistics (WP.24)
- AGC/AGTC online tool
- Handbook for national master plans for freight transport and logistics
- Railway's role in intermodality and the digitalization of transport documents
- Logistics and Transport Competitiveness reports
- Code of Practice for Packing of Containers (CTU Code)







# **Thank you for your attention**







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# EUROPEAN FOCUS

## Round Table 2: What steps to achieve this new paradigm?

- Moderator: Mr. Simon Fletcher, UIC Director Europe
- Dr. Bettina Wunsch-Semmler, Head of Transport Policy and Compliance Officer, DB Cargo AG
- Mr. Diego Diaz, President, SNCF International
- Mr. Josef Doppelbauer, Executive Director, European Union Agency for Railways (video message)
- Mr. François Davenne, Director General, UIC



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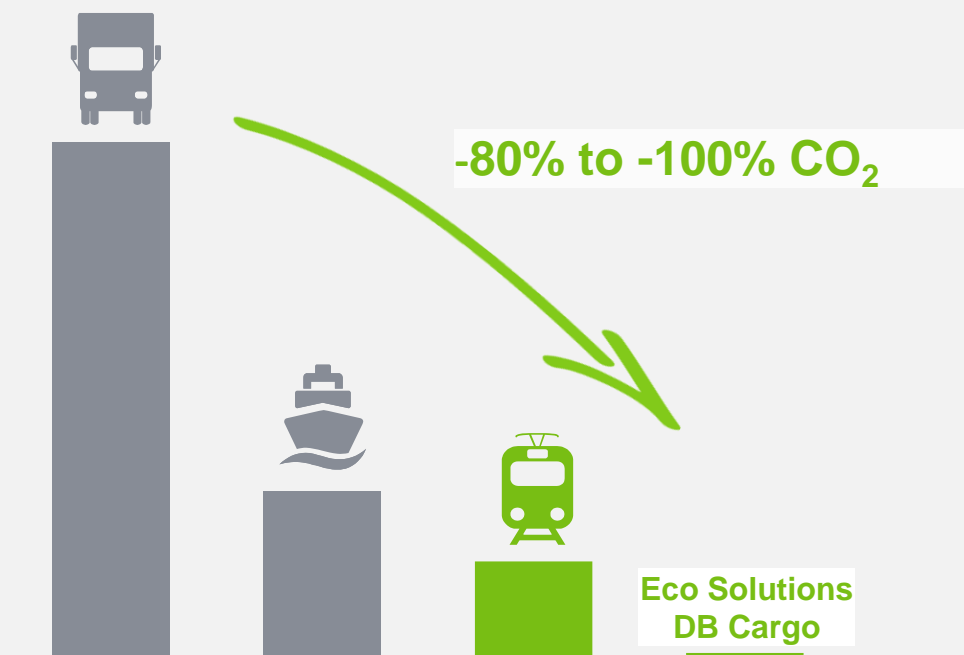
Dr. Bettina Wunsch-Semmler, Head of Transport Policy and Compliance Officer, DB Cargo AG



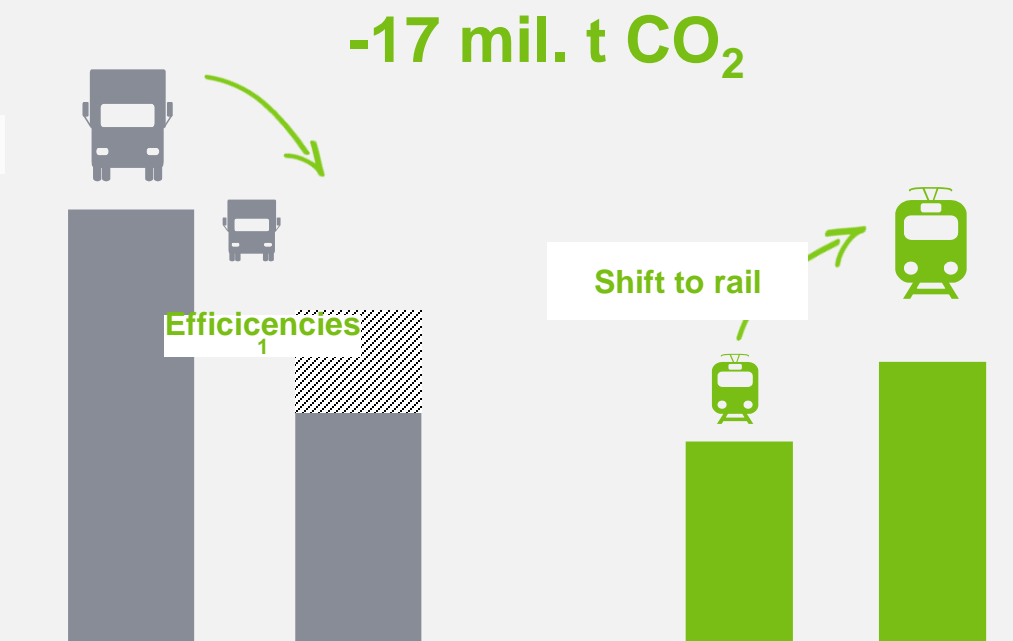
# The new paradigm: freight belongs on rail. This takes pressure off roads, protects the environment and cuts CO<sub>2</sub> emissions.

Rail is better than road...

Emissions in g CO<sub>2</sub>e/tkm



... and helps, to solve the problem faster

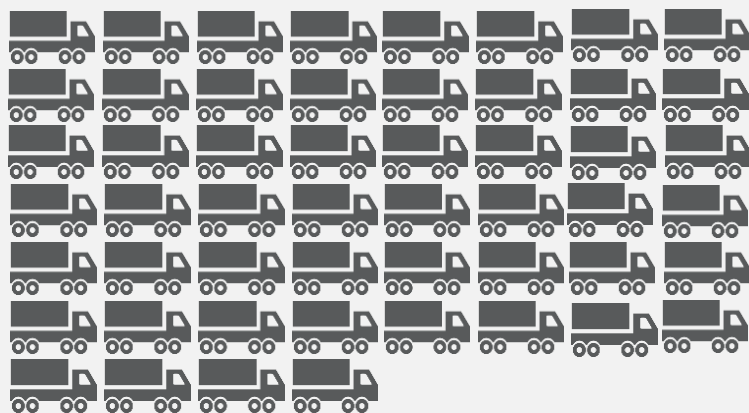


(1) Switch to electrification and green fuels

**DB Cargo is well-positioned for the shift towards rail.  
Today we are already taking 22 million trucks off the road every year.**



One Train replaces up to **52**  
trucks



**DB Cargo strives to shift more and  
more freight from road to rail**

**7 mil. t**

CO<sub>2</sub> savings  
per year

**50%**

fewer external costs

**4,5 bn.**

EUR revenue

**30.000**

Employees



Replaces up to

**22 mil.**

Truck runs per year

**3.600**

Trains per day

**17**

European countries + China

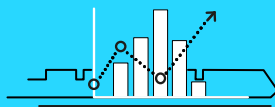


## Our formula to success: customer proximity and logistics services within the European network – European rail logistics provider

Our purpose: Europe needs a strong rail logistics provider.

### For a sustainable economy

- Providing logistics
- Proving resilience



Rail logistics provider  
Intermodal operator  
Terminal operator

DB Cargo  
Carrier

### For the climate

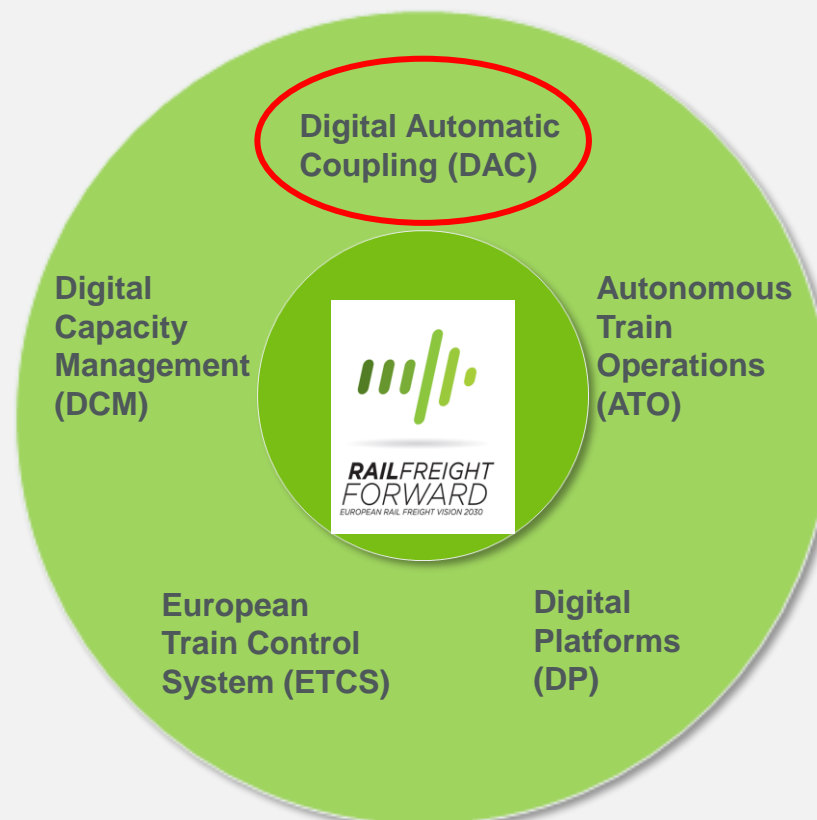
- Protecting the climate
- Reducing road congestion



For Europe

## Engagement of the entire rail sector and authorities is the cornerstone to achieve the goal of 30% modal share by 2030

Rail Freight Forward, a coalition of the major European rail freight companies supported by CER, UIC, ERFA, VDV and other associations, has identified 5 enabling, interlinked technologies which require a coordinated, sector-wide rollout across the EU.







**May the freight  
be with you.**

**We deliver the  
goods.**

**DB Cargo.**







# **Thank you for your attention**







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Mr. Diego Diaz, President, SNCF International

# Proactive steps and a holistic strategy are necessary

- Develop the modal part of rail and other sustainable mobilities
- Reduce the environmental footprint of our activities
- Adapt our activities and increase their resilience
- Act locally to increase social cohesion and promote an inclusive and ecological economy
- Mobilize our workforce as key contributors to this transition
- Foster strong ethics and an inclusive governance





**Thank you for  
your attention**





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Mr. Josef Doppelbauer, Executive Director, European Union Agency for Railways (video message)



# How to Transform Rail into the Backbone of Multimodality?

Josef Doppelbauer, Executive Director  
European Union Agency for Railways

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# UIC Symposium

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François Davenne, Director General UIC





**Round Table 2: What steps to achieve this new paradigm?**



# DESIGN A BETTER FUTURE.

2030 Vision of Rail



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# Transforming cities & connecting communities



Increased bundling enables frequent, short distance rail freight to connect to city hubs, dispatching goods around the city area on cargo bikes and electric vans

By connecting cities better and reducing car use, railway stations are the gateways to cities that are less congested and where people can breathe cleaner air.

# Energy and Technology Innovation



Automated Train Operation, robotics, modern communication based on 5G and Artificial Intelligence is improving the efficiency of the railways.

Dedicated renewable energy generation as well as energy storage on the railway estate including on buildings and on the lineside.

Diesel trains are fast becoming a thing of the past, with a large-scale programme of electrification of main lines continuing and the use of bi-mode vehicles common.

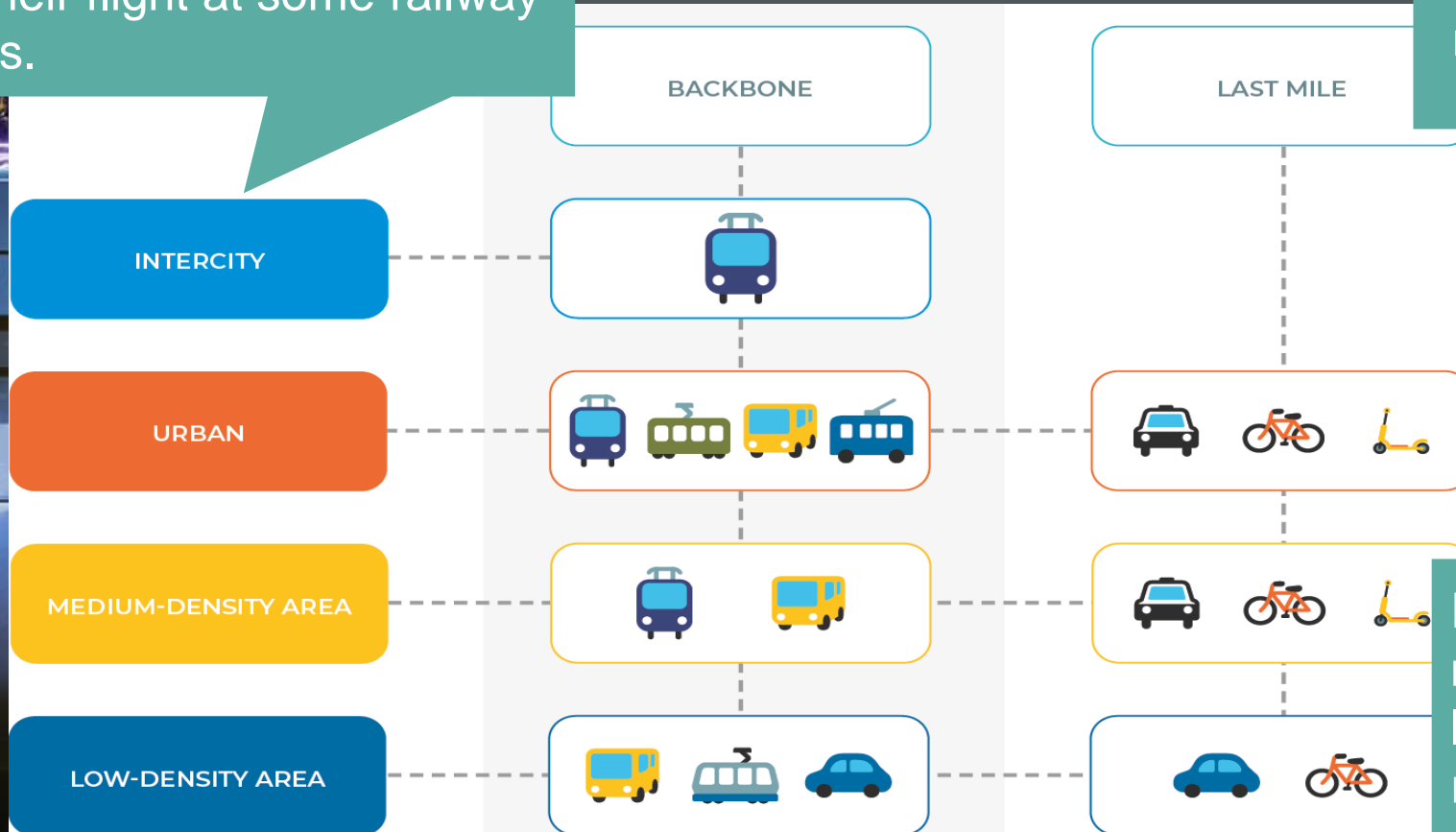


# Intermodality and Seamless Connection

57

Railways link well into airports, with passengers able to check in for their flight at some railway stations.

By 2030, Most passenger journeys will be made with multimodal e-tickets, passengers will be able to move seamlessly between different modes of transport.



Rail freight hubs are electrified multi modal solutions with innovative loading systems, well linked to both road, canal, and seaports.

# Transforming Customer Experience

Particularly vulnerable infrastructure owners have accessed the finance and technology they need for climate change adaptation and therefore are more reliable

Rail operators adapted to the new travelling behaviours and became increasingly aware of customer needs, catering for new working patterns and the voices of a wider range of people.

All passengers will feel more secure and safe. These actions have been supported through a more diverse and better gender-balanced workforce in transport.





# Now

## DEMAND

Targets for modal shift and decarbonisation  
Policy to incentivise use of rail  
accessibility & inclusivity

## INVEST

Public investment  
Transformational projects  
Public contracts  
Redirecting public spending to rail

## PROMOTE

Information, awareness raise  
Campaigns on benefits of sustainable behavior

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