Danube Region Transport Day 2021

Challenges for Passenger Transport in the Danube Region

Alberto Mazzola, CER Executive Director
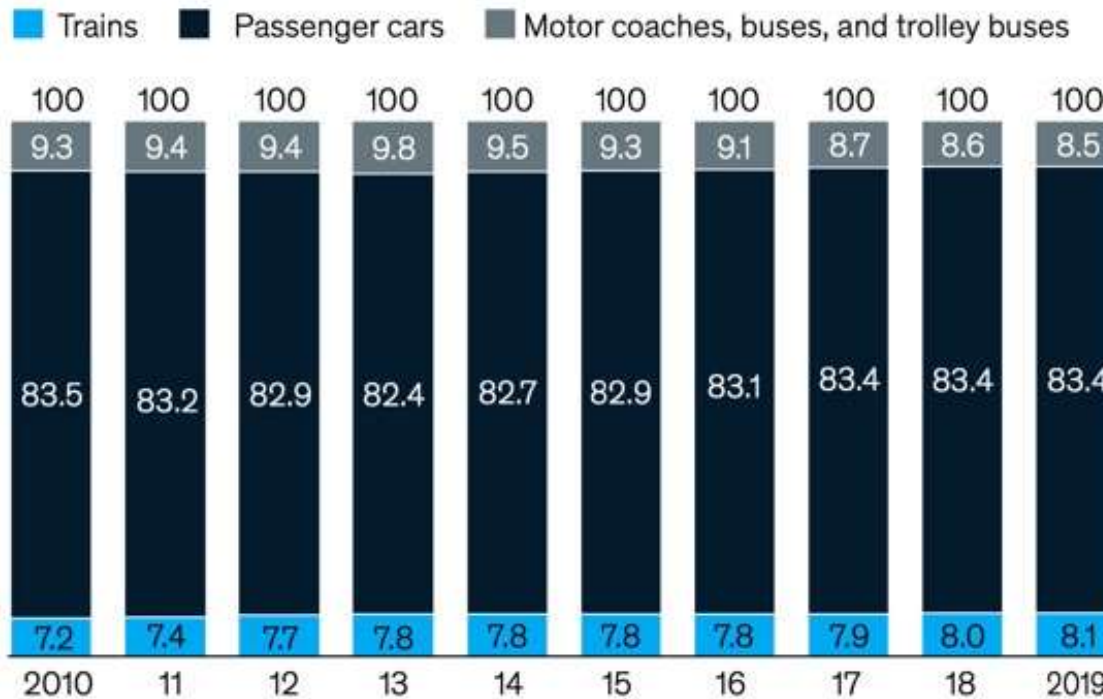
17 December 2021

The Covid experience

- Total **revenue for the EU rail sector fell by around €26 billion between 2019 and 2020**, €24 billion related to passenger traffic. Accumulated losses of the entire rail system today equal more than €50 billion

- Over the same period in Germany, France, Italy, and Spain, **passenger kilometers dropped by 40-60%**.

- Revenue losses are likely to continue in the short term as demand with mostly **fixed costs** that do not scale back

- Between 20 and 25% of the workforce in advanced economies could **work from home** between three and five days a week, affecting permanently commuting and business market segments (McKinsey Global Institute).

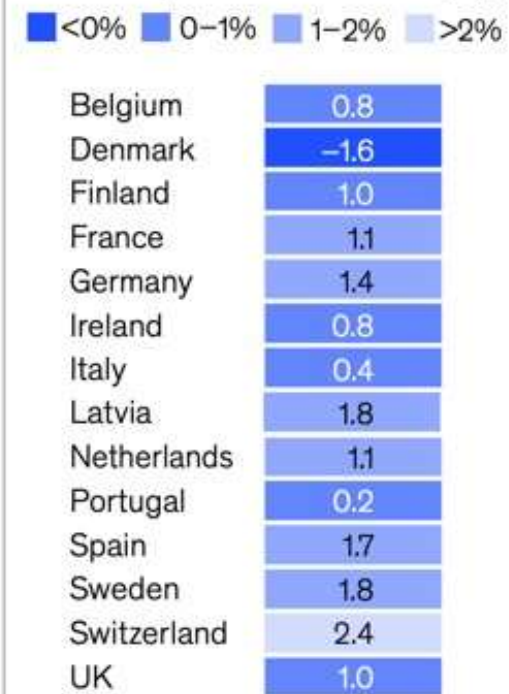# Modal share evolution 2010-2019: little progress made

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Exhibit 1

Modal share started flattening around 8 percent; Switzerland exhibited the highest absolute growth at over 2 percentage points.

Modal split of passenger transport European Union 28 countries

■ Trains ■ Passenger cars ■ Motor coaches, buses, and trolley buses

	2010	11	12	13	14	15	16	17	18	2019
Total	100	100	100	100	100	100	100	100	100	100
Motor coaches, buses	9.3	9.4	9.4	9.8	9.5	9.3	9.1	8.7	8.6	8.5
Passenger cars	83.5	83.2	82.9	82.4	82.7	82.9	83.1	83.4	83.4	83.4
Trains	7.2	7.4	7.7	7.8	7.8	7.8	7.8	7.9	8.0	8.1

Source: Eurostat modal share of transport

Selection of EU countries
Absolute growth 2010–2019 (%p)

■ <0% ■ 0–1% ■ 1–2% ■ >2%

Belgium	0.8
Denmark	−1.6
Finland	1.0
France	1.1
Germany	1.4
Ireland	0.8
Italy	0.4
Latvia	1.8
Netherlands	1.1
Portugal	0.2
Spain	1.7
Sweden	1.8
Switzerland	2.4
UK	1.0

Source: McKinsey from Eurostat

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Yet we must insist: rail is the ready-made solution for decarbonisation

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Rail is **9x less CO₂** intensive than road for freight and air travel for passengers.

Passenger
- Rail (28gCO₂/pkm)
- Road (102gCO₂/pkm)
- Air (244gCO₂/pkm)

Freight
- Rail (16gCO₂/tkm)
- Inland waterways (51gCO₂/tkm)
- Road (140gCO₂/tkm)
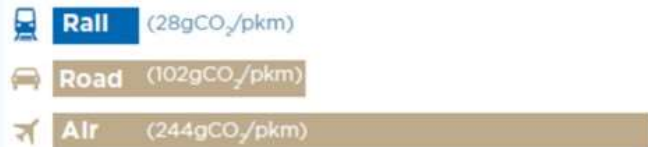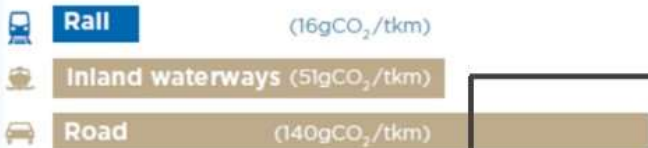
Rail is **7x more energy-efficient** than road due to physical advantages such as lower rolling and air resistance.

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
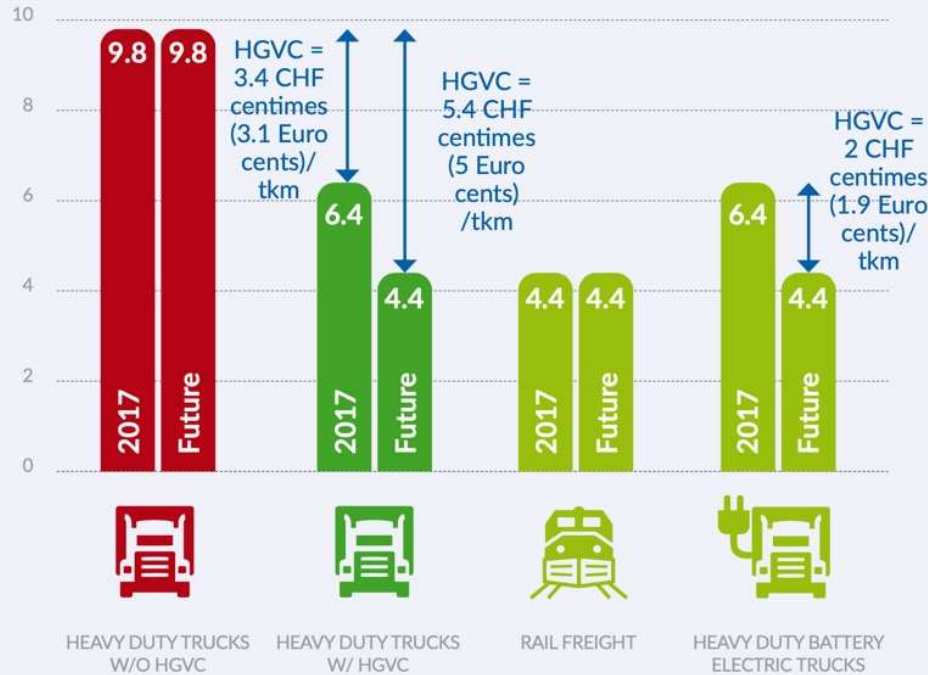
Rail emits **9x less CO₂**

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Rail pollutes 8x less

Rail is **7x more energy efficient**

CO2 emissions are not the only externalities to be accounted for

FIGURE 2: EXTERNAL COSTS (CHF CENTIMES PER TKM)

In future external costs must be accounted for both diesel and electric trucks in order to create a level playing field between rail and road freight transport (Source: Albert Mancera/ETH Zürich)

HGVC = 3.4 CHF centimes (3.1 Euro cents)/tkm

HGVC = 5.4 CHF centimes (5 Euro cents)/tkm

HGVC = 2 CHF centimes (1.9 Euro cents)/tkm

2017	Future	2017	Future	2017	Future	2017	Future
9.8	9.8	6.4	4.4	4.4	4.4	6.4	4.4

HEAVY DUTY TRUCKS W/O HGVC | HEAVY DUTY TRUCKS W/ HGVC | RAIL FREIGHT | HEAVY DUTY BATTERY ELECTRIC TRUCKS

- Current average values for HGVC create a level playing field for competition between diesel and electric trucks.

- Nevertheless, current average values for HGVC do not create a level playing field for competition between road and rail freight transportation.

- Hence, the HGVC should increase by about 2 CHF centimes (1.9 Euro cents)/tkm and amount to 5.4 CHF centimes (5 Euro cents)/tkm for diesel and to 2 CHF centimes (1.9 Euro cents)/tkm for electric trucks.

Source: CER Essay, Boulouchos and Ducrot, 2021

Railways want to play a bigger role in the door2door mobility chains

- The journey experience is dependant on **seamless ticketing and digitalisation**, but also includes the **affordability** of ticket prices, the **speed** and **duration** of rail passenger travel, as well as on-board facilities.

- **High-speed** and **night trains** are a sustainable alternative to cheap flights with a range of 1000km if appropriate political support is provided

- Several legal and technical obstacles need to be addressed in relation to setting up new cross-border international train services, including night trains: this is why **fast harmonisation of technical and operational rules, norms, and requirements** is needed

- It is also essential to fully internalize environmental externalities with pricing based on the 'user-pays' and the 'polluter-pays' principles: with it, more **international commercially viable train services** could then be developed

Passenger modal shift will be possible if positive actions are taken on important dossiers

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- ► The **TEN-T** revision, to provide adequate capacity and quality infrastructure
- ► The acceleration of **ERTMS** deployment, to improve infrastructure and traffic management
- ► The sector-led work on **ticketing**, to provide an ever better customer experience of rail services
- ► The **Fit for 55**, to redress intermodal competitive imbalances and reallocate resources to collective low emissions mobility

The revision of TEN-T Regulation

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Revision of TEN-T Regulation will be key in promoting the right standards

- TEN-T must promote a European **high-speed network** linking European major cities

- **International passenger corridors** must be created and the cooperation between **RFCs and CNCs** must improve

- **P/C 400 loading gauge** must be possible on the TEN-T network, at least for predefined international rail freight routes

- **Urban nodes and last mile infrastructure for freight** must be integrated in the current TEN-T Network.

- 160km/h as minimum speed limit for passenger trains will not be always feasible. Instead "**as fast as required** (to fit the timetable)" should be the leading principle
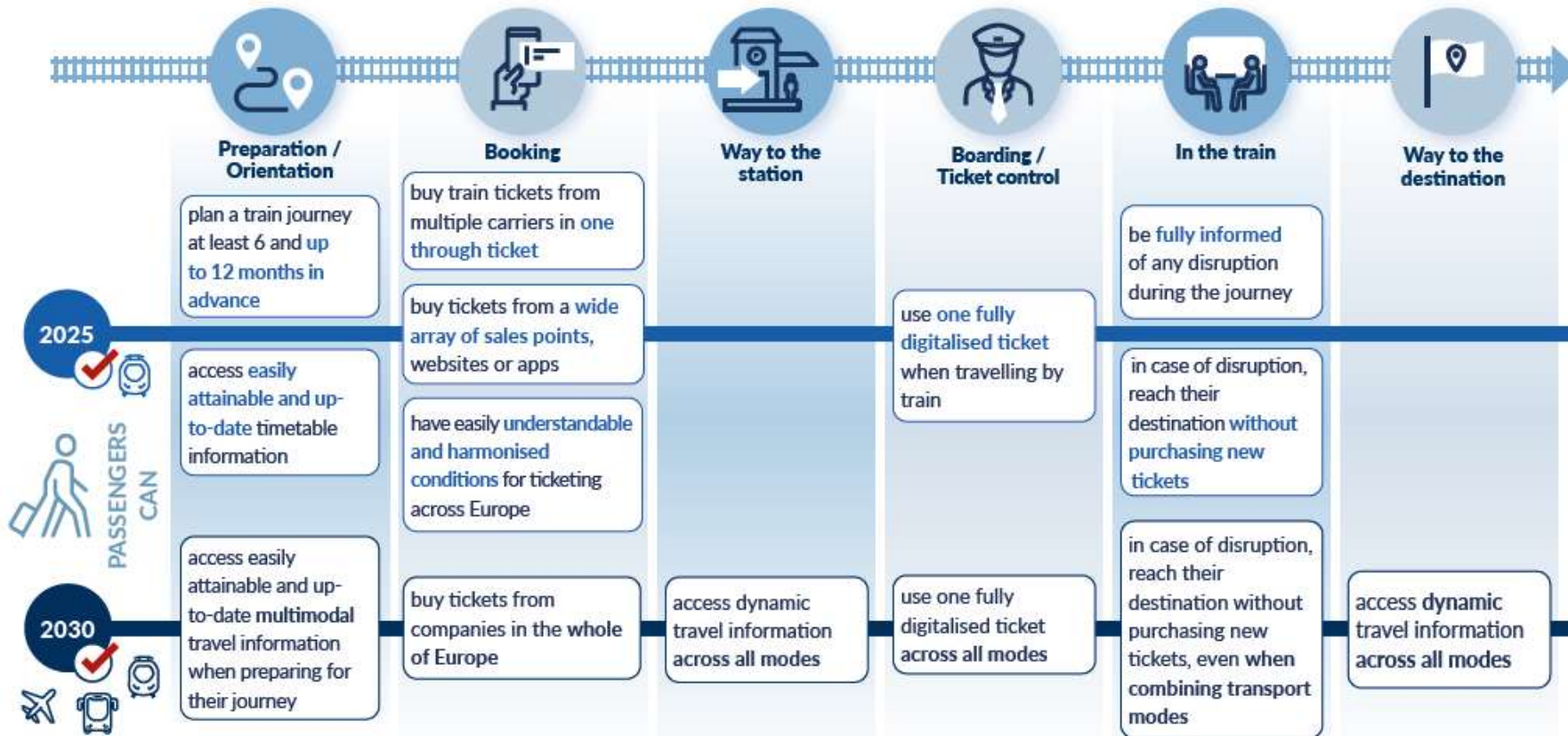
- **ERTMS** is pivotal

The CER Ticketing Roadmap

The vision

Passengers will have a seamless user experience when searching, selecting, buying and using rail services, including first and last mile transport, with:
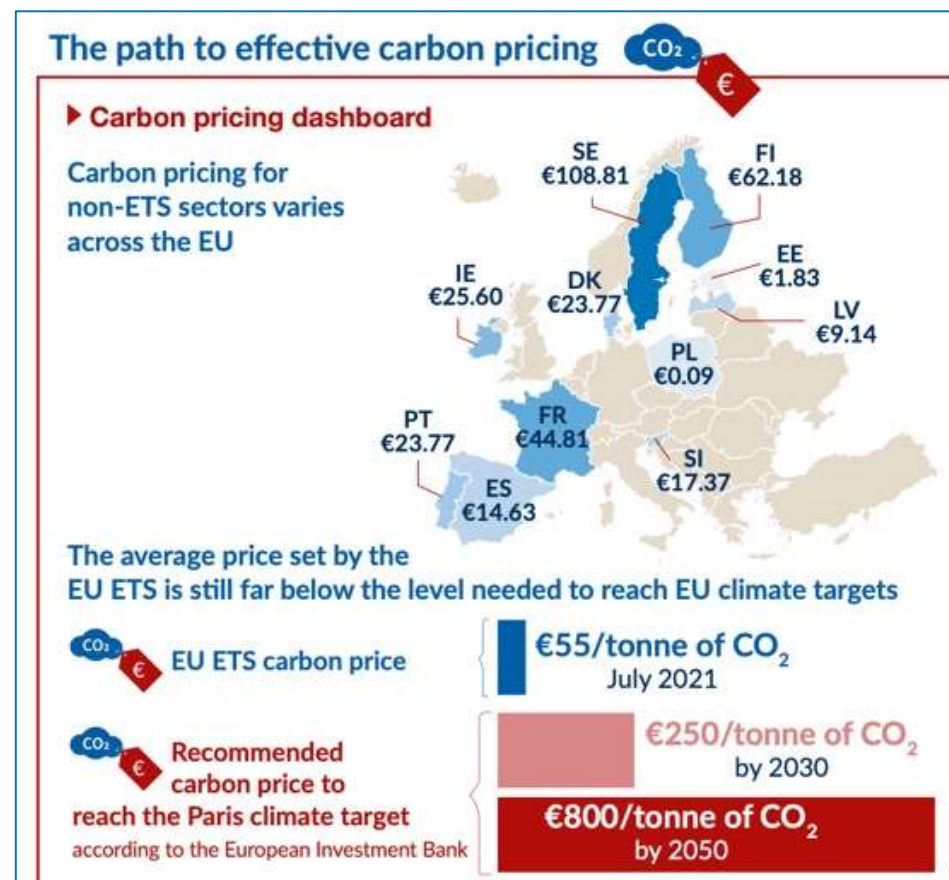
- access to **simple, reliable and comprehensive online information** regarding timetables, prices, dependable real-time information and ticket purchasing for (rail) transport services, both domestic (urban, regional, long-distance) and international

- **easy acceptance throughout Europe** of tickets issued by different railways and ticket vendors
- **guidance in case of travel disruption** on onward journey options and passenger rights

How we get there

Preparation / Orientation · **Booking** · **Way to the station** · **Boarding / Ticket control** · **In the train** · **Way to the destination**

PASSENGERS CAN

2025

Preparation / Orientation	Booking	Way to the station	Boarding / Ticket control	In the train	Way to the destination
plan a train journey at least 6 and up to 12 months in advance	buy train tickets from multiple carriers in one through ticket			be fully informed of any disruption during the journey	
access easily attainable and up-to-date timetable information	buy tickets from a wide array of sales points, websites or apps		use one fully digitalised ticket when travelling by train	in case of disruption, reach their destination without purchasing new tickets	
	have easily understandable and harmonised conditions for ticketing across Europe				

2030

Preparation / Orientation	Booking	Way to the station	Boarding / Ticket control	In the train	Way to the destination
access easily attainable and up-to-date multimodal travel information when preparing for their journey	buy tickets from companies in the whole of Europe	access dynamic travel information across all modes	use one fully digitalised ticket across all modes	in case of disruption, reach their destination without purchasing new tickets, even when combining transport modes	access dynamic travel information across all modes

Fit for 55: on opportunity not to be missed

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- **ETS scope** should include the whole of aviation and road
- At least 25% of **ETS revenues** should be earmarked to sustainable mobility projects (e.g. air-rail projects on the TEN-T network to replace short-haul flights with rail transport)
- **The scope of the Social Climate Fund should be widened to facilitate citizens' access to low emissions collective mobility with at least 25% of its firepower**

The path to effective carbon pricing CO₂ €

▶ Carbon pricing dashboard

Carbon pricing for non-ETS sectors varies across the EU

SE €108.81
FI €62.18
IE €25.60
DK €23.77
EE €1.83
LV €9.14
PL €0.09
PT €23.77
FR €44.81
SI €17.37
ES €14.63

The average price set by the EU ETS is still far below the level needed to reach EU climate targets

CO₂ € — EU ETS carbon price → €55/tonne of CO₂ July 2021

CO₂ € — Recommended carbon price to reach the Paris climate target according to the European Investment Bank → €250/tonne of CO₂ by 2030 / €800/tonne of CO₂ by 2050

Action plan to boost long distance and cross-border passenger rail (**key takeaways**)

The EC will

- prepare **"go-everywhere" passenger rolling stock specifications**, in cooperation with ERA (a TSI deliverable expected for 2022)

- clarify by 2023 the **State aid rules on public funding of interoperable rolling stock for cross-border services** in the revised Railway Guidelines. The issue of scrapping of existing rolling stock will be addressed in this context;

- continue supporting the fitting and retrofitting of rail vehicles with **ERTMS**

- promote the ratification of the **Luxembourg Rail Protocol** and support its implementation within the EU

- provide guidelines in 2023 for setting **TACs** which support the development of long-distance and cross-border passenger services

Action plan to boost long distance and cross-border passenger rail (key takeaways)

- Assess the need for an **EU-wide VAT exemption for international train services**

- Support and promote **air-rail multimodal journeys** on routes where the suitable infrastructure is in place to deliver such services, and assess regulatory options to facilitate such multimodal services

- publish interpretative guidelines in 2022 for applying the **PSO Regulation**, including to long-distance and cross-border rail passenger services and to promote and support the development of sustainable multimodal land transport services

- With the EIB, the EC will seek eligible pilot projects to **acquire rolling stock** under the Green Rail Investment Platform / InvestEU

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