

The cost of non-interoperability

Cutting Cost in Rail, High-level Event
Copenhagen, 5 November 2025

Oana Gherghinescu, Executive Director, ERA



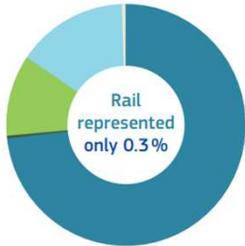
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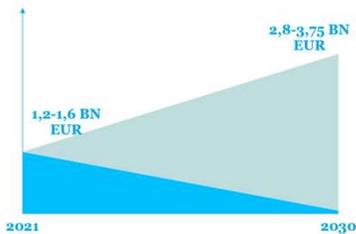
Greenhouse gas emissions by transport mode

EU27 (2022)

- Rail
- Waterborne
- Air
- Road
- Other



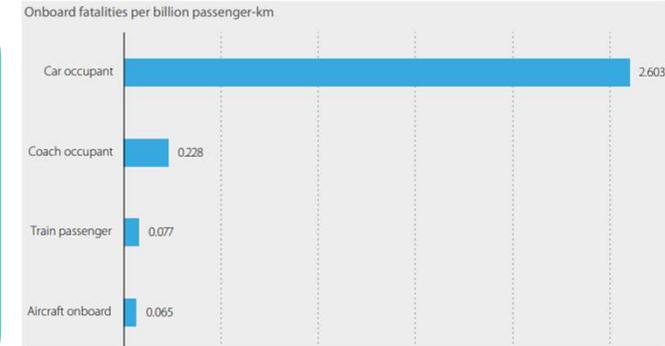
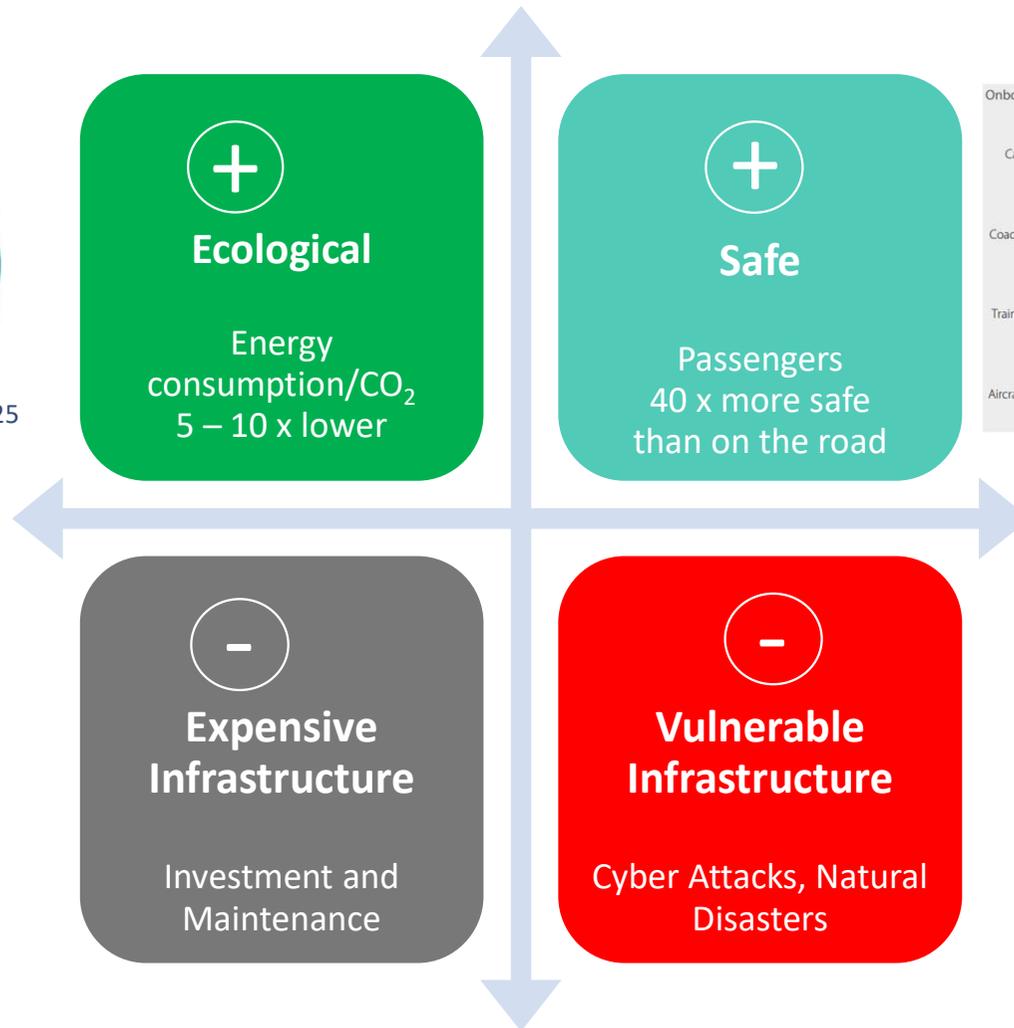
Source: RMMS Report, European Commission, 2025



■ Development in backlog from before 2021
■ Total backlog

Transportministeriet

Rail is special...



Source: Report on Railway Safety and Interoperability in the EU, ERA, 2024



www.spiegel.de

...but should not aim to be fine art

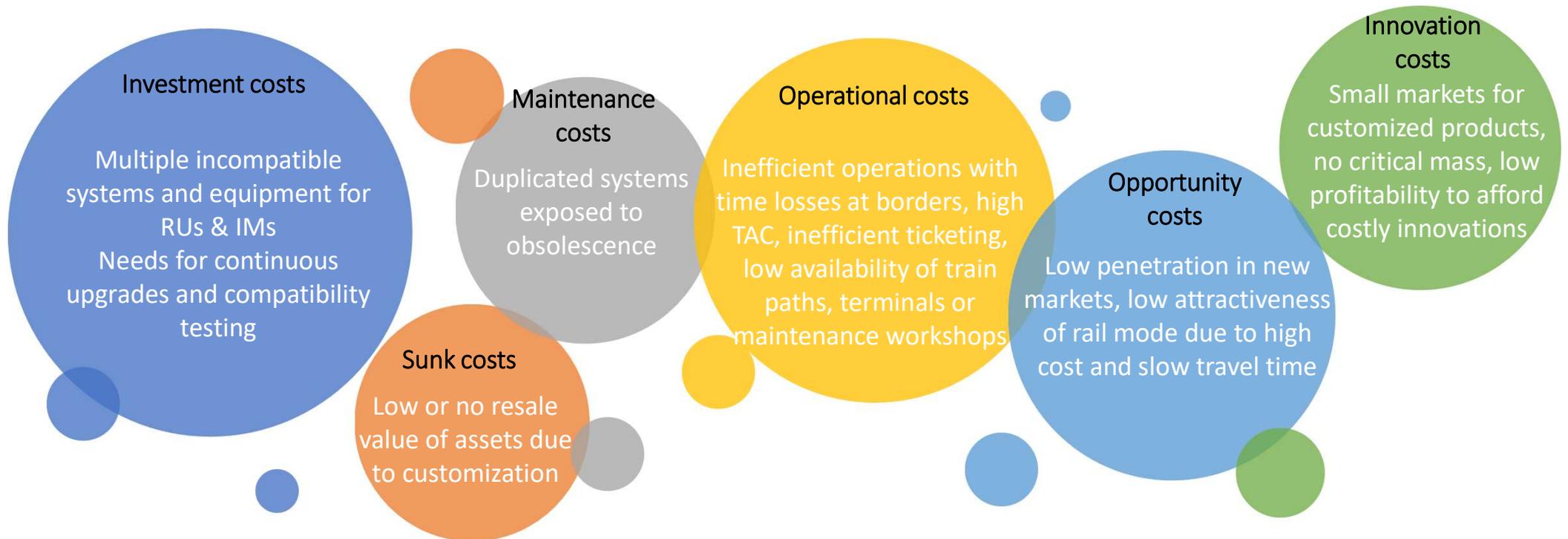
1. Unique concepts
2. Custom-made for pretentious clients
3. Originals only, replicas are not tolerated
4. Prices are huge and increase with time
5. Locked in small private collections or in museums



Unlike fine art, rail is a masterpiece when:

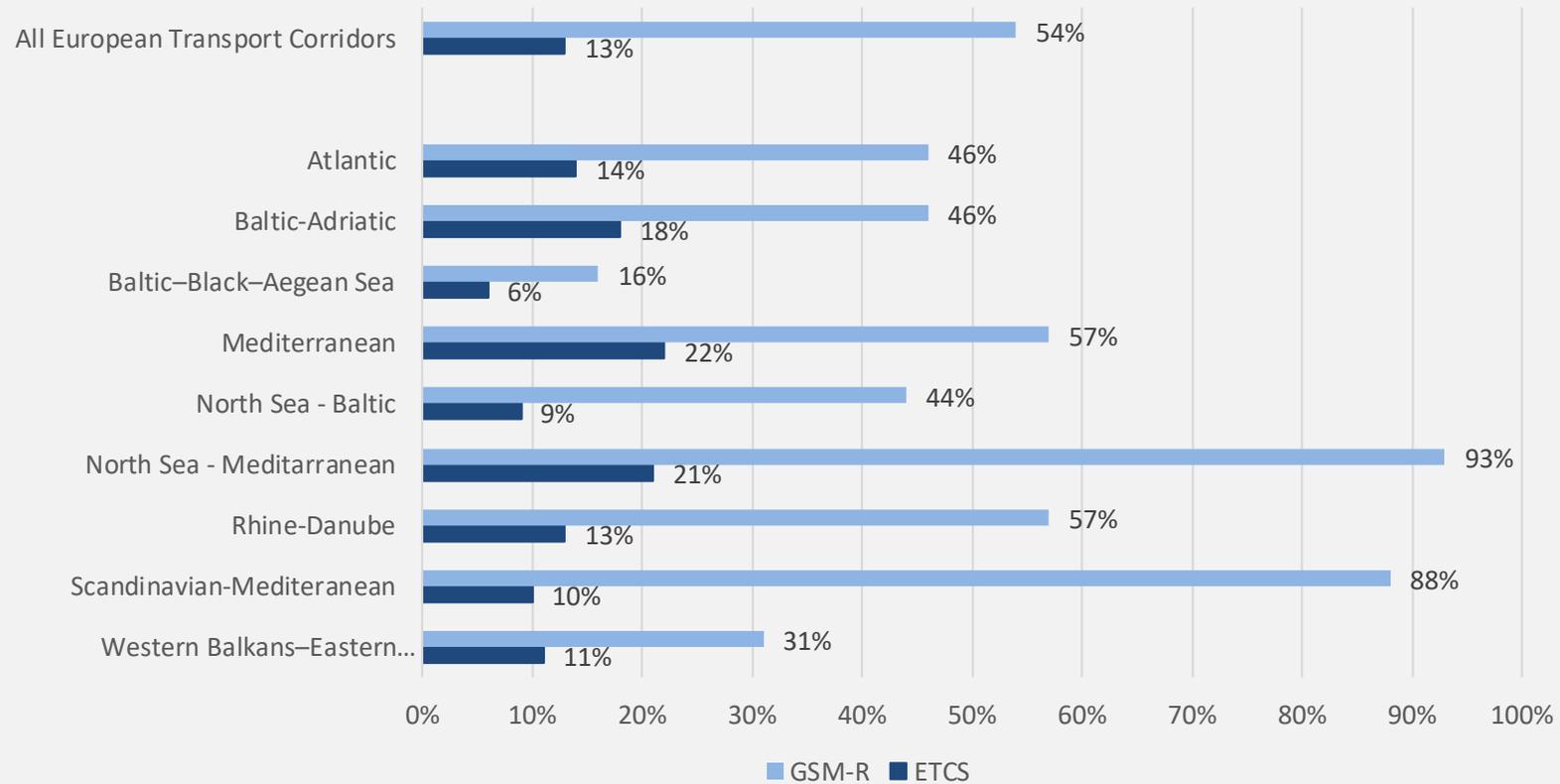
1. It is based on **standardization**
2. It follows an **industrial approach, with economies of scale**
3. It **crosses borders** seamlessly as a true **EU solution**
4. It is **affordable and safe** for the wide public
5. It follows an **integrated deployment and financing plan**

Non-interoperability - I



Deployment of ERTMS on European Transport Corridors (end 2024)

ETCS and GSM-R equipped lines among the whole corridors



Source: DMT / TENtec (Directorate-General for Mobility and Transport)

Border Crossing Dwelling Time Report

Annex 1

RU		North/South	Maximum time that trains need to arrange their border procedures																	Average Schedule time week 38 2019	Week 38 Average Real Time week 38 2019
DB Cargo	Malmö	Process time	from arrival to (can be parallel) in minutes	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	23/22 minutes DB Cargo, scheduled time, arrived/departure Shunting time,	All trains left ahead the schedule (30 earlier)	
		Change Loco																			
		Wagon Shunting (e.g. buffer wagon)																			
		Technical check (with or without ATT)																			
		Brake test																			
			Administration (paper train orders)															Duration of procedure: 23 minutes			
			Train ready message/route control															Duration of procedure: 23 minutes			
<p style="text-align: center;">Process Time</p> <p style="text-align: center;">Maximum time that trains need to arrange their border procedures</p>																				Average Schedule time week 38 2019	Week 38 Average Real Time week 38 2019
DB Cargo	Padborg	Process time	from arrival to (can be parallel) in minutes	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	28 min. only DB Cargo trains with one trainnumber are counted - train number changes are not considered and there isn't many trains running	7 min. Gained* only DB Cargo trains with one trainnumber are counted - train number changes are not considered and there isn't many trains running	
		Change Loco																			
		Wagon Shunting (e.g. buffer wagon)																			
		Technical check (with or without ATT)																			
		Brake test																			
			Administration (paper train orders)															Duration of procedure: 28 min			
			Train ready message/route control															Duration of procedure: 28 min			
<p style="text-align: center;">Process Time</p> <p style="text-align: center;">Maximum time that trains need to arrange their border procedures</p>																				Average Schedule time week 38 2019	Week 38 Average Real Time week 38 2019
Rail Cargo Austria	Kufstein	Process time	from arrival to (can be parallel) in minutes	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	17 Minutes Source ÖBB ARAMS (only trains with one trainnumber are counted - train number changes are not considered)	13 Minutes Source ÖBB ARAMS (only trains with one trainnumber are counted - train number changes are not considered)	
		Change Loco																			
		Wagon Shunting (e.g. buffer wagon)																			
		Technical check (with or without ATT)																			
		Brake test																			
			Administration (paper train orders)															Duration of procedure: 60 minutes			
			Train ready message/route control															Duration of procedure: 60 minutes			
<p style="text-align: center;">Process Time</p> <p style="text-align: center;">Maximum time that trains need to arrange their border procedures</p>																				Average Schedule time week 38 2019	Week 38 Average Real Time week 38 2019

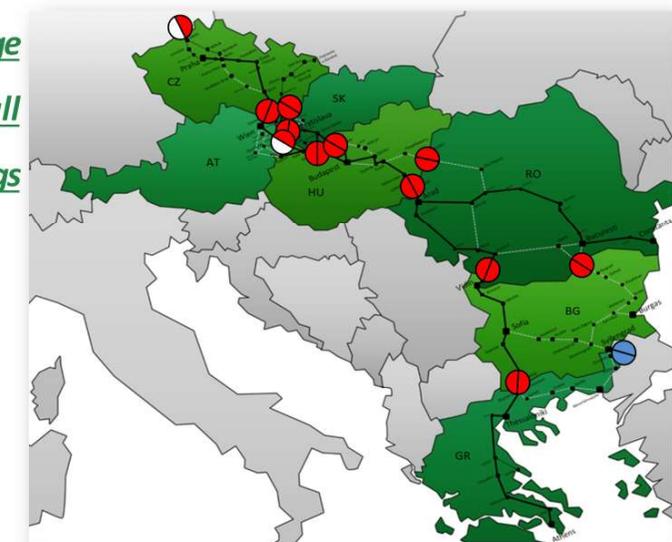
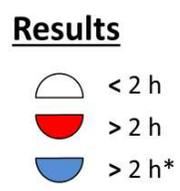
RFC7 : Waiting time on border crossing

1

Current situation



Measuring of average waiting time at all RFC 7 border crossings



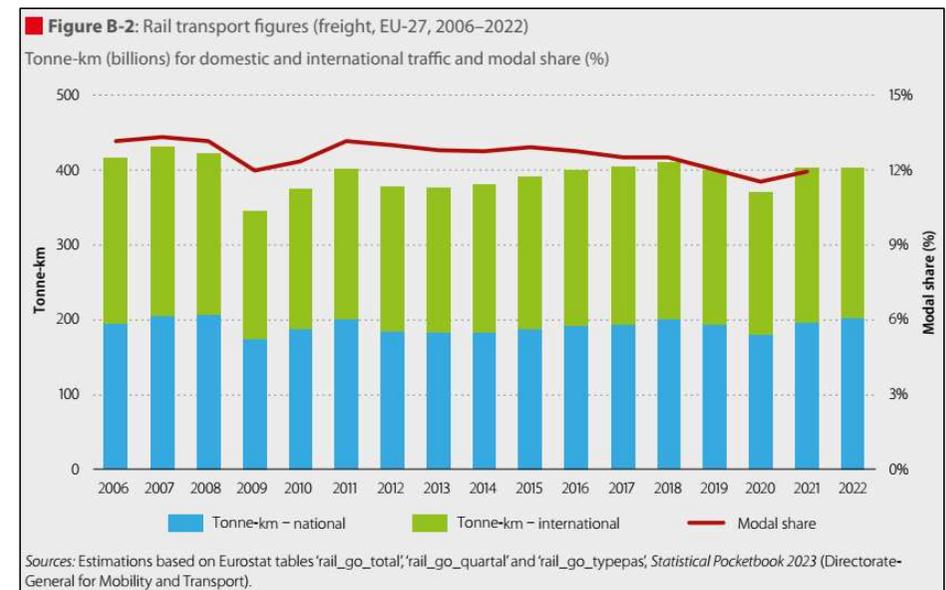
*Third country cross-border link. Only has an informative character, and does not form part of the Action Programme.



Interoperability barriers are among the top reasons for the low competitiveness of rail ([Costs of non-interoperability-2023 - Briefing note-final.pdf \(europa.eu\)](#))

Non-interoperability - IV

The modal share of rail transport in Europe is stagnating around quite low levels (around 6 % for passenger and 12 % for freight respectively)



Some ideas on how to make progress, while guarding safety

1. Think **time, money and knowledge**

- Mature technical specifications
- Strike the right balance between innovating and protecting existing investments; well thought deployment plans
- Standardised solutions and harmonization at engineering rules level; leave no room for “original” solutions
- Leave no room for system compatibility testing
- Plan production capacity and ensure predictability on orders
- Streamline administrative processes for authorization
- Mainstream TSIs and ERTMS savviness to the “large masses”

2. Think **cross-border**

- Where and why do bottlenecks persist; where does it hurt most (follow the high traffic volumes first); further clean up of operational rules
- Native cross-border solutions vs “cleaning work” after
- Talking and listening to the “neighbors” as early as possible
- ERTMS-native investments with fast decommissioning of the legacy systems; large cross-border projects and their positive domino effect

Non-interoperable, non-standardized rail projects have no chance to become as famous as fine art...

Bronze plain colour with blue sea background is actually
great...



THANK YOU

Moving Europe towards a sustainable and safe railway system without frontiers.

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