

The journey to sustainable and smart mobility begins with rail

With the European Green Deal, the European Commission proposed the most ambitious plan ever for a supranational institution: to make Europe the world champion of sustainability.

European railways support this agenda with the full strength of their own undisputed sustainability credentials.

To pave the way to a greener future through sustainable and smart mobility, four overarching goals are pivotal:



Net-zero greenhouse gas (GHG) emissions from transport **by 2050** at the latest

- This is key to achieve **net-zero emissions in the wider EU economy by 2050** and requires agreement on GHG emission reduction milestones for transport:
- 25% by 2030 (on 1990 levels, amounting to -42% for 2017-2030)
 - 65% by 2040 (on 1990 levels)
 - 100% by 2050 (climate-neutral transport)



A rail freight modal share of at least **30% by 2030**

- This is key to meet rising transport demand without more emissions and requires a **pan-European deployment plan for rail freight digitalisation** based on a system approach where all technologies are interlinked.



Marginal social-cost pricing (MSCP) promoted in all transport policy reflection.

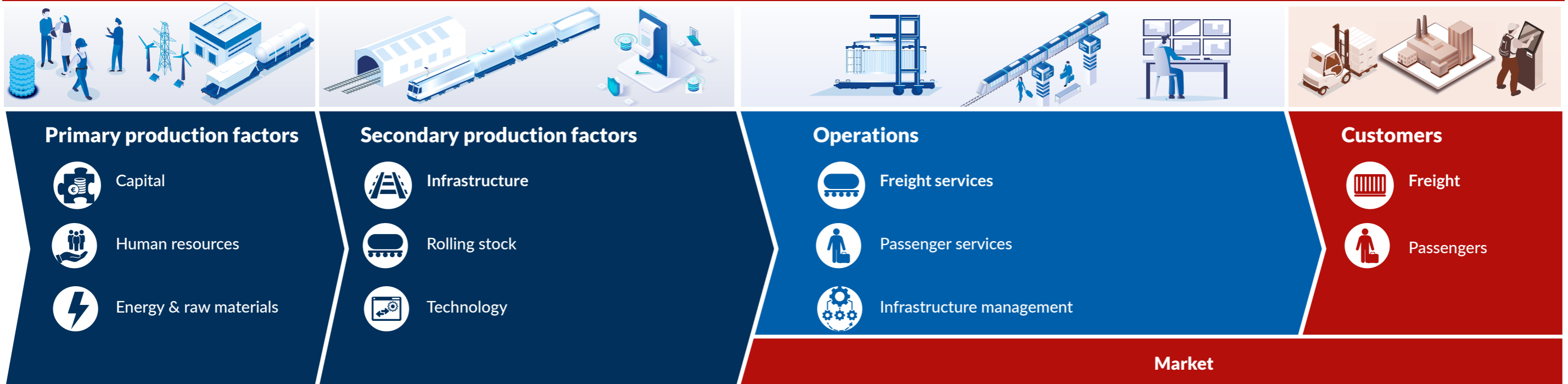
- This is key to **implement the 'polluter-pays' and 'user-pays' principles** across all transport modes, so as to internalise transport externalities. Railways comply with these principles better than any other mode; now others must follow.



A rail modal share of passenger traffic of at least **15% by 2030** and **20% by 2050**

- This is key to realise sustainable travel ambitions and relies on **an enhanced digitalised purchasing and travel experience** accessible to all passengers in both national and international rail services.

To support these goals, targeted policy levers and actions are needed across the whole value chain of rail



Capital

Connecting Europe Facility (CEF) and European Structural and Investment (ESI) funds to provide support to rail infrastructure, station capacity, ERTMS, digitalisation, accessibility, TEN-T expansion, rolling stock.

Private investments to be scaled up via sustainable finance.

Human resources

EU Sectoral Social Dialogue for Railways must be supported.

CER/ETF project on **impact of digitalisation and automation on rail employability** to be considered in future initiatives.

Educational programmes for sustainable travelling behaviours and **skill-building** for future rail employees.

Energy & raw materials

EU-wide carbon pricing for transport through ETS, taxation and user charges. Tax exemption must end for aviation and maritime shipping fuel.

Infrastructure

TEN-T network completion to be sped up.

740m freight trains and 22.5-tonne axle load to be enabled.

Local freight network to be promoted.

A European **high-speed core network** to be completed by 2035.

Alternative fuel infrastructure deployment should include the rail network.

Rolling stock

CEF and ESI funds to finance rolling stock upgrading and renewal.

Private investments' role in rolling stock financing must increase.

Technology

Uniform functional reference system to be defined for implementing interoperability, interchangeability, modularity, evolvability, plug-and-play interfaces.

Deployment of **5G mobile infrastructure** and services to be started.

A **new institutionalised European partnership (iEP)** must be established as the next generation of Shift2Rail.

Freight services

Freight automation to be supported through:

- **Digital Automatic Coupling,**
- **Digital Capacity Management,**
- **EU-wide Data Exchange Platforms,**
- **Digitalisation of accompanying transport and customs documents,**
- **ERTMS.**

Customs guarantee burden for rail freight must be reduced.

Passenger services

EU-level incentives are needed to promote international passenger transportation by rail.

High-speed and night trains can become an alternative to cheap flights with a range of 1000 km if appropriate political support is provided.

New **ticketing models and cooperation for through-tickets** must be based on commercial agreements.

Infrastructure management

The competences of **Rail Freight Corridors** should be enhanced, with better coordination with TEN-T governance structures.

Timetabling and capacity redesign including digital scheduling must become a reality.

Transport eco-labelling to help shippers and travellers make well-informed choices for low-carbon mobility.

Freight

Last-mile rail connection of industrial sites to main rail network must be enabled.

Multimodal rather than road-only **end-to-end solutions** must be enabled.

Grouping of industries in logistics parks or freight villages linked to rail must be promoted for bundling of freight flows.

Passengers

Travel to be simplified by **harmonising booking time intervals** and **clarifying liability** between rail service distributors.

Customers to benefit from tailored **Mobility-as-a-Service (MaaS)** models through close collaboration of all transport providers in a city or region.

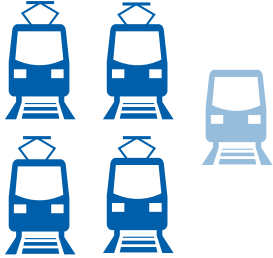
All passengers to benefit from an **accessible railway system** fit for an ageing population and persons with disabilities or reduced mobility.

Market rules have been defined for both the freight and passenger services – most recently with the Fourth Railway Package – and must remain stable.

Railways: the backbone of sustainable European mobility

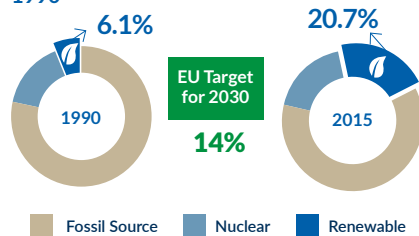
European railways already deliver zero-emission transport

4 trains out of 5 are already running on **electricity**, which is becoming greener



The railway sector is already **beyond the EU's 2030 renewable energy target** for transport

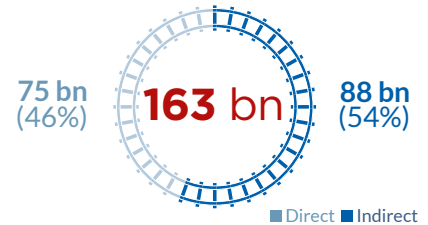
Rail's energy mix in the EU, 2015 compared to 1990



Railways create jobs and value added

Rail is an essential component of the transport system, and transport is an essential function of any modern economy.

Economic size of Europe's rail sector (GVA)



Millions of persons employed

1 million directly **1.3 million** indirectly

ONE job in railway transport creates more than **ONE** other job in indirectly dependent economic activities.



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

Specific CO₂ emissions per transport mode

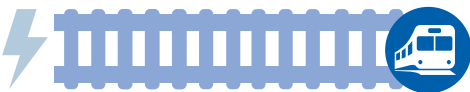
Passenger



Freight



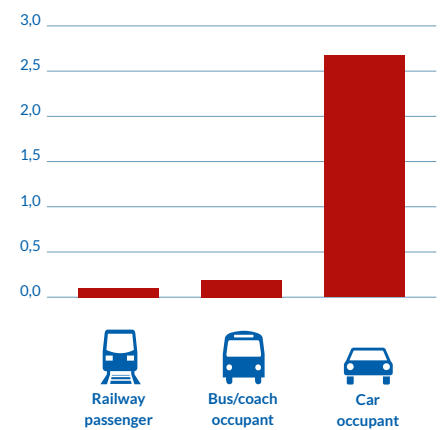
Rail is **6x more energy-efficient** than road due to physical advantages such as lower rolling and air resistance.



Distance per energy unit consumed

Rail is the **safest mode of land transport**

Fatalities per billion passenger-kilometres for different modes of transport (2011-2015)



CER membership

71% of the European rail network length

76% of the European rail freight business

92% of rail passenger operations in Europe