IRG-rail

Independent
Regulators' Group - Rail

14th Annual Market Monitoring Report

March 2026

01

Introduction

Participating countries

AT - Austria
BE - Belgium
BG - Bulgaria
HR - Croatia
CZ - Czech Republic
DK - Denmark
EE - Estonia
FI - Finland
FR - France
DE - Germany
EL - Greece
HU - Hungary
IE - Ireland
IT - Italy
XK - Kosovo*
LV - Latvia
LT - Lithuania
LU - Luxembourg
MK - North Macedonia
NL - Netherlands
NO - Norway
PL - Poland
PT - Portugal
RO - Romania
RS - Serbia
SK - Slovakia
SI - Slovenia
ES - Spain
SE - Sweden
CH - Switzerland
UK - United Kingdom

SCOPE

31 countries

5 years of data
2020 - 2024

CONTENT OF THE REPORT

FOCUS TOPICS IN PREVIOUS REPORTS

2019	2020	2021	2022	2023
Impacts of the COVID-19 pandemic in the first half of 2020	Additional analyses of the Impacts of the COVID-19 pandemic in 2020	Impacts of COVID-19 in 2021 and market recovery	Heterogeneity of network usage and potential determinants	Characteristics of infrastructure managers

*Kosovo (XK): This designation is without prejudice to positions on status and in line with UNSCR 1244 (1999) and the ICJ opinion on the Kosovo declaration of independence.

IRG-Rail – A network of cooperation

The Independent Regulators' Group Rail (IRG-Rail) was established by 15 European rail regulatory bodies in June 2011. Since its foundation, the objective of the group has been to establish a network of cooperation between member organisations in the railway sector. The group has expanded over time and now includes members from 31 countries.

IRG-Rail members aim to deal consistently with regulatory challenges and rail market developments across Europe. IRG-Rail acts as a platform for cooperation, sharing best practice and promoting a consistent application of the European regulatory framework. As stated in the group's statutory document, 'the overall aim of IRG-Rail is to facilitate the creation of a single, competitive, efficient and sustainable railway market in Europe' [1].

What we do

Directive 2012/34/EU states that regulatory bodies have a formal duty to monitor the situation in the railway market. Market monitoring is therefore an essential task for the national regulatory bodies. It is also a vital instrument for enhancing market transparency, setting direction for the activities of regulatory bodies and encouraging market participants to develop and improve their activities.

General aim of the Market Monitoring Working Group

The IRG-Rail Market Monitoring Working Group was set up as a platform for cooperation and to exchange best practices in terms of data collection and analysis. The group has an agreed set of guidelines[2] for gathering railway data and produces the annual Market Monitoring Report, based on the results of a yearly collection of data.

This is IRG-Rail's 14th Market Monitoring Report and covers calendar year 2024, unless otherwise stated.

Content of the report

The Market Monitoring Report provides an overview of market developments and the economic conditions in the railway sector with respect to IRG-Rail member countries. The report also compares developments and the competitiveness of the railway market over time.

The report consists of two parts. This Main Report presents results at the European level. The Working Document includes country specific data and more detailed observations[3]. Furthermore, the underlying data is available on the IRG-Rail website[4].

In addition to the indicators presented in common with the Main Report, the Working Document is enriched with some specific data. They are signalled by a pin symbol ( ) throughout the Main Report. Some examples are: high-speed and TEN-T route length, intermodal freight traffic, PSO passenger-km awarded by competitive tenders, number of passenger stations, number of cancellations.

Methodology

It is the responsibility of each regulatory body to gather, quality-assure and submit data according to the agreed guidelines. The Working Group has developed a common template to save effort for regulatory bodies and ensure the comparability of the data. Data comes from market surveys carried out by the regulatory bodies and/or national statistics, as well as other trustworthy sources.

31 countries contributed to this 14th Market Monitoring Report. However, most countries were not able to provide data for all measures. This report only presents indicators for which enough data was made available, to ensure reliable and consistent information. As a result, some analyses are performed using data from a subset of participating countries. Therefore, some sections may not cover all 31 countries. In each section of the report, key figures and analyses presented use a consistent sample of countries[5]. Detailed information and specific data by country are also provided in the Working Document.

[1] https://www.irg-rail.eu/irg/about-irg-rail/general-information/About-the-IRG-Rail.html
[2] The guidelines can be found here.
[3] The Working Document can be found here.
[4] The data can be found here.
[5] The data coverage for each figure is included in the footnotes. All countries are included, unless otherwise specified.

Recent trends in European rail transport (2023-2024)

Passenger services

Passenger train-km	Passenger-km	TAC* from passenger services	Operator revenues
+2%	+6%	+6%	+8%
(31 countries)	(31 countries)	(28 countries)	(25 countries)
(2019-2024 : +2%)	(2019-2024 : +8%)	(2019-2024 : +18%)	(2019-2024 : +22%)

Freight services

Freight train-km	Freight tonne-km	TAC* from freight services	Operator revenues
-3%	-2%	+0.1%	+1%
(31 countries)	(31 countries)	(28 countries)	(22 countries)
(2019-2024 : -8%)	(2019-2024 : -9%)	(2019-2024 : -8%)	(2019-2024 : +19%)

Notes: All comparisons are for 2024 compared with 2023, plus comparisons in grey between 2024 and 2019 below each indicator. The number of countries included is provided under each metric. *Track Access Charges for the Minimum access package collected by infrastructure managers.

OVERVIEW

In 2024, inflation in IRG-Rail countries fell to below 3% on average, its lowest value since 2021. This easing of costs has contributed to the return of economic growth in almost all member countries in 2024. However, the European railway market still showed two contrasting trends.

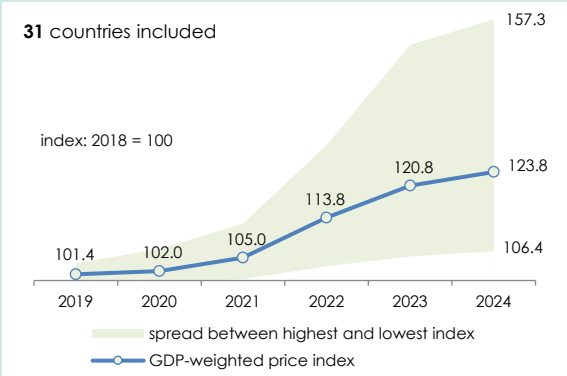
The **rail passenger traffic continued to increase over the last year** (+6% in passenger-km), now well beyond its 2019 level. National traffic contributed for a larger part to the overall passenger-km growth compared to international counterpart. Similarly, PSO traffic was the main driver of the total passenger transport growth, relative to non-PSO traffic.

Meanwhile, **rail freight transport could not yet recover from the downturn in 2023 and fell again in 2024** (-2% compared to 2023, in net tonne-km). This overall decrease was driven by international traffic as the latter dropped by 5% while national traffic increased slightly by 1%. International tonne-km reached the lowest level ever recorded for IRG-Rail countries since 2015.

Track access charges (TAC) collected by infrastructure managers (IM) **for passenger services increased faster than the rise in traffic volume, while TAC for freight services remained unchanged amid a decline in freight train-km.** This reflects an upturn in the average charges per train-km (+4% for passenger and +6% for freight from 2023).

On a mostly stable railway network, infrastructure managers' expenditure per route km increased by 13% in 2024 compared with 2023. Almost one quarter of the total expenditure was dedicated to maintenance of the network.

Figure 1 – Average price index from 2019 to 2024



In 2024, **railway undertakings'** (RU) **revenue from passenger services grew by 8% year-on-year for the second consecutive year**, driven by both traffic growth and inflation. **For freight services, RUs' revenue increased slightly from 2023 while** traffic is still down, suggesting a higher unit price charged to clients.

RUs' spending on electricity (per kWh) decreased for the first time since the leap in 2022 (-15% over the year). Meanwhile, **spending on diesel (per litre) increased again in 2024** (+11%) but stayed far below its peak in 2022.

02

Characteristics of the railway network

IN 2024

Network length

232,191 km
total route length

4.76 km
of lines per 100 km² country area

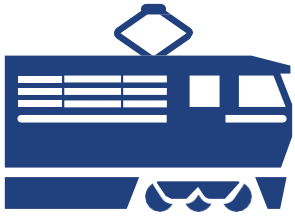
4.32 km
of lines per 10,000 inhabitants

Network usage intensity

55
trains per day per route km

83%
for passenger services

17%
for freight services



57%
share of electrified route

3.9%
share of high-speed route

The sample used to calculate these figures is specified in the following pages.

European railway network

In 2024, the total route length of IRG-Rail member countries amounted to over 232,000 km. Over recent years, while the total route length has remained stable, there have been country-specific changes (see Working Document for more detail). Furthermore, there may be changes within a national network that are not visible in the data, including line closures and new constructions which have balanced each other out.

Almost 70% of the total route length comes from the eight countries with the largest networks: Germany, France, Poland, Italy, the UK, Spain, Sweden and Romania. Luxembourg has the shortest network of all participating countries (271 km).

Figure 2 – Route length (in km) of participating countries in 2024

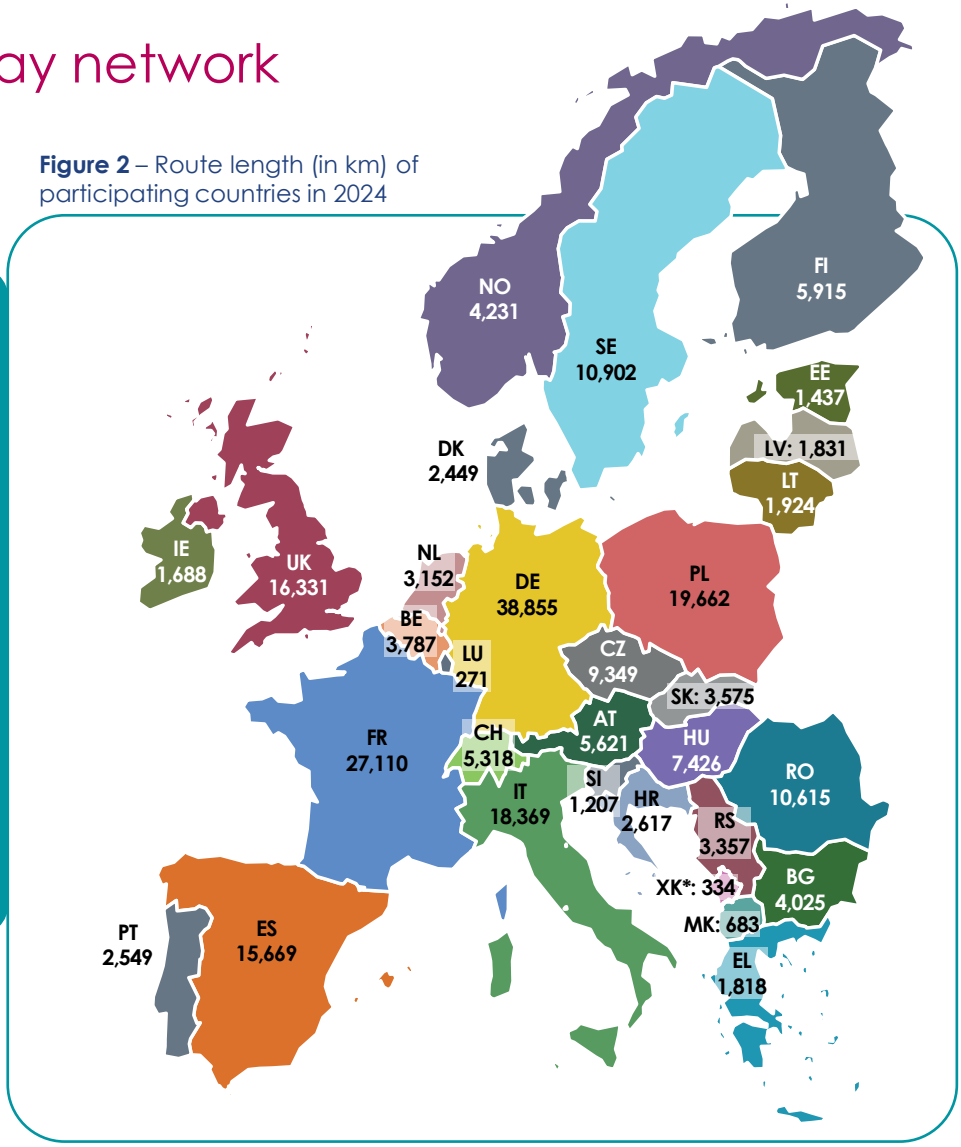
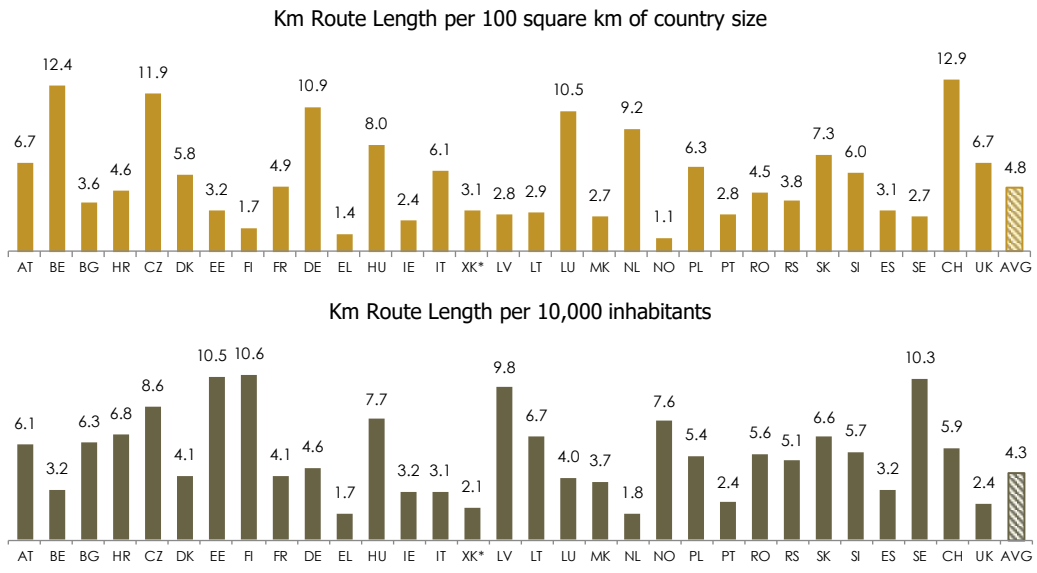


Figure 3 – Network density with respect to country area and population in 2024



Network density is an indicator for the development and coverage of the rail network in each country. The average network density stands at 4.8 route-km per 100 square km of area.

Switzerland has currently the highest network density relative to country size, 12.9 route-km per 100 km^2, followed by Belgium (12.4) and Czech Republic (11.9). All these countries have rail networks with extensive coverage across the respective territories. Norway has the lowest network density relative to country size of all participating countries (1.1).

Network density can also be quantified in terms of route length per 10,000 inhabitants. In 2024, that figure was on average 4.3km of route per 10,000 inhabitants, having underwent a slight decrease (-1%) w.r.t 2023, owing to the increase in population. As in 2023, Estonia, Finland and Sweden have the densest networks in terms of route length per capita, with more than 10 km of route per 10,000 inhabitants. The countries with highest network density relative to population size (Finland, Estonia, Sweeden and Latvia) are among those with lower density in terms of country size, which is indicative of a relatively low population density, or the fact that there are large areas of the country which are not served by the rail network. Greece and the Netherlands show the lowest density in terms of route length per 10,000 inhabitants, both below 2.0 km of route per 10,000 inhabitants.

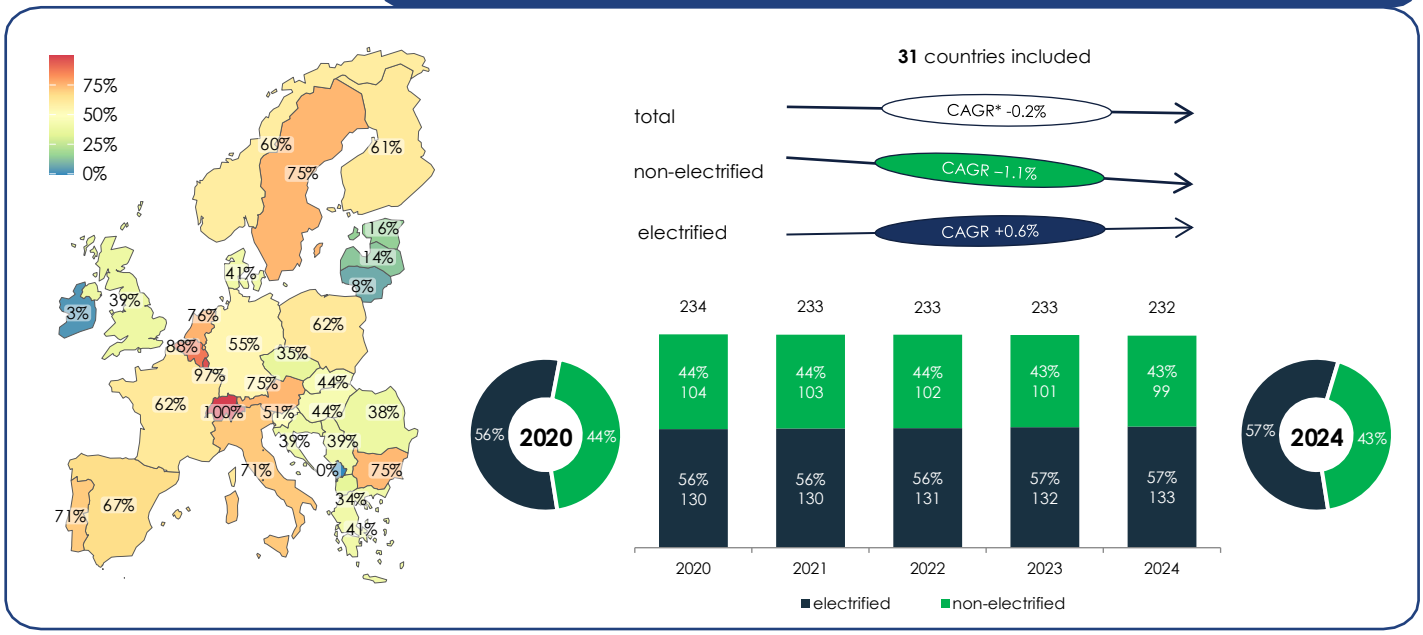
Additional indicators included in the Working Document:
- High-speed route length
- TEN-T route length

Electrification of the railway network

In 2024, 57% of the total route length of the IRG-Rail countries was electrified. Compared with 2020, the electrified network increased by approximately 3,000 km, corresponding to a 1.6-percentage-point increase in the share of electrified routes.

Across Europe, the level of electrification of the railway network varies significantly – from Switzerland, where the entire network is electrified, to Kosovo, where it is entirely non-electrified. In between, nine countries have a share of electrified network higher than 70%, and five have a share of electrified network below 20%.

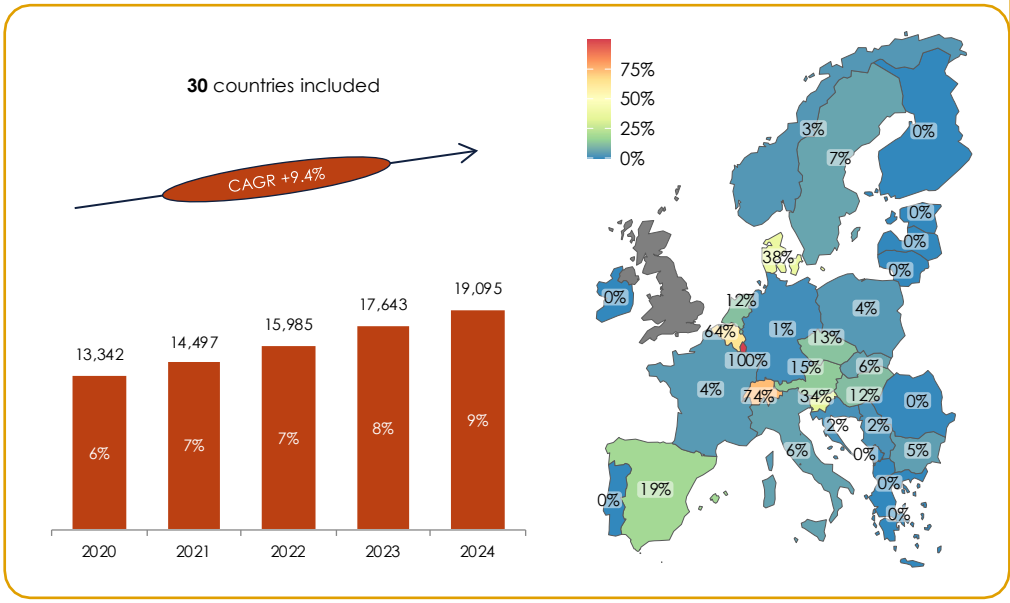
Figure 4 – Electrified share per country in 2024 (left) and breakdown of total route length (thousand km) into electrified and non-electrified network (right)



*CAGR: compound annual growth rate

Interoperability of the railway network

Figure 5 – Total ETCS-enabled route length (km) and share of total route (%) from 2020 to 2024[7] (left) and share of ETCS-enabled routes per country in 2024 (right)



In total, 30 IRG-Rail countries reported data on ETCS-enabled routes in 2024, of which 20 have equipped routes amounting to a total length of about 19,000 km.

Over the 2020-2024 period, the ETCS-enabled route length has increased rapidly (+9% per year). However, in 2024 it still represents only 9% of the total network, and the deployment effort of the last five years has increased its share by only 3 percentage points.

Switzerland has the longest ETCS-enabled route length (3,922 km), representing 74% of its network. Luxembourg, has had its entire rail network equipped since 2023. Conversely, five countries, including those with the largest networks such as France and Germany, have a share of ETCS-enabled routes below 5%.

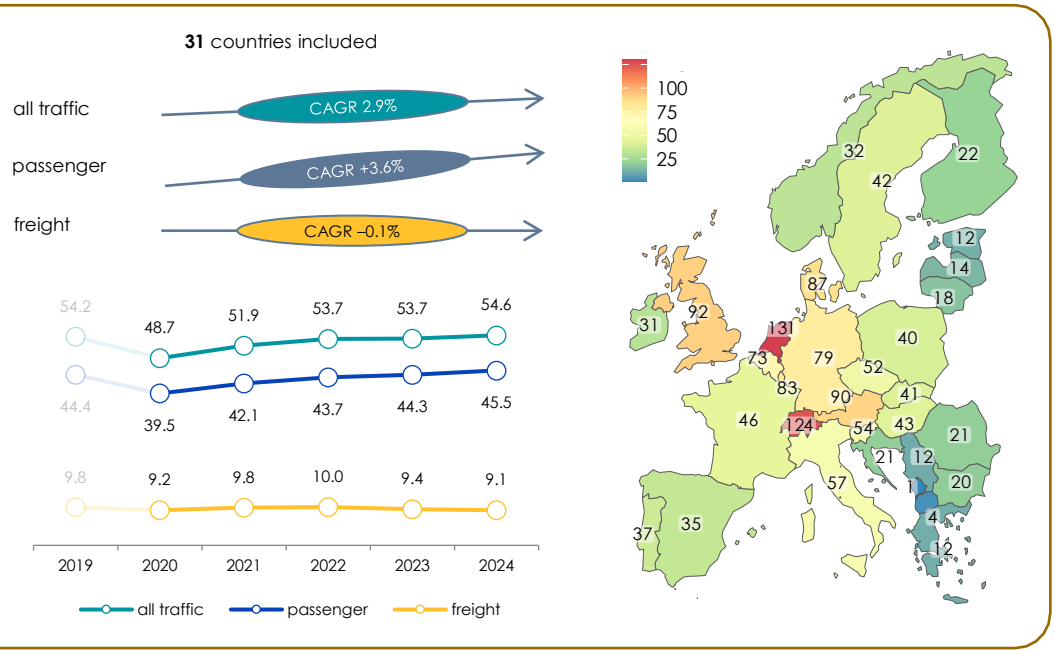
[7] 30 countries are included in this figure (UK is missing).

Network usage

On average, almost 55 train-km ran per route km per day in 2024, among which 83% came from passenger trains. Passenger traffic accounted for a large majority of rail traffic in all monitored countries, with the sole exception of Slovenia. The usage intensity of passenger trains reached 45.5 train-km per route km per day, increasing by 3% compared with 2023 and exceeding the 2019 value for the first time.

For freight services, the average usage in 2024 was 9.1 train-km per route km per day, the lowest value since 2019 and the second decline over the last three years.

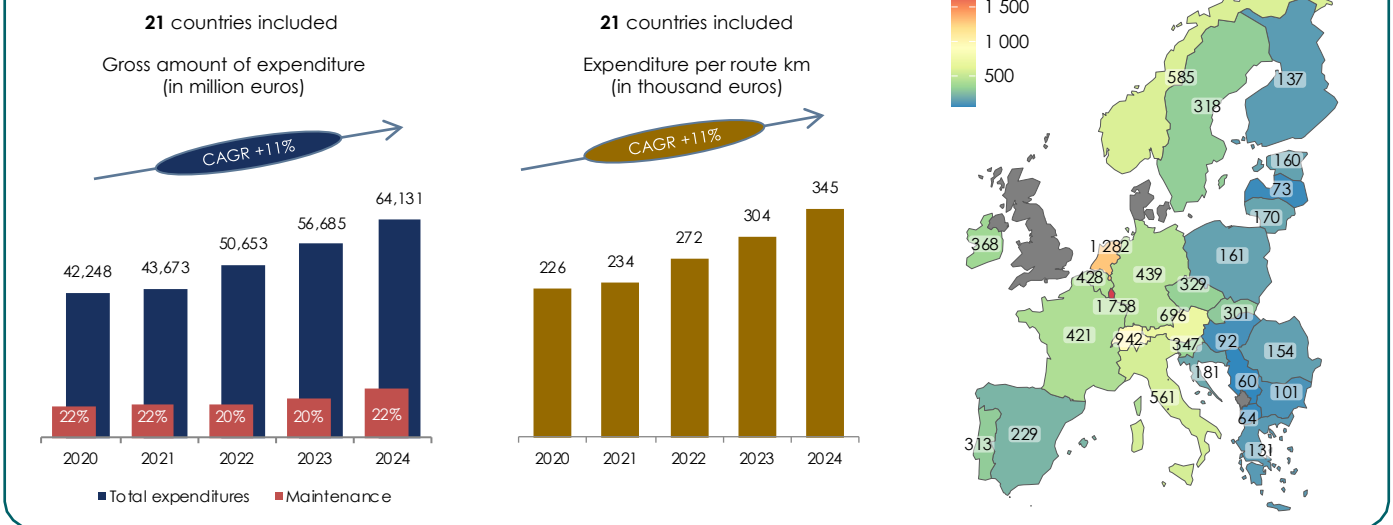
Figure 6 – Overall network usage intensity (train-km per route km per day) from 2020* to 2024 (left) and its 2024 level per country (right)



*2019 values are plotted as references. CAGR are calculated over 2020-2024 period.

Infrastructure managers' expenditure on the network

Figure 7 – Infrastructure managers' expenditure on the network, share of maintenance in total amount (left), expenditure per route km (centre) from 2020 to 2024 and expenditure per route km per country in 2024 (right) [8]



In total, infrastructure managers' expenditure on the network reached €64 billion according to data from 21 countries in 2024. Expenditure has increased steadily since 2020 by an average of 11% per year, with a 13% increase observed between 2023 and 2024. As before, Germany and France were the countries with highest expenditure: €17 and €11 billion, respectively.

Overall, expenditure per route km averaged €345,000 in 2024, with substantial variation across countries. As with last year, the highest level was reported in Luxembourg (almost €1.8 million per route km) while the unit amount was lower than €100,000 per route km in five countries. Several factors contribute to these disparities including the actual conditions of the network, historic works completed, composition of infrastructures and usage intensity.

[8] 21 countries are included in this figure (Czech Republic, Denmark, Kosovo*, Latvia, Macedonia, Netherlands, Slovakia, Serbia, Switzerland and UK are missing).

03

Track access charges (TAC) for the minimum access package

IN 2024

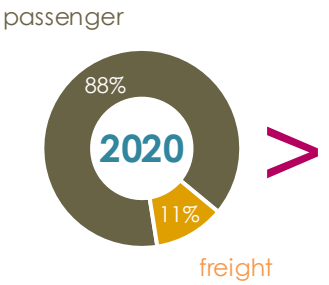
€24.8 bn
total TAC

€5.38
average TAC per train-km

91%
share of TAC from passenger services

The sample used to calculate these figures is specified in the following pages.

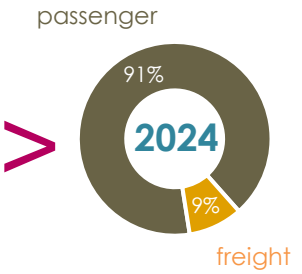
Evolution of TAC



€19.6 billion

In 2024, the gross amount of track access charges (TAC) paid for the minimum access package to infrastructure managers in 29 IRG-Rail countries reached €24.8 billion[9]. This corresponds to a yearly increase of 6%, and a 27% increase relative to 2020.

TAC collected from passenger services has always contributed for the large majority of total TAC amount. Over the past five years, the share of passenger services has increased by 2 percentage points to reach 91% in 2024.



€24.8 billion

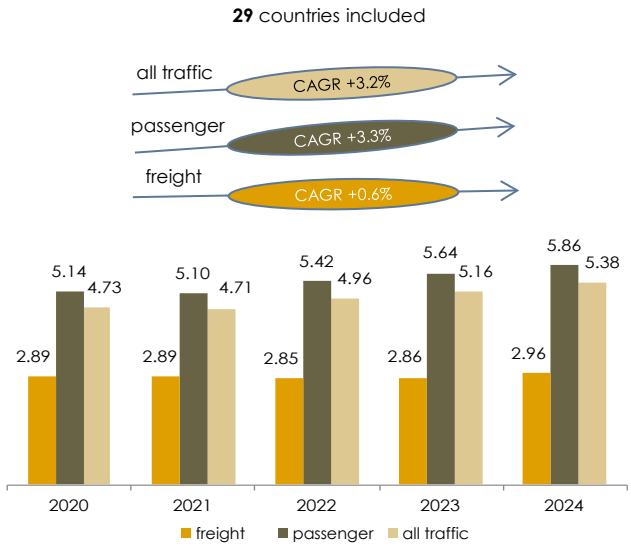
TAC per train-km

91% of all European track access charges (TAC) was paid for passenger services in 2024, based on data reported by 29 countries. While the average TAC per passenger train-km peaked at €5.86 in 2024, this indicator varies substantially between European countries. In four countries, the unit charges were lower than €1, while they were higher than €5 in another seven countries. Moreover, non-PSO TAC per train-km is, on average, 75% higher than that for PSO services. It should be noted that for some countries, railway undertakings (RUs) do not pay the whole amount of TAC that is collected by infrastructure managers, as public financing may intervene to reduce the TAC burden for RUs (see the Working Document for more detail).

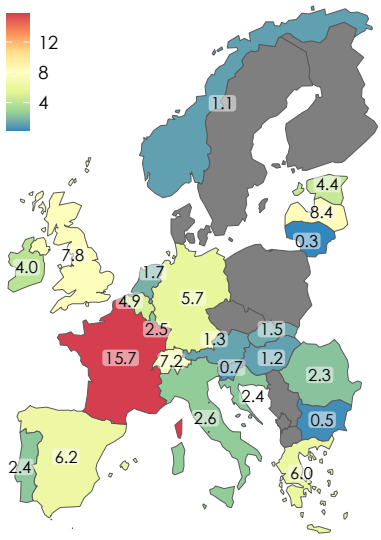
The average TAC per passenger train-km show constant growth over the last five years. This trend is also confirmed over a ten-year period. Meanwhile, TAC per freight train-km increased by 6% in 2024 after a slightly declining trend from 2020 to 2023.

Between 2020 and 2024, TAC for total traffic showed a compound annual growth rate (CAGR) of 3.2%.

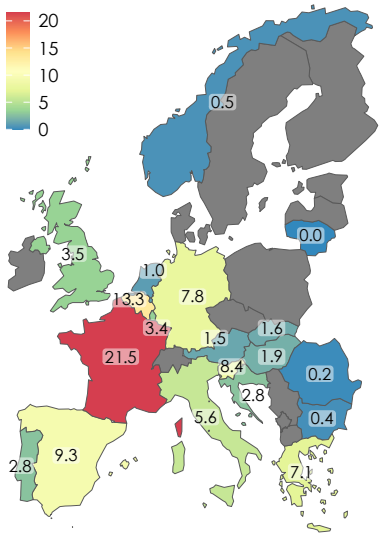
Figure 8 – Track access charges (in Euro per train-km) paid for the Minimum Access Package[10] to infrastructure managers from 2020 to 2024 (chart)[11] and 2024 level per country (maps)



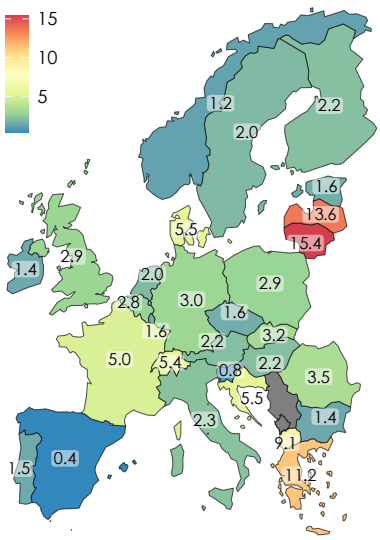
PSO TAC (Euro per train-km)



Non-PSO TAC (Euro per train-km)



Freight TAC (Euro per train-km)

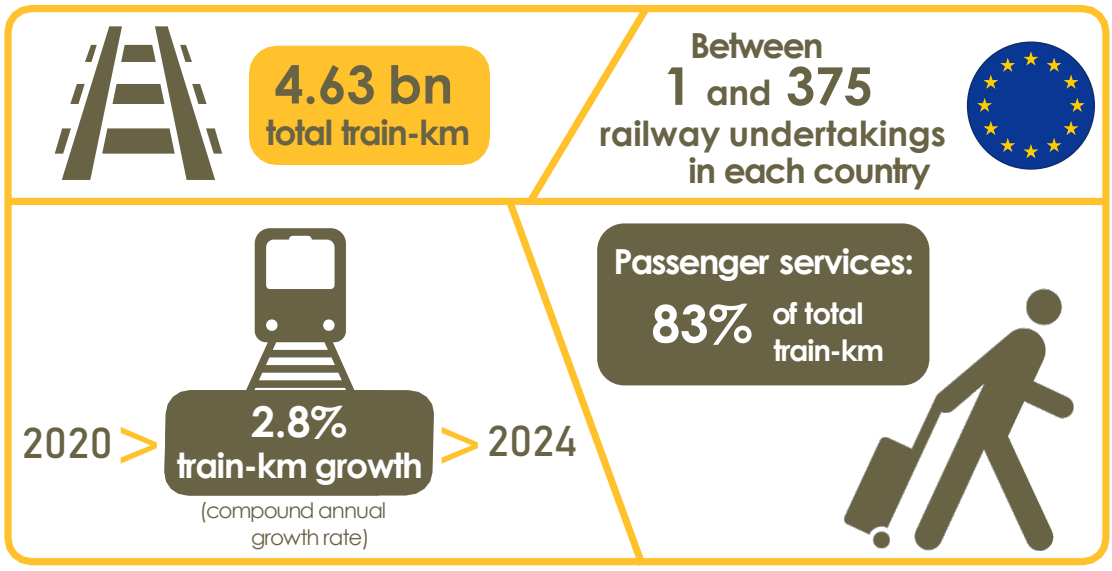


[9] 29 countries are included in this paragraph and its associated figures (Kosovo and Serbia are not included).
[10] Directive 2012/34/EU of the European Parliament and of the Council.
[11] 29 countries are included in this paragraph and its associated figures (Kosovo and Serbia are not included).

04

Market players and European rail traffic

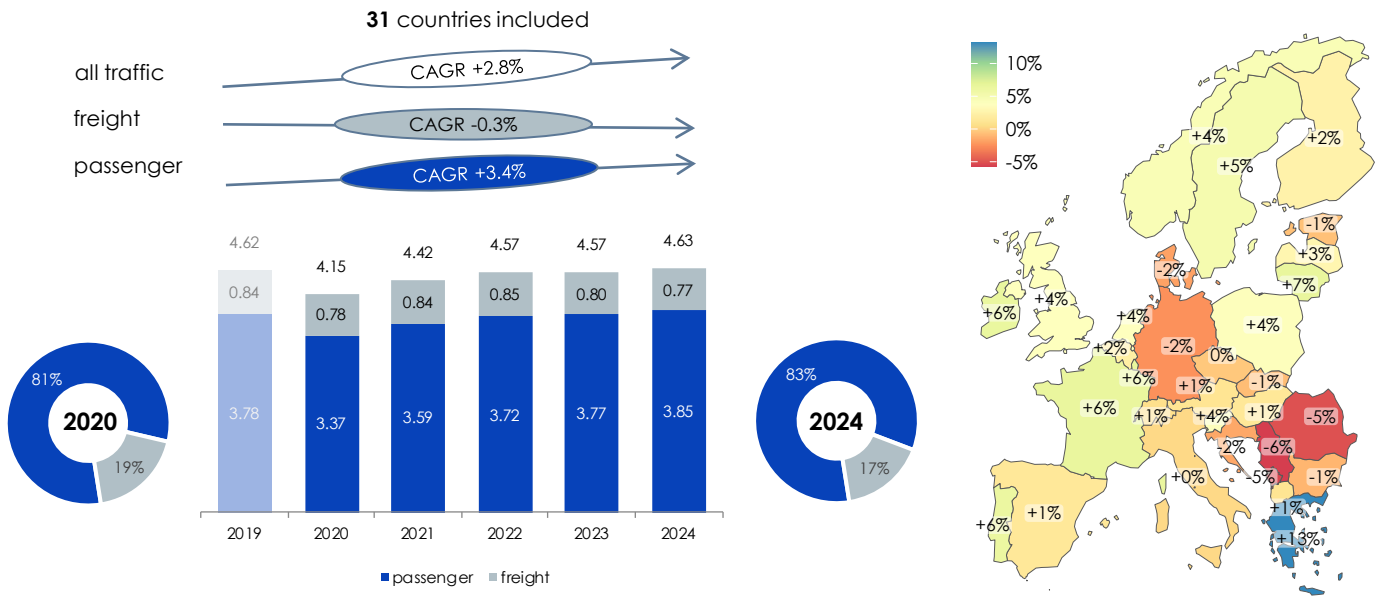
IN 2024



The sample used to calculate these figures is specified in the following pages.

Total rail traffic

Figure 9 – Rail traffic in billion train-km from 2020* to 2024 (left) and 2023/2024 individual change (right)



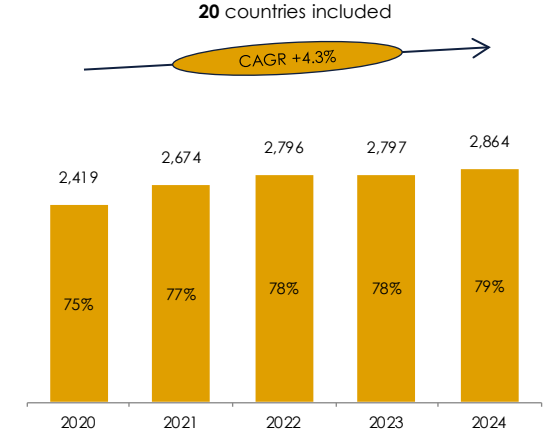
2019 values are plotted as references. CAGR are calculated over 2020-2024 period.

In 2024, a total of 4.63 billion train-km was reported by member countries, an increase of 1% compared to 2023. European rail traffic therefore outperformed pre-pandemic level of 2019 for the first time. The split of total traffic between passenger and freight services has shifted slightly towards passenger services.

Rail transport supply varies substantially between countries. There have been year-on-year increases of more than 5% in France, Greece, Ireland, Lithuania, Luxembourg and Portugal, while noticeable reductions (around –5%) have taken place in Romania and Serbia. Denmark, Germany and Kosovo reported minor declines as well. In comparison to 2019, the majority of countries (17) reported increases in total rail traffic, while 14 countries saw a fall in train-km.

Electrified traffic

Figure 10 – Electrified train-km (in millions) and share in total rail traffic (%) from 2020 to 2024[12]



Of the 20 countries that reported, almost four fifths (79%) of rail traffic is electrified. In 2024, electrified train-km totalled almost 2.9 billion, significantly higher than the 2020 level (+18%). This increase was stronger than the one in total rail traffic at the same time, providing evidence for the progress in electrification of traffic.

While some countries show shares of electrified train-km close to 100% (Luxembourg 98%, Sweden 97%, Italy 95%), some countries observe proportions close to 85% of train-km resulting from non-electric trains (Ireland, Lithuania).

Apart from a few exceptions, most electrified train-km are run in the passenger segment, which accounts for 82% of electrified train-km on average in Europe. Regarding each segment separately, the share of electrified traffic was higher in the freight segment (80%) than in the passenger counterpart (77%). This reflects the fact that passenger trains are relatively more present on non-electrified sections than freight ones.

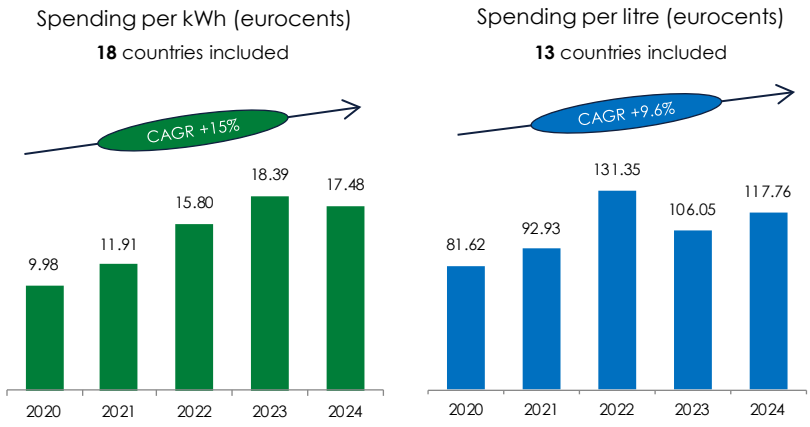
[12] 20 countries are included in this figure (Austria, Czech Republic, Denmark, Ireland, Luxembourg, Netherlands, North Macedonia, Norway, Slovakia, Slovenia and Switzerland are not included).

Railway undertakings' energy expenditure

Railway undertakings' spending on energy has in general significantly increased since 2020. However, spending developments have not been homogenous across energy types. On the one hand, spending on traction current went down in 2024, for the first time since 2020, reflecting a gradual slowdown in overall electricity prices after the surges in the years before. Most reporting countries saw electricity spending peak in 2023. However, Greece, Poland, Slovenia and Sweden still recorded (partially large) increases in spending per kWh in 2024.

On the other hand, after a 40% increase in 2022, spending on fuel decreased by 19% in 2023 amid a decline in oil prices and went up again in 2024. This results in an annual growth rate of almost 10% over the last five years.

Figure 11 – Railway undertakings' spending (in eurocents) per kWh and per litre of diesel from 2020 to 2024[13]



Railway undertakings

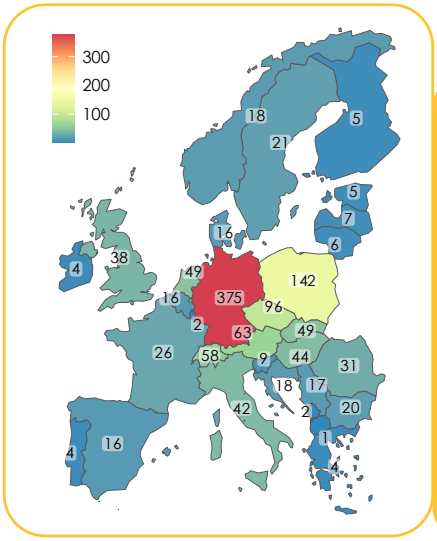


Figure 12 – Number of active railway undertakings by country in 2024

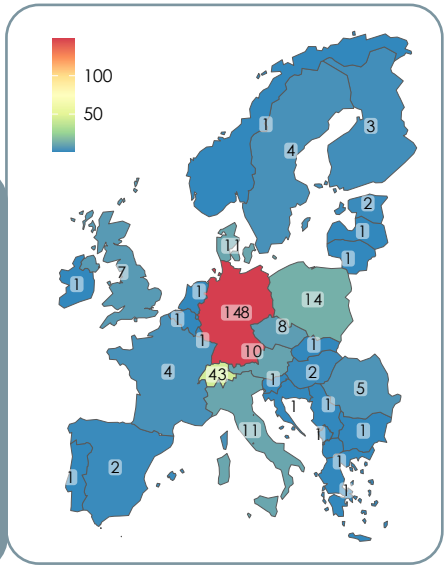
The number of active railway undertakings varies substantially across members, from only one in North Macedonia to 375 in Germany.

For most members (21), the number of active RUs operating freight services exceeds the number of RUs operating passenger services. This reflects the earlier opening of the freight market. Freight services were offered by 73% of all active RUs, while passenger services were only offered by one third of operators.

Passenger RUs can provide either PSO or non-PSO or both services. All countries indicated at least one active RU operating under a public service contract (PSO), among which eight members reported one RU operating both PSO and non-PSO services, and two members had one RU for each of the services. While three countries did not have any non-PSO operator, 16 countries had more than one operator in this segment. Compared to 2023, 11 countries have seen an increase in the number of active RUs while 15 countries did not experience a change.

Infrastructure managers

Figure 13 – Number of infrastructure managers by country in 2024



A total of 290 infrastructure managers (IMs) were reported by participating countries for 2024. Similar to the number of active RUs, the number of IMs varies across countries. Germany again shows the highest number (148) followed by Switzerland (43) and Poland (14). However, a majority of countries (16) reported only one IM operating the whole national network. While most main IMs are structurally separated from any transport operators, smaller and local IMs are part of a vertically integrated structure offering network and rail services simultaneously (see Working Document and 13th Report for more detail).

The number of IMs seems to reflect the historic developments, demographical circumstances and geographical features of a country. In some countries, network management is decentralised and entrusted to regional or local-based entities, resulting in a larger number of IMs than in countries with a centralised organisational scheme.

[13] 18 countries are included in the figure of spendings per kWh (Austria, Czech Republic, Denmark, Finland, Italy, Latvia, Luxembourg, North Macedonia, Netherlands, Norway, Serbia, Sweden and Switzerland are not included). 13 countries are included in the figure of expenditure per litre (all countries above plus Belgium, Bulgaria, Croatia, Greece, Kosovo*, Slovakia and UK). Italy and Sweden are not included in the first figure but included in the second one.

05

The rail freight market

IN 2024

774 m
freight train-km

431 bn
freight net tonne-km

Freight load factor:
557 net tonne-km per freight train-km

58%
total market share of competitors* in the freight market
(net tonne-km)

€26.73
RU's revenue per freight train-km

€cent 4.71
RU's revenue per net tonne-km

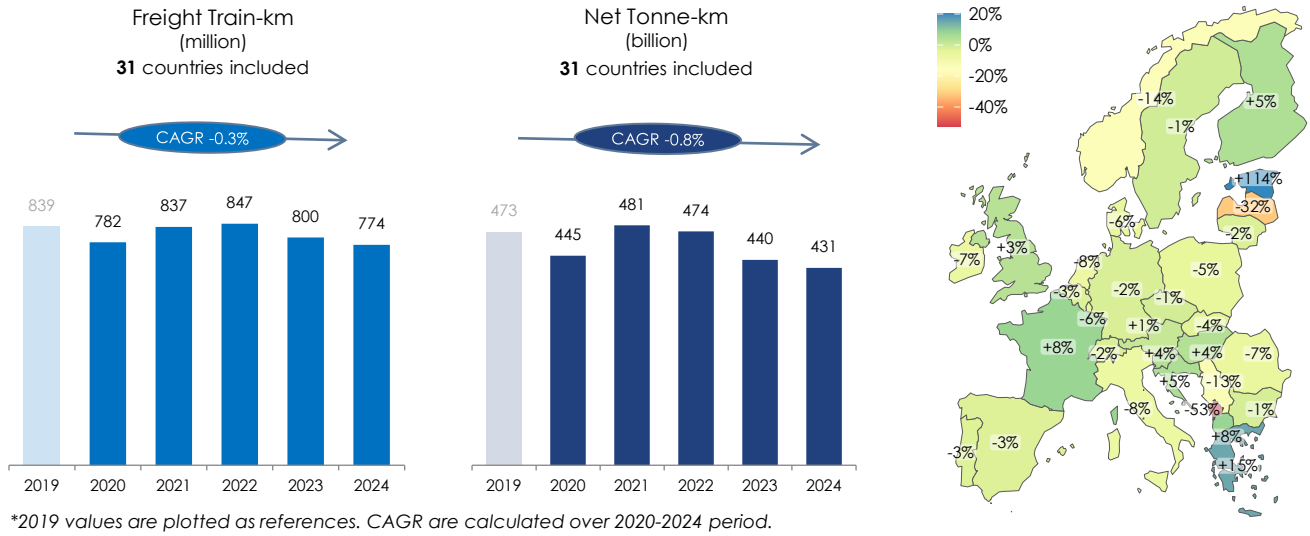
The sample used to calculate these figures is specified in the following pages.
* competitors in each country refer to all railway undertakings other than the domestic incumbent.

Size of the rail freight market

For reference, the modal split of rail freight transport in the EU countries was 16.6% of total inland freight net tonne-km in 2024, slightly decreasing compared to the previous year (source: Eurostat).[14]

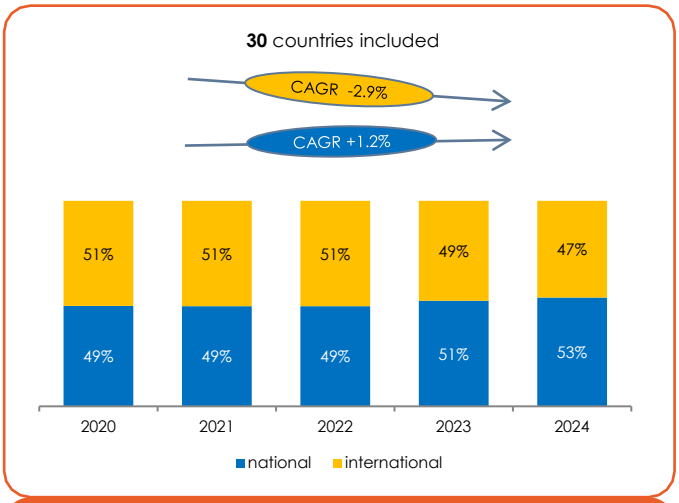
Rail freight traffic declined again in 2024, by 3% in train-km and 2% in net tonne-km. The decrease is moderate compared to that seen in 2023 (-7% in net tonne-km) but was enough to drag freight traffic down to its lowest level since 2016. Traffic decline in 2024 was observed in the majority of countries (21). Furthermore, in 8 out of 10 countries reporting a yearly increase in 2024, the 2024 level was still lower than the recent peak of 2021. This indicates a weak and partial recovery of the freight transport after the negative impacts of the price-level crisis and economic slowdown in 2022-2023.

Figure 14 – Total freight traffic from 2020* to 2024 (left) and 2023/2024 change in net tonne-km (right)



*2019 values are plotted as references. CAGR are calculated over 2020-2024 period.

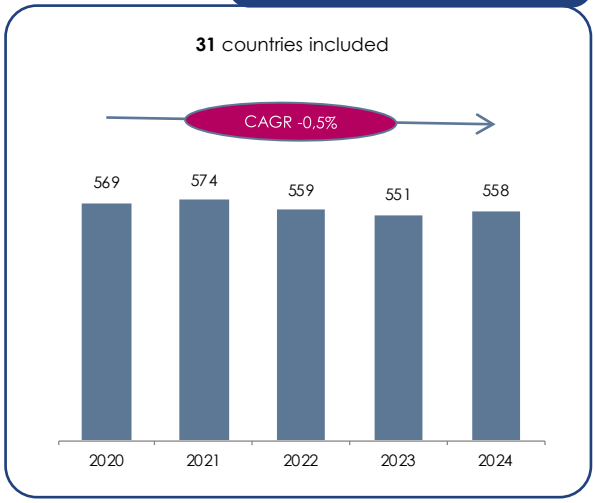
Figure 15 – Share of national and international freight traffic (based on net tonne-km) from 2020 to 2024[15]



International traffic saw its share fall again in 2024, now reaching only 47%, 2 percentage points lower than in 2023. Over the year, while national tonne-km increased slightly by 1%, international traffic dropped by 5%, driving the total tonne-km down by 2%. Compared to 2022, international traffic fell by 17%, while national traffic decreased by only 1%.

After a two-year reduction, a slight increase in the freight load factor can be observed. Freight load factor in 2024 increased by 1% compared with 2023 but still decreased by 2% compared with 2020. Over the last five years, 50% of the countries reported a decrease in this indicator.

Figure 16 – Freight load factor (net tonne-km per freight train-km)



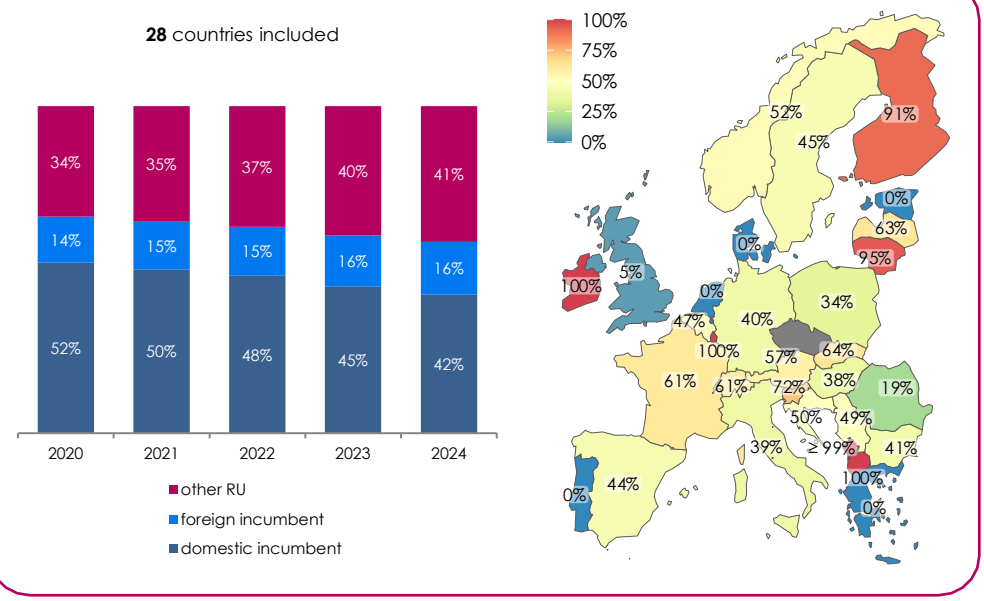
[14] Data on the modal split of freight transport in the European Union can be found on Eurostat website.
[15] 30 countries are included in this figure (Switzerland is missing).

Market share of freight railway undertakings

Figure 17 – Market share (based on net tonne-km) of freight railway undertakings (left)[16] and share of the domestic incumbent by country in 2024 (right)

As in previous years, competitors continued to gain market share from the domestic incumbents in 2024. The latter's share declined by almost 3 percentage points over the year to 42% in 2024. While the market share of foreign incumbents has remained stable at approximately 15%, that of other railway undertakings has been on an upward trend since 2017, now reaching 41% [17].

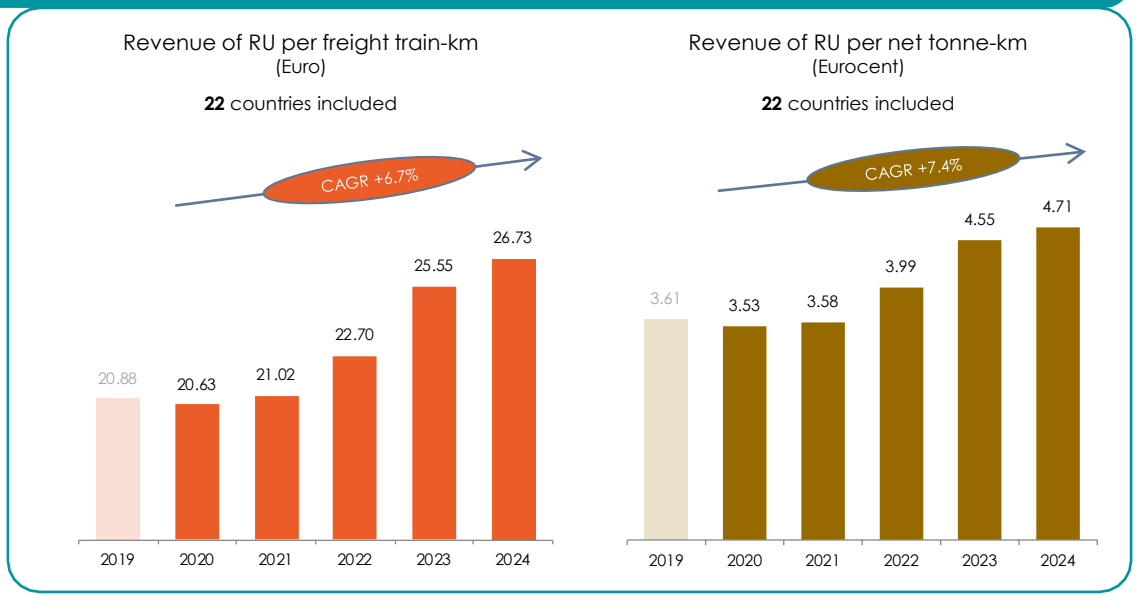
Five countries have no traffic operated by the domestic incumbent in 2024, while four others still have more than 99% or monopoly in the rail freight market. The latter countries have indeed the smallest rail freight markets among IRG-Rail members.



Economic performance of freight railway undertakings

Railway undertakings' revenue from freight services continued to increase in 2024 (+5% per train-km, +3% per tonne-km), extending the upward trend observed over the recent years. On average, freight revenue per train-km and per tonne-km rose by around 7% per year. Amid the contraction of traffic since 2023, operators have increased prices to compensate high inflation in costs (price levels have gone up by more than 20% over the 2020-2024 period). The increase in average revenue per train-km (+5%) was largely driven by the upturn in countries with high freight transport volumes, such as Austria (+36%), Germany (+24%) and Poland (+16%).

Figure 18 – Freight railway undertakings' revenue per train-km and per net tonne-km from 2020* to 2024[18]



*2019 values are plotted as references. CAGR are calculated over 2020-2024 period.

[16] 28 countries are included in this figure (Czech Republic, Estonia and Switzerland are not included). Incumbents include their subsidiaries, if any. The sum of the components may not exactly be equal to 100% due to rounding.

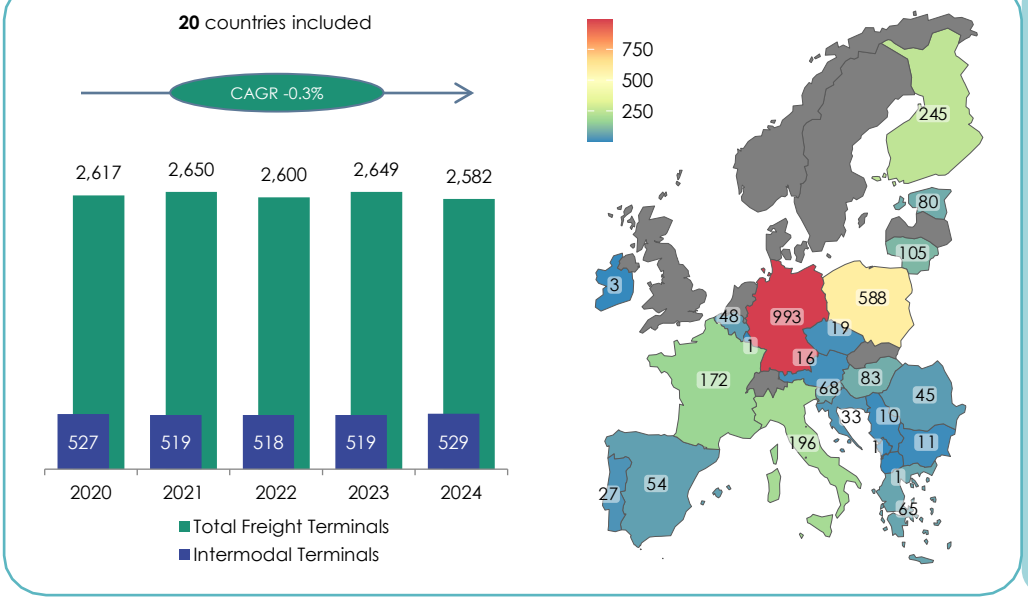
[17] Other railway undertakings consist of both privately owned and publicly owned companies without any link to the domestic and foreign incumbents (e.g. undertakings held by communities, counties or regions). A more detailed market split of other RUs into private and public ones for 2024 can be found in the Working document.

[18] 22 countries are included in this figure (Belgium, Czech Republic, Denmark, Kosovo, North Macedonia, Netherlands, Slovakia, Switzerland and United Kingdom are not included).

Additional indicators included in the Working Document:
- Intermodal freight traffic

Service facilities for freight transport

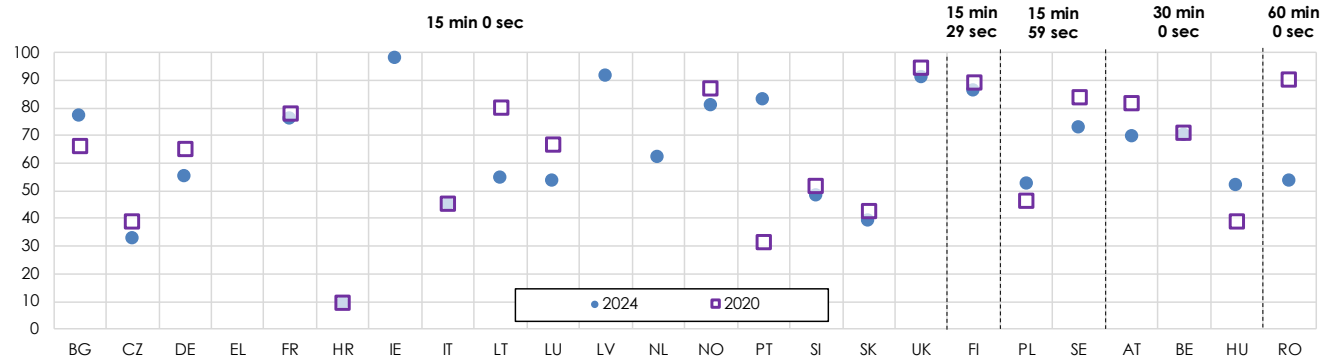
Figure 19 – Number of freight and intermodal terminals from 2020 to 2024 and number of freight terminals per country in 2024 (right)[19]



There were 20 countries that reported data for freight terminals, where goods can be loaded/unloaded. A slight downward trend can be observed in the total number of terminals. This is mainly influenced by the number in Germany, with nearly 1,000 terminals and a reduction of around 100 over the last five years. Another influencing factor is a recent change in the methodology of collecting data in Poland. The proportion of intermodal terminals, serving at least two means of freight transport (i.e. rail + road/ship), has remained stable at around 20% over the last five years.

Punctuality of freight trains

Figure 20 – Share of freight trains arriving on time at their last stop from 2020 to 2024 (in %)



Punctuality rates for freight trains ranged from 10% to almost 100%. This is much wider than the range observed for passenger services (see Chapter 6). It should be noted that comparisons should be made with caution, due to differences in the punctuality thresholds being used. In 2024, 8 countries reported an improvement in freight punctuality compared with 2023, while 14 countries reported a deterioration. Among countries applying the 15-minute-0-second threshold, the (simple) average punctuality rate[20] of freight trains has remained close to 58% from 2020 to 2024.

The main reasons cited were network congestion, unplanned diversions, maintenance works, technical problems of vehicles, priority given to passenger trains in case of traffic disruptions, and staff shortages.

[19] 20 countries are included in this figure (Denmark, France, Greece, Latvia, Netherlands, Norway, Slovakia, Sweden, Switzerland and United Kingdom are not included).

[20] Due to the lack of data on the number of freight train rides, a weighted average punctuality rate could not be computed.

06

The rail passenger market

IN 2024

3.9 bn
passenger train-km

551 bn
passenger-km

25%
total market share of competitors* in the passenger market

€25.19
RU's revenue per passenger train-km

€cent 16.78
RU's revenue per passenger-km

The sample used to calculate these figures is specified in the following pages.

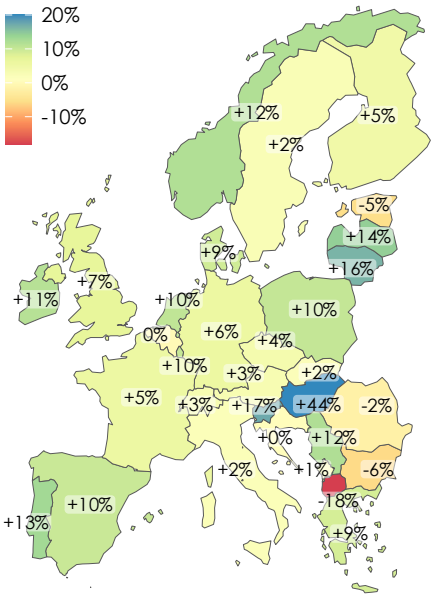
* Competitors in each country refer to all railway undertakings other than the domestic incumbent.

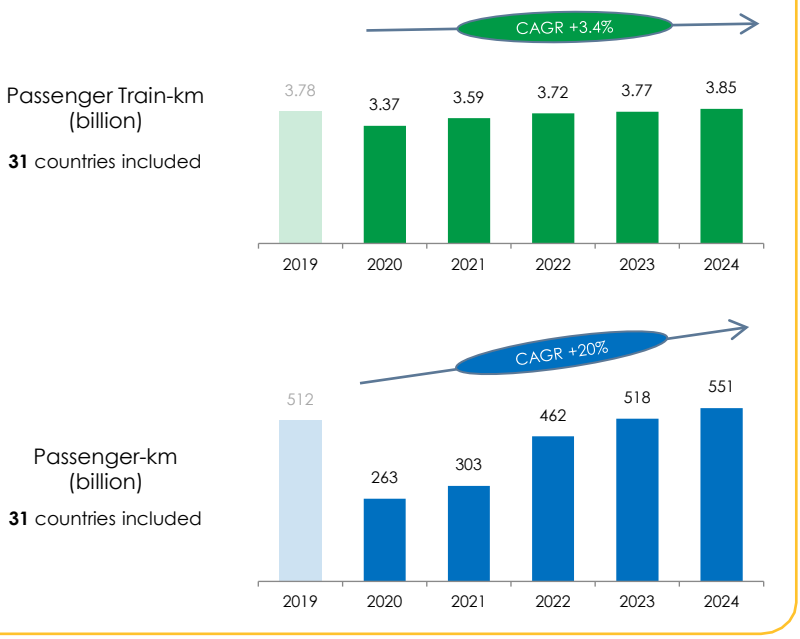
Size of the passenger market

For reference, the modal share of rail passenger services in the European Union in 2023 represented 8.4% of the total inland transport by passenger-km, meaning an increase of 0.5 percentage points compared with 2022, and was the largest since 2014.[21]

In 2024, 31 countries reported 3.9 billion train-km run by passenger trains, slightly higher than both 2023 and 2019 values (+2% both). Compared with 2023, 22 countries reported an increase in train-km in 2024.
On the demand side, 551 billion passenger-km were recorded for 2024, increasing by 7% compared with 2023. This reflects strong growth in demand for rail passenger transport which exceeded the pre-pandemic level (+8%). The highest growth was recorded in Hungary (44%) due to the introduction of new but already popular regional passes, as well as changes in calculation method. Almost all countries reported a year-on-year increase, except for Estonia, Bulgaria and North Macedonia (see the Working Document for more detail).

Figure 21 – 2024/2023 change in passenger-km (left) and total passenger traffic from 2020* to 2024 (right)



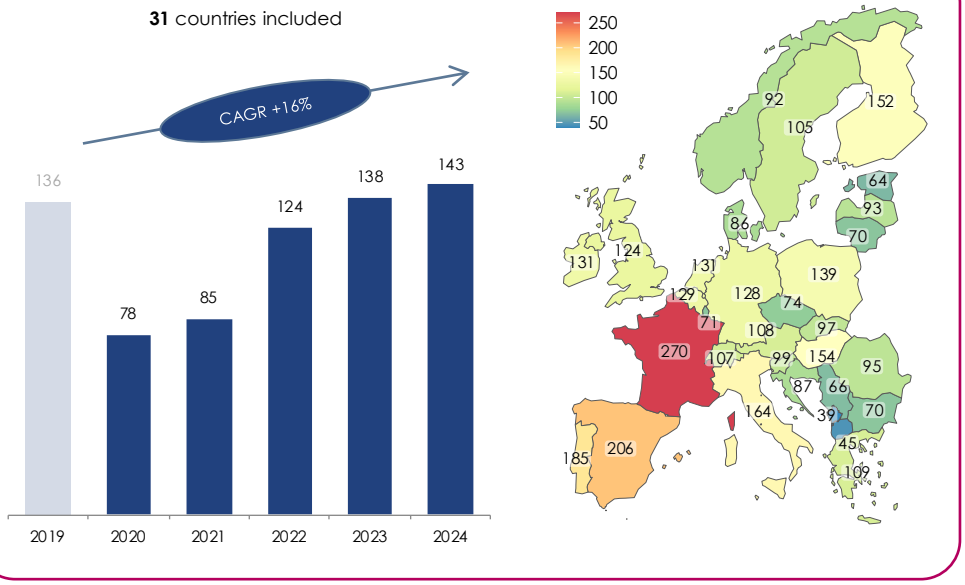


*2019 values are plotted as references. CAGR are calculated over 2020-2024 period.

Figure 22 – Passenger load factor (passenger-km per passenger train-km) from 2020* to 2024 (left) and 2024 level by country (right)

In 2024, there was an average of 143 passenger-km per train-km. This is up by 4% compared with 2023, due to the larger increase in passenger transport demand than that in transport supply. The load factor in 2024 was also higher than its 2019 value by 5%.

France had the highest average passengers per train, at 270, which can be attributed to the greater capacity of its trains, in turn motivated by high TAC level per train-km in France. Moreover, high-speed trains, the capacity of which is particularly high (552), account for a large share of traffic in the French passenger market.

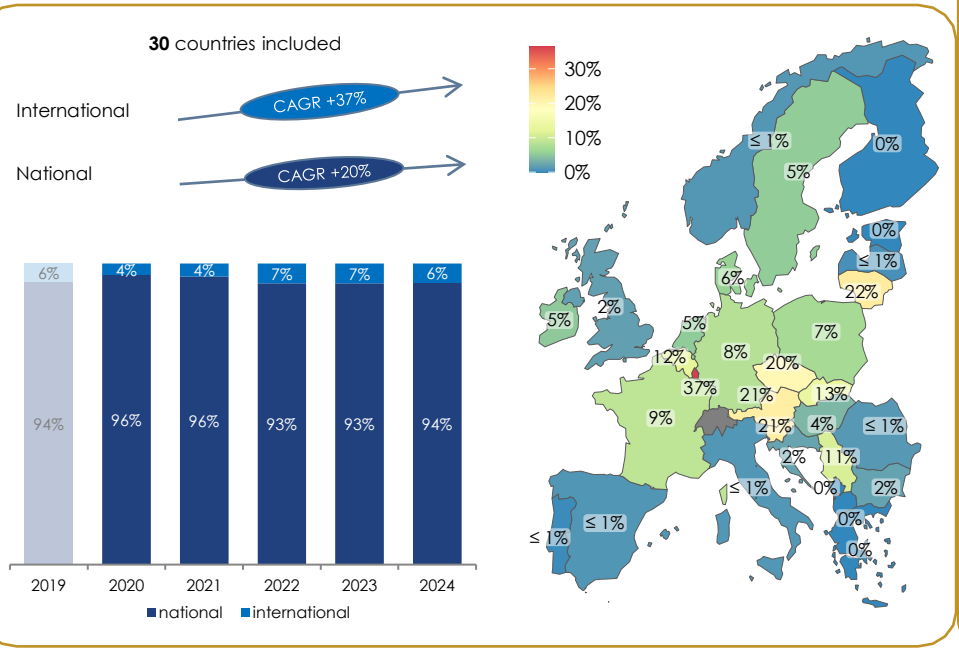


*2019 value is plotted as reference. CAGR is calculated over 2020-2024 period.

[21] Data on the modal split of passenger transport in the European Union can be found on Eurostat website.

Components of the rail passenger market

Figure 23 – Share of national and international passenger traffic (based on passenger-km) from 2020* to 2024 (left)[22] and share of international traffic per country in 2024 (right)



*2019 values are plotted as references. CAGR are calculated over 2020-2024 period.

In 2024, there were increases in both national and international passenger traffic (in passenger-km) compared to 2023 (+4% and +7% respectively). Compared to 2019, both segments recorded growth in passenger-km, with a stronger dynamic observed for international traffic (+13% vs. +7% for national part). However, the share of international traffic in the passenger market has remained low at only 6%, far below the 47% observed on the freight market.

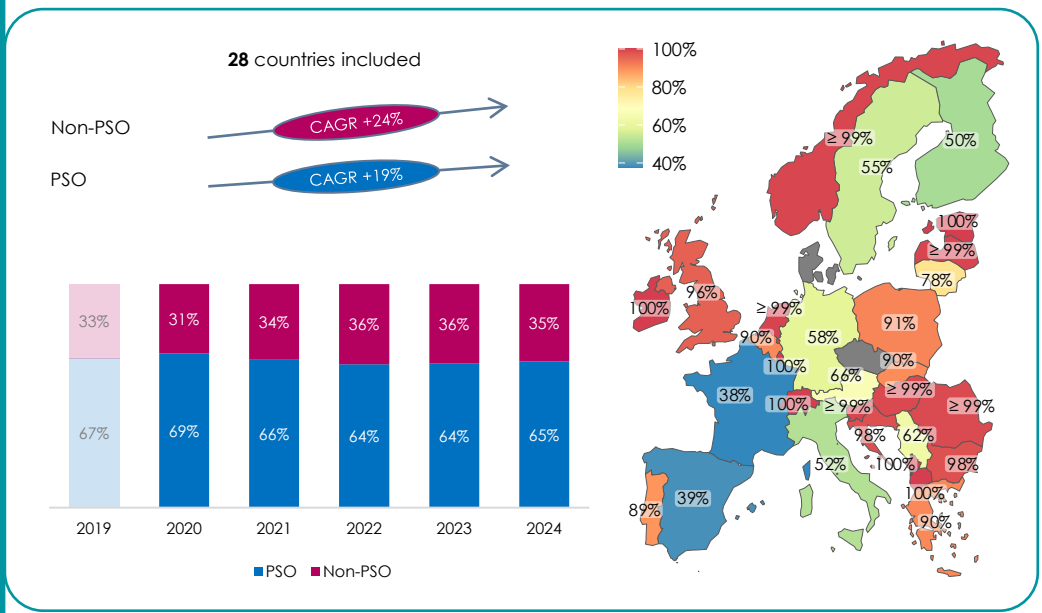
For many countries, international services represent less than 10% of the total passenger market, with the likes of Estonia, Finland, Greece, Kosovo* and Macedonia reporting national traffic of 100%. Higher shares of international traffic can be found in Luxembourg and other countries in central position having borders with many neighbours, such as Slovenia and Austria.

In 2024, there were increases in both PSO and non-PSO passenger-km compared to 2023. The growth of PSO traffic (+8%) is larger than that of non-PSO traffic (+4%), resulting in an increase in the share of PSO passenger-km. This is true for most countries that have a lower-than-average PSO share, such as France, Finland, Germany, Italy (exception for Spain where non-PSO traffic has grown steadily since the opening of its market).

In 2024, around 40% of PSO traffic was under contracts awarded via competitive tenders, largely contributed by Germany and the UK (see the Working Document for more detail).

Compared to 2019, non-PSO traffic has gained 2 percentage points of market share, although most passenger rail transport is still operated by PSO services.

Figure 24 – Share of PSO and non-PSO traffic (based on passenger-km) from 2020* to 2024 (left)[23] and share of PSO traffic per country in 2024 (right)



*2019 values are plotted as references. CAGR are calculated over 2020-2024 period.

Additional indicators included in the Working Document:
- PSO traffic awarded by competitive tenders

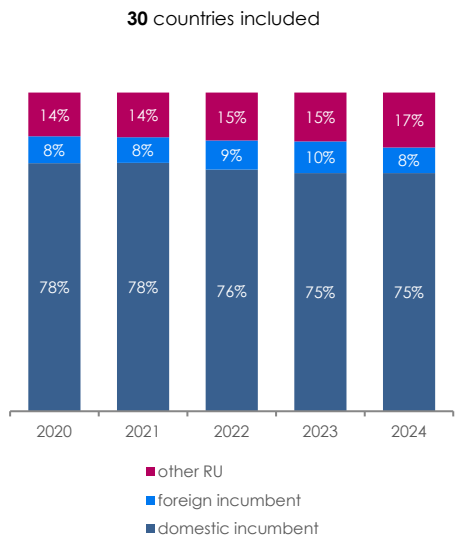
[22] 30 countries are included in this figure. Switzerland is not included.
[23] 28 countries are included in this figure. Czech Republic, Denmark and Luxembourg not included.

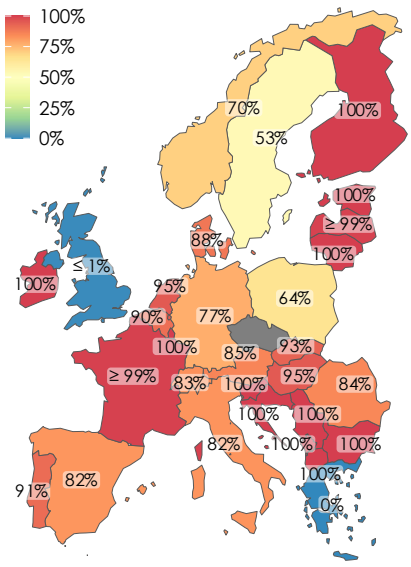
Market share of passenger railway undertakings

In contrast to freight transport, the passenger market is still largely dominated by domestic incumbents. Over the 5-year period to 2024, domestic incumbents' share in the passenger market has remained mostly stable. In absolute passenger-km values, the traffic of domestic incumbents and competitors in 2024 increased compared to 2023 by a similar amount (+6%). This resulted in the same market split as in 2023.

Eleven countries reported still having a *de facto* monopoly, with (almost) all passenger traffic being operated by domestic incumbents and their subsidiaries. In Spain (+18%), Norway (+6%) and Austria (+5%), competitors increased their market share in 2024 compared to 2020, but in Poland (-10%), Belgium (-5%) and Portugal (-5%) this share decreased.

Figure 25 – Market share (based on passenger-km) of passenger railway undertakings (left)[24] and share of domestic incumbent per country in 2024 (right)





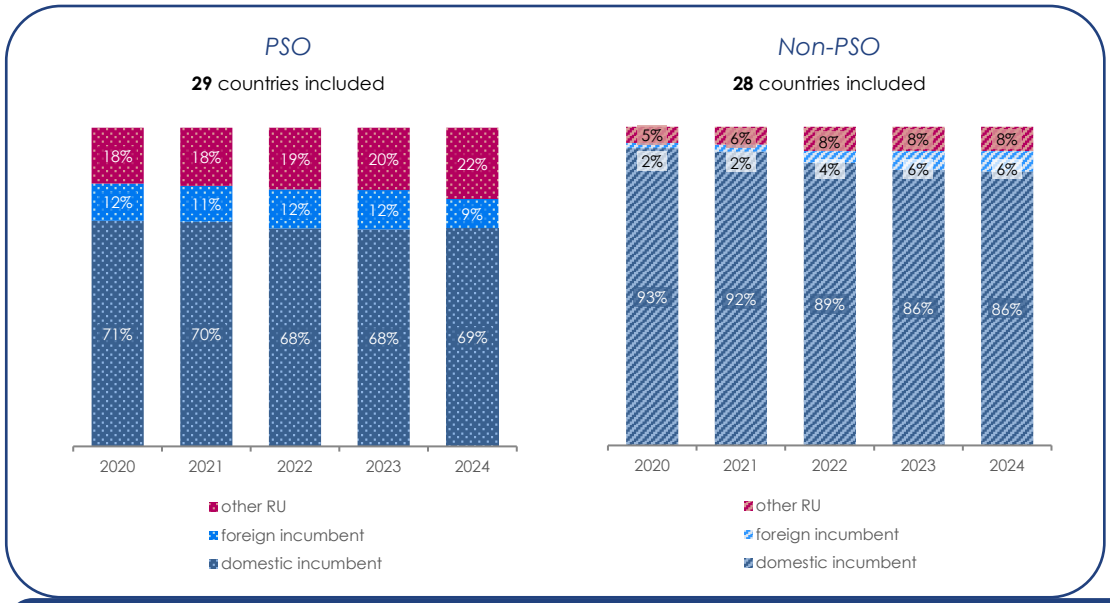


Figure 26 – Market shares (based on passenger-km) of passenger railway undertakings respectively on PSO and non-PSO markets[25]

Like the overall passenger market, the PSO market has also been dominated by domestic incumbents, but to a lesser extent. Indeed, the domestic incumbents' share reached 69% in 2024, while that of competitors was 31%. This may suggest that PSO contracts play a significant role in enabling new entrants to access the passenger rail market. In line with the overall market, the PSO market split in 2024 was mostly stable compared with 2020. Fourteen countries still have a monopoly or a share of domestic incumbent in PSO passenger-km over 99% in 2024. Sweden stands out as the only country which still has its incumbent railway undertaking but whose share is lower than 50%.

Meanwhile, the non-PSO market has seen only around 14% of its traffic operated by competitor railway undertakings. In 2024, 6% of non-PSO passenger-km was transported by foreign incumbents and 8% by other RUs. Only in Belgium that the market share of competitors (foreign incumbents) in non-PSO market was 100%.

[24] Incumbents include their subsidiaries, if any. 30 countries are included in this figure (Czech Republic are not included).
[25] 29 countries are included in PSO figure and 28 countries in non-PSO figure (Czech Republic, Denmark and Slovakia are missing in both figures, Hungary and Luxembourg are not included in non-PSO figure only).

Additional indicators included in the Working Document:
- Passenger train stations

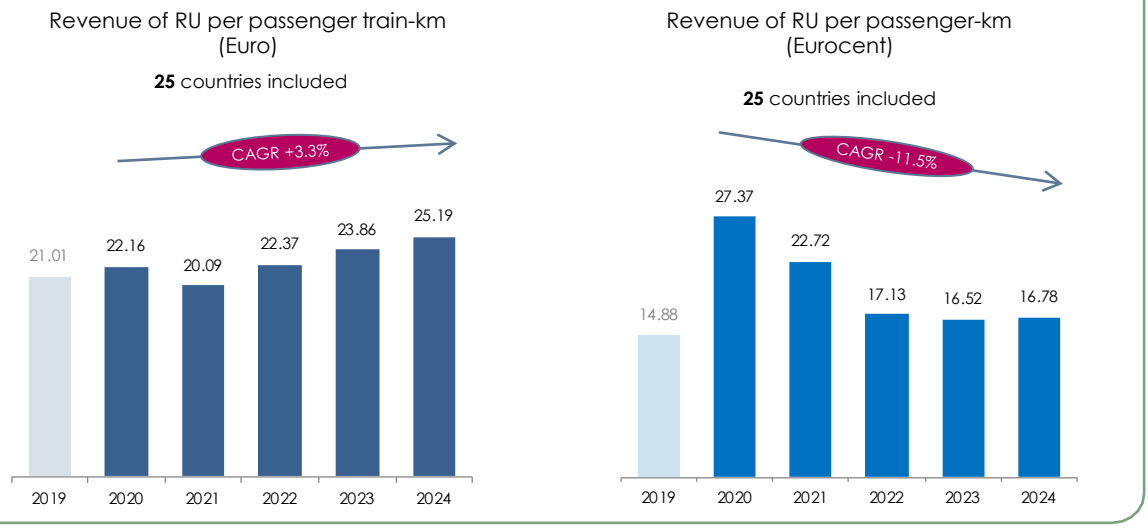
Economic performance of passenger railway undertakings

In 2024, the average revenue of passenger railway undertakings was €25.19 per train-km (up 6% from 2023) and 16.78 Eurocent per passenger-km (up 2 % from 2023). The increase in revenue per train-km was mostly driven by higher revenue from PSO services. In contrast, on the demand side, the increase in revenue from non-PSO services contributed more to the rise in overall revenue per passenger-km.

More than 60% of passenger RU's revenue were generated by ticket prices on average in 2024, and almost 40% comes from PSO compensations. This revenue split is almost the same as that in 2023, but the share of PSO compensations was still higher in 2024 compared to 2019 of about 5 percentage points.

Compared to 2019, revenue has risen by 20% per train-km and 13% per passenger-km, a development driven both by the expanding demand for passenger transport and high inflation.

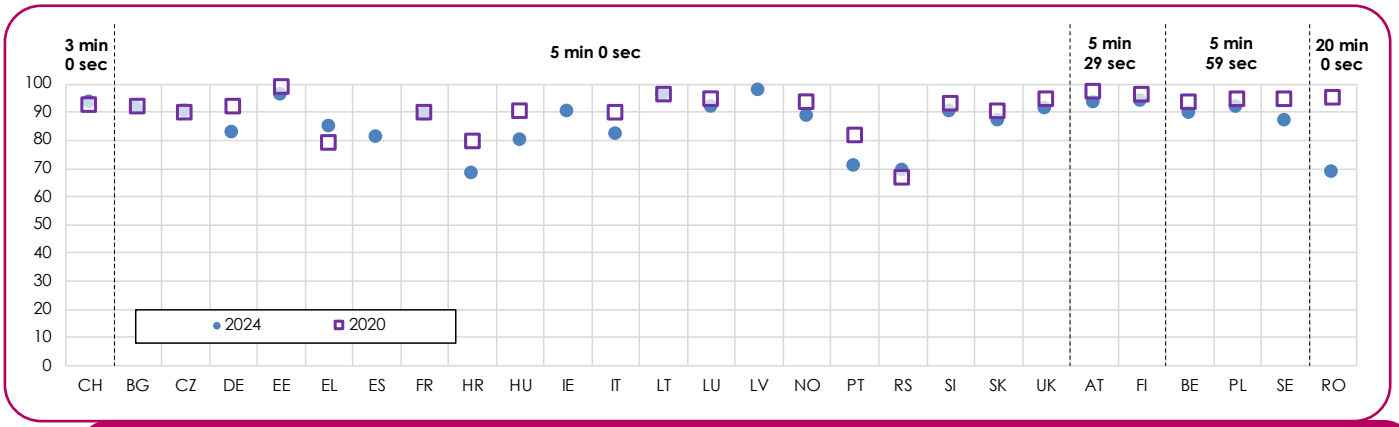
Figure 27 – Passenger railway undertakings' revenue (from fares and compensations) per train-km and per passenger-km from 2020* to 2024[26]



**2019 values are plotted as references. CAGR are calculated over 2020-2024 period.*

Punctuality of passenger trains

Figure 28 – Share of passenger trains arriving on time at their last stop from 2020 to 2024 (in %)



Various punctuality thresholds are used across countries, but it can be observed that punctuality of passenger trains is more homogenous across countries, and in general better, than that of freight trains.

Of the 24 countries for which both 2020 and 2024 figures were reported, 17 saw their passenger train punctuality fall in 2024, with 2 improving. Among countries applying the 5-minute-0-second threshold, the (simple) average punctuality rate[27] of passenger trains decreased by 4 percentage points from 2020 to 2024.

From 2020 to 2024, one of the greatest decreases in passenger trains punctuality was in Romania. The situation has been caused mainly by significant modernisation and maintenance carried out on the infrastructure, entailing speed restrictions.

[26] 27 countries are included in this figure (Denmark, North Macedonia, and Switzerland are not included).
[27] Due to the lack of data on the number of passenger train rides, a weighted average punctuality rate could not be computed.