

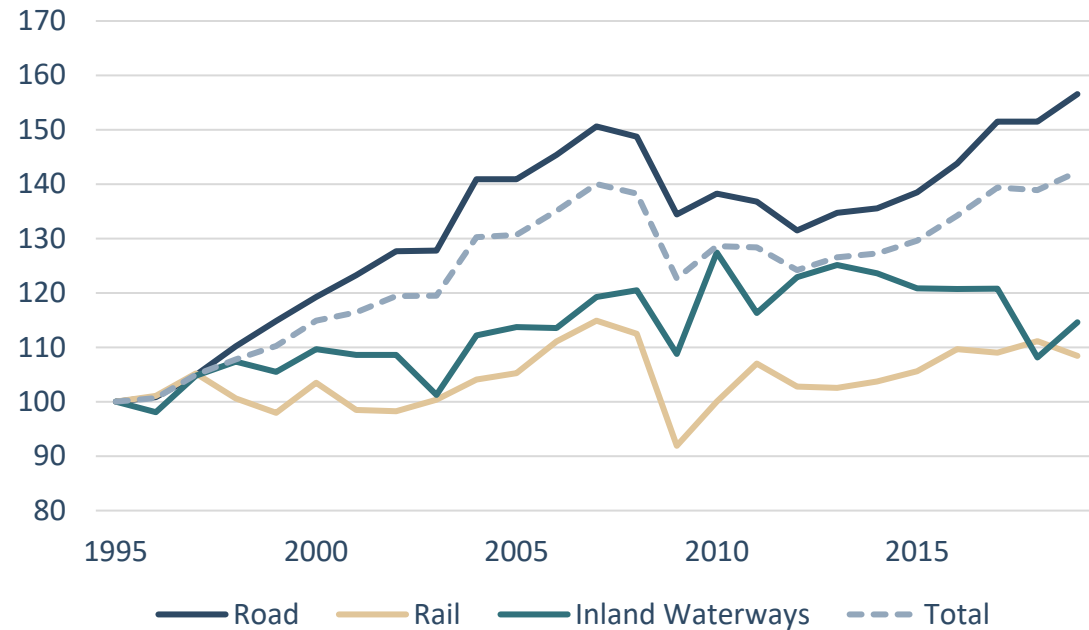
Compendium 5.2

Section Commercial Vehicles

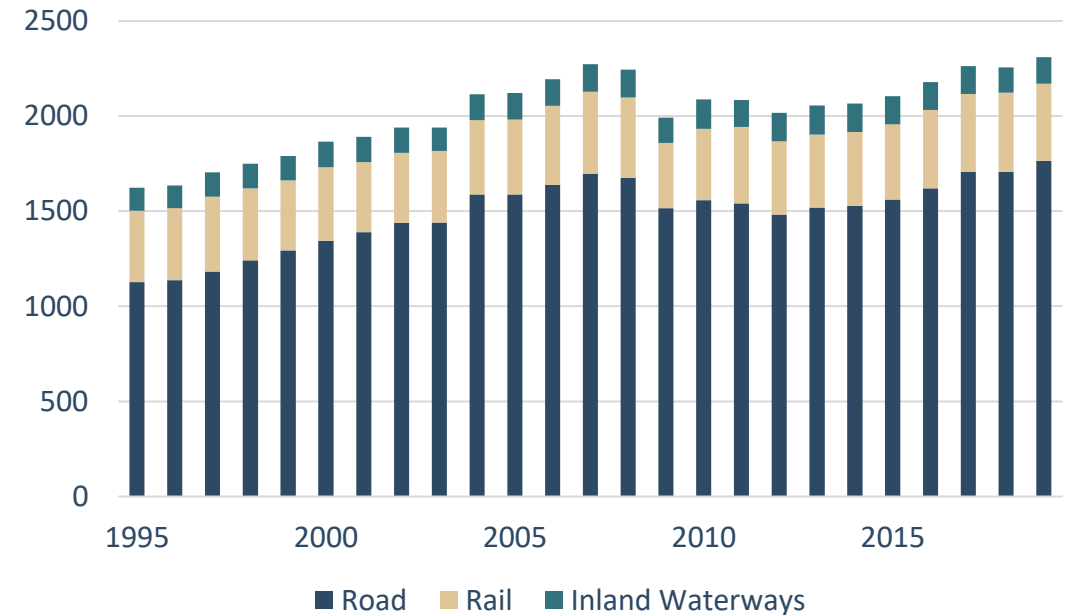


The truck makes the European internal market possible

Land based transport in the EU27 – 1995 =100



Land based transport in the EU27 – in billion tkm



- ▶ The merging of the EU triggered an enormous growth in freight transport .
- ▶ The creation of the internal market fueled growth on road and rail.
- ▶ More than 70 percent of European freight transport services are provided by trucks.
- ▶ Drastic impact of the financial crisis in 2008/2009. Only in 2018 the transport performance of the year 2007 was reached again.

Quelle: Eurostat, Transport in Figures 2021

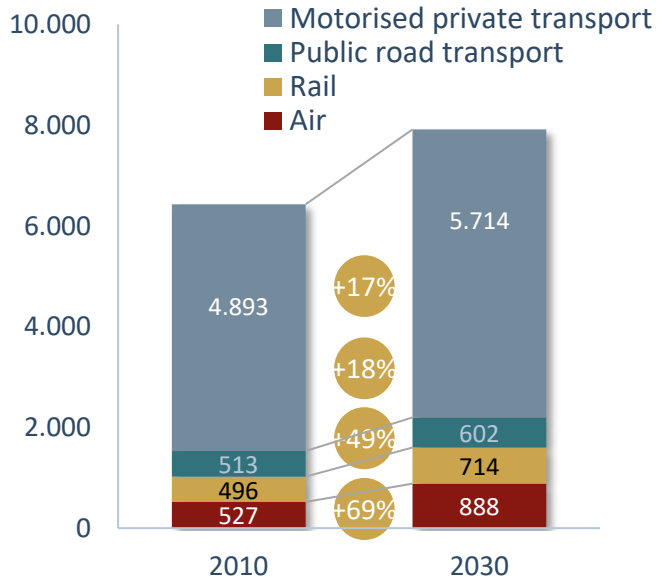
Traffic forecasts for the EU by year 2030

Road traffic will continue to dominate

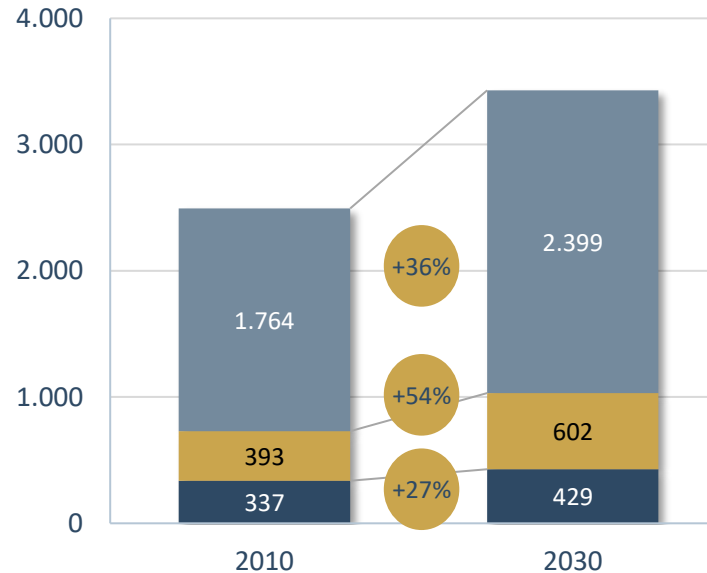
Traffic capacity in billions of passenger kilometres/tonne-kilometres



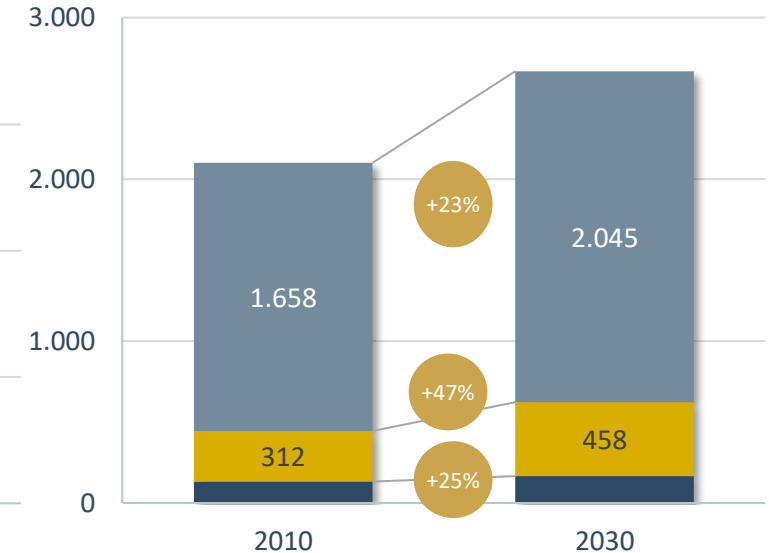
Official passenger traffic forecast



Official freight traffic forecast



Prognos freight traffic forecast EU



■ Waterway ■ Rail ■ Road

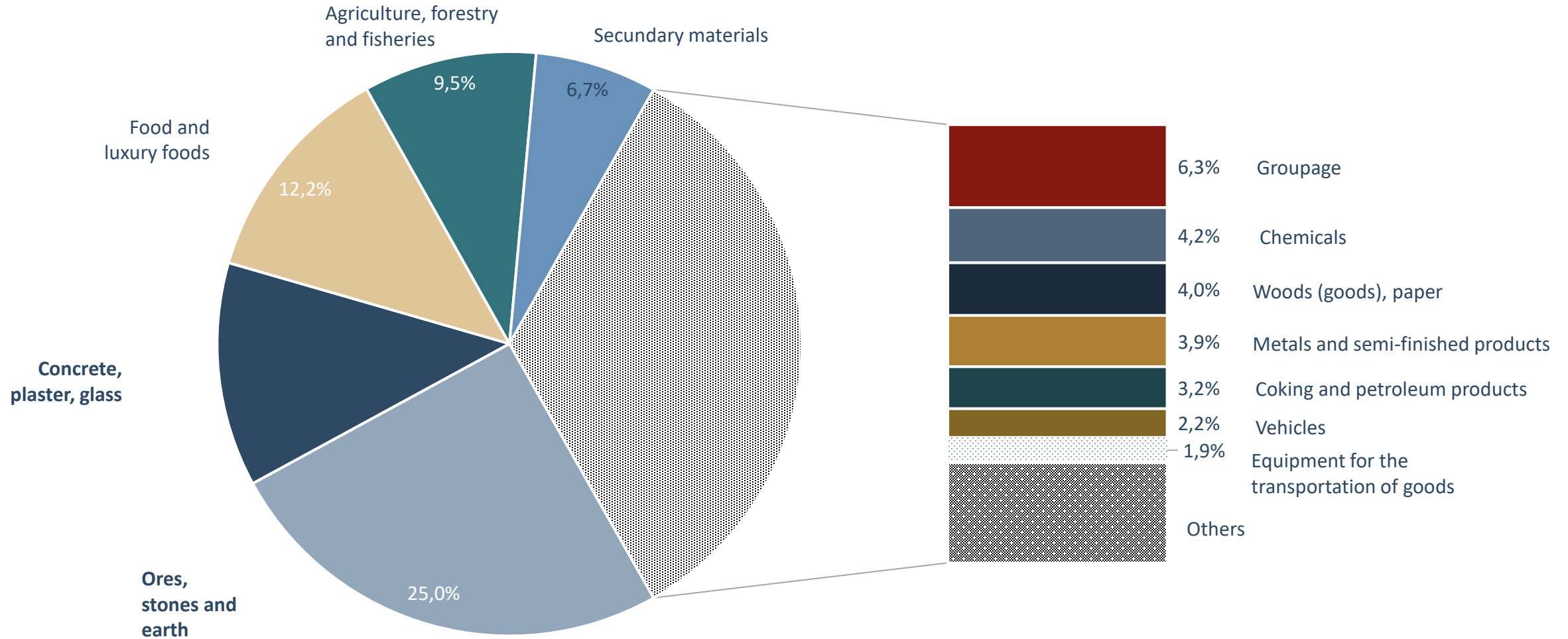


- ▶ There are indications that the 2013 forecast for the EU 27 is outdated. In the period from 2010 to 2015, it assumes growing transport services and clearly overestimates the real development.
- ▶ The Prognos Report does not cover the entire EU, but only 12 countries. This represents about 92 percent of road freight traffic. With the rail and waterway, the coverage is worse.

Sources: EU, Trends to 2050, 2013; Prograns, 2016; ; BMVI, Verflechtungsprognose 2030, 2014

Road traffic by freight group in 2019*

As many percent of the tonnes transported by commercial vehicle...



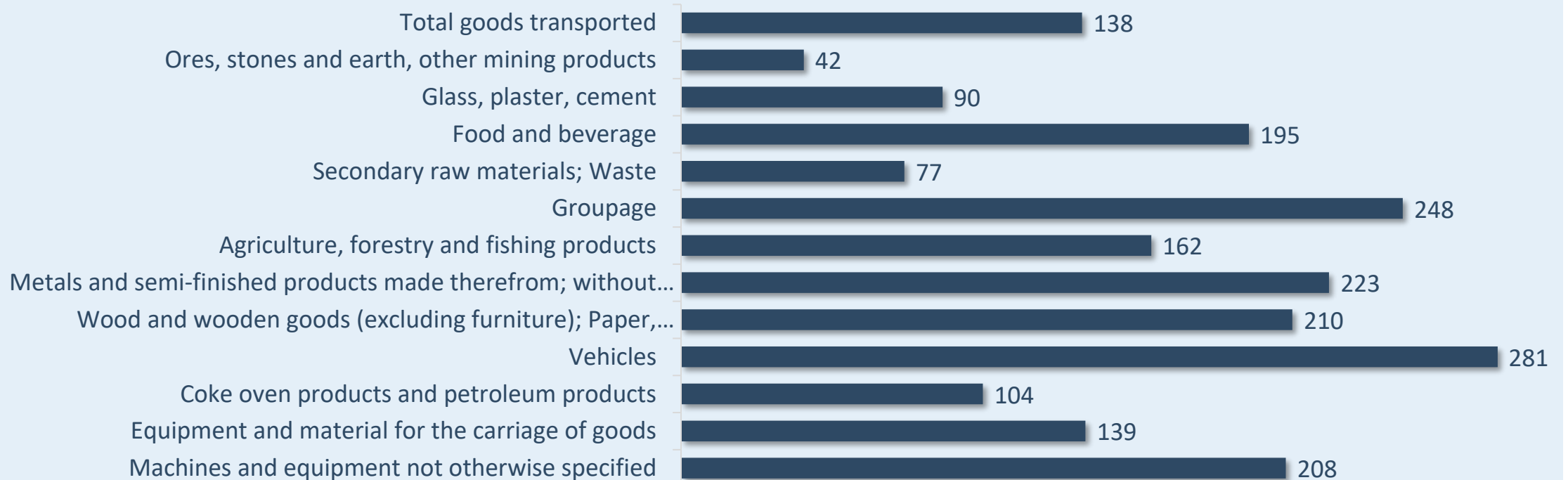
* Without products from the chemical industry (no information for reasons of confidentiality)
Source: Eurostat, 2021

Truck traffic in Europe – the short distance dominates

TRANSPORT DISTANCE

One ton of freight doesn't travel far in the EU28 by truck

Average transport distance* in kilometres for all goods groups with a share of more than one percent of traffic – as of 2019

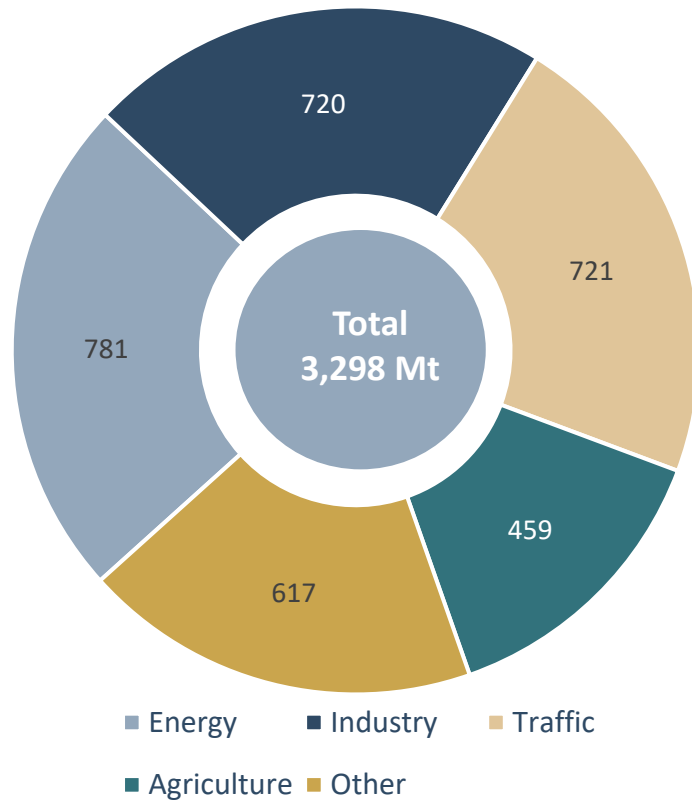


*Total calculated without products of the chemical industry
Source: Eurostat, 2021; own calculations

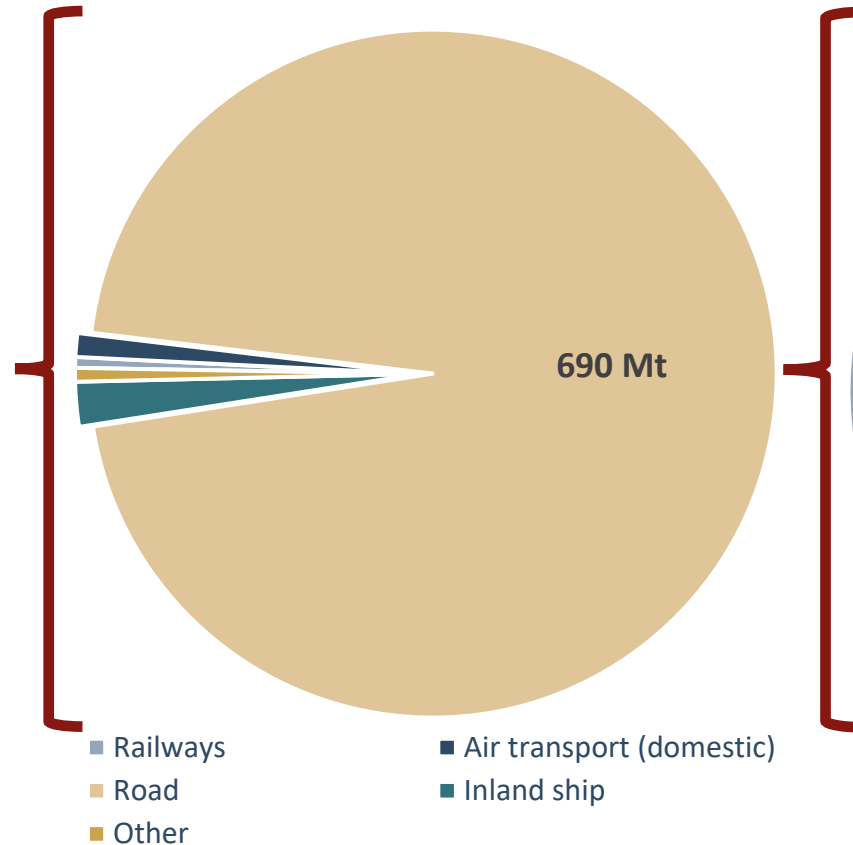
Road traffic plays a central role in Europe

Figures for the EU27 in 2020 in megatons CO_{2eq}

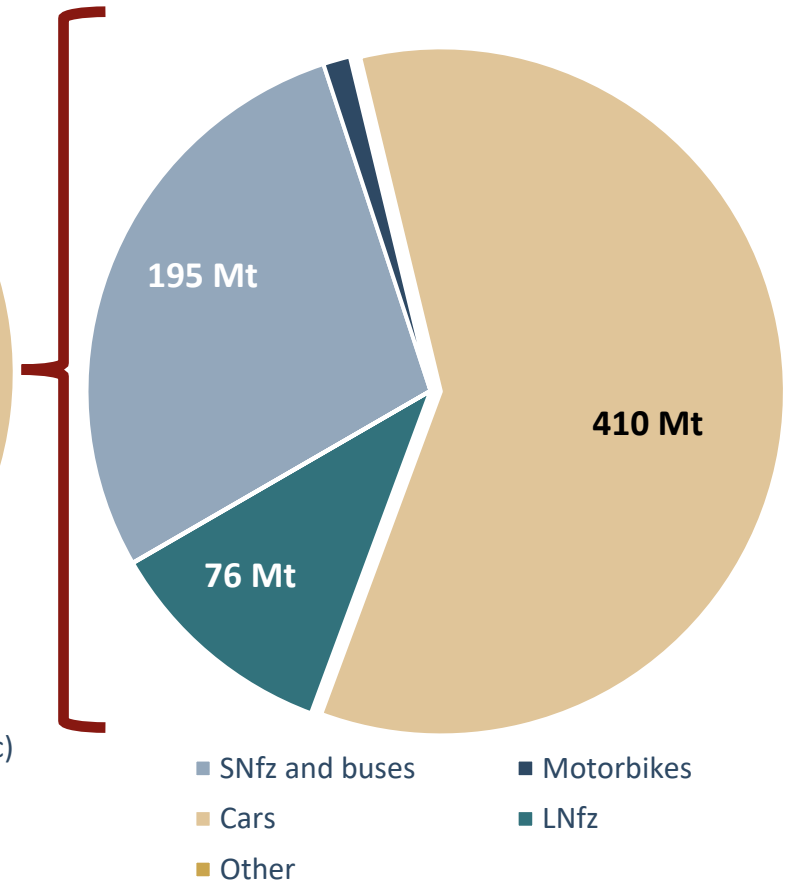
Total greenhouse gas emissions¹⁾



Emissions from transport²⁾



Emissions from road traffic



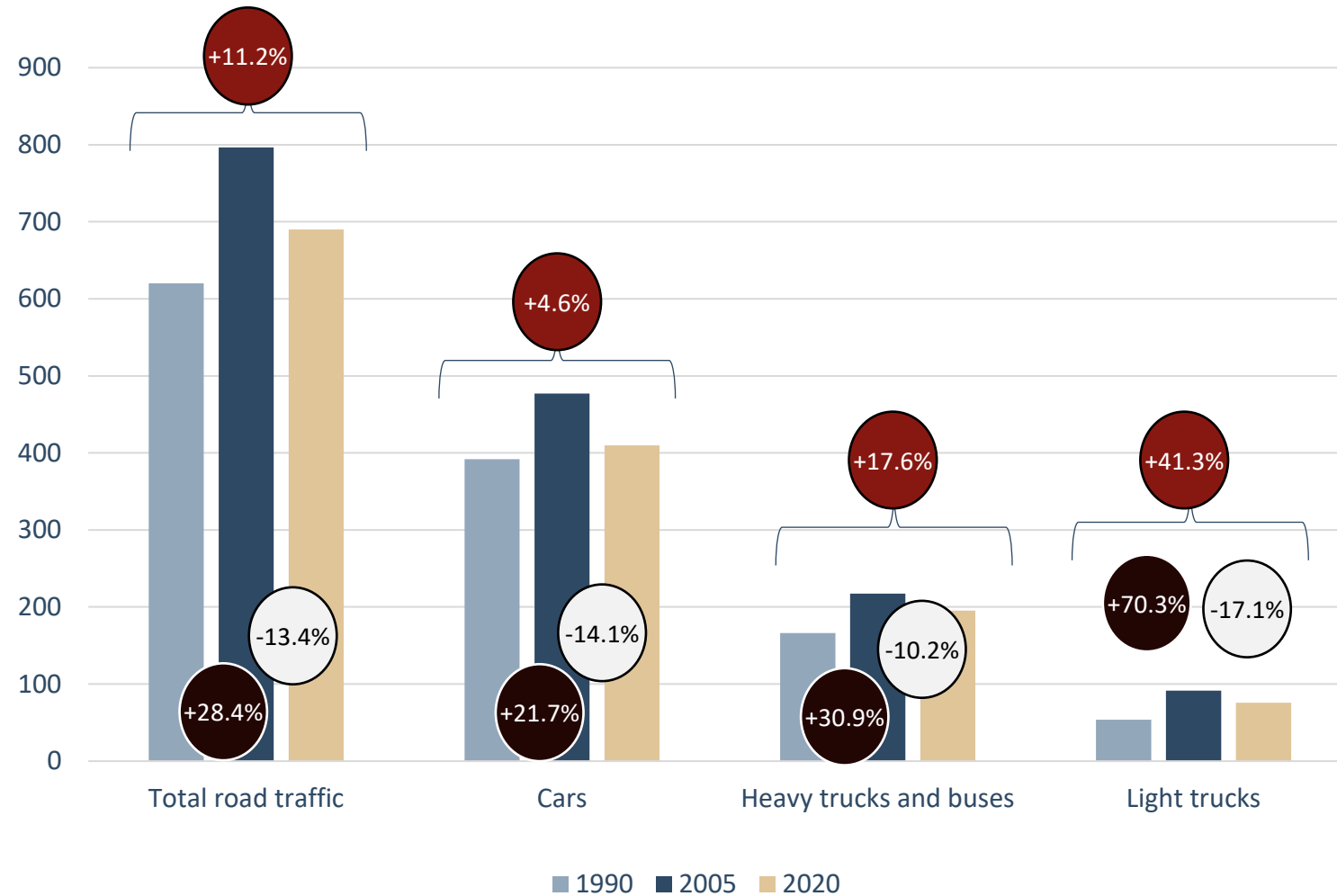
¹⁾ With sinks

²⁾ Excluding international air and sea transport

Source: EEA, 2022 (V25)

EU road traffic: Emissions growth especially in the 90s

In million tons CO₂EQ

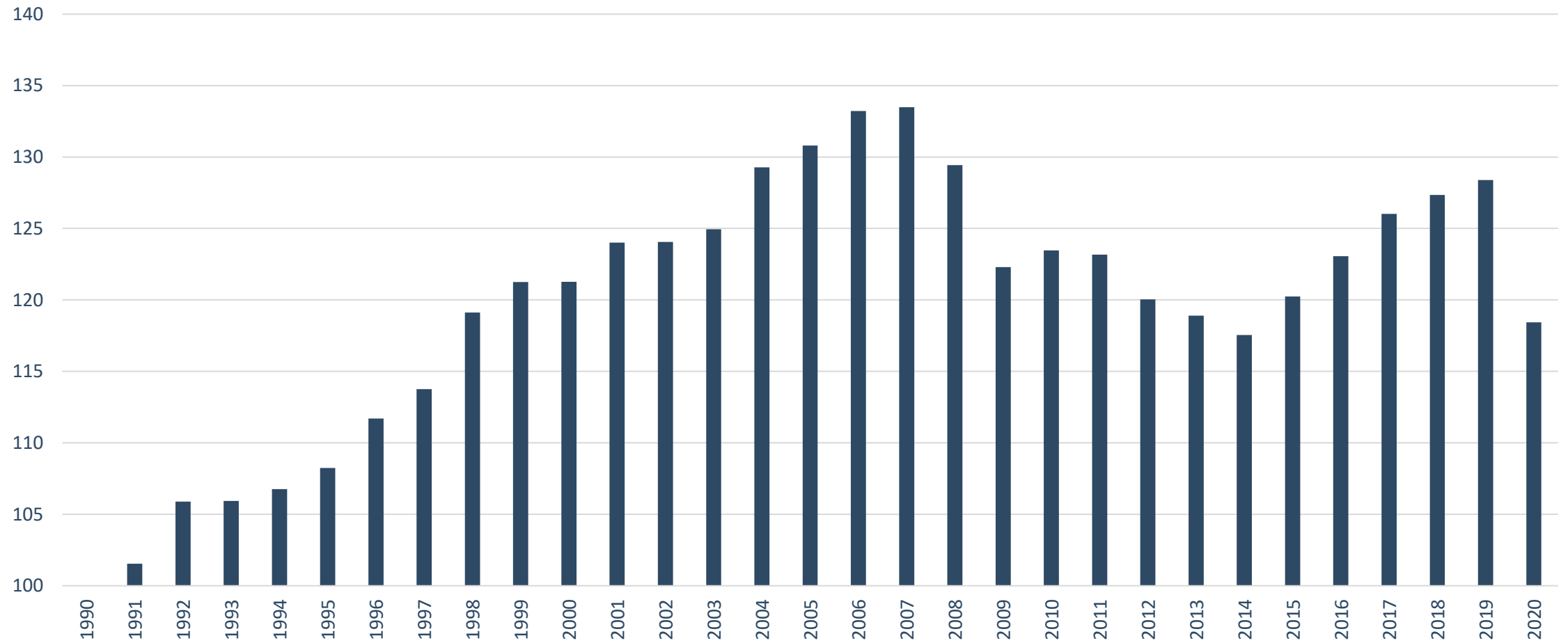


- ▶ The EU wants to reduce emissions from traffic by 30 percent between 2005 and 2030.
- ▶ EU road traffic emissions peaked in 2007.
- ▶ Between 2007 and 2013 CO₂ emissions from road transport in the EU fell. They have been increasing again since 2013.
- ▶ The greatest growth in emissions was recorded by light commercial vehicles, which, however, make up a relatively small proportion of total emissions.
- ▶ The growth in emissions in car traffic was more moderate. Emissions have stagnated since around 2004 and declined between 2007 and 2012. They have been rising again since 2013.

Source: EEA, 2022 (v25)

Heavy Commercial Vehicles – Shaped by the Economy

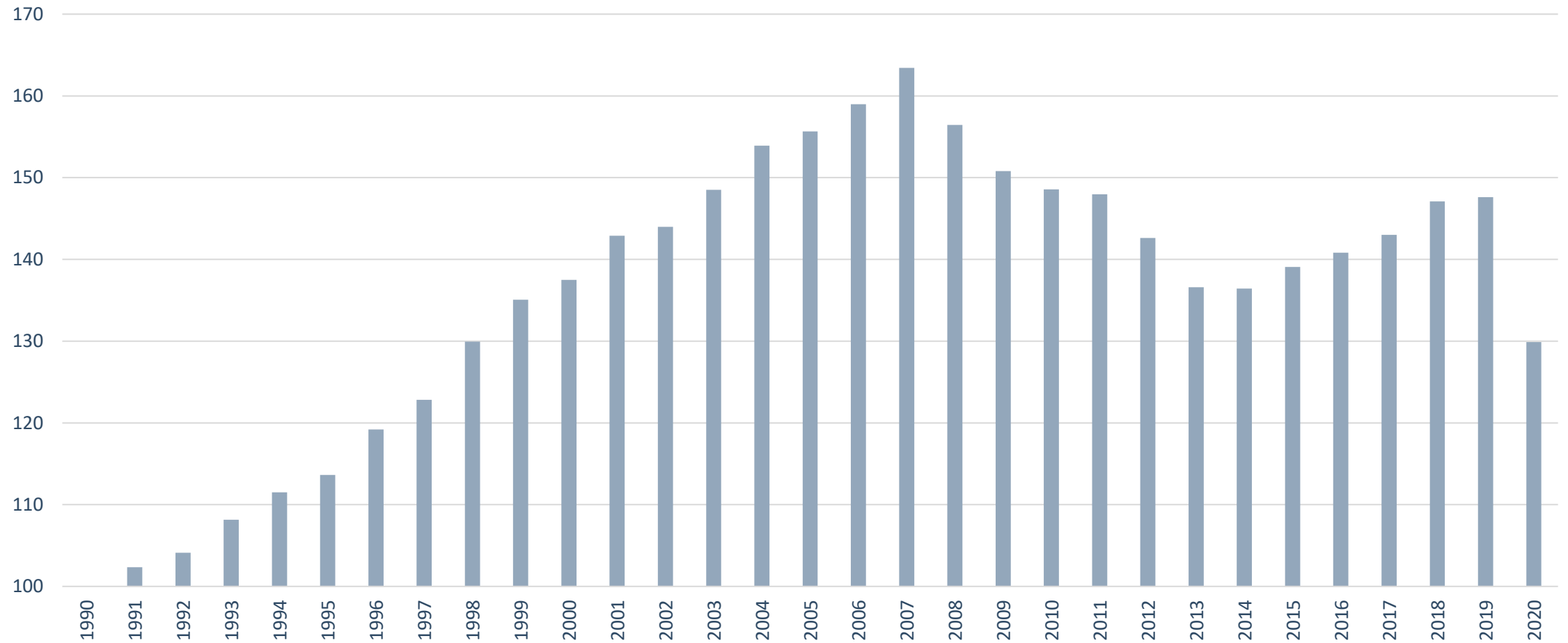
Emissions of heavy commercial vehicles and busses in the EU27; 1990 = 100



Source: EEA, 2022 (v25)

Light commercial vehicles – Shaped by the economy

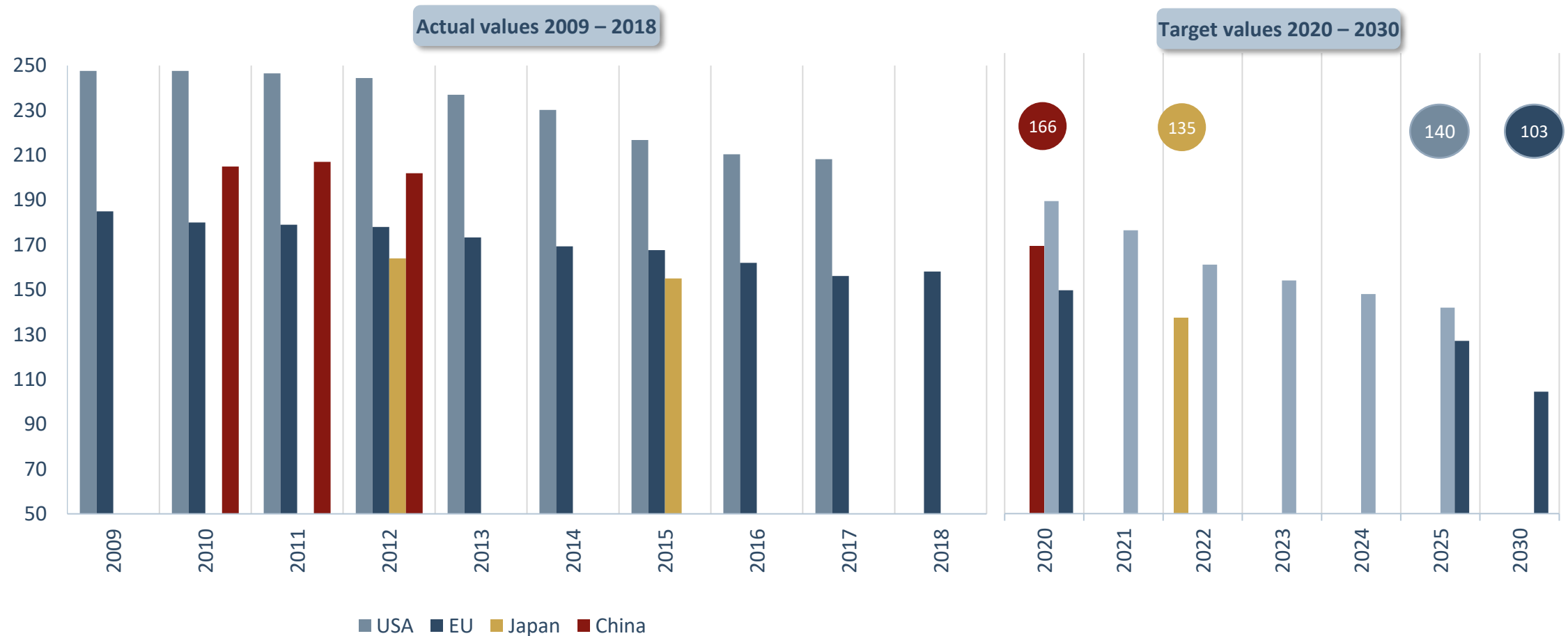
Emissions of light commercial vehicles in the EU27; 1990 = 100



Source: EEA, 2022 (v25)

Light commercial vehicles move into focus

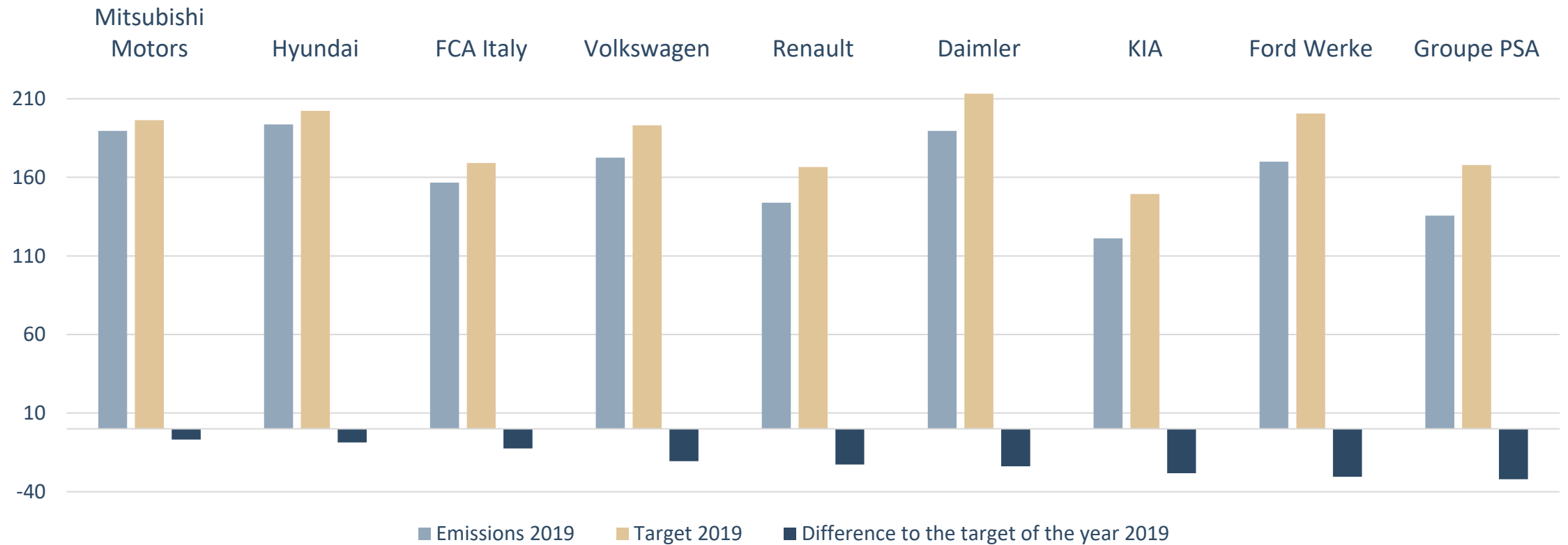
Emissions of new registrations in g CO₂/km by New European Driving Cycle



* Without diesel vehicles
Source: ICCT, 2020

Light commercial vehicles: In 2019 all manufacturers have undercut their emissions target

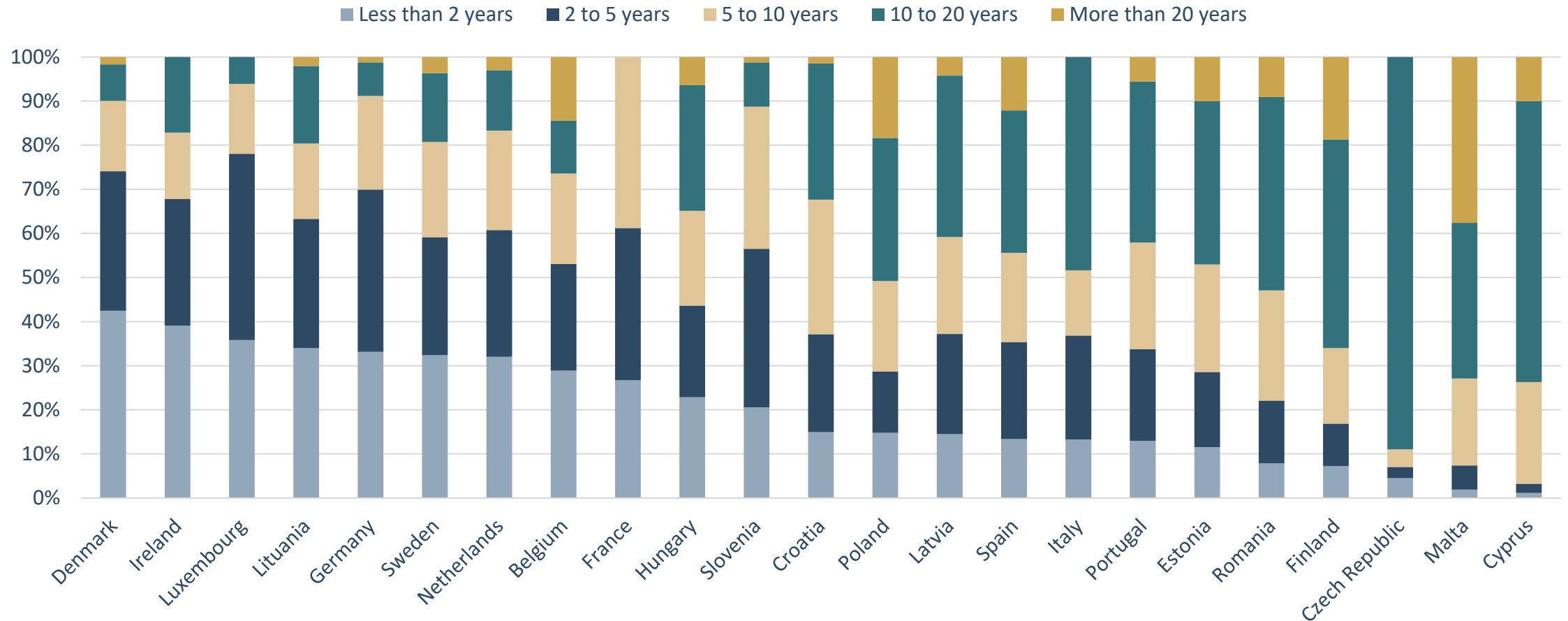
Information for manufacturers with over 50,000 new registrations in the EU28



Source: EEA, 2022

Tractors: The latest commercial vehicles in Europe

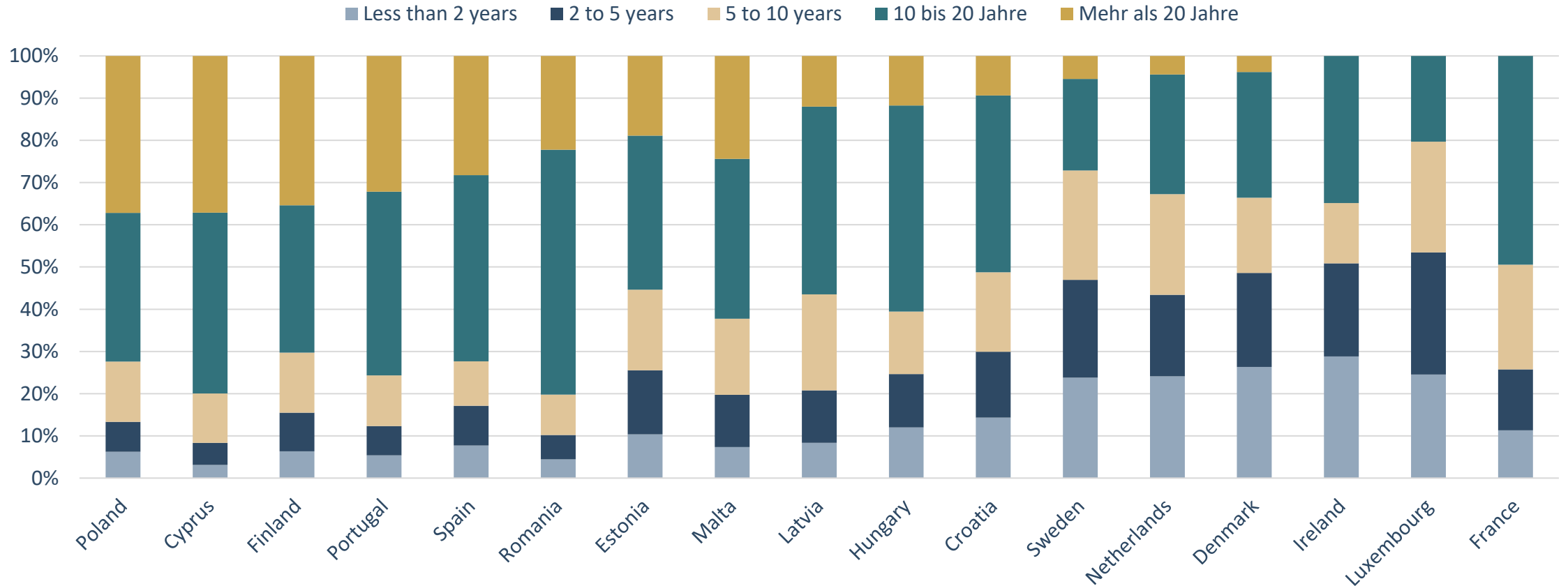
Fleets of commercial vehicles of European countries by age in percent



No data for Bulgaria, Greece, Slovakia, France; no application of category "more than 20 years"; Netherlands: Information only: "less than years"
 Quelle: Eurostat, 2021

Light commercial vehicles: many old vehicles

Fleet of commercial vehicles $\leq 3,5t$ total weight for European countries by age, in percent

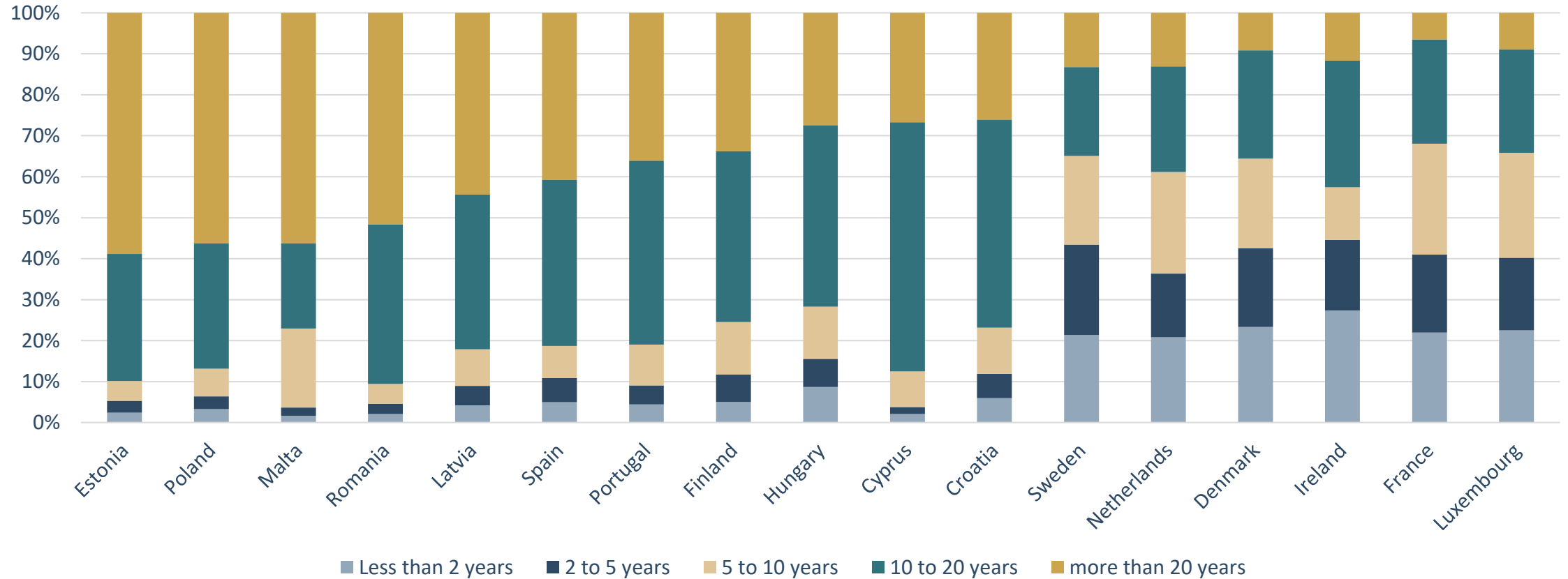


No data for Belgium, Bulgaria, Czech Republic, Germany, Greece, Italy, Lithuania, Slovakia, Slovenia; France, Ireland, Luxembourg: no application of category "more than 20 years"; Netherlands: Information only: "less than years"
Poland: incorrect record

Source: Eurostat, 2020

Commercial vehicles in the countries of the EU

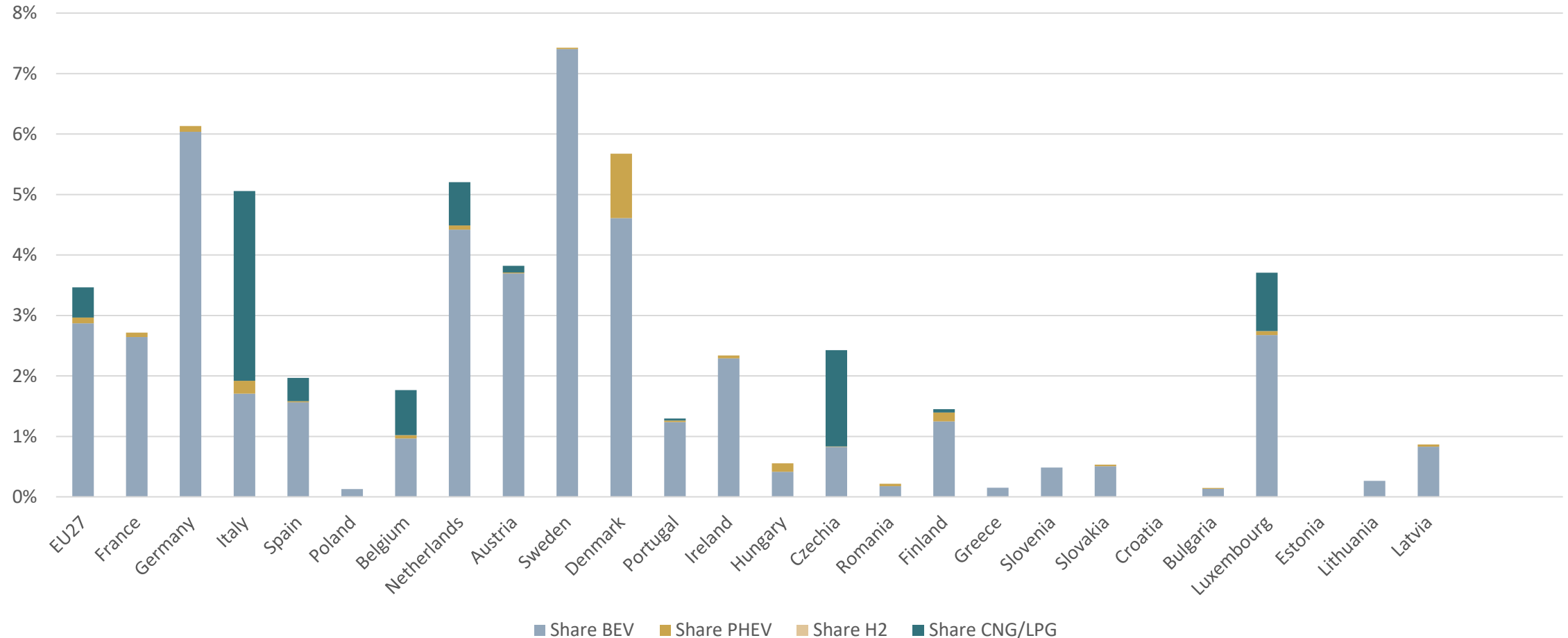
Fleet of commercial vehicles with more than 3,5t total weight per age in percent



No data for Belgium, Bulgaria, Czech Republic, Germany, Greece, Italy, Lithuania, Slovakia, Slovenia; France, Ireland, Luxembourg: no application of category "more than 20 years"; Netherlands: Information only: "less than years"
 Source: Eurostat, 2021

Light Trucks: Alternative drives still at the beginning of the road

Market shares of Light Trucks with alternative drives in EU 27 – indicated in percentage of 2021

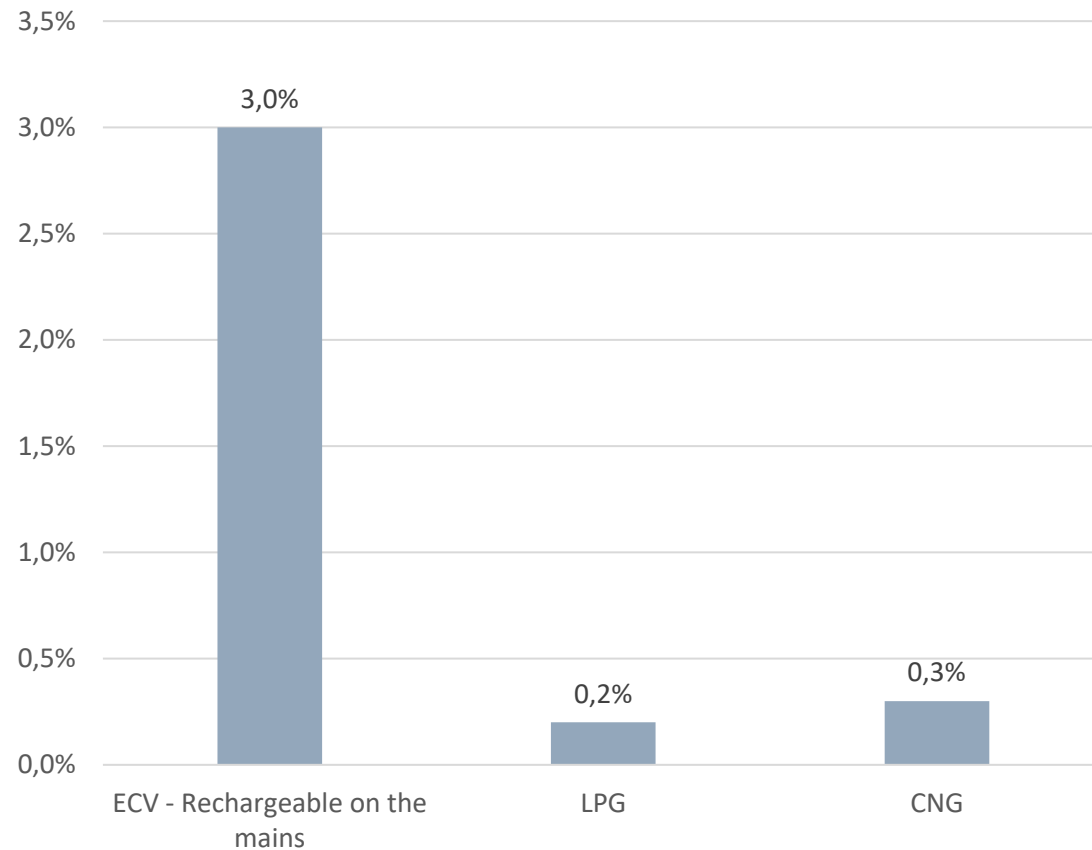


*No data for Malta, Cyprus
Source: ACEA, 2022; EAFO, 2022

Only a few vehicles on the road

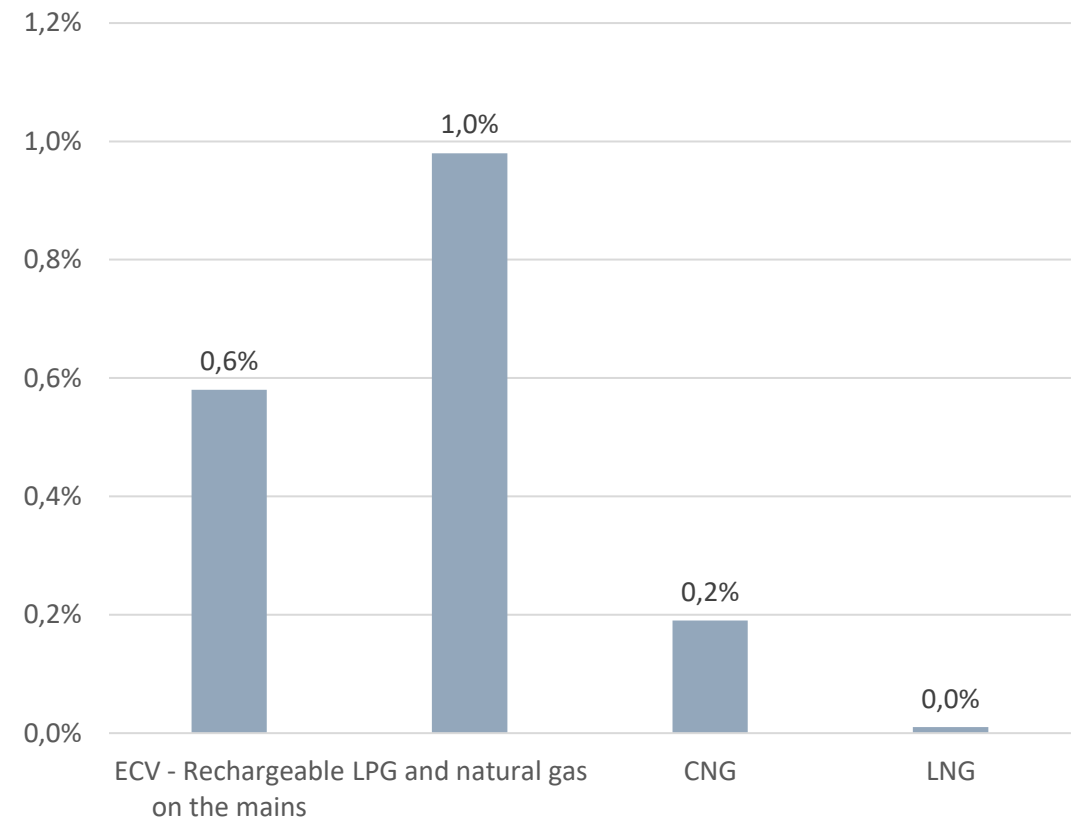
Only a fraction of the fleet has an alternative power train

Share of alternative drives in passenger car inventory in the year 2021



Only a fraction of the fleet has an alternative power train

Share of alternative drives in light commercial vehicles in the year 2021

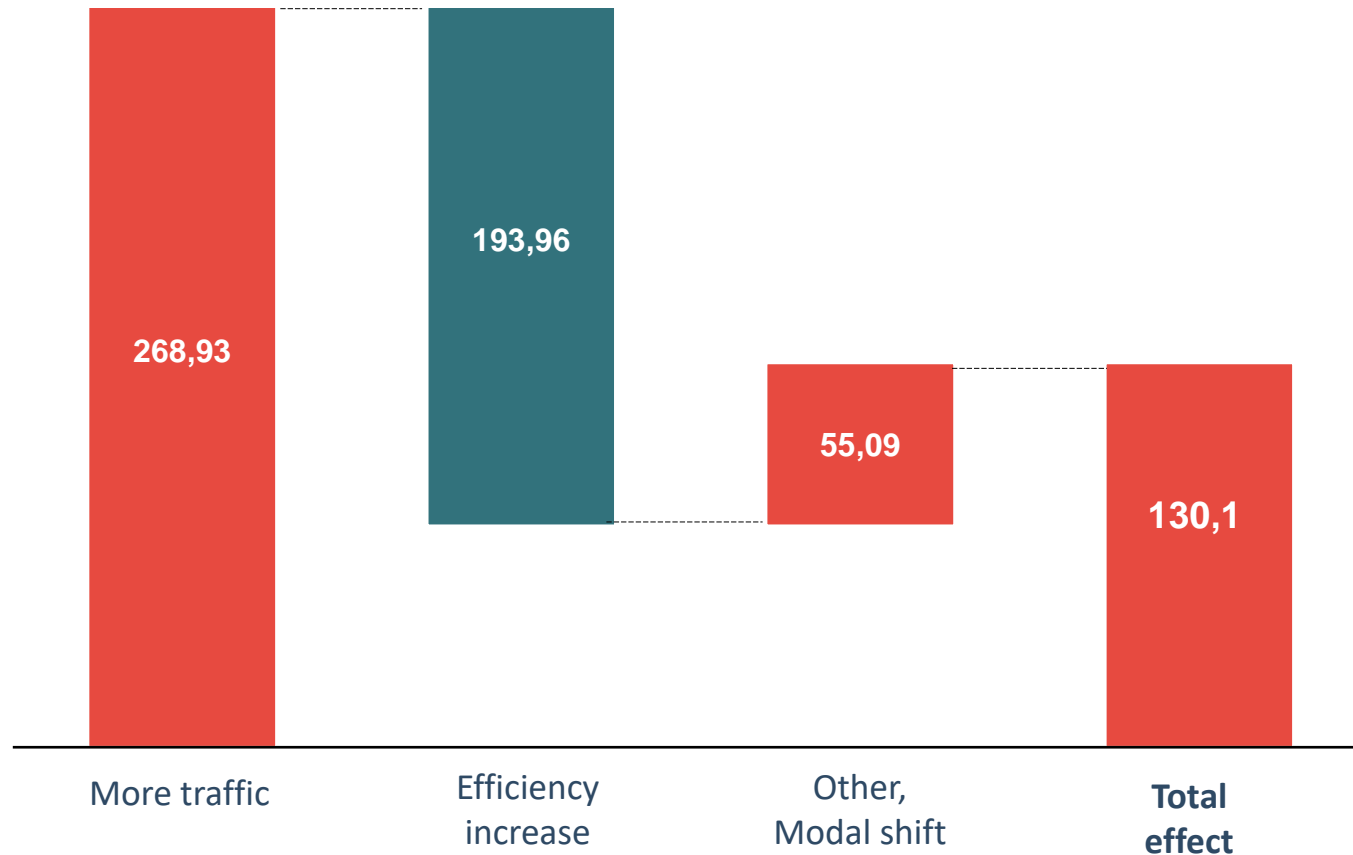


Source: EAFO, 2022

EU freight transport between 2000 and 2019

Increases in efficiency are obscured by volume growth

Development of energy consumption – Data in terawatt hours (TWh)

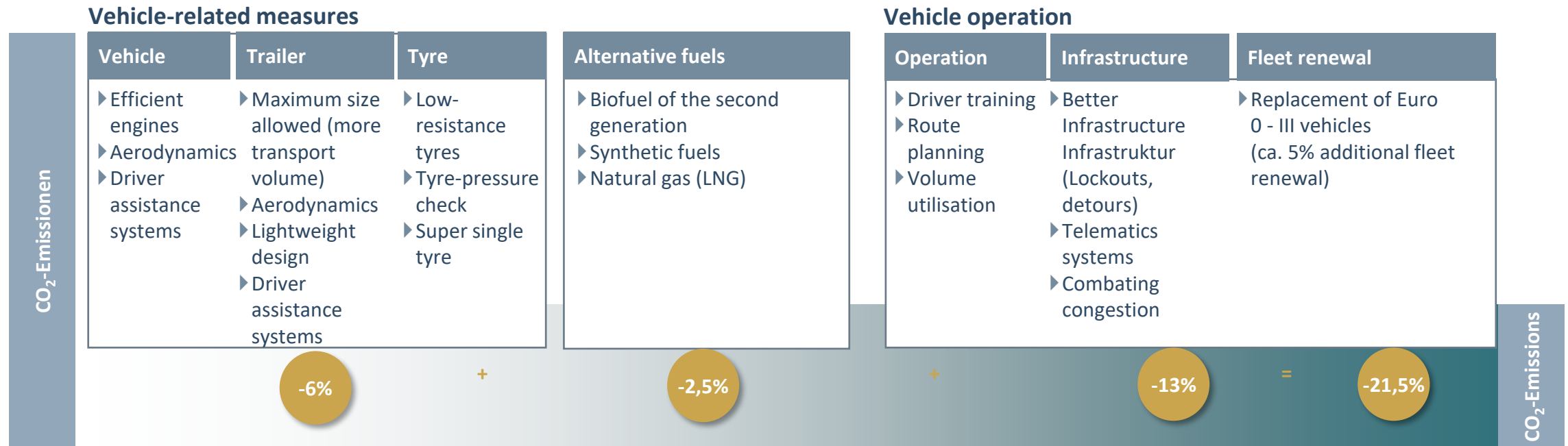


- ▶ More efficient vehicles and route planning compensate for the factors that increase consumption.
- ▶ Relocation effects towards the road with an additional consumption of almost 34 TWh play a subordinate role to the increase in activity.

Source: Odyssee Database 2020

Integrated approach: future regulation must cover all areas

Estimation from road freight transport

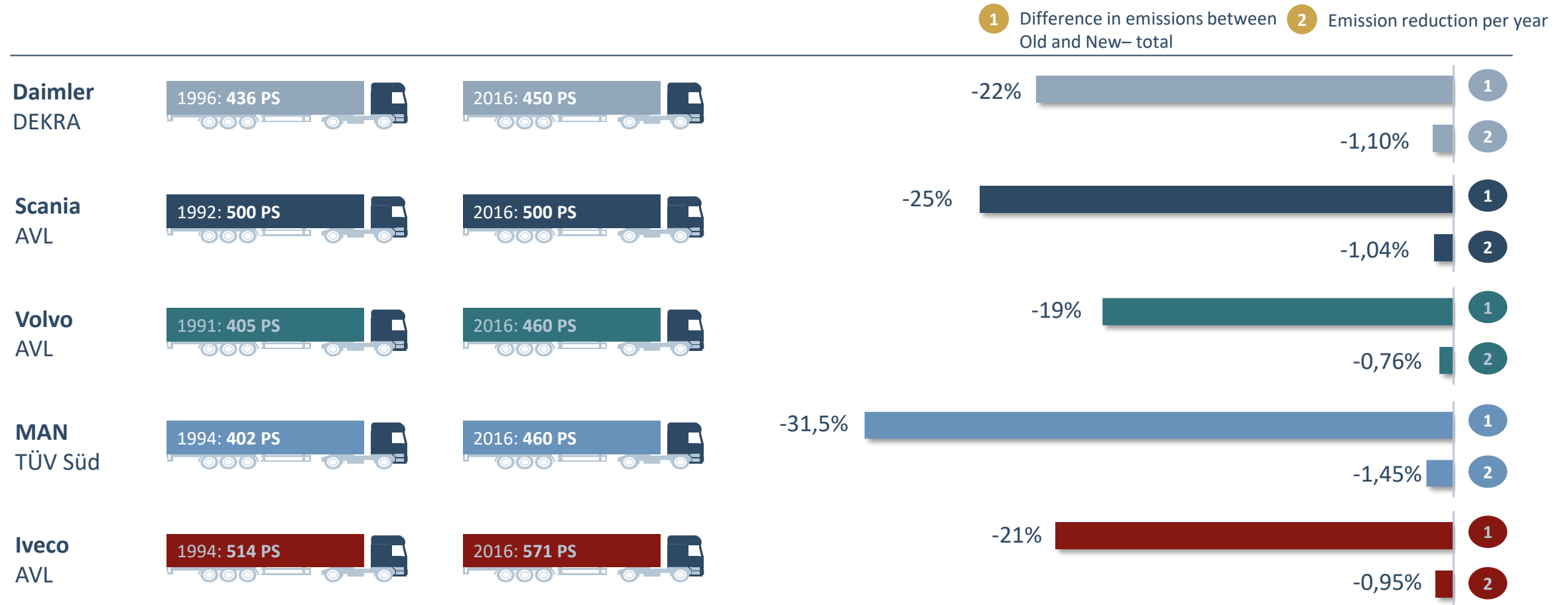


- ▶ An integrated approach avoids rebound effects and can significantly increase the saving effect.
- ▶ Various instruments are needed to exploit all potentials.

Source: ACEA

Visible progress in the field test

Scientifically accompanied road test with comparable trucks of different years depending on the manufacturer on different routes¹⁾



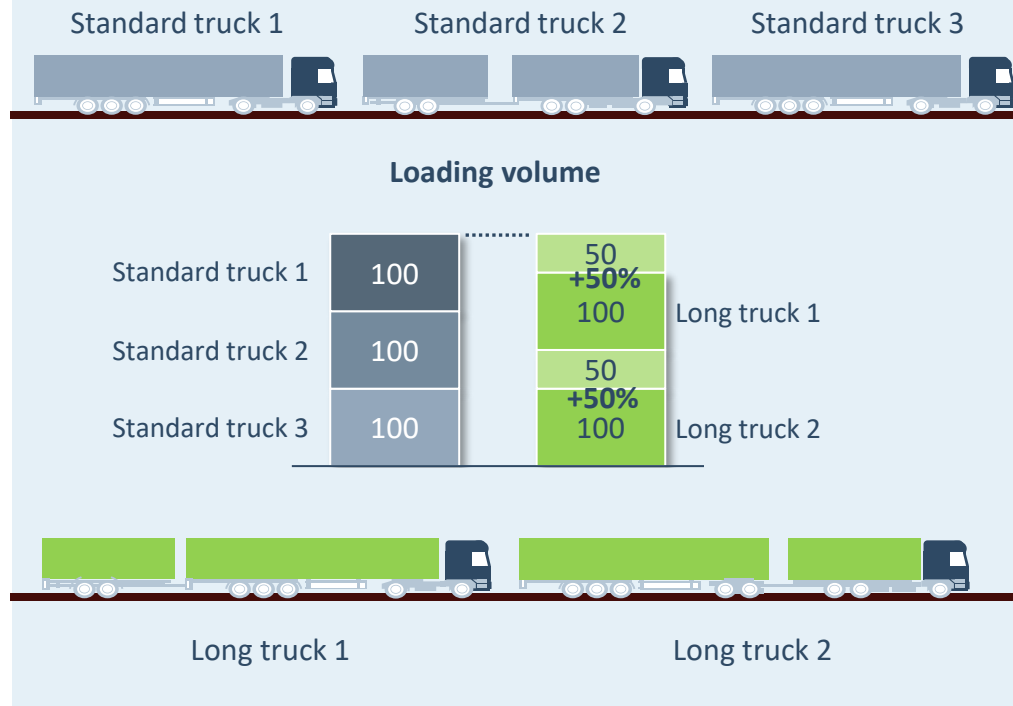
¹⁾ A Comparison of the reduction performance between the manufacturers is not permitted, because test tracks and environmental conditions (weather etc.) were not standardized.

Source: ACEA, 2017, Reducing CO₂ from trucks: progress in practice – Third-party assessment

Turn 3 into 2 – More loading volume saves fuel

Turn 3 into 2

Two long trucks transport as much load as three standard trucks.



Low consumption

The long truck drives more efficiently than other trucks. The result: less fuel consumption per charge.

