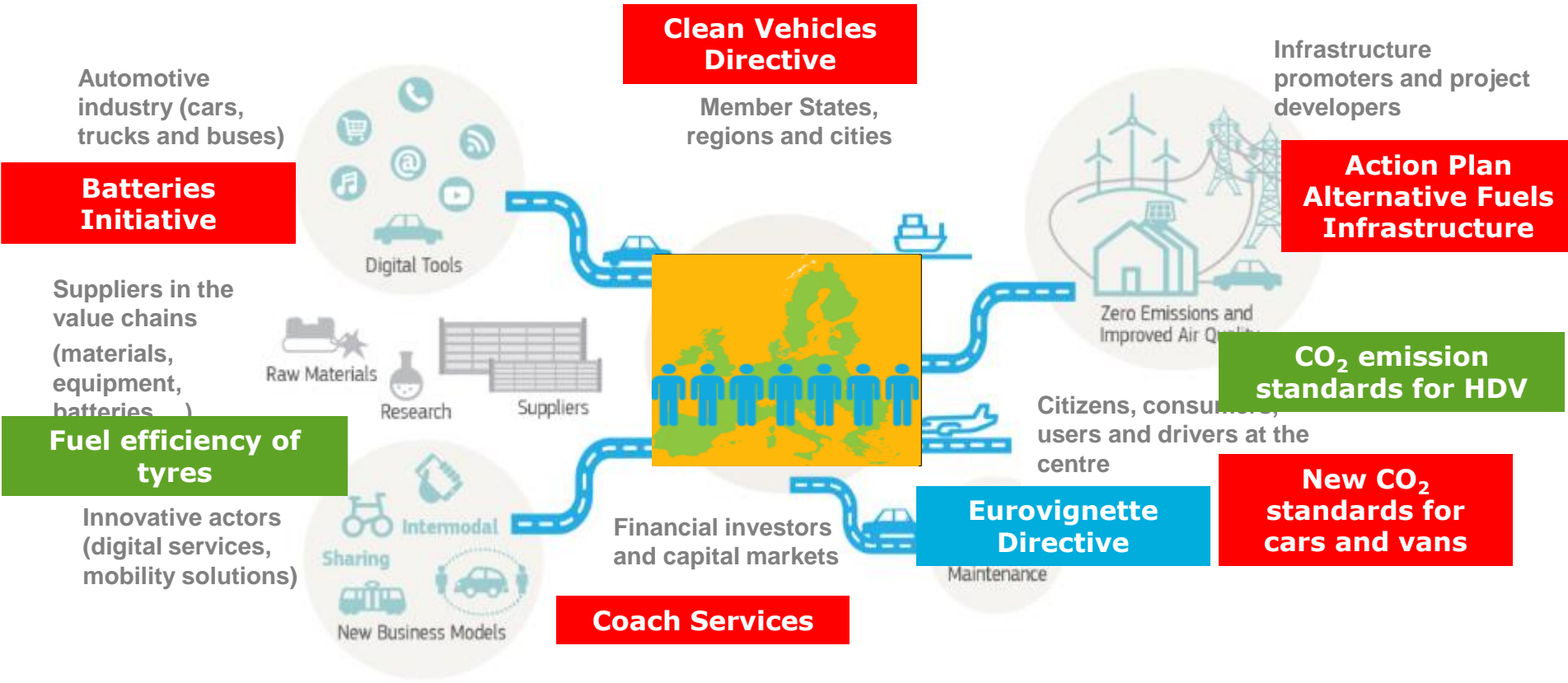




# CO<sub>2</sub> emission standards for heavy-duty vehicles

# Mobility Packages I-III: an integrated approach



**2016 Clean Energy Package  
incl. RED-2 (low-carbon fuels)**

**2016 European  
Low-Emission Mobility Strategy**

# Objectives

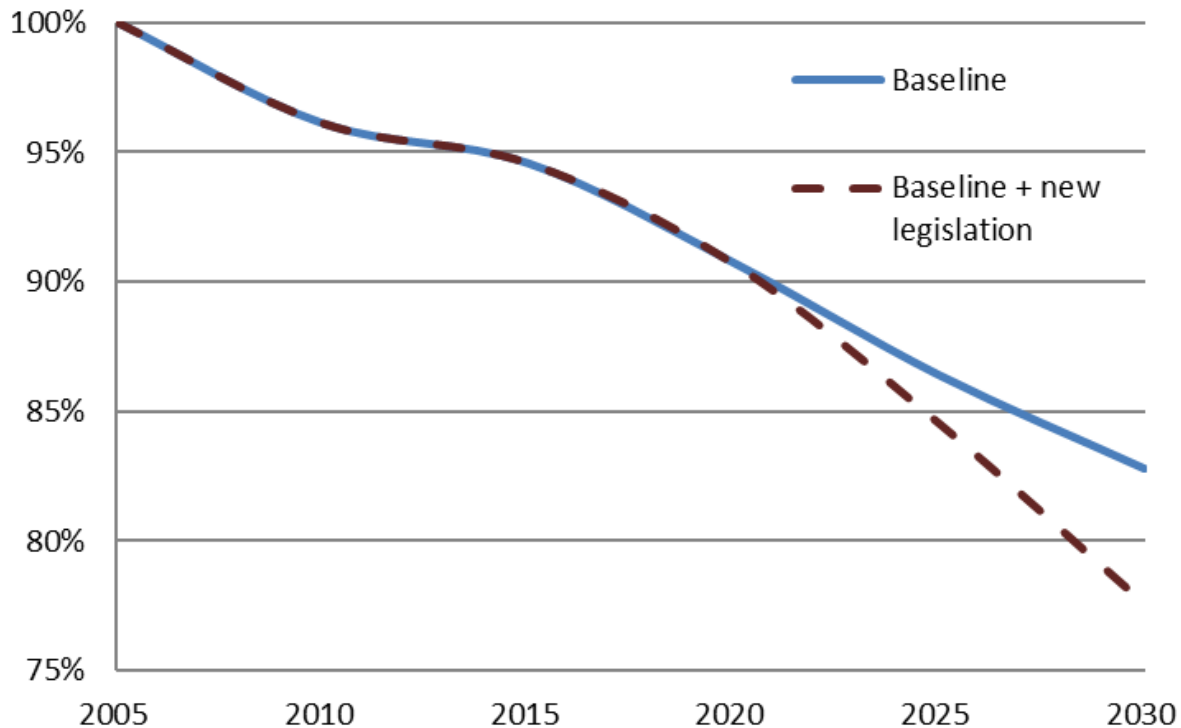
- Climate: Deliver on **Paris Agreement** commitments and support MS in meeting their binding Effort Sharing targets
- Consumers: Ensure fuel savings for **transport operators**, most of which are SMEs
- Industrial leadership: Maintain the **technological and innovative leadership** position of EU HDV manufacturers and component suppliers

## Expected key benefits of the legislation

- Around **54 million tonnes of CO<sub>2</sub>** reduced in the period 2020 to 2030
- **Net savings for transport operators:** around €25 000 in the first five years of use for a new lorry bought in 2025 against an additional purchasing cost of less than €2 000
- **Oil savings of** more than 200 million tonnes of oil up to 2040
- Additional **jobs** compared to a business as usual scenario





# Support MS to achieve emission reduction targets under Effort Sharing Regulation

**EU road transport CO<sub>2</sub> emissions; 2005=100%**



# Which are the vehicles regulated?

- Scope: trucks are divided into **18 vehicle groups**
- Certification Regulation currently applies to vehicle groups **4,5,9 and 10 with a technically permissible maximum laden mass TPMLM > 16t**
- These four groups represent around **2/3 of the total CO<sub>2</sub> emission from HDVs**

Vehicle group	Axle and chassis configuration	Without trailer
<b>4</b>	4x2 Rigid	
<b>5</b>	4x2 Tractor	
<b>9</b>	6x2 Rigid	
<b>10</b>	6x2 Tractor	

# Key elements of the final agreement on HDV CO<sub>2</sub> Standards

## Targets

### Two binding reduction targets for fleets of each manufacturer:

- **15%** in **2025**
- **30%** in **2030**

as compared to the 2019 baseline (= average of all manufacturers).

- Sufficient lead time combined with the possibility of early uptake of existing fuel-efficient technologies
- **Unit:** g CO<sub>2</sub>/t km
- Tailpipe based approach



# Incentive mechanism for ZEV/LEV

- **Type of incentives:**

- **Super-credits until 2024**, subject to a cap
- One-way/bonus-only crediting system based on a **2% benchmark from 2025 onwards**
- 2030 benchmark to be set by the 2022 review
- Scope covering both ZEV and LEV: technology-neutral
- Also smaller ZE trucks with TPMLM < 16t not regulated yet for their CO<sub>2</sub> emissions contribute to incentives

- **Definition LEV:**

- Emissions below 50% of the reference CO<sub>2</sub> emission of the sub-group to which the vehicle belongs

# Compliance assessment

## Penalties for exceedances of targets:

- **EUR 4250 per gCO<sub>2</sub>/tkm in 2025**
- **EUR 6800 per gCO<sub>2</sub>/tkm in 2030**
- Significantly above the marginal cost of meeting the targets, and therefore deterrent for manufacturers.

# Governance provisions

- **Robust reference CO<sub>2</sub> emissions**
- **Real world CO<sub>2</sub> emissions**
- **In-service conformity**

# Robust reference CO<sub>2</sub> emissions

- CO<sub>2</sub> reductions to be achieved through improvements in vehicle technology
- Avoid inflated reference CO<sub>2</sub> emissions
- COM to develop a methodology for assessing the test conditions and set criteria for determining undue increases and how they should be corrected
- COM to adjust the reference CO<sub>2</sub> emissions by 30 April 2022 in case of unjustified increase

# Real world CO<sub>2</sub> emissions

Objective:

- Ensure that the HDV Certification Procedure results in CO<sub>2</sub> emission values that are representative of real world emissions
- Prevent an increase of the gap between real and certified emission values

# Real world CO<sub>2</sub> emissions

How:

- Collect data from on-board fuel/energy consumption monitoring devices (OBFCEMs) and payload monitoring devices
- COM to assess how this data can be used to prevent the gap between the certified CO<sub>2</sub> emissions and real world CO<sub>2</sub> emissions from increasing over time
- By 2027, if appropriate, COM to adopt a legislative proposal on a mechanism to adjust monitoring emissions to take into account the gap

# In-service conformity

- Ensure a correspondence between CO<sub>2</sub> emission values as determined in accordance with the Certification procedure and the emissions of vehicles in use
- COM to lay down principles and procedures for verification by MS
- MS shall on that basis verify that manufacturers record correct values in the context of the use of the VECTO simulation tool and that manufacturers do not manipulate CO<sub>2</sub> emissions. In case of deviation, MS shall correct the values in the relevant documents.

## More information

### 3<sup>rd</sup> mobility package

[https://ec.europa.eu/transport/modes/road/news/2018-05-17-europe-on-the-move-3\\_en](https://ec.europa.eu/transport/modes/road/news/2018-05-17-europe-on-the-move-3_en)

### HDV policy

[https://ec.europa.eu/clima/policies/transport/vehicles/heavy\\_en](https://ec.europa.eu/clima/policies/transport/vehicles/heavy_en)

### The Regulation

<https://eur-lex.europa.eu/eli/reg/2019/1242/oj>