A Practical Roadmap to CO_2 Reduction for Commercial Vehicles

Chengdu, 13 November 2014

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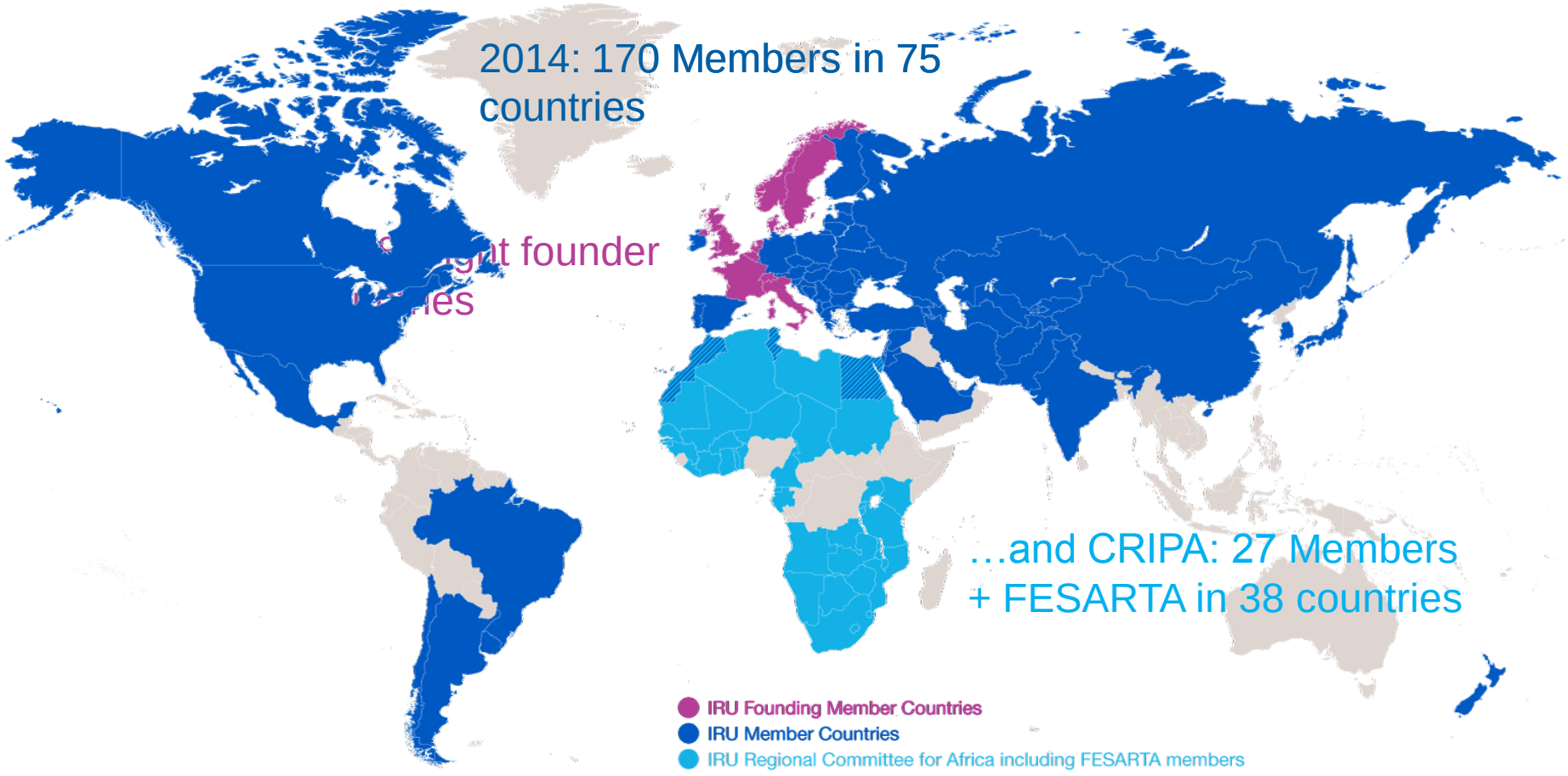
IRU International Road Transport Union

This is the IRU

Evolution of IRU Membership



IRU Secretariat General

1948 – IRU founded in Geneva

1973 – IRU Permanent Delegation to the European Union in Brussels

1998 – IRU Permanent Delegation to Eurasia in Moscow

2005 – IRU Permanent Delegation to the Middle East and Region in Istanbul

2012 – IRU Secretariat for Africa in Geneva

2013 – IRU Permanent Delegation to the United Nations in New-York

Securing and facilitating trade and international road transport

What is Globalisation?

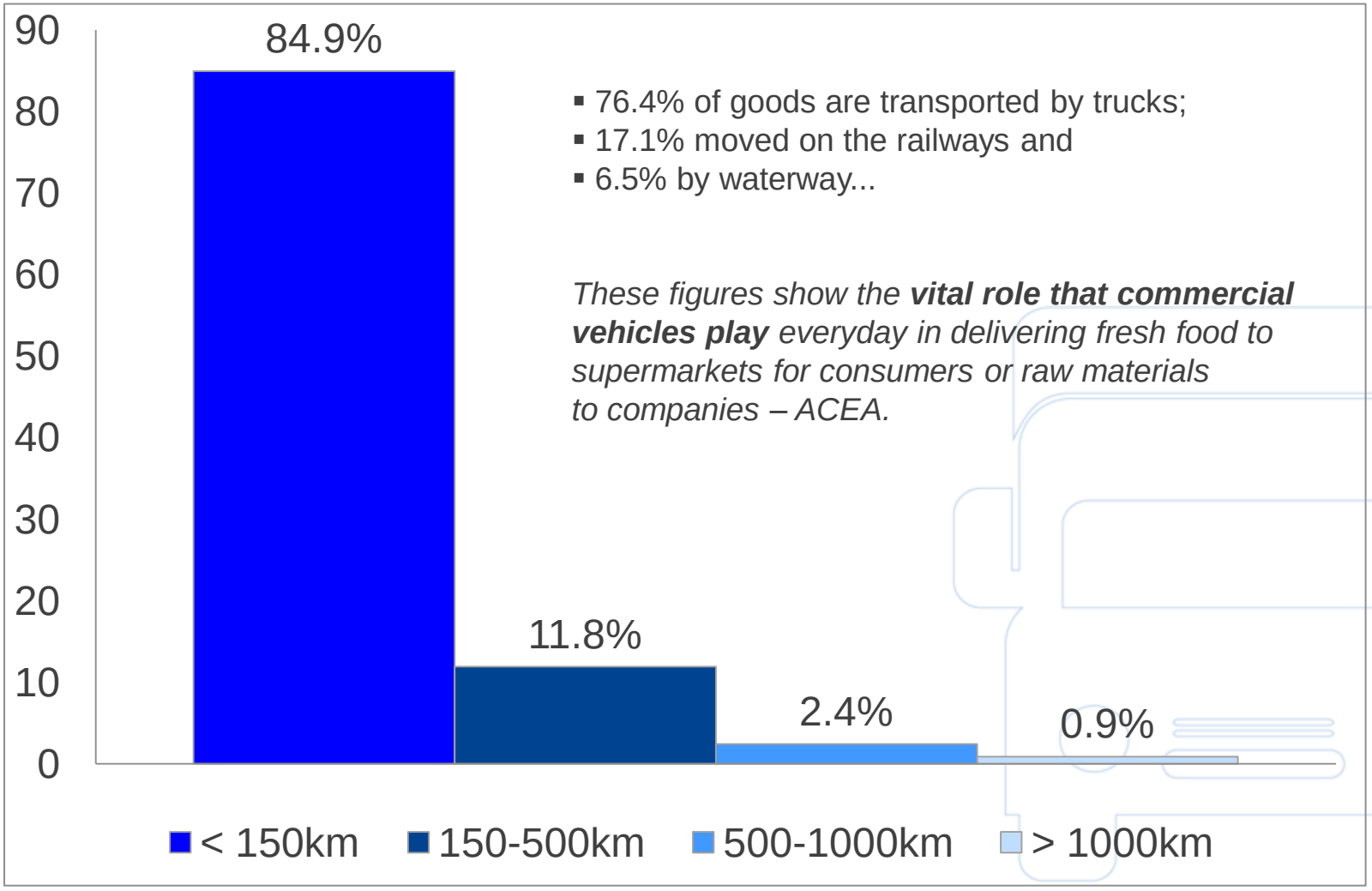
What does it take to have a cup of coffee in a café?

The combined efforts of 29 companies in 18 countries

Road Transport has become a vital production tool!

Source: IRU

Road transport tonnage distances in modern economies



- 76.4% of goods are transported by trucks;
- 17.1% moved on the railways and
- 6.5% by waterway...

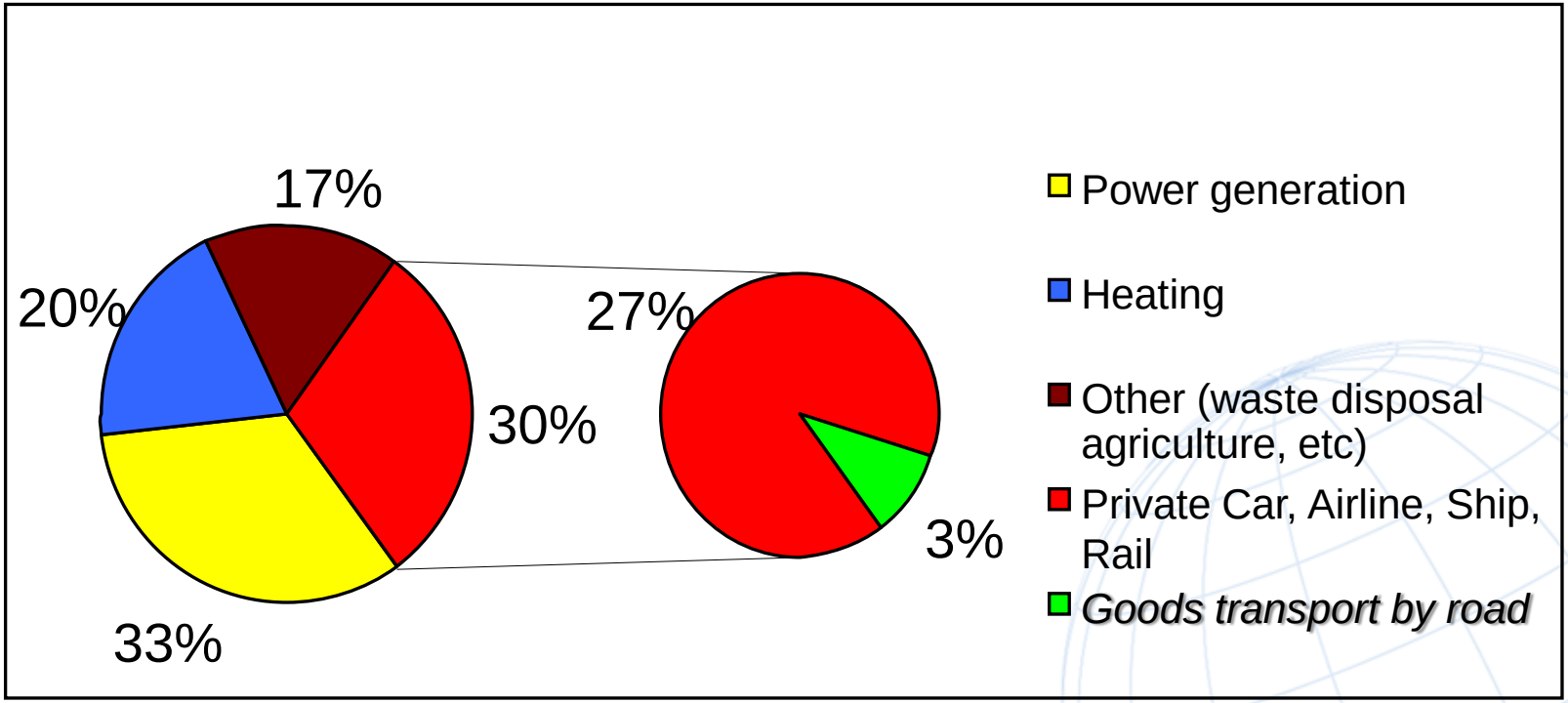
*These figures show the **vital role that commercial vehicles play** everyday in delivering fresh food to supermarkets for consumers or raw materials to companies – ACEA.*

Focus on the right issue

- Fossil fuel is not renewal
- Our industry is depending on oil
- Challenge to find economically viable alternatives to fossil fuel

Our duty is to ensure a sustainable energy policy

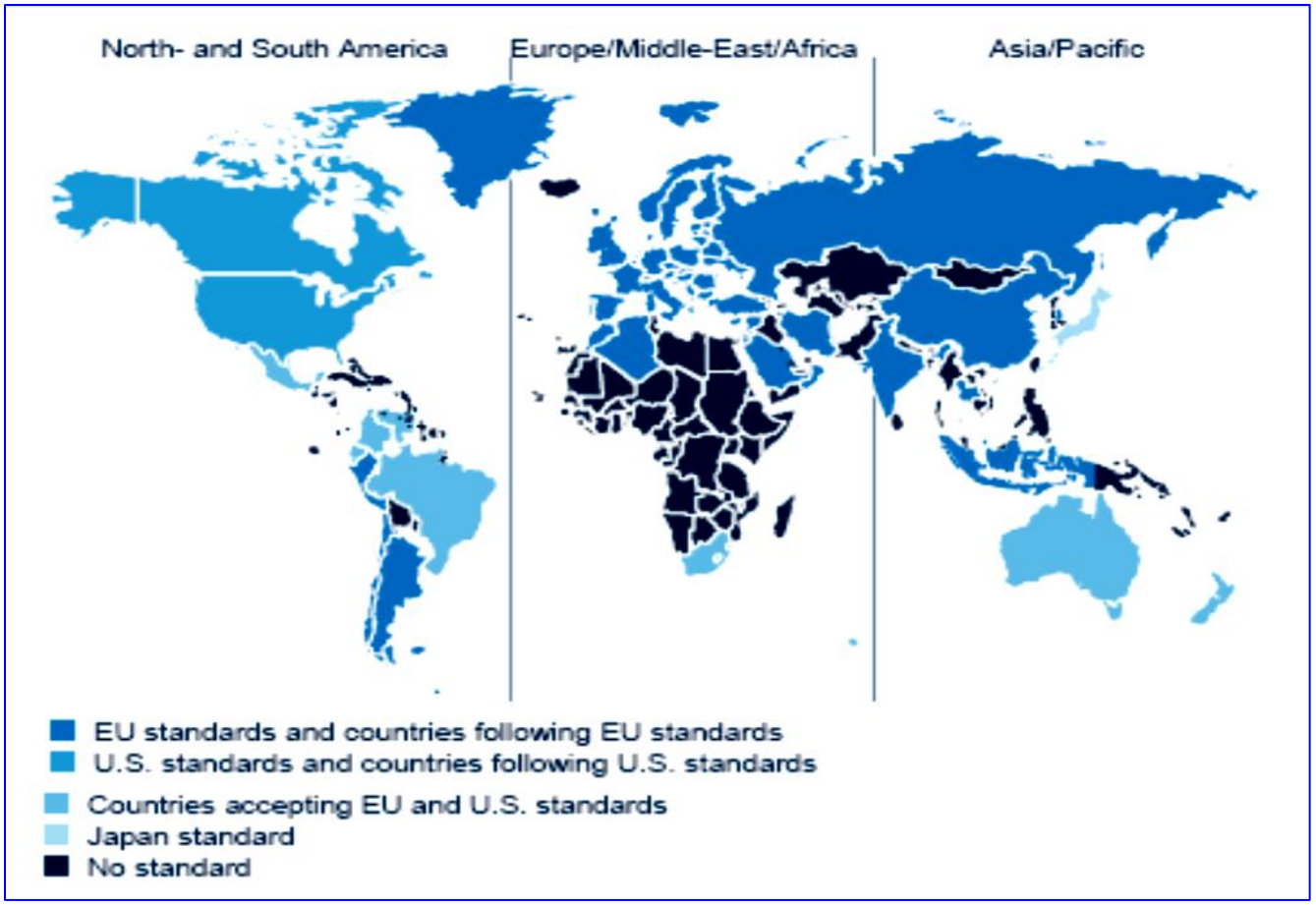
Misperception – who really produces CO_2



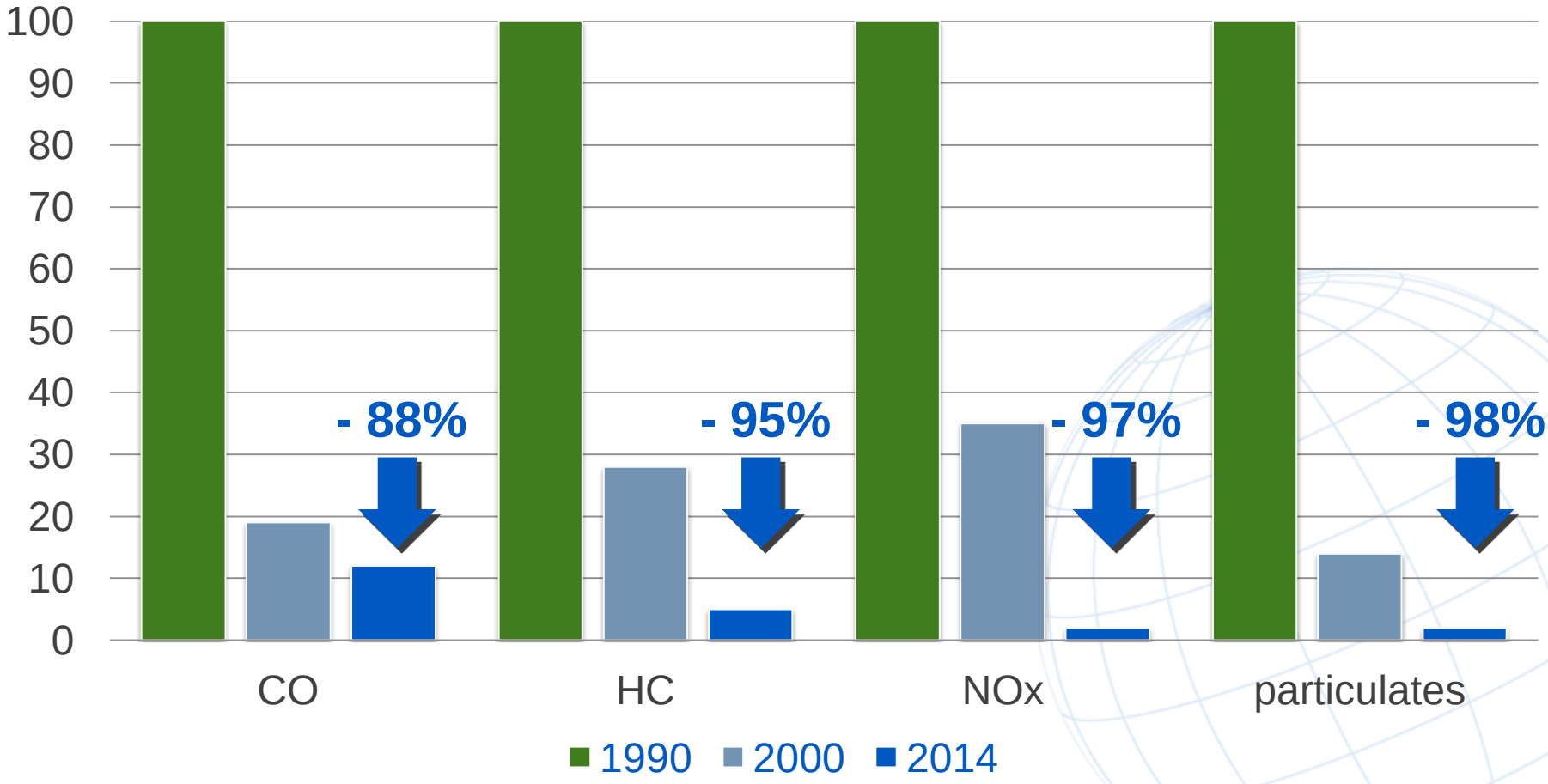
While power generation and heating contribute to over 50% of CO2 emissions, these are areas where viable alternate energy sources with low CO2 emissions exist already today.

Source: UN Framework Convention on Climate Change (UNFCCC)

Worldwide Emission Limits

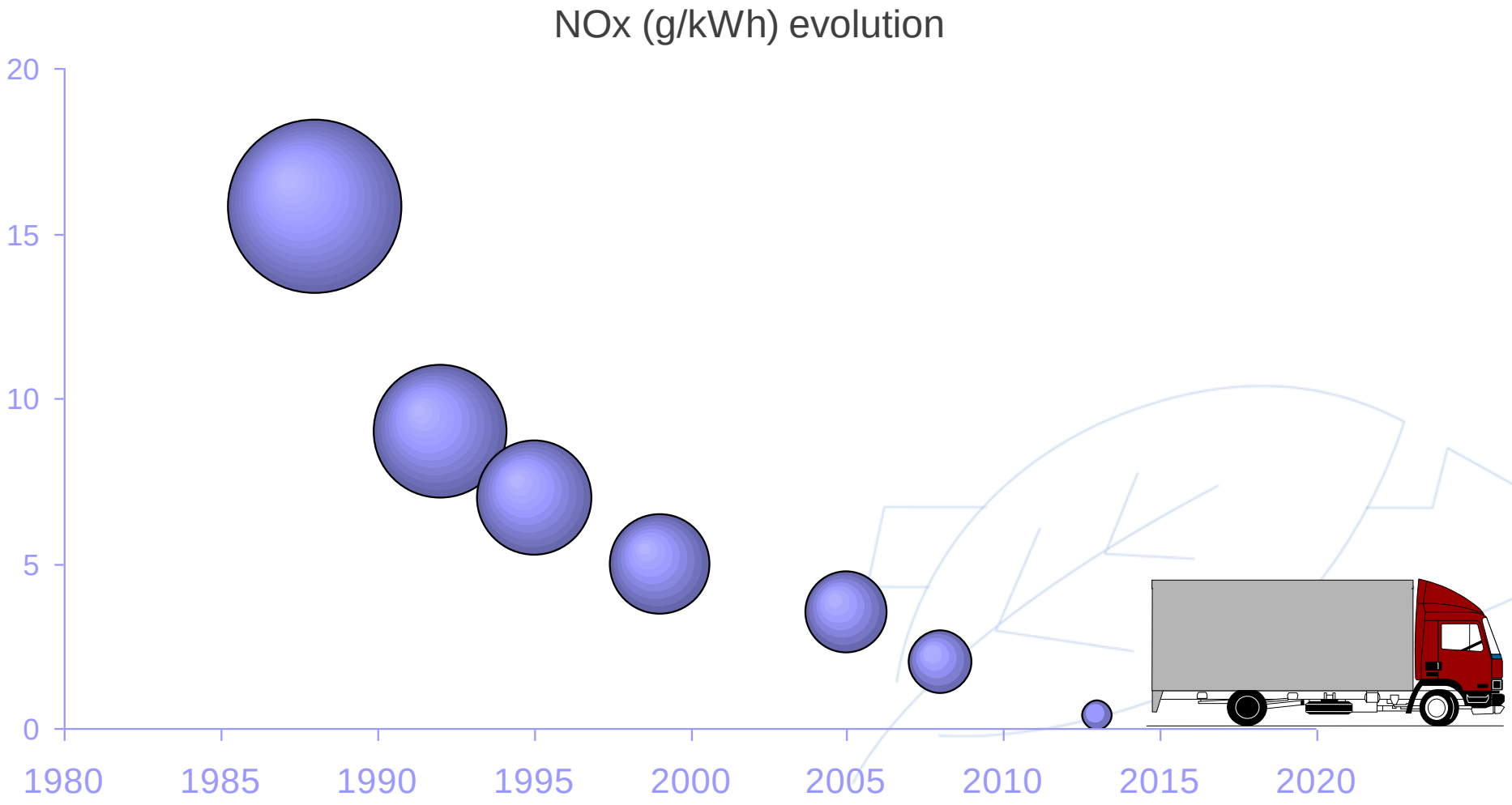


Global Evolution of Commercial Vehicles Toxic Emissions



Source: IRU based on EU Commission 2008, US Environmental Protection Agency 2010, Japan Ministry of the Environment 2005

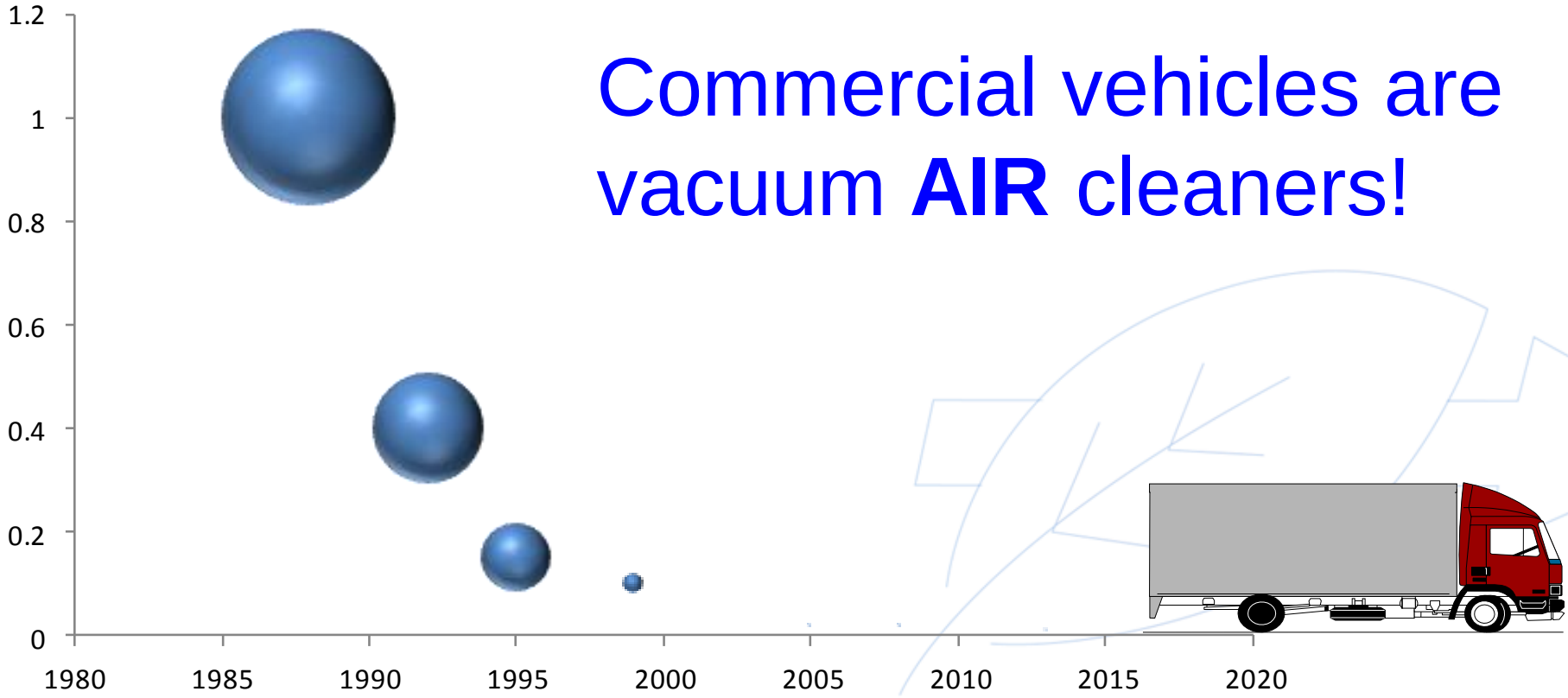
NOx Emissions from Commercial Vehicles



Source: IRU

PM Emissions from Commercial Vehicles

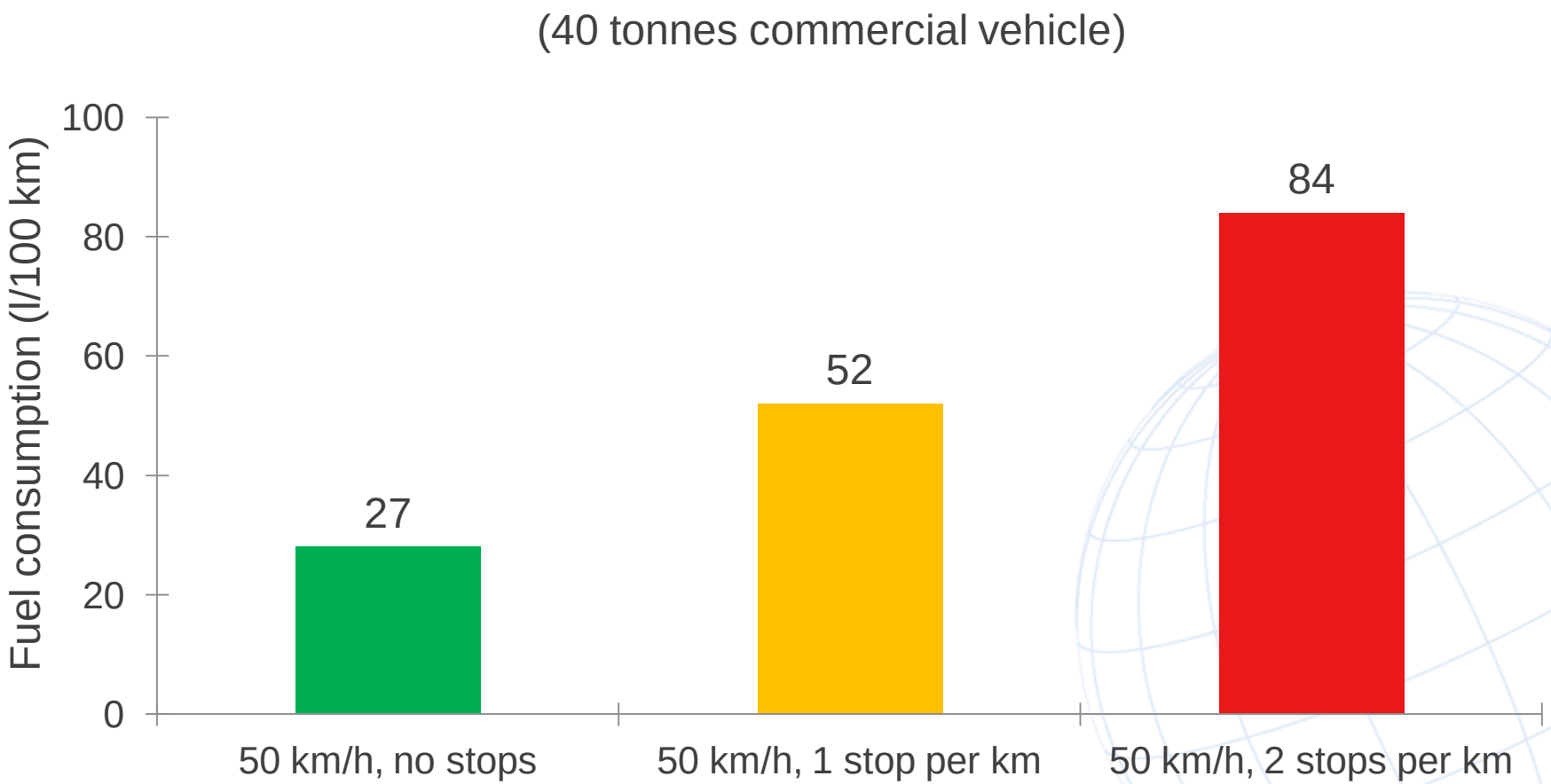
PM (g/kWh) evolution



Commercial vehicles are vacuum **AIR** cleaners!

Source: IRU

Road Congestion increases Fuel Consumption



Source: VDA

IRU "30 by 30" Resolution

IRU Resolution

IRU "30-BY-30" RESOLUTION

adopted unanimously by the IRU General Assembly in Geneva on 9 November 2009

IRU Resolution on a voluntary commitment of the road transport industry to reduce CO2 emissions by 30% by 2030.

The International Road Transport Union (IRU), representing truck, bus, coach and taxi operators through its 180 Members in 74 countries on 5 continents,

Considering that:

The road transport industry – recognising the role that road transport plays in economic, social and environmental progress and in accordance with the IRU's 3 "i" strategy for achieving sustainable development based on innovation, incentives and infrastructure – has taken up its responsibilities by significantly reducing toxic and non-toxic emissions by up to 99% which helped to significantly improve air quality;

The globalisation process has led to an increase in tourism and trade and thus transport, and therefore to an increase in fuel use and consequently CO_2 emissions;

Road transport is the only mode of transport that can provide high quality door-to-door service with in many cases a better CO_2 emissions footprint than other modes of transport;

Overall transport accounts for 20% of CO_2 emissions while the commercial road transport industry is responsible for 3% of total CO_2 emissions;

Inadequate road infrastructure can easily triple the fuel consumption of a heavy commercial vehicle;

Apart from urban distribution and short distance road passenger transport, commercial road transport is and will remain dependent on oil, with no economically viable alternative in sight;

Taking into account the above, the road transport industry, represented by the IRU and its Member Associations:

Voluntarily commit, on the basis of innovative technologies and practices, to reduce CO_2 emissions by 30% by 2030 - calculated as transport performance in tkm and pkm and related to the base year 2007 - through means such as:

- investments in innovative engine and latest vehicle technology, which can contribute to a reduction in fuel consumption and consequently CO_2 emissions of more than 10%;
- driver training, as provided by the IRU Academy and others, which can reduce fuel consumption and consequently CO_2 emissions by up to 10%;

- 30% CO_2 by 2030

The road transport sector has voluntarily committed, on the basis of innovative technologies and practices, to reduce CO_2 emissions by 30% by 2030 based on transport performance in tkm and pkm and related to the base year 2007.

IRU

-30% CO_2 by 2030

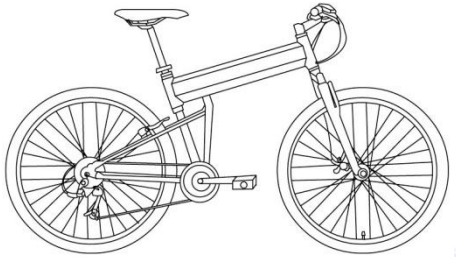
CO_2- Fuel used vs. work done

The simulation based system established by the European Commission should take into consideration the balance between the fuel used versus the work done and should indicate:

- **grams of fuel per ton-km, m^2-km or m^3-km of goods or by passenger-km**
- **grams of CO_2 per ton-km, m^2-km or m^3-km of goods or by passenger-km**

Energy label for Commercial Vehicles

Energy Label within road transport sector



Key issues

- Performance Management and Fuel Management
- Information Technology
- Driver Training (eco-driving)
- Vehicle Specification and Aerodynamics
- Operational Modifications
- Vehicle Maintenance
- Improvements in Propulsion Technology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