

# Accordo di Parigi e Agenda 2030 per lo sviluppo sostenibile

Webinar tematici gratuiti

Mercoledì 25 ottobre 2017 (ore 15,30-16,30)

## Le politiche europee sulle emissioni dei veicoli.

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Con il sostegno del Ministero dell'Ambiente



MINISTERO DELL'AMBIENTE  
E DELLA TUTELA DEL TERRITORIO E DEL MARE

# T&E: 27 COUNTRIES

## 50 MEMBER & SUPPORT GROUPS



# OUR MISSION



## OUR MISSION

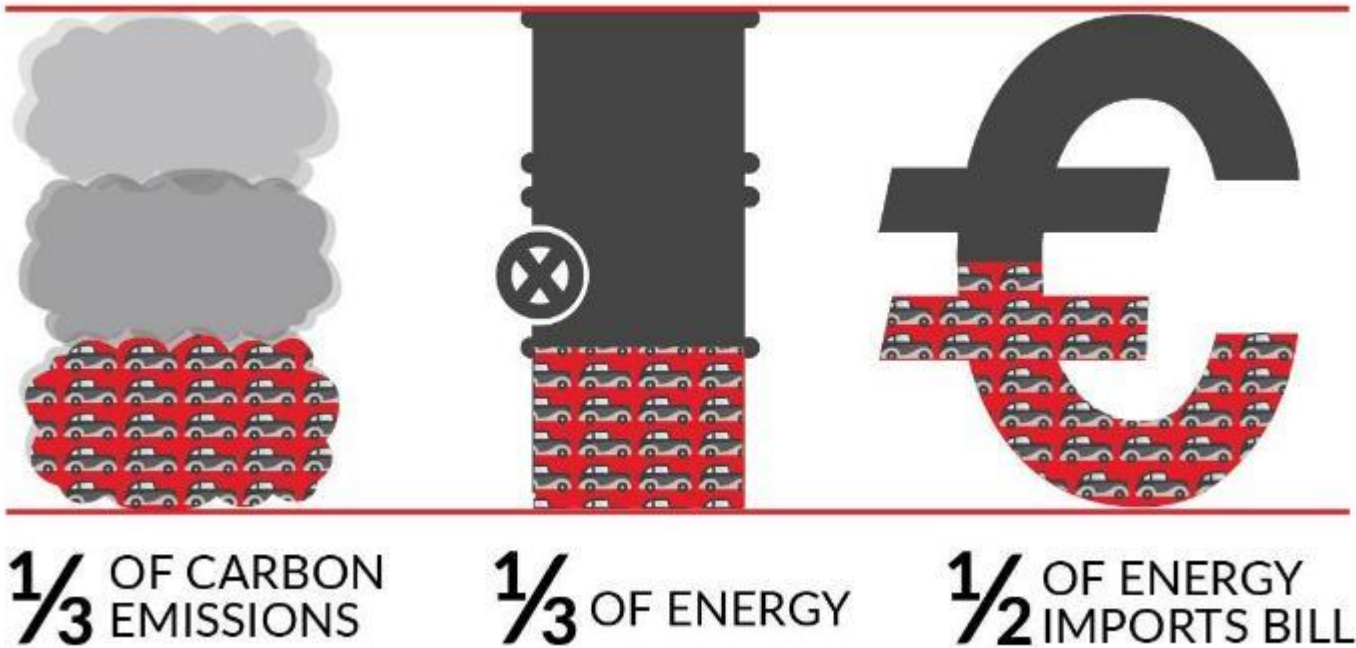
Transport policy should minimise harmful impacts on the **environment** and **health**, maximise **efficiency** of **resources**, including energy and land, and guarantee safety and sufficient access for all.



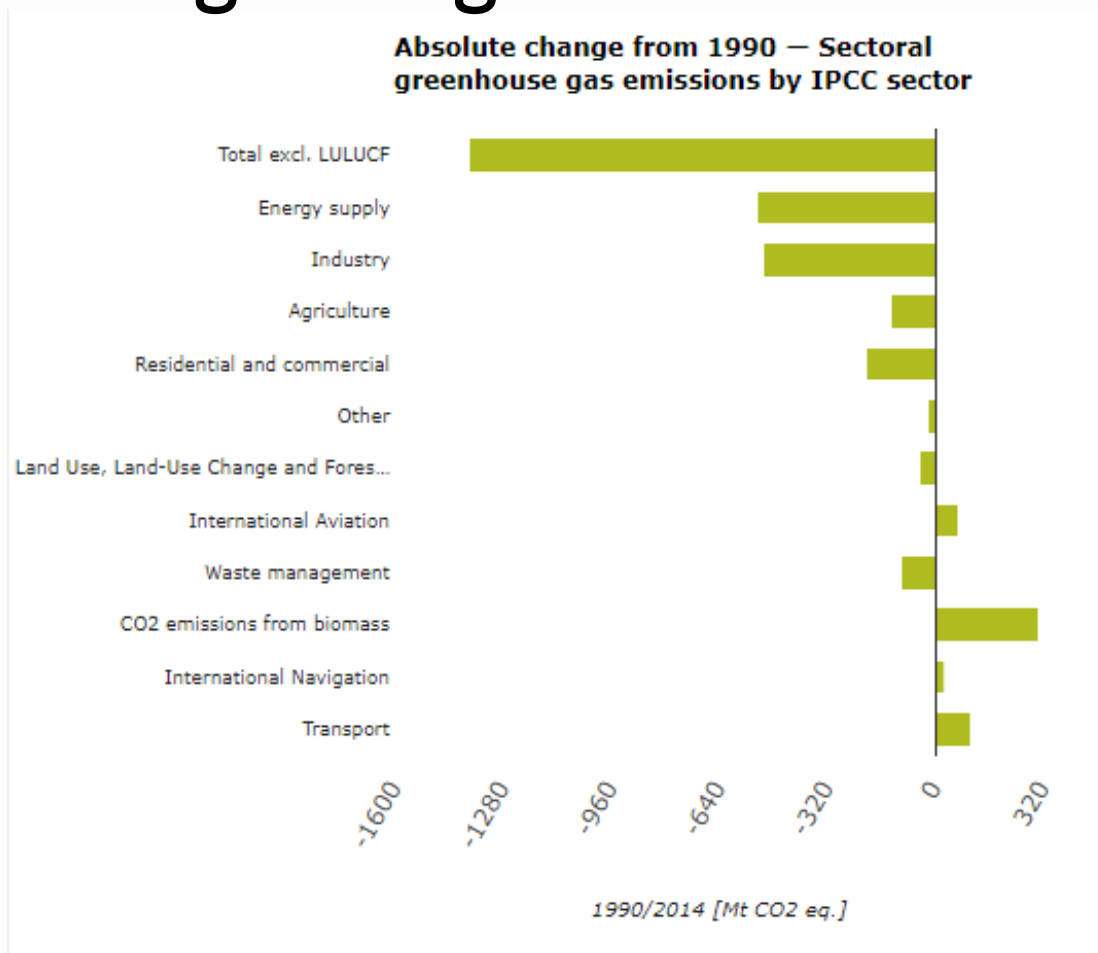
## OUR ASSETS

**Credibility** is our key asset. Therefore we are a **non-profit** and **politically independent**, and we are strong believers in the power of **science** and **evidence** in policymaking.

# Transport in Europe

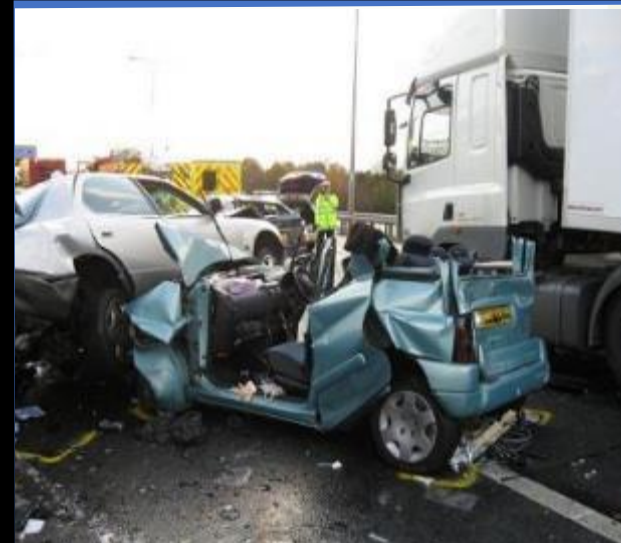


# Transport sector is where CO2 emissions still growing





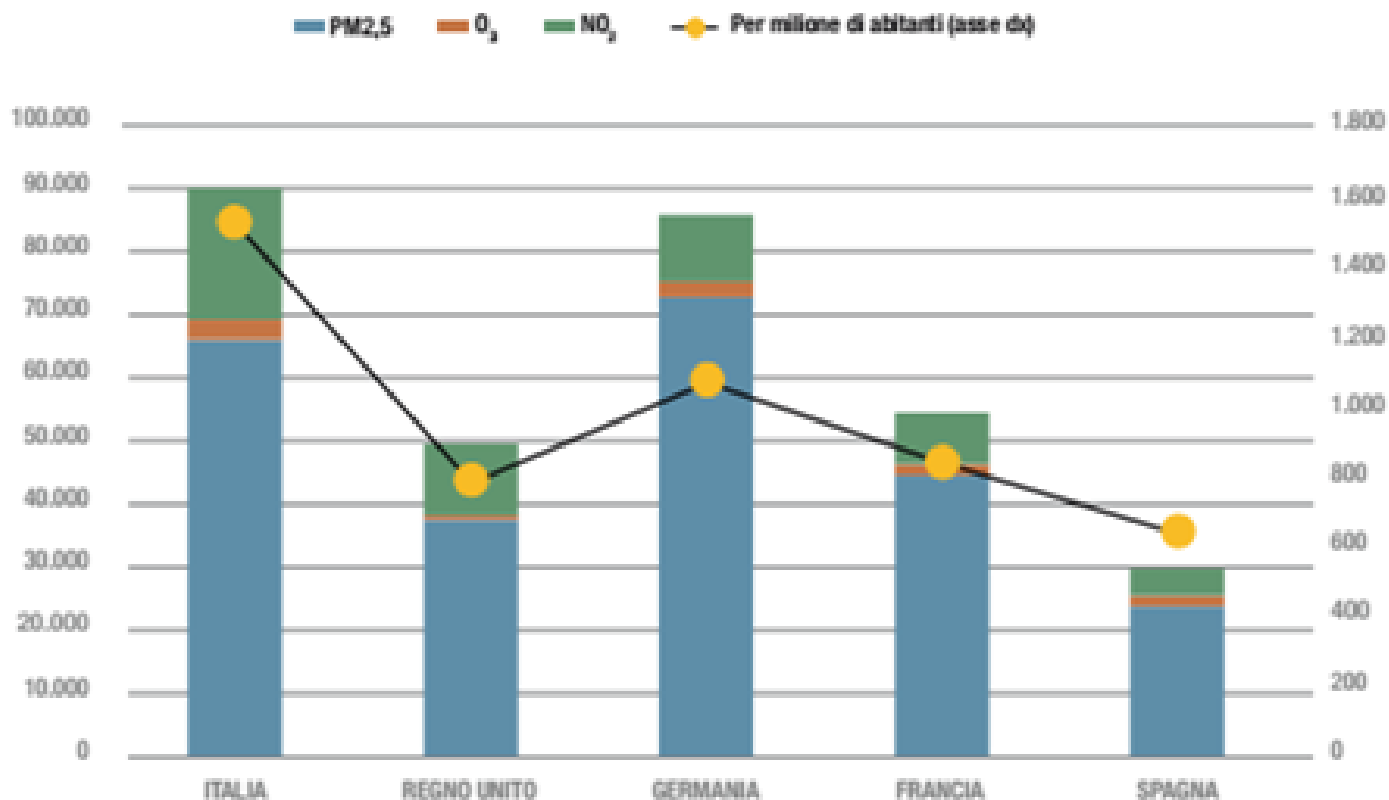
# CARS ARE HIGHLY UNSUSTAINABLE



# AIR QUALITY

## ITALY AT THE FIRST PLACE FOR PREMATURE DEATHS

Numero di decessi prematuri per inquinamento atmosferico in alcuni Paesi europei nel 2013, valore totale (sx) e per milione di abitante (dx)





# A BUSY EU AGENDA FOR TRANSPORT POLICIES

- From NEDC to WLTP for CO<sub>2</sub>
- From NEDC to WLTP and RDE for NO<sub>x</sub>
- Type Approval Framework Regulation Post Dieselgate
- New Mobility Package (post 2020 car and van regulation/ZEV target)
- New Renewable Energy Directive/Biofuels Policy



# A-S-I APPROACH

AVOID / REDUCE

SHIFT / MAINTAIN

IMPROVE



Reduce or avoid  
the need to travel

System  
Efficiency



Shift to or maintain share  
of more environmentally  
friendly modes

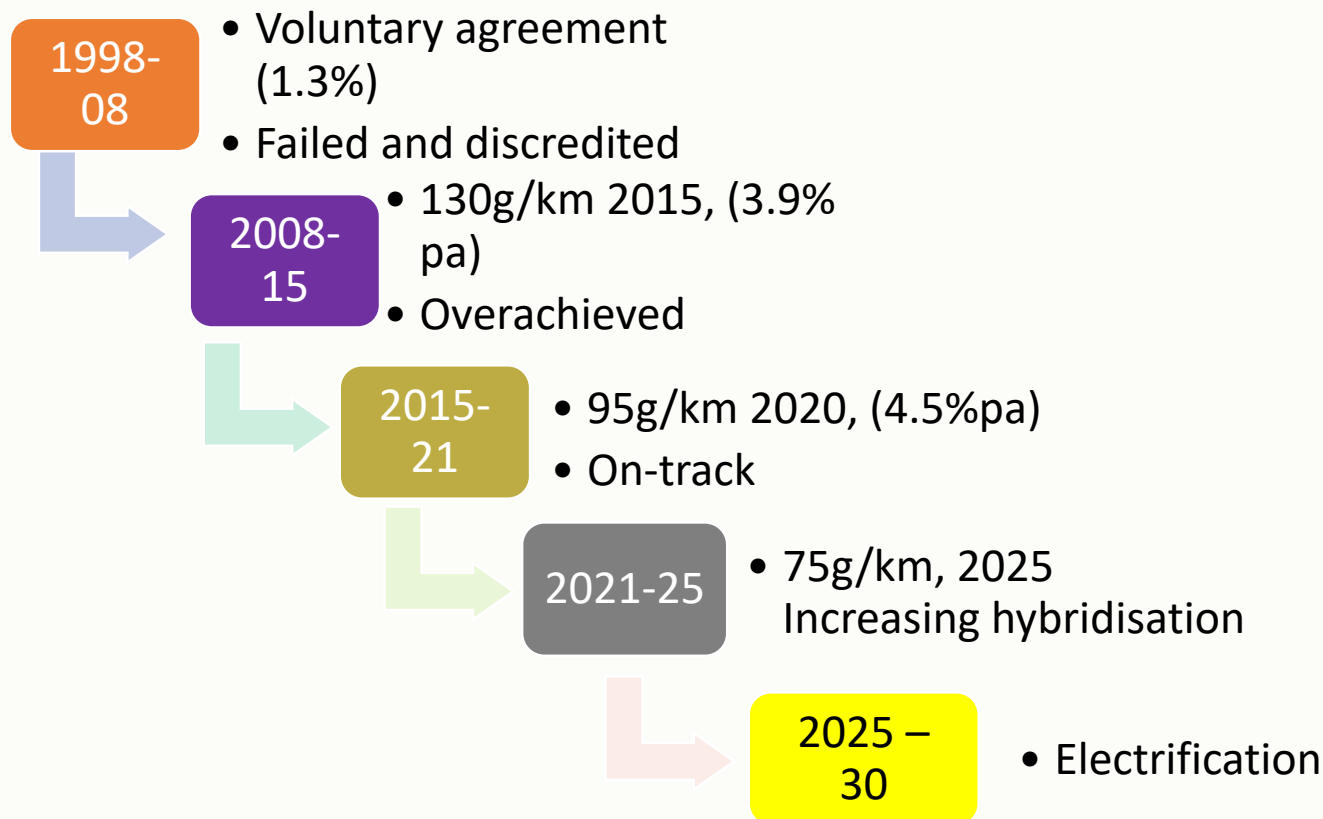
Trip  
Efficiency



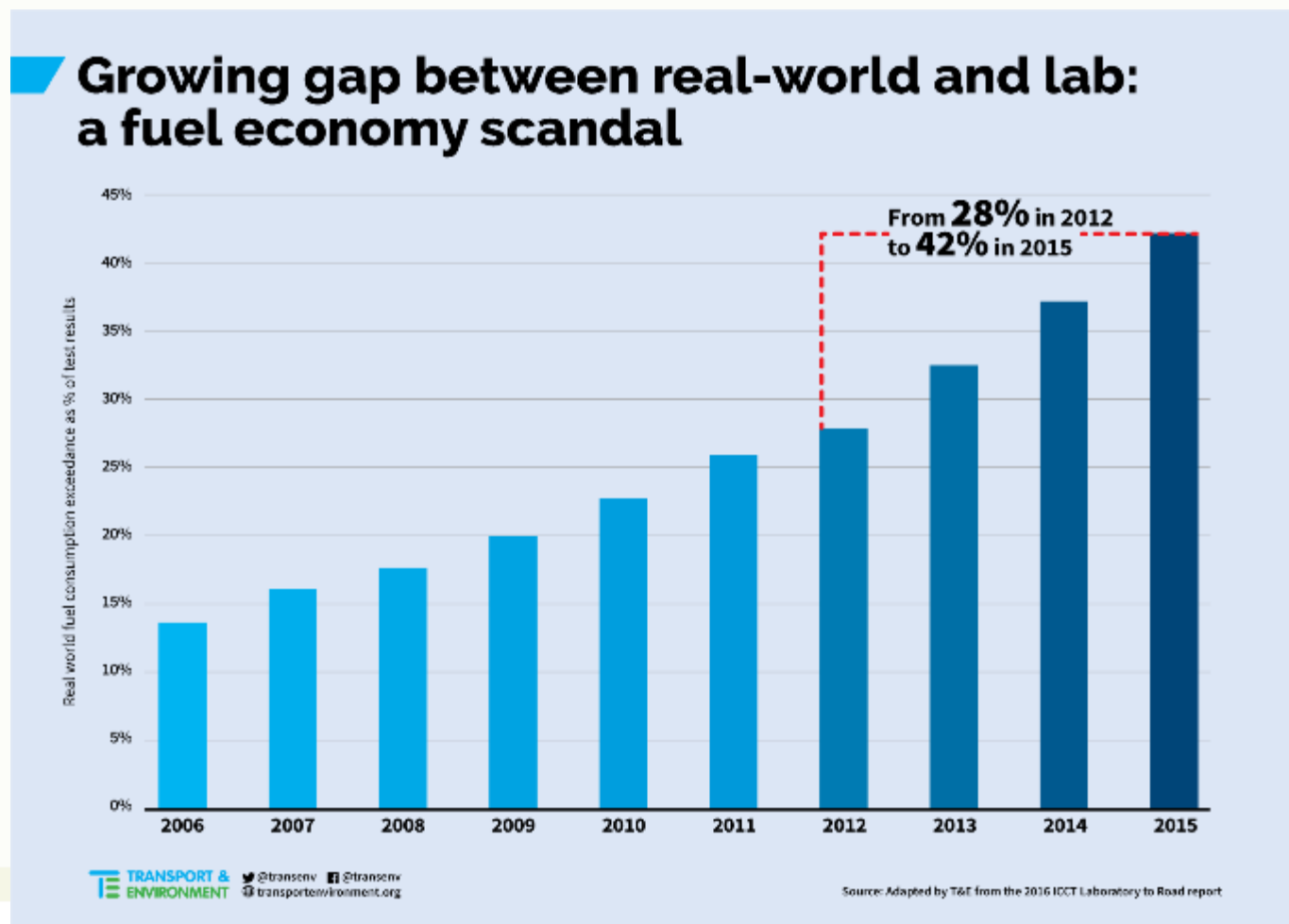
Improve the energy  
efficiency of transport  
modes and vehicle  
technology

Vehicle  
Efficiency

# Car (and van) CO2 standards are lowering Emissions



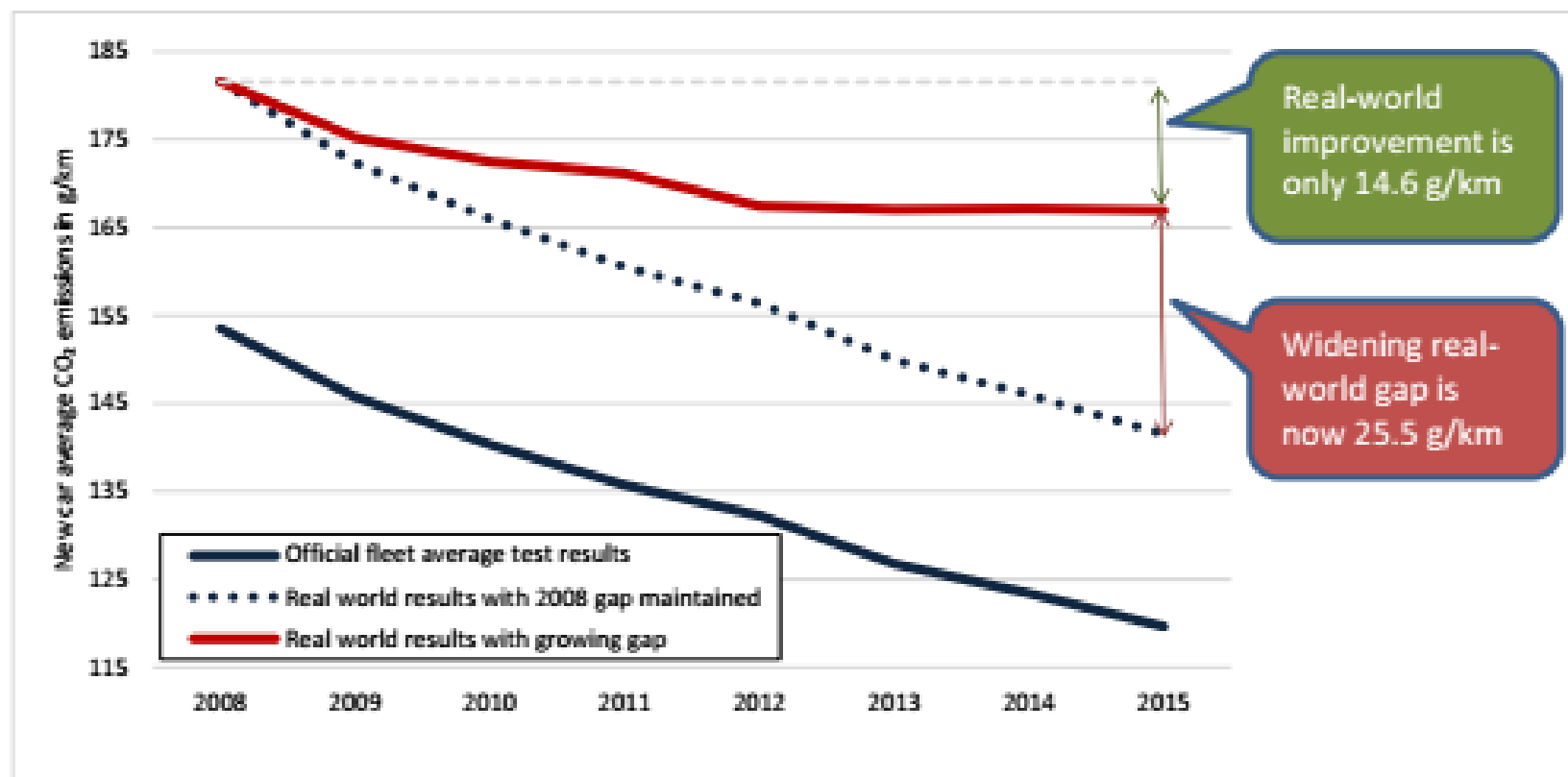
# MIND THE GAP: Cars CO2 emissions, much reduction is on paper



# Common ways for test manipulating



# Why test manipulation must be stopped



**Fig 3: Official CO<sub>2</sub> test results versus the real world outcomes in 2014 for private motorists (derived from ICCT, 2016 and EEA official CO<sub>2</sub> data)**



# From NEDC to WLTP: good but not enough.

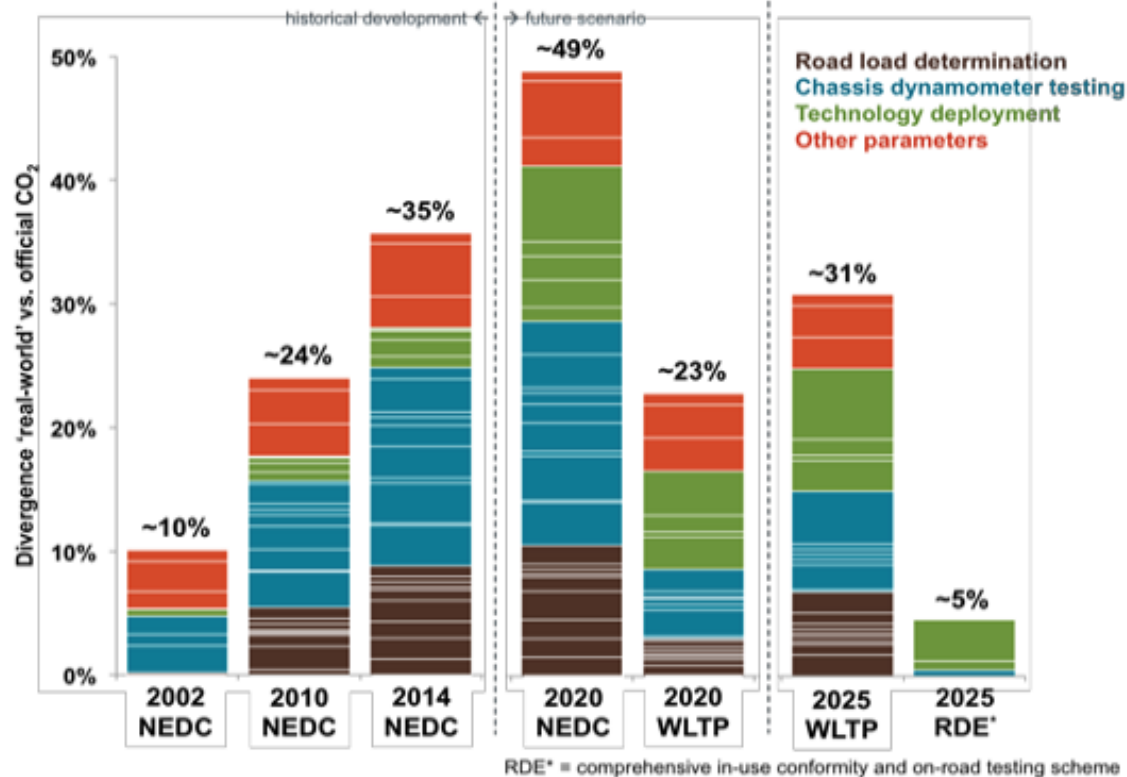


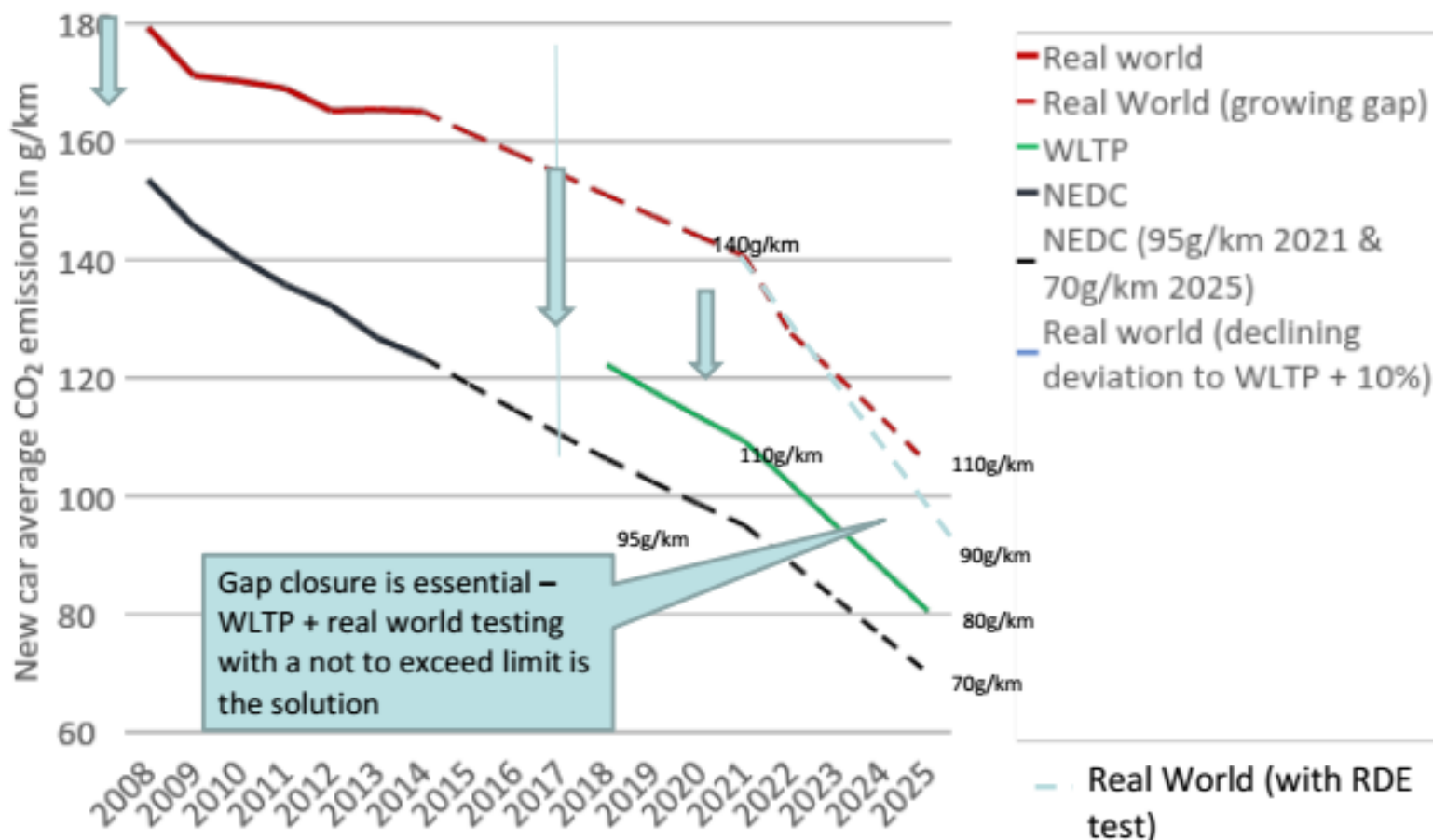
Fig 2: Causes of the gap between CO<sub>2</sub> test results and real-world driving

# RDE + WLTP significantly lower the gap



# A NOT TO EXCEED LIMIT AND REAL WORLD TEST IS NEEDED TO DELIVER EMISSIONS REDUCTIONS ON THE ROAD

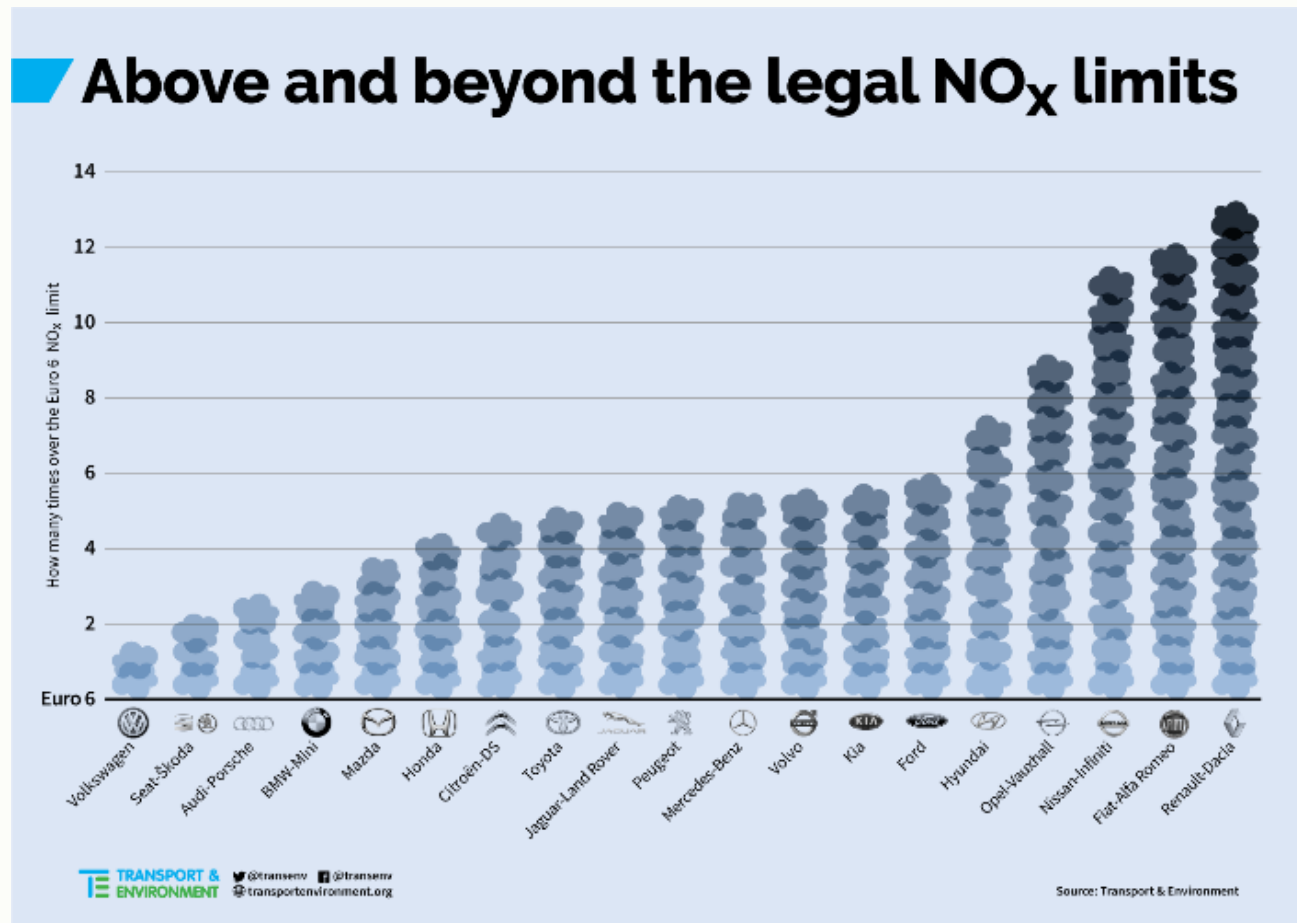
52



# ISSUES: DIESEL

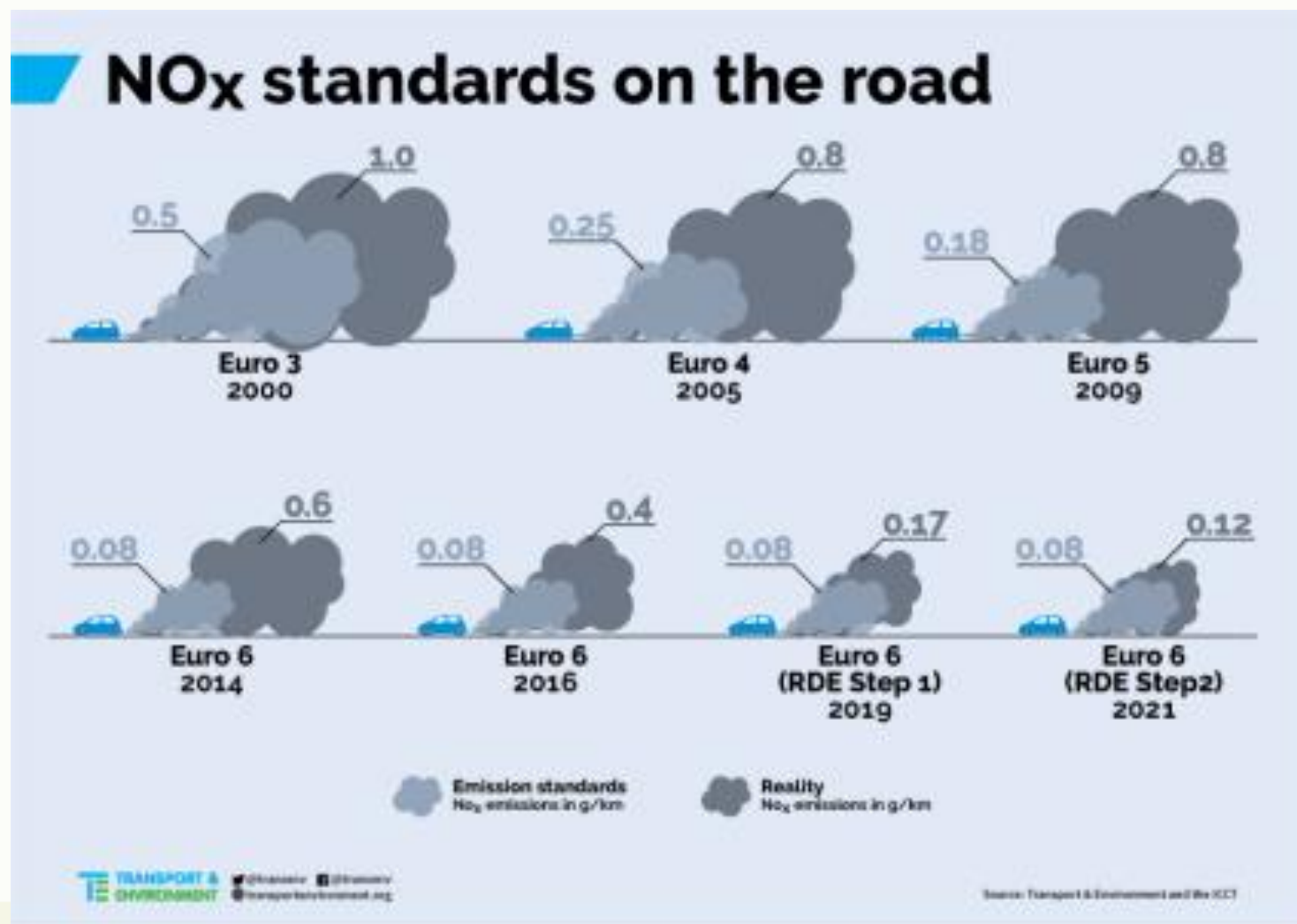


# AIR QUALITY: Dieselgate



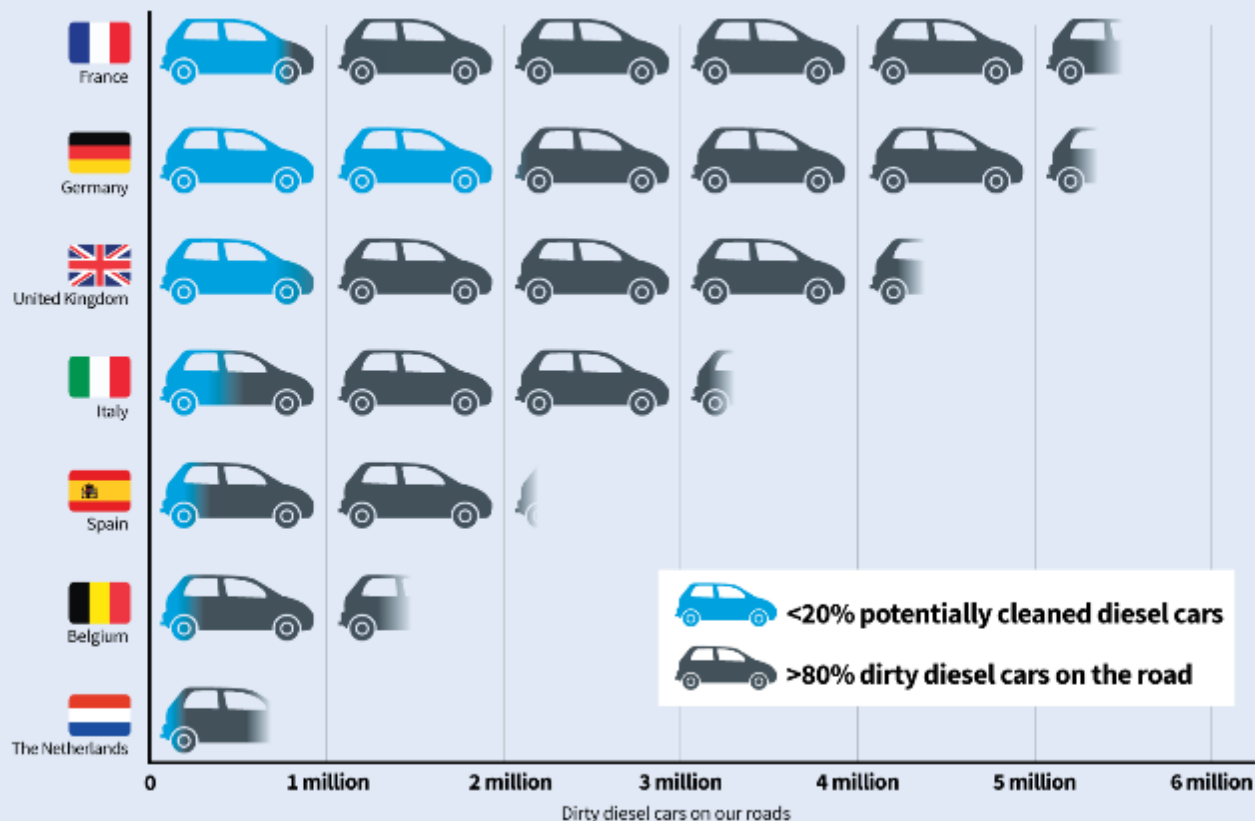


# AIR QUALITY



# MINIMAL RECALL ACTION SO FAR:

At least 80% of dirty diesel cars remain on our roads



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Source: Transport & Environment, EEA and ICCT



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# Europe: a diesel island

7 in 10 diesel cars and vans are sold in Europe

1%  
U.S.A.

2%  
China

3%  
South Korea

70%  
Europe

2%  
Turkey

15%  
India

Rest of the world: 7%

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Source: Global Fuel Economy Initiative & OICA



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# Euro emission standards: passenger cars

Euro stage	Year of entry into force for new models <sup>a</sup>	CO g/km	HC	HC+NO <sub>x</sub>	NO <sub>x</sub>	PM	PN number/km
<b>Compression ignition (diesel)</b>							
Euro 1	1992	2.72	-	0.97	-	0.14	-
Euro 2	1996	1.0	-	0.7	-	0.08	-
Euro 3	2000	0.64	-	0.56	0.50	0.05	-
Euro 4	2005	0.50	-	0.30	0.25	0.025	-
Euro 5a	2009	0.50	-	0.23	0.18	0.005	-
Euro 5b	2011	0.50	-	0.23	0.18	0.005	6.0x10 <sup>11</sup>
Euro 6	2014	0.50	-	0.17	0.08	0.005	6.0x10 <sup>11</sup>
<b>Positive ignition (petrol/gasoline/LPG/CNG)</b>							
Euro	1992	2.72	-	0.97	-	-	-
Euro 2	1996	2.2	-	0.5	-	-	-
Euro 3	2000	2.3	0.20	-	0.15	-	-
Euro 4	2005	1.0	0.10	-	0.08	-	-
Euro 5	2009	1.0	0.10	-	0.06	0.005 <sup>a</sup>	-
Euro 6	2014	1.0	0.10	-	0.06	0.005 <sup>a</sup>	6.0x10 <sup>11</sup> **

<sup>a</sup> models already in production must comply typically around one year later

<sup>\*\*</sup> applicable only to direct injection engines

# BETTER ENFORCEMENT NEEDED

## EU Market Surveillance Mechanism



Spot check cars  
on EU roads



Audit  
national authorities



Investigate complaints  
on non-compliance

### Management Board



Commission



National  
vehicle experts



Industry: carmakers,  
testing services



Civil society,  
NGOs

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Source: Transport & Environment

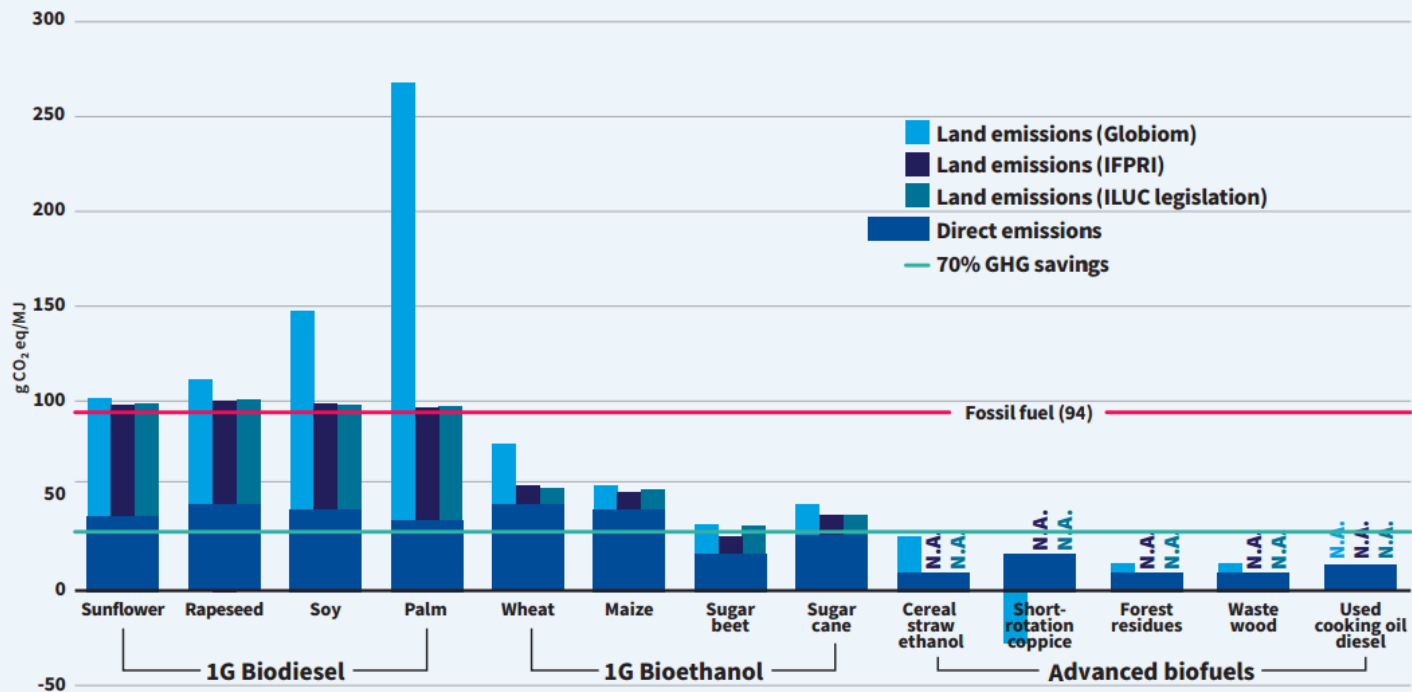


• **ALTERNATIVES**

# **E-mobility & biofuels**

# NOT ALL FUEL SUBSTITUTES REDUCE EMISSIONS















## Direct emissions plus land emissions



# NATURAL GAS – NOT A CLIMATE OPTION

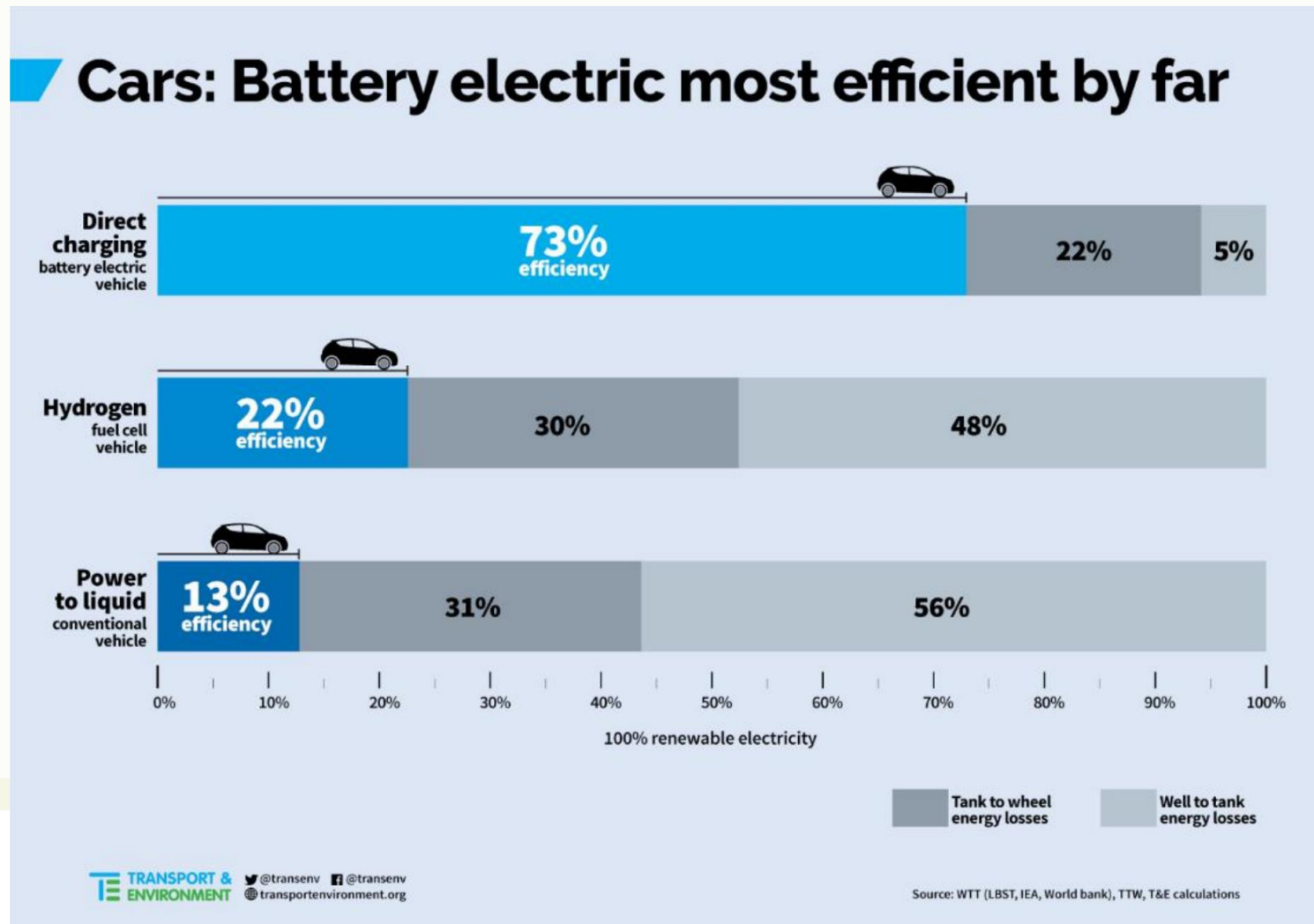
- Very inefficient in reducing climate gas and air pollution
- High societal costs
- Not a 'bridge fuel' but dead end

## Natural gas vehicles: High costs, few benefits

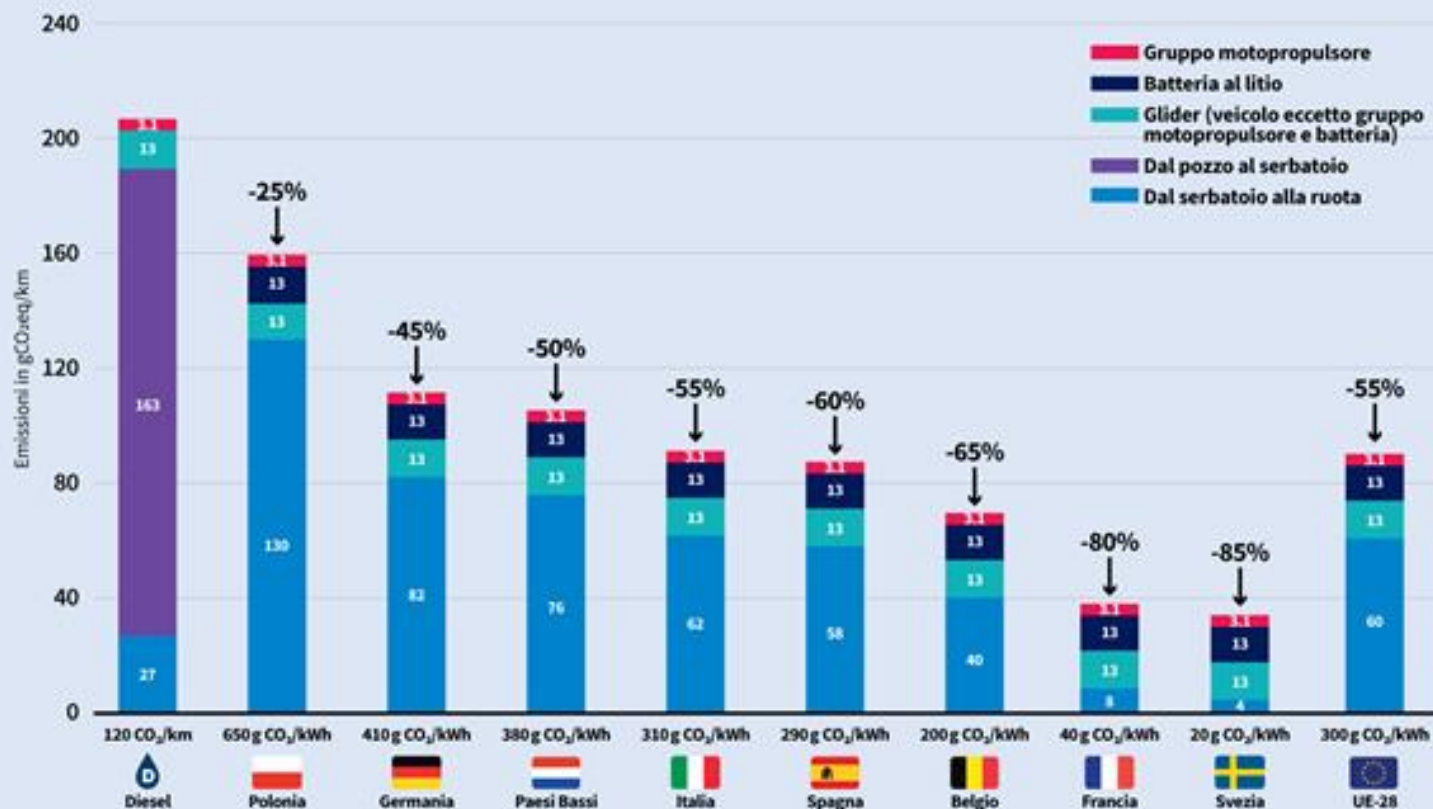
vs.	Natural gas emissions		Natural gas costs	
	CO <sub>2</sub>	NO <sub>x</sub>	Operator costs	Societal cost
 Diesel cars			€	€
 Petrol cars		—	€	€
 Vans			€	€
 Small rigid trucks		—	€	€
 Articulated trucks		—	€	€
 Buses		—	€	€



# EVs: THE MOST EFFICIENT SO FAR

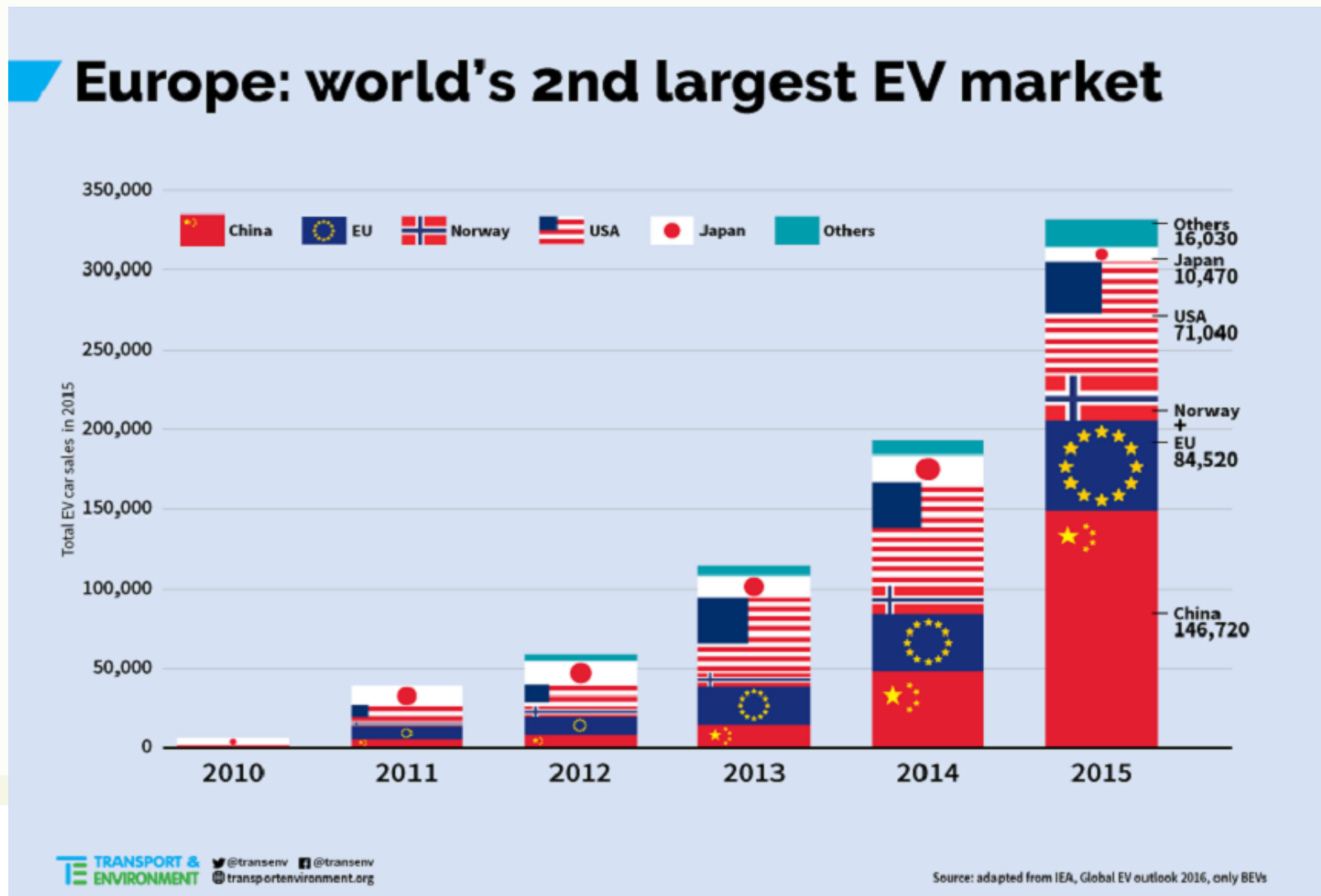


## L'impatto climatico dei veicoli elettrici per differenti mix energetici



# INDUSTRY COMPETITIVENESS

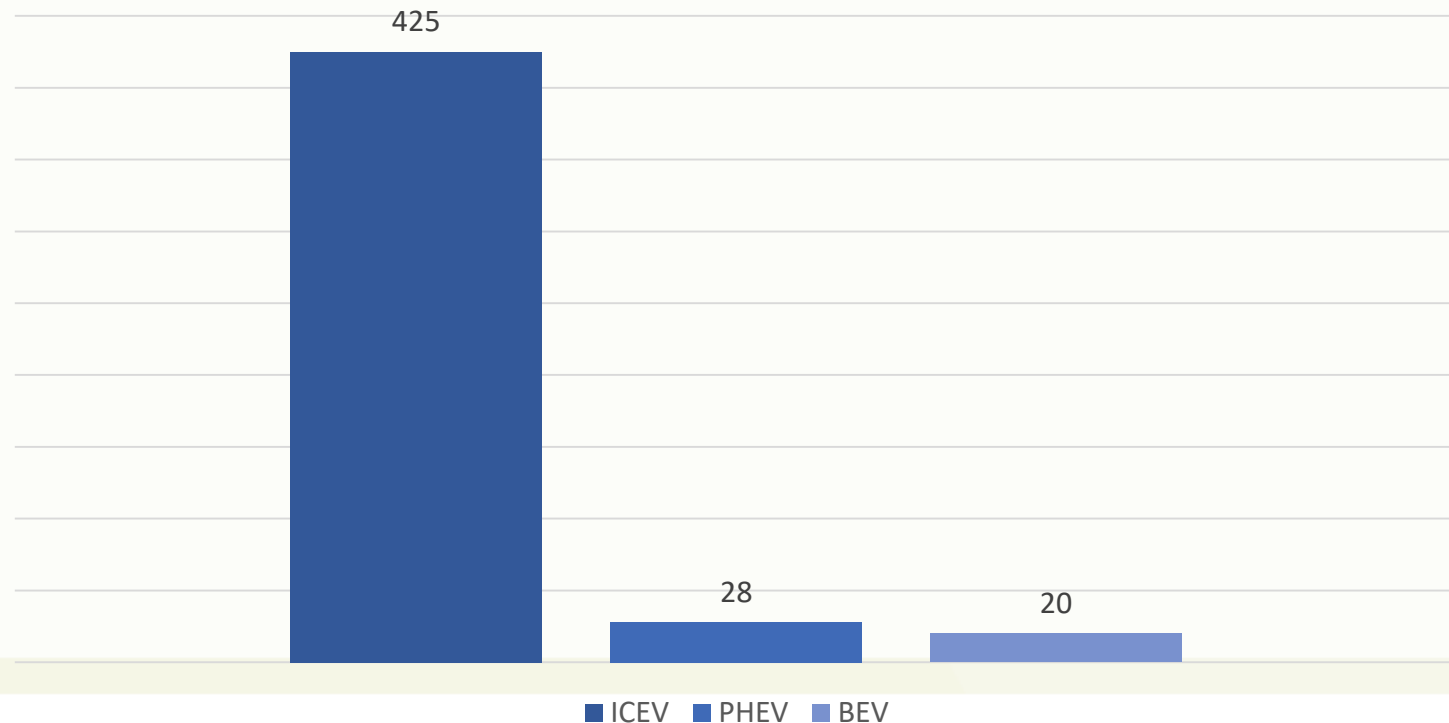
## CHINA: LEADING EV MARKET GLOBALLY





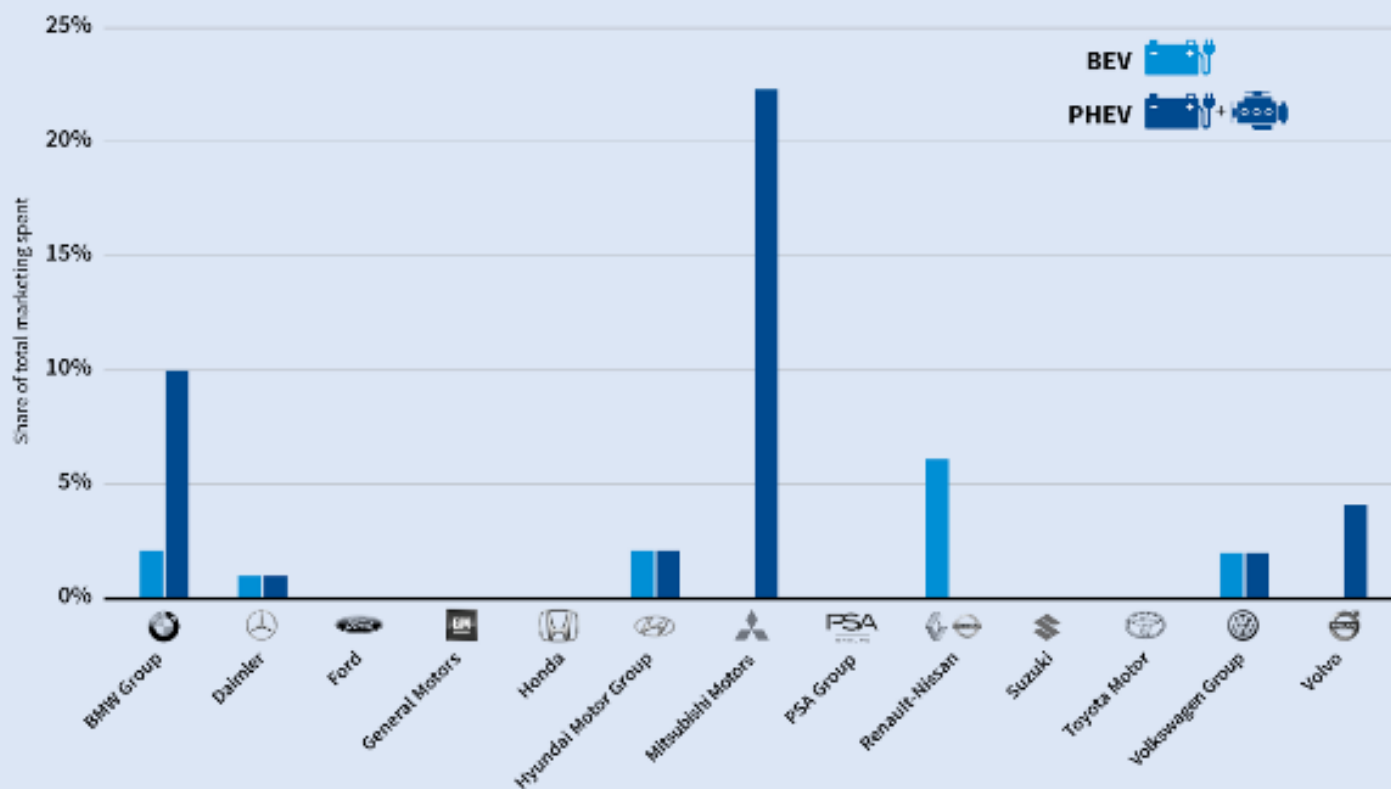
# EU: LIMITED CHOICE UNDERMINING DEMAND FOR EVs

Number of Models available on EU market 2016



# EV SUPPLY LAGGING BEHIND

## Marketing spent in 2016 across EU core markets



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transportenvironment.org

Source: Transport & Environment, Eliaquity



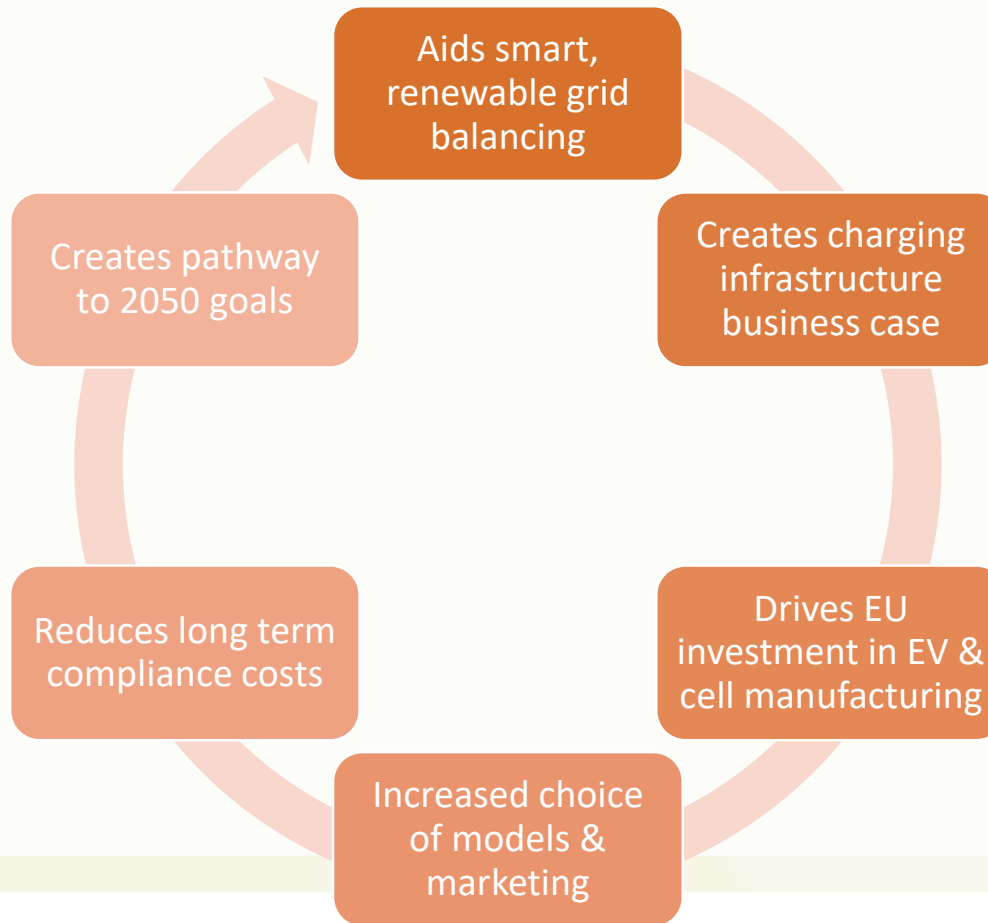
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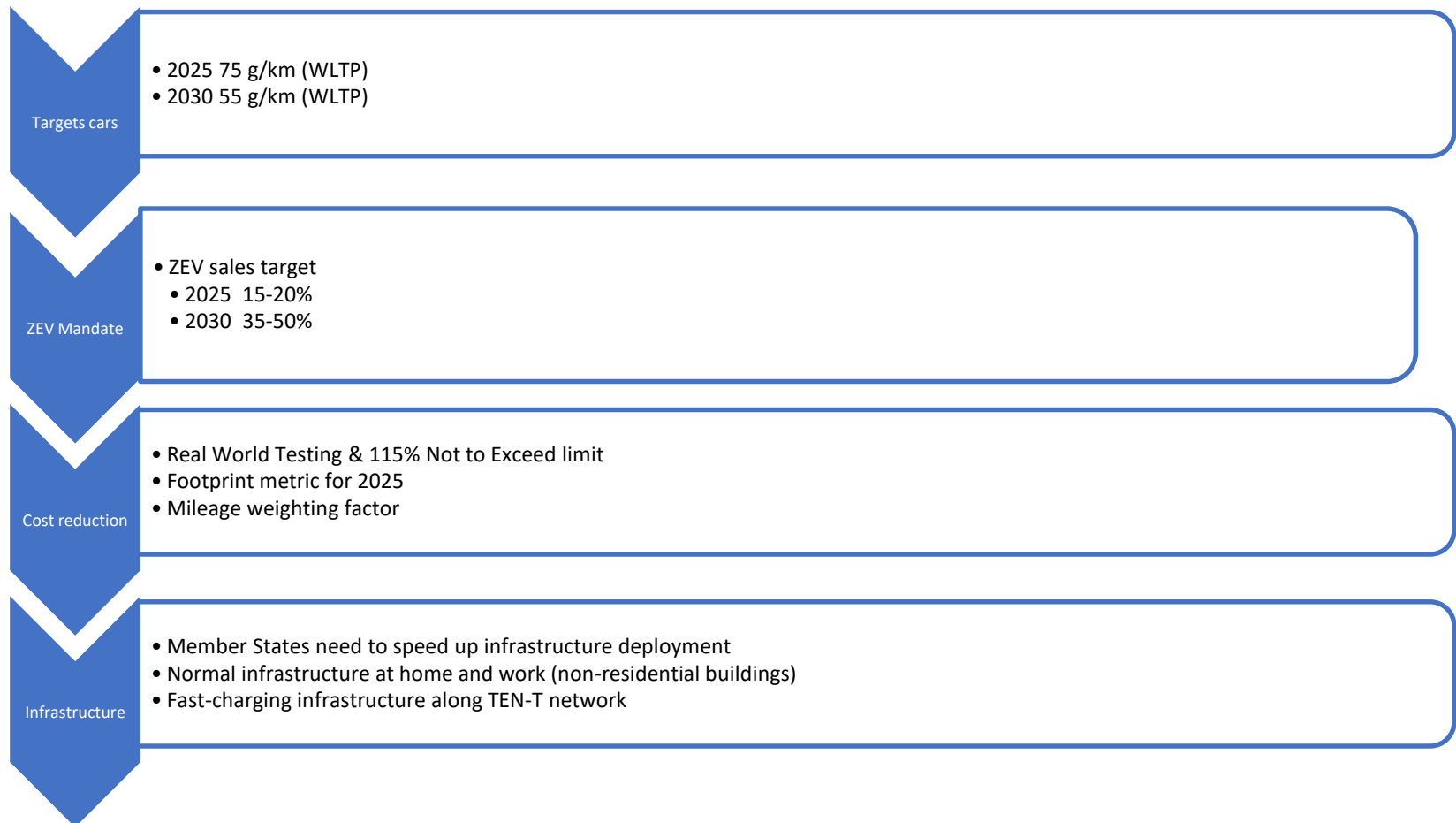


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# ZEV TARGET: THE FUTURE IS ELECTRIC



# NOVEMBER MOBILITY PACKAGE: OPTIMAL DESIGN OF POST 2020 CAR AND VAN CO2 STANDARDS



# WHAT THE EU SHOULD DO?

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**Type approval reform: independent & effective enforcement at EU level**

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**2025 CO2 targets for cars, vans and trucks**

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**ZEV mandate as part of CO2 regulations**

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**Technology neutral Euro 7 standard**

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**Phase out land-based biofuels by 2025**

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**In use checks & real-world tests**

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# Accordo di Parigi e Agenda 2030 per lo sviluppo sostenibile

## Grazie per l'attenzione!

Veronica Aneris

Prossimo webinar:

Mercoledì 15 novembre 2017 (ore 15,30-16,30)

**L'alternanza scuola – lavoro,  
opportunità per i giovani e le  
aziende.**

*Laura Bruni, Schneider Electric - GdL "Efficienza  
Energetica" Kyoto Club*



Per l'elenco completo dei webinar consulta: [www.kyotoclub.org/formazione/accordo-parigi-agenda-2030-sviluppo-sostenibile](http://www.kyotoclub.org/formazione/accordo-parigi-agenda-2030-sviluppo-sostenibile)



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