



Railways and climate: a perfect match

RAIMONDO ORSINI

ERESS FORUM 2023, JUNE 15TH

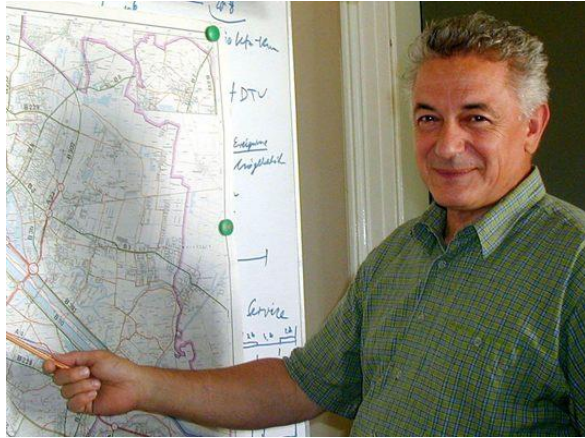


**FONDAZIONE
PER LO SVILUPPO
SOSTENIBILE**

Sustainable Development Foundation



Let's play !



The Austrian transport expert Hermann Knoflacher wanted to make clear, back in the 1970s, **how incredibly large is the space occupied by cars** in the city of Wien. How did he do it?

1

He planted 3 small trees in each available parking space.

2

He marked parked cars with a big sticker: "Don't park on our streets".

3

He built a *walking frame* and walked the streets of his city with it.

**WITH NUMBERS YOU
CAN DO
EVERYTHING...**

A trip on an
Easyjet airplane
is greener than a
trip in a Toyota
Prius?



Mc Donald's can
transport a
cheeseburger for 1
million kilometers
without not even one
single drop of diesel ?

YES!!!



3 DECEMBER 2005



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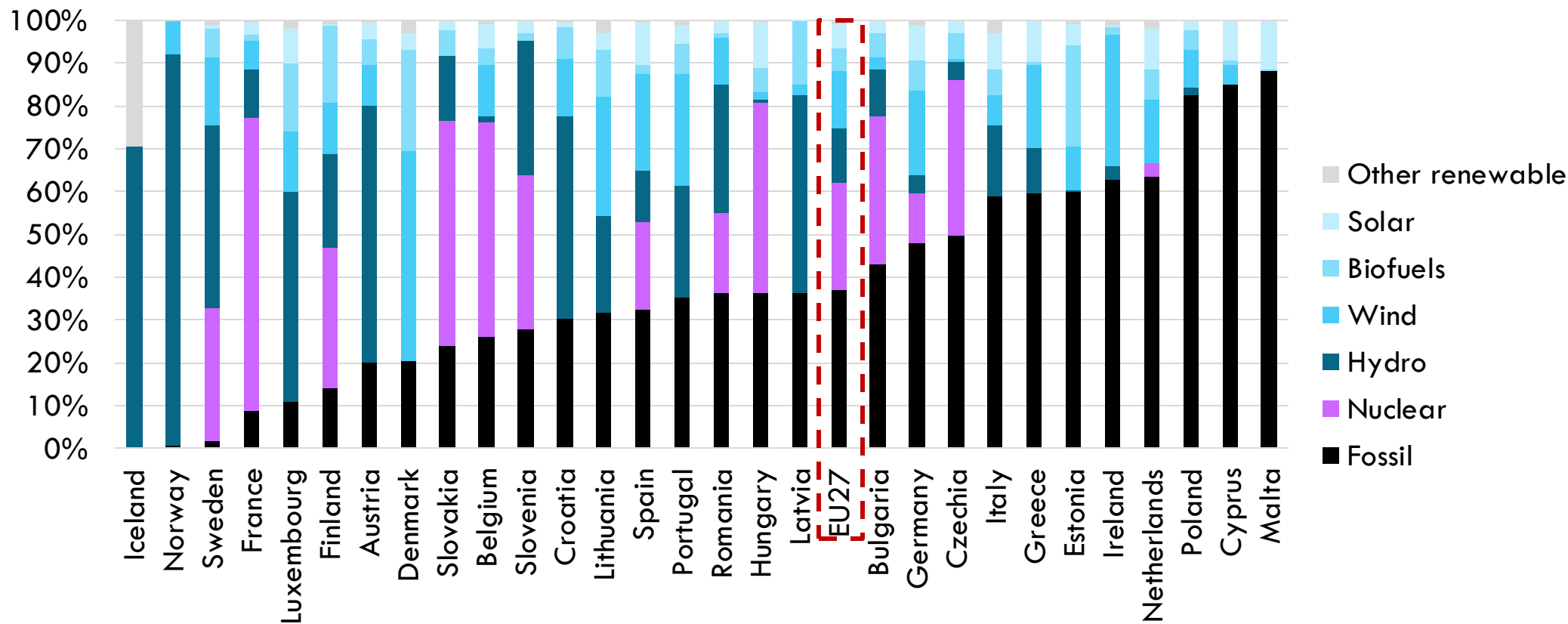
Just what the environment needs from a car. Water.

If nature had the wish, what do you think it would be? A car that doesn't produce exhaust? We thought so too. That's why our hydrogen-powered Fuel Cell vehicles only emit water. In fact, as they've proven in recent road tests, they may well be the alternative drive systems of the future. At DaimlerChrysler Research we're developing these intelligent technologies today. For the sustainability of tomorrow.

To find out more about "Energy for the Future" visit www.daimlerchrysler.com.

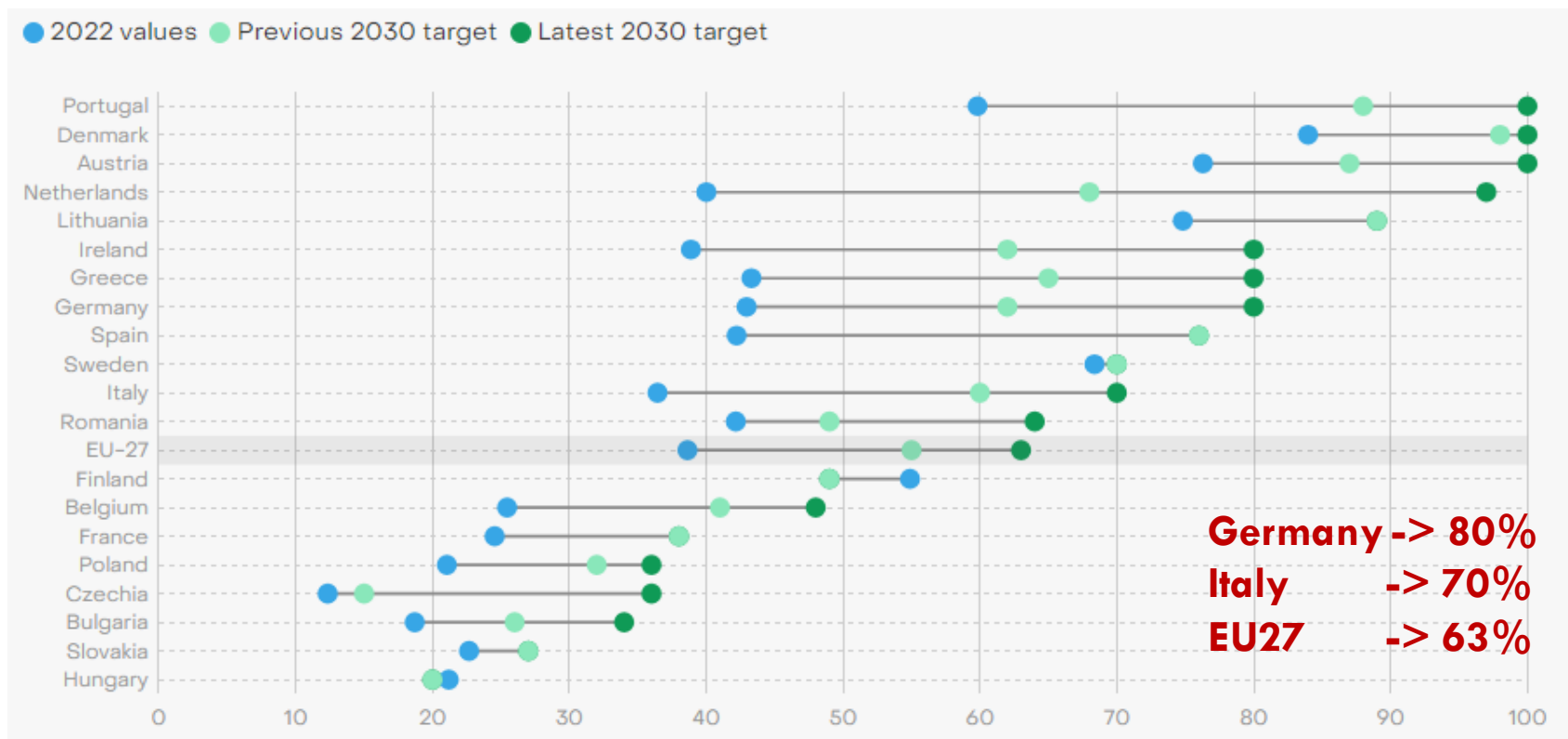
DAIMLERCHRYSLER
Energy for the future. To drive.

EU production of electricity by source - 2021



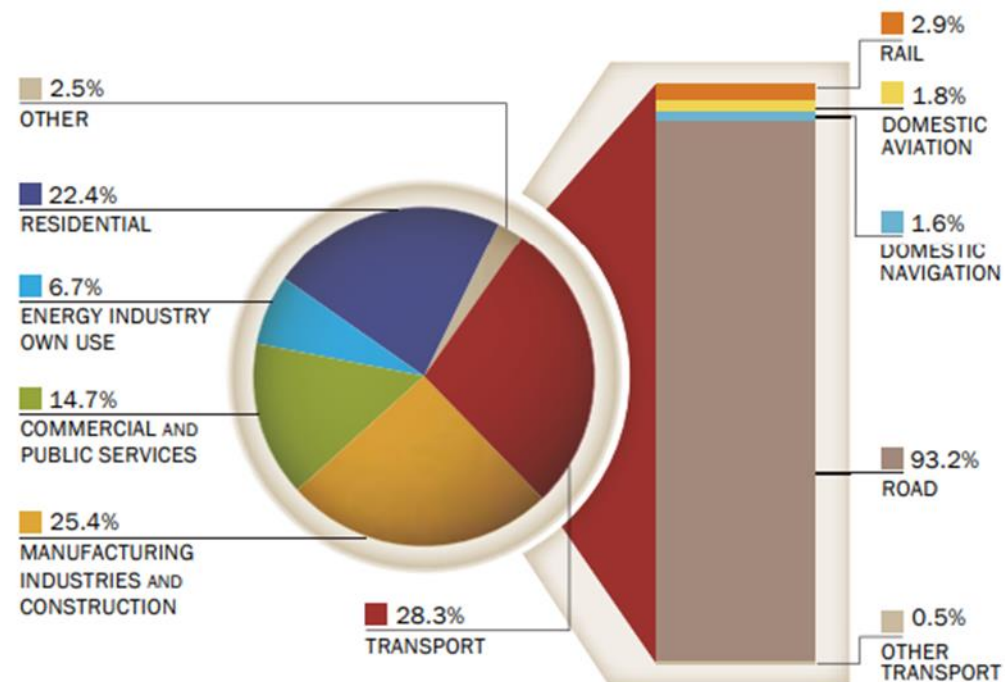
EU countries accelerate fossil fuel phase outs

Current (2022) and 2030 planned renewable share in EU-27 electricity generation



Source: Ember

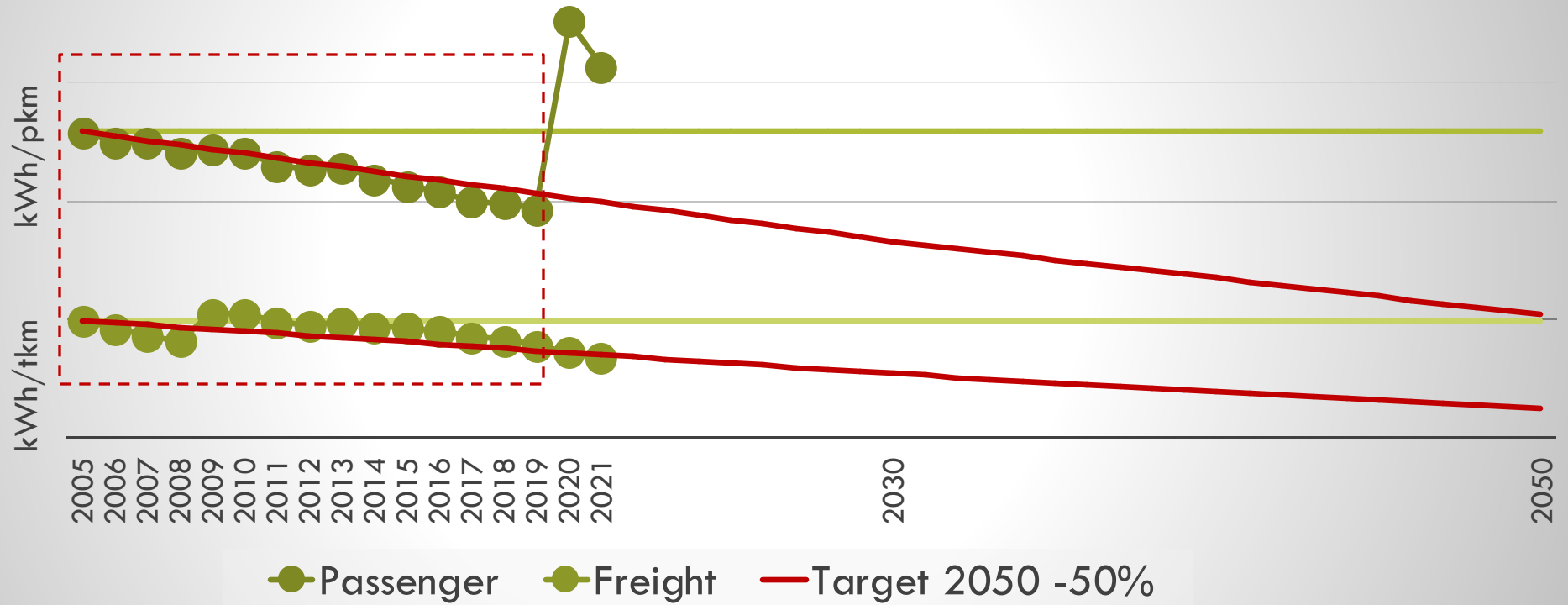
Share of CO₂ emissions from fuel combustion by sector



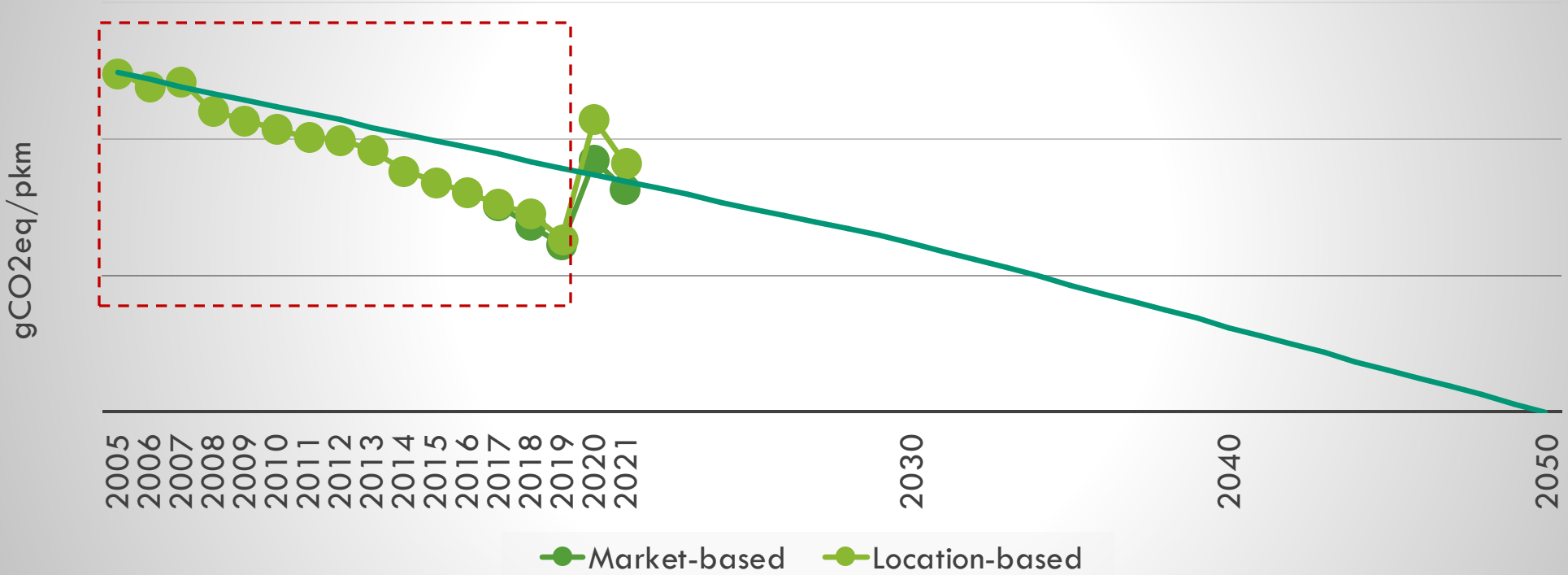
Note: Electricity and heat production related emissions are reallocated to the end-use sectors. In transport, all the emissions from electricity and heat production are reallocated to rail. "Other transport" includes emissions from Pipeline transport.

Source: Elaboration by Susdef based on IEA (2017a)

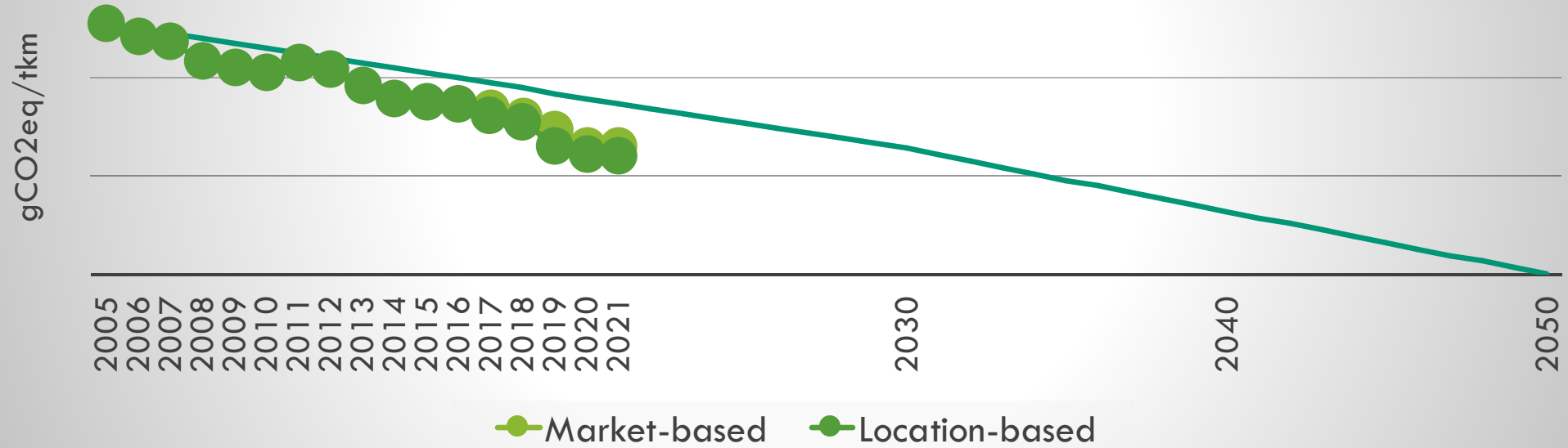
SPECIFIC ENERGY CONSUMPTION TREND



SPECIFIC CO2EQ EMISSIONS (PASSENGER) TREND AND TARGETS



SPECIFIC CO₂EQ EMISSIONS (FREIGHT) TREND AND TARGETS



SOME RESULTS FROM THE ERESS SURVEY - RAILWAY ENERGY IN EUROPE



**In your opinion, who in
the railway sector has
more trust in other?**

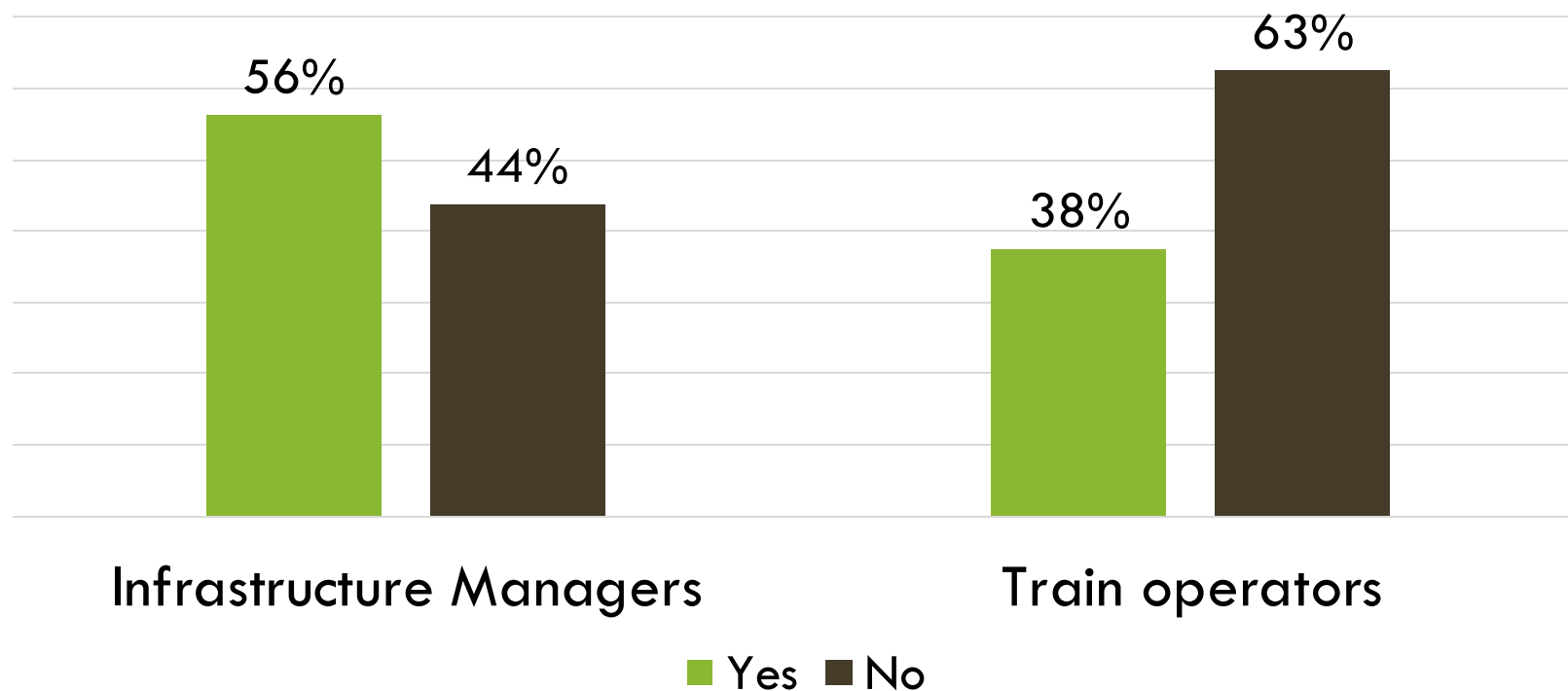
1

IMs have more
trust in RUs

2

RUs have more
trust in IMs

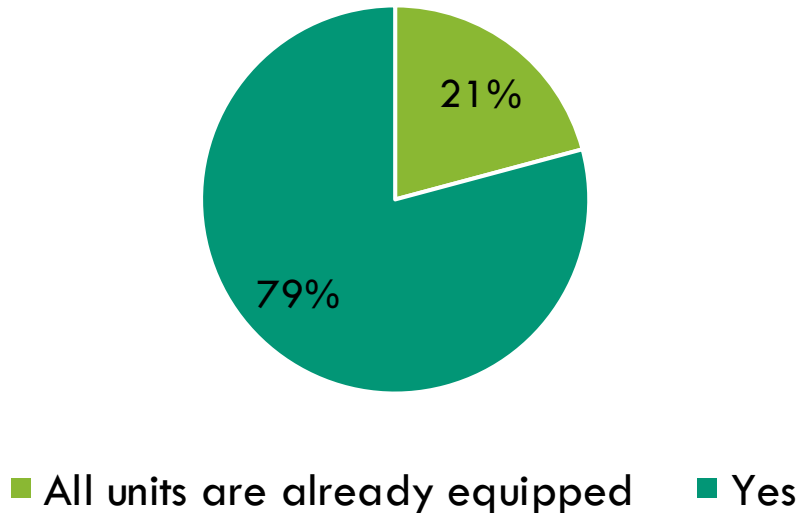
Do you think that the cooperation between IMs and RUs is strong enough regarding energy use?



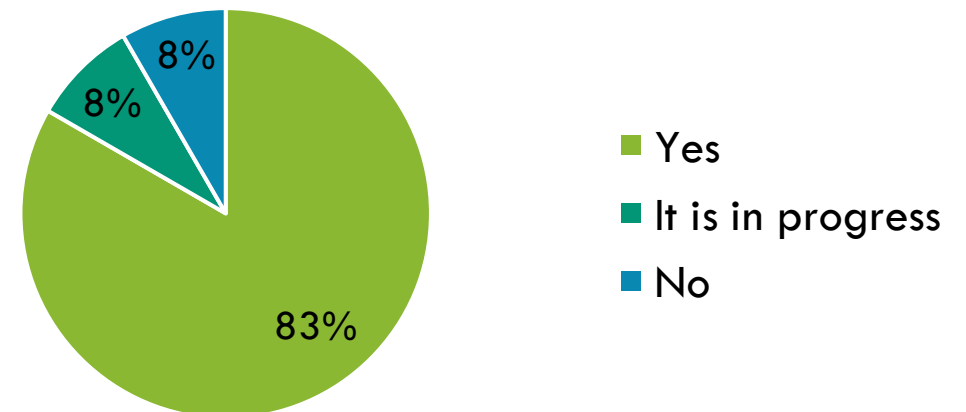
In 2017, nearly half of the respondents had less than 100 energy meters in their country.

Today the average number of meters is more than 1000 and it will be surely increase in 2024.

Do you expect to have more meters in 2024?



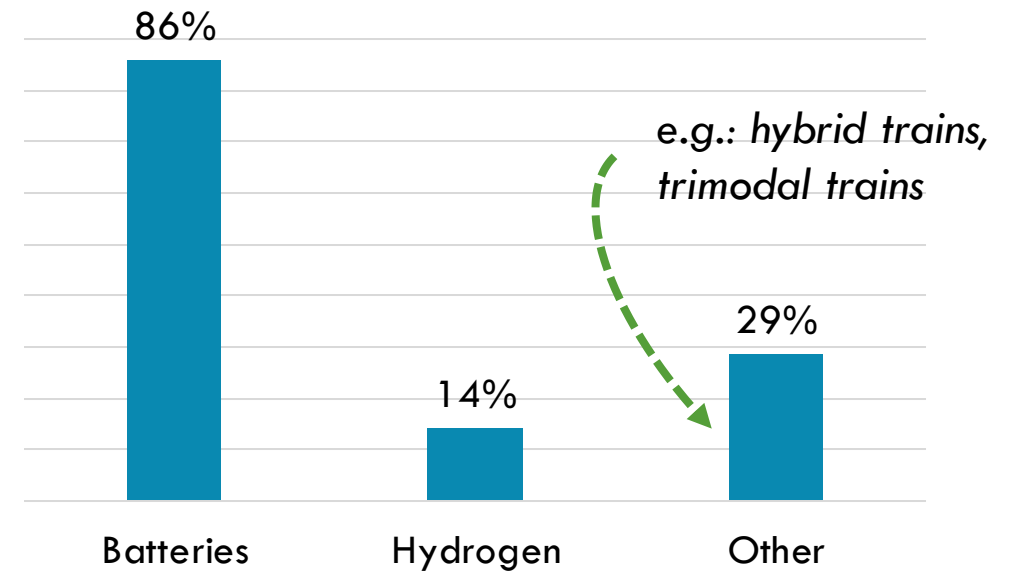
Do you have an Energy Settlement System to correctly handle metering data from trains for billing purposes?



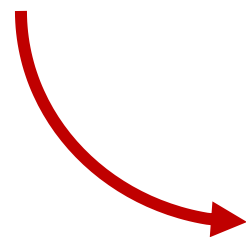
Which measures have you taken to save energy?



What new technologies have been adopted in your country?



To see all the survey results



HOW CAN WE TALK ABOUT CLIMATE WITHOUT SCARING PEOPLE?

You will be surprised to know that my inspiration for communication on environmental issues comes from a Norwegian...



Per Espen Stoknes

foreword by Paul Hawken

Tomorrow's Economy

A Guide
to Creating
Healthy
Green Growth



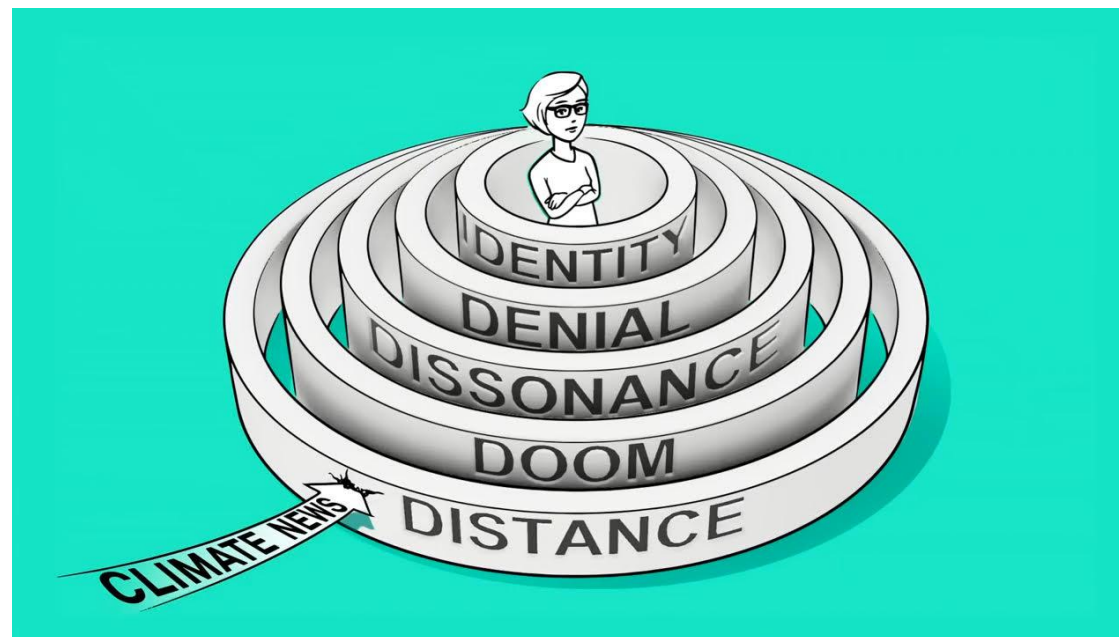


TED

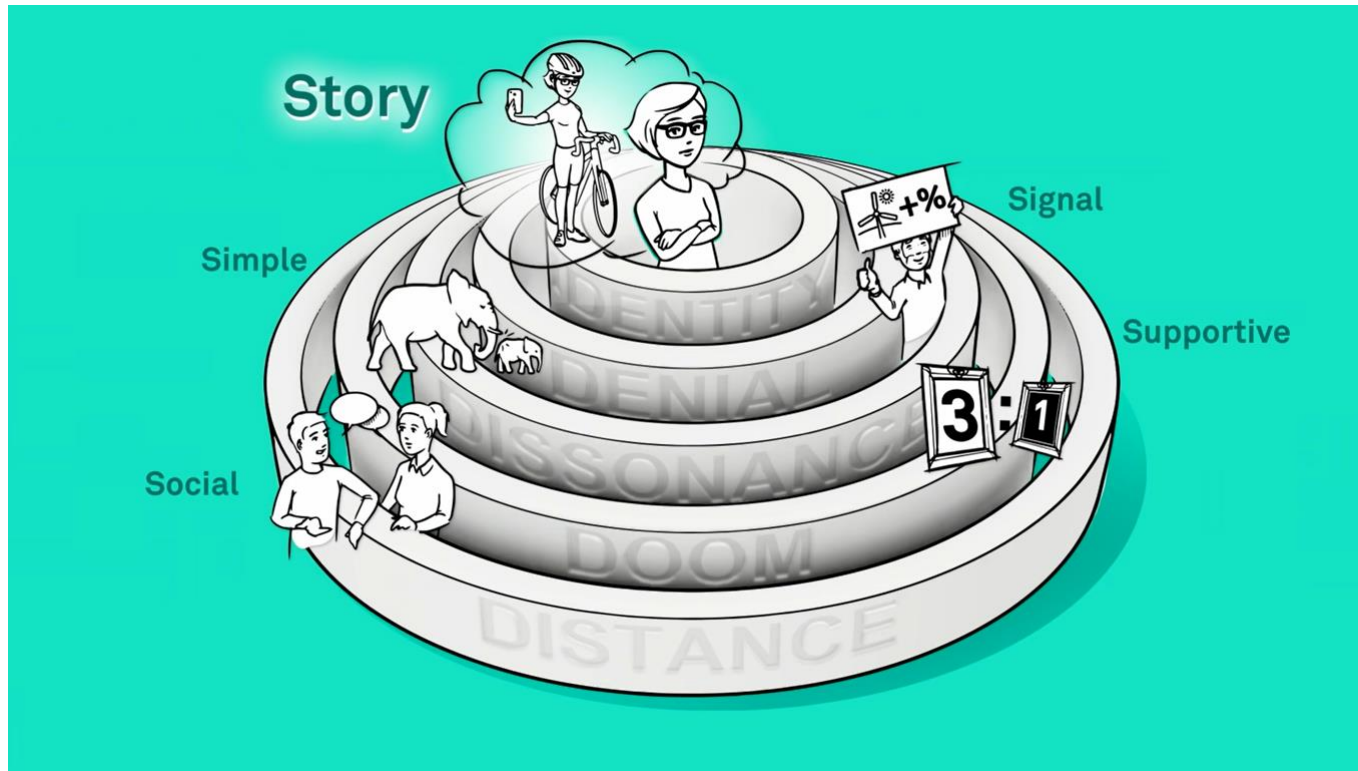
clideo.com



5 INNER DEFENCES



5 MAIN SOLUTIONS



Flip “Distance” to “Social”

Flip “Doom” to “Supportive”

Flip “Dissonance” to “Simple”

Flip “Deniance” to “Signal”

Flip “Identity” to “Story”

Greenhouse gas emissions by transport mode

Source: Department for Transport
(figures for 2016)

Cars and Taxis

70.3 Million Tonnes

Aviation

(Domestic/International)

35.5 Million Tonnes

HGVs

20.3 Million Tonnes

Rail

2 Million Tonnes



OUR PLANET MEANS THE WORLD TO US

1

AVANTI WEST COAST



THIS TRAIN
REMOVES UP TO

50%

TRAIN TRAVEL
REDUCES CARBON
EMISSIONS BY UP TO
7.7 MILLION
TONNES
IN THE UK EVERY YEAR

GVWR | Great Western Railway

Space Required To Transport 48 People





THANK YOU!

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