Alice de Brauer

V.P., Strategic Environmental Planning

SUSTAINABLE DEVELOPMENT STRATEGY

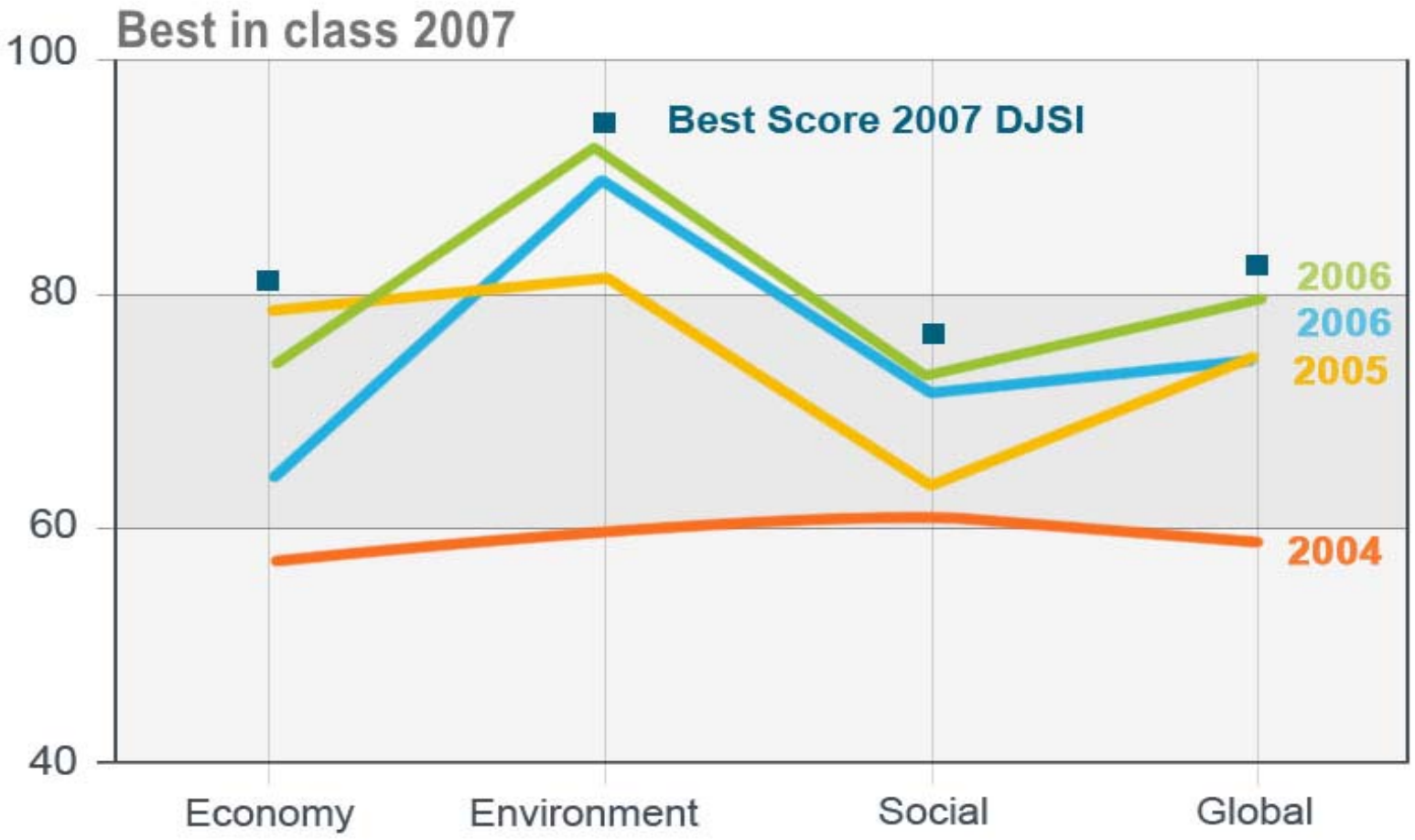
A TWO-PRONGED APPROACH TO THE ENVIRONMENT

TECHNOLOGIES

ENVIRONMENTAL MANAGEMENT

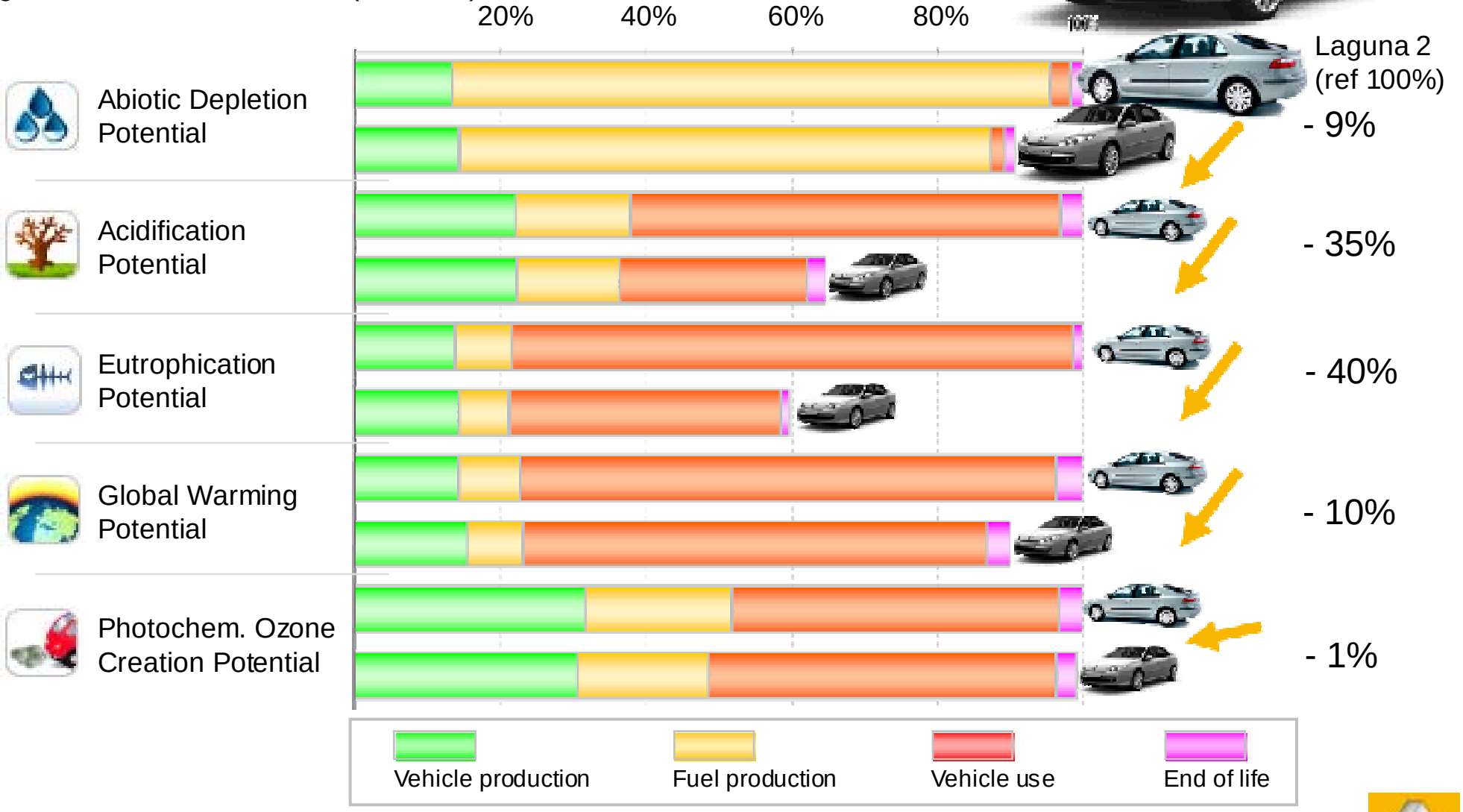
PROVEN RESULTS

SAM Score - Dow Jones Sustainability Indexes

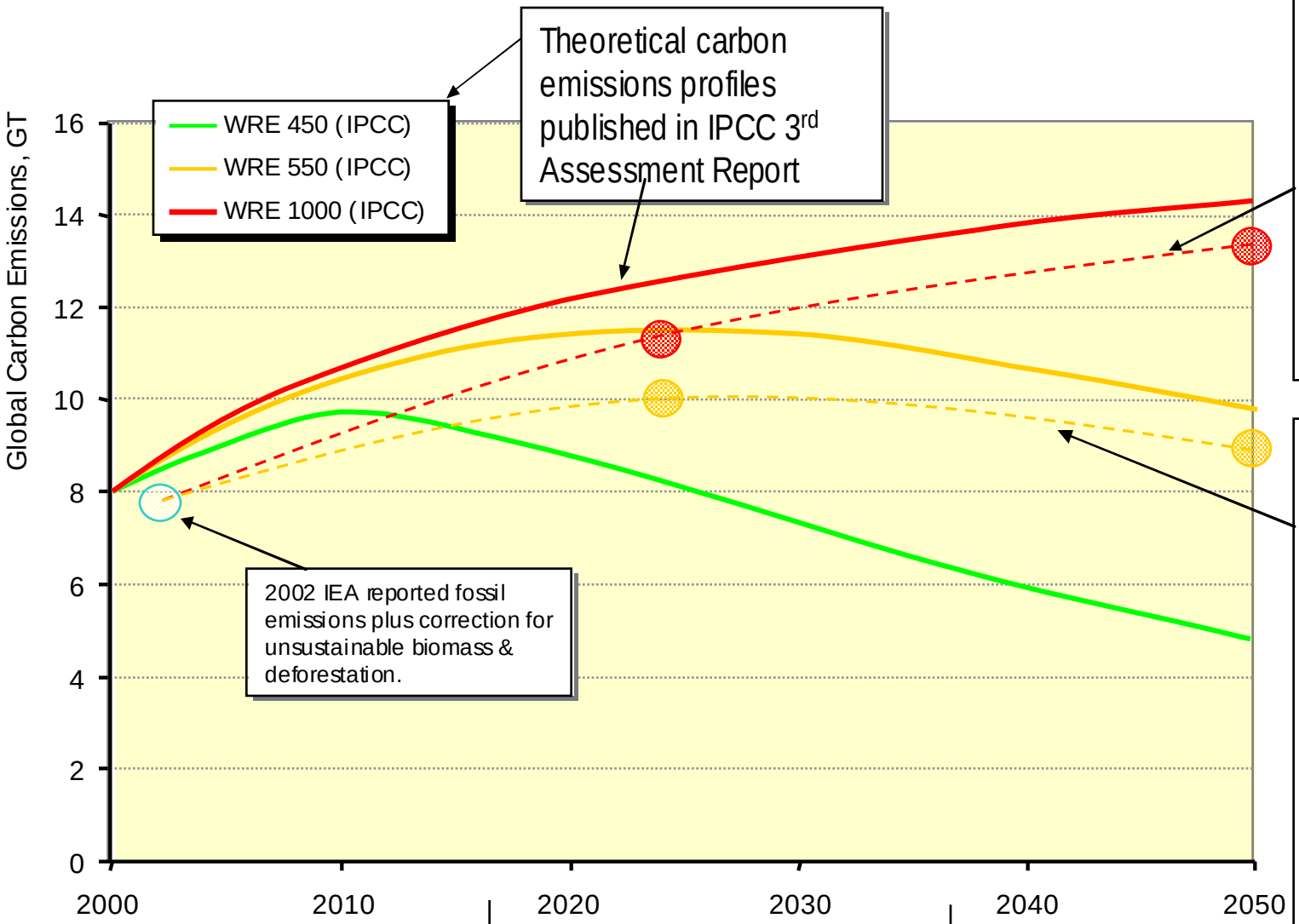


RENAULT MANAGEMENT ON WHOLE LIFE CYCLE

Laguna 3, 1,5dCi 110cv Euro4
Laguna 2, 1,9dCi 110cv Euro3 (ref 100%)



KYOTO II FORECAST :
HIGHT AND LOW CARBON PATHWAYS



>900 ppm Trajectory Energy by **2050**:

- Coal over 2x, no Carbon Capture & Storage (CCS), some coal to liquids.
- Oil up 50%
- Gas over 2x
- Biofuels make up 10% of vehicle fuel mix.
- Electricity 1/3 of final energy.
- Modest increase in nuclear.
- Renewables provide 1/3 of electricity generation.
- Vehicle efficiency up 50%.

<550 ppm Trajectory Energy by **2050**:

- Coal up 50%, but half of power stations use CCS.
- Oil down 10-15%.
- Gas nearly 3x
- Biofuels make up 20% of vehicle fuel mix.
- Hydrogen has arrived.
- Strong shift to electricity as final energy (~50% final energy).
- Strong increase in nuclear.
- Renewables provide half of electricity generation.
- Vehicle efficiency up 100%
- Sustainable biomass practices

OPTIONS FOR CHANGE

Emission reduction

A further shift to natural gas

Nuclear power

Renewables

Bio-products

Carbon capture and storage

Energy conservation and efficiency

Mass transportation

Road transport

Buildings

Low energy appliances

Doing things differently

FUEL ECONOMY IS AN HISTORICAL CONCERN FOR RENAULT

Petrol

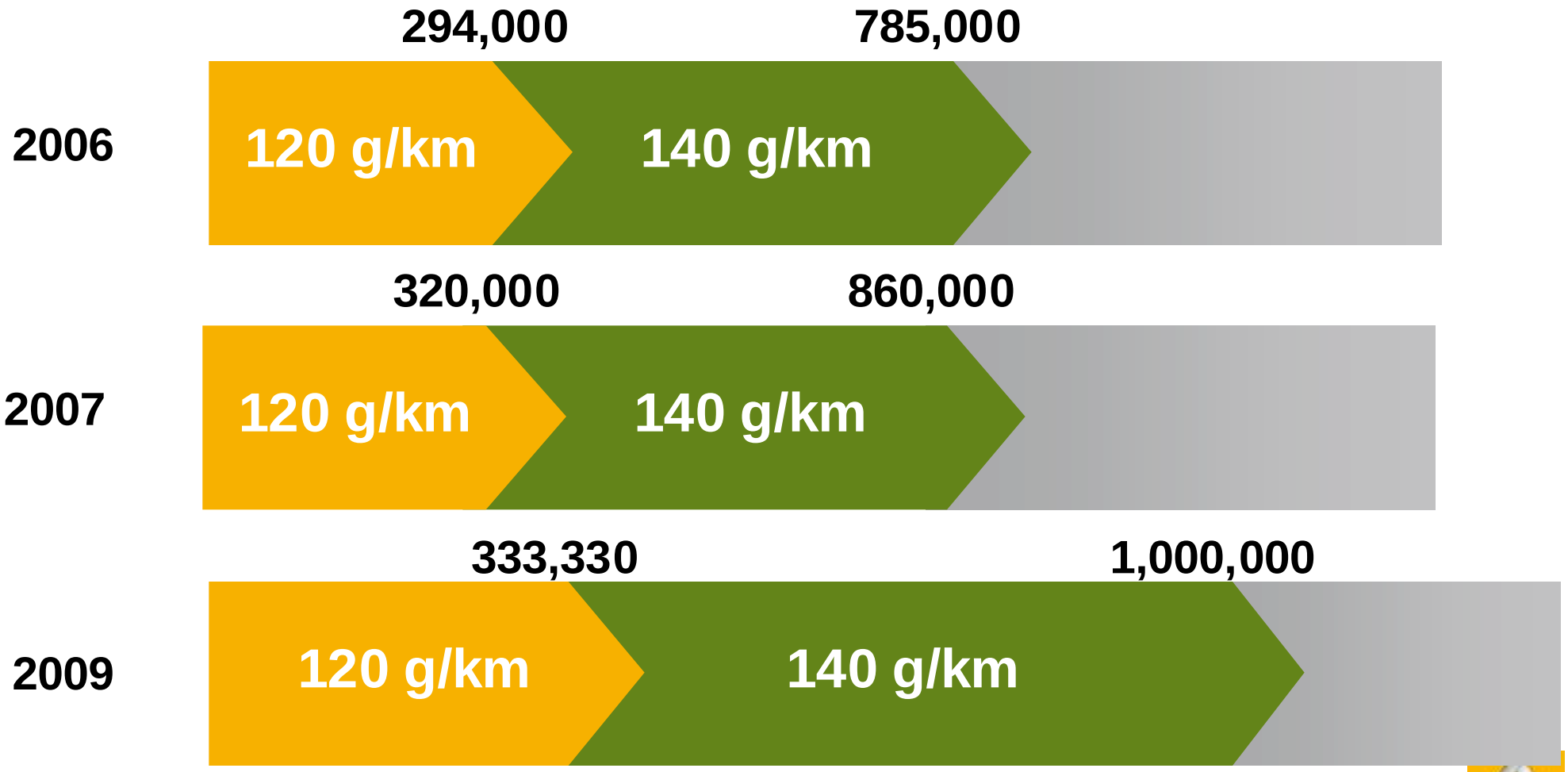
Clio I	1991	8,2 l
Clio II	1999	6,7 l
Clio III	2007	5,9 l

Diesel

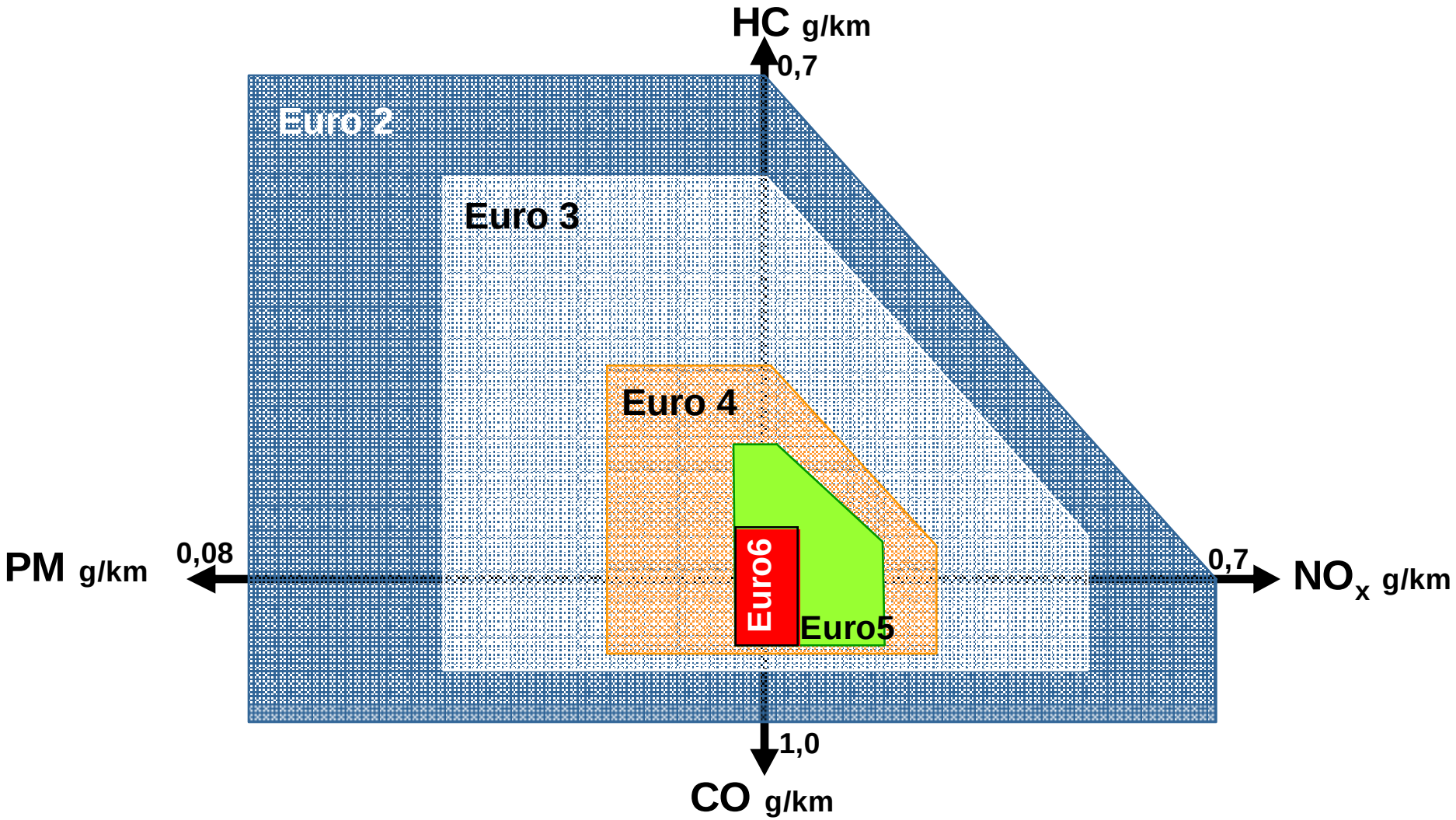
R19	1993	6,5 l
Mégane I	2000	5,2 l
Mégane II	2006	4,5 l

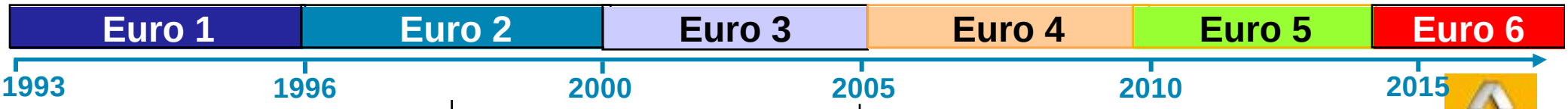
IN FEBRUARY 2006 RENAULT COMMITMENT 2009

Be in the top three in terms of CO_2 emissions



DECREASE BOTH CO2 AND POLLUTANTS EMISSIONS





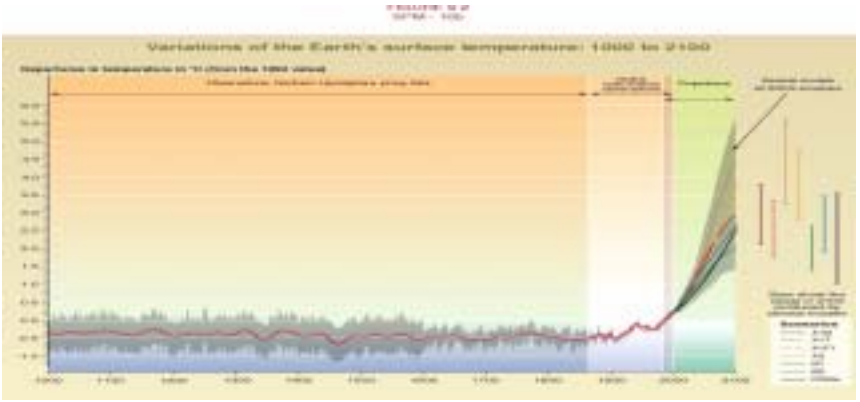
2012 / 2015 EUROPEAN CO_2 REGULATION PROJECT

- Feb. 2007 CO_2 Cars Commission Communication was presented : 120g CO_2/km by 2012 broken up in :
  - ⇒ ***130 g CO_2/km*** *vehicle technologies - OEM CAFE*
  - ***10 g/km*** *:* ***"additional measures" :***
    - Efficient air conditioning
    - Tire pressure monitoring
    - Low rolling resistance tire
    - Gear shift indicator
    - Bio-fuel compatible cars
    - LDV (N1) CAFE : **175 g/km (2012)** and **160 g/km (2015)**
  - Other measures:
    - ***CO_2 taxation*** *reinforcement*
    - *Modification of* ***Labeling directive***
    - One level emission further (for example Euro6 in 2012) and ≤ 120 g/km

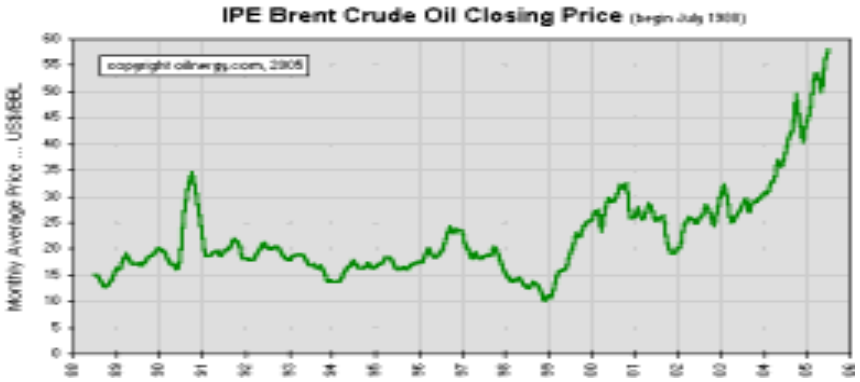
⇒ New legislation should be adopted by 2009 at the soonest

THE « CO2 » CHALLENGE MEETS CUSTOMERS

Global Warming

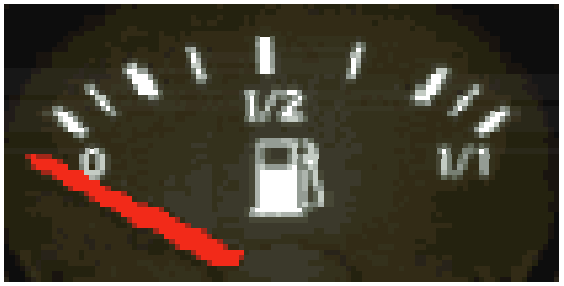


Oil Price



CO_2 label & fiscal policy

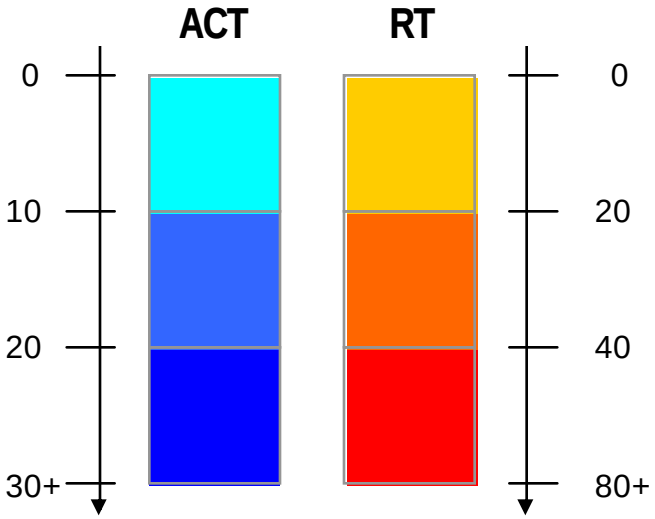
Fuel consumption



EU COUNTRIES INCREASE THE CO2 CUSTUMER VALUE WITH TAXES

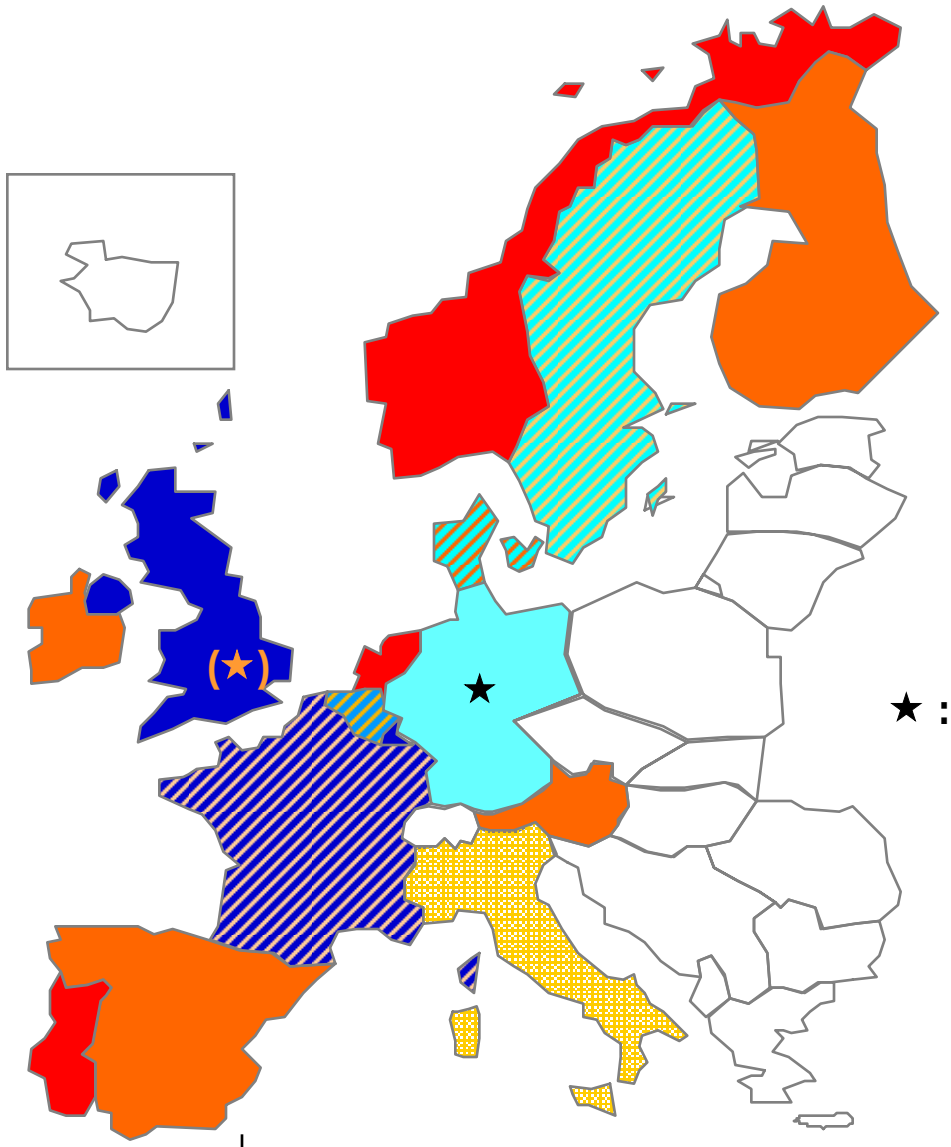
2007-2008

Annual or Registration taxes based on CO_2 / FE criterion :



€/gCO_2 / year €/gCO_2

Average indicative cost of one additional gCO_2/km on mid-market [100g-200g CO_2/km]



★ : project

CURRENT AVERAGE CO2 EUROPEAN CUSTOMER VALUE

Fuel consumption savings

1 g CO_2 /km

Taxes

Customer value

52 €/g/km

≈260 €/ton

Future value with penalty

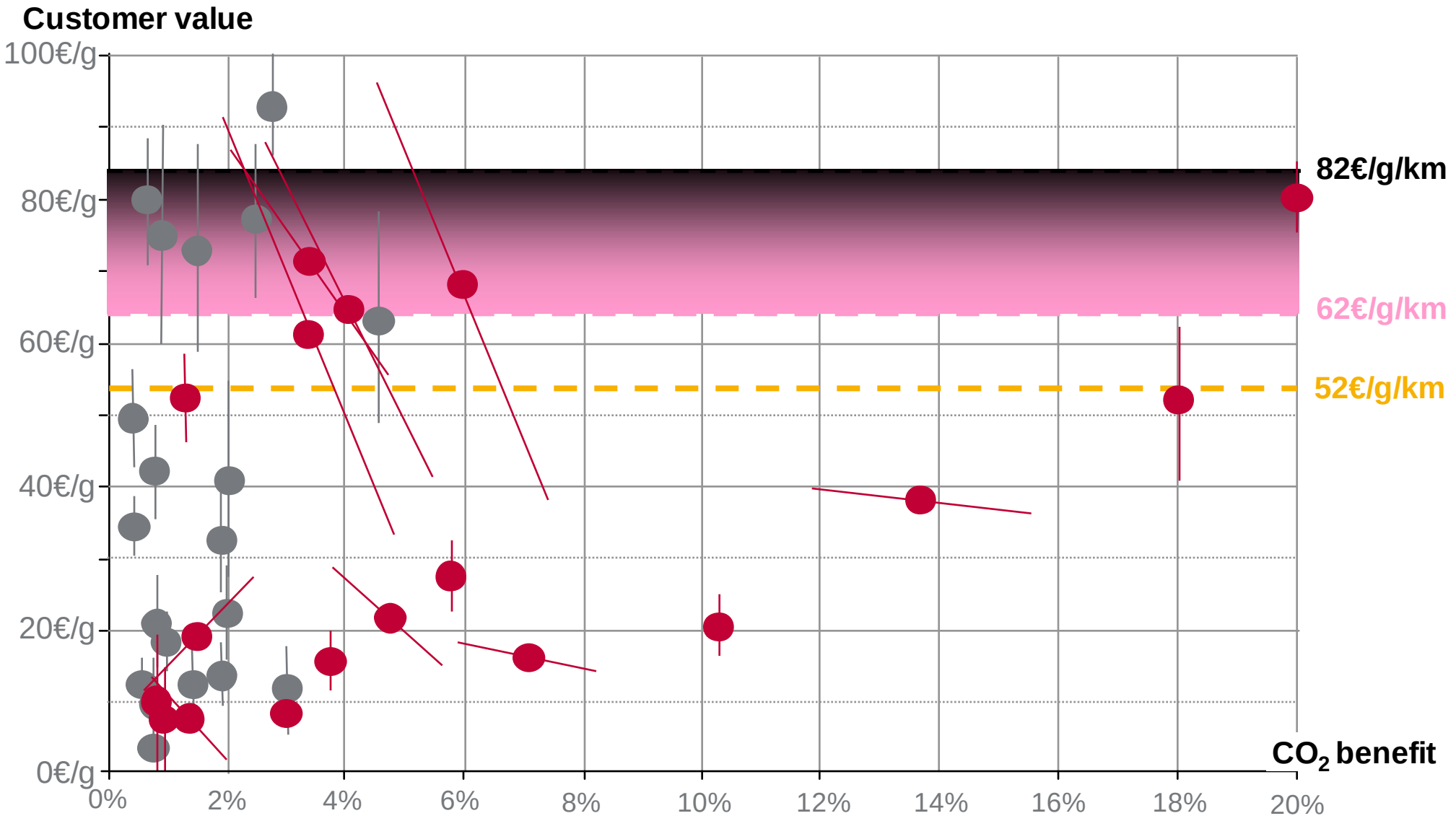
82 €/g/km
≈410€/ton

72 €/g/km
≈360 €/ton

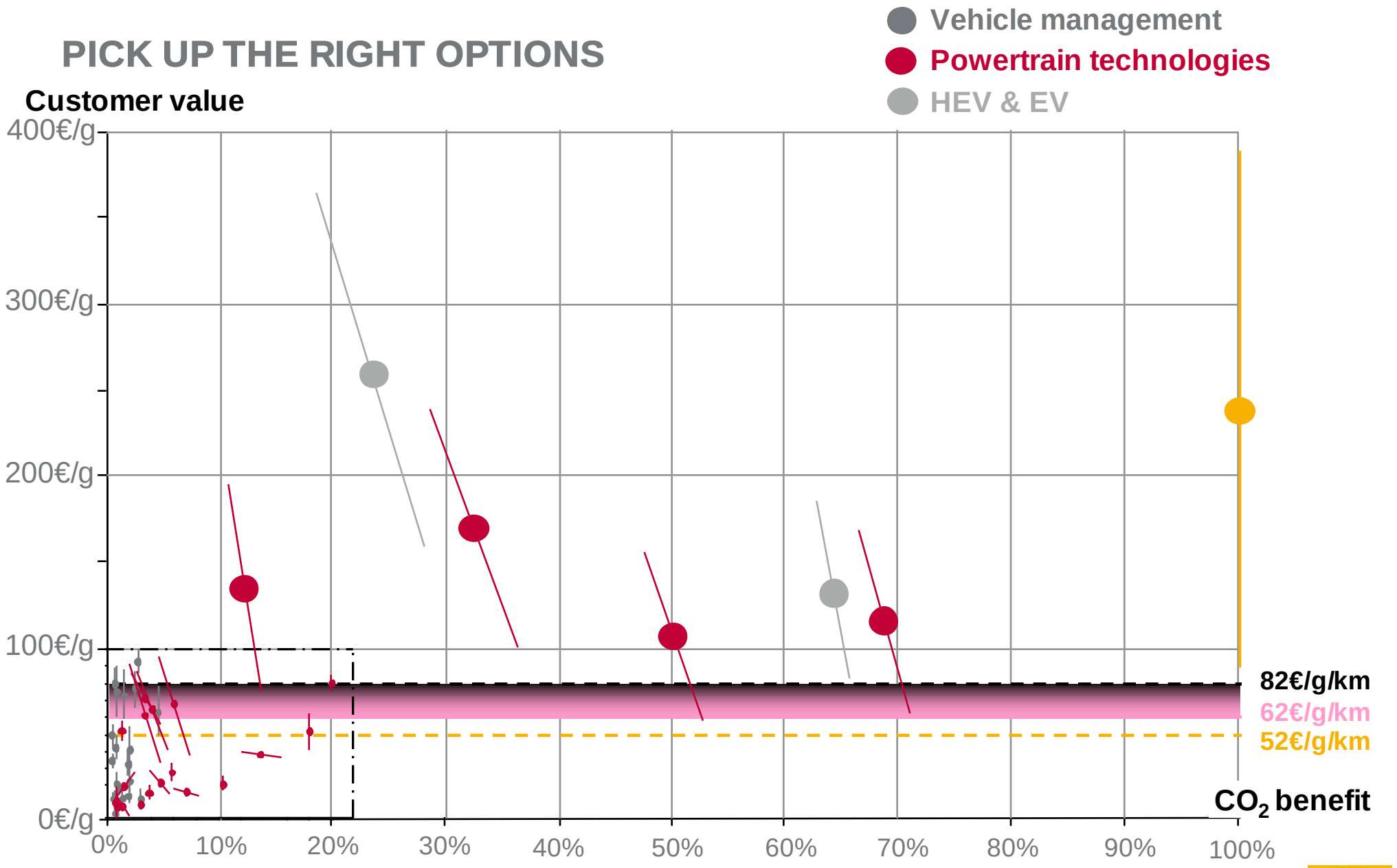
62 €/g/km
≈310 €/ton

5 g/km x 200,000 km ⇔ 1 ton CO_2
5 g/km ≈ 0.2 liter/100 km

POSITIONING TECHNOLOGIES ACCORDING TO CO2 VALUE …

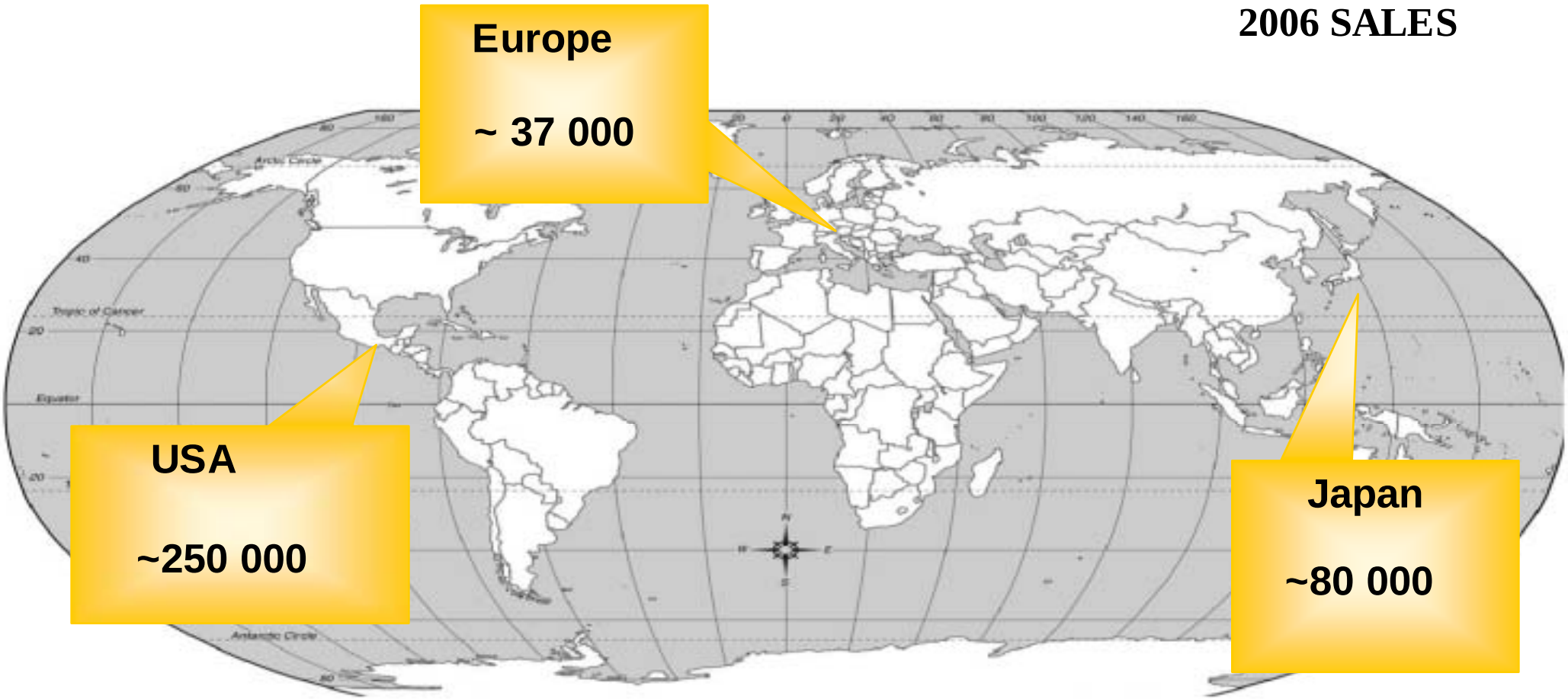


PICK UP THE RIGHT OPTIONS



ONLY MASS MARKET FOR MASSIVE ECOLOGICAL ACHIEVEMENTS
HEV IS NOT YET A CASE

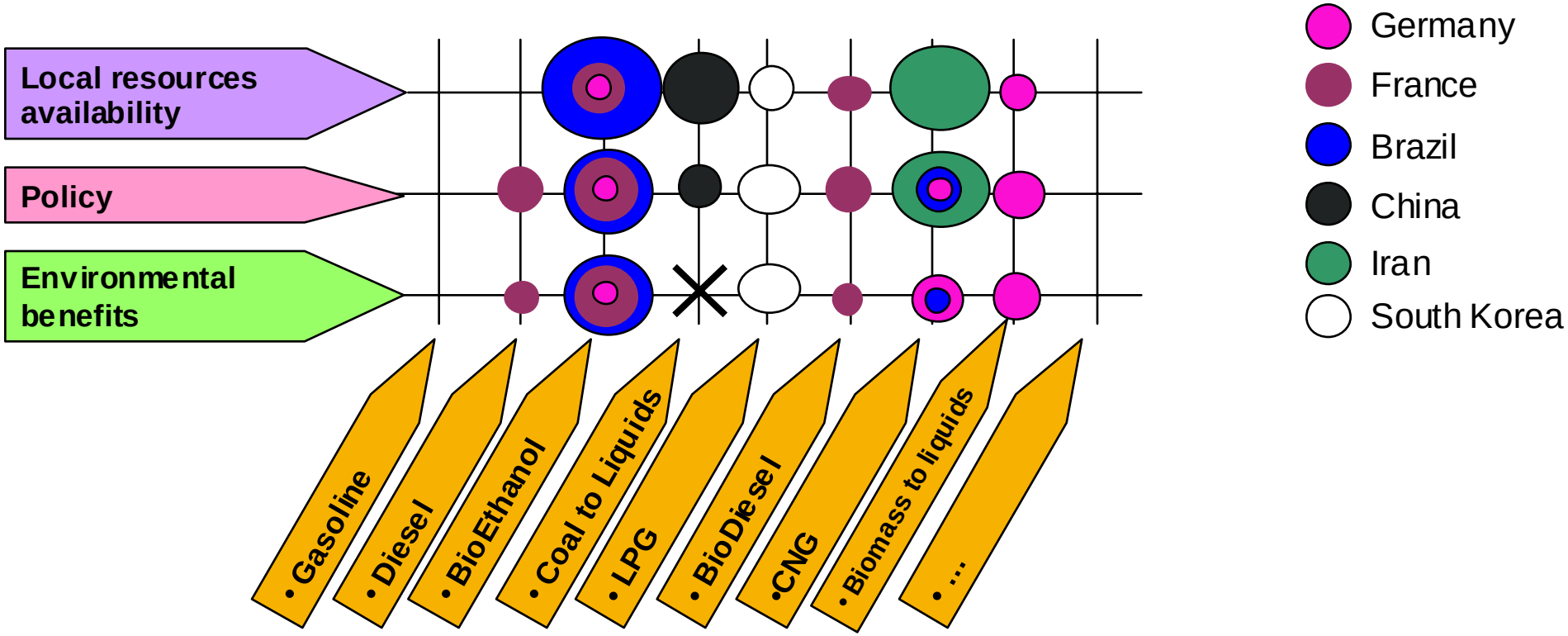
2006 SALES



IN FEBRUARY 2006, RENAULT COMMITMENT 2009 ON BIOFUELS

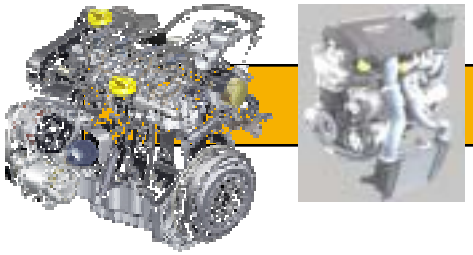
Gasoline	**50%** compatible with **E85 Bioethanol**
Diesel	**100%** compatible with **B30 Biodiesel**

CONSIDER THE ENERGY CHALLENGE ALSO AT A REGIONAL SCALE



NOT A UNIQUE SOLUTION BUT A RANGE OF TECHNOGIES

2007 – 2009	2009 - 2011	2011 - 2015	2015 – 20XX



Downsizing Diesel & Gasoline Engines

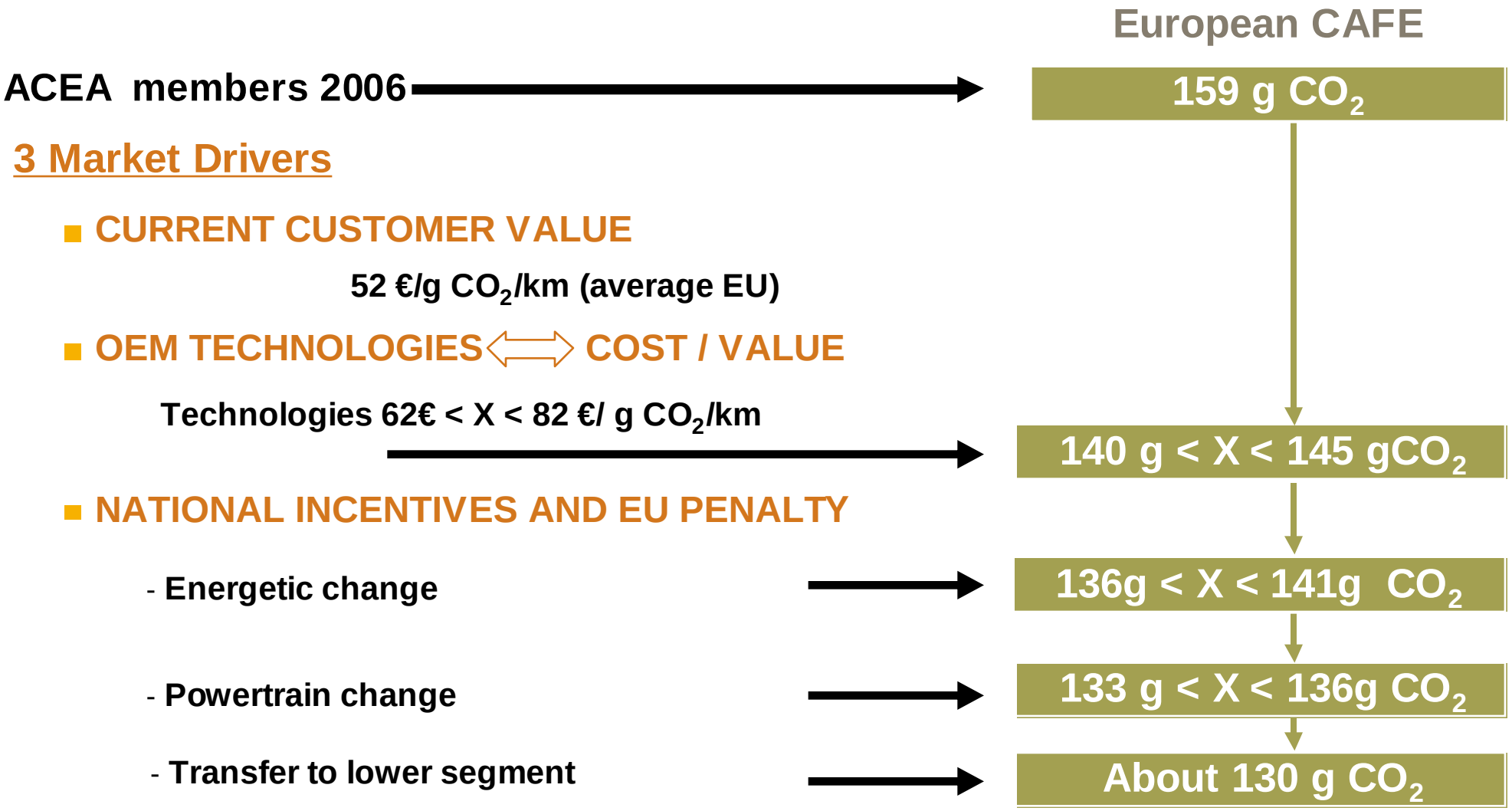
Biofuels: First generation → Biofuels:Second generation

Gas (LPG, CNG) in specific world regions

Electric drivetrains: from Stop & Start, hybrid up to electric cars

Fuel Cell car

CHALLENGE 2012 – 2015
European CAFE : 130 g CO_2 /km



LOGAN "Renault eco2" CONCEPT

97 g/km of CO_2 ...

BIBENDUM CHALLENGE
Shanghaï, November 2007

71g/km of CO_2 measured on real driving conditions

(2.7 l /100 km)

DIALOG WITH OUR CUSTOMERS

Renault eco²: 3 criteria for ecological & economical vehicles

CO_2 EMISSIONS

Below 140 g/CO_2 or biofuel-compatible

PRODUCTION

Produced in an Iso-14001-certified plant

END-OF-LIFE

95% reusable by weight & at least 5% of recycled plastics

& **&**

Renault eco2

Low fuel consumption, tax management, affordability to a wide majority of customers supported by the ecological efficiency.

Ecological & Economical

DEMONSTRATES THE PROGRESS FROM GENERATION TO GENERATION

- Iso 14001 since 1998

Weight
- - 15 kg in average
- - 65 kg on 1.5 dCi

- 130 gCO_2 per km (1.5dCi)
- 158 g CO_2 per km (2.0 dCi)

Recycled plastics
- 35 kgs equal to 17 wt-%
- 90 parts

Thank you very much