Car Labeling: A Comparison of Case Studies

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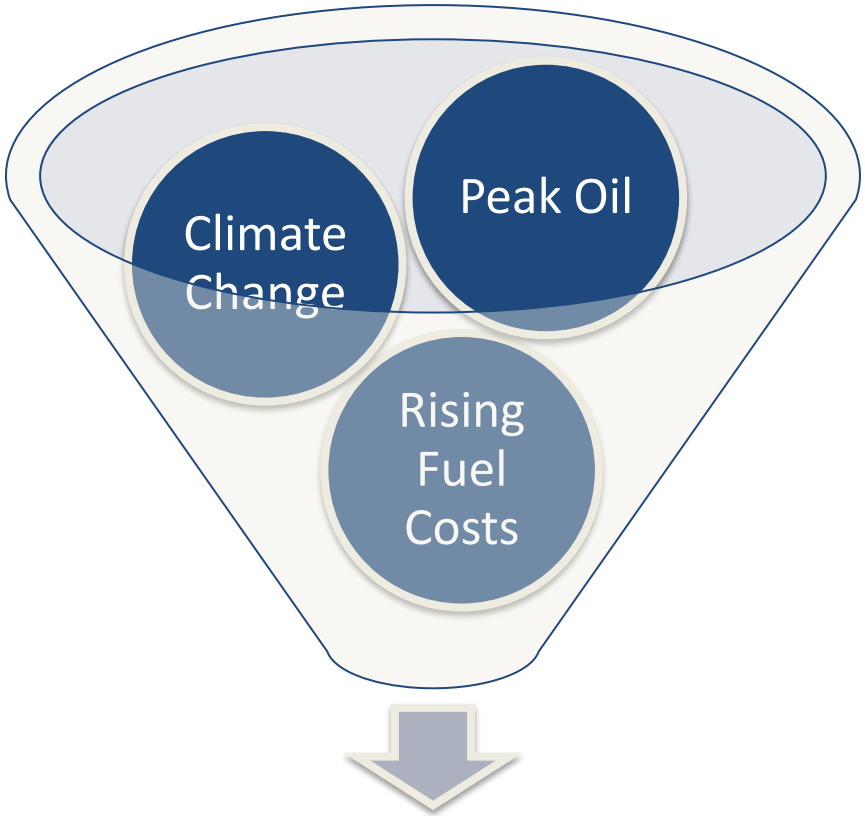
IDEC: Debate Automóvel e Consumo

Ecologic Institute

- Independent Research Institute
  - Environmental Research
  - Policy Analysis
  - 120 employees

- Offices in Berlin, Brussels, Washington DC und San Mateo
- Experience and Contacts: Car Labeling
  - Study commissioned by the European Parliament (2010)
  - *ICCT, Friends of the Earth Europe, Germany Association of the Automotive Industry, various manufacturers*

Overview: Vehicle Energy Efficiency



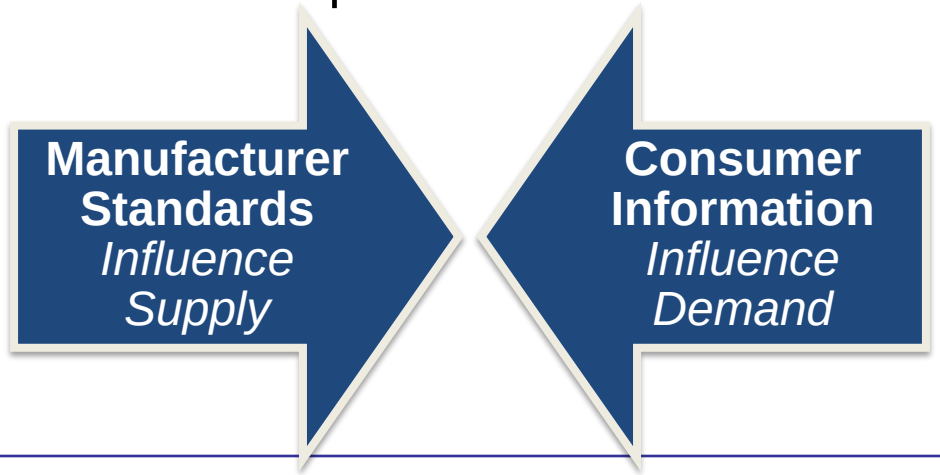
Need for Vehicle Energy Efficiency

EU Policy Instruments

- **Directive1999/94/EC:** Information for new passenger cars for *sale or lease*
  - Label
  - Guide
  - Poster display
  - Printed promotional material

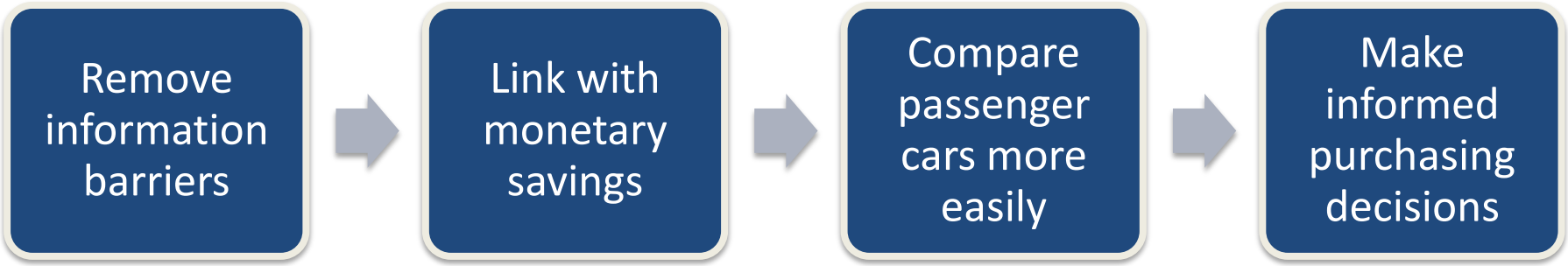
- **Regulation (EC) No 443/2009:** Emission performance standards for manufacturers

- „**Push-Pull**“ effect



Overview: Car Labeling

- Information regarding fuel economy and CO_2 emissions costly to obtain
- Provide consumers with relevant information



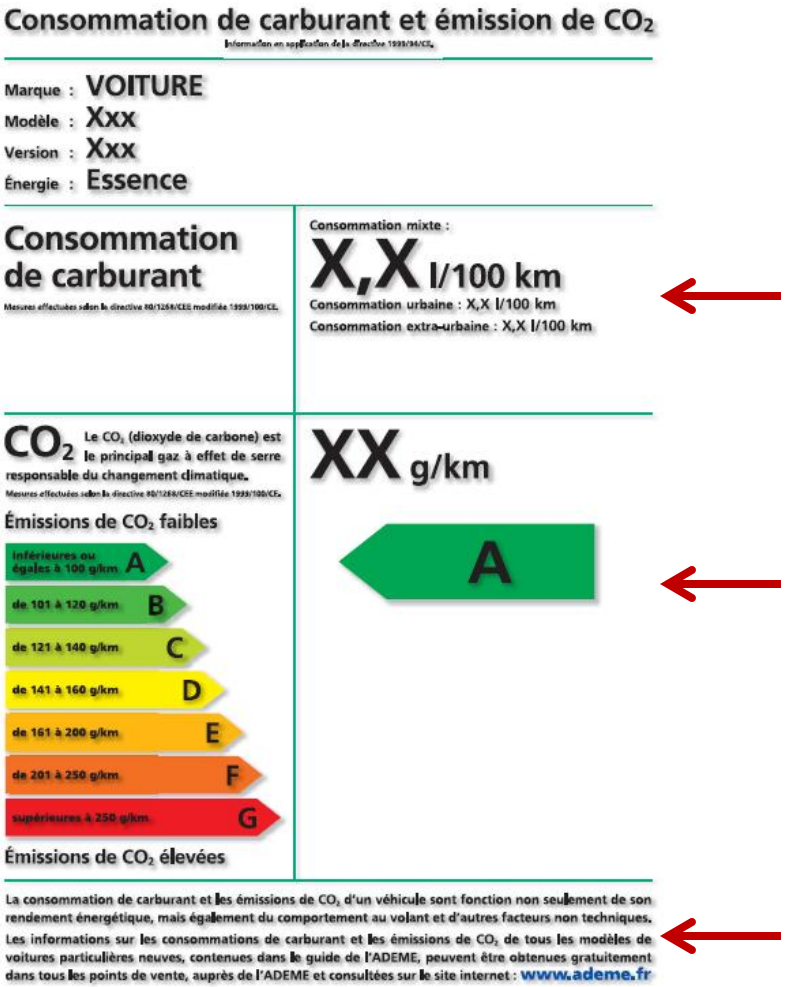
- Manufacturers compete according to fuel economy

→***Climate Change Mitigation***
→***Energy Independence***
→***Cost savings and Effiency***

France

Label Attribute	
Format	**Absolute:** CO_2 Emissions **Static**
Categories	7
Additional Information	city and highway fuel consumption, link to website
Assessment	No running costs on label but Bonus/Malus System *links directly to the label*

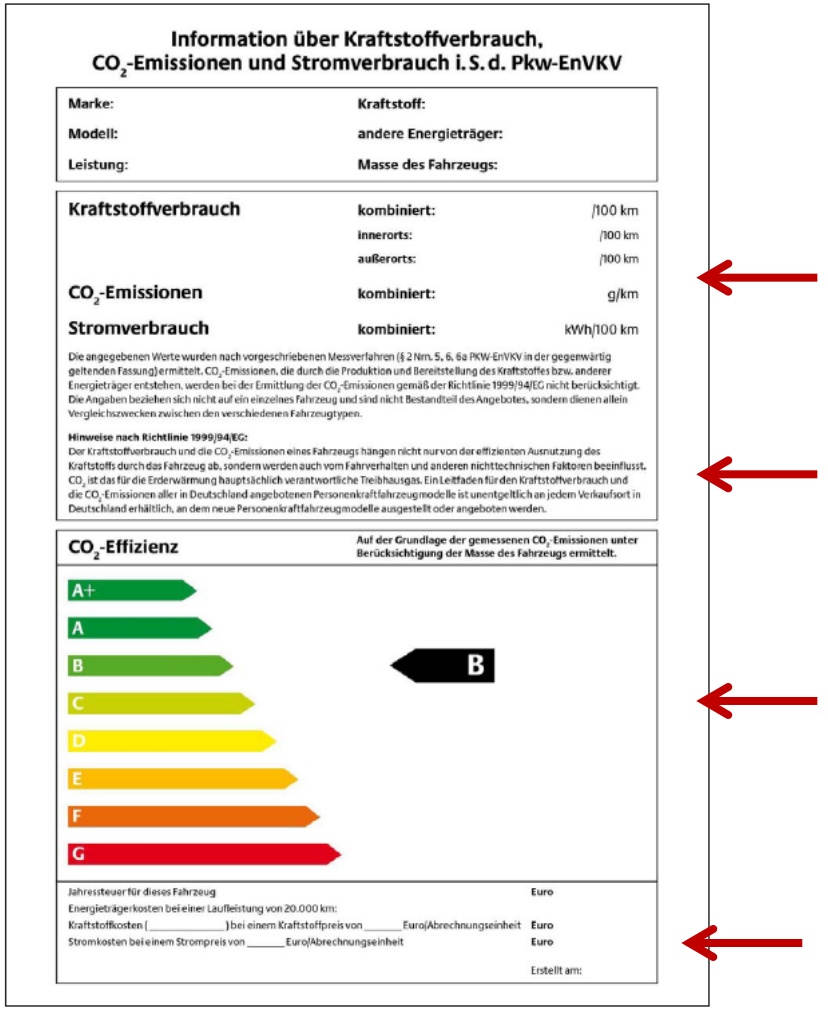
Illustration of the Label



Germany

Label Attribute	
Format	**Relative:** CO_2 Efficiency by car mass **Semi-Dynamic:** Percentage deviation from the reference value *(potential A++,A+++)*
Categories	8 (so far)
Additional Information	Electricity consumption, tax information, fuel and electricity costs
Assessment	No inventive for lighter vehicles Vehicle registration tax linked to CO2 emissions

Illustration of the Label



Information über Kraftstoffverbrauch, CO_2-Emissionen und Stromverbrauch i. S. d. Pkw-EnVKV

Marke:	**Kraftstoff:**
Modell:	**andere Energieträger:**
Leistung:	**Masse des Fahrzeugs:**

Kraftstoffverbrauch	**kombiniert:**	/100 km
	innerorts:	/100 km
	außerorts:	/100 km
CO_2-Emissionen	**kombiniert:**	g/km
Stromverbrauch	**kombiniert:**	kWh/100 km

Die angegebenen Werte wurden nach vorgeschriebenen Messverfahren (§ 2 Nrn. 5, 6, 6a PKW-EnVKV in der gegenwärtig geltenden Fassung) ermittelt. CO_2-Emissionen, die durch die Produktion und Bereitstellung des Kraftstoffes bzw. anderer Energieträger entstehen, werden bei der Ermittlung der CO_2-Emissionen gemäß der Richtlinie 1999/94/EG nicht berücksichtigt. Die Angaben beziehen sich nicht auf ein einzelnes Fahrzeug und sind nicht Bestandteil des Angebotes, sondern dienen allein Vergleichszwecken zwischen den verschiedenen Fahrzeugtypen.

Hinweise nach Richtlinie 1999/94/EG:
Der Kraftstoffverbrauch und die CO_2-Emissionen eines Fahrzeugs hängen nicht nur von der effizienten Ausnutzung des Kraftstoffs durch das Fahrzeug ab, sondern werden auch vom Fahrverhalten und anderen nichttechnischen Faktoren beeinflusst. CO_2 ist das für die Erderwärmung hauptsächlich verantwortliche Treibhausgas. Ein Leitfaden für den Kraftstoffverbrauch und die CO_2-Emissionen aller in Deutschland angebotenen Personenkraftfahrzeugmodelle ist unentgeltlich an jedem Verkaufsort in Deutschland erhältlich, an dem neue Personenkraftfahrzeugmodelle ausgestellt oder angeboten werden.

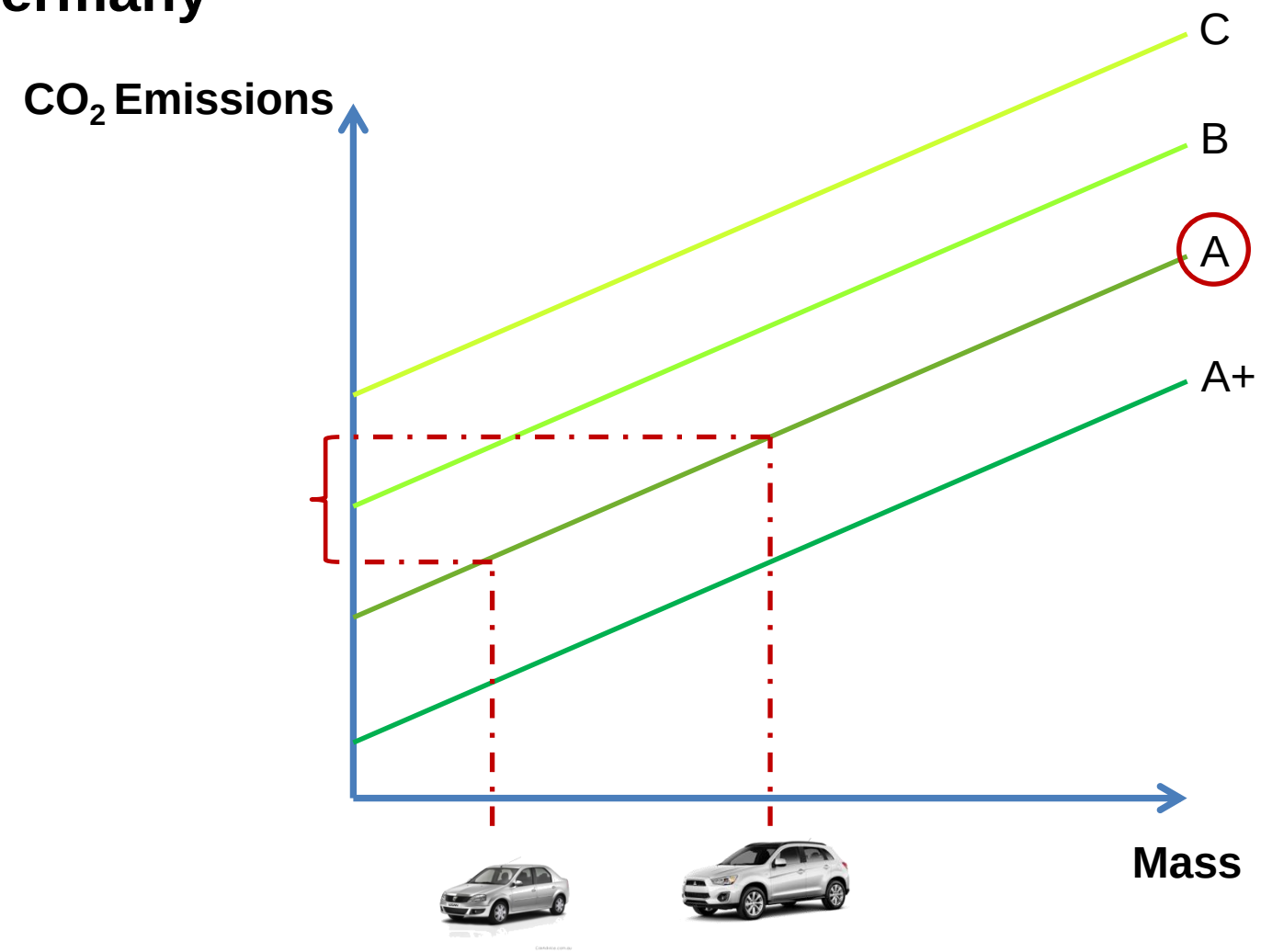
CO_2-Effizienz — Auf der Grundlage der gemessenen CO_2-Emissionen unter Berücksichtigung der Masse des Fahrzeugs ermittelt.

A+
A
B
C
D
E
F
G

B

Jahressteuer für dieses Fahrzeug	Euro
Energieträgerkosten bei einer Laufleistung von 20.000 km:	
Kraftstoffkosten (_____) bei einem Kraftstoffpreis von _____ Euro/Abrechnungseinheit	Euro
Stromkosten bei einem Strompreis von _____ Euro/Abrechnungseinheit	Euro
	Erstellt am:

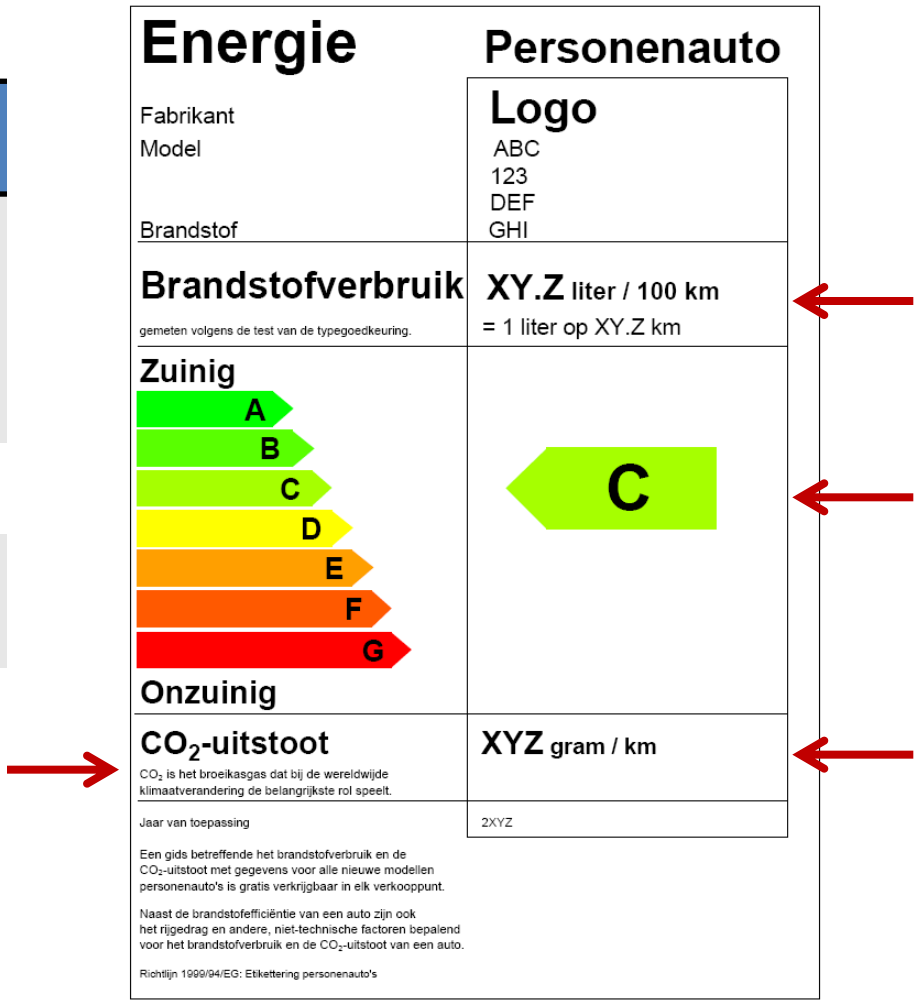
Germany



The Netherlands

Label Attribute	
Format	**Relative:** CO_2 Emissions by realtive footprint *(weighted)* **Dynamic**
Categories	7
Additional Information	-
Assessment	No information about fuel costs No incentive for smaller vehicles, but for lighter vehicles

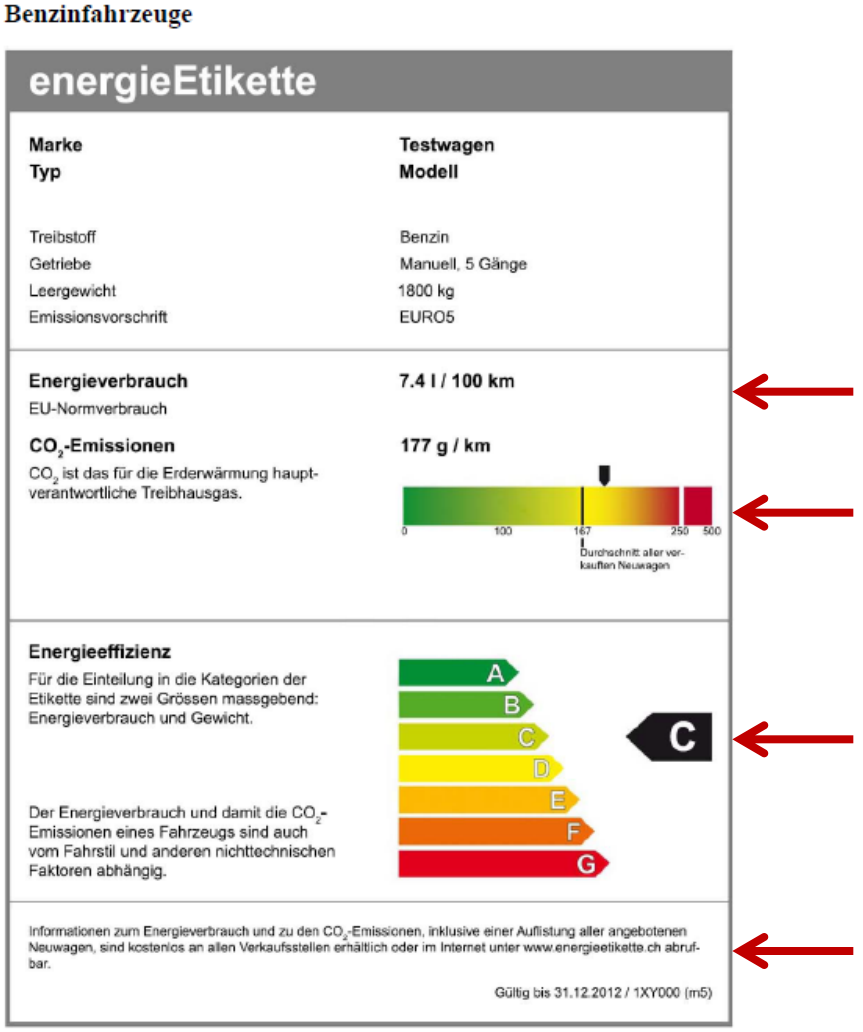
Illustration of the Label



Switzerland

Label Attribute	
Format	***Dual Label*** **Absolute/Static:** CO_2 Emissions *(continuous scale with fleet average)* **Relative/Dynamic**: Energy Efficiency by mass
Categories	7
Additional Information	link to website
Assessment	No running costs Too complex → information overload?

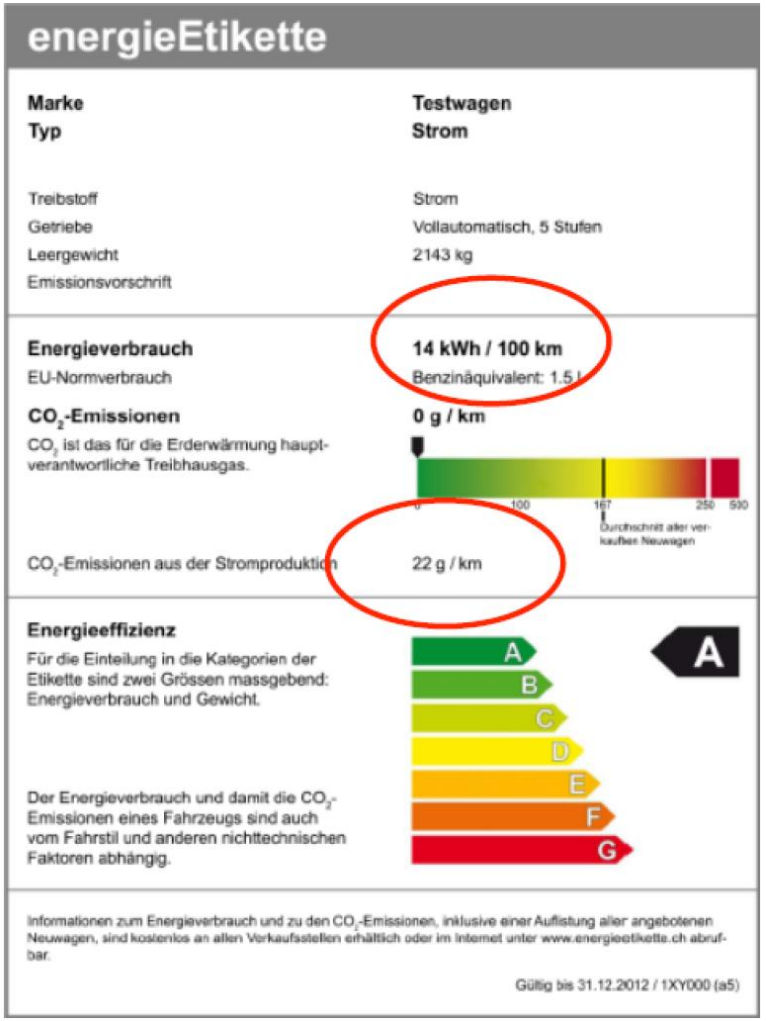
Illustration of the Label



Switzerland

Label Attribute	
	Separate label for electric vehicles
Additional Information	CO_2 emissions from electricity generation, assuming the Swiss electricity consumption mix
Assessment	Plug-in electric vehicles → *well-to-wheels basis*; other vehicle types → *tank-to-wheels basis*

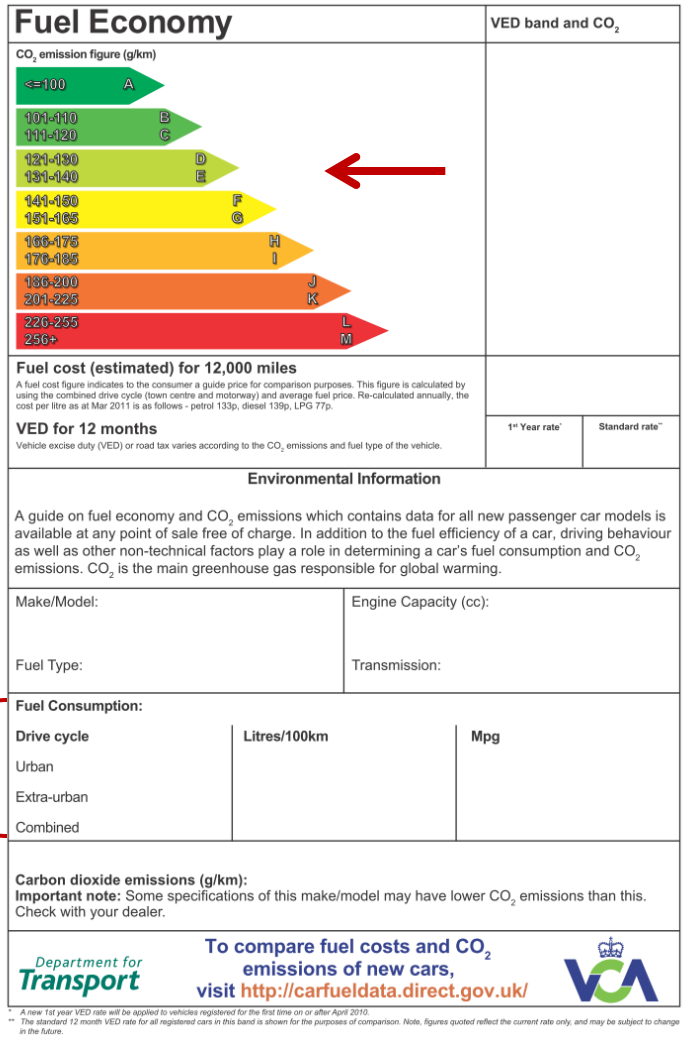
Illustration of the Label



United Kingdom

Label Attribute	
Format	**Absolute:** CO_2 Emissions **Static**
Categories	13
Additional Information	Fuel costs, vehicle excise duty (direct link between label and tax), link to website, logos → branding and legitimating Voluntary for used cars
Assessment	A lot of information provided → potential overload?

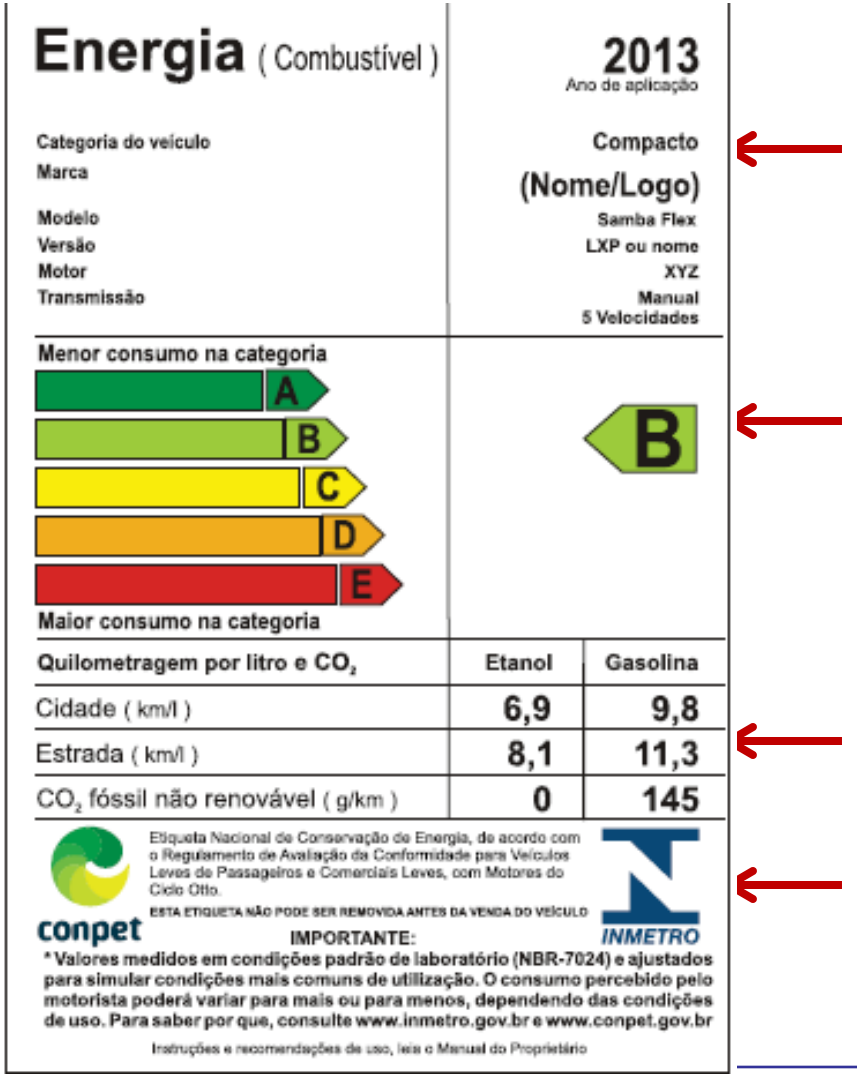
Illustration of the Label



Brazil

Label Attribute	
Format	**Relative:** Energy consumption by car class **Static**
Categories	5 (but in 8 car classes)
Additional Information	Ethanol and gasoline consumption (if appll.), city and highway, Plus CO2-emissions logos → branding and legitimation
Assessment	**Voluntary** → compliance issues, overlapping categories, No running costs less incentive for lighter vehicles

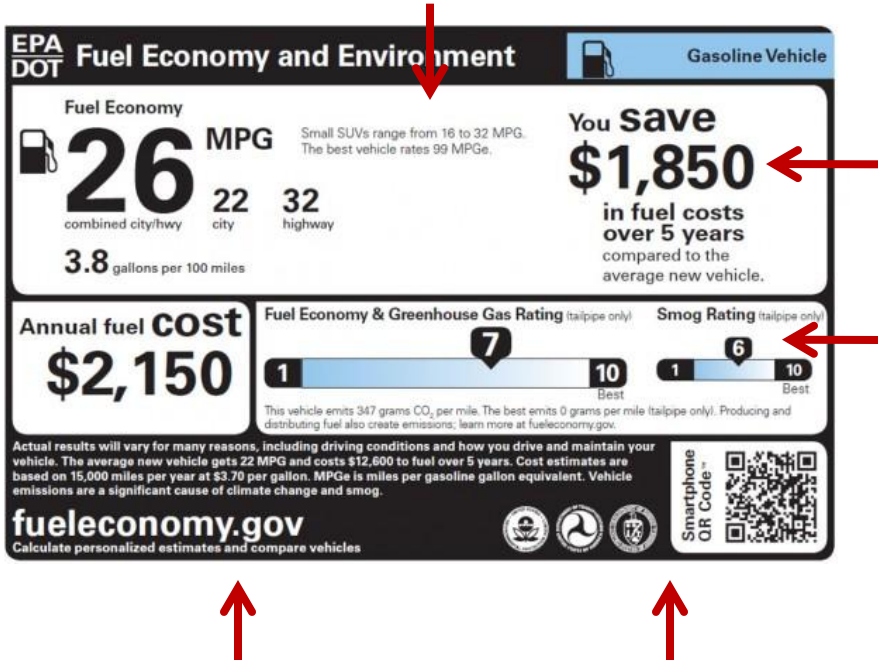
Illustration of the Label



United States

Label Attribute	
Format	**Absolute:** Combined continuous scale for fuel economy and GHG emissions **Static**
Additional Information	Additional smog scale, annual fuel costs and savings over 5 years; car class range; MPG: city, highway and combined; logos → branding and legitimation, online tools, Smartphone application
Assessment	Focuses on costs (cultural reasons?) Potential information overload

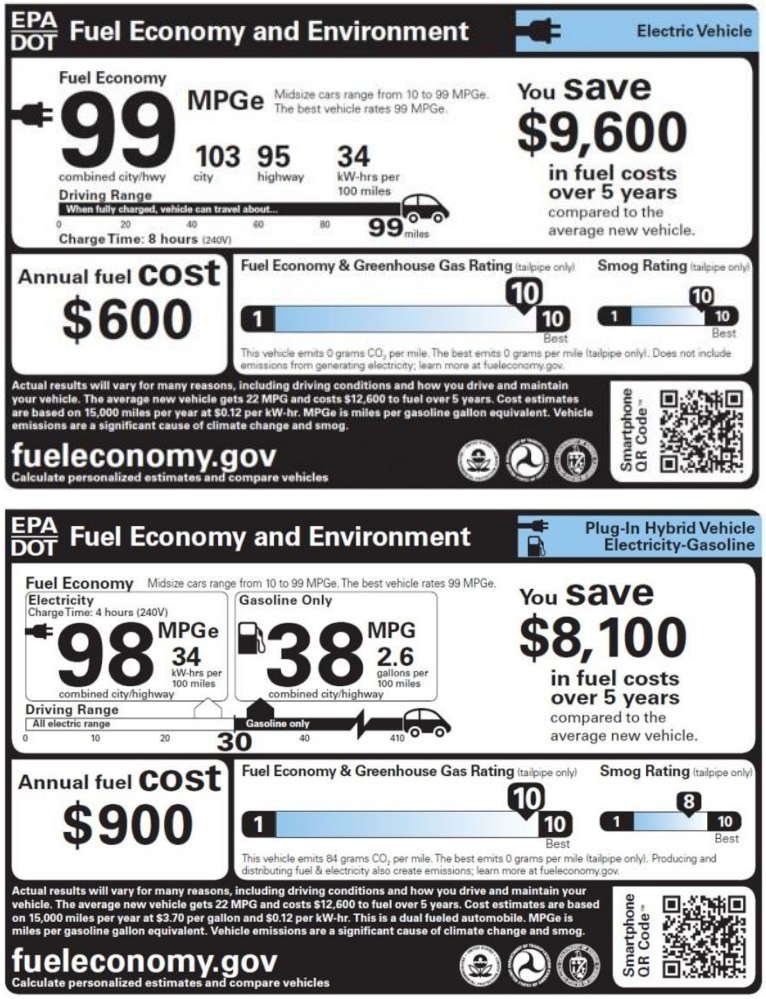
Illustration of the Label



United States

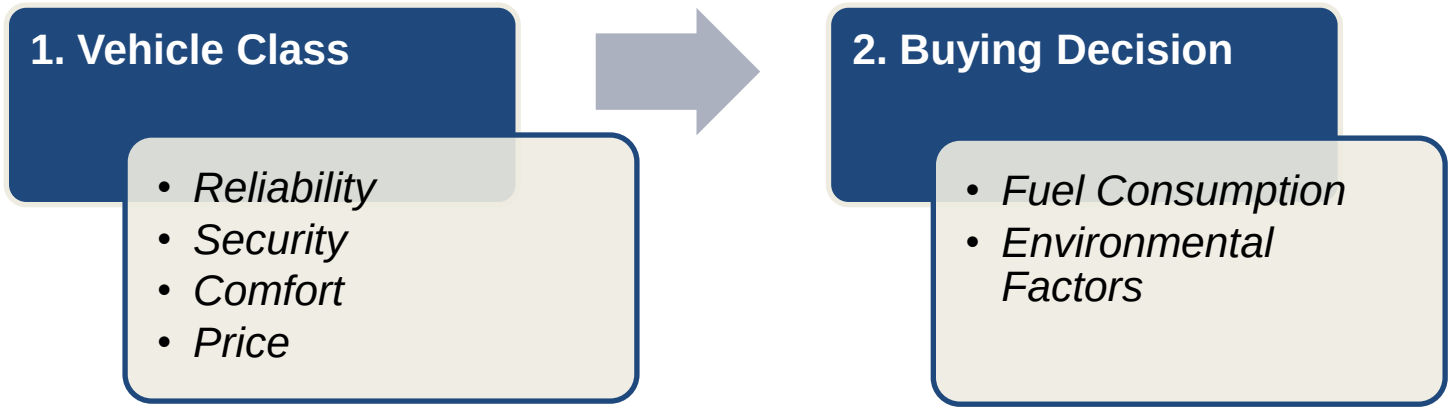
Label Attribute	
	Separate label for electric and hybrid vehicles
Format	**Absolute:** same scale as other passenger vehicles **Static**
Additional Information	Charge time, driving range, fuel economy by electricity and gasoline
Assessment	Focus on costs Potential information overload

Illustration of Electric and Hybrid Car Label(s)



Debate: Relative vs. Absolute Label

- **Pros of relative label**:
  - Enables consumers to compare fuel efficiency of cars ***within*** vehicle class
    - efficiency vs. fuel economy
  - Complements decision making process of car buyer (*two-stage process)*

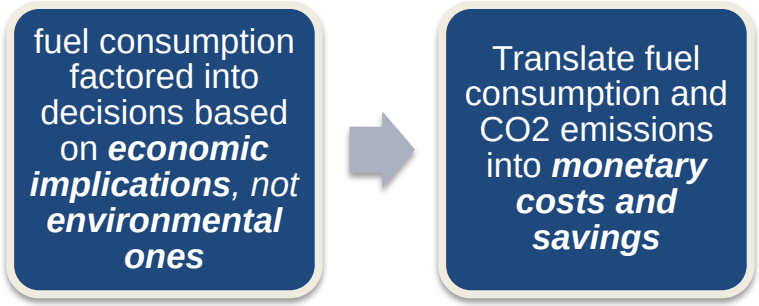


Debate: Relative vs. Absolute Label

- **Cons of relative label**:
  - Complicated method and calculations
  - No incentive for manufacturers to build smaller / lighter cars → manipulation
  - Could create confusion among consumers

Best Practices

- Mandatory labelling for 100% of LDV is the global standard
- Provide cost information on label

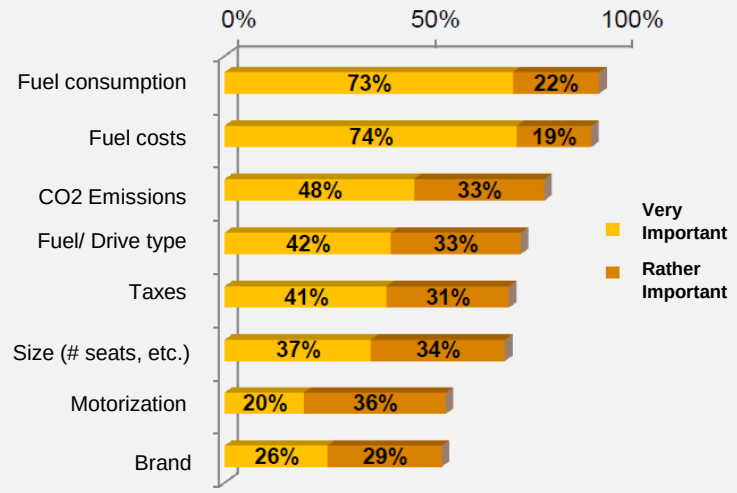


- Link label to fiscal policies (complementarity of measures)
- Avoid information overload
- Present information in a clear and concise manner (units that can be intuitively understood
- Use branding strategies and supplement label with online-tools
- Adapt information to local consumer preferences → **market research**

Awareness

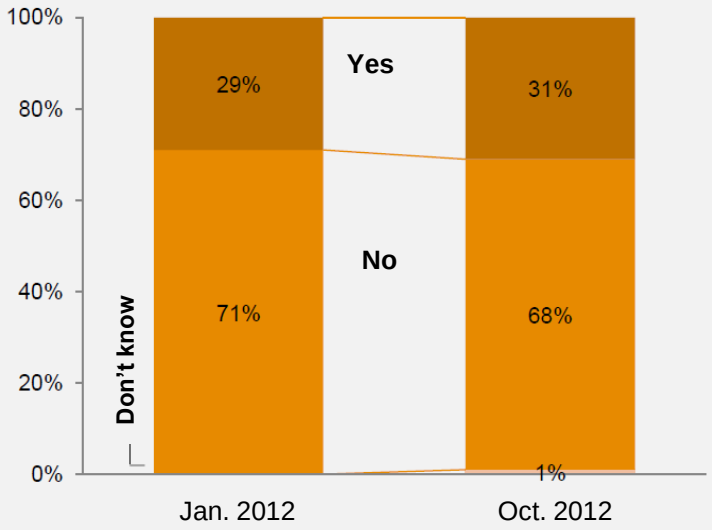
- German consumers understand the impacts on the environment, knowledge about the car label is increasing > continuous process

Please tell us if the following factors are relevant to your car purchasing decision



Basis: 1,680 New Car Buyers, Oct. 2012

Do you know about the new CO2 Efficiency car label?



Basis: 1,680 New Car Buyers, Oct. 2012

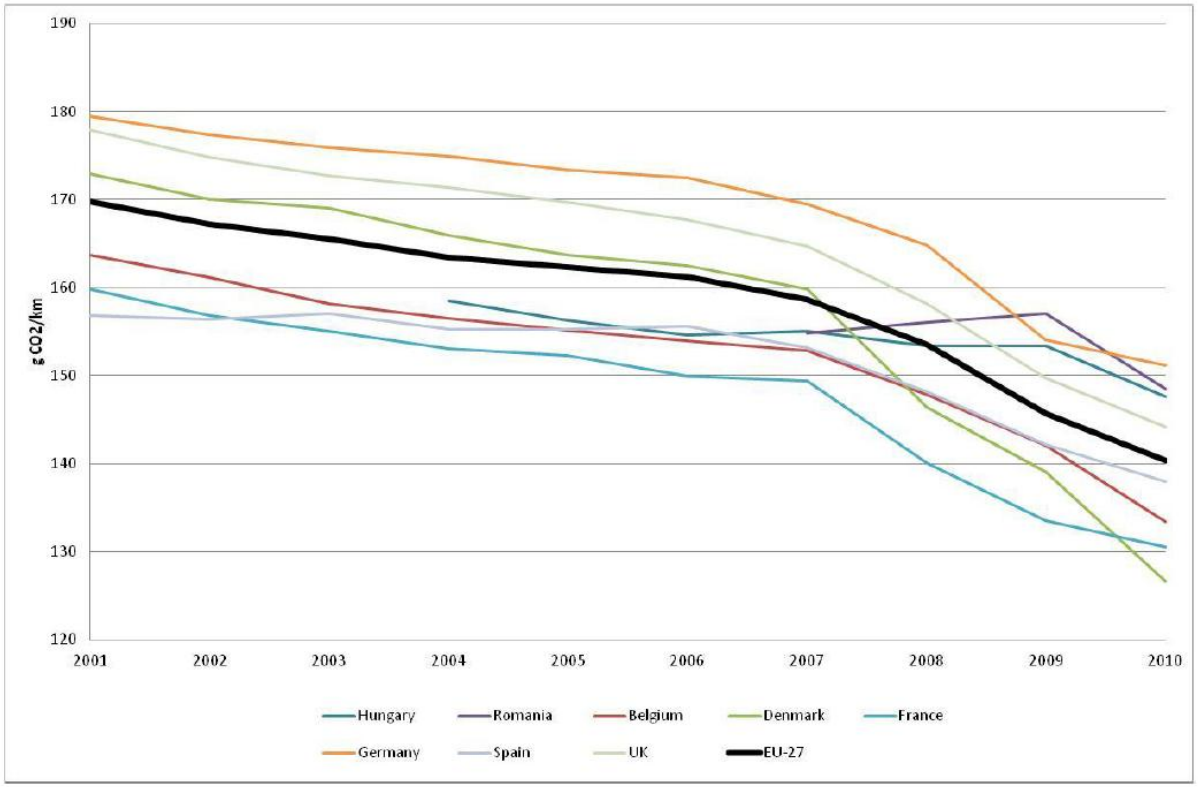
Source: DENA, 2012

Overall Assessment

- **CO_2 Mitigation**

*CO_2 Emissions are **decreasing** → reduction due to a combination of measures including targets, taxes and labeling*

Average CO_2 emissions of new car registrations in selected Member States



Source: AEA, 2011

Key messages

1. Mandatory labelling for 100% of LDV is the global standard
2. Provide cost information on label
3. Link label to fiscal policies (complementarity of measures)
4. Avoid information overload
5. Present information in a clear and concise manner (units that can be intuitively understood
6. Use branding strategies and supplement label with online-tools
7. Adapt information to local consumer preferences → **market research**

Thank you for your attention!

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