How Much Information Is Enough?

Green Global NCAP Labelling / Green Scoring Workshop
Global Fuel Economy Initiative

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Outline of Presentation

- How does the information shown on fuel economy labels differ internationally?
- Outline of research studies exploring presentation of environmental information on product labels
- Examples of multi criteria environmental labels
- What insights have been gained from LowCVP research
- Conclusion – how to balance information

Information processing theories suggest there is a limit to the amount of information a human can absorb over a specific period of time. (Born et al 2011)

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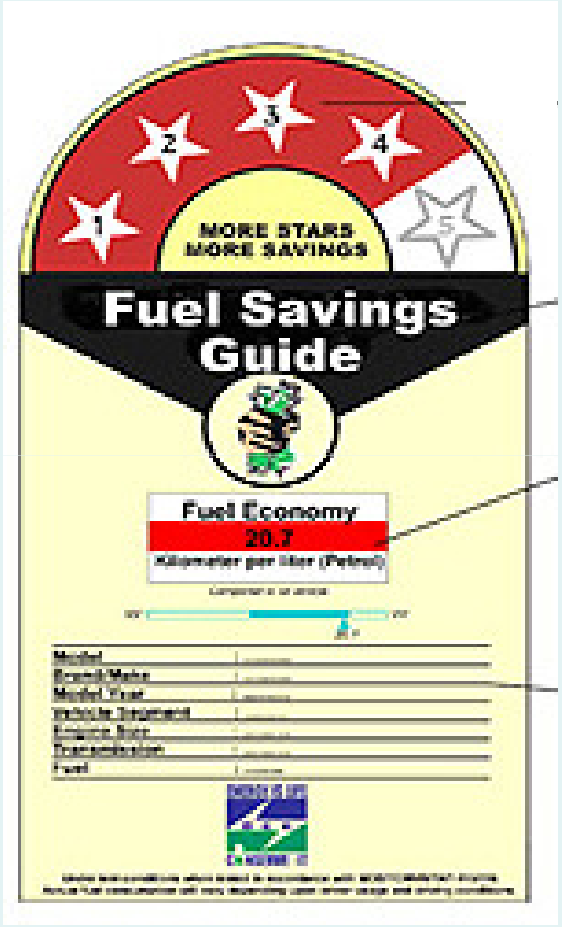
Examples of information presented on fuel economy labels – benefits and drawbacks



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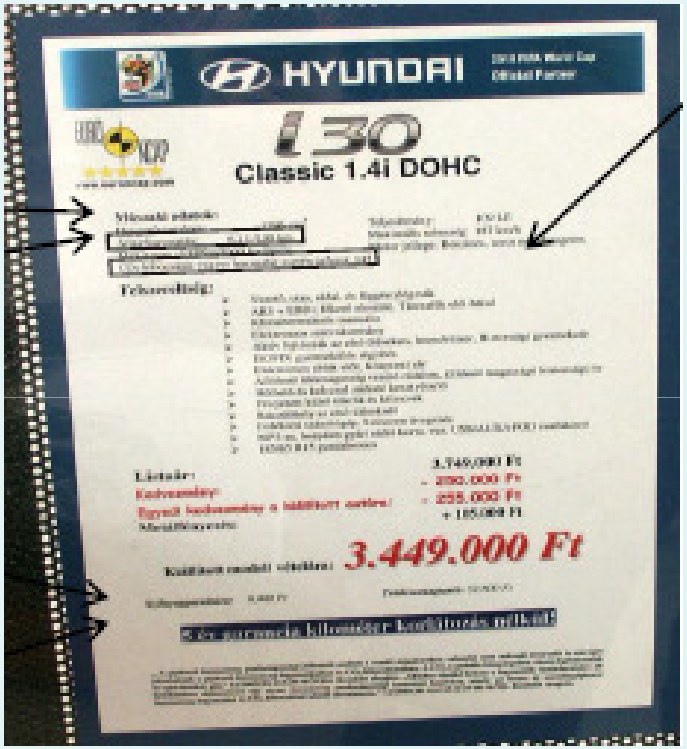
Reduction in information

Examples of 'information only' fuel economy labels



企业标志

汽车燃料消耗量标识

AUTOMOBILE FUEL CONSUMPTION LABEL

生产企业：
车辆型号：
发动机型号：　　燃料类型：
排量：　mL　额定功率：　kW
变速器类型：　　驱动型式：
整车整备质量：　kg　最大设计总质量：　kg
其他信息：

燃料消耗量

市区工况：　XX.X　L/100 km
综合工况：　XX.X　L/100 km
市郊工况：　XX.X　L/100 km

适用国家标准为GB XXXX-XXXX；
第X阶段要求自XXXX年XX月XX日开始执行，对应限值为XX.X L/100 km；
第X阶段要求自XXXX年XX月XX日开始执行，对应限值为XX.X L/100 km。

说明

本标识所采用的燃料消耗量数据系根据GB/T 19233-2008《轻型汽车燃料消耗量试验方法》测定。

由于驾驶习惯、道路状况、气候条件和燃料品质等因素的影响，实际燃料消耗量可能与本标识的燃料消耗量不同。

为避免标识影响视野，请在购买车辆后去除标识。

备案号：　　启用日期：XXXX年XX月XX日

Difficult to draw out key information

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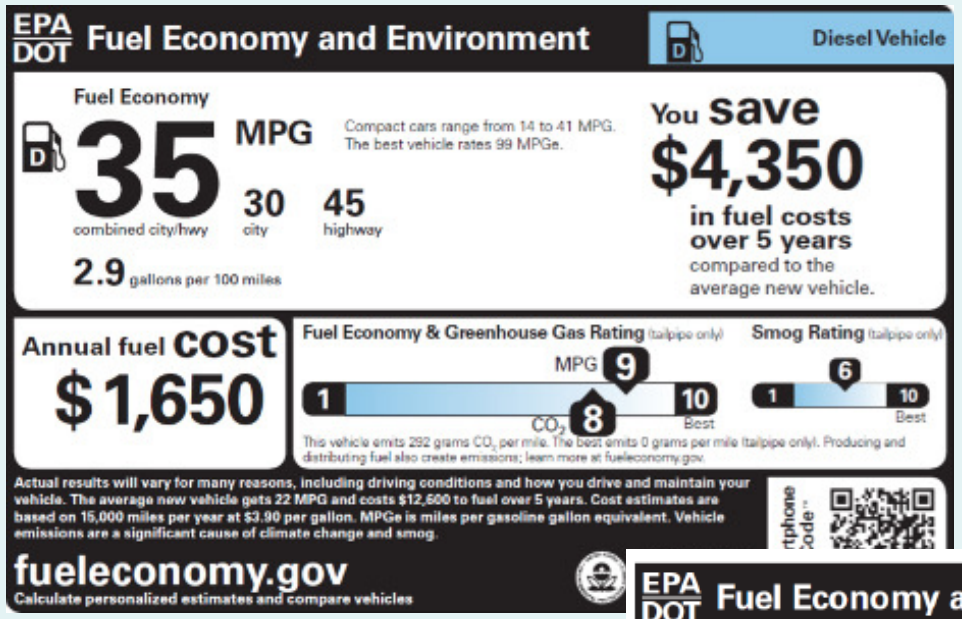
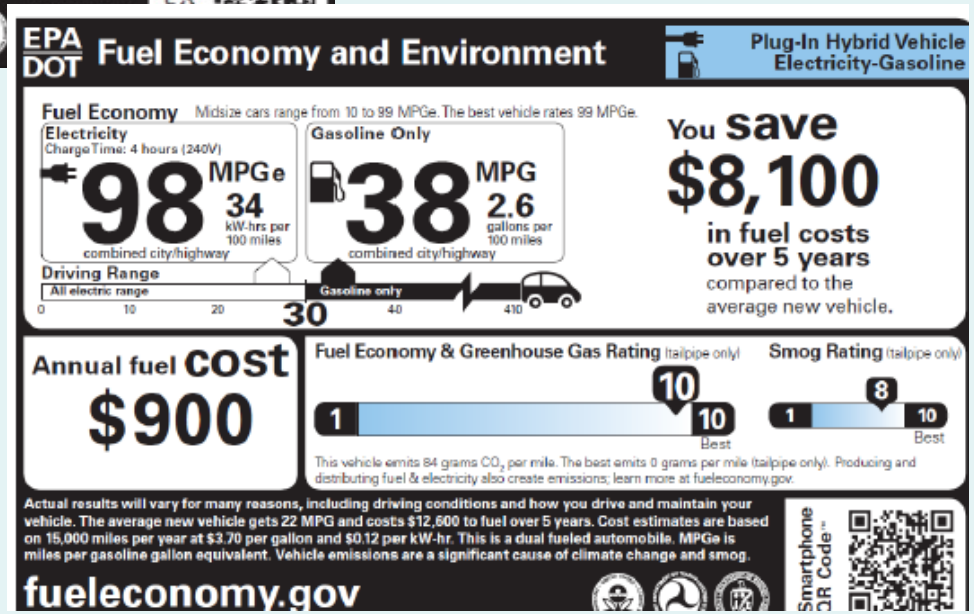
‘Hybrid’ Comparative Fuel Economy Labels



- Highly numerical
- High volume of information for PHEV
- Smog rating (smaller size)?
- MPGe simplifies comparisons
- QR code & URL leads consumer to further information



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Comparison of fuel economy labels

Presentation of CO2 emissions fuel economy	**Country**
Comparative colour coded	UK, Germany, France, Spain, Finland, Belgium, Denmark
Comparative scale system	US, New Zealand, Korea, India
Information only	Hungry, China
Additional Information	
Running cost (fuel/road tax)	US, Denmark UK, Germany, Finland
Air quality rating system	US
Exhaust emission class	Austria
Driver behaviour impact on fuel	UK, US, Belgium, Denmark, France, Hungry Spain
Electricity consumption for EVs	US, Germany, UK
CO2 from electricity consumption	Switzerland
Euro NCAP	Denmark
QR code	US
Website for further information	US, New Zealand, UK, Belgium

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Fuel economy - combination of mandatory and voluntary information - how this is presented varies internationally

European Commission - Study of different options for communicating environmental information on products

- Strong support - aggregated indictor for multi criteria environment information, combined with up to three individual indictors
- Quality and clarity rather than quantity
- Preference for performance based on a comparative scale eg stars, letters, numbers or colour codes
- Information support via on a website and smartphones
- The way units and values are expressed can affect consumer understanding
  - Physical values too technical – preference A,B,C
  - Favor visual markers and signs

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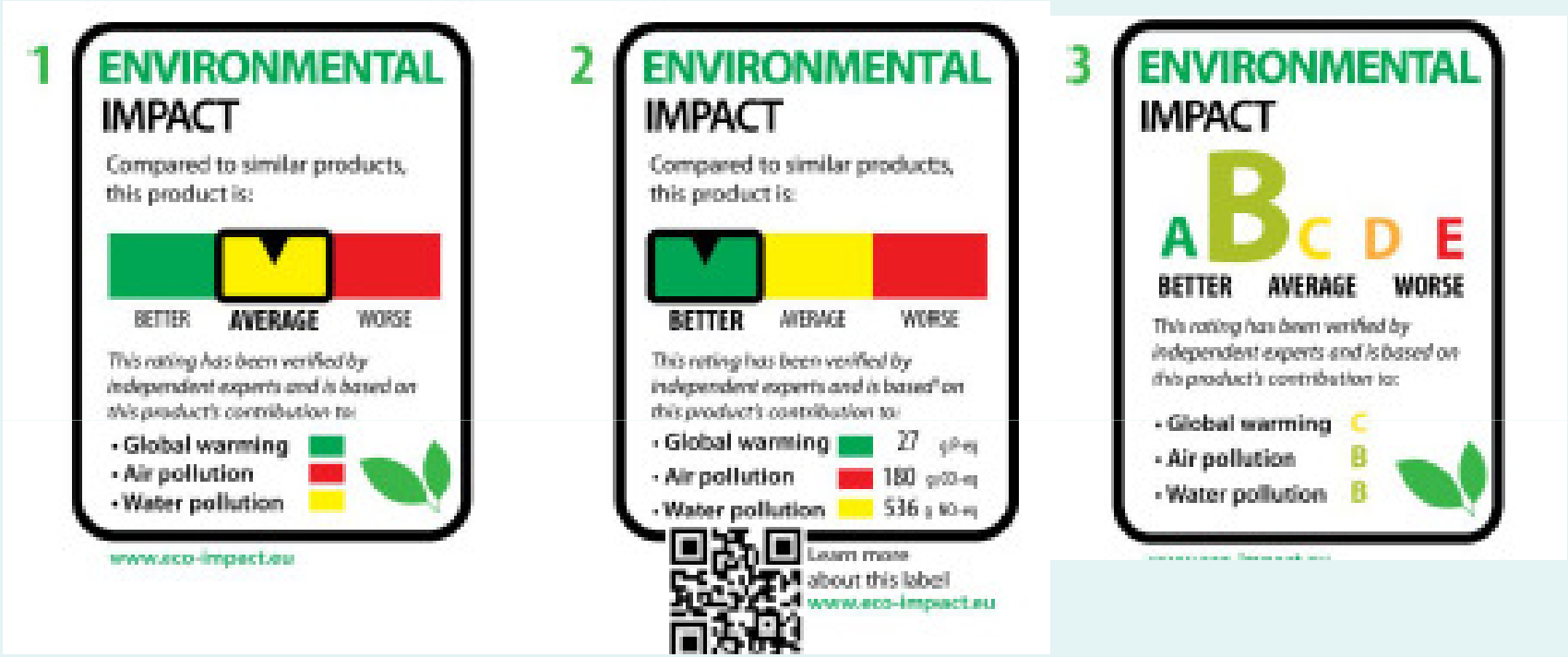
Study of different options for communicating environmental information on products, Bio Intelligence Solutions, 2012

Three Optimal Environmental Designs Identified



Balance between level of technical information and how it can be communicated to consumers to be easily understood

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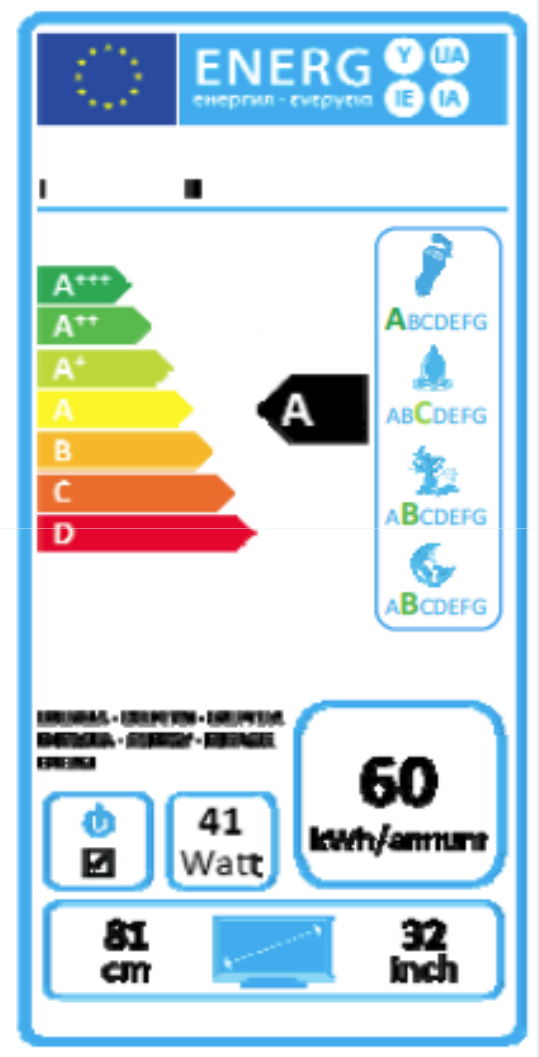
European Commission - Research on EU Product Label Options

- Study investigates creating a product label providing environmental lifecycle performance.
- Labels presenting comparative efficiency via stars, letters or numbers vastly preferred to continuous scale
- Preferred less technical terminology such as “power” to represent electricity consumption and “units per day” over “kWh per day”
- Grouped and delineated information, presented in a hierarchy of importance avoids overloading
- Evidence of reduced running costs is key to getting more consumers to buy energy efficient products



Most favoured design

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Research on EU Product Label Options -Ipsos MORI, London Economics and AEA, 2012

Environmental Life Cycle Rating Label

- A weighted overall score and scores for four life cycle impact stages
- Layered approach allows readers to choose between abbreviated and detailed information
- Star rating systems - simplist for people to understand, positive connotation across cultures
- Consumer survey – well received, expand consumer awareness and contribute to environmental purchasing decisions

'The label is clearly laid out and conveys a lot of information simply, I would prefer a more concrete scale'

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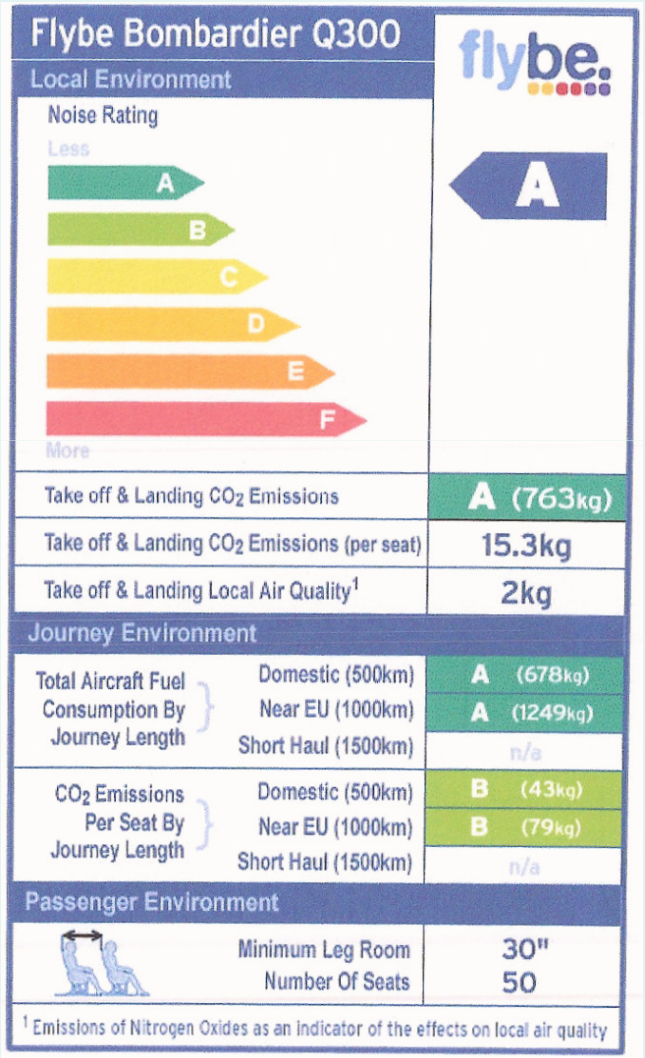
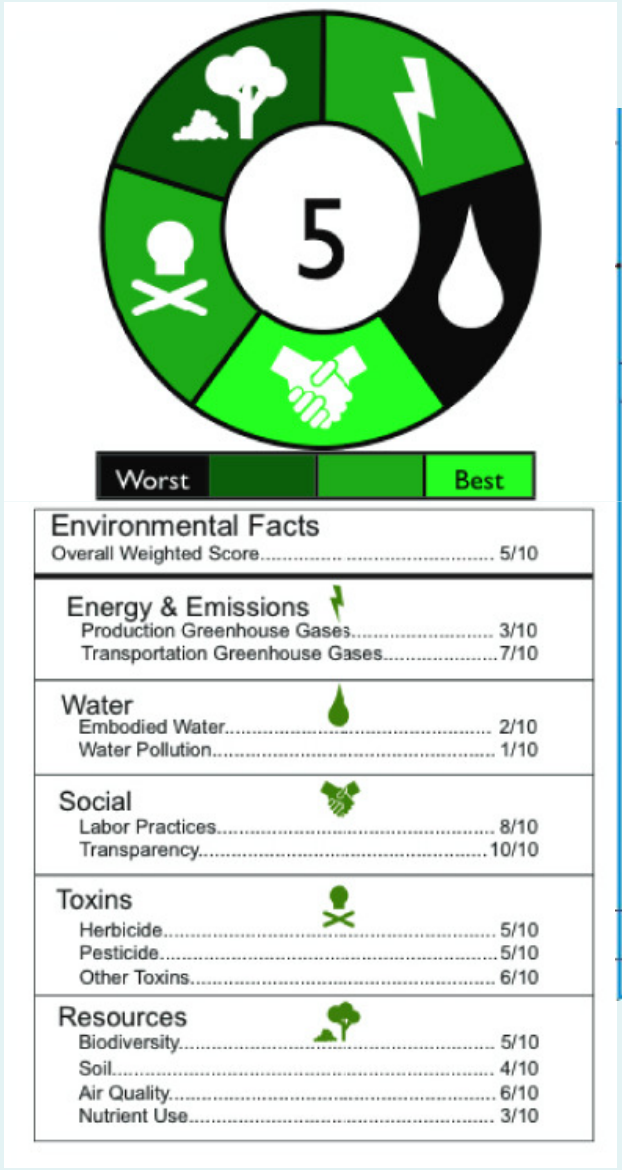
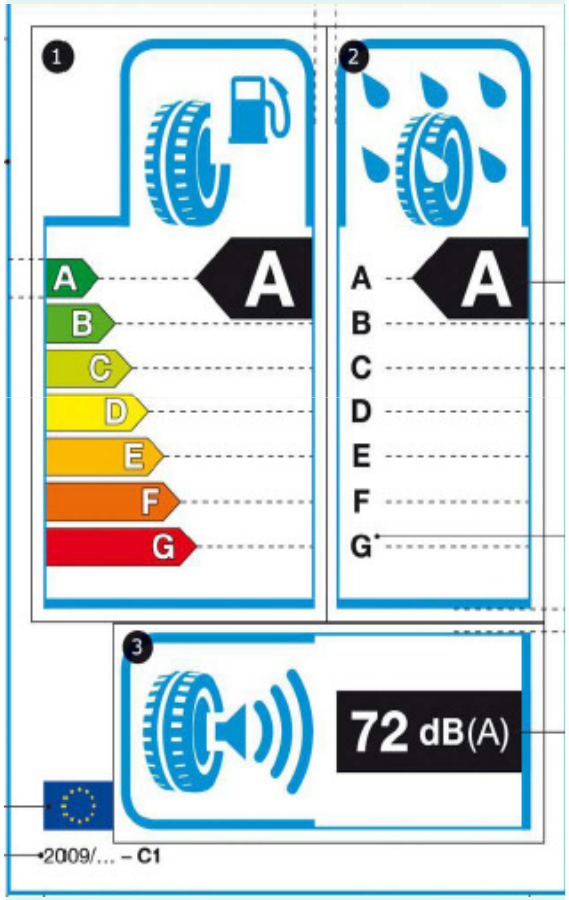
Indicating Impact: The Environmental life-cycle rating label – Laron & Farkes, 2010

Do any of these labels risk information overload?







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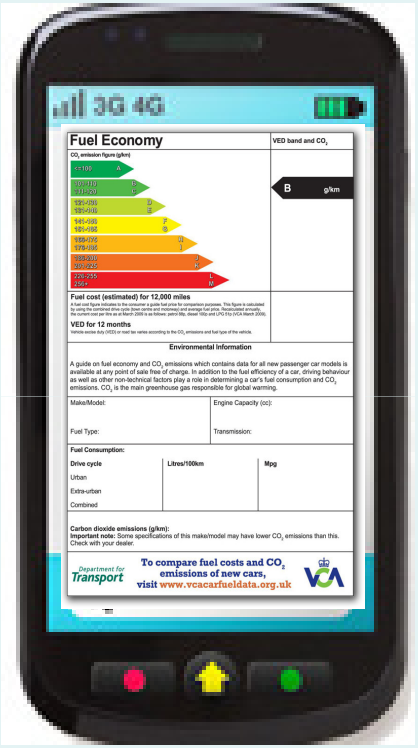
LowCVP Car Labeling Research Insights

- ✓ MPG important
- ✓ Fuel cost important
- ✓ CO2 figure less important, link to cost (tax)
- ✓ Recognise colour coded comparative scale
- ✓ Require more practical information on EV/PHEV
- ✓ Metrics related to EV/PHEV challenging
- ✓ Internet, and smart phones, dominant research method for consumers when buying a car
- ✓ Support for a QR code and URL on label
- ✓ Future proof the label to allow integration with an increasingly digital world



By 2015 more people will access content and services via the mobile web on smart phones and tablets than laptops and computers (International Telecommunication Union).

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Conclusion – The Winning Elements

- Balance regulatory & voluntary information, **prioritise** information most likely to influences consumer purchasing :

  1. Fuel consumption 2. Fuel Cost 3. Environmental (CO2)

- Information must be **clear, simple and ease cognitive processing**

- **Aggregation** of multiple environmental indictors useful
- **Comparative data** required, works well using categorised colour coding or stars – 'creates branding', cost comparisons useful

- Links to websites **(URL & QR codes)** can avoid information overload

- Care with **metrics** and **terminology**

- **Test** new labels with consumers – different cultures & demographics

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