A New Digital Switchover? Delivering a Digital Energy Label for Europe

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The Problem

- A lack of information remains a barrier to consumers saving energy

- The energy label has been a static, on-product label for over 20 years

- Due to the necessities of regulation, it is inflexible; lacks adaptability

- Its limited to the quantity of information within its physical confines

- It cannot be modified once printed: does not support future rescaling

- The content on the label cannot be personalised

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Current information/content communication media by retailers

QR Code; standardised since 2012, patent free, and work fine when printed at a low resolution. Can be scanned simply by a smartphone.
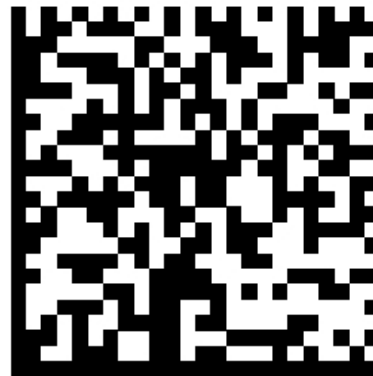
Data Matrix; a precursor to the QR code, is another example of a 2D barcode – was superseded by the QR code as it only carries half the information of a QR code.
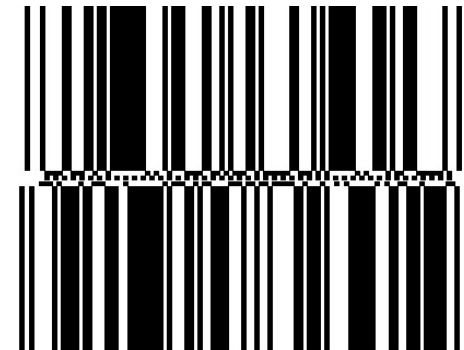
Data bar; can carry up to 4 pieces of information, compared to the traditional linear barcode, and when printed take up less space. But they carry far less information compared with 2D barcodes
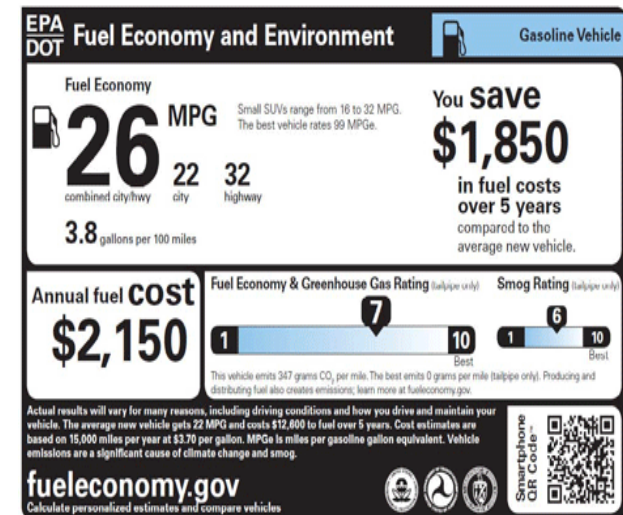
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QR Code Use on environmental & product labels
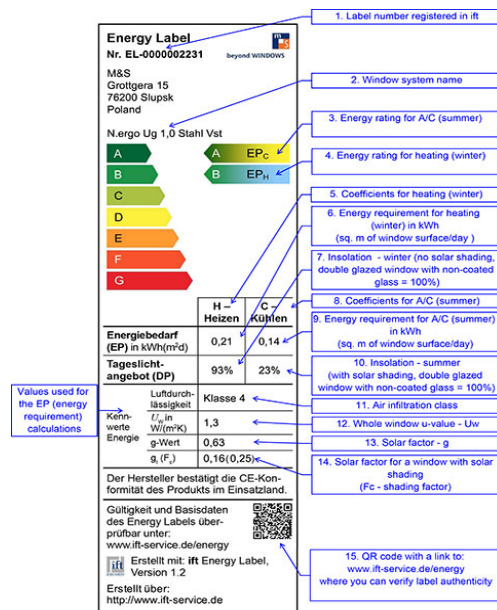
German window energy label uses a QR code to link the user to the database of products to verify its authenticity

Best Buy, the U.S. multiple retailer, uses QR codes within their "Fact Tags" to informer their customers about the product

U.S. EPA (Environmental Protection Agency) and Dept. of Transport uses QR codes to facilitate model comparison on fuel economy

How do consumers use and react to QR codes?

- Average smartphone penetration in EU5 has now reached 57%

- 82% of consumers already use smartphones during their shopping trips
  (Retail Geek, 2010)

- Between 15-20% of smartphone users use QR codes
  (evidenced by UK Gov. study (2014), and 2012 studies by Digital Marketing and Pitney Bowes)

- 29% of marketeers rated QR codes very effective: 66% effective
  (Experiean survey, 2012)

- BUT: they should be positioned appropriately and not out of reach for scanning, have unbroken links and have landing spots which are mobile optimised…this misuse can be a turnoff for consumers.

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The research & benefits to energy labelling

- EC and CLASP research on consumer understanding…

- Energy label content can be enriched along the following lines:

  - **Cost** – display annual, lifetime and total cost of ownership

  - **Energy consumption** – beyond the "kWh/annum" figure

  - **Energy class** – depending on when it was placed on the market

  - **Best practice** – comparison with other models on the market

  - **Time benchmarks** – how much more efficient is the product compared to an older model

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Bosch Siemens – Trialling QR codes on energy labels
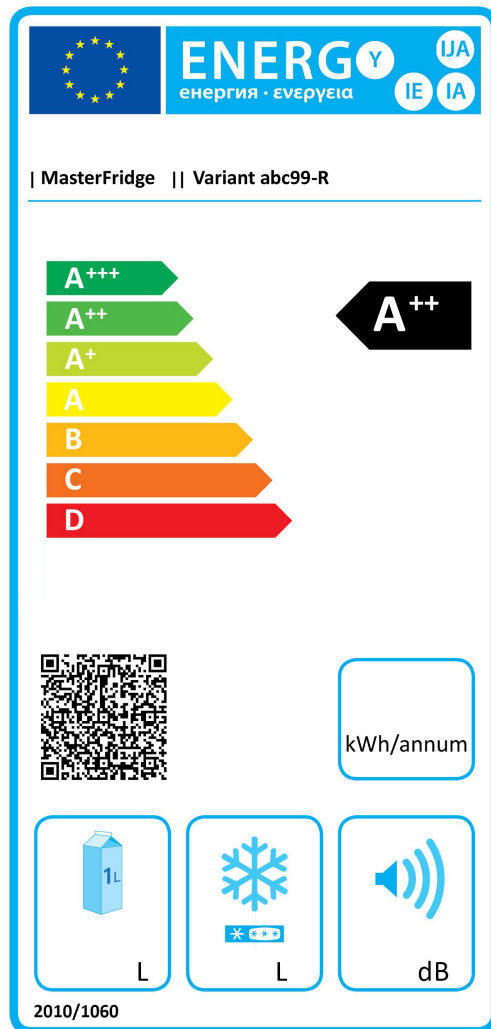
Key issue: the need to maintain simplicity in the message without losing key, relevant information about the product

Problems: there is more information than you can fit on the label. Its impact has waned in with less class differentiation, and in a static form, the label doesn't support re-scaling.

Bosch Siemens (BSH) wanted to test how to employ digital means to overcome these problems.

BSH produced an app that identified a product via scanning a QR code. BSH maintain a preference for this method as opposed to optical scanning.

This "proof of concept study" proved the technical feasibility. BSH concluded that the apps should not be proprietary, regulators should set the regulatory requirements without defining the solution, and that the Apps can work with existing database structures.

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International examples of energy label digitisation (1/2)

The mandatory Chinese Energy Label.

The accompanying new Chinese Energy Label app has a built in optical scanner for use with the QR code on the label.
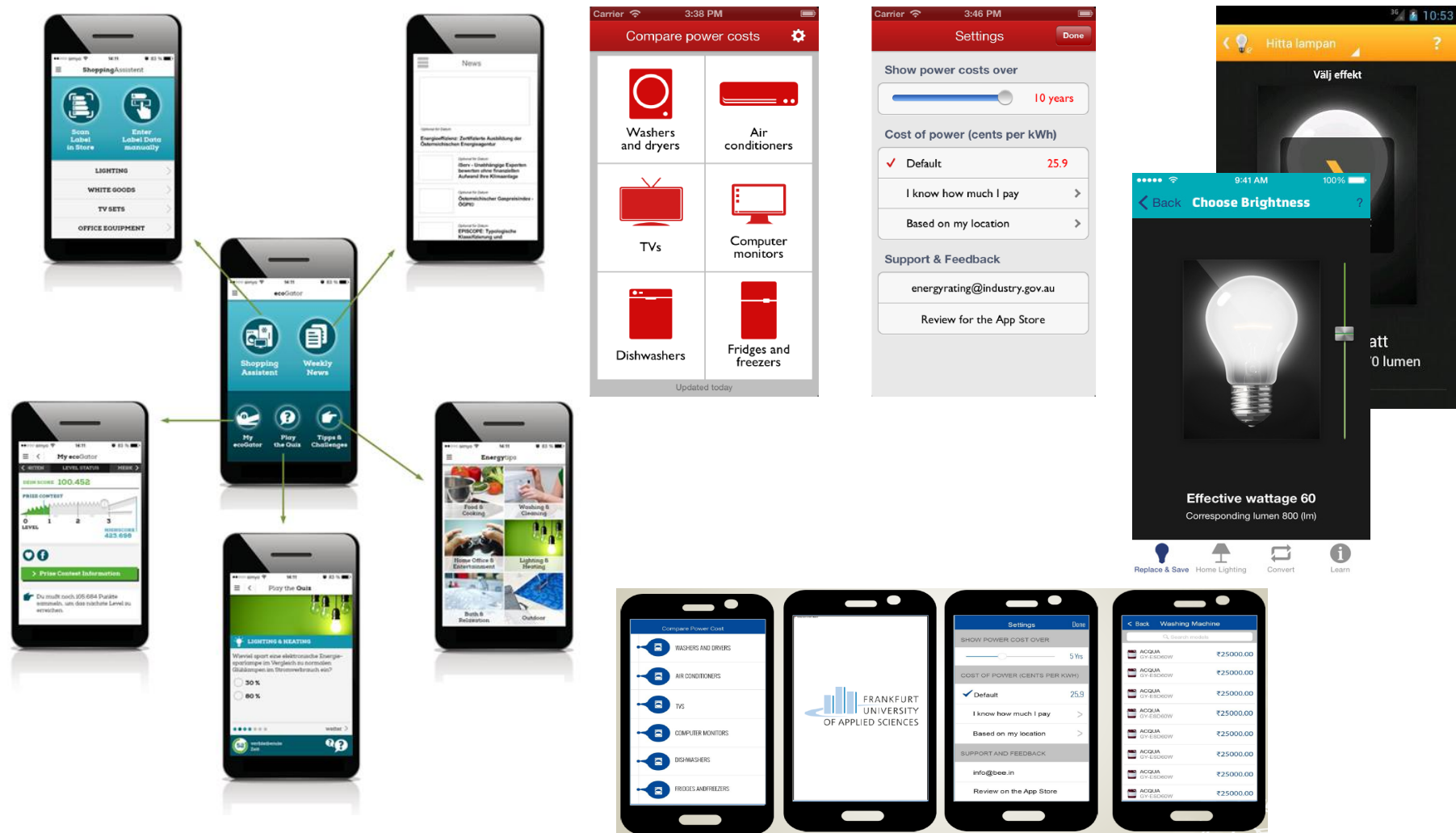
The voluntary TopTen China energy label.

Scanning the QR code takes you to the TopTen China website

Inclusion of a QR code from an Energy Label in Bolivia

International examples of energy label digitisation (2/2)

Conclusion & Discussion (1/2)

- ***Do Consumers use QR codes?*** The evidence suggest they do. But they are not a silver bullet and can be used as part of a wider suite of different communication media

- ***Are we between technologies?*** Perhaps not. Different proponents use different optical scanning (Ecogator) and QR code solutions (China, BSH).

- ***Are the current examples of digitisation effective?*** What we don't have is any independent data on the effectiveness and use by consumers of any of these new tools.

Conclusion & Discussion (2/2)

- ***What are the opportunities within the EU?*** Many! A digitised energy label would :

    1. Guide consumers

    2. Provide tailored information on cost or best product according to user habits

    3. Enhanced comparison with benchmarks

    4. Mitigate confusion at label transition times

    5. Support market surveillance

    6. Provide tips on sustainable use

    7. work seamlessly with a mandatory product database

- ***Energy Label digitisation must remain a part of the solution for the reform of the energy label within the EU***

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Thanks

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