
Smart Grids and Cleanpower 2010

The need for Real Time Feedback

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Agenda

Synopsis

- There is a lot of interest in providing energy information over the Internet but will this be enough - indeed, will it manage to engage the ordinary person in the street or only achieve limited interest?
- What is the role of direct or real time feedback? Is this the trigger that is needed to make consumer engagement mainstream?
- And what about gas and water - is there a need for similar feedback for these services?

Three topics:

1. Different types of displays - features and benefits
2. Trial results from deployments of these types of display.
3. The importance - and challenge - of real time feedback for gas and water.

Different types of Display – Push Displays

Direct Feedback

- Real Time information
- Always on, simple, low cost
- Need to be engaging – analogue not digital
- Pre-smart & smart meter solutions



Different types of Display – Pull Displays

Indirect Feedback:

- On demand ‘request for information’
- Richer environment
- Often shares other primary displays: e.g. TVs, computers, mobile phones
- Competition for interest with primary use



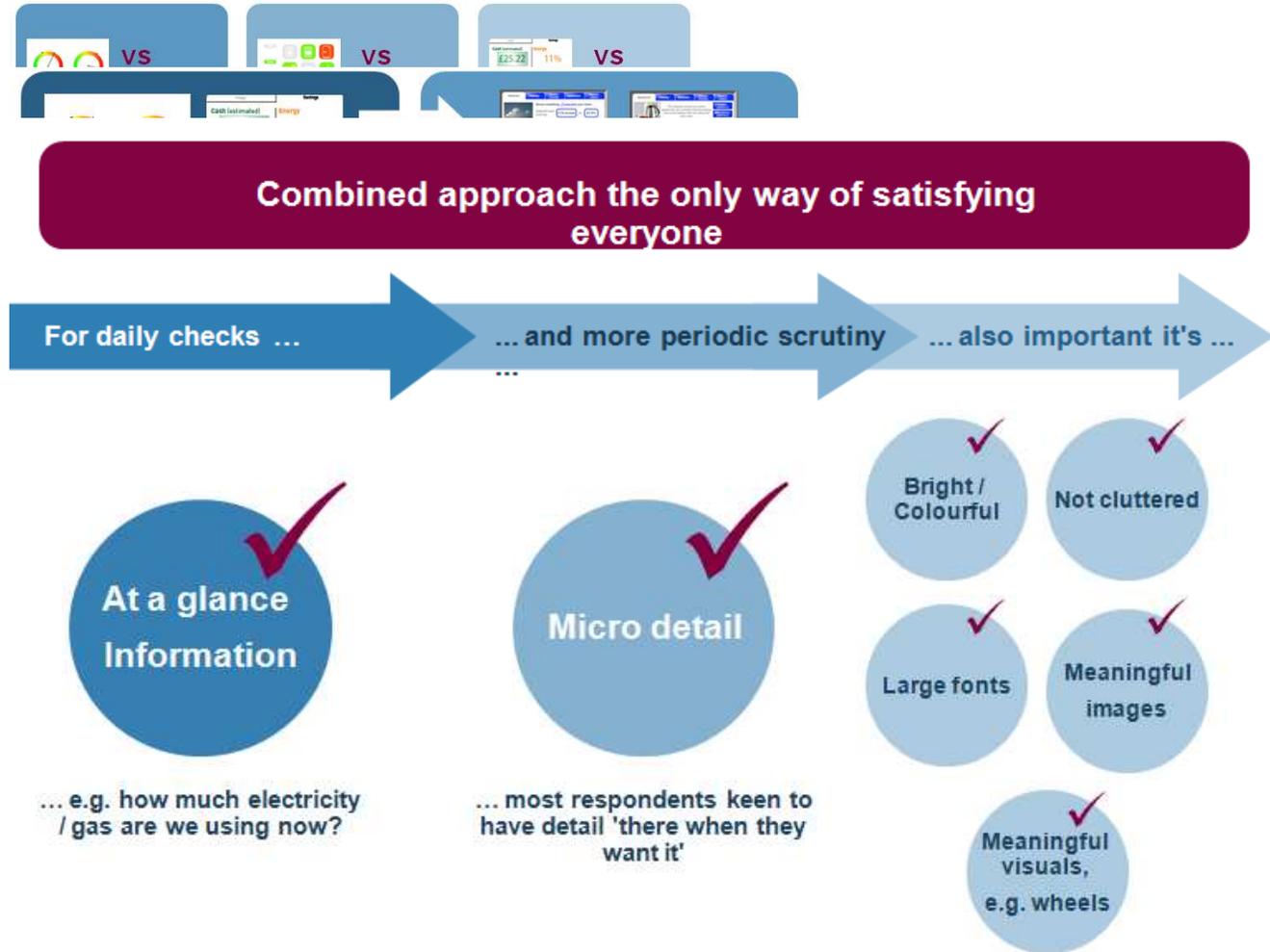


The mobile phone revolution

The iphone has introduced the whole new world of 'apps'...

- Tremendous flexibility, user interface, access – all at a low cost.
- But:
 - They still need sensors, controllers and a bridge and these are not free
 - Not every one has broadband let alone a smart phone
- Optimum solution:
 - An engaging push display that includes appliances
 - Add on web services and mobile phone apps
- But the push display is the starting point

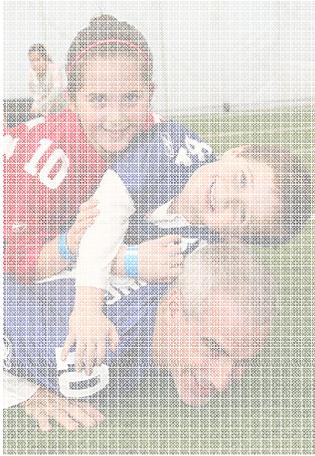
Market Research (GEO, 2006)



Field Trial Interim Results



	Solo	Duet	Trio
High levels of satisfaction:	95%	82%	73%
Daily usage – ‘push’ versus ‘pull’:	70%	60%	28%
Changes in behaviour: switching things off more than before:	70%	95%	78%
Learning: those who have increased their level of confidence:	85%	65%	69%
Follow-on actions as a direct result of having a display:	<p>2/3rds of those without a full set of low energy light bulbs bought additional ones</p> <p>22 people are now considering installing insulation</p>		



Trial Conclusions

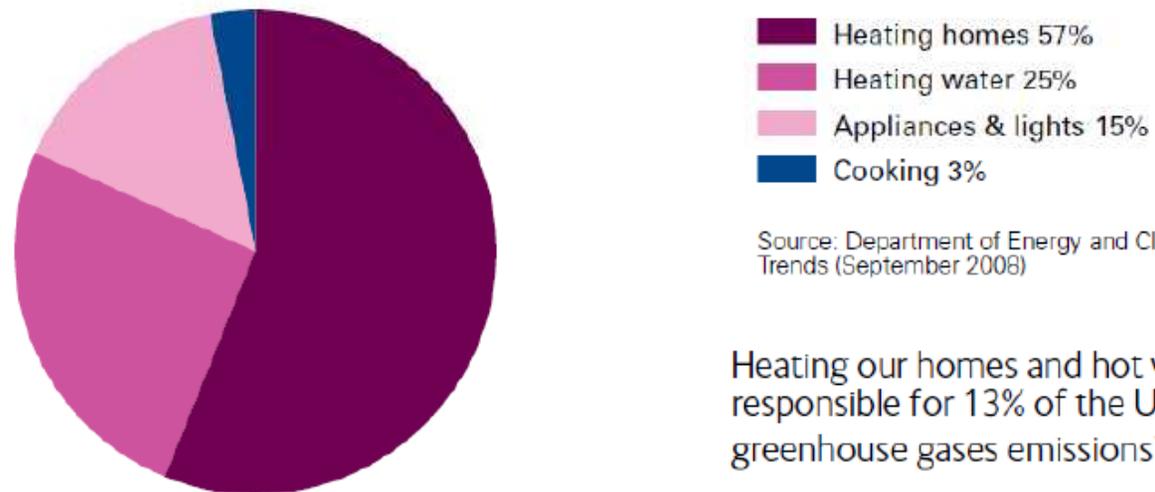
Its about people...

- Once people start to use displays they seem to want more
- Push displays are needed to engage and remind people
- There is a learning curve: people can be scared off with too much detail too quickly
- Displays:
 - Create awareness
 - Generate confidence
 - Stimulate action
 - Bring people into the market

Electricity is not the biggest problem

Chart 2

Over three-quarters of the energy we use in our homes is for heating



Source: Department of Energy and Climate Change, Energy Trends (September 2008)

Heating our homes and hot water is responsible for 13% of the UK's total greenhouse gases emissions¹

Source: UK Low Carbon Transition Plan

The challenge of Gas - and Water – smart meters

Gas and water smart meters will often give only one reading a day...

- Will this be enough to engage people?
- Experience with electricity monitors suggest not.

Why only one reading a day?

- To provide 15 year battery life
- Entrenched in old thinking

Is it too late to challenge this thinking?

Conclusions

Push displays are important to:

- Engage people
- Trigger actions

Pull displays are also important

- For analysis
- For remote control
- For detailed settings

Smart phones offer a major opportunity

We need to insist on real time data from gas and water meters

- Gas savings are of greater significance
- Water conservation is a hard sell without direct feedback