Smart Cities: The Consumer Perspective

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What is Consumer Focus?

• Consumer Focus is the statutory consumer champion for England, Wales, Scotland and (for postal consumers) Northern Ireland. We were formed by The Consumers, Estate Agents and Redress (CEAR) Act 2007.

• We operate across the whole of the economy, persuading businesses, public services and policy makers to put consumers at the heart of what they do.
Today’s Session

- Consumer Focus work on Smart Meters
- Consumer Focus work on Smart Grids
- Key learning for Smart Cities
Our position on Smart Meters

We recognise the potential benefits:

- Can end estimate and inaccurate billing, a major source of customer complaints
- Can be a tool to help consumers better manage their energy consumption
- Can bring environmental and social benefits to consumers & citizens
- If implemented well, in the long-term should have a downward pressure on costs
- May enable introduction of more complex demand response, which in conjunction with a smarter grid should also reduce energy costs and enable more low-carbon generation
Our Position on Smart Meters

But, concerns that in practice customers may suffer detriment and benefits may not be realised

- Key challenge of delivering both industry and consumer benefits from rollout is customer acceptance and engagement (but these are different things!)

- Steps must be taken to protect consumers’ privacy and other interests
Consumers’ Perceptions of Smart Meters
Omnibus Survey, March 2012

• 52% had heard of smart meters
• Many people believe smart meters will help them monitor usage (60%), help save money (30%) and provide accurate bills (29%)
• 8% believe they are ‘expensive’
• 4 % believe they will help governments to spy on people in their homes
• 17% of people are ‘concerned’ or ‘very concerned’ about potential health effects from smart technologies
Our initial position on Smart Grids

**Potential benefits** of Smart Grids include:

- Reduction in the costs to consumers of investing in network infrastructure, particularly in order to cater for increasing electrification
- Reduction of the cost to consumers of losses through network faults
- Can enable some domestic customers to take advantage of lower-cost deals for demand response
- Can reduce energy costs per unit, if savings are shared by all
- Can allow more renewables, including distributed generation, onto the grid, and reduce the need to use expensive, carbon intensive ‘peaking’ plant.
Our initial position on Smart Grids

However there is potential for **consumer detriment** and this must be avoided:

- Demand response tariffs must be appropriate to households, and must not leave the vulnerable behind.
- Not everyone wants to be a ‘prosumer’
- New protections around automation inc. consent, override.
- Privacy and security concerns – more chance of maliciously caused blackouts.
- Do the networks have expertise and capacity for ‘smartening’ of the grid to be value for money?
- Current lack of joined-up thinking by government.
Some key consumer benefits of Smart Cities

- Better energy management; demand side response, and potential for reduction in energy bills
- Better water management
- Tele-healthcare (but danger of isolation?)
- Better information on public transport and traffic
Key challenges for Smart Cities
from our work on smart meters and smart grids

- Privacy
- Security
- Customer service, mis-selling, cross-selling
- Interoperability/interchangeability
- Health concerns from EM signals
- Protecting the vulnerable
- Joined-up policy
- Ensuring effective competition
Privacy: UK customer attitudes to data sharing – mixed picture

Consumer Focus Online survey of 2000 consumers March 2010:
• Around two thirds of consumers said government or local council should be able to access customer’s energy efficiency data for environmental, social or security reasons.
• But one third willing to share their own data.

IBM survey 2011:
• 42% people would share data to manage their energy
• 21% will not
• 16% will not share data for any purpose

Navetas research May 2010:
• 49 per cent of consumers were happy to share information on appliance consumption with their energy provider, 10 per cent with other companies
• 39 per cent saying that they would rather their information be kept within their home
Privacy

- ‘Privacy by design’ vital
- Consumers to be recognised as ‘data owners’, having control of who else has access to their data (except for where necessary for regulation) through opt IN, not out.
- Regulated duties to be drawn narrowly, to reduce amount of data collection necessary
- Automation always by consent only
- Engagement strategy vital to inform consumers of their rights re. data, to empower them and quieten concerns
- Regulation/standards to eliminate commercial misuse of legitimately collected data
Security

- 18% of consumers ‘very concerned’ about the security and use of their energy data and personal information (Omnibus Survey, March 2012)
- Smart City is even more vulnerable to criminal hackers, and to terrorist attacks, than smart metering systems alone
- Public must be reassured as to the security of their data
- However, balance must be drawn between security and costs, which will be picked up by the consumer
Customer service, and sales

- Customers’ experience of installation of smart meters and other devices must be positive
- Concerns over cross-selling and mis-selling, while carrying out a government-sponsored roll-out
- Consumers can feel pressured when given sales pitch, on their doorsteps – CF report *The End of the Road* found 41% felt under pressure to buy (2011)
- In 2011 four out of Big Six were investigated by Ofgem for misselling
- We are concerned by the decision to allow marketing (although not sales) during Smart Meter installation visit
- Regulation and service standards need to be tighter
Interoperability and co-existence

- Customers should not have to change their meter, IHD or any other smart appliance when they switch supplier or move home.
- Failure to address issues could result in higher costs, waste, customer inconvenience, and could hurt competition.
- **Testing needed** to ensure smart technologies are compatible with existing appliances e.g. international experience reports interference with touch lamps, security systems etc.
- Consumers must not be locked in – or misled into thinking they are locked in – to appliance or supply deals because of previous purchases.

I contacted the price comparison site and then entered into a contract over the phone. Yesterday I received an email saying that the supplier had to cancel my contract as they cannot support my smart meter.

Example call to Consumer Direct 24/6/11.
Addressing health concerns

- Estimated 5% of UK population suffers from electromagnetic sensitivity (EMS)
- People’s concerns must be taken seriously; contributed to the stalling of roll-out of smart meters in Fairfax and Watsonville in California
- Smart Cities will make it very difficult to get away from EM signals

Action needed:
- Technology is independently and robustly tested to ensure safe; decisions on functionality, communications, taken with health concerns in mind
- Residents have choices to reduce exposure e.g. hard wired communications, right to say no to installation, EM free areas in offices, hospitals?
- An independent body should produce and make easily available reliable information on health issues in relation to smart technology
Making smart cities work for everyone

• Inclusivity by design
• Ensuring that technology is affordable
• Ensuring that those who do not engage in the ‘smart’ agenda are not penalised or excluded
• Often no commercial drivers to cater for low income and vulnerable consumers, so standards and regulation must ensure they are protected and benefit from services
Ensuring Effective Competition

- Smart Metering roll-out, and Data Communications Company, provides opportunity for concentration of telecommunications and data handling into hands of small number of companies?
- Regulation needed to protect against oligopoly and promote competition, which will have better outcomes for consumers
• Digital Britain, Smart Metering, Smart Grid, Assisted Living agendas could all be linked up
• However currently, they are not sufficiently
• Opportunities to learn through experience, improve services, and make efficiency savings are being lost
Conclusions

• Smart Cities could bring considerable benefit to consumers, but only if managed explicitly in consumers’ interests
• Health, privacy and security concerns must be dealt with effectively
• Care must be taken that more vulnerable consumers are catered for – the market won’t deliver
• Joined-up policy vital
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