



Green Shift

Cities meeting the challenge of energy efficiency through ICTs and green technology

Home Energy Management in Manchester and other European Cities.

Vin Sumner, Clicks and Links Ltd

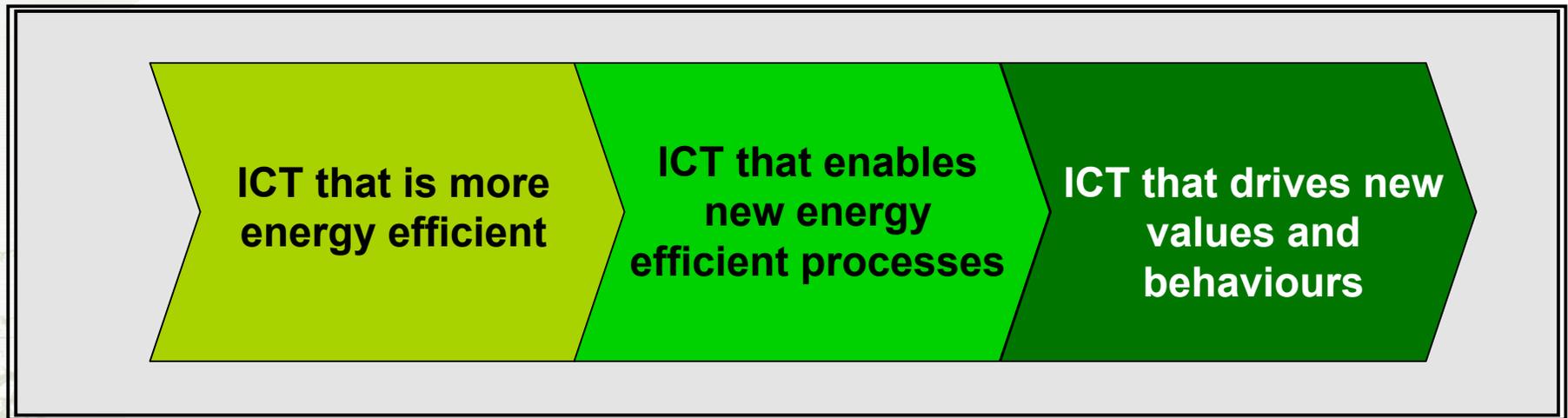
Agenda

- » Who am I ?
 - » Green Shift
 - » DEHEMS Project (Home Energy)
 - » Green Digital Charter
 - » Contacts/Further Information
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Vin Sumner

- » 25 Yrs ICT Industry
 - » Founder , Clicks and Links (2000)
 - ICT for Public Sector
 - Virtual Worlds
 - ICT and Energy Efficiency
 - » Co Founder , IT4Green (2008)
 - ICT and Energy Efficiency Products
 - » Member European Commission Advisory Group on ICT and Energy Efficiency
 - » Co Founder Green Shift Initiative
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A Green Shift



- sustainability in production, use & disposal of ICT
 - more energy efficient business, public services and living
 - creating sustainable energy communities
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Digital Environment Home Energy Management System (DEHEMS) - 1

- » DEHEMS partnership led by Manchester City Council
 - » Funding secured (€2.9m) from bid to European Commission
 - » Project kick-off June 2008
 - » Action research pilots in Manchester, Birmingham, Bristol, Rouse, Cluj Q1 2009-Q3 2010, including first real time household emissions trading markets (Q1 2010)
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Digital Environment Home Energy Management System (DEHEMS) - 2

- » Energy use accounts for 85% of household emissions.
 - » Barrier to behaviour change in energy use is lack of measurement of emissions impact at household level
 - » Disconnect between scale of problem and households' role in tackling it
 - » Absence of measurement undermines government policy responses e.g. household emissions trading
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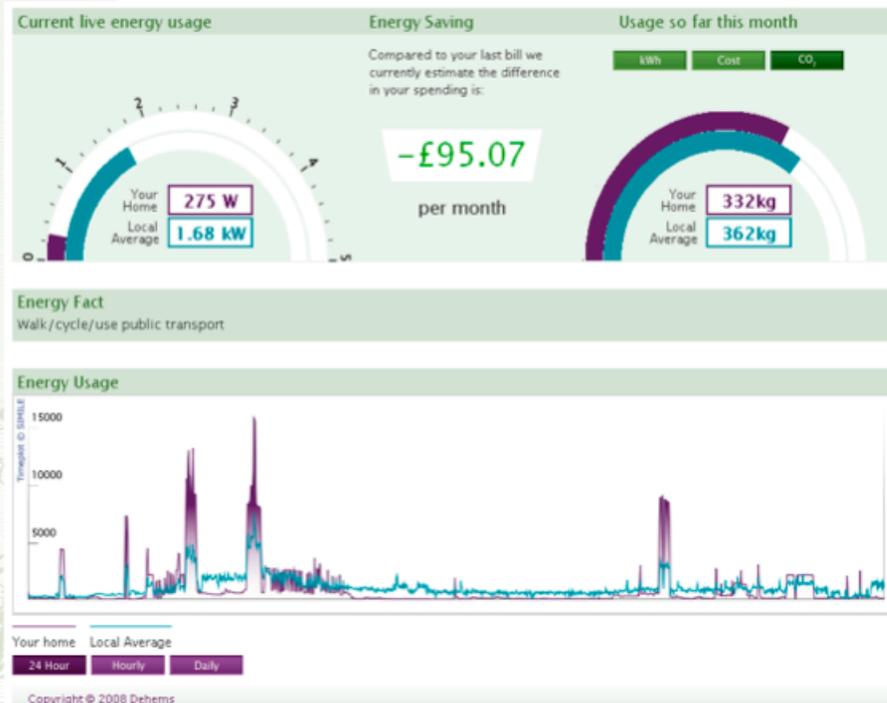
Digital Environment Home Energy Management System (DEHEMS) - 3

- » Next generation, online Smart Meters, providing
 - » Real time Carbon footprint of household emissions, broken down by individual appliance and service
 - » Efficiency rating for each appliance and service
 - » Neighbourhood emissions trading in pilots, with households able to buy and sell quotas, according to their 'emissions budgets'.
 - » Neighbourhood emissions league tables in pilots, with households' performance ranked
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Current Progress

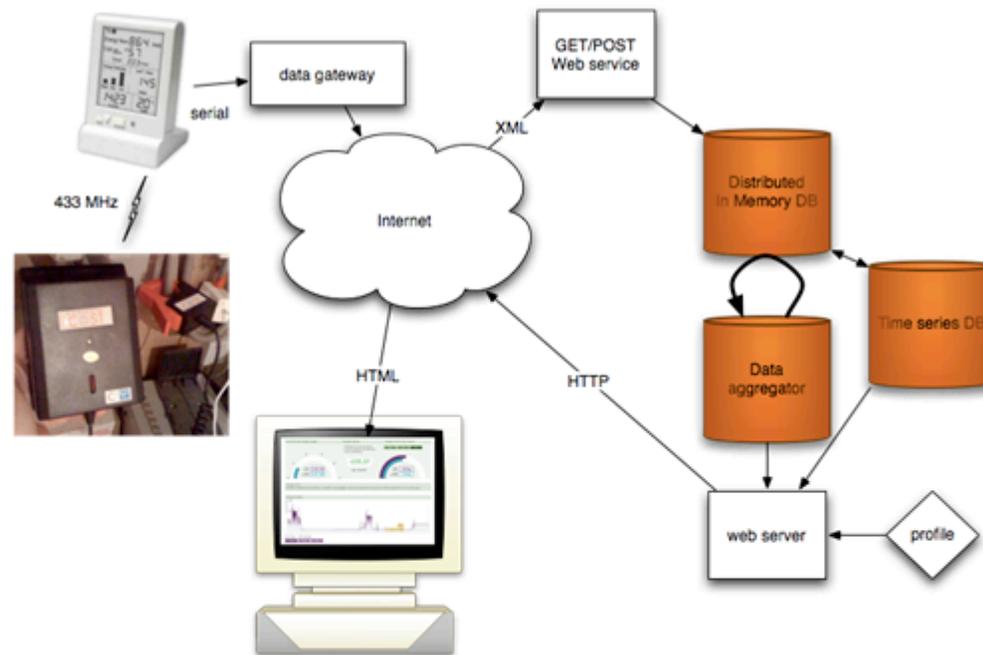
- » Prototype Deployed
- » Discussions in UK re rollout under CERT
- » [BBC](#) : *Means to identify energy use*, 23 September 2008
- » [DEHEMS Live Demo](#)

Dashboard



- » Real time measurement of cost & emissions
- » Compare home with neighborhood (Neighbourhood Nudge)
- » Projected household savings
- » Identify energy intensive activities
- » Web based interface with open access to data for other platforms, such as mobile, TV, mashups, social networks, etc.

DEHEMS System



- Scalable to millions of households
- API for storage and retrieval
- OpenAPI for interfacing with other sensor input
- Ability to pipeline data for powering next generation web services

Green Digital Charter - 1

- » *“To visibly prioritise organisational commitment to the Charter internally and externally.”*
 - » *“To prioritise requirements for emissions reduction activities in planning a city/region’s ICT infrastructure”*
 - » *“To improve energy efficiency of data centres and PC services by 25% over 3 years through take-up of green options”*
 - » *“To provide required data to enable independent, annual green IT audits evaluating effectiveness of green IT delivery”*
 - » *“To generate meaningful emissions information through integration of IT-enabled energy measurement systems”*
 - » *“To utilise IT to enable households and businesses to take action to reduce personal emissions and participate in community action to reduce emissions at a collective level.”*
 - » *“To disseminate learning and best practice from Charter projects across government, business and citizens.”*
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Green Digital Charter - 2

- » Draft Available October 2008
 - » Complements new EC Recommendations
 - » Green Shift Europe www.greenshifteurope.eu
 - » Cities/Regions Sign Up
 - » Develop Charter and Commit to Action
 - » Formal Launch March 2009 ICT4EE , Brussels
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Contacts/Further Information

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 - » www.secondplaces.net (Virtual Worlds)
 - » www.dehems.eu
 - » www.greenshifteurope.eu
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