



**Lorraine Hudson  
Bristol City Council**



**BRISTOL**

GREEN  
DIGITAL  
CITY



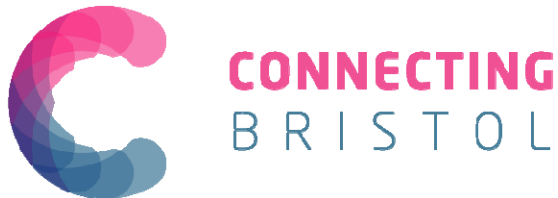


# Green Digital Charter

- Bristol signed in 2010
- Bristol's 2 strand approach:
  - **Green ICT:** improving energy efficiency in ICT
  - **Smart City Bristol:** using ICT to reduce emissions in other sectors and to support behavioural change

# Before Green Digital Charter

- Bristol member of DC10plus & lead for Green ICT
- Led by Connecting Bristol – the city’s digital partnership
- DC10plus network aims to address social, economic, environmental and improved service delivery through the use of technology and innovation.
- Developed a number of green ICT initiatives in collaboration with community partners





[www.bristolgreencapital.org](http://www.bristolgreencapital.org)

## BRISTOL DIGITAL CITY A centre for Digital Industries & Environmental Technologies



**Digital City work closely aligned to Bristol's climate  
change work & Green Capital Initiative**



# City Leadership

- Signatory of **Covenant of Mayors** – 2009
- More **ambitious carbon targets** than EU or UK
- **Green Digital initiatives** at the heart of the Local Authority
- **Bristol Futures Group** - established 2011 & brings together Green, Digital, Economic Development & International/European functions of City Council



# Carbon Reduction Target

- 40% reduction in Bristol's CO<sub>2</sub> by 2020 from 2005 baseline
- Includes organisations, homes & transport and ICT included in this
- Currently on target: between 2005-08, total CO<sub>2</sub> emissions reduced by 7% or 11% per capita CO<sub>2</sub> emission
- Population increased by 4%



## Integrated approach

- Digital work linked to climate change initiatives but also social (e.g. digital inclusion, older people, health) and economic work streams for the City
- Partnership work is crucial with all sectors and engage your community
- Pooling of resources & creating open source tools and reports

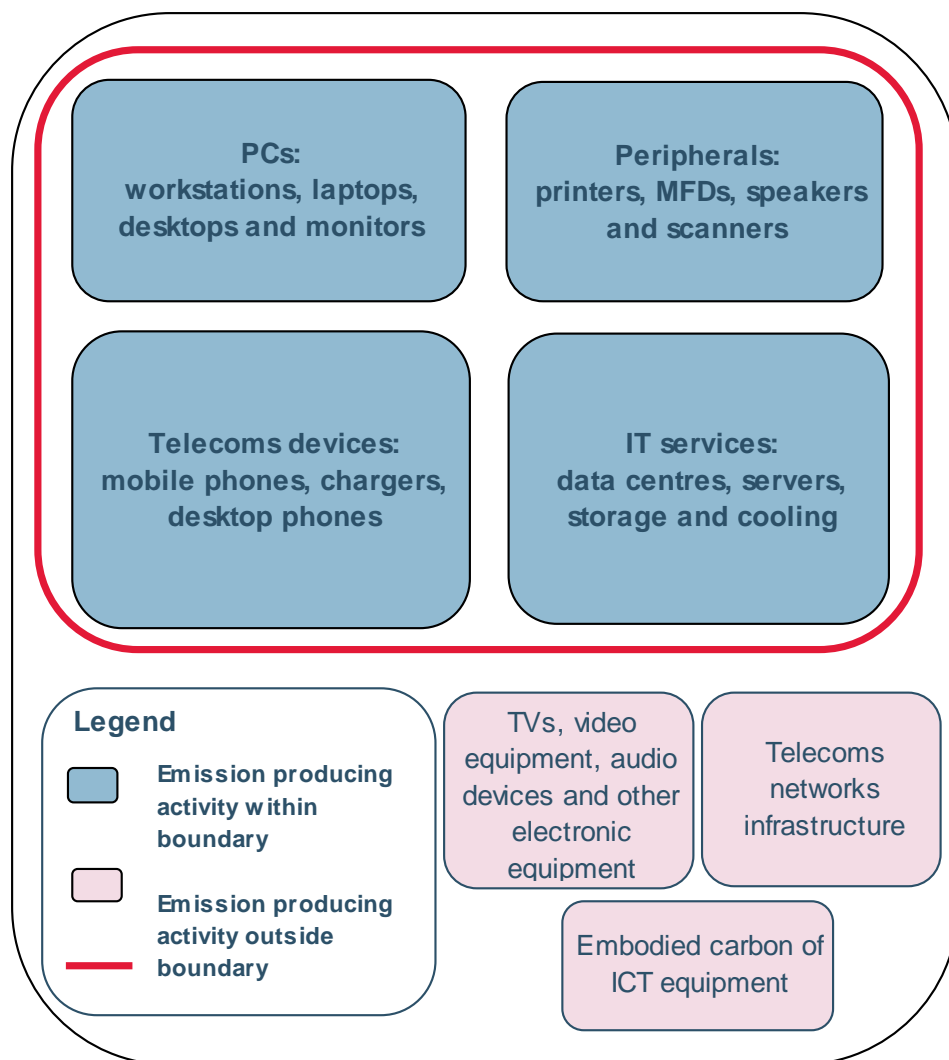




# Bristol Green ICT

- Participated in Low Carbon City Programme (2008)
- Supported work with public sector agencies in city to explore joint activities to reduce carbon
- Green ICT selected as one of activities
- Secured additional £25,000 funding to undertake carbon footprint of business use of ICT

# Bristol ICT Carbon Footprint



- For 2006
- The scope covers all non-domestic ICT
- 3% of City emissions or 7% of industrial or commercial emissions



## **Green Addict**

- Green ICT portal with free resources and tools
- Carbon footprint displayed in creative & engaging way
- Green ICT Solutions Database
- Tool to create Action Plan
- Green ICT Champion case studies

[www.greenaddict.eu](http://www.greenaddict.eu)



- Home
- Green ICT Map
- We're Committed
- Sector Statistics
- Hardware Statistics
- Green ICT Champions
- Did you know...
- Solutions Database
- Action Plan
- Carbon Calculators
- Submit Feedback
- In Your Area

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Site initiated by:



### About

Read case studies from Green ICT business champions in Bristol

Play Flash Intro

## BRISTOL

Slide Me

2006

CO2 emissions from ICT (tonnes) **67258**

Energy Bill (£) **10771349**

Based on 2008 energy prices

## Green ICT Map

Our map shows those organisations already committed to their green footprint. If you are ready to join them, click the join button to register your organisation.

Bristol UK Europe

### Green Tweets

Follow on

BristolGreenICT: Bristol response to #BDUK superfast broadband announcement, need to be more ambitious on upload and download speeds [ow.ly/65mKQ](http://ow.ly/65mKQ)

2:18 on 17/08/11

BristolGreenICT: RT @AskBristol: BCC election 2011 - 1st results expected at 0315, 2nd wave at 0430. Watch live from 0300 at [bit.ly/bccvote](http://bit.ly/bccvote) #bccvote

9:46 on 05/05/11

BristolGreenICT: Service Director Bristol Futures, register your interest in applying [www.bristolfutures.com](http://www.bristolfutures.com) #bcc

### Green-Mail

Sign up to regular Green ICT newsletters to your inbox

Your name  Company name

Your e-mail address

### News

Rss link

September 8, 2011  
Event: Wiki Wildlife Bristol, Watershed, 15 September

September 7, 2011  
Event: Bristol Independents Day, 17 September

September 5, 2011  
Next Gen Conference Registration Now Open



## **Green ICT Champion - BCC**

- Green ICT Officer & Green ICT Strategy (2010)
- Green data centre - natural cooling provided by the moat
- Printer consolidation & reduction
- IT equipment reuse & recycling scheme - redundant council PC's being redirected for community use
- Server virtualisation & consolidation
- Exploring central power down of all PCs as standard

**The Datacentre Leaders' Award: Innovation in  
the Micro Data Centre**



# Smart City Bristol



Smart City Bristol  
Final Report



- The purpose of the report is:
  - An independent analysis of how smart city technologies can contribute to Bristol's carbon reduction objectives
  - Benchmark Bristol against other world cities
  - Set of objective recommendations that will contribute to further emission reductions and provide city-wide economic benefits
- Funded by DECC and available at <http://www.slideshare.net/Bristolcc/bristol-smart-city-report-7579696>



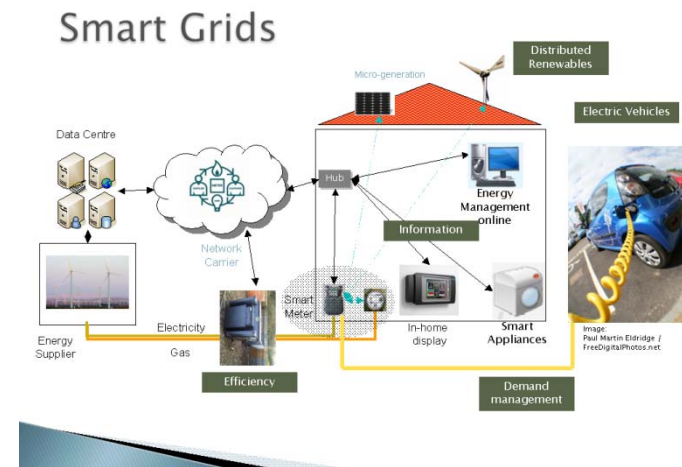
# Smart City Bristol – Focus

- **Smart energy:** sustainable electricity generation, smart distribution, storage and metering, building/home energy management systems, smart meters and interfaces, smart & informed consumers and demand response.
- **Smart transport:** deployment of sustainable mobility programmes (e.g. smart public transport, intelligent traffic management systems etc), alternative fuel vehicles & infrastructure.
- **Smart data:** expanding Bristol's open data portal & community of interest in smart data software applications, developing a city dashboard and public engagement initiatives.



# Test-bed for Innovation & Deployment

- **Smart metering:** DeHems & 3eHouses
- **Smart Grid:** Bid to Low Carbon Network Fund with Distribution Network Operator







# Test-bed for Innovation & Deployment

- **Smart Transport:** Freight Consolidation Centre & Traffic Control Centre
- **Smart Data:** B Open datastore & community led art projects using data



Integrated Logistics



Reducing Congestion





# Partnerships

- Partnership working critical with all sectors
- Draw on City's expertise e.g. Bristol has leading technology companies (e.g. Toshiba, IBM, HP etc), Universities and community based initiatives e.g. Knowle West Media Centre
- Happy to share our experiences in cooperation with national, European and international initiatives
- **Future Plans:** FP7 Smart Cities bid, as well as exploring other partnerships & funding sources

# Barriers

- Resources - financial & people time
- As you build more successful partnerships this create more opportunities but also greater pressures
- Focusing in on opportunities which will bring greatest environmental, social & economic benefits
- Metrics to measurement improvement

# Summary & Contact



**CONNECTING**  
BRISTOL

Future cities will be smart,  
green, open and connected....

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