



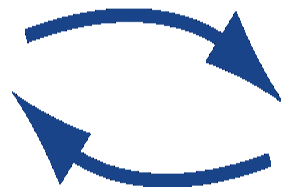
**MDDA**  
Manchester Digital Development Agency










Vin Sumner, Clicks and Links Ltd , Manchester, UK.

**Manchester City Region: Manchester Digital Development Agency:**  
MDDA set up in 2004 to coordinate Digital Agenda for the city region

# Cottonopolis



-  ROAD - 50AD
-  CANAL - 1734
-  RAIL - 1830
-  SHIP CANAL - 1894
-  AIR - 1938
-  FIBRE - 1970s
-  INTERNET - 1990s

Global Market Connectivity

# Transformation

needs **Vision + Aspiration + Action**

**Manchester – original modern industrial city to  
creative, innovative diversity .....**





# Innovation, Creativity and Diversity

“Technology, Talent and Tolerance” Richard Florida.

- **Largest urban regeneration programme in the UK**
- **Transformational Infrastructure** (mobility, digital, energy)
- **User driven open innovation – Living Labs**
- **Co-creation – co-production**
  - innovators, inventors and entrepreneurs
  - building, operating and owning infrastructure
  - user generated content and services
  - generating global skills and jobs locally
- **‘Smart Cities’**



European  
Network of  
Living Labs



# Policy drivers:



## Smart City Agendas

- Smart, inclusive & sustainable growth
- Green & Digital
  - Manchester: A Certain Future – [www.manchesterclimate.org](http://www.manchesterclimate.org)
- Transformational services
- Open innovation, open data, open networks
- Manchester Living Lab – open innovation test-bed



# A Digital Agenda for Manchester

- **Access and Connectivity**
  - Connected Citizens, Connected Businesses, Connected Manchester
- **Engagement**
  - Digital Skills, Social City, Digital Reform
- **Economy**
  - Stimulating and growing the creative and digital sector
- **Place**
  - A new digital city landscape
- **Leadership**
  - Investment, resources – think digital first and lead the way



## Future Internet enabled services in Smart Cities

- Internet of Things + Cloud + Open Data + 3D printing + nano.....



# Go ON Manchester – creating Digital Champions

The screenshot shows a web browser window with the address bar displaying `http://go-on-manchester.com/`. The browser's address bar also shows a search engine icon, a refresh icon, and a close icon. The browser's title bar shows "Home | Go ON Manchester". The browser's status bar shows "11:27 02/11/2012".

The website's header features a dark grey bar with a cookie notice: "We use cookies on this website. [Read about our use of cookies.](#) [Accept Cookies](#) [Decline Cookies](#)".

The main content area has a white background. On the left is the "Go ON Manchester" logo, consisting of the words "go on" in a black square above the word "Manchester". To the right of the logo is the text: "Go ON Manchester aims to bring the benefits of the Internet to every individual, organisation and community across the city".

Below the header is a navigation menu with links: "Home", "About Go ON Manchester", "Digital Champions", "News", and "Resources". A search box is located to the right of the navigation menu.

The main content area features a large graphic of a stylized person with a pink cape and a yellow starburst. A speech bubble next to the person contains the text: "Become a Digital Champion and help Manchester become one of the world's leading digital cities".

To the right of the graphic is a box titled "Interested in helping out?" with the text: "We're mobilising a network of Manchester Digital Champions to inspire, encourage and support people to use the Internet." Below this text is a blue button labeled "Sign Up Here".

Below the graphic and the "Interested in helping out?" box are three blue buttons with white text: "What is a Digital Champion?", "What can a Digital Champion do?", and "How you can help".

At the bottom of the main content area is a large image showing a group of people sitting at tables in a meeting room. A large screen in the foreground displays the "Go ON" logo. The image has navigation arrows on the left and right sides.

The browser's taskbar at the bottom shows the Windows logo, Internet Explorer, File Explorer, and other icons. The system tray on the right shows the time and date: "11:27 02/11/2012".

# Go ON Manchester:

## - city wide digital inclusion campaign

### CONNECTED MANCHESTER

From its own residents and businesses to European and global cities, Manchester's digital connections are undoubtedly impressive. One of 15 Digital Cities in the world; one of ten European SmartCities; it's even got a festival dedicated to digital. Manchester is very much part of the conversation when it comes to what the digital world of the future is going to look like.

#### NEW YORK'S DIGITAL CITIES INDEX: MANCHESTER HAS APPLIED TO JOIN

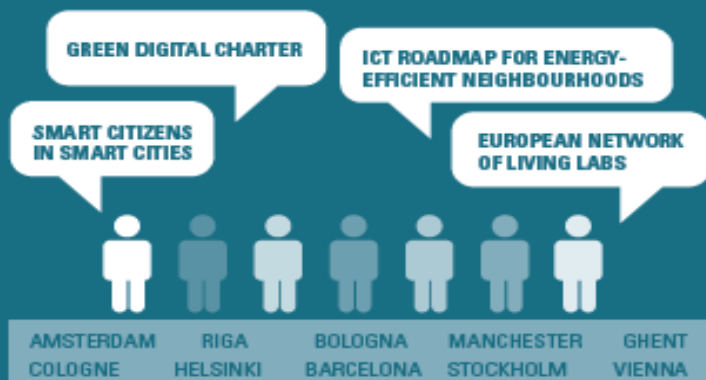
THE WORLD'S DIGITAL CITIES WILL MEASURE THEIR ACHIEVEMENTS IN TERMS OF:

- ACCESS
- OPEN GOVERNMENT
- ENGAGEMENT
- INDUSTRY



#### EUROPEAN NETWORKS: SMART CITIES

EUROPEAN CONVERSATIONS ON THE DEVELOPMENT OF OPEN NETWORKS, OPEN DATA AND OPEN INNOVATIONS



#### GO ON MANCHESTER

**67,000**  
PEOPLE IN MANCHESTER ARE CURRENTLY OFFLINE

**50%**  
OF THESE WILL BE ONLINE BY 2015



ONLINE BUSINESSES GROW TWICE AS FAST AS THEIR OFFLINE COMPETITORS

#### FUTURE-EVERYTHING



FutureEverything is an award-winning festival of ideas and digital innovation in Manchester celebrating digital in music and art

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

FUTURE EVERYTHING HAS BEEN GOING FOR

# 17 YEARS

AND HAS A TOTAL REACH ON TWITTER OF

**2.3m** (100,000)

IN 2012 FUTURE EVERYTHING ATTRACTED

# 36.8 THOUSAND PEOPLE

TO A TOTAL OF

# 28 SEPARATE EVENTS

# 91%

OF ATTENDEES SAID THEY HAD TAKEN AWAY NEW KNOWLEDGE



# Manchester Living Lab

## Principals:

- **co-creation: building on digitally enabled engagement and Open Data**
- **co-ownership: mutualising commitment**
- **co-production: generating new services**
  - recognising people as assets
  - valuing work differently
  - promoting reciprocity
  - building social networks

## Practice:

- **user driven open innovation**
- **replicable and scalable models**
- **focus on social innovation**
- **sustaining user engagement**

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



European  
Network of  
Living Labs



# 'Geek' Power! Creative spaces and People as innovators

## Manchester Digital Lab –

### MadLab

#### + Omniversity

- Creativity
- Innovation
- Diversity

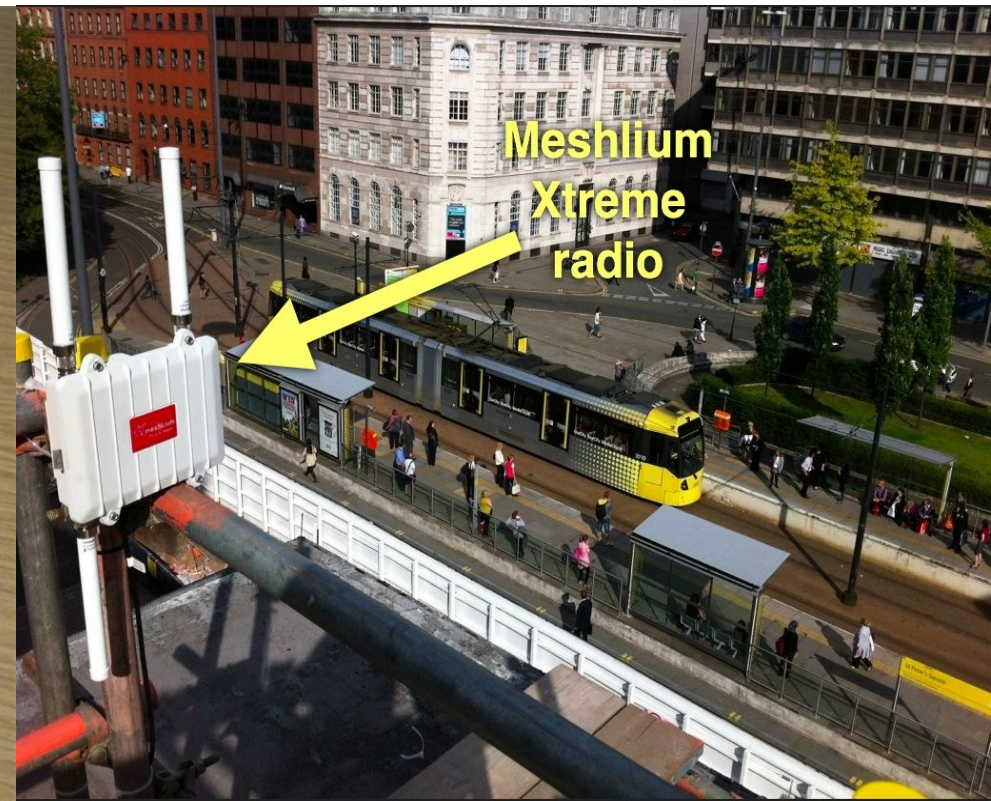
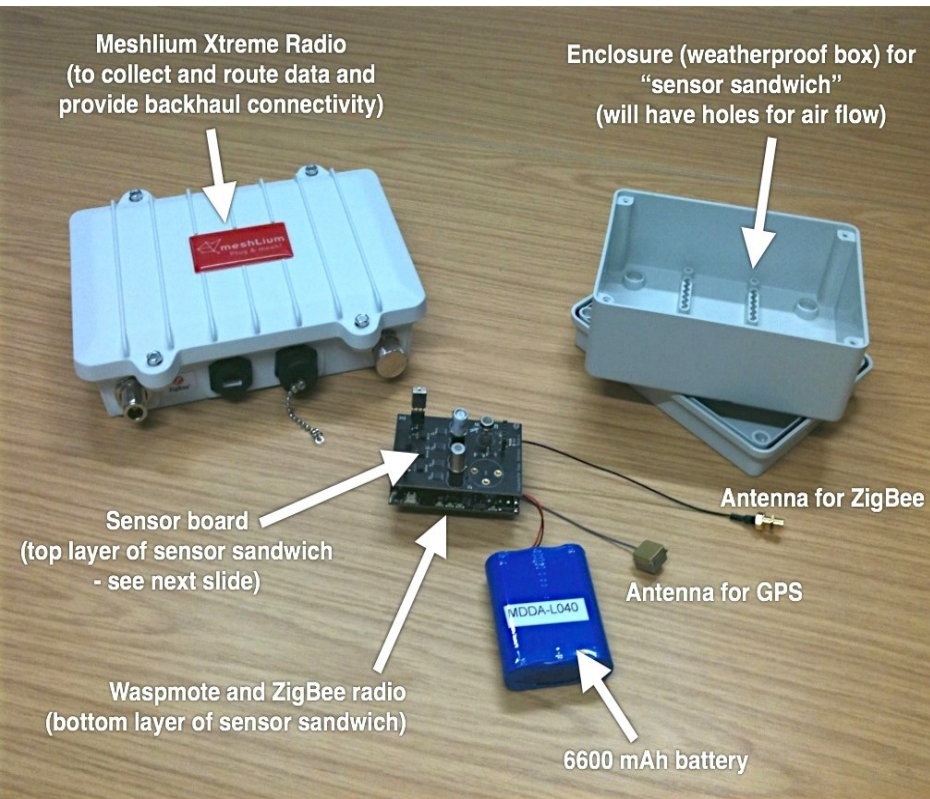
#### Stimulating:

- new ideas
- new business
- new skills
- new jobs



# Internet of Things and co-production: Manchester Living Lab & SMARTiP project:

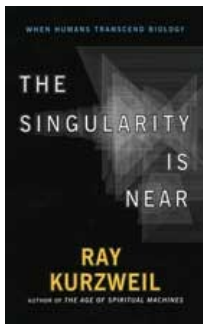
- Test-bed smart environments network in Corridor Regeneration Area
- Affordable and accessible sensors including DIY (Arduinos)
- Potential for wearables (clothes, bikes etc.) and micro-production
- Links to Corridor Area fibre and wireless networks
- Future links to transport network and city wide deployment



# FUTURE FUTURES.....

Even for those archetypal, **DIY garage inventors**, they can now **download free design tools like Blender or Google's SketchUp to create 3D renderings of their product**, then **purchase online the manufacturing equipment** (which have fallen in price from the hundred thousands to a few thousand, **e.g. MakerBot**) they would need to **build their products at home or in their rented space.**

 **SINGULARITY UNIVERSITY**  
[www.singularityu.org](http://www.singularityu.org)



 **The Replicator™**

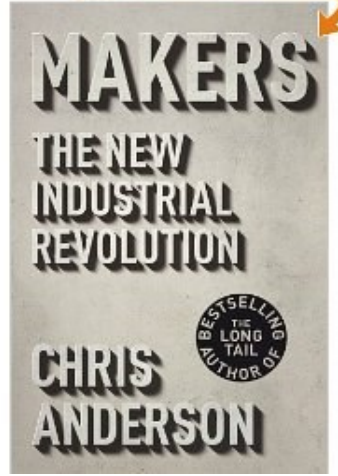


**LEARN MORE**

[www.makerbot.com](http://www.makerbot.com)

Customised 3D-printed appendages let Emma Lavelle play alongside her friends with new freedom <http://cnet.co/OJAPtU>

Click to **LOOK INSIDE!**



# Smart Cities Network

Smart Cities Network | Sharing knowledge and best practice on open data, internet of things and smart cities - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Cologne - Participatory Budgeting... Smart Cities Network | Sharing kn... +

smartcitiesnetwork.eu community reporter

IN DEVELOPMENT

## CONNECTED SMART CITIES NETWORK

[Home](#) [Why Smart Cities?](#) [Participate](#) [Examples](#) [City Profiles](#) [Co-production](#) [Local Digital Agendas](#) [Events](#)

**A network of European smart cities sharing best practice in open data, internet of things and co-production.**

An open and collaborative network supporting smart cities and their partners.



**Smart Cities**  
What does it take to become a smart city?

**City Profiles**  
Find out more about the cities involved in the Smart Cities Network.

**Participate**  
Find out how to take part in the activities and knowledge sharing of the Smart Cities Network.

**Co-production**  
Find out about developing services in partnership with citizens.



# Measuring Manchester's ICT Footprint



# The Green Digital Charter

- City of Manchester / Clicks and Links
- EUROCITIES
- European Commission

- Commits cities to reduce emissions through ICT
- Promotes **progress in tackling climate change** through the innovative use of digital technologies in cities



# Commitments

Three tangible commitments:

- Work with Green Digital Charter **signatories** on ICT & energy efficiency
- Deploy **5 large-scale ICT pilots** per city within 5 years
- Decrease **ICT's direct carbon footprint** per city by 30% within 10 years





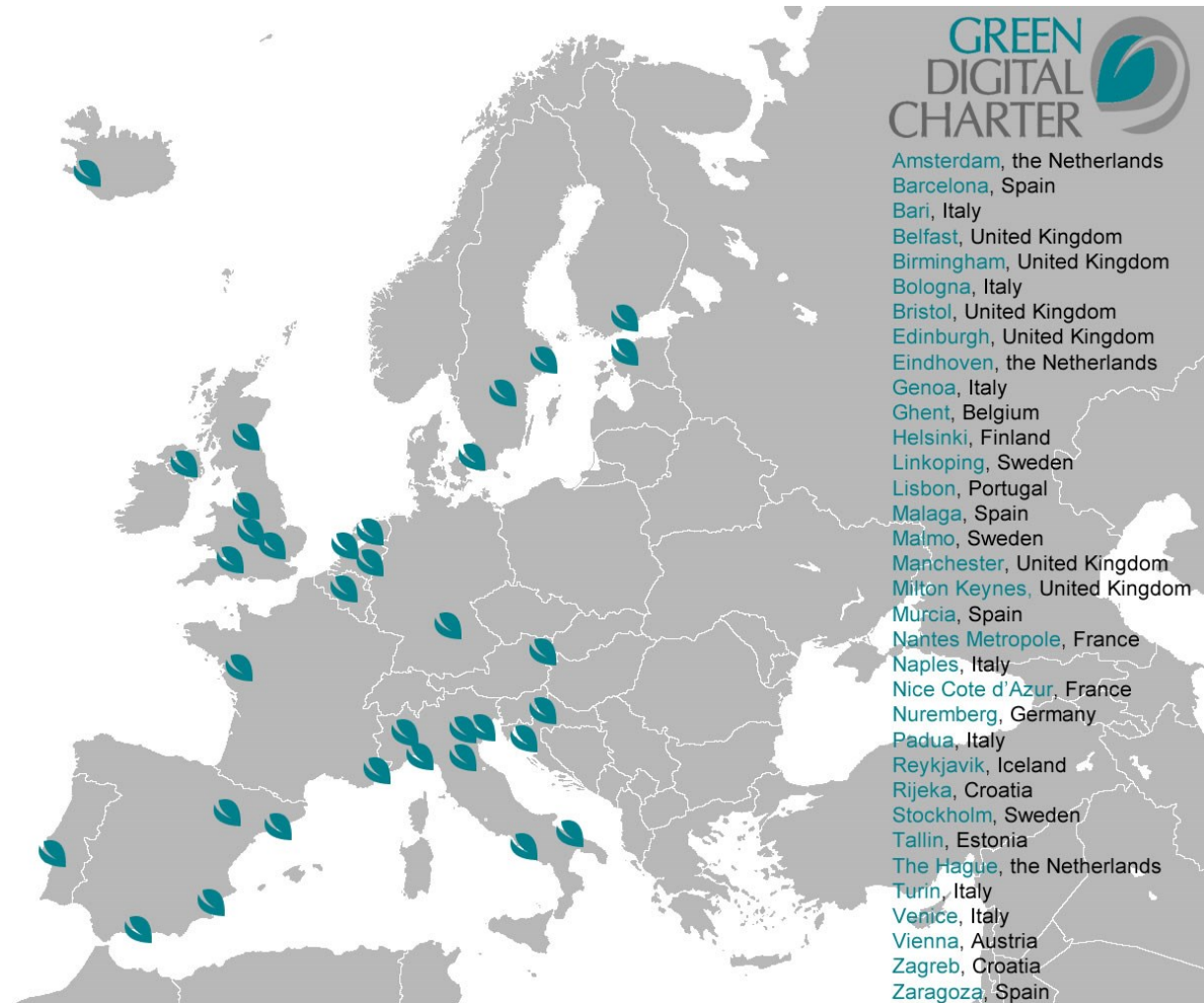
# The Charter Signatories



34 signatories

40 large cities interested in signing

**GOAL:** at least 48 signatories by 2014



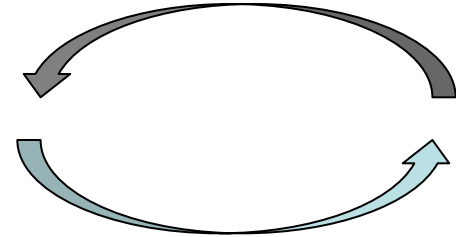
# NiCE Approach



**N  
i  
C  
E**

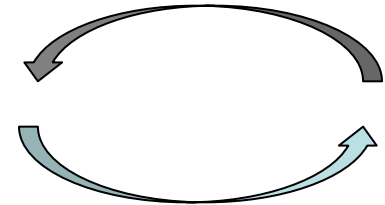
## **GDC TOOLKIT**

Action Framework  
Action Tools Catalogue  
Reporting tools (GDC, CoM, ICT)



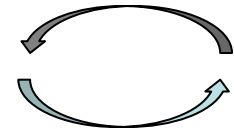
## **SUPPORT TO CITIES**

GDC Contact Point  
Technical trainings  
Study tours



## **OUTREACH**

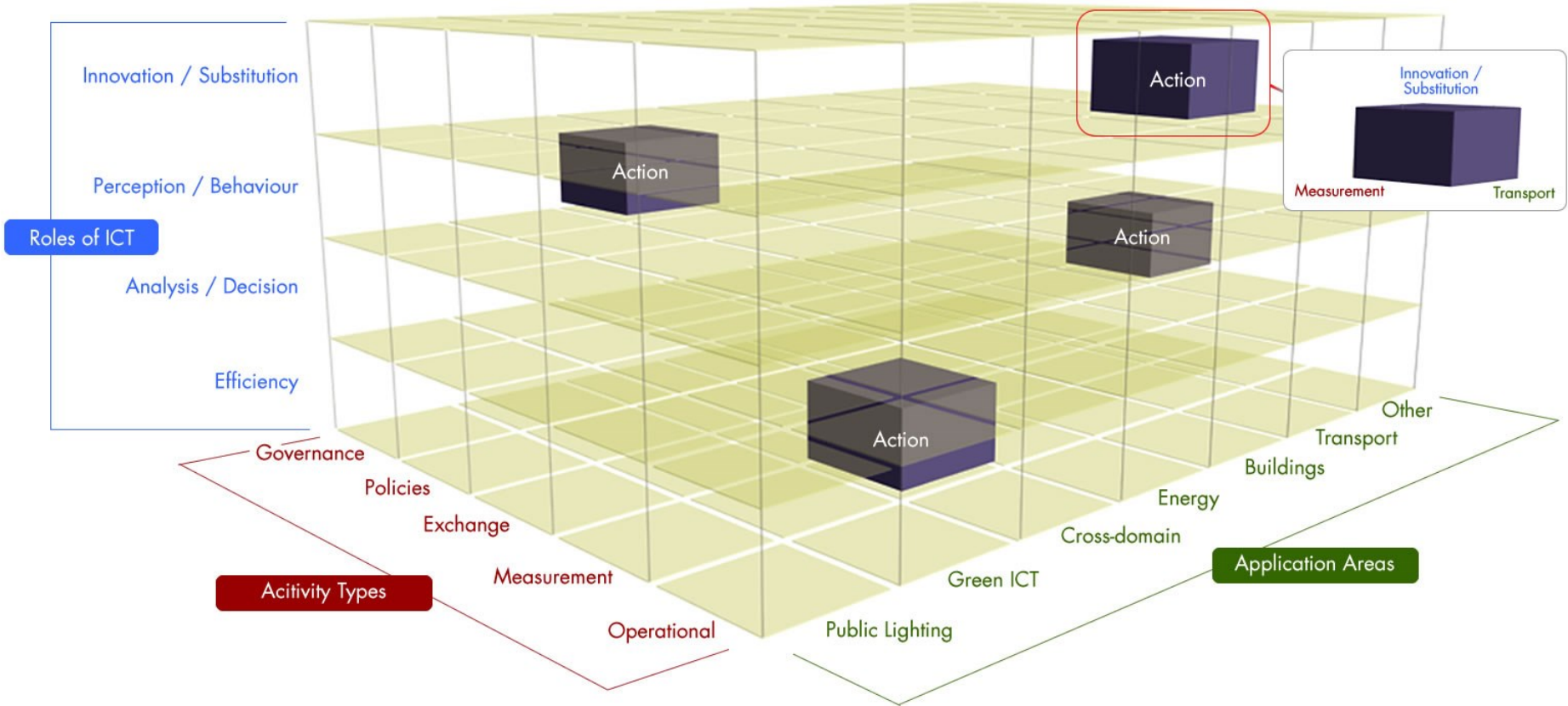
Roadshows  
Cooperation with CoM  
Focus on China



**G  
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**ADVISORY GROUPS:** Reference Cities Group & Expert Advisory Board

# GD Action Framework



# Assess Green Digital

Assess my progress

View charter status

## Assess your city's green digital activity

Answer these questions to capture your city progress in green digital activity and its progress in relation to the Green Digital Charter.

Please select one answer and fill in the text areas.

### Strategic frame - Question 1:

Does your city have a green & digital strategy (dedicated or as part of other strategies)?

Yes  No  Partly  Don't know

#### Related tools

Linköping Digital Strategy

#### Related commitments

A3.1  
A3.2  
A1.1  
A1.2  
B4.2  
B7.1

#### Role of ICT(s):

perception / behaviour  
innovation / substitution

#### Application Area(s):

Other domains

#### Activity Type(s):

Question 1 of 23 | [Next](#) | [Save](#) | [Cancel](#)

#### Questions:

[1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) [11](#) [12](#) [13](#) [14](#) [15](#) [16](#) [17](#) [18](#) [19](#) [20](#) [21](#) [22](#) [23](#)



View answers as table

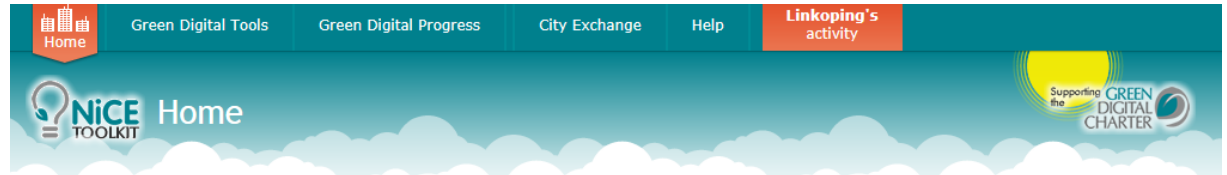


View answers in relation to Covenant of Mayors



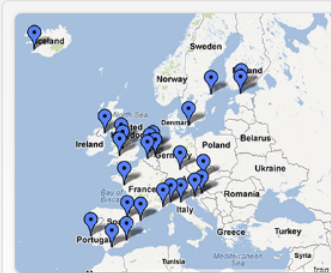
Download answers to PDF

# Green Digital Toolkit



## Green Digital Charter signatory cities

In this toolkit, Green Digital Charter signatories share tools that combine environmental and ICT activities.



21 Activities

26 Shared Tools

### Feature Activity

#### Fibre broadband networks in rural areas

2010 Linköping decided to start building fiber based broadband network (back-bone) in nine rural areas. Primary target group is 3 200 households and 550 (smaller) companies. At the moment, five of these back-bones are completed and the number of households and companies that is connected to the broadband network is increasing for every day. The remaining four back-bones will be built during 2012 and 2013. The business model is that

## Green Digital Progress

Welcome to the Green Digital toolkit, a resource for reviewing, sharing and discussing combined environmental and ICT activities.

The tools on this site support:

using ICT to support green initiatives

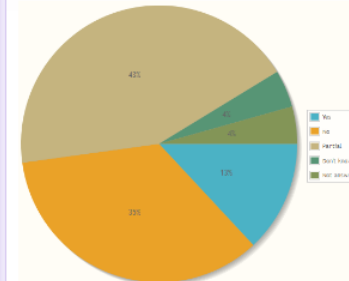
making ICT more environmentally efficient.

This toolkit supports the Green Digital Charter, an EU commitment to deliver on the green digital agenda.

On this site Charter signatories can track their progress on the Charter and also relate Charter commitments to the Covenant of Mayors.

These tools combine to help create smart, sustainable cities across Europe.

- Review my city's progress
- Review city ICT carbon footprint



View city status on Green Digital Charter

## Tools

Add New Tool

All tools have been used at least once. They come recommended by at least one European city. They range from feasibility studies to software.

Browse tools by category below or view all tools.

- GDC Dimensions
  - Application area
  - Activity type
  - Roles of ICT
- Commitments
  - Tool Type
  - City

View all tools

## Activities

Add New Activity

Cities use tools to carry out 'green digital activities'. See below to find out about what sorts of activities cities are involved in.

### Latest Activities Shared

- bla test
- Linköping Digital Agenda
- DEHEMS: Providing citizens with energy monitoring
- Implementing Broadband - Manchester
- Fiber to the Home
- Roadmap Light 2030
- Green Computing
- Smart metering and Smart Grid
- Virtualisation of the servers in the municipal offices
- Linköping Green ICT Journey



# Action tool



Manchester is my Planet  
Tackling Climate Change

[About this app](#) | [Contribute data to this app](#) | [Terms and conditions](#) | [Contact](#)

## Filter map and graphics

### Select by Theme

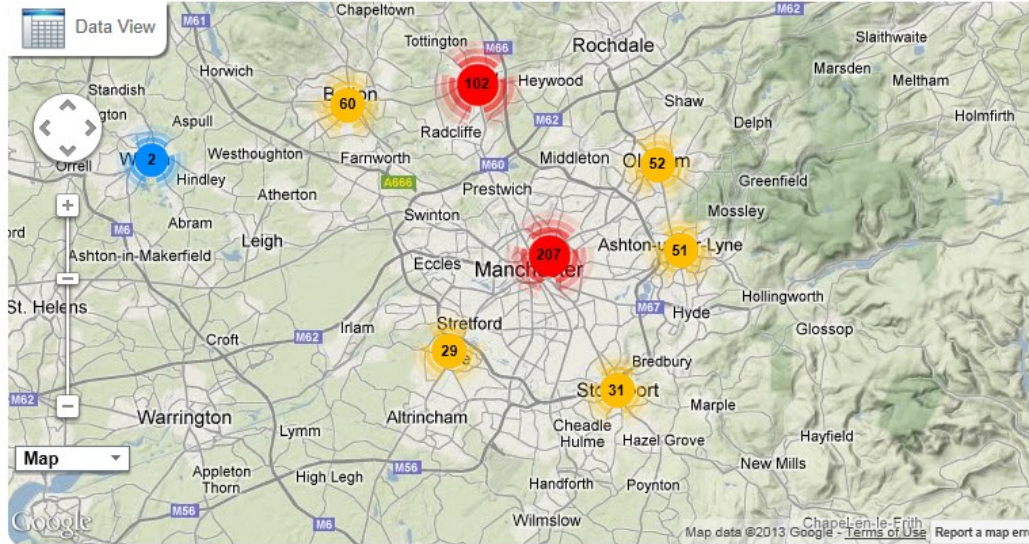
- Enabling
- Consumption
- Buildings
- Energy
- Transport
- Green and Blue

### Select by Objective

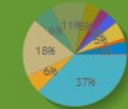
- Low carbon economy
- Carbon literacy
- Emissions reduced 48%
- Adapting

### Select by District

Clear Filters



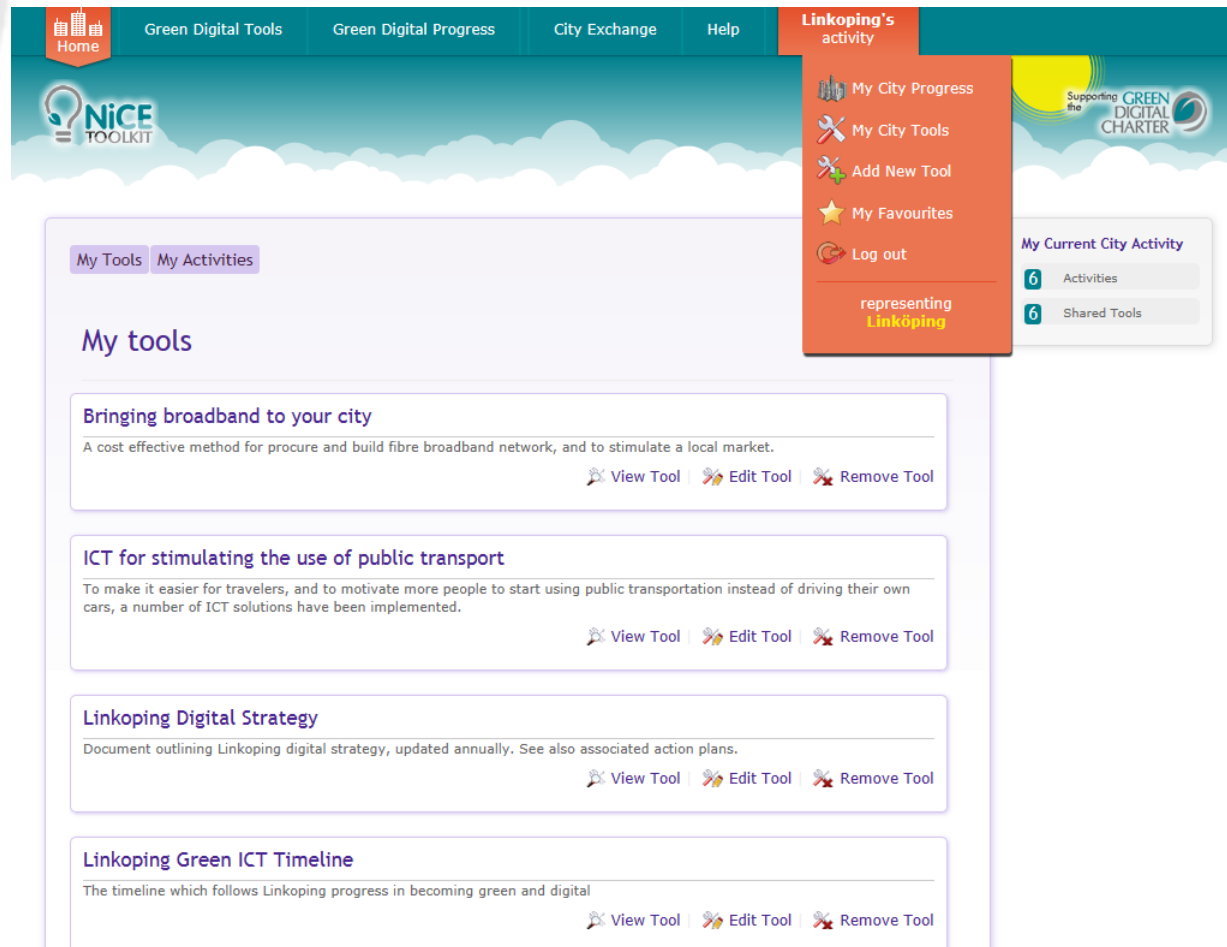
## Number of actions per district:



## Tag Cloud

completed  
Salix  
Domestic  
implemented  
forecast

# Tool sharing



The screenshot shows the NiCE Toolkit web application interface. At the top, there is a navigation bar with links for Home, Green Digital Tools, Green Digital Progress, City Exchange, Help, and Linköping's activity. Below the navigation bar is a header section with the NiCE TOOLKIT logo on the left and the Green Digital Charter logo on the right. A dropdown menu is open for 'Linköping's activity', showing options: My City Progress, My City Tools, Add New Tool, My Favourites, Log out, and a button for 'representing Linköping'. On the right side, there is a 'My Current City Activity' section with two items: 'Activities' and 'Shared Tools', each with a '6' icon. The main content area is titled 'My tools' and contains four tool cards:

- Bringing broadband to your city**: A cost effective method for procure and build fibre broadband network, and to stimulate a local market. Actions: View Tool, Edit Tool, Remove Tool.
- ICT for stimulating the use of public transport**: To make it easier for travelers, and to motivate more people to start using public transportation instead of driving their own cars, a number of ICT solutions have been implemented. Actions: View Tool, Edit Tool, Remove Tool.
- Linköping Digital Strategy**: Document outlining Linköping digital strategy, updated annually. See also associated action plans. Actions: View Tool, Edit Tool, Remove Tool.
- Linköping Green ICT Timeline**: The timeline which follows Linköping progress in becoming green and digital. Actions: View Tool, Edit Tool, Remove Tool.

# Tool rating and commenting

The screenshot shows the NiCE Toolkit website interface. At the top, there is a navigation bar with links: Home, Green Digital Tools, Green Digital Progress, City Exchange, Help, and Linköping's activity. Below the navigation bar is a banner with the NiCE Toolkit logo and the Green Digital Charter logo. The main content area displays a tool listing for 'Bringing broadband to your city'. The tool is rated 3 stars out of 5, with 3 ratings so far. The tool description states: 'A cost effective method for procure and build fibre broadband network, and to stimulate a local market.' The tool type is 'eGovernment rollout plans', the language is 'English', and the status is 'Early stages'. The date updated is '12/10/2012'. The contact details for Fredrik Eriksson, ICT Strategy Officer, are provided: +46 13 263353 and fredrik.c.eriksson@linkoping.se. A comment section shows a comment from Manchester dated 13/12/2012, with a link for the first comment. An 'Add Comment' form is also visible.

City: **Linköping**  
Activity type: **broadband**  
Application area: **Green ICT**

This tool supports cities to combine environmental and ICT related activities

★ Add to My Favourites ✂ Edit Tool ✂ Remove Tool

Fibre broadband networks in rural areas (3 rating(s) so far)

✂ **Bringing broadband to your city**

A cost effective method for procure and build fibre broadband network, and to stimulate a local market.

Tool type: **eGovernment rollout plans**  
Language: **English**  
Status: **Early stages**  
Date updated: **12/10/2012**

Contact Details:  
**Fredrik Eriksson, ICT Strategy Officer**  
+46 13 263353  
fredrik.c.eriksson@linkoping.se

Comments

manchester from Manchester  
Date: 13/12/2012  
[First comment goes here](#)

Add Comment  
Comment:

Other Related Tools

1. Whole lifecycle management strategy for ICT
2. Virtualising data centre process
3. Bringing broadband to your city
4. ICT Reporting tool
5. ICT Business plan for Low Carbon Delivery
6. Encouraging SMART citizens
7. Green IT Terms of Reference
8. Implementing broadband - State Aid Justification
9. Implementing broadband
10. Measuring energy usage of ICT



# Searching



Browse toolkit by...

Search

green ict

All tools

GDC dimensions

Application area

Activity type

Roles of ICT

GDC

commitments

Tool type

City

Tools Activities

## Search results for:green ict

### Implementing Green ICT in your city

(0 rating(s) so far)

Lead City: **Bologna**  
Date updated: **02/07/12**  
Language: **English**  
Status: **Early stages**

Methodology for implementing green ICT in city administration

Add to My Favourites  
View Tool

### Linköping Green ICT Timeline

(0 rating(s) so far)

Lead City: **Linköping**  
Date updated: **25/09/12**  
Language: **English**  
Status: **Early stages**

The timeline which follows Linköping progress in becoming green and digital

Add to My Favourites  
View Tool

### Feature Tool

Linköping Digital Strategy

Document outlining Linköping digital strategy, updated annually. See also associated action plans.

Read more

### Most Popular Tools

(Ranked by Cities)

1. Green Futures
2. Encouraging SMART citizens
3. Linköping Digital Strategy
4. Greater Manchester Low Carbon Visualisation
5. Lessons from home-based energy management
6. ICT for stimulating the use of public transport
7. Bringing broadband to your city
8. Linköping Green ICT Timeline
9. Green IT Terms of Reference
10. ICT Business plan for Low Carbon Delivery

# Self Assessment Questions

Assess my progress

View charter status

## Assess your city's green digital activity

Answer these questions to capture your city progress in green digital activity and its progress in relation to the [Green Digital Charter](#).

Please select one answer and fill in the text areas.

### ICT applications - Question 1:

Does your city use ICT for enhancing energy efficiency and carbon emission reduction in ... the energy domain?

Yes
  No
  Partly
  Don't know

Related tools

Related commitments

D10.1  
D10.2  
D2.1  
D2.2  
D3.1

Role of ICT(s):

innovation / substitution

Application Area(s):

Cross-domain  
Energy  
Other domains

Activity Type(s):

Question 1 of 23 | [Next](#) | [Save](#) | [Cancel](#)

Questions:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

### My Current City Activity

0 Activities

0 Shared Tools

### Taking the temperature of Green Digital activity

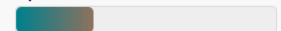
Governance



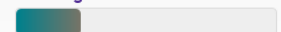
Policy



Operational



Exchange



Monitoring



Total



# ICT Footprint of a City



Home

Green Digital Tools

Green Digital Progress

City Exchange

Help

Linköping's  
activity



## ICT Carbon Footprint Tool



## ICT Carbon Footprint Tool

**This tool enables a City / Municipality to measure their ICT Footprint.**

It is a reporting tool used as part of an iterative process - added to or refined as local ICT records, relating to both equipment owned, or used (eg. outsourced services; 3rd parties who may attach their own ICT devices) by a City etc are identified, and/or authoritative data on energy usage for all ICT devices are published.

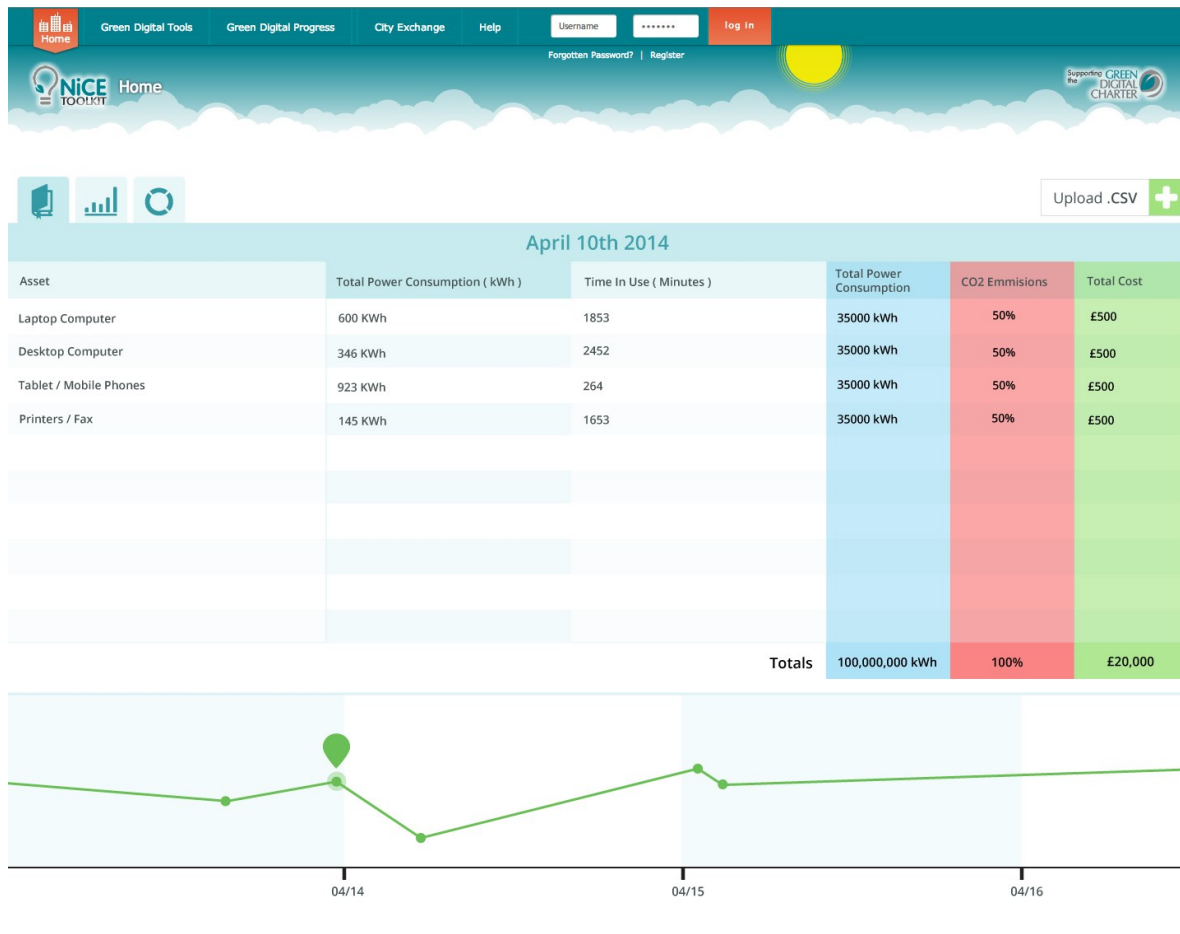
It is recommended that a City's first attempt at measuring its ICT Footprint is based on a self-contained Department which has a good record of their ICT assets. Once they have an ICT Footprint 'score', this should also identify where there are gaps and how they might refine the process. Access 7 step guide to measuring 1 City department's ICT Footprint and accompanying spreadsheet

- [7 step guide](#)
- [ICT Carbon Footprint measurement spreadsheet](#)

- NiCE continues to contribute to the 'Methodology to evaluate the GHG Impact of ICT in Cities' being developed by ITU-T (Q18 , Study Group 5)
- NiCE providing City input via EC and UK routes to L1440
- L.1420 on organisations can be used by the public administration
- Trialling approach in Manchester and Linköping



# Online Tool



# Challenges for L.1440

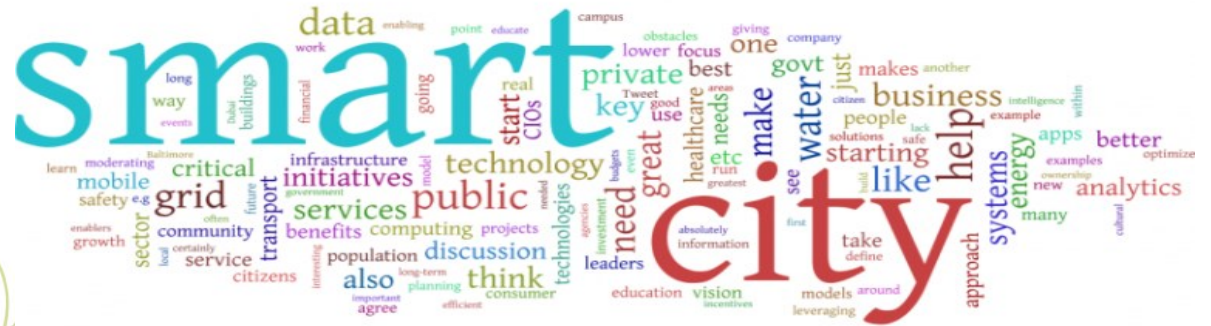


- Practicability for Cities
- Level of Accuracy
- Availability of Base Data
- Access to ICT footprints
- Positive and Negative ICT impact on footprint
- City Need



# Thank You!

[Vin.sumner@clicksandlinks.com](mailto:Vin.sumner@clicksandlinks.com)



**MDDA**  
Manchester Digital Development Agency

BBC RADIO MANCHESTER

