

# Smart Cities UK

..... bringing fundamental improvements

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# Beyond the marketing gloss

## Smart City Imagery



## Smart City Reality



# Improving peoples lives

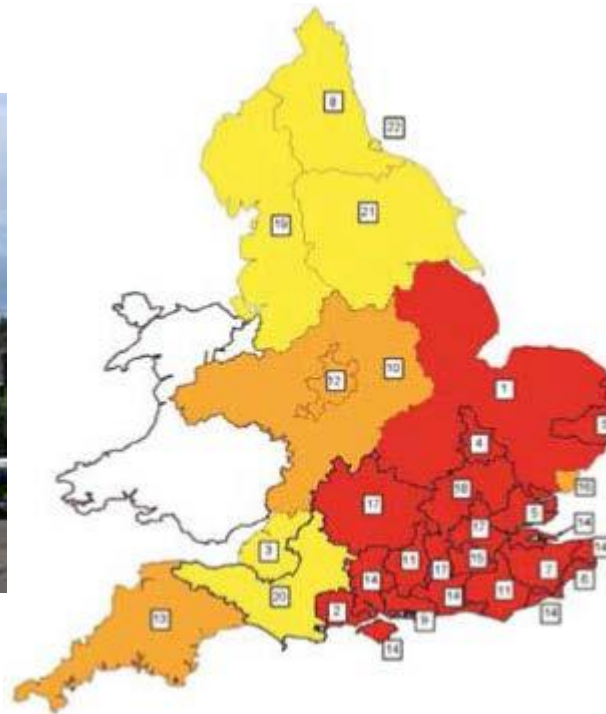
## Improving the fundamentals

1. Water supply
2. Drainage
3. Waste disposal
4. Transportation
5. Energy
6. Telecommunications



# Basic challenges

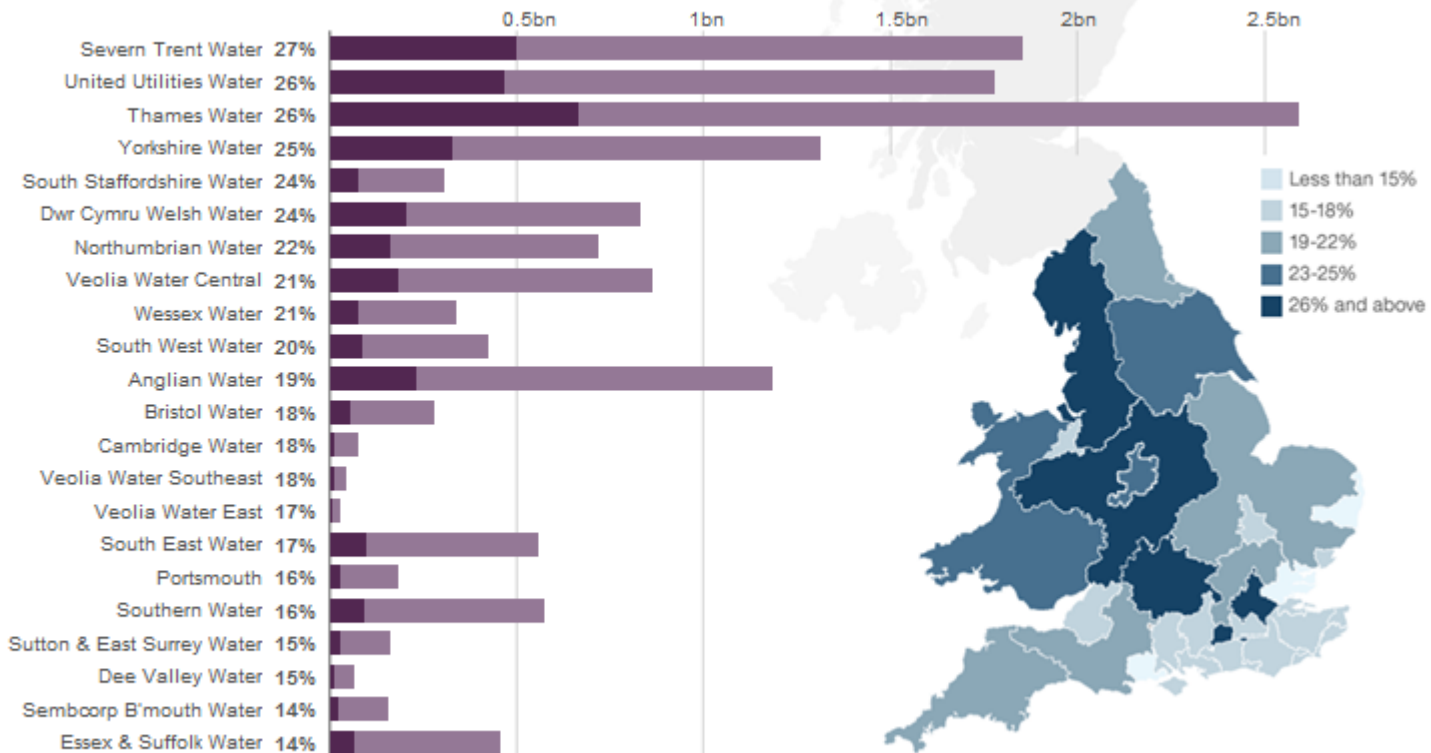
## Water stress in UK EA 2007



## England & Wales water leakage

Major water companies in England and Wales ranked by the percentage of their supply that is lost in leaks

■ Leaks in 2010-11, litres per day ■ Water supplied 2010-11, litres per day



Source: Ofwat, Environment Agency, water companies

The water companies are investing in improvements to their networks and are set targets for leaks by the water regulator, Ofwat.

# Drivers for change

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## Technological drivers

### **Asset Base:**

Increased financial burden on maintenance  
Aging system not fully understood  
Increased pressure population growth, weather change

### **Smart technology:**

Cheaper sensors  
Real time interface with customers  
Technology enabling sourcing treatment and supply in efficient and cost effective manner

# Drivers for change

## Other drivers

- Political:** Infrastructure Cost  
Economic development
- Economic:** Competition  
Funding  
Value for money
- Social:** Population growth  
Food Water
- Environmental:** Climate change adaptation  
Flooding  
Water quality  
Eco-system services

## Glasgow, UK - Future Cities Demonstrator

- ▶ Glasgow awarded £24 million
- ▶ Integrate transport, communications and other infrastructure
- ▶ To improve city's economy and quality of life
- ▶ Reduce environmental impact





# Application to flooding



RICS

## Land Journal

### A change of focus

Spotlight on Glasgow's innovative Smart Cities approach

~ 8

May/June 2014  
rics.org/journals

**Lessons learnt?**  
No single panacea for flood risk management  
~ 6

**Everything in place**  
New wave pool provides award location  
~ 10

**In with the new**  
Land administration countries in transition  
~ 14

RICS LAND JOURNAL | SMART CITIES

Future City/Glasgow is an innovative programme that uses technology intelligently and actively engages residents to make life in the city smarter, safer and more sustainable.  
**Iain Langlands** reports

## A change of focus

**L**ast year, Glasgow City Council beat 29 other UK cities to win £24m from the UK government's innovation agency, the Technology Strategy Board, after showing that the local authority could integrate transport, communications and other infrastructure to improve the city's economy and quality of life and reduce environmental impact better than anywhere else in Britain (see [More information](#)).

The Future Cities Demonstrator (FCD) programme was born. Glasgow set out on a journey of review, innovation, research and development in a project that aims to deliver a lasting legacy to its residents, businesses and visitors.

**The Open Manifesto**  
What is so different about the Future Cities approach? Glasgow is opening up its data and information stores to public viewing and use. The council published an Open Manifesto (<https://bit.ly/openmanifesto>), describing the city's aims. "The Open Manifesto will pave the way for a more responsive city that adapts to the needs of its citizens. The success of Glasgow's Open Platform depends on its ability

to open data, engage with the community and manage information. These principles will shape new solutions for the city."

This is an entirely new way of working. It represents a change of focus, with the council and its partners working with the citizens rather than for them. It is a better way to engage and will enhance the city's relationships with its partners and the business community.

**Spatial information**  
Information often has a spatial element: we know where it is on the ground. In the council, almost everything that is recorded on systems is address- or map-based. As with all local authorities in Scotland, the map base is often Ordnance Survey mapping and it is used according to the terms and conditions described in the One Scotland Mapping Agreement. Briefly, that limits the use of such data to internal or licensed partnership business purposes and prohibits the sharing of spatial data derived from Ordnance Survey mapping, except in strictly licensed terms.

The Open Manifesto, in accordance with the principles of the Open Data Charter (<http://bit.ly/opensdatac>) signed by 68 leaders in June last year, seeks to

enable sharing of information for the enhancement of accountability, efficiency and responsibility, and to encourage economic growth. It is clear that the legitimate licensing restrictions within the One Scotland Mapping Agreement are not wholly compatible with the aims and aspirations enshrined in the Open Data Charter. How is this to be resolved?

**Development Data Licence**  
As the UK's national mapping authority, Ordnance Survey is globally known for high-quality products and has a well-deserved reputation for innovation and best practice across its services. Its managers saw the opportunities presented

through the FCD programme and engaged in discussions that resulted in a locally applicable Ordnance Survey Development Data Licence (<http://bit.ly/osdd3>).

The full terms and conditions of the licence are presented to anyone who views or downloads data from the FCD data portal, but they can be summarised as terms and conditions that give developers some freedom in the use of Ordnance Survey-derived data for the development of applications and products. They preclude, however, any commercial gain from these initiatives without appropriate declarations to and further negotiations with Ordnance Survey.

This new licensing agreement leads the way

Image © Glasgow City Council

8 MAY/JUNE 2014

# Glasgow's Open Manifesto

## Adapting to the needs of its citizens

In accordance with the principles of the **Open Data Charter** (G8)

Success depends on:

- ▶ Ability to have data openly available
- ▶ Engage with community
- ▶ Manage information
- ▶ Working **with** citizens rather than **for** them

## 7 Key Principles

- ▶ **Open:** facilitating innovation
- ▶ **Community engagement:** allowing communities to maximise value
- ▶ **Consumerisation:** data needs to be consumable through toolkits
- ▶ **Enrichment:** overcome concerns about privacy and accuracy
- ▶ **Scalability and flexibility:** responding to demands for data
- ▶ **Real-time:** improving engagement and interaction
- ▶ **Secure:** proportionate security to protect data

# Barriers to change

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## Barriers identified as follows:

- ▶ Lack of vision and an innovation culture in city government
- ▶ Funding for investment
- ▶ Procurement rules which inhibit innovation
- ▶ Data-use legislation

# Removing barriers to change

- ▶ Boston,
- ▶ Chicago,
- ▶ Stockholm,
- ▶ Barcelona,
- ▶ Rio de Janeiro
- ▶ Hong Kong



**What really distinguished the case studies was the systematic approach to change based on the power of information.**

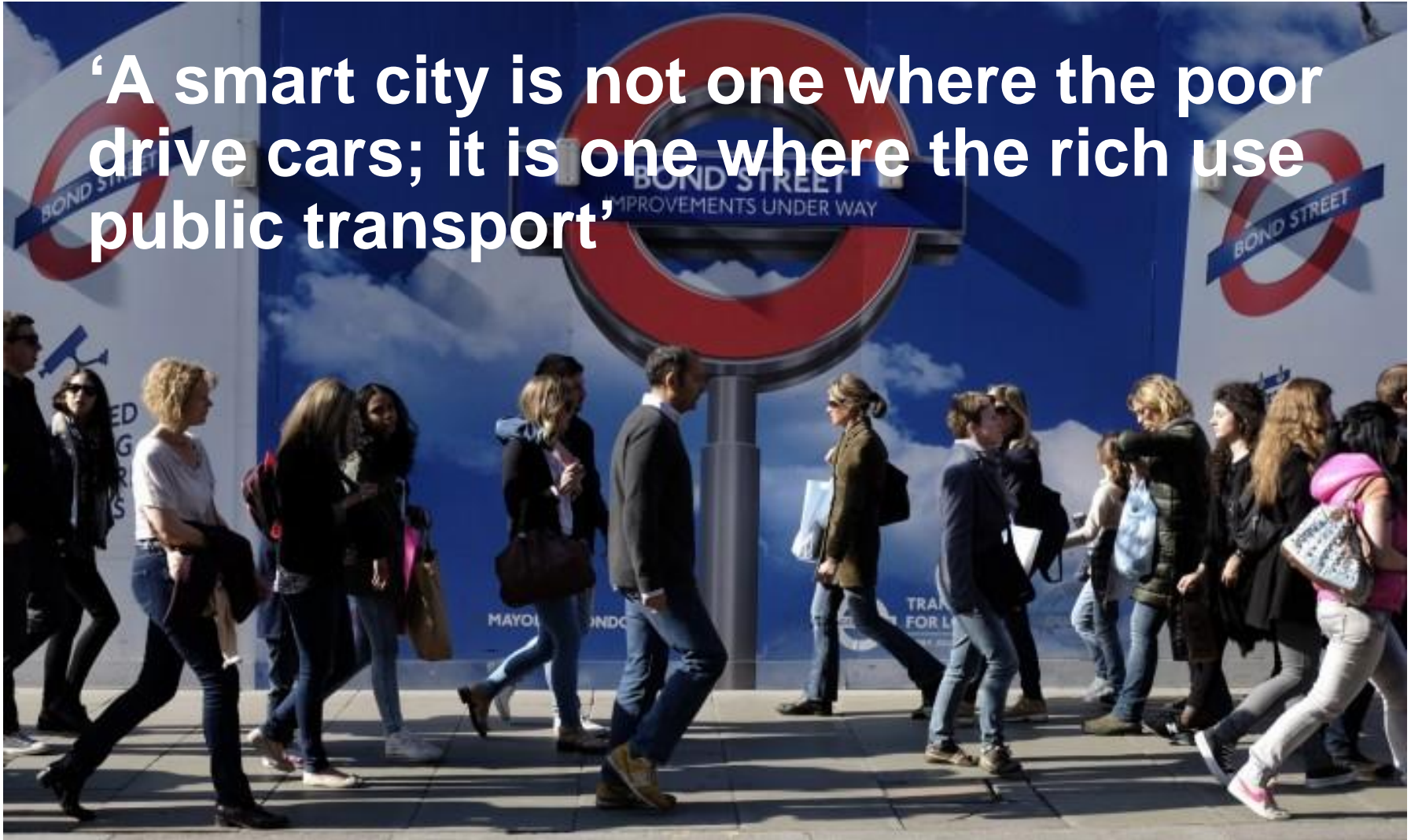
# Power of information

## Aligning national policy and urban policy



# Recognising a smart city

**‘A smart city is not one where the poor drive cars; it is one where the rich use public transport’**



# Thank you!

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