

SMART CITIES NEED LOCATION DATA

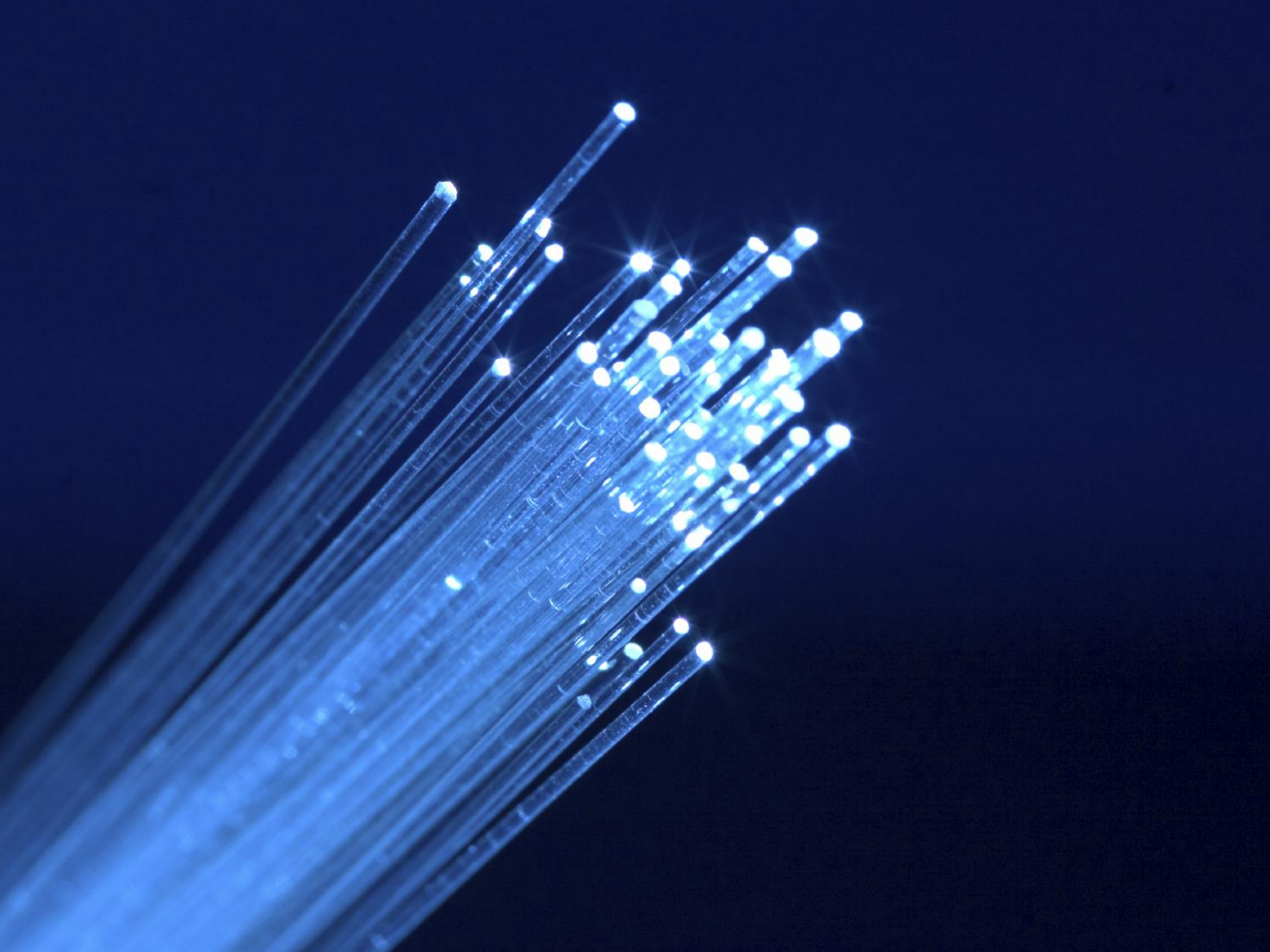
Carsten Rönsdorf
27 May 2015
Lisbon




Opportunities / what are future cities and why geo?

Open Standards / 3D models

Events / Security / Resilience / Use Cases





A smart city is
“where there is effective integration of
physical, digital and human systems in the built
environment to deliver a sustainable, prosperous and
inclusive future for its citizens.”

BSI PAS180

THE POTENTIAL OF SMART CITIES: IT ENABLEMENT



CAD – computerisation of the design/construction industry



GIS - computerisation of mapping



Smart cities - computerisation of city infrastructure

THE POTENTIAL OF SMART CITIES: INTEROPERABILITY



BIM level 2+ - sharing of building and infrastructure data



SDI – geospatial data exchange and market place



Smart cities – IoT, big data and collaboration between public, private and citizens

LOCATION – THE VITAL INGREDIENT

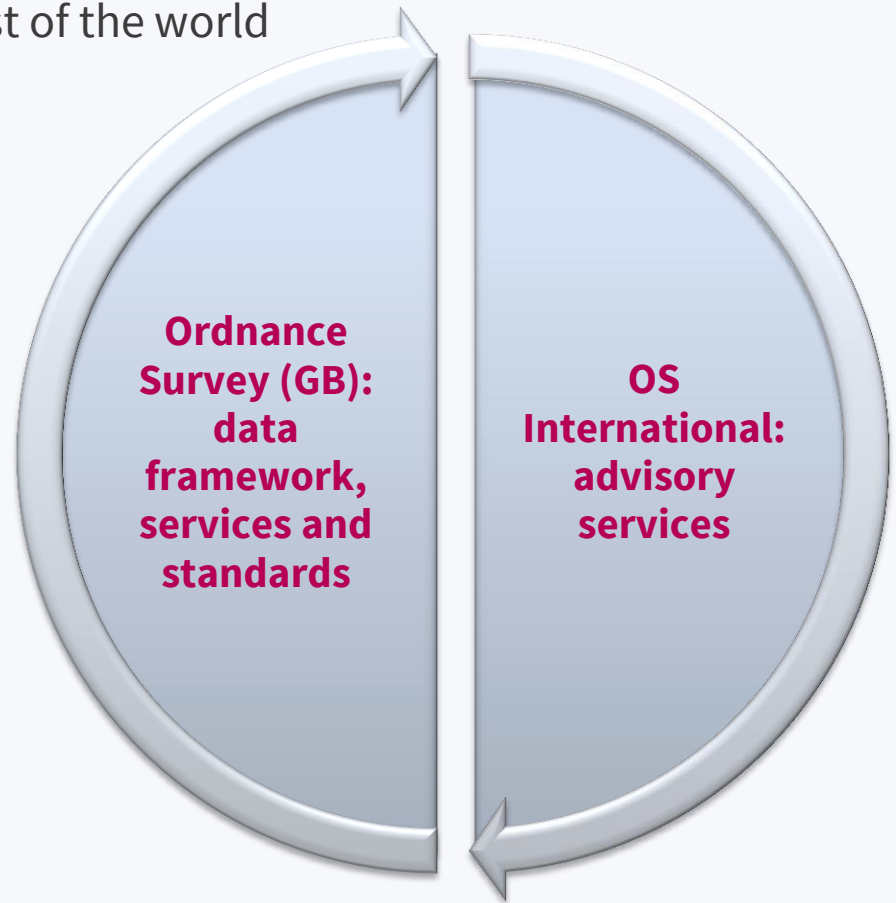


ORDNANCE SURVEY SMART CITIES WORK

Ordnance Survey in the UK

Ordnance Survey International in the rest of the world

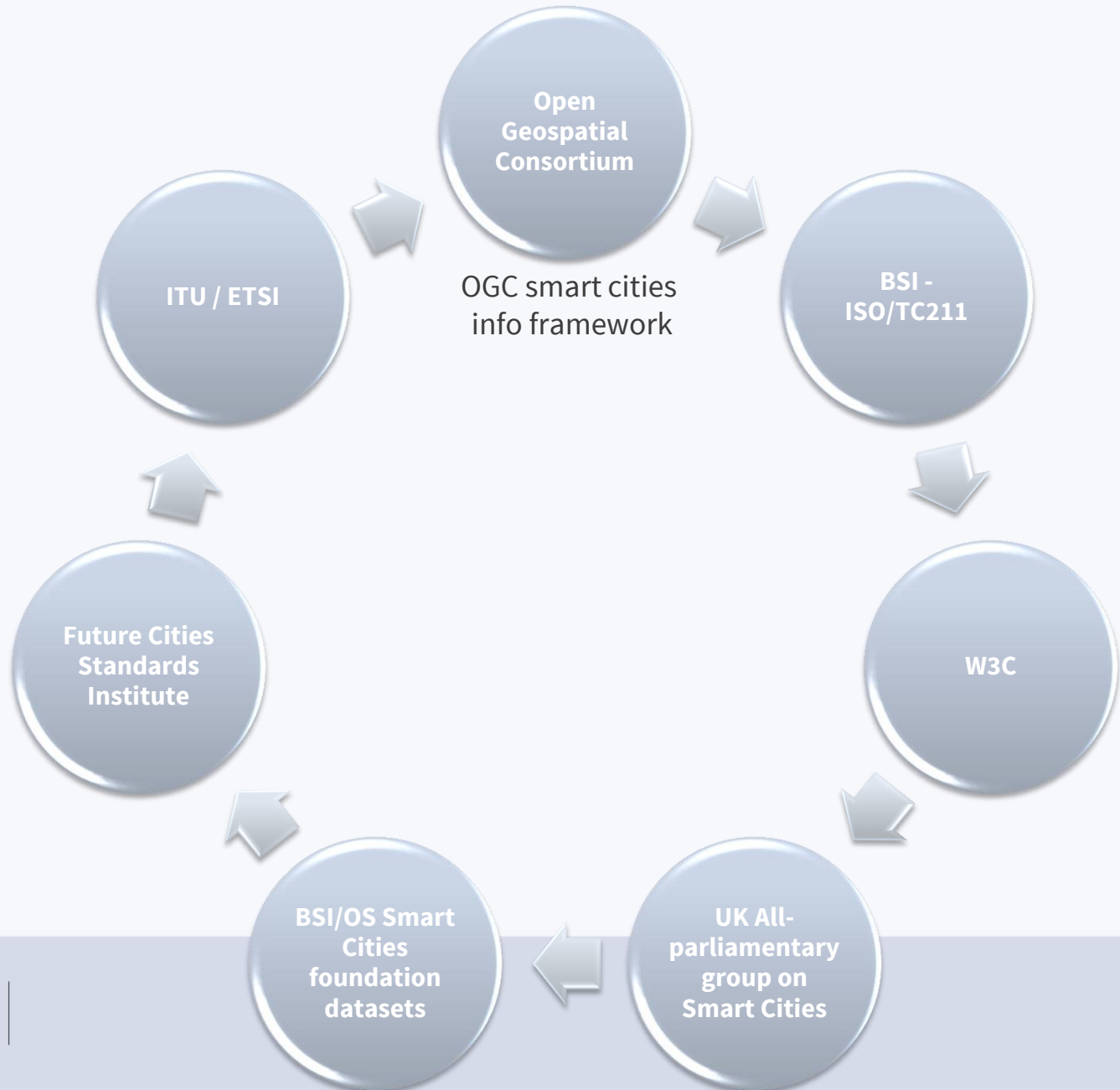
Developing and delivering solutions to real-world challenges and opportunities, that enable cities, communities and to operate smarter.



OS INTERNATIONAL WORKING ACROSS THE GLOBE



ORDNANCE SURVEY SMART CITIES WORK - STANDARDS



ORDNANCE SURVEY – STRATEGIC OGC MEMBER



27 May 2015 – Press release

Ordnance Survey (OS) is pleased to announce that it has raised its Open Geospatial Consortium (OGC) membership level to become the first Strategic Member outside of the USA.

OS joins the US Department of Homeland Security, US Geological Survey, US National Geospatial Intelligence Agency and NASA, as strategic members, reinforcing the company's vision to be at the forefront of open standards development

Aim to underpin standards as global experts, and guardians of the UK national infrastructure.

SAVINGS MADE IN BRITISH PUBLIC SECTOR USING SPATIAL DATA



East Riding of Yorkshire saves **£1,000,000** on school transport.



Harrow Council's waste project saves **£3,200,000** over 10 years.



Automated bus pass allocation project saves Liverpool **£50,000**.



Gloucestershire County Council saves **£2,000,000** on tendered bus services.



The Suffolk Waste Partnership saves St. Edmundsbury District Council **£180,000**.



North Somerset District Council saves **£690,000** on school transport.



Lee Valley Regional Park Authority saves **£100,000** on grounds maintenance.



From 2002, London Borough of Sutton saves **£30,000** yearly on SEN transport.

Greater Manchester Data Synchronisation Programme

Innovating data use in city councils.

Enabling local authorities to benefit from open data, delivering public services more efficiently and inviting innovation in..



Urban ingenuity. Made real. Scaled globally.



We are the Future Cities Catapult, a global centre of excellence on urban innovation. A place where cities, businesses and universities come together to develop solutions to the future needs of our cities.



New Report: Defining 'Future Cities'



UK leads in urban innovation



Bristol open data initiative launched

The Catapult will be funded by up to £50 million over five years through the Technology Strategy Board. With additional private sector inputs, the funding for the centre is expected to rise to around £150 million.

Twitter Feed

+ Future Cities demonstrator project in Glasgow (£24 million)

<http://t.co/DH7XIFAqFW> via @FastCoExist



GLOBAL MARKET FOR SMART CITY SOLUTIONS WILL BE WORTH AN ESTIMATED **US\$408B (€305.4B/£260.3B) GLOBALLY BY 2020.**

US\$40B (€36.5B/£26B) IS EXPECTED TO BE ALLOCATED TO THE UK SMART CITIES INDUSTRY.

March 2014: ... transforming Dubai into the smartest city in the world in the upcoming three years



Image Credit: WAM

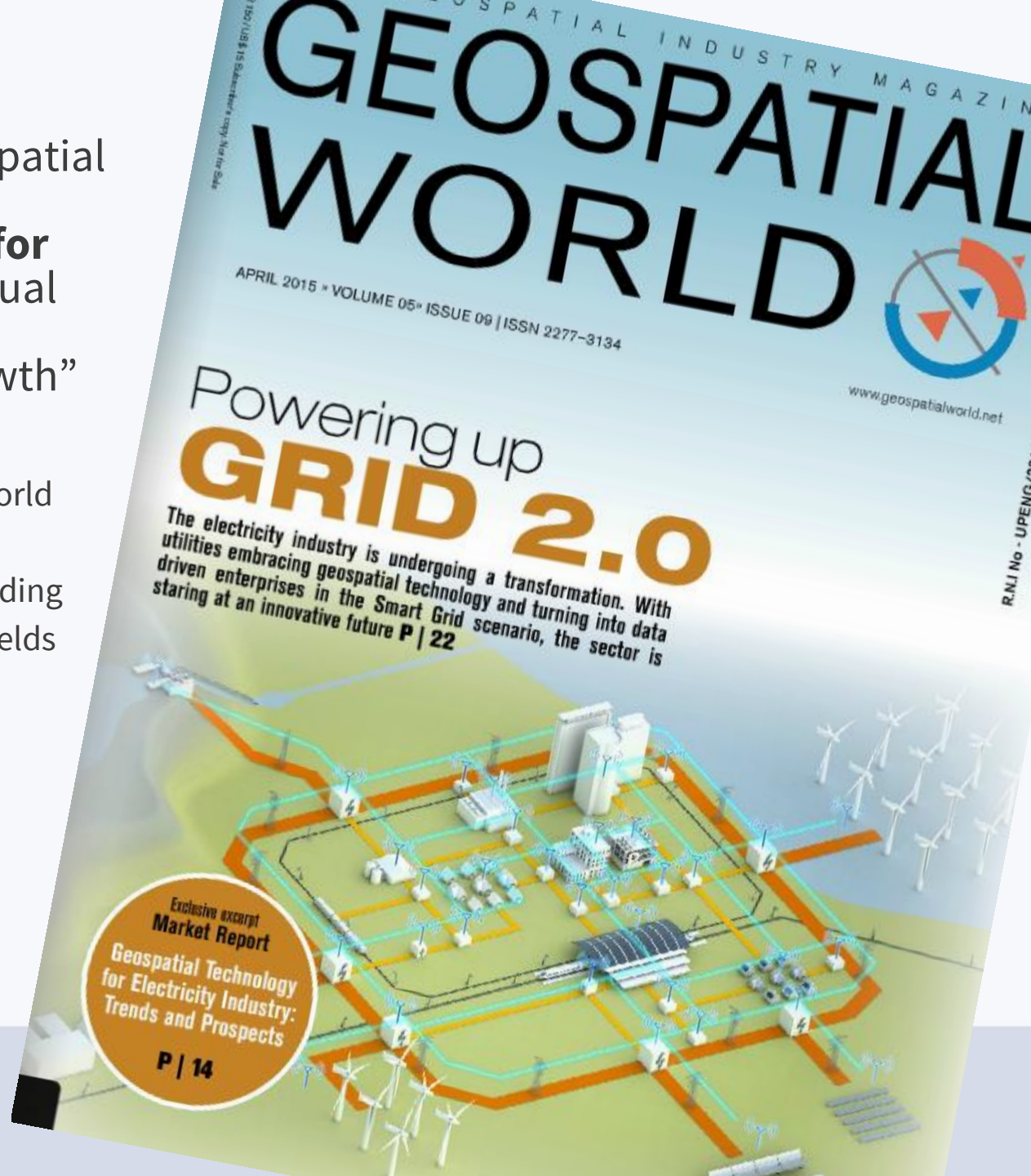
Shaikh Mohammad at the launch of the Smart Dubai strategy at the Dubai World Trade Centre on March 5, 2014. Shaikh Hamdan and Shaikh Maktoum are with him.

To make Dubai the Happiest City on Earth.

Navigant research: “geospatial is poised to becoming a **foundation technology for smart grid**”; “**12.8%** annual increase [...] utility GIS software and service growth”

April 2015 issue of Geospatial World

OS International works with leading experts in various future cities fields



LONDON 2012: GEOGRAPHIC DATA TO SUPPORT 3 PHASES

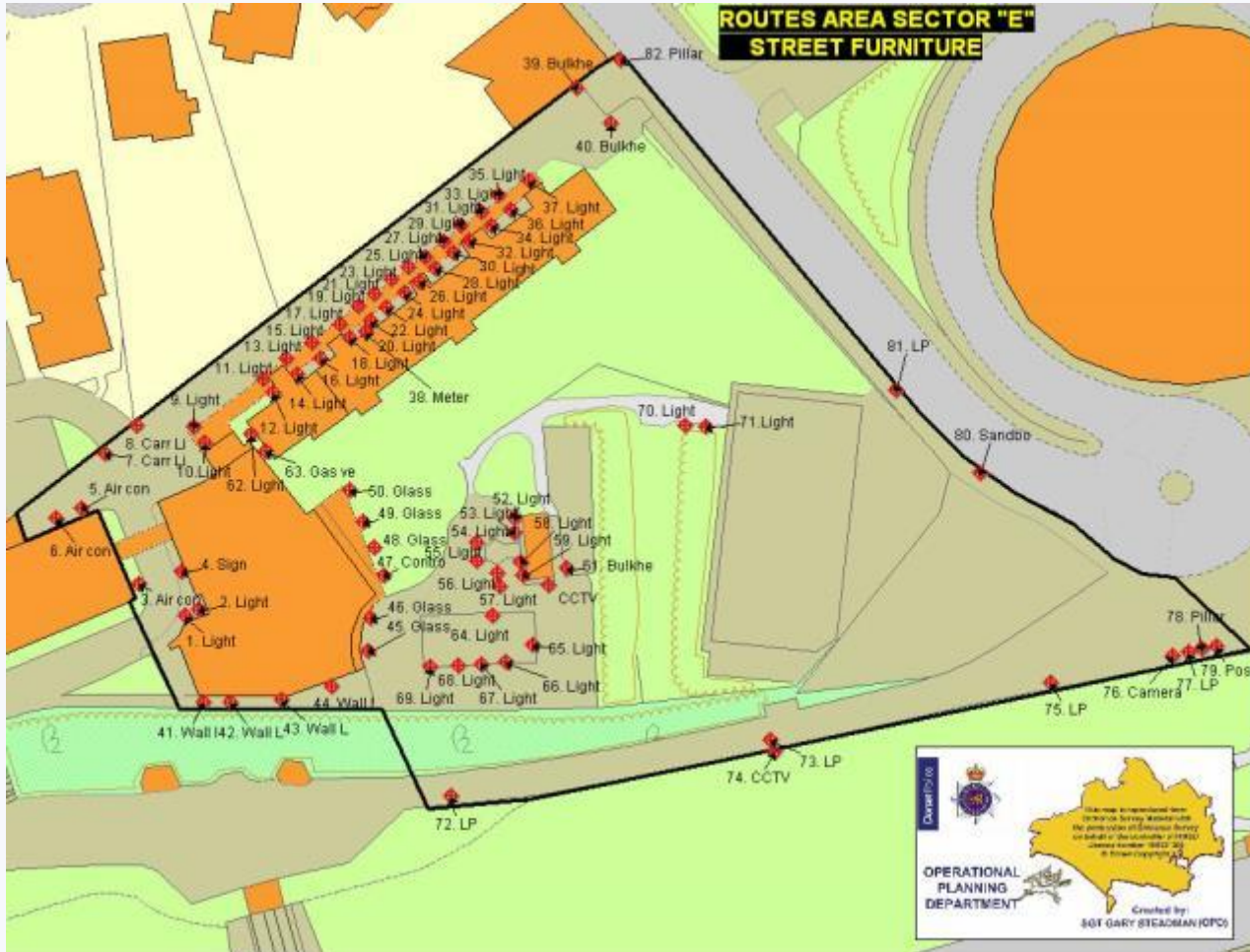
1. Design and construction

2. Planning and operations (security and transportation)

3. Visitor experience



REQUIREMENT: SEARCH AND SECURE STREET FURNITURE



ResilienceDirect

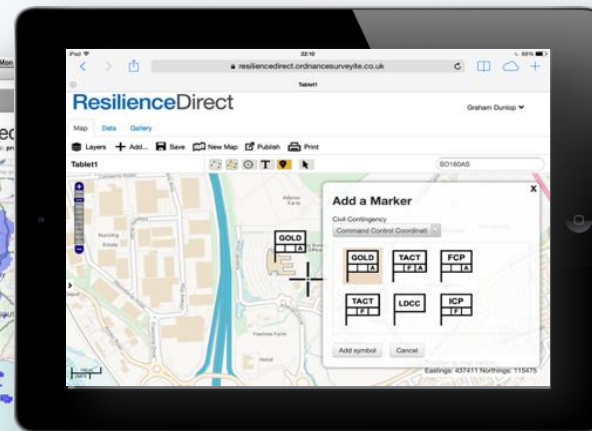
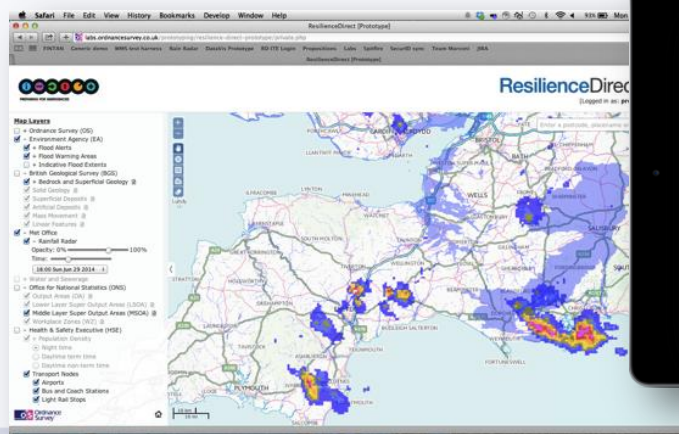


PREPARING FOR EMERGENCIES
WHAT YOU NEED TO KNOW

Available on almost any device, users can:

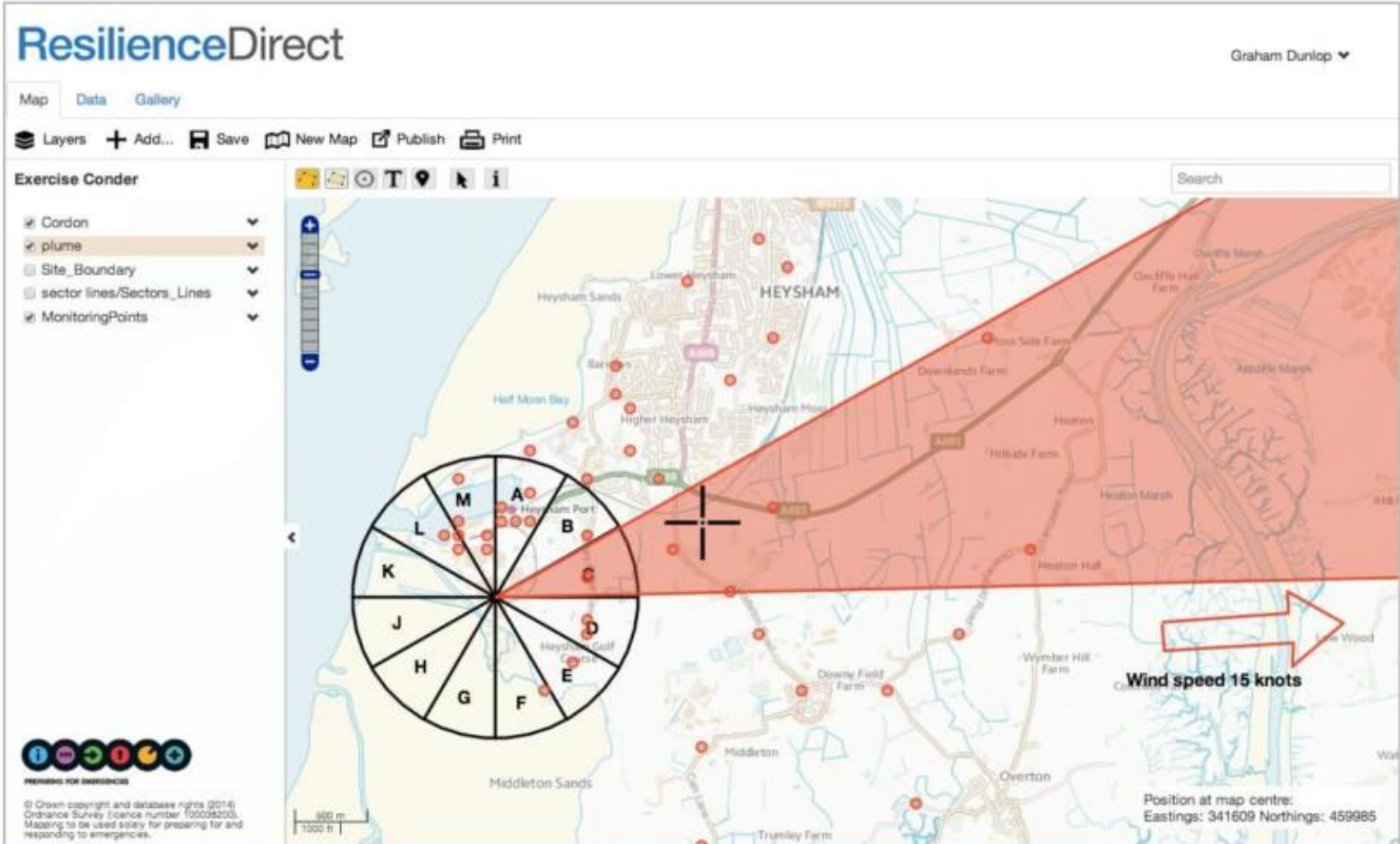


- **Coordinate** planning, response and recovery activities
- Help attain common **situational awareness** through gathering, assess, validating and disseminating information between organisations
- Maintain a shared repository of information to drive greater **inter-agency collaboration**
- Visualise many different datasets on **one common platform**





Common operating picture



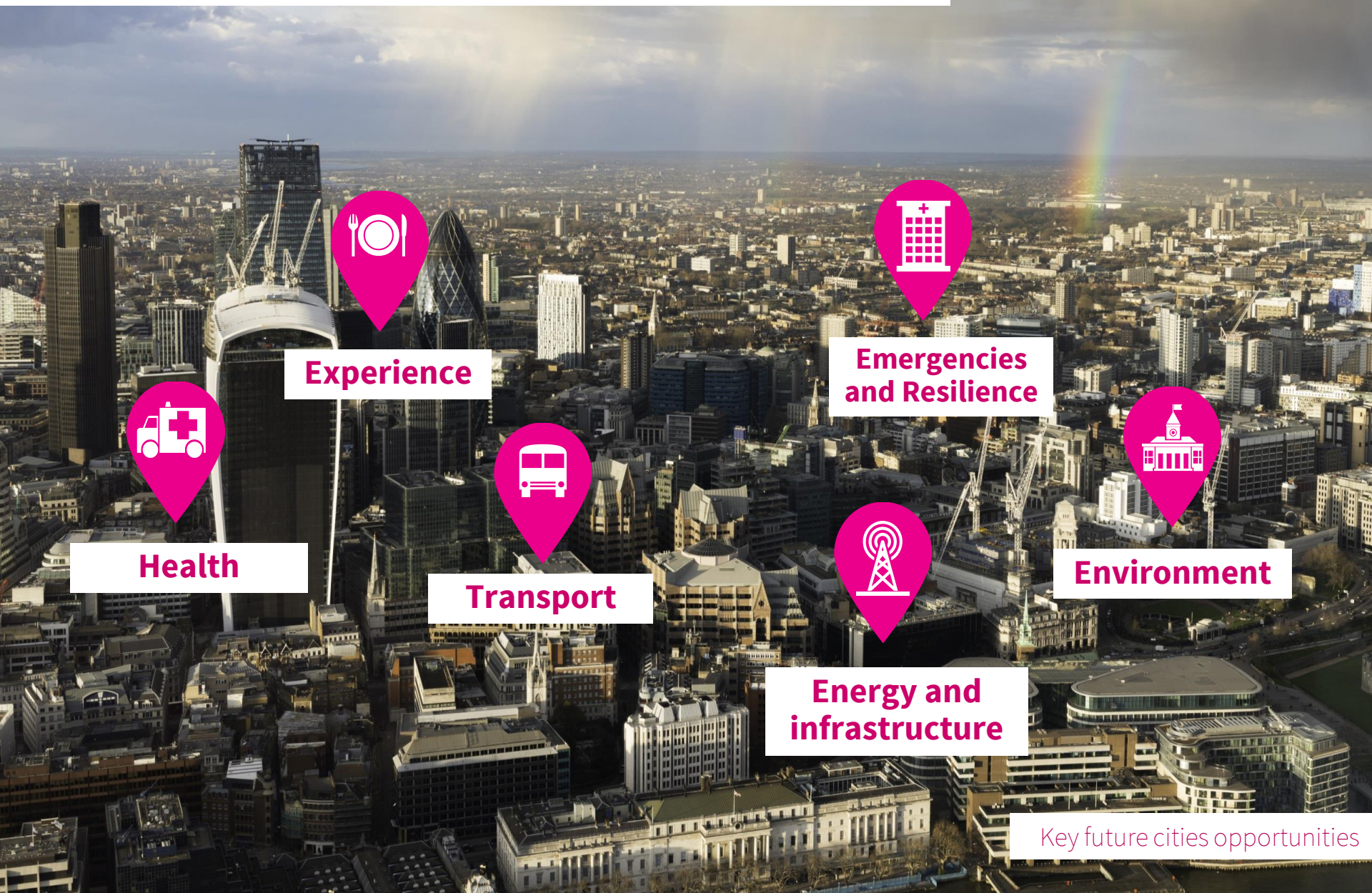


Attend the Gala dinner tonight to find out what was so special about Glasgow's smart cities approach.

CITYGML—FUTURE CITIES PLATFORM



Location data opportunities for smart cities



Experience



**Emergencies
and Resilience**



Environment



**Energy and
infrastructure**



Transport



Health

Key future cities opportunities

RESOURCES

Ordnance Survey Future Cities Thinking

<https://www.ordnancesurvey.co.uk/about/thinking/future-cities/index.html>

Open Geospatial Consortium Smart Cities Spatial Information Framework

<http://www.opengis.net/doc/WP/smart-cities-sif>

British Standards Institution PAS

<http://www.bsigroup.com/en-GB/smart-cities/Smart-Cities-Standards-and-Publication/PAS-180-smart-cities-terminology/>

ISO Urban Indicators ISO37120 / World Council on City Data

<http://www.dataforcities.org>

SUMMARY

So, Smart Cities need Location Data.

Smart Cities = growth opportunity for geospatial methodologies and data

Key application area in improving

- City Infrastructure
- Resilience
- Health
- Economic growth
- Environment/Sustainability
- Visitor/citizen experience

