



# THE BEST DECISIONS COME FROM SPATIALLY CONNECTED AND ENABLED GOVERNMENT

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*“The goal is to turn data into information, and information into insight”*

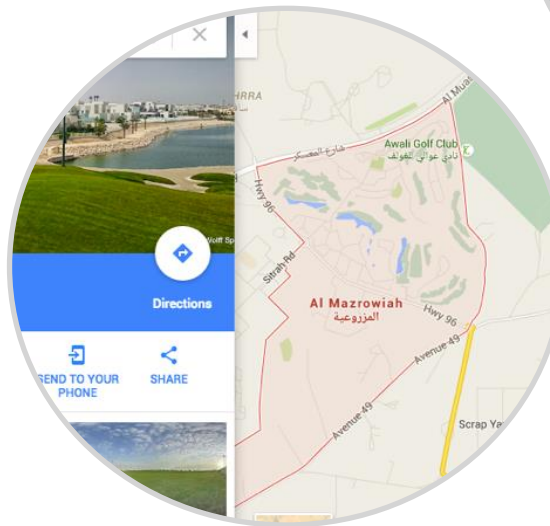
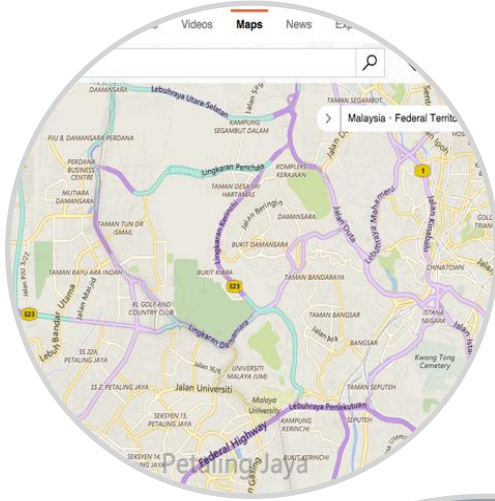
Carly Fiorina, former chair Hewlett Packard

*...and insight into actions and then value?*

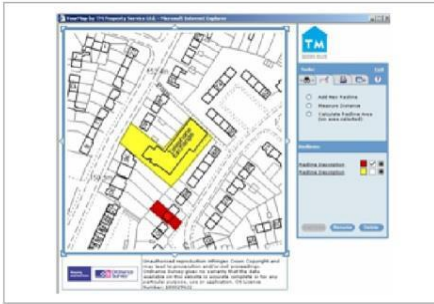
Dan Paull, CEO PSMA Australia



# Maps are everywhere...



# Location- the vital component!





# Location – a meeting point for information?

Postcode  
?

Place  
name?

Coordinates  
?



Unique spatial  
code for every  
real world  
object

# Same location but known very differently

Planning Dept-Flat 1, 21 Ash Grove London NW2 3LN

Police-Ground Floor Flat, 21 Ash Grove London

Utility-21A Ash Grove London NW2

Land tax-Flat 1, 21 Ash Gr. London NW2 3LM

Fire-21A Ash Grove, Cricklewood

Local Municipality-FL 1 21 Ash Grove

Employment Dept-Ground Floor Flat, Elm Grove & Ash Grove



UPRN = 200004525

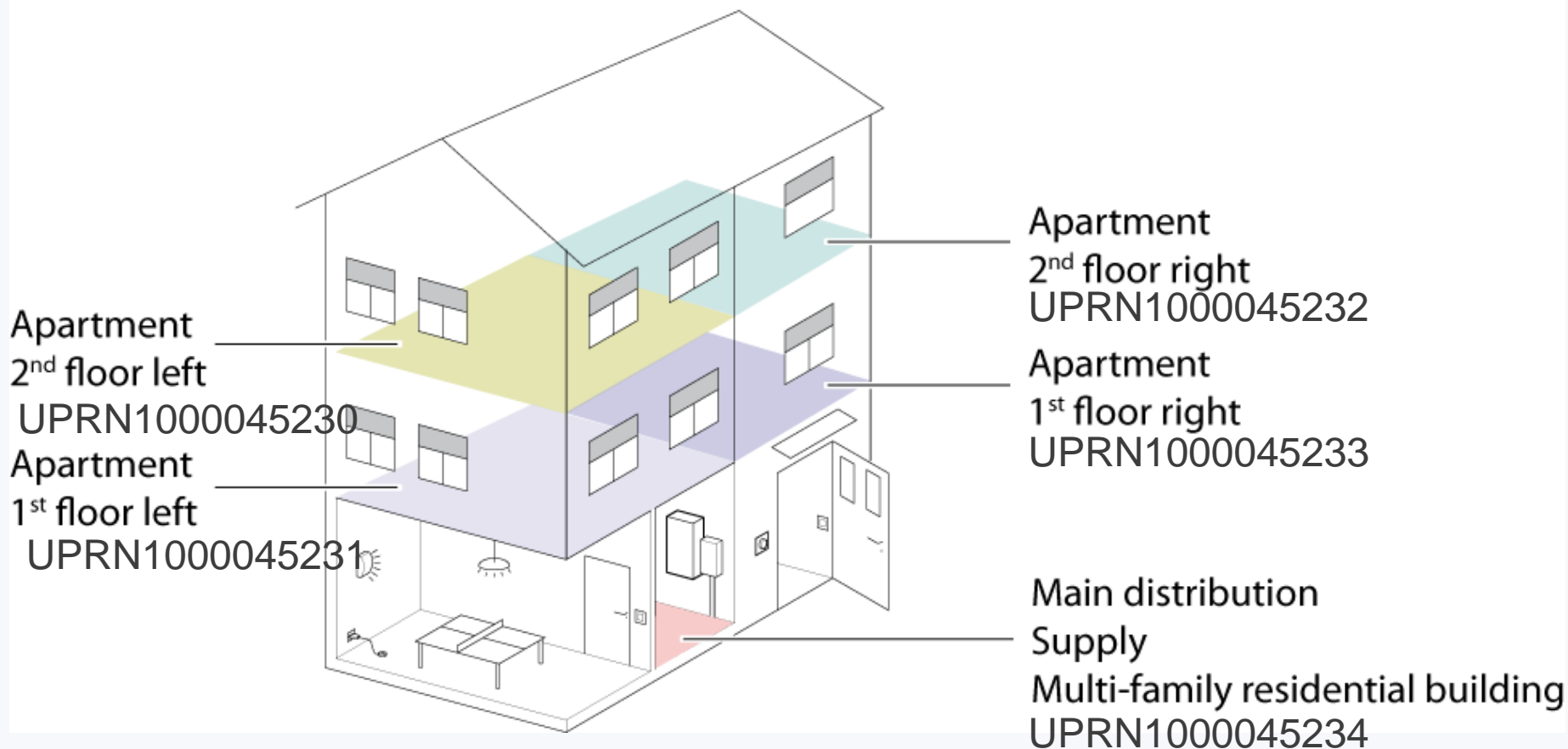


# Unique Consistent Reference -Linking all government information



- Health records
- Flood plain
- Land ownership
- Utility supply/smart meters
- Topography
- Height of building? Floor levels?
- Crime, education, vulnerable persons

# UNIQUE IDENTIFIERS FOR EVERY LOCATION/APARTMENT

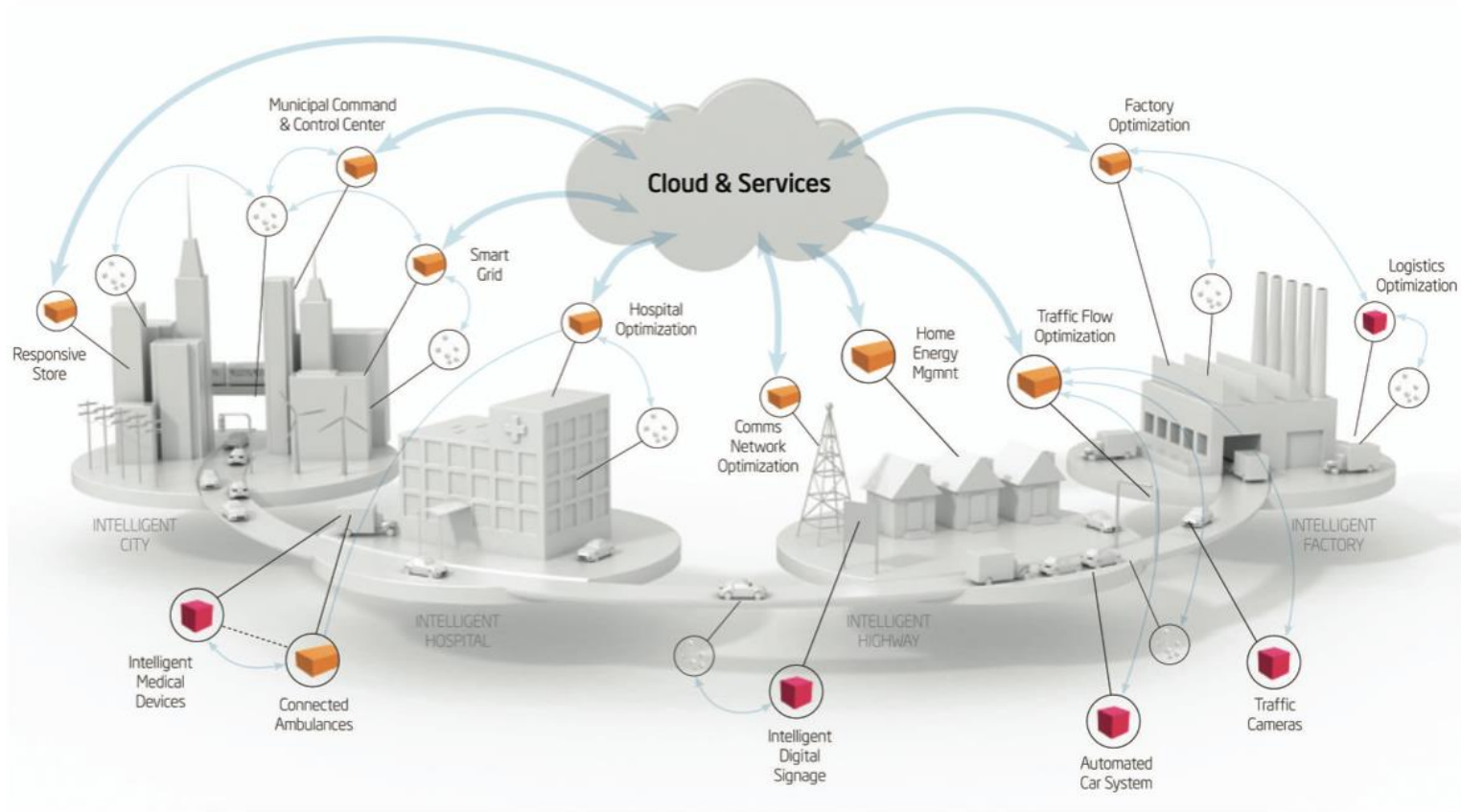




50 billion Internet-connected things by 2020

# **Sensors Everywhere**

**(Things or Devices)**



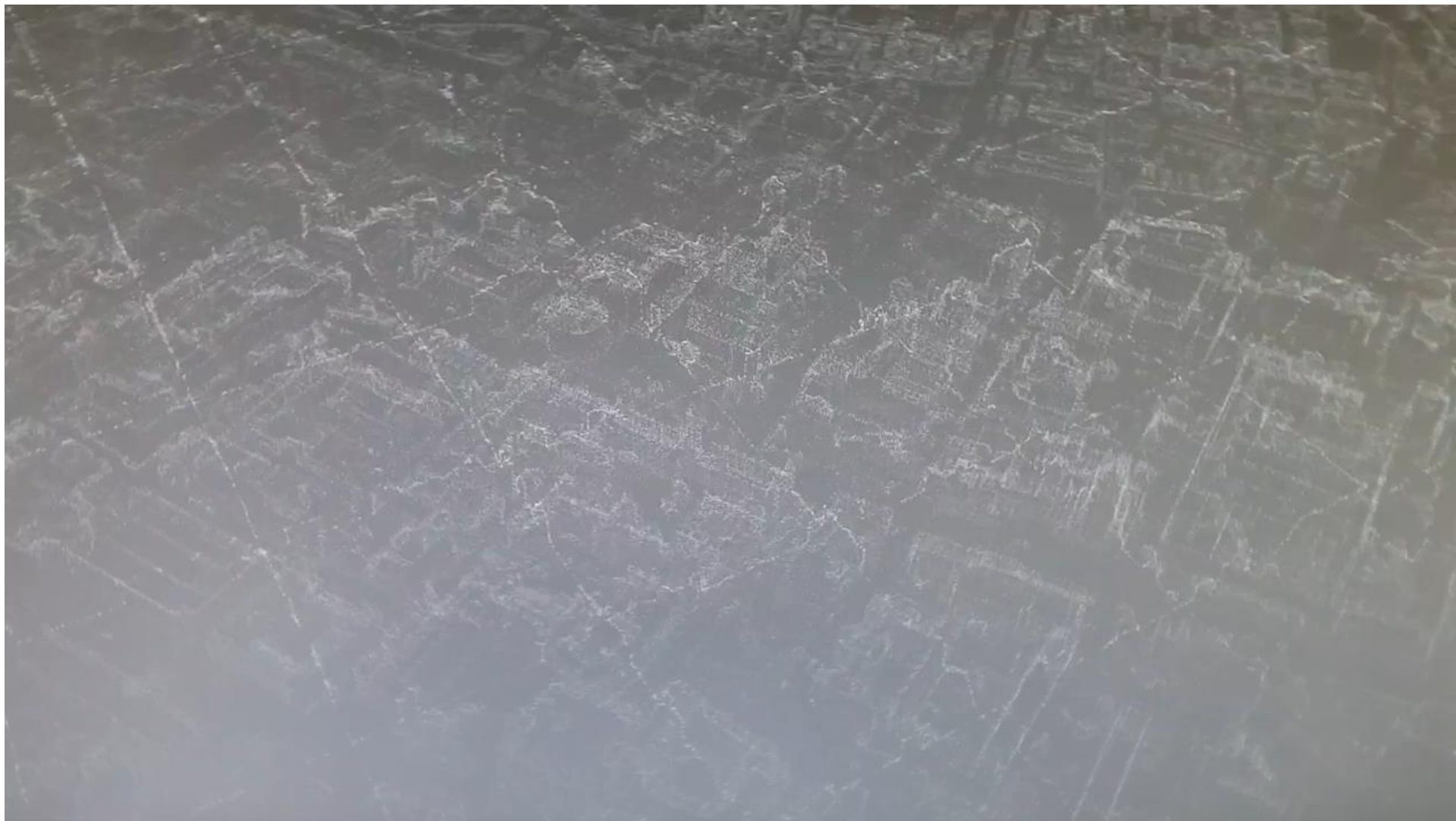
# Cityverve- Manchester



## The Corridor









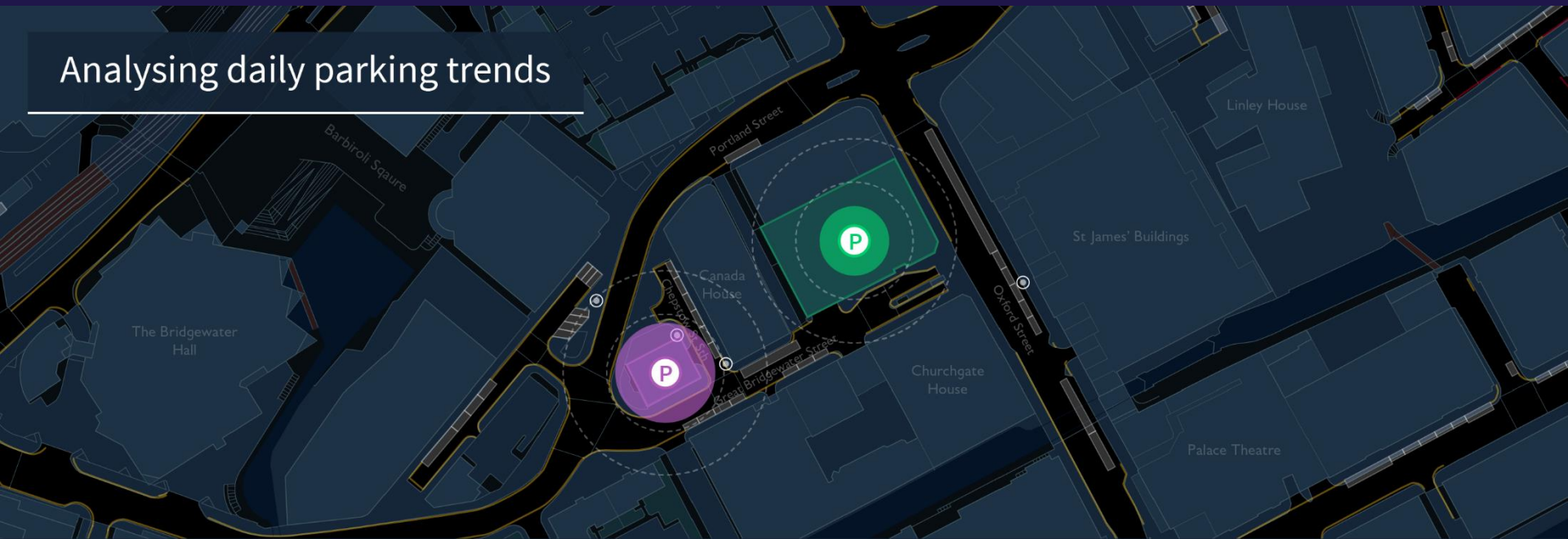
# Solving urban problems

## Utilising sensors to analyse daily parking trends

Where can I park? How much will it cost? How many spaces are available?



## Analysing daily parking trends



Car park capacity



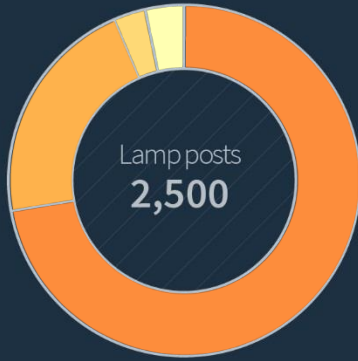


# Supporting infrastructure development

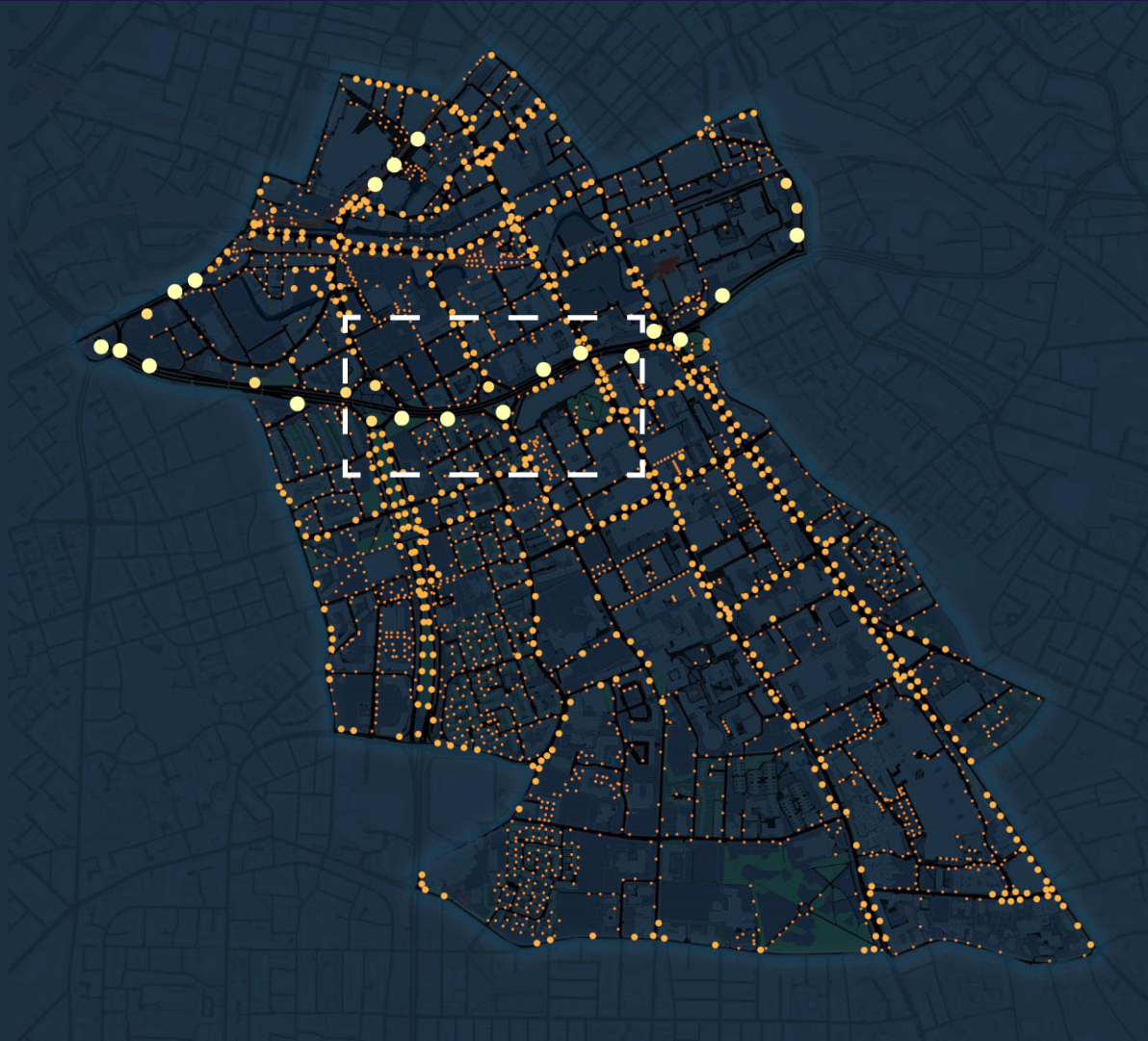
## Identifying lamp posts to deploy air quality sensors

Which lamp posts are tall enough? Do they have spare electricity?  
Can we deploy them safely?





Lamp post height







Feature:	Street Furniture
Group:	Lighting
Primary Use:	Lamp post
Secondary Use:	Air quality sensor
Sensor reading:	HIGH
Height:	30.5m
Owner:	MCC
Power:	Yes
Condition:	Established



11:27 7th March 2017

Can you show me those lamp posts which have air quality sensors attached?

MANCHESTER  
17:30 06-03-2017

LOW

MODERATE

HIGH



17:04 7th March 2017

Can we map the current readings for these  
air quality sensors?







# UK Project: Atlas

identify and define the navigation, communication, processing and mapping requirements for the reliable and safe operation of Autonomous Vehicles anytime,





Attributes information

DPA	Flat 5, Ryder Court, 15, Mansel Close, Poole, BH12 5HS
LPI	Flat 5, Ryder Court, 15, Mansel Close, Poole, BH12 5HS
PARENT_UPR	100041231714
CLASS_DESC	Self Contained Flat (Includes Maisonette/Apartment)
VOA_CT_REC	300119172
WARD_CODE	E05010535
TOPO_TO	osgb1000012800751
P	2.500000000000
PNT	1.880000000000
DPTT	1.680000000000
DPNT	1.240000000000







Feature Attributes	
pub_era_number	0
street_description	GERVIS PLACE
town_name	BOURNEMOUTH
postcode_locator	BH1 1LG
descriptiveterm	
featurecode	10021
descriptivegroup	Building
voandattrib	8101000
primary_description	ADVERTISING RIGHT AND PREMISES
fulladdress	OUTSIDE 26 (ADSHL 2201 0444), GERVIS PLACE, BOURNEMOUTH



Ordnance  
Survey

*Leica*  
Geosystems

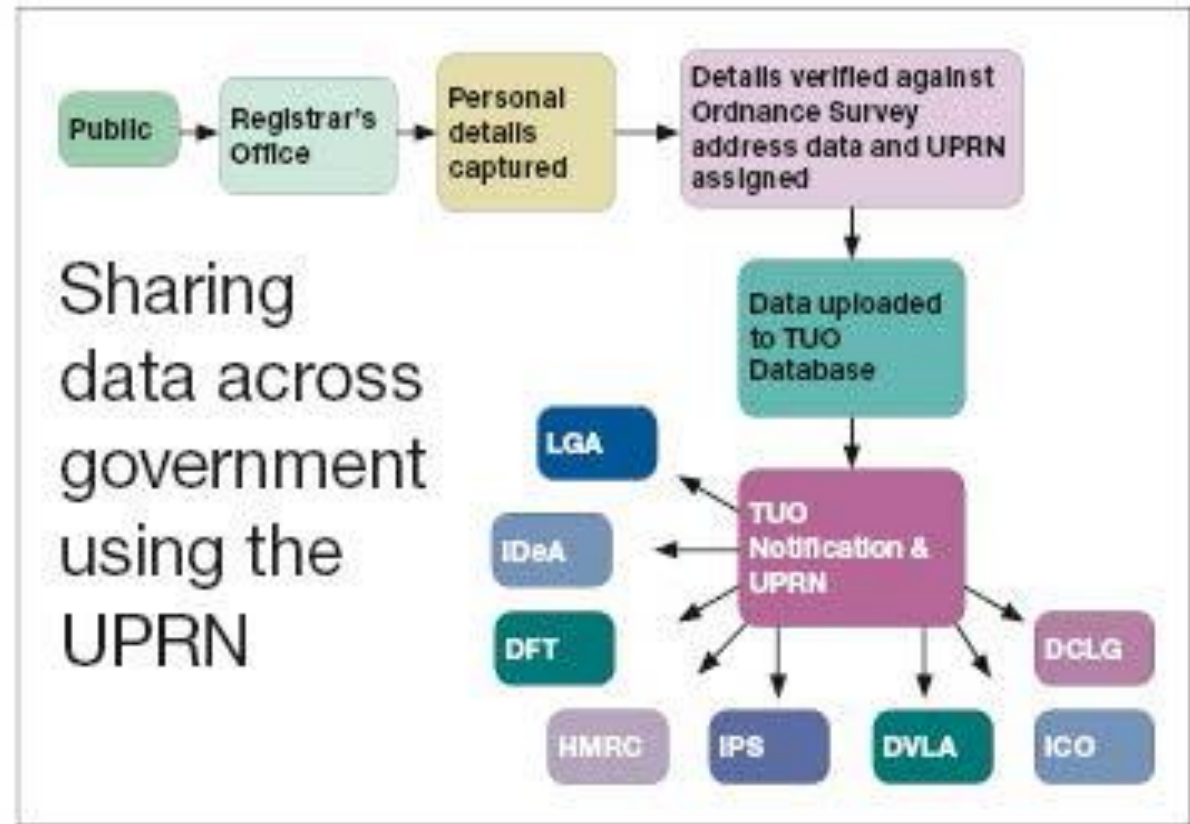




# Tell Us Once- UK Department for Works and Pensions

Over 10 years, **\$400 m** in savings is predicted – based on evidence-based pathfinders and trials.

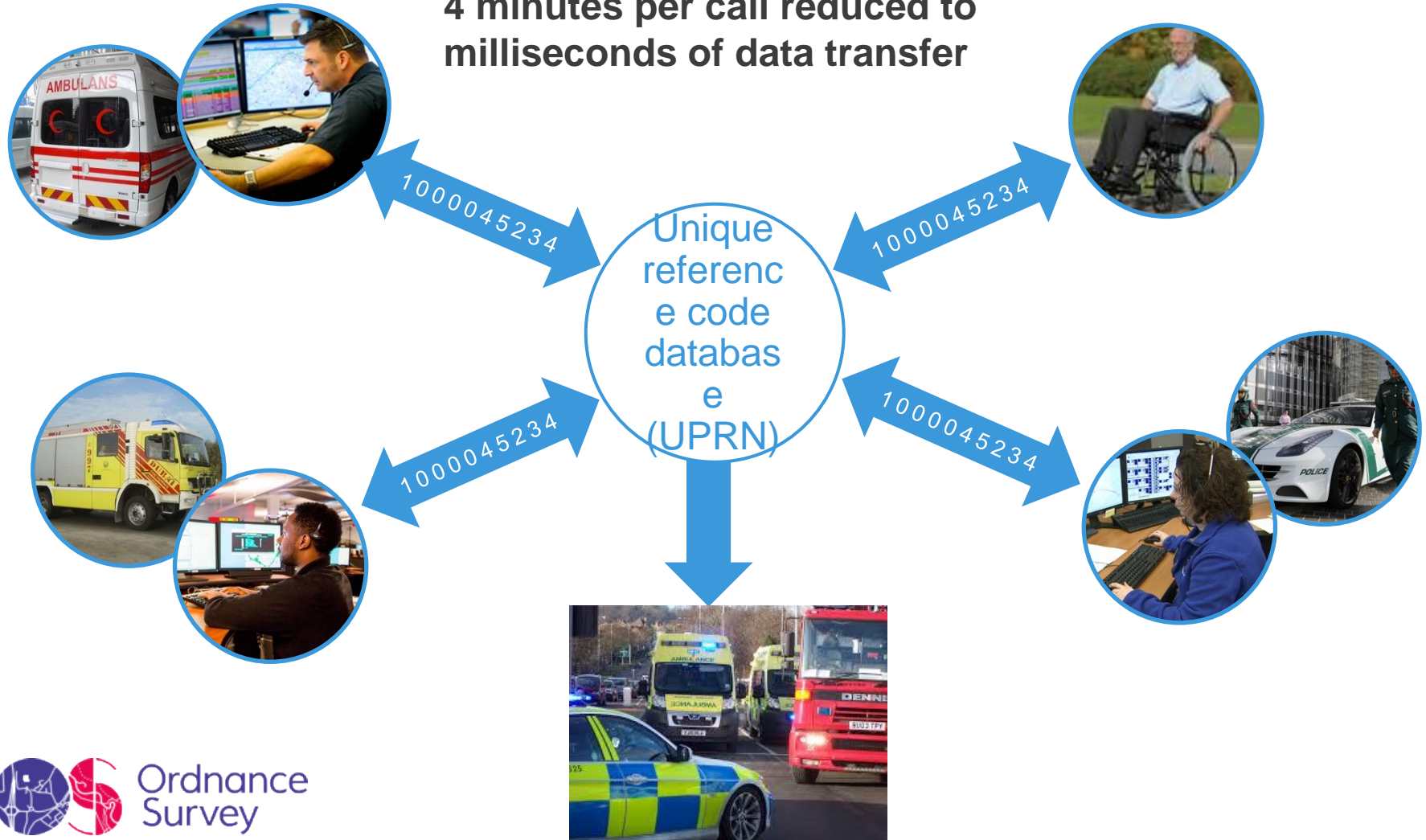
**\$100 m of** savings for families over the next 10 years, resulting from the money saved on fuel or parking charges.



# Incident location sharing for Emergency Services

**Saving 18,000 hours per annum**

**4 minutes per call reduced to  
milliseconds of data transfer**



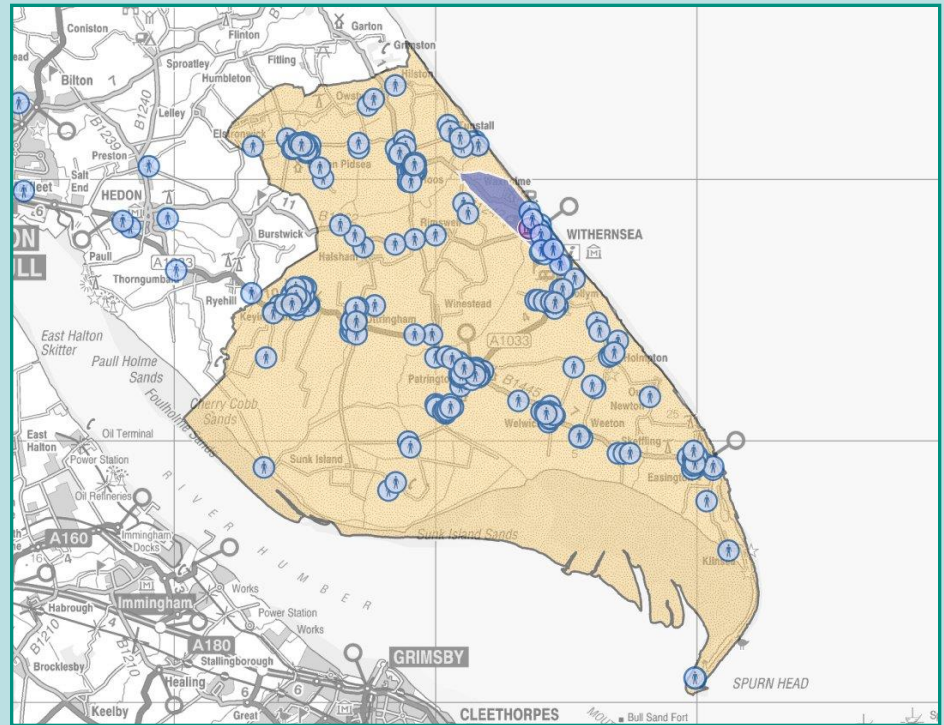


# Withernsea School: Before and After

- 550 pupils using 14 school buses

After optimisation?

- 11 buses
- Savings of \$1.4m in 3 year contract
- Reduction in Carbon Footprint by 5.1 tonnes CO<sub>2</sub>



EAST RIDING  
OF YORKSHIRE COUNCIL



Ordnance  
Survey



esri UK

# Waste management



12 UK Local Authorities achieving cost savings of **\$5.5m** (£3.8m) per year through optimising their waste management processes

- Saving between 50-120 tonnes each of CO<sub>2</sub> per annum
- Cutting fuel consumption by 12-15%
- Some showing a recycling rate doubled to 65%



Ordnance  
Survey

# Coordination of utility roadworks

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**What's on this map**

- Live incidents
- Road closures and diversions
- Traffic restrictions
- Roadworks
- Public events

**Date filter:**

- Today

[Customise my map](#)

**Roadworks, delays possible**

16 Feb - 24 Feb  
A3211 Upper Thames Street, London, City of London

**Responsibility for these works**

UK Power Networks

**Information for Road Users**

Location: A3211 Upper Thames Street, London, City of London

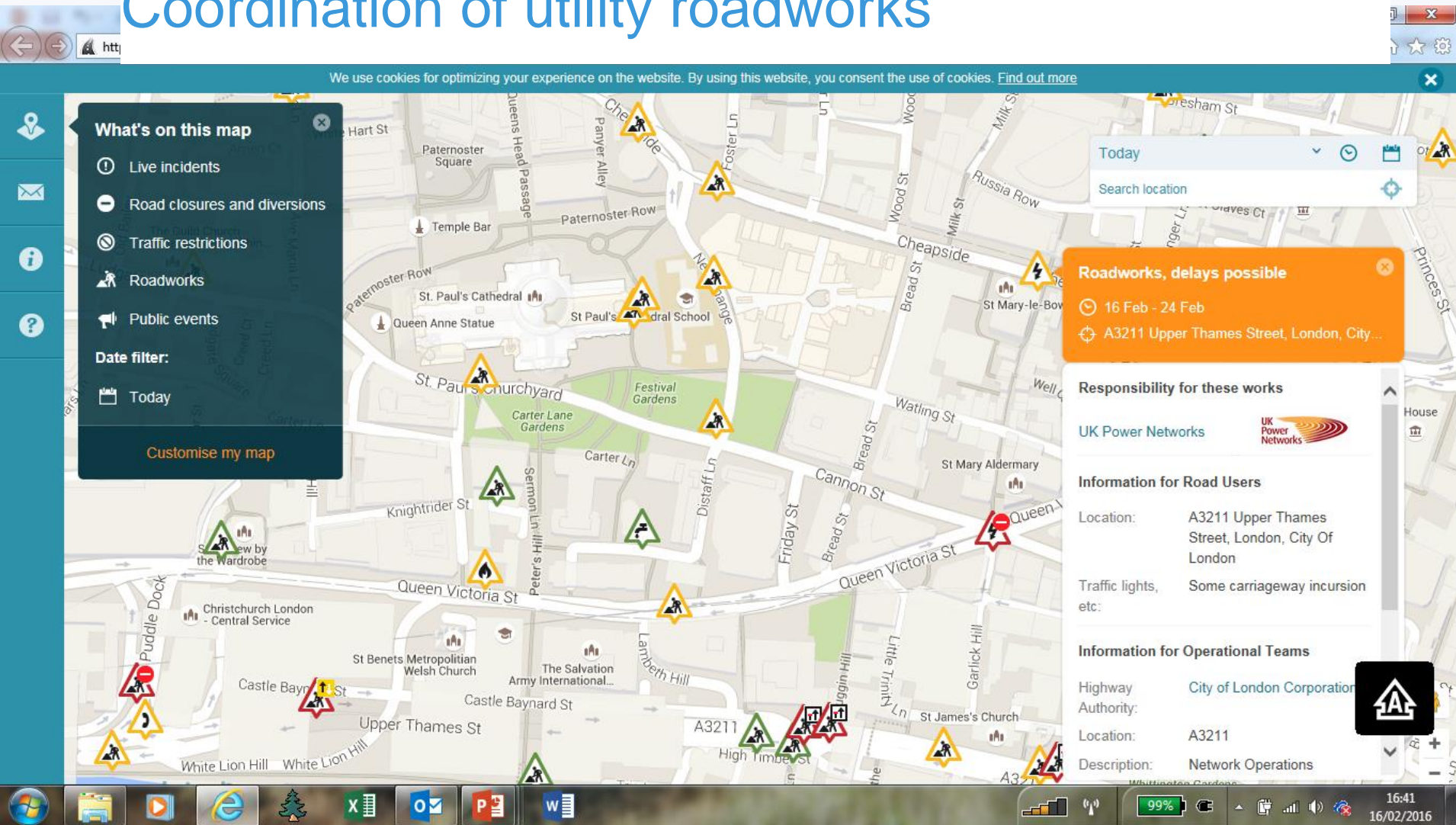
Traffic lights, etc.: Some carriageway incursion

**Information for Operational Teams**

Highway Authority: City of London Corporation

Location: A3211

Description: Network Operations



The screenshot displays a web-based map interface for coordinating utility roadworks. The map shows a section of London, including areas around St. Paul's Cathedral and the River Thames. Numerous yellow and green icons representing different types of roadworks (e.g., lane closures, diversions) are overlaid on the map. On the left, a sidebar menu titled 'What's on this map' allows users to filter the map content by live incidents, road closures, traffic restrictions, roadworks, or public events. Below this is a 'Date filter' set to 'Today' and a 'Customise my map' link. On the right, an orange information panel for a specific roadwork event on A3211 Upper Thames Street provides details on the duration (16 Feb - 24 Feb) and potential impacts. Below this, another panel identifies the responsible organization as UK Power Networks and provides further information for road users and operational teams, including the highway authority (City of London Corporation) and a description of the work as 'Network Operations'. The bottom of the image shows a Windows taskbar with various application icons and a system clock indicating 16:41 on 16/02/2016.



# Savings made in UK public sector using spatial data



Gloucestershire County Council saves \$3m on tendered bus services



East Riding of Yorkshire saves \$1.5m on school transport



Harrow Council's waste project saves \$4.8m over 10 years



Automated bus pass allocation project saves Liverpool \$75k



The Suffolk Waste Partnership saves St. Edmundsbury \$27k



North Somerset District Council saves \$1m on school transport



Lee Valley Regional Park Authority saves \$150k on grounds maintenance



From 2002, London Borough of Sutton saves \$70k yearly on SEN transport



Ordnance Survey

# Smart Dubai Geospatial Strategy



# Economic Benefits of Spatially Connected Government

- Ordnance Survey data underpins **\$113bn** of Great Britain's economy

*Source- OXERA*

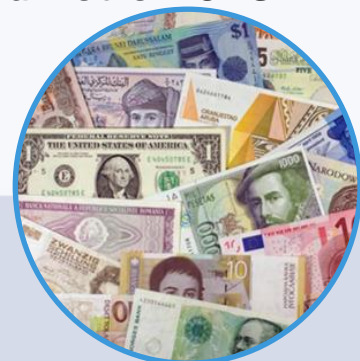
- For every **\$1** spent on address and street spatial data **\$4** is saved

*Source-*

*Geoplace*

- Across the 15 most commonly built applications using data from the UK single data framework, research shows that UK local authorities, police forces and fire services are already saving over **\$187 million** every year
- If a majority (75%+) of local authorities and emergency services were to implement just these 15 most popular applications, savings would rise to over **\$0.7 billion** each year.
- **0.2 to 0.6 GDP growth** in UK

*Source- Mindmetre 2015*





# Economic Benefits- International Examples

**Australia-** The spatial information industry and its accumulated impacts are valued at between \$6.43 billion (0.6%) and \$12.57 billion (1.2%) of Australia's Gross Domestic Product (GDP).

source [ACIL Tasman](#)

**Canada-** geospatial technologies contribute some \$21 billion of value to Canada's GDP (1.1%), and generate approximately 19,000 jobs in Canada's economy.

Source [Canadian government](#)

**Ireland-** the [economic value of the geospatial industry in Ireland](#) and reported that geospatial data contributes almost €70 million in terms of gross added value to the Irish economy every year and has an economy-wide impact of €126.4 million.

Source [Indecon](#)

**United States-** The geospatial services industry generates annual revenues of \$75 billion and provides jobs for 500,000 people. "together, geospatial services companies drive \$1.6 trillion in revenues and \$1.4 trillion in cost savings throughout the U.S. economy."

Source [Boston Consulting Group](#)



# ACHIEVEMENTS TO DATE

- Total external funding raised for Geovation members in excess of \$14m
- 6 companies each raised up to \$650K in seed funding from early stage venture and angel investors.
- More than 80 new jobs created by Geovation companies since we opened.
- Secured national press coverage for members of our community, notably for OpenCapacity, which directly resulted in commercial trials of their technology.





# KEY BENEFITS OF SPATIALLY CONNECTED GOVERNMENT

- Easy exchange of information and open data between organisations and users through single location reference
- Best evidence for best policy creation and optimised (smart) resilience
- Easier interaction with citizens- better public services and happier citizens
- Cost, time and environmental savings

# Ordnance Survey International

**Ordnance Survey (OS) is Britain's Government National Mapping Agency- mapping Great Britain since 1791.**

**Services ranging from strategy formulation to geodesy, geospatial data capture, to product development and data policies and standards.**

**Strategic Member of the Open Geospatial Consortium (OGC)**

**UK Government owned and vendor neutral**

**Offices in Singapore, Dubai, Abu Dhabi and Bahrain- active in over 25**







Ordnance Survey

We're at the heart of Smart

[os.uk/smartcities](https://os.uk/smartcities)

# THANK YOU

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