



Is your data AI ready?

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GeoPlace LLP

18th October 2024



Agenda

- Context of the national data infrastructure for street and address
- Why AI?
- AI as an opportunity and the CDO challenge
- Criticality of data and data quality essentials
- Prompt for thoughts, ideas and discussion

The origins of GeoPlace – a Joint Venture partnership

Parliamentary Under-Secretary of State for
Communities and Local Government (Robert Neill)

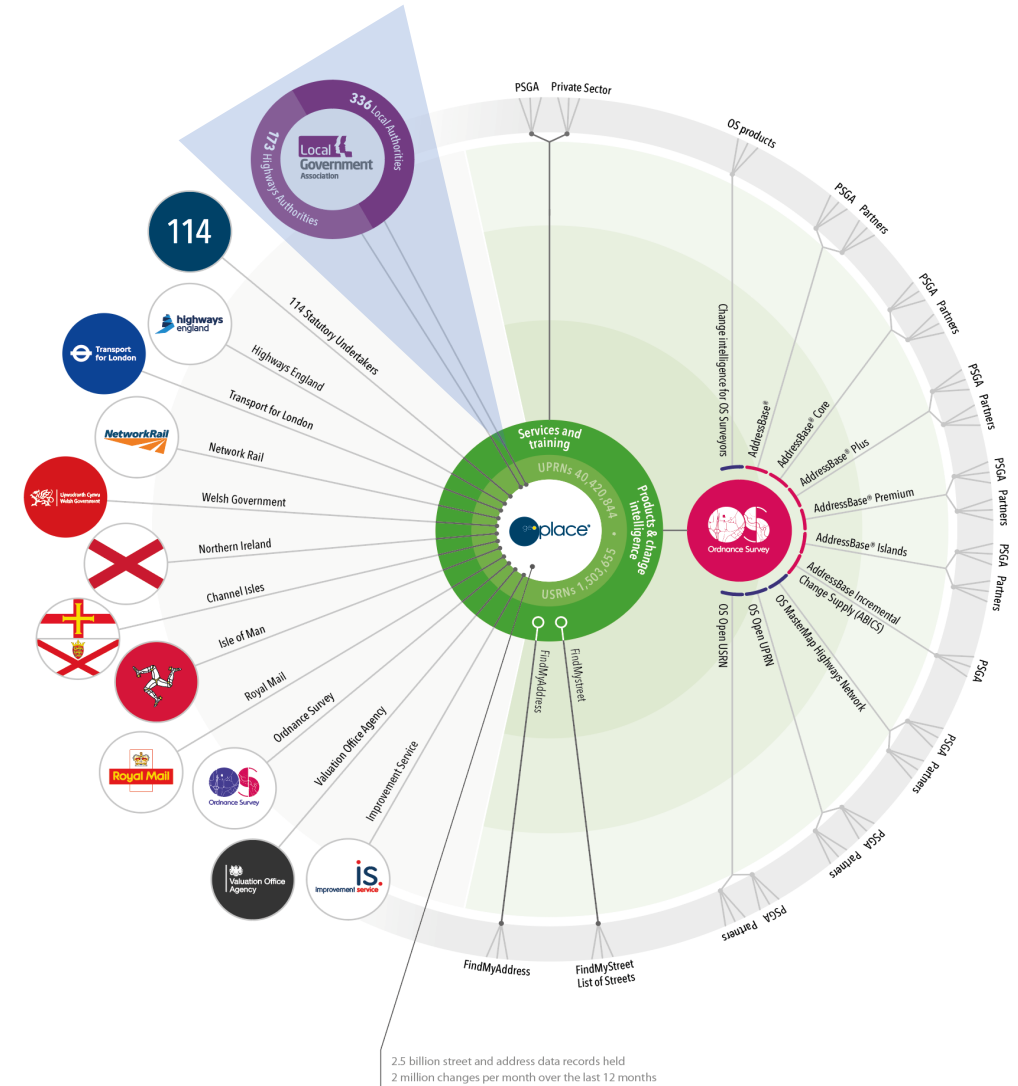
...Government are today announcing they will **bring together publicly owned address information for England and Wales from Ordnance Survey and local authorities** to create a “**national address gazetteer database**”, providing one definitive source of accurate spatial address data.

To deliver this, an agreement has been reached to set up a joint venture between Ordnance Survey and the local government group to create a single source of address data. Having just **one database will remove duplication and inefficient processes** in the public sector and will provide a **better quality of information for all users**.



What we do - The engine room of UPRNs, USRNs and authoritative reference data

- Complex data standard – BS 7666 is our foundation
- 600 data providers – GeoPlace link, validate (1000+ checks), link, enrich and transform, analyse and publish to create unified UK data sets
- 2.5 billion street and address data records each to a precise set of rules. Average 2 million changes a month.
- **Unique Property Reference Number (UPRN)** is the unique identifier for every addressable location in the UK
- **Unique Street Reference Number (USRN)** is the unique identifier for every street in the UK.
- Available as NGD Address / AddressBase / OS Highways / National Street Gazetteer
- UPRNs and USRNs and associated geometry are Open data - OS Open USRN / OS Open UPRN
- Mandated for use across UK government





Local authorities rely on what we produce together

Imagine being able to ask:
“Show me everything we know in the organisation about...”

UPRN 10033625525

USRN: 4601460

15 Church Way,

Green Acre

HR1 2PT

Nottingham City - an exemplar



Nottingham
City Council

Nottingham City Council ROI on use of address data

SHARE



Organisations of all kinds demand evidence of investment. This new case study - 'Return on socio-economic value of address and street data' - is of huge interest to all local authority decision-makers for every £1 invested in the use of accurate address data, the potential to make efficiency savings and income of £6. The report predicts that the benefits over the period 2023 to 2026.



Case Studies

Are you looking for a case study on street data? Want to read a case study about addressing, or how to engage more effectively with your own authority? We capture the results from local authorities and Custodians' work across England and Wales, showing how valuable UPRNs, USRNs, street and address data is for society, people, businesses, and decision-making in general. Using address and street data to help realise the power of place. [Sign up here to receive notifications of new Case Studies.](#)

MAP VIEW

FULL VIEW

Search Case Studies

FILTERS

- Addresses
- Bins, waste & environment
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- Community, people & culture
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- Council property
- Council tax & NDR
- Customer contact & services
- Data management
- Democracy
- Economic development
- Emergency services
- Fraud
- Health & social care
- Highways
- Housing
- Information &

<https://www.geoplace.co.uk/local-authority-resources/guidance-for-custodians/case-studies>

USRNs this study shows the value of different areas. The report examined 6 specific areas: using data from 2018 to 2026 using the UPRN is estimated uplift of £6.2 million in newly-identified impact of investing in better addressing will be for licensing and enforcement is in the range of 2018 - 2026 is estimated at £0.6 million. Tests that the direct savings would be at least

6:1



Government relies on what GeoPlace produce – as originally intended

census
2021

Ministry of Housing,
Communities &
Local Government

NHS

Geospatial
Commission

National
Underground
Asset Register

national
highways

Department
for Transport

Cabinet Office

HSE
Health & Safety
Executive

NAO
National Audit Office

HM Revenue
& Customs

UK Health
Security
Agency

HM Land
Registry

Department for
Science, Innovation,
& Technology

The Scottish
Government
Riaghaltas na h-Alba

Llywodraeth Cymru
Welsh Government

Part of
[What to do when someone dies: step by step](#)

Tell Us Once

Tell Us Once is a service that lets you report a death to most

Emergency Alerts Test on Sunday 23 April, 3pm

Home > Housing and local services > Council Tax

Check your Council Tax band

Find out the Council Tax band for a home in England or Wales by looking up its address or postcode.

Register a high-rise residential building

Roles and responsibilities About the Building

Home

It is a legal requirement to register high-rise residential buildings that are at least 7 floors high, or 18 metres tall or higher, with two or more residential units by 1 October 2023.

The fee to register each building is £251.

If you are the principal accountable person for your building or have been authorised to complete registration on their behalf, you can begin your application.

[Apply to register a high-rise residential building](#)

Register to vote

You can use this service to:

- get on the electoral register so you can vote in elections or referendums
- update your name, address or nationality by registering again with us

National Fraud Initiative

Reports, guidance and case studies for the National Fraud Initiative (NFI), a data matching exercise that helps prevent and detect fraud.

From: Cabinet Office
Published 20 March 2015
Last updated 21 April 2022 — [See all updates](#)

Contents

- Working with the National Fraud Initiative
- Public sector
- Private sector
- About the National Fraud Initiative
- National Fraud Initiative reports
- Press releases

The National Fraud Initiative (NFI) is an exercise that matches electronic data within and between public and private sector bodies to prevent and detect fraud.

Order Covid19 test packs

Get a coronavirus test

ALPHA This is a new service – your feedback will help us to improve it.

Order summary

Home address 37 CLARENDON ROAD NORWICH nr2 2pn [Change](#)

Delivery address Same as home address [Change](#)

Disclaimer

By ordering a pack of 7 rapid lateral flow home test kits, I confirm that:

- The information I've provided is up to date and correct
- I agree with the [Terms and Conditions](#) and [Privacy Policy](#) of this service

EPC listings

Energy Performance Certificate HM Government

Dwelling type: Semi-detached house Reference number: R4SAP existing dwelling
Date of assessment: 30 September 2016 Type of assessment: R4SAP
Date of certificate: 01 October 2019 Total floor area: 135 m²

Use this document to:

- Compare current ratings of properties to see which properties are more energy efficient
- Find out how you can save energy and money by installing improvement measures

Estimated energy costs of dwelling for 3 years:	£ 11,910
Over 3 years you could save	£ 6,612

Estimated energy costs of this home

Lighting	Current costs	Potential costs	Potential future savings
Lighting	£ 420 over 3 years	£ 232 over 3 years	
Heating	£ 6,843 over 3 years	£ 4,404 over 3 years	
Hot Water	£ 747 over 3 years	£ 342 over 3 years	
Totals	£ 11,910	£ 4,998	You could save £ 6,612 over 3 years

These figures show how much the average household would spend in this property for heating, lighting and hot water and is not based on energy used by individual households. This excludes energy use for running appliances like TVs, computers and cookers, and electricity generated by micro-generation.

Energy Efficiency Rating

The graph shows the current energy efficiency of your home. The higher the rating the lower your fuel bills are likely to be. The potential rating shows the effect of undertaking the recommendations on page 3. The average energy efficiency rating for a dwelling in England and Wales is band D (rating 65). The EPC rating shown here is based on standard assumptions about occupancy and energy use and may not reflect how energy is consumed by individual occupants.

Recommended measures	Indicative cost	Typical savings over 3 years
1. Flat roof or sloping ceiling insulation	£800 - £1,500	£ 755
2. Cavity wall insulation	£500 - £1,500	£ 2,178
3. Floor insulation (suspended floor)	£800 - £1,200	£ 249

See page 3 for a full list of recommendations for this property.

To find out more about the recommended measures and how to access them you could call 0800 123 1234 (standard national rate). The Green Deal may enable you to finance your home warmer and cheaper to run.

All DVLA services

Search on GOV.UK

→ [Coronavirus \(COVID-19\)](#) | Rules, guidance and support

Home > [Driving and transport](#) > [Number plates, vehicle registration and log books](#)

Get a vehicle log book (V5C)

Contents

- [Get a duplicate log book](#)
- If you cannot get a log book online

If you cannot get a log book online

There are other ways to get a new log book if:

- your name or address has changed
- you've sold, transferred or bought a vehicle

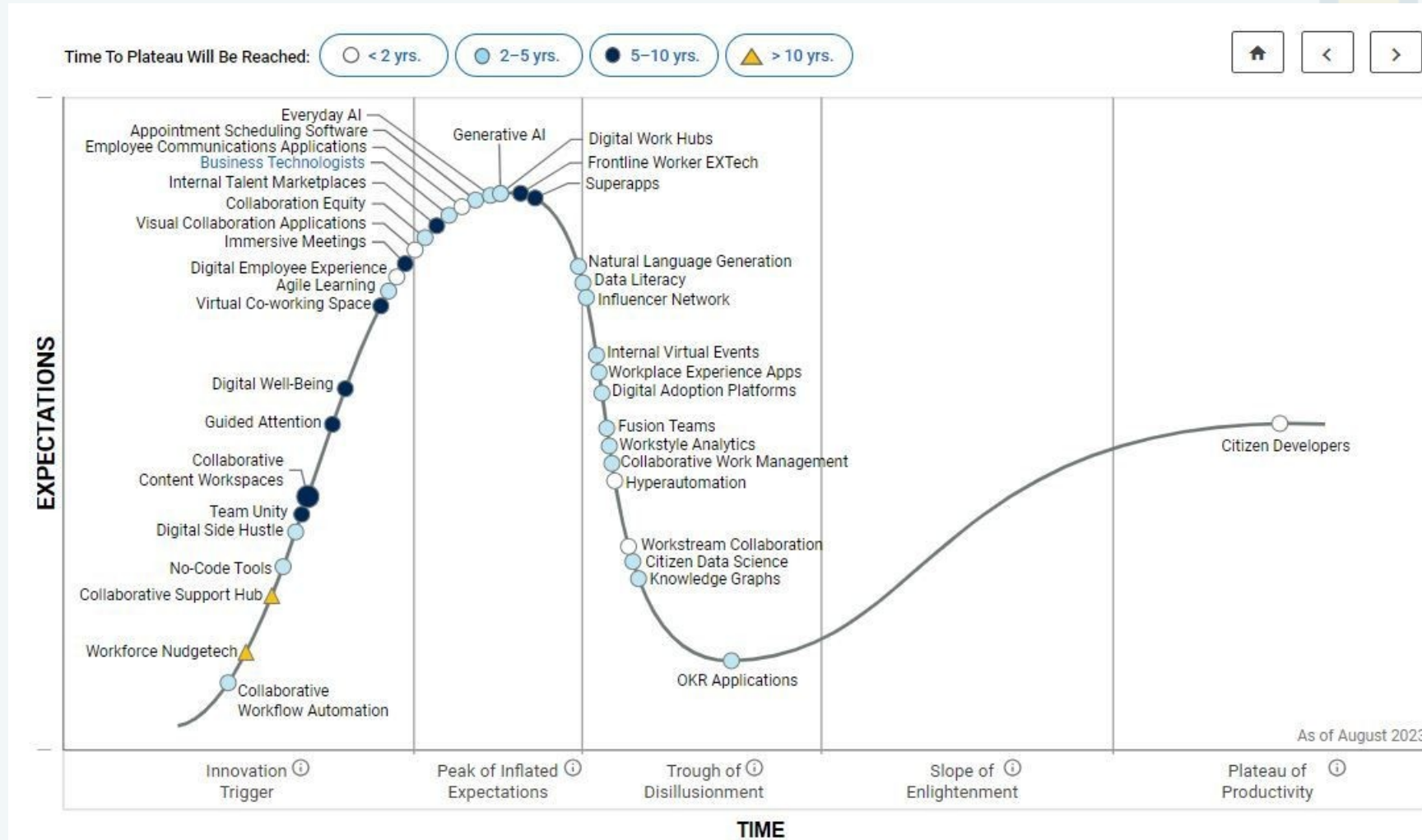
Related content

- [Change your address on your vehicle log book \(V5C\)](#)
- [Change vehicle details on a V5C registration certificate \(log book\)](#)

**Businesses and commerce also rely on what we produce -
Adoption driven by regulation, automation and competition.**



Where is AI on the 2024 Gartner Hype cycle?



Why AI?



Better, quicker insights

Machine learning can sift through data faster than humans to find patterns and generate helpful predictions



Efficiency

Automates repetitive tasks that take humans a long time



Improved accuracy

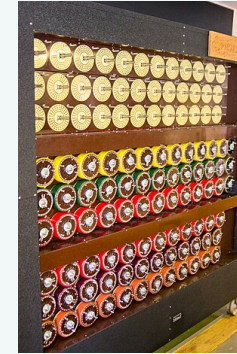
Programs don't make mistakes like humans do - assuming they are programmed **+ data entered** correctly and monitored



Cost reduction

Humans need rest, but AI doesn't sleep.

Anything new?



Bombe (1940)



Enigma



Alan Turing



Better, quicker insights

Machine learning can sift through data faster than humans to find patterns and generate helpful predictions



Efficiency

Automated repetitive tasks that took (v clever) humans a long time



Improved accuracy

Bombe didn't make mistakes like humans did - assuming it was programmed **+ data entered** correctly and monitored

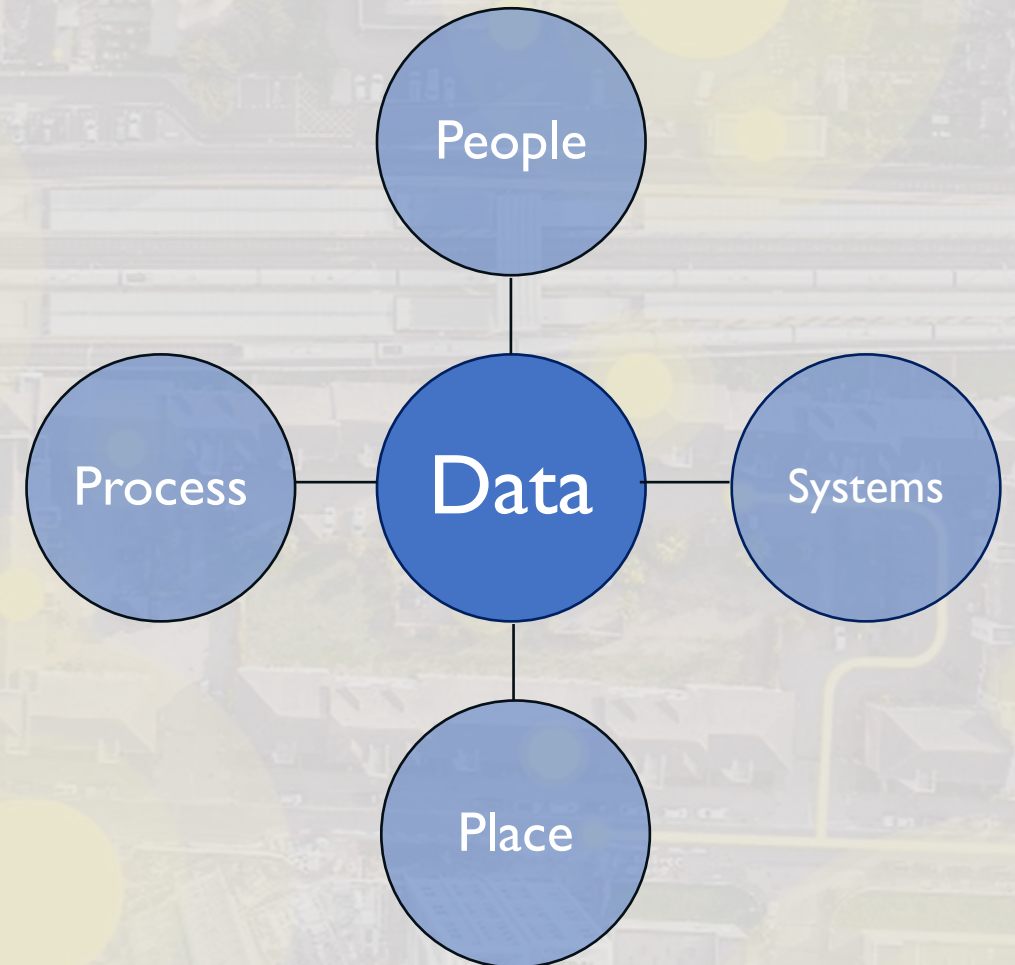


Cost reduction

Humans need rest, but Bombe didn't sleep!

Data is at the heart of the best decisions and processes

- Process and data are the drivers **not** systems and technology
- Systems and technologies are interchangeable
- **Better decisions and processes demand the best data – ‘good enough is not good enough’**
- National Data Infrastructure Providers – you rely on what we produce
- Store once, use many is most efficient
- Identifiers (UPRN) underpins connectivity, geospatially enables, automation and right first time

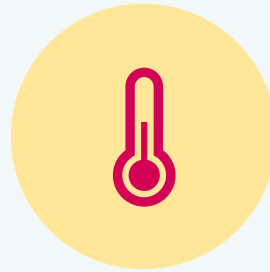


AI / computing answers only as good as the data provided

CDO's challenge – is my data AI ready?



A LEADERSHIP ISSUE -
DATA FINDABILITY,
ACCESSIBILITY,
INTEROPERABILITY,
REUSABILITY (FAIR)



AUDIT DATA, ASSESS
'FITNESS FOR
PURPOSE' , PRIORITISE
AND COMMIT



INVEST IN
ORGANIZATION WIDE
DATA STANDARDS AND
GUIDELINES



AGREE PUBLICATION
POLICIES AND
SECURITY

Some data quality essentials

- **Validity** – check data at the point of entry
 - **Accuracy** – agreed guidelines and entry conventions
 - **Completeness** – use of additional sources
 - **Consistency** - multiple providers and operators, tests to check ‘re-sync’
 - **Timeliness** – management strategies for updates, changes, deletions
 - **Uniqueness** – methods to avoid duplication
-
- AI to support data quality improvement strategies?
 - Beware the overhead of ‘false positives’



Closing thoughts

AI driving a growing thirst for data

Leadership opportunity for CDOs - AI and invaluable highlight to support investment

Pointers for data quality – use what's available (e.g. UPRN, USRN) and invest

The best decisions require the best data

GeoPlace support for high-quality adoption – no match is better than the wrong match