Improving Customer Outcomes (a lifetime of lessons) in 12 Digits

Rob Lee

13/2/25

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Introduction

Rob worked in Financial Services most of their working life and spent many many many hours trying to help customers, using the data the organisation holds.

They are the Chief Data Architect at HMRC focussing on how to arrange HMRCs data flows for agility, cost and a better customer experience.

Here we distil a lifetime of working on one problem… to the solution.

Co-developed with Debbie Wilson Head of Data at Ordnance Survey.

Customer Outcomes

Who is the customer?

Who is interacting with the process?

How do we know?

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How to process customer data

1

Collect data about a customer, use it to identity them

2

Turn it into another identifier, so we have consistency

3

Design processes based on the new identifier (mostly)

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Customer Identifiers

National Insurance Number

Email Address

Mobile Number

Company Number

Bank Account and Sort Code (IBAN)

Charity Number

NHS Number

UTR

Customer Number

Name, Address, Date of Birth
Company Name

Posting in the UK

When posting something to someone in the UK, write the address like this:

Addressees' name
House number and street name
Locality name (if needed)
TOWN (please print in capitals)
FULL POSTCODE (please print in capitals)

Handy tips

- Don't use full stops or commas
- Start each line on the left (don't centre the lines)
- You don't need to write the name of the county if you've included the town and postcode

Return address

If you want to make sure your post can get back to you, don't forget to include your UK return address on each item. Items that cannot be delivered will be returned to you

The Address

Addressees' name
House number and street name
Locality name (if needed)
TOWN (print in capitals)
FULL POSTCODE (print in capitals)

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The Address

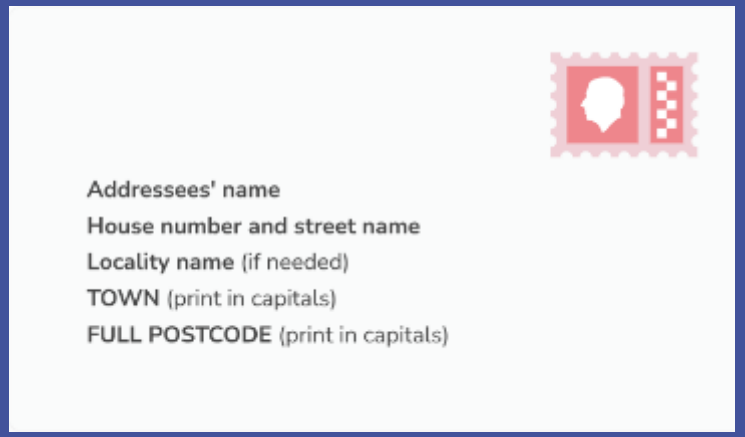
Mx Rob Lee
32 Culley Way
MAIDENHEAD
SL6 3PX

✓ Addressees' Name
✓ House Number and street name
✓ TOWN
✓ FULL POSTCODE

Mr Robert Lee
Two Chimneys
High Street
Urchfont
DEVIZES
SN10 4QH

✓ Addressees' Name
× House Number and street name

✓ Locality name
✓ TOWN
✓ FULL POSTCODE



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Ms Rob Lee
Ground Floor Flat, 43a Catharine Street
FROME
BA11 1DB

Is Ground Floor Flat the NAME, like Two Chimneys

Or a synonym for 43a Catharine Street

Is there a First Floor Flat
Is it 43b

Is 43 the building with flats: Ground Floor and First Floo

Can I get broadband installed?

43b Catherine Street, Frome, BA11 1DB

Land At The Back Of, 43 Catherine Street, Frome, BA11 1DB

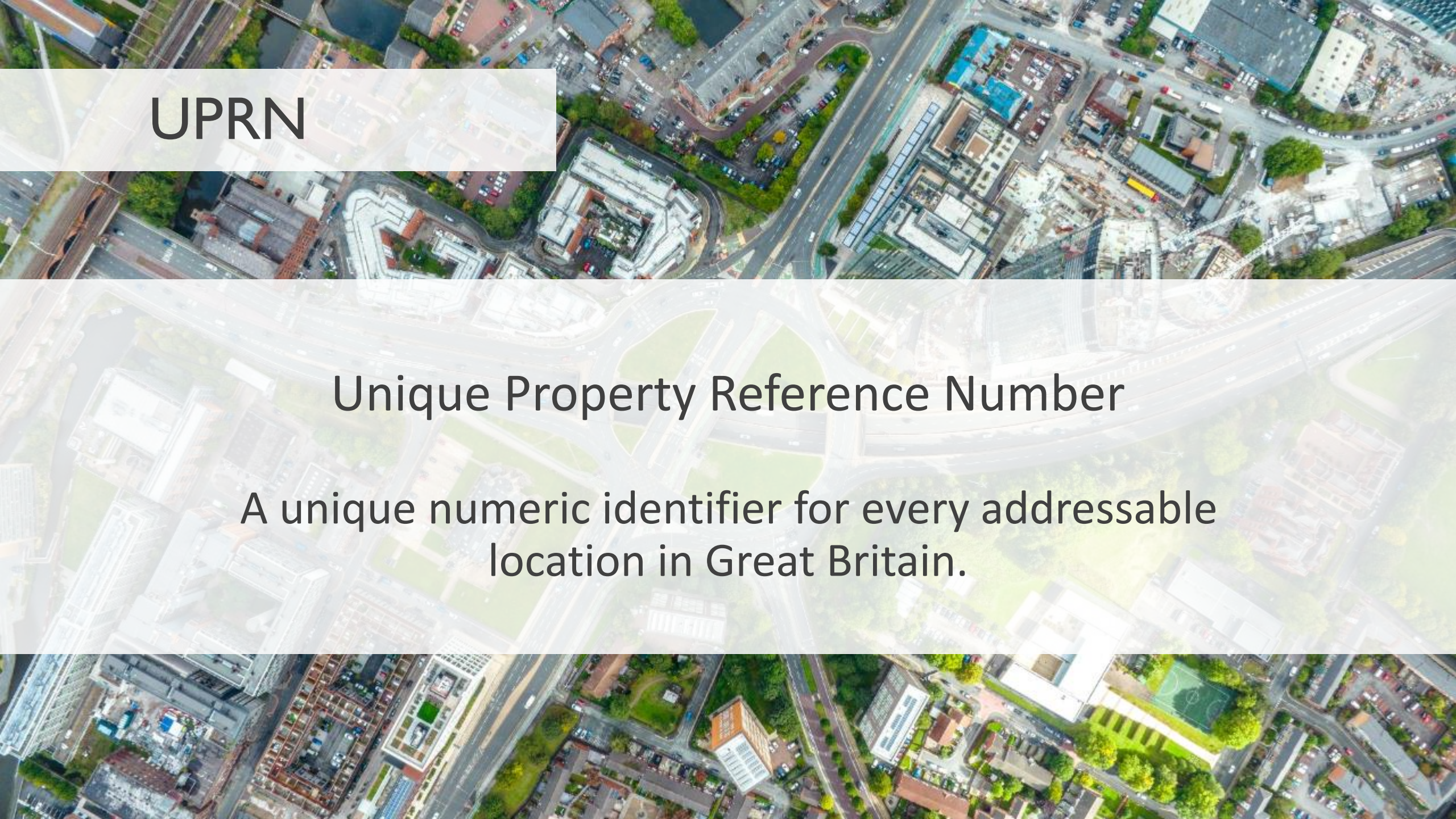
43 Catherine Street, Frome, BA11 1DB

43a Catherine Street, Frome, BA11 1DB

Ground Floor Flat, 43a Catherine Street, Frome, BA11 1DB

The Garden Apartment, 43 Catherine Street, Frome, BA11 1DB

First Floor Flat, 43a Catherine Street, Frome, BA11 1DB



UPRN

Unique Property Reference Number

A unique numeric identifier for every addressable location in Great Britain.

UPRN

32 Culley Way
MAIDENHEAD
SL6 3PX

100080354541

Two Chimneys
High Street
Urchfont
DEVIZES
SN10 4QH

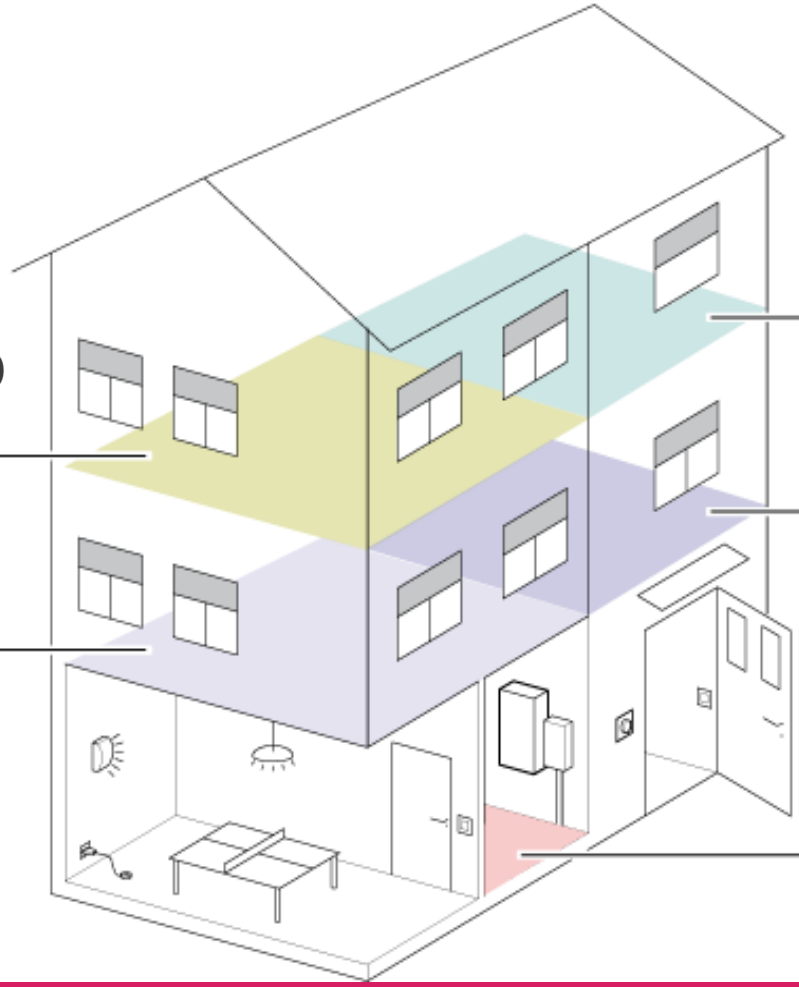
100120990799

Ground Floor Flat, 43a Catharine Street
FROME
BA11 1DB

250070260

Unique identifiers for every location/apartment

250070259 does not equal 250070260



UPRN1000045230
Apartment
2nd floor left

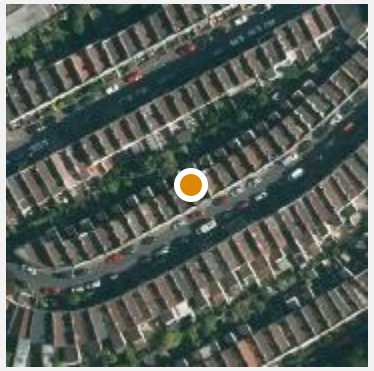
Apartment
1st floor left
UPRN1000045231

UPRN1000045232
Apartment
2nd floor right

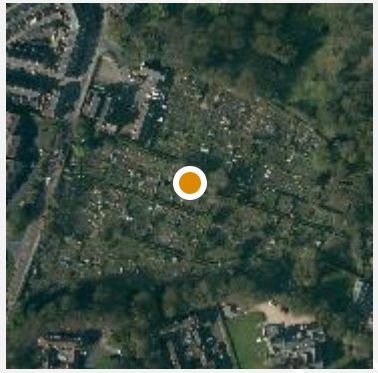
UPRN1000045233
Apartment
1st floor right

UPRN1000045234
Main distribution
Supply
Multi-family residential building

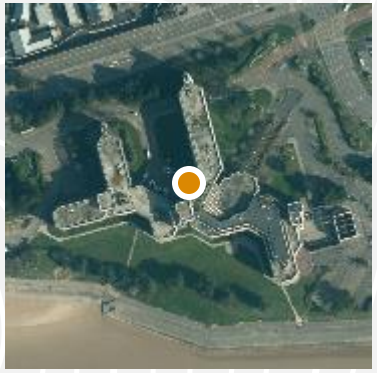
An UPRN is attached to any kind of building, residential or commercial, as well as many objects that might not have a ‘normal’ address



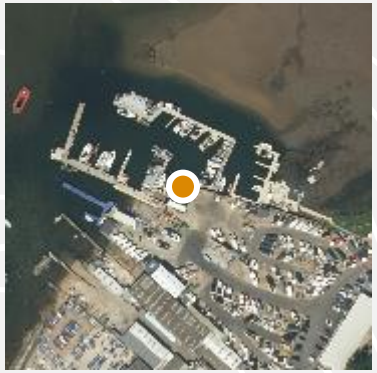
53 Stevens Crescent, Bristol
UPRN: 120621



St Margarets Allotments, Durham
UPRN: 10093041935



Swansea Council Offices
UPRN: 100100986761



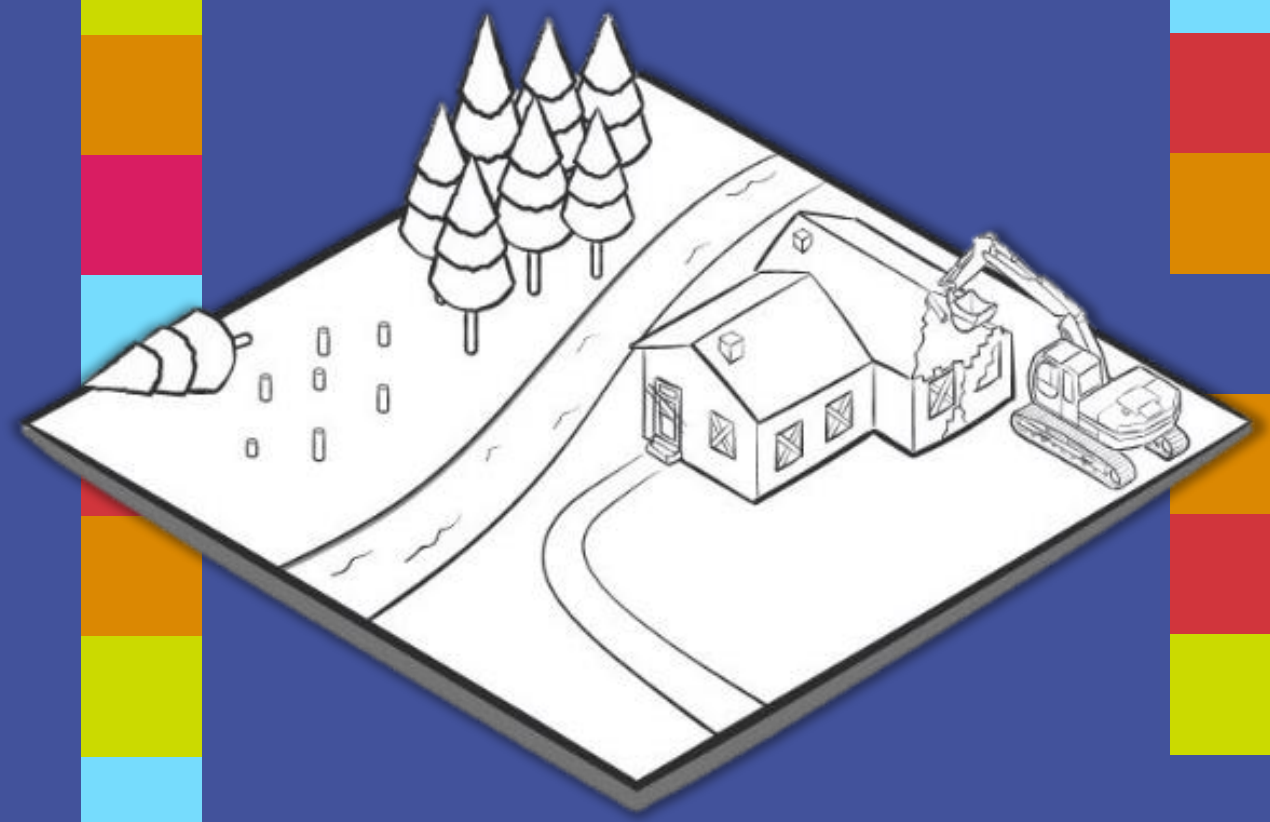
Parkstone Bay Marina, Poole
UPRN: 100041056934

Composting Site
UPRN: 10023410127

Chatsworth House Maze
UPRN: 10015324484

An allocated UPRN will remain a constant for an addressable location, never changed or reused, and will follow the lifecycle of that location, up to and including its demolition.

Even if a property is changed or removed, its original UPRN is kept as ‘historic’ information and remains available.



USRN

Unique Street Reference Number

The same as a UPRN but for an entire street.

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The lifecycle of a UPRN

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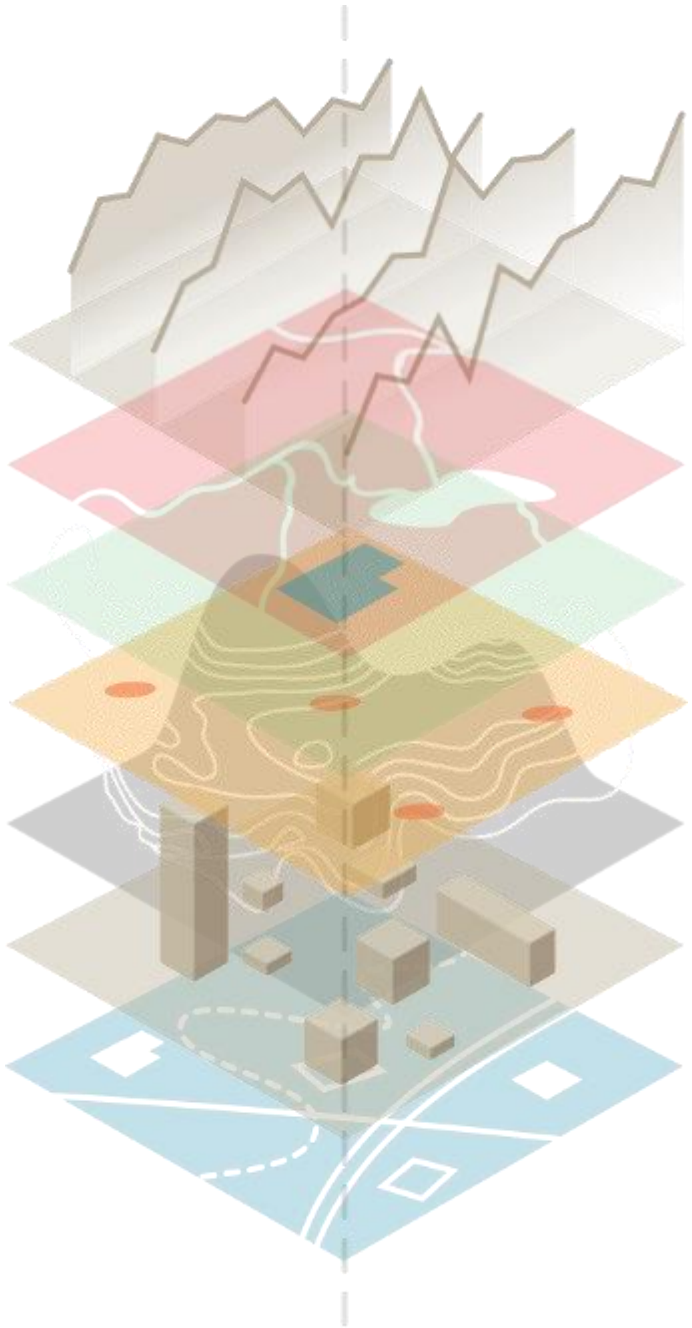


Unique Standardised Consistent Reference enables linking of government and commercial information

— Health records

— Flood plane

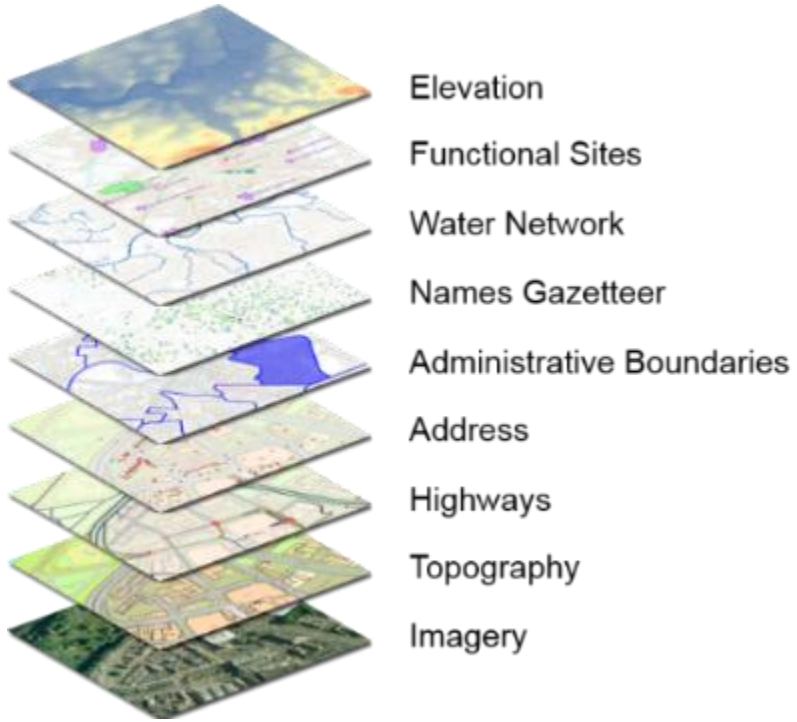
— Land ownership

— Utility supply/smart meters

— Topography

— Height of building? Floor levels?

— Crime, education, vulnerable persons



Does it apply to my industry?

Land and Property

Utilities

Financial Services

Emergency Response

Transport and Logistics

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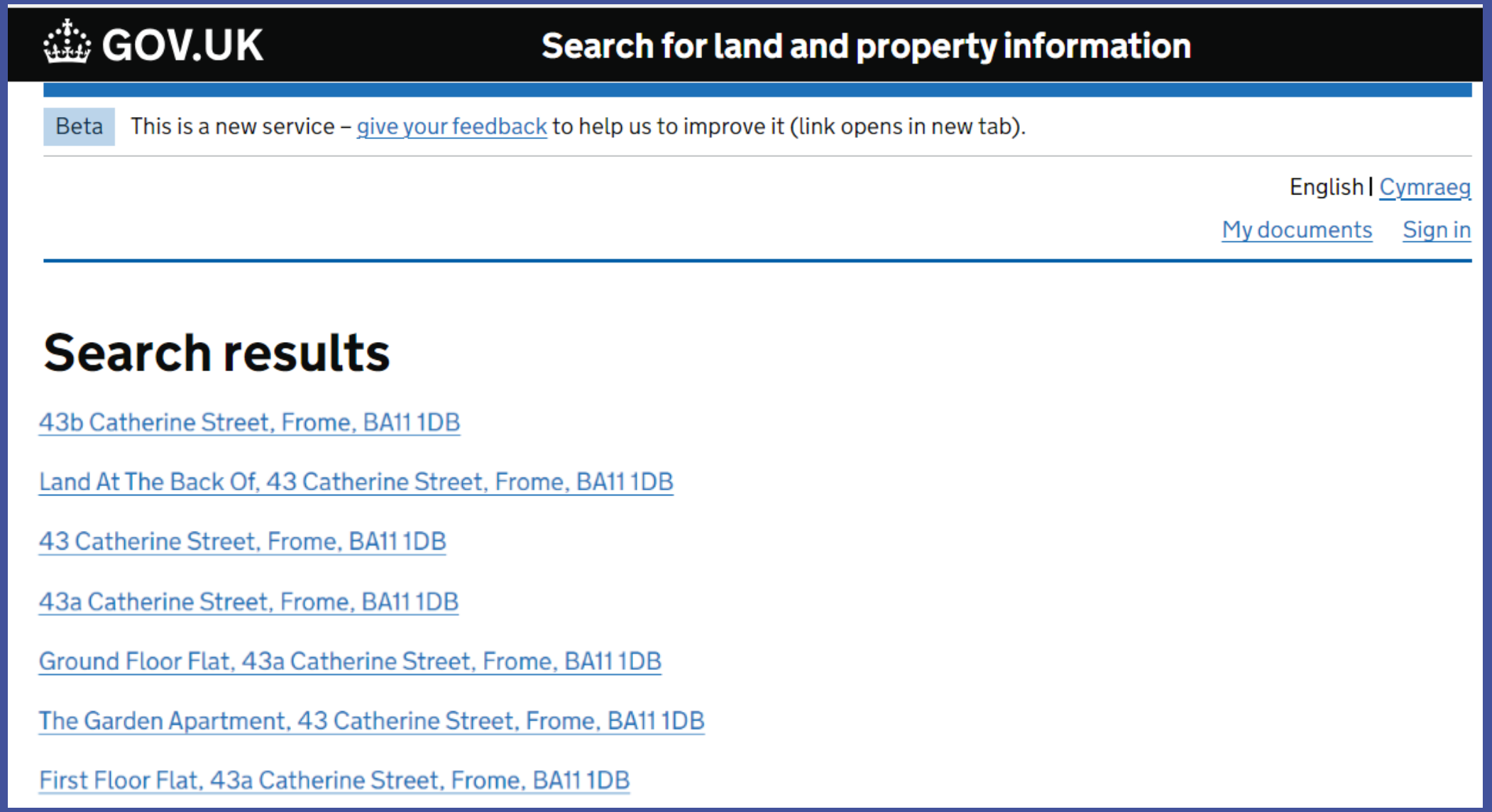
At the point of entry select, not type and use the UPRN



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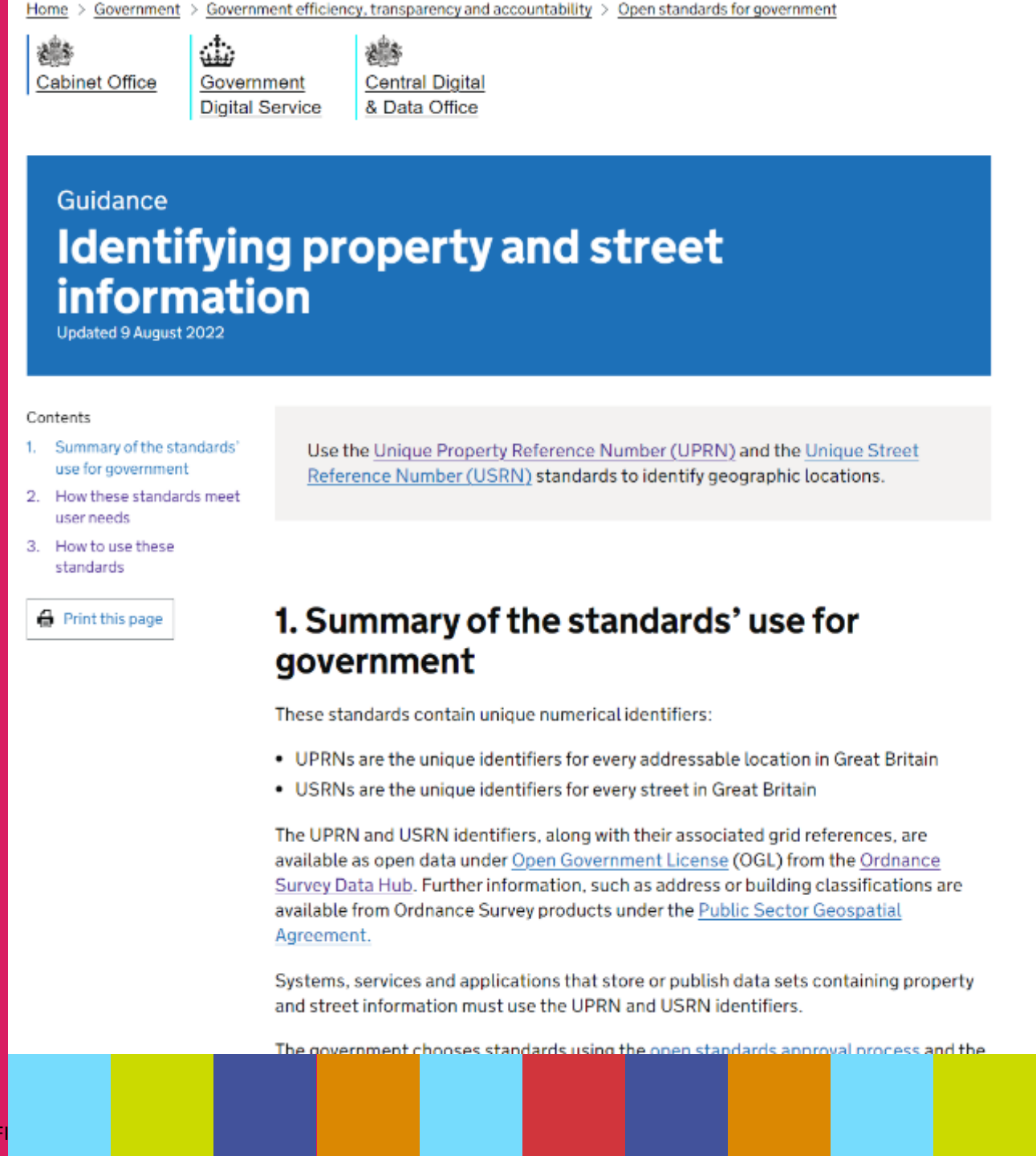
Local and National Government has had a standard since July 2020

As Government seeks to deliver more and more shared services expect the use of UPRN to rise.

It will be added to APIs and Data Requests.



Home > Government > Government efficiency, transparency and accountability > Open standards for government

Cabinet Office | Government Digital Service | Central Digital & Data Office

Guidance

Identifying property and street information

Updated 9 August 2022

Contents

1. Summary of the standards' use for government
2. How these standards meet user needs
3. How to use these standards

Print this page

Use the Unique Property Reference Number (UPRN) and the Unique Street Reference Number (USRN) standards to identify geographic locations.

1. Summary of the standards' use for government

These standards contain unique numerical identifiers:

- UPRNs are the unique identifiers for every addressable location in Great Britain
- USRNs are the unique identifiers for every street in Great Britain

The UPRN and USRN identifiers, along with their associated grid references, are available as open data under Open Government License (OGL) from the Ordnance Survey Data Hub. Further information, such as address or building classifications are available from Ordnance Survey products under the Public Sector Geospatial Agreement.

Systems, services and applications that store or publish data sets containing property and street information must use the UPRN and USRN identifiers.

The government chooses standards using the open standards approval process and the

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Nottingham City Council – Licensing Applications

UPRN allows various datasets such as records of property sales and data required to check licence applications and undertake enforcement checks to be tied together, improving work efficiency.

Privately rented accommodation has to be licensed – failure to license a property results in a fine and potential loss of the property.

In a year, the efficiency gain equated to savings of around £125,000.

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London Borough of Hackney – Improving Housing Conditions

UPRNs allowed multiple datasets to be easily joined to aid in creating a Vulnerability Index, meaning that households most at risk of mould could be identified.

This could also be extended to prioritise residents at greatest risk if amenities like lifts break, or prioritise certain households for tenancy and household checks.

By helping to aid a more proactive approach in managing housing conditions, meaning that issues are dealt with sooner.

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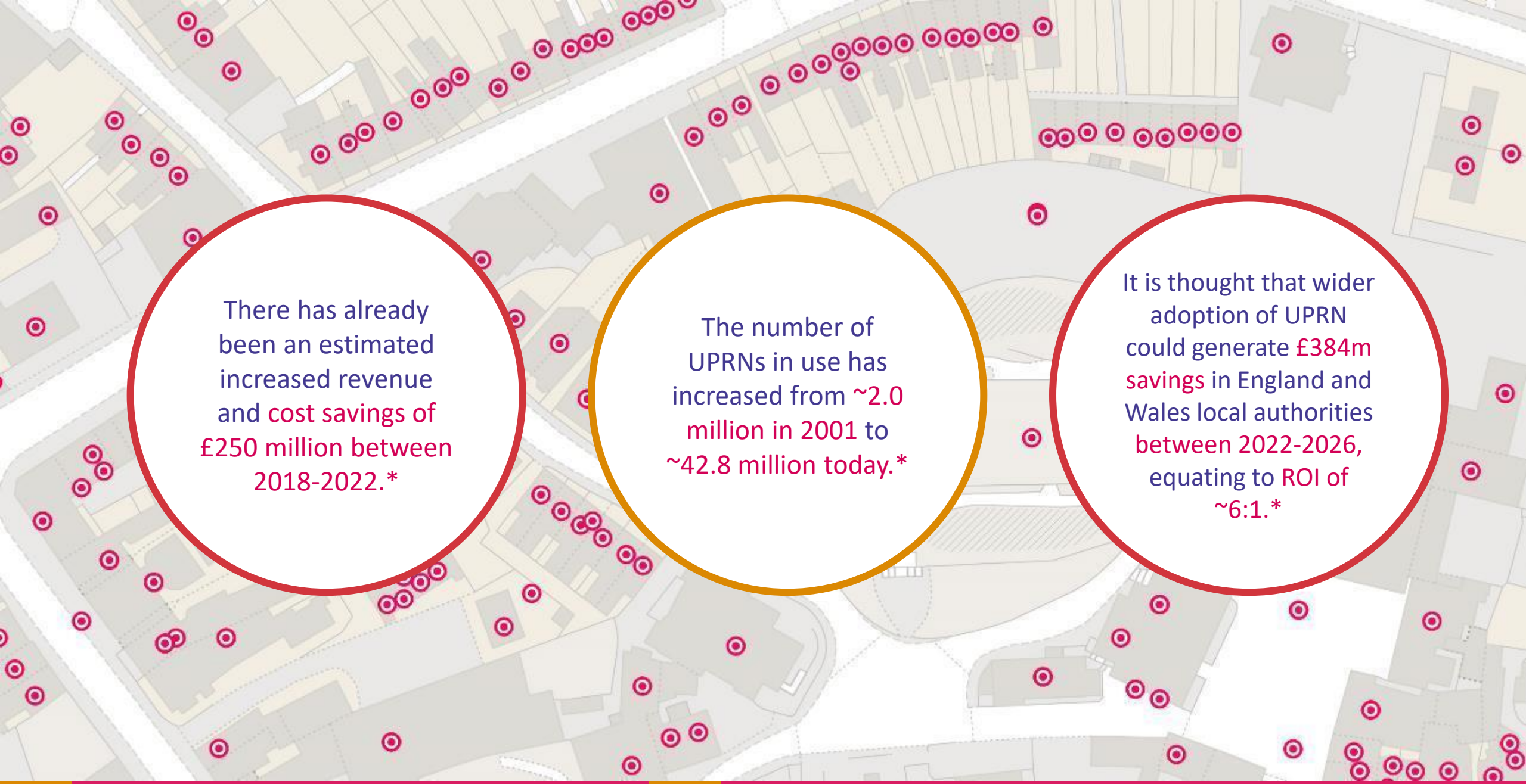


There has already been an estimated increased revenue and cost savings of £250 million between 2018-2022.*

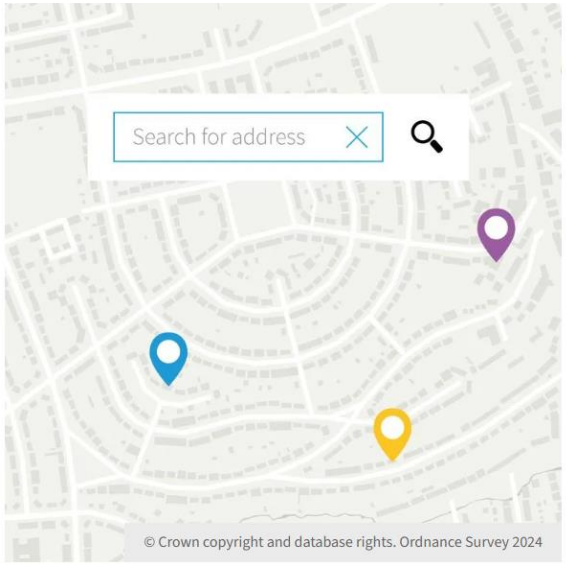
The number of UPRNs in use has increased from ~2.0 million in 2001 to ~42.8 million today.*

It is thought that wider adoption of UPRN could generate £384m savings in England and Wales local authorities between 2022-2026, equating to ROI of ~6:1.*

* Figures are estimate across government from Ordnance Survey

Where do I get them?

OS Places API



Product overview | Technical information | Get this product

OS Places API

With OS Places API you have direct access to rich address data for geocoding, postcode searching, form-filling and much more. Find UK addresses instantly online and be confident you're getting the most up-to-date information.

Addressing and location | API | Public Sector Plan | Premium Plan

This product is updated daily

Get this Product

View Technical Information

OS Places API | Data Products | OS

EVERY PROPERTY IN GREAT BRITAIN

FindMyAddress

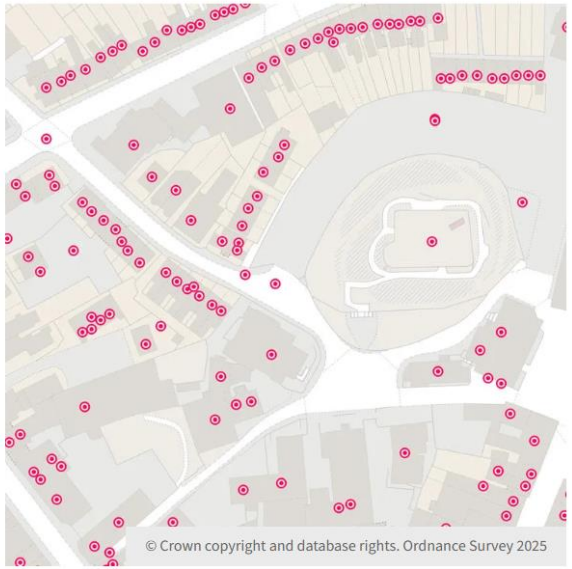
Use FindMyAddress to search for the official address, UPRN and location of every property in England, Scotland and Wales.

The data is created and maintained by local authorities, collected and managed centrally by GeoPlace and published by Ordnance Survey as AddressBase®.

FindMyAddress is for personal, non-commercial use only. You can perform up to 10 searches every day, free of charge. Need more searches?

FindMyAddress

AddressBase Premium



Product overview | Technical information | Get this product

AddressBase Premium

AddressBase Premium has over 40 million addresses and 100 million cross references as well as providing all the information relating to an address from creation to retirement.

Addressing and location | Download | Public Sector Plan | Premium Plan

This product is updated every six weeks

Get this Product

View Technical Information

AddressBase Premium | Data Products | OS

What AddressBase Premium provides you with

Addresses throughout the property lifecycle

The AddressBase Premium dataset contains Local Authority, Ordnance Survey and Royal Mail addresses, each uniquely referenced by the UPRN.

Spot data patterns

Property level coordinates within AddressBase Premium allow you to conduct analysis at the level of individual addresses and spot patterns hidden in your own data.

Shape your operations

With UPRNs being assigned as soon as planning permission is granted, with AddressBase Premium you'll have all the information you need to shape the way you plan, operate and communicate with your audience.

Enable efficient processes

Each address is referenced by the Unique Property Reference Number (UPRN), a persistent identifier for each address allowing you to manage addresses and making your processes more efficient.

1) Learn about Unique Property Reference Number & Unique Street Reference Number
2) Change existing platforms and applications to add a UPRN field wherever a UK address is used
3) Work out UPRNs at the point Addresses enter your organisation
4) Update your existing address data to add UPRNs
5) Use UPRNs instead of the address whenever doing a comparison of addresses
6) Use USRNs when dealing with street-based analysis or work
7) Share UPRNs with partner organisations through APIs, Feeds and Data Set publications
8) Expect UPRNs from partner organisations
9) Lower your risk appetite for false matches based on addresses matching
10) Raise your expectations for serving your customers
11) Relax
12) Tell others about how UPRNs changed your life

CIAL

Thank you

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