

# Enabling modern Digital Britain – data as infrastructure

From Principles to Practice: Delivering  
Interoperable Data at Scale

→ Debbie Wilson – Head of Data, Ordnance Survey



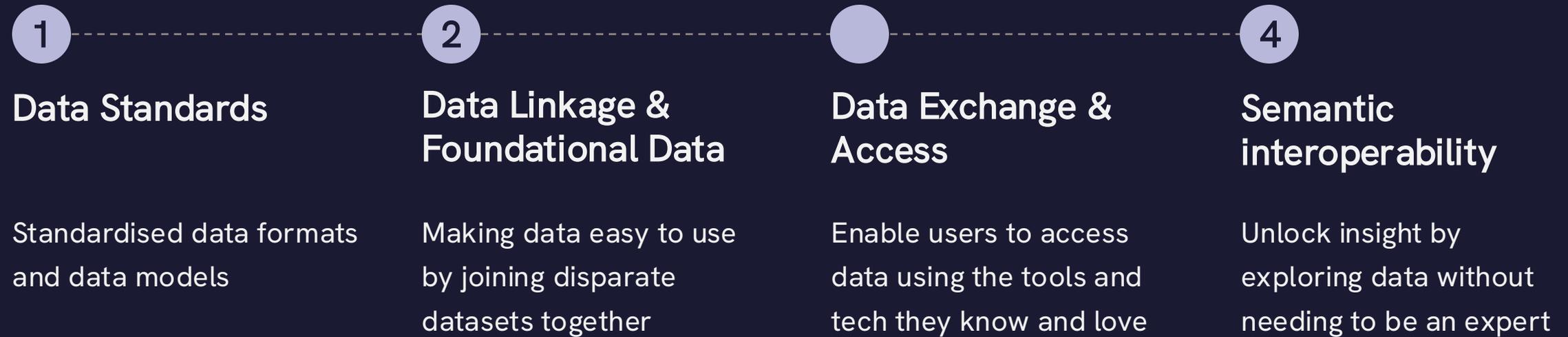
“Data is one of the UK’s unrealised growth assets, underpinning innovation and productivity....  
the ability to collect, share and use data in a safe and trusted way has become essential.”

## Capitalising Data Value

The UK's Modern Industrial Strategy 2025 - GOV.UK

# Data Interoperability at scale

Share and use data with minimal intervention



# Data Standards

Proprietary data formats

Open standards

Cloud native (geospatial)

SHP

GML

Parquet - WKB

Parquet - native  
Geometry/ geography

NTF

TIF

GeoTIFF

CSV

GeoPackage

COG / STAC

DXF

WFS / WMS

OGC Features / Tiles API

Open table formats -  
Iceberg / Delta

Metadata

ISO 19115 / UK Gemini

GeoDCAT

Open Data  
Contracts

Landline-era

MasterMap-era

NGD-era

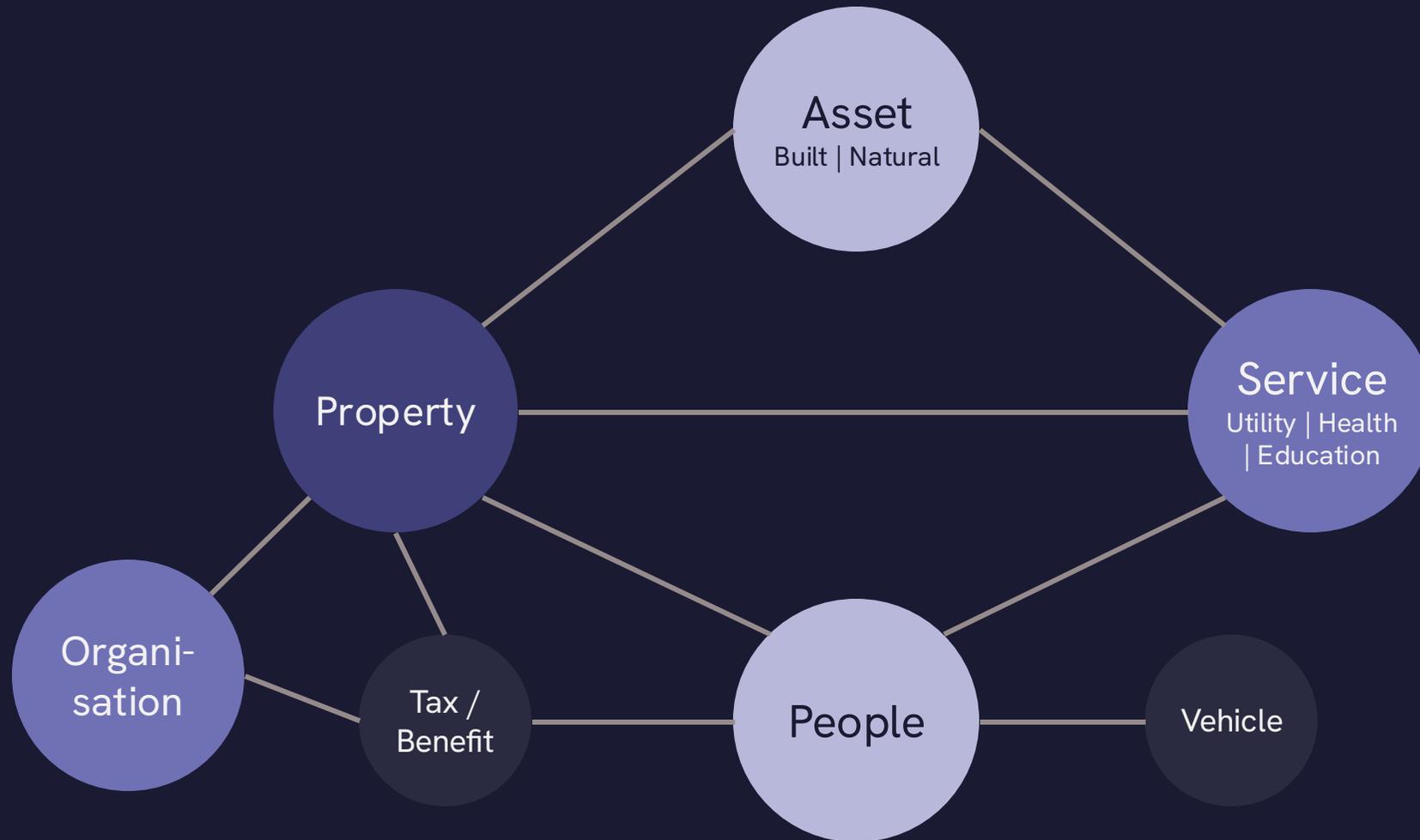
Pre-2000

2001

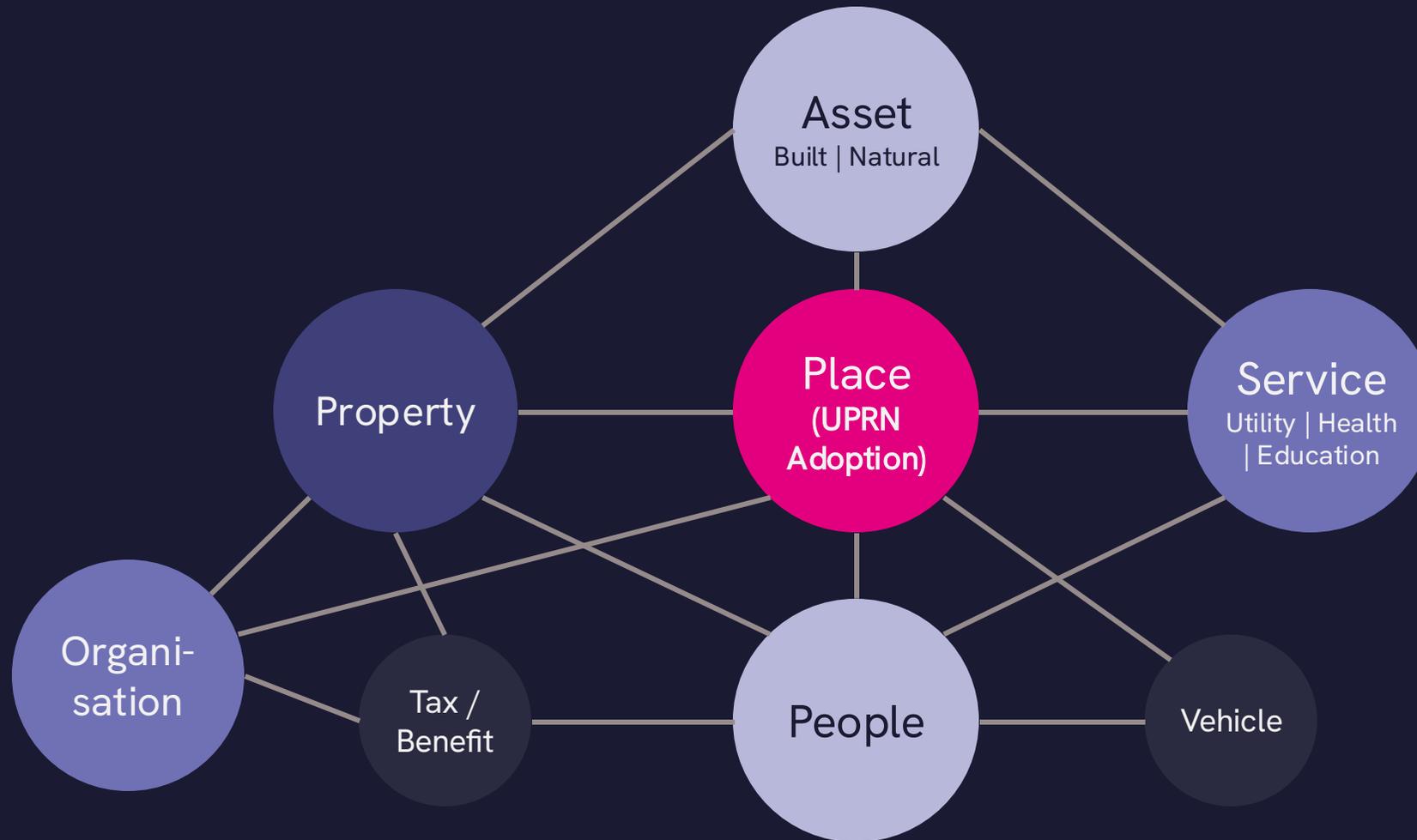
2020

2030

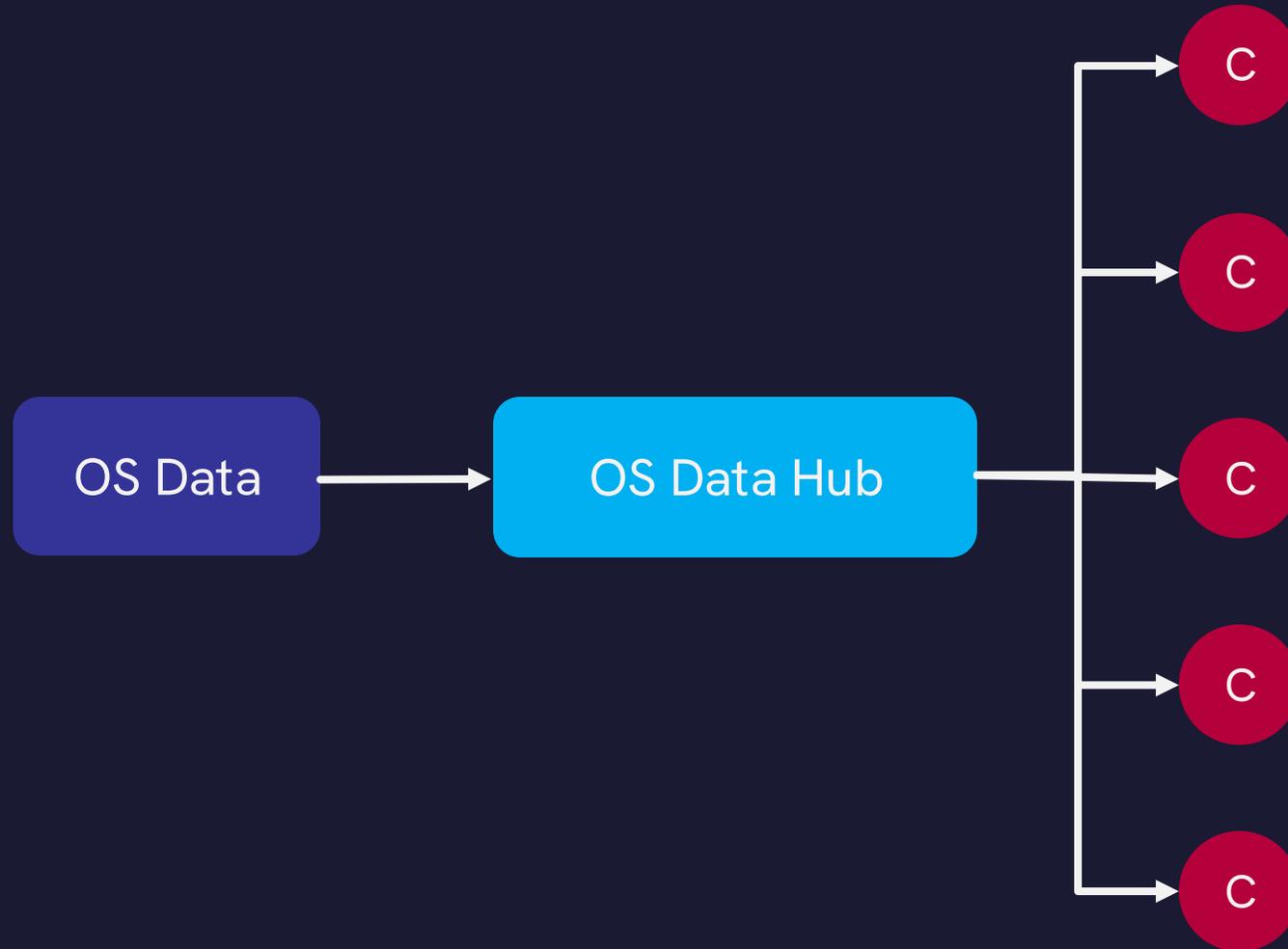
# Data Linkage & Foundational Data



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# Data Exchange & Access - From Data Hub to Data Platform Architecture



# Data Exchange & Access - From Data Hub to Data Platform Architecture



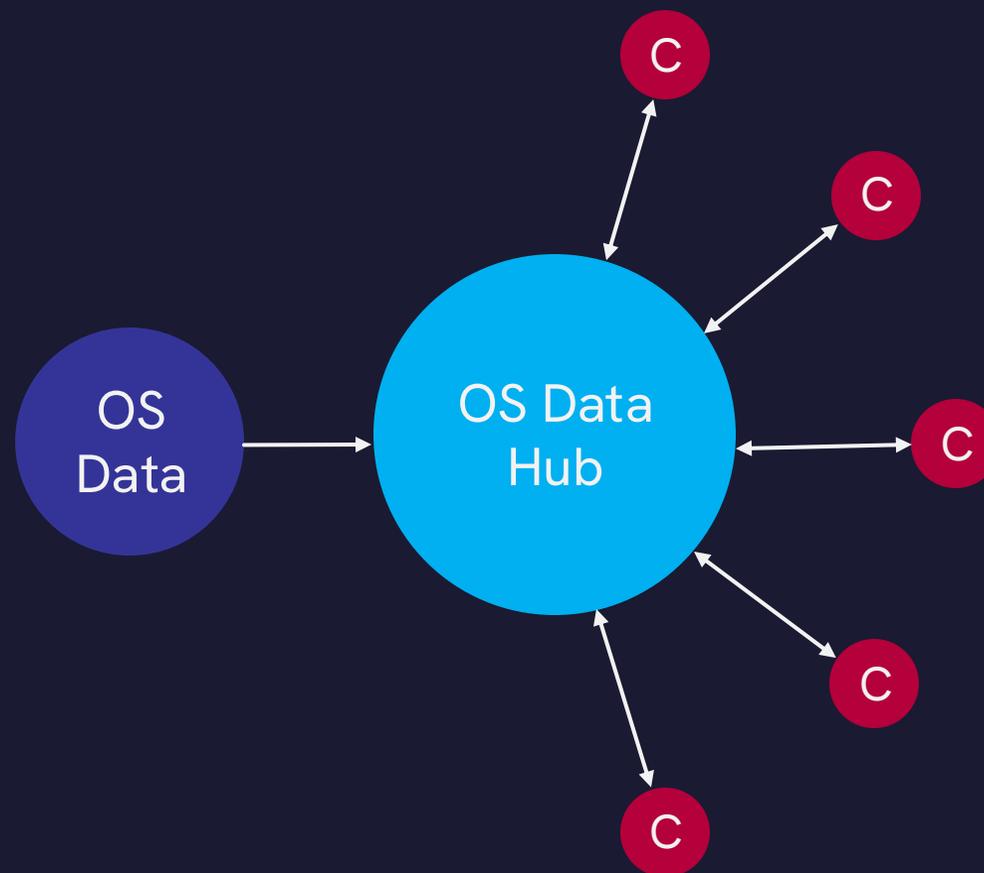
NGD - 600 million features



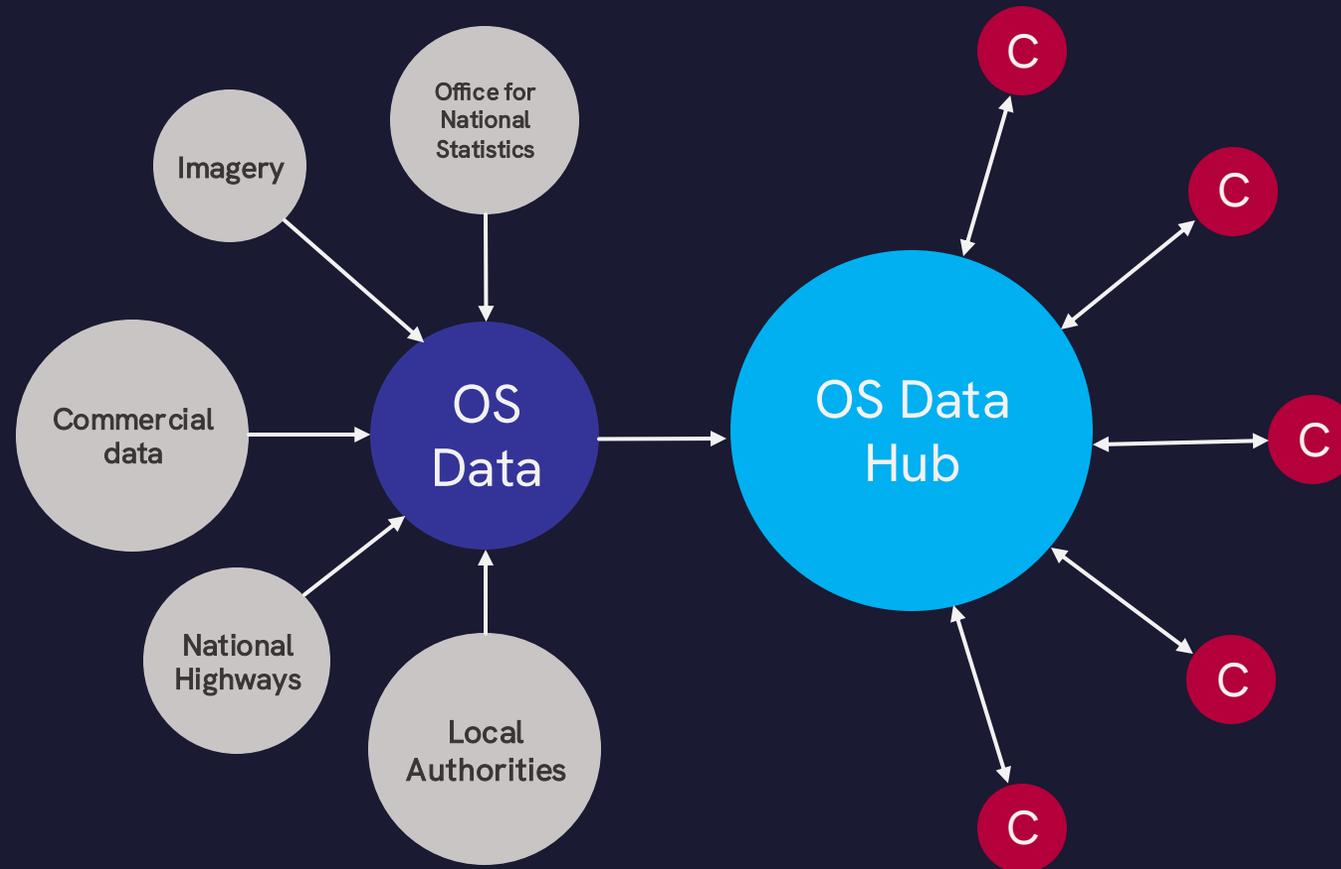
1.4Bn updates since launch



> 1.25m data improvements per year



# Data Exchange & Access - From Data Hub to Data Platform Architecture



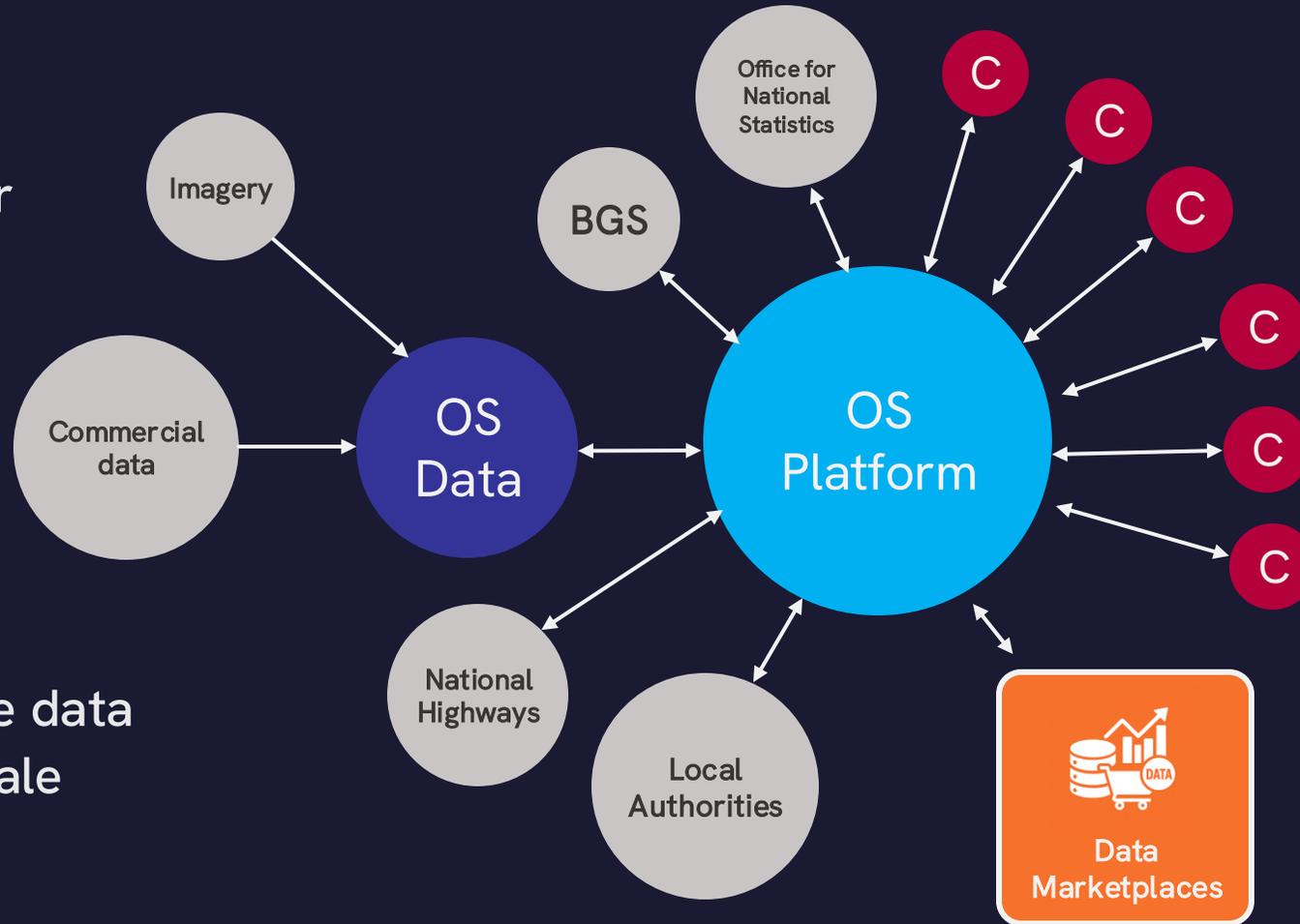
# Data Exchange & Access - From Data Hub to Data Platform Architecture



Data producer ecosystem



Interoperable data sharing at scale



# Semantic interoperability – discoverability to insight

Ordnance Survey | Data Explorer v0.1

Hi, I'm the OS Data Explorer. I can help you discover and access OS data

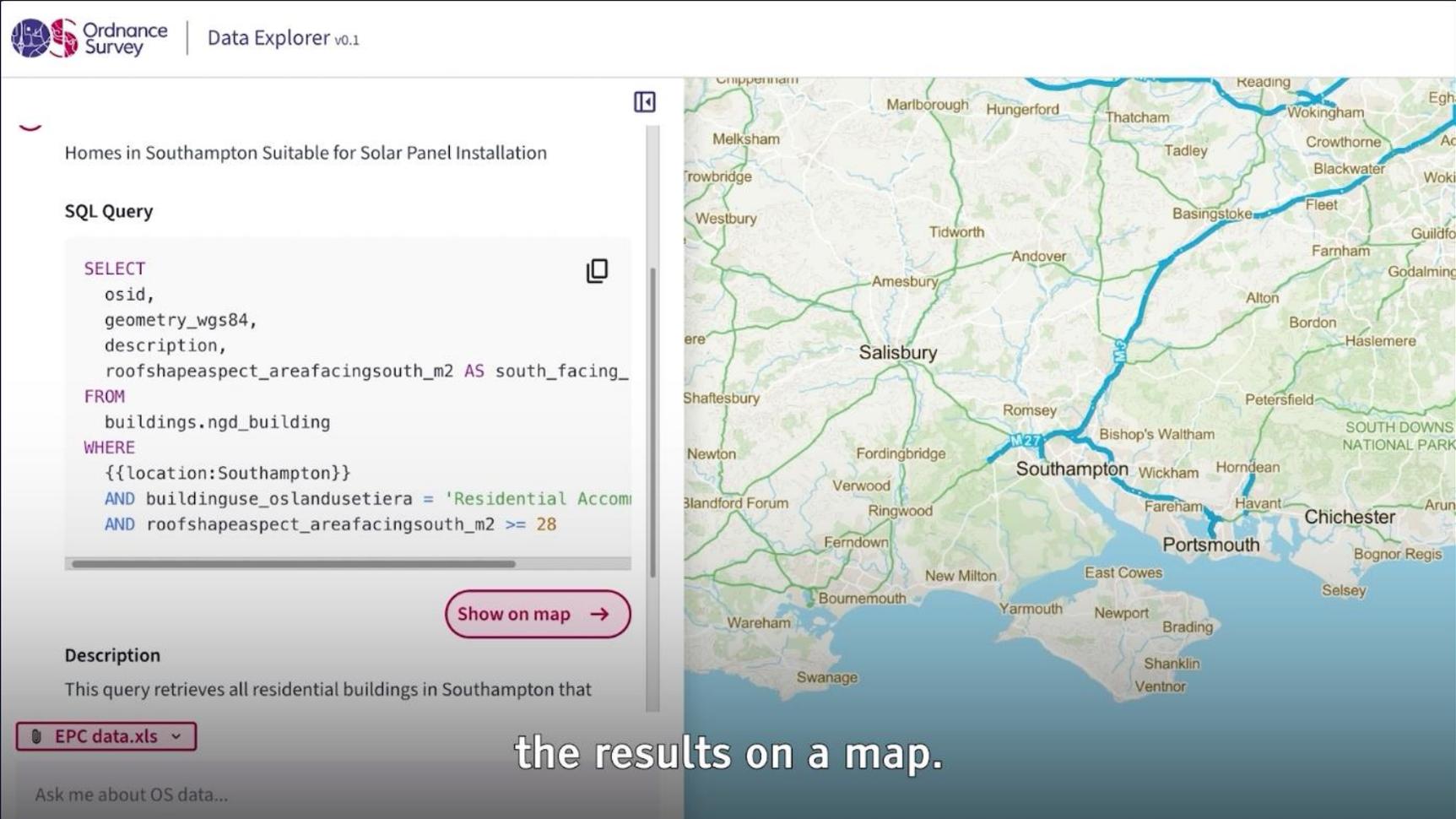
I want to find homes in Southampton suitable for solar panels

EPC data.xls

homes in southampton that are good candidates for solar panel installation

Just type your query the AI interprets it

# Semantic interoperability – discoverability to insight



The screenshot displays the Ordnance Survey Data Explorer v0.1 interface. On the left, a sidebar contains the title "Homes in Southampton Suitable for Solar Panel Installation" and a SQL query editor. The query is as follows:

```
SELECT
  osid,
  geometry_wgs84,
  description,
  roofshapeaspect_areafacingsouth_m2 AS south_facing_
FROM
  buildings.ngd_building
WHERE
  {{location:Southampton}}
  AND buildinguse_oslandusetiera = 'Residential Accom
  AND roofshapeaspect_areafacingsouth_m2 >= 28
```

Below the query is a "Show on map" button. Underneath, a "Description" section states: "This query retrieves all residential buildings in Southampton that". At the bottom of the sidebar, there is a file upload icon, a dropdown menu showing "EPC data.xls", and a text input field with the placeholder "Ask me about OS data...".

On the right, a map of the Southampton region is shown. A blue line highlights the M27 motorway, and a red dot marks the location of Southampton. Other nearby towns like Salisbury, Portsmouth, and Chichester are also visible.

the results on a map.

# Semantic interoperability – discoverability to insight

Ordnance Survey | Data Explorer v0.1

Homes in Southampton Suitable for Solar Panel Installation

SQL Query

```
SELECT
  osid,
  geometry_wgs84,
  description,
  roofshapeaspect_areafacingsouth_m2 AS south_facing_
FROM
  buildings.ngd_building
WHERE
  {{location:Southampton}}
  AND buildinguse_oslandusetiera = 'Residential Accom
  AND roofshapeaspect_areafacingsouth_m2 >= 28
```

Displayed on map

Description

This query retrieves all residential buildings in Southampton that

EPC data.xls

Ask me about OS data...

**Multiple Residential Accommodation**

Osid  
**64e98640-44b0-4831-b8cd-83b94da3fcc3**

Description  
**Multiple Residential Accommodation**

It's quick

# Summary

- Geospatial is foundational national data infrastructure
- Customers expect easier access to data and to find more of the data they need in the place where they work
- Collaborative co-creation data spaces are essential to drive innovation
- AI is transformational to unlock interoperability simplifying ease of use
- Geospatial standards must continue to enhance mainstream data standards and initiatives to drive digital innovation