RESPONDING TO THE
CHALLENGES OF OPEN DATA
IN GREAT BRITAIN

Clare Hadley,
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WHY OPEN DATA?
The various objectives of opening data

Objective

- **Sustainable Economic Growth**
  - New industries, jobs, skills
  - Example Outcome

- **Improved Public Services**
  - Decreased risk of recidivism

- **Improved Public Administration**
  - Decreased unit cost per outcome

- **Increased economic & social benefits to taxpayers**
  - Safe, vibrant communities

- **Enhanced citizens’ awareness of their rights**
  - Increased trust in government

- **R&D Excellence**
  - Accelerated discovery of cures

Source: David Zaharchuk, IBM Institute for Business Value

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OPEN DATA IN THE UK
How it started ... and gathered momentum ...

- Tim Berners-Lee and Nigel Shadbolt asked by Prime Minister Brown to advise the Government
- The Guardian newspaper starts a campaign to ‘Free our Data’
- ‘Power of Information’ Report® and Task Force
- Prime Minister Brown announced some Ordnance Survey data will be made open
- OS releases OS Open Data
data.gov.uk launched
- Open Data User Group created
- UK and 7 others form the Open Government Partnership
- Open Data Institute created
- UK top on Open Data Barometer
- Metadata for 30,000 datasets of which 20,000 are Open
- National Geospatial Strategy published, includes FAIR data
- National Data Strategy published, focus on FAIR data

Position | Top 5 | Score
--- | --- | ---
1 | UK | 100

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THE ORDNANCE SURVEY EXPERIENCE
Initial Open Data Releases in 2010
Open MasterMap Policy

“Key parts of Ordnance Survey’s (OS) highly detailed OS MasterMap are being made completely open under the Open Government Licence (OGL), with the remaining data being made freely available up to a threshold of transactions…”

David Lidington, Cabinet Office Minister, June 2018
Data Available under OS OpenData

### APIs
- OS Linked Identifiers
- OS Names
- OS Vector Tile
- OS Features
- OS Maps
- OS Downloads

### Downloads
- GB Overview Maps
- Code-Point Open
- Boundary-Line
- MiniScale
- OS Open Names
- OS Open Greenspace
- OS Open Zoomstack
- OS Open TOID
- OS Open Rivers
- 1:250 000 Scale Colour Raster
- OS Open UPRN
- OS Open Roads
- OS OpenMap – Local
- OS Open USRN
- OS Open Terrain 50
- OS VectorMap District
- OS Open Linked Identifiers

Current

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Open & Premium Versions

Depends on API being automated
OS Open Identifiers

Topographic Identifier (TOID)
A unique identifier, consisting of the letters ‘osgb’ and followed by up to sixteen digits, associated with every feature in many of Ordnance Survey's large scale products. The TOID is based upon the Digital National Framework concept and the principles that underpinned it. The TOID will remain with the feature throughout the feature’s life and will not be reassigned to a new feature when the existing feature is deleted.

Unique Property Reference Number (UPRN)
A unique numeric identifier for every spatial address in Great Britain and can be found in OS’s Address products. It provides a comprehensive, complete, consistent identifier throughout a property’s life cycle – from planning permission through to demolition.

Unique Street Reference Number (USRN)
A unique identifier assigned to each Street where the street name/number/descriptor and locality information is the same. This number is allocated by the local highway authority.

Linked Identifier
The relationship between UPRNs, USRNs and TOIDs, and metadata
Meeting a real world need

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OS OpenMap – Local
Map, visualise and truly understand your data at street level.

**Data Structure**: Raster, Vector

**Format**: ESRI® Shapefile, GML, GeoPackage, and GeoTIFF
**OS Open Zoomstack**

A comprehensive basemap of Great Britain showing coverage from national level right down to street detail.

**Data Structure:** Vector

**Format:** GeoPackage, and Vector Tiles

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“Up and running in development in under an hour”

“Companies can utilise OS Open Zoomstack as a near plug-and-play toolkit”

“This new product is going to be something of a game changer and so far I can't think of anything I don't like about it”
Successes of OS OpenData

- 76% increase in like-for-like OS OpenData orders since OS Data Hub launched
- 520m features released under OGL terms
- 4242 orders of new OS OpenData

- Everything delivered on time, to great feedback
- Massive user engagement which has embedded user engagement practices & customer focus
- Huge amount of usage for the various new APIs, with growth in both public and private sector usage of authoritative data
## Future of OS OpenData

### How have we decided what to build?

- Key requirements from Open MasterMap Policy statement
- Market research and data trials (including sample data) with CAG and wider groups
- Consolidation of feedback into proposals with key stakeholders (e.g. GeoPlace & Improvement Service)
- Engagement with Customer Advisory Group (CAG)
- Webinars
- Agreement & verification of proposals with Geospatial Commission

### Ongoing OpenData Activity

In the future OS is focusing on improving the use of existing products and APIs, through developing sample code, tutorials and getting started guides.
OPEN DATA CHALLENGES
Current Challenges Facing Open Data

- Clarity in Government Objectives
- Building an Ecosystem
- Sustainable Funding
Our data.gov.uk portal has been instrumental in enabling the UK government to open up over 27,000 datasets since its launch in 2010. However, despite considerable recent progress, government data can still be difficult to find and use.

Too much government data is still held in organisational silos, which are costly and inefficient to maintain. The data we currently make available openly does not always meet users’ needs in terms of format, quality and timeliness. At the same time, data publishing processes across government do not fit a standard model. They are not always automated or embedded in ‘business as usual’, which can mean there is sometimes duplication and overlap in the data government holds.”

- UK Open Government National Action Plan 2016-18
Clarity in Government Objectives

- Open Data is a means to an end – it needs to solve problems to be useful
- Different problems mean different objectives, which need different types of policy support

<table>
<thead>
<tr>
<th>Objective</th>
<th>Supporting Actions</th>
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<tbody>
<tr>
<td>Transparency</td>
<td>• Better data access and curation&lt;br&gt;• Support with data interpretation</td>
</tr>
<tr>
<td>Public Sector Service Delivery</td>
<td>• Assistance with common procurement&lt;br&gt;• Sharing of good practice</td>
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<tr>
<td>Socioeconomic benefit and Innovation</td>
<td>• Developer Outreach and Incubation&lt;br&gt;• Enable User input</td>
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Building an Ecosystem

Introduce new users to wide range of data

Support users by giving them easy-to-use tools, and leadership into what is achievable

Understand and respond to user needs, across all stakeholders
Building an Ecosystem

OS’s Approach

Engage
- Sponsorship
- Speaking opportunities
- Hands-on (hackathons)
- Exhibition

Educate
- Workshops
- Showcases
- OpenData Masterclasses
- Competitions
- Online engagement

Webservices and APIs
Freemium Pricing Model
OS Data Availability
Developer Outreach
BRITAIN’S PIONEERING LOCATION DATA LAB

The Hub is an incubator space designed to support individuals, SMEs and corporate innovators.
Building an Ecosystem
Open MasterMap Approach

• Discovery interviews and surveys
• 9 trials with 1000+ users
• Customer Advisory Group covering:
  • Start-ups
  • OS Partners
  • Public Sector
  • Open Data Institute
Sustainable Funding

Need to acknowledge that data costs money to produce and develop sustainable funding mechanisms
Sustainable Funding
OS Example

• The first OS OpenData agreement was funded by government at £20m pa for a period of 10 years. This covered the initial release of 11 products.

• The 2015 release of a further 4 products was funded by OS by adopting a ‘freemium’ business model.

• The Public Sector Geospatial Agreement which was signed in 2020 includes the provision of open data products and services over the next 10 years.
CONCLUSION
Conclusions

• It is important to consider not only what data is provided, but why and how data is provided. Regularly reviewing the original objective and monitoring its achievement will inform actions in the future.

• OS has responded to the challenges of open data by focusing on supporting users, using new innovation to improve the National Geospatial Database, and on the creation of additional value from the data by, for example, making identifiers open. Also by making the case to government for sustainable funding.

• The concept of ‘open data’ is one-dimensional – ‘open’ or ‘closed’. The issues are far more complex and a more nuanced approach is needed. This could be FAIR

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A better focus for the future?

Findable Accessible Interoperable Reusable

Source: Wikipedia and GoFair
THANK YOU!

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