

RESPONDING TO THE CHALLENGES OF OPEN DATA IN GREAT BRITAIN

Clare Hadley,
Chief Geospatial Office, Ordnance Survey



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

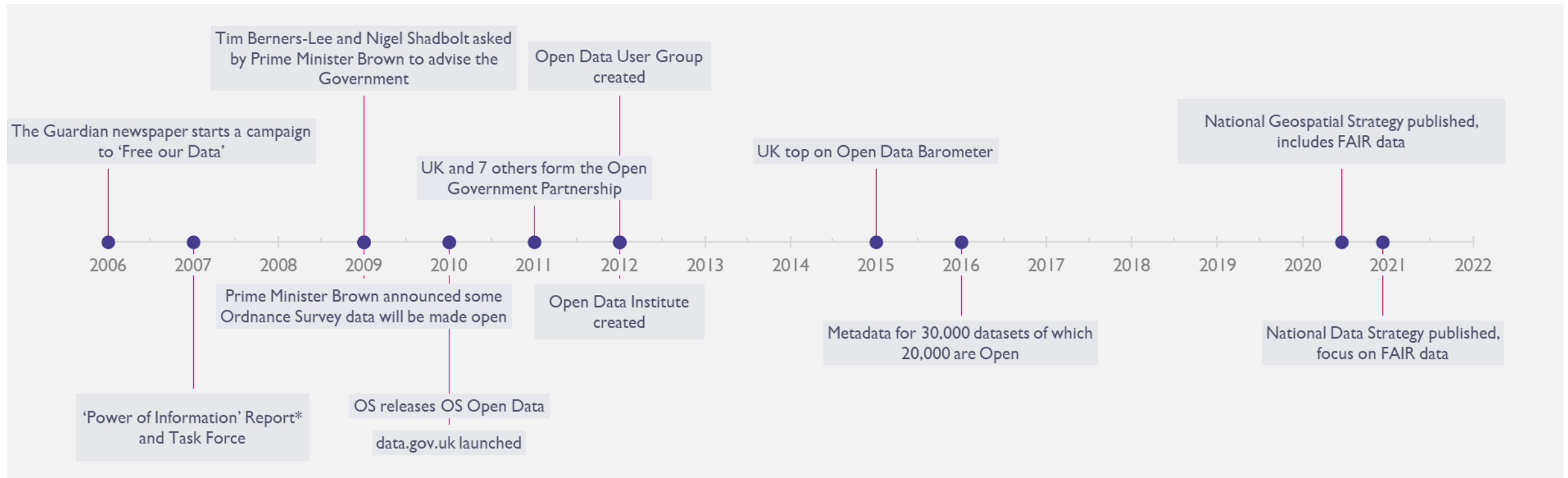


Accelerated discovery of cures

Source: David Zaharchuk, IBM Institute for Business Value

OPEN DATA IN THE UK

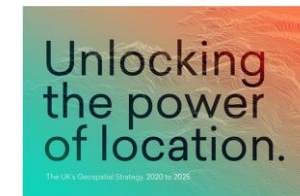
How it started ... and gathered momentum ...



© Ordnance Survey



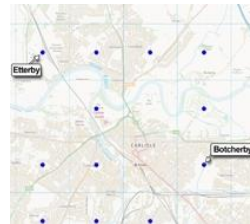
Position	Top 5	Score
1	UK	100



THE ORDNANCE SURVEY EXPERIENCE



Initial Open Data Releases in 2010



Open MasterMap Policy



David Lidington, Cabinet Office Minister,
June 2018

“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...”

Data Available under OS OpenData

APIs

OS Linked Identifiers

OS Names

OS Vector Tile

OS Features

OS Maps

OS Downloads

Open

Open & Premium Versions

Depends on API being automated

Downloads



GB Overview Maps



MiniScale



OS Open Zoomstack



1:250 000 Scale Colour Raster



OS OpenMap – Local



OS VectorMap District



Code-Point Open



OS Open Names



OS Open TOID



OS Open UPRN



OS Open USRN



OS Open Linked Identifiers



Boundary-Line



OS Open Greenspace



OS Open Rivers

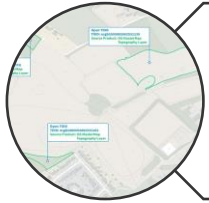


OS Open Roads



OS Terrain 50

OS Open Identifiers



OS Open TOID

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.



OS Open UPRN

Unique Property Reference Number (UPRN)

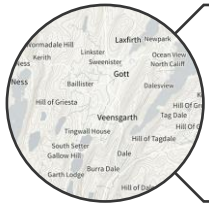
A unique numeric identifier for every spatial address in Great Britain and can be found in OS's Address products. It provides a comprehensive, complete, consistent identifier throughout a property's life cycle – from planning permission through to demolition.



OS Open USRN

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.



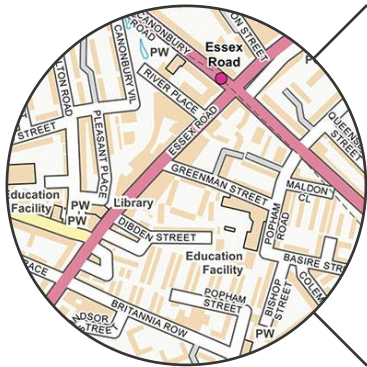
OS Open Linked Identifiers

Linked Identifier

The relationship between UPRNs, USRNs and TOIDs, and metadata

Meeting a real world need





OS OpenMap – Local

Map, visualise and truly understand your data at street level.

Data Structure: Raster, Vector

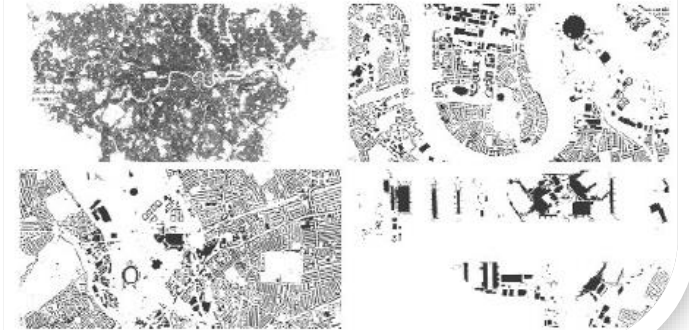
Format: ESRI® Shapefile, GML, GeoPackage, and GeoTIFF



I made a map in @qgis with @OrdnanceSurvey new #Opendata #selflearn #gistribe



Detail of the great new OS Open Map Local buildings layer, plus full London shapefile here: [drive.google.com/file/d/1OB8RsBb ...](https://drive.google.com/file/d/1OB8RsBb...)



27 MAR 2015

Also a first attempt to use OS Open Map Local data. This is a bit of a mess-up, using VectorMap District data for the roads, on OS boundary layer and public rights of way layers available for some local authority areas (not mine) under the OS Opendata licence.

I don't like the new roads layers because they have collapsed dual carriageways, so I use the old VM District road layers. The woodland polygons were generalised from the VM District layers.

Map scale is nominally 1:10000.

Look Down



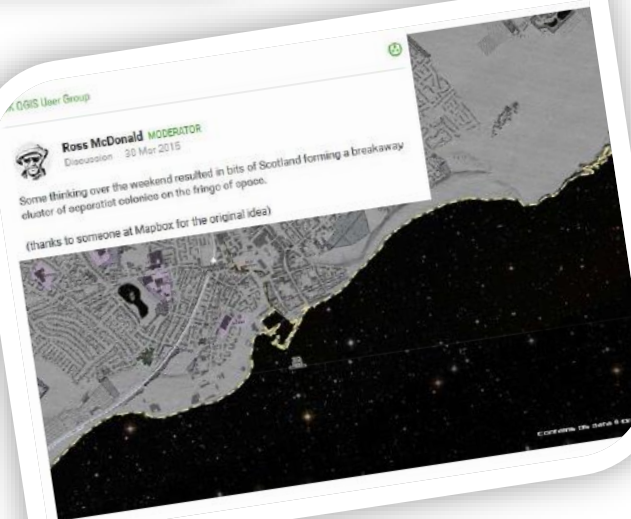
OS User Group

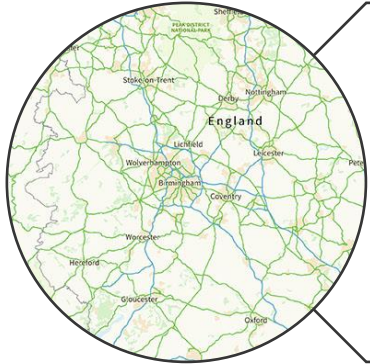


Ross McDonald MODERATOR

Discussion 30 Mar 2015

Some thinking over the weekend resulted in bits of Scotland forming a breakaway cluster of separatist colonies on the fringe of opeas. (thanks to someone at Mapbox for the original idea)





OS Open Zoomstack

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

Data Structure: Vector

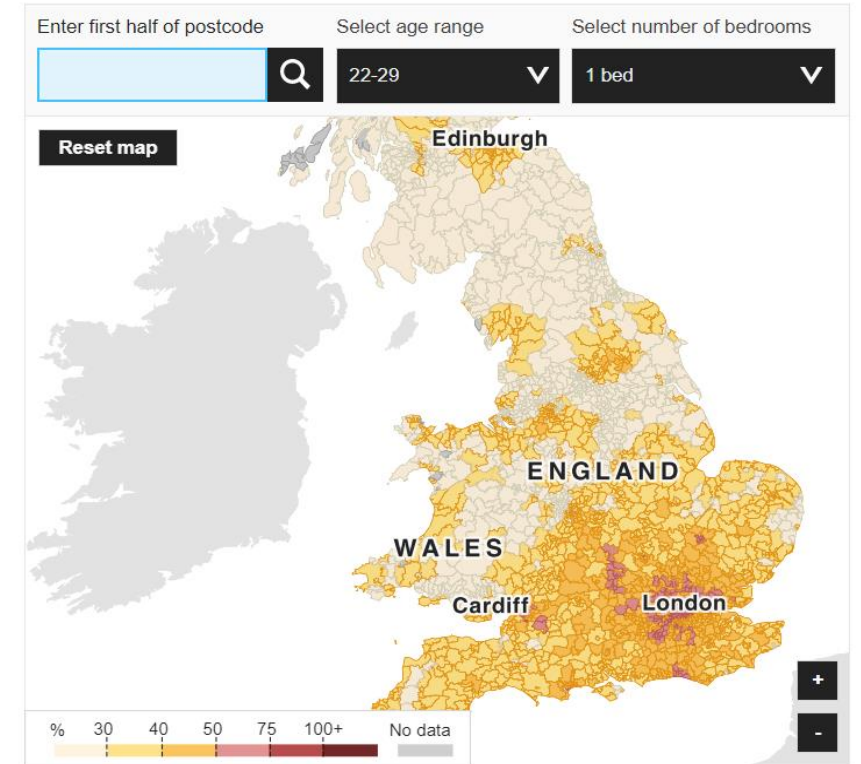
Format: GeoPackage, and Vector Tiles

“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”

Compare rent affordability in your area with Britain as a whole



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)



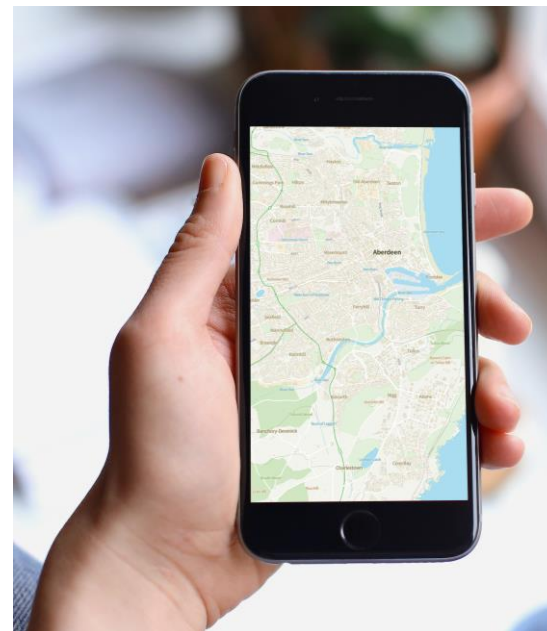
Webinars



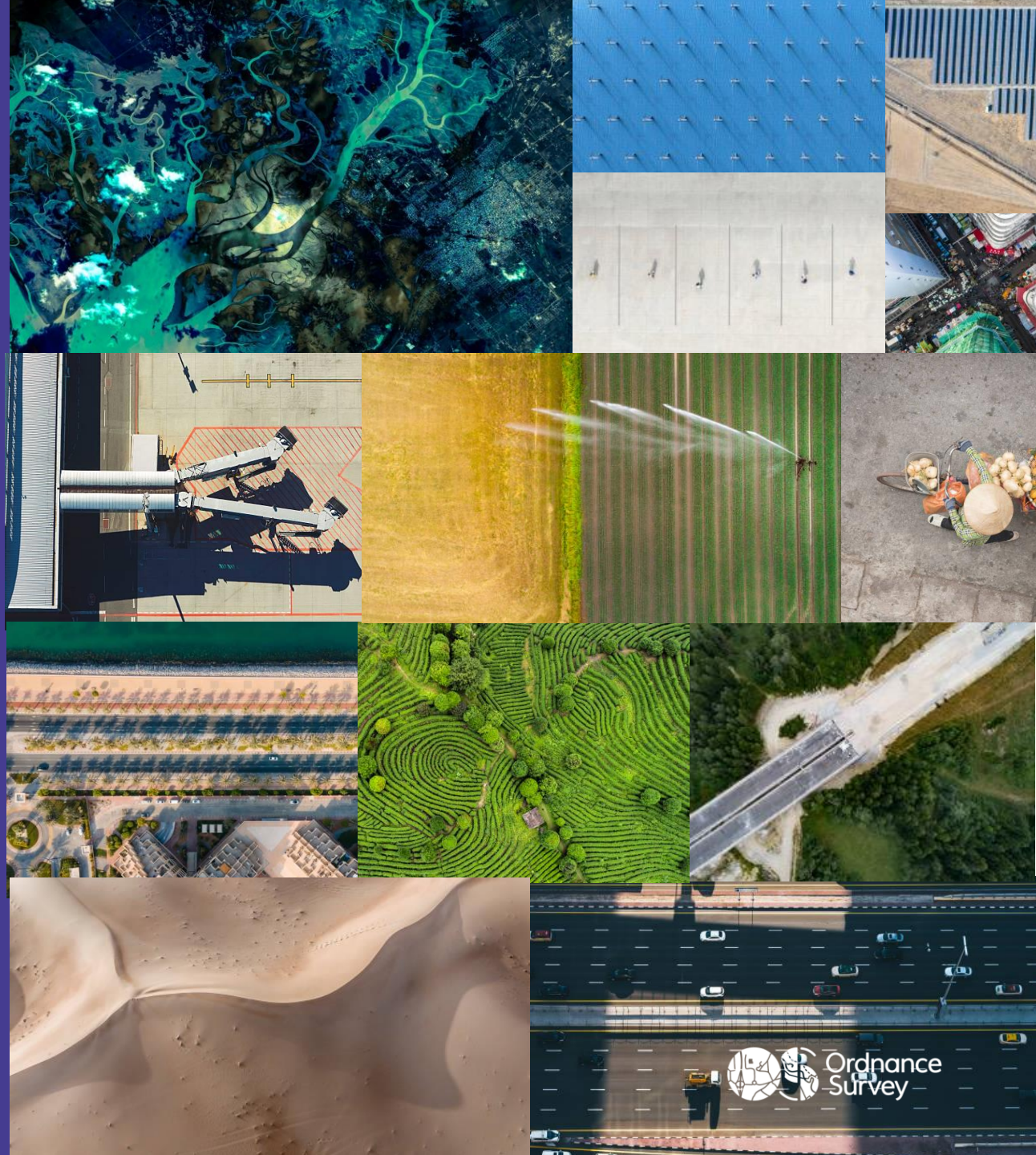
Agreement & verification of proposals with Geospatial Commission

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.



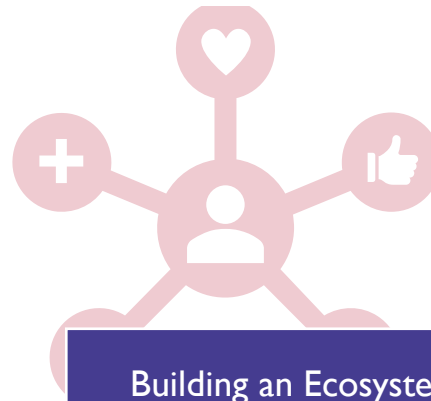
OPEN DATA CHALLENGES



Current Challenges Facing Open Data



Clarity in Government Objectives

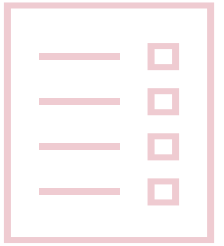


Building an Ecosystem



Sustainable Funding

Clarity in Government Objectives



“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.”

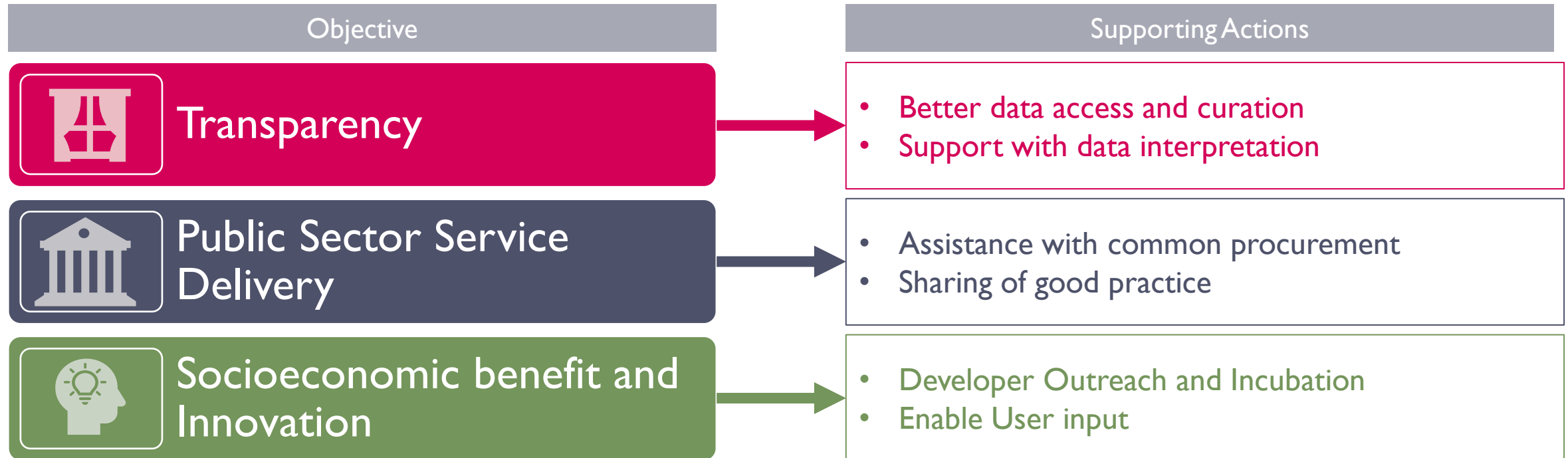
- **UK Open Government National Action Plan 2016-18**



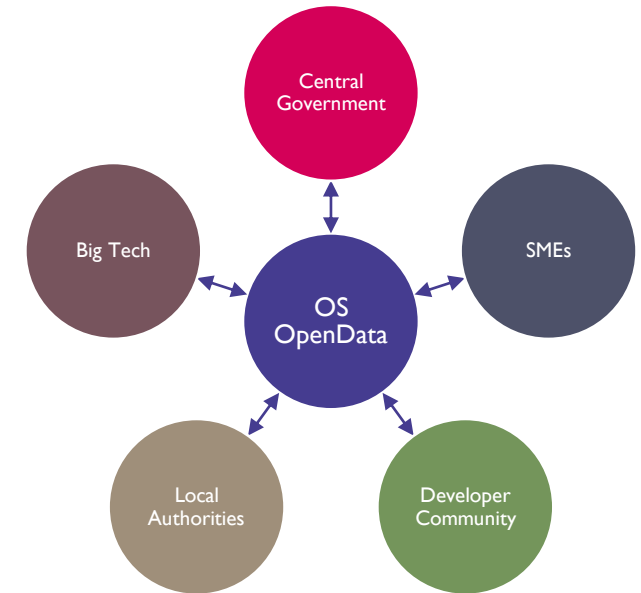
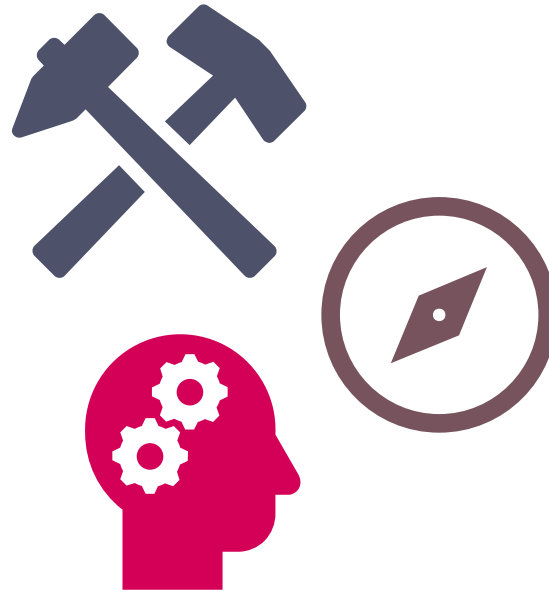
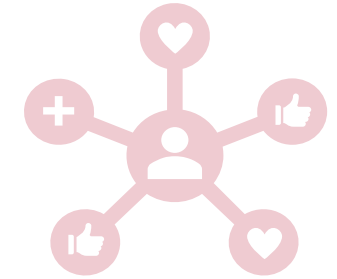
Clarity in Government Objectives



- 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



Building an Ecosystem



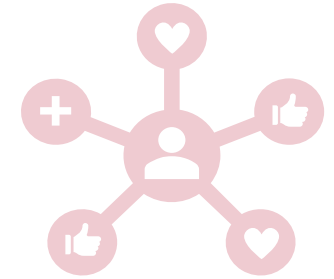
Introduce new users to wide range of data

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



Webservices and APIs

Freemium Pricing Model

OS Data Availability

Engage

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

Educate

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

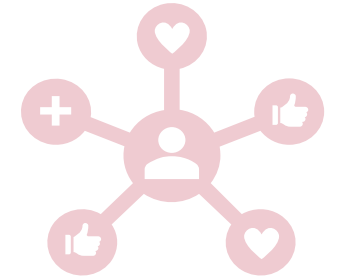
Developer Outreach





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

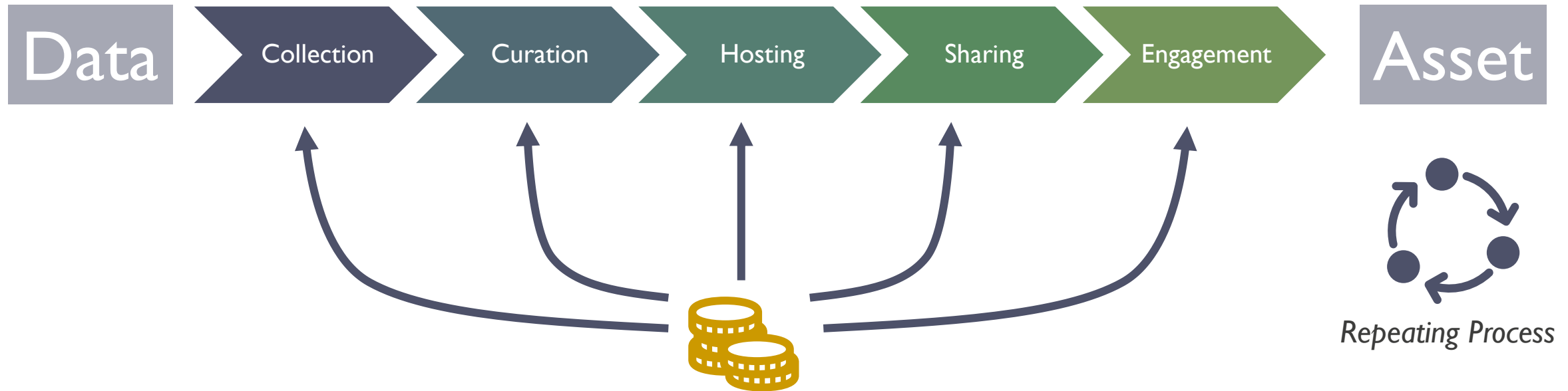
- Discovery interviews and surveys
- 9 trials with 1000+ users
- Customer Advisory Group covering:
 - Start-ups
 - OS Partners
 - Public Sector
 - Open Data Institute



Sustainable Funding



Need to acknowledge that data costs money to produce and develop sustainable funding mechanisms



Sustainable Funding

OS Example



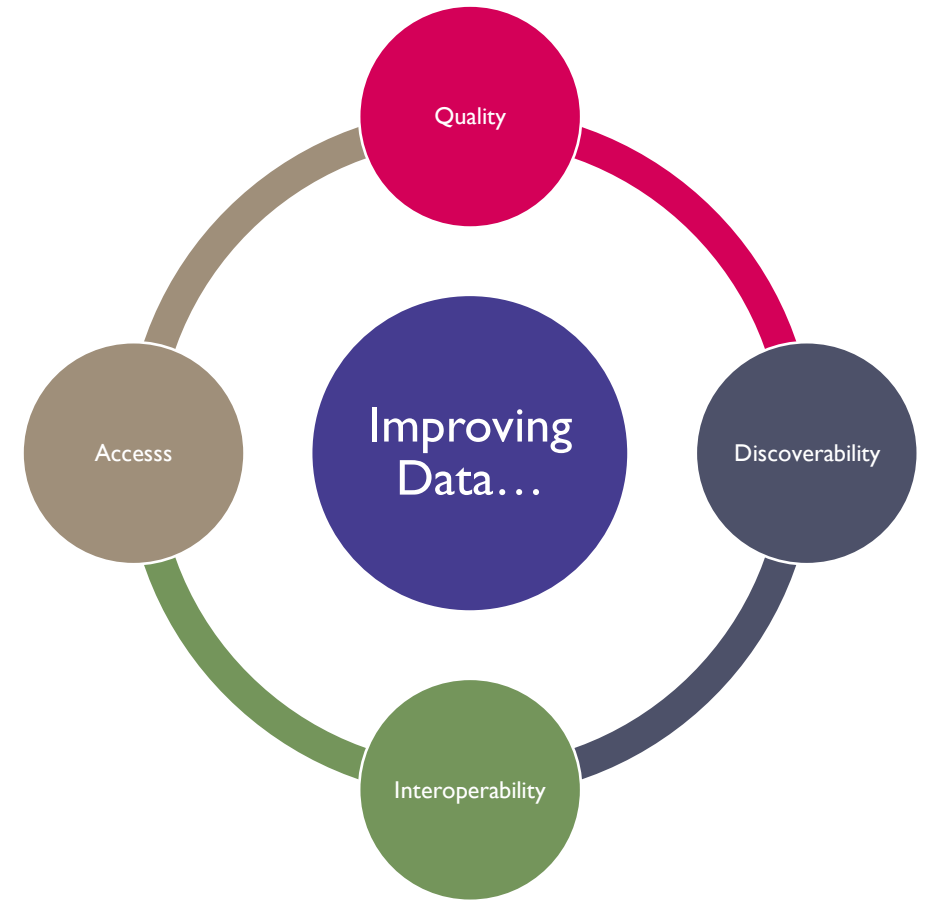
- The first OS OpenData agreement was funded by government at £20m pa for a period of 10 years. This covered the initial release of 11 products.
- The 2015 release of a further 4 products was funded by OS by adopting a ‘freemium’ business model.
- The Public Sector Geospatial Agreement which was signed 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



A better focus for the future?

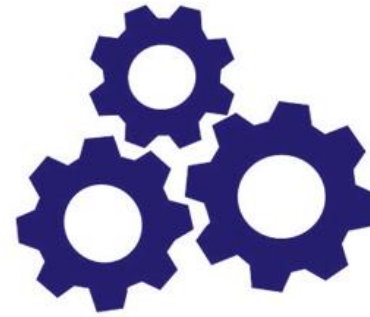


Findable

Accessible

Interoperable

Reusable



Source: Wikipedia and GoFair

THANK YOU!
CLARE.HADLEY@OS.UK

