OPEN FOR FEEDBACK

Discovering geospatial data user needs

May 2018

Open Data Institute

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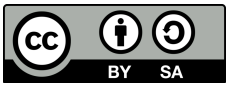
About

This report has been researched and produced by the Open Data Institute, and published in May 2018. If you want to share feedback by email or would like to get in touch, contact the Geospatial data project lead Leigh Dodds at leigh.dodds@theodi.org.

To share feedback in the comments, highlight the relevant piece of text and click the ‘Add a comment’ icon on the right-hand side of the page.



How can it be improved? We welcome suggestions from the community in the comments.

Discovering geospatial data user needs

In February 2018, the ODI, in collaboration with a UK cross-government team, organised and ran four workshops with geospatial data users.

Following the announcement that the UK government intends to form a Geospatial Commission[1], work has been underway to explore how to open up freely the Ordnance Survey (OS) MasterMap data, in particular to UK-based small businesses.

As part of this exploration, a cross-government team, led by Cabinet Office, is engaging with small businesses, startups and other data users who can help provide insight into the challenges faced when using MasterMap in its current form and in its current pricing and licensing scheme.

In February 2018 the Open Data Institute (ODI), in collaboration with the cross-government team, organised and ran four workshops with geospatial data users.

The goal was to collect a diverse range of opinions and insights that would help to inform ongoing activities.

This report briefly summarises the common issues and needs identified at each of the workshops.

Workshop format and attendance

To collect a range of data-user needs from businesses and communities around the UK, the ODI worked with its network of UK nodes (franchises of the ODI, hosted by existing organisations) to run a number of geospatial data-user workshops. These workshops were held in Aberdeen, Bristol, Cardiff and Leeds.

Each workshop was organised and facilitated by the individual nodes, with representation from the Cabinet Office team. The workshops were designed to prompt discussion around the following core set of themes:

- Technical issues with accessing and using MasterMap or other related

[1] Gov.uk (November 2017), 'Autumn Budget 2017', https://www.gov.uk/government/publications/autumn-budget-2017-documents/autumn-budget-2017#technology

geospatial data
- Legal or licensing issues that relate to reuse of OS geospatial data
- Opinions on pricing and sustainable service delivery models

A total of 57 people attended the four workshops.

Leeds was the best attended workshop with 21 people. There were 13 attendees at the Cardiff workshop, 12 at the Bristol workshop, and 11 the Aberdeen workshop.

The workshop attendees were from a wide mix of backgrounds and organisations, including:

- SMEs with a variety of experience with geospatial data, from environmental and mapping consultancies to startups and freelance developers
- public sector organisations, including local councils
- students and staff from educational organisations, eg universities
- members of the open data and OpenStreetMap community

A common theme highlighted in several of the discussions is that both local government and educational organisations frequently work in collaboration with SMEs and startups on projects involving geospatial data.

It is therefore relevant to include this wider perspective in the discussions around making MasterMap more accessible to small businesses.

Practical and technical sources of friction

Workshop attendees raised several technical issues relating to the discovery, access and use of OS and MasterMap data.

Discovery

The attendees reporting using a broad range of geospatial data. The data included not just geospatial products published by the OS but also a variety of other data from across government and other sectors including environmental, census and statistical information, transport and cultural heritage.

Attendees reported that it was hard to find geospatial data on data.gov.uk. For example, they commented that it is difficult to find all data about a specific geographic area.

The number of organisations responsible for publishing geospatial data about the UK also creates problems for data users wishing to find and access UK-wide datasets.

Access

The workshop attendees reported a number of issues relating to the access and use of MasterMap data. These included:

- **problems with the current distribution model** – attendees wanted to access data directly, rather than receive it via DVDs
- **the need to receive a feed of updates to datasets**, rather than repeated downloads of bulk data
- **the need to query and extract the data needed for a specific application**

or analysis, rather than the whole product. Geographical subsets don't always reflect how users want to access data
- **the need to access sample data** to help build a proof-of-concept or otherwise explore working with a dataset, before accessing the whole product
- **a preference for easier to use formats**, for example GeoJSON for smaller data visualisation and manipulation tasks
- **ability to easily work with data using existing tools**, for example QGIS and environments, eg quickly build a map with an OS base layer rather than Google Maps, using standard libraries
- **complexity of working with more specialised geospatial data formats and services** make the current products harder to use by smaller businesses and charities
- **the need for access to simple lookup services**, eg to map locations and identifiers to specific features.

Generally attendees found it easier to work with Google Maps and similar products for simple use cases, but would appreciate an open, free alternative from OS.

More sophisticated geospatial data users would like more options for accessing and consuming OS data.

A number of attendees were using geospatial data from multiple sources. Whenever these sources provide data in different formats, via different access mechanisms, it creates additional friction.

The ability to consume OS data using commonly used web frameworks and open source tools, rather than requiring bulk downloads, extracts and conversions, would go some way to addressing these issues.

Linking and use with other datasets

Lack of access to openly licensed identifiers and supporting services (for example mapping locations to identified features) was a common theme across the workshops.

Attendees felt that there is a need for freely available, openly licensed identifiers and core reference data to help to connect geospatial data published by multiple sources.

Some participants highlighted that it is currently hard to link new geospatial data to MasterMap, and to link to specific web-based views of MasterMap.

The lack of common standards for data attributes and coordinate systems across UK geospatial datasets was highlighted as another source of friction. This appears to particularly be a problem when using OS data in combination with local authority sources.

Data issues

OS data was generally recognised and praised for its quality and authority. However several attendees reported issues with the speed of updates to the core OS products.

Examples given were new property builds, demolitions and updates to road networks taking several months to be reflected in data. Some data users were relying on OpenStreetMap to provide up-to-date information.

Others suggested that more collaborative approaches to data maintenance could help to improve OS data.

Attendees also highlighted some new use cases which are not currently supported by OS data. These included 3D modelling which is hampered by lack of coverage of building heights, or access to historical data to support machine-learning applications.

Licensing issues

The current OS licensing models were variously described as confusing, unhelpful, restrictive, inhibiting, short sighted and outdated.

It is felt that the current licensing framework is difficult for businesses to understand. Among the suggestions made by attendees was the creation of additional guidance and clarity around permitted forms of reuse, and a shift to more proactive encouragement of reuse.

Participants stressed that there must be a low legal burden and initial costs for small businesses. Several attendees suggested that the current licensing scheme impacts their ability to create revenue from new derivative products.

Generally there was a feeling that the OS licensing framework needs to be reviewed to ensure it is compatible with the broader landscape of additional geospatial data that small businesses are using.

Examples given were of businesses needing to use data from Wikipedia and OpenStreetMap which have incompatible licensing conditions with OS products.

It was suggested that more open licensing and greater access to MasterMap data would reduce the burden on local authorities who have to regularly release geospatial data to SMEs under the Public Sector Mapping Agreement (PSMA) or ‘presumption to publish’[2] arrangements.

Open licensing would allow small businesses to access the data directly, avoiding the need for local authorities to approve or review individual data releases.

The issue of public–private partnerships was highlighted as a specific area where licences and additional costs were a recurring issue.

Ambiguity around licensing and permitted uses is frequently a barrier for local authorities to release data. A contributor to the Aberdeen workshop highlighted several relevant examples.

In the first example a local authority has decided not to release winter maintenance routes because of the need to redraw/retrace routes using OS Open Roads or OpenStreetMap to avoid triggering issues with substantial copying from OS source data.

In the second example the same authority is spending time matching location and address data against both MasterMap and OpenStreetMap to release data to a social enterprise involved in a joint community mapping project.

[2] Ordnance Survey (2018), ‘Public sector agreements and 'presumption to publish'’, https://www.ordnancesurvey.co.uk/business-and-government/help-and-support/public-sector/guidance/presumption-to-publish-criteria.html

Perspectives on pricing and service delivery

There was general agreement among workshop attendees that there needs to be some form of cost recovery or other funding mechanism to ensure sustainable access to, and maintenance of, OS data.

However the current costs for SMEs, startups, charities and educational organisations (working with commercial partners) were felt to be too high, particularly in comparison with services like Google Maps which are freely available.

There were different perspectives on what type of services the OS could or should offer to support use of its datasets. For example, how much should the OS provide by default, and how much should be left up to the market?

Attendees repeatedly suggested freemium-style models as an acceptable approach for charging for services over OS data. Suggestions included:

- free services for looking up identifiers and reference data, and for mapping location data to standard identifiers
- free base map service, equivalent to that provided by Google
- premium pricing for more detailed data, or specific datasets such as aerial photography
- differential pricing of data feeds based on frequency of data updates
- differential pricing based on size of organisation

Attendees also distinguished between free and open: not all services need to be free, but the ability to reuse data under an open licence was felt to be important.

SMEs are happy to pay for services, particularly if they receive data on-demand, in suitable formats. But there were concerns that restrictions on reuse of the supplied data would limit the ability to create new products and services.

Summary

The workshops have highlighted a wide range of issues that relate to how the OS is currently publishing and licensing its MasterMap product. Workshop attendees were keen to see technical and legal sources of friction addressed in a way that would ensure sustainable access to data.

An update to the OS's approach supplying data – for example embracing on-demand freemium style licensing – would go some way towards addressing these issues.

However the workshop participants were clear that any proposed changes to make MasterMap more accessible must take into account the wider context of how they are accessing and using geospatial data.

Conflicting business and licensing models, and the lack of standard approaches to publishing and accessing data, all increase friction, add to costs, and impact opportunities for innovation.