Urban Big Data Centre

Data Services: Guide for Researchers

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Who we are

The Urban Big Data Centre (UBDC) is a national data service, funded by the Economic and Social Research Council (ESRC) to support data owners, policymakers, researchers and everyday citizens in extracting useful information from urban-related data. We help harness the potential of big data to develop solutions for environmentally sustainable, economically resilient, and socially just cities.

We provide three data services: Data Collections, Data Sourcing Service, and Controlled Data Service. Please also see our website for training, knowledge exchange and other activities we offer. This guide gives an overview of the data services and how to access them.

UBDC data services for researchers

We offer three data services to enable access to a wide range of data to study urban problems:
- Data Collections (Open and Safeguarded).
- Data Sourcing Service.
- Controlled Data Service.

The UBDC aims to provide these services free of charge to the UK research and policy communities, but additional costs may be involved for data acquisition, extraction, cleaning, programming or linkage, especially when sourcing new data.

Our Open Data Portal and some datasets in our Safeguarded Data Collection may be used by anyone, anywhere, as long as they abide by the terms and conditions defined for each dataset. Some safeguarded datasets, and the other three services, are only available to researchers in the UK, including from academic, public and third sector organisations, and in some cases, businesses. Please contact us for more information if you are not sure about your eligibility.

UBDC Data Collections

See: http://ubdc.ac.uk/data-services/data-collections

The UBDC provides access to open, safeguarded, and controlled or personal data. Researchers can browse or search the collection and download the open data they need. Safeguarded data can be accessed after signing our End User Licence and agreeing to the terms and conditions of use. For access to controlled or personal data, see below under Controlled Data Service.

Open Data Collection.
> "Open data is data that can be freely used, re-used and redistributed by anyone - subject only, at most, to the requirement to attribute and sharealike." – from the *Open Data Handbook* at http://opendatahandbook.org/guide/en/what-is-open-data/.

Government at all levels in the UK is moving toward making data openly available where possible. As well as providing access to existing open data of interest to urban researchers, we are working with a wide range of organisations to enable them to share data with us on an open basis. We are also developing new open data products using modelling or estimation techniques (see for example our

SUDS Urban Indicators: http://ubdc.ac.uk/geospatial-data/, and our iMCD data: http://ubdc.ac.uk/imcd-data/). Our main Open Data Collection is available via our Open Data Portal: http://ubdc.gla.ac.uk/dataset.

Safeguarded Data Collection. Some organisations share data with the UBDC so that we can make it available to researchers, under the condition that we restrict its use. For example, they may wish to limit use to research for academic purposes, retaining future commercial interests for themselves. UBDC provides researcher access to these data under the conditions set by data owners. This means researchers have to sign the UBDC End User Licence and agree to the specific dataset's terms of use. In some cases, the data owner's terms of use may require the data to be used only within the UBDC's secure computing cluster. To see some examples of Safeguarded Data, check out our Data Spotlight page: http://ubdc.ac.uk/data-services/data-spotlight/.

Data Sourcing Service

See: http://ubdc.ac.uk/data-services/data-sourcing/

In some cases the UBDC may be able to source additional data at a researcher's request. To access this service, the research project for which the data is needed must be approved by the independent Research Approvals Committee (RAC). As data sourcing may result in additional costs, for which UBDC has a limited budget, all requests for sourcing new data will also require approval according to the process and criteria outlined in the *UBDC Data Acquisition Strategy and Processes*. For more information please contact us to discuss your requirements.

Controlled Data Service

See: http://ubdc.ac.uk/data-services/controlled-data

The Controlled Data Service aims to make it easier to conduct research on urban issues using personal data. We provide secure computing facilities, technical advice on analysis, and knowledge about what data is available and how to obtain the necessary permissions to make use of it. We use an established provider, the electronic Data Research and Innovation Service (eDRIS – part of NHS National Services Scotland), to provide this service. For more information please see our *Controlled Data Service: Guide for Researchers* (available for download at the above link).

The term 'personal data' refers to any data which may identify an individual living person, or which could do so when combined with other information. This could be personal data from administrative datasets (e.g. welfare benefit or health records); data on personal movements (e.g. from mobile phones); or information on personally-owned assets (e.g. car registration details). Organisations which hold personal data are governed by the Data Protection Act of 1998 (DPA) and are not generally permitted to sell, share or pass on this data without the permission of the individuals concerned. However, in some circumstances the controllers of personal data can agree to permit others to have access to personal data without consent. Such access is very tightly controlled. It is limited to approved uses by approved users, and must be organised in such a way that individual confidentiality is protected and risks of disclosure minimised at all times.

Accessing our data services

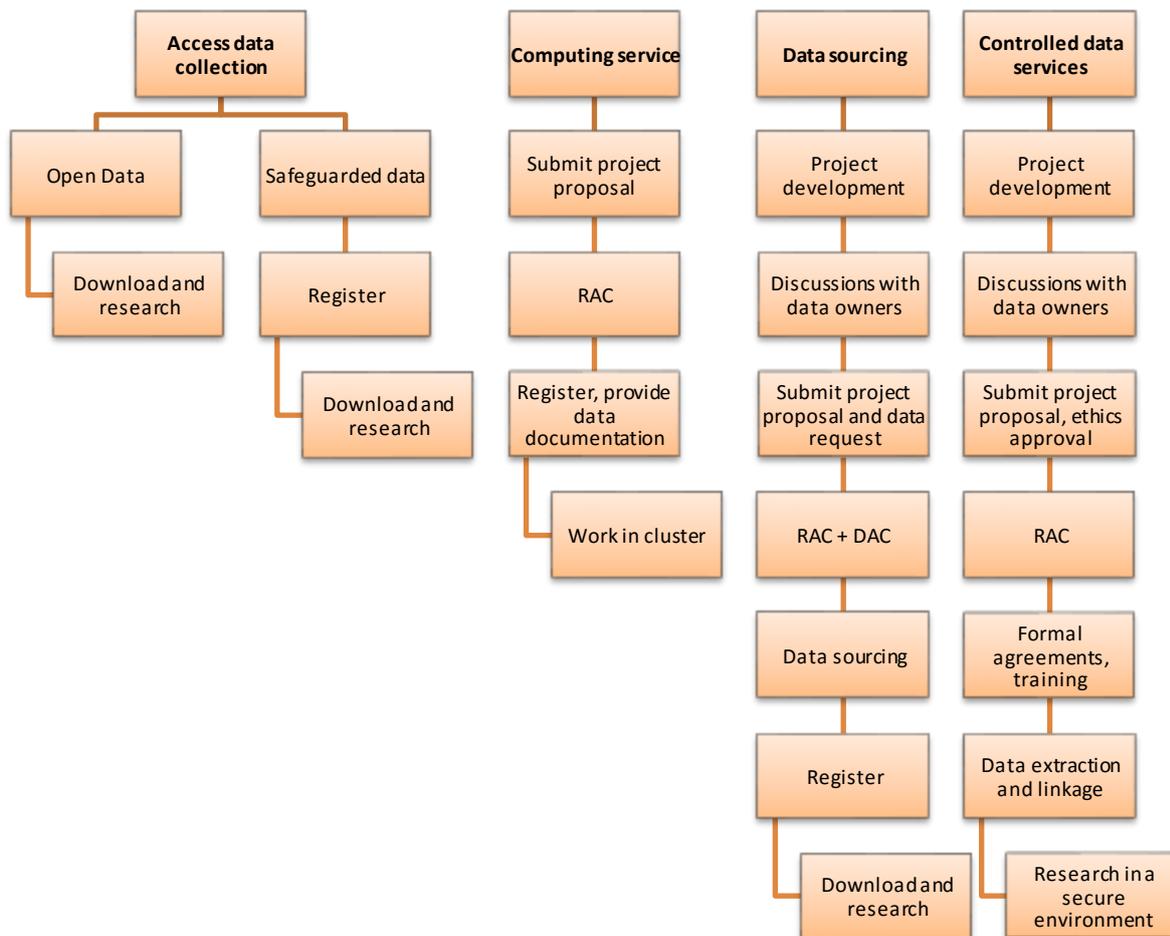See: http://ubdc.ac.uk/data-services/access-our-services

The first thing researchers need to do is fill out our online research application form, so that we can assess your eligibility and the fit of your project to UBDC's objectives: http://ubdc.ac.uk/data-services/access-our-services

Once we have let you know whether your request for access is broadly within scope and feasible, the next steps are outlined below, and summarised in **Figure 1**.

If researchers ask us to source new data, or use controlled or personal data, they must submit a full application to our external, independent Research Approvals Committee (RAC), including a separate data request application for each new dataset to be sourced, if UBDC doesn't already offer it. The RAC meets twice a year (see *Timescales* below). Please contact us for more information about the detailed application and approvals process and criteria.

For inspiration, check out our current projects here: http://ubdc.ac.uk/current-project-spotlight/ and our own internal research ages here: http://ubdc.ac.uk/research/research-projects/.

Figure 1. *The user journey*

Timescales

The timescales for gaining access to our services depend on what researchers want to access. For our Data Collections access should be quick, pending signing the End User Licence and reading and agreeing to specific terms and conditions of use in the case of safeguarded data. Where UBDC staff need to negotiate licences for new uses or to source new data, timescales can be longer.

For access to controlled data, it will always be necessary to negotiate a new data sharing agreement with the data owner controller, and to arrange for the data to be transferred to our secure facility. We aim to minimise the time this will take by developing relationships with the major data owners, by building up information on the data they hold, and by agreeing standard protocols with them.

From 2016, the UBDC will hold two *Calls for Expressions of Interest* per annum. While researchers can submit their initial web form at any time, any final applications to the Research Approvals Committee will only be reviewed twice a year. Please contact us to find out the current deadlines and timescales for RAC approvals.

Applying for research funding

While there are no charges for UBDC services, researchers may need to apply for funding, for example, to cover the costs of additional data acquisitions or the costs of research staff time. Applications for funding can come before or after application for approval. In cases where researchers are on a deadline that does not match up with the RAC's timetable, UBDC may be able to offer a Letter of Comfort to be submitted with a funding application.

If you require more information about UBDC services, please contact ubdc@glasgow.ac.uk.