equipment.data

UK National
Equipment & Facilities Portal

How to contribute

Specifications document for data submission fields for publication to equipment.data.ac.uk

Aggregating equipment data
from across UK Higher Education

EPSRC

In partnership with Jisc

EASY AS

1, 2, 3

1

PLACE YOUR DATA ON THE WEB IN ONE OF THE ACCEPTED FORMATS

The most simple can be created in a UNIQUIP spreadsheet.

TIP: use a google-docs spreadsheet.

2

CREATE (OR UPDATE) AN ORGANISATION PROFILE DOCUMENT (OPD)

The OPD links to the equipment data and tells us what license you provide it under.

This is just a short machine-readable text file which tells us things like what logo to use, and what format your data is in.

3

MAKE YOUR OPD AUTO-DISCOVERABLE FROM YOUR UNIVERSITY HOMEPAGE

This means embedding a link in the home-page header of your website, that directs our discovery tool to your OPD.

If you run into any problems just drop us a line and we will assist where possible. Email: support@data.ac.uk

CONTENTS

BACKGROUND

Following the Wakeham Report (June, 2010) entitled 'Financial Sustainability and Efficiency in Full Economic Costing of Research in UK Higher Education Institutions' RCUK published 'Efficiency 2011-15: Ensuring Excellence with Impact', a report that outlined plans to promote efficiency in research funding. More intensive utilisation of assets and equipment was identified as a key approach to achieve the required savings. This report resulted in changes in how equipment is requested on Research Council grants.

The introduction of the new EPSRC Equipment Guidelines, with associated enabling funding, has lead to a great deal of activity focussing on improved asset management, equipment database development and utilisation management. The focus for most institutions was an equipment database as these are largely driven by the asset register for the institution. A significant development saw the collaboration between the universities of Southampton, Leeds, Bath and Loughborough on the UNIQUIP project, a

The subsequent success of the equipment.data national equipment portal has largely been due to the ease of contributing. It has seen interest from a range of institutions many simply publishing reports from their asset registers on excel spreadsheets. This simplicity has resulted in over 40 institutions now contributing with many more in the process of joining, resulting in over 10,000 items of research equipment now being discoverable.

This success has been noted in the UUK Efficiency, effectiveness and value for money report, page 60 and 68.[2]

The development is now moving into a new phase, jointly funded by EPSRC and Jisc, and will be exploring the wider data discovery benefits presented by tools such as the Organisation Profile Document (OPD). The equipment.data team are already working with the Digital Curation Centre exploring the use of the OPD for the auto-discovery of research outputs discovery and research data management (RDM) documentation.

The wider exploitation of our infrastructure and the data captured by the OPD is being realised in the development of the "Intelligent Brokerage Tool", led by the National Centre for Universities and Business (NCUB). This exciting new development, which aims to provide a portal to HE research and enterprise information, publications and news, is acknowledged in the Dowling Review of Business-University Research Collaboration.[3]

The drive for efficiency and improved access to HE and its data is enabling greater benefits to be realised from the dataset and infrastructure and contributing couldn't be easier with wider institutional system enhancements reducing the need for duplication of data entry in separate databases. In particular many of the Current Research Information Systems (CRIS) offer equipment modules and with an active user group Pure is advancing the use of their equipment module. Just like publication DOIs using robust persistent identifiers for equipment, e.g. equipment.data URIs or your local asset IDs, will enable the linking of research outputs to the equipment used to create them. The growing agenda equipment.data is part of captures the very essence of linking open data, demonstrating both data origin and added value of the data aggregation.

1 www.rcuk.ac.uk/documents/publications/Equipment_Guidance.pdf

2 www.universitiesuk.ac.uk/highereducation/Documents/2015/EfficiencyEffectivenessValueForMoney.pdf

3 www.raeng.org.uk/policy/dowling-review

BENEFITS

of sharing equipment and facility data on the national equipment portal

Maximum use of equipment eligible for sharing

Instant information on available equipment and facilities for all users (managers, academics, students) within their own or other institutions in the UK

Meeting Wakeham and Research Council requirements

More advantageous procurement strategies and cost-effective service agreements

No unnecessary duplication of equipment leading to savings in terms of time, money and space

Ability to find/share expertise and information on equipment and facilities to enable better use of existing capabilities through:

a. Knowledge of lessons learned by other research organisations (ROs)

b. Training programmes for users setup by facility managers in other ROs

c. Charging models established by other ROs for service provision to internal and external users

Promotes greater university-business collaboration

Contribution to wider linked open data initiatives generating benefits from data sharing and data aggregations

Ability to combine data with wider research data compiled by RCUK e.g. Gateway to Research, to create rich data on institutional outcomes and capabilities

Potential to generate additional income by publicising selected equipment and capabilities to other Research Organisations (ROs) and commercial clients

Responds to recommendation in the UUK Efficiency, effectiveness and value for money report which states "all new equipment using public funding sources and over OJEU threshold should be registered on equipment. data.ac.uk…"

WHAT THIS MEANS FOR YOUR INSTITUTE

Understand your workflow

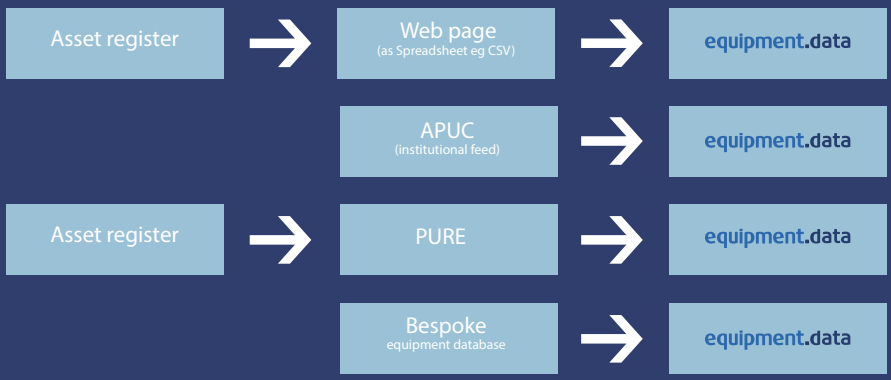
Before establishing technical readiness to enable equipment.data to discover your published equipment data we recommend you understand the workflow requirements.

Some methods for data capture will require additional resource to maintain the dataset. For example if your decision is to publish your own local internal or publically accessible equipment database, e.g. Kit Catalogue, there will be a resource requirement in managing the data quality and input. Please note equipment.data can ingest data automatically from Kit Catalogue and is supporting the Jisc pilot project.[1]

It has been widely acknowledged that the key driver for successful equipment databases is accurate asset data management. The British Universities Finance Director's Group[2] acknowledge the value added benefit equipment.data presents in driving improvements in institutional asset management encouraging institutions to improve the core basic data describing equipment, its location and appropriate contact information. It is the establishing of this core information and how you make it discoverable which is essential to successful and sustainable publishing of equipment data.

Typical workflows

The process is likely to be driven by your Finance department
although the quality will be the responsability of academics (data providers)
who will need to understand its use e.g. in the equipment database.



1 jisc.ac.uk/rd/projects/equipment-sharing-made-easy
2 bufdg.ac.uk

If you already have an asset register

To enable effective browsing and searching on the national equipment portal, a minimum set of information about equipment/facility must be present in query outputs (see p.10). Through conversations with institute representatives it has become apparent that current asset registers, mostly maintained for accounting purposes, contain some, but not all, of these required fields. Thus, current asset registers held in existing ERP software (e.g. Agresso, GP) or CSV file outputs from such systems will require additional information to be added before being published on equipment.data.

Great Plains 2012
Fixed Assets for National Research

The following has been authored by Robert Pyke
(Babraham Institute, Robert.Pyke@babraham.ac.uk)

This is just an idea of how we plan to meet the requirements at Babraham Institute.

The Babraham Institute uses the GP2010 Fixed Asset Module to record all capital assets. There are already processes in place to capture capital purchases and take on assets to the Fixed Asset Module. Processes do need to be improved at Babraham for the movement and disposal of assets. In order to meet the data requirement for the national portal there will need to be a review of the descriptions held on the fixed asset module. The Babraham Institute believes that the best way to meet the requirements of BBSRC and Wakeham in respect of the capital equipment initiative is to use the GP2010 asset module.

UNIT 4
Agresso

In responding to the need for an equipment database the University of Southampton sought to ensure contribution was sustainable and efficient and ideally utilised existing workflow. To achieve this they looked at the workflow for asset data and how this could capture the additional UNIQUIP data publishing specification fields. Working with Unit4 a project has now been delivered providing enhanced views in the Agresso Fixed Asset Module to enable capture of this information using the flexi-fields features in the Agresso ERP

If your asset information is stored using Agresso, please contact support@data.ac.uk for further information.

If you do not have an existing asset register

If you do not currently hold an asset register (e.g. Agresso or GP), then you can transfer your relevant asset data to, and further amend it, in the excel spreadsheet template available on the national equipment portal.[1] This excel file, rather than a CSV output file, will need to be made available to equipment.data for subsequent publishing on the national equipment database.

Help from your institute IT

The CSV output file or excel spreadsheet containing your insitute's asset data will require publishing on an institute webpage for harvesting by equipment.data. The location of this page needs to be referenced within a file that equipment.data refers to as the Organisation Profile Document (OPD) that your institute IT department will need to create. The OPD is a simple RDF file which describes your institute and open access documents and provides equipment.data with indications as to where to find your institute's equipment (facilities, capabilities) data, the institute logo, licence etc.

For further information that can be forwarded to your IT department detailing specifications for the OPD and how to allow it to be found by equipment.data, please refer to the equipment.data website.[2]

1 equipment.data.ac.uk/examples/UniquipTemplate.xlsx
2 equipment.data.ac.uk/info

WHAT DATA SHOULD BE PROVIDED

When the new equipment guidelines were launched all scientific equipment costing £10K and above was suggested as a suitable level to be published through equipment databases. Obviously for simplicity we would suggest your capitalisation limit (typically between £10-40k) making it easier to manage through your asset register data. However, you may not wish to exclude fully depreciated items which may be of significant interest for sharing. Many organisations establish filters enabling items they wish to exclude from publishing to be withheld. Exceptions to publishing include details of equipment that upon public disclosure, introduce significant security risks to the institute (e.g. gamma radiation sources). It is also understood that equipment may not be sharable for a variety of valid reasons such as restrictions on use by a contracting or funding body or lack of spare capacity. There is no obligation to share the equipment if valid reasons exist but data on such equipment should still be included to help realise other non-sharing related benefits (e.g. better service agreements).

Additionally, entries can also be made for 'Facilities'. To clarify, several pieces of equipment could belong to a single facility or even multiple facilities. Include individual entries for each piece of eligible equipment and then relate them, if appropriate, to a facility ID, see example below. The facility itself should be a separate entry with its own name, description, institute specific ID etc. If you are using Kit Catalogue equipment and facility identities are defined in the data entry process and included in the api export in a format which equipment.data can handle. In the next phase of the equipment.data development programming within the website will automatically generate a facility page including information from all related equipment from the single CSV file you will publish on your institute webpage. Facility entries can also be used, in a sense, to advertise capabilities for which your institute would rather not provide specific equipment data due to security risks. For instance, you would like users to know that your animal facility has the equipment to perform bone marrow transplants without advertising the equipment (i.e. gamma radiation source) that will be required to perform them.

TYPE	ID	NAME	DESCRIPTION	RELATED FACILITY ID
Facility	F001	Analytical Facility	An example facility	
Equipment	E0001	XRD Diffractometer	Single Crystal Xray Diffractometer	F001
Equipment	E0002	600MHz NMR Machine	600MHz NMR Machine	F001

Please note: your asset register or database (CRIS) may be able to produce a report in this format.

Alternatively, a UNIQUIP spreadsheet is available on the equipment.data website.[1]

Which data fields are needed?

The UNIQUIP data publishing specification,[1] defines the format and fields equipment. data will ingest. This standardised vocabulary was the output of the UNIQUIP Project, a collaboration between the universities of Southampton, Leeds, Bath and Loughborough, with the aim of establishing sector consensus for the primary required fields in equipment datasets.

THE FOLLOWING FIELDS ARE ' REQUIERED'

COLUMN HEADING	REQUIREMENT NOTES	DESCRIPTION/NOTES
Name	At least one of these fields must be completed	Name of equipment or facility. Please include model number if relevant. E.g Becton Dickinson FACSAria or Flow Cytometry Facility.
Description		A description of the equipment or facility. This can be as short as a sentence or as long as a short paragraph or two describing the capabilities of the equipment or facility. E.g Cell sorting, with a three laser optical system enabling up to nine colour analysis and sorting of specific cell populations, for example B-lymphocytes
Site Location	Required	Campus or site location of building where the facility or equipment is located. E.g. Babraham Research Campus
Contact Telephone	At least one of these fields must be completed	A contact telephone number, with an optional text prefix (e.g. tel:) to make data input into spreadsheets easier. E.g. tel: +44 1223 496 XXX
Contact URL		The URL or a web page containing contact information. E.g. http://www.example.ac.uk/research/facilities.html
Contact Email		A contact email address. If not providing a telephone number or URL where further contact details can be found, then this email ideally should be one that is guaranteed to be picked up regardless of staff turnover etc. For equipment that is part of a facility (e.g. FACSAria belongs to the Flow Cytometry facility), this email can be a generic one. E.g. facs@example.ac.uk. If not part of a facility, please provide email of relevant contact person.

1 equipment.data.ac.uk//uniquip

THE FOLLOWING FIELDS ARE 'OPTIONAL'

COLUMN HEADING	REQUIREMENT NOTES	DESCRIPTION/NOTES
ID	Recommended	An institution assigned unique ID /Asset number. This enables two items of the same name to be distinguishable if contact or location details are changed. If so desired, asset numbers may be prefixed with institute initials. E.g. BI-1234, JIC-0001, IFR-5678
Technique	Recommended	Descriptor(s) of research discipline/field. E.g. Flow Cytometry or Mass Spectrometry
Service Level	Recommended	Details of support available for use of this facility. E.g. Full or Partial or None
Web Address	Recommended	The URL of a web page giving information about this facility. E.g. http://www.example.ac.uk/research/FACS.html
Type	No	Define as either equipment or facility (defaults to equipment)
Related Facility ID	No	The ID of a facility listed in this document which the equipment is part of. Only applies if type=Equipment and it is part of a facility. If equipment is related to multiple facilities, multiple values may be specified separated by a mandatory comma "," and optional whitespace e.g. F001, F002. This facility ID is set by you, the institute, that is entering the data. It is advisable to make this ID unique to your institute to avoid users finding multiple facilities with the same ID.
Location	No	The URL of a Wikipedia page for the city/town/borough in which the facility is in or near. The purpose of this field is to give a rough idea of where the facility is located for the purposes of logistics. Postcodes may be too accurate, and co-ordinates are unwieldy. Wikipedia pages represent an easily verifiable resource which can be automatically converted into 'approximate location' coordinates for machine processing. E.g. http://en.wikipedia.org/wiki/Babraham or http://en.wikipedia.org/wiki/Cambridge
Contact Name	No	Name of custodian of equipment or facility manager. If you are providing a name, please ensure at least one further type of contact is provided (email, phone or URL)
Secondary Contact Name	No	Secondary contact name, if required. Again, if providing a name, please also include a way of contacting the person.

Secondary Contact Telephone	At least one of these fields must be completed along with secondary contact name	A contact telephone number, with an optional text prefix (e.g. tel:) to make data input into spreadsheets easier
Secondary Contact URL		The URL or a webpage containing contact information
Secondary Contact Email		A contact email address
Photo	No	The URL of a publically accessible photograph of the facility (png, jpeg, gif). E.g. http://www.example.ac.uk/img11/facilities/facs001.png
Department	No	Organisational unit, school or research group which owns the facility (if appropriate)
Building	No	Name or reference number for building where the equipment or facility is based. E.g. Building 501

FURTHER NOTES

Data submitted by all ROs will be aggregated into a single table and be made available for download on the national equipment portal at equipment.data.ac.uk. In addition to information provided above, following columns will be added based on information on the OPD:

COLUMN HEADING	DESCRIPTION/NOTES
Institution Name	The name of the institution that owns the equipment or facility
Institution URL	The homepage of the institution that owns the equipment or facility
Institution logo URL	The URL for a publically accessible logo for the institution
Datestamp	The date on which the data were submitted. An indication of how current the records are
Approximate Coordinates	The Latitude and Longitude of the Wikipedia location page submitted

! Please note: words used under 'Column Heading' in the tables above must not be changed as UNIQUIP requires this to be consistent to aggregate the data faithfully across all ROs.

"Using a standard open data approach to equipment data made it easier for institutions to contribute to the UK national equipment sharing database."

Efficiency, effectiveness and value for money report,

Professor Sir Ian Diamond

Glossary

Agresso – Example of ERP software.

CC0 – A Creative Commons license is one of several public copyright licenses that allow the distribution of copyrighted works. It is used when an author wants to give people the right to share, use, and even build upon a work that they have created. CC provides an author flexibility (for example, they might choose to allow only non-commercial uses of their own work) and protects the people who use or redistribute an author's work, so they don't have to worry about copyright infringement, as long as they abide by the conditions the author has specified. Creative Commons also offers a way to release material into the public domain through CC0, a legal tool for waiving as many rights as legally possible, worldwide.

CSV – A comma-separated values (CSV) file stores tabular data (numbers and text) in plain-text form. Plain text means that the file is a sequence of characters, with no data that has to be interpreted instead, as binary numbers. A CSV file consists of any number of records, separated by line breaks of some kind; each record consists of fields, separated by some other character or string, most commonly a literal comma or tab. Usually, all records have an identical sequence of fields.

ERP software – Enterprise resource planning is business management software that allows an organization to use a system of integrated applications to manage its business processes. ERP modules include those for product planning, material purchasing, inventory control, distribution, accounting, marketing, finance and HR.

GP – Microsoft Dynamics GP (formerly Great Plains). Example of ERP software

OGL – The Open Government Licence is an open licensing model and tool for public sector bodies to license the re-use of their information and data easily. It consists of a simple set of terms and conditions to which public sector bodies simply point as the relevant licence. Use of information under the Open Government Licence is free and there is no distinction

OJEU – Official Journal of the European Union. As it pertains to procurement, it is a tendering process required by EC Directives for public sector procurement where the value exceeds an annually updated threshold. The process starts with a notice in the OJEU (previously OJEC). OJEU is now online via the Tenders Electronic Daily (TED) database. See also Catalist as alternatives to OJEU for public sector procurement. For current values for the OJEU threshold, refer to: http://www.ojec.com/Threshholds.aspx

Open licence – describes a class of content without conventional copyright restrictions. The openness of content can be assessed under the '4Rs Framework' based on the extent to which it can be reused, revised, remixed and redistributed by members of the public without violating copyright law. Unlike open source and free content, there is no clear threshold that a work must reach to qualify as 'open content'. For further info, refer to: http://en.wikipedia.org/wiki/Open_licence

URI – Uniform resource identifier is a string of characters used to identify a name or a resource. Such identification enables interaction with representations of the resource over a network (typically the World Wide Web) using specific protocols. Schemes specifying a concrete syntax and associated protocols define each URI. Examples include a URL (uniform resource locator) or a URN (uniform resource name).

URL – A uniform resource locator, also known as web address, is a specific character string that constitutes a reference to a resource. In most web browsers, the URL of a web page is displayed on top inside an address bar. For example: "http://en.example.org/wiki/Main_Page". A URL is technically a type of URI, but in many technical documents and verbal discussions, URL is often used as a synonym for URI.

equipment.data

Equipment Data
University of Southampton,
Highfield Campus SO17 1BJ,
023 8059 4456
info@data.ac.uk
equipment.data.ac.uk