

Research Data: Concerns, Challenges & Necessities in a Research-led University

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Deconstruction:

- **Research Data**
- **Concerns**
- **Challenges**
- **Necessities**
- **Research-led**
- **University**

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Deconstruction:

- **Research Data** = digital for this talk, but only addresses part of the problem..
- **Concerns** = how to select, collect, store, preserve, make accessible digital research data over decades/centuries
- **Challenges** = all of it!!!
- **Necessities** = “must do this”....will come back to this
- **Research-led** = not sure this matters, all organisations that do research-like work have similar problems – scale for R-led Us bigger, which may be advantage
- **University** = or any organisation that takes public funds to do research-like activities, eg consultancy agencies

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The screenshot shows the website 'Tobar an Dualchais' in a Windows Internet Explorer browser. The address bar shows the URL 'http://www.tobarandualchais.co.uk/'. The page has a header with the site name and navigation links: 'Home | Advanced Search | Previous Searches | Help'. Below the header, there is a language selector for 'English | Gàidhlig' and a message: 'If you have any comments about the test version of this website, please complete the form in [Can You Help](#)'. A banner in Gaelic reads: 'Guthan ar sinnsirean ... a' tighinn beò tro theicneòlas an latha an-dìgh' and its English translation: 'The speak o' a bygone age ... gien new vurr wi' fantoosh technology'. The main content area is divided into three columns: 'Search' with a search box and 'with audio in Any Language' dropdown; 'Search by County' with a map of Scotland labeled with counties like Orkney, Shetland, Sutherland, Caithness, Ross & Cromarty, Moray, Nairn, Banff, Aberdeen, Inverness, Kincardine, Perth, Angus, Kinross, Clackmannan, Fife, Stirling, Dunbarton, and Argyll; and 'Most Popular Items' listing 'The Iron Horse', 'Agus hò Mhòrag', 'The Tarves Rant', 'Cò Siud Thall air Sràid na h-Eala?', and '79th's Farewell to Gibraltar (Canntaireachd)'. There is also a 'Lucky Dip' button. The footer shows 'Done' and 'Internet | Protected Mode: On'.

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Necessities

Based on my Edinburgh

Consult and get approval at

RDM policy

RDM strategy

RDS policy

RDS strategy

Sets end point, aspiration
Funding lever

What is kept and why

Financing mechanisms (eg PAY-AS-U-GO,
FAPOU)

Details of storage protocols
Details on financing
Services on offer

University's draft RDM policy

It shall be the University's policy that:

- Research data should be managed to the highest standards **throughout the research data lifecycle** as part of the University's commitment to research excellence.
- **The University** should provide training, support and advice, as well as mechanisms and services for storage, backup, registration, deposit and retention of research data assets in support of current and future access, during and after completion of research projects.
- **Responsibility** for research data management through a sound research data management plan during any research project or programme **lies primarily with PIs**.
- All new research proposals must include **research data management plans** or protocols that explicitly address data capture, management, integrity, confidentiality, retention, sharing and publication.
- Research data management plans must ensure that research data are **available for access and re-use** where appropriate and under appropriate safeguards.
- The legitimate interests of the subjects of research data must be protected.
- Research data of future historical interest, and all research data that represent records of the University, including data that substantiate research findings, **should be offered and assessed for deposit and retention in an appropriate national or international data service or domain repository, or a University repository**. Such research data deposited elsewhere should be registered with the University.

High level statements from University's Research Computing Strategy - contains 'embryonic RDS Policy'

- **Researchers will have access to world-class data services which will include storage, backup, sharing and access facilities to enable re-use, curation, and archive of data that they obtain through experimentation, observation and simulation or that is purchased or procured for use in research. It will be possible share data with groups both within and beyond the University.**
- **Researchers will have the skills and knowledge to make best use of the computational facilities available to them. Training will be available in order to ensure this is the case.**
- **Flexible and timely support will be available for all researchers to help them to make the most of these services.**
- **Research facilities will be available to collaborators from different institutions and to independent visiting scholars and will support mobile researchers.**
- Research services will conform to the University IT security strategy which is currently being developed.
- Researchers will have access to world-class computational facilities which provide for agility and ease of access with capacity and capability. This may include advanced and standard software.
- The needs of individual researchers will be addressed, taking account of the different needs of large well endowed research groups compared with those of the lone scholar.
- There will be partnership at all levels. Research facilities and support will be part of a robust core infrastructure, and where possible will be shared rather than owned by individual research groups. Common solutions for provision of data and computational services will be agreed between all stakeholders, so that research groups, Schools, Colleges, and Support Groups can work together.
- Advanced facilities require sophisticated procurement processes, and support will be provided for this activity in order to achieve best value for money and to comply with legislation. Best value for money will be achieved by selecting and acquiring facilities at the correct level in the University.
- The need will be investigated to use research techniques as part of the teaching environment.
- Flexible, composable services, which respect subsidiarity, will be available in recognition that 'one size does not fit all'. The smallest number of solutions will be identified that will satisfy the community.
- This strategy will be aligned to the annual plans of Colleges and Support Groups and will act as a guide when unpredicted opportunities or challenges arise.

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Embryonic RDS Strategy

6. Recommendations from RDS WG (*Draft*)

1: Archiving of research data [= *repository+?*]

2: Accessibility of research data to all virtual collaborators, facilitating extra-institutional collaboration

3: Globally accessible cross-platform file store

4: Backup/synchronisation of data on mobile devices

5: Establishing networks of knowledge

6: Federated structure for local data storage

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Next steps

- Consult widely
- Refine, pass thru committee structure to University Court
- Implement, in difficult financial times
- Keep eye on national developments in case shared service options become available