RDM Roadmap to the Future
or:
Lords and Ladies of the Data

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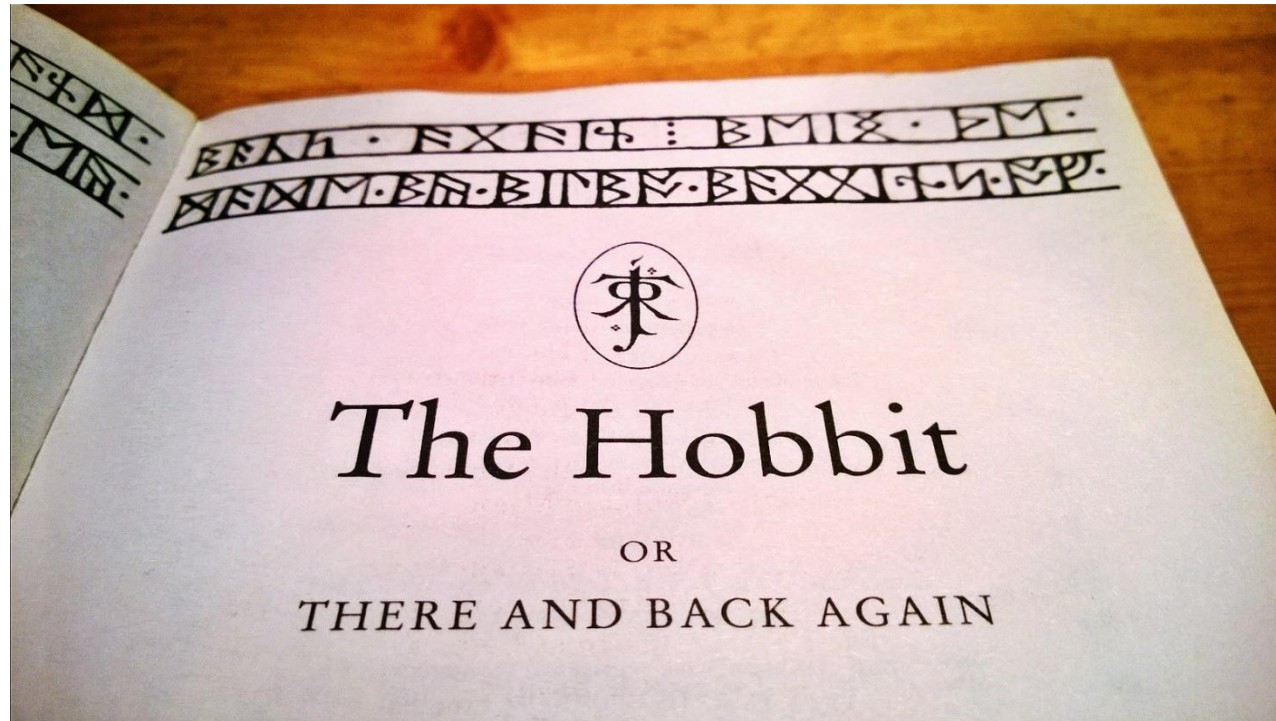
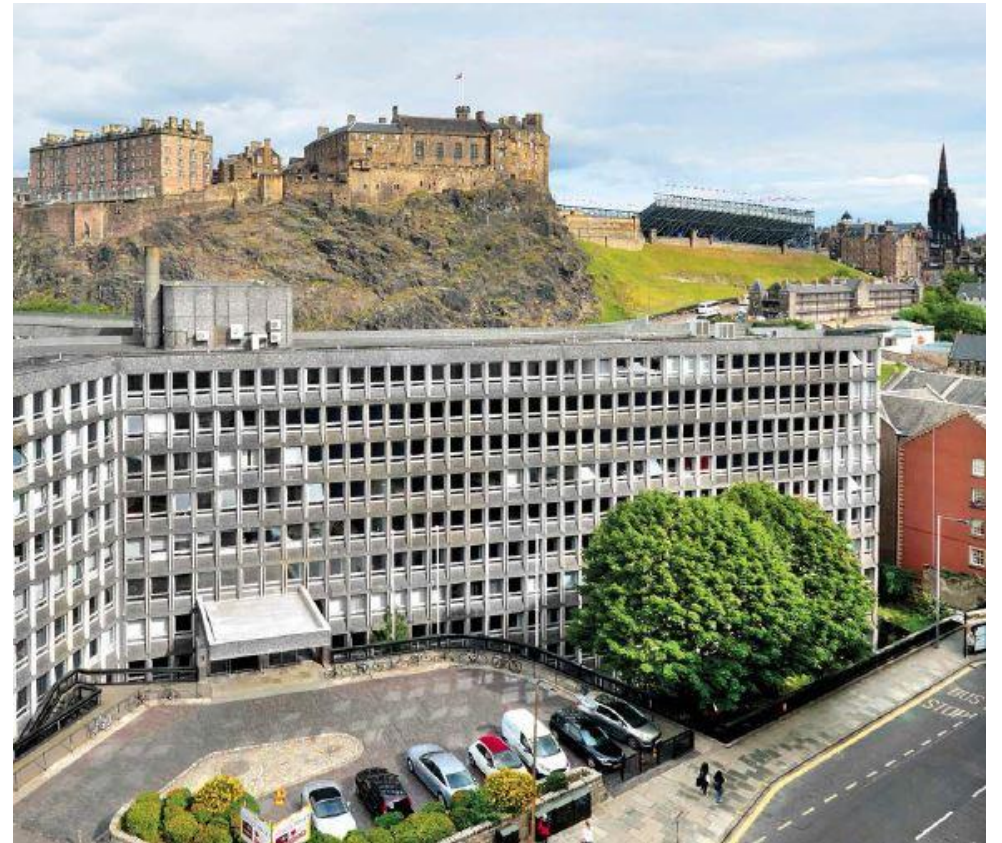Library & University Collections

University of Edinburgh

IASSIST-CARTO 2018

Montreal, 30 May, 2018

An intrepid journey to the future…

Information Service's base in the Shire – Argyle House, University of Edinburgh, Scotland

An enchanting cast of characters to work with

- A service owner (data librarian)
- Data curators & user support staff
- Software engineers
- Computing infrastructure staff
- Senior managers
- Academic stakeholders
- Hobbit
- Elves
- Trolls
- A wizard, if we're lucky

University of Edinburgh Roadmap – in 3 parts

- Building on (mostly) success of earlier two Roadmaps, starting 2012

- Research Data Service Roadmap: August 2017-July 2020, approved by academic-led steering group

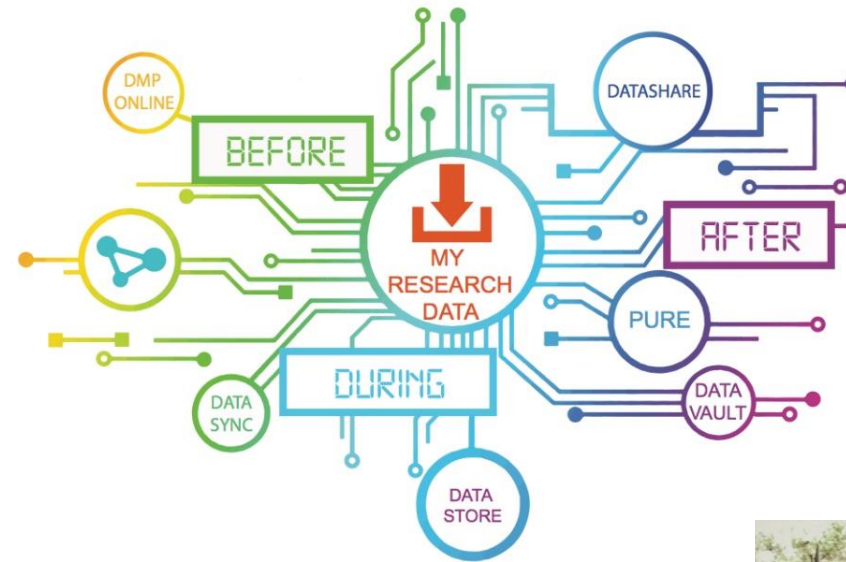- 32 challenging objectives with associated actions, milestones and deliverables

https://www.ed.ac.uk/is/rdm-roadmap

Many tools & forms of support make up the single Research Data Service

Research data management planning

Tools and support for creating data management plans

Working with active research data

Tools and support for sourcing, managing and using data during a project

Sharing & preserving research data

Ensuring that research data are shared and preserved at the end of a project

Based on a simplified data lifecycle

BEFORE
create a data management plan

DURING
working with data

AFTER
share and archive your data

TRAINING & SUPPORT

Unification of the service

Theme A

From RDM programme to unified research data service

Objective	Priority
Devise a unified look and feel to the service components, as part of Digital Research Services.	High
Create a coherency to service as a whole and its underlying components.	High
Offer a simplified user journey starting from the home page.	High
Investigate and deliver on options to allow interoperability between systems, e.g. to transfer data easily from one system to another.	High
Horizon scan on options for replacement/merging of system components.	Low

Theme A, Milestones & deliverables

- All access points have same branding
- User testing completed and revisions made
- New brochures
- Single service description
- Service Level Agreement
- Consistent documentation across service
- Promotional video, whole service
- Service component 'how-to' videos
- Case study interview videos

- Interactive solution on website and tested
- FAQs and/or decision trees for self-help available
- Demonstrated interoperability improvements
- End to end service
- Report on benchmarking endeavours
- Test instances set up (e.g. other repository platforms)
- Written requirements documented across service

Research data management planning

Theme B

Data management planning

BEFORE create a data management plan

Objective	Priority
Increase the **number of fully-costed plans** written by researchers across schools, including University-funded research.	High
Increase the number of schools/departments that require a simple **DMP as part of a PhD research proposal** (from zero).	Medium
Encourage **software management** planning as part of DMP.	Medium
Explore and evaluate possibilities for **'active' data management plans**.	Low

Theme B, Milestones & deliverables

- Number of plans created known and increasing.
- Diverse set of plans available.
- Annual revision of standard text and University DMP template.
- User tests completed.
- Advocacy leads to new school or centre templates in DMPOnline.
- Evidence of working with schools/centres on data management procedures.
- Measure turnaround time of requests. No request ignored due to timing.
- Procedure in place and being followed for contacting PIs at start and end of projects.

- Evidence of outreach to doctoral programmes.
- Number of bespoke DMP templates created.
- More annual invitations for bespoke training to PhD students in schools.
- Software management text for DMPs available.
- Events organised with SSI and others focusing on software management.
- RDM training materials updated appropriately.
- Ensure team stays informed on developments.

Working with data

Theme C

Working with data

Objective	Priority
Provide **secure setting for sensitive data** and set up controls that meet ISO 27001 compliance and user needs.	High
Modernise the **code versioning service** component.	High
Ensure usable interface for researchers and their **collaborators to share storage space** for research data.	Medium
Advocate and understand how lab-based research settings can move to **electronic lab notebooks**.	Medium
Ensure researchers doing **database** activity have secure, networked backed-up resource.	Medium
Provide coherent, safe solution for University researchers who need to **encrypt their data** in Research Data Service systems.	Medium
Ensure the stability of the University shared storage space and **plan for growth**.	Low
Assist researchers who require **datasets for analysis** from all disciplines.	Low

DURING

working with data

Theme C, Milestones & deliverables

- Data Safe Haven launch
- Compliance check and reporting mechanisms in place.
- ISO 27001 certification.
- Known process for incorporating non-research related projects into Data Safe Haven.
- Gitlab available to researchers.
- Decision made on Subversion service.
- Options considered and decided for dealing with the bug.
- Improvements to documentation about sharing data with collaborators.
- Written and/or video examples available from website.
- Uptake of RSpace known.

- Project outcomes reported to steering group.
- Additional resources for ELN tools available.
- Database as a platform launched.
- Online user support for databases tested and available.
- Scoping study completed.
- Additional steps taken as recommended by steering group.
- Continuous improvement gains for DataStore.
- Requirements gathered for finding data portal.
- Key datasets obtained and made available.

Sharing and preserving research data

Theme D

Data stewardship options (1of 2)

AFTER

share and archive your data

Objective	Priority
Provide **enhanced display** and preview of multimedia files held in repository.	High
Alternative to open sharing exists with immutable, replicated **secure long-term storage.**	High
Embrace new technologies and metadata standards for curating and providing access to **research images**.	Medium

Data stewardship options (2 of 2)

AFTER

share and archive your data

Objective	Priority
Communicate options to researchers for data sharing and curation customised to their situation (discipline, funder, project longevity).	Medium
University repository that provides **FAIR (findable, accessible, interoperable, reusable) principles** in line with emerging funder and international principles (EU Open Science Cloud etc.).	Medium
Repository makes best use of metadata standards and citations to **improve impact** for researchers.	Medium
Repository continues to meet **trusted digital repository** requirements for researchers and actively migrates supported file formats for long-term preservation.	Low

Theme D, Milestones & deliverables

- Enhanced display of files in repository.

- DSpace options investigation.

- Usability investigation.

- Full solution in place following end of project.

- Interim service vaults migrated to full solution.

- Functionality from useful open source code adopted.

- Usable documentation exists for researchers and team members on choosing between data stewardship options.

- Guidance materials and case studies available via UoE website or Sharepoint.

- Conference papers and other evidence of impact in the international RDM field.

- At least one funded collaboration with external parties.

- DataShare release reflects outcome of metadata study.

- DataShare release reflects outcome of subject classification evaluation.

- DataShare ORCiD ID field.

- DataShare release for Altmetrics.

- Image server requirements gathered.

- Evaluation written for use of IIIF in Research Data Service systems.

- Office format file migration completed in DataShare.

- Workflows and documented procedures on wiki.

- One-page evaluation of Archivematica experiment.

- Certification received from CoreTrustSeal.

Training and support

Theme E

Training and support

Objective	Priority
Refresh **Communications Plan** to ensure key messages are getting out to all stakeholders in line with Digital Research Services objectives.	High
Vibrant **network of data managers** and curators speaking about their use of data with service representatives and each other.	High
Forward-looking **training on data protection** in light of General Data Protection Regulation.	High
Conduct **privacy impact assessments** on service components and/or service as a whole.	High
Training on and offline is responsive to user needs, new tools, **open science / digital scholarship** new norms for transparency and reproducibility.	Medium
Ensure researchers have access to expert advice in **anonymising** and pseudonymising their data.	Medium
Alignment with College and School **Ethics committees** for data-related guidance.	Medium
Revisit **statistical training** and consultancy offerings with relevant parts of IS in light of Innovation Project outcome (Scoping Statistical Support).	Low

Theme E, Milestones & deliverables

- Communications Plan enacted.

- Successful annual Dealing with Data events.

- Topical meetings are scheduled and attended.

- Regular RDM Forum meetings.

- Periodic GDPR training sessions.

- Working with Personal and Sensitive Data training courses redesigned and tested.

- Income from external training/consultancy.

- GDPR and personal data guidance approved by DPO and Information Security team.

- DPIA assessments completed as required.

- Bi-annual data / software carpentry courses with SSI/EPCC.

- DCC trainers run University courses.

- Design two courses on Data Science topics.

- Database training delivered in RDM context.

- Scoping report on an Anonymisation advisory service.

- Successful pilot anonymisation advisory service.

- Service team members attend some REIRG meetings (Research Ethics and Integrity Review Group)

- Service team members speak to college and school ethics committees and report back.

- Suite of sample consent forms augmented for Vault suitability.

- Findings disseminated; meetings held.

- Next steps identified, with User Services Division involvement.

Challenges (1)

- Getting through the sheer volume of work in a coordinated way

- Managing stakeholder expectations as we go

- Keeping up with developments in data science and data stewardship and being responsive to signals of change

Challenges (2)

- Reaching beyond early adopters to majority of researchers

- Publish or perish culture; data as second class research object;

- Scholarly publishing commercial giants competing for the data space

- Making data FAIR in era of GDPR

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