Research Data Services in European University Libraries: Current Offerings and Plans for the Future

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A bit about me...

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DataONE Usability & Assessment Working Group: Assess the needs and motivations of various stakeholders for science data. (dataone.org)

Working Group on Scientific Information Infrastructures: ...collects good practices and lessons learned in the area of research data management in libraries.
Research Data Services are…

• …services that address the full data lifecycle, including the data management plan, digital curation (selection, preservation, maintenance, and archiving), and metadata creation and conversion.
Data Lifecycle

- Plan
- Collect
- Assure
- Describe
- Preserve
- Integrate
- Discover
- Analyze

DataONE
Library Challenges

- Plan
- Collect
- Assure
- Describe
- Preserve
- Analyze
- Integrate
- Discover
- Stewardship role (select & deselect)?
- Level of participation with data?
- What to do about metadata?
- Is there a repository for data?
- Level of my knowledge & skills?
- Partnering with researcher?
- Develop tools for data discovery?
- How to ensure preservation?
- DMP tools?
Research Data Services are...

- ...services that address the full data lifecycle, including the data management plan, digital curation (selection, preservation, maintenance, and archiving), and metadata creation and conversion.

- **Services** can be informational or technical
Informational/Advisory RDS

- Collaboration and outreach
- Policy development and planning
- Discussing RDS with others
- Reference for finding and citing data
- Creating web guides and finding aids
- Directly participating on a project
- Consulting on DMPs and metadata
- Training co-workers on data issues
Technical RDS

- Providing tech support for RDS systems/data repositories
- Identifying datasets for deposit in repositories
- Preparing datasets for deposit
- Deselecting datasets for removal from a repository
- Creating or transforming metadata
Assessment of Stakeholders

- Scientists
- Data Managers
- Citizen-scientists
- Students & Teachers
- Public Officials
- Publishers
- Libraries & Librarians
- Scientists
- Public Officials
- Citizen-scientists
- Publishers
- Libraries & Librarians
We are learning about Scientists

1\textsuperscript{st} Scientist Survey (2011)

Data Sharing by Scientists: Practices and Perceptions
Carol Tenopir, Suzie Allard, Kimberly Douglass, Arsev Umur Aydinoglu, Lei Wu, Eleanor Read, Maribeth Manoff, Mike Frame
Published: June 29, 2011 • http://dx.doi.org/10.1371/journal.pone.0021101

Views: 36,313
Citations: 205
Shares: 68
(published Jun 2011)

2\textsuperscript{nd} Scientist Survey (2015)

Changes in Data Sharing and Data Reuse Practices and Perceptions among Scientists Worldwide
Carol Tenopir, Elizabeth D. Dalton, Suzie Allard, Mike Frame, Ivanka Pjesivac, Ben Birch, Danielle Pollock, Kristina Dorsett
Published: August 26, 2015 • http://dx.doi.org/10.1371/journal.pone.0134826

Views: 8,511
Citations: 8
Shares: 165
(published Aug 2015)
Results of DataONE *scientists* surveys show opportunities for universities and libraries...
Researchers might...

- DIF: 1.70%
- DwC: 2%
- DC: 7%
- Open GIS: 7%
- FDGC: 8.50%
- EML: 9.30%
- ISO/Other: 10.20%
- Lab standard: 16.70%
- None: 47.90%
Most are willing to share at least some data…
I am willing to:

- Place all of my data into a central data repository (2014 n=609)
- Place at least some of my data into a central repository (2014 n=623)
Gap between willingness to share and accessibility

• Although 80% of scientists agree “I share my data”

• Only 46% agree “Others can access my data easily”
Barriers for scientists

- I need to publish: 44%
- Insufficient time: 39%
- I don’t have rights: 26%
- Lack of funding: 25%
- Do not need data: 25%
- Lack of standards: 18%
- No place to put data: 18%
- Should not be available: 13%
- Insufficient skills: 13%
However, lack of access to data ...

... is a major impediment to progress in science

  75% agree or strongly agree.

... has restricted my ability to answer scientific questions

  53% agree or strongly agree.
Libraries…

• Facilitate interdisciplinary work and data knowledge through collections and services
• Understand metadata
• Know how to find information about data
• In partnership with other administrative units can take a leadership role in a variety of research data services
European Survey Builds on Previous DataONE Library Surveys

1st Library (2012)

Citations: 82
(published June 2012)

2nd Library (2015)

Citations: 11
1,518 downloads
(published Dec 2015)

Survey Respondents

- North: 19%
- East: 17%
- West: 51%
- South: 13%

LIBER Academic Library Membership

- North: 15%
- East: 16%
- West: 53%
- South: 17%
Key Findings

1. LIBER academic libraries offer a range of Research Data Services, but…

2. Consultative RDS are most common (fewer libraries offer technical RDS)

3. Libraries use a variety of strategies for developing staff skills
1) LIBER academic libraries offer a range of Research Data Services
RDS offered by most libraries currently

- Discussing RDS with others: 77%
- Involved in policy development/planning: 66%
- Training colleagues on RDS: 54%
- Consulting on data management plans: 46%
- Consulting on data and metadata standards: 44%
- Outreach/collaboration with other RDS providers: 43%
RDS offered continued

- Providing tech. support for RDS: 38% (Technical)
- Providing ref. support for finding/citing data: 37% (Consultative)
- Creating webguides: 35% (Consultative)
- Direct participation with researchers: 32% (Consultative)
- ID datasets: 26% (Technical)
2) Consultative are more commonly offered than technical RDS
Currently offered and future plans for consultative-type services

- **Discussing RDS with others on a...**
  - Yes: 77%
  - No, but plan to: 15%
  - No, and no plans: 8%  

- **Involved in policy...**
  - Yes: 66%
  - No, but plan to: 25%
  - No, and no plans: 8%

- **Training coworkers on RDS**
  - Yes: 54%
  - No, but plan to: 34%
  - No, and no plans: 13%

- **Consulting on data mgmt plans**
  - Yes: 46%
  - No, but plan to: 43%
  - No, and no plans: 11%

- **Consulting on metadata stds.**
  - Yes: 44%
  - No, but plan to: 42%
  - No, and no plans: 14%

- **Outreach/collab. With others**
  - Yes: 43%
  - No, but plan to: 41%
  - No, and no plans: 16%

- **Create Web guides**
  - Yes: 49%
  - No, but plan to: 49%
  - No, and no plans: 16%

- **Provide reference support**
  - Yes: 37%
  - No, but plan to: 35%
  - No, and no plans: 15%

- **Direct participation with researchers**
  - Yes: 32%
  - No, but plan to: 32%
  - No, and no plans: 36%
Currently offered and future plans for technical-type services

- Providing technical support for...
  - Yes: 38%
  - No, but plan to: 42%
  - No, and no plans: 21%

- Preparing data/sets for deposit
  - Yes: 26%
  - No, but plan to: 48%
  - No, and no plans: 26%

- Create/Transform metadata
  - Yes: 25%
  - No, but plan to: 44%
  - No, and no plans: 31%

- Deaccession of data
  - Yes: 26%
  - No, but plan to: 45%
  - No, and no plans: 30%

Legend:
- Yes
- No, but plan to
- No, and no plans
We also know…

- There is great variation between libraries
- Some universities and some countries within a region are ahead in RDS
3) Libraries have a variety of strategies for developing staff skills
Have you hired staff for RDS in the last 12 months?

- **Yes**: 61.20%
- **No**: 38.80%
Has your library provided opportunities for library staff to develop skills related to RDS?

- Yes: 83.9%
- No: 16.1%
Which of the following opportunities has your library provided for library staff to develop skills related to RDS?

- Support for staff to attend conferences & workshops: 78%
- Support for staff to take courses related to RDS: 60%
- Support for staff to join working groups related to RDS: 59%
- In-house staff workshops: 47%
- Collaboration with others with skills related to RDS: 9%
Staff Skills Development

**Strategies**

- Collaborated with another institution to develop a skills-based MOOC
- Hired staff for projects (not permanent)
- Refocused an existing role
- Moved staff from other support unit [ITS]
- Dramatically increase the workload of some poor individual librarian
Assistance with training

http://datalib.edina.ac.uk/mantra/
Tools for RDS Education and Assistance

https://www.dataone.org/education-modules
DataONE Education Modules

1. Why Data Management
2. Data Sharing
3. Data Management Planning
4. Data Entry and Manipulation
5. Data Quality Control and Assurance
6. Protecting Your Data
7. Metadata
8. How to Write Quality Metadata
9. Data Citation
10. Analysis and Workflows
11. Legal and Policy Issues
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