Library Needs & the LERU Roadmap for Research Data

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LIBER: reinventing the library of the future

❑ Largest network of European research libraries: 410 in over 40 countries

Mission:

"To provide an information infrastructure to enable research in LIBER institutions to be world class"

What are the elements of this infra?

❑ Content

❑ Tools and infrastructure

❑ Skills

❑ Policy

Content

- ❑ Digitised cultural heritage
- ❑ Born digtial
- ❑ Research data
- ❑ Publications

Must be:

"*authentic, reliable, easy to find and retrieve, and easy to use and reuse*"

Tools & Infrastructure

- ❑ Trust
- ❑ Interoperability
- ❑ Shared service to decrease inefficiences and increase impact
- ❑ Metadata in, linked open data out
- ❑ Seamless (federated?) access
- ❑ Opportunities for community driven experiments and tools
- ❑ Trust

About LERU

❑ The League of European Research Universities

❑ 21 Research Universities

❑ Policy and cooperation

❑ 1/5 funding comes from research grants

❑ Research data expert group

Policy: Origins of the LERU Roadmap

❑ Recognition of the enormous potential
value of making data open

❑ Open science revolution

❑ Make publication of data in reusable
format mandatory

Science as an
open enterprise

THE
ROYAL
SOCIETY
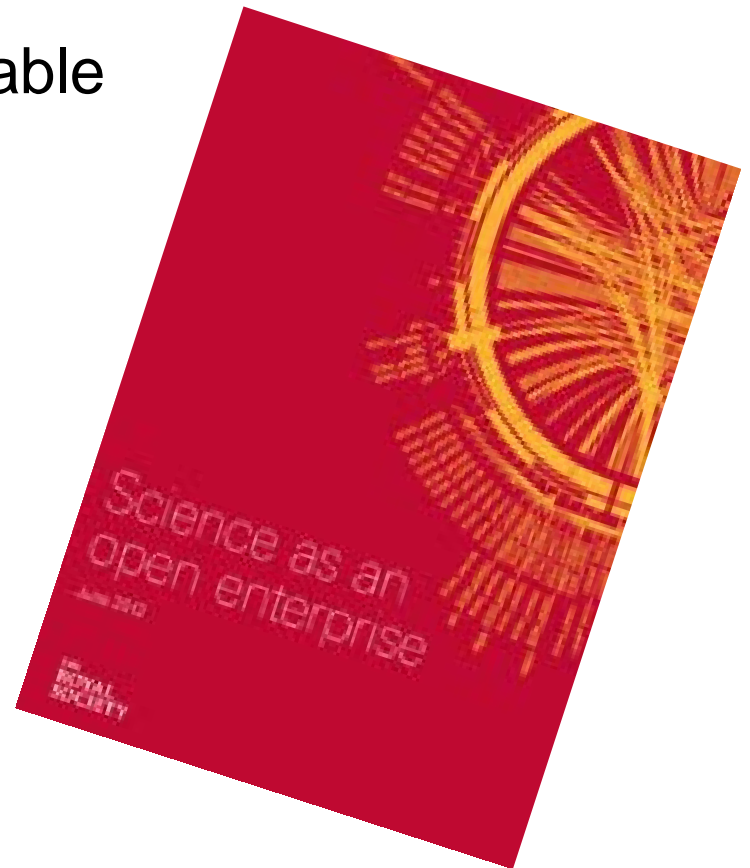
Pablo Achard (University of Geneva)
Paul Ayris (UCL, University College London)
Serge Fdida (UPMC, Paris)
Stefan Gradmann (University of Leuven)
Wolfram Horstmann (University of Oxford)
Ignasi Labastida (University of Barcelona)
Liz Lyon (University of Bath)
Katrien Maes (LERU)
Susan Reilly (LIBER)
Anja Smit (University of Utrecht)

L E R U

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LERU ROADMAP FOR RESEARCH DATA

LERU RESEARCH DATA WORKING GROUP

LEAGUE OF EUROPEAN RESEARCH UNIVERSITIES

University of Amsterdam - Universitat de Barcelona - University of Cambridge - University of Edinburgh - University of

http://www.leru.org/index.php/public/publications/category/advice-papers/

Six Key Areas

❑ Policy and Leadership

❑ Advocacy

❑ Selection and Collections, Curation, Description, Citation, Legal Issues

❑ Research Data Infrastructure

❑ Costs

❑ Roles, Responsibilities and Skills

Policy & Leadership

❑ Individual institutions should construct their own roadmap to guide policy development

❑ Institutions should develop a data policy, with supporting guidelines, which outlines the roles and responsibilities of stakeholders

Advocacy

❑ Debate on open data across stakeholders and disciplines

❑ Crucial to the success of research data sharing

❑ Promote best practice in data management, citation, interoperability

❑ Incentivise- best practice for promotion and rewards
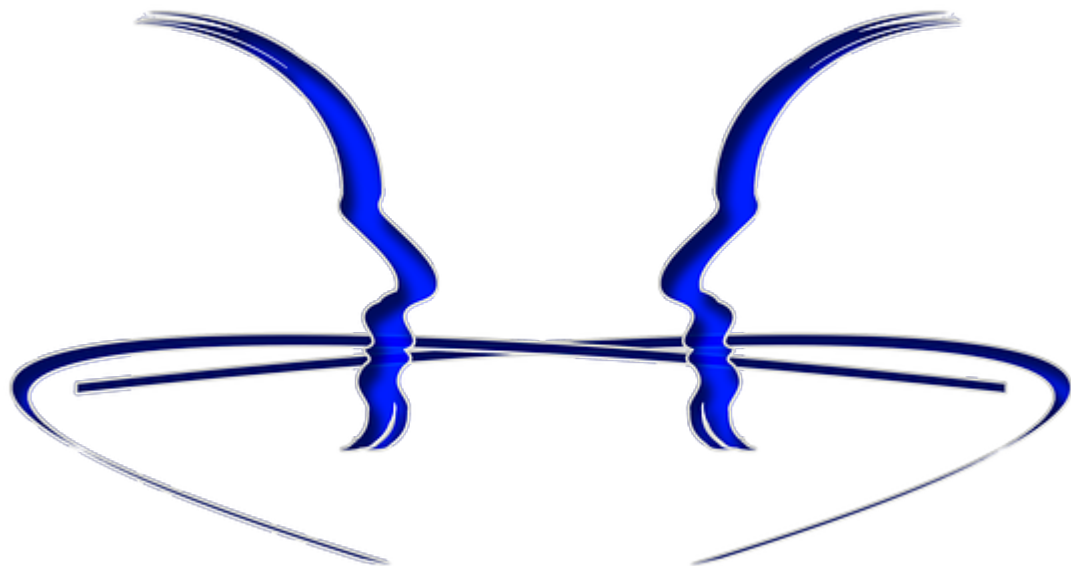
Selection, Collection Curation, Description, Citation & Legal Issues

- ❑ Consensus on which data to make open?
- ❑ Interoperability (metadata standards)
- ❑ Simple guides and principles based on funder mandates, data centre requirements etc.
- ❑ Who owns the data?
- ❑ Guidelines on licencing
- ❑ Legal clarity

Which data to make open?
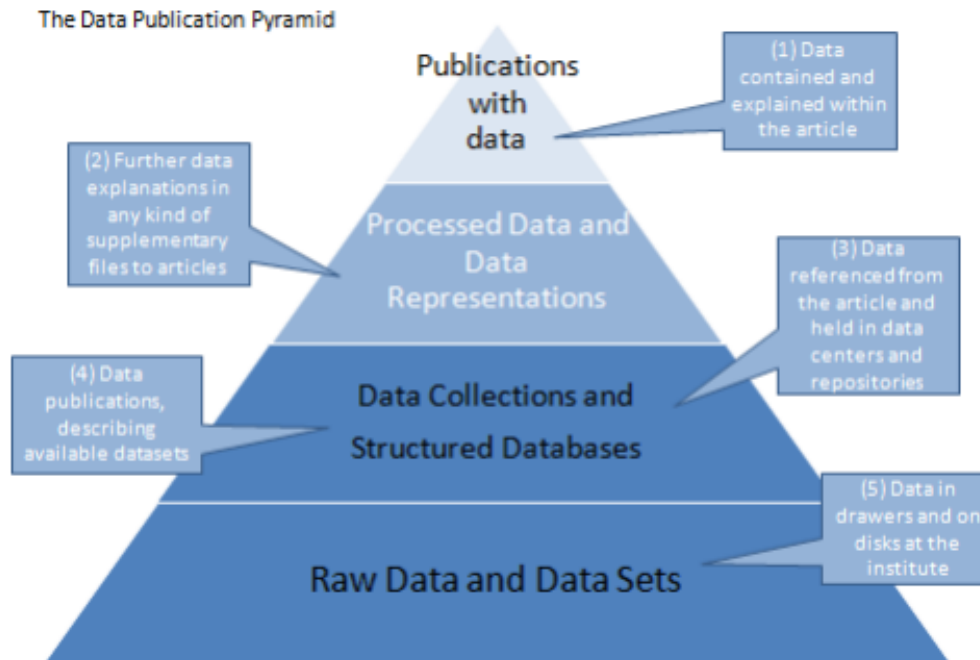
Graph 1: The Data Publication Pyramid, developed on the basis of the Jim Gray pyramid, to express the different manifestation forms that research data can have in the publication process.

Research Data Infrastructure

❑ Infrastructure that can cope with the heterogenity of data

❑ Institutional infrastructure and tools to fill gaps in exisiting external infrastructure

❑ Tools for creation and analysis, administration, documentation, storage, archiving and publication, discovery

❑ Long tail data

❑ Coherent services

Costs

❑ Between 1 and 2 million pounds to set up

❑ Circa 500,000 pounds to maintain

❑ Best practice in cost modelling

❑ Shared institutional data management services

Roles, Responsibilities & Skills

❑ Clear outline of roles and responsibilties

❑ Investments in skills and CPD

❑ Foster open science

Recommendations for all involved in curation of research data

❑ Best practice for describing research data

❑ Standards for interoperability

❑ Research data infrastructure needs to offer a generic framework for a wide variety of research processes and outputs to create, process and share data

❑ Open by default

Development of skilled professionals

Demand for support and guidance

Incentivise reseachers

**Inplement standards for
Interoperability e.g. metadata**

Ownership & ethics

Open by default

Wellcome Images

Getting started in RDM?

❑ LIBER working group on scientific information infrastructures

Ten recommendations for libraries to get started with research data management

1. Offer research data management support, including data management plans for grant applications, intellectual property rights advice and information materials. Assist faculty with data management plans and the integration of data management into the curriculum.
2. Engage in the development of metadata and data standards and provide metadata services for research data.
3. Create Data Librarian posts and develop professional staff skills for data librarianship.
4. Actively participate in institutional research data policy development, including resource plans. Encourage and adopt open data policies where appropriate in the research data life cycle.
5. Liaise and partner with researchers, research groups, data archives and data centers to foster an interoperable infrastructure for data access, discovery and data sharing.

6. Support the lifecycle for research data by providing services for storage, discovery and permanent access.
7. Promote research data citation by applying persistent identifiers to research data.
8. Provide an institutional Data Catalogue or Data Repository, depending on available infrastructure.
9. Get involved in subject specific data management practice.
10. Offer or mediate secure storage for dynamic and static research data in co-operation with institutional IT units and/or seek exploitation of appropriate cloud services.

http://www.libereurope.eu/news/ten-recommendations-for-libraries-to-get-started-with-research-data-management

Getting started in RDM

❑ Need for cross service collaboration

❑ Strong case for coherent support service

❑ Lack of clarity about what research data is and how it should be made accessible

❑ Need to go beyond the institution

❑ Investment in advocacy and awareness raising

Next steps

❏ Recheck the gap
❏ Identify new competencies
and skills

LIBER, ARL & COAR joint task force on Librarians'
Competencies in Support of E-Research and Scholarly
Communication

A discipliary approach?

- ❑ ReCODE: policy recommendations for open access to research data in Europe
  - ❑ Disciplinary approach
  - ❑ Values, Infrastructure, Legal & Ethical, Institutional
- ❑ One size does not fit all
  - ❑ Values differ across disciplines
  - ❑ As does data
  - ❑ And RDM practices
- ❑ Attitudes and practices will change over time
  - ❑ Increase in skills
  - ❑ Availability of infrastucture
  - ❑ Evidence and incentives
  - ❑ Legislative change will impact practices

http://recodeproject.eu/

Policy, technology and support services must be aligned!

Thank you!

❑ Any questions?

❑ Find out more at www.libereurope.eu