Data: opportunities for libraries

Kevin Ashley
Digital Curation Centre
www.dcc.ac.uk
@kevingashley
Kevin.ashley@ed.ac.uk

The DCC is supported by Jisc

DCC because good research needs good data

A summary

- A recap of why anyone cares about research data
- A focus on research data: library roles, institutional roles
- A nod to other data-related roles for libraries
- Note absence of BIG
  - A large collection of small data is big data
- But first, an apology

I am a

blogging about digital archives, scholarship & repositories since 2007

Home | Digital Archives | Repositories | Training | Web Archiving | Digitisation | Links | About the blog

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1781	8603	1	LEE VALLEY WATER COMPANY	8504	1	60	1	1	4	T
1891	8112	2	MERSEY DOCKS & HARBOUR COMPANY	8101	1	70	1	1	3	T
1891	8212	1	MERSEY DOCKS & HARBOUR COMPANY	8201	1	70	1	1	3	T
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pp. 5-13 **Prenormative Research into Standard Messaging Formats for Engineering Materials Data**
Tim Austin, Chris Bullough, Dimitri Gagliardi, David Leal, Malcolm Loveday
ABSTRACT | FULL TEXT PDF | doi:10.2218/ijdc.v8i1.245

pp. 14-28 **Can Persistent Identifiers Be Cool?**
Barbara Bazzanella, Stefano Bortoli, Paolo Bouquet
ABSTRACT | FULL TEXT PDF | doi:10.2218/ijdc.v8i1.246

pp. 29-41 **Data Management and Preservation Planning for Big Science**

FONT SIZE

INFORMATION
- For Readers
- For Authors
- For Librarians

My home – the DCC

- Mission – to increase capability and capacity for research data services in UK institutions
- Not just a UK problem – an international one
- Training, shared services, guidance, policy, standards, futures

What is data curation ?

- “Maintaining, preserving and adding value to research data throughout its lifecycle”
- More than preservation:
  - Active management – dealing with change
- Less than preservation:
  - Lifecycle sometimes involves destruction
- Sometimes, not always, about sharing, publication or citation

Why care?

- Data is expensive – an investment
- Reuse:
  - More research
  - Teaching & Learning
  - Planning
- Impact – with or without publication
- Accountability
- Legal & regulatory requirements

Why does this matter?

- Research quality
  - How close can we get to the truth?
- Research speed
  - How quickly can we get to the truth?
- Research finance
  - How much does the truth cost?

- Improving one or more of these is of interest to all actors:
- Researchers as data creators
- Researchers as data reusers
- Research institutions
- Funders – hence government and society

G8UK - Endorses OA Open Data Charter Policy Paper 18 June 2013

G8UK - Billigt offenen Zugang Eine offene Daten Charter Strategiepapier.

Cabinet Office

Policy paper

G8 Open Data Charter and Technical Annex

Published 18 June 2013

Contents

1. Principle 1: Open Data by Default
2. Principle 2: Quality and Quantity
3. Principle 3: Usable by All
4. Principle 4: Releasing Data for Improved Governance
5. Principle 5: Releasing Data for Innovation
6. Technical annex

Funder requirements

- UK

http://www.epsrc.ac.uk/about/standards/researchdata/Pages/policyframework.aspx

- USA – NSF, NEH, NIH
- Europe

- Most place burden on researcher – some on the institution

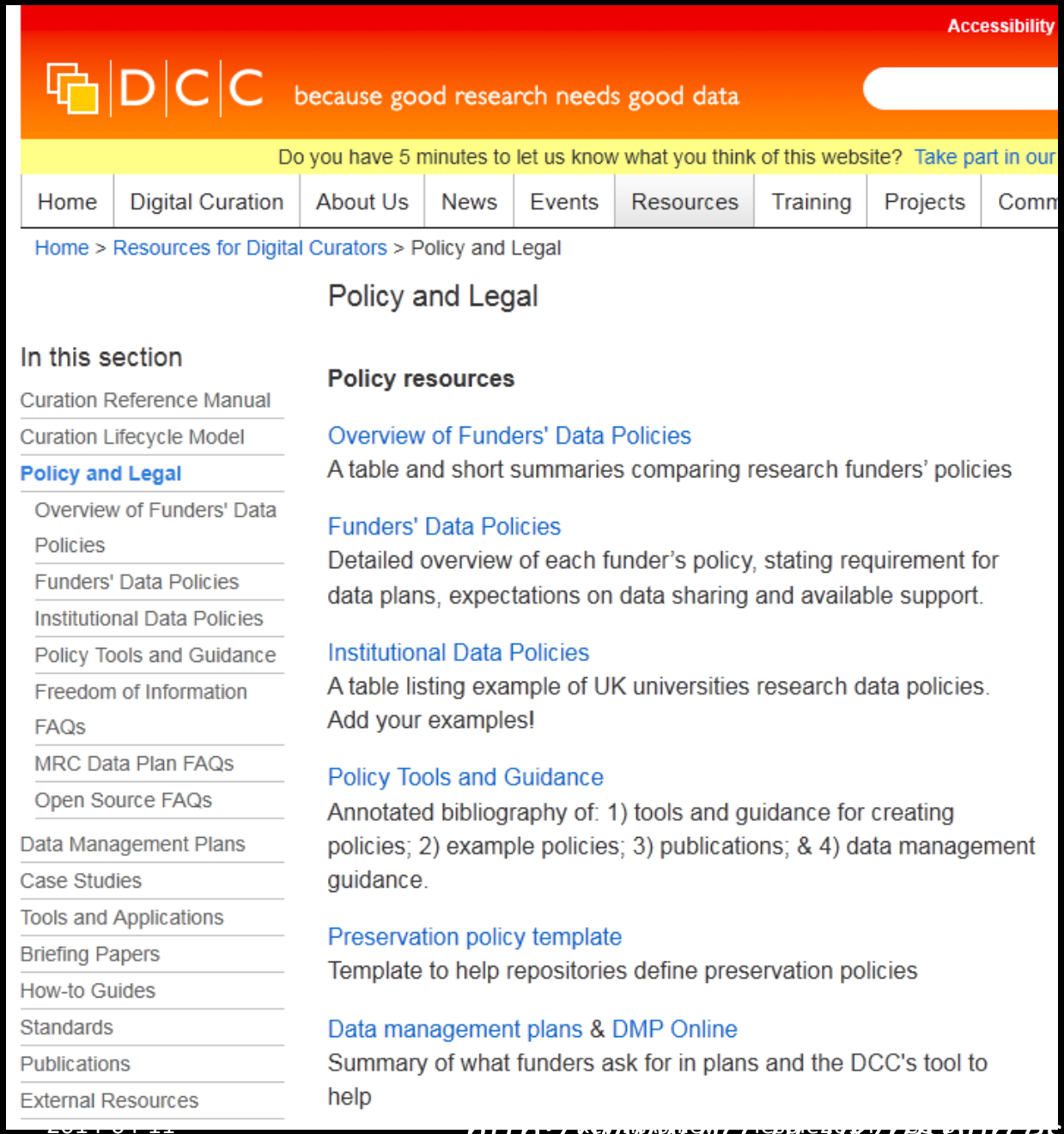
RCUK policy - The 1-minute version

- Research data are a public good – make openly available in timely & responsible way
- Have policies & plans. Data with long-term value should be preserved & usable
- Metadata for discovery & reuse. Link publications & data
- Sometimes law, ethics get in the way. We understand.
- Limited embargos OK. Recognition is important – always cite data sources
- OK to use public money to do this. Do it efficiently.

EPSRC policy points

- Awareness of regulatory environment
- Data access statement
- Policies and processes
- Data storage
- Structured metadata descriptions
- DOIs for data
- Securely preserved for a minimum of 10 years **from last use**

Compliance expected by 2016



DCC Policy Summary

http://www.dcc.ac.uk/resources/policy-and-legal

Data reuse stories

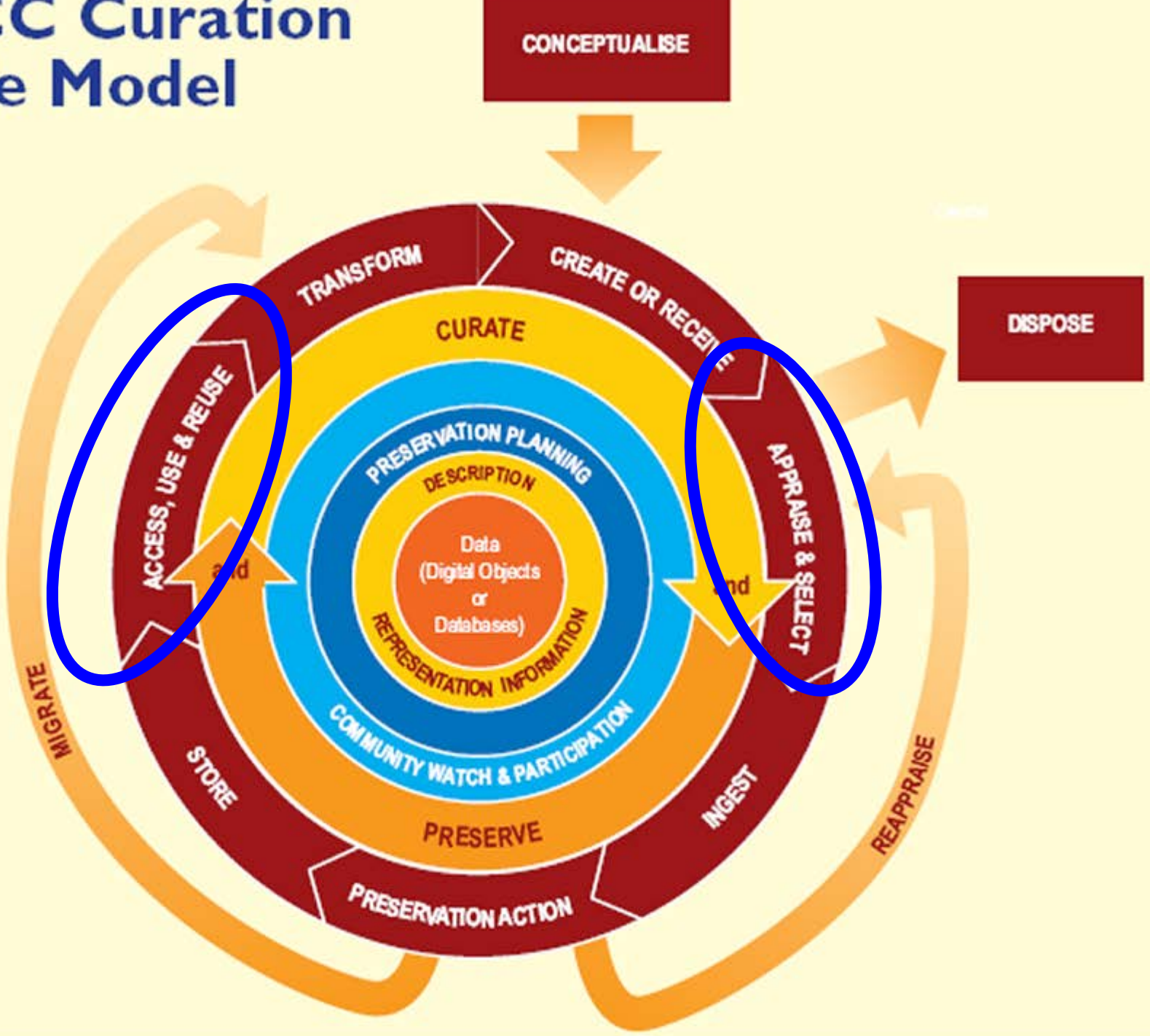
- The palaeontologist who saved years of work with archaeological data
- The ‘noise’ from research radar that mapped dust from Eyjafjallajökull
- The 19th-century ships logs that help us model climate change

Often your data tells stories that your publications do not

Compliance

Benefits

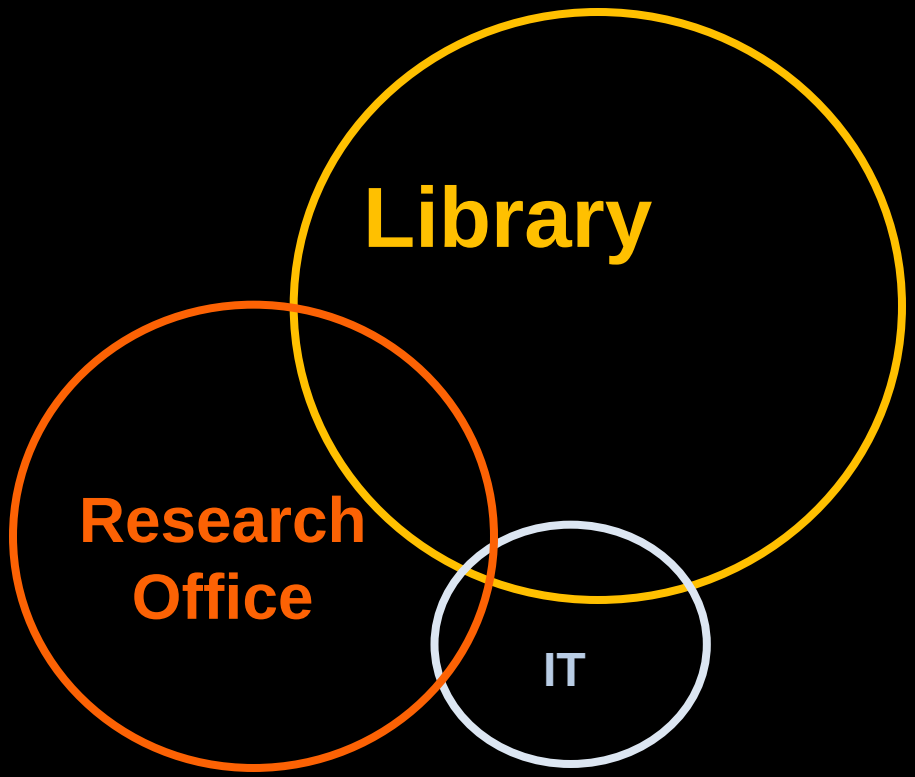
The DCC Curation Lifecycle Model



Some library roles

- Leadership – coordinate action
- Audit – who has what, where does it go?
- Advice on access – data, wherever it is
- Preservation – permanence
- Citability
- Data/publication linking
- Promoting data in teaching
- Selection
- Education – early career researchers

Who (in the UK) is addressing RDM ?



How?

- Create policy – collaborate with others
- Develop existing digital services
- Learn about audit tools (DCC & others)
- Learn about data & sources
- Reskill subject librarians
- Learn about your own data
- Bridge between publishers & researchers

Understanding Data Requirements

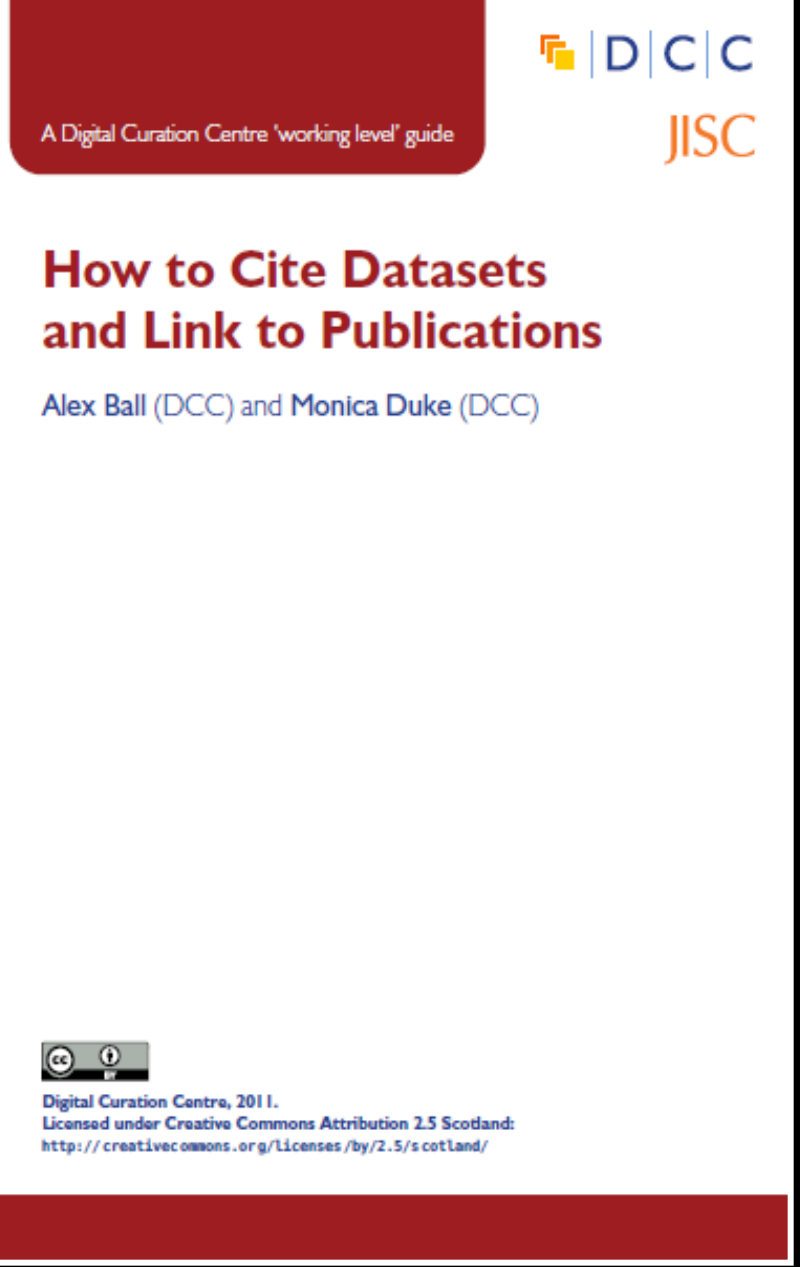
Data Asset Framework

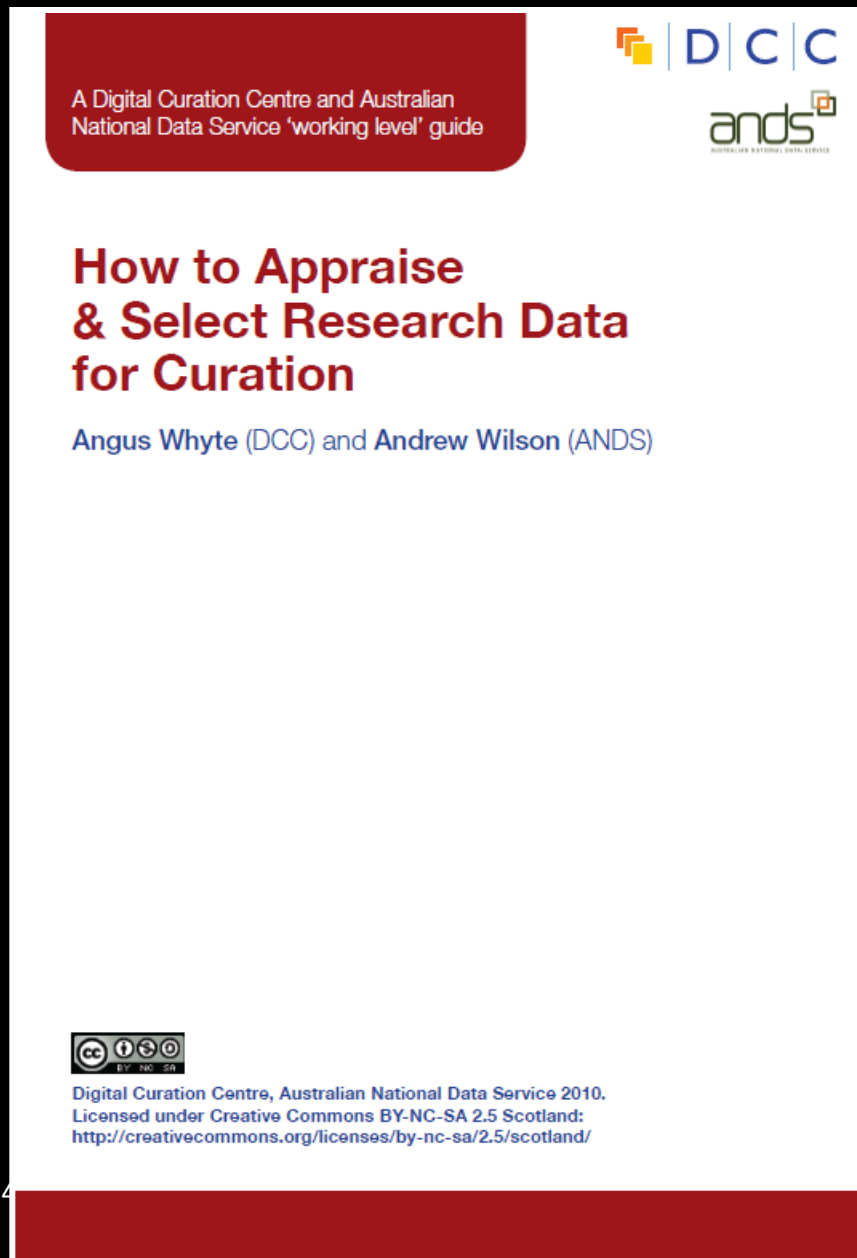
CARDIO
collaborative assessment of research data infrastructure and objectives

If research data lies at the heart of your organisation, you need to know that you have adequate infrastructure, staff skills and resources, and senior management support in place to ensure that your data is effectively managed for validation, reuse and evidential purposes.

CARDIO enables you to:

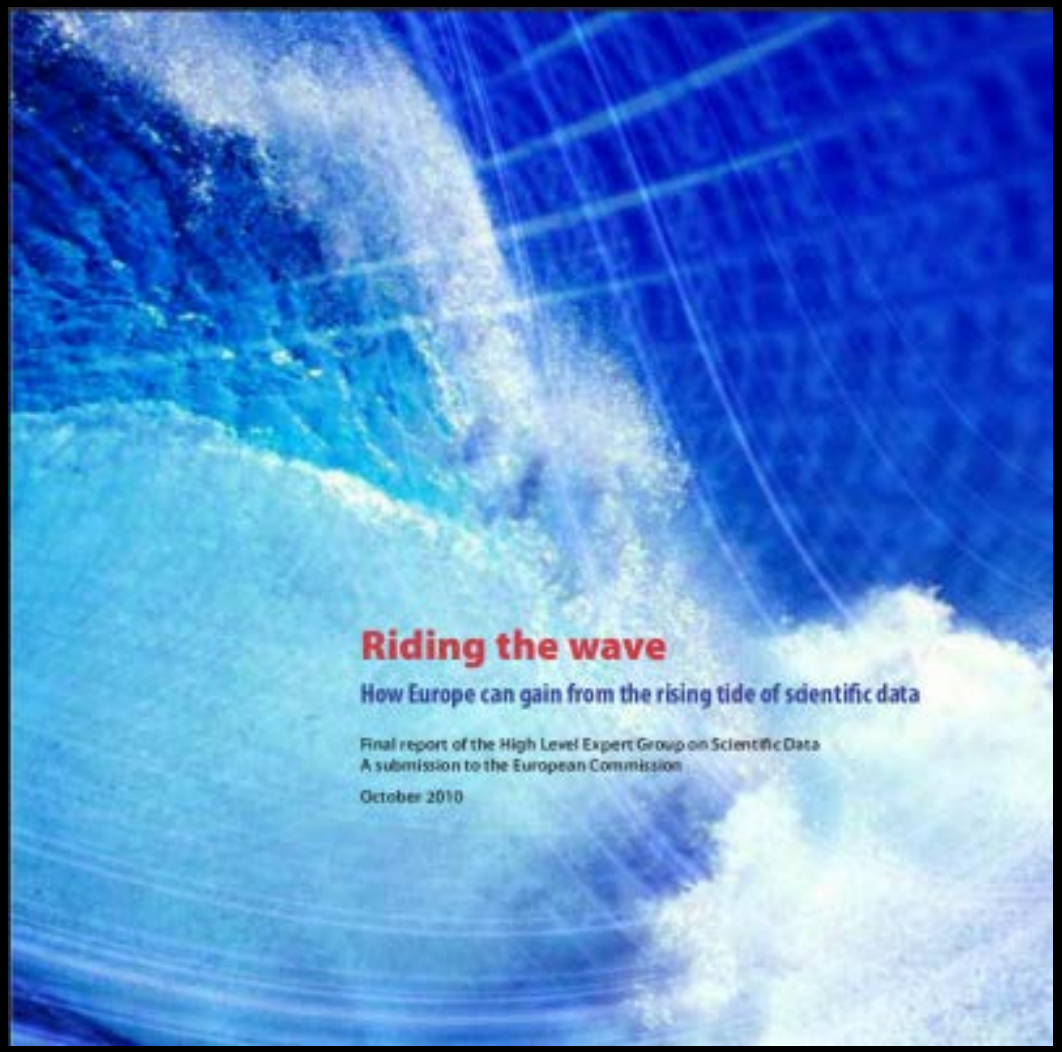
- collaboratively assess data management requirements, activity, and capacity at your institution
- build consensus between data creators, information managers and service providers
- identify practical goals for improvement in data management provision and support;
- identify operational inefficiencies and opportunities for cost saving;
- make a compelling case to senior managers for investment in data management support





How to cite data

The Data Deluge is upon us



Sensor's ability to produce data outstrips IT's ability to process it

Findable, citable data has value

- Important to link publications to data (and vice versa)
- Increases citations – of data & publication
- Increases reuse (hence value)
- But effects exist even without publication, if data is:
  - Archived
  - Citable
  - Discoverable
- All benefit – researcher; institution; publisher

MORAL: build a data registry

How?

- Create policy – collaborate with others
- Develop existing digital services
- Learn about audit tools (DCC & others)
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- Reskill subject librarians
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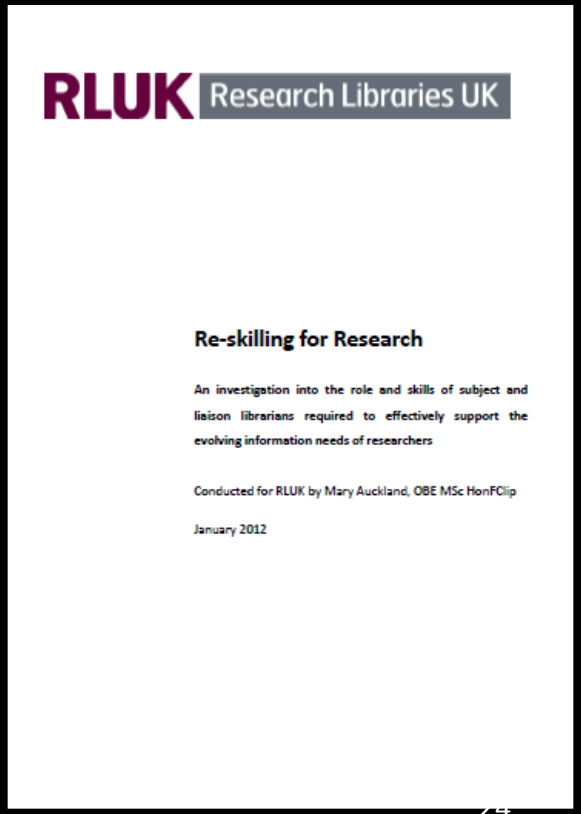
- Bridge between publishers & researchers

RLUK/Mary Auckland: Reskilling for Research 9 areas are skill gaps for subject librarians


RLUK Research Libraries UK

Re-skilling for Research

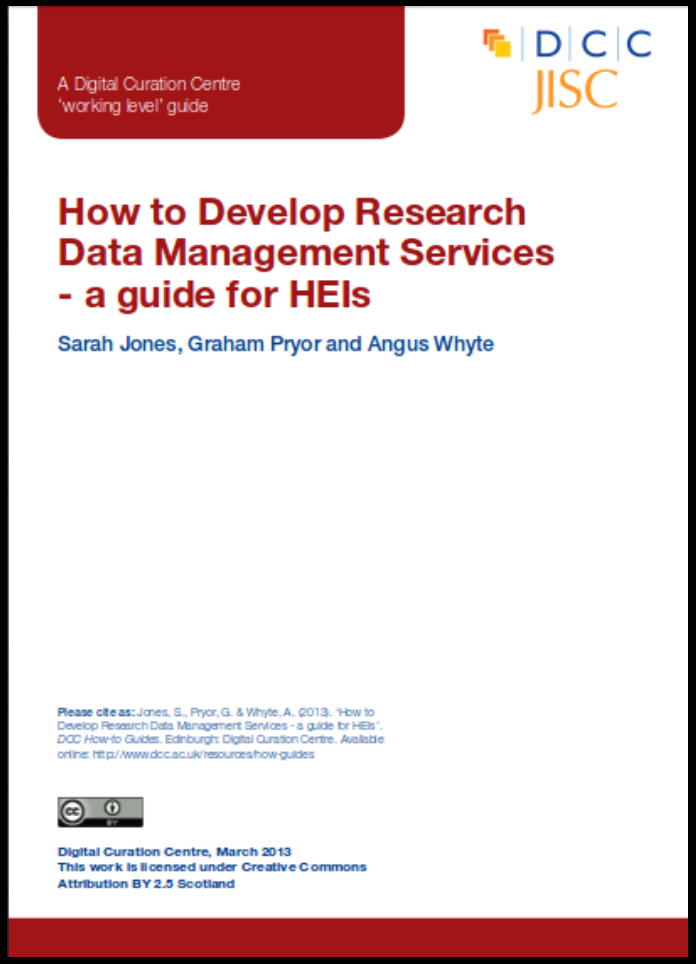
An investigation into the role and skills of subject and liaison librarians required to effectively support the evolving information needs of researchers

Conducted for RLUK by Mary Auckland, OBE MSc HonFCilp

January 2012

Sheila Corrall: Libraries, Librarians and Data
Many action exemplars

Other helpful guides



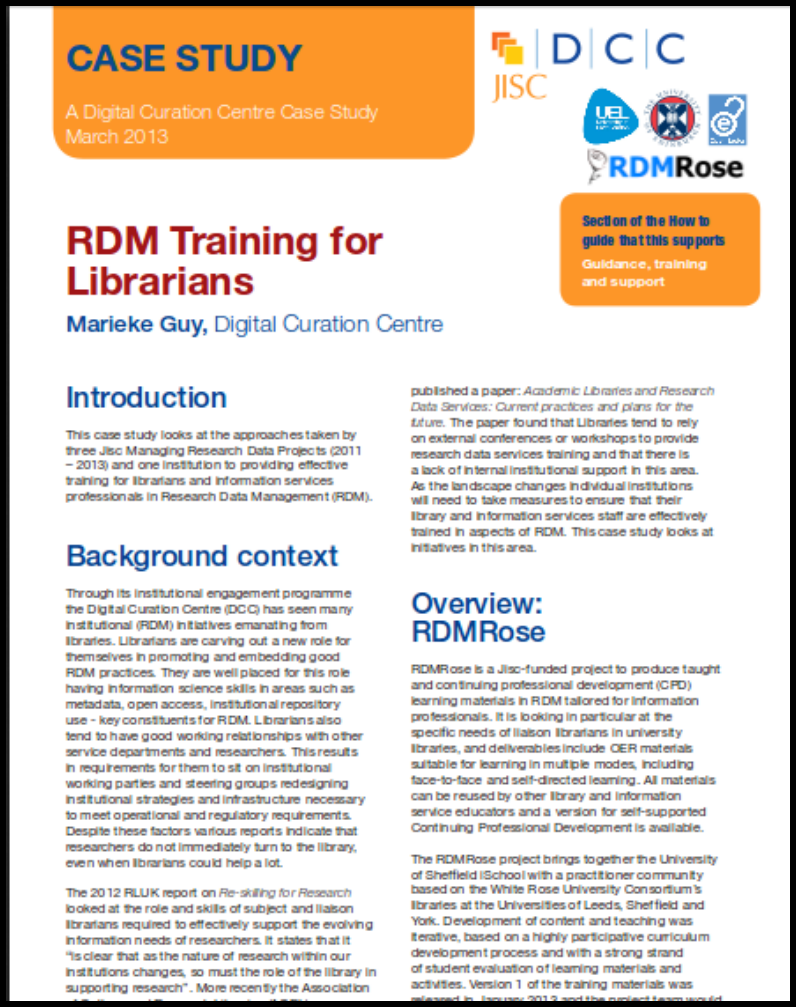
A Digital Curation Centre
'working level' guide

DCC JISC

How to Develop Research Data Management Services - a guide for HEIs

Sarah Jones, Graham Pryor and Angus Whyte

Please cite as: Jones, S., Pryor, G. & Whyte, A. (2013). 'How to Develop Research Data Management Services - a guide for HEIs'. *DCC How-to Guides*. Edinburgh: Digital Curation Centre. Available online: http://www.dcc.ac.uk/resources/how-guides



CASE STUDY

A Digital Curation Centre Case Study
March 2013

DCC JISC

RDMRose

Section of the How to guide that this supports
Guidance, training and support

RDM Training for Librarians

Marieke Guy, Digital Curation Centre

Introduction

This case study looks at the approaches taken by three Jisc Managing Research Data Projects (2011 – 2013) and one institution to providing effective training for librarians and information services professionals in Research Data Management (RDM).

Background context

Through its institutional engagement programme the Digital Curation Centre (DCC) has seen many institutional (RDM) initiatives emanating from libraries. Librarians are carving out a new role for themselves in promoting and embedding good RDM practices. They are well placed for this role having information science skills in areas such as metadata, open access, institutional repository use - key constituents for RDM. Librarians also tend to have good working relationships with other service departments and researchers. This results in requirements for them to sit on institutional working parties and steering groups redesigning institutional strategies and infrastructure necessary to meet operational and regulatory requirements. Despite these factors various reports indicate that researchers do not immediately turn to the library, even when librarians could help a lot.

The 2012 RLUK report on *Re-skilling for Research* looked at the role and skills of subject and liaison librarians required to effectively support the evolving information needs of researchers. It states that it "is clear that as the nature of research within our institutions changes, so must the role of the library in supporting research". More recently the Association published a paper: *Academic Libraries and Research Data Services: Current practices and plans for the future*. The paper found that Libraries tend to rely on external conferences or workshops to provide research data services training and that there is a lack of internal institutional support in this area. As the landscape changes individual institutions will need to take measures to ensure that their library and information services staff are effectively trained in aspects of RDM. This case study looks at initiatives in this area.

Overview: RDMRose

RDMRose is a Jisc-funded project to produce taught and continuing professional development (CPD) learning materials in RDM tailored for information professionals. It is looking in particular at the specific needs of liaison librarians in university libraries, and deliverables include OER materials suitable for learning in multiple modes, including face-to-face and self-directed learning. All materials can be reused by other library and information service educators and a version for self-supported Continuing Professional Development is available.

The RDMRose project brings together the University of Sheffield iSchool with a practitioner community based on the White Rose University Consortium's libraries at the Universities of Leeds, Sheffield and York. Development of content and teaching was iterative, based on a highly participative curriculum development process and with a strong strand of student evaluation of learning materials and activities. Version 1 of the training materials was

How?

- Create policy – collaborate with others
- Develop existing digital services
- Learn about audit tools (DCC & others)
- Learn about data & sources
- Reskill subject librarians
- Learn about your own data
  - Help promote data literacy
- Bridge between publishers & researchers

DCC because good research needs good data

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ome > Projects > Incremental

Incremental

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en Science Case Studies

The Incremental project is a collaboration between Cambridge University Library and HATII at the University of Glasgow. The project is about engaging with researchers to understand their concerns and needs with regards to data management, namely - how should you create data to make sure in can be found, accessed, understood and reused in the long-term - and

Incremental project

All UK HEIs must take steps to improve data curation activities. The Incremental project is working with researchers at the Universities of Cambridge and Glasgow to build their knowledge of data mangement, identify their requirements for support and fill any gaps. Findings will be shared to help support other HEIs.

Internet

http://www.flickr.com/photos/mattimattila/3003324844/

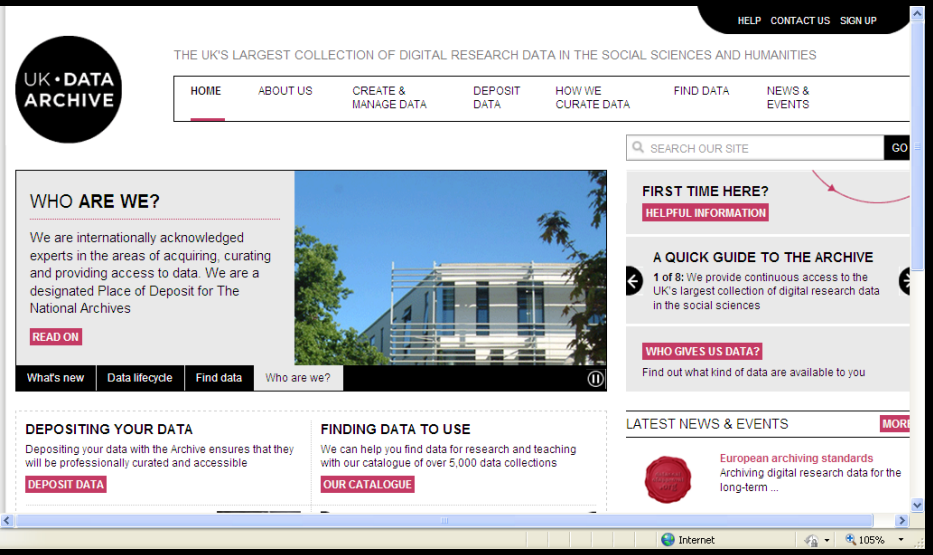
"Departments don't have guidelines or norms for personal back-up and researcher procedure, knowledge and diligence varies tremendously. Many have experienced moderate to catastrophic data loss"

Incremental Project Report, June 2010

Excuses – and responses

- "People will ask questions"
  - So use a data centre or repository
- "It will be misinterpreted"
  - Stuff happens. Also, openness encourages correction
- "It's not interesting"
  - Let others be the judge – your noise is my signal
- "I might get another paper out of it"
  - Up to a point. We might get more research out of it
- "I don't have permission"
  - A real problem. But solvable at senior level
- "It's too bad/complicated" –see above
- "It's not a priority"
  - Unfortunately, funders are making it so. But if you looked at the evidence, it would be your priority as well

See e.g. Carly Strasser's blog:
http://datapub.cdlib.org/2013/04/24/closed-data-excuses-excuses/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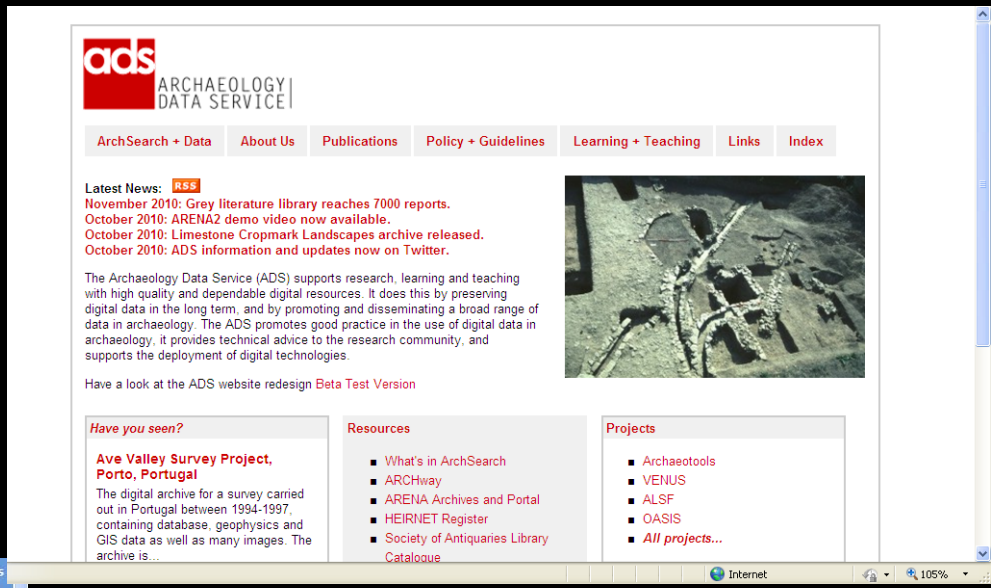
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November 2010: Grey literature library reaches 7000 reports.
October 2010: ARENA2 demo video now available.
October 2010: Limestone Cropmark Landscapes archive released.
October 2010: ADS information and updates now on Twitter.
The Archaeology Data Service (ADS) supports research, learning and teaching with high quality and dependable digital resources. It does this by preserving digital data in the long term, and by promoting and disseminating a broad range of data in archaeology. The ADS promotes good practice in the use of digital data in archaeology, it provides technical advice to the research community, and supports the deployment of digital technologies.
Have a look at the ADS website redesign Beta Test Version
Have you seen?
Ave Valley Survey Project, Porto, Portugal
The digital archive for a survey carried out in Portugal between 1994-1997, containing database, geophysics and GIS data as well as many images. The archive is...
Resources
What's in ArchSearch
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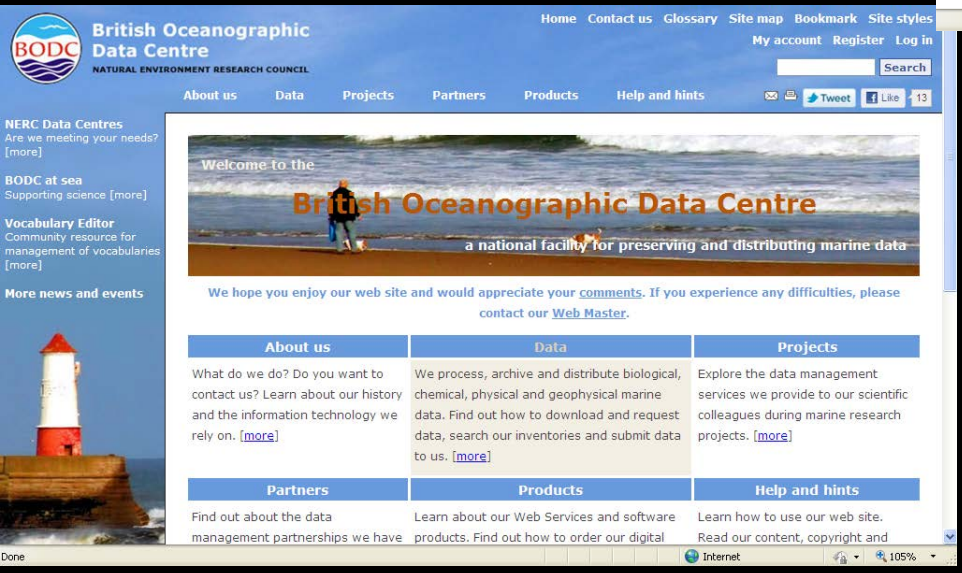
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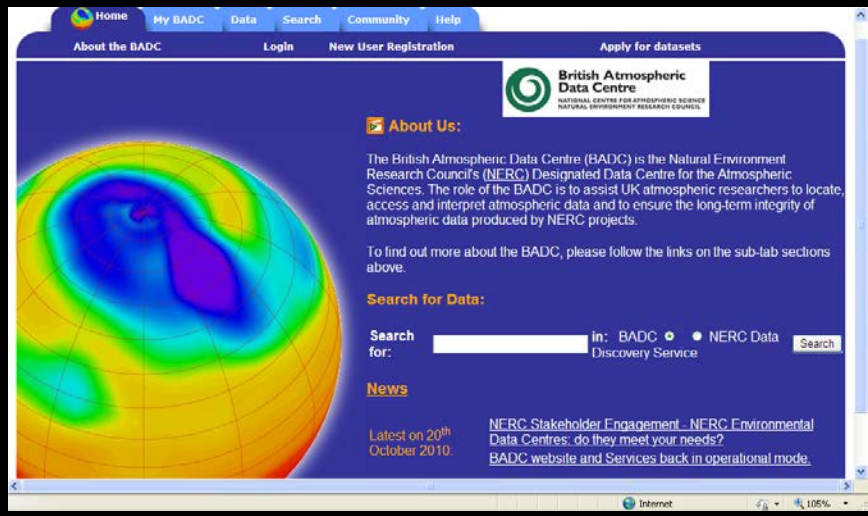
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To find out more about the BADC, please follow the links on the sub-tab sections above.
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News
Latest on 20th October 2010:
NERC Stakeholder Engagement - NERC Environmental Data Centres: do they meet your needs?
BADC website and Services back in operational mode.
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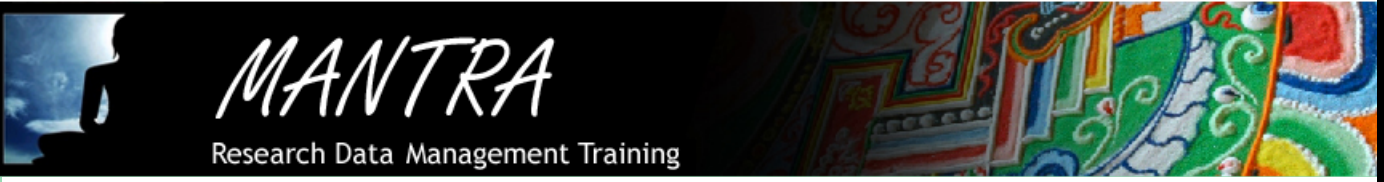
What about collaboration?

- Collaborate within the university
- Collaborate with partners
- Collaborate with regional, national services
- Not everything can be done well locally
- Some examples…

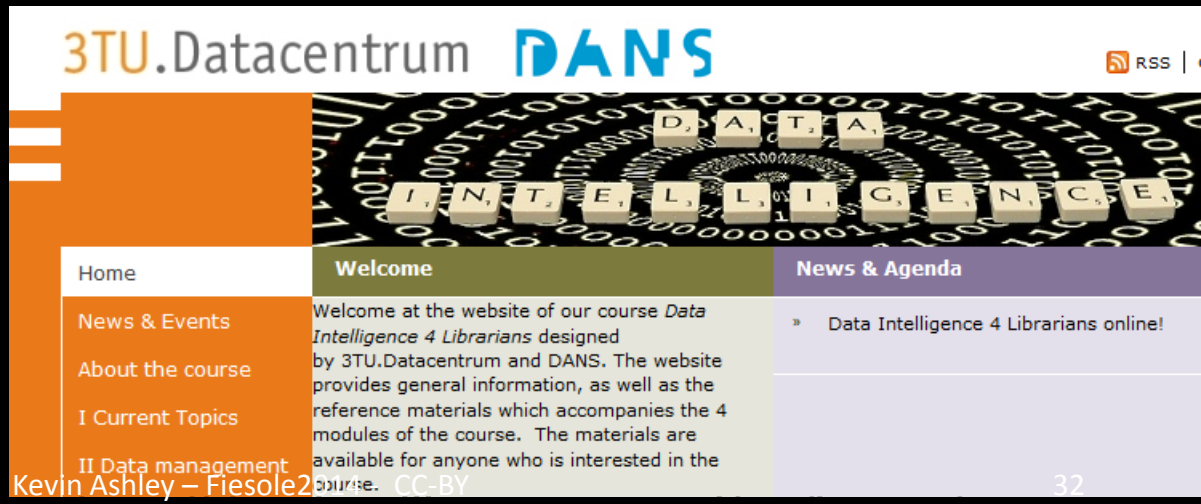


http://datalib.edina.ac.uk/mantra/libtraining.html

Do-It-Yourself Research Data Management Training Kit for Librarians

The University Of Sheffield. Information School

RDMRose



Choice of RDM training materials for librarians


Store your valuable data.
Show it to the world.
Share it with others.
http://datacentrum.3tu.nl

Data is variable

- Not always textual
- Not always tabular
- Not always fixed
- Not always clearly authored – think of archival provenance
- Not always associated with publication
- There’s more to the world than scholarly research
- Hidden data is wasted data

Closing thoughts

- Library roles: selecting content, protecting it, enabling and encouraging reuse
- All apply equally when the content is data
- Helping users find the most relevant content – much research data does not come from research
- Description can be very different where data is concerned

“Institutions will try to preserve the problem(s) to which they are the solution”

Clay Shirky

Questions

- How does data management align with institutional mission?
- When is library a coordinator, and when is it a service provider?
- What will you do alone, and what will you coordinate with others?
- What skills must you acquire?
- What do you want from national level?

Some conundrums

- Releasing genome data is OK when it's:
  - An identified human subject
  - An anonymous human subject
  - Your pet dog
  - Another mammal
  - An insect
  - A plant
  - A virus

notes

- No collections – show some data
- Not librarian etc
- Case for data – general, tamiflu
- ‘phd students don’t know what to do’
- Discovery, preservation, permanent ids, selection
- What does it cost/who pays
- Not a publication
- Research data as treasure
- Imperial example of similar time series
- Govt/academic data – the data librarian
- Libraries as providers of data
- Making better use of their own data