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The UK Research Data Service Project

Keynote Item

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The UK Research Data Service Project

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Outline of presentation

- Genesis of the feasibility study
- The challenge and the potential
- Aims of the feasibility study
- Building on previous research
- Key findings of the UKRDS study
- Features/benefits of a UKRDS
- Next steps and key messages

Genesis of the feasibility study

- OSI e-infrastructure report (Feb 2007)
- Data issues beginning to impact on HE library and IT services at local level
- Hefce shared services programme (Apr 2007)
- Joint initiative from Russell Group IT Directors (RUGIT) and Research Libraries UK (RLUK)
- JISC also contributed

The challenge

- Data deluge
- Research data: often an untapped resource
- Data are often unstructured and therefore inaccessible to others, preventing sharing
- Lack of adequate metadata and search tools
- Little coherence of policies and standards, for example for data management plans

The challenge continued

- Only a minority of researchers have access to a national or international facility
- Provision of skills for data curation and training for researchers are under-developed
- Varying funder requirements for data management, curation and sharing
- HE Library and IT directors under pressure to provide solutions at institutional level – unsustainable

The potential

“Because digital data are so easily shared and replicated and so recombinable, they present tremendous reuse opportunities, accelerating investigations already under way and taking advantage of past investments in science.”

Clifford Lynch, Executive Director of CNI, ‘Big data: How do your data grow?’ *Nature*, 4 September 2008



Aims of the feasibility study

- Develop an understanding of the UK's current and future research data management needs
- Identify gaps in current services
- Test the feasibility of a UK-wide co-ordinated approach to the lifecycle management of research data against a fragmented approach
- Avoid reinventing the wheel in any proposed solution

Building on previous research

- *“Dealing with data”* report for JISC (July 2007); Author Liz Lyon; 35 recommendations for further studies/toolkits, mainly for JISC/DCC
- *“To share or not to share”* Key Perspectives; report for RIN, JISC NERC (June 2008); interviews with 100 researchers/data experts across a number of disciplines

Building on previous research continued

- “*Skills, role and career structure of data scientists: an assessment of current practice and future needs*”; Alma Swan, Key Perspectives (July 2008); funded by JISC
- Data Audit Framework – one of Liz Lyon’s recommendations; pilots launched in October 2008 (funded by JISC)

Key findings of the UKRDS study

- 700 researchers consulted on their data needs (in Bristol, Leeds, Leicester, Oxford)
- They expect a 360% increase in data over the next 3 years
- 50% of their data estimated to have a useful life of up to 10 years
- 26% seen as having permanent retention value

Key findings of the study continued

- Most research data are currently held locally
- 21% use a national or international facility
- Most researchers share data within research teams and 18% share via a data centre
- 43% believe that their research could be improved by access to a wider range of data
- Those without access to a national facility would like a UKRDS

Key findings of the study continued

- There are excellent facilities and practices in already in existence in the UK
- National data centres with great expertise and skills - could they be expanded to fill gaps?
- UKDA, NERC, STFC and others
- Digital Curation Centre's data life cycle model
- Data management plans now being funded (Wellcome)

Features of a UKRDS

- A co-operative service working with existing stakeholders to create coherence and fill gaps
- An enabling service acting as broker between researchers and support facilities
- A catalyst for new services and partnerships
- A standards-guiding body
- A commissioner of toolkits and training to fill gaps in provision



Benefits of a UKRDS

- Protecting and extracting greater value from research investment
- Preserving opportunities for new research
- Reducing research data duplication, recreation and errors, and unplanned data loss
- Providing more opportunity for sharing, re-use, cross-referencing, and dataset integration

Benefits of a UKRDS continued

- Sharing skills for cost-effective productivity
- Providing an effective focus for best practice in data curation
- Helping with data management plans and life cycle management of datasets
- Informing the strategic development of the research infrastructure

Next steps

- Prepare for possible Pathfinder phase
- 4 “case study” universities are on board
- UKDA, DCC and RIN willing to participate
- We hope NERC and STFC will also get involved
- Create a mini-UKRDS with real researchers and start to fill the gaps



Next steps continued

- Work on more detailed proposals and business case for Hefce
- Work on possible governance models for a future UKRDS
- Encourage more dialogue with wide range of stakeholders
- Continue to disseminate vision of a coherent service

Key messages

- The study addresses the *sustainability* of what many researchers need
- It is not just about storage
- It's about whole life cycle management of data
- Excellent facilities are already in place, but many researchers do not have access to them
- There are therefore significant gaps to be filled

Key messages continued

- National research data services are under way or planned elsewhere (Australia, Canada, Germany, US)
- The UK is in danger of falling behind
- Yet we have a much stronger base on which to build
- It is about leverage of research value from data and a higher global research profile for the UK