Realising a robust and sustainable research data management infrastructure and services to enrich UK research.

**Challenge**
There is currently an inefficient and fragmented approach to research data management throughout the UK. This leads to underperformance and cost inefficiencies across universities. There is a real risk to universities in failing to comply with government and funder requirements.

**Who it affects**
- Researchers need to comply with government and funder requirements
- IT directors need to store and manage research data
- Librarians need to ensure other researchers can access the data

**Why it matters**
- Ability to attract and retain researchers
- Reputation of universities can be affected by mismanagement of research data
- Support better research collaboration (internationally)
- Comply with requirements of research funders

**Success criteria**
- Cost effective national brokered infrastructure as a service
- Research outputs discoverable and reusable
- Fewer impediments to doing research
- Research Data Management is business as usual

**Strategic framework**
How does the challenge fit with Jisc’s strategic framework?

**Jisc audience**
Which members of Jisc’s audience will be most interested?
- Vice Chancellor
- College Principal
- Finance Directors
- Librarians
- IT Directors

**Timescale**
How long until we can expect to see the benefits?
- 1 day
- 2 days

**Commitment**
Who in the steering group pledged to commit two days of their time?
- Mike Fraser - Director of Infrastructure Services, University of
Problems – data curation

It's hard to do so, so why look after data?
• Needed to prove research is valid
• Need it to be able to replicate research
• Range of benefits

https://en.wikipedia.org/wiki/Data_sharing
Why?
• Visibility
• Profile
• Quality
• Efficiency
• Replicability
• Re-usable
• AND
• **EPSRC Mandate - directed at HEI’s**
  • Retained EPSRC-funded research data is preserved for a minimum of ten years
  • Effective data curation is provided throughout full data lifecycle
  • Knowledge of publicly-funded research data holdings
  • **Discoverability; recording of third party access requests**
  • Notice and justification of access restrictions, for example ‘commercially confidential’
  • Awareness and use of relevant law, for example FOI
  • Awareness and compliance with research data policies
  • Adequate RDM resource allocation for example from quality-related research (QR) funding or research grants
Opportunities – data curation

https://en.wikipedia.org/wiki/Collections_management_%28museum%29
Opportunities – more innovative research

The launch of 100 floating sensors into the Sacramento River for the Floating Sensor Network Project

https://en.wikipedia.org/wiki/Center_for_Information_Technology_Research_in_the_Interest_of_Society
Challenges/Opportunities

- Scope of data
- Accuracy of data
- Usability of discovered data
- Identity of future service

Enhancing quality of metadata
Increasing profile of UK research data
Contributing to a layer of high quality accessible (meta)data

Evelyn de Morgan (1855–1919) - "The Garden of Opportunity", 1892
» Research Data Shared Service
  › Provide interoperable systems for researchers and institutions to adhere to best practice throughout the RDM lifecycle

» Research Data Spring
  › Tools for data analysis

» IRUSUK
  › Establish metrics for research data usage
Shared Services - interoperability

- CRIS grants/projects
- CRIS researcher DBase/HR
- Local data registry

Repositories:
- National/disciplinary repositories
- Repository metadata exchange
- UK discovery service

Metrics:
- OpenAIRE
- Usage stats/Citations/Metrics
- DataCite
- ORCID

Data flows:
- Local data storage
- Machine data ingest
- Repository data storage
**Vision and Policy**

**DIRECTIONS FOR RDM in UK Universities**

A shared state of play and set of directions in consultation and collaboration with key stakeholders, in particular ARMA, SCONUL, RLUK, RUGIT and UCISA.

- **Start:** September 2014
- **End:** March 2015
- **Outputs:** Workshop, http://bit.ly/1T4XG6I
- **End Goals:** A plan for the way ahead & a baseline for progress

**Guidance on meeting Research Funder requirements**

Clear guidance on how to meet funder policies & engagement with Research Data Concordat Group on funder policy harmonisation and implementation.

- **Start:** November 2014
- **End:** September 2016
- **Outputs:** Guide on meeting the EPSRC research data policy & case studies http://bit.ly/1Jtpfko
- **End Goals:** A plan for the way ahead & a baseline for progress

**Business Case and Costing for RDM**

An agreed set of guidance for the case for RDM and costing information to support the business case in HEIs for research data management.

- **Start:** July 2015
- **End:** December 2016
- **End Goals:** Defined value of RDM, business case template and costing tool for HEIs

**Research Data Champions**

Advocate researchers for RDM in a range of disciplines. To set out case studies to enhance understanding of how good DM enhances research practice. To ensure researcher input into the development of R@R solutions.

- **Start:** X
- **End:** X
- **Status:** Deferred
Shared services in active RDM & storage

To determine the need and scope of a shared service, underpinned by a clear RDM architecture. To then procure the development & delivery of a shared service for RDM.

- **Start:** April 2015
- **End:** December 2017
- **Blog:** http://bit.ly/1IMKkn6
- **End Goals:** HEIs can meet funder mandates easily and have a cost effective solution.

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Shared services in the preservation & curation gap

To work with institutions to determine the need and scope of shared solutions to meeting research data needs for curation and preservation.

- **Start:** January 2015
- **End:** December 2017
- **Website:** http://bit.ly/1IMKkn6
- **End Goals:** Shared service to meet preservation needs so HEIs have trusted long-term access to data.

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Research Data Management Shared Service

- **Start:** April 2015
- **End:** December 2017
- **Blog:**
- **End Goals:** RDM shared service that enables easy implementation of a solution for RDM in UK HEIs
UK Research Data Discovery Service

To develop a shared service to make research data easier to discover and re-use - this aims to be a shared national catalogue of research data

- **Start**: November 2014
- **End**: December 2016
- **Website**: http://bit.ly/1Iseikh
- **End Goals**: A shared service for research data to enhance re-use and impact of data; possibly part of the RDM shared service

Research Data Metadata

To build consensus and standardisation around a core metadata schema that applies across disciplines

- **Start**: July 2015
- **End**: December 2016
- **End Goals**: A shared solution for non-disciplinary specific RD metadata

Usage Statistics for Research Data

To increase understanding of metrics & usage for RD, to develop a usage statistics service to enable UK HEIs to count data use, to contribute to incentives for sharing research data & to contribute to determining the point of use

- **Start**: June 2015
- **End**: November 2016
- **Blog**: http://tinyurl.com/qcxfaao
- **End Goals**: A shared research data usage statistic service & common related standards

Data Management Plan Online Registry

To develop a registry of DMPs so that they can be interrogated for use cases such as: planning data storage, planning costs; planning infrastructure, fulfilling mandates etc.

- **Start**: X
- **End**: X
- **Status**: Deferred
Advice and Guidance

Research Data Hub

Starting with a Lite approach - to develop an easy to access web presence of RDM advice and guidance & second phase to look a potential wider 'one stop shop access'.

• Start: July 2015
• End: November 2016
• End Goals: Easy access to advice, tools and tips for HE stakeholders

Journal Research Data Policies Registry

To develop best practice on journal policies between publishers & other stakeholders. To make it easy for researchers to know how to follow policies and for journals to create RD policies

• Start: April 2015
• End: September 2016
• Website: http://bit.ly/1Ks8jhb
• End Goals: best practice toolkit and guidelines to drive policy expressions for authors and support staff
**Vision and Planning**

- **Directions for RDM in UK Universities**
  - Jan 15: Directions for RDM report
  - Mar 15: Review progress and update

**Supporting Practice and Policy**

**Research Data Hub**
- Jan 15: Update quick guide
- Mar 15: Scope
- May 15: RD Hub-lite Wire frame
- Jul 15: Clear web presence for RDM

**Business Case and Costing for RDM**
- Jan 15: Scope
- Mar 15: Share initial scope
- May 15: Deliver business case guidance, tools
- Jul 15: Ongoing engagement with research data concordat group

**Guidance on Meeting Research Funder Requirements**
- Jan 15: EPSRC case studies
- Mar 15: EPSRC guide

*Notes:*
- High priority: red
- Medium priority: blue
Research Data Spring

To bring together key actors in the research data management arena to develop innovations for improving workflows, interoperability and new shared tools and services

• **Start**: November 2014
• **End**: July 2016
• **Website**: http://bit.ly/1LCrmEG
• **End Goals**: A range of interoperability issues improved, shared advice & in some cases tools for all HEIs.
Pre Co-Design Research Data Activity

**UK Research Data Discovery Service**
- **Jan 15**: Use case and requirements
- **Mar 15**: Alpha
- **May 15**: Pilot early adopters engaged
- **Jul 15**: Beta – HEIs and DCs
- **Sep 15**: Business case
- **Nov 15**: Live service

**Jisc-Arna ORCID Pilot**
- **Jan 15**: National ORCID consortium
- **Mar 15**: Live service and on-going support

**Journal Research Data Policies Registry**
- **Jan 15**: Define use cases
- **Mar 15**: Rapid Prototype
- **May 15**: Best practice toolkit design
- **Jul 15**: Expert group establishes
- **Sep 15**: Requirements defined
- **Nov 15**: Expert group agrees recs.
- **Jan 16**: Finalise toolkit
- **Mar 16**: Launch toolkit

**Research Data Spring**
- **Jan 15**: Sandpit workshop
- **Mar 15**: Workshop 3
- **May 15**: Alpha
- **Jul 15**: Beta
- **Sep 15**: Lessons / decisions on implementation