REsearch Data Management for mechanical Engineering Departments (REDm-MED)

(JISC MRD Programme, Phase 2, Strand B)

Mansur Darlington, Alex Ball, Uday Thangarajah, Chris McMahon & Liz Lyon
REDm-MED in a Nutshell

• 1 Nov 2011- 31 May 2012
• To scope, specify, design and implement a research data management approach suited especially to the needs of the Department of Mech. Eng. at UoB.
  • Will build upon the ERIM Project work,
  • and on other recent work by the MRD community.
• Complements Research360.
The Aim of the Project

• To implement effective and *practical* research data management where there is little or none,
• through the provision of:
  – Procedures & Documentation,
  – A Tool Set,
  – Infrastructure,
• including development of the prototype RAIDmap* tool.

*Research Activity Information Development Mapping
Key ERIM Research Findings

1. Poor framework for:
   - pre-project considerations of data management.
   - data management during the research.
   - during-project data management for post-project re-use.

2. Poor knowledge of context in which data were generated:
   - engineering research data are very diverse.
   - large number of diverse research data records.
   - Relations between data records complex.

3. Knowing the context is vital for understanding data.
Ex-ERIM Multi-level ERDMP Best-Practice Guidance

Principles for Engineering Research Data Management.

Thematic Analysis of Data Management Plan Tools and Exemplars.

1 Engineering Research Data Management Plan Requirement Specification

Being a specification for 2

2 The Draft IdMRC Projects Data Management Plan

Being an implementation of 1

DMP Template for IdMRC Projects

JISC MRD02 Programme Launch 02.12.11
From ERIM to REDm-MED

Engineering Research Data Management Plan Requirement Specification

The Draft IdMRC Projects Data Management Plan

DMP Template for IdMRC Projects

CARDIO


DMP Template for Mech. Eng. Projects

Data Purposing
Data Re-purposing
Supporting Data Re-use

Data Purposing
Data Re-purposing
Supporting Data Re-use
PLUS
Amenability Criteria & ‘Re-usefulness’

‘To manage research data such that they are highly amenable to re-use.’

‘What is the nature of these data that makes them more or less amenable to re-use?’

• Findability
• Readability
• Comprehensibility
• Interpretability
• Admissibility
• Desirability

Data ‘RE-USEFULNESS’

‘Good DM planning provides the potential to increase re-usefulness’
Promoting ‘Re-usefulness’ Through Plan Execution

DMP Template for Mech. Eng. Projects


Meta management

Potential for re-usefulness

Data-level Management

DMP Template for IdMRC Projects

The Draft IdMRC Projects Data Management Plan

DCC DMP Checklist

IdMRC Project X DMP

Mech. Eng. Project X DMP
The Two Stages of RDM

- Good DM planning provides the potential to increase data re-usefulness.
- The execution of good DM plans promotes data re-usefulness.

(some data will remain forever re-useless)
K.I.S.S.O.F.F.*

How will we go about supporting the execution of the plan and turning it into practice?

We will aim to provide guidance and tools to aid practical RDM planning which are simple and engaging to use, easy to access and which require least effort on the part of the users.

* Keep It Supremely Simple Or Face Failure