REPORT

The University of **Nottingham**

UNITED KINGDOM · CHINA · MALAYSIA

ADMIRe Project Benefits

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1. Introduction

The ADMIRe project aims to:

"Establish and pilot a sustainable research data management (RDM) infrastructure for The University of Nottingham. It aims to develop an infrastructure to support the research data lifecycle, acknowledging & responding to differing practices across subject disciplines."

The project driver is the RCUK announcement that mandates all funded research institutions to implement a support and technical infrastructure to enable:

1. Research data management throughout the research lifecycle
2. The publication and sharing of research data

The EPSRC expectations represent the majority of RCUK policies:

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

The University drafted a response to these expectations in May 2012, which sets out a roadmap of how The University of Nottingham (Nottingham) will comply by the May 2015. The ADMIRe project has a key role to play within this compliance matrix by developing an RDM support service, but is also supported by technical infrastructure projects to deliver the physical data management services.

2. Project metrics and benefits

The project submitted a benefits and metrics plan to the Nottingham Information Services Project Office and to JISC in July 2012. The benefits plan was broken into two parts, namely a high-level benefit and capability overview and a corresponding benefits profile and metrics table. The first area addressed the strategic capabilities the project was to implement and this included 4 key deliverables:

1. Create a Research Data Management website
2. Produce a Data Management Plan and supporting Policies/Roles
3. Determine a technical infrastructure for RDM across the institution
4. Create a single RDM roadmap

The end result or capability of delivering these elements would be an RDM Service for researchers. This would enable the following outcomes and end benefits to the researcher and Nottingham:

1. Consistent RDM working practices across the University
    a. Compliance with RCUK requirements to have a RDM infrastructure by 2015
2. Increase in research data, registration, visibility and accessibility:
    a. Increase in research award income generation
3. Research data centrally stored, secure & compliant on a resilient framework
    a. Institutional Process & Efficiency Savings
    b. Mitigation of UoN data security threats/risks
4. More data sets cited in support of publications

a. Increased recognition of research through the use of open access principles

These outcomes and benefits would ultimately help to support the Nottingham strategic objectives of:

- Research Excellence
- Savings & Efficiency

And in turn this will have a number of strategic benefits:

- Robustly enhance our UoN electronic infrastructure to support technology enabled innovation in R & T, especially data management
- Ensure our research outputs are appropriately managed, widely disseminated in order to improve knowledge transfer
- Invest strategically in our research infrastructure across campuses and underpin activities with latest research management systems

These high-level benefits are accompanied by a second lower-level of metrics or Key Performance Indicators (KPI) which complement and allow these high-level objectives to be measured. Before considering these, it is wise to examine the outputs of the project in line with the aforementioned four key deliverables. These are detailed in Table 1:

Deliverable	Outcome within ADMIRe	Post-ADMIRe
Create a Research Data Management website	ADMIRe has delivered a new RDM website to raise awareness and provide guidance for researchers. This is a lasting resource and sits within the strategically important "Research" area of the site.	Update of website with subject specific advice.

Produce a Data Management Plan and supporting Policies/Roles	RDM policy approved by Research Knowledge Transfer Board, September 2011 and then approved by Management Board, February 2013. The RDM policy is available here. Support for Data Management Plans has been provided and institutional capacity increased via the RDM website, an RDM training courses in Moodle, via a dedicated RDM support email address and via IT Support and IT Services. The roles and skills document to support an RDM service post-ADMIRe, have been published on the JISC ADMIRe blog in June 2013.	IT Support is expected to lead and develop RDM capabilities post-ADMIRe. Although, the exact roles and responsibilities between IT Support, Research Graduate Services (RGS) and Libraries and Research and Learning Resources (LRLR) are yet to be decided.
Determine a technical infrastructure for RDM across the institution	Technical documents, requirements and use cases have helped to conceptualise an RDM infrastructure. While, small pilots with EQUELLA and BPM Metastorm have provided test systems. All relevant reports and findings have been published on the JISC ADMIRe blog.	The technical infrastructure roadmap is a good starting point for the deployment of an infrastructure to support researchers. It has been recognised that signification investment is required post-ADMIRe to realise this before 2015.
Create a single RDM roadmap	The ADMIRe RDM service models, business case and communications plan have been discussed and taken forward at University Management Board level. All relevant reports and findings have been published on the JISC ADMIRe blog.	Post-ADMIRe RDM support is under consideration and expected to be clarified Q3/Q4 2013. It is expected to fall under the remit of LRLR, IT Services or RGS.

 Table 1: High-level project outputs

Detailed operational metrics follow on from these strategic metrics. Where possible these have been measured via the following:

1. Nottingham RDM survey[1] across Nottingham based researchers (366 responses)
2. Support staff survey of LRLR and IT Support in February 2013 (see Appendix 4.1)
3. Pilots or case studies with researchers throughout the project
4. Technical infrastructure and data catalogue development work
5. External references e.g. Twitter, blog posts or requests for project material
6. External presentations, papers and events

It is important to note that ADMIRe was tasked with developing an institutional RDM service; therefore the following metrics reflect both the project team's contribution and the efforts of existing support staff over the life of this project.

It should also be noted that these are interim benefits that have occurred within the life of the project, some are a direct result of ADMIRe and others are a result of a raised awareness with support staff and researchers through the direct actions of ADMIRe. It is expected that the high-level benefits will be re-measured post-ADMIRe at regular intervals. A breakdown of the project metrics are provided in Table 2:

Interim Benefits Profile				
Benefit Identifier and title End benefit Intermediate benefit	**Benefit Description** Inc who will be the beneficiaries	**Target values and timing**	**Method of measurement**	**Measures**
Compliance	Reduced likelihood of fines and compliance requests from RCUK	Every 6 months	RDM Events & Audits	1 large RDM event for Senior staff (58 people)
				DAF audit in Medical Health Sciences
Increase in income generation	More successful research bids as a result of consistent RDM policies/pract ice	Every 6 months	Monitored by email queries & RDM Events	11 pre-proposal support requests
				12 support requests for DMPs
				6 RDM awareness events with researchers and support staff (>300 people)

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[1] http://eprints.nottingham.ac.uk/1893/

			Training courses run & attended	10 RDM training sessions for support staff & researchers (195 people)
Demonstrable Process & Efficiency Savings	Consistent processes for RDM	July 2012/13	Google Analytics for RDM website	624 website hits (May 2013)
			Data sets	31 datasets catalogued (in Excel)
Support for Open Access Principles	Increase data visibility and access	July 2012/13	Admin interface of RDM system	Two systems tested (EQUELLA & BPM Metastorm)
			RDM survey	4% of researchers have publically shared data (~180)
			RDM support requests	11 data repository queries
				6 publishing data queries
Mitigation of Data Security Breaches	Research data stored and backed up within a resilient environment	July 2012/13	RDM survey	48% of researchers using Nottingham infrastructure (local file storage)
			DAF audit	DAF template piloted in Community Health Sciences. Awaiting feedback.
			Website or email support requests	21 file organisation requests.
				25 local storage requests.
			Policies and agreements in place	Draft deposit and licencing agreement in progress.

Table 2: Project metrics

3. Conclusion

Overall the majority of project metrics have been completed. The "Compliance" benefit is certainly the hardest to measure within the life of the project. But the increased awareness of RDM across the University will certainly help to increase the likelihood of compliance.

It is expected that the efforts of ADMIRe and the deployment of a Research Data Archiving System (RDAS), will mitigate these risks further.

Although the RDAS has not been fully developed beyond a prototype, test datasets have been collated through via metadata pilots with researchers and test DOIs explored using the DataCite API. These tests have informed the development of the system and these datasets can be catalogued and published immediately, once the new RDAS system is live.

Overall, ADMIRe has had a significant impact on raising awareness of RDM across Nottingham and has had buy-in from senior management and stakeholders. It is widely acknowledge that ADMIRe has been the start of the RDM journey that must be continued. As of this report, plans and strategies are in place from both LRLR and IT Services to continue this work and as such, the outputs of ADMIRe will only continue to grow ad prosper within Nottingham in the long-term.

4. Appendix

4.1. Support staff survey results

Section 1: Department and role			
1. In which department are you working?			
Libraries and Research & Learning Resources (LRLR):		32.1%	17
IT Services:		67.9%	36
2. What is your job title?			
View All Responses - There are too many responses to display on this page and so all the responses to this question are available on a separate page.			
Section 2: Research Data Management queries from researchers			
3. Have you ever had to deal with a RDM query from a researcher?			
Planning a research idea:		n/a	11
Systematic review of the literature/data review:		n/a	5
Funding/Grant bid proposal:		n/a	12
Data management planning:		n/a	12
File organisation:		n/a	21
Local storage:		n/a	27
Data gathering:		n/a	13
Documentation and Metadata:		n/a	8
Data analysis:		n/a	8
Publishing research data:		n/a	6
Repository storage:		n/a	11
Data curation:		n/a	4
Data deposit:		n/a	1
Data discovery:		n/a	7
Accessing and re-using research data:		n/a	7
Never dealt with a RDM query:		n/a	20
Other *(please specify)*:		n/a	3
View All Responses - There are too many responses to display on this page and so all the responses to this question are available on a separate page.			

4.2. RDM website queries