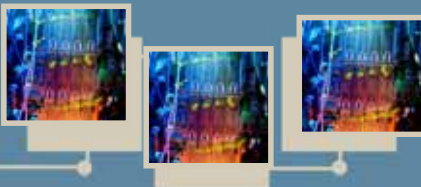


# Building eResearch Services, Capabilities and Capacity

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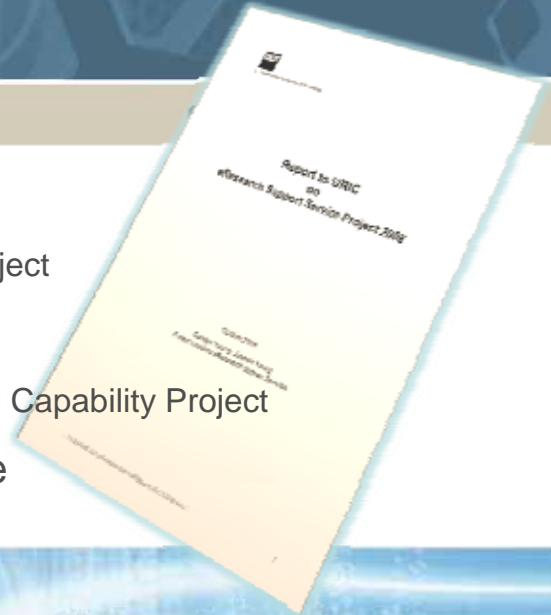
## Queensland University of Technology

eResearch @ QUT

- based in Brisbane, Queensland.
- 40,000 students; 6,000 from overseas
- the University has an applied focus in research & teaching

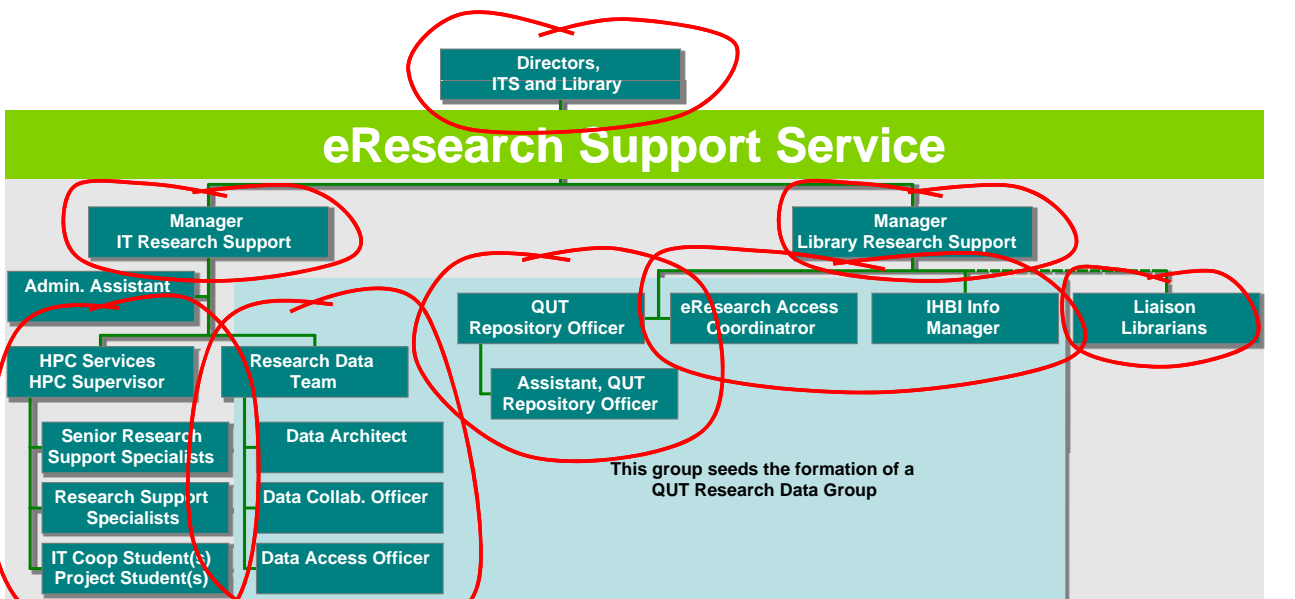


- Quick re-cap on 2008
  - The QUT eResearch Support Service Project
- What we've been doing in 2009
  - Building eResearch Support Capacity and Capability Project
- Conclusions and where to from here



## 2008 Proposed Model

eResearch @ QUT



- Revise university **research data management policy**
- Prepare a **Data Management Plan template** and a **training program** for researchers
- **Implement the Initial eResearch Support Service model**
- **Co-locate** eResearch Support Service staff where possible so that they can establish themselves as a team
- Provide a **central, QUT data store for research data** as part of the larger Enterprise Data Management system
- Seek **sustainable funding** for the eResearch Support Service from 2009 to end reliance on soft money for existing services and to provide new services

- Complete current **research data management pilots** + undertake new data pilots
- Investigate and select research **data management technologies** and **applications**
- Develop **staff expertise and knowledge**; **co-locate** staff where appropriate
- Identify researchers with **significant research data sets** and collaborate with a view to adding to the ANDS Data Commons.
- Begin a **promotion and training program** with researchers.

- Strong support for the 2008 report from university research committee and the VC's Advisory Committee
- Led to subsequent project *Building eResearch Support Capability and Capacity*
- Major objectives:
  - Build research data management capabilities
  - Build capabilities for eResearch support
  - Build eResearch skills within the research community



## 2009 eResearch Project - Objectives

Objective	Outcome
Research Data Management Support team implemented within HPC	Extend range of eResearch support services thus improving QUT's research capability
An audit of eResearch skills for support staff	Informed about staff capability and skills gaps
An eResearch skills development program, and resources, for support staff	Support staff are better skilled and informed to provide eResearch support
An audit of eResearch skills for researchers	Researcher capability and skills gaps identified
An eResearch skills development program	Improved eResearch capability
Research data management policy developed	Improved practices from policy framework
Research data management procedure and plan	Research benefits from best practice guidelines
Central data management infrastructure and service operationalised (including ANDS collaboration)	Research data is managed and appropriately available
A small number of discipline specific research data management infrastructure solutions will be operationalised	Specialised research data is also managed and appropriately available
Descriptions of the University's research datasets will be made available	Increased access to research data sets
The University's web sites providing research support will be evaluated and integrated.	Researchers will have access to a more seamless eResearch support service
Partner and collaborate with key stakeholders and experts including ARCS , ANDS and other universities	Shared work, improved ROI, and better decision making



# 2009 eResearch Support Model

Directors  
ITS and Library

## 2009 eResearch Support Service

Manager  
HPC and Research Support

Associate Director Library  
Info Resources and Research Support

Manager  
Research User Services

Manager  
HPC Infrastructure Services

Research Data Team

Groundwater Viz Unit

Hosted ARCS/ ANDS Staff

QUT Digital Repository Team

eResearch Access Coordinator

IHBI Information Manager

Data and Liaison Librarians

Project Officers  
(Web, Surveys etc)

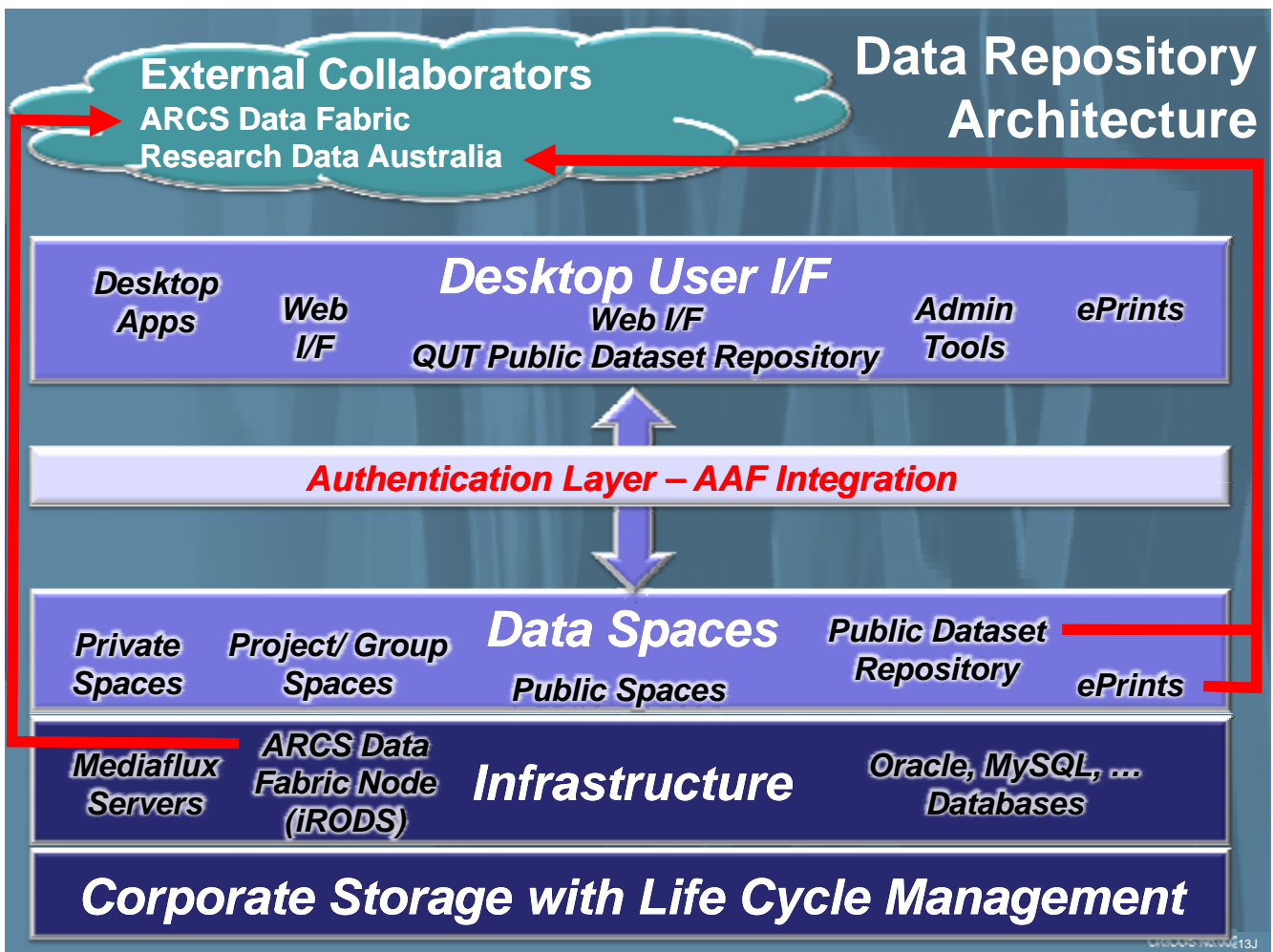
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**QUT**

## 2009 Major Activities

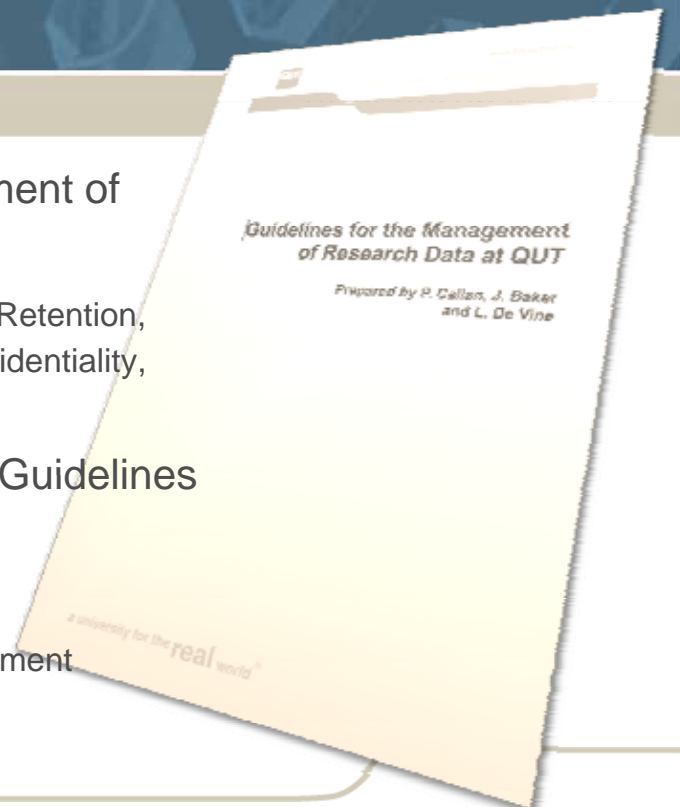
eResearch @ QUT

- Establishment of a QUT Data Repository
- Data Management Policy, Guidelines and Checklist
- eResearch Surveys – research and support staff
- Integrated Research Support Web Site
- Monthly eResearch Seminar Series
- ANDS NCRIS Project
- ANDS EIF Project



## Data Management – Policy, Guidelines and Checklist

- University Policy on Management of Research Data
  - Planning, IP, Copyright, Storage, Retention, Record keeping, Privacy and confidentiality, Access and Reuse, Disposal
- Research Data Management Guidelines and Checklist
  - First draft now completed
  - Currently being circulated for comment





4. How would you describe your ability to support researchers in the following *data management* practices?

\* Please answer for each row.

	No knowledge	AWARENESS only	AWARE: Can refer for further help	BASIC SKILLS	COMPETENT	ADVANCED SKILLS
Preparing a data management plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Managing data storage needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Managing privacy and confidentiality of data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Managing the legal issues of data (copyright, contracts, licences)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Backing up data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Retaining research data according to legislative and funding body requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Disposing of data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using pre-existing datasets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assigning descriptors or metadata to datasets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Preparing a data exit plan (for retiring or departing staff)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How would you describe your ability to support ...

5. How would you describe your ability to support researchers in *managing* the following types of data:

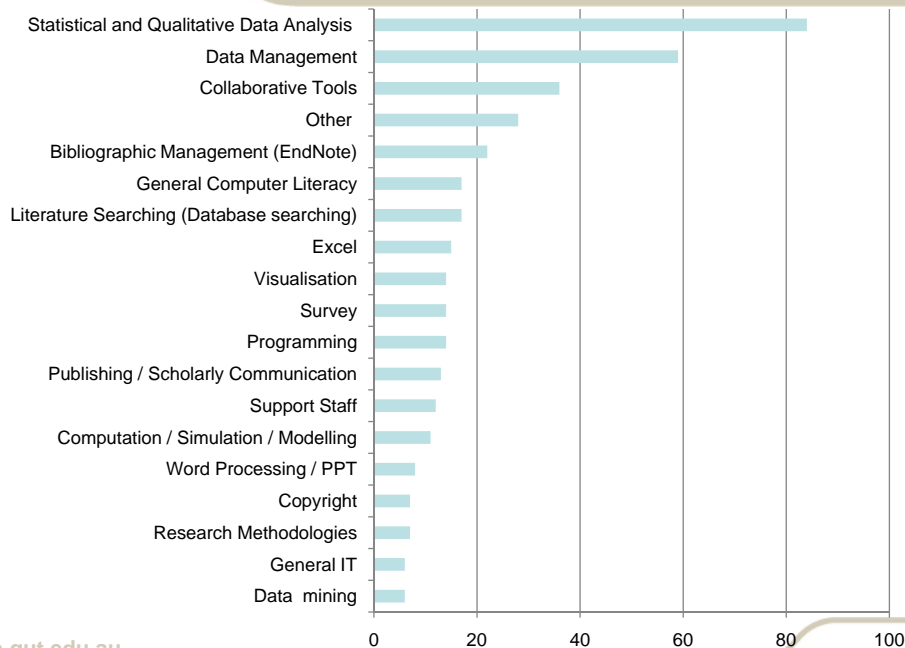
\* Please answer for each row.

	No knowledge	AWARENESS only	AWARE: Can refer for further help	BASIC SKILLS	COMPETENT	ADVANCED SKILLS
Fieldwork data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Experimental data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Survey data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interview data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clinical data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Laboratory notes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Data collected from sensors or instruments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Digital audio files	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Digital video files	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Computer simulation data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Images, scans or x-rays	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

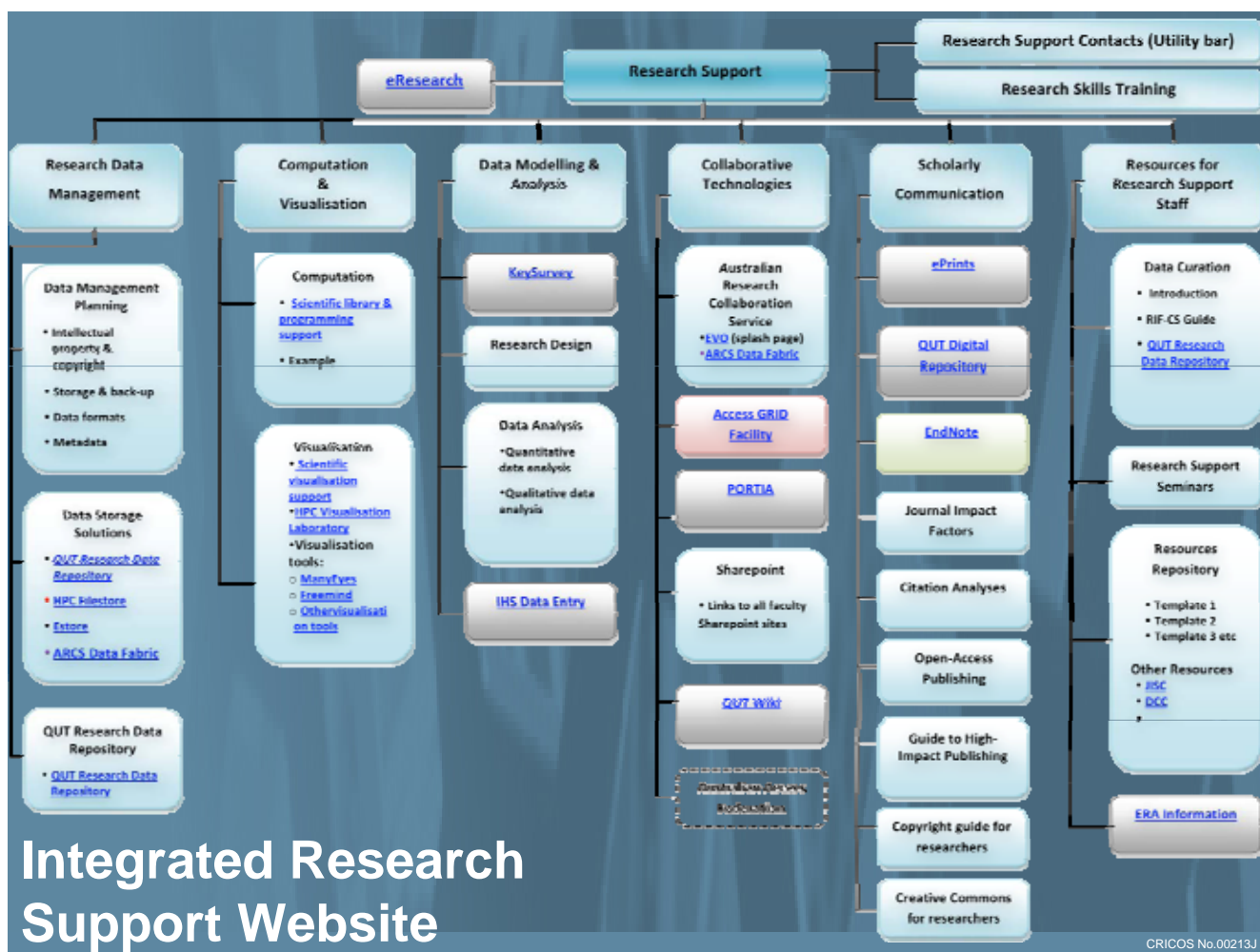


## What three eResearch skills could increase your research productivity and quality?

eResearch @ QUT







# eResearch Seminar Series

eResearch @ QUT

- Introduction to Managing Research Data
- Principles of Managing Research Data, The Australian Code of conduct for Responsible Research and the Research Cycle
- Overview of HPC Services
- Data Management: From Rhetoric & Theory to Practice & Action
- EVO and Other Research Collaboration Tools
- Navigating the Patent Literature: Using Patent Lens
- Intellectual Property Issues and Research
- Data Management for Researchers (multiple sessions)
- *The Fourth Paradigm: Data-Intensive Scientific Discovery*
- *QUT's Online Survey System for Research*
- *QUT's Research Data Repository*
- *The Australian Access Federation (AAF)*

-- Completed --

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-- Scheduled --

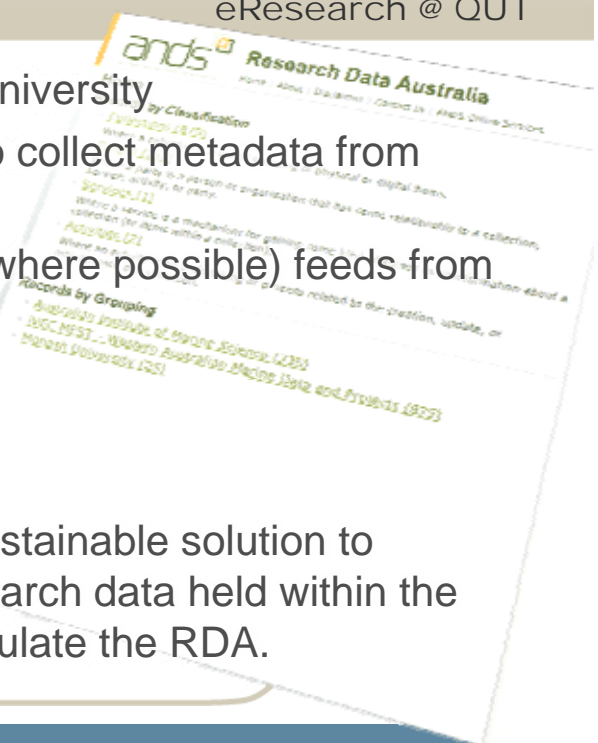
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CRICOS No.00213J

- Catalogue of QUT's Category 1 Research Datasets
  - Through interviews and other methods, gather information on datasets generated from Category 1 Research Projects (e.g. ARCS, NHMRC, Australian Arts Council)
  - Provide these to ANDS (using RIF-CS metadata schema) for publishing in Research Data Australia
  - Two Data Librarians have been hired



- collaborative project with Griffith University
- implement a data exchange hub to collect metadata from university research collections
- establish customised (automated where possible) feeds from the various University systems
- provide a metadata feed into:
  - Research Data Australia (RDA)
  - university library discovery tools
- overall objective is to develop a sustainable solution to automate the collation of new research data held within the University that can be used to populate the RDA.



1. Executive support, disposition and readiness
2. Several key related research initiatives
  1. OAKLaw
  2. Leader in Creative Commons
  3. Microsoft QUT eResearch Centre
  4. New Science and Technology Precinct
3. Single Key Support Division for eResearch
4. Many key platforms in place – e.g.
  1. ePrints and leader in Open Access
  2. Mature HPC, Visualisation and Access Grid services
  3. Mature computational and advanced visualisation support
  4. Corporate Confluence Wiki
5. Building other key platforms
  1. Leading AAF
  2. Research Data Repository (Mediaflux and ARCS Data Fabric (iRODS))
  3. Uni wide EVO, Sharepoint, CMS, centralised data storage system (eStore)
  4. CAMBIA Patent Lens
6. Collaborations
  1. AAF, ANDS, ARCS, Monash, Griffith and others

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- QUT has come along way down the eResearch path:
  - We have implemented, or are implementing, recommendations from the 2008 QUT eResearch Support Service Project but there's a lot more to do
- The end game is the embedding of eResearch techniques broadly across research. This requires:
  - appropriate infrastructure at the university and national levels
  - eResearch support services – training, support, consultation, engagement
  - traction at the discipline level – even at the sub-discipline level
- Some of the challenges are:
  - sustainable funding stream for increased support activities and/ or staff release time
  - greater understanding of the research process - discipline specific
  - wider engagement within eResearch projects – address the academic bottom line – publications, grants and HDR students
  - appropriate eResearch service integration with lightweight overheads (already lots to do)
  - probably requires both a top-down (research champions) and bottom-up approach

[www.eresearch.qut.edu.au](http://www.eresearch.qut.edu.au)

