Managing Research Data: a Collaborative Approach

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This Presentation is posted at Research Online.
https://ro.ecu.edu.au/ecuworks2011/4
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Background
To ensure maximum benefit is achieved from the investigations in a collaborative research network, it is essential that research data is managed effectively. However, there is no set model to follow. Normally an institution will establish its own policy and procedures applicable to their researchers and data. This causes difficulties for researchers sharing data across a collaborative network.

Edith Cowan University (ECU) is one of fifteen Australian universities striving to create world-class research capacity and capability through investment in the Collaborative Research Network (CRN) project. The CRN project at ECU aims to accelerate the growth of research activity from 2011 until the end of 2014, in four key areas: Health, Education, ICT, and Environment. These areas align with both the Australian Government’s National Research Priorities and ECU’s strategic research plan.

The CRN project will create a significant amount of new data and it is imperative that this data is managed so that it is secure, accessible and useable. Consequently, research data management policies, procedures and technical solutions are being developed to support this process.

Method
During the first half of 2012 a series of semi-structured interviews with CRN researchers was held that probed various research data management issues. The research data interview instrument was developed in conjunction with a variety of stakeholders within ECU (the Information Technology Service Centre, the Library and the Office of Research and Innovation) and external stakeholders including the Australian National Data Service (ANDS) and IVEC. Specifically the interviews provided insight into:

- Developing a model for research data management, ensuring data is collected and consolidated consistently
- Developing a model for data sharing across multiple partners
- Exploring possibilities of working in partnership with IVEC for data sharing and storage

Current Challenges
Not unexpectedly, the challenges highlighted within the interviews varied, depending on the nature of the project, and the size and scale of the data being captured. From the interview three main themes have emerged - data storage, data sharing and education.

Technical Solutions
In order to support the policies and procedures being implemented, there is a requirement for a software solution - a research data management system. There are a number of options that are currently being discussed:

1. Internal ECU solution – deployment of ANDS software within current ECU IT systems
2. External solution – using an external organisation (e.g. hosted data management solution)
3. Collaborative approach – working with IVEC and ANDS

All these models have benefits and risks. However, an effective research data management system will be pivotal for the sustainability of the collaborative research within ECU and its partners. It is hoped that the important research data management themes highlighted as significant from this work can be developed and integrated into other research streams within ECU’s future research activities.

Acknowledgements and Further Information