

THETA

The Higher Education Technology Agenda

The HWMD maturity model: A foundational framework to measure effectiveness of institutional research e-infrastructures

Background

There has been significant investment in eResearch infrastructure over the past several years. The federal government, through initiatives such as the Education Investment Fund (EIF) and the National Collaborative Research Infrastructure Strategy (NCRIS) has supported the development of distributed large scale data storage, an Australian Research Cloud, discipline based virtual labs and has increased capacity to support research data management to the point where most institutions offer data sharing services.

In this changing environment, institutions have responded in different ways. There have been some attempts at sector wide coordination through initiatives such as the CAUDIT Research Working Party and the AeRO IT Research Expert Support Group to leverage and promote the use of this investment into the institutional environment. At the same time library and IT organisations within universities have been grappling with ways to create and improve research services and have been looking for ways to seamlessly connect researchers to these services, whether developed in-house or as part of a research community. Internationally groups such as EDUCAUSE and JISC have been addressing similar issues. For most senior managers though, measuring what progress has been made has been problematic.

The annual eResearch Australasia conference held in late October 2014 provided a valuable forum to bring together system owners of funded eResearch tools and applications, State based eResearch service providers and institutions. However despite this, there are widely varying ideas about what constitutes maturity and best practice within institutions regarding research tools and services. A well attended Birds of Feather Session at eResearch Australasia 2014 asked for feedback on metrics for measuring performance on these issues

to assist in the development of a framework for institutions to measure progress. While the question generated a good discussion, it became clear that there are no known practical metrics for measuring progress or effectiveness (i.e. the value to the institution or to the researcher). Several participants at the BoF had already researched the topic in attempt to resolve the problem. The authors presented a tentative maturity model at the BoF and the consensus was that a maturity model would be more valuable at this point.

The presentation will build on the outcomes of that session and present a flexible model for gauging maturity of library and IT services for research at research institutions.

The Benefits of a Maturity Model

eResearch advocacy, brokering and support services have developed in different ways across Australian institutions. Most require cooperation across IT, Library and Research Office boundaries, but operational responsibility and the flavours of service vary enormously. There are many institutional specific factors that influence a university response to the problem. The idea of a maturity model that can be applied across all this variation is challenging, but would ultimately be very useful as:

- a benchmarking tool;
- a model that can be used within the institution to help focus on the development of library and IT services and infrastructure to support research; and
- will provide reference to frame further discussion of about supporting researchers across the sector.

The Model

This proposed model has been developed collaboratively between the authors and draws upon comparable maturity models and transition models used elsewhere (e.g. the ECAR Analytics Maturity Index for Higher Education) and upon discussions to date within the sector. It covers six main areas of activity for institutions: 1) Collaboration and community engagement, 2) Research Information and Data Management, 3) Technological Infrastructure, 4) Governance and Leadership, 5) Service delivery and management and 6) Workforce education training.

The Presentation

The presentation will discuss the proposed model and the underlying self-assessment tool in some detail. A full paper will be provided at the conference to explain the model in some detail.

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