

Building Australia's eResearch Capability: the challenge of data management

Adrian Burton and Margaret Henty

Outline

- The ANDS context
- What do we mean by building capabilities?
- What is the ANDS constituency?
- What skills are we talking about?
- Developing a delivery strategy

The ANDS Blueprint

- *Towards the Australian Data Commons (TADC)*
- Developed during 2007
- Mapped out coherent vision of what needs to be done in the data space
- Available at
<http://www.pfc.org.au/bin/view/Main/Data>

TADC: Why Data? Why Now?

- We are in an era of increasing data-intensive research
- Almost all data is now born digital
- Increasing amount of data generated (semi-)automatically
- *“Consequently greater clarity is needed over control and access to community-funded data, and the means of aggregating, federating and accessing such data are increasingly important”* (TADC, p. 5)

The ANDS Vision

- “As a vision, ANDS sets out to transform the disparate collections of research data around Australia into a cohesive corpus of research resources. This transformation would assist the connection of Australian and international data centres, repositories and online collections to enable serendipitous discovery, cross-disciplinary research, and cross-repository workflows.” (TADC, p. 5)

Australian Code for the Responsible Conduct of Research

- It describes the responsibilities of institutions and researchers in the management of research data and primary materials
- Institutions are to retain research data, provide secure data storage, identify ownership, and ensure security and confidentiality of research data
- Researchers are to retain research data and primary materials, manage storage of research data and primary materials, maintain confidentiality of research data and primary materials

ANDS Delivery Structure

- ANDS has been structured as four inter-related and co-ordinated service delivery programs:
 - Developing Frameworks
 - Providing Utilities
 - Seeding the Commons
 - Building Capabilities
- Plus candidate service development activities funded through National eResearch Architecture Taskforce projects

Building Capabilities (ANU)

- To improve the level of capability for data intensive research (and associated technologies) across Australia by working with research groups and partnering with willing institutions to improve core data competencies.
- Two themes
 - Community Building
 - Capability Building

Community Building - Activities for 2009-10

- use the ANDS Content Forum to discuss, inform and create guidelines for translating data management policy into practice
- engage the community on capacity and capability constraints to be addressed and the means of addressing them

Capability Building - Activities for 2009-10

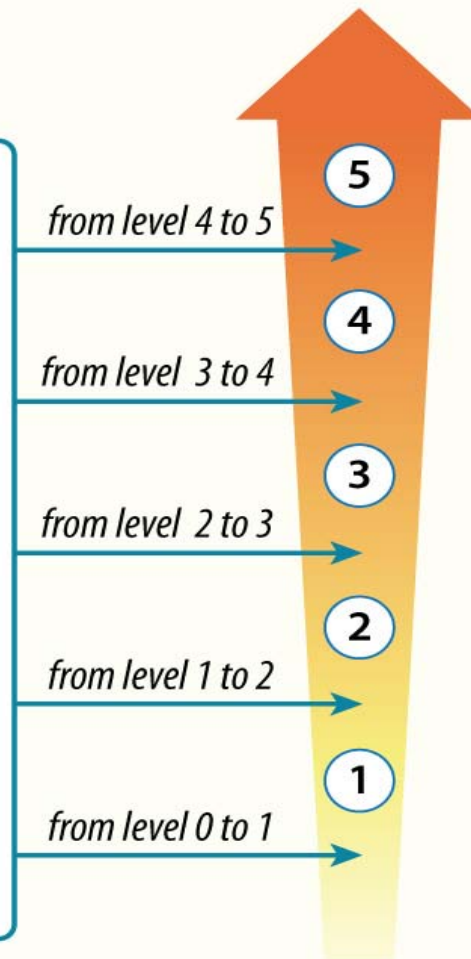
- develop targeted documentation to support the improvement of data management, analysis, curation & preservation
- provide access to documentation through various media & through direct contact to support widespread access & use
- provide opportunity for capability development through workshops, seminars and other forums
- work with practitioners to identify best practices in data management processes, data repository management, preservation planning, data management practices, roles and responsibilities and skill sets for the research community
- develop relationships with equivalent activities overseas to share approaches to capability building that can inform ANDS

The Australian Data Commons

Targeted Activities

...for example

- Develop user and owner frameworks for a data commons
- Develop and operate national registries and data sharing services
- Help Institutions connect repositories to the data commons
- Help researchers publish, share and access data through the data commons
- Certify repositories
- Qualify staff



Capability Maturity Levels

- 5. Optimised:** Organisations have implemented processes to support continuous e-research capability, driven by feedback from monitored processes
- 4. Measured:** Organisations have established processes for appraising and measuring e-research capabilities and interoperability
- 3. Defined:** Organisations have defined governance policies and operational guidelines for e-research services and processes, according to the lessons learned from previous maturity levels
- 2. Managed:** Organisations begin capability building while gaining an early, shared understanding of e-research maturity
- 1. Initial:** Organisations have early awareness of e-research capabilities and have procured organisation-wide infrastructure, such as an institutional repository

The ANDS Constituency

■ Organisations

- Australian universities
- publicly-funded research organizations (CSIRO, GeoScience Australia, Australian Bureau of Statistics)
- cultural collections sector - galleries, libraries, archives & museums

The ANDS Constituency (cont.)

■ People

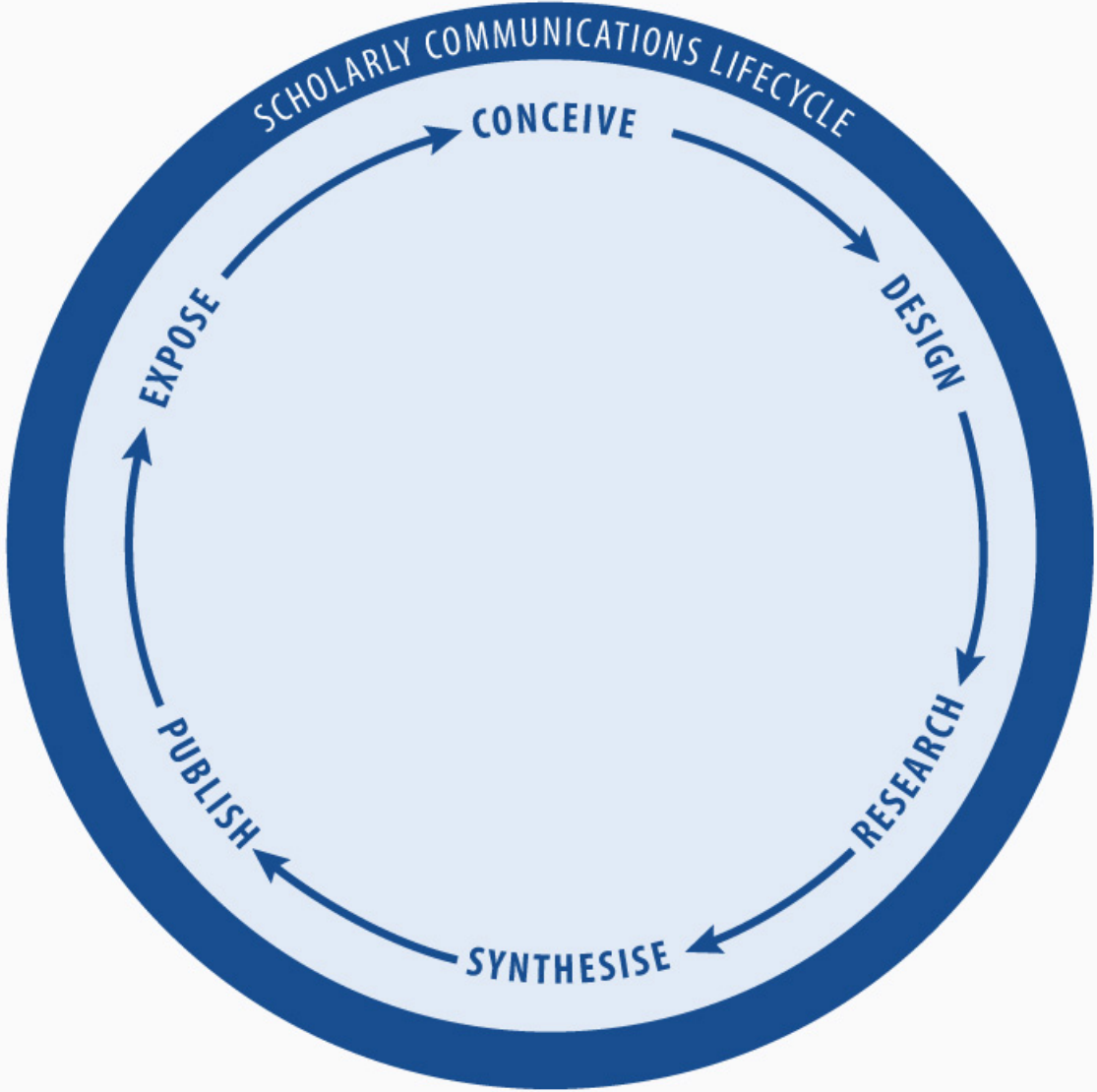
- researchers – those are creating, using, sharing and re-using data and publishing their results. Their understanding of information management and IT may not be as advanced as their disciplinary expertise
- research support staff - often skilled in IT, with varying levels of skills in information management and the disciplinary areas within which they are working
- data centre / repository management staff who need a good understanding of such issues as scholarly communications, collection development and management, file formats, information about collection description and metadata, electronic publishing, collection statistics & metrics, financial sustainability, data curation and sustainability
- data centre / repository technical support staff & software

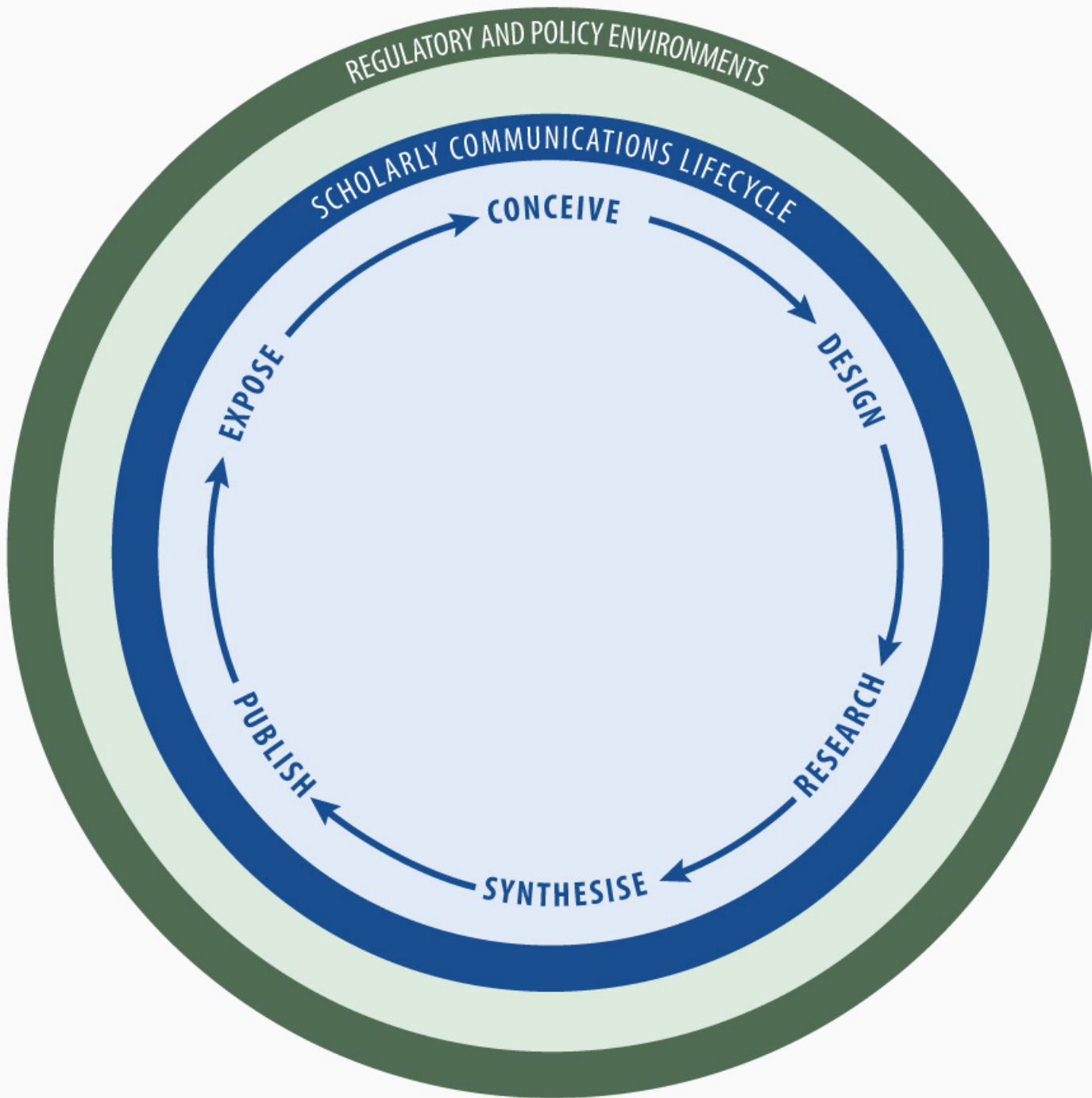
What skills?

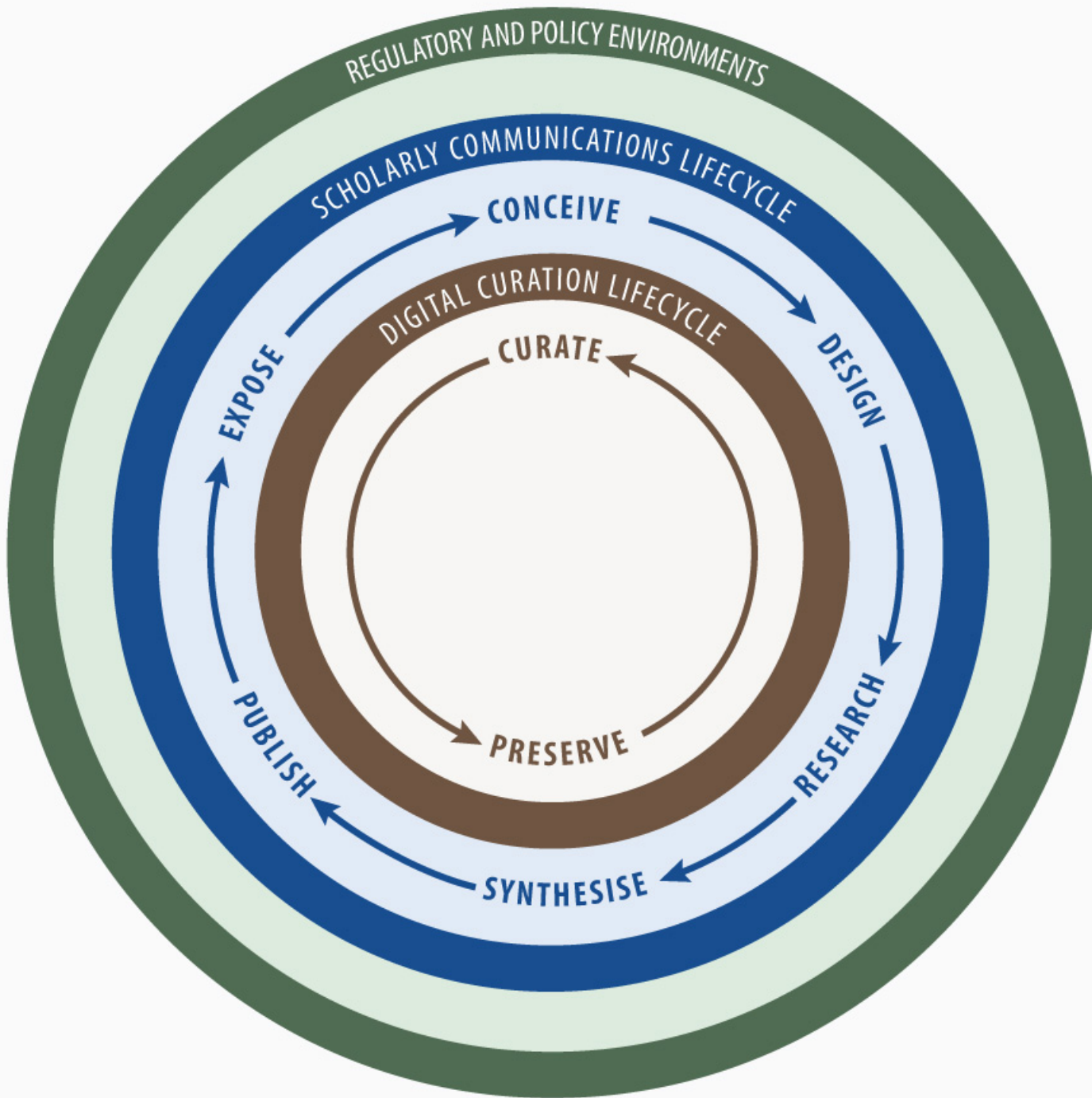
- Scholarly Communications Cycle
- Data management planning
- Legal & Regulatory Environment
- Information management
- Informatics
- Data analysis
- Advanced computation

Delivery strategy

- practical advice at point of need - consultancy, informal knowledge transfer
- enhance and add national focus to institutionally based support, materials development, and training initiatives
- reference group drawn from research communities, data networks, e-Research support services, and data stewards
- workshops, documentation, and training materials
- work in integrated engagement activity with staff from all other ANDS programs and supporting ANDS services
- Not formal course development







Questions?



margaret.henty@ands.org.au

<http://ands.org.au/>