

## **BUILDING THE RESEARCH DATA ECOSYSTEM**

IMPROVING MANAGEMENT OF RESEARCH DATA IS ONE OF THE KEY CHALLENGES FACING RESEARCH INSTITUTIONS. RESEARCH DATA, LARGELY BORN DIGITAL AND GROWING RAPIDLY IN BOTH VOLUME AND COMPLEXITY, IS AN INCREASINGLY VALUED COMPONENT OF RESEARCH OUTPUT, AS EVIDENCED IN NATIONAL AND INSTITUTIONAL POLICY AND GUIDELINES, INTERNATIONAL FUNDING MANDATES, AND AS REFLECTED IN THE ACTIVITIES OF THE AUSTRALIAN NATIONAL DATA SERVICE (ANDS) AND ITS PARTNER INSTITUTIONS.

GRIFFITH UNIVERSITY HAS RESPONDED TO THE DATA MANAGEMENT CHALLENGE BY BUILDING A RICH AND CONSTANTLY EVOLVING DATA ECOSYSTEM COMPRISED OF POLICY AND BEST PRACTICE GUIDELINES, NEW APPLICATIONS, NEW CONTENT MANAGEMENT SYSTEMS AND STORAGE SOLUTIONS. THE CENTRE OF THE ECOSYSTEM HAS BEEN THE DEVELOPMENT OF ERESEARCH INFRASTRUCTURE, INCLUDING: A RESEARCH DATA REPOSITORY TO DESCRIBE DATA COLLECTIONS; AN ANDS-FUNDED METADATA STORES SOLUTION THAT UTILISES SEMANTIC WEB TECHNOLOGY; AND A "RESEARCH HUB" DISCOVERY LAYER THAT SITS OVER THE TOP OF THE METADATA STORE. THE RESEARCH HUB IS THE RESULT OF A STRONG PARTNERSHIP BETWEEN THE DIVISION OF INFORMATION SERVICES (INS), THE OFFICE OF RESEARCH, AND OTHER KEY STAKEHOLDERS WITHIN THE INSTITUTION. THE SUCCESS AND INNOVATION OF THE "GRIFFITH RESEARCH HUB" IN SHOWCASING GRIFFITH RESEARCHERS AND THEIR RESEARCH PUBLICATIONS, DATA COLLECTIONS, GRANTS, PROJECTS AND ASSOCIATED GROUPS WAS RECOGNISED IN MARCH 2013 WITH A 'COMMENDATION OF MERIT' FROM STANFORD UNIVERSITY, AND IN NOVEMBER 2012 WITH A VALA AWARD.

THE NATURE AND CONSTRUCT OF A TRADITIONAL REPOSITORY HAS BEEN CHALLENGED AND A NEW MODEL IS UNDER CONSTRUCTION. A RESEARCHER SELF-SERVICE MODEL IS ALSO IN DEVELOPMENT TO ENABLE RESEARCHERS TO REGISTER THEIR OWN DATA COLLECTIONS. BEST PRACTICE GUIDELINES FOR DATA MANAGEMENT ARE IN THE FINAL STAGES OF APPROVAL. GRIFFITH WAS THE FIRST AUSTRALIAN INSTITUTION TO MINT DIGITAL OBJECT IDENTIFIERS (DOIS) FOR ITS DATA COLLECTIONS AND IS ENGAGED IN AN ONGOING EFFORT TO SUPPORT PERSISTENCE OF DATA AND TO ENCOURAGE DATA CITATION.

BUILDING THE DATA ECOSYSTEM HAS BEEN A JOINT EFFORT OF ALL GROUPS WITHIN THE INSTITUTION BUT IS DRIVEN BY THE ERESEARCH SERVICES UNIT. THE UNIT IS LOCATED OUTSIDE THE CENTRALISED ICTS BUT BOTH COME WITHIN THE DIVISION OF INFORMATION SERVICES, AND IT HAS TRIPLED IN SIZE IN A FEW SHORT YEARS LARGELY DUE TO THE AGGRESSIVE PERSUAL OF PROJECT FUNDING BOTH WITHIN AND EXTERNAL TO THE ORGANISATION. ERESEARCH SERVICES PROJECT TEAMS, LARGELY MADE UP OF DEVELOPERS, PROJECT MANAGERS, AND LIBRARIANS HAVE RAPIDLY GROWN THE QUANTITY AND QUALITY OF ERESEARCH INFRASTRUCTURE AND ASSOCIATED MANAGEMENT AND DISCOVERY TOOLS. AN AGILE APPROACH TO PROJECT MANAGEMENT HAS CHALLENGED THE TRADITIONAL

WATERFALL MODEL AT THE INSTITUTION AND GENERATED NEW APPROACHES TO PROBLEM SOLVING.

AS THE DATA ECOSYSTEM HAS GROWN, CHALLENGES HAVE ARISEN, RESULTING STRATEGIES IMPLEMENTED AND LESSONS LEARNT. THESE INCLUDE: SECURING SUPPORT FROM KEY STAKEHOLDERS INCLUDING RESEARCHERS THEMSELVES; REDUCING COMPLEXITY AND PRE-POPULATING METADATA FIELDS TO ASSIST A RESEARCHER SELF-SERVICE MODEL; AUTOMATING DATA AND METADATA CAPTURE; IDENTIFYING NEW DATA SOURCES; DEALING WITH 'DIRTY DATA'; TAKING ADVANTAGE OF OPPORTUNITIES AS THEY ARISE; AND DEVELOPING A STAFF CULTURE THAT FACILITATES NEW IDEAS, OPEN DISCUSSION AND A SPIRIT OF INNOVATION.

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