

Data and Services Discovery projects - Institutional Role in a Data Commons

Griffith University

Title

Combined DMP/Provisioning workflow with Research Project Resources Portal

Approach

To deliver the objectives outlined within the ARDC project proposal, Griffith University procured a Senior Business Analyst (BA). This resource proceeded to elicit information intended to fully scope, document and recommend business/workflow process changes, business/workflow process integration points and design requirements which would support Griffith University's implementation of a Data Management Plan (DMP) solution. The BA engaged 32 different stakeholders with responsibilities traversing the research lifecycle, these stakeholders were located across five different organisations, and participated in 25 hours of interviews, focus groups and workshops.

The stakeholders consulted include:

- Six key researchers from health and economics fields. Two of these researchers have active projects with Queensland Health.
- Director and staff of Griffith Office for Research (Code and Policy compliance and relevant systems expertise).
- Griffith Research Librarians, Library and Learning Services (Outreach/DMP/training).
- eResearch Services, Digital Solutions (specialist infrastructure and platform provisioning/training).
- Information Technology Infrastructure, Digital Solutions (hardware infrastructure provision).
- Enterprise Information Systems, Digital Solutions (leveraging and integration with enterprise-wide systems e.g. Research Management System).
- Software Services, Digital Solutions (software provision).
- Cybersecurity Services and Digital Strategist, Digital Solutions (security/enterprise architecture).
- University of Queensland (UQ) Researchers and Librarians involved in the Research Data Management (RDM) tool development (for DMP tool implementation lessons learned)
- Queensland Cybersecurity Infrastructure Fund (QCIF) Staff (for QRISCloud Environments)
- Australian Research Data Commons (ARDC) (RDA, RAiD interfaces).

This activity identified Griffith University's 90 strategic needs, 225 research data management business requirements and of those, 173 business requirements were deemed within scope for a DMP solution by means of subject matter expert appraisal. Concurrently, the BA resource

identified and documented the rewards, key drivers, benefits, constraints, barriers and gaps, culminating in a recommended implementation approach for consideration by the institution's project governance through a business case submission.

Several business analysis artefacts and solution design inputs were produced as part of this activity, including;

- Business Analysis Framework
- Requirements Management Plan
- Glossary of Terms
- Requirements Register
- Project Item Register
- Requirements Traceability Matrix
- Business Analysis Artefact (which includes standard BA outputs such as, current and future state workflows, functional and non-functional requirements, use cases, benefits realisation guidance etc.)
- Business Case

Subject to assessments made by Griffith University governance, these artefacts shall be made available for sharing upon request.

The collateral compiled through the business analysis activities of the ARDC DMP project has been used to inform the design of a prototype solution which leverage existing IT infrastructure. This prototype has been tested by researchers, that experience and the feedback provided will be utilised to support the business case. Additionally, if the prototype continues to be considered a viable option by users, it will be developed, maintained and used to frame future DMP solution conversations.

FAIR

FAIR principles have been long communicated as part of Griffith University's Information Management Principles prior to the initiation of this project. Griffith University's Information Management Principles AFAIRS (Asset, Findable, Accessible, Interoperable, Reusable, Secure) are a good example of how FAIR concepts can be practically implemented by institutions at an operational level. Notwithstanding this, the uptake of standards which align researchers to AFAIRS principles is widely recognised as being poor by the stakeholders engaged, although metrics to support this assessment do not currently exist.

Although Griffith University has not achieved a quantifiable change in their FAIR alignment within the project timeline, through the availability of; current state & future state processes; business requirements; roles and responsibilities, Griffith University is now well placed to successfully implement business processes and IT infrastructure to facilitate FAIRer research data.

Collaboration

Many internal and external stakeholders were approached to contribute as part of the ARDC DMP project BA activities. This included engagements with resources from organisations including the ARDC, QCIF, Queensland Health, Australian Digital Health Agency and UQ. Many Griffith University stakeholders had also been heavily involved in RDM endeavours through previous roles and were able to share perspectives of recent experiences across a range of research institutions. Throughout these collaborations it became clear that best practice RDM is a national problem and any Griffith University solution would need to remain mindful of the impacts arising from national or international developments.

Despite the collaborations, it was agreed that the greatest value-add for Griffith University researchers would be through outputs and future investigations focused on overcoming existing institutional barriers and maturing of the data management planning business processes holistically within the institution.

Sustainability

The artefacts developed through this project will be leveraged for any future RDM activities. An ongoing activity is the distribution of the Requirements Traceability Matrix artefact which allows various business units to respond to the capabilities captured throughout this exercise. This activity will determine whether existing solutions (e.g. SharePoint) align with the expectations of stakeholders and/or confirm the scope of any development required.

Griffith University's primary objective is to implement a DMP solution and the body of knowledge collected through ARDC funded resources, has identified a viable approach which, once implemented, will ensure that resulting tools and projected cultural shifts to data management best practice, will be sustained.

Whilst the original proposal put forward was to implement a DMP solution across Griffith University, a staged evolution will minimise the change management workload/risk, allow time for benefits realisation and business case validation, and leverage the learnings and experience of previous phases.

Indeed, to realise a best practice DMP future state, additional design, build and implementation activities need to be adequately resourced and a Business Case has been submitted to the Griffith University senior executive for university funding.

Learnings

The challenges Griffith University faces are synonymous with those experienced by many research institutions across the country. Improving data management planning and alignment to FAIR principles, has been difficult due to several constraints and barriers, such as:

- the absence of context-sensitive guidance and researcher decision support;
- the expectation placed on researchers to retain an in-depth understanding of ever-changing policies, legislation and technology;
- poor longitudinal visibility over projects due to the absence of an agreed persistent research project identifier;
- lack of basic information management skills (i.e. it isn't taught in coursework); and
- researcher time allocation to RDM tasks due to higher priorities to meet research performance indicators.

The Research Data Management problem is a national one, and accordingly a national body should provide the sound leadership required to overcome it, this is complementary to leadership objectives listed within the ARDC's Strategic Plan 2019-2023. Without centralised guidance on emerging technology and standards, institutions will continue to form their own conclusions on the research data community's direction and adopt technologies or develop bespoke solutions without long-term FAIR prospects.

Impact

Presently there are no quantifiable impacts to research data practices that can be attributed directly to the ARDC Project activities. However, the benefits associated with the stakeholder engagement initiated, has increased researcher visibility of the process and supporting services, and opened research data dialogues across the institute. Griffith University well placed to realise the benefits and capitalise on the interest and momentum generated.

A notable example of this is a key research project which will be dealing with a particularly vulnerable participant demographic, the school has sought to define a Research Project Standard Operating Procedure and a Data Management template to facilitate the adoption of best practice data management planning throughout their Academic Group. It has been recommended that this success and others like it be used to inform the implementation of the solution developed through this body of work.

We are confident that with the formal support from Griffith University in way of resource allocation, all stakeholders across the research project lifecycle stand to benefit from a DMP solution implementation set-up for success owing to the increased visibility of business processes and requirements which have not been available prior to the ARDC project.

Report prepared by: Christopher Genc

Date: 25/09/2019