BUSINESS PLAN

PLANNING PERIOD: 1 JULY 2016 TO 30 JUNE 2017

SUBMITTED: 30 JUNE 2016

Contents

1   Executive summary

ANDS exists to transform Australia's research data environment by making Australian research data collections more valuable through managing, connecting, enabling discovery and supporting the multiple use of this data. The purpose of this activity is to enable richer research, more accountable research, more efficient use of research data, and improved provision of data to support policy development. The outcome of this activity will be that Australia's research data as a whole becomes a nationally strategic resource.

The Business Plan describes the planned activities and outcomes of the Australian National Data Service (ANDS) for financial year 2016-17. This plan is in large part a continuation of directions set out in the 2015-16 plan and deepens the National Collaborative Research Infrastructure Strategy (NCRIS) partnerships, particularly with Research Data Services (RDS) and the National eResearch Collaboration Tools and Resources project (Nectar).

The work of ANDS will continue to be carried out under four programs:

- **National Engagements** with government, institutional, discipline and national facility data providers
- **National Services** including registration, publication, discovery, skills and advisory services
- **Institutional Engagement** with all of Australia's major research institutions
- **International Collaboration** with data infrastructure providers and organisations to ensure that Australian research data infrastructure is compatible with international approaches.

During 2016-17 ANDS will work to ensure the following outcomes are achieved:

- Improved capacity of Australian research to conduct data intensive research through availability of a richer, more valuable set of research data collections with appropriate tools and services
- Enhanced ability to discover Australian research data assets in the Australian Research Data Commons (ARDC), with more data collections that have been managed and connected, ensuring over 100,000 collections descriptions are discoverable and accessible through Research Data Australia, Google and other mechanisms
- Reliability of the ARDC through delivery of valued national data technical and advisory services
- Increased value of NCRIS data related activities by delivering a more integrated set of data services to the Australian research system
- Institutions that build more coherent research data infrastructure as a result of ANDS role as a trusted partner of research institutions
- Australia participates effectively in international data intensive research because it continues to play a leading role in research data infrastructure internationally, particularly through the Research Data Alliance.

2 Project components

National engagements

The National Engagements program represents ANDS' focus on data collections and data services that are contributed by national data providers such as the NCRIS data intensive facilities, the NCRIS eResearch facilities, and Commonwealth science agencies and data collecting and aggregating departments. This national focus complements the institutional focus of the Institutional Engagement program, which caters for Australian research organisations, typically universities. A set of activities will be conducted through this program to integrate ANDS, Nectar and RDS services that collectively deliver benefit, particularly through NCRIS data intensive partners.

National services

Through the National Services program, ANDS provides data publication and discovery infrastructure as well as support for those using ANDS infrastructure. The support extends more broadly to research organisations and public sector data providers building their own institutional capacity and capability as part of the Australian Research Data Commons.

Institutional engagement

The Institutional Engagement program aims to ensure that institutional research data infrastructure is developed, maintained and operated at all of Australia's major research organisations. This will ensure a continuing coherent Australian Research Data Commons, and that the research data assets of the institutions provide as much value as possible. A particular focus of this program is supporting a coherent approach to institutions raising the value of particular significance to the institution.

International collaboration

The International Collaboration program works with data infrastructure providers to ensure that Australian research data infrastructure is compatible with international approaches. The program focuses on the Research Data Alliance, although a number of existing activities will continue in parallel. The purpose of the Research Data Alliance is to accelerate international data-driven innovation and discovery by facilitating research data sharing and exchange, use and reuse, standards harmonisation, and discoverability.

These programs will be delivered in a coordinated manner that will ensure that ANDS' partners engage with ANDS as a whole, not with the individual programs. This has the consequence that ANDS needs to have a greater emphasis on customer relationship management so that partners do not have to navigate their way through different parts of ANDS.

2.1 National engagements

One of the foci for National Engagements in the period will be to demonstrate greater integration between RDS, ANDS and Nectar, and meet the needs of an agreed number of NCRIS capabilities. This will be demonstrated through a series of coordinated activities between ANDS, RDS, Nectar, the Australian Access Federation (AAF) and Australia's Academic and Research Network (AARNet). This will involve connecting ANDS, Nectar and RDS systems using existing identifiers to provide a more joined-up experience for users. This will ensure that information is systematically gathered to pre-populate any forms that currently require this information. The main challenge for this activity is coordinating a shared project between different NCRIS capabilities and their lead agents, as well as activities across a number of service providers within a very short timescale.

A related activity will be the provision of trusted data repository solutions for three different capabilities. The emphasis will be on systems integration, not systems development. This will require close cooperation between ANDS, RDS, and the NCRIS data generating facilities. Associated with this activity will be work to ensure that the data held in the trusted data repository is of high quality.

ANDS will also work with other eResearch capabilities to develop a reporting framework that focuses on how to derive evidence that can demonstrate the value of the investments in eResearch infrastructure for both the research community and other stakeholders.

ANDS will proactively engage with public sector organisations to facilitate the discoverability of and access to public datasets that are valuable to the research community. In parallel with this activity ANDS will engage with the Public Data Branch, Department of the Prime Minister and Cabinet to build stronger connections in relation to open data.

The outcome of this program will be a more valuable set of research data collections with appropriate tools and services, integrated with NCRIS data and services.

2.2 National services

2.2.1 Online services

ANDS will continue to deliver trusted national services in support of data publication and re-use. A number of optimisations to existing services are scheduled for 2016-17 as well as a new area of collaboration with NCRIS facilities around the cross-facility discovery of data services.

Key areas for service development include:

- data service discovery

- DOI service optimisation

- vocabulary service optimisation

- 3rd party integration (ORCID, Thomson Reuters Data Citation Index, DataCite, CrossRef, user annotation)

- user tracking (partner reports, recommended datasets, MyRDA)

- data connections (value-add and visualisation)

- systems optimisation.

2.2.2 Capability building (skills, resources, policy)

Expected activities include building capability in strategic areas with target stakeholders through activities such as virtual events, workshops, product development, awareness raising, publications and communications. These are designed to ensure a sustainable future for data management and access. The key activities for 2016-17 include webinars, workshops, publications and skill building materials focusing on the wider use of research data and building technical data management skills within support services at institutions.

ANDS will continue its engagement with the national data policy framework through renewed collaboration with the Australian Research Council (ARC), the National Health and Medical Research Council (NHMRC), the Department of Education, the Department of the Prime Minister and Cabinet, Universities Australia, and the Chief Scientist's Office.

The outcome of this program will be a richer Australian Research Data Commons (ARDC) with an associated set of valued national data technical and advisory services.

2.3 Institutional engagement

ANDS will continue to engage with institutions through ongoing support and projects to build capability at individual institutions and through community engagement activities.

ANDS will continue to engage with the research data community and facilitate the sharing of information and experiences between institutions through round tables and informal meetings across Australia. These will be structured to enable regional participants to attend face-to-face events and ensure activities accommodate a range of maturity levels at the various institutions.

The institutional engagements program will focus on the following cross-program streams:

High Value Collections. A funded program building on open data collections where ANDS will partner with 25 institutions to form collections of strategic significance to them, which are tied into national initiatives and other relevant NCRIS facilities. Most of these collections will be openly available, enabling the discovery of the rich data being produced and making optimal use of national facilities. The highlight of this program will be building capability at the institutions and forming collections that exploit Australia's research data infrastructure.

Collection Enhancement Partnerships. A program partnering with 14 less research intensive universities to extend their experience and build on their existing infrastructure. This will be through expertise provided by ANDS staff and some funding.

Institutional Research Data Infrastructure Connectivity. This work will ensure connectivity between institutional systems. Through a package of activities ANDS will facilitate sharing and understanding at an institution level about the means of capturing information about research data and passing this information between systems. These activities will take place in conjunction with the Australasian Research Management Society *(*ARMS) and Council of Australian University Librarians (CAUL). Activities will include webinars and workshops on systems that capture information about research data and connections between these systems.

To achieve a national and coherent approach to building capacity in research data across medical research institutes (MRIs) and cooperative research centres (CRCs), engagements will be set up to offer a combination of funding, support and expertise.

The outcome of this program will be a richer Australian Research Data Commons (ARDC) and strengthened partnerships with Australia's research institutions.

2.4 International collaboration

The main vehicle for International Collaboration will be through the Research Data Alliance (RDA), although a number of existing activities will continue in parallel. In addition to the RDA focus, ANDS is also involved in two joint Organisation for Economic Co-operation and Development (OECD)/Global Science Forum (GSF) Expert Groups, producing policy reports in the areas of International Coordination of Data Infrastructures for Open Science and also Sustainable Business Models for Data Repositories.

Expected activities over the planning period will be:

- driving continued momentum and maturing of the RDA

- making an ongoing contribution to RDA governance bodies as outlined above
- successful holding of Plenary 8 (Denver, September 2016 as part of International Data Week) and Plenary 9 (Barcelona, April 2017)
- continuing development and adoption of the Research Data Switchboard (an output of the RDA Data Description Registry Interoperability Working Group)
- contributing to the successful conclusion of the OECD/GSF Expert Groups' activities and production of final reports
- contributing to the ongoing success of Datacite, including attending DataCite Board Meetings and Annual General Meetings
- ongoing engagement with the ORCID (author identifiers) and Thomson Reuters (Data Citation Index) initiatives
- actively seeking and working with Australian representatives of discipline communities for whom an RDA working group is an appropriate vehicle to develop and implement international data exchange technologies
- participating in the THOR follow-on project to ODIN to develop production services to enable connection using researcher IDs, data IDs and publication IDs.
- promoting greater involvement of Australian participants in RDA Interest Groups and Working Groups

The major difficulty anticipated is the challenge of recruiting greater Australian involvement in the RDA when the bulk of the members come from Western Europe and the USA. This manifests itself at this stage of the RDA in distances to be travelled to physical meetings, and the time zones chosen for virtual meetings. This should improve over time as the membership of RDA becomes more geographically diverse – the plenary in Japan in 2016 was a positive pointer in this direction.

The outcome of this program will be that Australia continues to play a leading role in research data infrastructure internationally, particularly through the Research Data Alliance.

3   NCRIS relationships

ANDS will allocate considerable effort over 2016-17 to integrate its activities with Nectar and RDS, along with AARNET and AAF. RDS, Nectar, ANDS and AAF provide services addressing a full range of services for project and researcher identification, and research data generation, analysis, manipulation, management, and curation.

Further alignment of strategies across the projects is seen as being highly beneficial and is being developed on a number of levels including:

- increased discussion and visibility across projects of works planned and in progress, and
- shared projects with joint strategy, planning, resourcing, and development.

RDS, ANDS and Nectar recognise the significant additional value available to the research community in creating a more coherent and connected experience when accessing national underpinning capabilities. Together the projects will demonstrate this value through a series of coordinated activities undertaken between ANDS, RDS, Nectar and AAF to support a whole of data lifecycle approach in support of a number of NCRIS data-intensive capabilities.

This activity will involve connecting together ANDS, Nectar and RDS systems using existing identifiers to provide a more joined-up experience, with the identifiers envisaged at this stage being ORCID for people and grant identifiers (ARC, NHMRC) for projects. This will ensure that data is coming from authoritative sources of truth for pre-population of data, streamlining the provisioning experience for users while enabling the harvesting of provenance metadata throughout the data's developing life.

Initial activity will provide a core suite of functional components for a selection of NCRIS and institutional partnerships, building on this rapidly with a wider set of partners for deeper integration, leveraging existing services developed through the wide range of NCRIS project-specific working groups such as the Nectar Virtual Labs and the RDS A.x series of projects.

ANDS will also pursue trusted data repository activities (described in the National Engagements section) with key partnerships including NCRIS partners.

4   Industry engagement plan

ANDS' main strategy is to support researchers and research institutions to lift their engagement with industry as intended through the Australian Government's Industry Innovation and Competitiveness Agenda. Data is a powerful tool for collaboration and ANDS sees its role in support of other industry partnerships, rather than direct engagement. There are a number of key activities in the ANDS 2016-17 Business Plan that demonstrate an intention to develop industry engagement activities or extend existing activities. Through the National Services program, ANDS will:

- continue to make available to research and industry a rich set of data collections descriptions at no cost

- develop an improved data capability at selected cooperative research centres, and the newly established Industry Growth Centres

- help research institutions to refine data management planning to take into account industry engagement.

Through the National Engagements program, ANDS will:

- help research institutions establish high value data collections that support the industry partnerships targeted by the institutions

- help to integrate existing data collections from a wide range of sources—including research, government and industry—to provide Australia with a unique international advantage in industry data sharing

- in partnership with Nectar, RDS, and associated data intensive NCRIS capabilities, develop stronger abilities to support research and industry to jointly access a rich range of data services.

Through the Institutional Engagements program, ANDS will:

- help research institutions establish high value data collections that support the industry partnerships targeted by the institutions

- help to integrate existing data collections to provide Australia unique international advantage in industry data sharing

- develop an improved data capability at selected cooperative research centres and the Industry Growth Centres

- help research institutions to refine data management planning to take into account industry engagement.

Through the International Collaboration program, ANDS will:

- enhance Australia's ability to participate in international industry data sharing through activities in the Research Data Alliance.

These activities will be carried out in an integrated manner across the ANDS programs. Activity to date has led to improved ability to collaborate over data in several areas. Most notable are Curtin University's ability to engage with the mining sector over mining data samples, the University of South Australia's ability to engage with the water industry, and the University of Western Australia's engagement with Agriculture over crop varieties. Each of these areas will be enhanced through further engagement in data collection activities. For ANDS, our determination of success in this area is directly related to our institutional partners' success in industry engagement.

5 Performance measures

Target performance measure	Associated achievement	Project component
ANDS will engage with 6 data intensive NCRIS facilities and associated research institutions	NCRIS data intensive facilities and associated research institutions are able to bring together and explore related data collections	National Engagements
More than 100,000 research collections are published	Research data is routinely published through Research Data Australia by our institutional partners	National Services
Number of research institutions that ANDS partners with (target – 35)	Partner research institutions develop more valuable research data assets	Institutional Engagement
ANDS and Australian partners are involved in the RDA governance and at least four (4) working groups	Australia has a leading role in international research data through the Research Data Alliance	International Collaboration

6   Expected expenses

	Tax Financial Year Jul 2016 - Jun 2017 $'000	
Summary		
Funding		
NCRIS 2016 Funding		9,380,000
NCRIS 2015 Funding cfwd		3,435,655
Interest Earned (Approx.)		118,364
Total Income		**12,934,019**
Total Expenditure		12,934,019
Closing Balance		**(0)**
Expenditure		
National Engagements		**4,495,543**
Management and Governance Costs		332,255
Salaries and On-Costs for technical staff		1,212,175
Infrastructure Maintenance		2,700,000
Total Administration		97,453
Utilities	20,491	
Rent	63,119	
Consumables	13,843	
International Collaboration	-	
Industry Engagement and Outreach	-	
Others		153,660
National Services		**2,951,116**
Management and Governance Costs		166,360
Salaries and On-Costs for technical staff		2,098,002
Infrastructure Maintenance		75,000
Total Administration		458,094
Utilities	92,619	
Rent	301,142	
Consumables	64,333	
International Collaboration		-
Industry Engagement and Outreach		-
Others		153,660
Institutional Engagement		**5,127,143**
Management and Governance Costs		475,053
Salaries and On-Costs for technical staff		711,516
Infrastructure Maintenance		3,300,000
Total Administration		95,081
Utilities	20,016	
Rent	61,553	
Consumables	13,511	
International Collaboration		-
Industry Engagement and Outreach		-
Others		545,493
International Collaboration		**360,217**
Management and Governance Costs		23,255
Salaries and On-Costs for technical staff		160,918
Infrastructure Maintenance		100,000
Total Administration		76,044
Utilities	16,209	
Rent	48,989	
Consumables	10,846	
International Collaboration		-
Industry Engagement and Outreach		-
Others		-
Total ANDS Expenditure		**12,934,019**

7   Governance and management arrangements

The ANDS Steering Committee provides overall governance of the ANDS project and sets the strategic directions, policy and milestones for ANDS. Information about membership of the Steering Committee can be accessed at www.ands.org.au/about-us/governance.

ANDS is currently managed by a full time executive staff comprising an Executive Director (located at Monash University), three Directors (a Monash Director, a CSIRO director, and an ANU Director) as currently agreed under the ANDS Collaboration Agreement, and various Program Managers.

Directors and Managers report to the Executive Director with regard to ANDS activities and to a nominated person in the host institution for administrative purposes (the Supervisor).

8   Capital upgrade path

ANDS neither manages nor owns physical assets.