

## PART FOUR

## OWNERSHIP AND MANAGEMENT

### Investment Criterion 3

**An investment plan must include a facility ownership and management structure that will result in the efficient and effective operation of the infrastructure**

### Governance

Because the pace of change in e-Research cyber-infrastructure is high; it is likely that change will be needed to some of the proposed programs over the investment timescale. In addition, additional funding for related activities may become available which may also require considerable re-planning and re-aligning of activities. This suggests that the maximum flexibility be retained (commensurate with good management of the programs of activities within the investments).

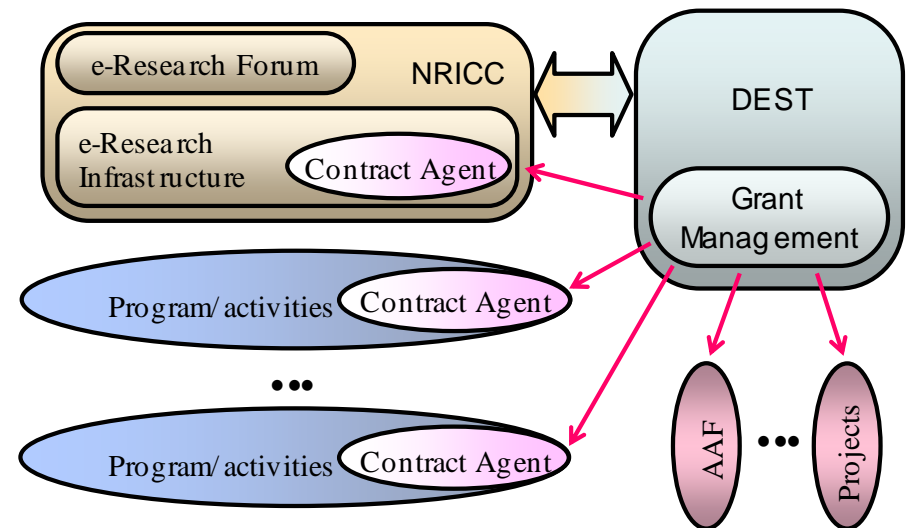
A high level of co-ordination effort is also implied if investments are to be brought together within that changing environment to achieve the emergent capabilities needed by e-Research. This suggests a single overall managing agent is needed.

On the other hand, the various activities have very different properties, and many of the relevant parties have interests well outside of the NCRIS framework and indeed outside of the research sphere. This suggests the need to separate activities so that like interests can be involved in areas that matter to them and organisations are not compelled to be involved in activities that distract them from their own missions.

The entities that may be involved are also likely to change over time, so that the contractual arrangements need to be 'light weight' and flexible. On the other hand, while the activities may include a few participants, many entities and research groups will come to depend on them, so that contractual obligation around service delivery and arrangements for community steering will need to be in place.

An overall structural framework that meets these various requirements is depicted to the right. In this framework

- The primary strategic governance for activities within Platforms for Collaboration will be through a high level committee established by DEST, to be called the National Research Infrastructure Coordinating Committee (NRICC)
- Primary management will be through a program office, to be called e-Research Infrastructure (eRI) Australia, operating to a business plan approved annually by NRICC, and implemented by a lead agency under contract with DEST



- Financial control will be via contracts between DEST and the lead agency for eRI and other lead agencies and participants associated with program activities

The result is a fast track and flexible start-up for Platforms for Collaboration, as eRI can be established via existing grant mechanisms. Activities which need continuation, such as the APAC National Facility, can also be easily continued under a suitable grant. The arrangement also allows for incorporation at a later date if desired.

Programs operating in this structure will report to DEST on funding acquittal and report through eRI and NRICC to NCRIS and DEST on performance.

If funding agreements can be kept at the program level, by DEST funding a lead agency, the number of agreements can be kept small.

## NRICC

The National Research Infrastructure Coordinating Committee (NRICC) will be the strategic committee charged with setting direction around the use of, and driving the uptake of, platforms for collaboration in research.

The goal of NRICC is to provide an holistic oversight of the activities contributing to the platforms for collaboration capability.

The Committee will have an independent Chair, an Executive Director, and its membership will include a nominee of DEST (as a Principal Adviser).

The remaining members would be appointed for their expertise rather than necessarily on a representational basis.

The NRICC may also recommend one or more international members be appointed to the committee, for example from the e-research communities in Europe or the USA.

The NRICC will:

- formulate and set strategic directions for new programs or for variations to existing programs under the Platforms for Collaboration banner
- appoint the Executive Director, and may appoint one or more e-Research champions and consider the advice made to it by those individuals
- convene a forum to inform it, known as the e-Research Community Forum and act on its advice and input
- engage collaboratively with DEST in relation to its deliberations and determinations, including through the Principal Adviser DEST who will have a seat on the NRICC
- approve the annual business plan prepared by the Executive Director and the programmes operating under the Platforms for Collaboration banner
- make recommendations to DEST and the NCRIS committee arising from the business plan, including for allocation of funding and programme variations

NRICC would provide a formal progress report to DEST annually but would be able to make recommendations to DEST at any time in response to changing needs or developments in e-research.

The NRICC will be supported by its Executive Director and other staff, to be determined, who will be employed within the eRI program office.

## eRI

e-Research Infrastructure Australia will be a program office operating under the governance of NRICC, supported by a selected contract agency.

The analogy would be, if eRI were incorporated, NRICC would be the eRI Board, except that, the allocation of funds to new programs and general variations to programme funding will be enacted by DEST through a Grant Management office.

The contract agency will appoint the Executive Director on the recommendation of NRICC, and the Executive Director will be an ex-officio member of NRICC.

The eRI budget and staff levels will form part of the Platforms for Collaboration annual business plan and will require NRICC approval.

DEST will provide the approved budget funds to the contract agency which will provide the Executive Director with the necessary authority to expend those funds.

The contract agency, will appoint such additional staff as required to administer the programs as nominated in the business plan.

eRI will focus on two principal business activities, namely programme development and the provision of services through specific entities contracted through DEST.

eRI will:

- design and monitor the programmes of activities that make up the Platforms for Collaboration capability for approval by NRICC
- manage, and actively promote the uptake of, the programmes in accordance with NRICC's strategic direction and the Australian Government's policy direction
- create and stimulate partnerships and collaborative arrangements to assist in the design and operation of the programmes, such as convening occasional working groups to deal with specific issues
- develop program agreements to support the implementation of each program, identifying the obligations, duties and benefits of participating in the program
- appoint program managers and other staff to approved positions

Entities seeking to participate in Platforms for Collaboration program would sign the relevant program agreement with the lead agency for that program, or directly with DEST in cases where few parties are involved.

## Program Governance

While multiple programs allow different participation and conditions to be applied in each program, it also leads to multiple agreements. In general the number of agreements needs to be as few as is possible, and therefore some programs may be implemented through alternative means.

Where a program is established, it will be governed by a Program Agreement which every participating organisation will need to sign with a Lead Agency for that program or with DEST, where DEST acts in that capacity. Organisations participating in a program will be referred to as Program Members.

In general it will be necessary to sign the program agreement to receive funding for the purposes of a program. It may be possible in some circumstances to be funded on a project basis, but in that case a deed of grant with DEST would be required.

Program members will also need to satisfy a qualification hurdle and accept the obligations inherent in the implementation of the program.

The form of the program agreement and the initial program plan will be approved by NRICC before the commencement of each program.

The general arrangements around a program will include the following.

- eRI will appoint a Program Manager for each program, where each will be at least a half time position
- The role of the program manager will be set out in the program agreement; one element of which will be to develop a revised program plan each year
- The program manager, a single representative of each program member and at most three nominees of NRICC will form a Program Steering Committee
- The program steering committee will be tasked with oversight of the program and endorsement of changes to the program plan

Apart from the usual issues to be covered in a partnership style agreement, each program agreement will also address the following items:

- The categories of program members and the associated rights and obligations
- The process for identification and admission of new program members
- The identification of matters which may be determined as part of program activities (such as merit allocation of resources), by the program manager (such

as resource substitution); or by the program steering committee (such as commencing anew activity, or re-assigning resource between activities)

- Program members will have the right to terminate their participation, after meeting any outstanding commitments, without prejudice, on any imposed program variation, and may do so on three months notice otherwise
- Lead agencies will have the right to terminate an agreement with any program member on three months notice for any of the reasons identified as part of the program agreement, such as performance failure or financial variations to the program imposed by NRICC

Each program plan will address the following items:

- The overall goals of the program and the objectives set for the year in question
- The key performance indicators that will be used to assess the program's effectiveness and contribution
- A summary of resources available to the program, both funded by DEST and contributed from other sources
- A program plan and associated milestones for each activity identified within the program plan
- A organisational chart identifying the personnel and their roles and authorities within the program activities

Each program activity will provide a quarterly report summarising achievements and notifying any variations to resource levels or milestones to the program manager.

Where funding is provide to program members, it will be provided quarterly in arrears following submission of the relevant summary. Further funding may be withheld where the effort level required by an activity has not been provided, until such time as the effort contribution is made good.

Program member contribution will be on a best effort basis, so that payment while in arrears is not milestone based. Where project failure is determined, activities may be terminated or curtailed, and funding reduced if substitute activities cannot be agreed.

Program members may request a substitution of staff and changes to resource levels across projects and also across programs, where reasonable, in order to assist their maximum contribution to the overall investment plan.



## **PART FIVE**

## **ACCESS AND PRICING**

### **Investment Criterion 2**

**An investment plan must result in research infrastructure that is accessible by researchers on the basis of merit, at reasonable prices, and that encourages collaboration in research**

The following access policies are proposed for the various services categories:

- Systemic services, publicly available at no usage charge
- Project services, available through merit allocation at no usage charge
- Funded services, available by agreement at full marginal cost for research entities

All services will be for a stated duration and no agreement will be entered into to retain data on behalf of third parties indefinitely.

Project participants will need to accept that Intellectual Property contributed to a project will be retained by the contributor, as will all improvements to that intellectual property, and that any intellectual property developed by the project itself will either be in the public domain or each participant will receive an enduring non-exclusive right to use.

## PART SIX IMPLEMENTATION STRATEGY AND BUSINESS CASE

**Investment Criterion 4** An investment plan must include an implementation strategy and business case that will result in the efficient implementation and effective ongoing financial management of the infrastructure

### Mutual Dependency

Because the build up over time of national e-Research support and cyber-infrastructure will have many contributors, the Platforms for Collaboration investment approach has adopted a “build-with” model.

Therefore a relaxed participation model is proposed where participants do not need to be involved in all programs, and program members do need to be involved in every activity.

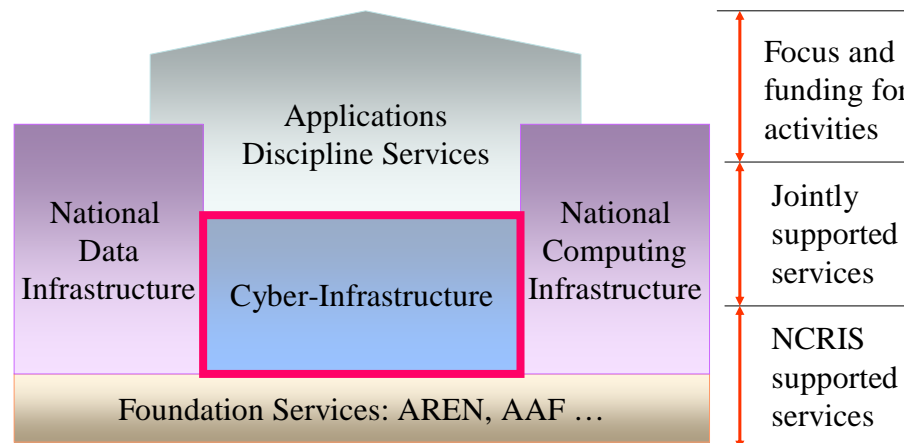
The intention however is to build up a balance of activities so that Platforms for Collaboration becomes a source of core e-Research services that helps the surrounding set of activities co-ordinate and inter-operate. It is simply the case, that the majority of funding in the e-Research space will always be provided ex-NCRIS.

This ability to attract organisations and other e-Research investment into the overall framework is a key goal, and therefore the level of ex-NCRIS resources contributed to or co-operating within the activities is a key performance indicator.

### Initial Scope

The overall envelope of contribution that Platforms for Collaboration is aiming towards is as follows:

	2007-08	2008-09	2009-10	2010-11	TOTAL	Operations	EFTs	Contribution	In-kind	
Data program										
Compute program		These financial arrangements are under negotiation with a variety of parties and in the interests of those negotiations the financials have been removed from the public draft								
Applications program										
Interoperation program										
Foundation services										
eRI										
TOTAL										



NCRIS funds national components, others fund other components, noting that some services will be user/member funded as well

A primary factor in arranging the investment is that the scope of Platforms for Collaboration leads it to prefer to support systems and operational components and to obtain consulting, advisory and expertise components as in-kind contributions.

The arrangement permits organisations to participate in the tools program without having to fit the mould of a service provider. It also concentrates rather than replicates system and service support expertise and allows for the fact that tools may be best hosted for operational reasons near the significant compute or data capabilities they work with.

As tools and services develop, they will transition into the Cyber-infrastructure program to be hosted and supported by suitable service providers. Hence NCRIS funding will need to be provided in a way that allows it (consequently) to also migrate into that program over time.

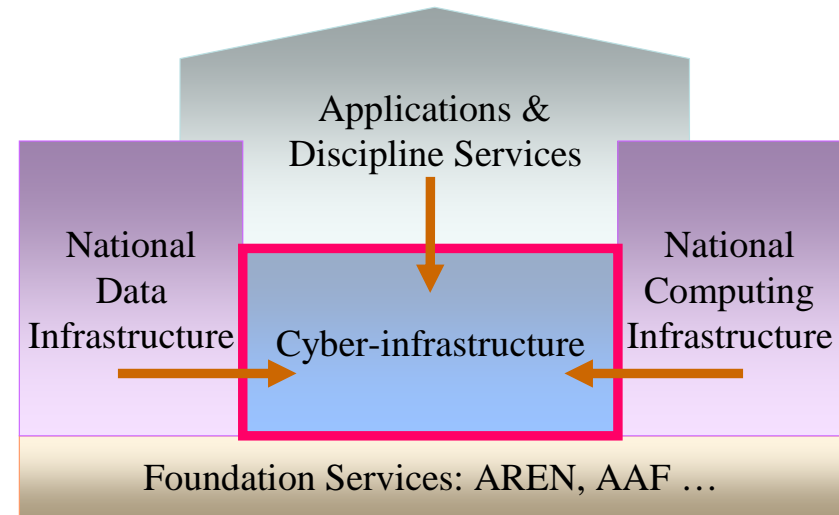
A second factor concerns the manner in which other e-Research infrastructure investors, such as state governments and research institutions, prefer to channel their investment activities. Most state governments have nominated the existing APAC member as the means for focussing in their region. Some APAC members are in transition to a more generalised e-Research focus and Victoria has created a second entity in addition to the existing APAC member.

However, the expertise required to develop user tools and discipline services and the services identified within the data collections program do not reside solely within the APAC state partners, and significant resources in associated organisations (such as ANU, CSIRO and the University members of the APAC partners) are not included in APAC’s management scope. There is a clear community preference that these additional capabilities for the development of e-Research tools should be harnessed, but that the existing operational service providers are a participant rather than a controller of that process and that investments relating to tools and data issues be considered independently of the existing compute interests.

This is major complication, as the benefits that arise from co-location of tools, data and compute resources are high. While network bandwidth is perceived to be able to transport data to compute resources, the future requirement for information services derived from large volumes of data leads inevitably towards the installation of tools and the location of processing capability close to the sources and repositories of data.

The long term vision must be a number of e-Research support facilities that provide for this co-location. However, the urgency for significant investment in data specific services, the immaturity of the tool domain, and the existing contextual gap between data and compute communities, means that this can only be a longer term goal; it is simply too important to begin dealing with research data in its own right, than to ponder eventual improvements, that after all can be accommodated in refurbishment investments, when the requirements are better understood.

The “build-on” strategy does support such the achievement of such a vision, and the investment arrangements are intended to broaden and strengthen the role of regional e-Research service providers as the most suitable architecture for reaching this vision within a national cyber-infrastructure.



➔ Requirements for services in operation

## Contractual Overview

eRI will define a variety of activities to implement the programs, to be agreed by NRICC, after which DEST will enter into the requisite contractual arrangements, as follows:

Service Cluster		Participants	Form	Contributions	Management	Duration	Resource Ownership	Service basis
Applications and Discipline services		eRI, RNSPs, 3 <sup>rd</sup> parties	Per project: Deed of grant, Project plan	eRI: scoping and review Others: resources, services and service developments	Project manager, NEAT	2 or 4 years	Partners (exclusive of eRI), IP to developers	Strategic allocation on a discipline or capability basis
Australian National Data Service		eRI, RNSPs, 3 <sup>rd</sup> parties	Deed of grant, Business plan, ANDS member agreement	eRI: scoping and review Others: resources, services and service developments	ANDS Director, S/C, Annual Plan	4 years	Partners (exclusive of eRI)	Public, strategic on a research community basis, or on a full cost basis
HPC	National Facility	eRI, ANU, 3 <sup>rd</sup> parties	For each investment: Deed of grant, Business plan	eRI: scoping and review DEST (and 3 <sup>rd</sup> parties): funding Host: resources, services and service developments	ANCF Director, S/C, Annual Plan	4 years	ANU	Strategic by capability, individual researcher by merit or on a full cost basis
	Speciality systems	eRI, RNSPs, 3 <sup>rd</sup> parties			RNSP Director, S/C, Annual Plan	2-4 years	RNSPs, or 3 <sup>rd</sup> parties	Strategic by capability, individual researcher by merit or on a full cost basis
Inter-operation and Collaboration Infrastructure		eRI, CSIRO, RNSPs	Deed of grant, Business plan, ANG member agreement	eRI: scoping and review RNSPs: resources and services 3 <sup>rd</sup> parties: resources to implement and deliver services	ANG Director	various	RNSPs or 3 <sup>rd</sup> parties	Available to any researcher with access to a connected research resource
Foundational	AREN	DEST, AARNet	Deed of grant, Annual reports	DEST: scoping and review AARNet: extended services	Annual review	10 years	AARNet	Subscription or fee for use
	AAF	eRI, AAF	Deed of grant, Business plan	eRI: scoping and review AAF: services, and service and market development	Annual review	10 years	AAF	Public, any researcher, subscription, fee for use