



Australian Government

Australian Research Council

ARC Research Networks

Selection Report for Funding

Commencing in 2004-05

ARC Research Networks

1. Overview

This report describes the selection process and outcomes for the ARC Research Networks scheme for funding commencing in 2004-05.

ARC Research Networks will assist groups of researchers to coordinate and communicate their research activities across disciplinary, organisational, institutional and geographical boundaries. Without duplicating established co-ordination bodies and mechanisms, they will favour research concentrations that encourage and support:

- open exchange of information and sharing of resources;
- development and implementation of coherent and integrated research plans among researchers working independently and in small teams on topics of common interest;
- efforts to nurture the careers of young investigators and research students by promoting a sense of community, collaboration and strong, effective mentoring, and encouraging them to shape the future direction of the research fields; and
- links with actual and potential end users, and with the broader community, especially in respect of the development of research plans, the absorption of international and national know-how, and the adoption of new discoveries made by researchers in the Network.

To support the effort of planning and preparing full ARC Research Networks proposals, the ARC provided seed funding from its Special Research Initiatives Program. In December 2003, 147 Seed Funding grants were awarded to potential Research Network applicants.

2. Objectives

The ARC Research Networks scheme builds on investments in excellent research undertaken by individual investigators and small teams to:
enhance the scale and focus of their research;
encourage more inter-disciplinary approaches to research; and
facilitate collaborative and innovative approaches to planning and undertaking research.

3. Selection process

3.1. Proposals

In December 2003, the Australian Research Council (ARC) invited eligible organisations to apply for ARC Research Networks grants. Applications closed on 22 March 2004. The ARC received 84 applications from 24 administering universities.

Table 1 shows some statistics for ARC Research Networks applications submitted to the ARC.

Table 1: Statistics of Applications Submitted

Number of applications submitted	84
Total funds requested	\$196,852,124
Available funding	\$37,500,000
Average requested funding	\$2,343,477
Number of higher education institutions submitting applications	24

3.2. Assessments

Members of the ARC College of Experts (CoE) assessed the proposals. Up to seven members were assigned to assess each proposal. The assessors ranked and commented on proposals against the selection criteria. They also recommended budgets for each proposal.

3.3. Selection Committee

The selection committee comprised the following members of the College of Experts:

Prof Lynda Beazley,	University of Western Australia - Biological Science & Biotechnology
Prof Mark Burry,	RMIT University - Humanities & Creative Arts
Prof John Carter (Chair),	University of Sydney – Environment and Engineering
Prof Peter Cawood,	University of Western Australia – Physics, Chemistry & Geoscience
Prof Hilary Charlesworth,	Australian National University - Humanities & Creative Arts
A/Prof Alan Dench,	University of Western Australia - Social, Behavioural & Economic Sciences
Prof Amanda Goodman,	Flinders University – Biological Science & Biotechnology
Prof Graeme Hugo,	University of Adelaide – Social, Behavioural & Economic Sciences
Prof Iven Mareels,	University of Melbourne – Mathematics, Information & Communications
Prof John Patterson,	James Cook University - Environment and Engineering
Prof Simon Sheather,	University of New South Wales - Mathematics, Information & Communications
Prof Michelle Simmons,	University of New South Wales - Physics, Chemistry & Geoscience

At a meeting held in Canberra on 1 and 2 June 2004, the committee discussed proposals and assessments, and formulated funding recommendations. The ARC applied strict procedures for declaring potential conflicts of interest during the meeting. Members withdrew during consideration of particular proposals with which they had a conflict of interest.

3.4 Selection Criteria

The selection criteria for the ARC Research Networks program are:

i) Network strengths

- Breadth of engagement and standing of participants in the Network
 - Breadth and standing of relevant national and international participation
 - Capacity to raise the profile of the Network's research portfolio globally
- Coherence and cooperation
 - Strength and extent of collaboration and co-ordination within the Network
- Cross-cutting & innovation
 - Potential for the Network to foster genuinely broad, cross-disciplinary, innovative research
 - Plans for providing support for new partnerships and linkages

ii) Research strengths and opportunities

- The research programs encompassed by the Network
 - Excellence of current and prospective research programs conducted by Network Participants
 - Opportunities to add value to Australian research programs encompassed by the Network
- Participant track record, relative to opportunity
 - Track record of the Network Convenor and Network Participants in research and research student supervision, where appropriate
 - The Network Convenor's track record as a research co-ordinator, relative to opportunities
 - Arrangements to encourage researchers who have less than 15 years postdoctoral experience to build research leadership and management skills within the Network

iii) National benefit

- National Research Priorities
 - Capacity of the Network to be catalysed by National Research Priorities
- Contribution to the Australian economy, environment, society and culture
- Communication and Outreach
 - The nature and extent of the Network's strategic approach to communication and outreach

iv) Funding and governance

- Adequacy of the Budget plan
 - The impact of Network Funding in adding value to existing investments in research

- Strength of the case for the requested funding relative to the Network's proposed programs
- Governance
 - Efficiency and effectiveness of the proposed governance arrangements in relation to the Network's vision
 - Capacity of the governance arrangements to transcend disciplinary, geographical, and institutional boundaries and cultures, to achieve the Network's objectives

4. National Research Priorities

In November 2002, the Australian Government designated a set of four National Research Priorities and within them 21 national research priority goals.

Of the 84 applications for an ARC Research Network, 97.6% selected a National Research Priority area, including the 24 applications recommended for funding. Applications relating to the National Research Priority 'Safeguarding Australia' had a success rate of 66.6%. For ARC Research Networks the greatest amount of funding (\$17,000,000) is recommended for projects in the 'Frontier Technologies for Building and Transforming Australian Industries' priority area. Data for ARC Research Networks by National Research Priority are shown in Table 2.

Table 2: Numbers, Success Rates and Funding Recommended for ARC Research Networks by National Research Priority

	ARC Research Networks			
	Applications Received	Recommended Applications	Success rate %	Recommended funds 2004-2009
No area	2	0	0	\$0
Environmentally Sustainable Australia	19	4	21.0	\$7,450,000
Promoting and Maintaining Good Health	17	4	23.5	\$7,250,000
Frontier Technologies for Building and Transforming Australian Industries	37	10	27.0	\$17,000,000
Safeguarding Australia	9	6	66.6	\$10,300,000
Total priority applications	82	24	29.3	\$37,500,000
Priority as % of total	97.6%	100.0%	-	100%

5. Summary of Outcomes

5.1 Recommended applications

The committee considered 84 applications that sought a total of \$196,852,124. A total of 24 applications were recommended for funding (28.6% of all applications). The selection committee found each of these applications met the selection criteria. Table 3 analyses the applications recommended for funding. A total of 3416 individuals are participants in these applications. Table 4 lists the titles of all applications recommended for funding and provides information on the administering organisation, the Network Convenor and the amount of

funding recommended. Table 5 shows the recommended funding for the Research Networks scheme of \$8,400,000 per financial year, totalling \$42,000,000 over five years. Summary descriptions of the ARC Research Networks recommended for funding are provided at Appendix 1.

Table 3: Statistics of Applications Recommended for Funding

Number of applications recommended for funding	24
Total recommended funding	\$42,000,000
Success rate	28.6%
Average requested funding per application	\$1,785,714
Number of higher education institutions administering the grants	11
Total number of participants in applications recommended for funding	3416

Table 4: ARC Research Networks Recommended for Funding

ARC Research Network	Administering Organisation	Network Convenor	Total Funding 2004-2009
The Economic Design Network: Practical Policy Tools for Industry, Infrastructure, Services and the Environment	The University of Melbourne	Bardsley, P	\$1,500,000
Financial Integrity Research Network	University of Technology, Sydney	Chiarella, C	\$1,750,000
Enabling Human Communication: Tough problems in human communication with bold but informed solutions drawing on sound, speech, and language research capabilities.	University of Western Sydney	Dale, R	\$2,000,000
Complex Open Systems Network (COSNet)	The Australian National University	Dewar, R	\$1,500,000
Asia-Pacific Futures Network	The Australian National University	Edwards, L	\$1,500,000
ARC/NHMRC Fluorescence Applications in Biotechnology and Life Sciences	Macquarie University	Goldys, E	\$2,000,000
Discovering the past and present to shape the future: networking environmental sciences for understanding and managing Australian biodiversity	The University of Adelaide	Hill, R	\$1,500,000
Australian Nanotechnology Network	The Australian National University	Jagadish, C	\$1,900,000
ARC/NHMRC Research Network in Ageing Well	The University of Sydney	Kendig, H	\$2,500,000

ARC Research Network	Administering Organisation	Network Convenor	Total Funding 2004-2009
Molecular and Materials Structure Network	The University of Sydney	Kepert, C	\$1,500,000
Research Network for a Secure Australia (RNSA)	The University of Melbourne	Mendis, P	\$1,950,000
ARC Research Network in Enterprise Information Infrastructure (EII)	The University of Queensland	Orlowska, M	\$1,600,000
ARC Research Network on Intelligent Sensors, Sensor Networks and Information Processing	The University of Melbourne	Palaniswami, M	\$2,250,000
The ARC Earth System Science Network	Macquarie University	Pitman, A	\$1,950,000
Australian Communications Research Network	University of South Australia	Rasmussen, L	\$1,500,000
ARC/NHMRC Research Network in Genes and Environment in Development (NGED)	The University of Adelaide	Richards, R	\$1,500,000
The Governance Research Network (GovNet)	Griffith University	Sampford, C	\$1,500,000
ARC Research Network for Early European Research	The University of Western Australia	Sharpe, P	\$1,600,000
ARC/NHMRC Network for Parasitology	University of Technology, Sydney	Smith, N	\$1,500,000
ARACY/ARC/NHRMC Research Network: Future Generation	The University of Western Australia	Stanley, F	\$1,750,000
ARC Research Network in Spatially Integrated Social Science	The University of Queensland	Stimson, R	\$1,500,000
The Cultural Research Network	The University of Queensland	Turner, G	\$1,750,000
Australia-New Zealand Research Network for Vegetation Function	Macquarie University	Westoby, M	\$2,500,000
Australian Research Network for Advanced Materials	The Australian National University	Williams, J	\$1,500,000

Table 5: Funding Recommended Over Five Years

2004/05	2005/06	2006/07	2007/08	2008/09	TOTAL
\$8,400,000	\$8,400,000	\$8,400,000	\$8,400,000	\$8,400,000	\$42,000,000

5.2. Administering organisations

Table 6 shows the number of applications and total ARC funding by institution. It also shows the total requested and recommended funding for the applications from each administering organisation.

Table 6: Administering Organisations

Administering Organisation	Number of applications	Number recommended	Requested funding	Recommended funding
Central Queensland University	1	0	\$2,565,000	\$0
Curtin University of Technology	1	0	\$2,423,789	\$0
Griffith University	1	1	\$2,586,959	\$1,500,000
La Trobe University	1	0	\$1,062,759	\$0
Macquarie University	4	3	\$10,183,883	\$6,450,000
Murdoch University	2	0	\$3,155,219	\$0
Queensland University of Technology	1	0	\$2,137,387	\$0
RMIT University	1	0	\$2,340,683	\$0
The Australian National University	14	4	\$33,669,363	\$6,400,000
The Flinders University of South Australia	1	0	\$2,327,620	\$0
The University of Adelaide	3	2	\$7,675,854	\$3,000,000
The University of Melbourne	11	3	\$24,254,856	\$5,700,000
The University of New England	2	0	\$3,990,620	\$0
The University of New South Wales	5	0	\$12,615,959	\$0
The University of Newcastle	1	0	\$2,500,975	\$0
The University of Queensland	12	3	\$29,404,840	\$4,850,000
The University of Sydney	8	2	\$19,899,030	\$4,000,000
The University of Western Australia	3	2	\$6,895,057	\$3,350,000
University of Canberra	1	0	\$2,248,325	\$0
University of South Australia	3	1	\$7,503,107	\$1,500,000
University of Tasmania	4	0	\$7,513,171	\$0
University of Technology, Sydney	2	2	\$4,965,261	\$3,250,000
University of Western Sydney	1	1	\$2,503,657	\$2,000,000
University of Wollongong	1	0	\$2,428,750	\$0

5.3. Joint funding between the Australian Research Council (ARC) and National Health and Medical Research Council (NHMRC)

The ARC and NHMRC are jointly funding five Research Networks (see Table 7). These projects will reflect the joint support from the ARC and the NHMRC.

Table 7: Research Networks Applications which are jointly funded by the ARC and NHMRC

ARC/NHMRC Research Network	Administering Organisation	Network Convenor	Total Funding 2004-2009
ARC/NHMRC Fluorescence Applications in Biotechnology and Life Sciences	Macquarie University	Goldys, E	\$2,000,000
ARC/NHMRC Research Network in Ageing Well	The University of Sydney	Kendig, H	\$2,500,000
ARC/NHMRC Council Network for Parasitology	University of Technology, Sydney	Smith, N	\$1,500,000
ARACY/ARC/NHMRC Research Network: Future Generation	The University of Western Australia	Stanley, F	\$1,750,000
ARC/NHMRC Research Network in Genes and Environment in Development (NGED)	The University of Adelaide	Richards, R	\$1,500,000

5.5. Uncompetitive applications

The remaining 60 applications (71.4%) were considered uncompetitive and have not been recommended for funding.

Project Title	ARC/NHMRC Network for Parasitology
Network Convenor	Smith, N
Admin Organisation	University of Technology, Sydney
Total Indicative Funding (for 5 years)	\$1,500,000
Indicative Funding per Year (2004-05 to 2008-09)	\$300,000

Project Abstract: The ARC Network for Parasitology will focus and coordinate Australia's world class fundamental, strategic and applied parasitology research. This targeted approach will raise Australia's standing in the field, assist in the community's understanding of parasitology and biosecurity and maintain and improve Australia's capacity for keeping its stock, crops, wildlife and people disease-free. On an international scale, the Network will work with other countries to develop new technologies for the detection and eradication of parasites. This emphasis will not only protect Australia's borders but will assist our near neighbours and lead to the development of technologies with an economic benefit to Australia.

Project Title	ARACY/ARC/MHMRC Research Network: Future Generation
Network Convenor	Stanley, F
Admin Organisation	The University of Western Australia
Total Indicative Funding (for 5 years)	\$1,750,000
Indicative Funding per Year (2004-05 to 2008-09)	\$350,000

Project Abstract: Research across a range of disciplines is urgently needed to understand the complexity of pathways contributing to the healthy development of children and young people in modern societies like Australia and to develop effective strategies to improve them. Given our economic prosperity and the level of knowledge about human development, it is profoundly disappointing that many child and youth problems are increasing, creating a crisis in services. This application brings together a highly talented network of researchers to work collaboratively and innovatively with policy makers and those providing services, to enable both new knowledge and implementation of what we already know, to enhance children's futures.

Project Title	ARC Research Network in Spatially Integrated Social Science
Network Convenor	Stimson, R
Admin Organisation	The University of Queensland
Total Indicative Funding (for 5 years)	\$1,500,000
Indicative Funding per Year (2004-05 to 2008-09)	\$300,000

Project Abstract: The ARC Research Network in Spatially Integrated Social Science (SISS) builds Australia's capacity and capability for innovative, collaborative, cross-disciplinary effort to investigate the impacts of change on the behaviour and well-being of people and the fortunes of places. SISS theories and research tools permit the integration of diverse and complex databases, the generation of new synthetic datasets, the incorporation of spatial concepts into statistical analysis and modelling, powerful visualisation of information, and the building spatial decision support systems, to provide an improved evidence base and better informed decision-making to address the significant challenges facing Australia's people and its places.

