Australian Government

Australian Research Council

Linkage Projects

Funding Rules for Funding commencing in 2006

Federal Register of Legislative Instruments F2008B00430

Linkage Projects
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Acronyms

The following acronyms are used in ARC Funding Rules.

AEST	Australian Eastern Standard Time
AEDT	Australian Eastern Daylight Saving (Summer) Time
AIMS	Australian Institute of Marine Science
ANSTO	Australian Nuclear Science and Technology Organisation
APA	Australian Postgraduate Award
APAI	Australian Postgraduate Award (Industry)
APD	Australian Postdoctoral Fellowship
APDC	Australian Postdoctoral Fellowship (CSIRO)
APDI	Australian Postdoctoral Fellowship (Industry)
APF	Australian Professorial Fellowship
ARC	Australian Research Council
ARCIF	Australian Research Council International Fellowship
ARF	Australian Research Fellowship
AVCC	Australian Vice-Chancellors' Committee
CoE	College of Experts
CI	Chief Investigator
CRC	Cooperative Research Centre
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DSTO	Defence Science and Technology Organisation
ECR	Early Career Researcher
ERISS	Environmental Research Institute of the Supervising Scientist
GA	Geoscience Australia
GAMS	Grant Application Management System
GST	Goods and Services Tax
HECS	Higher Education Contribution Scheme
KCTR	Key Centre for Teaching and Research
LASP	Learned Academies Special Projects
LIEF	Linkage Infrastructure Equipment and Facilities Program
LIF	Linkage Industry Fellowship
NC	Network Convenor
NCGP	National Competitive Grants Program
NHMRC	National Health and Medical Research Council
NP	Network Participant
PI	Partner Investigator
QEII	Queen Elizabeth II Fellowship
SPIRT	Strategic Partnerships with Industry – Research and Training
SRC	Special Research Centres
URL	Universal Resource Locator

Key Dates

Closing date for eligibility and exemption requests, Round 1	Thursday 24th March 2005
Closing date for applications, Round 1	**Friday 6th May 2005**
Closing date for eligibility and exemption requests, Round 2	Friday 15th October 2005
Closing date for applications, Round 2	**Friday 25th November 2005**

Contacts

The ARC deals with many thousands of applications each year. Where possible, applicants should direct requests for information to the Research Office or similar unit within their organisation.

Enquiries about the ARC Linkage Projects scheme may be addressed to:

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Australian Research Council

Linkage Projects

Funding Rules for Funding commencing in 2006

1. Introduction

This document sets out the Funding Rules for *Linkage Projects*, a scheme funded under the Australian Research Council's National Competitive Grants Program (NCGP), which comply with the requirements of the *Australian Research Council Act 2001* (the Funding Rules).

Applicants should read and understand the entire Funding Rules and the ARC's standard Funding Agreement [which is available at www.arc.gov.au] before submitting an application to the ARC. Applicants are responsible for ensuring that their applications are complete and accurate.

These Funding Rules are written on the basis that it is the researcher who is the applicant. However, grants from the ARC are made to Eligible Organisations (Section 4.1), not to individual researchers.

1.1 NCGP Objectives

The Australian Research Council (ARC) is an Australian Government statutory authority established under the *Australian Research Council Act 2001* (the ARC Act). The primary functions of the ARC, as specified by the ARC Act, are to make recommendations regarding the funding of research programs, to administer funding to support research programs, and to provide policy advice related to research and research training.

The ARC has established a range of competitive funding schemes for the support of research and research training under the framework of the NCGP. A list of current NCGP funding schemes is available on the ARC web site at www.arc.gov.au.

By the operation of a range of funding schemes under the NCGP, the ARC aims to:

a. maintain and build on existing research and research training;

b. build the scale and focus of research and research training;

c. encourage inter-disciplinary approaches to research and research training;

d. facilitate collaborative approaches to research and research training; and

e. support research and research training in the following National Research Priority Areas:

   i. An Environmentally Sustainable Australia;

   ii. Promoting and Maintaining Good Health;

   iii. Frontier Technologies for Building and Transforming Australian Industries;

   iv. Safeguarding Australia

Full descriptions of these National Research Priority Areas and their associated Priority Goals can be found in Appendix 6, and on the ARC web site (www.arc.gov.au). Assessment of the degree to which a proposed project would contribute to National Research Priority Areas and Priority Goals may be used as part of the selection process in NCGP schemes.

1.2 Linkage Projects

Linkage Projects supports research and development projects which are collaborative between higher education researchers and other parts of the national innovation system, which are undertaken to acquire new knowledge, and which involve risk or innovation.

Linkage Projects aims to:

a. encourage and develop long-term strategic research alliances between higher education organisations and other organisations, including within industry, in order to apply advanced knowledge to problems and/or to provide opportunities to obtain national economic, social or cultural benefits;

b. support collaborative research on issues of benefit to regional and rural communities;

c. enhance the scale and focus of research in National Research Priorities (Appendix 6);

d. foster opportunities for postdoctoral researchers to pursue internationally competitive research in collaboration with organisations outside the higher education sector, targeting those who have demonstrated a clear commitment to high-quality research;

e. provide outcome-oriented research training to prepare high-calibre postgraduate research students; and

f. produce a national pool of world-class researchers to meet the needs of the broader Australian innovation system.

1.3 Fundamental principles and requirements

1.3.1 Ethics and Research Practices

The National Health and Medical Research Council (NHMRC) provides a series of publications on its web site (http://www.nhmrc.gov.au) which outline the principles of ethical conduct in research. All research proposals should conform with the principles outlined in:

a. the Joint NHMRC/AVCC *Statement and Guidelines on Research Practice* (1997);

b. as applicable, the NHMRC's *National Statement on Ethical Conduct in Research Involving Humans*; and

c. as applicable, the principles outlined in the NHMRC's codes on animal research.

1.3.2 Conflict of Interest

All applicants associated with ARC funding proposals have an obligation to disclose affiliations with or financial involvement in any organisation with a direct interest in the subject matter or materials of the researchers. Researchers have an obligation to disclose at the time of applying for an ARC grant, or reporting on it, any conflict of interest which has the potential to influence their research and investigations, publication and media reports, or grant applications.

1.3.3 Acknowledging ARC support

The ARC requires that research funded by the ARC will be appropriately acknowledged.

When, at any time during or after completion of a project, the organisation or researcher publishes material, books, articles, television or radio programs, newsletters or other literary or artistic works which relate to the project and/or Fellowship, the organisation or researcher shall

acknowledge, at a prominent place in the publication, the support of the ARC in a form acceptable to the ARC.

Advice on acceptable forms of acknowledgement and use of the logo is provided on the ARC website at www.arc.gov.au.

2. Changes from last year

Significant changes to the *Linkage Projects* Funding Rules since last year include:

a. the ordering of a number of sections and sub-sections has been altered as part of an ongoing initiative to enhance consistency and common terminology across all NCGP funding schemes. For example, eligibility requirements have been clarified by splitting those for organisations (new Section 4) from those for investigators (new Section 5);

b. the term 'Industry Partner' has been replaced by the term 'Collaborating Organisation' throughout these rules to better reflect the diversity of organisations that now participate in this scheme. This is a terminology change only – eligibility requirements for such organisations remain unchanged;

c. the possibility of funding levels above the previous maximum of $500,000 per annum has been added, where proposals are highly competitive and make an outstanding case for such funding (Section 3.1, and a new 50% cash requirement in Appendix 2);

d. removal of the possibility of reconsideration of some unsuccessful applications in the following application round;

e. the previous sections 6.2 and 6.3 (Researchers from ARC Centres and CRCs respectively) have been combined into a single re-worded section 6.2 (Researchers from Commonwealth-funded Centres);

f. Section 11.3 clarifies that the ARC has the discretion to change project titles and descriptions; and

g. some material in Appendix 5, which largely duplicated information contained in Appendix 2, has been moved to and clarified in Appendix 2, or removed.

The list of changes above is not completely comprehensive – a number of minor formatting, style and other changes have also been made. Applicants should read and understand the entire Funding Rules and draft Funding Agreement before submitting an application to the ARC.

3. Funding

Applicants will be able to apply in the first round in May 2005 for funding to commence in January 2006, or in the second round in November 2005 for funding to commence in July 2006. The ARC will allocate funds for commencing projects between the two rounds to take account of funds available, the demand to fund projects and the quality of applications.

3.1 Level of funding

The minimum grant size is $20,000 per year. Applicants must make a request of at least $20,000 per year.

Under normal circumstances the maximum grant size is $500,000 per annum. In exceptional circumstances, the ARC is prepared to consider higher funding levels, where an outstanding

case is made, and where there is clear evidence of a very high level of commitment by, and very significant cash contributions from, the Collaborating Organisation(s).

In any case, the amount of Commonwealth funding being sought in a *Linkage Projects* application will depend on the applicant's capacity to obtain the required contribution from their Collaborating Organisation(s), as described in Appendix 2.

Applicants seeking an APDI under *Linkage Projects* must include a request for a salary component in the budget. APDIs are awarded at levels outlined in Appendix 4.

3.2 Duration of funding

Linkage Projects funding may be awarded for one to five years, subject to parliamentary appropriation. APDIs have a standard duration of three years. The ARC may award APDIs with a duration of less than three years where the application provides reasons, to the satisfaction of the ARC, why an award of the APDI for a period of less than three years is justified. (Further details about the tenure of APDIs are provided in Appendix 4.)

APAI stipends are awarded for a maximum period of three years with provision under certain conditions for an additional six months' support from the Commonwealth for PhD students. Where an applicant seeks funding for less than the three-year maximum, including for a Master's degree, a successful applicant will be awarded a stipend only for the period sought without the opportunity to extend.

In all cases, the ARC may recommend funding for a duration different from that requested.

3.3 Types of research supported

The scope of *Linkage Projects* is broad because it supports excellent research which includes:

a. pure basic research which is experimental and theoretical work undertaken to acquire new knowledge without looking for long-term benefits other than the advancement of knowledge;

b. strategic basic research which is experimental and theoretical work undertaken to acquire new knowledge directed into specified broad areas that are expected to lead to useful discoveries. It provides the broad base of knowledge necessary to solve recognised practical problems; and

c. applied research which is original work undertaken primarily to acquire new knowledge with a specific application in view. It is undertaken either to determine possible uses for the findings of basic research or to determine new ways of achieving some specific and predetermined objectives.

The following project costs are supported under *Linkage Projects:*

a. Personnel, including:

    i. Research Associates, technicians, laboratory attendants, and so on;

    ii. Australian Postgraduate Awards Industry (APAI) for postgraduate research students studying towards a Masters or PhD award (see Appendix 3 for APAI entitlements);

    iii. Australian Postdoctoral Fellowships Industry (APDI) for researchers with less than three years' postdoctoral experience (see Appendix 4 for entitlements);

    iv. Linkage Industry Fellowships - support for costs associated with short-term transfers for Chief Investigators or some Partner Investigators between Eligible Organisations

and Collaborating Organisations, where, in the opinion of the ARC, an outstanding case is made (see Section 3.6); and

v. Teaching relief for Chief Investigators, but only where the request is justified to the satisfaction of the ARC (see Section 3.5);

b. Equipment;

c. Maintenance; and

d. Travel.

3.4 Areas of investigation/work not supported

Linkage Projects does not support the following work:

a. clinical medical and dental research and training, and public health research and training that are covered by the NHMRC;

b. activities leading solely to the creation or performance of a work of art, including visual art, musical compositions, drama, dance, designs and literary works, for which Commonwealth Government support is provided through the Australia Council for the Arts;

c. scholarly investigations that, while important in themselves, do not lead to conceptual advances or discoveries, or to novel practical outcomes or applications. Projects such as uncritical bibliographical compilations and purely descriptive catalogues or editions that do not involve original research are not funded;

d. projects where one or more Collaborating Organisations is seeking expert external assistance, not available within their own organisation, in order to develop specific applications involving little innovation or low risk, which the ARC deems to be contracted research or consultancies;

e. projects that, in the judgement of the ARC, do not significantly enhance links with organisations outside the publicly funded research and higher education sectors;

f. additional funding of existing projects previously funded by the Commonwealth under an ARC scheme;

g. production of teaching materials, even though some research may be involved in their production;

h. compilation of data, unless it is an integral part of a project, in which case applicants must provide a statement indicating the research objectives to which the data would contribute; or

i. development of research aids and tools (including databases and computer programs), unless they form an integral part of a project, in which case applicants must provide a statement indicating the research objectives to which these activities would contribute.

3.5 Budget items not supported

Linkage Projects does not support the following budget items:

a. Costs of capital works and general infrastructure
Capital works and general infrastructure costs are not considered as project costs to be funded from financial assistance provided by the ARC. In addition, they must not be included in the required matching contributions made by Collaborating Organisations.

b. Salaries of Chief Investigators and Partner Investigators

Apart from the possibility of support for costs associated with teaching relief, or a Linkage Industry Fellowship (Section 3.6), the Commonwealth will not provide support in whole or in part to meet the salaries of Chief Investigators or Partner Investigators under *Linkage Projects*. The ARC may consider a request for teaching relief, for a period of not more than six months per year, and at a rate of not more than $31,070 per six months, if the request is justified to the satisfaction of the ARC in terms of the achievement of a successful outcome for the project. Only funds specifically approved for teaching relief may be used for that purpose.

c. Special Studies Programs

Funds are not provided for travel or related expenses for researchers when on a Special Studies Program. In well justified cases some specified costs may be supported within a *Linkage Projects* grant provided a CI can show that such expenses are not covered by a Special Studies Program grant and that the research to be undertaken directly relates to the project. In these cases the use of funds needs to be approved as a special condition of the grant.

d. Research support for investigators not resident in Australia

Funding will not be provided for research assistance to an overseas Partner Investigator.

e. International students' fees and HECS liability

Funds are not provided to pay the fees of international students or HECS liabilities for Australian students.

f. Computer facilities for molecular analysis

Applicants for projects involving molecular biology should be aware that the Australian National Genomic Information Service provides access to a range of databases and a large suite of analysis programs. As this service is available at modest cost, proposals seeking funding for computer facilities to undertake molecular analysis will have to justify such needs very thoroughly.

g. Basic facilities

Linkage Projects will not fund basic facilities, resources and infrastructure such as:

i. accommodation (e.g. laboratory and office, suitably equipped and furnished in standard ways);

ii. access to workshop services (such as machine tools and qualified technicians available to each member of staff to enable them to carry out their research);

iii. access to a basic library collection;

iv. adequate computing time (excluding access to high-performance computers);

v. standard reference materials or funds for abstracting services;

vi. basic computing, word processing and microfilm-reading facilities; or

vii. use of photocopiers, telephones, mail, fax, email and internet services

h. Publication Costs

Publication costs, including page costs, are not funded under *Linkage Projects*.

3.6 Linkage Industry Fellowships

Linkage Projects offers some researchers the opportunity to request a Linkage Industry Fellowship, which provides support for costs involved in a temporary transfer from one of the

Eligible Organisations listed on an application to one of the Collaborating Organisations on that application, or vice versa.

A Linkage Industry Fellowship may be funded only for a single period of between 3 and 12 months during the life of the proposed project, for an amount up to a maximum of $100,000. An application may not request more than one Linkage Industry Fellowship. Only a limited number of Linkage Industry Fellowships will be made available, where, in the opinion of the ARC, an outstanding case is made for the Fellowship. Only funds specifically approved for a Linkage Industry Fellowship may be used for that purpose.

To request a Linkage Industry Fellowship, an application must:

a. identify the proposed Linkage Industry Fellow, who must be:

   i. an eligible Chief Investigator on the application, or

   ii. an eligible Partner Investigator on the application who is an employee of, and derives more than 50% of his/her salary from, one of the Collaborating Organisations on the application;

b. identify the amount of support requested for the Fellowship (not more than $100,000) and the proposed duration and timing of the Fellowship (between 3 and 12 months), and detail how the support requested will be used;

c. describe and justify the nature of the temporary transfer, which, except in exceptional circumstances, must include a single, continuous physical transfer of the Fellow for the duration of the Fellowship from one of the Eligible Organisations listed on the application to one of the Collaborating Organisations on the application, or vice versa. The ARC is prepared to be flexible in considering a range of transfer arrangements, as best benefits the proposed project and circumstances of the parties involved; and

d. make a case for the Fellowship in terms of the benefits to the project, and the contribution towards the objectives of *Linkage Projects*.

Recommendations on the level of support for, and duration of, Linkage Industry Fellowships rest with the ARC. The ARC may recommend levels and durations which differ from those requested.

The *Linkage Projects* 'Instructions to Applicants' provides more detailed information on how to request a Linkage Industry Fellowship within a *Linkage Projects* application.

3.7 Number of grants and applications

a. The following limits apply to applications and grants awarded under the Linkage Projects program:

   i. Chief Investigators and APDIs may participate in up to four concurrent Linkage Projects grants which have funding for project costs and/or APDIs (these four may or may not also include APAI funding). Chief Investigators may also participate on up to four concurrent Linkage Projects grants which have funding only for APAIs.

   ii. There is no limit on the number of concurrent Linkage Projects grants which may be held by Partner Investigators.

   iii. Except in the final year of their Fellowship, researchers who hold an APDI Fellowship may apply for further support under Linkage Projects only providing the application is, in the opinion of the ARC, closely associated with their existing Fellowship project.

b. Applicants may apply for Linkage Projects grants only to the extent that, if all were successful, they would not hold more than the maximum number of grants permitted in 2006. Submitting initial applications that contravene the above limits may result in the exclusion of all applications involving that researcher as a Chief Investigator/Partner Investigator/APDI.

c. Various components underpinning a project are to be framed in a single Linkage Projects application. For example, separate applications cannot be submitted seeking project funding for APDIs and APAIs for essentially the same project. Only one Linkage Projects application concerning a single project may be submitted in a round, regardless of any variation in the applicants or proposed Administering Organisation.

d. A Linkage Projects application for essentially the same project may not be submitted twice in consecutive rounds. However, if a Linkage Projects application is found ineligible in a particular round, a similar application which meets eligibility requirements may be submitted in the following round.

e. Apart from the exceptions above, submitting similar or duplicate applications may result in the exclusion of all applications involving those applicants.

f. In all cases, the ARC reserves the right to determine whether applications are duplicates or sufficiently similar to warrant exclusion.

4. Organisational types, roles and eligibility

4.1 Eligible Organisations

To be eligible for consideration, an application in *Linkage Projects* must be submitted by an organisation which is eligible to receive and administer ARC financial assistance (an Eligible Organisation). Appendix 1 lists the Eligible Organisations for *Linkage Projects*.

More than one Eligible Organisation may be identified in a single application – such organisations are generally identified by virtue of the organisational affiliations of the Chief Investigators listed on the application. However, each application must identify a single Eligible Organisation (the Administering Organisation) which will receive and administer ARC financial assistance if the application is successful.

4.2 Collaborating Organisations

Information about the eligibility of Collaborating Organisations is set out in Appendix 2, together with information about their required contributions and possible tax incentives. Each proposal must include at least one Collaborating Organisation. Interaction with a Collaborating Organisation is required for the whole period of the project.

Each proposal must contain a contribution from a Collaborating Organisation, and these contributions must meet the requirements described in Appendix 2. Applicants determine, in collaboration with the Collaborating Organisation(s), which type of resources are appropriate and necessary for the project they wish to undertake. The contribution from the Collaborating Organisation(s) must be specific to the project and must not be part of a broader contribution to an Eligible Organisation.

The proposal should include a detailed description of the collaborative arrangements proposed, and a clear indication of how the Collaborating Organisation(s) will be involved in the project. Details of the nature of the collaboration should be presented in both descriptive terms and in

figures. Proposals should make clear how each Collaborating Organisation is involved in the project, how the project fits into each Collaborating Organisation's overall strategic plan and how the project is of value to each of the Collaborating Organisations involved.

The proposal must also include a letter of support (of no more than two pages) from each Collaborating Organisation on its letterhead, including a brief profile of the Collaborating Organisation; and details of the cash and in-kind support that will be provided. Applications which fail to meet this requirement may be excluded from further consideration.

Every organisation applying to *Linkage Projects* as a Collaborating Organisation must certify at Section F of the application form:

a. that no part of its cash contribution is drawn from funds previously appropriated from government sources for the purposes of research, evaluation and/or consultancy activity; and

b. that the Collaborating Organisation has read and understood the requirements in the Funding Agreement about Collaborating Organisation agreements, including the requirement to enter into arrangements regarding intellectual property.

Applications which fail to meet this requirement may be excluded from further consideration.

5. Investigator types, roles and eligibility

5.1 Applicant roles

There are three applicant roles available under *Linkage Projects*:

a. Chief Investigator (CI);

b. Partner Investigator (PI); and

c. Australian Postdoctoral Fellowship Industry (APDI).

The roles and eligibility requirements for each of these are described below. To be eligible for consideration, each application must have at least one Chief Investigator or APDI. Where a *Linkage Projects* application requests support for an APAI, the application must have at least one Chief Investigator identified as supervisor for the student.

5.2 Eligibility criteria for Chief Investigators

To be eligible to apply as a Chief Investigator, the applicant must meet the following criteria:

a. He/she must be an active researcher who takes intellectual responsibility for the project, its conception, any strategic decisions called for in its pursuit and for the communication of results. The applicant must have the capacity to make a serious commitment to the project and cannot assume the role of a supplier of resources for work that will largely be placed in other hands.

b. He/she must reside predominantly in Australia for the full term of the grant. If the applicant does not have permanent resident status he/she must obtain temporary resident status from the Department of Immigration, Multicultural and Indigenous Affairs before taking up the grant.

c. He/she must meet one of the following two criteria:

i. be an employee of, and derive at least 50% of his/her salary from, an Eligible Organisation (as listed in Appendix 1); or

ii. be the holder of an adjunct appointment at an Eligible Organisation (as listed in Appendix 1) who does not have a substantive position or paid appointment elsewhere;

d. His/her involvement in the project must not generate or represent a significant conflict of interest. At a minimum, this means that an applicant:

i. must not have any direct or indirect financial interest in any of the proposed Collaborating Organisation(s) for the project; and

ii. must not hold a position of Director, Board member, or other paid or unpaid senior management or advisory position in any of the proposed Collaborating Organisation(s) for the project. Exemptions may be obtained where the ARC considers that any financial interests or positions held by the Chief Investigator are such as would not be likely to affect, or be reasonably perceived to affect, the decisions and/or actions of the Chief Investigator in carrying out his/her responsibilities towards the Project. (Section 5.5.3).

e. He/she must not receive any salary from the ARC for the project (subject to Section 3.6 concerning Linkage Industry Fellows).

Notwithstanding his/her eligibility under the criteria above, researchers in the following categories are not eligible to apply as a Chief Investigator:

a. an undergraduate student; or

b. a postgraduate student (unless eligible to be a CI because of employment but only for research which lies outside the scope of the postgraduate studies).

Chief Investigators must have fulfilled to the satisfaction of the ARC all obligations from previous ARC grants (including progress and final reports).

5.3 Eligibility criteria for Partner Investigators

Researchers who are not eligible to be Chief Investigators or APDIs but who are providing significant commitment, intellectual input and relevant expertise to the project can apply as Partner Investigators. To be eligible to apply as a Partner Investigator, a researcher must meet the following criteria:

a. be ineligible to apply as a Chief Investigator;

b. be employed by an organisation other than those Eligible Organisations listed at Appendix 1, such as Collaborating Organisations and organisations being funded for research from State or Commonwealth sources (such as CRCs and the CSIRO), companies, industry peak bodies and overseas organisations;

c. derive more than 50 per cent of his/her salary from employment in the organisation;

d. secure an appropriate contribution of time and operating costs from his/her organisation for the proposed project; and

e. not receive funding from the ARC for the project, unless approved to undertake a Linkage Industry Fellowship (see Section 3.6).

A Partner Investigator may act as a supervisor for an APAI in conjunction with a Chief Investigator in the application.

Partner Investigator and Chief Investigator roles are mutually exclusive. An individual cannot apply to have both roles on applications in the same round.

5.4 Eligibility criteria for APDI

Applicants for an APDI Fellowship must satisfy all the criteria for a Chief Investigator (above) except for the requirement to be an employee of, and derive at least 50% of his/her salary from, an Eligible Organisation. They must also:

a. have no more than three years postdoctoral equivalent research experience, and have been awarded a PhD not more than three years before the close of applications for the relevant round or have not yet submitted a PhD but will do so within six months after the close of applications in the relevant round (in which case the Fellowship cannot commence until the PhD has been awarded);

    i. If the PhD is not submitted within six months of the close of applications for the relevant round any offer of grant for a project involving the APDI award will be withdrawn;

b. not have previously held any other ARC fellowship; and

c. make a **full-time** commitment to the project.

The ARC regards an APDI as a prestigious award. If the ARC considers the APDI applicant to be critical to the success of the project then, if the APDI applicant cannot take up the award, the entire project will be terminated.

Further information on entitlements for APDIs is set out in Appendix 4.

5.5 Requests for exemptions

If a researcher requires one or more of the following eligibility exemptions, a request must be lodged according to the process described in Section 7.1.

5.5.1 APDI -Career interruption

In some circumstances, an applicant who is seeking an APDI may not satisfy all the required eligibility criteria due to research career interruption. Research career interruptions could include, for example, non-research employment, misadventure, or carer responsibilities. If this is the case, an applicant may apply for an exemption from the eligibility criteria. The ARC will make a final determination of the eligibility status of applicants at its sole discretion.

5.5.2 APDI -PhD

Normally, a prerequisite for an APDI is that the applicant is a researcher with a recent PhD (as described in Section 5.4 above). Applicants who do not have a PhD or equivalent research doctorate must submit a request for eligibility exemption which provides evidence that their research has been recognised as equivalent to a PhD, and that they have no more than three years postdoctoral equivalent research experience.

5.5.3 Interests of Chief Investigators

Chief Investigator or APDI applicants may apply for an eligibility exemption from the requirement not to have any direct or indirect financial interest in, or position with, any of the proposed Collaborating Organisation(s) for the project. Such exemptions may be given to Chief

Investigator or APDI applicants where the ARC determines that their financial interest, or position held, is not such as to affect, or be reasonably perceived to affect, the decisions and/or actions of the applicant in carrying out his/her responsibilities towards the Project.

In these cases, a request for exemption may be lodged, together with a statement detailing an applicant's financial interests or positions held, and justifying their special circumstances for an eligibility exemption.

6. Cross-program funding

The ARC will not fund research already funded by the Commonwealth. The ARC reserves the right to determine if a proposed research project duplicates research already being funded.

6.1 Cross-program eligibility

Applicants must list all existing research funding, and research funding being sought, from all sources.

If a funding request for all or any part of a project for which the applicant is seeking *Linkage Projects* funding has been or is being submitted to any other funding source (including other ARC schemes and other funding bodies) applicants must indicate the level of funding obtained, or being sought, from the other funding source.

Applicants applying for both an APDI and any other ARC Fellowship must cross-reference the applications. Only one fellowship can be accepted in the event that both applications are successful.

If the requirements above are not met, the *Linkage Projects* application may be excluded. The ARC also reserves its rights to exclude any other application by the applicant to other ARC schemes and to terminate any ARC funding arrangement currently in place with the applicant.

The ARC may liaise with other funding bodies to determine if there is any overlap between applications in order to avoid duplication of funding.

6.2 Researchers from Commonwealth-funded Centres

The ARC will not duplicate funding for research already funded by the Commonwealth in a Commonwealth-funded Centre. Any researcher associated with a Commonwealth-funded centre who wishes to apply for ARC funding under *Linkage Projects* must:

a. propose a research project which does not duplicate existing Commonwealth-funded research within the Centre, as outlined in any or all of the Centre proposal, funding agreement, business/research plan and annual reports. This must be certified by the Centre Director in a statement no longer than one page in length, which must accompany the application; and

b. meet all other relevant eligibility requirements described elsewhere in this document.

As Centre Directors may be required by their Conditions of Grant to undertake the function on a full-time basis they may apply for *Linkage Projects* funding only if their proposed research is related and complementary to the Centre, but not funded by the Centre.

The ARC reserves the right to make the final decision on whether a proposal, if funded, would duplicate funding for research already funded by the Commonwealth.

6.3 Funding under the ARC or the NHMRC

In some instances, it may not be clear whether an application is more appropriately considered by the ARC or the NHMRC. In these cases, the potential applicant should forward a two-page summary outlining the proposal to the ARC *Linkage Projects* Coordinator, according to the process described in Section 7.1. The ARC will use the summary to decide whether it will accept an application.

If an application is received that has potential overlap with NHMRC and the above process has not been observed, the ARC will determine if it is the more appropriate funding agency. Applications that the ARC determines are more appropriate for the NHMRC will be ruled ineligible.

7. Application process

7.1 Eligibility and Exemption requests

These rules describe a number of situations where applicants may submit eligibility or exemption requests and seek a ruling from the ARC. All such requests must be submitted via the Research Office of the intended Administering Organisation, and received by the ARC by close of business on the following dates:

For requests regarding applications in Round 1: **Thursday 24th March 2005**

For requests regarding applications in Round 2: **Friday 15th October 2005**

The ARC may, in its absolute discretion, extend closing dates for these requests.

Such requests must include the supporting information required in each of the situations where rulings can be sought, as described elsewhere in this document. The Research Office will be advised of the outcome of any such request as soon as possible to allow time for a detailed application to be completed.

If an applicant requires an eligibility exemption or ruling, and fails to follow the above process or meet the deadline for such requests, his/her subsequent application may be deemed ineligible.

7.2 Applications

Applicants must submit their projects as mature research plans ready for implementation. The application must contain all the information necessary for assessment of the project without the need for further written or oral explanation, or reference to additional documentation, including the World Wide Web, unless requested by the ARC. All details in the application, particularly concerning any successful grants, must be current.

Applications must not be marked commercial-in-confidence as, if so, they cannot be assessed under the ARC procedures for peer assessment.

7.3 Certification

It is the responsibility of the Administering Organisation to obtain signatures of all participants named at Part B and Part F of the application form. These signatures are to be retained by the Administering Organisation which must provide these certifications if requested. A pro forma is available for this purpose on the ARC web site (www.arc.gov.au).

7.4 Submission of applications

Applications under *Linkage Projects* consist of two parts:

a. Application form to be completed in the ARC Grant Application Management System (GAMS); and

b. Additional text.

7.4.1 Application format

All documents must be written in English and must comply strictly with the format and submission requirements.

All pages should be in black type, use a single column and 12-point font size on white A4 paper, printed on one side only and unbound, with at least 2 cm margins on each side. As applications are scanned electronically, applicants must use a highly legible font type, such as Arial, Courier, Palatino, Times New Roman and Helvetica. Variants such as mathematical typesetting languages may also be used. References may be reproduced in 10-point font size. Colour graphs or colour photographs may be included but they will be reproduced in black and white. Finely detailed graphics and greyscale may also not be precisely reproduced.

The pages of the application should be numbered consecutively starting from page one.

7.4.2 Application form

Applicants must use the application form completed within GAMS at the ARC web site (www.arc.gov.au).

Applicants should note that a separate document, *Linkage Projects* Instructions to Applicants for Funding Commencing in 2006, is available from www.arc.gov.au to assist in preparing applications.

Applicants should submit their applications through the Research Office by the organisation's internal closing date. Research Offices have access to GAMS and will allocate GAMS UserIDs and passwords to enable applicants at their organisation to access the system and create application forms. If an applicant has previously been allocated access to GAMS, his/her UserID and password should still be current.

After preparation by the applicant, the Research Offices must submit the application form in GAMS and forward the full paper application, to be received at the ARC before the closing date for the relevant round. Information entered which is common to both the GAMS application form and the paper copy must match across both the GAMS form and paper copy submitted to the ARC.

Research Offices should send applications:

By mail to:
Linkage Projects Coordinator
Australian Research Council
GPO Box 2702
CANBERRA ACT 2601

By courier to:
Linkage Projects Coordinator
Australian Research Council
Geoscience Australia Building
Cnr Jerrabomberra Avenue and Hindmarsh Drive
SYMONSTON ACT 2609

7.4.3 Number of copies

An original and one identical paper copy are required. The application must be clipped with NAL clips, not stapled. The application form should be submitted with the additional text, including supporting documentation, interleaved appropriately (see *Linkage Projects* Instructions to Applicants for Funding Commencing in 2006).

7.4.4 Closing date for applications

The paper original and copy of applications for the first round of *Linkage Projects* must be received by the ARC, and application forms completed in GAMS must be submitted to the ARC, by 5pm (AEST) **Friday 6th May 2005**.

The paper original and copy of applications for the second round of *Linkage Projects* must be received by the ARC, and application forms completed in GAMS must be submitted to the ARC, by 5pm (AEDT) **Friday 25th November 2005**.

The ARC may, in its absolute discretion, extend closing dates for applications. In such cases, the ARC will advise potential and registered applicants via its website [www.arc.gov.au].

Applications may be withdrawn but may not be changed after submission. Additions, deletions and modifications will not be accepted after submission. The ARC will not accept applications that have not been submitted in GAMS or received by the ARC by the relevant closing date above.

8. Selection and approval process

8.1 Selection criteria

When the ARC is assessing applications for funding, it applies weightings to each selection criterion. Selection criteria and weightings under *Linkage Projects* are detailed below.

Investigator(s)

- Track record (20%)
    - Track record relative to opportunities and/or suitability to supervise postgraduate students (as appropriate)

Project Content

- Significance and innovation (25%)

- does the research address an important problem?
- how will the anticipated outcomes advance the knowledge base of the discipline?
- is the research principally focussed upon a topic or outcome that falls within one of the National Research Priorities and associated Priority Goals, and if so how does it address the National Research Priorities and Priority Goals?
- are the project aims and concepts novel and innovative?
- will new methodologies or technologies be developed?

- Approach and Training (20%)
  - are the conceptual framework, design, methods and analyses adequately developed, well integrated and appropriate to the aims of the project?
  - if the project involves an APAI, is the project suitable for research training?
  - is the intellectual content and scale of the work proposed appropriate to a research higher degree?
- National benefit (10%)
  - what is the potential of the research project to result in economic and/or social benefits for Australia from the expected results and outcomes of the project?
  - what is the potential for the research to contribute to National Research Priorities?
- Commitment from Collaborating Organisation(s) (25%)
  - is there evidence that each of the Collaborating Organisations is genuinely committed to, and prepared to collaborate in, the research project?

8.1.1 APDI(s)

Assessment of fellowship applications is based on the excellence of the applicant's track record relative to opportunity and the excellence of the project. APDI applicants must also provide details of their contribution to the project and the research environment of their host organisation.

8.1.2 Projects that are of benefit to a rural or regional community

The ARC will identify approximately 20 per cent of available *Linkage Projects* funding to support collaborative research on issues of benefit to rural or regional communities. *Linkage Projects* applications will be considered with regard to the nature of the research and to evidence of collaboration between the researcher(s) and the community. This could, for example, take any of the following forms:

a. the Collaborating Organisation(s) is an organisation located, and/or operating, in a rural or regional community;

b. the rural or regional community is involved in identifying the problem or issue to be addressed;

c. the rural or regional community is involved in conducting the research;

d. there is evidence of an existing relationship between the researchers and the community; and/or

e. researchers with a strong track record are involved in conducting research of benefit to rural or regional community.

Applications with a demonstrated benefit to a rural or regional community not supported under the identified allocation will be assessed under the remaining *Linkage Projects* allocation.

8.1.3 APAI in the fields of information technology and communications

In 2006, the ARC will, subject to an adequate number of applications of sufficient quality, allocate at least 50 APAI places in the field of information technology and communications in addition to other APAI funding.

Where a *Linkage Projects* application contains a request for an APAI that is clearly demonstrated as being primarily within the area of information technology and communications, the ARC will initially assess the APAI request against these 50 APAI places. Requests for APAIs not supported under these 50 places will also be assessed against all other *Linkage Projects* applications.

8.2 Assessment and selection procedure

Assessment of applications is undertaken by the ARC with the assistance of its College of Experts, which has the right to make decisions and recommendations solely on the basis of its expertise, and which may:

a. exclude ineligible applications;

b. assign assessors to review applications;

c. seek applicants' comments on assessors' reports;

d. rank each application relative to the others on the basis of the application and any assessors' reports and applicant response to those assessments;

e. assess and recommend budgets;

f. prepare funding recommendations that are submitted to the ARC Board.

The ARC has procedures for declaring and managing conflicts of interest and for members and assessors to withdraw from consideration of particular applications.

8.2.1 Exclusion

Exclusion of ineligible applications by the ARC may take place at any time during the selection process. Every effort will be made to exclude ineligible applications and inform applicants early in the assessment process. Applications that contravene the Funding Rules in any way may be excluded. Grounds for exclusion include, but are not limited to:

a. failing to submit the application through the appropriate Research Office/Chief Executive Officer for certification

b. not meeting the funding threshold when inappropriate budget items are removed

c. Investigator not meeting the eligibility criteria for a Chief Investigator, Partner Investigator or APDI

d. exceeding the limits on the number of applications permissible

e. submitting applications in clinical medicine and dental research and training (refer to Section 6.3)

f. providing incomplete or misleading information

g. designating all or any part of the application as ‘commercial-in-confidence’.

8.2.2 Assessment

The ARC may assess applications in different ways depending on the level and nature of support sought in the application. The ARC may assign a number of assessors who will be asked to read and rank assigned applications. Such assessors for each discipline grouping will be drawn from a range of organisations to avoid potential conflicts of interest. The ARC reserves the right to make decisions and recommendations based on any number of assessments or solely on the assessments of the ARC and its College of Experts.

Applicants may name any person whom they do not wish to assess the application. Detailed written justification, which will be considered by the ARC, must be submitted by the applicant through their organisation’s research office, in a separate letter, which must not accompany the application. The letter must be received by the closing date for applications for the relevant round, and be sent to

Linkage Projects Coordinator
Australian Research Council
GPO Box 2702
CANBERRA ACT 2601

The ARC will consider the justification put forward by an applicant to exclude any person as an assessor. However, the ARC may not give effect to an applicant’s request.

8.2.3 Applicant rejoinder

Where obtained, assessors’ comments will be provided to the applicant allowing the opportunity for a rejoinder to the comments. Names of assessors are not provided to the applicant. At the same time, the ARC may add questions to the material sent to the applicants for rejoinder. A period of at least 7 working days will be notified to research offices in which applicants will be able to submit a response to the ARC. The ARC may limit the length of rejoinders which can be submitted.

8.2.4 Recommendations

Recommendations for funding are submitted to the ARC Board and, subject to its views, to the Minister for Education, Science and Training for approval. The Minister determines which applications will be offered funding.

8.3 Offer of funding

Successful Administering Organisations will be notified by letters of offer which will indicate the funding to be provided and include the Funding Agreement.

9. Appeals process

Appeals will be considered only against process issues and not against committee recommendations or assessor ratings and comments.

Appeals must be made on the appeals form available on the ARC website (www.arc.gov.au). The form must be lodged through the Administering Organisation's Research Office to, and be received **within 28 days** of the date on the letter notifying the outcome of applications by:

The Appeals Officer
Australian Research Council
GPO Box 2702
CANBERRA ACT 2601

10. Administration of funding

10.1 Funding Agreement

Applicants should familiarise themselves with the Funding Agreement. The successful applicants must accept the terms of the Funding Agreement and the Administering Organisation must sign the Funding Agreement before the ARC will commence payments.

Projects must commence as required by the Funding Agreement. Failure to do so will result in termination of funding.

Administering Organisations should note that the Funding Agreement covers the post-award management including reporting requirements and financial management. The draft Funding Agreement can be viewed on the ARC website (www.arc.gov.au).

10.1.1 Varying the Funding Agreement

Requests to vary the Funding Agreement must be forwarded in writing by the Administering Organisation's Research Office, or equivalent, to the ARC. Forms are available for variation requests on the ARC website (www.arc.gov.au).

10.1.2 Varying the Funding Approval

Requests to vary the Funding Approval must be forwarded in writing by the Administering Organisation's Research Office, or equivalent, to the ARC.

The Funding Approval may be varied by varying the amount of financial assistance, the duration of financial assistance, the name of the person leading the research program and the name of the organisation receiving financial assistance.

The Funding Approval may be varied where:

a. the organisation's involvement with the research program ends or substantially changes;

b. the research program changes so that it is no longer consistent with the description in the Funding Approval;

c. the person named in the Funding Approval as the person leading the research program ceases to lead the program;

d. any of the organisations involved in the research program end or substantially change their involvement with the program.

10.1.3 Reports

Administering Organisations are required to submit reports concerning funded projects to the ARC, in the format and by the due dates detailed in the Funding Agreement.

11. Other matters

11.1 Applicable law

The ARC is required to comply with the requirements of the *Privacy Act 1988* and the *Freedom of Information Act 1982*.

11.2 Confidentiality

Information contained in applications is regarded as confidential unless otherwise stated and, subject to the need to provide applications to assessors, and statutory requirements for the ARC to provide information to Parliament and other organisations, applications will be received and treated as confidential.

Notwithstanding the above, the ARC may publicise and report offers or awards of funding, including information about the proposed research, the name and organisation of any applicant, the identity of the Administering Organisation and any other organisation involved in the project, the title and summary descriptions of the project and its intended outcomes, and the level and nature of financial assistance from the ARC.

11.3 Project Descriptions

If the ARC judges that a project title and description do not adequately reflect the objectives and outcomes sought, the ARC reserves the right to change the project title and description.

11.4 Intellectual Property

Applicants must agree to comply with the National Principles of Intellectual Property Management for Publicly Funded Research (available at www.arc.gov.au) and act in accordance with any intellectual property policies of the applicant's organisation.

11.5 Incomplete or misleading information

It is a serious offence to provide false or misleading information to the Commonwealth. If an application is incomplete, inaccurate or contains information that is considered misleading, it may be excluded from any further consideration for funding (see Section 8.2.1).

If the ARC believes that omissions or inclusion of misleading information are intentional, or if there is evidence of malpractice, the ARC will refer the matter for investigation with a view to prosecution under Commonwealth criminal law. The Commonwealth Government is committed to protecting its revenue, expenditure and property from any attempt, by members of the public, contractors, sub-contractors, agents, intermediaries or its own employees, to gain financial or other benefits by deceit.

Examples of malpractice include, but are not restricted to:

a. providing fictitious track records; or

b. falsifying claims in publications records (such as describing a paper as accepted for publication when it has only been submitted).

11.6 Insurance and liabilities

Organisations are subject to the liability, indemnity and insurance provisions of the Funding Agreement. The draft Funding Agreement can be viewed on the ARC website (www.arc.gov.au).

Appendix 1. Eligible Organisations

New South Wales

Charles Sturt University
Macquarie University
Southern Cross University
The University of New England
The University of New South Wales
The University of Newcastle
The University of Sydney
University of Technology, Sydney
University of Western Sydney
University of Wollongong

Victoria

Deakin University
La Trobe University
Melbourne College of Divinity
Monash University
RMIT University
Swinburne University of Technology
The University of Melbourne
University of Ballarat
Victoria University

Queensland

Bond University
Central Queensland University
Griffith University
James Cook University
Queensland University of Technology
The University of Queensland
The University of the Sunshine Coast
University of Southern Queensland

Western Australia

Curtin University of Technology
Edith Cowan University
Murdoch University
The University of Notre Dame Australia
The University of Western Australia

South Australia

The Flinders University of South Australia
The University of Adelaide
University of South Australia

Tasmania

Australian Maritime College
University of Tasmania

Northern Territory

Charles Darwin University
Batchelor Institute of Indigenous Tertiary Education

Australian Capital Territory

The Australian National University
University of Canberra

Multi-State

Australian Catholic University

Appendix 2. Collaborating Organisations

Eligibility

To be an eligible collaborating organisation (a Collaborating Organisation), an organisation must be:

a. a private sector organisation;

b. a private non-profit organisation; or

c. a Government agency - State, Territory or Commonwealth Government organisations are eligible to apply as Collaborating Organisations where funds they are committing to the project have not previously been appropriated either for internal research-related activities or for any other purpose of research, evaluation and/or consultancy.

The following organisations and types of organisation are not eligible as Collaborating Organisations under *Linkage Projects*:

a. higher education organisations and their controlled entities, including their commercial arms;

b. Rural Research and Development Boards / Corporations;

c. State and Territory Government Research and Development organisations;

d. Co-operative Research Centres (CRCs);

e. the Defence Science and Technology Organisation (DSTO);

f. the Australian Nuclear Science and Technology Organisation (ANSTO);

g. the Commonwealth Scientific and Industrial Research Organisation (CSIRO);

h. Geoscience Australia;

i. the Australian Institute of Marine Sciences (AIMS);

j. the Institute of Advanced Studies (IAS) at the Australian National University;

k. the Environmental Research Institute of the Supervising Scientist (ERISS);

l. the Australian Antarctic Division (AAD);

m. any other organisation that the ARC considers as primarily funded for research or research-related activities from State, Territory or Commonwealth Government sources or from Governments of other countries.

If, after reading these Funding Rules, any doubt exists over the eligibility of an organisation to be a Collaborating Organisation, applicants can seek advice from ARC about the status of the organisation before developing the application. Any requests seeking ruling about the eligibility of an organisation must comply with the process described in Section 7.1.

Overseas Collaborating Organisation

The ARC is prepared to accept an overseas organisation as a Collaborating Organisation where the organisation meets the eligibility criteria above. Where an application includes an overseas Collaborating Organisation, the application must address the following additional criteria to the satisfaction of the ARC:

a. the economic or social benefit of the research to Australia, and

b. the intended use of the research outcomes in Australia.

Where similar projects involving Australian and overseas Collaborating Organisation(s) are competing at the margin for funding, the ARC may give priority to the Australian Collaborating Organisation. An Australian Collaborating Organisation is an eligible Collaborating Organisation, or part of such an organisation, that is incorporated under Australian law and is operating in Australia.

Contribution of Collaborating Organisation(s)

For projects not involving an APAI, the combined Collaborating Organisation contributions, in cash (i.e. funds transferred to the Administering Organisation) or in kind (i.e. other eligible contributions of resources), must at least match the total amount sought from the Commonwealth on a dollar-for-dollar basis. Only total direct costs are taken into account as eligible Collaborating Organisation contributions.

Where a project is seeking on average $50,000 or more per year from the Commonwealth, the combined contribution in cash must be at least 20 per cent of the total amount sought from the Commonwealth. Only in exceptional circumstances will the ARC waive this prerequisite.

Where a project is seeking on average $500,000 or more per year from the Commonwealth, the combined contribution in cash must be at least 50 per cent of the total amount sought from the Commonwealth.

Organisations such as community groups, small business enterprises, charities, and start-up commercial organisations that can demonstrate that they do not have ready access to cash reserves, may seek exemption for the minimum cash requirement. In such cases, the applicant must submit a request for exemption according to the process described in Section 7.1. The request must quantify in detail the in-kind contributions and the Collaborating Organisations' commitment to providing it. However, applicants should note that the cash contribution is an important indicator for assessors when judging the degree of commitment and level of collaboration from the Collaborating Organisation.

The total contribution from Collaborating Organisations must be specific to the project and not part of a broader contribution to an Eligible Organisation. The contribution may be used to assist the project with personnel costs (excluding the salaries of CIs), provision of equipment or the use of a laboratory. Costs of capital works and general infrastructure are not normally considered for inclusion in the Collaborating Organisation contribution.

The ARC examines the proposed level of the Collaborating Organisation's cash and in-kind financial support carefully and makes any adjustments it considers necessary to reflect the true value of the contribution. The Collaborating Organisation's contribution (both in cash and in-kind) must be reported by the Administering Organisation in its end-of-year report.

Guidelines to assist applicants and Collaborating Organisations in determining the value of in-kind contributions can be found at Appendix 5.

Linkage Projects involving an APAI

Where a project seeks support for an APAI student, the Collaborating Organisation must contribute a minimum of $5,000 in cash and $5,000 in cash or in kind (that is, $10,000 in total) for each year the student is to receive a stipend. In-kind payments alone will not suffice for this purpose. Where a PhD APAI is extended beyond the normal 3-year period (by up to six months), the Collaborating Organisation is not required to provide further cash or in-kind contributions associated with the APAI.

Support requested for project costs over and above those sought to support an APAI stipend must (in addition) be matched by the Collaborating Organisation on a dollar-for-dollar basis at least. Where a project is seeking on average $50,000 or more per year from the Commonwealth, the combined contribution in cash (including for APAIs) must be at least 20 per cent of the total amount sought from the Commonwealth. Where a project is seeking on average $500,000 or more per year from the Commonwealth, the combined contribution in cash (including for APAIs) must be at least 50 per cent of the total amount sought from the Commonwealth.

Offer of funding

A project may not begin, nor grant funds be expended, until the Funding Agreement between the Administering Organisation and the ARC has been signed, and Collaborating Organisation(s) and the Administering Organisation have entered into a written agreement (the Collaborating Organisation Agreement) as required in the Funding Agreement.

With the exception of the above APAI-related Collaborating Organisation contribution, if the amount of Commonwealth funding approved for a *Linkage Projects* project varies from the amount applied for, the Chief Investigator must discuss the matter with the Collaborating Organisation. Where the Collaborating Organisation agrees the research project is viable within the parameters of the varied amount of Commonwealth funding, pro rata adjustments may be made to the project proposal budget. The Chief Investigator is responsible for providing their research office with evidence of any such Collaborating Organisation agreement for funding acquittal and reporting purposes.

Eligibility for concessional treatment

Collaborating Organisation contributions to a *Linkage Projects* project may be eligible for the R&D Tax Concession to the extent that the expenditure is incurred by an eligible company in respect of eligible R&D activities and provided that all other eligibility requirements are met.

Detailed information on the eligibility requirements for the R&D Tax Concession can be obtained from AusIndustry State Offices in each capital city. Details of the programs administered by AusIndustry can be obtained from its homepage (www.ausindustry.gov.au).

If an eligible company is unsure whether it can claim the contribution as research and development expenditure, it can apply for a private binding ruling from the Australian Taxation Office (ATO). Details on how to apply and what information needs to be provided can be obtained from the ATO.

Appendix 3. APAI information

Eligibility

Students are likely to be recent graduates interested in applied research or graduates with some years of relevant work experience who wish to undertake research work in order to complete a higher degree. APAI funding is provided on the basis of full-time study and the student is to begin in the first year of the project.

To be eligible for an APAI, a student must:

a. be an Australian citizen (unless a suitable Australian citizen cannot be obtained – see the Funding Agreement for further details);

b. be enrolled in a full-time postgraduate research degree at an Eligible Organisation;

c. have an appropriate Honours 1 or high 2A (or equivalent) undergraduate degree;

d. not be receiving similar funding or stipend from a Commonwealth Government program

e. not already have completed a degree at the same level as the proposed candidature or at a higher level; and

f. not have previously held an Australian Postgraduate Award (APA) or APAI unless it was terminated less than three months after the stipend was first paid.

The organisation where the student is enrolled may credit periods of study already undertaken towards the degree. If this occurs, the periods of study before the beginning of the APAI will be deducted from its maximum period of tenure.

The Administering Organisation must inform the ARC of any changes to an award that affect the amount or duration of funding.

APAI students may receive additional funding and/or payments from other sources provided that such funding and/or payments do not contravene their host organisation rules applying to *Linkage Projects* APAI holders and that the Collaborating Organisation(s) has no objection to the funding and/or payments.

Entitlements from the Commonwealth for APAIs

The Commonwealth will provide an annual stipend and other entitlements in the form of an APAI for a postgraduate research student studying for either a Masters or a PhD, or equivalent research doctorate. Scholarship rates are indexed annually.

Details of the rates for the current year are set out on the ARC website (www.arc.gov.au).

APAIs can be sought for up to three years. Where the award is based on a Masters, the Committee will allocate a maximum of up to two years stipend only. PhD APAIs will be allocated a maximum of three years, with a possible six month extension. For a successful applicant, the Commonwealth will pay:

a. the APAI stipend each year; and

b. a further contribution towards relocation and thesis expenses, as outlined below.

Any funding requirements in excess of the allocation provided for these expenses should be claimed by the Administering Organisation in the end-of-year report, and any unspent amounts should be reported.

Relocation allowance

The Administering Organisation will make payments to APAI students relocating residence in order to take up their position, or for an approved transfer, provided that the student provides evidence of expenditure to the Administering Organisation within six months of the expenditure being incurred. The ARC will reimburse the Administering Organisation provided that the claim is submitted within a year of the expenditure having been incurred. The ARC will reimburse up to a maximum of $6000 for all allowances combined in accordance with the Funding Agreement.

Thesis allowance

The Commonwealth will provide up to $840 toward the production of a PhD thesis or $420 toward the production of a Master's thesis. This amount must be provided by the Administering Organisation to the student if:

a. the student's thesis is submitted within six months of the completion of the project;

b. a claim is made within twelve months of the end of the project; and

c. the student provides to the Administering Organisation evidence of expenditure relating to producing the thesis.

Taxation

Full-time APAI stipends are tax-exempt under section 51-10 of the *Income Tax Assessment Act 1997*.

HECS exemption

An APAI student is an exempt student under the *Higher Education Support Act 2003* for the purpose of their enrolment in the full-time postgraduate research degree.

Appendix 4. APDI information

A successful applicant would be appointed by the host organisation for three years as an APDI to be employed full-time on the approved project. Tenured researchers who meet the eligibility criteria and successfully apply for an APDI will have to resign from their substantive position before the project begins.

Entitlements from the ARC for an APDI

For a successful APDI applicant, the ARC will pay to the administering organisation, as part of funding for the *Linkage Projects* project, a sum of approximately $59,000 (plus approximately $15,340 on-costs) per year as a contribution towards the salary of the Fellow. Remuneration levels are reviewed each year.

The Fellowship funding represents the maximum contribution that may be paid as salary to the Fellow from Commonwealth funds in any one calendar year. The host organisation must use internal funds or other resources to match local salary levels reached under enterprise bargaining agreements. Other project funds from the Commonwealth must not be used for this purpose.

Eligibility exemption

Please refer to the information at Sections 5.5 and 7.1 of these Funding Rules.

Relocation allowance

The Administering Organisation will make payments to an APDI for travel and removal expenses associated with their relocating residence in order to take up their position on condition that the Fellow provides full particulars of mode and time of travel and the receipts for all other payments (for example, removal expenses) to the Administering Organisation within six months of the expenditure being incurred. The ARC will reimburse the Administering Organisation only in the context of the End-of-Year Report, provided that the claim is submitted within a year of the expenditure having been incurred.

The ARC will reimburse in accordance with the Funding Agreement the following relocation expenses:

a. travel expenses, not exceeding the cost of the cheapest direct airfare, for the Fellow and his/her dependants. Where a Fellow elects to travel by car, the Commonwealth will provide a mileage allowance up to the maximum equivalent of the cheapest direct airfare. On completion of the Fellowship, the Fellow will be entitled to the same return fare provisions and removal expenses, provided that he/she has not obtained subsequent employment in Australia for a period exceeding twelve months;

b. relocation costs for the Fellow and his/her dependants. For the purposes of relocation entitlements, a dependant is defined as a person who moves residence with the Fellow. A spouse/partner who transfers employment to the city of the host organisation may be regarded as a dependant; a child continuing to study at the former city and not intending to live with the Fellow, may not be regarded as a dependant.

Appendix 5. Guidelines for the evaluation of the adequacy of Collaborating Organisation in-kind contributions

Appendix 2 describes the requirements for both cash and in-kind contributions by Collaborating Organisations. This appendix contains guidelines to be used in determining the value of in-kind Collaborating Organisation contributions.

Underlying principles and practical considerations

The primary objectives in examining Collaborating Organisation in-kind contribution are to ensure that the available support is adequate for the successful completion of the project and that the Collaborating Organisation contribution is in accordance with the budget, aims and research plan contained in the proposal.

In-kind contributions that are shown to be essential and central to the conduct of the project are given full recognition in evaluating the dollar-for-dollar contribution, However, claims of contributions that are not fully documented in the End-of-Year Report will be closely examined by the ARC. The onus is on the Administering Organisation to establish the merit of the case for recognition of the level and extent of the in-kind contribution.

In-kind contributions to a project may include scientific liaison and management, direct technical support, or unique access to reagents or equipment.

Corporate membership or subscription fees in industrial consortia do not qualify as Collaborating Organisation contributions but the allocation of designated research funds, together with the identification of the linkages between the member and the project, does qualify.

Guidelines for recognising in-kind budget items in Collaborating Organisation contributions

This list is not all-inclusive. If in doubt as to the acceptability of a particular item, consult:

Linkage Projects Coordinator
Australian Research Council
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CANBERRA ACT 2601

Category	Accepted	Not Accepted
Access to unique databases	Incremental costs of access	Cost of collecting the database
Analytical and other services	Internal rates	Commercial rates
	Incremental cost of providing service	
Equipment	Contributed – Used - fair market value - company book value - price for internal transfers	List price or discounted list price Rental equivalents exceeding accepted values had the equipment been donated or sold

Category	Accepted	Not Accepted
	Contributed - New - selling price to most favoured customer (if stock item) - cost of manufacture (if one of a kind) - cost of purchase	Development costs
	Lent - rental equivalent based on depreciation - rental rate equivalent to highest-volume user	
	Sold - difference between discounted price and selling price to most favoured customer	
Materials	Unit cost of production for commercial products Selling price to most favoured customer Price for internal transfers Cost of production of prototype and samples	Development costs (unless it is an integral part of the Project proposal)
Patents and licences	Licences acquired from third parties for use by the university	Patents Licensing fees paid to the university
Payments concerning the Chief Investigator	Payment to the university for release time from teaching duties	Payment to the Chief Investigator as consulting fees or honoraria (additional to normal salary)
Salaries	Typical salary cost (including overheads) at internal rates	External charge-out or consultant rates Costs relating to administrative support where overhead has been included in salary costs
Contributed software (need to distinguish between existing software used as a tool for analytical purposes and the Collaborating Organisation's contribution to developing new software tools where this is one of the main objectives of the proposal)	Copying costs Licensing cost Documentation cost Cost of training and support of software Cost of equivalent commercial product (where donated software is not commercially available)	Development costs
Travel	Travel costs associated with field work Travel costs to meet with university personnel & Collaborating Organisation staff Conference travel for university staff	

Category	Accepted	Not Accepted
Use of facilities	Internal rates for logistical support and travel allowance for university personnel working on Collaborating Organisation premises or on field work Internal rates for use of specialised equipment by university personnel or use of process or production lines Internal rates for value of lost production resulting from down time	Use of equipment by Collaborating Organisation personnel. Space for Collaborating Organisation activities outside the scope of the specific proposal Equivalent commercial rates

Appendix 6. National Research Priorities and associated Priority Goals

Research Priority 1: An Environmentally Sustainable Australia

Transforming the way we utilise our land, water, mineral and energy resources through a better understanding of human and environmental systems and the use of new technologies

Natural resources have traditionally fuelled our national and regional economies. They have the potential to generate further wealth and employment opportunities in the future. But our natural resources and biodiversity must be used on a sustainable basis so that the benefits continue to be enjoyed by future generations.

Australia faces significant environmental challenges:

- Efficient and sustainable water use is a critically important issue for our economic and social development;
- Significant land degradation issues, such as salinity, need to be arrested to underpin our agricultural production systems;
- Climate change can be expected to have complex, long-term consequences for the environment, for our agricultural and marine production systems and for communities; and
- The cleanliness and efficiency of our energy production systems should be enhanced.

There is substantial effort underway to develop more efficient water utilisation practices, to protect our rivers and groundwater resources, and to protect and remediate our fragile soils.

Our agricultural and mining industries are being transformed through the adoption of new technologies, and the development of new types of foods.

This will help to revitalise our regional communities and generate substantial export earnings for the nation over the coming decades.

The Government is committed to meeting the greenhouse gas emissions target set for Australia at Kyoto.

Australia is well placed to take an international lead in developing new and improved energy technologies and in capturing and ‘sequestering’ carbon dioxide.

Other opportunities lie in managing and using our unique, rich land- and marine-based biodiversity, and in developing our deep earth resources.

Australia has a strong record of achievement in research in fields in the natural sciences, such as agriculture, natural resource management, climate change, horticulture, forestry, mining, energy, and marine sciences, as well as in the social sciences and humanities.

We must build on these strengths to improve our competitive advantages while enhancing our understanding of natural systems and the interplay of human activities.

In particular, there needs to be an increased understanding of the contributions of human behaviour to environmental and climate change, and on appropriate adaptive responses and strategies.

To understand and manage these complex interactions better will require significant collaboration within the research community and with other stakeholders.

Priority goals for research fall in the seven areas of water utilisation, transforming resource-based industries, overcoming land degradation, developing cleaner, more efficient fuels and energy sources, managing biodiversity, deep earth resources and responding to climate change and variability.

Priority Goals

- **Water – a critical resource**

Sustainable ways of improving water productivity, using less water in agriculture and other industries, providing increased protection of rivers and groundwater and the re-use of urban and industrial waste waters.

Australia is one of the driest continents and is dependent upon access to freshwater supplies for economic and social development. It has a complex geological structure, a highly variable climate, unique ecosystems, flora and fauna and a distinctive indigenous and settler history. Enhancing our understanding of the links between these factors and water availability will result in a better understanding of sustainable water management practices.

- **Transforming existing industries**

New technologies for resource-based industries to deliver substantial increases in national wealth while minimising environmental impacts on land and sea.

Resource-based industries underpin much of Australia's prosperity and have the potential to do so in the future. For example, Australia remains highly prospective for minerals discoveries and highly attractive for the development of new era foods from agricultural and marine sources. Our competitive advantage and national well being will depend on research and on the development and adoption of new technologies.

- **Overcoming soil loss, salinity and acidity**

Identifying causes and solutions to land degradation using a multidisciplinary approach to restore land surfaces.

The Australian landscape is fragile: soil salinity, acidity, and nutrient levels pose significant, long term challenges for agriculture and the environment. Research is helping to find solutions to these problems. For example, the National Land and Water Resources Audit shows the extent of salinity, soil erosion and soil acidification in the Australian environment and illustrates Australia's leading edge in national mapping of critical resource data. Further multidisciplinary effort is required to develop sustainable land management practices that are appropriate for Australian conditions and mitigate major land degradation processes and increase biodiversity.

- **Reducing and capturing emissions in transport and energy generation**

Alternative transport technologies and clean combustion and efficient new power generation systems and capture and sequestration of carbon dioxide.

Australia is well positioned to produce world class solutions to reduce and capture greenhouse gas emissions and the Government is committed to meeting the emissions target set for Australia at Kyoto. We are also well placed to develop alternative energy technologies and ecologically sustainable transport and power generation systems.

- **Sustainable use of Australia's biodiversity**

Managing and protecting Australia's terrestrial and marine biodiversity both for its own value and to develop long term use of ecosystem goods and services ranging from fisheries to ecotourism.

Australia has a unique and rich flora and fauna. Many of our complex ecosystems – on which our agricultural, fisheries and tourism industries depend - have adapted to events such as drought and fire, and have been shaped by indigenous and settler management practices. There is a need for a more comprehensive understanding of these natural systems and the interplay with human activities, and the effects of management and protection measures.

- **Developing deep earth resources**

Smart high-technology exploration methodologies, including imaging and mapping the deep earth and ocean floors, and novel efficient ways of commodity extraction and processing (examples include minerals, oil and gas) while minimising negative ecological and social impacts.

Many of Australia's known mineral assets may be nearly exhausted within the next decade. New land-based deposits are believed to be buried deeper in the crust and the deep marine areas surrounding Australia are also largely unexplored. New technologies, such as remote sensing, indicate scientists are on the brink of being able to 'see' inside the earth and identify deeply buried deposits.

- **Responding to climate change and variability**

Increasing our understanding of the impact of climate change and variability at the regional level across Australia, and addressing the consequences of these factors on the environment and on communities.

Australia already has a highly variable climate, and climate change can be expected to have further significant impacts. It is important to enhance our understanding of the consequences of climate change and variability at the regional level across Australia, and the implications for the environment and for communities. It is also important to explore beneficial adaptation strategies to climate change and variability to ensure ongoing social, economic and environmental well being.

Research Priority 2: Promoting and Maintaining Good Health

Promoting good health and well being for all Australians

Average life expectancies have increased markedly in recent decades. Australians also expect to lead longer and healthier lives in the future, and to remain productive and independent over an extended period.

Enabling individuals and families to make choices that lead to healthy, productive and fulfilling lives will yield economic and social benefits and add materially to national well being.

Australians expect that their children and grandchildren should have a healthy start to life.

Developing strategies to promote the healthy development of young Australians, and addressing the causes and reducing the impact of the genetic, social and environmental factors which diminish their life potential will be critical.

A revolution is also underway at the other end of the life cycle. Australia, like many other developed nations, is undergoing a major demographic shift involving significant growth in the aged population.

To meet this challenge, it will be important to promote healthy ageing by developing better social and medical strategies to ensure that older Australians enjoy healthy and productive lives.

Informed insights into the causes of disease and of mental and physical degeneration will contribute to the achievement of this goal.

All Australians stand to benefit from preventive healthcare through the adoption of healthier attitudes, habits and lifestyles.

Evidence-based preventive interventions may help reduce the incidence and severity of many diseases, including major health problems such as cardiovascular and neurodegenerative diseases, mental ill-health, obesity, diabetes, asthma and chronic inflammatory conditions. These could include interventions that reduce exposure to contamination of the physical environment (eg air pollution).

Improvements in the health and well being of the young, of older Australians and in preventive healthcare will be underpinned by research.

However, while Australia has an enviable record in health and medical research, the research effort is spread across the many universities, hospitals and health and medical research institutes, resulting in critical mass only in limited areas of research.

There is also a need to draw on multidisciplinary approaches that include research contributions from the social sciences and humanities.

This priority is designed to promote health and prevent disease through a more focused and collaborative effort.

Priority goals for research fall in the four areas of a healthy start to life, ageing well, ageing productively, preventive healthcare and strengthening Australia’s social and economic fabric.

Priority Goals

- **A healthy start to life**

  Counteracting the impact of genetic, social and environmental factors which predispose infants and children to ill health and reduce their well being and life potential.

  Human health in the developing foetus and in early childhood is critical to the future well being of the adult. Research shows that health and well being in early childhood is predictive of later positive outcomes, and that health in middle and late childhood is also crucial. This goal supports the Government's National Agenda for Early Childhood initiative.

- **Ageing well, ageing productively**

  Developing better social, medical and population health strategies to improve the mental and physical capacities of ageing people.

  Australia's population is ageing, with a significant projected increase in the number of people aged over 65 and over 85. While Australia is relatively well placed compared with many OECD nations, major shifts in cultural expectations and attitudes about ageing are necessary to respond constructively, at both an individual and population level. A healthy aged population will contribute actively to the life of the nation through participation in the labour market or through voluntary work. This goal supports the Government's National Strategy for an Ageing Australia.

- **Preventive healthcare**

  New ethical, evidence-based strategies to promote health and prevent disease through the adoption of healthier lifestyles and diet, and the development of health-promoting products.

  Preventive healthcare research will improve the prediction and prevention of disease and injury for all Australians through the adoption of healthier behaviours, lifestyles and environments. Research will generate an improvement in the design, delivery and uptake of programmes such as exercise-based rehabilitation. There are several major disease targets amenable to immediate study, such as cardiovascular health, neurodegenerative diseases, mental ill-health, obesity, diabetes, asthma and chronic inflammatory conditions. Research on prevention will emphasise interdisciplinary approaches, including research on ethics, drawing on contributions from the social sciences and humanities, as well as from the health and medical sciences. It will also focus on developing new health promoting foods and nutraceuticals. This goal supports the Government's Focus on Prevention initiative.

- **Strengthening Australia's social and economic fabric**

  Understanding and strengthening key elements of Australia's social and economic fabric to help families and individuals live healthy, productive, and fulfilling lives.

  Living in today's society involves a complex web of choices, yet many of the traditional support structures are weaker than they have been in the past. Enabling people to make

choices that lead to positive pathways to self reliance and supportive family structures is more important than ever. The interactions between the social safety net, social and economic participation, financial incentives and community and private sources of support are critical in helping people maximise their potential and achieve good, healthy, lifetime outcomes. In the decade ahead, it will be vital to understand and support the drivers for workforce participation and the broader social and economic trends influencing Australian families and communities. This goal supports the Government's welfare reform and participation agendas. Research in this area will emphasise interdisciplinary approaches, drawing on contributions from the economic, behavioural and social sciences

Research Priority 3: Frontier Technologies for Building and Transforming Australian Industries

Stimulating the growth of world-class Australian industries using innovative technologies developed from cutting-edge research

Progress and wealth often derive from the unforeseen application of new discoveries. Australia must be at the leading edge if it is to stay abreast of international developments and take advantage of opportunities.

Our national capabilities in emerging sciences and their underpinning disciplines determine our capacity to develop and implement new technologies. Australia has a strong base of expertise, skills and technological capacities in the fundamental sciences and key technologies.

Our strengths are in a wide range of areas such as biotechnology, material sciences, information and communications technology (ICT), photonics, nanotechnology and sensor technology.

ICT is currently the critical enabling technology and is a major contributor to national productivity and growth.

But breakthrough science underpins technological advancements in many areas and Australia needs to foster an environment that stimulates creativity and innovation.

Applications for frontier technologies are potentially very large. Australia has the capacity to exploit niche markets for new products and services.

Australia also has an enviable track record as an innovator and developer of advanced materials and must grasp the opportunity to stay ahead.

Smart information use involving improved data management, intelligent transport systems and digital media to develop creative applications for digital technologies provides huge opportunities to improve the performance of key Australian industries.

Australia needs to invest in this research area as it is fundamental to our future competitiveness and well being.

This priority will help to strengthen the capacity of Australian researchers to participate in new areas of research, enhance Australia’s international scientific reputation, stimulate local expertise, and help create vibrant new industries.

A better understanding of the conditions that are conducive to innovation will ensure that Australia’s investment in research will maximise the benefits for Australia.

Enhanced research effort will also be achieved through initiatives that develop a critical mass of researchers in key areas.

Priority goals for research fall in the five areas of breakthrough science, frontier technologies, advanced materials, smart information use, and promoting an innovation culture and economy.

Priority Goals

- **Breakthrough science**

  Better understanding of the fundamental processes that will advance knowledge and facilitate the development of technological innovations.

  Breakthrough science underpins technological innovation across a range of industries critical to maintaining Australia's position as a developed country. Some examples include bio-, cultural- and geo-informatics, nano-assembly and quantum computing. Technological advances are often unexpected and a strong foundation in mathematics and the fundamental sciences will provide an environment that fosters creativity and innovation. Early participation in leading edge areas of research will enable Australian researchers to benefit more fully from international developments.

- **Frontier technologies**

  Enhanced capacity in frontier technologies to power world-class industries of the future and build on Australia's strengths in research and innovation (examples include nanotechnology, biotechnology, ICT, photonics, genomics/phenomics, and complex systems).

  The potential applications of frontier technologies across a range of industries in Australia are vast. Australia has significant capacity to exploit niche markets for new products and services emerging from frontier technologies. Australia has world-class research expertise in many such areas. Some examples include nanotechnology, biotechnology, ICT, photonics, genomics and phenomics. Also important are advanced frameworks such as complex systems in which these technologies are applied. Future directions in this priority area need to target the cutting-edge science critical for each emerging technology.

- **Advanced materials**

  Advanced materials for applications in construction, communications, transport, agriculture and medicine (examples include ceramics, organics, biomaterials, smart material and fabrics, composites, polymers and light metals).

  The development of advanced materials will underpin growth in many areas of industrial and economic activity in Australia. Australia has substantial infrastructure in this area and an enviable track record as an innovator and developer of advanced materials. The era of advanced materials is just beginning, in spite of the tremendous progress in recent years. Substantial scientific and technological challenges remain ahead, including the development of more sophisticated and specialised materials. Some

examples include ceramics, organics, biomaterials, smart materials and fabrics, composites, polymers, and light metals.

- **Smart information use**

  Improved data management for existing and new business applications and creative applications for digital technologies (examples include e-finance, interactive systems, multi-platform media, creative industries, digital media creative design, content generation and imaging).

  ICT applications are providing huge opportunities to deliver new systems, products, business solutions, and to make more efficient use of infrastructure. Examples include e-finance, multi-media, content generation and imaging. Improved data management is central to the future competitiveness of key industries such as agriculture, biotechnology, finance, banking, education, transport, government, and health and 'info-tainment'. The ability of organisations to operate virtually and collaborate across huge distances in Australia and internationally hinges on our capabilities in this area. The media and creative industries are among the fastest growing sectors of the new economy. Research is needed to exploit the huge potential in the digital media industry.

- **Promoting an innovation culture and economy**

  Maximising Australia's creative and technological capability by understanding the factors conducive to innovation and its acceptance.

  Understanding the factors that lead to highly creative and innovative ideas and concepts, and the conditions that lead to their introduction, transfer and uptake is critical for any nation that aspires to lead the world in breakthrough science, frontier technologies, and in other forms of innovation. Promoting an innovation culture and economy requires research with a focus on developing and fostering human talent, societal and cultural values favourable to creativity and innovation, and structures and processes for encouraging and managing innovation.

Research Priority 4: Safeguarding Australia

Safeguarding Australia from terrorism, crime, invasive diseases and pests, strengthening our understanding of Australia's place in the region and the world, and securing our infrastructure, particularly with respect to our digital systems.

The importance of security and safety to Australia has been underscored by recent events.

Australia has to be capable of anticipating and tackling critical threats to society, strategic areas of the national economy and the environment.

The threats can potentially come from within and outside Australia.

The world is now characterised by the widespread and rapid movements of people, digitally coded data, goods and services, and exotic biological agents.

Critical infrastructure in Australia is increasingly dependent on digital technology for its management and integration.

Information protection and the integrity of security systems are now more important than ever before.

It is also necessary to protect the status of Australia as a nation free of many of the diseases affecting primary production around the world.

Terrorism has emerged as a very real global threat and crime is taking a significant toll on Australian society and economy.

Maintaining the operational advantage of Australia's defence forces through superior capabilities is also fundamental to our national security.

Enhancing our nation's understanding of social, political and cultural issues will help Australia to engage with our neighbours and the wider global community and to respond to emerging issues.

Leading edge research in Australia is already yielding high dividends and as a national research priority will improve the effectiveness of that contribution.

Stronger research capabilities will ensure that solutions are tailored to Australia's unique circumstances, reflecting its geographic features and small population.

Greater collaboration within the research community and with other stakeholders will allow us to better understand and manage potential threats to Australia.

Harnessing the knowledge and capabilities across Australia offers us the best chance of developing innovative and rapid solutions to serious threats.

Australia's international relations and its regional influence will be strengthened through new collaborative approaches and new science and technologies that enhance security and safety.

The heightened interest in personal and electronic security across the world also provides opportunities for Australian solutions.

Priority goals for research fall in the five areas of critical infrastructure, understanding our region and the world, protecting Australia from invasive diseases and pests, protecting Australia from terrorism and crime, and transformational defence technologies.

Priority goals

- **Critical infrastructure**

  Protecting Australia's critical infrastructure including our financial, energy, communications, and transport systems.

  Protecting our critical infrastructure is important to national security and to the social and economic well being of Australia. An important aspect of this priority goal is e-security which is an enabler of e-commerce. Maintaining a critical mass of research in e-security will be essential in providing Australia with the tools to protect our way of life.

- **Understanding our region and the world**

  Enhancing Australia's capacity to interpret and engage with its regional and global environment through a greater understanding of languages, societies, politics and cultures.

Social, cultural and religious issues are of growing significance due to the insecurities of globalisation and the increasing role of non-state players in the security environment. Australia's capacity to interpret and engage with its regional and global environment will be substantially improved by enhancing its research base in apposite languages, societies and cultures. An approach that enhances Australia's capacity to interpret itself to the rest of the world is also needed.

- **Protecting Australia from invasive diseases and pests**

Counteract the impact of invasive species through the application of new technologies and by integrating approaches across agencies and jurisdictions.

Australia is free of many of the pests and diseases affecting primary production around the world. This status needs to be protected as the introduction of exotic species has the potential to adversely affect our exports and the environment. Australia already has strong skills and expertise in this area of research and further work will offer immediate benefits to the community. A greater level of coordination of our research effort will mean that Australia can more effectively develop innovative and rapid solutions to serious threats.

- **Protecting Australia from terrorism and crime**

By promoting a healthy and diverse research and development system that anticipates threats and supports core competencies in modern and rapid identification techniques.

Protecting Australia from terrorism is now more important than ever before in light of recent events and our involvement in the 'war on terror'. The new threat requires a more sophisticated response which should harness Australia's research capabilities, and which will focus on all phases of counter-terrorism; prevention, preparedness, detection, response and recovery. Crime takes a significant toll on Australian society and economy. The June 2000 report from the Prime Minister's Science, Engineering and Innovation Council estimated that crime costs Australia at least $18 billion per annum. Personal identification, information protection and the integrity of security systems are fundamental towards ensuring the national security of Australia. An effective solution will include building on Australia's existing strengths in rapid detection using new analytical technologies and managing significant data collections.

- **Transformational defence technologies**

Transform military operations for the defence of Australia by providing superior technologies, better information and improved ways of operation.

Australia has a small defence force to protect a large continent and a substantial maritime region of responsibility. Its operational advantage has been maintained through a superior capability which is dependent on leveraging innovative technologies. Although some benefits can be gained from overseas research, Australia has to conduct its own research to address uniquely Australian demands. A systems approach which harnesses the research capabilities of all stakeholders is essential to the successful development and introduction of innovative technologies.