



**Australian Government**  
**Australian Research Council**

# **Linkage Infrastructure Equipment and Facilities**

---

**Selection Report  
for Funding Commencing in 2005**

# Linkage Infrastructure Equipment and Facilities

## Overview

The objectives of the *Linkage Infrastructure Equipment and Facilities* (LIEF) scheme are to:

- encourage institutions to develop collaborative arrangements among themselves, across the higher education sector and with organisations outside the sector, in order to develop research infrastructure;
- support large-scale cooperative initiatives involving two or more institutions, thereby allowing expensive facilities to be shared;
- enhance support for areas of research strength; and
- ensure that researchers in fields of recognised research potential have access to the support necessary for development.

## Selection process

### *Committee Membership*

The LIEF Advisory Committee comprised nine members of the Australian Research Council's (ARC) College of Experts (CoEs).

### *Selection Meeting*

The LIEF Advisory Committee discussed applications and formulated funding recommendations at a selection meeting in Canberra on 19 and 20 July 2004. The LIEF Advisory Committee strictly observed the ARC procedures for potential conflicts of interest.

## Selection criteria

The LIEF Advisory Committee's assessment of applications was based on the scheme's selection criteria:

- need and level of demand for the proposed equipment or facilities in Australia;
- excellence of the researchers and research activity to be supported;
- effectiveness of the cooperative arrangements between institutions, including access and resource sharing; and
- commitment of each collaborating institution.

## National Research Priorities

In November 2002, the Australian Government designated a set of four National Research Priorities and within them 21 National Research Priority Goals. For the LIEF scheme for funding commencing in 2005, 151 applications selected one of the National Research Priority areas. This represented 94.9% of all applications. Of these, 73 are funded with a success rate of 48.3%. Priority applications represented 93.6% of funded applications with funding totalling \$27,897,010 of a total of \$30,400,105.

**Table 1. Numbers and success rates for LIEF projects by National Research Priority**

| LIEF  |                       |                     |                |                     |
|---|-----------------------|---------------------|----------------|---------------------|
| Priority  | Applications received | Applications funded | Success rate % | Approved funding    |
| None  | 8                     | 5                   | 62.5           | \$2,503,095         |
| An Environment-ally Sustainable Australia                                 | 42                    | 20                  | 47.6           | \$5,781,239         |
| Promoting and Maintaining Good Health                                     | 12                    | 7                   | 58.3           | \$2,971,888         |
| Frontier Technologies for Building and Transforming Australian Industries | 91                    | 45                  | 49.5           | \$18,818,010        |
| Safeguarding Australia  | 6                     | 1                   | 16.6           | \$325,873           |
| <b>Total priority applications</b>  | <b>151</b>            | <b>73</b>           | <b>48.3</b>    | <b>\$27,897,010</b> |
| <b>Total applications</b>   | <b>159</b>            | <b>78</b>           | <b>49.1</b>    | <b>\$30,400,105</b> |
| <b>Priority as % of total</b>   | <b>94.9%</b>          | <b>93.6%</b>        |                | <b>91.8%</b>        |

## Duration of funding

Funding is normally for one year only. However, applications for multiple years of funding may be considered in the case of subscriptions to major international facilities. LIEF grants may be awarded for one to five years, subject to parliamentary appropriation.

## Summary outcomes

### *Applications submitted*

A total of 159 applications, seeking \$81,272,351 in ARC funds, were considered by the LIEF Advisory Committee.

### *Applications funded*

A total of 78 applications (49.1% of applications) have been funded. These applications requested support for facilities and equipment worth \$62,494,508. The ARC funding for these applications totals \$30,400,105.

### *Unsuccessful applications*

A total of 81 applications (50.9%) either did not meet the scheme guidelines or were considered uncompetitive and were not selected for funding.

## ARC funding and partner contributions

Table 2 shows all applications considered and all applications selected for funding, with details of requested and approved funds and partner contributions (cash contributions only). There were no applications selected for multi-year funding.

**Table 2. Requested grant size and partner contributions**

| Applications received |              |   |                                     |   |                      |
|-----------------------|--------------|---|-------------------------------------|---|----------------------|
| Total received        |              | Requested funds<br>(over life of project) |                                     | Partner contribution<br>(cash only)<br>(over life of project) |                      |
| 159                   |              | \$81,272,351                              |                                     | \$46,147,499  |                      |
| Applications funded   |              |   |                                     |   |                      |
| Total                 | Success rate | Requested funds                           | Partner contribution<br>(cash only) | Total ARC allocation  | % of requested funds |
| 78                    | 49.1%        | \$36,597,196*                             | \$24,866,584*                       | \$30,400,105*   | 83.1%                |

\* These values include only single year requests, contributions and allocations, even though multi-year funding was sought.

## Research library collections and databases

Table 3 provides information on applications classified as involving library or database projects.

**Table 3. Library or database projects**

| Applications received |              |                 |                                     |                                     |                      |
|-----------------------|--------------|-----------------|-------------------------------------|-------------------------------------|----------------------|
| Total received        |              | Requested funds |                                     | Partner contribution<br>(cash only) |                      |
| 11                    |              | \$3,803,117     |                                     | \$1,914,500                         |                      |
| Applications funded   |              |                 |                                     |                                     |                      |
| Total                 | Success rate | Requested funds | Partner contribution<br>(cash only) | Total ARC allocation                | % of requested funds |
| 9                     | 81.8%        | \$3,544,248     | \$1,827,000                         | \$2,732,459                         | 77.1%                |

## Applications by State

Table 4 provides the breakdown of LIEF applications and funding by State.

**Table 4. Received and funded applications by State**

| State        | Applications received | Applications funded | Success rate | Total ARC allocation | % of funded applications | % of total funds |
|--------------|-----------------------|---------------------|--------------|----------------------|--------------------------|------------------|
| ACT          | 16                    | 10                  | 62.5         | \$3,698,106          | 12.8%                    | 12.2%            |
| NSW          | 47                    | 25                  | 53.2         | \$9,381,949          | 32.1%                    | 30.9%            |
| NT           | 2                     | 1                   | 50.0         | \$229,326            | 1.3%                     | 0.8%             |
| QLD          | 20                    | 9                   | 45.0         | \$2,841,555          | 11.5%                    | 9.3%             |
| SA           | 14                    | 8                   | 57.1         | \$3,164,436          | 10.3%                    | 10.4%            |
| TAS          | 6                     | 2                   | 33.3         | \$914,220            | 2.5%                     | 3.0%             |
| VIC          | 32                    | 16                  | 50.0         | \$7,040,808          | 20.5%                    | 23.2%            |
| WA           | 22                    | 7                   | 31.8         | \$3,129,705          | 9.0%                     | 10.3%            |
| <b>Total</b> | <b>159</b>            | <b>78</b>           | <b>49.1</b>  | <b>\$30,400,105</b>  | <b>100.0%</b>            | <b>100.0%</b>    |

## Funding by institution

Table 5 shows funding requests and partner contributions for all applications and, for those applications selected for funding, by administering institution.

**Table 5. Funding requests and partner contributions by administering institution**

| Applications received                                   |               |                   |                                   | Applications funded |                   |                                  |                |
|---|---------------|-------------------|-----------------------------------|---------------------|-------------------|----------------------------------|----------------|
| Organisation  | Apps received | Requested funding | Partner contributions (cash only) | Apps funded         | Requested funding | Partner contribution (cash only) | ARC allocation |
| Australian Institute of Nuclear Science and Engineering | 1             | 240,000           | 160,000                           | 1                   | 240,000           | 160,000                          | 240,000        |
| Charles Darwin University                               | 2             | 470,948           | 173,000                           | 1                   | 267,033           | 98,000                           | 229,326        |
| Curtin University of Technology                         | 7             | 2,262,468         | 1,243,500                         | 2                   | 389,988           | 251,000                          | 303,876        |
| Deakin University                                       | 4             | 1,756,876         | 1,036,440                         | 1                   | 1,045,870         | 595,000                          | 825,000        |
| Griffith University                                     | 3             | 2,074,944         | 1,720,000                         | 2                   | 1,199,563         | 1,300,000                        | 798,145        |
| James Cook University                                   | 6             | 1,363,428         | 973,700                           | 3                   | 976,814           | 728,700                          | 898,142        |
| La Trobe University                                     | 4             | 1,417,039         | 989,500                           | 1                   | 491,673           | 390,000                          | 406,385        |
| Macquarie University                                    | 2             | 855,427           | 475,873                           | 2                   | 855,427           | 475,873                          | 660,000        |
| Monash University                                       | 12            | 6,617,517         | 3,818,576                         | 6                   | 3,325,029         | 2,322,576                        | 2,761,210      |
| Murdoch University                                      | 4             | 1,610,743         | 557,500                           | 0                   | 0                 | 0                                | 0              |
| Queensland University of Technology                     | 3             | 605,500           | 345,498                           | 1                   | 188,000           | 165,000                          | 188,000        |
| RMIT University   | 3             | 1,431,140         | 561,000                           | 1                   | 148,599           | 80,000                           | 110,000        |

| Applications received                   |               |                   |                                   | Applications funded |                   |                                  |                   |
|---|---------------|-------------------|-----------------------------------|---------------------|-------------------|----------------------------------|-------------------|
| Organisation                            | Apps received | Requested funding | Partner contributions (cash only) | Apps funded         | Requested funding | Partner contribution (cash only) | ARC allocation    |
| Southern Cross University               | 2             | 480,611           | 455,970                           | 0                   | 0                 | 0                                | 0                 |
| Swinburne University of Technology      | 2             | 344,291           | 118,000                           | 1                   | 120,156           | 43,000                           | 114,036           |
| The Australian National University      | 16            | 8,300,867         | 5,986,000                         | 10                  | 4,578,909         | 4,092,000                        | 3,698,106         |
| The Flinders University South Australia | 4             | 1,586,181         | 1,142,035                         | 3                   | 1,427,312         | 1,088,035                        | 1,196,010         |
| The University of Adelaide              | 8             | 2,907,780         | 1,483,004                         | 5                   | 2,016,560         | 1,105,000                        | 1,968,426         |
| The University of Melbourne             | 7             | 4,724,764         | 2,998,000                         | 6                   | 3,252,601*        | 2,298,000*                       | 2,824,177*        |
| The University of New England           | 4             | 907,890           | 343,000                           | 1                   | 132,885           | 80,000                           | 129,800           |
| The University of New South Wales       | 14            | 7,595,009         | 3,944,250                         | 8                   | 3,309,087         | 1,813,500                        | 2,659,991         |
| The University of Newcastle             | 6             | 1,770,932         | 1,000,000                         | 1                   | 270,500           | 125,000                          | 207,189           |
| The University of Queensland            | 8             | 4,748,301         | 3,462,000                         | 3                   | 1,191,872         | 1,002,000                        | 957,268           |
| The University of Sydney                | 9             | 5,937,839         | 3,310,000                         | 6                   | 4,559,538         | 2,702,000                        | 3,644,323         |
| The University of Western Australia     | 11            | 14,279,810        | 5,964,000                         | 5                   | 3,519,748         | 1,801,000                        | 2,825,829         |
| University of South Australia           | 2             | 796,029           | 340,000                           | 0                   | 0                 | 0                                | 0                 |
| University of Tasmania                  | 6             | 3,129,676         | 1,283,400                         | 2                   | 1,047,139         | 447,900                          | 914,220           |
| University of Technology Sydney         | 3             | 1,136,748         | 508,253                           | 1                   | 323,612           | 165,000                          | 295,320           |
| University of Western Sydney            | 2             | 940,312           | 977,000                           | 1                   | 740,000           | 760,000                          | 740,000           |
| University of Wollongong                | 4             | 979,281           | 778,000                           | 4                   | 979,281           | 778,000                          | 805,326           |
| <b>Total</b>                            | <b>159</b>    | <b>81,272,351</b> | <b>46,147,499</b>                 | <b>78</b>           | <b>36,597,196</b> | <b>24,866,584</b>                | <b>30,400,105</b> |

\*These values include only single year requests, contributions and allocations, even though multi-year funding was sought.

## Single-institution applications

While LIEF emphasises collaboration, in some circumstances single institutions may apply for assistance to purchase a large item of equipment or major facility on a sole-use basis if justification is provided. Applications may include collaboration with an international university or other organisation, or an Australian industry or government organisation. In the current funding round a total of 21 applications were submitted by single institutions including 13 single-institution applications from rural/regional universities. Of these applications, 5 are funded and 2 of the funded single-institution applications have partners from industry, government, or international sources.

Table 6 shows the success rate of single-institution applications under the former Research Infrastructure Equipment and Facilities (RIEF) scheme (1997-2001) and LIEF scheme (2002 to 2005).

**Table 6. Infrastructure funded 1997- 2005**

| Year | Application received | Single institution applications received | % of single institution applications received over total received applications | % of single institution applications funded over total funded applications |
|------|----------------------|--|--|--|
| 1997 | 182                  | 45                                       | 24.7%  | 13.0%  |
| 1998 | 202                  | 70                                       | 34.7%  | 9.0%   |
| 1999 | 179                  | 14                                       | 7.8%   | 16.8%  |
| 2000 | 144                  | 9  | 6.3%   | 1.4%   |
| 2001 | 136                  | 20                                       | 14.7%  | 12.0%  |
| 2002 | 129                  | 15                                       | 11.6%  | 6.6%   |
| 2003 | 121                  | 20                                       | 16.5%  | 10.4%  |
| 2004 | 146                  | 17                                       | 11.6%  | 8%   |
| 2005 | 159                  | 21                                       | 13.2%  | 6.4%   |

## Collaboration

Table 7 categorises project applications and project funding by the number of organisations participating in the project and gives the corresponding success rate for LIEF 2005. The term “organisation” includes both universities and industry or other partners.

**Table 7. Project applications, funded projects, and success rates by number of participating organisations**

| Number of Organisations Involved | Applications received | Applications funded | Success Rate (%) |
|----------------------------------|-----------------------|---------------------|------------------|
| 1                                | 11                    | 3                   | 27.3             |
| 2                                | 42                    | 19                  | 45.2             |
| 3                                | 41                    | 23                  | 56.1             |
| 4                                | 23                    | 10                  | 43.5             |
| 5                                | 11                    | 3                   | 27.3             |
| 6                                | 9                     | 6                   | 66.7             |
| 7                                | 7                     | 4                   | 57.1             |
| 8                                | 5                     | 2                   | 40.0             |
| 9                                | 5                     | 4                   | 80.0             |
| 10                               | 2                     | 2                   | 100.0            |
| 14                               | 1                     | 0                   | 0.0              |
| 18                               | 1                     | 1                   | 100.0            |
| 26                               | 1                     | 1                   | 100.0            |

Chart 1 illustrates the incidence of collaboration in the 2004 round of LIEF applications, for funding in 2005.

**Chart 1: Incidence of collaboration in LIEF scheme**

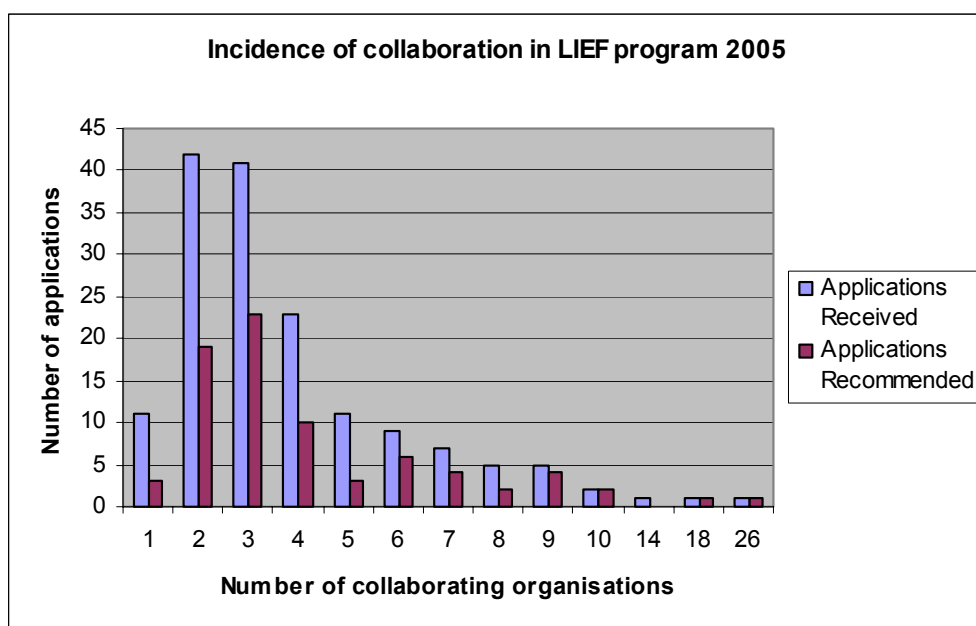


Table 8 illustrates the high degree of collaboration that occurs in the 2005 LIEF scheme. A total of 38 universities and 122 other organisations have participated in applications.

**Table 8. Incidence of collaboration in LIEF scheme**

| Partner organisation            | Incidences in received applications involving partner organisation | Total cash contribution pledged by partner organisation (over life project) | Incidences in applications funded involving partner organisation | Total cash contribution pledged by organisation (funded applications) |
|---------------------------------|--|---|--|---|
| Australian Maritime College     | 1  | \$10,000  | 0  |   |
| Cambridge University            | 1  | \$5,000   | 0  |   |
| Charles Darwin University       | 6  | \$118,500   | 4  | \$61,000  |
| Charles Sturt University        | 1  | \$10,000  | 0  |   |
| Curtin University of Technology | 21   | \$1,131,667   | 9  | \$394,167   |
| Deakin University               | 5  | \$499,400   | 1  | \$200,000   |
| Edith Cowan University          | 6  | \$100,000   | 2  | \$75,000  |
| Griffith University             | 12   | \$1,420,000   | 7  | \$1,135,000   |
| James Cook University           | 10   | \$873,700   | 4  | \$578,700   |
| La Trobe University             | 8  | \$800,000   | 4  | \$295,000   |

| <b>Partner organisation</b>         | <b>Incidences in received applications involving partner organisation</b> | <b>Total cash contribution pledged by partner organisation (over life project)</b> | <b>Incidences in applications funded involving partner organisation</b> | <b>Total cash contribution pledged by organisation (funded applications)</b> |
|-------------------------------------|---|--|---|--|
| Macquarie University                | 16  | \$770,000  | 9   | \$480,000  |
| Massey University                   | 1   | \$5,000  | 0   |  |
| Monash University                   | 33  | \$3,273,841  | 22  | \$2,463,841  |
| Murdoch University                  | 13  | \$674,167  | 4   | \$206,667  |
| University of Tennessee             | 1   | \$50,000   | 0   |  |
| Queensland University of Technology | 8   | \$390,498  | 2   | \$140,000  |
| RMIT University                     | 10  | \$918,500  | 5   | \$572,500  |
| Southern Cross University           | 3   | \$430,970  | 1   | \$20,000   |
| Swinburne University of Technology  | 12  | \$200,000  | 8   | \$105,000  |
| The Australian National University  | 37  | \$4,976,253  | 22  | \$3,130,000  |
| The Flinders University of SA       | 12  | \$570,000  | 7   | \$505,000  |
| The University of Adelaide          | 19  | \$1,383,754  | 10  | \$896,750  |
| The University of Melbourne         | 28  | \$2,704,150  | 20  | \$1,976,650*   |
| The University of New England       | 10  | \$452,000  | 5   | \$189,000  |
| The University of New South Wales   | 37  | \$3,358,085  | 24  | \$1,822,335  |
| The University of Newcastle         | 18  | \$1,096,285  | 9   | \$431,285  |
| The University of Queensland        | 27  | \$3,200,000  | 16  | \$1,330,000  |
| The University of Sydney            | 33  | \$3,007,000  | 24  | \$1,938,000*   |
| The University of Western Australia | 30  | \$5,334,666  | 11  | \$1,317,666  |
| University of Canberra              | 2   | \$105,000  | 0   |  |
| University of South Australia       | 14  | \$537,000  | 6   | \$240,000  |
| University of Southern Queensland   | 2   | \$15,000   | 2   | \$15,000   |
| University of Tasmania              | 9   | \$1,093,400  | 5   | \$487,900  |

| <b>Partner organisation</b>            | <b>Incidences in received applications involving partner organisation</b> | <b>Total cash contribution pledged by partner organisation (over life project)</b> | <b>Incidences in applications funded involving partner organisation</b> | <b>Total cash contribution pledged by organisation (funded applications)</b> |
|--|---|--|---|--|
| University of Technology, Sydney       | 14  | \$782,000  | 6   | \$280,000  |
| University of Western Sydney           | 4   | \$677,000  | 3   | \$510,000  |
| University of Wollongong               | 18  | \$1,014,000  | 14  | \$934,000*   |
| Victoria University of Wellington      | 1   | \$4,000.00   | 0   |  |
| Victoria University of Technology      | 3   | \$132,040  | 1   | \$30,000   |
| <b>University Totals (38)</b>          | <b>486</b>  | <b>\$42,122,876</b>  | <b>267</b>  | <b>\$22,760,461</b>  |
| <b>Other organisation Totals (122)</b> | <b>144</b>  | <b>\$4,024,623</b>   | <b>78</b>   | <b>\$2,106,123</b>   |
| <b>All organisation Totals (160)</b>   | <b>630</b>  | <b>\$46,147,499</b>  | <b>345</b>  | <b>\$24,866,584</b>  |

\* This value includes only one year cash contributions, even though multi-year funding was sought.

The applications include 38 different universities as partner organisations where 4 are overseas universities.

## **Scheme Budget**

The following allocations from the LIEF budget have been approved for 2005 new grants.

| <b>2005</b>  | <b>Total</b> |
|--------------|--------------|
| \$30,400,105 | \$30,400,105 |