

# **Themes in the Landscape: Research at UWS 2005-2008**

Report of the Review of Research Concentrations 2004

September 2004



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## Preface

Research creates knowledge that contributes to important national aspirations – social wellbeing, economic prosperity, environmental sustainability and cultural vitality. As a ‘new generation’ university, UWS aims to develop a distinctive research profile focused on collaborative problem-solving research and significant regional engagement.

As part of UWS’s ongoing commitment to quality assurance, the performance of research concentrations is regularly subject to expert external review. I commend to you this report of the 2004 review of the University’s research centres. Successor to the 2001 UWS *Research Landscape*, *Themes in the Landscape* reaffirms and refines the key dimensions of UWS’s research profile and the evolving research themes that mark its distinctiveness and relevance for a dynamic future.

The review has maintained UWS’s tradition of setting a high bar for research performance. UWS has nurtured areas of outstanding achievement, supported by both individual researchers and University research centres. Confirming the dynamic nature of UWS’ research development, the review recommends the designation of a significantly smaller number of University Research Centres in the next period of research development. These centres will have a consistently larger minimum size and support consistently higher levels of performance in research and higher degree study. The report envisages such centres as developing to become self-sustaining on the basis of their research performance.

I would like to thank the members of the Review Panel who considered submissions, interviewed staff and prepared their recommendations, and the Office of Research Services which supported the Panel through this intensive and rigorous process.

The review findings consolidate the core concepts of selectivity, concentration and strong performance in a national and international context. The centres designated for University support are indeed leading intellectual debates and connecting with collaborators in industry, government and the community, fulfilling fundamental goals of the University Research Plan. This review now allows us to look further into the future, through a new phase that will seek to nurture emergent research strengths focused around key research themes.



Professor Janice Reid  
Vice-Chancellor



## Executive Summary

As part of UWS's ongoing commitment to selectivity in its research endeavour and commitment to transparent external review of its research concentrations, the University has reviewed its research centres and the support mechanisms for research centres.

The model of research development that UWS is pursuing as a result of the major 2001 *Research Landscape Report* is articulated through University-wide research themes and designated research centres. The model has been given strong direction in the *Research Plan 2004-2008*, articulating UWS research 'through its interdisciplinary focus, collaborative orientation and responsiveness to the contemporary social, economic and environmental challenges in Greater Western Sydney and beyond' (p.3).

The 2004 Review considered the performance and prospects of research centres and prospective research centres, and examined

structural support arrangements applying to research centres. This report summarises the review of research centres undertaken by the University during May 2004; the findings and recommendations of the review of structural arrangements form Appendix B of this Report.

The 2004 Review Panel noted that the *Research Landscape Report's* diagnosis of the national policy environment and the strategic directions for research development at UWS remain highly relevant and recommended that the document still be used as a guide where research concentrations are evolved as centres. Similarly, the disinterested assessment offered by external reviewers and the use of objective performance data should continue to be used as a methodology for the designation of University Research Centres.

Aspects of the themes identified by the *Research Landscape Report*

emerged powerfully in research centre activity. The designation of research themes offers opportunities to position scholarly and entrepreneurial activities around them and for UWS to be identified with generating and implementing University-wide research themes underpinned by intersections with teaching programs and community linkages. The 2004 Review Panel considered that there is scope to refine the University's implementation of themes. A new University-wide research program building on UWS research strengths was recommended in the area of 'children's futures'.

The University's pursuit of research centre selectivity has been vindicated with the maturation of a number of research centres. In the strongest centres there has been responsiveness to the recommendations of the *Research Landscape Report* with good return on investment overall and

achievement of centre based researchers above the UWS averages in all research indicators. Performance benchmarked against relevant national and international concentrations of research and use of citation and journal impact factors is more unevenly carried out and should be implemented by all University Research Centres.

The strongest centres demonstrated intellectual cohesion around well articulated research problems and related research programs. They were a locus of research degree training and attracted excellent postdoctoral fellows. The Review Panel noted UWS was still experiencing an imbalance between overall research student load and centre load. Since it is a University goal to increase concentration of research students in University Research Centres, there is a need for student recruitment, scholarship allocation and enrolment provisions to reflect this strategic University aim.

Strong and enduring performance with future potential was a feature of centres that had (a) implemented governance and management structures, (b) developed a clear model for the relationship with their host College and School, (c) had recruited appropriate professional staff, and (d) were developing diverse research income portfolios.

As a 'new generation' university, UWS's overall research achievement and growth is impacted by a lack of depth and constrained by its aging cohort of successful researchers. Strategic recruitment is required to maintain current levels of performance and to support growth in the areas of current research concentration and emerging research strengths.

Overall, commercialisation activity among University Research Centres is minimal. Several centres commented on what they saw as inadequate access to commercialisation expertise through the Office of Business Development, which they viewed as spread thinly and tending to be reactive.

The principles under which support to research centres has been provided over the last three years have been effective with tailored support aimed at assisting growth towards centres becoming self-sustaining in a medium-term future. The goal and achievement of self-sufficiency for all URCs is underpinned by the return of 100 percent of the IGS and RIBG funding generated by URCs to their host College.

Taking into account the need of the University to benchmark its research performance against national and international levels, the Review Panel recommended that the goals of the *Research Plan* should be advanced through the endorsement of the strongest performing centres. Through this process there will be a reduction in the number of University Research Centres, commencing in 2005.

To achieve its vision of a sustainable research culture, the University should now look to the next generation of high achieving researchers and develop processes for monitoring and supporting emerging research groups in areas linked to its overarching research themes of interdisciplinarity, collaboration and social responsiveness.

The dynamic nature of UWS's research development is confirmed by the best performing research centres

which are leading intellectual debates and connecting with a range of collaborators. UWS, particularly through the networks and influence of its senior staff, should articulate and promote these strengths to government, industry and the community.

## Recommendations

### Selectivity, concentration and themes

**Recommendation 1.** That the University continue to use the Research Landscape Report as a guide where research concentrations are evolved as Centres and that aspects of this Report be revisited and refined with a view towards even stronger performance over the period of the UWS Research Plan 2004-2008.

**Recommendation 2.** That UWS should aim to be known as a generator of appropriate research/education/community themes and as a University having the capacity to implement such university wide programs. In this way, the evolution of themes will continue to inspire and energise research at UWS and the designation of University Research Centres (URC) will drive and improve research performance.

**Recommendation 3.** That research themes should be underpinned by research concentration and intersections with teaching programs.

**Recommendation 4.** That consolidation of the theme approach include using research themes to guide priorities within internal grants, scholarships, teaching reviews and academic appointments.

**Recommendation 5.** That UWS consider reviewing and reshaping the set of themes developed in 2001, replacing schools and education with the 'children's futures' theme.

**Recommendation 6.** That the University consider formally allocating its scarce research training places and scholarships to its articulated research themes, programs and concentrations and URCs.

**Recommendation 7.** That UWS give active consideration to aligning the allocation of scholarships with the key issues articulated in the plan, e.g. the major commitment to regional engagement.

**Recommendation 8.** That all URCs be actively encouraged to bid for Australian Research Council and National Health and Research Medical Council fellowships.

**Recommendation 9.** That URCs build targets for internationalisation of higher degree research load into their strategic plans

### University Research Centres

**Recommendation 10.** That a defining feature of a University Research Centre is the demonstration of intellectual cohesion around well articulated research problems and research programs addressing those problems.

**Recommendation 11.** That the University no longer distinguish between University Research Centres and Research Centres, designating a small number of well established University Research Centres on the basis of achieved excellence in research performance and alignment with the strategic directions of University research development.

**Recommendation 12.** That the University re-confirm the *Research Landscape Report* recommendation that the title of 'Centre' be reserved for University Research Centres.

**Recommendation 13.** That, in order to continue to reap the benefits of the model of selectivity and concentration it has developed, the University should continue to provide targeted central funding to support selected University Research Centres to achieve the high level performance typical of a nationally designated centre. The principle of central needs based support including centrally held funding for key salaries and infrastructure has been effective and should continue within the framework of eventual self-sufficiency for all UWS designated research centres.

**Recommendation 14.** That UWS set itself the goal of being the headquarters of at least one major national designated research centre of excellence within 3 years.

**Recommendation 15.** That in order to advance the appropriate benchmarking of URCs, the University must ensure that all URCs develop strong benchmarking capacity through detailed systemic use of citation and journal impact factors, knowledge of comparable international research centres, and where appropriate, formal relationships with those centres.

## Supporting research concentration, performance, quality and profile

**Recommendation 16.** That the Colleges' central role in identifying emerging areas of research strength, particularly through the College Deans and Associate Deans (Research) be enhanced through active consultation with the UWS Research Committee.

**Recommendation 17.** That in consultation with the Colleges, the University should refine its mechanisms for achieving growth of select research groupings within appropriate timeframes, in particular through senior appointments, infrastructure and general resource allocation and systemic establishment of goals and monitoring of growth.

**Recommendation 18.** That the University should encourage the development of intra-university collaboration through the promotion of networks of expertise. These would be groupings that can demonstrate they have wide-ranging fundamental niche expertise that other researchers would benefit from.

**Recommendation 19.** That in consultation with the University, processes be developed to ensure its Library collection is built in alignment with the UWS Research Plan 2004-2008, especially in supporting areas of research strength.

**Recommendation 20.** That the PVC (Research) and the University Librarian develop reporting processes that monitor how the collection supports and is being built to support research concentrations 2005-2008.

**Recommendation 21.** That the PVC (Research) and the University Librarian develop plans to ensure University Research Centres are supported in systematically benchmarking their research productivity internationally, particularly through citation and journal impact analysis.

**Recommendation 22.** That all recruitment proposals, whether by advertisement or targeted search process, for UWS professors and associate professors address how their research and teaching programs would align to the University's themes and its Research Plan, particularly the desire for interdisciplinarity, internationalisation, regional engagement, collaboration and commercialisation.

**Recommendation 23.** That College Research Plans respond to the University's medium to long-term research goals with targeted recruitment strategies.

**Recommendation 24.** That the University develop recruitment criteria and processes which complement and strengthen its efforts to build research capacity through research leadership.

**Recommendation 25.** That all URCs be required to develop a clear business development model in collaboration with the Office of Business Development (OBD) to ensure a diverse income portfolio, particularly entrepreneurial income, which will allow each URC to underpin growth in new areas of activity and contribute to its self sufficiency.

**Recommendation 26.** That business development models for URCs should have specific targets with respect to consultancy income, commercialisation opportunities, and entrepreneurial training opportunities.

**Recommendation 27.** That given the three year funding arrangement implemented for the URC Commercialisation Manager is to end in early 2005, a proposal for the next period should be developed by the Office of Business Development to support research centre commercialisation.

**Recommendation 28.** That UWS support positions of research program co-ordinator in University Research Centres.

**Recommendation 29.** That URC Directors be required to undergo management training through a targeted program developed in collaboration with UWS Professional Development Unit (PDU).

**Recommendation 30.** That all URCs must implement governance and management structures as established by the University within the next annual reporting period.

**Recommendation 31.** That all future appointments of directors of research centres be made in accord with UWS human resources policies and be made for defined periods.

**Recommendation 32.** That Office of Research Services register the membership of research centres annually, and that membership registrations carry the endorsement of the research centre director, the member's Head of School and the College Dean.

**Recommendation 33.** That all URCs and host Schools and Colleges must finalise their structural relationships and have resource models in place that meet standards of equity and transparency before 2005.

**Recommendation 34.** That the UWS Research Studies Committee should explore and outline mechanisms to enrol research students in research centres.

**Recommendation 35.** That UWS act more effectively to communicate its distinctive research strengths and profile.

**Recommendation 36.** That the effective communication of UWS's distinctive research strengths should be monitored and managed through the performance management of relevant senior staff (DVC, Development and International; PVC, Research; Director of Marketing and Media).

**Recommendation 37.** That targeted central support be made available to selected URCs during the period 2005-2008, within the framework of eventual self-sufficiency for all URCs.

**Recommendation 38.** That the principle of eventual self-sufficiency of all URCs to continue to be underpinned by the significant return of performance based funding to all URCs – covering Institutional Grants Scheme (IGS), Research Infrastructure Block Grants (RIBG), Research Training Scheme (RTS) and the Research Incentive in the University Funding Model (UFM). This return on performance should continue to occur through College distribution of these funds, ensuring a strong research income stream to consolidate and grow the strategic activity of URCs. The Pro Vice Chancellor (Research), in discussion with the College Deans, should monitor this allocative process.

**Recommendation 39.** That those Colleges providing additional support to their URCs through professorial appointments, capital expenditure etc., should ensure that such allocations are linked to the productivity benchmarking and self-sufficiency regimes recommended by the Review Panel.

**Recommendation 40.** That future review of research centres be conducted, in the normal case, at the same time as the reviews of Schools, Colleges and academic programs in cognate areas.

**Recommendation 41.** That the criteria and methodology for subsequent review of URCs should follow the solid

patterns established in the 2001 and 2004 reviews.

## University Research Centre Designation

**Recommendation 42.** That the following centres be designated as University Research Centres from 2005:

- Centre for Cultural Research (CCR)
- MARCS Auditory Laboratories (MARCS)
- Social Justice and Social Change Research Centre
- Self-Enhancement Learning and Facilitation Research (SELF) Centre

**Recommendation 43.** That UWS actively assist CCR and MARCS in the first instance, to position themselves to compete in the next round of the Australian Research Council's Centre of Excellence Program.

**Recommendation 44.** That Centre for Horticulture and Plant Sciences (CHAPS) and Centre for Advanced Food Research (CAFR) be combined into a new centre, redefining a research focus and programs and resubmitting a revised strategic plan within three months to the Pro Vice Chancellor (Research) for consideration and possible designation as a URC by the Vice Chancellor.

**Recommendation 45.** That the CHAPS/CAFR combined and renamed centre be considered as offering the basis for a new UWS research focus on food and food production.

**Recommendation 46.** That the following centres be requested to redefine their research focus and programs and resubmit a revised strategic plan within three months to the Pro Vice Chancellor (Research) for consideration and possible designation as a URC by the Vice Chancellor.

- Centre for Complementary Medicine Research
- Australian Expert Group in Industry Studies (AEGIS)

**Recommendation 47.** That following proposals not be recommended for URC designation:

- Centre for Advanced Systems Engineering (CASE)
- Centre for Construction Technology and Research (CCTR)
- Centre for Nanotechnology
- Property Research Centre

**Recommendation 48.** That CASE be designated as a College Research Group and focus on its Health

Informatics strand of research, linking specifically to the new 'children's futures' research theme.

**Recommendation 49.** That CCTR reconfigure itself as a Business Unit supported by the Office of Business Development.

**Recommendation 50.** That the College of Law and Business should determine if it invites the property research grouping to seek designation through its formal research group process.

**Recommendation 51.** That a framework to develop and test the sustainability of UWS research in the field of nanotechnology be implemented. This might involve support in the form of short term funding to explore the role of nanotechnology as an enabling force across the university focused on problem solving in a wide range of disciplines, including the proposed medical school.

**Recommendation 52.** That Reports covering the Review Panel's findings relating to performance of individual centre proposals be provided to the Centre Proposer, the appropriate College Dean, Associate Dean (Research) and Head of School. For those centres recommended for designation as a URC, the report will provide advice on broad central funding support, if any, during the 2005-2008 period.

## 1. Introduction

This report summarises the review of the University of Western Sydney's research concentrations, as expressed through its research centres, undertaken by the University during May 2004.

In 2001, UWS conducted a systematic and wide-ranging review of research and research support policy across the University. Known by the name of *The UWS Research Landscape*, the outcomes of the review included:

Identification of strategic directions and priorities for research development in the new, unified university

Identification of research areas and groups of researchers that represented areas of strength in research at UWS and the designation of research centres in those areas

Specification of a research management model for the management and support of research at UWS

The 2001 review was conducted in the context of self-scrutiny and restructuring that gave rise to the 'new UWS' and was unique in its examination of research performance and policy across an entire university. Its diagnosis of the national policy environment and the strategic directions for research development at UWS remain highly relevant.

Following on from *Research Landscape*, the 2004 review involved two linked review exercises: setting the terms for supporting research concentrations in the next period; and identifying those research groups that will be recognised as UWS research centres. The first part of the review process examined structural support arrangements applying to research centres. That report is appended to this document. The second part of the review process reviewed the performance and prospects of research centres and prospective research centres.

The *Research Landscape Report* foreshadowed the review of research centres every three years beginning in 2004. UWS has recently established draft policy and procedures for a rolling program of regular review of Colleges and Schools and academic programs (UMAC Item 3.4, 16 June 2003). Future reviews of research centres will be linked to the schedule for reviews of the academic units and programs in associated areas.

The 2004 review evaluated research effort at UWS as expressed through current research concentrations and put forward a set of recommendations that endorsed the core notion of research concentration and selectivity. These recommendations continue what the 2001 *Research Landscape Report* set in motion, aiming to ensure that UWS will flourish and develop a distinctive, high-impact research and research training culture within the fluid policy and funding environment that continues to challenge young universities.

## 2. Terms of Reference

The Terms of Reference for the 2004 Review of Research Centres were as follows:

1. To consider Research Centres and University Research Centres recognised in the *Research Landscape* review and supported with central funding for the three years 2002-2004.
2. To consider claims for research centre status and support by research groups not presently having the status of Research Centre.
3. To consider the performance of existing research centres and prospective research centres in light of the following criteria:
  - i. Return on UWS investment (funds and support in kind, taking into account teaching and other workload aspects; external income from grants and contracts)
  - ii. Management (staff and students, budgeting and funds management, research project management, succession planning)
  - iii. Integration in College and/or University (regular or occasional teaching, collaboration with non-Centre staff, leveraging or enhancing College research performance, involvement in University-wide activities)
  - iv. Proposed research agenda, 3-5 years (future research

directions, alignment with UWS strategic directions for research)

- v. Prospects for future development (achievement of critical mass with respect to both the scale and substance of research development, financial viability and infrastructure requirements, likelihood of attracting external research funding)

*The following criteria will be considered for groups of researchers who wish to be considered for recognition as a research centre:*

- i. Performance in research and research training 2001-2004 of the members of the research group, in both quantity and quality (publications output including in internationally recognised journals and as verified through citation index data; attraction of external research resources, especially national competitive grants; IP and commercialisation; national and international reputation and public profile)
- ii. Internal research support received by members of the research group, taking into account teaching and other workload aspects
- iii. Participation of members of the group in College or UWS leadership and governance activities

- iv. Proposed research agenda of the research group (future research directions, alignment with UWS strategic directions for research)

- v. Prospects for future development of the group (likely achievement of critical mass with respect to both the scale and substance of research development, financial viability and infrastructure requirements).

4. Applying the above criteria, the Review will recommend:

- For existing centres, the continuation of recognition and support in the period from 2005, or the termination of such recognition and support,
- For prospective centres, the possible formation of one or more new research centres.

While all the above criteria will be taken into account, performance in research and research training, the actual or likely attainment of critical mass in research activity and funding, and the alignment of the proposed research agenda with UWS strategic directions in research development will be given particular importance. In line with the policy of research concentration, the University, where appropriate, will require research groups working in cognate fields to join together as a condition of support as a research centre.

### 3. Review Process

The review of support mechanisms for UWS research concentrations sought submissions from researchers, Research Centres, Schools and Colleges. The deliberations of this prior review were communicated to the review of research centre designation. The Review of research centres was conducted by a team of five members: two senior staff at UWS and three external members (see Appendix A). The Panel included a member of the 2001 Vice Chancellor's Review Committee providing continuity to the review process. The Review Panel was assisted by the Director and Executive Officer of Research Services.

The review of research centres was conducted across three days. The Review Panel considered the reports from each Centre and proposed Centre and met with each Centre Director and Proposed Director.

The Review Panel also considered:

- The UWS Strategic Plan 2004-2008
- The University Research Plan 2004-2008
- Objective global data on UWS research performance for the period

2001-2003 covering performance relating to external income, publications, and higher degree research load and completions.

The Review Panel comprised Professor Chung Tong Wu, Deputy Vice-Chancellor, Development & International (Chair) and Professor Sheila Shaver, Pro Vice-Chancellor (Research) together with three eminent and experienced current or former senior university research administrators: Emeritus Professor Mary O'Kane, previously Vice-Chancellor, University of Adelaide; Professor Elspeth McLachlan, Pro Vice-Chancellor Research, University New South Wales; Professor Rod Wissler, Deputy Vice-Chancellor, Research and Commercialisation (Acting), Queensland University of Technology.

### Proposals for designation as University Research Centre

The Review Panel examined twelve proposals from across UWS for designation as a University Research Centre. Proposals came from all Centres designated by the 2001 Review, other than the Skin Technologies Research Centre. One new proposal was considered (Centre for Nanotechnology).

1. *Australian Expert Group in Industry Studies* (AEGIS), Professor Jane Marceau,<sup>1</sup> College of Law and Business
2. *Centre for Cultural Research* (CCR), Professor Ien Ang, College of Arts, Education and Social Sciences
3. *MARCS Auditory Laboratories* (MARCS), Professor Denis Burnham, College of Arts, Education and Social Sciences

<sup>1</sup> Professor Marceau retired in May 2004. Professor Tim Turpin, Acting Director, represented AEGIS in the review.

4. *Self-Concept Enhancement and Learning Facilitation (SELF)*, Professor Herb Marsh, College of Arts, Education and Social Sciences
5. *Centre for Horticulture and Plant Sciences (CHAPS)*, Associate Professor Robert Spooner-Hart, College of Science, Technology and Environment
6. *Centre for Advanced Food Research (CAFR)*, Associate Professor Jim Hourigan, College of Science, Technology and Environment
7. *Property Research Centre, (PRC)* Professor Graeme Newell, College of Law and Business
8. *Centre for Construction Technology and Research (CCTR)*, Professor Mark Patrick, College of Science, Technology and Environment
9. *Centre for Complementary Medicine Research (CompleMed)*, Associate Professor Alan Bensoussan, College of Social and Health Sciences
10. *Social Justice and Social Change (SJSC)*, Professor Jan Mason, College of Social and Health Sciences
11. *Centre for Advanced Systems Engineering (CASE)*, Dr Carolyn McGregor, College of Science Technology and Environment
12. *Centre for Nanotechnology*, Professor William Price, College of Science Technology and Environment

Proposals from the UWS research community were called for in February 2004. A template structuring submissions was developed along with detailed guidelines that included UWS and sector benchmarking data. The Office of Research Services provided individual centre member performance data to proposers. Proposals were in the first instance developed in discussion with College Associate Deans (Research).

## 4. Overview of Centre Review Panel Findings

The Review Panel commended the impact and overview of the *Research Landscape Report*, recommending that the document still be used as a guide where research concentrations are evolved as centres and that aspects of the Report are revisited and refined with a view towards even stronger performance over the period of the *UWS Research Plan 2004-2008*. The *Research Plan* elaborates the University's commitment to undertaking nationally and internationally competitive research; to ensuring that its contribution to new knowledge and its modes of engagement are distinctly recognisable; and its overarching commitment to its region.

Investment in research strength through its home-grown researchers is strong but as a 'new generation' university, UWS is without the critical mass of upper echelon researchers that would provide organic growth. The building phase of the University's research capacity must also manage the retirement of its cohort of successful but aging researchers. The University might seek to enhance its research capacity in key areas by identifying existing teams of researchers who could be brought in to provide significant invigoration to the University's capacity in competitive research funding.

At present, UWS is in the lower third on most research indicators for Australian universities. UWS is a large university - accounting for over 3.1

per cent of the sector's academic staffing but less than 1 per cent of its external research income. Income per academic FTE is less than a third of the sector average, although publications output is much stronger. UWS accounts for over 2 per cent of the sector's research publications and approximately 2 per cent of higher degree load and research completions. There have been significant increases in publications and in higher degree completions during the 2001-2003 review period. The University achieves strong performance in gaining other public sector (OPS) income – particularly from State and Local Government sources. Across the sector, UWS remains in the top 20 in overall OPS funding; is in the top 10 in Local Government funding; and is number 11 in State Government funding (2002 AVCC data).

At the time of the 2001 research review, UWS was in a new development stage and the Panel commended the University's development in research and research training since the earlier review. Through its designated University Research Centres, the University is well positioned for the next phase of its research development, with research centres that can merge powerfully into the national scene as leaders in their fields.

### Recommendation

1. That the University continue to use the *Research Landscape Report* as a guide where research concentrations are evolved as Centres and that aspects of this Report be revisited and refined with a view towards even stronger performance over the period of the *UWS Research Plan 2004-2008*.

### 4.1 A model for selectivity and concentration

The University's model of selectivity and concentration articulating University-wide research themes and designated research centres was implemented as a result of the 2001 *Research Landscape Report* and affirmed by the *Research Plan 2004-2008*.

The 2001 *Research Landscape Report* recommended that "at the highest level research concentration be expressed as a small number of major, multidisciplinary and interdisciplinary research themes that support the University Mission and have national and local relevance". The research themes listed for possible development and consolidation in 2001 were:

- Water
- Urban and Community Development
- Culture and Communities
- Public Health
- Environmental Sustainability
- Food
- Schools and Education.

The 2001 *Research Landscape Report* also recommended that at the next level the University designate a small number of University Research Centres (URC) – potential flagships – and Research Centres (RC) – developing centres, reserving the name ‘Centre’ for such designated entities. These designated centres were expected to ultimately link into one or more research themes.

A defining feature of a University Research Centre (URC), as set out in the *Research Landscape Report* and endorsed by the 2004 Review Panel, is the demonstration of intellectual cohesion around well articulated research problems and research programs addressing those problems. The Review Panel noted that a number of proposals identified their primary purpose to be outstanding research centres, rather than articulating aims and achievements in the research program. The Panel therefore sought to explore in all its interviews with Centre Directors how the Centre was setting the intellectual agenda in its field and what were the key intellectual controversies that it was dealing with. As URCs should be operating at a national or international level, the Panel also asked Directors to articulate plans to systematically benchmark the Centre against international performance, particularly in citation and journal impact.

The maturation of a small number of research centres since the 2001 review was recognised; the responsiveness of a number of centres to the previous reports had paid clear dividends. The model of centre selectivity has been vindicated with good return on investment overall. In 2002, for example, University supported research centres accounted for more than \$5.2million, or 49 per cent, of the external research income generated by UWS. This was on a staffing basis of 51 first named investigators generating research income as opposed to 104 first named investigators who generated the remainder of the UWS external research income. Research centres are thus generating substantially more income per capita than non-research centre staff. Within centres, the number of staff generating multiple project income is notable, with an average of 2.9 grants per centre grantee. Research centres also accounted for 29 per cent of all audited publications output in 2002 - with a registered publication output per centre publisher of 1.36. The output for other UWS staff was 1.17. This suggests a slightly higher publication output among those Centre members who are publishing, although the Review Panel recognised that publication focus and output differs dramatically across centres.

#### 4.1.1 Research Themes

It was particularly noted by the Review Panel that aspects of the themes identified by the *Research Landscape Report* emerged powerfully in research centre activity, that is water; urban and community development; and culture and communities. The water program

was strongly picked up in anticipated areas such as the Centre for Horticulture and Plant Sciences (CHAPS) but also by the Centre for Cultural Research (CCR), as well as individual researchers across the University. The Water Research Program that was developed as a result of the *Research Landscape Report* nurtured a range of research intersections and generated a number of research projects as a result of intensive promotion across the University. That program has also resulted in the new Water Futures Alliance, positioning UWS in the now overcrowded national water research field, but such programs would not always develop in a similar fashion.

The Review Panel did not envisage themes to be singularly expressed as centres *or* programs but as a rich mix of expressions of research concentration – centres, programs and other initiatives including undergraduate and postgraduate teaching. Themes anticipated for development in the *Research Landscape Review* continue to show strong prospects with ‘food production and consumption’ arising strongly through the activities of Centre for Horticulture and Plant Sciences and the Centre for Advanced Food Research (CAFR). There is a potential role for the Centre for Cultural Research (CCR) to contribute to this theme picking up cultural representations, culinary traditions, together with nutrition and intersections with food networks, such as Oldways (a USA think-tank - [www.oldwayspt.org](http://www.oldwayspt.org)) and the international ‘slow food’ movement which develops regional responses to food production practices. Food tourism in Asia and the Pacific could also be a productive focus. The

'culture and communities' research theme has emerged powerfully around the everyday work of some centres, particularly CCR and the Social Justice and Social Change Research Centre (SJSC). The necessity to instantiate the culture and communities theme has in a sense been superseded by the impressive growth of CCR; in SJSC's emergence and strong connections to communities; and in aspects of the Australian Expert Group in Industry Studies (AEGIS) regional engagements.

The 'schools and education' theme proposed in 2001 did not come through as ready for launching as a research theme but a closely related area emerged very strongly: young children. This came through a variety of funded research projects, e.g. Bush Babies<sup>2</sup>; the long term presence in UWS of research on infants, children and young people undertaken by MARCS Auditory Laboratories (MARCS) and SJSC, as well as the E-babies program of Centre for Advanced Systems Engineering (CASE); and significant intersections and integration with teaching strengths in nursing and education. A program in this area could be immediately energised by endorsing MARCS and SJSC as URCs and by supporting the Bush Babies program. This stream of research could be strongly endorsed and supported across the University through scholarships, internal grants and other targeted funding.

Designating research themes offers the University an opportunity to position scholarly and entrepreneurial activities around these themes. A University-wide research program in the area of 'children's futures' (infants,

children and young people) would also identify UWS as a site where relevant interested parties might come together for a range of activities, drawing people to UWS campuses. The launch of a new theme should be tied to relevant corporate and community involvement.

If UWS is to be known as a generator of appropriate research/education/community themes and as having the capacity to implement such university-wide research activity, then the University must have a range of processes and models for bringing programs to fruition. A brief evaluation of the history and trajectory of UWS wide programs since 2001 was recommended by the Review Panel to enable good processes to be identified, ensuring the institutional delivery of themes and interdisciplinarity occurs in a guided and strategic manner.

<sup>2</sup> Researchers are developing a prototype system to facilitate the management of critically ill babies born in geographically remote locations using broadband technology to transmit real-time physiological data from the remote bedside monitors to a consulting specialist at another location funded by the Telstra Broadband Fund.

## Recommendations

- 2. That UWS should aim to be known as a generator of appropriate research/education/community themes and as a University having the capacity to implement such university wide programs. In this way, the evolution of themes will continue to inspire and energise research at UWS and the designation of URCs will drive and improve research performance.**
- 3. That research themes should be underpinned by research concentration and intersections with teaching programs.**
- 4. That consolidation of the theme approach include using research themes to guide priorities within internal grants, scholarships, teaching reviews and academic appointments.**
- 5. That UWS consider reviewing and reshaping the set of themes developed in 2001, replacing 'schools and education' with the 'children's futures' theme.**

### 4.1.2 Research Training

Given the careful articulation in the *Research Plan* of the University's desire to establish distinctive research higher degree programs marked by their relevance to industry, government and community futures, UWS will need to give active consideration to aligning the allocation of scholarships and research training places with the key issues articulated in the plan, e.g. a commitment to regional engagement.

Research centres must be a locus of research degree training and support postdoctoral training. In 2002, UWS Research Centres accounted for approximately 25 per cent of UWS's research training load; the 2003 data showed no increase in this overall share of higher degree research (HDR) load. Across URCs there is strong differentiation: the share of HDR load goes from the barely detectable to a healthy and appropriate cohort. The Panel noted that certain centres that had been advised in the 2001 review that they must make a strategic commitment to developing a viable research training program had failed to achieve this.

Across the Research Centres, the average PhD completion time was 3.84 EFTSU (equivalent full time student units); as an average this represents appropriate achievement. However, performance across the centres in the area of completions varies considerably.

Generally, the Centres were not committed to an active recruitment strategy around international students. This was considered a deficit requiring concerted action, particularly given the commitment to internationalisation

that was articulated in the University *Research Plan*.

At the level of advanced research training, the Review Panel commended the University's strategic focus on the recruitment of excellent postdoctoral fellows into its areas of research concentration, recognising that in its areas of research focus UWS must be viewed as an attractive destination for both research students and postdoctoral fellows.

### Recommendations

- 6. That the University consider formally allocating its scarce research training places and scholarships to its articulated research themes, programs and concentrations and URCs.**
- 7. That UWS give active consideration to aligning the allocation of scholarships with the key issues articulated in the plan, e.g. the major commitment to regional engagement.**
- 8. That all URCs be actively encouraged to bid for Australian Research Council and National Health and Research Medical Council fellowships.**
- 9. That URCs build targets for internationalisation of higher degree research load into their strategic plans**

## 4.2 Model for designating University Research Centres

The Review Panel commended the University's review process, particularly the disinterested assessment offered by external review panel members and the use of objective performance data. This is a process that should continue to be used as a methodology for the designation of University Research Centres (URC).

The Panel viewed University Research Centres as an important piece of UWS's research architecture. Designation as a URC is a tribute to the research efforts of all those involved in a centre's performance. The Review Panel affirmed the *Research Landscape Report's* implementation of differential resource allocation, rather than block funding entitlements to research centres.

The Panel endorsed the recommendation from the linked and prior review of centre support mechanisms and policies that the use of dual terms – University Research Centre and Research Centre – to refer to UWS research centres should be discontinued since it poorly understood within the University and rarely used or useful in external relations. Research Centres designated as a result of the 2004 review process will be known as University Research Centres. The term 'centre' will continue to be used only for officially designated University research centres.

As the University continues to shape its research landscape, national and international initiatives should always necessarily form part of a URCs' objectives and planning. Equally, the performance of URCs should be nationally and internationally benchmarked.

The Panel refined the articulation of baseline descriptors to be applied to University Research Centres, endorsing those established by the *Research Landscape Report*. The baseline qualities set out in the *Landscape Report* are that URCs:

- Demonstrate intellectual cohesion around well articulated research problems and research programs addressing those problems.
- Have a critical mass of researchers including: a leading, visionary and productive research leader, a group of strongly performing researchers, a group of developing researchers, including postdoctoral fellows, and a

solid cohort of research students.

- Articulate 'succession plans', demonstrating the development of future generations of researchers via support of postdoctoral fellows and research student training.
- Have a substantial and clearly articulated relationship to the University's academic programs, including undergraduate, honours, postgraduate course work and research degrees; they would not take up roles more appropriate to a School.
- Demonstrate organisational cohesion and leadership, together with strong governance processes and external oversight through an advisory board.
- Demonstrate collaborative research partnerships both within the Centre, within the University and with community or industry players.
- Demonstrate that its program has impact, as measured by its influence

on other research and teaching programs.

- Demonstrate a 'return on investment', i.e. external income generation, benchmarked by discipline. Such external income should have an upward trajectory and should exceed any internal funding by a very significant factor.
- Demonstrate quality in research publications, including but not limited to citation quantity.
- Have broad types of dissemination of results, appropriate to its community, industry and scholarly linkages.

The Review Panel recommended adding to those the further condition:

- That the achievements of a URC will exceed all UWS overall achievements and performance will be benchmarked against relevant national and international concentrations of research.

## Recommendations

10. That a defining feature of a University Research Centre (URC) is the demonstration of intellectual cohesion around well articulated research problems and research programs addressing those problems.
11. That the University no longer distinguish between University Research Centres and Research Centres, designating a small number of well established University Research Centres on the basis of achieved excellence in research performance and alignment with the strategic directions of University research development.
12. That the University re-confirm the Research Landscape Report recommendation that the title of 'Centre' be reserved for University Research Centres.
13. That, in order to continue to reap the benefits of the model of selectivity and concentration it has developed, the University should continue to provide targeted central funding to support selected University Research Centres to achieve the high level performance typical of a nationally designated centre. The principle of central needs based support including centrally held funding for key salaries and infrastructure has been effective and should continue within the framework of eventual self-sufficiency for all UWS designated research centres.
14. That UWS set itself the goal of being the headquarters of at least one major national designated research centre of excellence within 3 years.
15. That, in order to advance the appropriate benchmarking of URCs, the University must ensure that all URCs develop strong benchmarking capacity through detailed systemic use of citation and journal impact factors, knowledge of comparable international research centres, and where appropriate, formal relationships with those centres.

### 4.3 Development and planning processes for emerging research strengths

The University *Research Plan 2004-2008* envisions research growth through interdisciplinarity, internationalisation, relevance to industry, government and community, and collaboration. The model of selectivity and concentration structures research growth through themes, programs and groupings of researchers. The University recognises that its Colleges have gone through processes to identify and designate research groups and acknowledges that some research groupings aspire to growth of the order of a URC, while others will develop collective activity on smaller scales or might take a different form, e.g. a regional or business unit.

#### 4.3.1 Designated Research Groups

Of the proposals seeking designation as University Research Centres, the Panel noted that for some research groupings it was too early to consider designation as a URC. In effect, for a range of reasons some had not achieved the growth anticipated at the time of their designation in 2001. The Panel considered that these should be designated as research groups and encouraged and supported to develop into small to medium concentrations designated by Colleges and acknowledged by the University as a part of its dynamic research landscape. By defining and supporting those research groupings that warrant tracking towards being a research centre, Colleges and Schools will build such growth into their strategic plans and establish processes for development of that growth.

#### Recommendations

16. **That the Colleges' central role in identifying emerging areas of research strength, particularly through the College Deans and Associate Deans (Research) be enhanced through active consultation with the UWS Research Committee.**
17. **That in consultation with the Colleges, the University should refine its mechanisms for achieving growth of select research groupings within appropriate timeframes, in particular through senior appointments, infrastructure and general resource allocation and systemic establishment of goals and monitoring of growth.**

### 4.3.2 Other Initiatives

One aspect of the University's underdeveloped capacity that emerged during the review was the potential for groupings to excel at underpinning research across the University. The uptake of interdisciplinary approaches to research has been strongest in the humanities and social sciences but at least one science proposal wanted to work with many different researchers across the University – offering a range of techniques in research problem solving – a laudable approach especially in a highly dispersed university. The Panel considered there was the possibility of and benefits to be gained from mechanisms for sharing expertise across diverse areas of University research.

#### Recommendation

**18. That the University should encourage the development of intra-university collaboration through the promotion of networks of expertise. These would be groupings that can demonstrate they have wide-ranging fundamental niche expertise that other researchers would benefit from.**

### 4.4. Supporting the model of selectivity and research concentration

University infrastructure and policies supporting development and growth of research strengths are a key resource that UWS can strategically deploy to achieve its research goals. The Review Panel was concerned that the University has no formal major research infrastructure fund from which centres can bid for funds, although a process was enacted in late 2003 to seek bids for major infrastructure items to be funded from the recall and reallocation of unspent research quantum, institutional grant scheme (IGS) and research infrastructure block grant (RIBG) funds. The Review Panel was encouraged by a recommendation of the recent review of research support policies (see Appendix B), that the University audit its research infrastructure and seek to invest to achieve its strategic research goals; the establishment of a central major research infrastructure fund will also be explored.

#### 4.4.1 Library

There is other fundamental infrastructure that the University deploys to support its research, including the Library research collection and management of human resource recruitment. The University Library receives \$500,000 annually from the UWS Research Budget as a direct allocation of Research Training Scheme funds. The UWS *Research Plan* articulates a need to increase the depth of library resources in the University's areas of research strength (Goal 3.4). Systematic building of the collection in areas of research

strength – themes and concentrations – is a key action that would not only support the University's research efforts but would contribute to the Library building itself as a major contemporary research collection. The collection should be a hub of information in the University's areas of research strength, particularly the theme areas, attracting national and international researchers to UWS's special collections.

The Library also has a key role in supporting University Research Centres to achieve systematic benchmarking of their research productivity – particularly through citation and journal impact analysis, and comparative analysis of the productivity of related centres overseas (see 4.2 above).

#### Recommendations

- 19. That in consultation with the University, processes be developed to ensure its Library collection is built in alignment with the UWS Research Plan 2004-2008, especially in supporting areas of research strength.**
- 20. That the PVC (Research) and the University Librarian develop reporting processes that monitor how the collection supports and is being built to support research concentrations 2005-2008.**
- 21. That the PVC (Research) and the University Librarian develop plans to ensure University Research Centres are supported in systematically benchmarking their research productivity internationally, particularly through citation and journal impact analysis.**

## 4.5 Recruitment supporting the model of selectivity and research concentration

As the UWS *Research Plan* recognises, active recruitment of researchers will encourage and support research growth (Goal 3.3). The appointment of a member of the professoriate or an associate professor is always an opportunity to strengthen the University's research performance. Through the University's strategic planning process, College Dean's are able to set out medium to long-term recruitment plans for research leadership, enabling the University to work towards a greater match up in academic staffing with its areas of present or future research strength and themes. Supporting the implementation of such strategic recruitment of research leadership would be transparent selection criteria responding to research capacity and research performance in the context of the UWS *Research Plan*, in particular, its articulation of nationally benchmarked research performance and the internationalisation of the University's research profile.

### Recommendation

22. **That all recruitment proposals, whether by advertisement or targeted search process, for UWS professors and associate professors address how their research and teaching programs would align to the University's themes and its *Research Plan*, particularly the desire for interdisciplinarity, internationalisation, regional engagement, collaboration and commercialisation.**
23. **That College Research Plans respond to the University's medium to long-term research goals with targeted recruitment strategies.**
24. **That the University develop recruitment criteria and processes which complement and strengthen its efforts to build research capacity through research leadership.**

## 4.6 Business development support of model of selectivity and concentration

The Review Panel affirmed the importance of (a) URCs developing a balanced research income portfolio, covering National Competitive Grants (NCG), Other Public Sector Funding (OPS) and Industry and Other Funding (IOF) within the framework of eventual self-sufficiency for all URCs and (b) the UWS *Research Plan 2004-2008* setting a performance measure for research concentrations that exceeds the University's 5 per cent annual increase in research funding. A balanced income portfolio, in tandem with the adoption of business planning for increased entrepreneurial income, mitigates the risk of sudden funding reductions for a research centre, as can be the case when limited external funding sources are targeted. Entrepreneurial income can also underpin imaginative and innovative research ventures that might otherwise be unfunded. A diverse income portfolio is also an effective strategy for increasing overall levels of funding and acknowledges that some sixty per cent of UWS research funding comes from non-NCG sources. While Research Centres have a slightly higher success rate in Australian Research Council Discovery grants than the overall UWS success rate (15 per cent for URCs and 13.71 per cent for UWS), this is well below the sector success rate of 25.25 per cent during the same period.

The national picture of university commercialisation success is not strong and mirroring this UWS has developed only a small number of

commercialisation opportunities to the point of returning a royalty stream to the University. As a result of the *Research Landscape Report* a dedicated commercialisation officer was funded through the central Research Budget to support four Centres which were seen as having strong commercial and enterprise activity potential: MARCS Auditory Laboratories, Centre for Horticulture and Plant Sciences (CHAPS), Centre for Advanced Food Research (CAFR), and the Centre for Construction Technology and Research (CCTR). The Commercialisation Manager position was designed to be located in the Office of Business Development staffing structure but required to work closely not only with the Centres but with the Director of Research Services and the Pro Vice Chancellor (Research). Several centres commented on what they saw as inadequate access to commercialisation expertise through the Office of Business Development, which they viewed as spread thinly and tending to be reactive. For a range of reasons, the goals for the Commercialisation Manager position have not been achieved, although the necessity for effective business and commercialisation support has increased.

### Recommendations

25. **That all URCS be required to develop a clear business development model in collaboration with the Office of Business Development (OBD) to ensure a diverse income portfolio, particularly entrepreneurial income, which will allow each URCS to underpin growth in new areas of activity and contribute to its self sufficiency.**
26. **That business development models for URCS should have specific targets with respect to consultancy income, commercialisation opportunities, and entrepreneurial training opportunities.**
27. **That given the three year funding arrangement implemented for the URCS Commercialisation Manager is to end in early 2005, a proposal for the next period should be developed by the Office of Business Development to support research centre commercialisation.**

## 4.7 Management and Governance of University Research Centres

The *Research Landscape Report* drew attention to the increasing complexities of managing research development and administration in University research centres. The *Research Landscape Report* determined that all research centres were to be hosted within a College or a School, recognising that Schools are the central incubators of future UWS research strengths. In the event, some have been established within Schools and some as separate units within Colleges, effectively parallel with Schools. The *Research Landscape Report* also instituted governance structures and annual report mechanisms for all University Research Centres, affirming the UWS Research Committee's role in promulgating and monitoring such policies through the annual report process.

One outcome of the *Research Landscape Report* was the establishment of a number of professional research management positions in the centres and the provision of central support of these positions. Initially, nine research centres were allocated funds for a 'research program coordinator', a position requiring a complex of skills and experience. The recent review of UWS research centre support policies (see Appendix B) has shown that when recruitment into this position has focused on that set of requirements and the centre has embraced the value of that set of skills and experience, the position has clearly achieved the envisaged benefits. As a University Research

Centre might be expected to involve a staff of twenty or more, the management capacity of research centres would also be expanded by supporting Centre Directors to acquire a range of relevant high level management skills.

Implementation by the Centres of the governance and management policies has been uneven. The Review Panel noted a disturbing number of centres established prior to the 2001 review had still not convened management or advisory committees. The two centres showing the strongest growth had operationalised management structures and activated a strong externally weighted advisory board. The failure to implement basic governance mechanisms or to strengthen the national and international perspective of the research program through an advisory board was seen as a restraint on certain centres achieving strong growth or maintaining the performance they demonstrated at the time of the 2001 review.

#### 4.7.1 Centre and School Relationships

Research centres and their host Colleges and Schools have developed various models for their important relationship, some of which have worked better than others to resolve tensions around key issues, most significantly workloads and the apportionment of performance-based research funding. Some centres have been unable to resolve the workload commitments of centre members. A related issue is the clear definition of centre membership and the capacity of Research Services to accurately allocate IGS and RIBG funding

generated by URC members to their host College has been complicated by Centres not notifying Research Services of centre membership on an annual basis.

Noting active experimentation in centre and School/College relationships, the Review Panel did not wish to recommend a single or preferred model. Its discussions focused instead on certain critical aspects of the way research centres are constituted and governed that shape their relation to their host Schools and Colleges.

The position of research centre director is one key aspect. The terms of these appointments were not considered in the *Research Landscape Report* and now need to be addressed. As University positions, UWS human resource policies should apply. These positions should be filled through competitive selection processes, and where possible should include external advertisement. The Review Panel considered that research centre directors should be appointed for a defined term which would normally be synchronised with the review cycle for the research centre concerned.

At present, some research centre directors report to the Head of School and others to the Dean of the College. The reporting relation that is appropriate clearly depends in part on the size of the research centre, and it is unlikely that one rule will suit all cases. However the position is structured, it is essential that the performance management of research centre directors gives prominence to research, research development and research management. It is also important for centres to have sufficient independence from a host School to

attract and accommodate cross-School and even cross-College membership. For these reasons, the Review Panel was inclined to prefer that centre directors report directly to the dean of the relevant College.

It is an important principle that research centres should be able to draw their members from any School, and indeed any College, of the University. The *Research Landscape Report* established processes for identifying the members of research centres through the registration of centre membership with the Office of Research Services on an annual basis. Membership forms must be endorsed by the research centre director, the member's Head of School and the College Dean. This registration process is intended to provide the foundation for the negotiation of workloads associated with research centre participation, and with equity in the apportionment of performance-based research funding between research centres and schools. The Review Panel noted that some research centre directors did not have access to workload information for members of their centres and the Panel believed that one reason for this stemmed from failures in the process of member registration. The Panel believes that centre directors should have a voice in the negotiation of workload agreements of members of their centres. The Panel noted one research centre and School had achieved a new model for workload and performance management for those of its members employed within the School. This exemplar was commended as an excellent way of managing intersections and relations between centres and Schools.

Perhaps the most vexed issues in relations between centres and Schools arise in the apportionment and return of performance based funds, specifically IGS, RIBG and RTS. The Review Panel reiterated the importance of equity and transparency in the application of University policies in this area, and believes that the clarification of research centre membership will contribute to this goal. It approved of the principle, currently being introduced in some Colleges, that research workload should be paid for by the academic unit that is receiving the performance-based funding. This principle is clearly more easily applied to mature centres than to newly established research centres. The Panel noted a particular problem with the allocation of RTS funds for students with principal supervisors in some research centres stemming from the requirement that students enrol only through Schools. An increased concentration of research study in URCs is a strategic research goal of the University and there is a need for enrolment provisions reflecting this goal.

### Recommendations

- 28. That UWS support positions of research program co-ordinator in University Research Centres.**
- 29. That URC Directors be required to undergo management training through a targeted program developed in collaboration with UWS Professional Development Unit (PDU).**
- 30. That all URCs must implement governance and management structures as established by the University within the next annual reporting period.**
- 31. That all future appointments of directors of research centres be made in accord with UWS human resources policies and be made for defined periods.**
- 32. That Office of Research Services register the membership of research centres annually, and that membership registrations carry the endorsement of the research centre director, the member's Head of School and the College Dean.**
- 33. That all URCs and host Schools and Colleges must finalise their structural relationships and have resource models in place that meet standards of equity and transparency before 2005.**
- 34. That the UWS Research Studies Committee should explore and outline mechanisms to enrol research students in research centres.**

### 4.8. Profiling UWS

It is important for UWS's distinctive research strengths to be made known to the University's potential research partners in the public and private sectors, to other researchers and to the internal University community. This is in keeping with the *Research Plan 2004-2008* – Goal 2.4. Building on the excellent work of the UWS Media Unit in telling the stories of UWS researchers, the systematic communication of UWS research might include inviting opinion shapers and key players in the research funding agencies to participate in nationally significant events at UWS, for instance, a Fulbright Fellow Symposium. Opportunities to communicate UWS's research profile would also be expanded by ensuring that all senior management and academic staff are apprised of the University's strengths and are able to communicate those strengths. Equally, the University might empower Centre Directors and senior academics to identify key communication and strategic opportunities through relevant media and business training.

The University's research profile is also built through the individual standing of its researchers. Three University Research Centre Directors are Academy Fellows (Ang, Marceau, Marsh). The University should seek opportunities for the nomination of its Centre Directors and other senior researchers to the relevant Academy.

## Recommendations

35. That UWS act more effectively to communicate its distinctive research strengths and profile.
36. That the effective communication of UWS's distinctive research strengths should be monitored and managed through the performance management of relevant senior staff (DVC, Development and International; PVC, Research; Director of Marketing and Media).

## 4.9 Resource allocation and policies

During the 2002-2004 triennium, UWS has allocated substantial central research funding to support the research centres designated in the *Research Landscape Report*. The total central UWS support for University Research Centres during the triennium has been \$7.1 million. A further \$1.2 million has been allocated to support the development of University wide research programs – the Water Research Program and the Urban and Community Development Program. Funds allocated for research scholarships were \$570,000. Further amounts for transition and contingency were allocated. In sum, \$9.0 million – on average 1 per cent of the UWS budget across the 2002-2004 period – has been allocated to support and develop research concentrations. Funding allocated to Centres was allocated on the basis of specific support needs and has covered the broad areas of: management personnel;

administrative support; commercialisation support; research personnel, including postdoctoral fellows; research scholarships; equipment funding; and facilities, including refurbishment.

The Review Panel noted that UWS's financial commitment to research was substantial. The Panel supported the principles under which support has been provided over the last three years. Under these principles, central support is tailored to the needs of each research centre and aimed at assisting growth with the goal of centres becoming self-sustaining in a medium-term future. The goal and achievement of self-sufficiency for all URCs is underpinned by the return of 100 per cent of the IGS and RIBG funding generated by URCs to their host College. The Panel also favoured continuation of existing practice in which central support is provided primarily in-kind, in the form of funding for key salaries, scholarships and infrastructure.

## Recommendations

37. That targeted central support be made available to selected URCs during the period 2005-2008, within the framework of eventual self-sufficiency for all URCs.
38. That the principle of eventual self-sufficiency of all URCs to continue to be underpinned by the significant return of performance based funding to all URCs – covering Institutional Grants Scheme (IGS), Research Infrastructure Block Grants (RIBG), Research Training Scheme (RTS) and the Research Incentive in the University Funding Model (UFM). This return on performance should continue to occur through College distribution of these funds, ensuring a strong research income stream to consolidate and grow the strategic activity of URCs. The Pro Vice Chancellor (Research), in discussion with the College Deans, should monitor this allocative process.
39. That those Colleges providing additional support to their URCs through professorial appointments, capital expenditure etc., should ensure that such allocations are linked to the productivity benchmarking and self-sufficiency regimes recommended by the Review Panel.

## 4.10 University Research Centre Review Cycle

The Review Panel supported the University's proposal that the regular review of research centres be conducted within the University's regular program of Academic Review of Colleges, Schools and academic programs. This would establish a cycle of five-yearly review in which the activities and performance of research concentrations are examined in the larger context of academic performance, strategic directions and University development in cognate areas. The timing of reviews will then be synchronised with the review of academic programs. The Review Panel also supported the notion that the University reserve the right to review one or a group of research centres out of the normal review cycle should there be a perceived need to do so.

## Recommendations

40. That future review of research centres be conducted, in the normal case, at the same time as the reviews of Schools, Colleges and academic programs in cognate areas.
41. That the criteria and methodology for subsequent review of URCs should follow the solid patterns established in the 2001 and 2004 reviews.

## 4.11 University Research Centre Designation

The Review Panel considered the submissions made by existing centres and one proposed research centre, giving particular attention to the discussion of their existing and proposed research programs, detailed performance data, and discussions with the Centre directors. The Panel also reviewed the audited performance data<sup>3</sup> on research income, publications and higher degree completions of University staff associated with each centre or proposed centre. The Panel set these considerations in the context of the expectations of a University Research Centre set out in Section 4.2 above.

Turning to the designation of University Research Centres for the next period, the Panel made three types of recommendations as outlined below. Detailed information on the Panel's evaluation of each Centre or proposed centre is being provided separately and is given here in summary form only.

<sup>3</sup> The Review Panel considered audited data where it was available. Where audited data was not available, for example, 2003 publications which are currently being submitted to DEST, the number of publications lodged with Research Services was considered. The data considered included: external research income in all categories; DEST declarable research and scholarly publications, including student publications; higher degree research load; higher degree research scholarships; higher degree research completions; higher degree research completion times.

First, the Panel considered a number of Centres to be operating successfully in their existing forms and recommended that these continue to be recognised as University Research Centres. These are the Centre for Cultural Research (CCR), MARCS Auditory Laboratories, the Social Justice and Social Change Research Centre (SJSC) and Self-Enhancement Learning Facilitation Research Centre (SELF). The Panel considered these Centres to have established strong presences in their research fields, to be performing strongly and to have identified clear, viable directions for their development in the future. It saw these centres, and in particular CCR, as promising candidates for recognition as Australian Research Council (ARC) Centres of Excellence. The Review Panel considered that SELF's success in its chosen field has given it the capacity to be self-sustaining, and welcomed this considerable achievement. Finally, the Panel noted the contribution that these centres have made to research development in the theme areas of Water, Urban and Community Development, and Culture and Communities, and saw considerable scope for these and other centres to the development of the emerging 'children's futures' (infants, children and young people) research theme.

### Recommendations

**42. That the following centres be designated as University Research Centres from 2005:**

- **Centre for Cultural Research (CCR)**
- **MARCS Auditory Laboratories (MARCS)**
- **Social Justice and Social Change Research Centre**
- **Self-Enhancement Learning and Facilitation Research (SELF) Centre**

**43. That UWS actively assist CCR and MARCS in the first instance, to position themselves to compete in the next round of the ARC Centre of Excellence Program.**

The Review Panel considered that a number of other centres have performed well in the last period and occupy promising niches in their fields, but that to continue as research centres - in two instances - these groups need to refine their focus and give further consideration to the research program that they will pursue for the next period.

The Centre for Horticulture and Plant Sciences (CHAPS) and the Centre for Advanced Food Research (CAFR) proposed that these centres merge to become a single research centre. The Panel saw considerable merit in this

proposal. The shape of a combined centre is not yet clear and the Panel considered that further work needs to be done to define the focus and remit of a new, combined research centre. The Panel saw a new joint centre, in association with the proposed CRC Organic Food & Farming Technologies, as providing the basis for a possible future UWS research theme in 'food and food production'. CAFR would not be designated as a University Research Centre without this merger.

### Recommendations

**44. That the Centre for Horticulture and Plant Sciences (CHAPS) and Centre for Advanced Food Research (CAFR) be combined into a new centre, redefining a research focus and programs and resubmitting a revised strategic plan within three months to the Pro Vice Chancellor (Research) for consideration and possible designation as a URC by the Vice Chancellor.**

**45. That the CHAPS/CAFR combined and renamed centre be considered as offering the basis for a new UWS research focus on food and food production.**

The Centre for Complementary Medicine Research (CompleMed) proposed to continue its research program in the three areas of herbal laboratory research, clinical trials research, public health and policy research. The Panel was impressed with what the group has achieved in a very short time, but concerned about its small size and capacity to sustain three streams of work involving fundamentally different forms of expertise. This group is invited to reflect on how best to equip itself with specialist expertise in some, and probably not all, of the areas of epidemiology and clinical trials and health policy.

The Australian Expert Group in Industry Studies (AEGIS) has attracted national recognition for its expertise in innovation and has performed outstandingly in the generation of research income, including national competitive grant income. Its achievements in publication and research training have been more uneven. With the retirement of its founding director, it now needs to review the scope and direction of its future development.

The Panel saw the rethinking required for these centres as clearly achievable within a short period, and the centres as likely to be able to regain centre status in a short time. It recommended that the Pro Vice-Chancellor (Research) work with these groups and the Schools and Colleges to which they belong to clarify their focus and develop revised strategic plans. These plans, to be submitted within three months, will form the basis for their consideration as University Research Centres by the Deputy Vice-Chancellor (Development & International) and the Pro Vice-

Chancellor (Research) and possible designation as URCs by the Vice Chancellor.

### Recommendation

**46. That the following centres be requested to redefine their research focus and programs and resubmit a revised strategic plan within three months to the Pro Vice Chancellor (Research) for consideration and possible designation as a URC by the Vice Chancellor.**

- Centre for Complementary Medicine Research
- Australian Expert Group in Industry Studies (AEGIS)

The Panel recommended that three research centres and one proposed research centre not be designated as University Research Centres at the present time. In three cases it judged existing centres as not having achieved sufficient critical mass and/or research performance to be viable as a research centre and as unlikely to reach such a stage of development in the short-to-medium term future.

Although the Panel found the Centre for Advanced Systems Engineering (CASE) not to meet the criteria for designation as a research centre, it saw the group as having considerable potential. CASE is in an area with a strong potential stream of research students from undergraduate students, significant potential for collaborative problem solving research and a major industry base and focus. A research area that could be a

powerful new area for the University that CASE evoked was health informatics. This is a particularly important possibility given that UWS is negotiating the possible establishment of a medical school. Existing medical schools have found it difficult to back-engineer health informatics into their curriculum and structure. UWS has the opportunity to develop this fundamental linkage at the development stage.

The Panel commended the Centre for Construction Technology and Research (CCTR) for its strongly developed contract research activity and its impressive record in commercialisation. Both are of significant value to UWS. It judged CCTR as having reached a mature of development in its areas of strength in which a business development model, rather than a research unit model, would be appropriate. It believes that recasting CCTR on a basis of this kind will enable it to flourish and contribute to the University's broader research income generation and commercialisation goals.

The Panel saw the developing Nanotechnology Group as not having reached the stage of development where it has the focus and coherence to function as a research centre. This group is new and to some extent still looking for the focus that will distinguish it within a broad and nationally competitive field. At its present stage of development, the Review Panel saw the Nanotechnology Group ideally placed to proffer technical capacity in areas across the University. This capacity has the potential for reconceptualising intractable problems, particularly in the areas of chemical engineering and new materials development. The

Group has developing industry links and is strongly integrated into the teaching program, aligning it strongly with the UWS *Research Plan*.

The Panel viewed the Property Research Centre as occupying a small niche with an applied focus and with a breadth of activity that was judged to be appropriate for a School that is seeking to develop its research activity and focus. The School of Construction, Property and Planning could potentially benefit from the emerging connections with international agencies and the Director's established presence in the Asia/Pacific region in the small network of property researchers. It is recommended that this Centre be no longer designated as a University Research Centre.

### Recommendations

**47. That following proposals not be recommended for URC designation:**

- Centre for Advanced Systems Engineering (CASE)
- Centre for Construction Technology and Research (CCTR)
- Centre for Nanotechnology
- Property Research Centre

**48. That CASE be designated as a College Research Group and focus on its Health Informatics strand of research, linking specifically to the new children's futures research theme.**

**49. That CCTR reconfigure itself as a Business Unit supported by the Office of Business Development.**

**50. That the College of Law and Business should determine if it invites the property research grouping to seek designation through its formal research group process.**

**51. That a framework to develop and test the sustainability of UWS research in the field of nanotechnology be implemented. This might involve support in the form of short term funding to explore the role of nanotechnology as an enabling force across the university focused on problem solving in a wide range of disciplines, including the proposed medical school.**

### Recommendation

**52. That Reports covering the Review Panel's findings relating to performance of individual centre proposals be provided to the Centre Proposer, the appropriate College Dean, Associate Dean (Research) and Head of School. For those centres recommended for designation as a URC, the report will provide advice on broad central funding support, if any, during the 2005-2008 period.**

## 5. Conclusion

The Panel welcomed the chance to contribute to the University's ongoing research review processes. In this next phase of its research development, the Review Panel believed UWS was equipped to achieve the goals it has set itself in its *Research Plan 2004-2008*. With the focus on research themes it has pursued and will continue to pursue, UWS will be able to realise its desire to be truly interdisciplinary, to have a clearly defined collaborative orientation and to be responsive to contemporary social, economic and environmental challenges in Greater Western Sydney and beyond. It is hoped that the observations and recommendations provided in this report will assist the University to achieve these challenging goals.



# Appendix A

## Review Panel Members

### External members

[Professor Rod Wissler](#) is Deputy Vice Chancellor, Research and Commercialisation (Acting) at Queensland University of Technology. Professor Wissler is Professor of Drama and built a distinguished career in the arts as an award-winning actor, director, translator and producer, founding the multi-disciplinary Centre for Innovation in the Arts at QUT and the Catalyst Youth Arts (Inc). Professor Wissler was Chair of the Council of Heads of Australian Theatre Studies Institutes and CEO and Artistic Director of the Twelfth Night Theatre (Inc). His professional and research work has been supported by the Australia Council and the Australian Research Council.

His latest publication, a co-edited book emerging from a two year project funded by the Australian Academy of the Humanities, "Innovation in Australian Arts, Media and Design: Fresh Challenges for the Tertiary Sector" is due for release mid year 2004.

[Professor Elspeth McLachlan](#) is an autonomic neurobiologist and Pro Vice Chancellor, Research at the University of New South Wales.

Professor McLachlan is Co-Director of the Spinal Injuries Research Centre, Prince of Wales Medical Research Institute and Investigador Asociado, Instituto de Neurociencias, Universidad Miguel Hernández, Spain. Professor McLachlan serves on several public sector committees including the International Brain Research Organisation Asian-Pacific Regional Committee and the joint AVCC/NHMRC/ARC Committee on Scientific Practice.

She is a Fellow of the Australian Academy of Science.

[Professor Mary O'Kane](#) is a company director and consultant, advising governments and the private sector on innovation, research, education and development.

Professor O'Kane was Vice-Chancellor of Adelaide University from 1996-2001 and Deputy Vice-Chancellor (Research) from 1994-96. She was also Professor of Electrical and Electronic Engineering within the University and now holds the title of Professor Emeritus.

Professor O'Kane has served on several boards and committees in the public and private sectors. She specialises in high technology, national research strategies and higher education policy. She is a Director of the Development Gateway Foundation and of several public and private companies. She chaired the Research Grants Committee of the Australian Research Council from 1994-96.

Mary O'Kane is a Fellow of the Academy of Technological Sciences and Engineering and a Fellow of Engineers, Australia.

### Internal Members

[Professor Tong Wu](#), Deputy Vice Chancellor, Development and International (Chair)

[Professor Sheila Shaver](#), Pro Vice Chancellor, Research



# Appendix B

## UWS Research Centre Support Policy

### Report of the Review Panel

31st March, 2004

Superintendent's Cottage, Parramatta Campus

#### Introduction

UWS currently supports 12 University recognised Research Centres which were designated in 2001 by rigorous external review of UWS's research performance and policy – usually known by the name of The UWS *Research Landscape Report*. As part of the 2004 Research Review process, the University is considering the way in which UWS provides support to research centres, locates them in its structures of Schools and Colleges, and deals with student and staff matters of their members.

#### Terms of Reference

- UWS policy for the management and support of research centres, including the provision of funding in cash and in kind
- Distinction between University Research Centres (MARCS, CCTR, CHAPS, CAFR) and Research Centres (AEGIS, CCR, CompleMed, CASE, PRC, SJSC, SELF, SkinTek)
- The 'return' of performance-based research funding, such as IGS and RIBG, to the units that 'earned' it
- Research training and support of research students
- Minimum number of researchers and level of grant income required for effective research centre performance
- Relationships between research centres and Schools and Colleges, including the role of members of research centres in teaching and the recognition of teaching and research in the determination of workloads
- Human resource issues including appointment of research centre directors and deputy directors
- Accommodation and infrastructure
- Any other relevant matters.

#### Consultation

Submissions from researchers, Research Centres, Schools and Colleges were sought as part of the review process. There were 22 responses and these are summarised in Figure 1. A number of the issues addressed by the review overlap with the relationship between Centres and Schools and so submissions are elaborated on within each section below.

Area of Submission	Number of Responses
UWS policy for the management and support of research centres, including the provision of funding in cash and in kind	11
Distinction between University Research Centres and Research Centres	6
The 'return' of performance-based research funding, such as IGS and RIBG, to the units that 'earned' it	8
Research training and support of research students	6
Minimum number of researchers and level of grant income required for effective research centre performance	5
Relationships between research centres and Schools and Colleges, including the role of members of research centres in teaching and the recognition of teaching and research in the determination of workloads	8
Human resource issues including appointment of research centre directors and deputy directors	7
Accommodation and infrastructure	5
Any other relevant matters.	10

**Figure 1 Summary of University community submissions**

## Policy and Central Funding

### Summary of Submissions

There were a small number of submissions that commented on the broad policy of establishing and funding research centres.

A small number of submissions commented on the principle and appropriateness of UWS pursuing research intensiveness through research centres. One argued that while UWS would not in the foreseeable future be recognised as a comprehensive research and teaching university, its research centres should be few in number and to ensure excellence they should be benchmarked against research centres at research intensive universities, such as, University of Sydney. Another suggested that the configuration of research centres as a structure with director, deputy director and various administrative infrastructure was not helpful in getting much research activity done.

A number of submissions commented on what they believed to be a lack of strategic alignment of some research groupings in Schools and Colleges and the absence of policy and transparency in designating such groupings or providing funding to them.

Central resourcing, it was generally agreed, should continue and was seen to have an important role in resourcing postdoctoral and professional officer appointments. There is currently a range of structures in place resourcing administrative support. Most potentially problematic is where those arrangements are informal and based on goodwill

between school and centre. Further comments that relate to the relationship between Centres and Schools and to infrastructure support are discussed in the relevant section below.

### **New-Cash**

During the 2002-2004 triennium, UWS has allocated substantial central research funding to support designated research centres that arose from the major external review of research capacity undertaken in 2001. The total central UWS support for University Research Centres has been \$7,110,428. A further \$1,186,235 has been allocated to support the development of university wide research programs – the Water Research Program and the Urban and Community Development Research Program. Funds allocated for research scholarships were \$570,000. Further amounts for transition and contingency were allocated. In sum, \$9.02 million – on average 1% of the UWS budget across the 2002-2004 period – has been allocated to support and develop research concentrations.

Funding allocated to Centres was allocated on the basis of specific support needs, unlike the transitional untied-block funding allocation in 2001 of \$200,000 for each Key Centre, with several other centres being allocated \$50,000 one-off funding.

Funding has covered the broad areas of: management personnel; administrative support; commercialisation support; research personnel, including postdoctoral fellows; research scholarships; equipment funding; and facilities, including refurbishment. Within the 2002-2004 triennium, support was allocated in the following manner.

<b>Funding Category</b>	<b>Central Funding Support</b>
Research Program Coordinators	\$2,156,6630
Administrative Support	\$670,179
Commercialisation Manager	\$363,600
Postdoctoral Fellows	\$1,486,000
Research Scholarships	\$1,980,000
Equipment Funding	\$1,601,374
Facilities including refurbishment	\$853,846
Contingency	\$90,000

**Figure 2 Distribution of central UWS support for University research centres 2002-2004**

Several of these funding areas are not allocated to centres directly but managed centrally by the Office of Research Services, including: Research Scholarships, Facilities, Contingency and Commercialisation Manager. The Commercialisation Manager is a member of the staff of the Office of Business Development.

Some Research Centres have received funding from the host College through the Resource Allocation Model (now University Funding Model). In 2004, Centres in all Colleges other than Social and Health Sciences are supported in this fashion.

During this period, there has been minimal investment in major research infrastructure and future support will need to address these needs.

## **In-Kind Support**

The bulk of in-kind support for designated research centres arises through the provision of salaries support for key research staff, including underwriting or direct funding of research only appointments. Such support covers the salaries/workload contribution of Directors, Deputy Directors, Research Associates and Postdoctoral Fellows. Such support varies significantly across the Colleges and in some instances is not easily quantifiable.

## **Distinction between University Research Centres and Research Centres**

### **Summary of Submission comments**

Many submissions commented on this distinction, which is poorly understood within the University and rarely used or useful in external relations. One submission described a University Research Centre as large scale and expected to conduct cross-disciplinary research, while at School level a research grouping would be more specialised and smaller. Two submissions noted hierarchical relations. In general, there was no support for the continuation of this distinction.

### **Research Centres at UWS**

The distinction between University Research Centres and Research Centres was created by the 2001 *Research Landscape Report*, which recommended that the University designate a small number of University Research Centres (URC) and Research Centres (RC), reserving the name "Centre" for such designated entities. The URC were identified as potential flagships and had considerable commercialisation potential, a critical mass of researchers, and capacity to potentially generate up to \$2 million external research income per annum.

The use of these distinctions should not continue after 2004. Research Centres recognised by the University and designated as a result of the 2004 review process should be known as University Research Centres (URC).

## **Performance-based funding return**

### **Summary of Submission comments**

A number of submissions commented on the implications for individual active researchers who are not located within research centres particularly the lack of transparent and strategic mechanisms for allocation of resources. There was strong support for access to RIBG, RTS and IGS. There was strong support for the continued return to Colleges of 100 per cent of performance based funding generated by research centres through RIBG and IGS.

The return of performance based funding is one of the key areas intersecting with relationships between Centres and Schools. A number of submissions were concerned to resolve perceived and actual implications of this process towards achieving or preventing breakdown of harmonious social relations among Schools and Centres and prevent the establishment of research silos.

### **Performance based funding**

Management of the return of performance based funding varies across the Colleges and Schools and is closely tied into the kind of host relationship between the Centre and School or College. The principle of 100 per cent IGS return for Centre earnings and 80 per cent for School earnings has been operating centrally since 2002 as set out in the *Research Landscape Report*. Distribution to Centres by Colleges and Schools is determined by those academic units and the mechanisms are in some instances unknown to the review panel.

Where Centre members are largely drawn from a single School staff, there is a perception of potential unease between staff who are in the Centre and those who are not as a result of splitting the return of IGS and RTS. This perception is driving certain models of School/Centre relationship. Where Centres are embedded within Schools, the Research

Committee of those Schools is making resource decisions that impact on Centres, with the consequence that Centre strategic planning is placed largely in the hands of the School Committee.

## Research training

### Summary of Submission comments

There was surprisingly little comment on research training in the submissions. The importance of centrally supported research training scholarships was strongly endorsed by submissions from research centre members. A small number of submissions commented on the strength of research training that exists outside centres, in particular, in certain areas of social science.

### Research Centre research training

The *Research Landscape Report* recommended that the University align research training where possible with areas of research concentration as expressed through University wide research programs and centres. The allocation of scholarships is invaluable in securing excellent students and the Panel recommended increasing that allocation to continue to build alignment with research strength. At end 2003, centres accounted for less than 25 per cent of the higher degree research load of UWS.

## Minimum income generation and critical mass of researchers

### Summary of Submission comments

There was little comment overall on this issue. One submission put the view that the number of grant applications, rather than the amount of actual research income, should be used for performance evaluation, while another put the view that income was not always an indicator of research excellence. One submission cynically suggested that the configuration of research centres as a structure with director, deputy director and various administrative infrastructure was not helpful in getting much research activity done.

### Sustainable Research Centres

The 2004 Review of Research Concentrations has set down a minimum annual research income for UWS Research Centres at \$200,000 per annum. Quantifying 'critical mass' is more difficult but the issues remain as they were at the time of the *Research Landscape Report*: a sustainable research centre requires strong visionary leadership with succession planning; there will be an expectation that research centre members are research active with the recognition that centres must also develop early career researchers who may not initially be research active. A guiding principle would be that if one or two senior researchers leave the centre, there would be negligible impact on the centre's capacity to carry out its objectives and continue to grow.

## Relationships between Centres and Schools and Colleges

### Summary of Submission comments

There was acknowledgement that these key relationships required nurturing. The tendency toward introspection in both Centres and Schools was seen as potentially impacting negatively on the relationship between a School and Centre. There was a range of views in submissions on whether or not these key relationships should be defined or enabled to develop according to individual College, School and Centre contexts.

The key issue raised by all but one submission that addressed this area is the allocation of workload. One submission argued that the level of research activity in the College of Law and Business was substantially due to School staffing ratios. Within the College of Law and Business, half of the College's Schools operate with staff to undergraduate

student ratios above the UWS average – an area outside the review terms of reference. From the same College, one submission argued forcefully that the application of democratic principles operating for allocation of research workload did not strategically support active researchers but effectively penalised those researchers. The submission that did not raise workload as an issue took the view that there was no role for centre members who were not research only. The same submission took the view that a centre was a resource for Schools around carrying out research and an ideal research training environment for both School staff and research students.

### **Relationships among UWS academic units**

The relationship between Centres and Schools and Colleges has taken time for some Centres and related School/College to work through. The *Research Landscape Report* determined that all research centres were to be hosted within a College or a School. The *Research Landscape Report* recognised that Schools are the central incubators of future UWS research strengths and that College resources should be strategically deployed to develop future generations of researchers in emerging research concentrations, particularly on a collaborative funding basis with matching central and College funding.

Most University Research Centres are structurally located within Colleges, with some exceptions: Complementary Medicine, Social Justice and Social Change, and Property Research Centre are hosted by Schools. These hosting relationships are mirrored in some instances by the Centre Director's reporting relationships.

Centres tend to relate most strongly to the unit that has the key resourcing role. Some level of structured communication between Centre and School staff may be usefully developed to ensure that these important relationships are not left to informal structures.

A mechanism for the Pro Vice Chancellor (Research) to also be involved in the performance management of Research Centre Directors would reflect the importance and strategic nature of the relationship between these roles. The strategic link between Centre Directors and the PVC (Research) portfolio would also be strengthened through a specific annual forum for reflection and development.

### **Relationships and resources**

Where it has intersected with resource issues, the relationship between some Centres and Schools has on occasion been vexed with respect to salary support and workload agreements.

The *Research Landscape Report* sought to establish certain resourcing policies for Centres. These have been variously interpreted and applied across the four UWS Colleges. The *Research Landscape Report* determined that resource allocation to University Research Centres and Research Centres be on the general rule of returning up to 100 per cent of the Institutional Grants Scheme (IGS). This maintained the 'no tax' policy on external income earned to provide a strong platform for centres to move toward being 100 per cent self funding or to require only minimal support, thus demonstrating return on investment" (p.6). IGS is returned to the Colleges on this basis but is then distributed to the Centres according to College determinations. The 'tax' policy has since changed with the introduction of a 15 per cent levy on all external research income other than National Competitive Grants, donations and scholarships.

In order to determine IGS return, the Office of Research Services has sought details of centre memberships on an annual basis. Centre response to providing updated membership lists has been very uneven and formal membership of centres as registered with Research Services does not necessarily reflect the historical or current context.

The model proposed by the College of Science, Technology and Environment (CSTE) to commence in 2005 might be usefully deployed by all Colleges. CSTE has drafted a funding model that proposes that research centres will pay a proportion of a centre member's salary based on their percentage workload contribution to the centre. Under this model a Centre Director will be directly involved in workload negotiations for centre members and in turn the centre members will be accountable to the Centre Director for their contribution to a centre.

## Human resource issues

### Summary of Submission comments

There were three specific areas of human resourcing commented on in the submissions: Research Centre Directors and Professional Staff, including, Research Program Coordinators, Commercialisation Manager, Business Development Managers. One submission commented on postdoctoral fellows, noting a lack of career structure for postdoctoral fellows.

As per the UWS Delegations, Research Centre Directors are a grouped position with Heads of School. A number of submissions commented on the discrepancy between Centre Directors and Head of School appointments: there is no provision for a loading covering the role; no systemic contracted position; and no position description, potentially leading to perceptions as expressed in one submission of a lack of transparency and accountability in the appointment of Directors and Acting Directors.

A number of submissions commented on professional staff within centres, identifying the research program coordinator (RPC) as an invaluable key role, although difficult to fill because of the range and depth of skills required. One submission offered that administrative staff in Centres should report to RPC (currently, all administrative staff report to the College Manager). Another submission strongly valued the RPC and sought to give the research program coordinator acting director status during the Director's absences, although under UWS Delegations and Human Resource policies this would necessarily involve a reclassification of the position from general to academic.

Other submissions drew attention to the kind of human resource model that UWS might develop to achieve effective research commercialisation and increase consultancy capacity within Centres.

### Staffing UWS Research Centres

#### *Research Centre Directors*

The central human resource issue is the absence of policy determining the nature of a Research Centre Director's appointment and the lack of a position description covering the role. No specific reference to Centre Directors' recruitment and appointment is made in the UWS Delegations, although the position is grouped with Head of School.

The relevant Delegations related to position creation and description are:

- (a) For research only academic staff
  - B5 DVCDI can approve position descriptions
- (b) For non-research only academic staff:
  - B2 Approve the creation, modification or deletion of academic and general staff positions (below Division Head) is with College Dean.
  - B5 Approve position descriptions for all academic and general staff positions is with DVCAS
- (c) Also potentially relevant
  - B4 Approve conditions for any positions not covered by Enterprise Agreements - eg. senior contract positions is with VC.

The relevant Delegations related to recruitment action are:

(a) For research only academic staff

– B7 VC for positions Level E, DVCDI for Levels A to D and CD Levels A to C.

(b) For non-research only academic staff:

– B7 VC for positions Level E, DVCAS for Level D.

– B9 Approve the subsequent appointment of academic staff following selection committee deliberations. VC for DVC, PVC, CD, Level E; DVCDI sub Level E research only. DVCAS sub Level E. CD sub Level E except where the Dean has been a member of the selection committee.

The relevant Delegations related to Acting Director of University supported Research Centre is: B21 Approve Acting Director of University Supported Research Centre appointment: DVCDI for appointments to Acting Director of University Supported Research Centre

A number of anomalous situations have arisen during the 2002-2004 triennium, including one Research Centre Director's contract being renewed at the last possible moment. Some Directors were appointed during the previous UWS member network era and these appointments may have been as director of a specific research centre. Since the *Research Landscape Report* in 2001, permanent appointments as a centre director are potentially in conflict with the University's desire to be strategic with respect to its research strengths and to implement regular review of its research centres.

The DVC, D&I will request a full briefing on the current appointment situations from HR of all existing Centre Directors.

### *Professional Staff*

The Research Program Coordinator position was developed in conjunction with the centres as a result of the 2001 review, in recognition of the complexities of managing research development and administration. Initially, nine research centres were allocated funds for a research program coordinator. Two declined this support – they were not convinced of the value of this role and requested the funding be directed towards the appointment of administrative assistance and the support of a Deputy Director position. At a later stage, one of these Directors sought and received funding from the College for a research program coordinator. The position requires a complex of skills and experience and when recruitment has focused on that set of requirements and where a centre has embraced the value of that set of skills and experience, the position has clearly achieved the benefits envisaged.

The *Research Landscape Report* also recommended the deployment of professional business staff, in particular, a commercialisation manager to support the four University Research Centre's (MARCS, CHAPS, CAFR, CCTR) strategic requirements with respect to commercial and enterprise activities. The Commercialisation Manager position was designed to be located in the Office of Business Development staffing structure but required to work closely not only with the Centres and with the Director of Research Services and the Pro Vice Chancellor, Research. For a range of reasons, the goals for this position have not been achieved, although the necessity for effective business and commercialisation support has increased.

### *Postdoctoral Fellows*

The *Research Landscape Report* recommended strong investment in postdoctoral fellowships. Allocation of central support for postdoctoral fellowships during 2002-2004 has been \$1,486,000. The disappearance of the traditional apprenticeship model of research training has involved a serious erosion of postdoctoral research training and employment in the Australian higher education sector. The postdoctoral fellowship provides a breadth of research experience for early career researchers (ECR), although its role is not normally to provide permanent employment but to position the ECR in the research field.

## **Accommodation and infrastructure**

### **Summary of Submission comments**

One submission from a research centre acknowledged the importance of the infrastructure support that had been allocated but noted that it 'it has been too little to realistically support the establishment of a new scientific laboratory'. Two submissions noted that infrastructure support, such as laboratory space and equipment, is an issue that is particularly awkward for highly successful individual researchers not associated with centres. Furthermore, access arrangements, where suitable infrastructure is available, should be ensured formally and not left to informal relationships. The expectations of a research centre's growth will mean that the issue of accommodating staff will always be one that centres will need to negotiate with the host College or School.

### **Research Infrastructure**

The University has no formal major research infrastructure funds from which Colleges and Centres can bid for funds, although a process was enacted in late 2003 to seek bids for major infrastructure items to be funded from the clawback of unspent RQ, IGS and RIBG funds. Investment in research infrastructure is a key mechanism for ensuring UWS is able to achieve its strategic goals with respect to research.

## **Other Relevant Matters**

### **Summary of Submission comments**

One submission commented that as significant resources are directed at research centres and the University has identified centres as strategically significant, transparency with respect to the productivity and effectiveness of research centres is important.

### **Research Training Concentrations**

Two submissions commented on Research Training Concentrations (RTC). A small number of RTC were established at the time of the 2001 external review of research, recognising the lack of alignment between UWS research strengths and research training places and the concentration of cohorts of research students and supervisors within some fields. The RTC designated, from 2002, connected researchers from a number of schools within the unified UWS. RTC were strategically a transitional grouping of like researchers around supervision of research students. Most RTC activities have organically been reabsorbed into the Schools. Two RTC have maintained distinct identities but have also been strongly integrated into the host School of Applied Social and Human Sciences (SASHS). The continued successful capacity of researchers within SASHS to attract research students is strong evidence of the strength of research training within that School. As Schools are a natural site of research student supervision, there is little to recommend the artificial separation of students from Schools.

## Recommendations

### Research Centre Support Policy & Funding

The principle of central needs based support, including centrally held funding for key salaries and infrastructure, has been effective and should continue.

### Return of performance based funding

The principle of 100 per cent IGS return for Centre earnings and 80 per cent for School earnings will continue to be applied, although it is acknowledged that this is watered down through the various 'taxes' applied by Colleges and Schools. All models of distribution should be transparent and available to all UWS staff.

### School & College Research Groupings

Schools and Colleges are in the best position to identify and support new research groupings and emerging research strengths but should have policy and transparent procedures in place for designating and funding such groupings. School and College Research Committees will be advised that the reservation of the term 'research centre' to University designated Research Centres has been affirmed.

### Distinction between URC & RC

The use of these dual terms should be discontinued. Research Centres recognised by the University and designated as a result of the 2004 review process will be known as University Research Centres.

Without pre-empting the findings of the 2004 Review of Research, UWS supported Research Centres will characteristically be both intellectually and financially sustainable, and:

- be a research training focus
- have a membership that includes both active and early career researchers
- risk management procedures in place
- have operational and strategic plans
- have active management and advisory committees

### Relationships between Centres and Schools and Colleges

In order to facilitate the accurate distribution of performance based funding and reduce potential tensions between Centres and Schools, Centres must formally notify Research Services of memberships at least on an annual basis. In order to facilitate this, Annual Reports should include endorsed Membership Forms, signed off by Centre Director, Head of School and Dean.

There should be no discrepancy between the reporting relationship of the Director and the hosting of a Centre, but an existing reporting relationship would not determine where a Centre is hosted.

A mechanism for the PVC, Research to be involved in performance management of Research Centre Directors, reflecting the importance and strategic nature of the relationship between these roles, will be explored with HR where necessary and relevant Head of School and Dean.

An annual forum could be implemented for reflection and development among Centre Directors and PVC, Research, acknowledging the strategic link between Centres and the PVC, Research portfolio.

### **Research Centre Directors**

The DVC, D&I will request a full briefing on the current appointment situations from Human Resources. Position descriptions and conditions, including a defined term, will be developed to cover the appointment of all Centre Directors.

### **Accommodation and infrastructure**

In the next period of Research Planning 2004-2008, the University will audit its research infrastructure and invest appropriately to achieve its strategic research goals; the availability of a Central Major Research Infrastructure Fund will be explored.

### **Research Training**

The allocation of scholarships to Research Centres is invaluable in securing excellent students and that allocation will be increased while ensuring there is no conflict with the University's commitment to making offers to applicants on the basis of merit and excellence.

### **Research Training Concentrations**

The designation of RTC will not continue. All research training activities will be either within Schools or Centres. RTS funding will continue to be deployed to support research training activities through direct allocation to Colleges.

