The University of Sydney

Evaluation of Knowledge and Innovation Reforms

Our Universities: Backing Australia's Future

SUBMISSION FROM THE UNIVERSITY OF SYDNEY

INTRODUCTION

The University of Sydney welcomes the opportunity to contribute to the discussion on the effectiveness of the policy and funding framework announced in 1999. This is a response to ***'Evaluation of Knowledge and Innovation Reforms'*** on: *(i)* funding for research training; *(ii)* performance based funding to institutions for research and research infrastructure; *(iii)* the encouragement of strategic planning and verification of research and research training quality at institutional levels; *(iv)* the Regional Support Package; and *(v)* the contestability of funding for the Institute of Advanced Studies (IAS) of the Australian National University.

The University of Sydney, has a reputation for teaching and research excellence, and attracts students and staff from around the world. Many of the University's staff and graduates are leaders in their respective fields, making major contributions both locally and internationally. The University's faculties range from traditional arts and science faculties to a Conservatorium of Music and a College of the Arts operating from world-class facilities.

While The University of Sydney understands that this review must be completed in the context of budgetary deadlines, The University is very concerned that the hurried timetable for providing submissions and the time available for consultation is far too short – there is simply insufficient time to fully engage stakeholders and produce a comprehensive and considered submission in the critical and important issues embraced by the evaluation.

This submission does not address all of the issues surrounding the evaluation but signals that The University wishes to engage actively in the review. ***The policy framework for Australia's block research funding schemes must maintain excellence in research and research training, institutional autonomy and responsiveness, student choice, linkage and collaboration, as well as transparency, contestability and accountability.***

The University of Sydney strongly supports the broad policy objectives put forward in the *Knowledge and Innovation* reform package. Quoting the *Knowledge and Innovation Policy* statement:

> ***"By moving to a performance-based system of funding for research and research training, the Government will provide the incentives for institutions to best perform these functions. Institutions will be rewarded for performing research of an excellent quality, as well as***

being encouraged to increase their collaboration with industry. They will be rewarded for the quality of their research training environments and for ensuring that students complete their degrees.

These incentives will be provided in an environment that respects the autonomy of institutions to determine their areas of strength and the best way to manage their research."[1]

There is no question that implementation of the *Knowledge and Innovation* reforms policies have had a dramatic influence in driving changes in behaviour within the sector. The performance-based funding reforms of the RTS, IGS and RIBG have been beneficial in a number of areas, most notably: *(i)* the RTS has encouraged universities to more closely focus on the management and the quality of research higher degree students and their supervision, although much of this was already underway in response to other drivers; *(ii)* the IGS & RIBG, have provided an increased flexibility for institutions to strategically focus their investment in research and research infrastructure; *(iii)* the Research and Research Training Management Plans are congruent with the ongoing active review of research management processes within the universities.

Overall, these changes have improved the concentration of research effort and encouraged the development of areas of research strength.

However, it must be acknowledged that many of these outcomes cannot be attributed entirely to the performance-based funding reforms outlined in the *Knowledge and Innovation Policy*. Some universities, especially the research-intensive universities, have been achieving these objectives for some time, through good strategic management and adopting the principles of best practice. There is no doubt that ***the performance-based funding model does have the effect of rewarding and encouraging good management practices,*** and this can only be a good thing for research and research training in Australia. The University of Sydney congratulates the Government on the overall policy objectives and principles for the funding of higher education research and research training under the *Knowledge and Innovation Reform* package.

There are a number of important areas which must be addressed in this review of the *Knowledge and Innovation Reform* package and these include: *(i)* the general support for the concept that measures of research excellence should drive research funding in the sector; *(ii)* the absolute importance of the research block grants to provide the strategic funding within Universities to actively manage their own research effort; *(iii)* the lack of judgement and understanding in any proposal to absorb IGS and/or RIBG funding into the competitive grants scheme; *(iv)* the need to clarify and simplify the operation of the RTS to provide a scheme which is transparent and sufficiently robust that it can provide reliable future projections of RTS; *(v)* the general support for the Research and Research Training Management Reports as a mechanism for formally reporting research performance in a clear and accountable way.

---

1 *Knowledge and Innovation: A policy statement on research and research training,* The Hon Dr D. A. Kemp MP, Minister for Education, Training and Youth Affairs, December 1999, ISBN: 0 642 23958 4.

A succinct response to each of the consultation questions put forward in the ***Issues Paper*** can be found as an attachment to this submission (***See Attachment 1***).

BROAD POLICY OBJECTIVES

Australia must capture the benefits of research and research training to promote higher levels of economic growth as well as higher levels of cultural and social well-being.

The Government must acknowledge that ***research capacity (and the underlying research infrastructure) cannot be created rapidly – it must be built up and developed over time.*** Investment in research and research training must be a strategic investment to enable the research sector to respond quickly when required. Many important research areas require major facilities, supporting infrastructure and, more importantly, suitably trained and experienced staff.

The research-intensive universities, like The University of Sydney, have invested heavily in research infrastructure and research training and have built up a critical mass of powerful research teams consolidated in a vibrant research environment. The research performance of the research-intensive universities in Australia (by whatever measure) has been improving with time - they are the powerhouses of innovative research and invention in this country. This has not happened by chance - this has required a focused effort and careful strategic research management.

Identifying, promoting and supporting research excellence must be the overarching guiding principle driving Government planning for research and research training into the future.

Appropriate Resources & Accountability

Despite the initiatives introduced recently under *"Backing Australia's Ability"*, the quantum of funding directed to research and research infrastructure is still far too low. ***The Government should signal a long-term commitment to an appropriately resourced program, supporting research and research training through a dual funding system.***

Coupled with the exercise of evaluating and setting national research and research training funding policies, there must be recognition that serious research, targeted at real national priorities, must be properly resourced. This review is a significant opportunity for the Government to demonstrate long-term vision and leadership – well beyond the term of any one Government or even any generation of researchers.

Diverse National Research Base

In evaluating the *Knowledge and Innovation Reform Package* and defining the way forward for the funding of research and research training for Australian universities, ***it is essential to maintain a diverse national research base, which must not in any way stifle creativity, innovation***

and discovery. University researchers are creative research entrepreneurs whose innovative flair stems from a desire to investigate the unknown.

There is no question that a larger well-managed research effort can lead to good research outcomes. However it must be noted that the system is already quite diverse in terms of the magnitude of the research intensity in some of the research organisations. In terms of policy, ***one size does not fit all***. For the larger, research-intensive universities, there is a large critical mass of researchers and research management is an absolute priority. ***There is a real danger in any attempt to externally micromanage research and research training***. Overly specific policies cannot be permitted to restrict the creative and innovative mindset of our best researchers. If this happens, Australia risks the chance of neglecting significant areas of important research.

Recognising the magnitude of our responsibility to Australian society and the complexity of the international environment in which we operate, the outcome of this exercise to review the ***research block funding mechanisms must enable universities to operate responsively to the opportunities and resource challenges which they face.*** Likewise, overly broad research policies cannot be allowed to diffuse the research effort and compromise an institution's ability to develop and maintain world-class programs.

The *Knowledge and Innovation policy* objectives create an environment where there is a critical mass of researchers, there are resources to direct strategically and established accountability and compliance mechanisms in place.

National and International Research Arena

Australia is a small player on the international stage and this means that our competitive advantage in many areas relies on opportunities, often in niches that are uniquely Australian. It must be recognised that the smaller, unexpected fields often produce the new seminal ideas that go on to have the largest impact over time. The cultivation of these areas depends on local institutional management, backed by the flexibility of block funding.

Research and research training is of paramount importance if Australia is to remain a credible player in the international research arena. ***Irrespective of where the research and research training are located, institutions must be adequately resourced and supported sustainably (including the "human infrastructure")***. The research and research training carried out in universities provides the next generation of ideas for commercialisation as well the training environment for the next generation of entrepreneurs.

Australian research must not only compete internationally, it must also collaborate globally. In many areas, Australian research must be viewed as part of a global research effort. Particularly in areas where we are recognised as research leaders or have a natural advantage, a real investment in research is essential to ensure that we maintain or assert our position with respect to the international effort. This will require an enhanced overall commitment to research.

Furthermore, an appropriately resourced approach to funding research and research training would go a long way towards breaking down barriers between research organizations and this would maximise the outputs from the national investment.

CONTESTABLE ARC/NHMRC FUNDING

The University of Sydney strongly supports the current policy of a dual research funding system where a research block funding scheme supports research and research training in the eligible higher education institutions and peer-reviewed competitive research grant schemes support individuals and their teams based on merit.

While The University of Sydney strongly supports the concept that the grant funding agencies should be able to fully fund research programs, this should not be at the expense of institutional research block funding. ***Any proposal to have IGS and RIBG funding tied to funded competitive grants is naïve and shows a lack of understanding of how the strong research programs in the higher education system actually operate.***

If the principles of public funding for research outlined in *Knowledge and Innovation Policy* are to be realised ***universities MUST have the flexibility and autonomy to adapt to emerging areas of research and new opportunities, and to set their own strategic priorities***. The research block funding provides the only means of support for universities to strategically manage their own research programs.

In managing and fostering its research profile, The University of Sydney has identified and supported its research strengths, many of which are multidisciplinary or are stimulated through collaborations with industry and with other universities and research institutes. The University's research strengths align well with the National Research Priorities and many of the strengths reflect public and industry needs and most have their genesis in good strategic appointments with focused support for excellence.

There are a number of points that underpin our support for retaining the research block funding schemes:

(i) Linking any (or all) of the research block funding to ARC/NHMRC grants would mean "*leakage*" of the block research funding to some of the currently non-eligible institutions. This would have the effect of diffusing (rather than focusing) the block funding and diminishing the overall support available for infrastructure and research support in the university research sector in an environment where the research environment is already under significant funding stress. Research programs (wherever they are undertaken) should be properly resourced in a research environment where there is the greatest probability for success.

(ii) The research block grants underpin research in a very diverse research portfolio that differs from institution to institution. ***The ARC and NHMRC are not the only funding agencies that support the excellent and diverse research effort within the University sector.*** The other agencies (still identified as Category 1 research

support) include Grains Research and Development Corporation, Rural Industries Research and Development, National Heart Foundation and Australian Centre for International Agricultural Research *etc.*

(iii) There is a very significant amount of excellent research that falls outside that which attracts identifiable external funding, particularly at an early stage. Some very significant research on the cutting edge and in emerging areas, may not win external grant support until it has wide acceptance and established its impact. The block grants provide the mechanism to create a research environment where early stage ideas and early stage researchers can be nurtured.

(iv) If tied to competitively awarded grants, the provision of major ***research infrastructure would become uncoordinated and piecemeal.***

A STRATEGIC RESEARCH ENVIRONMENT

Research at The University of Sydney operates in an environment where there is increasing pressure to prioritise, manage and coordinate its research effort. Strategically, it is essential to bring together teams of strong researchers and to provide the best environment where creative ideas can flourish. In doing this, we have generated research clusters or groups with critical mass coordinated to tackle significant problems, defined and supported institutional areas of research strength and aligned most of these areas of strength with the National Research Priorities. The significant support provided by the research block funding schemes is one way that The University of Sydney prioritises and coordinates it research effort and it has a significant influence on the research direction. The University of Sydney relies on IGS and RIBG funding to support programs of research and research training in strategic areas to raise them to a nationally and internationally competitive level. At the University of Sydney, the research block funding invariably finds its way to the areas of existing and emerging research strength. In 2003, as well as contributing directly to the research operating budget and local infrastructure in host schools and departments, The University has identifiably invested the research block funding in coordinated schemes including:

(i) The ***Sesqui Major Equipment Scheme*** to provide funding of more than $2 million a year for major equipment, which is often used in cross-disciplinary collaboration, and is needed to strengthen existing and emerging areas of research strength.

(ii) The ***Sesqui Research and Development Scheme*** to provide "*small grant support*" to all academic staff of the university with the aim of supporting, on a competitive basis, high quality research projects promising to deliver external funding in the future. In 2003 the Scheme allocated more than $2.1 million across research in all fields.

(iii) The ***Sesqui New Staff Support Scheme*** to provide "*small grant support*" specifically for new staff at the university. The scheme is open to all new staff at Levels A to D and aims to support, on a competitive basis, high quality research projects likely to

lead to external funding in the future. In 2003, the Scheme allocated approximately $700,000 across research in all disciplines.

(iv) The ***Sesqui Postdoctoral Research Fellowship Scheme*** awards up to 15 new Fellowships annually specifically to early career researchers. Fellows are selected on merit and the scheme is targeted to bringing young new researchers to the University of Sydney. Since the commencement of the Scheme in 1997, 13 of our Sesqui Fellows have won prestigious awards from external agencies.

(v) The ***ARC/NHMRC "Near Miss Scheme"*** provides bridging support of about $800,000 in total, to researchers who narrowly miss out on ARC or NHMRC funding. The scheme is designed to provide support for researchers to better position themselves and their research programs to win external support in subsequent granting rounds.

(vi) The ***Postgraduate Research Support Scheme*** awards, on a competitive basis, support for postgraduate candidatures (to support conference travel, "*suitcase science*" travel to use instruments and equipment, books and computer equipment *etc*). In 2003, the scheme awarded more than $1.2 million.

(vii) The ***University Postgraduate Awards*** resemble APAs in terms of tenure and benefits. In 2002, 40 UPAs were offered to commencing first semester research students in 2003, and an additional 40 Scholarships were offered to students commencing in semester two.

These initiatives would not be possible if RIBG/IGS was obligatorily tied to specific ARC/NHMRC grants. This would deny the University the opportunity of determining its own strategic directions.

The University of Sydney also uses RIBG and IGS funding to provide strategic ***matching support*** for large research programs such as the CRC Program, LIEF, Centres of Excellence, Federation Fellows *etc*.

The University of Sydney is a research-intensive university with deep and established infrastructure to support its research activities. The University should be recognised primarily as a "*research provider*", however, it has been increasingly called upon to be a "*research funder*" when it comes to providing the research infrastructure needed to undertake world-class research programs. ***There is danger in a system in which success in winning grants can be punished by the need to provide full or partial matching resources, often by cross-subsidy from other activities.***

RESEARCH TRAINING SCHEME

The university sector has a distinct and important role to play in postgraduate research training. Particularly in the research-intensive universities, where there is a real critical mass of research

students and research staff, and this provides an excellent research environment for the development of research skills.

The intentions and philosophy of the RTS are commendable but the implementation of the RTS has not been fully effective and thus it has not met its intended objectives of simplicity and transparency. As with the other block-funding schemes, the RTS must focus on excellence and continue to be performance-based. However, the operation of this scheme needs revision to streamline administration and operation and to enable forward planning based on realistic performance projections.

(i) The complexity derives from the "unstable interplay" between various components of the RTS formula. It is not possible to make reliable projections about RTS funding. ***A system which was simpler, less convoluted and more easily comprehended would be much more useful***.

(ii) There is a widely held view that there is a mismatch between the drivers of the RTS and some of the projected outcomes that it is being used to drive. The RTS is driven primarily by ***total*** research higher degree completions and by research grant income yet RTS is used to set the domestic research student load.

While the University of Sydney has grown quite rapidly, in both its total completions and research income, the domestic student profile cannot be changed overnight. While increasing RTS performance could notionally provide support for additional postgraduate places, there is a significant time lag required to adjust load in response to changes in RTS performance. The RTS allocation is based on data that is historical (income/completions in 1999-2000 determine the 2002 RTS). Changes in load take significant time to adjust (years rather than weeks). This inherently makes the RTS system unstable since institutions must always be reacting to adjust domestic student research higher degree load based on historical data that is inherently out-dated.

(iii) The RTS calculation of load relies on a single year to reconcile actual domestic postgraduate load against RTS-projected load. ***Domestic load is inherently lumpy so the projections should be done using a rolling average*** rather than with data provided for a single year. This would smooth out any annual or semester fluctuations and be a more realistic index of actual load.

(iv) ***The treatment of postgraduate separations and the return of funding to a "separations pool" is probably the most difficult and convoluted component of the RTS.*** While the principle of providing a mechanism for resources to move within the sector in response to demand and performance is sound, the mechanism for implementing this by monitoring "separations" is flawed. ***The RTS would be much more workable if "separations" were simply dropped from the system.***

RESEARCH AND RESEARCH TRAINING MANAGEMENT REPORT

The Research and Research Training Management Report (RRTMR) has evolved to be a valuable report for each institution that has taken it seriously. The data contained in the reports is still of variable quality from some parts of the sector. The RRTMRs should be viewed much in the way of an annual report for an institution and the quantitative data should be in a consistent format and easily comparable.

Part B of the RRTMRs is not particularly useful – most of the useful quantitative data is available from other sources (HERDC, the ARC commercialisation survey *etc*) so there is a real question as to whether this section of the report is necessary at all or perhaps should be an institutional summary of data that is publicly available in other reports.

The published DEST analysis of the RRTMRs (available at http://www.dest.gov.au/highered/respubs/rrtm/overview02.htm) is naïve and shows an incredible lack of knowledge of the meaning of the data contained in the reports. As they are currently set up, a quantitative comparison of the data in the reports is simply not possible. However, given a tighter set of guidelines and specifications, the RRTMRs have the potential to be a valuable set of reports of research activity across the sector. This must be balanced against the danger of over-prescription that forces data collection and presentation not aligned with institutional organisational structure.

There should be minimal changes to the guidelines from year to year. Accumulating information and data for the reports is a continuous process that is difficult to accomplish retrospectively so it requires careful planning within the institution.

HERDC AND PERFORMANCE INDICATORS

The HERDC is essential to provide reliable (audited) data on which to assess research performance. The underlying principle of centrally collecting a reliable set of indicators is very important for the management of research in Australia. The HERDC has the advantage that it provides a reliable (albeit qualified) comprehensive snapshot of the sector as a whole. In addition, universities now have established processes in place to manage this process well.

Some of the direct and derived research performance indicators require refinement and the collection could be expanded to capture other research providers to provide a more comprehensive analysis. The question as to whether the data needs be collected to the accuracy that it is collected now is debatable.

The University of Sydney would like to see the re-instatement of double weighting (or at least some weighting) for Category 1 research income. Category 1 income is well defined and is based on peer-reviewed assessment of research excellence whereas Category 2 and Category 3 income can both be distorted significantly by major single investments (for example by State Governments or commercial organisations). There is no question that Category 2 and Category 3 income represent valuable components of research funding support (and this should be recognised) however, Category 1 income is a more important index of research performance.

LIEF and Research Infrastructure in HERDC

The Specifications for the HERDC, originally approved by the Minister, were absolutely clear with regard to the treatment of LIEF and other infrastructure funding. While there have been some equity concerns regarding the changes from previous years to include LIEF, MNRF and SII income, these were flagged by universities, with DEST, for some considerable time prior to the HERDC deadlines. The removal of infrastructure income from the HERDC collection this year was handled hastily and without due and proper consideration.

Research infrastructure funding from SII, LIEF and MNRF grants would seem to be exactly the type of activity that was intended to be captured as Category 2 income in the HERDC. These types of grants are no different to others involving collaboration and sharing of funds (Centres, programs *etc*) which are all funded through the lead institutions. There should be mechanisms in place to equitably and transparently attribute indicators to each of the partners in collaborative ventures.

CONCLUDING COMMENTS

The University of Sydney commends the Government in undertaking an evaluation of the Knowledge and Innovation policy reforms that will ensure the future of research and research training in Australia. The guiding principle should be that there should be greater flexibility and diversity in Australian Higher Education, with all stakeholders contributing to increased quality and opportunity. This is a principle that The University of Sydney embraces and will work to make a reality.

Recognising the magnitude of our responsibility to Australian society and the complexity of the environment in which we operate, the outcome of this evaluation must enable us to continue to operate responsively to the opportunities and resource challenges we face. We are very much aware that there are still significant challenges to overcome in the implementation of some aspects of the block funding under the Knowledge and Innovation reforms (in particular with the RTS).

In its research-intensive universities, Australia has a valuable asset in some of the most powerful research establishments in the country and overseas. There is a need for dialogue leading to an acceptable framework for the smooth operation of the diverse university research sector wherein institutional autonomy is safeguarded while also being mobilised in the national interest. There is a real opportunity for the Government to work more strategically with a long-term vision to plan and enhance research and research training into the future for the benefit of the nation as a whole.

Evaluation of Knowledge and Innovation Reforms

Our Universities: Backing Australia's Future

ATTACHMENT 1

PERFORMANCE BASED FUNDING

1. **Has the introduction of performance-based funding reforms had the desired effect of implementing the goals outlined in *Knowledge and Innovation*?**

   Yes. However the RTS should be simplified.

2. **Do the Knowledge and Innovation reforms encourage the attraction and retention of high-performing research staff?**

   Not necessarily. The attraction and retention of high-performing research staff is driven primarily by providing a well-resourced, engaging and active research environment. This is the function of having good research management structures in place within the institution.

3. **Do the Knowledge and Innovation reforms allow the possibility of an individual institution's markedly improving its funding position in a reasonable time (say 5 years) by good research management?**

   Yes. Good "*research performance indicators*" are generally reflected in a good funding position, however, the 5% capping prevents the more effective movement of funding and the capping should be removed.

4. **Has beneficial concentration of research effort occurred?**

   Yes. However this takes time and the re-focusing of the research effort cannot necessarily be attributed to K&I reforms. The concentration of research effort has generally been the result of good strategic research management within the institution.

5. **Does the Knowledge and Innovation package and its implementation at the institutional level encourage the development of pockets of international level research activity at the majority of universities?**

   As above. This takes time and the development of pockets of excellence cannot necessarily be attributed to K&I reforms. The development of pockets of excellence has been the result of good strategic research management within the institution. Pockets of international-level activity have not developed in all universities in the sector. The research-intensive universities generally provide a better research environment and the requisite supporting infrastructure to permit pockets of excellence to develop.

6. Are the current block funding formulae encouraging universities to move in the directions laid out in Knowledge and Innovation?

Yes for RTS, RIBG and IGS. However, the RTS is considered too complex in its implementation and must be simplified.

7. What changes should be made to the formulae for current performance-based block funded schemes?

7.1 Should the double weighting for national competitive grant funds be restored?

Yes.

7.2 Should the research publications element be removed from the formulae?

No. Publications (in all of their forms) are a very effective measure of the research activity and quality. The publication collection should be expanded to include creative works and patenting. Auditing requirements need to be more realistic – the system would be equally as effective if the auditing were to a lesser level of accuracy.

7.3 Should the research publications element of the formulae include quality measures?

Yes. But this must be done in such a way as to make it practical to collect the data. Specifications would need to be carefully thought through.

7.4 Should performance in block funding mechanisms be measured at university level or at department/faculty level or areas of research strength?

The advantage of institutional block funding is that it encourages strategic institutional research management, so logically the collection should be aggregated to institutional level.

7.5 Should Australia adopt an RAE-type mechanism to allocate block funds?

The block-funding scheme must support Australia's research excellence. There is no question that, over time, the RAE exercise in the UK has lead to an overall improvement in the quality of research and provided a transparent mechanism for identifying research excellence and focusing resources. However the UK RAE exercise has been very complex and a very significant administrative burden to run. ***We should consider adopting the principles underlying the RAE but use a much simpler approach***. There is no reason why ***an RAE-type exercise could not be run on a modified and slightly expanded set of research performance indicators to those that are currently collected by DEST*** in an audited fashion.

8. Should there be an increased proportion of research funded through granting councils?

DEFINITELY NO. But granting councils should be appropriately resourced to fully fund research programs.

9. Should granting councils be funded to allow them to cover the full cost of the research that they support?

Yes, provided that this does not reduce block funding to the universities.

10. Should the incentives for universities to collaborate with outside bodies be strengthened?

Qualified Yes. There is no question that a larger well-managed research effort can lead to good research outcomes. However it must be noted that the system is already quite diverse in terms of the magnitude of the research intensity in some of the research organisations. In terms of policy, ***one size does not fit all***. For the larger, research-intensive universities, in many areas, they already have a critical mass of research effort where there is no advantage to forming a larger collaborative group. There is also a danger in a system where too many partners can dilute the strength of research ownership and creativity.

11. Are the requirements for universities to contribute funds to collaboratively funded programs leading them to inadequately support other research projects?

Yes. The requirement for matching contributions to collaboratively-funded research funding diverts resources from other programs. At present, there is a clear cross-subsidy of some of the research effort from other programs, particularly for the essential major infrastructure and equipment-intensive facilities. If a research program is worth doing, it should be done well - programs should be fully resourced to achieve as completely as possible the desired outcomes within the project timeframe. The cost of supporting programs (including the costs of the "human infrastructure") must be factored into any research program.

12. Should universities be required to account for how they use research funds in a more detailed way than presently?

No. The processes for doing this adequately are already in place in the R&RTMR. The R&RTMR should be a very effective accountability mechanism, coupled with annual auditing requirements.

13. Should the 5% capping of institutional gains through the RTS and IGS continue?

No. Capping should be phased out as quickly as possible to permit the system to equilibrate fully. Capping artificially dampens the flow of resources in response to the areas of growth where resources are required. The current situation with capping in place (coupled with the inherent complexity of the RTS and the inherent time lag in some of the performance indices) makes research planning very difficult or impossible.

14. How useful is the HERDC, including categories under which data are provided?

The HERDC (or something very similar) is essential to provide reliable (audited) data on which to assess research performance. Some of the direct and derived research performance indicators require refinement and the collection could be expanded to capture other research providers to provide a more comprehensive analysis but the underlying principle of centrally collecting a reliable set of indicators is essential for the management of research in Australia.

15. Are there more viable data alternatives for the system as a whole?

Not obvious. Any system will rely on some derivative of the data collected at present. The HERDC has the advantage that it provides a reliable (albeit qualified) comprehensive snapshot of the sector as a whole. The question as to whether the data should be collected to the accuracy that it is collected now is debatable. The system used in the UK RAE (selected "best" data for a subset of researchers) serves the purpose of permitting institutions to highlight their best research achievements but doesn't provide a comprehensive set of data for the sector.

16. Have the current arrangements given sufficient encouragement to universities to support the activities of early career researchers, or those who are seeking to reestablish research careers?

There is nothing specifically in the K&I reforms to meet this objective. At present support of early career researchers is the result of effective university management rather than the reform package. Any University with good strategic planning for research must provide a vibrant research environment with strategies in place to attract excellent younger staff and provide them with the opportunity to meet their potential as strong researchers in the future.

FUNDING FOR RESEARCH TRAINING

17. Has the RTS succeeded in encouraging a focus on the quality of student supervision?

Yes. The RTS has focused attention on the length of candidature, the quality of supervision and the research environment. The complexity of the implementation of the RTS formula has also sent very mixed messages and this needs attention.

18. Has the allocation method had the desired effect of placing research students into research environments which provide the best research training and research infrastructure support?

Yes. The RTS has been an effective tool to drive behaviour. In many universities, this was happening effectively already.

19. Has the RTS succeeded in concentrating research training in areas of excellence?

Yes. As above. The RTS has been an effective tool to drive behaviour. In many universities, this was happening effectively already.

20. Have the funding arrangements provoked a shift in students between masters and doctorates?

No. At least this trend has not been obvious. In some disciplines, there has been a trend towards Masters (*research*) programs and in others there has been as shift in the other direction. There is no evidence that this has been in any way connected to the introduction of the K&I reforms.

21. Should the time allowed for a full-time student undertaking a doctorate be increased from four to five years?

Yes. This should be done to permit flexibility in extending RTS entitlements. In many disciplines it may become necessary to have a period beyond 4 years to produce good doctoral research and there should be no reason to penalise candidates for this. The emphasis should be on quality and not necessarily the length of candidature.

22. Has the use of similar formulae by institutions to internally allocate funding produced any undesirable side effects?

No. The University of Sydney doesn't use the same formula internally to allocate funding received under the RTS (or other components of the block grant) to drive its internal budget. However, the same basic drivers (competitive grant performance, publications, postgraduate completions and postgraduate load) drive parts of the internal allocation. This means that the outcomes are still sensitive to the same external drivers as the RTS and other block funding allocations.

This is another case where one-size-doesn't fit all. Each institution is different and the hallmark of effective research management within the institution would be to tailor support to strategically optimise the whole research effort of the institution. There is naturally some alignment with the block-funding drivers – otherwise the funding to support research would diminish in time.

23. Has there been any impact on part-time and mature age students?

No. At least this trend has not been obvious. It is somewhat too early to make this judgment with confidence and there are many parameters (outside the impact of the K&I reforms) that impact on part-time vs. full-time candidatures and the proportion of mature age candidates in the postgraduate cohort.

24. Has there been any impact on granting leave of absence, suspending candidature or allowing students to change from full-time to part-time study?

No. At least this trend has not been obvious. Again there are many parameters (outside the impact of the K&I reforms) that impact on part-time vs. full-time study.

25. With regard to the formula for the RTS:

25.1 Is it too complex?

Yes.

25.2 Should the separations pool mechanism be retained?

No. At least not in its present form.

25.3 Should funding adjustments continue to be made on a semester basis?

Yes. However a rolling average should be used to produce the adjustments and RTS should be based on actual data, not projections.

25.4 What changes, if any, should be made to the RTS formula itself?

Use a rolling average, remove the separations component, remove the capping and increase the weighting for Category 1 grants.

25.5 Should international research student completions be treated equally as local research student completions?

Yes

26. What alternative approaches could be adopted to fund research training?

This should remain something that institutions are funded to do and permitted to manage according to clear guidelines and projected outcomes.

PERFORMANCE BASED FUNDING TO INSTITUTIONS FOR RESEARCH AND RESEARCH INFRASTRUCTURE

27. Is the IGS achieving its stated objectives of increasing institutions' flexibility and autonomy?

Yes. But the level of funding support should be increased.

28. What changes should be made to the IGS formula?

Reinstate the enhanced weighting for Category 1 research income.

29. Is the use of different formulae for IGS and RIBG unnecessarily confusing? Should only one formula be used?

No. These formulae are direct and clear.

30. Should RIBG funds be directly attached to competitive grants? If so, how?

DEFINITELY NOT. RIBG should remain as a block allocation to the institution. The institution then has the flexibility to manage this in a fashion appropriate to its circumstances and strategic direction. At the University of Sydney a proportion of the RIBG goes directly to the Department hosting the research program and a proportion is held centrally to provide large infrastructure and fund strategic infrastructure initiatives.

ENCOURAGEMENT OF STRATEGIC PLANNING AND VERIFICATION OF RESEARCH AND RESEARCH TRAINING QUALITY AT INSTITUTIONAL LEVEL

31. Has this reporting requirement produced positive results by encouraging a more strategic approach?

Yes.

32. Is further streamlining of the Research and Research Training Management Reports (RRTMRs) appropriate?

Yes but this should not be a priority. The RRTMRs could be used more effectively if the guidelines were more explicit.

33. What alternative approaches could be taken to meet the public accountability objectives of the RRTMRs?

The published DEST analysis of the RRTMRs shows an incredible lack of knowledge of the meaning of the data contained in the reports. The data contained in the reports is still of variable quality from different parts of the sector. The RRTMR's should be viewed much in the way of an annual report for an institution and in this case the quantitative data should be consistent and easily comparable. Part B of the RRTMRs is not particularly useful – most of the quantitative data is available from other sources (HERDC, the ARC commercialisation survey).

REGIONAL SUPPORT PACKAGE

34. Should the regional support package be continued beyond 2004, taking into account the role and contribution of regional universities to Australia's science and innovation system?

Regional campuses should continue to be recognised. However it should be realised that some of the institutions based in the metropolitan areas have strong campuses that are clearly regional. The University of Sydney has a number of "regional" campuses including a rapidly developing campus at Orange. In many arenas (particularly the research arena), the regional campuses of the research-intensive Universities have the greatest potential to show improvement in research performance because these institutions have good research management strategies in place.

Quality of research should take precedence over geographic equity, and scarce funding should not be diffused to support research of lesser quality.

35. Should the eligibility criteria for regional assistance be reviewed?

Yes.

36. What alternative mechanisms for support (other than operating grant funding) should be considered?

As above. There should be encouragement for the State Governments to become involved in research and research investment.

CONTESTABILITY OF FUNDING FOR THE IAS

37. What have been the benefits of this arrangement and what have been the impacts overall for the IAS?

IAS is a strong research performer in the Australian research sector – they are truly one of the research– intensive organisations. They are relatively new players and the impact on the IAS and on the sector as a whole is still not at equilibrium. Since they entered the contestable funding arena, IAS has taken a greater proportion of funding than they have initially put into the system.

38. What are the implications of these arrangements for the higher education sector as a whole?

Ultimately it is a zero sum game and will stabilise. The prediction would be that the IAS would perform as one of the strong research-intensive universities probably at the expense of the non-research-intensive institutions.