Building a culture of research excellence

Strategic Planning for 2016-20
Discussion Paper no. 4
August 2015
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Foreword

The first research discussion paper in the strategic planning series, Investing in research excellence, expresses a desire for the University to embrace a bold vision for the future that focuses on our investment in building research excellence, so that the quality and impact of our research is demonstrable.

In this second paper, Building a culture of research excellence, we contemplate how best to create a research environment that supports researchers at every stage of their career, enables their development as research leaders, and engages community and industry with our research in a model of genuine partnership.

I would encourage you to read this paper alongside the second education discussion paper, Building a culture of educational excellence. This is an important opportunity to think about how we create a university at which both teaching and research thrive, where the contribution of our people is not only recognised but celebrated, and where our work connects us with the communities for whom our research has important consequences.

Dr Michael Spence
Vice-Chancellor and Principal
# Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreword</td>
<td>1</td>
</tr>
<tr>
<td>1 Introduction</td>
<td>3</td>
</tr>
<tr>
<td>2 Academic researcher qualities</td>
<td>5</td>
</tr>
<tr>
<td>2.0.1 Proposal to consider</td>
<td>5</td>
</tr>
<tr>
<td>3 Innovation, experimentation and collaboration</td>
<td>6</td>
</tr>
<tr>
<td>3.1 The research–teaching nexus</td>
<td>6</td>
</tr>
<tr>
<td>3.2 Supporting emergent research</td>
<td>7</td>
</tr>
<tr>
<td>3.2.1 Proposals to consider</td>
<td>7</td>
</tr>
<tr>
<td>4 Researcher development: from research training to research excellence</td>
<td>8</td>
</tr>
<tr>
<td>4.1 Higher degrees by research at the University of Sydney: current state</td>
<td>9</td>
</tr>
<tr>
<td>4.2 HDR programs: funding issues and the ‘tragedy of the Research Training Scheme commons’</td>
<td>11</td>
</tr>
<tr>
<td>4.3 The higher degree by research experience at Sydney</td>
<td>12</td>
</tr>
<tr>
<td>4.4 Strategic issues for the University of Sydney</td>
<td>14</td>
</tr>
<tr>
<td>4.4.1 Proposals to consider</td>
<td>15</td>
</tr>
<tr>
<td>4.5 Researcher development</td>
<td>17</td>
</tr>
<tr>
<td>4.5.1 Proposals to consider</td>
<td>20</td>
</tr>
<tr>
<td>5 Engagement</td>
<td>21</td>
</tr>
<tr>
<td>5.1 Community engagement</td>
<td>21</td>
</tr>
<tr>
<td>5.2 Sydney Policy Lab</td>
<td>23</td>
</tr>
<tr>
<td>5.3 The ‘how’ and ‘why’ of our research</td>
<td>23</td>
</tr>
<tr>
<td>5.3.1 Proposals to consider</td>
<td>24</td>
</tr>
<tr>
<td>5.4 Industry engagement</td>
<td>25</td>
</tr>
<tr>
<td>5.4.1 Proposal to consider</td>
<td>26</td>
</tr>
<tr>
<td>5.5 Global engagement</td>
<td>27</td>
</tr>
<tr>
<td>5.5.1 Our current approach</td>
<td>27</td>
</tr>
<tr>
<td>5.5.2 A new approach</td>
<td>30</td>
</tr>
<tr>
<td>5.5.3 Criteria for our priority international research partnerships</td>
<td>30</td>
</tr>
<tr>
<td>5.5.4 Proposals to consider</td>
<td>31</td>
</tr>
<tr>
<td>6 Conclusion</td>
<td>32</td>
</tr>
<tr>
<td>6.1 Your contribution</td>
<td>33</td>
</tr>
<tr>
<td>6.1.1 Complete list of proposals for consideration</td>
<td>33</td>
</tr>
<tr>
<td>Notes</td>
<td>36</td>
</tr>
</tbody>
</table>
1 Introduction

This is the second of two discussion papers on the future of research at the University of Sydney. In our first research paper, we make clear that our ambition is for the University of Sydney to become the leading research and teaching institution in Australia, and among the finest in the region. This vision is founded on four pillars, involving an unstinting commitment to:

- research excellence
- harnessing that excellence to address some of the vital national and global challenges of our time
- putting in place initiatives to develop, nurture and support our researchers; that is, to develop not only brilliant minds, but also research leaders
- engaging with the communities for whom our research has significant meaning and consequences and from whom we can learn – whether in the private or public sector, local or global.

The first research paper focuses on the first two pillars of this vision. This paper addresses the third and fourth pillars – researcher development and research-led community engagement – and is intended to be a companion to the second education discussion paper, *Building a culture of educational excellence*.

These two papers should be read together as a common expression of our ambition for excellence in education and research at Sydney. There should be no trade-off between the two. In fact, as we shall argue below, our success will depend on a deep commitment to excellence in both domains.

As in our first research paper, a major theme underlying the discussion here is the need to target our discretionary investment in the development of our researchers, as well as our approach to engagement generally, in a more strategic manner and aligned closely with our overall vision for research excellence. What this means is identifying our core research values and ambitions more clearly and putting in place the mechanisms we believe can help realise them.

To achieve our aspirations, we need to attract the most talented students and staff – whatever their social or cultural background – and ensure that they have the opportunity to fulfil their true potential as researchers.

And in order to serve the communities that support us, we need to ensure our research is of the highest quality, as well as asking and answering the most important questions that need to be addressed. Whether it is the public or private sector, industry, government, or non-government organisations, we need to find ways to ensure our research is contributing to and taking inspiration from the problems and challenges our communities face.

But first, what do we mean by a *culture* of research excellence?

At a very general level, we mean there is a dynamism and level of engagement between researchers across the institution – an intellectual ‘buzz’ and sense that truly exciting work is being done at a multitude of levels. It also means there is a palpable sense of this energy beyond the institution as well, felt not only by our staff and students, but our alumni, supporters and partners. This reputation for and expectation of excellence, in turn, generates a desire on the part of others to want to join the University, which further deepens and sustains the very culture that attracted them in the first place. It means, finally, that there is a culture of experimentation, innovation and aspiration across the institution as a whole: a desire to be bold, to take risks, and thus also to be prepared to learn from failure, as much as success. This is the kind of culture we want to build at the University of Sydney.

In our first research paper, we made a series of proposals for how we believe more focused investment in disciplines, multidisciplinary areas and grand societal challenges can help drive and realise our ambition to be the leading university in Australia. We talked about what is distinctive at Sydney and how we will differentiate ourselves as both a global and yet also uniquely Australian university.

To succeed and sustain such a transformation, our financial investment needs to be accompanied by a reinvigoration of our research culture – among the most important components in building research excellence. The challenge is, how can we best support our people, individually and collectively, to do their finest work? How can we support them to pursue new knowledge and understanding, to stretch existing methodologies and create new ones?
In part, we are already doing it – for example, through our flagship initiatives in China, Southeast Asia, the Charles Perkins Centre, the Australian Institute for Nanoscale Science and Technology, and the Brain and Mind Centre, along with emerging initiatives at Westmead, in data science and the environment, among others. We need to keep seeking out new ways of working together that help build on, support and demonstrate our research excellence.

Evidence suggests that one of the most important components leading to high-quality research performance is a strong sense of academic community.\(^1\)

“The world’s best research centres each had an enviable research community that caused individual academics to want to join in and contribute. Members of the community joined for either the self-centred reasons of maximizing the quality of their own research, or because (as social science teaches) social connections provide independent motivation. Either way, the quality of the community is fundamental.”

Our discussion of researcher development and engagement in this paper seeks to build on this insight. But also, which elements of our culture can we foster that will be distinctive about Sydney?

Core to our commitment in the Wingara Mura – Bunga Barrabugu strategy (to increase participation of Aboriginal and Torres Strait Islander students), and more broadly, is cultural competence and openness to new ways of thinking and acting. There are many ways of being, doing and knowing. Our culture should be one that is open to these multiple knowledge systems and how they operate, where we can create space for our staff to build their sense of self and for reflective practice. Such openness enables other change. It will afford the capacity to listen and be influenced and thus engage with society respectfully, responsibly and meaningfully.

A high-performing culture is thus one that promotes staff and student development and engagement, as well as continual learning. For this reason, our research and education strategies must be aligned closely. We need to ensure that our research training framework, for example, reflects our commitment to excellence and research leadership. We explore this in more detail below.

It is crucial that whether we are recruiting new academic or professional staff, or implementing new development programs, we consider how each initiative will help create and reinforce the kind of research culture we want to build at Sydney. Our researchers – and all of our staff – need to be capable of contributing to building strong teams and high-performing cultures, whatever their disciplinary or institutional location.

As a way of beginning to articulate the central elements of this culture, we propose a set of key qualities that ought to characterise researchers at the University of Sydney (Table 1). While we have a range of criteria expressed in our codes of conduct and promotions process, we have not previously attempted to summarise the qualities of our researchers in this way. These qualities will then form the basis for the proposals below for our researcher development and engagement strategies. We will argue that they should also inform many of the reward and incentive mechanisms of the University – including recruitment, confirmation, annual performance reviews, promotions and awards.

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2 Academic researcher qualities

Table 1: University of Sydney Academic Researcher Qualities

<table>
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<th>Quality</th>
<th>Description</th>
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| **Research expertise and scholarship** | Every researcher will aspire to be a leader in their field, in the sense that they will pursue research excellence through:  
- an ongoing commitment to the pursuit, discovery, creation and application of new knowledge and understanding  
- asking important and difficult questions and being bold in challenging existing paradigms and dogmas  
- regularly seeking to publish and disseminate their work through high-quality publications and where appropriate through engagement with key end-users  
- contributing to the core undergraduate and postgraduate curricula of their discipline(s), as well as supervising and helping to train higher degree by research students. |
| **Leadership**                    | Every researcher will aspire to develop a national and international reputation for outstanding research in their discipline, providing leadership at disciplinary, school, faculty, university and community levels, including:  
- helping to support and deliver key whole-of-university strategic objectives as outlined in the University’s Strategic Plan  
- helping to mentor students, (especially HDR students) and academic colleagues (at all levels) in order to enable them to achieve their career objectives and perform at the highest level possible  
- making an active and demonstrable commitment to sustaining a positive and dynamic research and workplace culture  
- where appropriate, helping to grow and support research teams and networks, as well as inspire collaboration that builds on both established and emergent research excellence. |
| **Engagement**                    | Our researchers will be committed to engaging with their disciplinary, faculty, university, national and international communities, including:  
- engaging with the research community in Australia and internationally to share research findings and continually learn from other researchers and research partners  
- where appropriate, engaging with the relevant stakeholders and end-users of their research, including industry, government, non-government organisations and local, national and international partners  
- where appropriate, engaging constructively in public debate on matters related to their research expertise through informed commentary and provision of impartial, expert advice (consistent with the University’s policies on public comment), to help inform public discourse and policymaking. |
| **Integrity and professional conduct** | Researchers at the University will embody the highest degree of research integrity. This includes:  
- abiding by the University’s Research Code of Conduct and research policies, including its ethics and integrity policies, as well as those of the national research funding agencies  
- understanding and applying the principles of responsible research practice, including regarding the dissemination of research findings, attributing the contributions and authorship of others, declaring sources of support, managing research data and managing conflicts of interest  
- interacting with academic and professional staff and students in a professional and collegial manner. This includes with regard to issues of research integrity, professional responsibility, project management and the sharing of knowledge. |
| **Cultural competence**           | Our researchers will display high levels of cultural competence, defined as the ability to participate ethically and effectively in intercultural personal and professional settings and be open to the many ways of being, doing and knowing, as well as looking for and understanding context. They will:  
- embody best practice with regard to cultural competence in their research activities, including the dissemination of their work and engagement with those communities for whom their work has significant consequences  
- where appropriate, take advantage of the opportunities provided for professional development and training provided by the University’s National Centre for Cultural Competence. |

2.0.1 Proposal to consider

**Proposition 1**

That the University adopt the qualities outlined in Table 1 as the core qualities of researchers at the University of Sydney. Further, that we use these qualities to guide the development, recruitment, and progression of our researchers and to provide a measure for the kind of contribution we expect our researchers to make to the University and beyond.
3 Innovation, experimentation and collaboration

We want to be a university that embodies openness, innovation, the testing of new ideas and pushing and stretching the boundaries of knowledge. Staff and students will be encouraged to experiment and innovate in research and teaching in environments where both success and failure are seen as part of the innovation and learning process. Achieving this will require new and flexible approaches.

As a way of seeing what this might mean practically, it is worth reflecting on the work to date of the Charles Perkins Centre, and the benefits that are already accruing as a result of the kind of approaches being developed there.

The centre, as a ‘strategic priority area for collaboration’ (SPARC), was conceived as a complex adaptive system, committed to enabling researchers to be ambitious, to collaborate, share, and engage more easily in research and education partnerships. The structure of the centre and its research framework emphasises encouraging researchers to find compatible expertise, thereby maintaining disciplinary depth and enabling them to gain breadth as well. This framework means diverse research project ‘nodes’ become the groups that define behaviours and culture within the centre’s overarching mission. The nodes, in turn, help to generate new approaches and knowledge, but are also encouraged to pursue other outcomes, including public engagement, entrepreneurship and commercialisation.

Is it working? Already the centre has been able to recruit a considerable number of outstanding researchers who would otherwise not have come to the University, attracted as they are by the centre’s mission and interdisciplinary focus. It has enabled more than $16 million in additional research grants and attracted more than $17 million in philanthropy throughout 2014-15. There were also more than 7000 undergraduate students in 70 units of study from seven faculties who were taught in the centre last year. It is a model that is undoubtedly beginning to generate the kind of intellectual and public engagement we envisaged when it was established. We can learn from the centre’s success – as well as its challenges.

We offer two further ideas to prompt reflection on how we might promote the kind of open and innovative culture we want to develop at Sydney.

3.1 The research-teaching nexus

The first idea proposes that we consider the ways our classrooms could become spaces for research innovation – places that bring staff, students and members of the broader community together to experiment and collaborate on new approaches to complex and pressing research questions.

The classroom can offer a more neutral and experimental space within which to try out new approaches and new methodologies than can sometimes be the case in other environments. The kind of deep, extended and informed conversation that occurs between genuine co-teachers from different disciplines (and/or sub-disciplines), along with a group of engaged and brilliant students, can trigger new thinking and perspectives on sometimes overly familiar disciplinary frameworks. We know this already through illustrations of this kind of experimentation already underway at Sydney in various disciplines – for example, in the innovative new unit of study being coordinated by the Charles Perkins Centre on obesity and diabetes, or the new Indigenous studies major developed by both Aboriginal and non-Aboriginal staff across the Faculty of Arts and Social Sciences, the Faculty of Education and Social Work and the Sydney Law School.

Co-teaching in these circumstances would become more than a mere rotation of lecturers. It would mean creating opportunities for colleagues from different disciplines to address fundamental problems and questions in new ways, collaboratively. This innovative learning environment could be established by groups of researchers coming together to propose new units of study that tackle ‘wicked’ problems, or multidisciplinary questions, in novel ways, open to as wide a range of students across the university as possible. The Education and Research portfolios would jointly sponsor and enable a limited number of these creative learning environments each year (using existing ‘shell’ units, or other flexible modes of delivery), aligned to promote and encourage the education and research priorities in our strategy.

This initiative aligns very closely with the proposals in 3.3.2 of the first education discussion paper, Developing a distinctive undergraduate education, regarding curriculum enrichment. It’s part of our commitment to encouraging curiosity, exploration and multidisciplinary approaches
across multiple fields of study. It would also provide students with a unique opportunity to integrate diverse forms of knowledge across disciplinary boundaries in addressing complex problems – exactly what we are asking our researchers to do in our faculties and multidisciplinary initiatives.

### 3.2 Supporting emergent research

The second idea concerns systematically identifying, testing and developing, in a staged and efficient way, new research ideas. We propose the establishment of a seed fund that the Senior Executive Group (SEG) Research Committee would manage, to invest in and develop new ideas at different scales.

The first stage of such a process might be to use a digital platform to crowd-source ideas from the University community. This platform would enable researchers to propose ideas and gain quick feedback and contribute to the development of others. From this transparent starting point, quite small investments could be made to start testing those ideas, a process that would then gradually increase the level of investment, and expectation, as each was developed and refined, in a stage-gated process. These ideas would begin to comprise a pipeline of new initiatives that could be explored, developed and positioned in the most appropriate ways, including for important external funding opportunities such as centres in the National Health and Medical Research Council and Australian Research Council programs, potential Cooperative Research Centres, or laying the groundwork for large-scale industry partnerships.

One important element of such an approach is that there would be no expectation of a linear progression of increasing scale. Each research activity would be considered distinct – a function of the people involved and their disciplinary cultures and perspectives. Some projects may have extended time scales and expectations for further development. Others could be more program and time specific. The aim is to encourage experimentation, innovation and openness, and to do so in ways that are as efficient and bureaucratically ‘light touch’ as possible.

Within this process, we propose to develop the next iteration of the Sydney Research Networks Scheme (SyReNS). There has been resounding support to reprise this scheme and we can do so now with greater external focus. New networks would be encouraged to bring together not only researchers at Sydney, but partners from the community, industry and government.

An important enabler for new projects is a scalable model and tools for collaboration. Such a model for the governance and operation of collaborative and multi-disciplinary research and education centres and networks, including SPARCs, is emerging not only through the Health and Medical Research (HMR+) project in response to the Health and Medical Research Strategic Review, but more generally across the University as our multidisciplinary activity grows. We need our models to be adaptable and scalable, to make collaboration as easy as possible – from the ground up, but including different modes and sizes of activity. An additional benefit of this model would be to increase the visibility and efficacy of much of our existing research where activity is dispersed and hard to ‘see’– both from within but also outside the University.

### 3.2.1 Proposals to consider

**Proposition 2**

That the University consider developing a mechanism for supporting new learning environments in which academic staff from different disciplines (and sub-disciplines) can seek support to develop and teach new units of study that tackle key questions or problems in innovative, multidisciplinary ways.

**Proposition 3**

That the University develop a scalable model and tools for collaboration including a digital platform for sourcing new collaborative research projects that would be used to identify potential new research initiatives, including developing the next iteration of the SyReNS scheme to support multidisciplinary, industry and community collaboration.
If we are to develop and sustain the kind of research culture that supports research excellence, then we will not only need to recruit outstanding researchers to Sydney, but develop, nurture and support researchers who are already here. We will need to ensure there is a virtuous circle between recruitment and development: the very best people will want to work with us because we have a great culture within which they can do their best work.

Developing researcher excellence begins with how we train and support our higher degree by research (HDR) students. Sydney has one of the largest higher degree by research (HDR) cohorts in Australia (16 percent of the national share). We need to provide the best possible training for them – for their sake and ours. They are our future research leaders, both in Australia and globally. They also form an important part of our overall research culture.

HDR training is a period during which students transform into researchers. Supervision and mentorship are critical to this transformation. And because research students are also a critical part of our research activity, instilling in them the qualities and skills we aspire to more generally in research is vital for both their careers and the University and society as a whole.

HDR students are therefore simultaneously a research-intensive and externally engaged aspect of the University’s educational mission and an education-intensive component of the University’s broader research ecosystem.

For these reasons, this section, and the proposals that follow, are a joint product of the Education and Research portfolios. We have already emphasised how a truly great university has, at its core, a deep commitment to excellence in both research and teaching. Our vision for research training is an important manifestation of that commitment.

2 Oversight of HDR strategy and policy at the University of Sydney sits within the Education portfolio, and a new Director of Graduate Research role, reporting to the Deputy Vice-Chancellor (Education), will lead University-level development and implementation of HDR strategy, policy and academic co-curricular programs supporting the HDR experience. At the same time, the Education portfolio, and the new director, will work closely with the Research portfolio to ensure mutual support and alignment of our research training strategies.
4.1 Higher degrees by research at the University of Sydney: current state

Distribution of HDR students across degree types and fields of research

Table 2 sets out current enrolments in HDR programs by type and compares the distribution of enrolment by HDR type at the University of Sydney to the distribution nationally.

Table 2. HDR enrolments 2014

<table>
<thead>
<tr>
<th>HDR type</th>
<th>2014 University of Sydney domestic load in EFTSL (as at 31 August)</th>
<th>2014 University of Sydney international load in EFTSL (as at 31 August)</th>
<th>2014 University of Sydney total load in EFTSL (as at 31 August)</th>
<th>% of total HDR load in EFTSL at the University of Sydney (2014)</th>
<th>% of national HDR load that are of this type (2014)</th>
<th>% of national HDR enrolments of this type (2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master’s by research</td>
<td>603.3</td>
<td>112.8</td>
<td>726.1</td>
<td>19.8%</td>
<td>29.2%</td>
<td>13.8%</td>
</tr>
<tr>
<td>PhD</td>
<td>2250.8</td>
<td>683.0</td>
<td>2933.8</td>
<td>80.2%</td>
<td>14.6%</td>
<td>7.1%</td>
</tr>
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</table>

There are three noteworthy features of HDR enrolment patterns at the University.

The first is the strong concentration of enrolments in some high-cost areas of research (see below, table 3). The Examining the Full Cost of Research Training Report surmised that large, research-intensive institutions undertook this more expensive research because they have the expertise and infrastructure required to do so.

The second is the relatively high current HDR load at the master’s level, accounting for 29.2 percent of the national master’s by research load. This is partly explained by the popularity of these degrees in the health area, although master’s by research degrees are also often used as an introduction to research and a potential pathway to a doctoral degree.

The third noteworthy feature of Sydney’s HDR profile is the high proportion of full-time HDR students at Sydney relative to total national load and total enrolments (as the final two columns of Table 2 make clear).

Admission to HDR programs and access to scholarships and stipends for HDR programs at the University is driven by the academic merit of the applicants, subject to availability of supervision and scholarship support. A consequence of this approach is that the distribution of HDR students across fields of research is largely a function of the demand of well-qualified students, moderated by supervision and scholarship availability.

In other words, the distribution of HDR load is not directly guided by University or faculty-level research strength or strategy, nor by broader systemic needs within higher education, industry, community or government. Our view is that this situation requires reconsideration. We are clearly ‘overweight’ in some areas, relative to overall research activity, and underweight in others. But further analysis will be required to understand more fully these ratios, especially with regard to the underlying quality of the research areas within which our HDR students are located.

3 See docs.education.gov.au/documents/examining-full-cost-research-training

4 A revised internal allocation formula for the Research Training Scheme was agreed by SEG in 2013.

5 Though scholarships supported by competitive research schemes arguably build researcher excellence and national priority into the scholarship availability.
In Table 4, we compare the distribution of Field-of-Research (FOR) codes for our HDR and UG student cohort, with FOR codes for the research activity of academic Teaching and Research and Research-Only staff, as well as with 2012 Excellence in Research Australia rankings for those FOR codes.
4.2 HDR programs: funding issues and the ‘tragedy of the Research Training Scheme commons’

Commonwealth funding
Funding of HDR programs is complex, depending heavily on the allocation to the University from two fixed block grants from the Australian Government: Research Training Scheme (RTS); and Joint Research Excellence (JRE). Allocation of these grants relies partially on weighted HDR load, a 30 percent driver for JRE, and weighted HDR completions, a 50 percent driver for RTS, as well as on other drivers and a number of rolling averages and smoothing factors. Although the University of Sydney received the largest share of RTS and JRE in 2014 in Australia, many institutions are growing their HDR loads rapidly and this has led to a substantial dilution of RTS and JRE per EFTSL over the past few years, given no growth in the RTS pool except through indexation. This ‘tragedy of the RTS commons’ is illustrated by Figure 1, which charts the decline in RTS per student as the total national HDR enrolment grows.

Figure 1. RTS funding per student 2002-2013 (Source: Universities Australia)

The decline in per student funding is likely to continue given the current upward trajectory of national HDR load and the reduction in research block grants that is built into the government’s budget forward estimates.

Costs and fees
While HDRs bring evident direct and indirect benefits to the research output and research milieu of the University, it is also important to understand their costs. These costs vary by discipline and by student, depending on the nature of the research project, and are not readily identified. However, the Examinining the Full Cost of Research Training project in 2011 revealed that the best approximation of the typical HDR cost in any faculty (excluding scholarships and capital expenditure) is the full-time international student fee.\(^6\) It should be noted, though, that about one-third of all international HDR

\(^6\) Examining the full cost of research training, Department of Innovation, Industry, Science and Research (July, 2011)
student fees are actually paid by the University as fee scholarships (32.6 percent of all international HDR fees, over $4.7 million, were paid by the University in Semester 2, 2014). In addition, domestic students who exhaust their notional funded entitlement (two years full-time equivalent for a master’s degree, four years for a doctorate), are currently charged a zero fee. In 2014, 9.2 percent of our domestic HDR load had exhausted this maximum entitlement.

Scholarships
Scholarships are an important way in which the University supports students to undertake their candidature on a full-time basis. The University of Sydney has one of the largest stipend scholarship programs of any institution in Australia. In addition to having the highest number of new International Postgraduate Research Scholarships (IPRS) in the country (33 in 2014), and the second highest number of new Australian Postgraduate Awards (APA) (345 in 2014), with a total 2014 spend on Commonwealth scholarships in excess of $30 million, in 2014 the University also funded more than $10 million in centrally funded scholarships and more than $10 million in faculty-based scholarships (including non-established stipends funded through external research grants).

About 70 percent of full-time HDR students are currently in receipt of a stipend scholarship paid through the University. And yet there is often a general sense across the University, and externally, that we are not doing enough to support our HDR students.

4.3 The higher degree by research experience at Sydney

2011-15 Strategic Plan Initiatives
The 2011-2015 Strategic Plan identified as a key initiative the formation of a four-year PhD that would provide a broader and enriched experience, yielding better preparation for the PhD research project as well as for careers to follow. The proposal to introduce the four-year program was not pursued, primarily for budgetary reasons, but an alternative proposal – to support the identification and delivery of each PhD student’s research training needs – was endorsed.

The Research Training Needs Analysis is being implemented across the University. A key question for implementation is how to resource and organise the development and delivery of learning experiences that meet commonly identified research training needs. Supervision policy has also recently been revised, and now includes provision for co-supervision and panel supervision, as well as a revised and broadened training program for supervisors. A refreshed policy framework and a more centralised set of administrative procedures are under continuing development to ensure more seamless and effective processes for HDR candidature management.

There is evidence, nonetheless, that attention to the concerns that originally sparked the proposal for a four-year PhD is still required.

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7 Advice from faculties in 2011 suggested some demand for: research ethics; general and specialised topics in research design, research methods and data analysis; data management; project management; practical research skills including laboratory and specialist analytical skills, and health and safety; career management; thesis writing, writing for publication and oral communication skills; and specialised topics in relevant disciplines.
Student views
The recent strategy survey reveals that a substantial proportion of the HDR cohort is still seeking further opportunity to build skills and knowledge. Moreover, national surveys such as the Postgraduate Research Experience Questionnaire (PREQ) completed about four months post-graduation, suggest that while University of Sydney HDR graduates are positive about their HDR experience, they are less positive than their graduating HDR counterparts nationally. Fortunately, the Sydney Research Experience Questionnaire (SREQ) taken biennially by current HDR students indicates some pleasing signs of improvement in similar measures, but we clearly still need to develop creative ways to enrich the HDR educational experience and outcomes, especially those of the PhD.

Staff views
A paper released to academic staff in October 2014 by the Deputy Vice-Chancellor (Education) sought feedback on how best to enrich the intellectual environment for HDR programs as well as on the value of offering more effective professional learning support to HDR students undertaking sessional teaching roles. Feedback on the paper offered strong support for an enriched HDR experience, particularly for the PhD. Among the main issues that emerged (echoing earlier surveys) included:

- the need to provide greater breadth and contextualisation for the PhD, including the ability to master both core methodological and specialist skills within their broad field of enquiry
- more cohort engagement activities
- the need for more preparation for post-PhD careers, including broader skills development around research integrity, communication, teamwork and leadership
- more professional development for teaching roles.

Colleagues in professional faculties have emphasised the need to create pathways to the PhD not only for students coming back to university after a period of employment, but also for those early in their careers trying to balance the attainment of professional experience and qualifications with research training.

The Student Recruitment team has also identified a number of issues affecting our capacity to attract well-qualified HDR students. At the international level, they report difficulties in recruiting sponsored students because: the students rarely meet our current PhD entry requirements even though they may be master’s-qualified, and the students’ funding arrangements are generally not sufficiently generous to cover both an MPhil and a PhD program. These observations suggest the value of clear, visible and accessible pathways to the PhD.

Finally, there was concern that we needed to find a way to address the problem that there is currently no satisfactory, agreed funding mechanism for HDR coursework. This is a problem in need of rapid resolution.

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8 The survey was undertaken in March-April 2015. Of the respondents: 83% were PhD students; 23% were international; 77% were studying full-time; and 31% were also engaged as staff members.

9 For the item, I would value the opportunity to undertake some relevant coursework and specialist skills development as part of my degree, 75% of HDR students agreed and only 5% disagreed. Likewise, in response to I would welcome the opportunity to take units of study offered by faculties/schools other than the one in which I am enrolled, 75% agreed and 5% disagreed.

10 The 2013 University of Sydney/national scale scores for the PREQ were: Supervision 77%/81%; Infrastructure 75%/70%; Intellectual climate 62%/68%; Generic skills 92%/94%; Thesis examination 86%/82%; Overall satisfaction index 85%/87%. 2014 University of Sydney outcomes were broadly similar to 2013 Sydney outcomes.

11 SREQ outcomes were generally 2-4 percentage points higher in 2014 compared to 2012.

12 The paper and a brief summary are available at: intranet.sydney.edu.au/news-initiatives/education.html

13 The master’s program may not have the 25% research component required for PhD entry.
4.4 Strategic issues for the University of Sydney

These observations raise a number of strategic questions for the University. Where should we focus our HDR efforts? How can we ensure that our HDR programs serve both the educational and research missions of the University? What are our preferred pathways to the PhD?

Size and shape of HDR programs

Our current implicit strategy for HDRs is to maximise HDR activity subject to scholarship and supervisor availability. But we need to think more strategically about the form of the University’s HDR programs. Some important questions therefore include:

- What is the desirable number of HDR enrolments and the optimal strategic mix of enrolments at master’s and doctoral level?
- Should the focus for scholarship support be primarily at PhD level, while also supporting sufficient master’s by research places to meet equity and diversity needs and other strategic purposes?

Alignment with education and research strategy

From an educational perspective, we seek to offer programs of the highest quality that yield excellent outcomes for both graduates and the national and international sectors in which they will work. From a research perspective, we seek to draw on our research strengths to build outstanding research capacity for the future, contributing at the same time to the excellence of the University’s research endeavours.

We should consider whether this means a greater focus on areas of research strength as the research environments in which our contribution to researcher development can be most effective and therefore should be most concentrated.

For example, a proportion of centrally allocated research scholarships could be untied and allocated by merit to the top applicants in the whole-of-university ranked list; the remaining proportion could be allocated to fields of research or targeted HDR activities of demonstrated excellence, and/or strategic priority (for example, in support of strategic partnerships, multidisciplinary initiatives or other strategic priorities). The whole-of-university ranked list could still be used for the remaining scholarship allocation, but a scholarship would only be allocated where it was available and where applicants met a pre-determined threshold of excellence.

Over time, this approach should have the effect of building a greater concentration of HDR activity in areas of research strength/priority, and hence a closer alignment of research strength and researcher development activity.

Pathways to the PhD

The long-standing national debate on preferred pathways to the PhD has been stalled for some time, and rather than wait further on its resolution, there may be value in identifying the University’s preferred position and exploring an institutional solution with the Commonwealth. We should therefore assess:

- What are the University’s preferred pathway(s) to the PhD? In particular, should we develop a research-track master’s coursework pathway given that it could meet the demand for depth and breadth of coursework for HDR students? If so, should the master’s program be 72 credit points and 1.5 years in length? If the latter, could an accelerated program be offered in a single calendar year utilising summer and winter, or two summer, semesters as well as the two standard semesters?
- In the context of the proposed four-year option for undergraduate liberal studies degrees, should we develop a vertical liberal studies bachelor’s/research-track master’s coursework degree that could sit alongside honours as a PhD pathway? Importantly, could it attract Commonwealth Supported Places?
- In addition, and in the context of the proposed four-year option for high-achieving students, could we offer a 216 credit point (4.5 EFTSL) vertical double bachelor’s/master’s degree in four calendar years for high-achieving students, with acceleration of 24 credit points (0.5 EFTSL) over the course of four years (that is, an acceleration of 6 credit points per year)?
- For bachelor’s and master’s graduates who do not meet entry requirements for the PhD, should we also offer the 72 credit point research-track master’s program as the preferred qualifying pathway to the PhD? Where relevant should we also offer a vertical double 216 credit point (4.5 EFTSL) research-track master’s/PhD degree, suitable for both international and domestic students, in which the research-track master’s program is the same as for the stand-alone and bachelor’s/master’s double degree suggested above?

14 The Department of Education has nonetheless flagged its intention to return soon to consideration of (a) CSP places for graduate coursework programs and (b) research training as a part of the national research system. Both of these activities will be relevant to the current discussion.
In all of the proposed double-vertical degree arrangements, there could be an option to exit with the first degree only.

The PhD experience and PhD learning outcomes
Vitally important, too, is the PhD experience itself and the outcomes it yields. Following on from the feedback from students and staff summarised above, some of the key issues include:

− How can we most effectively enrich the PhD experience for students, ensuring an intellectually enriching environment and access to support for skill and further development and through what further means we can best add intellectual depth and breadth to the PhD experience? Should we also encourage participation in additional seminars, workshops and discussions, not just within the field of enquiry but also in areas of contemporary interest and concern, including in interdisciplinary domains? These additional resources and workshops might focus on providing PhD-level enrichment of the Sydney researcher qualities developed above. Important domains might include, for example, a range of methodological skills, communication skills, fundamentals of project management, fundamentals of commercialisation, entrepreneurship, research integrity, effective teamwork, mentoring skills and leadership development.

− Given the increasing flows of PhD graduates into non-academic careers, can we do more to prepare students to make productive transitions post-completion of the PhD or post-doctoral fellowship? Can we support students to spend more time in relevant industry or community settings, providing opportunities to develop and build skills for alternative career pathways? Do we need, as an institution, to develop more expertise in supporting transition to non-academic pathways?

− Can we develop more systematic support for international mobility experiences for PhD students (for example, international visits, short courses, conference attendance) to accelerate connection to international expertise and networks in students’ fields of study?

− Can we streamline and improve arrangements for dual degrees with our leading global partners?

4.4.1 Proposals to consider

Proposition 4
That the University move to focus HDR programs more strategically by:

− prioritising general HDR scholarship support at the doctoral level as the University’s preferred degree for researcher development

− developing a model in which a proportion of University-wide HDR scholarships are allocated on merit, but also in areas of agreed research strength/priority and subject to meeting a pre-determined standard of excellence.

Proposition 5
That the University develop a 72-credit point (1.5 EFTSL) research-track coursework master’s degree as the preferred pathway to the PhD. Options should be developed to offer the master’s degree:

− as following a bachelor’s degree
− as part of a 212 credit point 4.5-year vertical double bachelor’s/master’s degree for a 3-4-year bachelor’s degree and a 1.5-year (72 credit point) master’s degree, with the potential of cross-crediting of 48 credit points from the master’s degree to the bachelor’s degree where the bachelor’s degree is a 4-year (192 credit point) liberal studies program
− a 4.5-year 212 credit point vertical double master’s/PhD degree.

Options for acceleration should be developed for:

− a bachelor’s/master’s program for high-achieving students that can be completed in 4 calendar years

− an accelerated master’s program that can be completed in 14 months or less, through use of summer and winter semesters

− a master’s/PhD program that can be completed in 4 calendar years.

15 In 2015, a number of new initiatives are in place including: a new professional learning program for sessional teachers (many of whom are HDR students); new schemes for student and staff-led HDR enrichment initiatives; and a pilot Statistical Consulting Service funded through a Deputy Vice-Chancellor (Research) project.

16 It is not intended that programs with equity and diversity goals be adversely affected by this broad focus on the PhD.
Proposition 6

That the University consider the following options for an enriched PhD experience to deliver the University’s proposed graduate qualities at PhD level:

- An open HDR learning environment for specialist skill development offering:
  - resources, available openly and on demand to all HDR students, developed with funding allocated centrally on a competitive basis
  - workshops, subject to need and availability; areas to be covered might include: ethics, research integrity, intellectual property, methodological skills, communication skills, fundamentals of project management, fundamentals of commercialisation, fundamentals of research translation, entrepreneurship, effective teamwork, teaching, consulting, leadership development, data and record management, workplace health and safety.

- A more rigorous progression framework to support and guide students towards a successful and timely completion of their degree, including satisfactory completion (pass/fail) of two PhD seminars as part of the PhD confirmation requirement.

- The development of a tailored virtual environment to support the University’s HDR students, including in their capacity as researchers and sessional teachers.

Proposition 7

That the University simplify its arrangements for joint PhD programs by:

- identifying a set of universities and a set of applicable conditions under which joint PhD programs could be pre-approved
- developing a policy to cover the establishment, operation, monitoring and disestablishment of such programs
- developing a process by which the set of universities to which these processes apply could be extended or contracted.
The central theme of this paper is building a culture of research excellence. One aspect of our strategy is to improve the quality of our research training. But another equally important element is to find new ways to develop the capacities of our staff. A successful culture, ultimately, comes down to the quality of the people doing the research, as well as the ambitions and expectations we set for ourselves and the support provided to help achieve them.

As a general principle, we need to take a holistic approach to the professional development of our researchers – and all of our staff.

To achieve the kind of research excellence we described in the first research paper, and to develop the core qualities outlined above, we need to put in place new initiatives for researcher development, as well as continue to support those that are already in place and working well. These qualities form the basis for a clear set of expectations and support mechanisms to ensure we foster, celebrate and reward excellence across the researcher lifecycle – from recruitment to induction, confirmation, promotion and recognition.

Of course, an important part of academic development is ensuring an appropriate balance between research and teaching. Given the way that Australia’s higher education system is funded, as well as our fundamental commitment to providing the highest quality education possible for our students, all academic staff – including those on research fellowships – need to contribute to the teaching mission of the University. We will need to monitor academic workloads constantly in light of the changing demands of teaching and research to ensure we can maintain both research and teaching excellence.

A Sydney model for researcher development

Our model for researcher development brings together, for the first time, a whole-of-university scheme with the work being done in faculties and other parts of the University. The model will align our development programs with our proposed qualities, which will in turn drive the Academic Performance and Development (APD) scheme and the academic promotions policy.

The aim is to build on and complement excellent work already being done to develop researchers across the University, but also to do more, and to do it better. Current activity is heterogeneous, but includes the development of skills in grant and publication writing, industry and community engagement, project management, mentoring, collaboration and running research incubator programs. Our university-wide program will seek to incorporate these elements, as well as developing the tools and mechanisms for building new collaborations described earlier in this paper.

Central to this program will be the nurturing and growth of leadership skills in all of our researchers. Our staff and student survey both affirmed the need for such development, and also gave an indication of the kinds of skills colleagues want to see developed. Respondents said that the three most important qualities for leadership are:

- inspiring and motivating others (37 percent)
- clear communication (33 percent)
- enabling, developing and coaching others (30 percent overall; but the second-ranked quality overall by female staff).

Together with continuing to refine our APD process, there is also need to ensure there are effective, well-communicated performance-management tools and training to manage research and teaching under-performance actively. The APD process needs to become deeply embedded in our institutional practices, encouraging a feedback-rich environment, and setting clear expectations for high-quality performance, aligned with our core qualities and goals across research, teaching and academic leadership.

Another key element of our approach must be to use the opportunities for development that come through effectively led groups and networks, both within faculties and centres and across them. The more opportunity our researchers have to be part of a dynamic, well-led and high-performing group or network – within which they can access increased mentorship, support and resources – the better our research culture is likely to be.

There is a wide variety of models and scales for collaborative groups and networks across the University, and much successful practice to learn from – for example, through our Laureate programs, SyReNS scheme and faculty initiatives – in supporting early and mid-career researchers, increasing diversity, and challenging and pushing colleagues to do the best work they can.

We need to develop a systematic approach for supporting and encouraging the formation and support of high-performing groups and networks as part of our commitment to pursuing research excellence.
We turn now to some of the specific schemes and activities we propose as part of our development program.

**Sydney outstanding researcher program**

We propose two new fellowship schemes:
- one for early-career researchers (ECRs)
- one for mid-career researchers (MCRs).

These schemes will acknowledge, celebrate and nurture high-performing researchers, providing a mix of teaching support, mentoring, professional development and targeted career development to help improve the quality and impact of their research. These programs will be Sydney's flagship researcher development schemes and will seek to attract, inspire, retain and continually support our most talented academic staff.

The focus of the proposed schemes will be to offer fellows an integrated and individualised career development plan over a range of time periods (from one semester up to two years), accompanied, where appropriate, by additional research and teaching support.

The career plan would contain agreed development activities that may include coaching, shadowing senior research leaders, attending conferences, building or strengthening collaborations by visiting others or hosting visitors, media training, skills development for engaging with industry or government, leadership development and/or further professional development.

The plan would be established with the head of school to define the fellow's workload of teaching, administration and other school activities during the period of the fellowship. A separate development fund per fellow would be set aside to enable the activities specified in the plans.

A trained academic mentor would be appointed for each fellow, with the understanding that other short-term or specific mentoring advice may be sought from other senior leaders within the University, or externally. Regular coaching sessions with fellows to monitor progress and refine and update the development plans would also be provided.

To support the fellows to focus on their research goals, their faculties or schools would be offered additional funds to cover teaching and administrative support (for academics in teaching and research roles), for a specified period during the fellowship.

Both ECR and MCR fellows would be offered additional research funding. The fund would not require the researcher to propose a new project or program, but would be provided to enhance and expand the fellow's existing work, and to offer increased support to allow the achievement of the agreed research and career goals.

The MCR fellowships will be open to academic staff at Levels B, C and D, with teaching and research or research-only appointments spanning at least the duration of the award. The ECR scheme would be open to staff who are no more than 10 years post-PhD (with appropriate consideration given to career breaks and other interruptions).

The selection process would be developed through consultation with faculties and centres, but in general will be evidence-driven and based on the measures of research quality and potential appropriate to the relevant disciplines. We anticipate the program growing to support up to 25 colleagues per annum.

**Embedding our qualities and values**

Another important enabler of researcher development is to ensure we align the major milestones of the researcher lifecycle with our expectations for research excellence and researcher qualities.

As part of our recruitment process, for example, we ought to seek not only the highest performing people against the specific requirements of the role, but also against the researcher qualities outlined above. Similarly, the qualities should provide the basis for a fresh approach to academic performance assessment, including confirmation, promotion and other mechanisms for recognition and reward.

In our multidisciplinary initiatives we have begun to capture and recognise the value of participation in highly collaborative and cross-disciplinary research (and understand how best to do that). Among the key outcomes and qualities this process has identified are:

- generation of non-category 1 research income
- engagement in public debate and with external organisations, including engagement with industry and commercial development
- research leadership more broadly, especially the commitment to the development and mentoring of other researchers.

We need to find ways to make these qualities generalisable across the University as a whole.
With our commitment to social inclusion and cultural competence – as part of a deep, underlying commitment to diversity and respect for others – staff will be expected to engage in their research in ways that respect and uphold these values. We will provide opportunities to build skills in cultural competence through the National Centre for Cultural Competence, and recognise outstanding examples of cross-cultural and community-engaged research.

Recognising outstanding leadership among our professoriate

Working closely with the Office of the Provost, we propose a new level of recognition for our most senior academics that emphasises the value and importance of outstanding academic leadership.

The aim of this initiative is to recognise academic staff at Level E who have made truly outstanding and sustained contributions to academic work in their disciplines (including the support and mentoring of staff), but also demonstrated exceptional leadership beyond their disciplines and faculty that contributed to improving the overall success of the University across a range of areas.

This recognition – in the form of a distinct professorial title and financial and/or research support (for a fixed period of time) – would acknowledge our outstanding senior academic leaders who exemplify our core qualities. These professorships would mark out for special recognition the outstanding contributions of a select group of senior colleagues who, in turn, would help support and develop the very same qualities in others.

Recognising research excellence

We need to change the way we recognise truly outstanding performance. The results of the staff and student survey show that researchers want more opportunities to have their contributions and those of their colleagues recognised and celebrated. There are many ways to do this and at varying scales. Already, schools and faculties do this well through local communications and events, but where we can improve and send even stronger signals is at the University level.

In addition to finding more ways to recognise and celebrate success, we propose a new awards scheme for research excellence. These awards would stand alongside the existing Vice-Chancellor’s Awards for teaching excellence as part of a reimagined, high-profile university awards scheme. Areas of activity that might be recognised would span from early career researchers (including PhD students) to our most senior researchers and research teams. Across those groups we could recognise the creation and pursuit of new knowledge:
- a groundbreaking discovery or insight
- an exceptional publication
- the translation of research into extraordinary community or industry outcomes
- exemplary collaboration
- truly outstanding contributions to public debate and education.

The aim of these awards would be not only to recognise the achievements of individuals and teams, but to celebrate and promote the research ambitions and achievements of the University as a whole, and to reinforce the values and qualities that characterise our research mission more generally.

Increasing the representation of women in research and supporting women’s academic careers

Our researcher development program will continue to support increasing the representation of women in research at the University, building on the work begun over the past few years. We won’t achieve our vision for research excellence if women at the University are not provided a genuinely equal opportunity to succeed.

We already have outstanding female leaders across the University – including in the Senior Executive Group (SEG), our faculties, schools, disciplines and research institutes – and we need to support these colleagues, as well as encourage more women to take on leadership roles, and for men to support this ambition.

Over the past three years we have put in place a number of policies and strategies to address gender equity, including our Women’s Career Acceleration and Leadership Strategy, designed to increase the representation of women at all levels of the organisation, address the gender pay gap and further develop flexible working arrangements. We are working closely with the Science in Australia Gender Equity Forum, hosted by the Australian Academy of Sciences, and have been awarded the pilot of the Australian version of the Athena Swan Charter scheme, to begin in August 2015.

The Science in Australia Gender Equity Forum is co-chaired by one of our three female Australian Research Council Laureate Fellows, all of whom have not only been recognised as international leaders in their fields (mathematics, history and political science), but who have also earned additional awards from the ARC (the Georgina
Sweet and Kathleen Fitzpatrick Fellowships) to help promote women in research and to mentor and encourage female early-career researchers in particular.

The University has introduced a range of equity fellowships over the past five years, supported by the Research portfolio, that include the Brown and Thompson fellowships, which support researchers whose careers have been interrupted by sustained periods of caring duties, and which aim to promote and enhance women’s academic careers more generally.

Thompson fellowships are available to women at Levels C and D, with the aim of supporting them to apply for senior roles in the near future. In addition, the Faculty of Science and the Faculty of Arts and Social Sciences, for example, have support schemes that offer funding for teaching relief or research assistance for academics returning from extended periods of parental leave, and for childcare support to attend conferences and other research activities. These faculties and others also have programs that support and develop women at Level D to apply for promotion to Level E.

Other gender equity initiatives are also being delivered across the University by our human resources team, faculties and Deputy Vice-Chancellor portfolios. These include:

- the annual Women at Sydney Symposium
- a University-wide women’s research network, to begin in the third quarter of 2015, hosted by the Research portfolio
- the Faculty of Science’s Visiting Scholar Scheme for Women
- the WiSci (Women in Science) Project, which offers public lectures, networking events and promotions support for women from the Faculties of Science, Veterinary Science and Agriculture and Environment, and the School of Medical Sciences.

The exciting opportunity here is for our researcher development program to be the point of coordination for many of these activities – embedding them deeply in the research culture of the organisation. We also need to ensure that best practice is shared so that successful local programs can be adapted for other parts of the University, ultimately leading to consistent university-wide initiatives supporting women in research.

### 4.5.1 Proposals to consider

**Proposition 8**

That the University develop an integrated researcher development program for outstanding early career and mid-career academic staff, focused on developing the core qualities identified above.

**Proposition 9**

That the University develop a new professorial classification that recognises outstanding leadership across research, education and service.

**Proposition 10**

That the University develop a comprehensive recognition and award program for recognising exceptional performance in research and education annually.

**Proposition 11**

That the University continue to invest in and support recent initiatives to support gender equity and the research careers of women across the University.
5 Engagement

5.1 Community engagement

Our environment is shaped by our neighbours, collaborators, partner organisations and networks, local and global, spanning other research organisations, government and the public and private sector.

As we emphasised in the first research paper, a university such as ours has a moral responsibility to harness its research and teaching resources to serve the public good. Our staff, students, supporters and the broader community expect and deserve excellence in research. But we also need to find new ways of engaging with the communities for whom our research has important consequences, whether in the public or private sector, local or global.

What is distinctive about Sydney is the potential scope and range of the impact of our research and our ability to engage with a wide variety of communities. Our unique strengths in the humanities, for example, mean that our historians, philosophers, literary, cultural and language scholars have the capacity to shape public thinking and debate in deep and fundamental ways – not only in relation to our major cultural institutions, but also well beyond the daily froth of punditry and superficial analysis.

It is impossible to understand where we are going without first understanding where we have come from and who we are now. These are among the most important questions the humanities ask.

The new Faculty of Arts and Social Sciences Research Institute for the humanities and social sciences, planned as part of the development of a new faculty building, will provide a catalyst for this kind of engagement and activity by creating a common space and focal point for humanities and social sciences research.

Our multidisciplinary initiatives have been designed to help us engage in innovative ways with multiple communities and to take advantage of our extraordinary research breadth. They exist, in part, to help answer the questions that the communities most invested in their work want answered, but also for those communities to become involved in our research in a variety of ways.

For example, this public engagement – broadly conceived and encompassing a multiplicity of forms of engagement – is central to the work of the Charles Perkins Centre, the China Studies Centre, the Sydney Southeast Asia Centre, the Australian Institute for Nanoscale Science and Technology, the Brain and Mind Centre, the Sydney Environment Institute, the Marie Bashir Institute for Infectious Diseases and Biosecurity, and the Centre for Carbon, Water and Food.

This is also true of many other research activities across the University. The Conservatorium of Music, for example, is defined, in large measure, by its commitment to public engagement through diverse artistic forms and modes of performance. Moreover, there is often considerable crossover between research activity and academic professional practice more generally, especially (but not only) in the creative arts. The creative, critical, scholarly practices that underpin excellent research permeate wider aspects of our work – including our teaching, but also our engagements with the community and industry in myriad ways.

Similarly, as we made clear in the first research discussion paper, research into Aboriginal and Torres Strait Islander issues is already a priority for the University. There are two aspects to this.

First, there is research done at the university by Aboriginal and Torres Strait Islander researchers. We are committed to recruiting more Indigenous students and staff, including HDR students and researchers. Our research and education portfolios are working closely with the Deputy Vice-Chancellor (Indigenous Strategy and Services) and the National Centre for Cultural Competence, to support the strategies we are putting in place to achieve these goals – including the new Wingara Mura Academy aimed at recruiting and supporting Aboriginal and Torres Strait Islander HDR and early-career researchers.

Second, there is the work we do with Aboriginal and Torres Strait Islander communities across Australia, and in our region, to understand their needs and challenges so that we can jointly develop programs of research and education to address these challenges. This approach provides yet another source of advice and demonstration of best practice for how we can engage the whole University community in tackling the kinds of research questions to which these partnerships can lead.
Thus we are already beginning to position ourselves for new modes of community engagement. And there are further developments underway that can help us continue to do so.

For example, the recent Health and Medical Research Strategic Review signalled the benefit and necessity of our external partnerships and engagements, with a specific objective to:

“Facilitate research excellence and impact by making Sydney’s strengths in the (health-related) Strategic Priority Areas for Research Collaboration (SPARCs) highly visible to healthcare providers and industry, to expedite partnerships and opportunities for translation and commercialisation, and by making outstanding staff supported by state-of-the art research facilities the hallmarks of research excellence at Sydney.”

The implementation of this review over the past 18 months is starting to show the benefits of this focus. The National Health and Medical Research Council recently highlighted the impact and potential of our SPARC strategy when recognising Sydney Health Partners as among the world’s best exponents of translating research evidence into better patient care and health outcomes.

While there is great potential to strengthen community engagement through all of the collaborations that underpin Sydney Health Partners, particularly important opportunities are emerging in western Sydney, as the NSW Government invests heavily in the region, and as our partners seek to meet anticipated healthcare challenges by integrating education and research to help drive innovation.

The multibillion-dollar redevelopment of the Westmead precinct, currently underway, represents an enormous opportunity for the entire University to help develop new approaches to education and research-led community engagement to make a step-change in the health and economy of western Sydney. In fact, Westmead offers the University a base in western Sydney from where it can lead the development of a new vision and approach for transforming health and wellbeing.

We have been a core partner in the Westmead precinct for 45 years and have more than 800 staff and affiliates working there, along with more than 1000 coursework and research students studying there. The population around Westmead is projected to grow by almost 1 million by 2030, and clinical activity at Westmead is set to more than double. Westmead offers the University a unique opportunity to transform itself, by developing, with willing partners, a genuinely holistic, patient-centric approach to health in a region vital to the future of NSW.

Another exciting example is the emerging cross-University initiative in data science. Researchers from throughout the University with interests in data science and machine learning are coming together to drive fundamental research innovation in this broad discipline. They share a common desire to apply their collective capability to forging a new data-driven approach to discovery, modelling and prediction of complex phenomena in the physical, life and social sciences, collaborating with domain experts in those areas, with other institutions and with partners in government and industry faced with similar complex challenges.

The data science initiative as well as rapidly becoming a focus at Westmead is cohering data science research among NSW universities and in partnership with the State Government. At the heart of this program will be the development of the next generation of academics and professionals in this critical area. In short, the work will push the boundaries of knowledge in data science and machine learning. It will be inspired by major fundamental and societal challenges. It will be done collaboratively with other researchers in NSW, Australia and in leading international organisations, and in partnership with governments and the private sector. It has the potential to become the kind of whole-of-university commitment that pulls together the different elements of our strategy in an innovative and powerful way.


18 Sydney Health Partners is one of four Australian Centres of Research Excellence recognised as a new NHMRC Advanced Health Research and Translation Centre in March 2015 by an international panel and the National Health and Medical Research Council. The partnership comprises Sydney Local Health District, Western Sydney Local Health District, The Sydney Children’s Hospitals Network, Northern Sydney Local Health District, the University and affiliated medical research institutes.
5.2 Sydney Policy Lab

Another possible new initiative concerns our contribution to policy, broadly construed. The University has a wealth of policy expertise and experience spread across a wide range of faculties – including in the Faculty of Arts and Social Sciences, which hosts the Graduate School of Government, but also in the University of Sydney Business School, the Faculty of Education and Social Work, Sydney Law School, Sydney Medical School, the Faculty of Agriculture and Environment, the Faculty of Architecture, Design and Planning, and the Faculty of Health Sciences, as well as in many of our research institutes and centres.

However, our public profile for policy expertise is not as great as it should be, mainly because this expertise is dispersed and lacks greater visibility and connectivity. Moreover, the policy community – including state and federal governments, as well as the non-government sector – find it difficult to access our expertise and to work with us, given our organisational complexity.

Building on recent initiatives in the Faculty of Arts and Social Sciences, as well as in other faculties, we have a unique opportunity to develop a whole-of-university approach to our contribution to policy debates and policy studies, broadly construed. This could potentially enable our research expertise to inform policy debates, both domestic and international, as well as enhancing the overall profile of the University and our commitment to public service. It could also help draw out the policy implications of our various multidisciplinary and other initiatives, bringing together our research leaders with policy practitioners in the field, helping to translate our expertise into improving policy processes and outcomes in relation to some of the most challenging issues of the day.

One possible model is thus to create a Sydney Policy Lab as a virtual hub with the aim of harnessing policy-oriented research and expertise across the University. The lab would become the focal point of this work inside the University and a forum to bring researchers together through a common identity and research community, as well as provide external bodies – state and commonwealth governments, but also non-government organisations – clear visibility of our work and a single entry-point for accessing our expertise. It would send a strong message that Sydney wants to be more engaged with government and contribute to evidence-based, innovative policy development and implementation. It would enable and support our researchers to connect with public policy debates and contribute to the education of those in policymaking roles.

The lab concept is intended to facilitate building upon what is already in place. Initially we would create a community of policy-related researchers and HDR students, linking the various master’s programs with significant policy content, and building a much more visible and coordinated web presence and ‘shopfront’ to enable greater ease of access for the broader policy community.

Success here, as in other activities, would mean being recognised as the thought leader for policy research in Australia and the region, a preferred partner for state, federal and regional governments, and the preferred destination for students, staff and others interested in developing expertise in and understanding policy more broadly.

5.3 The ‘how’ and ‘why’ of our research

The discussion in this section raises some broad questions about what we might call the ‘how’ of our research, as compared to the more familiar ‘why’ we pursue the research we do. How do we evaluate the way we conduct our research in relation to these kinds of initiatives and activities? For example:

− Are we improving the wellbeing of the communities we work with?
− Are we reducing the incidence of disease or illness that we are studying?
− Are we improving policymaking, providing innovative solutions for our industry or community partners, and helping to broaden and deepen public debate?
− Are we engaging our community partners to help us conduct our research and holding ourselves accountable to these standards?

Evaluating the research performance of both large and smaller scale cross-disciplinary research activities – that span traditional University structures – is challenging but necessary. We need a framework that allows a comparison against the standard, recognised proxies we use to measure research. Critically, however, the only way we can know we are having the impact we say we want – the kind that is long-term, deep and profound – is to be able to capture or measure it against benchmarks that are publicly accountable to the communities for whom the research is most meaningful.
We propose that consideration be given to developing new measures that focus on our ambitions for active societal engagement and national and international impact. This will require considerable consultation across the University, as well as with our external and community stakeholders. For example, they need to encompass not only areas such as health or industry engagement, but also the humanities, creative arts and social sciences. What is exciting is that there are few universities as well placed as the University of Sydney to bring its disciplinary strengths to bear on questions of fundamental importance about which the communities we serve care most.

Two sets of questions are key to this process:

- **The ‘how’ of our research.** Do we respond actively to the questions being asked by the wider society, or simply present society with what we have ‘discovered’ and expect them to respond? Do we frame the questions we are addressing in active partnership with the community? Do we involve affected communities in the research itself?

- **Evaluation/measurement of success.** Have we got the requisite research expertise to make a substantial contribution to relevant research areas? How should we measure progress against our goals, as well as the quality of our outcomes? There are a range of potential mechanisms, case studies, emphasis on impacts on public policy, measures of active engagement with communities, measures of actual uptake of outputs by end-users, participation in active collaborative programs with relevant communities and participation in major national and international decision-making processes.

### 5.3.1 Proposals to consider

**Proposition 12**

That the University consider establishing a Sydney Policy Lab, designed to bring together policy expertise from across the University into a more visible and accessible structure that will enable a greater contribution to public policy development and a stronger profile for the University in this area.

**Proposition 13**

That the University develop a set of agreed, clear benchmarks and measures for evaluating its commitment and outcomes in relation to community-focused and community-led research.
5.4 Industry engagement

As we pointed out in the first research paper, the University has enjoyed some success in attracting industry funding across a range of different faculties (generally 2nd or 3rd place behind the University of Queensland and Monash University over the past three years). However, to improve on this performance, we need to examine our approach to industry engagement afresh.

Industry engagement - which we define broadly to include not-for-profit organisations that are working with the University in the capacity of an end-user, or as the commercialising party - can provide exciting perspectives and challenges for researchers that span both basic and applied research.

In fact, the distinction between applied and basic research is often overdrawn. There are many forms of basic research that can have extraordinary consequences for an industry or eventual user of a product, technique, policy or new perspective that emerges out of that research. The most successful companies are often most interested in the highest quality basic research for precisely that reason. At the same time, there are many cases where the problem presented by a community or industry partner can raise deep intellectual challenges, not only around the translation of basic research, but also for the basic research itself. We should aim to do research that is transformational in both of these senses. Two examples are:

- our fundamental historical and philosophical understandings of the nature of human rights can be transformed when we consider the social, cultural and institutional requirements required for their realisation. The University’s Master of Human Rights and Democratisation (Asia-Pacific regional program), which is funded in part by the European Commission, as well as our Social Justice Network (funded by the SyReNS program), brings together researchers from philosophy, sociology, political science and law to tackle these questions directly, as well as working with human rights and social justice organisations on the ground in Australia and Southeast Asia.

- the fundamental research at the interface between evolution and ecology, studying the life-history traits of native and invasive species that has led to major advances in conservation of endangered Australian fauna.

Industry can also be the proving ground and application domain for research discoveries in the University, bringing end-user knowledge, equipment and networks that complement our own. In this exchange with industry, we can demonstrate relevance to society by enabling growth of those industries. To do this well, we need to equip our researchers and students with the skills and confidence to interact with the world beyond academia, and to help them consider and articulate a possible path, however long, from basic research to some future impact on society.

If we succeed in engaging with industry, we will have the scope to attract and harness substantial additional resources to drive further research. Industry can provide resources that are as valuable as those from any other source and can support the highest quality research, while at the same time ensuring we are protecting academic freedom and the public value of our research.

Recognising the increasing importance of engagement with industry, the Vice-Chancellor recently established an Industry Engagement and Commercialisation Working Group (the group) with terms of reference to investigate the current status and deliver recommendations for industry engagement and commercialisation for the 2016-20 Strategic Plan.

The group identified a variety of exciting opportunities to help enable a step change in our engagement in industry-related activities. These include:

- establishing high-level, formal, consultative connections with national industry bodies and representatives
- improving levels of researcher awareness and/or understanding of principles of commercial interaction and intellectual property management
- acknowledging and supporting application-oriented research activities and associated revenue streams
- creating clear incentives for industry engagement with respect to researcher personal performance assessment and promotion.

To that end the working group has proposed a set of policy principles that ought to frame our engagement with industry. These principles state that the University should:

- be inspired, informed and challenged by industry, while maintaining a strong commitment to academic freedom: the University will undertake projects for the mutual benefit of the University and individual industry partners, and will maintain its ethical standards for excellence in unbiased published research and teaching.

- develop, enhance and sustain existing governance structures, while better connecting faculty and central procedures underpinning the Conflicts of Interest and External Commercial Interests Policies, and those related to industry-funded research
- use, and enhance as needed, the safeguards that already exist, ensuring the University controls the use of funds, the design of programs (including research or education) and the publication of findings
- continue to exercise its duty of care in supporting students and staff through industry/commercial engagements.

The high-level recommendations of the group form the core of a proposal for increasing industry engagement and commercialisation at Sydney. The group’s report will be released soon, but the key recommendations include:
- Establishing an integrated business development capability that coordinates and supports industry and end-user engagement across the University, ensuring coordination and alignment between the faculties and connecting the research and teaching objectives of the University.
- In line with our discussion of recognising outstanding achievement above, communicating and celebrating successes in industry engagement and commercialisation, including recognition for individuals, groups and faculties. Examples of success include:
  - new contractual engagements for research
  - licensing of project outputs
  - granting of patents
  - creation of spin-off companies.
- Establishing enhanced and specific metrics and related promotion mechanisms for achievements by staff in the areas of industry engagement and commercialisation. A range of potential mechanisms and actions are described, including recognising patent applications filed under the Patent Co-operation Treaty as equal to a peer-reviewed publication for purposes of performance assessment and promotion. These will drive culture change through incentivising activities such as a greater focus on ARC Linkage and NHMRC Development grant success.
- Establishing innovation and collaboration spaces for the co-location of researchers and industry representatives. We need to find practical ways of inviting our community partners to work with us, side by side, on campus – including not only industry but government, non-government and not-for-profit partners as well.
- Creating an Industry-to-Academia Fellowship scheme, to help break down some of the barriers between the two domains and encourage mutual engagement and learning. Fellows would be expected to spend a 6–12 month term in a host faculty, at 50 percent or greater appointment level, with activities to include assessment of existing and prospective external engagements with industry partners, and provision of input and advice to staff on development of further opportunities.
- Establishing organisational mechanisms to enable existing entrepreneurial units or courses of study to be available to all undergraduate and postgraduate students, as well as staff and research students, to support development of their engagement skills in such areas as communication, project management, cost drivers and commercial timescales. Further, the University will encourage extracurricular activities such as INCUBATE, the University of Sydney Union’s start-up company accelerator program.

5.4.1 Proposal to consider

Proposition 14

That the University endorse the core principles articulated by the Industry Engagement and Commercialisation Working Group and then consider and implement the recommendations proposed.
5.5 Global engagement

Our global research engagement strategy needs to align closely with our overall strategy for research excellence and multidisciplinary innovation.

A crucial part of what it means to be a truly global university is the extent to which our research not only addresses global challenges – whether in health, politics, cultural understanding or science and technology – but also the extent to which we engage with other leading global universities. By engagement we mean co-publications, joint research projects, staff and student exchange and mobility (including for HDR and undergraduate students) and participation in consortia and international networks.

There are at least four reasons global engagement is vital for universities today:

- First, the best universities have an important social and moral responsibility to harness their resources to address global challenges that other kinds of organisations cannot. We won’t be able to tackle climate change, global poverty or food security, for example, without taking a genuinely global perspective on these problems. To do this, we need not only to align our resources across the University, but also across Australia, our region and the world. The complexity and difficulty of these ‘wicked’ problems means that no single country, or even region, can solve them on their own.

- Second – and related – given the very nature of the way knowledge is developed and produced in our disciplines, we need to engage with the highest quality research partners wherever they may be in the world. Academic work is now deeply globalised – even work with a particularly local or national focus, such as Australian history, takes place within a broader global and often comparative framework. To do our best work we need to provide support for our researchers to access these international networks and resources. To publish and participate in the best journals, conferences, symposia, funding bodies and research networks requires being engaged across national boundaries.

- Third, it is becoming clear that major funding agencies, governments, foundations, as well as other partners in the public and private sector, expect universities to collaborate across borders.\textsuperscript{20} With declining public funding for research, we will need to ensure we are well placed to take advantage of especially large-scale funding that can be available for larger clusters of universities collaborating. In Europe, for example, the implementation of an agreement with French health funding agency INSERM to encourage PhD and postdoctoral mobility has enabled researchers from Sydney to work on joint research in France. In Latin America, the University’s success in schemes such as BecasChile and Brazil’s Science Without Borders program is linked to effective partnerships with foreign governments. In Southeast Asia, closer collaboration with overseas managing contractors has provided access to new funding opportunities in international development and capacity building.\textsuperscript{21}

- Finally, the reputational benefits of having constructive, strategic partnerships with leading global universities are very clear. They highlight the quality of the work we do, enable us to participate in high-value global research networks and thus reinforce the quality and influence of Australian higher education more generally.\textsuperscript{22}

5.5.1 Our current approach

Until recently, our approach to international partnerships mirrored our pattern of research investment discussed in our first research paper. We have tended to take an organic and sometimes ad hoc approach to international research collaborations. These partnerships have more often than not been driven by individual researchers or specific faculty needs without necessarily considering a whole-of-university perspective. In some cases, this is entirely appropriate. But for the reasons outlined above, this is no longer a sustainable approach.

Several parts of the University explicitly fund and support international engagement. The Office of Global Engagement (OGE), working closely with our regional advisory groups and faculties, allocates its modest resources across a range of countries and regions that have emerged as priority areas, including China, Southeast Asia, South Asia, Europe, and the Americas, and to a lesser extent Northeast Asia, the Middle East and the Pacific.

\textsuperscript{20} See for example the federal government’s Draft National Strategy for International Education: internationaleducation.gov.au/


In addition, the OGE aligns its International Program Development Fund for sending Sydney researchers overseas with those priorities and invites deans to rank proposals in relation to faculty priorities. The Deputy Vice-Chancellor (Research) offers a separate fund for international research collaboration to bring international visitors to Sydney as well as a range of other programs that often support international research activity. In addition, the Deputy Vice-Chancellor (Registrar) is responsible for an extensive team of international recruitment experts, working in regions across the world.

We have hundreds of Memorandums of Understanding and other agreements with universities around the globe. Many of these are education-focused, but include arrangements for PhD and staff mobility, as well as a limited number of research collaboration agreements.

To give a sense of this activity, including the countries and institutions with whom we are interacting most frequently, Figures 2 and 3 (opposite) provide a map of the density of our international research activities. These figures show that we are still overwhelmingly European focused in our research collaboration, despite increased co-publication and collaboration with partners in Asia.

If we look at this collaborative activity through a quality lens (using the ‘relative citation impact’ of publications as one measure of quality – though, of course, it is not the only one), we see that our collaborations in North America are producing work of a higher quality than in Europe – though much lower in volume. This might have to do with the quality of the partners with which we are working. Further analysis is required.
Figure 2: Number of collaborative publications and average Relative Citation Impact (RCI) over time.

Figure 3: Number of publications and average RCI across the world (the larger the dot, the higher the RCI).
5.5.2 A new approach

We propose that the University build on the recent work of the Office of Global Engagement and take a more strategic approach to our international research partnerships, as part of a more general strategy with regard to international engagement. In doing so, we need to draw on more of the kind of analysis shown above.

To begin with, the University has already clearly indicated, through establishing the China Studies Centre and the Sydney Southeast Asia Centre, that these are areas of global institutional priority. We have recently endorsed a new China Strategy\(^{23}\) that proposes a wide range of initiatives, including creating a multifunctional centre in China that will offer enormous opportunities for facilitating research engagement and collaboration. We need to ensure that our global research engagement strategy is aligned with these important University initiatives.

As a general principle, we need to develop strategic global research partnerships that will enhance and support excellence in research (and education). This doesn’t mean constraining individual researchers, research groups, schools or faculties from developing partnerships that they judge are important for their work. However, it does mean bringing more coordination and concentrated effort to those partnerships where additional discretionary investment from the University will yield great benefit.

We need to use the criteria developed for supporting research excellence in our first research paper for identifying our priority international research partnerships. These partnerships will involve more than simply student or staff exchange, but offer a deeper and more strategic level of engagement, including staff and student mobility, common research higher degree student pathways, postdoctoral fellows, joint teaching programs, common research programs and joint funding applications. We will use our existing investments in the China Studies Centre and the Sydney Southeast Asia Centre to seek out opportunities in Asia.

However, we can also focus on opportunities for global collaboration around the major global challenges at the heart of many of our multidisciplinary initiatives. The Australian Institute for Nanoscale Science and Technology, for example, has strong links with North American institutions that would suggest potential strategic partnerships. Other initiatives, including the Charles Perkins Centre and the Brain and Mind Centre, among others, present opportunities for strategic collaborations in many parts of the world in which we are already have burgeoning networks, or are seeking to develop new ones.

5.5.3 Criteria for our priority international research partnerships

Table 5: Criteria for selecting international partnerships

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<thead>
<tr>
<th>Attribute</th>
<th>Indicative criteria for investment</th>
<th>Criteria for international partnerships</th>
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<tbody>
<tr>
<td>Quality</td>
<td>- Existing excellence&lt;br&gt;- Emerging excellence&lt;br&gt;- Multiplier effect</td>
<td>- Existing excellence&lt;br&gt;- Emerging excellence&lt;br&gt;- Multiplier effect&lt;br&gt;- Complementarity of research strengths</td>
</tr>
<tr>
<td>Social impact</td>
<td>- Societal impact&lt;br&gt;- National and global priorities</td>
<td>- Societal impact&lt;br&gt;- National and global priorities</td>
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<tr>
<td>Reputational impact</td>
<td>- Opportunity to lead&lt;br&gt;- Recruitment of high quality UG and PG students and staff&lt;br&gt;- Potential to attract quality partners&lt;br&gt;- Rankings value</td>
<td>- Opportunity to lead&lt;br&gt;- Recruitment of high quality UG and PG students and staff&lt;br&gt;- Complementarity of research training strengths and opportunities&lt;br&gt;- Potential to attract quality partners&lt;br&gt;- Rankings value</td>
</tr>
<tr>
<td>Resources</td>
<td>- Availability of talent&lt;br&gt;- Likely availability of future funding&lt;br&gt;- Existing collaborations and partnerships and current scale of collaborations&lt;br&gt;- Positive existing research culture (in the discipline)&lt;br&gt;- Spend required to be number 1&lt;br&gt;- Opportunity to diversify funding</td>
<td>- Availability of talent&lt;br&gt;- Access to high quality research networks and capabilities, including industry and other partners&lt;br&gt;- Likely availability of future funding&lt;br&gt;- Existing collaborations and partnerships and current scale of collaborations&lt;br&gt;- Positive existing research culture (in the discipline)&lt;br&gt;- Spend required to be number 1&lt;br&gt;- Opportunity to diversify funding</td>
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Enabling mechanisms

The University needs to put in place enabling mechanisms to help international research collaboration flourish:

- We need to streamline and clarify responsibility for initiating and managing international agreements, a process that is currently dispersed and insufficiently coordinated.\(^{24}\)


We need a clear strategic partnership approval process that ensures faculties, centres and institutes can identify and inform strategic decisions about investment. SEG is considering new arrangements whereby the Office of Global Engagement will work even more closely with the Deputy Vice-Chancellor (Research) portfolio, including creating a new international research engagement fund that closely aligns funding for international research with the University’s research strategy.

We need the capacity to manage partnerships after they are established to ensure we are implementing the plans we have developed and to which we are committed.

We need a clear process for review and evaluation to ensure our partnerships are still productive and have delivered on the goals and outcomes we have set for them.

5.5.4 Proposals to consider

**Proposition 15**

That the University identify a limited range of priority international strategic partnerships over the life of its next strategic plan to help lift the global profile and position of the University aligned with our research and education strategies.

**Proposition 16**

That the University streamline and better embed the Office of Global Engagement’s activities and funding mechanisms in line with the Research and Education portfolios as a means of ensuring our international activities are supporting our core mission as a University.
6 Conclusion

In arguing for a new set of proposals to help build a culture of research excellence at the University of Sydney, we have explored three major themes.

- The first is the need for a holistic approach to how we support, develop, recognise and set expectations for excellence in research. We need to make sure we are not only recruiting outstanding researchers – including higher degree by research students, early-career researchers and senior academic leaders – but also investing in and supporting their development, as well as supporting colleagues who are already here. Our recruitment, confirmation, retention, promotion and performance-management processes need to reflect our unstinting commitment to research excellence. In particular, we need to find ways to support and develop academic leadership at all levels of the organisation, using the power of networks and groups to create communities of outstanding researchers pursuing collective projects that help lift the performance of everyone involved.

- The second major theme is a deep commitment to engagement with the many local and global communities that support us and have an enormous stake in the research we do. We need to ensure that we harness our research for the public good in such a way that takes advantage of our extraordinary breadth and multidisciplinary strengths. We need to recognise and support the outstanding achievements of our researchers who are already engaging in so many different ways with our communities, and encourage others who have the capacity and desire to do so as well.

- The third major theme, as in the first research paper, is the need for us to take a more strategic approach to how we invest our discretionary funds in relation to researcher development and engagement. Our efforts need to focus more on what is required to build a culture in which the pursuit of research excellence becomes embedded in all of our research activities. This means taking new approaches to funding higher degree by research scholarships, postdoctoral fellowships, researcher development programs and to our global research activities as well.

Underlying all three themes is the need for us to become a more innovative, experimental and open university, from the administrative processes underpinning our research programs to the way we seed and fund new ideas and projects.

Building a culture of research excellence is not something that happens overnight, or by mere proclamation. It requires a commitment to this aspiration on the part of each and every member of the University community to realise it. This discussion paper has set out a number of proposals for how we might begin to do just that.
6.1 Your contribution

We encourage you to take the time to consider the important proposals within this discussion paper, engage in the strategic discussions about them and contribute your feedback.

If you would like to respond to the propositions set out in this discussion paper, please do so by 18 September via
− sydney.edu.au/strategy

Should you require further time to submit feedback, please inform us via
− university.strategy@sydney.edu.au

There are many other ways to contribute your thoughts and ideas on these proposals. The University will also facilitate focus groups with staff and students. We welcome your participation and will invite you to these events as they are scheduled.

6.1.1 Complete list of proposals for consideration

**Proposition 1**

That we adopt the qualities outlined in Table 1 as the core qualities of researchers at the University of Sydney. Further, that we use these qualities to guide the development, recruitment, and progression of our researchers and to provide a measure for the kind of contribution we expect our researchers to make to the University and beyond.

**Proposition 2**

That the University consider developing a mechanism for supporting new learning environments in which academic staff from different disciplines (and sub-disciplines) can seek support to develop and teach new units of study that tackle key research questions and/or problems in innovative, multidisciplinary ways.

**Proposition 3**

That the University develop a scalable model and tools for collaboration, including a digital platform for sourcing new collaborative research projects that would be used to identify potential new research initiatives, including developing the next iteration of the Sydney Research Networks Scheme (SyReNs) scheme to support multidisciplinary, industry and community collaboration.

**Proposition 4**

That the University move to focus on higher degree by programs more strategically by:
− prioritising general HDR scholarship support at the doctoral level as the University’s preferred degree for researcher development
− developing a model in which a proportion of university-wide HDR scholarships are allocated on merit, but also in areas of agreed research strength or priorities and subject to meeting a pre-determined standard of excellence.

Conclusion
Proposition 5
That the University develop a 72-credit point (1.5 EFTSL) research-track coursework master’s degree as the preferred pathway to the PhD. Options should be developed to offer the master’s degree:
- as following a bachelor’s degree
- as part of a 212 credit point, 4.5-year vertical double bachelor’s/master’s degree for a 3-4 year bachelor’s degree and a 1.5-year (72 credit point) master’s degree, with the potential of cross-crediting of 48 credit points from the master’s degree to the bachelor’s degree where the bachelor’s degree is a 4-year (192 credit point) liberal studies program
- a 4.5-year 212 credit point vertical double master’s/PhD degree.

Options for acceleration should be developed for:
- a bachelor’s/master’s program for high-achieving students that can be completed in 4 calendar years
- an accelerated master’s program that can be completed in 14 months or less, through use of summer and winter semesters
- a master’s/PhD program that can be completed in 4 calendar years.

Proposition 6
That the University consider the following options for an enriched PhD experience to deliver the University’s proposed graduate qualities at PhD level:
- An open higher degree by research learning environment for specialist skill development offering:
  - resources, available openly and on demand to all HDR students, developed with funding allocated centrally on a competitive basis and
  - workshops, subject to need and availability; areas to be covered might include: ethics, research integrity, intellectual property, methodological skills, communication skills, fundamentals of project management, fundamentals of commercialisation, fundamentals of research translation, entrepreneurship, effective teamwork, teaching, consulting, leadership development, data and record management, workplace health and safety.
- A more rigorous progression framework to support and guide students towards a successful and timely completion of their degree, including satisfactory completion (pass/fail) of two PhD seminars as part of the PhD confirmation requirement.
- The development of a tailored virtual environment to support the University’s HDR students, including in their capacity as researchers and sessional teachers.

Proposition 7
That the University simplify its arrangements for joint PhD programs by:
- identifying a set of universities and a set of applicable conditions under which joint PhD programs could be pre-approved
- developing a policy to cover the establishment, operation, monitoring and disestablishment of such programs
- developing a process by which the set of universities to which these processes apply could be extended or contracted.
Proposition 8
That the University establish an integrated researcher development program for outstanding early-career and mid-career academic staff, focused on developing the core qualities identified above.

Proposition 9
That the University develop a new professorial classification that recognises outstanding leadership across research, education and service.

Proposition 10
That the University develop a comprehensive recognition and award program for recognising exceptional performance in research and education annually.

Proposition 11
That the University continue to invest in and support recent initiatives to support gender equity and the research careers of women across the University.

Proposition 12
That the University consider establishing a Sydney Policy Lab, designed to bring together policy expertise from across the University into a more visible and accessible structure that will enable a greater contribution to public policy development and an increased profile for the University in this area.

Proposition 13
That the University develop a set of agreed, clear benchmarks and measures for evaluating its commitment and outcomes in relation to community-focused and community-led research.

Proposition 14
That the University endorse the core principles articulated by the Industry Engagement and Commercialisation Working Group and then consider and implement the recommendations proposed.

Proposition 15
That the University identify a limited range of priority international strategic partnerships over the life of its next Strategic Plan to help lift the global profile and position of the University aligned with our research and education strategies.

Proposition 16
That the University streamline and better embed the Office of Global Engagement’s activities and funding mechanisms in line with the Research and Education portfolios as a means of ensuring our international activities are supporting our core mission as a University.