Higher Degree by Research Provision
– The value proposition for RMIT
Key points:

- Substantial, vibrant and high quality research training activity is a hallmark of success for all universities both within Australia and globally.

- The provision of this standard of training and support for the next generation of researchers is key to the growth, success and quality of research at RMIT.

- HDR candidates contribute to the research outputs of the university through their contributions to research teams and production of published works.

- Annually RMIT receives over $14m in block grant funding for HDR provision. This is awarded predominately on the basis of HDR completions, not enrolment load.

- It is imperative that we improve the rate of completion of our candidates.

- To achieve this level of quality RMIT must have the best programs for the best candidates with the best supervisors, and provide the best support for both candidates and supervisors.
Higher Degree by Research Provision
– The value proposition for RMIT

Overview

RMIT aspires to international excellence in research in its chosen fields, concentrated by theme and discipline, and aligned to and working with our global network of partnerships, industries and cities.

The Research and Innovation Plan 2011 – 2015 provides a roadmap for increasing the quality, scale and impact of the University’s research activity and outcomes. It is acknowledged that although RMIT is an institution with a long history, we are still relatively new to research and research training and have the potential to significantly grow and improve in this area as our research culture develops and matures. Higher Degree by Research (HDR) programs are an integral part of this activity.

The provision of high quality training and support for the next generation of researchers is the key to the growth, success and quality of research at RMIT.

RMIT’s Strategic Goal to be Global, Urban and Connected is central to the R&I Plan and each of the key initiatives of the plan intrinsically involve research candidates. Our HDR candidates will engage in the global research community through our research nodes in key cities and partner with academic staff in the urban research laboratories to design, test, implement and showcase innovative practices. HDR programs, in particular, doctoral training programs, provide an avenue for RMIT to strengthen and deepen its connections with industry and community.

While the RMIT Business Plan 2012-2014 projects stable HDR load (around 1,100 EFTSL) in the period 2012-16, the plan sets a target for completions to rise to 280 per annum by 2015. This identifies a significant challenge for the university and the need to refine the profile planning process for HDR. It is important that we determine the optimum load levels in areas of research and research training strengths that can be adequately supported and will achieve the desired number of completions.

The School of Graduate Research, while open to achieving growth beyond that projected in the Business Plan, recognises the need to strengthen current activities before significant growth occurs.

2012-2015 is the time for reform and consolidation of all aspects of HDR delivery across the university is key to the growth, success and quality of research at RMIT.
This is considered to be a necessary pre-condition for more ambitious growth targets in the next planning period. Thus, in the current planning period, RMIT must put in place a range of measure to support both the quality of its research training programs and their growth in the period beyond 2015-16. Achieving this target in a context of load stability represents the need to achieve a timely completion rate of well over 80% (currently our completion rate for PhDs sits at 61% and for Masters at 44%)\(^1\). That is, across the university we need to lift our doctoral completions by nearly 20% and our completions of Masters by around 36%. Any possibility of moving towards this very ambitious completion rate target is dependent on an institutional commitment to quality, concerted effort, a re-evaluation of the place of research training in the day to day business of all schools, and significant investment.

To achieve this level of quality RMIT will need to have the best possible programs for the best possible candidates with the best possible supervisors and the best possible support for both candidates and supervisors.

An effort of this magnitude requires high levels of commitment from academic leaders from the Vice Chancellor to Deans and Heads of Schools and from administrative areas such as FSG, SRU etc. It also requires a clear articulation to all members of the university community of the value proposition represented by HDR candidates at RMIT so that efforts on their behalf can be promoted and understood in every school and every discipline at RMIT.

This paper articulates the tangible value that higher degree by research provision provides for RMIT explains the need to invest in HDR programs to optimise this return and proposes some key strategies to enhance this core area of university business.

**What do research students produce?**

There is long-held, evidence-based recognition of the contribution that higher degree by research candidates make to research output:

In 1997 Professor David Siddle reported estimates of 65-70% of university research being carried out by research postgraduates, and around 25-30% of university publications having at least one research postgraduate as an author.\(^2\)

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\(^1\) Refer data reported in submission to Research Committee: Improving HDR Student Outcomes and the setting of School and College targets

\(^2\) Extract from Council of Australian Postgraduate Associations (CAPA) Submission to the Review of Australian Higher Education July 2008

In June 2008 the Australian Bureau of Statistics confirmed that the bulk of the workload supporting Australia’s research and development is being undertaken by postgraduates:

Table 1:

<table>
<thead>
<tr>
<th>Year</th>
<th>Academic staff</th>
<th>Technical staff</th>
<th>Other staff</th>
<th>Postgraduate students</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>28.4%</td>
<td>25.5%</td>
<td>7.5%</td>
<td>50.4%</td>
<td>100%</td>
</tr>
<tr>
<td>1994</td>
<td>27.3%</td>
<td>27.6%</td>
<td>10.8%</td>
<td>55.0%</td>
<td>100%</td>
</tr>
<tr>
<td>1996</td>
<td>26.4%</td>
<td>21.6%</td>
<td>17.0%</td>
<td>55.7%</td>
<td>100%</td>
</tr>
<tr>
<td>1998</td>
<td>25.8%</td>
<td>13.8%</td>
<td>16.2%</td>
<td>57.4%</td>
<td>100%</td>
</tr>
<tr>
<td>2000</td>
<td>27.1%</td>
<td>14.1%</td>
<td>14.6%</td>
<td>57.0%</td>
<td>100%</td>
</tr>
<tr>
<td>2002</td>
<td>28.9%</td>
<td>13.4%</td>
<td>13.8%</td>
<td>59.8%</td>
<td>100%</td>
</tr>
<tr>
<td>2004</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>2006</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>


The fact is that a great deal of research work is (and potentially much more) undertaken by postgraduates at RMIT.

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Productive and effective research candidates are central to RMIT's competitiveness in science, research and innovation.

As well as the critical role played by HDR candidates in research teams, there is great potential for candidates to contribute to the publication output of the university. Informing Research Strategy the 2011 Research Performance Report, quantifies Higher Education Research Data Collection (HERDC) publications scores and counts in its assessment of College and School research performance. Publication outputs predominate in the Excellence in Research Australia (ERA) assessment of fields of research at RMIT. The key research performance project in the RMIT Business Plan 2012 – 2014 includes increases in total, per capita and per paper citations in its performance indicator targets.

RMIT annual HERDC reportable publication output average around 1300 items per annum and generates just over $3m in block grant funding.

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High quality HDR candidates, producing just 1 or 2 publications each throughout candidature could increase research block grant funding generated by publications by 50% ($1.5m per annum).
How much do they earn for the university?

HDR candidature drives the block grant returns on four significant federal funding programs:

1. Research Training Scheme (RTS)
2. Joint Research Engagement (JRE)
3. Australian Postgraduate Awards (APA)
4. International Postgraduate Research Scholarships (IPRS)

In total, these schemes provide almost $24m to RMIT annually. Tied specifically to HDR provision, the RTS, APA and IPRS constitute over two thirds of the total block grant income. Research Training Scheme (RTS) income dominates this total with approximately $14,000,000 received in each year.

RTS funding is provided differently to other sources of student funding as the majority of these funds are provided on the basis of HDR completions rather than load and this is not widely understood in the RMIT community.

Each high cost PhD completion\(^3\) earns the University $80,842 and a low cost PhD generates $40,511. Enrolments earn less at $6,035 per annum.

Hence a successful high-cost completion over 4 years would earn RMIT $105,000, a non-completion (costing the same in staff time and resources) only $24,000. Thus, even in the current period of projected stable load, RMIT can increase this income stream simply by achieving better HDR outcomes (completion rates). The Research and Innovation Plan acknowledges these realities and aims for a significant increase in the number of HDR student completions by 2015\(^4\). Further, if we can improve the rates at which all our HDR candidates publish throughout their candidature, we can secure additional income through the RTS and JRE.

Table 2 has been produced by R&I and shows the 2012 block grant returns on each of the research activity drivers.

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\(^3\) RTS formula counts completions of all Higher Degree Research Students (including fee-paying students). DEEWR weights PHD completions relative to Masters on a ratio of 2:1 and also weights PhD completions for low and high cost fields of study on a ratio of 2:4.7

\(^4\) 2015 Strategic Plan Indicator Target of 280 completions by 2015
Table 2: RMIT Block Grant Return on Research Output Drivers – Updated 2012

<table>
<thead>
<tr>
<th>Driver</th>
<th>RTS</th>
<th>RBG</th>
<th>JRE</th>
<th>APA</th>
<th>IPRS</th>
<th>SRE Base</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1</td>
<td>$0.09</td>
<td>$0.18</td>
<td>$0.00</td>
<td>$0.03</td>
<td>$0.00</td>
<td>$0.03</td>
<td>$0.33</td>
</tr>
<tr>
<td>Category 2-4</td>
<td>$0.09</td>
<td>$0.00</td>
<td>$0.12</td>
<td>$0.03</td>
<td>$0.01</td>
<td>$0.01</td>
<td>$0.25</td>
</tr>
<tr>
<td>Research Publications</td>
<td>$1,205.81</td>
<td>$0.00</td>
<td>$622.12</td>
<td>$443.40</td>
<td>$304.56</td>
<td>$0.00</td>
<td>$3,378.40</td>
</tr>
<tr>
<td>Unweighted Masters High Cost</td>
<td>$332,888.05</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$5,318.32</td>
<td>$1,115.05</td>
<td>$0.00</td>
<td>$40,421.42</td>
</tr>
<tr>
<td>Unweighted Masters Low Cost</td>
<td>$14,463.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$5,318.32</td>
<td>$474.49</td>
<td>$0.00</td>
<td>$20,255.81</td>
</tr>
<tr>
<td>Unweighted PhD Completion High Cost</td>
<td>$687,976.09</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$10,636.65</td>
<td>$2,230.10</td>
<td>$0.00</td>
<td>$80,842.84</td>
</tr>
<tr>
<td>Unweighted PhD Completion Low Cost</td>
<td>$28,926.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$10,636.65</td>
<td>$948.98</td>
<td>$0.00</td>
<td>$40,511.62</td>
</tr>
<tr>
<td>RTS High Cost Load</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$6,035.87</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$6,035.87</td>
</tr>
<tr>
<td>RTS Low Cost Load</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$2,568.46</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$2,568.46</td>
</tr>
</tbody>
</table>

Building our reputation

Substantial, vibrant and high quality research training activity is a hallmark of success for all universities both within Australia and globally. Research reputations are bolstered by the size, success and research outputs of HDR cohorts. Eminent researchers want to work in institutions where their research can be supported by high quality teams that include HDR candidates. Candidates themselves look for institutions with substantial research training programs and well developed supervision and support structures. Increasingly, our capacity to attract and retain high calibre staff and candidates will be influenced by our research training capacity and performance.

These factors, in turn, can impact on the influential university ranking systems, so important in both the teaching and research market places. Academic ranking (reputation) constitutes 40% of the QS ranking scale and research reputation determines 18% of the Times Higher Education (THE) World University Rankings. The THE weights another 42.5% of its scores on PhD awards, research papers and citations. Successful research training programs can significantly impact on an institution’s international rankings and assist in recruitment of outstanding students to all programs within the university.

Within Australia, university reputations are informed by readily available university statistics. Signalling the central importance of research training to university esteem, the only statistical link on the postgraduate research section of the MyUniversity website5 lists research student and scholarship numbers. The results of the Postgraduate Research Experience Questionnaire and the Graduate Destination

5 http://content.myuniversity.gov.au/sites/MyUniversity/pages/aboutpostgraduateresearch
Survey are published annually and provide a public snapshot of the quality of the research training experiences and employability of a university’s graduates.

Another reputational driver will be the results of newly introduced TEQSA regulatory reviews and compliance. The Regulatory Risk Framework\(^6\) acknowledges that low completion rates for HDR candidates “may reflect issues with teaching and learning processes, especially supervision and research environment. This may also affect the supply of future academic staff and highly skilled workforce. It is also very costly for providers, especially relative to Research Training Scheme (RTS) funding ...”

Poor performance in any of the above measures will affect the reputation of RMIT and could have flow on effects on undergraduate and postgraduate marketing and potentially research partnerships and funding and philanthropy.

**How do we move forward?**

To optimise the tangible benefits that can be gained from successful HDR programs and harness the reputational advantage it is vital that RMIT commits to and invests in the growth and development of a strong and successful research training program.

Recruitment, selection and retention strategies should align the interests, needs and abilities of our HDR candidates with the Global, Urban and Connected aspirations of RMIT and reflect what is distinctive and excellent about our university. We must translate as many enrolments to completions as possible and to do this within the RTS funded period\(^7\) to minimise any unfunded load being carried by the university. To do this we must ensure that we have the best possible candidates in the right programs with the best possible supervision and support.

Much work has already been initiated by the School of Graduate Research and is underway to achieve these aims (see Appendix 1) but more is immediately necessary.

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\(^6\) REGULATORY RISK FRAMEWORK – Australian Government TEQSA 2012 Risk Indicator D6

\(^7\) RTS funded candidature is 4 years for fulltime PhD candidates, and two years for fulltime Masters candidates
Quality Programs

Already distinguished by its deep industry links, relevance to national and global market place and recognition of project based research, HDR programs at RMIT have a lot to offer. The quality of this offering will be further enhanced by the RMIT PhD project which will create a ‘whole of University’ approach to research training in the form of a single PhD program, centralising doctorate-level provision into a single program code to be managed by the School of Graduate Research (SGR).

The proposed structure will enable us to consolidate and enhance our distinctive strengths, to ensure the quality of our research training, to grow our doctoral load and completions, and to build a program which embraces innovation and diversity in doctoral education. As the project has developed in 2012 as the major vehicle for driving and assuring AQF compliance in the HDR space at RMIT, Masters by Research are now encompassed within the project plan. The RMIT PhD will be fully implemented by 2014.

Quality Supervision

A relative forerunner in its commitment to supervision quality, RMIT has an established supervisor training and registration process. This will be further refined in 2012 in response to the new TEQSA Higher Education Standards Framework. To meet the framework requirements that HDR supervisors hold a PhD or equivalent and are active in publishing and research, new eligibility requirements are being introduced. An improved supervisor training program is also being developed.

It is important that at all levels of the university, due recognition is given to the value and importance of excellent HDR supervision. Academics have a responsibility to contribute to the stewardship of their disciplines by mentoring the next generation of researchers but can also gain a great deal personally and professionally by the experience.

Supervisory workloads and support requirements need to be recognised in academics units and adequately resourced. There is room for improvement in RMIT’s HDR supervision culture.

Quality Candidates and Support

RMIT’s distinctive profile as an urban, global and connected university of technology and design has the proven capacity to attract high quality, appropriately qualified or experienced and highly motivated candidates from Australia and overseas.
However, in advancing our position in this market, we must recognise that, as a relative newcomer to the HDR space in Australia, we compete for our candidates against a range of other institutions with well-established research training infrastructure, efficient, well-funded scholarship funds, and additional funding available for HDR candidate support through significant grant income, efficient on-line admission systems and capacities for all-year round enrolments. Many of our competitors in the Australian sector – including several of our ATN comparator universities – are making significant advances in securing critical masses of HDR candidates through large intakes of domestic and international candidates supported by significant funds from the Commonwealth, other funding agencies, and complemented by generous in-house domestic and international scholarships.

As demand for domestic HDR places has plateaued over recent years and this is particularly so in the Science and Engineering fields\(^8\), it is important that RMIT is not disadvantaged in the competition for the best possible candidates.

**Selection**

The first step was taken in late 2011 with the decision to uncap the RTS allocation and provide fee free places to all eligible Australians, New Zealanders and permanent residents. To implement this change, the current eligibility criteria were clarified, taking into account the various pathways into HDR programs (e.g. Honours, Masters, professional experience and industry esteem). The process for assessing eligibility has been refined so that transparent and equitable distinctions can be made between eligible and ineligible candidates across the university. Whilst scholarships are limited and selection competitive, assessment for admission is an absolute rather than comparative process with clearly articulated entry requirements that are either met or not met.

A significant amount of staff time and resources is invested in all enrolled candidates and reputations are damaged if outcomes are poor. It is imperative that only those candidates with a good chance of success are admitted.

Adherence to RMIT’s HDR eligibility criteria is vital and these should not be waived or lessened in an attempt to attract fee income or sponsorship. Along with fee income collected for international candidates, successful completions generate sizable RTS funding (up to $80,000 per candidate), research output and reputation but the liability of a failed candidature can be higher than the income or sponsorship received.

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\(^8\) Domestic HDR commencements dropped 6.7% between 2004 and 2009
Scholarship Funding

It is a reality in the Australian Higher Education marketplace that the best HDR candidates need to have scholarship support, or they will go elsewhere. Australian and international universities are aggressively marketing their programs by offering numerous and attractive scholarships and incentive programs.

By example Deakin School of Law placed a full page advertisement in The Age in June promoting its HDR offerings and scholarships and several universities have enough scholarships to make immediate offers throughout the year to high calibre candidates.

As a consequence of historically low completion numbers and research output, RMIT has a very small federally funded scholarship pool to allocate to new candidates each year relative to comparator universities. Using the most recently available sector data, in 2010 the university received 72 of the national total of 3069 APA’s and 8 of the 330 available IPRS. Despite enrolling 4.73% of the total national unweighted HDR load, we only received 2.35% of the allocated scholarships. It should be noted that the RMIT APA allocation in 2012 was only 53, 91 scholarships short of the national average on the basis of load.

The relatively inadequate pool of RMIT PhD Scholarships on offer further increases this institutional disadvantage. As an ATN point of comparison, on top of a federal allocation of 105 APA and 10 IPRS awards this year, Queensland University of Technology also offered 60 full QUT Postgraduate Research Awards, bringing their total number of new scholarships to 175. This compares with the 100 offered at RMIT. We provide 43% less scholarships despite having only 20% less candidates, a proportional shortfall of 38 new scholarships each year.

It is therefore imperative that serious consideration is given to substantially increasing the number of university funded scholarships provided each year. A separate and transparent pool of funding, promoted broadly as a marketing tool for the University and allocated to the best competitively selected international candidates would have significant advantages for the University as a whole. Allocation of 50% of the RTS income to HDR scholarships has been proposed. This would commence in 2013 and phasing in over 4 years to a total pipeline funding of $7,500,000 by 2016.

A centrally funded and administered scheme would also lessen the current necessity for local arrangements that may not be targeted to the best candidates or providing a strategic advantage to RMIT as a whole. To gain the most strategic benefit from

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9 DIISR 2010 data used for 2012 grant allocations:
such an initiative, a decision on the funding of additional domestic and/or international HDR scholarships is required prior to the peak scholarship application period in September/October.

**Scholarship Selection**

As well as increasing the University’s investment in HDR scholarship support, it is vital that we ensure that our limited scholarship resources are allocated as strategically as possible to support the improvement of completion rates.

The current scholarship ranking process assesses the academic standing and research or related experience of the prospective student but the research training environment is also an important success factor which is not adequately reflected in the process. If a university places a high quality student into a school without strong research activity or with a poor track record of student completions, the levels of support and hence chances of success are likely to be compromised. Previous institutional research by the Dean SGR has shown that research environment and support are equally influential determinants of the likelihood of completion as academic qualifications on entry.

Under the previous formula, the quality of the research and the research training outcomes was not factored into the scholarship ranking process. The scholarship ranking process has now been expanded to include a more comprehensive consideration of the research training effectiveness of the enrolling academic unit. Revision of the scholarship formula has included a research training effectiveness bonus of up to 10% which takes account current HDR completion rates of each enrolling unit.
Appendix 1 - Policy and Program Initiatives, August 2011 to July 2012

The School of Graduate Research (SGR) is committed to the R&I portfolio’s vision and targets for improving RMIT’s overall performance and standing in research as articulated in the R&I Strategic Plan 2012-2015 and recognises that excellence in research training will greatly enhance all research outcomes across the university. In addition, SGR is committed to ensuring the highest quality (fully AQF compliant) educational provision in research training and to transform RMIT into a leader in innovative approaches to research training. The SGR aims to place RMIT as the first-ranked research training institutions within the ATN – in terms of load, completions and other indicators (such as graduate publications) – by 2016 and as the research training destination of choice for high quality domestic and international applicants in our fields of research strength.

In line with the vision of the School of Graduate Research to provide academic leadership and develop policies and procedures to ensure RMIT continues to attract the very best candidates into the best programs with the best support to bring their research to timely completion, a range of new initiatives has been developed in the period since 1 August 2011. SGR is committed to a complete overhaul of many aspects of our delivery of HDR programs to ensure that the university optimises its relative position under Commonwealth funding schemes; and in the international arena. We have high ambitions for all of our current and future candidates and for the university in research training. These ambitions need the support of excellent programs, policies and procedures – which are now in advanced development – and significant investment from the university to support these.

A full listing of all current and projected initiatives is available in the SGR Workplan 2012-2015. Major initiatives currently underway are summarised here.
Best support and supervision

Already achieved:

- Business cards for all confirmed candidates
- Revised guidelines for DVC R&I conference fund
- Strategies to improve HDR publications rates
- Higher Degree by Research Publication Grant
- Development of suite of Vice Chancellor’s and University Prizes to celebrate and promote best practice by HDR supervisors and candidates
- All research-related candidate travel to be booked through TROBEXIS
- Enhanced offerings through On Track program – including regular Writing for Publication Workshops
- Initiation of HDR Peer to Peer Support (P2P) Pilot Project in 6 schools across 3 colleges
- Overhaul of SES for HDRs and re-introduction of the abandoned Candidate Exit Survey
- Initiation of HDR Co-ordinators Network
- Revisions to Supervisor Registration eligibility to meet HESF requirements
- Personalised letters of congratulations to all completing HDR candidates and their supervisors signed by Dean SGR
- Development of research training performance metrics
- Convene Summer and Winter Research Weeks

In development:

- Revision of Code of Practice in Research Training in line with Deans and Directors model practice document
- Review of HDR examination processes in line with Deans and Directors of Graduate Studies best practice principles
- Standardisation/centralisation of forms and candidature events
- Revision of all SGR correspondence
- Development of policy on Collaborative Research Training Agreements
- Review of Supervisor Professional Development Programs
Best HDR programs

The RMIT PhD project will create a ‘whole of University’ approach to research training in the form of a single PhD program, centralising doctorate-level provision into a single program code to be managed by the School of Graduate Research (SGR). The proposed structure will enable us to consolidate and enhance our distinctive strengths, to ensure the quality of our research training, to grow our doctoral load and completions, and to build a program which embraces innovation and diversity in doctoral education. As the project has developed in 2012 as the major vehicle for driving and assuring AQF compliance in the HDR space at RMIT, Masters by Research are now encompassed within the project plan.

Initiatives will include:

- Changes to Regulations
- Systems Changes
- Establishing consistent and compliant program architecture and program guides
- Developing a more flexible and cost-effective model of research methods delivery
- Transfer of Students and Discontinuation of Non AQF Compliant Programs

Best candidates to RMIT

Already achieved:

- Allowing RTS funded candidature for all eligible candidates
- Development of clear eligibility criteria for admission
- Establishment of annual PhD Information Session – akin to HDR Open Day
- Significant work in the research pathways space for currently enrolled RMIT students and for students from outside RMIT, including:
  - Leadership of Academic Board strategic conversation on Research Pathways
  - Initiation of Jump Start! Workshops (for intending Honours and Final Year project students) and Research Pathways workshops (for intending HDR students within RMIT)
- Initiation of PhD and Research Masters information sessions for internal and external Stakeholders

In development:

Policy on Collaborative Research Training Agreements to inform all forms of collaboration (with HEPS and other bodies) in research training both within Australian and internationally