2014-16 Mission-based Compact

Between:

The Commonwealth of Australia

and

Macquarie University
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This compact is between

The Commonwealth of Australia (Commonwealth) represented by and acting through:
The Minister for Tertiary Education, Skills, Science and Research
Assisted by the Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education (DIICCSRTE)
ABN 77 599 608 295
Of
Industry House
10 Binara Street
Canberra ACT 2601

And

Macquarie University
ABN 90952801237
A body corporate under the Macquarie University Act
Of
2109 NSW
(University)
A. Policy Setting

The Australian Government believes all Australians are entitled to a productive, fair and prosperous life and our higher education system is crucial to achieving this. Universities impart the skills and knowledge Australians need to realise their personal and professional aspirations and contribute to the broad economic and knowledge base of our society including the cultural, health and civic wellbeing of the community.

Over the term of this mission-based compact (compact), Australian universities will confront a range of opportunities and challenges in fulfilling their social and economic remit. These opportunities and challenges include, but are not limited to, changing national and international educational markets, dynamic global financial arrangements including the rise of the Asian Century, new approaches to teaching and learning, rapidly changing information technologies and evolving priorities for research and innovation.

Australia’s universities are well equipped to harness the opportunities and meet these challenges that lie ahead. The 2014-16 compact supports this process by articulating the major policy objectives and the diverse approaches and commitments universities will adopt to achieve these strategic goals over the term of the agreement.

B. The Purpose and Effect of this Compact

This compact is an agreement between the Commonwealth and the University. Entering into a compact is one of the quality and accountability requirements which a higher education provider must meet under the Higher Education Support Act 2003 (HESA) as a condition of receiving a grant. Specifically, subsection 19-110(1) of HESA requires Table A and Table B providers must, in respect of each year for which a grant is paid to the provider under HESA, enter into a mission based compact with the Commonwealth for a period which includes that year.

The compact demonstrates the Commonwealth and the University have a shared and mutual commitment to provide students with high quality educational experiences and outcomes and to building research and innovation capabilities and international competitiveness.

The compact recognises the University is an autonomous institution with a distinctive mission, operating within a state or territory, national and international higher education environment.

The purpose of this compact is to provide a strategic framework for the relationship between the Commonwealth and the University. It sets out how the University's mission aligns with the Commonwealth’s goals for higher education, research, innovation, skills development, engagement and Aboriginal and Torres Strait Islander access and outcomes.

The Commonwealth and the University agree this compact will be published on Commonwealth websites and may be published on the University website.

C. Establishment of the Compact

The Commonwealth and the University agree the Term of this compact is from 1 January 2014 until 31 December 2016.

D. The Principles of Commonwealth Funding Support

The Commonwealth articulates its vision for the higher education sector, through Transforming Australia’s Higher Education System (available at the DIICCSRTE website), and the role of universities in driving our national innovation system, through Powering Ideas (available at the DIICCSRTE website).
In supporting Australia’s universities, the Commonwealth seeks to promote:

- academic freedom and institutional autonomy;
- a diverse and sustainable higher-education sector;
- opportunity for all;
- access to university based on merit;
- world-class teaching and learning that advances the international standing of Australian education;
- world-class research and research training that advances knowledge, critical thinking and Australia’s international standing; and
- responsiveness to the economic, social and environmental needs of the community, region, state, nation and the international community through collaborative engagement.

To ensure Australia’s higher education system remains robust and of high quality in a globally connected and competitive world, the Australian Government has adopted and implemented a number of system-wide quality measures including establishing the Higher Education Standards Framework, and the Tertiary Education Quality and Standards Agency (TEQSA).

E. The Structure of this Compact

Part One provides for the Commonwealth’s focus for the compact and a description of the University’s Mission Statement and Strategic Priorities.

Part Two provides for matters related to improving access and outcomes for Aboriginal and Torres Strait Islander people. It contains Commonwealth objectives, university strategies and performance indicators and targets.

Part Three provides for matters related to innovation, industry and skills and engagement. It also contains Commonwealth objectives, university strategies and performance indicators and targets.

Part Four provides for matters related to teaching and learning including student enrolments, quality, equity and infrastructure. It contains Commonwealth objectives, university strategies and equity targets.

Part Five provides for matters related to research and research training including research performance and research capability. It contains Commonwealth objectives, university strategies, performance indicators and targets.

Part Six provides for general provisions of the compact including compact review, privacy, confidentiality and information sharing, changing the compact and notices.
PART ONE: FOCUS & MISSION

The Commonwealth’s Focus for this Compact

The Commonwealth’s ambitions for higher education include:

- providing opportunities for people from all backgrounds to participate to their full potential and be supported to do so. This includes supporting the aspirations of Aboriginal and Torres Strait Islander people through improved access and support arrangements. The Commonwealth is committed to ensuring the rate of Aboriginal and Torres Strait Islander people participating in undergraduate and higher degrees by research (HDR), as well as staffing and academic representation, reaches population parity;

- providing students with a stimulating and rewarding higher education experience;

- producing graduates with the knowledge, skills and understanding for full participation in society and the economy;

- better aligning higher education and research with the needs of the economy, and building capacity to respond to future changes in skills needs;

- increasing universities’ engagement with all parties and linkages between universities and Australian businesses in particular;

- playing a pivotal role in the national research and innovation system through the generation and dissemination of new knowledge and through the education, training and development of world class researchers across a wide range of intellectual disciplines;

- improving knowledge transfer and commercialisation outcomes;

- consistent with the Asian Century policy framework, ensuring education is at the forefront of Australia’s engagement with Asia; and

- being amongst the leading Organisation for Economic Co-operation and Development (OECD) countries in terms of participation and performance.

In support of these objectives, the Commonwealth encourages universities to consider the following important measures in their planning and delivery:

- developing partnerships with schools and other organisations to improve the participation of people from disadvantaged backgrounds in higher education;

- working with business, industry and Vocational Education and Training (VET) providers to provide the Australian economy with the graduates it needs;

- the suite of performance measurement tools being developed through the Advancing Quality in Higher Education initiative, work on quality in research training, and a feasibility study on research impact assessment (including the possible implementation of a mechanism, separate from Excellence in Research for Australia, to evaluate the wider benefits of publicly funded research);

- applying the principles and procedures required to support a continuous improvement model for intellectual property; and

- the National Research Investment Plan, including the need for a strategic outlook to address Australian Government priorities and principles at a national level.
1 THE UNIVERSITY’S MISSION AND STRATEGIC PRIORITIES

1.1 The purpose of the University’s Mission
The University’s Mission sets out its values and aspirations, what it does and how it can best serve the interests of its students, staff and key stakeholders. The Commonwealth and the University recognise the University’s Mission may evolve.

The University and the Commonwealth recognise the University is an autonomous institution which is responsible for the determination of its Mission and for its aspirations and strategies for their achievement.

1.2 The University’s Mission and Strategic Priorities

University Mission Statement
Macquarie University has been well-served by the goal it adopted in 2006 to be ‘among the top eight universities in Australia and among the top 200 in the world’ by the University’s 50th anniversary in 2014.

In the Compact for 2011-2012, we were able to point to both Excellence in Research Australia results and those for the Academic Ranking of World Universities leading to the conclusion that we were placed ‘firmly in the elite group of Australian research universities’.

That claim is confirmed by 2012 results. Last year’s ERA rated 85 per cent of the University’s performance in broad fields of research at world standard or above, an increase of almost 15 per cent over 2010 and with three fields of research again awarded the highest possible rating. And the Shanghai Jiao-Tong index for 2012 ranked Macquarie equal eighth with the University of Adelaide among Australian universities.

Now, as 2014 approaches, and with significant changes in the University’s Executive including the recent appointment of a new Vice-Chancellor, Macquarie has embarked on a major initiative—Our University—A Framing of Futures—to develop a long term plan ‘for a sustainable future of excellence and distinction for our University’. That plan will identify new values and establish a new set of over-arching aspirations for the University, providing a context for Faculties and Offices to make more detailed plans.

While this broad planning process will be concluded before the 2014-16 Compact comes into effect, with University Council ratification to be sought in August this year, it may alter the University’s mission and strategic priorities in ways which cannot yet be predicted. To take just one set of emerging challenges, the planning initiative will need to address the shifts now going on in what prospective students regard as a desirable student experience, and how attractive they will find the private providers now emerging in the sector. Answers to questions like these may well lead to significant changes in Macquarie’s direction and culture. What the University can confidently assert is that we go into this planning process from a position of strength. Macquarie continues to pursue a highly effective research strategy, has reviewed and recently implemented significant changes to both its undergraduate and postgraduate curriculums, and has made major investments in infrastructure to support future growth.

Given the planning process now underway, this Compact should be regarded as provisional. However, it is certainly possible to indicate likely directions for the University against the Commonwealth’s objectives with the remainder of this Compact setting out these directions. And it will probably be necessary, in accordance with General Provision 6.3, to propose changes to this Compact in the latter half of this year, before it comes into effect. With this in mind, the likely mission and strategic priorities for the University follow.
Learning and Teaching

1) Increasing Participation
The University has embarked on a strategy to target high schools in nominated regions (e.g., Central Coast) with an aim of developing a long term relationship that can increase recruitment and promote high school education to University and then career pathways.

The University also continues to encourage wide participation by providing a range of access pathways and equity based scholarships, particularly through its LEAP Program and membership of the BRIDGES to Higher Education Consortium, and through its delivery of courses and programs via Open Universities Australia. It focuses on Indigenous engagement through Patyegarang, an advancement strategy for Aboriginal and Torres Strait Islanders for 2012-17 which promotes community engagement and educational aspirations through the provision of access arrangements such as our cadetships as well as by implementing systems for supporting student retention and increasing completion rates. The strategy states that 'We are committed to ensuring that our institutional culture, the cultural competence of our staff and the nature of our curriculum recognises and supports the participation of Indigenous Australians. In addition, an audit of study units is underway to identify points at which an Indigenous perspective can be added to the student experience and an Indigenous Research Strategy will be in place across the University by the beginning of 2014.

2) Enhancing the higher education experience
A central and distinctive feature of the undergraduate education experience at Macquarie University is the Participation and Community Engagement (PACE) Program in which students engage in work integrated learning projects with organisations in the business, community, not for profit and government sectors. This work, which is for credit, contributes to the learning outcomes of their academic study unit. In 2013, we expect that almost 4,000 undergraduates will take part in PACE and our goal for 2016 is that all undergraduates, almost 10,000 at current rates, will do so.

The PACE Program is the third and most recent element in a major reform of the curriculum which also now requires all undergraduates to undertake 'People' and 'Planet' units, again distinctive parts of the Macquarie experience. People units of study focus on what it means to be engaged and ethical local and global citizens. Planet units aim to develop graduates who are literate in science and information technology and who will be informed and active participants in moving society towards sustainability.

In the period 2014-16, we will focus on ensuring the retention and success of the domestic cohort with a target success rate of 88.1 per cent by 2016. The University recognises that an excellent student experience is essential to recruitment, learning, retention and success. It has adopted a strategy of clearly identifying student needs and aspirations to create a more student-centred service culture among all administrative and support services. To that end we are using comprehensive analytics and benchmarking data as well as evidence based strategies to inform our practices and to improve year on year.

Further to this the University has also instigated life-cycle based research and results discussion, to better understand the needs of students, and align services and programs to meet these needs and improve the student experience. Commencing with a striving to understand and support students at risk, the program will shift towards a variety of student cohorts including international, indigenous, postgraduate, distance education and high achievers.

The University has also embarked on a unique socialisation Program which not only aligns mentors to every undergraduate student, but provides awareness and opportunity for engagement in 160 student clubs and societies in the first year. Programs such as these have seen an increase in MQ social engagement, including time on campus, in successive external measures. Similarly, the goal of being the 'healthiest campus in Australia' by promoting health and wellbeing and offering quality sport and aquatic centre and health programs aims to enhance a student’s higher education experience.
The University is also embarking upon a major process of redeveloping the masterplan of the campus. A redrafted masterplan will ensure that future developments pay regard to how the physical realm promotes an excellent experience for students and staff alike with an emphasis on creating additional informal learning spaces. In 2013, the University will develop for short-term use additional experimental informal student learning spaces in the old library building to respond to increasing student demand and the success of such spaces in the new Library.

(3) Alignment with the needs of the economy
Part of the considerable value of the PACE Program is the feedback it is providing, through students and employers, about curriculum relevance and sufficiency. This is in addition to the University timetable for review of programs and professional accreditations each year which involves industry representatives, consultation processes such as through the University’s Engineering Advisory Committee, and the work now underway to have the Macquarie Graduate School of Management and the Faculty of Business and Economics accredited by the international Association to Advance Collegiate Schools of Business.

The University has recently appointed a new Deputy Vice-Chancellor Corporate Engagement and Advancement who will be responsible for promoting closer alignment between the University’s educational programs and business and industry, especially those in the high technology corridor adjacent to the University’s North Ryde campus.

Major indicators of the University’s responsiveness to the needs of the economy are the introduction in 2014 of the Bachelor of Business Leadership and Commerce, following a call from the Business Council of Australia for graduates with “soft” skills and the University’s involvement in the 1,000 Indigenous Accountants pathway program undertaken through an articulation arrangement with TAFE NSW.

MQ has further renewed its focus on employability outcomes through the Graduate Capabilities Framework and will strive for increased ‘in-class’ and ‘out of class’ job and industry awareness and experience, resulting in job placement ready students.

(4) Engagement with Asia
The University conducts extensive and successful study abroad and student exchange programs. However, in common with many other Australian higher education providers, our students have shown little interest in Asia as a destination. The University proposes to take advantage of the introduction of new Commonwealth funding and loan arrangements for students by establishing targets, promoting exchange opportunities by bringing representatives of Asian universities to our campus, and developing a priority list for the allocation of financial support.

In 2012, 9,802 students from Asia were enrolled at Macquarie University, either in the North Ryde or City Campuses or at the University’s offshore programs in China, Hong Kong Korea and Singapore. Despite the recent downturn in international student numbers across the sector, all the indications are that recruitment will increase between 2014 and 2016.

MQ is presently reviewing and developing an innovative Student Exchange Strategy, with one key focus being an increase in AsiaBound exchange. Annual increases in domestic student exchanges with key Asian (particularly Chinese) institutions are planned.

In order to decrease student time to graduate and to allow students to accelerate or spread their program of study, Macquarie has changed Summer School into a full session of the academic year. In 2013-14 the University will allow international students to commence their studies at Macquarie in Session3. This will reduce International students’ costs of living and will offer them a better student experience through a fully supported program of study and support. Session3 has become an important point of differentiation for Macquarie.

Research and Research Training
(5) Developing World Class Researchers
A second highly distinctive feature of the student experience at Macquarie is the Bachelor of Philosophy/Master of Research program introduced in 2013. This combines a year of advanced
coursework with a second year of structured research training and is intended to provide a clear path from undergraduate to HDR study. Its goals are to give students the skills and strategies as well as the confidence to undertake their planned research and its success will be measured against evidence for improvements in the quality of the student’s HDR experience, retention rates and ultimately completion times. That assessment will inform the direction of the Program, particularly when the first cohort emerges at the end of 2014.

The University can point to a strong candidature management process for its doctoral candidates (indeed, this has been of considerable interest to various overseas universities). Supervisors must establish that they are research active and have completed an enhancement program. And the University is now beginning to roll out a campus-wide learning skills program for HDR students, focused on discipline specific writing programs as well as specialist workshops. We will also continue to implement an ‘out of time’ policy to manage requests for extensions with a rigorous review process. These strategies are leading to improvements in retention and completion rates.

(6) Generating New Knowledge
As well as the University’s 2012 ERA results referred to above, a second indicator of the quality of Macquarie research is our success rate for Australian Research Council Discovery Projects which in 2012 was third highest among Australia’s research intensive institutions. Underlying this success is the University’s continuing strategy of recruiting world leading academics to build areas of research strength. In addition, the University has made significant investments in infrastructure which will further enhance research activity in 2014-16. As well as the University’s state of the art Library, the Australian School of Advanced Medicine is now underway with its associated Macquarie University Hospital. And the Hearing Hub (partly supported by the Commonwealth’s Higher Education Endowment Fund) opened in April this year.

The School of Advanced Medicine and the associated Hospital which now has an occupancy rate of about 90 per cent are sites for major research partnerships including through involvement in the international Parkinson’s Progression Markers Initiative and through the Anatomy Laboratory which was part funded from the Commonwealth’s Education Investment Fund.

The Hearing Hub will promote world leading research into hearing and related speech and language disorders. It brings together the University’s Language Sciences and Cognitive Sciences research teams with clinical research and professional training teams in Audiology and Speech Language Pathology. These teams will work with the major government research organisations, Australian Hearing with the National Acoustic Laboratories, and research and implantation teams from Australia’s leading hearing technology company, Cochlear Ltd, as well as major not-for-profit organisations such as the Royal Institute for Deaf and Blind Children and the Shepherd Centre.

(7) Generating New Knowledge
The University is committed to maintaining effective policies and support systems to maximise research end-user engagement, knowledge transfer and commercialisation and to improve research links in our local geographical environment. To this end, the University is an active member of the international collaborative project, Easy Access IP which promotes new ways of sharing intellectual property. The University also has an Intellectual Property and Commercialisation Management Committee, responsible for evaluating the commercial potential of our research and, through the Office of Commercialisation, providing a pathway for researchers to industry.

The University is currently involved in a partnership with the local community through the Macquarie University City of Ryde Futures Partnership to establish collaborations in research and in community service (the latter through the PACE Program). This Partnership will be evaluated in 2013 as the basis for future collaborations.

(8) International Engagement
Since 2007, the University has actively pursued joint supervisory arrangements for its doctoral candidates with overseas (as well as other Australian) universities. This pursuit of Cotutelle and Joint PhD arrangements is proving to be not only of major benefit to candidates themselves but
an avenue for our researchers to embark on international research collaborations. We have established formal partnerships with overseas universities, particularly in China, France and Germany, and this approach will continue to be a major element of our international HDR engagement. An additional element of that strategy is to increase the number of co-funded HDR scholarships available to potential students through negotiations with universities and government agencies such as the China Scholarship Council.
PART TWO: ABORIGINAL AND TORRES STRAIT ISLANDER ACCESS AND OUTCOMES

2 ABORIGINAL AND TORRES STRAIT ISLANDER ACCESS AND OUTCOMES

Part Two recognises the important role universities play in supporting Aboriginal and Torres Strait Islander people’s personal and professional aspirations through the provision of accessible and supportive higher education programs. Increasing Aboriginal and Torres Strait Islander higher education participation and success is important given the direct benefits for Aboriginal and Torres Strait Islander individuals and communities and broader economic and social benefits for all Australians.

Universities are asked to detail their strategies and targets to improve Aboriginal and Torres Strait Islander access and outcomes over the compact period in this section. Principal Performance Indicators are compulsory and institutions may voluntarily nominate Optional Performance Indicators and targets considered reflective of individual institutional goals.

The Commonwealth recognises that universities have diverse missions and, consequently, targets and performance will vary between institutions. Each university should develop performance indicators and targets to reflect its individual performance and strategic direction.

2.1 Commonwealth Objectives

The Commonwealth is committed to enhancing the participation and outcomes for Aboriginal and Torres Strait Islander people in higher education consistent with the Closing the Gap initiative addressing Aboriginal and Torres Strait Islander disadvantage.

In realising this objective, the Commonwealth has set an aspirational national parity target for Aboriginal and Torres Strait Islander students and staff in higher education. The parity target equates to the proportion of the population aged between 15 and 64 years which is currently 2.3%.

To help achieve this aspirational national target, the Commonwealth has introduced a new focus on Aboriginal and Torres Strait Islander reporting in the compact as recommended by the Review of Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander People. Universities should report high level Aboriginal and Torres Strait Islander student and staffing plans and strategies in this part of the compact including performance targets for student enrolments, completions and numbers of general and academic staff. Universities may also report on Aboriginal and Torres Strait Islander initiatives under the Innovation and Engagement, Teaching and Learning and Research and Research Training parts of the compact.

2.2 University Strategies

Aboriginal and Torres Strait Islander Access and Outcomes

As well as orchestrating opportunities to attract and integrate students from diverse cultural backgrounds, Macquarie is enhancing our commitment to local students whose circumstances limit their access to tertiary study through a range of equity based scholarships and university access pathways.

Aboriginal and Torres Strait Islander participation is vital to this mission. Macquarie has a range of programs and supports aimed at raising aspirations, building capabilities, ensuring seamless progress through Indigenous specific pathways (Warawara Department of Indigenous Studies’ entry program) and ensuring successful completions. These include; the appointment of Indigenous outreach/pathway coordinators in the Faculties; the expansion of the successful Indigenous Science Education program to multiple sites in Western Sydney; the appointment of an Elder in Residence; the development of new administrative processes to ensure Indigenous students receive an offer of place, scholarship and accommodation contiguously; and the creation of new accommodation scholarships for Indigenous students. Outlined in the table below is more information on the programs and initiatives 2014-2016:
<table>
<thead>
<tr>
<th>Initiative</th>
<th>Description</th>
<th>Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outreach/schools engagement programs</td>
<td>Mentoring indigenous students in high schools, indigenous science program, community mural project</td>
<td>High schools in Western Sydney and rural NSW, all MQ faculties</td>
</tr>
<tr>
<td>Residential Camp</td>
<td>Camp at MQ grounds for indigenous year 10 students from partner schools – academic preparedness and confidence</td>
<td>High school students/parents/all faculties</td>
</tr>
<tr>
<td>Elder in Residence</td>
<td>Cultural support and pastoral care for indigenous students</td>
<td>Indigenous MQ students</td>
</tr>
<tr>
<td>Warawara Entry Program</td>
<td>Supporting prospective indigenous students through applications process/familiarisation with university environment</td>
<td>Indigenous students, parents, Warawara (Department of Indigenous Studies)</td>
</tr>
<tr>
<td>Indigenous Accommodation scholarships</td>
<td>New scholarships to support indigenous students unable to live at home. Co-funded with university halls of residence.</td>
<td>Students, parents, residential accommodation providers</td>
</tr>
<tr>
<td>Foundations of Learning and Teaching</td>
<td>Core content on indigenous cultural competency delivered by indigenous staff – all new staff to university complete.</td>
<td>Staff, academic departments, students</td>
</tr>
<tr>
<td>Curriculum mapping and development</td>
<td>Mapping and developing indigenous content in all MQ academic units. Stage 1 due for completion end 2013, Stage 2 commencing 2014.</td>
<td>Academic staff, students</td>
</tr>
<tr>
<td>NITV/SBS Mentoring program</td>
<td>NITV Mentoring program for indigenous students studying media</td>
<td>Indigenous students</td>
</tr>
</tbody>
</table>

**Patyegarang Aboriginal and Torres Strait Islander Advancement Strategy**

Following the 2010 Review of Indigenous Education at Macquarie, a whole-of-institution Aboriginal and Torres Strait Islander Education strategy was developed, by a group of senior Indigenous and non-Indigenous academic and professional staff. There were iterative consultations with Indigenous staff and the strategy was endorsed by the Senior Management Group in late 2011. The strategy is now being implemented by an active working group, chaired jointly by the Pro-Vice-Chancellor, Social Inclusion and a senior Aboriginal academic staff member from Warawara Department of Indigenous Studies, with representatives from key areas across the University, including, Human Resources, Higher Degree Research, Learning and Teaching, and foundation services such as the Library, and Health and Wellbeing. The seven priority areas listed below form a blueprint for Indigenous Advancement across the University:

- Community Engagement and Outreach;
- Access and Participation;
- Retention and Completion;
- Academic Programs and Pathways;
- Research Advancement;
- Aboriginal and Torres Strait Islander peoples’ Wellbeing;
- Sustainable Employment;
- Patyegarang Aboriginal and Torres Strait Islander Advancement Strategy.
The following section provides some examples of Macquarie’s activities under the provided headings.

Aboriginal and Torres Strait Islander university employment strategies informed by the National Indigenous Higher Education Workforce Strategy

Macquarie’s Aboriginal and Torres Strait Islander Employment Strategic Directions can be found in three key documents:

- Aboriginal and Torres Strait Islander Employment Information Website
- Patyegarang Aboriginal and Torres Strait Islander Advancement Strategy (goal 7) sustainable employment
- Macquarie University Academic Staff Enterprise Agreement 2011

According to voluntary responses, the representation of Aboriginal people and Torres Strait Islander peoples in the Macquarie workforce remains below the benchmark of 2.3 per cent (the current figures are approximately - 0.8 per cent for academic staff and 1.1 for professional staff). Our strategies for 2012 and into 2013 have focused on the development of undergraduate Indigenous cadets employed on 12 month contracts at HEW 2 at 0.2 FTE. The employment contracts of cadets continue for the duration of their degree, contingent on academic success and full-time study status. The University continues the Indigenous Staff Development Fund which supports the professional development of Indigenous staff.

Aboriginal and Torres Strait Islander higher education strategies including teaching and learning across a range of curricula and research strategies

Learning and Teaching Strategies
The university has set aside funds to review units of study and academic programs with a view to Indigenising curriculum across the University. At present there are many units of study, particularly within the Faculties of Arts, Human Sciences and Science which have Indigenous content. The proposed project will audit units of study to ensure that all Macquarie students are exposed to Indigenous content in their discipline area.

Research Strategies
The University is currently working on the development of a cross university Indigenous research strategy. Under the auspices of the Deputy Vice-Chancellor, Research and Pro-Vice-Chancellor, Social Inclusion, Macquarie’s two senior Indigenous appointments are leading a group of senior research staff to develop a comprehensive whole of university initiative. We expect the Indigenous Research Strategy to be completed by June 2013. In addition, the Faculty of Arts has instituted an Indigenous Research Network.

Professional Development and Cultural Competency Training Programs
Macquarie provides a comprehensive suite of professional development programs for all staff. As part of a broad University initiative, the previous (term completed in 2012) and current Heads of the Warawara Department of Indigenous Studies had leadership coaching in 2012/13. Through Equity and Diversity Indigenous staff have had access to Women in Research Leadership intensive workshops and are consistently invited to participate in significant cultural events. The current HOD of Warawara has also attended a Faculty sponsored Research Leadership Program. Our Elder-in-Residence program was initiated in 2012. Our Elder works with students and, within the limitations of a part-time appointment, is providing cultural competency development for staff. For example, our Elder works with staff in departments where our Indigenous cadets are placed to ensure the ‘climate’ of the department is supportive for the cadet.

Student cohort support networks including virtual networks for distance education students
Specific cultural and academic support for Indigenous students is primarily provided by staff from Warawara, who have an extensive referral network across the University for services such as health and wellbeing, scholarships and discipline specific academic advice. The University has an active Indigenous Student Collective and Warawara emails all students with information and updates on a regular basis.
Financial assistance including student scholarships and study banks for staff

Macquarie University offers a range of scholarships. Most have a strong emphasis on social inclusion and equity and are awarded on the basis of financial need and/or other hardship. For a full range of scholarships please see our website at: http://students.mq.edu.au/opportunities/scholarships_and_prizes/.

In conjunction with Dunmore Lang College, the University has a strong emphasis on growing its accommodation scholarship program. Starting with 5 scholarships in 2011, a further 10 were added in 2012, with 10 additional scholarships in 2013.

Mentoring and leadership initiatives

Our most successful recent mentoring strategy has been the development of the position of Deputy Head of Warawara and the subsequent collaboration between the Executive Dean of the Faculty of Arts and the Head of Warawara to ensure that appropriate opportunities were provided for the Deputy position to transition to Head of Department in 2013. Indigenous staff have opportunities to study, attend conferences, and sit on appropriate committees across the University. Indigenous staff development has a high priority within Warawara. Senior staff from Warawara have opportunities to contribute to and co-chair University committees.

The University will aim to meet the Aboriginal and Torres Strait Islander targets set out in the following tables.

2.3 Performance Indicators and Targets

The purpose of the Aboriginal and Torres Strait Islander performance indicators and targets is to assist the University and the Commonwealth in monitoring the University’s progress against the Commonwealth’s objectives particularly its contribution to reaching national parity.

The University will aim to meet the Aboriginal and Torres Strait Islander targets set out in the following tables.

Note: All calendar year references below refer to the previous year’s data collection.

<table>
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<tbody>
<tr>
<td>Number of all Aboriginal and Torres Strait Islander student enrolments</td>
<td>184</td>
<td>208</td>
<td>280</td>
<td>308</td>
<td>339</td>
</tr>
<tr>
<td>Number of all Aboriginal and Torres Strait Islander student completions</td>
<td>36</td>
<td>28</td>
<td>56</td>
<td>61</td>
<td>68</td>
</tr>
<tr>
<td>Number of all Aboriginal and Torres Strait Islander professional/general staff</td>
<td>7</td>
<td>6</td>
<td>8</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>Number of all Aboriginal and Torres Strait Islander academic staff</td>
<td>5</td>
<td>4</td>
<td>8</td>
<td>10</td>
<td>12</td>
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<tbody>
<tr>
<td>Number of staff employed at senior staffing levels</td>
<td></td>
<td></td>
<td></td>
<td>1 Level E appointment</td>
<td></td>
</tr>
</tbody>
</table>

1 Refers to total undergraduate, postgraduate and HDR students by headcount
2 See footnote 1 for definition
3 Refers to number by headcount
4 See footnote 3 for definition
PART THREE: INNOVATION AND ENGAGEMENT

3 INNOVATION AND ENGAGEMENT

Part Three recognises the important role of universities in our national innovation system, in boosting economic productivity contributions to improved social and environmental outcomes and growth, and in engaging, advancing and inspiring their communities. It also recognises that universities make an important contribution to building connections and partnerships that broaden and deepen Australia’s understanding of Asia.

Under three themes: Innovation; Industry and Skills; and Engagement; universities are asked to detail their strategies and targets over the term of this compact. Principal Performance Indicators are compulsory and institutions may voluntarily nominate Optional Performance Indicators and targets considered reflective of individual institutional goals.

The Commonwealth recognises that universities have diverse missions and, consequently, targets and performance will vary between institutions. Each university should develop performance indicators and targets to reflect its individual performance and strategic direction.

3.1 Innovation

3.1.1 Commonwealth objectives

The Commonwealth seeks to build an innovation system that ensures Australia can meet the challenges and grasp the opportunities of the twenty-first century. The Commonwealth encourages innovation by supporting industry-led research, promoting knowledge-transfer activities and the commercialisation of research.

3.1.2 University strategies

Innovation through knowledge transfer and commercialisation has a well-defined and supported pathway at Macquarie University. The Office of Commercialisation (previously Enterprise Partnerships and Commercialisation) is the hub of Macquarie’s ‘tech transfer’ expertise and provides expert advice to researchers on the translation of their research outcomes and the process involved.

The University, through the Office of Commercialisation, has in place well-developed policies, processes and support structures to identify research-derived Intellectual Property and ensure it is used effectively for the benefit of inventors (staff or students), the University and Australia, through various forms of commercialisation and/or knowledge transfer.

The Intellectual Property and Commercialisation Management Committee (IPCMC) is a University Committee which evaluates the commercial potential for innovations generated by Macquarie researchers and, through the Office of Commercialisation, provides an efficient pathway for the transfer of those future products and services judged to be commercial to industry. The Office of Commercialisation manages the day-to-day Intellectual Property (IP) protection and commercialisation process and provides advice on these matters to University researchers.

Macquarie University’s commitment to knowledge transfer is demonstrated by our role as an active member in the Easy Access IP initiative. Easy Access IP is a collaborative project lead by the University of Glasgow, King’s College London and the University of Bristol in the UK and by UNSW in Australia to promote new ways of sharing IP and to adopt new approaches which make it easier for universities and industry to work together. The aim of Easy Access IP is to maximise partnerships with industry and, ultimately, the transfer of university knowledge for public benefit. As one of only three Australian universities participating in Easy Access IP, Macquarie University’s involvement demonstrates our desire to:

- maximise the transfer of knowledge;
- establish and build on our partnerships with industry;
- make available knowledge that has the possibility to impact positively on public well-being; and
- reduce barriers to commercialisation and collaboration.
Access Macquarie Ltd, a Macquarie University owned company established in 1989, is the University’s commercial arm. The Consulting, Research and Training (CRT) Unit of Access MQ serves as a link between academics and researchers from Macquarie University and industry and government. Access MQ contributes to the development, practical application and impact of the University’s research in the community by:

- working with University departments and divisions to provide contract research and consulting services to the business community;
- contributing more than $10 million per year to the University through Research and Commercial Services revenue;
- raising the profile of commercial research, consulting and collaborations at the University;
- feeding funds generated through Access MQ back into the University to fund further research.

Over the past 12 months Access MQ has forged a strong working relationship with the Sponsored Research Team—a new team within the Research Office established for the purpose of assisting researchers in finding and developing opportunities to: deliver solutions to current industry challenges, inform policy, and improve service delivery via collaborative research, contract research, consultancy and tenders. Access MQ and the Sponsored Research Team collaborate to ensure that consultancies, contracts and tenders are handled in the most effective and efficient way according to the strengths of the two areas.

Transfer of knowledge to industry, communities and other end-users is embedded in our goal that the University be a significant contributor to the nation’s economic, social, cultural and environmental well-being (Macquarie University Research Strategic Plan 2012 – 2014, Goal 4). In order to achieve this goal, the University’s objectives are to:

- maintain effective policies and support systems to maximise research end-user engagement, knowledge transfer and commercialisation; and
- improve research links in Macquarie’s local geographical environment

Thus the University seeks to identify and support excellent research that has the potential for high impact on the Australian community. Research outcomes which have outstanding impact through innovation in technology, environmental and human health, social or economic policy, culture or service delivery will be documented to provide a basis for prospective research impact assessments in the future.

Macquarie University has a particular responsibility and opportunity to develop strong research and research training partnerships with organisations in our local area. To this end, the Macquarie University City of Ryde Futures Partnership has been established with initial funding from the University for a two year period (2012-13) with the purpose of establishing broad collaborations in research and community service (through the Participation and Community Engagement (PACE) initiative) between Macquarie University and Ryde City Council. Success of this partnership will be evaluated in late 2013.
3.1.3 Performance indicators and targets
The purpose of the innovation performance indicators and targets is to assist the University and the Commonwealth in monitoring the University's progress against the Commonwealth's objectives and the University's strategies for innovation.

The University will report principal performance information and aim to meet the innovation performance indicators and targets set out in the following table.

Note: All calendar year references below refer to the previous year's data collection.

<table>
<thead>
<tr>
<th>Principal Performance Information</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of patent and plant breeder’s rights families filed, issued and held</td>
<td>Filed 8, Issued 2, Held 34</td>
</tr>
<tr>
<td>Number of all active licences, options or assignments (LOAs)6 executed and income derived</td>
<td>No. 37 active 29 executed in 2011, Value($) $655,000</td>
</tr>
<tr>
<td>Number and value of research contracts and consultancies executed7</td>
<td>No. &gt;200, Value($) $21,986,000</td>
</tr>
<tr>
<td>Investment in spin-out companies during the reporting year and nominal value of equity in spin-outs based on last external funding/liquidity event or entry cost</td>
<td>Investment ($) 0, Value($) $2,376,162</td>
</tr>
</tbody>
</table>

Note: All calendar year references below refer to the previous year’s data collection.

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Category 4 Income</td>
<td>$902,063</td>
<td>$1,181,255</td>
<td>$1,250,000</td>
<td>$1,500,000</td>
<td>$1,500,000</td>
</tr>
</tbody>
</table>

Note: All calendar year references below refer to the previous year’s data collection.

<table>
<thead>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The proportion of JRE Engineering Cadetships filled</td>
<td>0%</td>
<td>70%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

3.2 Industry and Skills
3.2.1 Commonwealth objectives
The Commonwealth encourages universities and employers to work together so that courses meet the needs of employers, where relevant. This may include integrating work and learning, meeting professional accreditation requirements and involving employers in course development and delivery.

3.2.2 University strategies
PACE (Participation and Community Engagement)
PACE (Participation and Community Engagement) is Macquarie’s centrepiece curriculum initiative connecting students with organisations in the business, community, not-for-profit and government sectors. Through PACE, students engage in work-integrated-learning projects that meet both the business needs of the workplace and the learning outcomes of their academic unit.

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1 This set of performance information does not require targets. Universities will be asked to advise their baseline performance and will report on their future performance in the context of the Institutional Performance Portfolio Information Collection commencing in 2013. Patent and plant breeder right family refers to a group of patent or plant breeder rights applications or grants emanating from a single filing. Note: this question only concerns patent and plant breeder rights families, and is not in reference to families of other forms of registered IP (i.e. trade marks).

2 A licence agreement formalises the transfer of technology between two parties, where the owner of the technology (licensor) grants rights to the other parties (licensee). An OPTION agreement grants the potential licensee a time period during which it may evaluate the technology and negotiate the terms of a licence agreement. An option agreement is not constituted by an Option clause in a research agreement that grants rights to future inventions, until an actual invention has occurred that is subject to that Option. An ASSIGNMENT agreement conveys all right, title and interest in and to the licensed subject matter to the named assignee.

7 Please use the definition of contracts and consultancies utilised in the National Survey of Research Commercialisation (NSRC). A copy of the survey is available at this URL: http://www.innovation.gov.au/Section/Innovation/Pages/TheNationalSurveyofResearchCommercialisation.aspx
of study. Students have the chance to apply theory learned in the classroom in real-world settings; they also develop the social, interpersonal, and personal capabilities that employers are increasingly looking for in work-ready graduates. The forms of engagement fostered through PACE also provide a mechanism for employers and students to 'feedback' to the University about curriculum relevance and sufficiency. This in turn enables course development that better responds to workforce and community needs. PACE operates in all Macquarie's Faculties and in 2013 will involve almost 4,000 students. By 2016, it is envisaged that 100% of Macquarie's undergraduate students will be participating in the program.

In addition to PACE, in 2012 a process was begun to bring a more strategic approach to Work Integrated Learning, which commenced with a review/audit. The report made governance and (relationship) management recommendations. As a result, in 2013 a Transformational Learning Strategy Group was established to implement the Review findings.

**Social Inclusion**

Macquarie provides an advising service to prospective Indigenous students as to priority disciplines and supports specific to these. Macquarie is growing its suite of health offerings (one of the priority discipline areas); however, the largest initiative in this area to which Macquarie is a participant, is the national 1,000 Indigenous Accountants pathway program undertaken through an articulation arrangement with TAFE NSW and in conjunction with CPA Australia and representatives of the finance sector, as referenced in section 2.2.

**Accreditation**

In relation to its academic programs Macquarie has a timetable of professional program accreditations that indicates there are between 3 and 20 Macquarie programs undergoing professional accreditation each year. Beyond the customary accreditation of professional programs by professional associations, Macquarie is also working towards having both its providers in the business and management fields (MGSM and the Faculty of Business and Economics) accredited by the international body – AACSB (The Association to Advance Collegiate Schools of Business).

**Workforce Focus**

In response to the workforce shortage for professional Engineers and the location of Macquarie University amongst 500 high-tech companies, including the Australian headquarters of Optus, Macquarie University has commenced teaching in Engineering, focussing on Electronic Engineering, Telecommunications and in particular Wireless Engineering. The Engineering Department has two major industry consultative groups: the senior group is the Engineering Advisory Committee. This is a high level group (CEOs, MDs etc) which meets 3-4 times per year and was involved in the recent Accreditation process. The second group is the Engineering Industry Partnership Program: two links with information are below:

http://engineering.mq.edu.au/community/industry

http://engineering.mq.edu.au/community/industry/partners/

Both groups, in differing ways, inform and assist in the development of the Engineering curriculum and program selection. They also provide industry placements/internships, guest lecturers, prizes and scholarships.

In response to industry demand from the Business Council of Australia for graduates with 'soft' skills, Macquarie is developing a new 4 year double degree – the Bachelor of Business Leadership and Commerce – which will have its first intake in 2014. This new academic program will combine high level soft skills required by employers with the high level technical expertise required by the professional associations. It is planned, following demonstrated success with graduates from the Bachelor of Business Leadership and Commerce, that the Business Leadership units would become available to Macquarie’s other professional programs as new double degree programs.

The development of new programs (particularly in the media and journalism areas) has resulted from extensive industry consultation. The Faculty of Arts curricula for its new journalism program has been considered by journalism and media professionals in television, radio, print and online
media companies and news agencies. Likewise, in response to a more diverse workforce in the media sector, Macquarie partnered with SBS to provide a mentoring program for students from culturally and linguistically diverse (CALD) communities and refugee backgrounds. Furthermore, the revised Law programs have involved extensive consultation with major law firms and are also accredited.

An Industry Advisory Board has been established to oversee all Media Programs, while an ongoing review of Media programs has identified the need for new courses, such as the B Marketing and Media (in partnership with the Faculty of Business and Economics) and the B Information Technology in Interactivity and Gaming (in partnership with the Faculty of Science)

Industry representatives are included in the panels to review Macquarie programs e.g. the 2012 reviews of the Master of Applied Finance and the Bachelor of Applied Finance. Three majors of the Bachelor of Commerce have been deleted following consultation with industry.

The University has been selective in its developments in the area of allied health. We offer only graduate entry courses and limit the entry numbers to maintain quality and ensure placement demands can be met. We work with HWA nationally and in NSW with Health Education Training Institute (HETI), the Interdisciplinary Clinical Training Networks (ICTNs) and ClinConnect to build placement opportunities and support state-wide efforts to increase capacity, enhance quality and coordinate distribution of training places.

We aim to maintain a strong link between research and teaching in allied health. The Australian Hearing Hub is a major initiative of MU building links between research, education and industry to advance both science and practice in the fields of audiology and speech pathology. The level of engagement with industry partners is excellent for the promotion of research and training opportunities for students to promote evidence-based practice.

We introduced the first Doctor of Physiotherapy in NSW (an extended 3 year masters) to produce graduates who are well equipped to research and lead in the profession. We have been mindful of workforce issues and will work to develop new areas in allied health in consultation with State workforce plans. Our new physiotherapy program has a very engaged advisory board with representatives from private industry and the profession. We are also developing, in collaboration with industry partners, new undergraduate majors aimed at preparing students for the growing services sector in health, in particular, the disabilities area. This will be guided by our new DVC CEA appointment and the Director of corporate engagement.

### 3.3 Engagement

**3.3.1 Commonwealth objectives**

As part of its social and economic remit and as an important precursor to innovation, the Commonwealth encourages universities to engage with all levels of government, other universities, businesses, schools, the vocational education and training sector, employers, the professions, research institutions and the wider community including international partners particularly those in the Asian region.

**3.3.2 University strategies**

#### Research Collaboration and Engagement

In 2009 the University’s commitment to collaboration was strengthened through the establishment of the Office of Enterprise Partnerships and Commercialisation (EPC) which lies within the portfolio of the Deputy Vice-Chancellor Research. The role of this Office was to assist University staff to identify and establish working relationships with potential research partners from outside the University in the private or government sectors, as well as to support commercialisation of research-derived Intellectual Property. Late in 2011 the University reviewed this structure and made the decision to disestablish the EPC and re-focus the expertise of this Office through an Office of Commercialisation and a Sponsored Research Team within the Research Office.
The Sponsored Research Team, established in 2012 and based on the previous Office of Enterprise Partnerships and Commercialisation, includes five Heads of Partnerships and Development (HPDs) one allocated to each of the four Faculties and one to ASAM. The HPDs assist researchers in finding and developing opportunities to deliver solutions to current industry challenges, to inform policy and to improve service delivery through collaborative research, contract research and tenders. The Sponsored Research Team provides researchers with strategic advice on external engagement and assists researchers with the establishment and development of research partnerships with business, government and other organisations, providing advice on tender bids, research proposals and budgets. The Team also draws on the expertise of Access MQ’s Research, Consulting and Training Unit for implementation of contract research consultancy, training and service provision projects.

Through this new structure, the University has strengthened management support systems assisting staff to identify potential research collaboration opportunities with research end-users in Australian industry, government, NGOs and the general community, and in its first year of operation secured $19.2 million in funding for the University.

The Sponsored Research Team targets an annual growth of 10% in real terms for the value of research contracts with Australian government (Category 2) and Australian and international industry (Category 3) funding.

While the University is committed to the continuation of its well-established record with Australian Competitive Grants, it needs to broaden its research funding base to achieve the MQ@60 target of a 100% real increase in research income to $100m by 2024.

One element contributing to the achievement of this target is the University’s Enterprise Partnerships Scheme which is intended to support the establishment and development of mutually beneficial links with private sector and government enterprises. The scheme supports a link with a partner where no partnership existed previously or a partner who has a current low level relationship with the university. The primary aims of this scheme are to

- facilitate a diversification of the University’s research funding base, including direct funding from research end-users by way of commissioned research and collaborative arrangements;
- enhance the process of transferring the results of our research to our environment; and
- increase the efficiency of resources engaged in acquiring research funding, principally by the creation of repeated research funding from these enterprises.

Overall the University invests approximately $650,000 per annum in this scheme, which supports researchers in their initial contacts with research sponsors and provides co-funding for pilot research projects.

**Higher Degree Research Collaboration**

The joint supervision of doctoral students at Macquarie University with overseas partner universities has expanded dramatically since 2007 and it is recognised to be an excellent mechanism for our researchers to maintain and enhance their international research collaborations.

Macquarie uses two models of jointly supervised doctoral degrees: Cotutelle and Joint PhD. Both models involve the doctoral candidate spending study periods of at least 12 months at each partner university under the co-supervision of at least one supervisor from each university, and the submission of a single thesis for joint recognition.

The University currently has more than 140 Higher Degree Research students who are jointly supervised with a supervisor from an external Australian or overseas institution. Approximately 100 of these students are also enrolled at one of Macquarie’s international partner institutions - the University has formal agreements with over 30 universities around the world to enter into Cotutelle or Joint PhD arrangements.
Joint supervision of HDR students between Macquarie staff and staff of other leading research-intensive universities is an effective way of both enhancing the research training experience for the students, and building in-depth collaboration with leading research institutions internationally. The University seeks to increase the number of PhD students undertaking joint PhD programs with international partners to 10% of total PhD load.

This will be achieved through expanded recruitment through specific partner institutions in Europe/UK, China, South East Asia and India involving tailored scholarship programs, joint research training pathway programs (via Macquarie’s new BPhil/MRes), and cooperative arrangements with industry (eg: India @ 75/CII Ektaal programs). The Dean Higher Degree Research and the Director Research Training and International Research Training Partnerships will work closely with the Global Programs Office to achieve this objective.

The University also aims to increase the number of co-funded HDR scholarships supporting our students, including externally-funded awards (project scholarships), Joint PhD Programs and other international cooperative awards (for example, through the China Scholarship Council). The University seeks to expand the number of HDR students supported by a co-funded scholarship to a minimum of 20% of total HDR load.

Philanthropy and Industry Investment

While Macquarie University has always encouraged philanthropic donations and industry investment, its engagement with potential benefactors or investors has become more focussed in recent years. This trend is set to continue with the establishment of recent initiatives and appointments.

The Macquarie University Foundation was established in 2009 to lead and support the University's fundraising endeavours. Building philanthropic and other financial support is integral to achieving Macquarie's vision and the Foundation plays a key role in seeking donations and support, and in forging new partnerships with individuals and organisations. In August 2012 the University appointed a new Director of the Macquarie University Foundation. The Director’s position is highly strategic with a significant focus on medical fundraising and a remit to forge new partnerships with individuals and organisations related to our areas of research strength.

Macquarie’s current strategic fundraising aims and objectives are to build a culture of philanthropy and diversify Macquarie University’s revenue streams through increasingly successful fundraising activities across the following areas:
- Major Donors
- Corporate Prospects
- Annual Fund and Appeals
- Bequests
- Trusts and Foundations
- A University Wide Anniversary Campaign (eg MQ@50)

A key strategy for engaging with potential supporters is to align the University’s high priority fundraising opportunities with their existing and potential philanthropic and business interests. The Foundation office will develop and strengthen relationships with alumni, donors, prospects, businesses, industry representatives and other key stakeholders through a program of cultivation and engagement around events, communication and stewardship.

In late 2012 the University engaged Grenzebach Glier and Associates to explore the scope and viability of increasing the fundraising capacity of the University and its Foundation prior to the University’s 50th anniversary in 2014. It is expected that the recommendations arising from the review will inform a road map for fundraising success and will complement the University-wide major planning initiative being undertaken during 2013 - Our University – A Framing of Futures.

Corporate Engagement and Advancement

As mentioned previously, in early 2013 MQ established a new position of Deputy Vice-Chancellor Corporate Engagement and Advancement. This position will play a crucial role in the University’s
executive leadership team, and will have oversight of marketing and communications, the Macquarie Foundation, as well as alumni and philanthropic development activities.

The DVC CEA will have responsibility for strengthening the University's engagement with a wide range of corporate entities, particularly in the neighbouring Macquarie Park technology sector where many major multinationals reside. The DVC CEA designate is a senior member of the academic medical profession and will be a great asset to Macquarie University Hospital and the Australian School of Advanced Medicine.

**PACE (Participation and Community Engagement)**

In collaboration with Australian Volunteers International (AVI), Macquarie has developed the PACE International program to engage students in community development projects in developing countries, primarily in the Asia-Pacific region. Since the program’s inception in 2009, some 300 students have worked with community partners in India, Vietnam, Cambodia, Malaysia, the Philippines and Peru. By 2016 our goal is for 400 students per annum to be participating overseas. Macquarie University’s PACE Program and Research Office are also working together to expand current local, regional and international partnerships focused on student engagement to multifaceted partnerships that enable collaborative research linked to practice with high social impact. Such partnerships also provide a vehicle for the movement and exposure of staff to industry and community sectors, foster collaborative curriculum and course development, and potentially encourage philanthropy and industry investment in the University’s student engagement and research program.

Through PACE, we currently partner with 443 organisations spanning all sectors of the economy and a range of geographical locations: within metropolitan Sydney, elsewhere in Australia, and overseas. Negotiations are currently underway with a further 168 organisations interested in partnering with the University through the PACE program. We are thus on track towards having an estimated 600+ PACE partnerships secured by the end of 2013. The breakdown of PACE partners by sector, and by status of partnership formation (established/in negotiation) is as follows:

<table>
<thead>
<tr>
<th>Pace Partners</th>
<th>Established</th>
<th>In Negotiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sole traders</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Companies</td>
<td>193</td>
<td>74</td>
</tr>
<tr>
<td>Partnerships</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Not For Profit</td>
<td>149</td>
<td>61</td>
</tr>
<tr>
<td>Federal Government</td>
<td>39</td>
<td>14</td>
</tr>
<tr>
<td>State and Territory Government</td>
<td>41</td>
<td>14</td>
</tr>
<tr>
<td>Local Government</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>443</td>
<td>168</td>
</tr>
</tbody>
</table>

As at July 2013, over 3,600 students are undertaking some form of Work-Integrated-Learning through PACE units (over 40% of the average annual undergraduate intake). This represents a doubling of student participation from the 20% enrolled in PACE units in 2012.

**Social Inclusion**

Macquarie University has appointed two Indigenous staff to work solely on Indigenous outreach programs as well as two non-Indigenous staff who work specifically on the Indigenous science education program in conjunction with community elders. To date, the University has worked with an increasing number of partner organisations in the Northern Territory (Papunya, Arnhem Land and Tiwi Islands) as well as in New South Wales regional (Maclean, Yamba) and urban locations (Blacktown, Chifley, Doonside). Outreach programs focus on aspiration raising and capacity/skill development through hands on activities relevant to individual and community members. Examples include: IT skills for Papunya youth; Bush Medicine mapping project; literacy & numeracy support; Indigenous tourism business development; and the Indigenous Science Fair.
3.3.3 Performance indicators and targets

The purpose of the engagement performance indicators and targets is to assist the University and the Commonwealth in monitoring the University's progress against the Commonwealth's objectives and the University's strategies for engagement.

The University will aim to meet the engagement performance indicators and targets set out in the following table.

*Note: All calendar year references below refer to the previous year’s data collection.*

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Number of active collaborations8 with industry and other partners in Australia</td>
<td>369</td>
<td>380</td>
<td>390</td>
<td>410</td>
<td>430</td>
</tr>
<tr>
<td>Number of active collaborations9 with industry and other partners overseas</td>
<td>56</td>
<td>58</td>
<td>61</td>
<td>64</td>
<td>67</td>
</tr>
<tr>
<td>Category 3 Income</td>
<td>$13,537,307</td>
<td>$10,723,521</td>
<td>$11,260,000</td>
<td>$12,000,000</td>
<td>$13,000,000</td>
</tr>
</tbody>
</table>

*Note: All calendar year references below refer to the previous year’s data collection.*

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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>PACE partnerships in Australia</td>
<td>300</td>
<td>600</td>
<td>800</td>
<td>1000</td>
<td>1200</td>
</tr>
<tr>
<td>PACE International partners</td>
<td>11</td>
<td>12</td>
<td>17</td>
<td>26</td>
<td>36</td>
</tr>
</tbody>
</table>

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8 Collaboration involves active joint participation with other organisations, by contributing resources such as intellectual property, knowledge, money, personnel or equipment, with the aim of obtaining a shared goal or objective. Straight fee-for-service arrangements, such as contracts and consultancies, are deemed not to be collaborative and are therefore excluded. Collaboration with Cooperative Research Centres (CRCs) is also to be excluded. This definition is in line with the ABS and OECD definitions of collaboration.

9 See footnote 8 for a definition of collaboration.
4.1 Student enrolments

4.1.1 Commonwealth objectives
The Commonwealth is committed to expanding higher education to provide high quality opportunities for people of all backgrounds to participate to their full potential. An expanded higher education system will educate the graduates needed for Australia's future economy, which will be based on knowledge, skills and innovation.

The main objectives of the Commonwealth are to ensure that:
- by 2025, 40 per cent of all 25 to 34 year olds will hold a qualification at bachelor level or above;
- by 2020, 20 per cent of undergraduate enrolments should be students from low socio-economic backgrounds;
- national parity for Aboriginal and Torres Strait Islander students and staff is achieved over time; and
- universities are producing graduates that meet the nation’s skills needs.

These objectives are supported through the Commonwealth Grant Scheme and, in particular, the demand driven funding of students in bachelor level courses.

4.1.2 University strategies
Macquarie University will see an increase demand from 2014 in areas of growth in CGS where we have strengthened our offerings in Engineering, Allied Health and Environmental Studies and Indigenous Education.

In addition we aim to continue to attract and integrate students from diverse cultural backgrounds. Macquarie will continue its commitment to local students whose circumstances limit their access to tertiary study through a range of equity based scholarships and university access pathways with a focus on disability which is in line with our strategic research initiatives (see Australian Hearing Hub). Macquarie plays an active developmental role in Australian society by giving students from all backgrounds a chance to achieve their potential and make a contribution to society.

Sub-bachelor planning
Macquarie has an agreement with the Northern Sydney Institute of TAFE (NSI) for a pathway from the TAFE taught Diploma in IT, the jointly taught Associate Degree in IT leading to Macquarie’s Bachelor of IT. This is an area where we see higher levels of growth and linkages to our Faculty of Science.

Internationally, the Faculty of Science has articulation agreements with several Malaysian VET providers and one Singaporean VET provider to provide a pathway into the Bachelor of IT.

Bachelor degree planning
Faculty of Arts
There will be new interdisciplinary majors which are based on existing unit offerings eg Bachelor of Arts with a Major in Criminology (involving units from Policing, Intelligence and Counter Terrorism, Law and Sociology) which commenced in 2013.

The university continues support a wide range of modern languages (9 European and 2 Asian) with Chinese as the strongest single language (currently with 919 unit registrations). For 2014 it is planned to bring on stream a new offering in spoken Chinese designed to appeal to existing students who see themselves as likely to have jobs which relate to China in the future. The continuation of language provision requires significant support from within the Faculty of Arts but it is seen as a major asset to the University and a contribution (through, for example, the maintenance of a major in Russian) to Australia’s international profile.
Faculty of Business and Economics
The Faculty will continue its focus on areas of high demand and staff expertise – accounting, actuarial studies, marketing and finance – and further establish credentials as a dominant player in the education of ‘soft/generic skills.

Further to this there are plans to release two new degrees:
(1) Bachelor of Business Leadership and Commerce 2014+ - developed on the basis of employer demand for graduates with ‘soft/generic skills; and
(2) Bachelor of Business Analytics – developed on the basis of identified area of business growth.
An inter-disciplinary program incorporating Mathematics, Statistics, Computing and Business Studies, with a planned commencement date of 2014.

Though not specifically named in the Review of Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander People Report, Accountancy has been identified as an emergent priority by Indigenous groups and industry and, as mentioned previously, the University is part of the 1000 Indigenous Accountants initiative through its partnering with the TAFE/University consortium on the Associate Degree Accounting program.

Faculty of Human Sciences
The Bachelor of Human Sciences will commence in 2014. The first two planned Majors will be Community Services and Human Movement, with others to follow. The degree will bring together a range of disciplines across the Faculty of Human Sciences including, Psychology, Linguistics, Early Childhood and Education. The focus for this degree will be on working in the community and within Allied Health. Expertise from the Business, Science and Arts Faculties will also contribute to these programs.

In addition, to support national parity outcomes, Macquarie has focused on priority disciplines for Aboriginal and Torres Strait Islanders include teaching and health. The new Bachelor of Human Sciences also provides a feeder into the new postgraduate health offering in physiotherapy.

Macquarie University has articulation agreements with several TAFE colleges who prepare students for initial teacher education programs in Early Childhood Education. We are in negotiation with a TAFE college to develop a jointly delivered degree program. Articulations with two leading poly-technical institutions in Singapore are also progressing.

Faculty of Science
At the undergraduate level in 2014 we will continue to strengthen our offerings in Engineering and Medical Sciences. We have revised the B Med Sci to provide greater flexibility, enabling students to tailor their program towards a variety of postgraduate Medical, Health and Allied Health destinations. We will introduce a new major in Web Design into both our Bachelor of Science and Bachelor of Information Technology.

Through our PACE program and our involvement in the National Indigenous Science Education program, we will continue to increase the level of engagement with science of rural and regional communities with high Indigenous populations, from 2014.

Postgraduate planning
Macquarie University is currently seeking clarification on our current PG coursework CSP courses from the Department, and we are hoping to expand the current range of PG courses which we currently offer as CSP. The university is also requesting additional places on our current student load targets it offers in Physiotherapy, Engineering, Social Health, Data Sciences and Education Leadership. The University will pursue opportunities for allocations of additional PG CSPs as they arise and will continue to work with the Department regarding its PG planning over the Compact period.

Faculty of Arts
A greater emphasis on employability of graduates is focussing a redevelopment of the suite of postgraduate coursework programs in the Faculty of Arts for greater alignment with the
professions (e.g. journalism, public diplomacy, global governance and development). The graduate Law program is being redesigned into a Juris Doctor.

The University considers itself a leader in learning and teaching strategies that enhance Indigenous content. In 2012, Warawara Department of Indigenous Studies commenced offering a new Master of Indigenous Education. The degree (also offered at Postgraduate Certificate and Postgraduate Diploma level) is available to Indigenous and non-Indigenous students and is the only one of its kind in Australia. Offered as a distance mode program, it currently has 35 students who reside in various areas of Australia e.g. Alice Springs, The Tiwi Islands and Amata (located on Anangu Pitjantjatjara Yankunytjatjara Lands).

Warawara has also decided to discontinue offering its Bachelor of Community Management degree (2013 is the final year) in light of developing its Indigenous Studies undergraduate major. Approximately 500 students undertake an Indigenous Studies unit each year, and the Department intends to develop this major and encourage more students from across the four faculties to undertake Indigenous Studies units.

**Faculty of Business and Economics**

The Faculty will continue its emphasis on areas of strength – accounting, actuarial studies and applied finance. Growth opportunities in the ‘soft/generic skills area

**Faculty of Human Sciences**

It is envisaged that Speech and Hearing Science expand to a commencing load of 130 per annum. We are aiming to increase the commencing load in Clinical Audiology to 60 per annum and the commencing load in Speech and Language Pathology to 45 per annum.

**Faculty of Science**

At the postgraduate level the Faculty plans to introduce a new Master of Climate Change in 2014 which builds on our cross-institutional research strengths in the climate change and climate science areas. We also plan to introduce a Master of Data Science which builds on our research strength in the computational linguistics area and fits with workforce demands for graduates in the area of analytics and data science. Further, there is a natural synergy with the Bachelor of Business Analytics in the Faculty of Business and Economics.

**Medical planning**

In recent years, Macquarie University has embarked upon major developments in the medical/health area through development of Macquarie University Hospital and the Australian School of Advanced Medicine. Research at the School of Medicine has grown significantly with increasing enrolments of PhD students and new research groups which have been recruited from other universities and health settings. The development of postgraduate teaching programs has been steady and will be aided significantly by the arrival of an inaugural Associate Dean – Teaching and Learning who arrived from the University of Leeds in May 2013. The Macquarie University Hospital continues to grow and consolidate a position as a leading private provider of high technology clinical care across the city and region. Bed occupancy has risen steadily to the point where the entity is operating at a break-even financial position on a month-month cash operating basis.

Although both the Hospital and Medical School are developing appropriately, it is during this Compact period that further refinements and acceleration of growth for both is likely to occur. The University recently retained the US-based boutique academic health centre strategy firm, AMC Strategies LLC, to visit the campus and review the status of medical/health development and to provide a planning pathway for further sustaining the good developments already achieved. The focus of forward work will fall into several broad areas including a) achieving closer alignment of the Medical School and the Hospital in all areas of mission (teaching, research, provision of clinical care and governance), b) examination and amendments to the model of clinical practice which has been in place since inception of the University Hospital, c) examination of the potential for an undergraduate medical program (not free-standing but in partnership with another
The University notes that the Australian Government does not intend to establish a new medical school or allocate additional medical CSPs at the current time.

4.2 Quality

4.2.1 Commonwealth objectives
A focus on teaching and learning quality underpins the Commonwealth’s vision for Australia to be one of the most highly educated and skilled nations in the world.

The Commonwealth has made a commitment to provide more autonomy to universities through the removal of funding caps on Commonwealth supported bachelor level places. In turn, the Commonwealth requires the University to participate in the higher education quality arrangements which are overseen by the Tertiary Education Quality and Standards Agency. The arrangements are designed to support academic autonomy while ensuring that the achievement of standards can be demonstrated and that there is a strong focus on enhancing the quality of teaching and learning while expansion of the higher education system meets national participation ambitions.

The Commonwealth’s commitment to quality is demonstrated through initiatives such as the Office for Learning and Teaching, which provides a suite of grants, awards and fellowships to recognise quality and promote innovations in learning and teaching.

The University also has obligations under the quality and accountability requirements in Division 19 of HESA. This compact does not change those obligations.

4.2.2 University strategies

Macquarie’s goal is to provide an inspiring educational experience. We will achieve this by:

- Delivering relevant, future-focussed and high quality programs
- Developing staff capability
- Providing intellectually challenging learning experiences
- Preparing students for the future

For the life of this Compact, Macquarie will be focussing on quality enhancement, integrating and embedding the significant change that took place over the life of the last Compact:

- Responding to the Review of the new Undergraduate and Postgraduate Curriculum to reduce complexity whilst maintaining flexibility and, in particular, to oversee the simplification of the curriculum award rules, course structures and study patterns
- Using the distributed model developed for the implementation of the new Moodle-based Learning Management System (called iLearn) to focus on distributed leadership in learning and teaching through communities of practice and mentoring – using the models of the Teaching Excellence Academy (Macquarie’s award winning teachers), the Teaching Index (incentivising and promoting scholarship in teaching and learning), and The Education Studio and other initiatives designed to get staff and students involved in investigating and researching creative approaches to learning and teaching research
- Responding to the Review of the Learning and Teaching Centre by systematising professional development of academics at all levels, and feedback from students collected via regular teacher, unit and course experience questionnaires; integrating the annual Performance Development and Review with personal plans for development and responding to student feedback
- Implementing the Teaching Standards Framework and outcomes to involve Departmental Heads and Course Coordinators in leading learning and teaching enhancement, and
- Redefining distance education online in the light of both the MOOC and the blended learning environment
Teaching Quality Initiatives (see below)

Macquarie University’s Initial Teacher Education (ITE) programs work in close collaboration with State and non-government school sectors through an external Teacher Education Program Advisory Committee and through representation on the State and National Councils of Deans of Education. MQ collaborates with the NSW DEC in teacher professional learning and school students’ engagement with technology for learning through the ICT Innovations Centre. The Head of School of Education represents the NSW Council of Deans on the NSW Institute of Teachers’ Initial Teacher Education Committee which is responsible for the review of teacher education programs in the state.

Our ITE programs for primary and secondary teachers employ a double degree model, the BA-B Ed or B Sc–B Ed, which ensures students receive strong grounding in content subjects as well as pedagogy and curriculum. We have opted for a 2-year Bachelor of Education as our graduate entry program rather than a masters as we believe students entering teacher education must be taught the fundamentals of the discipline of education which begins at undergraduate level in alignment with the AQF. We are developing an early offer initiative to attract excellent students to teacher education.

During the life of this Compact research will be undertaken into improving student experience through the experimental fit out of the old library building as a student managed informal learning space. This project will build on research projects funded through the Australian Learning and Teaching Council and the Office for Learning and Teaching. Three architectural firms have been given space in the building to work with the Student Advisory Group and student service providers to develop 3 flexible spaces. Over the 3 years of the research, usage will be monitored and outcomes identified that may be applied in future learning and teaching space refurbishments and new builds.

Student engagement activities at Macquarie over 2014 - 2016 will focus on ensuring the success and retention of the domestic cohort (including the growing numbers of Indigenous students – see 2.2) which has increased as a percentage of total student cohort in response to Federal Government. By 2016 Macquarie wishes to achieve a success rate of 88.1% for the domestic undergraduate student.

In order to achieve this Macquarie has established a Retention Working Party, which will:

- Identify areas of the University with retention rates below the State average
- Improve retention rates by implementing best practice programs and services, and
- Develop an implementation plan for a proposed retention technology system

It is planned that an Implementation Plan will be rolled out from 2014 and revised in response to evaluation over the period from 2015 - 2016. To assist the Working Party with its work, Macquarie has funded a Learning Analytics Project which over 2013 will be trawling the data we already hold on our students to identify customised pathways to assist our students to succeed. The faculties, being closer to the students will also be involved e.g. the Faculty of Business and Economics is extending their existing Peer-Assisted Learning (PAL) and Conversation Groups (for domestic and international students whose first language is not English) with a Students at Academic Risk (SAR) Program.

Further, to assist student engagement over transitions into and out of university, the First Year Experience Unit is rolling out a holistic student lifecycle program called UniWISE which is designed to support the students’ academic, social and emotional development as they transition from various pathways into university life and then later into careers. UniWISE has both physical and virtual modules covering the whole of the student lifecycle – from before they commence at university: UniWISE Prepare; their life at university: UniWISE Advance; and then their transition to work: UniWISE Succeed.

As noted in 3.2 above, to assist students to gain breadth in their studies whilst also achieving graduate attributes and employability, Macquarie’s PACE program provides work-integrated-
learning (WIL) opportunities for undergraduate students in all faculties. These take a variety of forms including internships, professional experience and practicums, field trips with a partnership component, industry/community panels with project mentoring, community development projects, service learning by volunteering, project-based learning, community-based research, mentoring and peer-assisted learning. Over 1,600 students engaged in PACE in 2012 and that number is set to grow to almost 10,000 per annum by 2016.

Note: All calendar year references below relate to projects and awards in that calendar year.

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Number of active learning and teaching projects supported by the PELTHE10 program where the University is the lead institution</td>
<td>6</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Number of active learning and teaching projects supported by the PELTHE11 where the University is a partner institution</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Number of citations for outstanding contributions to student learning</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Number of awards for teaching excellence</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Number of awards for programs that enhance excellence</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: All calendar year references below relate to projects and awards in that calendar year.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>An example of a possible indicator includes: Increase the numbers of staff that complete internal Learning and Teaching development</td>
<td>Baseline unknown</td>
<td>Undertake audit and develop targets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implementation of the Teaching Standards Framework</td>
<td>12.5%</td>
<td>25%</td>
<td>50%</td>
<td>75%</td>
<td>100%</td>
</tr>
<tr>
<td>Increase in % of the annual cohort of undergraduate students completing a PACE unit</td>
<td>20%</td>
<td>40%</td>
<td>60%</td>
<td>80%</td>
<td>100%</td>
</tr>
<tr>
<td>Increase in CEQ Overall Student Satisfaction Index</td>
<td>82.25%</td>
<td>%82.25</td>
<td>84.25%</td>
<td>85%</td>
<td>85.5%</td>
</tr>
<tr>
<td>Increase in domestic student Bachelor's Pass success rate</td>
<td>86.1%</td>
<td>86.6%</td>
<td>87.1%</td>
<td>87.6%</td>
<td>88.1%</td>
</tr>
</tbody>
</table>

10 Promotion of Learning and Teaching in Higher Education - the program provides learning and teaching grants, awards and fellowships and is administered by the Office for Learning and Teaching.
11 See footnote 10 for definition.
4.3 Equity

4.3.1 Commonwealth objectives

The Commonwealth is committed to a fair and equitable higher education system that provides equal opportunity for people of all backgrounds to participate to their full potential and the support to do so.

In particular, the Commonwealth has an ambition that by 2020, 20 per cent of higher education enrolments at the undergraduate level will be people from low socio-economic status (SES) backgrounds.

The Commonwealth expects all universities to play a part in meeting the Commonwealth’s higher education participation ambitions, consistent with the objectives and regulatory requirements of Commonwealth funding.

The Commonwealth funds a range of programs to encourage and support access to and participation in higher education by people from low SES backgrounds and other under-represented groups, including the Higher Education Loan Program and Student Income Support.

The Commonwealth will monitor the University’s equity performance through the reporting requirements and evaluations of programs and initiatives. The University’s performance in meeting equity objectives will also be linked with teaching and learning Performance Funding targets.

Universities have obligations under the fairness requirements in Division 19 of HESA. This compact does not change those obligations.

4.3.2 University strategies

In support of this outcome Macquarie University launched its LEAP (Learning, Education, Aspiration and Participation) initiative in 2011 and since that time has supported over 3,500 school students throughout NSW in a range of programs which target Indigenous, low SES, refugee and rural/regional youth. Additionally, MQ is a member of the BRIDGES to Higher Education Consortium which was successful in gaining the largest HEPPP funding allocation nationally to increase the participation rates of students from disadvantaged backgrounds from the Sydney Basin as well as from rural/regional sites. Chaired by a representative from Macquarie, BRIDGES is expanding existing university programs such as LEAP and will reach 100,000 more students; 2,800 more teachers and, through its programs, provide 1,700 more school contact points. BRIDGES has also developed collaborative projects in which each university is involved including a Parents program, a Connected Classrooms project and the development of two TV series - one aimed at late primary school students and the other at high school students. These TV series will be broadcast nationally by TVS to an estimated audience of 4 million viewers.

Through the rollout of its Outreach Strategy and through the delivery of its LEAP and BRIDGES programs, Macquarie has improved access rates of equity student groups from 2010. Specific programs which have been focussed on awareness raising and aspiration building as part of enhancing access have included: the Refugee Mentoring Program undertaken in conjunction with the Department of Education NSW and eight schools in Western Sydney; the Indigenous Science Education program in northern NSW; the university experience program in conjunction with Country Education Foundation; and, the Robotics program with low SES schools in north western Sydney. Capability and educational attainment as part of access enhancement has been undertaken through initiatives including the Environmental Science Curriculum Enrichment Program in Broken Hill and the Auburn Community of schools project which focuses on individual student capability development. Through BRIDGES to Higher Education, the University also works with teachers, parents and sometimes whole communities - such as with the group of Yaegyl elders in Maclean, as a key dimension of enhancing aspirations as well as educational attainment. Additionally, we have increased access rates by growing the suite of TAFE articulations, most
recently for example the Associate Degree Information Technology and the Associate Degree Accounting - a specific equity target group initiative. Finally, the introduction of a rural bonus scheme has impacted positively on access rates for students from rural, regional and remote locations.

Participation rates for equity groups have also increased steadily since 2010. This has been due to an increase in the financial supports available to students through equity scholarships which, as well as recognizing financial hardship, also target Indigenous, refugee, rural/regional and students with disabilities. Accommodation scholarships for on-campus accommodation have also increased as part of financial collaborations with University colleges and village.

Participation and successful completion rates are the focus of a number of initiatives introduced at Macquarie and designed to meet the different needs of students from diverse backgrounds. With a focus on transition, the First Year Experience Unit was created and coordinates face to face academic support services such as the Learning Skills Hot Desk located centrally in the Library, and online support through UniWISE which assists students with generic and discipline specific academic skills development, including academic writing and numeracy. Mentoring is another key dimension of the support available to enhance participation and in 2012, every commencing student had a matched mentor and all the mentoring training packages had been translated into accessible formats for vision and hearing impaired students.

Initiatives implemented to improve participation and outcomes for specific equity student groups include:

- **Indigenous** - the appointment of an Elder in Residence position which has been highly successful in the provision of cultural support to Indigenous students from local regional and interstate communities.
- **Disability** - an occupational therapist was appointed in 2011 and this position, along with the introduction of an individual coach for all students with disabilities, has enhanced successful first year completions.
- **CALD/NESB** - a media mentoring program for students studying media from refugee and CALD backgrounds was established in 2012 in conjunction with partners SBS and the NSW Ethnic Community Council.
- **Rural/Regional students** - a residential mentoring program was introduced in 2011 aimed at supporting students from rural/regional and remote locations and a Rural Students Club was established to provide social connectedness for both those rural students living on campus as well as on site.
- **Low SES** - all students enrolled from low SES postcodes were contacted with invitations to join the mentoring program as well as the Learning Skills Unit for additional support if needed.
4.3.3 Participation and Social Inclusion Targets
Proportion of domestic undergraduates who are from a low SES background
Baseline for improvement target: To be determined

<table>
<thead>
<tr>
<th>Principal Performance Indicators</th>
<th>2014 Reward Payment (target for 2013 students)</th>
<th>2015 Reward Payment (target for 2014 students)</th>
<th>2016 Progress target (target for 2015 students)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellence Target</td>
<td>To be determined</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td>Improvement Target</td>
<td>To be determined</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td>Outcome</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Proportion of domestic undergraduates who are from another underrepresented group
Baseline for improvement target: x\% (Either 2009 or average of 2008 and 2009 data)

<table>
<thead>
<tr>
<th>Principal Performance Indicators</th>
<th>2014 Reward Payment (target for 2013 students)</th>
<th>2015 Reward Payment (target for 2014 students)</th>
<th>2016 Progress target (target for 2015 students)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improvement Target</td>
<td>To be determined</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td>Outcome</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

4.4 Teaching and Learning Infrastructure

4.4.1 Commonwealth objectives

The Commonwealth is committed to the development of world class higher education infrastructure. A contemporary, technology rich, well designed and equipped campus environment has a positive influence on staff and student performance and satisfaction.

While the responsibility for capital infrastructure development and maintenance rests with the University, the Commonwealth’s commitment is demonstrated through programs such as the Education Investment Fund. Universities also utilise Commonwealth Grant Scheme funding for capital works and maintenance.

The Commonwealth will monitor the University’s infrastructure performance, through the Institutional Performance Portfolio/CAMS.

4.4.2 University strategies

Learning Space Design Principles
A set of Design Principles have been established that will enable the University’s approved Learning and Teaching Plan to implemented in Physical Space reflected as follows:

<table>
<thead>
<tr>
<th>Value</th>
<th>Principle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enquiring</td>
<td>The development of learning spaces is informed by an understanding of national and international trends in design and the perspective of academics, students and all areas of campus, and is supported by evidence</td>
</tr>
<tr>
<td>Inclusive</td>
<td>Learning spaces reflect the broad range of purposes and needs of the University and its students</td>
</tr>
<tr>
<td>Agile</td>
<td>Learning spaces are adaptable and can support a variety of purposes</td>
</tr>
<tr>
<td>Creative</td>
<td>Learning spaces are not only designed to support current needs; they should enable innovation in approaches to learning and teaching</td>
</tr>
<tr>
<td>Sustainable</td>
<td>When designing learning spaces, consideration should be given to the full range of resources required for them to operate effectively</td>
</tr>
<tr>
<td>Committed to Excellence</td>
<td>Learning spaces should make bold statements about the central role that scholarship plays in the life of the University, its academics and students</td>
</tr>
</tbody>
</table>
Implementing the design principles

Our approach is to have:
- new spaces based on best practice, stakeholder engagement and evidence-based design;
- learning spaces reflect the broad range of purposes and needs; and
- learning spaces designed to support current needs + innovation in approaches to learning and teaching.

As part of the ongoing Capital Management Plan and Campus Master planning, a clear strategy has been established identifying key central teaching areas targeted for either renewal or refurbishment. Part of this exercise has been the recent upgrade to the Macquarie Theatre as a key 500 seat facility that also includes a separate and innovative, active collaborative learning space for 80 students.

Fostering research collaboration and interaction
Increasingly, research at Macquarie University is a collaborative activity and where research funding was once focussed on individuals, today there is a strong emphasis on teams. A key driver of this is the need for inter- and cross-disciplinary activity, where research themes require multiple and often diverse inputs, spanning departments and occasionally Faculties.

Aligning supply with demand
Change in the context of academic and research activity occurs in different cycles. In addition, buildings and infrastructure also have life cycles, but they are asynchronous in their ability to accommodate academic life cycles in the medium to long term. Hence the natural life cycles of buildings do not necessarily align with those of their uses. This necessitates the adoption of strategies in terms of both design and management to provide appropriate flexibility for users, estate managers and the institution. The underlying philosophy of these design and management strategies should be three fold: agility, adjustability and adaptability

Daytime space utilisation rates maintenance
Macquarie University is already exceeding the recommended utilisation rates for Lecture Theatres under the TEFMA guidelines and is looking at upgrading a number of teaching rooms with new AV, and different styles of internal design to accommodate new teaching practices as well as changing configuration of numbers of seats within these spaces.

Since 2012, utilisation rates of the University’s infrastructure has increased with the conversion of Summer School into a full teaching session of the academic year, called Session3:

<table>
<thead>
<tr>
<th>Units offered</th>
<th>Summer School 2010-2011</th>
<th>Session3 2011-2012</th>
<th>Session3 2012-2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students enrolled</td>
<td>1979</td>
<td>3824</td>
<td>4725</td>
</tr>
</tbody>
</table>

Table 1: Improved utilisation rate with introduction of Session3

Another improvement in the utilisation rate of the University’s infrastructure has been brought about by the opening of a new University Library in August 2011.

<table>
<thead>
<tr>
<th>Seating capacity</th>
<th>2010 – Old Library</th>
<th>2012 – New Library</th>
</tr>
</thead>
<tbody>
<tr>
<td>Door count</td>
<td>1,955,511</td>
<td>2,317,505</td>
</tr>
</tbody>
</table>

Table 2: University Library – improved utilisation rate

Infrastructure Improved in Learning and Teaching
In recent years, Macquarie has built a number of innovative learning and teaching spaces that were designed to enhance students’ engagement, learning and satisfaction. The University’s Learning and Teaching Spaces Committee has been sponsoring research into the impact of space design and pedagogy on learning and teaching outcomes.
In the Collaborative Learning Forum, a space for 100 students and the first to be fully evaluated, teachers have created learning experiences which students have rated as being as active, as collaborative, and which enhances their learning as much, as a traditional small group tutorials of 20.

Attention now has shifted to evaluating the Active Learning Space, a technologically enabled space for classes of 60, and preliminary results show that it actually enhances levels of peer support and provides students’ greater opportunities to practice skills and apply knowledge than small group tutorial classes.

The next space to be evaluated will be the new informal learning spaces being constructed in the Old Library Building, called MUSE (Macquarie University Spatial Experience).

**Infrastructure Improved in Information technology**

On campus each week Macquarie services over 40,000 clients (students, staff and visitors) with IT services. This population generates 800,000 WiFi sessions and 7tb of traffic a week.

Improvements in coverage and bandwidth on campus has been steadily tracked and over the past 3 years coverage around the campus fringe has doubled. The peak traffic periods are normally at start of session but continue through semester with periodic events such as exam results. The WiFi coverage support the students in a number of ways. The introduction of a virtual computer laboratory (iLab) allows students to access any software they require for study from any device then bring to campus and from any location.

**Maintenance Backlog**

Macquarie University is currently undertaking three audits of all its facilities reviewing Building Code of Australia Compliance, DDA Accessibility and state of condition. This will inform individual building operational and capital budgets and allow more comprehensive maintenance planning for the future. It will also provide an up to date view of any backlog maintenance requirements.
PART FIVE: RESEARCH AND RESEARCH TRAINING

5 RESEARCH AND RESEARCH TRAINING

A range of research and research training performance indicators and targets are proposed in this section. Principal Performance Indicators are compulsory and institutions may voluntarily nominate optional performance indicators and targets considered reflective of individual institutional goals.

The Commonwealth recognises universities have diverse missions and, consequently, targets and performance will vary between institutions. Each university should develop performance indicators and targets to reflect its individual performance and strategic direction.

5.1 Research performance and research capability

5.1.1 Commonwealth objectives
The Commonwealth encourages excellence in research performance and the strengthening of research capability. Particular objectives are to:
- progressively increase the number of research groups performing at world class levels, as measured by international performance benchmarks; and
- promote collaboration, amongst universities, across sectors, between researchers and industry Australia and internationally.

The Commonwealth, through the Australian Research Council (ARC), conducts the Excellence in Research for Australia (ERA) which evaluates the quality of research undertaken at Australian universities by discipline against international benchmarks. ERA is used to assist in determining funding in the Sustainable Research Excellence in Universities program administered by the Commonwealth.

5.1.2 University strategies
Macquarie is one of the country’s leading research universities, bringing the best minds together and enabling them to conduct cutting-edge research across traditional disciplinary boundaries. The University’s Research and Research Training Strategy is based on five key objectives: to develop and sustain a pervasive research culture; to achieve world leading standing in selected areas of research; to enhance research training; to deliver value to the community; and to enhance the international standing of the University.

In early 2012 the DVC: Research developed a vision for the University’s upward trajectory as an internationally recognised research intensive University leading to its 60th anniversary in 2024. By age 60 Macquarie will have continued to increase in research rankings both in Australia and internationally, for example by SJT ranking for research. To achieve this, Macquarie will need to at least double its research capacity. This will mean: growing the HDR program to a load of approximately 3,500 with annual completions of ~ 600; increasing annual external research funding substantially as well as publication output. In addition to general growth across the University (including engineering), medical research will grow significantly, academic staff numbers will increase by approximately 500, and there will be a concomitant investment in physical resources.

The following five strategies have been put forward to achieve Macquarie’s objectives:

Increase research capacity of academic staff through: enhanced performance of individual staff; recruitment of new, high-quality, staff in targeted areas (particularly medical research), increase external research income to $100m (x10 for medical research), and enhance research infrastructure.

Identify and focus on areas of research excellence of international scale and quality with the intention of hosting 20 world-leading major research groupings. The key area targeted for major expansion is medical and biomedical research.
Grow the HDR research program to 3,500, using Macquarie’s Australian first, Master of Research program based on the Bologna model of research training, supported by a large-scale scholarship program funded by Australian government, industry/community partnerships, and international co-funding, and driven by enhanced student outcomes.

Expand domestic research partnerships with Australian industry/government, research agencies and free-standing self-funded research organisations (eg. medical research institutes), with a focus on relocation of partners to Macquarie campus, to create additional funding streams and research collaboration.

Expand international research partnerships with selected countries/regions including joint research centres (Macquarie campus and off-shore) and joint research and research training programs accessing international funding.

Macquarie is committed to achieving this level of growth and invests heavily in its researchers. Each year close to $30 million is distributed to the Faculties in support of research and a further $28 million in support of Higher Degree Research Students. In addition to this, the Deputy Vice Chancellor manages a budget of $45 million which comprises $25 million for HDR scholarships and support for a range of other discretionary and non-discretionary investments and initiatives.

Research Publications
In 2011 (the latest year for which nationally audited data is available) Macquarie University researchers increased their output of research publications by 8% over 2010, with an increase of almost 20% in research journal articles and an almost 10% increase in authored research books or monographs. In terms of 2011 weighted research publications per academic FTE, Macquarie again outperformed all non-Group of Eight universities and all but two Group of Eight universities.

Macquarie University researchers actively cooperate with other researchers both nationally and internationally. Of these 2011 publications, 42 per cent of Macquarie University research article publications were co-authored with researchers from another country, while 41 per cent were co-authored with researchers from another Australian university or institution (Source: SCOPUS).

Building on its international reputation for outstanding research in environmental science, in 2013 Macquarie University is ranked first in Australia and New Zealand and sixteenth in the world for highly cited research papers in environment and ecology (Thomson Reuter’s Essential Science Indicators). This places Macquarie alongside Princeton, Stanford, NASA and the Smithsonian Institute as the institutions producing the most cited research in environmental science.

Collaboration for research excellence
Macquarie holds more than 150 joint research grants with other universities and research organisations both national and international; boasts more than 140 jointly supervised PhD students with close to 100 of these being jointly supervised by an international supervisor; and well over 400 active collaborations and partnerships with Australian and overseas industry and other partners.

Macquarie’s commitment to research collaboration as a means to international research excellence was reflected in its success in the last round of ARC Centre of Excellence awards. Macquarie is the lead institution for two successful Centre of Excellence proposals: the ARC Centre of Excellence in Study of Cognition and its Disorders, led by Professor Stephen Crain; and the ARC Centre of Excellence for Core to Crust Fluid Systems, led by Professor Sue O’Reilly.

In addition to leading two Centres of Excellence, Macquarie is also a major partner institution in two other consortia: the Centre of Excellence for Ultrahigh Bandwidth Devices for Optical Systems and the ARC Centre of Excellence for Engineered Quantum Systems. This level of success – leading two Centres of Excellence and participating as a major partner in a further two from a total of 13 awarded – was bettered by only one institution. Several new collaborations involving Macquarie’s particular research strengths are currently being developed with the intention of making strong proposals in the 2013 ARC Centres of Excellence application round. The University
will support these proposals both through funding to enrich the development of the collaboration and through co-investment put forward in the proposals.

In 2012, Macquarie Neurology, headed by Dominic Rowe the inaugural Professor of Neurology at the Australian School of Advanced Medicine, embarked upon a significant new research study as one of 24 official study sites for the Parkinson’s Progression Markers Initiative (PPMI), and the only site in the Southern Hemisphere. PPMI is a landmark observational clinical study sponsored by The Michael J. Fox Foundation for Parkinson’s Research (MJFF) and the Shake it Up Foundation. Professor Rowe has been awarded $1.2 million to participate in the study using a combination of advanced imaging, biologics sampling and behavioural assessments from sites across the world to validate biomarkers of Parkinson’s disease progression.

The NSW Office of Environment and Heritage (OEH) is establishing a Hub for Adaptation Research in NSW, to harness the capabilities of NSW academic institutions to deliver climate impact and adaptation science research of state significance. The Hub will comprise three priority research nodes in the areas of:

- Coastal Processes and Responses
- Biodiversity
- Adaptive Communities

Consortium and cooperative bids to host these research nodes were encouraged; Macquarie University has been awarded as the host of the Biodiversity node, is a partner in the Sydney Institute for Marine Science (SIMS) which was awarded as host of the Coastal Processes and Responses node, and has submitted a competitive tender for the Adaptive Communities node which is currently being considered as part of the second stage of the selection process.

Other examples of collaborative arrangements in place at Macquarie are:

- the CSIRO-Macquarie University Chair in Wireless Communications;
- the NGARA collaboration with CSIRO in which CSIRO Ngara wireless technology will be brought to the Macquarie campus to enable experiments in cognitive radio;
- participation as a Foundation Partner in the Centre for International Finance and Regulation;
- several research-based joint appointments between Macquarie and the Australian Astronomical Observatory; and

The Ryde Futures Partnership brings together the research and intellectual capacity of Macquarie University and the City of Ryde for the benefit of the community.

Internationally, Macquarie University has entered into agreements with a number of leading Chinese universities to further develop collaboration in research and teaching including academic exchange in areas of mutual strength and interest. Under these agreements, and in partnership with the China Scholarship Council (CSC), Macquarie University will jointly offer a number of postgraduate research scholarships for three years full time PhD research over the period of 2012-2015.

Macquarie is strengthening its relationships with key Chinese Universities through a variety of activities including week-long, high-level visits, staff exchanges, student delegations to discipline specific conferences, workshops, and hosting international delegations on the Macquarie campus.

Macquarie will continue to identify and co-invest in collaborative opportunities both within Australia and internationally that are relevant to, and offer benefit for, its areas of research strength.

**Areas of research performing at world class level**

Macquarie commenced its endeavours to build areas of research strength by attracting world leading researchers to the University in 2006 with is Concentrations of Research Excellence (CoRE) recruitment initiative. Since 2006, close to 100 high-quality research active academic staff in selected areas of high research performance have joined the University. This prescient strategy
has played a pivotal role in the evolution of Macquarie University into a world leading research intensive University.

The Australian Government announced the results of the second Excellence in Research for Australia [ERA] initiative in December 2012. Macquarie’s research strengths were assessed in 20 out of a possible 22 broad fields of research. Of these, three fields of research were again awarded the highest possible rating of 5 - 'outstanding performance well above world standard'. These fields were: Physical Sciences, Earth Sciences, and Environmental Sciences. Biological Sciences, Law and Legal Studies, Language, Communication and Culture, History and Archaeology, and Philosophy and Religious Studies were all awarded a rating of 4 - 'above world standard'. Thus 40% of Macquarie’s research is rated as being 'above or well above' world standard, an increase over our 2010 ERA results where 28% of Macquarie’s broad fields of research were given this rating. Macquarie’s ERA 2012 performance in broad fields of research rated at world standard and above (5, 4 or 3) was 85%, an increase of almost 15% over Macquarie’s ERA 2010 results. At the 4-digit level Macquarie increased its proportion of areas of research rated at or above world standard from 80% to 86% which is in keeping with the Universities target to host 20 world-leading major research groupings by 2024. Lastly, six of the seven areas of research at the 4-digit level that Macquarie was assessed in for the first time in 2012 achieved a rating of at or above world standard with two of these areas achieving a rating of 5. These results demonstrate the success of the University’s strategy to consolidate and strengthen its areas of research excellence and place Macquarie firmly within the top echelon of research intensive universities in Australia.

The 2011/2012 Leiden Ranking reinforced Macquarie University’s outstanding research performance by placing the University at fourth in Australia behind the ANU and the universities of Melbourne and Queensland. Using a sophisticated set of bibliometric indicators, the Leiden Ranking measures the scientific performance of 500 major universities worldwide by providing highly accurate measurements of the scientific impact of universities and of universities’ involvement in scientific collaboration.

Improving performance

At the 2-digit level, Macquarie was rated as achieving below world standard in three areas: Mathematical Sciences, Medical and Health Sciences, and Commerce, Management, Tourism and Services. In each of these three areas Macquarie has commenced activities aimed at increasing the quality of the research undertaken in these areas. In February 2012, Professor Simon Foote, an internationally renowned research leader in the study of genes involved in susceptibility to disease, commenced at Macquarie in the role of Dean of the Australian School of Advanced Medicine (ASAM). Under Professor Foote’s strategic oversight, ASAM is building areas of research excellence in the areas of neuroscience, oncology, and genetics and infection. The University is also exploring means by which it can foster closer collaboration and translational research with researchers and clinicians in the Macquarie University Hospital. Major changes to the staff profile have been made within the Department of Statistics and high level research appointments have recently been made in the Department Marketing and Management as an investment in raising the quality and profile of the University’s research in these areas.

Macquarie is also looking to increase its performance in the area of Engineering for which it achieved a rating of 3 at the 2-digit level under ERA 2012. In mid-2012 Professor Candace Lang was appointed as the Head of Mechanical Engineering and she is currently building an area of research in Novel engineering materials (metal alloys and ceramics), particularly those with novel structures that lead to enhanced engineering performance.

Future areas of research excellence will be identified by the presence of strongly performing individual staff in allied areas of research, or small groupings of collaborating staff undertaking high quality research at the project level. These staff will be encouraged to establish formal groupings, first through Faculty Research Centres and ultimately through centrally funded Macquarie University Research Centres (MQRC). All MQRCs are strongly encouraged to seek major external research funding or national research centre standing within five years of establishment.
Areas identified as established or emerging areas of research excellence are supported to succeed by the University’s policy of aligning external research fellowship applications (Discovery Early Career Research Awards, ARC Laureate and Future Fellowships, NHMRC Fellowships), and major research infrastructure (e.g., ARC LIEF), to these areas. The University invests significantly in supporting externally funded fellowships, through cash and in-kind contributions, and in supporting bids for major infrastructure and equipment.

Research Funding
Macquarie University researchers attract significant funding through competitive research grants. In 2012, the University reported $45.07 million of competitive external research funding earned during 2011. In addition, the University was awarded $28.98 million of research block grants from the Australian Government in 2012. An early analysis of research income received in 2012 indicates that the University will receive a similar level of funding to that received in 2011.

Macquarie was highly successful in the 2012 Australian Research Council Discovery Projects round with 26 successful applications being awarded more than $8 million in research funding. The University’s success rate (26%) was third highest among the research intensive institutions in Australia. Macquarie has achieved great success in the last two rounds of ARC Future Fellowships. In each of 2011 and 2012, Macquarie was awarded nine Future Fellowships with success rates well above that national success rate. It is notable that seven of the nine successful applicants in 2012 are female researchers, demonstrating the University’s commitment to, and support of, gender equity in research.

The University has set a goal to double external research income to $100m in real terms by 2024. This requires an annual growth rate in real terms of 8%. The 2014 target is a minimum $60 million in external research funding income, which will include a significant increase in NHMRC funding (target increase to $10 million in 2014) and industry-linked competitive grants.

The University’s Research Office is actively supporting the achievement of these targets by:
- increasing the research expertise within the Research Office’s Research Grants Development Team, leading to higher level decision making as grant applications are checked for quality and compliance;
- increasing the research expertise within the Research Office’s Research Grants Development Team, leading to higher level decision making as grant applications are checked for quality and compliance;
- closer and more rigorous monitoring and management of proposals in collaboration with Faculty staff including Associate Deans Research and Faculty Research Managers;
- improving the efficiency of research funding application and data management processes through the implementation of IT based management tools, thus freeing up staff time for higher value-add work; and
- improving quality and reporting of research management data, leading to more strategic targeting of funding opportunities and better identification of emerging areas of strength.

Research strategies that support Aboriginal and Torres Strait Islander researchers and HDR students
In 2010 the DVC: Research committed to a suite of initiatives in support of Aboriginal and Torres Strait Islander researchers and HDR students. These are:
- Funding for up to 5 Indigenous Macquarie University Research Excellence Scholarships (MQRes) per year. MQRes scholarships hold a value of approximately $200,000 each over a 3-year PhD;
- A two-year Indigenous Postdoctoral Fellowship with a value of approximately $104,000 per year; and
- An Indigenous staff PhD completion award which will provide $20,000 to ‘buy out’ a semester worth of teaching.
In mid 2012 the Pro Vice Chancellor Social Inclusion established an Indigenous Research Strategy Working Group to be chaired by Associate Professor Susan Page and comprising key stakeholders from across the University. The core business of this working group is to develop and oversee the implementation of an Indigenous Research Strategy.

5.1.3 Performance indicators and targets

The purpose of the research performance and the research capability performance indicators and targets is to assist the University and the Commonwealth in monitoring the University's progress against the Commonwealth's objectives and the University's strategies for research performance and research capability.

The University will aim to meet the research performance and research capability performance indicators and targets set out in the following table.

<table>
<thead>
<tr>
<th>Principal Performance Indicators</th>
<th>ERA 2010</th>
<th>ERA 2012</th>
<th>ERA 2015 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of disciplines, as defined by two-digit Fields of Research (FoR), performing at world standard or above (3, 4 or 5)</td>
<td>15</td>
<td>17</td>
<td>19</td>
</tr>
<tr>
<td>Number of disciplines, as defined by four-digit FoR, performing at world standards or above (3, 4 or 5)</td>
<td>44</td>
<td>48</td>
<td>52</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Disciplines the University commits to demonstrating substantial improvement in as defined by two-digit FoR and/or four-digit FoR</th>
<th>Disciplines nominated in 2011–13 Compact</th>
<th>Disciplines nominated in 2014–16 Compact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sciences in Biomedical and Clinical Health Sciences (BCH) 15 – Commerce, Management, Tourism and Services</td>
<td>01 – Mathematical Sciences 11 – Medical and Health Sciences 15 – Commerce, Management, Tourism and Services</td>
<td></td>
</tr>
</tbody>
</table>

Note: All calendar year references below refer to the previous year’s data collection.

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<tbody>
<tr>
<td>Category 1 income</td>
<td>$24,624,858</td>
<td>$26,870,029</td>
<td>$30,000,000</td>
<td>$32,000,000</td>
<td>$35,000,000</td>
</tr>
<tr>
<td>Category 2 income</td>
<td>$6,010,215</td>
<td>$3,935,832</td>
<td>$5,000,000</td>
<td>$7,000,000</td>
<td>$10,000,000</td>
</tr>
<tr>
<td>Number of joint research grants in Australia</td>
<td>123</td>
<td>135</td>
<td>148</td>
<td>163</td>
<td>180</td>
</tr>
<tr>
<td>Number of joint research grants overseas</td>
<td>30</td>
<td>33</td>
<td>36</td>
<td>40</td>
<td>45</td>
</tr>
<tr>
<td>Number of jointly supervised PhD students in Australia12</td>
<td>41</td>
<td>58</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>Number of jointly supervised PhD students overseas13</td>
<td>95</td>
<td>118</td>
<td>140</td>
<td>170</td>
<td>200</td>
</tr>
</tbody>
</table>

12 Please provide the number by headcount of jointly supervised HDR students enrolled in your institution who have a supervisor from an external organisation in Australia (examples include someone from a government organisation, hospital or another university).
Note: All calendar year references below refer to the previous year’s data collection.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Research income per学术 staff FTE levels B-E</td>
<td>$56,840</td>
<td>$60,000</td>
<td>$67,000</td>
<td>$75,500</td>
<td>$85,000</td>
</tr>
<tr>
<td>The share of joint publications co-authored with researchers from other Australian institutions</td>
<td>41%</td>
<td>≥40%</td>
<td>≥40%</td>
<td>≥40%</td>
<td>≥40%</td>
</tr>
<tr>
<td>The share of joint publications co-authored with researchers internationally.</td>
<td>42%</td>
<td>≥40%</td>
<td>≥40%</td>
<td>≥40%</td>
<td>≥40%</td>
</tr>
</tbody>
</table>

5.2 Research training

5.2.1 Commonwealth objectives

The Commonwealth encourages excellence in the provision of research training. Particular objectives are to:

- support research excellence and develop an internationally competitive research workforce in Australia through high quality research training;
- develop an internationally competitive research workforce in Australia through high quality research training; and
- significantly increase the number of students completing higher degrees by research over the next decade.

5.2.2 University strategies

Macquarie’s higher degree research (HDR) training program is strategically focused to ensure high achieving applicants receive candidature places and scholarships. The University’s targeted higher degree research scholarships reward candidates and successful researchers working in areas of research excellence.

Key targets of the research training strategy are to maintain annual Higher Degree Research (HDR) new enrolments at 400 (increased from 300 in 2007) and to increase annual HDR completions by approximately 10% annually, to reach 300 by 2014. New HDR enrolments peaked at 420 in 2010 and in 2011 and 2012 total of 356 and 347 were reached. The current environment for recruiting both domestic and international students in PhD programs is currently very difficult across the sector for a number of reasons – Macquarie is addressing these challenges through several strategies of which the Master of Research is perhaps the most significant. In 2011 the University achieved 244 HDR completions, exceeding our target of 230 and in 2012 it achieved 273 completions which again exceeded our target of 241.

High quality research environment

During 2011 more than 340 HDR students commenced at Macquarie on a scholarship with more than 170 of those funded by the University. The University’s HDR Program is strongly underpinned by the MQ Research Excellence Scholarship (MQRES) program with University funding for scholarships now in excess of $25m per year. MQRES are allocated strategically based on indicators of research success such as: Chief Investigator of successful ARC Discovery and

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13 Please provide the number by headcount of jointly supervised HDR students enrolled in your institution who have a supervisor from an external overseas organisation (examples include someone from a government organisation, hospital or another university).
NHMRC Project grant applications; ARC Laureate and Future Fellowships; Discovery Early Career Research Awards; NHMRC Career Development Grants or similar competitive awards; ARC or NHMRC Centres of Excellence or similar competitive awards. MQRES may also be allocated to support major strategic initiatives including Macquarie University Research Centres. In this way Macquarie ensures that HDR students are enrolled in high quality research environments.

The University provides significant funding for HDR students both through their departments and centrally. Through the Faculty Funding Model, the University provides approximately $28m per annum to support infrastructure, equipment, dedicated HDR desk-space and other laboratory or workshop facilities. At least 25% of all funds allocated to departments for HDR students must be spent on direct support for HDR student projects, including fieldwork, conference and other travel and specialised equipment. The University also runs a central competitive grant scheme, where students can be granted up to $5,000, once in their candidature for a research activity that adds value to their project, usually either by presenting at a major international conference or lab visits. The success rate for this competitively awarded funding is over 80%.

The University Council has established a Student Experience Committee to oversee all aspects of the experience of all students, including HDR students. Membership includes the DVC (Provost), DVC (Students and Registrar) and Dean, HDR. HDR students often have support needs that are different from other students. They are older, and often have children and family responsibilities, so their accommodation needs are often different to those of undergraduate students, and they also are more likely to confront issues of childcare and schooling. This can be especially important for international HDR students. International students in general are more likely to be centred on campus, and reliant on campus facilities for basic needs, from retail up to medical services, as well as psychological and financial counselling and legal support. The aim of the Committee is to make sure that support is available 24/7/365 to all students and to raise their awareness of services on offer and of their rights and obligations. The Dean, HDR is also available to all HDR students to help them in all pastoral issues.

Improving completions
Macquarie has implemented an “Out of Time” policy requiring students who are about to reach four EFTSL in the PhD, or two in the Masters of Philosophy to apply to allow their enrolment to be extended. The extensions are for six months (with one further extension possible for PhD students), and require payment of a partial tuition fee from 2013. In conjunction with more rigorous review processes at Faculty and Department-level, this policy has already aided in improving both the number of completions and length of candidature.

Master of Research
In 2013, Macquarie introduced its new Bachelor of Philosophy/Master of Research (BPhil/MRes) program as the standard pathway between undergraduate and Higher Degree Research. The BPhil/MRes combines a year of advanced coursework aimed at identifying research frontiers in the relevant disciplines with a year of structured research training. In the first year, students undertake a unit in Research Communications, an analysis of the latest developments in research in their discipline (Research Frontiers) and six units of advanced discipline content. The aim is that students will not only develop a deeper knowledge of their discipline, but be able to make more informed choices about the focus of their research. The second-year of the program includes a further investigation of the frontiers of research (this time focussed on a sub-disciplinary area), training in research methods relevant to their discipline, as well as project management, a literature review for their topic, detailed project planning (including some forward thinking about possible HDR research topics) and a short thesis.

The aim of year two of the program is to provide students with a structured and supported introduction to research. The previous transition to research for HDR students commonly lacks clear guidance and milestones. This can lead to protracted delays in defining a topic and developing a plan, which inhibits progress, can be disorienting and can cause student anxiety. It is a major contributor to students discontinuing in their first year. The BPhil/MRes program will remedy this by giving students skills and confidence in their knowledge of their planned research
field, in research strategies and techniques as well as give them a sense of connectedness to a cohort of students. It is Macquarie’s most important ongoing strategy for increasing enrolments and improving retention rates, completion times and the quality of student experience in its PhD program.

**High quality supervision**

All HDR supervisors at Macquarie University must be on the Supervisor Register. In order to be registered, they must be both research active and have completed the Supervision Enhancement Program. The program is designed to introduce new supervisors to appropriate and effective approaches to supervision, and aid experienced supervisors in reflecting on their practice. It includes discussion of the different models of supervision, the changing nature of the PhD and PhD candidates, institutional policies, practices and the expectations of supervision at Macquarie. All supervisors must attend an initial workshop for two half-days, and an annual specialised update workshop. Annual workshops cover topics including cross-cultural supervision; cohort supervision; effective feedback for HDR students; project management; authorship protocols in supervision; communication difficulties with HDR candidates; and supporting thesis by publication. Experienced supervisors are encouraged to share their experiences in workshops, providing strategies for new supervisors to deal with particular issues and problems. The University also provides information on university processes, supervision strategies and the latest research in HDR via a dedicated supervisor website (http://staff.mq.edu.au/research/hdr_supervision/).

**Enhanced Research Training**

In 2012, Macquarie undertook a pilot project assessing the provision of learning skills programs for HDR students, in the areas of writing and research communication; project management; research methods and professional development. The project identified that although a significant number of programs were available to students at faculty level, they were not available equally to all across the campus, and there was also a large unmet demand, especially in the area of writing support. The result of this pilot has been the appointment of a central HDR Learning Skills lecturer on a continuing appointment to design and co-ordinate the offering of HDR learning skills programs across the campus. This program includes 9-week discipline-specific writing programs, full-day writing retreats for students in the late-stage of candidature, the development of peer-lead writing groups for students and the offering of a range of specialist workshops in specific research methods or types of software. This program will continue to develop in 2014 and beyond, with further appointments of faculty-based HDR writing support teachers and an expansion of offerings. The Research Communications unit in the BPhil/MRes will be a crucial part of the learning skills support package offered to incoming HDR students.

**Support for Aboriginal and Torres Strait Islander HDR students**

The University has developed a university-wide strategy for bolstering research of indigenous students as part of Patyegarang, the Macquarie Aboriginal and Torres Strait Islander Advancement Strategy 2012-17. The MQ Indigenous Research Strategy Working Group (chaired by the former Director of Warawara, the University’s Indigenous Studies Unit), is developing programs to enlist and support indigenous HDR students across the University.
5.3 Performance indicators and targets

The purpose of the research training performance indicators and targets is to assist the University and the Commonwealth in monitoring the University's progress against the Commonwealth's objectives and the University's strategies for research training.

The University will aim to meet the research training performance indicators and targets set out in the following table.

*Note: All calendar year references below refer to the previous year’s data collection.*

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<tbody>
<tr>
<td>HDR student load</td>
<td>1332</td>
<td>1253</td>
<td>1318</td>
<td>1500</td>
<td>1530</td>
</tr>
<tr>
<td>HDR student completions by masters</td>
<td>16</td>
<td>12</td>
<td>12</td>
<td>220</td>
<td>240</td>
</tr>
<tr>
<td>HDR student completions by doctorates</td>
<td>228</td>
<td>258</td>
<td>250</td>
<td>240</td>
<td>240</td>
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*Note: All calendar year references below refer to the previous year’s data collection.*

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<tbody>
<tr>
<td>Funding received for externally sponsored HDR candidates;</td>
<td>$2,324,340</td>
<td>$2,614,688</td>
<td>$2,750,000</td>
<td>$2,900,000</td>
<td>$3,050,000</td>
</tr>
<tr>
<td>Number of HDR supervisors who have undergone supervision training in the last 12 months</td>
<td>489</td>
<td>556</td>
<td>625</td>
<td>700</td>
<td>750</td>
</tr>
<tr>
<td>HDR student publication rates</td>
<td>29%</td>
<td>31%</td>
<td>33%</td>
<td>35%</td>
<td>37%</td>
</tr>
</tbody>
</table>
PART SIX: GENERAL PROVISIONS

6.1 Compact Review

6.1.1 The Commonwealth and the University will review the compact annually. This review will be a mechanism for considering progress made towards agreed goals outlined in this compact. Compact review will aim to ensure that the Commonwealth and the University will continue to focus on key objectives and strategies and will be an opportunity to consider developments that may impact on the compact or trigger a need to change the compact.

6.1.2 To facilitate this review the Commonwealth will produce an annual Institutional Performance Portfolio and the University agrees to contribute to the annual Institutional Performance Portfolio Information Collection (IPPIC). The Commonwealth will consult with the higher education sector on the information collection requirements and any issues arising from the IPPIC process.

6.2 Privacy and information sharing

6.2.1 Subject to clause 6.2.2 below, the University acknowledges and agrees that any information it provides to the Department for the purposes of this compact, may be accessible under the Freedom of Information Act 1982 and may also be:

- published by the Commonwealth in any manner in accordance with any legislative requirement;
- used by the Department for any purpose of the Commonwealth, including dealings with other Commonwealth or State or territory agencies;
- used in reporting to or answering questions from a Minister of State of the Commonwealth or a House or Committee of the Parliament of the Commonwealth; or
- disclosed where the Commonwealth is required or permitted by law to do so.

6.2.2 The Commonwealth and the University agree to carry out their roles under this compact in accordance with any obligations they have under the Privacy Act 1988 or any state or territory law relating to the protection of personal information.

6.3 Changing the Compact

6.3.1 Either party may propose changes to this compact at any time. Any variation to this compact is to be in writing and signed by the University’s, and the Commonwealth’s Representatives.

6.4 Notices

6.4.1 A party wishing to give notice under a provision of this compact:

- must do so by sending it to the other Representative set out in clause 6.4.2; and
- must, if a response is required to the notice, set out the time in which the response is to be given;

6.4.2 The Representatives are:

- University Representative
  
  Ms Melanie Harris, Vice-Chancellor’s Chief of Staff, Macquarie University
  
  Email: melanie.harris@mq.edu.au
  
  Ph: +61 2 9850 7489
  
  Fx: +61 2 9850 9950

- DIICCSRTE Representative
  
  Division Head
  
  Higher Education Group
6.5 Dictionary

In this compact, unless the contrary intention appears:

‘Department’ means the Commonwealth Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education or any successor.

‘HESA’ means the *Higher Education Support Act 2003* and includes any subordinate legislation or Ministerial determination made under that Act.

‘Institutional Performance Portfolio’ (IPP) is a report which provides an historical record of a university’s performance based on information provided by the University and an analysis of the Higher Education Data Collections. An IPP will be prepared by the Commonwealth for the University annually using the latest available data.

‘Institutional Performance Portfolio Information Collection’ (IPPIC) is a set of Commonwealth instructions requesting that universities provide a submission to the Commonwealth, endorsed by the University’s chief executive, that includes student, staff, financial and research information needed for the preparation of an Institutional Performance Portfolio for that university.

‘Minister’ means the Minister for Tertiary Education, Skills, Science and Research.

‘Mission’ means the University’s Mission set out at Part One of this compact as amended in accordance with the variation provisions in this compact from time to time.

‘TEQSA’ means the Tertiary Education Quality and Standards Agency.

‘Term of this compact’ means the period set out in Part B of the Context of this compact.

‘University’ means Macquarie University and ABN : 90952801237
Signed for and on behalf of the Macquarie University
by

................................................................. ........................................
Signature Date

Professor S. Bruce Dowton
the Vice Chancellor of Macquarie University
In the Presence of:

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WITNESS

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Full name and occupation or profession of witness (Please print)

SIGNED for and on behalf of
THE COMMONWEALTH OF AUSTRALIA
by

................................................................. ........................................
Signature Date

Mr David de Carvalho
the Head of Division
of Higher Education Division
of the Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education
a Delegate of the Minister for Tertiary Education, Skills, Science and Research

In the Presence of:

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WITNESS

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Full name and occupation or profession of witness (Please print)