



The JCU Research Plan 2011-2013

Research Context

James Cook University is a leader in research addressing the challenges and opportunities for the tropics, world-wide.

The University's approach to research is differentiated, targeted and embraces quality collaboration. JCU recognises its "power of place" and engages with its communities, governments and industry to promote a sustainable region which is socially inclusive. Tropical issues provide the focus to the University's research mission, driven by JCU's unique geographical location - its close proximity to the World Heritage-listed Great Barrier Reef and Wet Tropics rainforest. its links with rural, remote and indigenous communities, and its position in the global tropics.

We commit ourselves to research of excellence and high impact. As a regionally-based university, we recognise our obligation to engage with industry and government, commercialise our research findings and achieve critical mass through productive research partnerships with other research organisations. We are a catalyst for innovation and understanding.

We build on current areas of world-class excellence to achieve strong performance in scholarship inspired by a research-rich environment. We recognise that the University is judged not only on its quality but equally on its relevance to external stakeholders.

In recent years, JCU has consolidated its strengths in tropical science, knowledge and innovation by increasing its collaboration with other research organisations, facilitated in some cases by major infrastructure developments which allow our researchers to be co-located with researchers from partner institutions.

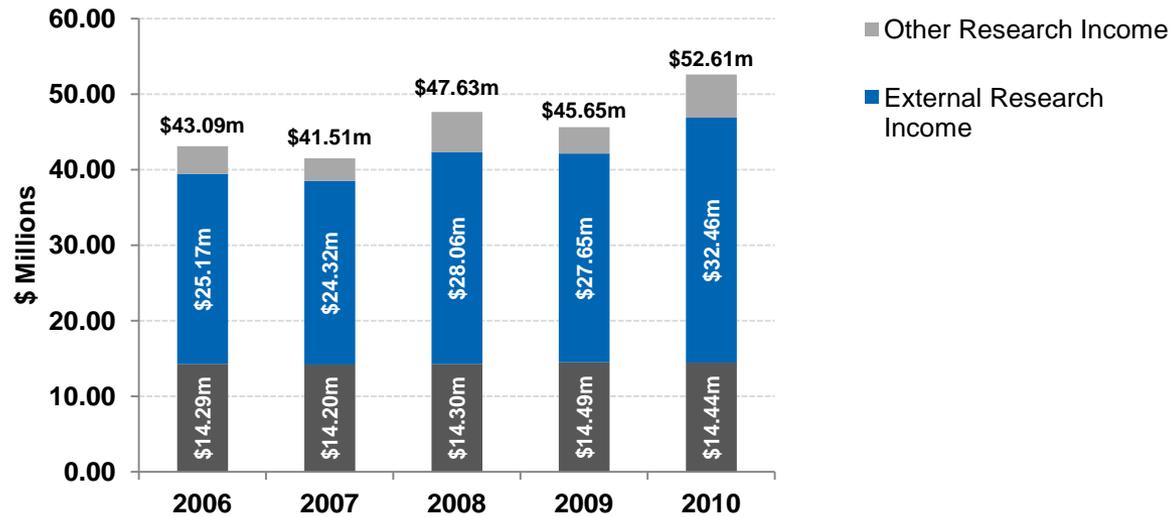
Together with key areas of JCU-based research such as the ARC Centre of Excellence for Coral Reef Studies, the Cairns Institute, and the Queensland Tropical Health Alliance we have significantly expanded the University's research base and its network of collaborations both in Australia and globally.

Our key defining features from a research perspective are:

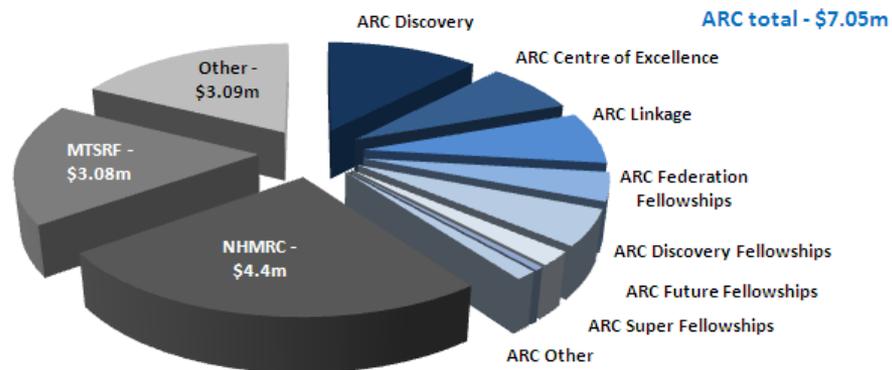
- A research intensive, regionally based university with a distinctive location of global significance
- A unique focus on research that builds a brighter future for life in the tropics
- A commitment to research of relevance to regional industries and communities
- A commitment to rural, remote and Indigenous communities

Research Snapshot

Research Income

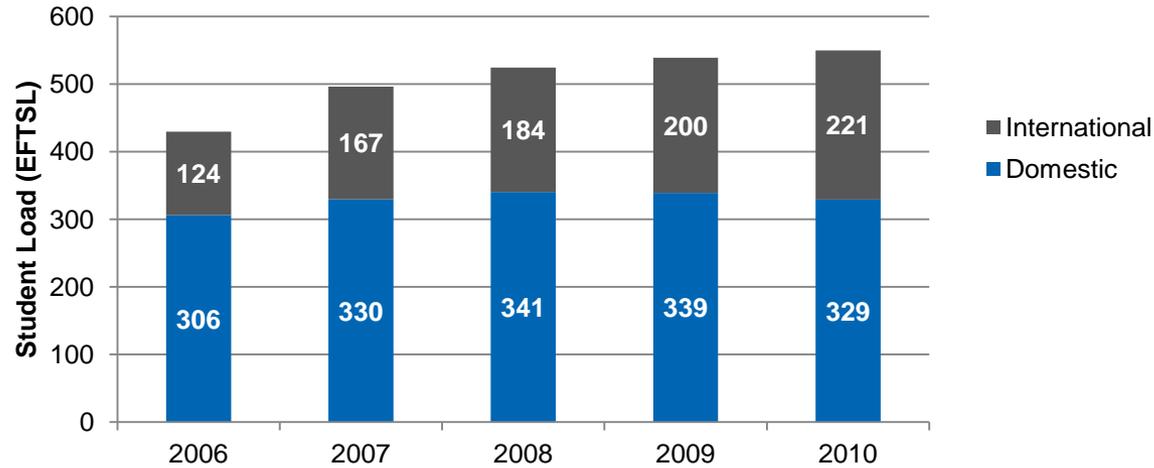


National Competitive Research Grants Income \$17.64m

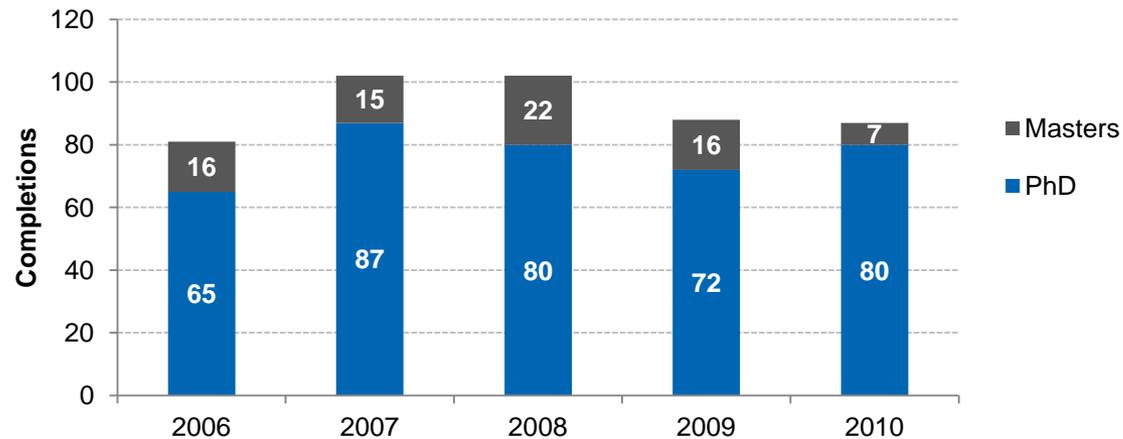


Research Snapshot

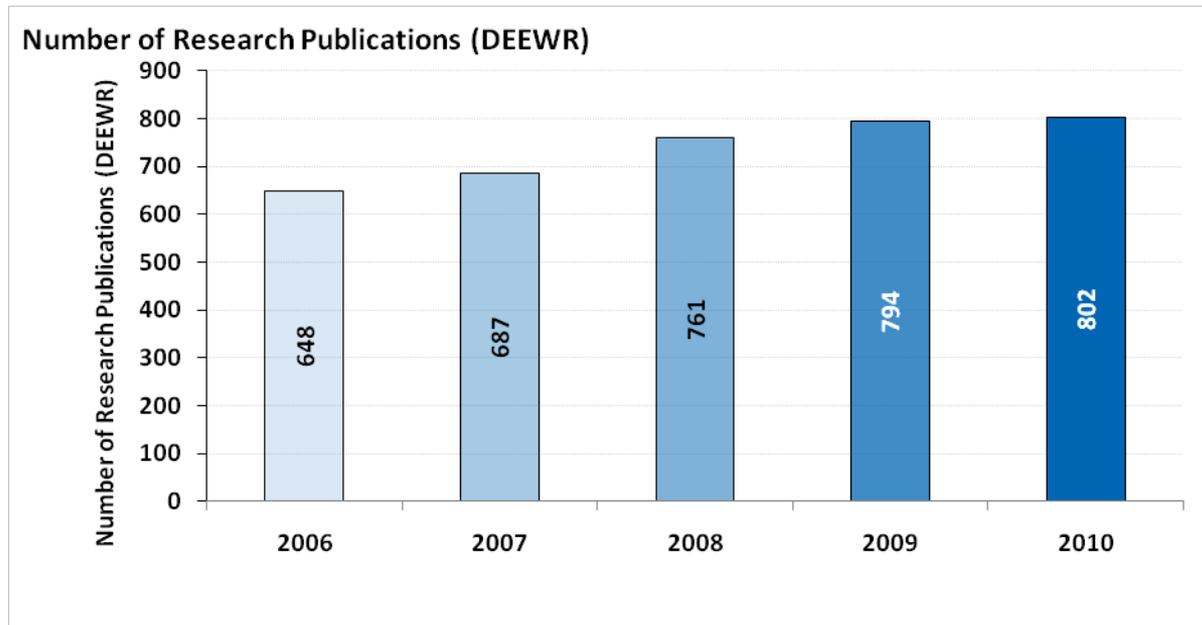
Higher Degree by Research (HDR) student load (EFTSL)



Higher Degree by Research (HDR) Completions

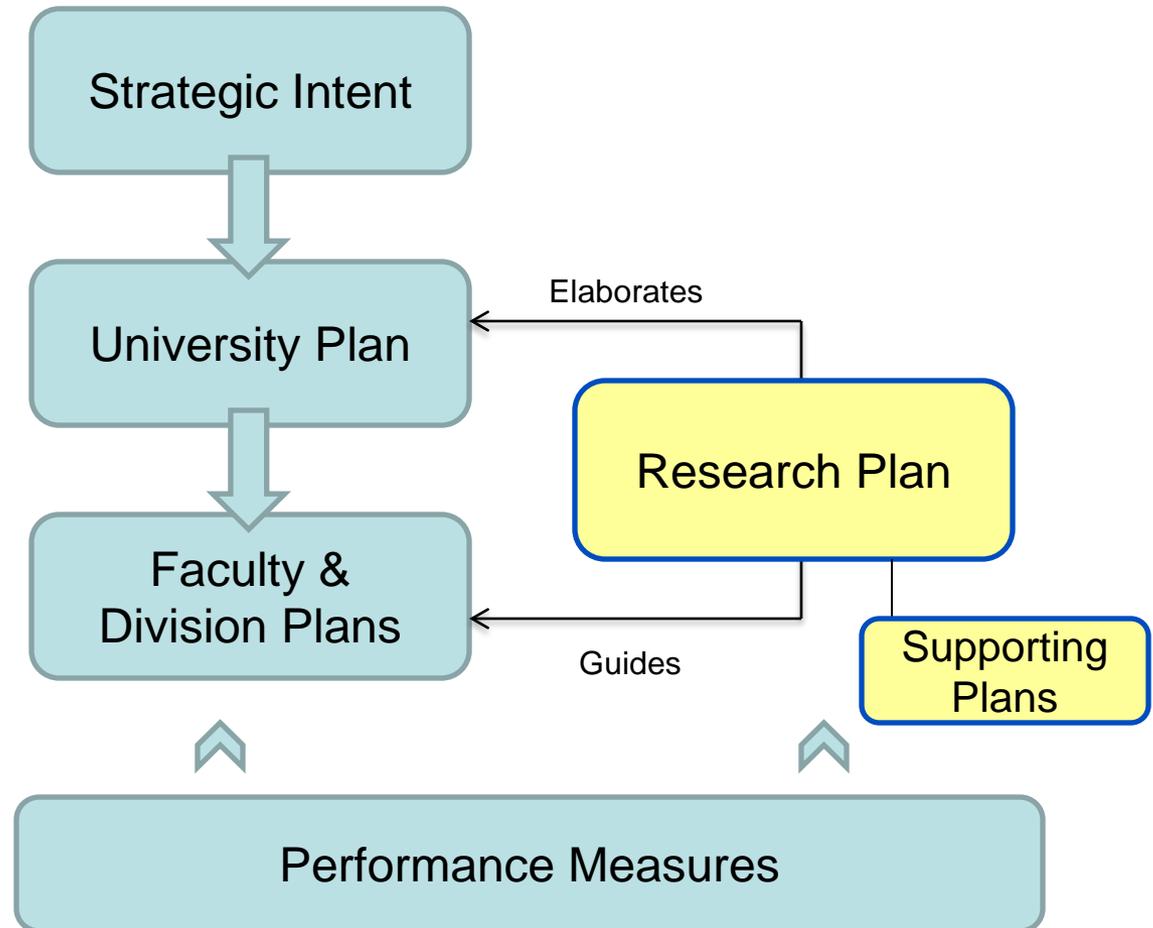


Research Snapshot



The JCU Planning Framework: Research Plan

This Research Plan has been developed to complement the University Plan. Its purpose is to distil and elaborate the primary values, objectives, strategies and performance measures in respect of research and research training. The Research Plan is presented as a guide and reference for faculties, schools and divisions of the University in developing their respective strategic plans. As such, it sits between the University Plan and the faculty and division plans. The research plan anticipates the existence of supporting plans in areas of specific importance – e.g., research education, indigenous research, research infrastructure.



The JCU Planning Framework: Strategic Intent

Statement of Strategic Intent

James Cook University's Strategic Intent describes the aspirations, beliefs, values and guiding principles to which JCU subscribes. Its purpose is partly to describe us, partly to guide us, partly to be an influence for change, and partly to be a public declaration of our commitment to deliver certain benefits to the community.

It is in some measure an expression of our contract with the community. We should expect to be measured by our achievements in meeting the terms of that contract.

Our Intent ~ A brighter future for life in the tropics, world-wide



The JCU Planning Framework: University Plan

The University Plan

The University plan gives life and substance to the Strategic Intent for the whole of the JCU community, establishing the high level framework within which Faculty and Divisional Plans will be developed.

Our goal is to position JCU as a leader in teaching and research addressing the critical challenges facing the tropics, worldwide. To this end, we are committed to providing shape and direction to our teaching and research by alignment to four major themes:

- Tropical Ecosystems, Conservation and Climate Change
- Industries and Economies in the Tropics
- Peoples and Societies in the Tropics
- Tropical Health, Medicine and Biosecurity

The University Plan presents objectives, strategies and performance measures under 5 main headings:

Academic
People and Culture
Physical and Virtual Infrastructure
International and Engagement
Finance and Resources

There are 5 objectives in the University plan that refer explicitly to research:

Enhance our tropical focus
Promote excellence in research & research training
Deliver research that has impact
Foster a culture supportive of research and develop capability in research and research training
Improve planning for and provision of research capacity and infrastructure

The JCU Planning Framework: Plans and Measures

Faculty and Division Plans

Within the JCU Planning framework, faculty and division triennial plans are prepared annually, to give effect to the University Plan. The faculty and division plans address important aspects of the operating context, set out objectives and strategies for the upcoming triennium, deliver financial and workforce plans, provide a risk management plan, and indicate strategies in support of the Vice-Chancellor's priorities (annual). The triennium plans also provide an acquittal in relation to the previous year's objectives and in relation to performance measures.

Performance Measures

The University measures performance using three sets of indicators:

KPIs - 23 indicators across all domains of the University Plan, monitored by Council and used to assess University performance.

KPMs - 39 indicators monitored by the relevant committees of Council (e.g. Academic Board, Finance, Strategy) in addition to the relevant KPI's.

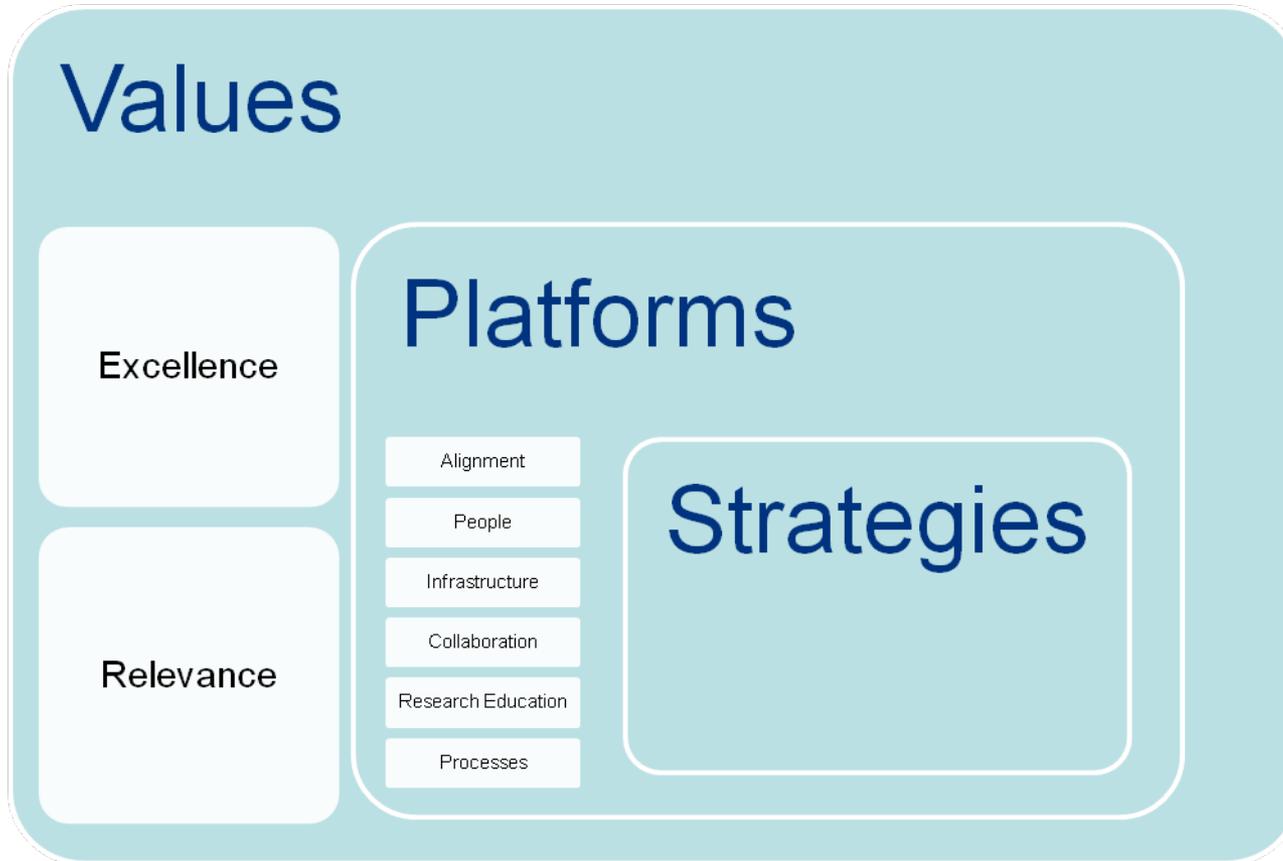
OPTs - Operational Performance Targets, used by the Vice Chancellor to assess the performance of faculties and divisions (ie. management-level performance measures). There are 115 OPTs across 4 Faculties and 4 Divisions/Offices. Some OPT's are also KPIs/KPMs.

The table on the next page presents the research performance measures for 2010.

Performance Measures 2010

Measure Type	Category	Measure	Final Result 2009	Target 2010	Final Result 2010	
Research Income						
KPI/OPT	Research & Research Training	Total Research-related Income	\$45,908,383	\$51,509,427	\$52,612,101	
KPM	Research & Research Training	Research Income (HERDC categories 1-4)	\$26,634,633	\$31,892,224	\$32,465,900	
KPM	Research & Research Training	Research Block Income (IGS, RTS, RIBG)	\$14,497,972	\$14,944,533	\$14,440,664	
KPM	Research & Research Training	Other Research Income	\$4,725,049	\$4,512,491	\$5,705,537	
KPM/OPT	Research & Research Training	Research Commercialisation Income	\$50,729	\$45,000	\$0	
Research Publications						
KPI	Research & Research Training	Number of DEEWR Publications	794	840	802	
KPM	Research & Research Training	Number of Publications in ISI journals	2,625	2,822	2,760	
KPM	Research & Research Training	Number of ISI Citations	13,311	14,984	15,232	
HDR Load and Completions						
KPI	Research & Research Training	Total HDR student load (International & Domestic)	EFTSL	536	528	550
KPI/OPT	Research & Research Training	Number of HDR Completions (International & Domestic)		82	100	87
KPM	Research & Research Training	Commencing HDR student load (International & Domestic)	EFTSL	97	101	105
Other Research Outcomes						
KPM/OPT	Research & Research Training	Ethics Compliance Achieved		Yes	Yes	Yes

The Research Plan: Primary Elements



The JCU Research Plan has 4 primary elements:–

Values ~ 2 high order attributes we strive for in research;

Platforms ~ the 6 core dimensions of our research;

Strategies ~ specific interventions that give substance to the research dimensions;

Accountabilities ~ performance measures and allocated responsibilities.

Accountabilities

The Research Plan: Our Aspirations

The JCU Planning Framework imbeds ambitious but achievable targets from year to year (KPIs, KPMs, OPTs), which are set against the background of our medium to longer term aspirations. For research and research education, the Research Plan delivers a strategy to fulfil these medium to long aspirations.

Over the triennium 2011-13 our aspirations in research and research education are to:

- achieve research income (research grant income + block funding) of >\$65m per annum
- establish a new portfolio of research centres and institutes, to include at least 3 new institutes
- improve our performance in ERA 2012 to the extent of improved ratings in at least 2 4-digit FoR codes
- increase our research publication output to 840
- increase our HDR load towards 6% of total student load
- implement an ECR research education and mentoring program
- increase NHMRC funding to >\$2.5m/annum
- establish Queensland Tropical Agri and Aquatic Sciences
- maintain or improve our position in the SJT
- establish the Tropical Data Hub

The Research Plan: Our Aspirations

By 2018:

- be an acknowledged world leading centre in research of relevance to the tropics
- have established a commanding reputation for research in several new fields, particularly around tropical health and medicine and, via the Cairns Institute, in social, economic, educational and business studies
- achieve 'world standard' in at least 60% of the 2-digit FoRs in which we are rated under ERA
- be ranked in the top 400 in the SJT
- have at least 7% of our student load enrolled in higher degrees by research
- have established an international ICT portal (Tropical Data Hub) serving the tropics
- retain our position as the world's leading centre for coral reef sciences and management
- be unequivocally recognised as the leading Australian university in environment and ecology
- be recognised as one of the world's leading centres of algal-based biotechnology



The Research Plan: Values

Excellence refers to research and research education that is recognised nationally and/or internationally to be at the forefront of scholarly activity. JCU is an acknowledged leader in several fields of research. We aim to maintain our reputation in these fields. At the same time, the University aspires to attain similar levels of achievement in other fields, while maintaining quality research across a broad range of research fields, reflecting both our responsibilities to our regions and the fact that we are a comprehensive tertiary institution.

Relevance acknowledges that research has value to industry, government and the wider society. As an institution that is regionally based, JCU has a responsibility to deliver research of relevance to its communities of interest. At the same time, JCU is a national and global leader in research in several fields. As such, the University has a responsibility to draw upon its research excellence to disseminate and deliver research outcomes to stakeholders. The University acknowledges the importance of translational research and the benefits of research commercialisation

Our research excellence is measured by:

- Research income [KPI/OPT]
- Research Income (HERDC categories 1-4)
- ARC success rate [OPT]
- HERDC publications [OPT]
- Number of ISI Citations [KPM]
- Total HDR student load [KPI]
- Commencing HDR student load [KPM]
- HDR completions [KPI/OPT]
- Reputation (International Rankings): SJT [KPI]

Our research relevance is measured by:

- Research Income (HERDC categories 2-4)
- Other Research Income [KPM]
- Research Commercialisation Income [KPM/OPT]
- Mentions of JCU in the media [OPT]

Platform ~ ALIGNMENT

Our aim is to achieve increasing alignment of research and research education with the strategic intent, purpose and values of the University.

Rationale:

JCU is one of the most distinctive universities in Australia and was established with the express purpose to serve as the nation's university for the tropics. Accordingly, the University Plan proclaims a focus on 4 themes that shape and direct our research and teaching in areas of significance to the tropics worldwide. In support of the Plan, research strategy will pursue increasing alignment with the University's stated intent.

Strategies:

- Refine and elucidate the 4 themes of the University Plan with a view to established and nascent areas of research that are of strategic relevance to JCU.
- Implement the new centres and institutes policy, to deliver a portfolio of research entities that are representative and reflective of the strategic intent and positioning of JCU.
- Deploy the University's investment pool for research and research education to initiatives that are clearly consistent with the identified themes underpinning the strategic intent.
- Develop partnerships and collaborations with external institutions and agencies that support research and research education in areas of strategic relevance to the University.
- Recruit, support and retain staff in fields of research that are distinctly aligned with the University's strategic intent.

Responsibilities:

DVC, ADRs, Res Cttee
DVC, faculties

DVC

Faculties, DVC

Faculties, HR

Performance measures:

- ERA ratings in Fields of Research aligned with research strengths
- Alignment of internal research investments with JCU themes
- Portfolio of research partnerships and collaborations
- Jointly supervised research students in areas of research strength

Platform ~ PEOPLE

The University aims to develop the capability of its people to participate in high quality, relevant research and to recruit and retain staff whose research interests are strongly aligned with our strategic intent.

Rationale:

Research quality and productivity are directly dependent on the capability of our staff. It is particularly important that early career staff are mentored and supported in the development of their research portfolios. Effective recruitment, support and retention of highly capable research staff is essential to the objective of growing the University's international standing as a research intensive tertiary institution.

Strategies:

- Implement the Early Career Researcher development program, including mentoring, skills training and the 'rising stars' program for ECRs of especially high potential.
- Ensure recruitment, performance management and promotion processes give adequate weight to research capability.
- Develop and implement a research performance management framework to facilitate the assessment of research outcomes for faculties, schools and individuals.
- Acknowledge outstanding achievements in research and research training through commendations and awards, including faculty-level awards for research excellence, Trailblazer, the GRS Supervisor of the Year Awards, and the title of JCU Distinguished Professor.
- Actively pursue opportunities for the recruitment of highly capable researchers through externally funded programs, including Australian Laureates, ARC DECRA, Future Fellowships, and NHMRC fellowships.

Responsibilities:

Dean GRS, ADRs

Prom Cttee, DVC
HOS, PVCs HR

RO

Faculties, Dean
GRS, DVC

ADRs, DVC,
Centres & Inst.

Performance measures:

- Number of ERA For (4 digit) ratings ≥ 3
- ARC Success Rate [OPT]
- Number of ISI citations [KPM]
- Number of HERDC publications [KPI/OPT]
- Number of academic staff with PhD [KPI]
- SJT ranking [KPI]

Platform ~ INFRASTRUCTURE

The University is committed to the procurement and maintenance of infrastructure to support world-class research and research education, particularly in its declared areas of research priority.

Rationale:

The needs differ widely but all research requires infrastructure. High-end instrumentation, testing, experimentation and field facilities are important for the natural, physical and medical sciences. eResearch has become increasingly important across the entire breadth of scholarly research. The institutional commitment is around the procurement, operation and maintenance of research infrastructure at a standard to support world-class research and research education.

Strategies:

- Undertake a review of research infrastructure, with a view to improving:
 - Processes for the development and consideration of capital works investment as they relate to research and research training.
 - The development of a return on investment perspective in respect of research infrastructure.
 - Approaches to the development of applications to external agencies for funding to support research infrastructure.
 - The contributions of the Advanced Analytical Centre.
 - The provision and development of eResearch facilities.
 - The operation and maintenance of other large-scale research infrastructure, including MARFU, Orpheus Island and the Canopy Crane.
- Develop and maintain relationships with external partners to support shared research infrastructure goals.
- Attract funding from external sources to deliver world-class research infrastructure.

Responsibilities:

FIAC, DVC
FaBs, DVC
ADRs, DVC
Dtr AAC, DVC
Dtr eResearch
ADRs, DVC,
Centres & Inst.
ADRs, DVC,
Centres & Inst
ADRs, DVC

Performance measures:

- ARC LIEF income
- Grant support for eResearch facilities
- External Income Analytical Services [OPT]
- Internal use of major research infrastructure
- External use of major research infrastructure

Platform ~ COLLABORATION

JCU seeks to develop real value partnerships regionally, nationally and internationally to support our research endeavours and research education in our defined areas of research priority.

Rationale:

JCU is a regionally based, research intensive university. We acknowledge and support a distinctive research profile.. Collaboration is recognition of our world-class standing in several fields of research and enables the University to achieve the required critical mass to achieve research outcomes at or above international benchmarks.

Strategies:

- Maintain and advance high-value partnerships, including the Tropical Landscapes Joint Venture, AIMS@JCU, Australian Tropical Herbarium, Queensland Tropical Health Alliance.
- Develop new value-adding partnerships with other researchers, industry and government, including, e.g., Queensland Tropical Agri and Aquatic Sciences.
- Support the ARC Centre of Excellence for Coral Reef Studies, as an exemplar in collaborative research and research education.
- Develop centres and institutes, as primary vehicles for the establishment and maintenance of collaboration in research.
- Develop partnerships and collaborations internationally.

Responsibilities:

ADRs, PVCs, DVC

DVC

Dtr CoE, DVC

PVCs, ADRs, DVC

HOS

PVCs, ADRs, HOS,

DVC

Performance measures:

- Percentage of papers co-authored with international collaborators
- Research grants with international collaborators
- Research activity attributable to partnerships and collaborations

Platform ~ RESEARCH EDUCATION

JCU aims to deliver best practice research education and training to our post-graduate students, by providing quality learning environments, academic support, and effective candidature management.

Rationale:

Post-graduate students are a major engine of research within the University. The vitality, volume and quality of research is to a significant extent delivered by our post-graduates. Our post-graduate alumni are ambassadors for the University. The University is committed to growing our post-graduate student numbers, an aim that is underpinned by the quality of our research environment and our reputation as an institution that nurtures and supports our students.

Strategies:

- Better align research education at JCU with our areas of research strength and strategic intent.
- Enable research students to develop the transferable skills required to: complete their research degrees; further their career aspirations; become members of the international community, by e.g.:
 - Skills training
 - International experiences
 - Professional development experiences (e.g., conference participation)
- Increase completion rates and decrease completion times of HDR students by providing greater incentives to supervisors to encourage timely completions, strengthening requirements for Confirmation of Candidature, increasing support and resources for HDR students.
- Increase HDR participation at JCU as well as the quality of the HDR candidates, through increased scholarships, improved recruitment of undergraduates, and marketing.
- Deliver a positive student experience, through effective candidature management, quality supervision, and constructive experiences,

Responsibilities:

Dean, GRS, ADRs,
Centres & Inst.
GRS

Supervisors, HOS,
Dean GRS

DVC, HOS, ADRs

Supervisors,
ADRs, PVCs,
Dean GRS

Performance measures:

- Total HDR student load [KPI]
- Commencing HDR student load [KPM]
- HDR completions [KPI/OPT]
- HDR Completions
- HDR completion times
- Number of jointly supervised HDRs
- PREQ results

Platform ~ PROCESSES

We aim to improve the effectiveness and efficiency of research and research education support services and the associated processes, in line with an institutional outlook that regards research administration as 'enabling'.

Rationale:

JCU implements policies and procedures, and provides services in support of research and research education. The institutional ethos is that policies, processes and services should enable research and research education. Accordingly, policies, processes and services should direct research and research training in support of the University's strategic intent. They should also be effective and efficient.

Strategies:

- Develop faculty and school research strategies that align with the University's research goals and intent.
- Implement and monitor research grant application processes to foster early planning, mentoring and peer review.
- Review the effectiveness of internal research grant schemes.
- Strengthen faculty-level processes in support of research development.
- Deliver best practice research grant administration.
- Increase transparency of the internal resource allocation model for HDR by improved communication with Heads of School, supervisors and PVCs
- Embed requirements for HDR progress management of candidates in the performance management of Heads of Schools

Responsibilities:

PVCs, ADRs

ADRs, RO

RO, DVC

ADRs

RO

FaBs, Dean GRS

PVCs

Performance measures:

- ARC Success Rate [OPT]
- NHMRC success rate
- Research income [KPI/OPT]
- Research Income (HERDC categories 1-4)
- Commencing HDR student load [KPM]
- HDR completions [KPI/OPT]
- Staff Satisfaction with services provided by Division [OPT]

The Research Plan: Annual Priorities

Annual Priorities

Each year, priority projects are developed to give effect to specific elements of the Research Plan. The priority projects are developed initially through the DVC's Research Advisory Group, they are then reviewed and approved by Research Committee and by the Vice-Chancellor.

The 2010 priority projects are listed below, along with an account of the extent to which they were achieved:

- *International positioning and strategy [Platforms: Alignment, Collaboration, Research Education]*. There were several initiatives pursued within the Research & Innovation Division, including ongoing work associated with the Coral Triangle Initiative, establishing relationships with universities in British Columbia, and contributing to the establishment of a global leadership group for the tropics. None of these initiatives were specifically brought before Research Committee. There was not a great deal of progress in terms of establishing an overall international research strategy. The role of the R&I Division and Research Committee in the international domain has been supplanted to an extent by the establishment of the International Committee.
- *Early Career Researchers – Staff Development [Platforms: People, Processes]*. An career development strategy for the support of ECRs was developed and approved by VCAC. The strategy is being implemented.
- *Research infrastructure [Platforms: Infrastructure, Processes]*. A working group was established and progress was made in terms of the processing of research-related applications to the Facilities and Infrastructure Advisory Committee (FIAC). These new processes were implemented in 2010. A paper outlining the role of the AAC was drafted, and a paper outlining an eResearch strategy was also developed. A new process for the review of LEIF grants was implemented. Overall, though, progress on this initiative fell short of expectations.

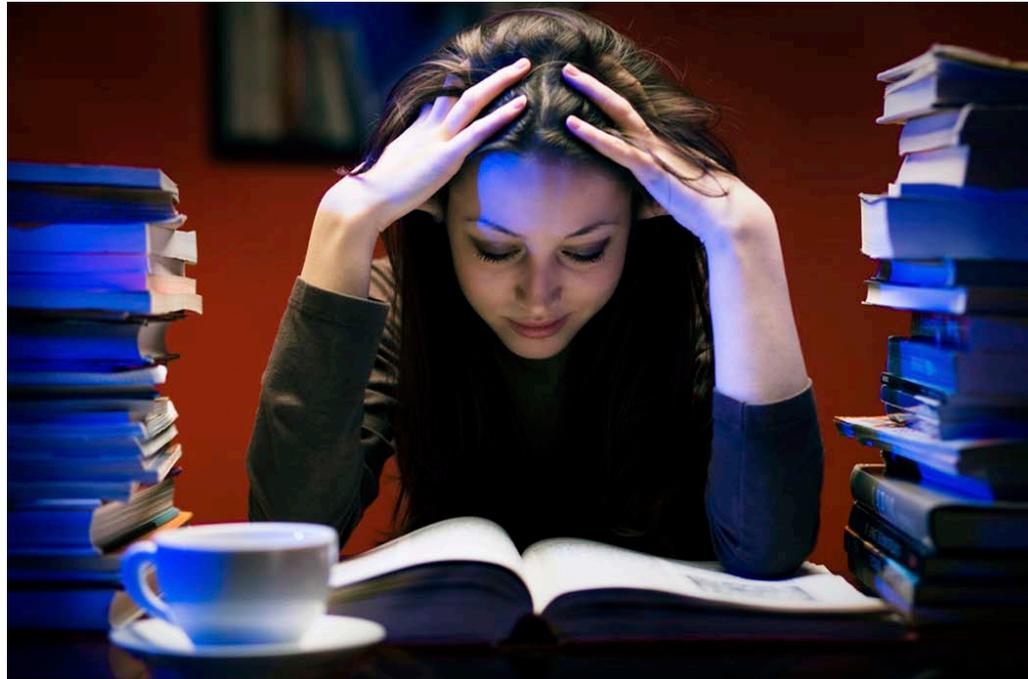
The Research Plan: Annual Priorities

2010 Priorities contd.

- *Centres & Institutes [Platforms: Alignment, People, Research Education, Processes]*. There were extensive discussions during the year in regard to fine-tuning the centres and institutes framework. A Centres and Institutes policy was drafted and approved. In the latter part of the year, a call for expressions of interest in establishing centres was put out.
- *Performance assessment [Platform: People, Processes]*. A new framework for performance assessment was developed and has been tested using data for two schools. The proposed framework was presented to VCAC and approved in principle. Further consultation will take place in the first part of 2011, with a target of full implementation by mid-year.
- *Research culture [Platforms: Alignment, People]*. The two main activities of the Division, supported by Research Committee, were the second 'Celebrating Research' program and the Senior Staff Conference, which had a significant focus on research in 2010.

For 2011, the following priorities were agreed:

- Carried forward from 2010:
 - International positioning and strategy *[Platforms: Alignment, Collaboration, Research Education]*.
 - Research infrastructure *[Platform: Infrastructure, Processes]*.
- New priorities:
 - Indigenous research strategy – a consideration of what additional strategies JCU might adopt to foster research in this domain *[Platforms: Alignment, Research Education]*.
 - Internal research grants – a review of the outcomes arising from internal research grant programs and recommendations for changes to the internal research grants programs *[Platforms: Alignment, Processes]*.
 - Higher Degree Research students strategy – a review and revision of the recruitment, support and structure of HDR programs *[Platforms: Research Education, Processes]*.



Celebrating
Research@JCU