



THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

Te Rautaki Rangahau / Research Plan 2022-2026

Our foundation is that of a University grounded in the Kīngitanga. Our research needs to reflect our place in the world, growing from Te Tiriti and celebrating all knowledge systems and the diversity in which our research talent presents itself. The University is an internationally bench-marked global institution that builds on its strong sense of place to deliver world-class research. This Research Plan reinforces that the University is a values-based and ethical organisation, and a leader in sustainability.

The University of Waikato is committed to a strategic goal of creating, and being known for, research outcomes that embody excellence, impact, relevance and resilience.

Pou Hiranga - Excellence is rooted in deep disciplinary expertise and scholarship. It is academically rigorous, significant, original and can be demonstrated through a variety of means and measures. Research excellence demands high quality post-graduate supervision to grow the next generation of researchers, who will be agents of positive change. Excellence is inherently inclusive of all forms of talent: without a full embrace of equity, diversity, and inclusion, our research outcomes will not attain their full reach nor ambition.

Pou Whakaaweawe - Impact can be demonstrated through achieving positive social, cultural and environmental transformation, locally and globally. There is no one comprehensive framework to assess impact, but increasingly researchers are expected to advance the state of knowledge in their disciplines, whilst demonstrably turning outputs into outcomes. We acknowledge that “impact” operates at differing temporal scales, and will therefore create an environment that enables high quality research to grow, at the appropriate rate, into high quality transformation. Frequently transformative impact occurs at the intersection of disciplines, so we also need to create an environment that fosters interdisciplinarity. Impact also incorporates telling our stories, so that people know what expertise we have to offer, and they can identify the change we are making in the world.

Pou Whaitake - Relevance operates at differing geographical scales: local, regional, national and international, and it encompasses our place in the world. Relevance means that mātauranga Māori, and Pacific knowledge systems cannot be separate from other approaches and methodologies, because we will benefit most when all are woven together to create synergy and space for all. Relevance also means strong engagement with our external stakeholders, who can leverage our research excellence and impact to enhance social, economic, and cultural outcomes. Relevance means the university is fully engaged with the place it is in, marshalling all its resources to work with the people in the region in order to address problems and collectively take advantage of opportunities. Relevance also means we grow the next generation of more diverse researchers, and create pathways to their employability.

Pou Aumangea - Resilience is required at an institutional level, to enable the University to thrive and have longevity and so, in turn, supports all staff to have successful and fulfilling careers. Resilience also means the University must operate sustainably, in the broadest sense, and so research that prioritises and promotes the UN Sustainable Development Goals (SDGs), and the sustainability of the environment, will be demonstrably resilient. Resilience also encompasses aspects of workload management and

academic expectations, a resilient University's processes for reward and recognition must place impact and relevance alongside excellence so that academic and professional staff can contribute fully and be recognised for their contributions. Resilience also includes working with other research providers to bolster the entire Research, Science and Innovation (RSI) sector in Aotearoa New Zealand. These four pou all share a common foundation: our aspirations to contribute as a critical, creative and constructive part of society. They also share a common base of resource requirements. We are now, and will be for some years, in a resource-constrained environment. The decisions we make now have to acknowledge our current financial situation, but also set us up for a future in which we do not simply keep up, but move ahead of comparable institutions. This goal means being very deliberate in our investments. For example, internal funding and support must have a twofold aim, both seeding additional resourcing in the near-term, and growing capacity in our research workforce to ensure a strong future.

As such this research plan has 5 Objectives:

- OBJECTIVE 1:** Increase recognition, internally and externally, of our world-class scholarship that reflects our place in the world, and in te ao Māori, and grow the next generation of researchers recognised for their ability to create sustainable futures through local and global leadership.
- OBJECTIVE 2:** Determine, and recognise, the measures that reflect positive environmental, social and economic impact, and invest in our researchers to deliver transformative research outcomes, and tell our story.
- OBJECTIVE 3:** Grow our interdisciplinary research collaborations, both within the University and with a wide range of external parties including, but not limited to, universities, wānanga and Crown research institutes (CRIs).
- OBJECTIVE 4:** Deepen stakeholder engagement in the co-creation of research programmes, including with iwi, Māori trusts, Pacific community organisations, industry and government.
- OBJECTIVE 5:** Increase resourcing for research and development from external sources, that enables the University to continuously improve research, teaching and service and allow all staff to balance their contributions to the University's strategy.

Specific targets will be developed each year for advancing these objectives. Initial actions, with a variety of timelines, are described here, but this Plan is a living document that both guides activity and evolves with it. The Research Plan will be a biannual standing item on the agenda of Research Committee where the actions will be reviewed. Each School or Faculty is expected to develop its own research plan, that come together to form Divisional research approaches that align with this overarching framework and advance the University's Strategy.

We are committed to implementing the recommendations of the Taskforce Report (2021) and to become an institution that rejects casual and systemic racism, honours Te Tiriti o Waitangi, and values mātauranga Māori. University-based research has evolved over centuries in the traditions of Natural Philosophy, as such we cannot simply "bolt on" Māori and Pacific knowledge systems and hope to gain value, whereas if we deliberately make space for mātauranga and Pacific approaches we can add depth and meaning to our research endeavours. As such, mātauranga Māori will be woven throughout the four pou of excellence, impact, relevance and resilience; and is an integral part of all five objectives in this Plan.

OBJECTIVE 1- INCREASE RECOGNITION, INTERNALLY AND EXTERNALLY, OF OUR WORLD-CLASS SCHOLARSHIP THAT REFLECTS OUR PLACE IN THE WORLD, AND IN TE AO MĀORI, AND GROW THE NEXT GENERATION OF RESEARCHERS RECOGNISED FOR THEIR ABILITY TO CREATE SUSTAINABLE FUTURES THROUGH LOCAL AND GLOBAL LEADERSHIP.

Scholarly excellence rooted in deep disciplinary expertise is the foundation upon which our research reputation rests. World-class scholarship means the excellence of our research is internationally-recognised and benchmarked. This does not mean the University's research endeavours are *only* for the rest of the world, but must reflect our setting, our region, and our country, blending the perspectives of tangata whenua and tangata te Tiriti, as well as Pacific approaches and methodologies. Our unique opportunity, as we engage with the work-programme of the 2021 Taskforce, is to embed mātauranga throughout our researcher's capabilities, treasure the input of Pacific knowledge systems, and celebrate the synergy with other approaches to science and knowledge generation. Recognising this opportunity, and working with it, will enable our research excellence to shine through.

Traditional bibliometrics are often used to quantify excellence. This fact will continue to be true for a long time yet, but it is essential that we rely on such metrics with caution and in context. A more ethical assessment of research excellence takes a more encompassing approach, drawing on bibliometrics, altmetrics and other tools to more fairly describe excellence. Grasping our opportunity to understand how research excellence can be assessed in a tikanga Māori context is an important step that will allow us to contribute to the evolution of the University sector in this country. By rigorously applying these standards internally, we can consistently convey our excellence to the world and, in the process, influence national and international assessment practises.

Growing capability and capacity in the next generation of researchers demands that we provide excellent supervision of graduate research students, as well as mentorship of new and emerging researchers. These two actions are critical for the sustainability of the whole research sector.

What will the University do to achieve this objective?

- Establish a process to identify and develop researcher capacity and capability in mātauranga Māori, and in Pacific research methodologies.
- Recognise a broader definition of excellence in our suite of annual research awards.
- Further develop specialist mātauranga competency among the professional staff supporting research, to deliver excellence in mātauranga.
- Support the Pacific Research Hub, valuing and ensuring a place for Pacific research and Pacific researchers.
- Build on our recognised strengths, as exemplified by our Research Institutes and significant research programmes, and identify new opportunities to concentrate support by aligning a proportion of internal funding and scholarships accordingly.
- Maintain a proportion of internal funding for entirely new collaborations, and run an annual campaign of activities to create opportunities for these to form.
- Develop a 5-year plan for the School of Graduate Research that plots the roadmap for the increased success of graduate research students, recognising the essential role they play in research excellence and productivity.
- Develop training for research students and supervisors that, by the conclusion of this Plan, will have differentiated our University as the best in NZ for the experience postgraduates have, and their employability.
- Put systems in place to attract an increased number of high-quality graduate research students from diverse backgrounds.
- Build on new and existing mentorship programmes that increase our researchers' well-being, whilst also fostering a culture of research excellence.
- Support the Early Career Academic networks across the University with a range of engagement and career-development opportunities.

OBJECTIVE 2 - DETERMINE, AND RECOGNISE, THE MEASURES THAT REFLECT IMPACT, AND INVEST IN OUR RESEARCHERS TO DELIVER TRANSFORMATIVE RESEARCH OUTCOMES, AND TELL OUR STORY.

Impact is increasingly being used by governments and funders to assess the quality of research. It is sometimes unhelpfully interpreted in narrow economic terms, but is starting to be used in a broader sense that encompasses the long-term transformation that research drives. Research that prioritises sustainability, as assessed through our contribution to the United Nations 2030 Agenda and its 17 SGDs, has local and global impact.

It is notoriously hard to quantify “impact”, and so part of our challenge is to define what it means for us at Waikato, and then design measures that can capture it across the wide variety of timelines that apply.

The journey from research activity to impact is well-summarised in the Ministry of Business, Innovation and Employment’s (MBIE) “results chain framework”¹ which encompasses inputs, activities, outputs, outcomes and impact. Researchers will occupy multiple stations on that journey, sometimes simultaneously. The multi-generational approach to a thriving community, that is embodied in te ao Māori, is a useful framing for impact over the longest timescales. At the other end of the scale, consulting activity that is grounded in research expertise might deliver impact in months. How we recognise and invest in impact generating activity, therefore, requires a flexible approach to timescales. It is important to note that *impact* is what our research might achieve, but it is not an activity in and of itself. As such, it is important to provide support for all research-active staff, irrespective of career stage. This support must enable them to pursue their research goals with passion, whilst acknowledging that the impact of that research might be recognised over longer timescales than, for example, a single PBRF or promotion cycle. In other words, we must align the processes by which the university rewards and recognises research activity so as to capture evidence of impact appropriate to career stage and discipline.

Communicating how our research is transforming the world around us is an important exercise because, critically, it contributes to the change we can hope to make. Amongst the clamour, our researchers need to be seen to be agents of change and so a well-structured approach to research communication is an integral part of delivering impact.

What will the University do to achieve this objective?

- Over the lifetime of this Plan develop alternative measures (both qualitative and quantitative) that recognise both excellence and impact in disciplinary, and interdisciplinary, contexts.
- Ensure these measures are part of our processes for reward and recognition.
- Develop an annual programme of activities that enable our researchers to tell their stories, and enable our communities to interact with our research.
- Ensure Waikato’s areas of research strength are nationally (and internationally) familiar and front-of-mind for funders, potential collaborators, PBRF panels, and internally.
- Provide training for researchers to enable them to engage with the media, or alternative routes for disseminating our research.
- Refresh the Staff Profile pages on our website so that external stakeholders can identify our experts and our expertise.
- Analyse the impact of Open Access, by discipline, to better understand the value of Article Processing Charges (APC), “transformative agreements” with publishers, and the role of our research repository.
- Develop guidelines for funding application budgets that include appropriate guidance on APC.
- Structure a campaign of support towards the 2025 PBRF round that enables researchers to effectively communicate their research excellence. This campaign will include an updated implementation of IRIS, with related staff training and support.
- Promote and encourage a research focus that contributes to advancing the UN SDGs.

¹ <https://www.mbie.govt.nz/dmsdocument/6983-the-impact-of-research-position-paper-october-2019-pdf>

OBJECTIVE 3 - GROW OUR INTERDISCIPLINARY RESEARCH COLLABORATIONS, BOTH WITHIN THE UNIVERSITY AND WITH A WIDE RANGE OF EXTERNAL PARTIES INCLUDING, BUT NOT LIMITED TO, UNIVERSITIES, WĀNANGA AND CROWN RESEARCH INSTITUTES (CRIS).

If scholarly excellence and deep disciplinary expertise are the foundations of our research reputation, then the ability to weave together outcomes that cross disciplinary boundaries should be the Waikato “sweet spot”. As the smallest of the comprehensive Universities, we should be most able to create mechanisms that support interdisciplinary collaborations within the University. With our foundation in the Kīngitanga, and our locations in Waikato-Tainui and Tauranga Moana rohe, we are ideally placed to collaborate with Wānanga. We have CRIs co-located on our campus, and are active participants in national research collaborations including the Centres of Research Excellence and the National Science Challenges.

As the RSI sector is examined and, potentially, reshaped by the Government’s “Te Ara Paerangi - Future Pathways” Green Paper² (2021) we need to ensure we are a constructive contributor to discussions of collaboration and co-location. This Green Paper could fundamentally reshape the research funding systems of NZ, whilst also examining the structures underpinning our research providers, including where and how the CRIs operate, and how they work with Universities. If so, the Green Paper will create opportunities for our research staff and students to work on the complex problems that stretch across a number of disciplinary boundaries.

At the core of the SDG agenda is the need to influence and increase interdisciplinary scholarly debates in different areas of research. Teaching and learning in an interdisciplinary context will become increasingly common, as the Academic Plan guides the development of new programmes, and will need to be research-informed, and aligned with a Division’s/School’s /Faculty’s research strengths.

International collaboration remains a cornerstone of research excellence and impact for a global university and this Research Plan intersects with the International Plan, in particular, with research collaboration opportunities with Waikato’s strategic partners. Supporting researchers to build on existing partnerships, and to explore new opportunities, is essential in maintaining and enhancing the University’s international reputation and creating mobility and reach for our researchers.

What will the University do to achieve this objective?

- Target internal funds toward building research collaborations, and seeding collaborative approaches to externally-funded research grant applications.
- Design and deliver a series of opportunities in which researchers can come together to share their ideas and expertise.
- Analyse internal processes to identify and facilitate interdisciplinary research.
- In 2021 and 2022, fully engage with Government’s Green Paper “Te Ara Paerangi - Future Pathways”.
- Identify key challenges and research questions linked to each of the 17 SDGs.
- Develop data management processes, in line with the data management policy, that enable collaboration whilst providing necessary data safeguards.
- Ensure close alignment between the Research Plan and the International Plan to support strategic partnerships and seed new research collaborations.
- Host international scholars in a way that enables maximum interaction with researchers across the University.

² <https://www.mbie.govt.nz/science-and-technology/science-and-innovation/research-and-data/te-ara-paerangi-future-pathways/>

OBJECTIVE 4 - DEEPEN STAKEHOLDER ENGAGEMENT IN THE CO-CREATION OF RESEARCH PROGRAMMES, INCLUDING WITH IWI, MĀORI TRUSTS, PACIFIC COMMUNITY ORGANISATIONS, INDUSTRY AND GOVERNMENT

University researchers have a long tradition of conducting inquiry-led research, and this tradition is a bastion of academic freedom that is unassailable. Given the long timescales for some impact, described in Objective 2, research that is driven by curiosity could change the world tomorrow or next century; it is therefore an essential cornerstone of a vibrant RSI sector. Universities, however, are also part of their communities and regions, and are well-placed to contribute to mission-led, and applied research, that contributes directly to outcomes that are demanded by our stakeholders. We need to engage with stakeholders early and often to understand the questions that need answering in their worlds, and co-create programmes of research that can contribute to the answers.

Our Research Institutes provide a focus of engagement between iwi and our researchers, between local council and our researchers, and between industry and our researchers. In addition, initiatives such as the Summer Research Scholarships, and Work-Integrated Learning are mechanisms through which our stakeholders can identify how our research strengths can be part of their success. WaikatoLink, and Research and Enterprise have essential roles in building these bridges. The creation of a Pacific Research Hub, as identified in the Pacific Strategic Plan, is another strong bridge into our wider community. Our commitment to Kīngitanga obligates us to engage with mana whenua and provides opportunities to co-create research directions that are relevant, excellent and impactful.

What will the University do to achieve this objective?

- Develop key roles that are dedicated to sustaining relationships between the University and iwi, Māori and other stakeholders working with mātauranga Māori.
- Build on existing research relationships within Tainui, Te Arawa, Tauranga-Moana to identify key areas of collaboration over the next five years.
- Work with Te Rōpū Manukura to identify new research synergies of relevance to all our partner iwi.
- Develop a key role, linked to the Pacific Research Hub, dedicated to developing Pacific research capacity and engaging with Pacific communities.
- Review current ethics policies to ensure there are rigorous processes in place for engaging in any research, in particular research with Māori and Pacific stakeholders.
- Support WaikatoLink, and Research and Enterprise staff, to work closely with stakeholders to identify opportunities for our researchers to work on relevant and immediate research issues.
- Through the greater flexibility of the revised Research and Study Leave (RSL) policy create opportunities for researchers to engage directly with the broader community, including businesses, NGOs and charities including co-location and sabbaticals.
- Work closely with local and regional councils to understand the mechanisms that allow them to fully engage with our research and researchers.
- Support staff to recruit high quality postgraduate research students by creating low barriers to entry for external stakeholder collaboration on summer research, Masters and PhD projects.

OBJECTIVE 5 - INCREASE RESOURCING FOR RESEARCH AND DEVELOPMENT, FROM EXTERNAL SOURCES, THAT ENABLES THE UNIVERSITY TO CONTINUOUSLY IMPROVE RESEARCH, TEACHING AND SERVICE AND ALLOWS ALL STAFF TO BALANCE THEIR CONTRIBUTIONS TO THE UNIVERSITY'S STRATEGY.

The role of the University as a provider of research-informed teaching, and as critic and conscience of society, has never faced more testing times than we will likely face during the life of this Research Plan. The Academic Plan speaks directly to re-establishing pathways for international students and this is critical, not simply from a financial point of view, but for the breadth of experience international students, particularly international PhD students, bring to both our campuses.

Supporting our staff to balance research and teaching means also supporting them to seek resourcing for their research where and whenever possible. Fully-costed, fully-funded research programmes enable universities to transparently recognise the cost of research and efficiently balance demands on staff time. Not all research funding is fully-costed and fully-funded, a fact that requires the University to recognise that research reputation is deferred income. Understanding the workload implications of externally-funded deliverables, without compromising on excellent student outcomes, means that transparent, realistic, discipline-specific workload models need to be developed.

Graduate research students are the engine-house of research outputs in many disciplines, and contribute to the richness and diversity of research across all disciplines. Increasing the number and quality of PhD students will require additional resourcing for an increased number, and value, of PhD scholarships. This Research Plan will be supplemented in 2022 by a new strategic plan for the School of Graduate Research that will directly tackle these issues.

Increasing regulatory commitments are a strong likelihood during the life of this Plan, especially in terms of the Government's Protective Security guidelines that relate to working with overseas collaborators. University systems need to provide us with secure processes, whilst enabling researchers to progress research that is at the forefront of knowledge.

What will the University do to achieve this objective?

- Increase the success rate in external funding applications by encouraging researchers and research teams to engage early with the major funding rounds and planning on one- to two-year campaigns for the major funds.
- Diversify externally-funded research revenue. Particular opportunities exist in funding from the Health Research Council (HRC), and in working more closely with Callaghan Innovation and local industry to find alternative routes to fund PhD and Masters scholarships.
- Design and deliver methods to more clearly advertise research opportunities for PhD and Masters students, especially those funded by external research income.
- Work with the International Office to identify, and support, opportunities for collaboration with strategic partners that open pathways to international funds.
- Increase our culture of seeking external funding for research by clearly communicating the financial models (such as overheads and buy-out) by which we resource staffing levels.
- Revise and define those finance models so they incentivise the sort of behaviours that maintain excellent performance in both research and teaching.
- Develop clear guidelines on what is expected of academic staff as they progress through Lecturer, Senior Lecturer, Associate Professor and Professor, and align our processes for reward and recognition accordingly.
- Develop training programmes for mid-career researchers to support them as they move from leading projects themselves to spearheading programmes that increase research capacity of others.
- Scoping study for a business-case to examine the cost and benefit of more streamlined processes for grants management and ethics approvals.
- Develop robust workload models that enable the delivery of excellent student learning outcomes whilst protecting quality time for research.
- Review processes that operate in support of research integrity and revise as necessary to align with international best practice.