

# THE UNIVERSITY OF WAIKATO

## Research Plan 2018-2021

The University of Waikato Strategy 2017-2021 signals a commitment to academic excellence and to embracing the University's motto *Ko Te Tangata*. The Research Plan has been developed to help operationalise the Strategy. It aims to act as a guide for ensuring 'a culture of research excellence is embedded in every University programme' and to substantially improving 'research quality and impact across the University as measured by articles in refereed international journals, monographs with academic publishers, competitive research grants won, and domestic and international university rankings', along with supporting 'academic staff to develop aspirational research plans that create a pathway to distinction in research performance' (Strategy 2017-2021).

To achieve these goals, the University will continue to develop its research portfolios, led by its Faculties, Research Institutes, Centres and Units. The University Strategy has identified several areas where we will demonstrate national research leadership and international standing<sup>1</sup>. These areas and the process by which they were identified are described in the University's Investment Plan 2017-2019. We are also growing our strength in other areas. We will demonstrate research leadership and grow our research portfolios by: developing the skills of our researchers with respect to research planning, proposal development, building collaborations and engaging with private- and public-sector partners and end-users of research; using the University's own funds to support (jointly with other investors, where possible) preliminary, exploratory, proof-of-concept and postgraduate research projects, and applications for external funds; supporting applications for external investment through the Research & Enterprise team; and managing teaching loads to allow academic staff to be fully active researchers. Particular areas of emphasis will include supporting researchers to develop excellent research concepts for the Marsden, Endeavour, Health Research and other funds, building more interdisciplinary research, helping more applied researchers build links to end-users and private-sector investors, and building teams in areas of high research demand to balance workloads.

An important aspect of delivering the University Research Plan will be through research plans developed by Faculties, Research Institutes, Centres and Units. Those plans will include actions that maintain and build national leadership in the areas that are identified in the University Strategy and other actions that will expand those areas of leadership in new directions and build new leadership areas for the future.

This Research Plan aligns with and supports the University's Strategy, Academic Plan, Māori Advancement Plan, Pacific Plan, Investment Plan and the School of Graduate Research Strategic Plan. This Plan therefore shares some objectives and actions, quantitative and qualitative success factors with those plans. The points of alignment are noted in this plan.

As is true for research project plans, this Research Plan is intended to set a direction and co-ordinate the University's efforts toward achieving its objectives, while being responsive to opportunities that may arise and flexible enough to deal with unexpected setbacks. Research projects take place over periods of years so some of the actions taken under this plan will only start to show results after the end of the plan's effective period. Where that is the case, we will seek forward-looking indicators of likely future success.

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<sup>1</sup> Health and sport, applications of digital technology, innovation in the agricultural, manufacturing and engineering sectors of the economy and in the study of environmental issues.

While the Research plan does not include Key Performance Indicators (KPIs), each objective does have quantitative and qualitative success factors to enable the University to monitor its progress against the Plan at regular intervals. KPIs and other information about how to determine progress against particular objectives is available in the University of Waikato Investment Plan and the University Strategy 2017-2021. Further specific targets and measures will be developed on an annual basis, in consultation with the Deans, so that progress can be monitored and enhanced as necessary. Each faculty is expected to develop its own, more detailed, research plan using the University's Research Plan as an overarching framework. With these factors in mind, the Research Plan aims to deliver on the following objectives:

- 1. Improved quality and quantum of University research**
- 2. Increased income from Research and Development activities**
- 3. Mātauranga Māori in Waikato Research**
- 4. Research excellence embedded in academic programmes**

### **Objective 1: Improved quality and quantum of University research**

As outlined in the University of Waikato Investment Plan 2017-2019, the excellence and relevance of university-based research is central to innovation, and of fundamental importance to the intrinsic, economic and social values of society. The University of Waikato will continue to build its research capability and its reputation for excellent research, which is reflected in both national and international indicators, both at the subject and university level. It will focus on maintaining its role as a prominent source of research expertise and will invest in its premier concentrations of established excellence, interdisciplinary research and valuable national and international partnerships.

A wide range of the quality research being undertaken at Waikato is leading to positive outcomes for New Zealand and overseas. The mission-led nature of much of the University's research requires highlighting the relevance and application of research being undertaken, to work closely with research partners – including industry, communities and other research institutions and encouraging students to participate on projects that will enhance their research skills and technical knowledge. Over the period of the Investment Plan the University is committed to enhancing the interdisciplinary and applied nature of its research programme.

The Investment Plan also indicates that the University will invest in its areas of national leadership, which will include investment in research and research capability. The University will take a targeted approach to its investment, which will be more strongly directed towards areas of distinctive contribution and national leadership. The development of any new Research Institutes, Centres or Units over this Investment Plan period will be dependent on new opportunities and needs emerging from the University's areas of national leadership. In particular, the University has established Te Waiora Joint Institute for Freshwater Management in association with NIWA.

#### **What will the University do to achieve this Objective?**

- Work with partners to invest in current and new research institutes, centres and units.
- Enhance inter-disciplinary research focused on global research challenges of direct relevance locally, nationally and internationally.
- Ensure all institutes, centres and units have appropriate quality linkages at the international level that foster research collaboration and outcomes.
- Align the University budget model to ensure it supports the sustainability and growth of research institutes, centres and units, and collaborations across faculties.
- Invest in the improvement of infrastructure, facilities, and resources and support for staff to enable them to complete excellent research and grow external research revenue.
- Continue to invest the University's internal funds to support excellent and relevant research projects, particularly in seed projects that lead to external research investment.
- Ensure staff have consolidated periods for research in each academic year (aligned with the Academic Plan 2017-2021)
- Put in place a research leadership development programme to build the capability of new and existing research staff and postgraduate students (especially members of under-represented groups) to propose and carry out excellent and impactful research.
- Ensure that succession planning is in place for research leaders and that early-career staff are well-supported.
- Effectively showcase research successes by identifying and actively communicating research of public interest, maximising the availability of research in Research Commons and public web profiles.
- Ensure each Faculty, Research Institute, Centre and Unit develops a research plan that:
  - identifies a few key areas of focus for research in the faculty where we have or plan to build national leadership and international recognition

- includes actions to develop the excellence and impact of each research area over the next five to ten years, and develop research-area-specific measures of both excellence and impact to track improvements over time .
- includes actions to build capability and capacity, in terms of both staff and postgraduate students, to support those research areas.
- develops a plan to increase doctorate and research masters enrolments and thesis completions.
- identifies key stakeholders, industry and research partners and end-users and has actions to engage and grow our relationships with these groups.
- encourages cross-faculty research relationships and builds linkages with collaborators outside the University.
- sets its own standards of what it considers to be a suitable level of production of academic research, per level of appointment.
- aligns (where applicable) with faculty operating targets in terms of student:staff ratios, teaching loads and external research income so that they are consistent with sustainability and future potential funding levels, includes sufficient time for staff to carry out their research roles, and establishes clear timeframes over which those targets must be met (in alignment with the Academic Plan 2017-2019)
- thus leads to excellent research, creates benefits for NZ and regional stakeholders and the research community, and provides sustainable growth of external income to support staff and postgraduate research.

## **Objective 2: Increased income from Research and Development activities**

Over the period of the Investment Plan 2017-2019, the University intends to increase its research and development (R&D) revenue with the exception of professional development contract income; the University is particularly targeting increases in revenue from non-Government sources over the period 2017-2019. This will be assisted by a more integrated and seamless approach to research support through the Research and Enterprise Office with end-to-end advice and support provided on the development of research proposals, management of research contracts and deliverables, identification of potential commercialisation opportunities and support for commercialisation of IP.

The University also has a number of established, externally funded, Chairs. These currently include the Bay of Plenty Regional Council Chair in Lakes Management and Restoration, the Bay of Plenty Regional Council Chair in Coastal Science, the Ministry of Environment Chair in Environmental Economics, and the Gallagher Chair of Engineering. Over the period of the Investment Plan the University will work closely with local government and business with a view to increasing its number of funded Chairs.

The Government's Entrepreneurial Universities initiative is an excellent opportunity to grow research that is both excellent and closely aligned with businesses in areas of strength for the University. It combines funds, plans and encouragement for researchers to build relationships with businesses and to build new businesses with well-resourced research capability that is attractive for businesses engagement.

Groups that are under-represented as researchers and as investors in research include Māori and Pacific communities with which the University has a long history of leadership and expertise. Goal 3 of the University's Māori Advancement Plan proposes that the University will 'integrate kaupapa, tikanga, reo and mātauranga Māori as natural elements of the Waikato experience', to this end the University has continued to focus on supporting mātauranga Māori and building Māori research capacity and this will continue to be a focus.

### **What will the University do to achieve this Objective?**

In addition to the actions relating to Objective 1, which also relate to this Objective:

- Develop one or two well-targeted proposals for each round of the Entrepreneurial Universities initiative and support successful initiatives to grow strong links with businesses.
- Establish at least one research centre combining expertise in machine learning, digital content and online learning (in alignment with the Academic Plan 2017-2021)
- Identify businesses with interests relating to the University's national leadership areas and Faculty, Research Institute and Centre research plan focus areas and work with those businesses to secure increased investment by them in research at the University.
- Increase the number of Pacific students undertaking and completing research postgraduate degrees, by bringing Waikato graduates through to these levels of study as well as by recruiting Pacific graduates whose interests connect with Waikato's research strengths, and increase the amount of research on Pacific topics (aligned with the Pacific Plan).
- Create benefits for iwi, communities and businesses in the New Zealand and, particularly, the Waikato / Bay of Plenty region by increasing our public and private partnerships to ensure the advancement of innovation and economic and social benefit, through *inter alia* commercialisation, the creation of intellectual property, licencing, contract research, research degree students (especially Māori, in alignment with the Strategic Plan and Māori Advancement Plan) and placements.
- Further its plans for internationalisation across a range of areas including research and strategic partnerships (in alignment with the Academic Plan 2017-2021)

### **Objective 3: Mātauranga Māori in Waikato Research**

As noted in the Investment Plan, the University of Waikato has long been regarded for its work on mātauranga Māori. Rather than being the sole responsibility of Māori academics, the concept of mātauranga Māori has become a core part of much of the University's teaching and research. Te Rōpū Manukura is the body responsible with Council to give effect to the Treaty of Waitangi in the University. It facilitates the educational and research advancement of iwi through partnership with the University, provides a forum for the discussion of matters of University policy which affect Māori and/or relate to the Treaty of Waitangi and advises on those matters to iwi and the University as appropriate.

The University's leadership and expertise in the area of mātauranga Māori is evidenced by the fact that the University of Waikato is frequently asked to contribute its knowledge of mātauranga Māori to research projects being undertaken by external groups, including CRIs and other universities.

The University's vision is to be seen by iwi and communities as a trusted and effective partner in advancing research and scholarship relating to Māori development and mātauranga Māori, and this vision underpins a number of work-streams and activities of the University over the period of this Investment Plan.

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#### **What will the University do to achieve this Objective?**

- Proactively support the Deputy Vice-Chancellor Māori to provide leadership and pursue the objectives of the Māori Advancement Plan, with a particular view to making an enhanced contribution to meeting the research needs of Māori.
- Support an increase in the research capacity of Māori academic staff, especially in terms of leadership, research qualifications, academic excellence and succession planning.
- Increase the number and range of University scholarships targeted at supporting Māori research capacity building.
- Support all researchers to understand the significance and application of mātauranga Māori to their research.
- Support all researchers to engage with Māori communities and businesses as co-designers of, participants in, end-users and beneficiaries of University of Waikato research.

#### **Objective 4: Research excellence embedded in academic programmes**

The Academic Plan 2017-2021 notes that, in developing academic programmes, Faculties will be guided by their research, student knowledge, best international practice, and the impetus to act as critic and conscience of society, as well as the needs of employers and representatives of relevant professions. It is also vital that the Faculties strengthen areas that are of national and/or international significance, and identify new and emerging areas for teaching and research. Interdisciplinary programmes that combine expertise from different relevant areas are of particular importance, as they will help equip students to face some of the complex global challenges of our time.

#### **What will the University do to achieve this Objective?**

- Aligned with the School of Graduate Research Strategic Plan, support the School of Graduate Research to:
  - Ensure an excellent student experience for doctoral candidates from enquiry, recruitment, admission and scholarship award, progress assessment, to thesis completion.
  - Develop academic staff understanding and ensure best practice supervision of different types of research degrees, student researchers, and their research.
  - Ensure consistency and equity among faculties in the level of support and resourcing provided to postgraduate students (aligned with Academic Plan).
  - Review the masters' student experience, which has been identified as a priority area that would benefit from attention (aligned with Academic Plan)
  - Increase the number of research students working with external organisations to produce impact for industry
  - Work in conjunction with other areas of the University to scaffold doctoral study through researcher development and skills training which support timely completions and feature in recruitment materials
  - Develop a programme of interdisciplinary research seminars featuring postgraduate research students and supervisors which promote dialogue and discussion on topical research
  - Increase doctorate and research masters research postgraduate enrolments and thesis completions
  - Increase the number of industry-funded research scholarships
- Support Faculties to strengthen areas that are of national and/or international significance.
- Identify new and emerging areas where the University should grow its research strength.
- Develop interdisciplinary research activities that will help equip students and society to address complex global challenges.