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## October 2022

### Introduction

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The 2022 academic year is drawing to a close, with all teaching ending in the third week of October. At this time students are preparing for examinations and assessments. Typical as the end of the year approaches this report covers the past month and also reflects on the past year.

The University of Canterbury began the 2022 academic year during a time of COVID-19 restrictions. Understanding that there would be no definitive switch to a post-pandemic environment but also knowing we had a vaccine policy in place, we made the bold decision to begin the academic year with a fully open campus, offering blended teaching and learning that included on-campus teaching. For the most of the year, the University community had to navigate changing risk levels and the restrictions associated with the nationwide 'Traffic Light' system. It was only in the final term that most national and regional restrictions were lifted and campus life resumed in full with events such as conferences, student festivities and in-person meetings.

As I reflect on the past year, I see many achievements to be acknowledged and I wish to express my heartfelt gratitude for the cooperation, commitment and support of staff and students. During the period of border closure when the numbers of international students declined, it has been pleasing that we have received the largest-ever enrolments of domestic students from our local community and the rest of Aotearoa New Zealand.

Notable too is the significant progress in UC's strategic objective to offer accessible, flexible and future-focused education that includes pastoral support to foster student achievement and success. The Kia Angitu team convened a national symposium (called Tūwhitia) to share best practice in Aotearoa New Zealand; opened the new central student hub, Te Pātaka; and continued to develop the Analytics for Course Engagement (ACE) learning analytics programme. The programme to improve student success runs over six years and some good results are beginning to emerge.

Another UC venture has been to offer 23 massive open online courses, which as of about now have reached about 100,000 students worldwide. We have also innovated with micro-credentials – short courses delivered online, face to face or in hybrid mode, usually earning credits of about five points. In 2021 UC enrolled 1,129 students into micro-credentials, equating to 28.4 equivalent full-time students (EFTS). In 2022, to the end of September, we have enrolled 2,922 students (97.2 EFTS).

UC, along with many other universities in the country, has had mixed results in its global university rankings. With a ranking of 284, UC remains in the top 300 in the 2023 Quacquarelli Symonds (QS) World University rankings. UC improved citations per faculty by about 10%, but the global mean improved by a greater percentage, resulting in a relative decrease in UC's ranking. There was also a drop in the Times

Higher Education (THE) institutional ranking again mainly attributable to citations relative to other universities. However, UC is still in the top 3% of universities globally.

UC has shown a more positive trend in the Impact Rankings. In the THE Impact Rankings, the University achieved first in the world for action on the United Nations Sustainable Development Goal (SDG) 12: Responsible Consumption and Production. We also achieved 50th in our Impact Ranking in the world overall and second in Aotearoa New Zealand. In October the inaugural QS Sustainability ranking was published placing UC as 95<sup>th</sup> globally, and third in New Zealand. Auckland and Otago were ranked globally at 10<sup>th</sup> and 47<sup>th</sup>, respectively, with Victoria University in Wellington and Massey ranked at 116<sup>th</sup> and 125<sup>th</sup>. It assessed a mix of research impact, reputational surveys, institutional policies, and sustainability operations across three environmental scores and five social scores,

These recent results from the two major international institutional ranking scheme run by QS and THE, places UC ranks 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> and 7<sup>th</sup> within the New Zealand Universities. Both the QS and THE will be changing their respective methodologies for the 2024 institutional rankings to be released next year.

## **Engagement – UC as an Engaged University**

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The establishment of the Office of Treaty Partnership Kā Waimaero has given greater impetus to our partnership with mana whenua.

The first objective has been to prepare a document that outlines the guiding principles and expectations of what constitutes a Treaty relationship within the University. That document is currently in draft. It will outline the expectations of Ngāi Tahu (represented by Ngāi Tūāhuriri – the hapū and papatipu rūnanga within Christchurch) as Treaty partner, the way Ngāi Tahu can contribute to the competitive advantage of the University, and the importance of the values of debate, knowledge and mātauranga Māori. It is not a strategic plan, but is designed to be read alongside:

- the University of Canterbury *Strategic Vision 2020–2030* and related documents
- the Tertiary Education Commission's *Tertiary Education Strategy* and *Learner Success Framework for Aotearoa New Zealand*.

Alongside Te Rūnanga o Ngāi Tahu, UC was the Principal Partner of the WORD Christchurch festival in August this year. The Secondary Schools Programme was run at our Ilam Campus where over 400 secondary school students spent time with six different writers.

On 30 June and 1 July 2022, UC hosted the two-day regional Ngā Manu Kōrero speech competitions, regarded as the most significant annual event on the Māori education calendar – both regionally and nationally. All secondary schools were invited to participate in the competition, which focuses on nurturing the bilingual oratory skills of taiohi Māori and encourages bilingualism and fluency in te reo Māori. This was the first time that UC has been the host in the Waitaha regional competition's 57-year history and our involvement this year signals the beginning of a potentially long-term partnership with the competition. The competition typically attracts up to 2,000 people.

The UC Faculty of Law continues its preparatory work to give effect to the resolution of its professional body, the Council for Legal Education (CLE), that Māori tikanga be taught in all New Zealand law degrees. The Faculty is proud to have made three important appointments to create a Māori academic lecture team: two recent appointees, Rachel Evans and Liam Grant, and a valued existing staff member, Adrienne Paul.

Adrian Paul is a contributor and co-author of the Borrin Foundation's report on 'Inspiring National Indigenous Legal Education for Aotearoa | New Zealand's LLB degree' which is working separately but in parallel with the CLE.

With the lifting of COVID-19 restrictions, Te Pae Rakahau | Knowledge Commons regained momentum when UC signed a Memorandum of Understanding with the Police earlier this month. In addition, UC staff and students have been deeply engaged in supporting initiatives of the regional economic development agency led by ChristchurchNZ. This agency has four main economic development clusters: Aerospace and Future Transport; Food, Fibre and Agritech; Health Tech and Resilient Communities; and High-Tech Services.

UC staff and students were prominent at New Zealand's Aerospace Summit and UC was also a sponsor of the recent Christchurch Aerospace Challenge to support new innovations and potential commercialisation in aerial imaging for local and regional disaster and natural hazards planning. Associate Professor Wolfgang Rack (Gateway Antarctica) was a finalist in the challenge with a proposed innovation for remote and autonomous snow-depth mapping.

Throughout the year, current and former UC staff have continued to have an impact on local, national and international policy making.

As part of a large body of work contributing to the success of the national and global COVID-19 response, a range of UC academics published research into the pandemic and key academics lead national discourse and modelling of the progress of the pandemic. Notable academic contributors have been Professors Alex James and Michael Plank as key members of the national team of scientists at award-winning research centre Te Pūnaha Matatini, which provided a series of mathematical models informing the Government's efforts to combat COVID-19.

There are several other UC contributors. The latest special issue of the *New Zealand Geographer*, edited by UC's Associate Professor Malcolm Campbell and Professor Robin Kearns (University of Auckland), takes a look at the pandemic geographies in Aotearoa New Zealand. The special issue features contributions from several School of Earth and Environment geographers (and their UC colleagues) with expertise in the geography of health and wellbeing.

As part of a report in the *New Zealand Medical Journal*, postdoctoral research fellow Dr Leighton Watson published the probability of Omicron infection based on the different vaccination statuses of the infecting and infected individuals. His study shows unvaccinated people are 3.1 times more likely to infect others and 2.4 times more likely to be infected than boosted people.

The work of Professor Mark Jermy and Dr Joe Chen from Mechanical Engineering on "Infection Risk Model of Airborne Transmission to Facilitate Decisions about Personal Protective Equipment, Ventilation and Isolation in Shared Indoor Spaces" was mentioned in the report *New Zealand's COVID-19 Research Response*.

The Faculty of Health and the School of Psychology, Speech and Hearing were awarded a contract by the Ministry of Health to deliver talking therapy courses to the mental health and addictions workforce. Associate Dean (Research) Pavel Castka presented to the New Zealand Food Safety Science and Research Centre on the use of technology for remote auditing. The Energy Efficiency and Conservation Authority contracted the EPECentre to study the efficiency and network interoperability of electric vehicle chargers. Adrienne Paul (Ngāti Awa, Ngāti Tuwharetoa ki Kawerau, Tūhoe me Te Arawa ki Maketu) has been working on a national project to strengthen the ability for Māori law to become a firm foundational component of a legal education in Aotearoa New Zealand.

Professor Ann Brower's research report from 16 years ago and her ongoing work on high-country land tenure were influential in the passing of the third reading of the Crown Pastoral Land Reform Bill in May 2022. Dr Jarrod Gilbert continued to have an impact through his work such as a major research project funded by the Law Foundation titled "Making Gang Laws in a Panic". He also carried out an evaluation of He Kete, a women's residential drug and alcohol treatment programme, which was funded by the Department of Corrections.

A nationwide study led by Public Health Senior Lecturer Dr Matt Hobbs shows that living in areas that have 'health constraining' features, such as fast-food outlets, dairies and liquor stores, is associated with poorer physical and mental health outcomes for residents. It is also linked to higher rates of vaping and tobacco smoking. The geospatial study was published in *Social Science and Medicine*.

Associate Professor Sara Tolbert, School of Teacher Education, has been deeply engaged in the national curriculum refresh work in 2022. Dr Annabel Ahuriri-Driscoll (Ngāti Porou, Rangitāne, Ngāti Kahungunu, Ngāti Kauwhata) was the lead writer of the literature review of the following Anti-Racism Kaupapa, recently published by the Ministry of Health. As a public health advisor at Te Whatu Ora in New Plymouth, Health Sciences graduate Sophie Thrupp is responsible for implementing evidence-based public health action with the goal of reducing inequities.

On the international stage, a number of staff have been involved in providing analysis and advice to the Intergovernmental Panel on Climate Change (IPCC). Professor Bronwyn Hayward, who has been involved with the IPCC for some years, was a co-author of a *Nature* commentary that highlighted the current state of gender diversity in IPCC processes and proposed actions of increasing it. Professor Jack Heinemann contributed to chapter 5, about the future of sustainable farming, of the latest IPCC Sixth Assessment Report (AR6) (see also the 'Environmentally sustainable' section below).

UC hosted the Canterbury Mayoral Forum to introduce the mayors of our region to UC and to explore areas of mutual benefit. Kaiārahi rangahau facilitated a blessing ceremony held for the Edward Percival Field Station in Kaikōura with Te Rūnanga o Kaikōura, before the site was vacated ready for demolition. The event was attended by current and former staff as well as family of Professor George Knox, who was instrumental in establishing the research wing. Ngāti Kurī led the ceremony, while Head of the School of Biological Sciences Professor Matthew Turnbull spoke on behalf of the many UC manuhiri and kaimahi in attendance.

The overall winners and grand prize recipients of the 2022 Food, Fibre and Agritech Supernode Challenge were Associate Professor Ken Morison and student Mahnaz Shahverdi, Chemical and Process Engineering, for SuperPro – a highly soluble and nutritional pea protein for the expanding plant-based foods market. The runners-up for the Research Award were student Daniel Mak, Professor Renwick Dobson, Biological Sciences, and Associate Professor Volker Nock, Electrical and Electronic Engineering, for Winealyse – a tool to analyse wine quality quickly and cost-effectively.

UC's objective to support the social sustainability of our locality and region is manifested in both local and national initiatives that have impact in our region. UC sponsors the Young New Zealander of the Year Award | Te Mātātahi o te Tau, which this year went to Ezra Hirawani for his work to set up his own power company, Nau Mai Rā, a purpose-built, kaupapa Māori energy retailer delivering affordable, 'always on' power after discovering how many families lived in power poverty. The winner of another UC-sponsored award, for the Tupuānuku – Education category in the Matariki Awards, was Marcus Akuhata-Brown, an experienced educator who has focused his efforts on addressing the learning and development needs of youth at risk and young offenders.

Te Kaupeka Oranga | Faculty of Health was a sponsor of the 2022 Sport Canterbury Coaches of the Year Award. The winners of the 2022 award were Sebastián González Moreno (Volley Blacks and Volley Ferns coach) and Alex Nilov (New Zealand Olympic Gymnastics coach) for creating a positive culture, encouraging fair play and showing great commitment.

The Future of Health Challenge is a weekend event run by UC Centre for Entrepreneurship in partnership with Te Papa Hauora and supported by Pegasus Health. The three areas of focus for the 2022 challenge were health workforce, health equity, and health and wellbeing. Two teams from Te Kaupeka Oranga were placed first equal.

UC academics are leading important research into the health impacts of sport, particularly contact sports. Professor Nick Draper aims to gain a better understanding of collisions in junior rugby through research funded by the Canterbury Medical Research Foundation and the Neurological Foundation. In addition, Associate Professor Sarah-Kate Millar has been successful in gaining a research grant from Netball NZ to investigate its netball smart, injury prevention programme. This research commenced at the 2022 South Island Secondary Schools tournament.

UC has a range of digital platforms to store and retrieve material and data for the community. One such site is the new Digital Voyages site, Historical Christchurch, created to support SOCI255: Sociology of the City. A number of resources about the printed history of Ōtautahi Christchurch from the heritage collections in Macmillan Brown have been digitised and made available online. Topics include Industry and Commerce, Workers and Unions, The Built Environment and Christchurch as a Peace City.

Supporting the fast-growing game development industry, UC sponsored the New Zealand Game Developers Association's Kiwi Game Starter Competition. Professor Andy Phelps, Programme Director of UC's Digital Screen Campus programme, was one of the three judges tasked with identifying the finalists from an exceptional pool of entrants. The winner was Rare Parrot Games, an Auckland-based team whose game combined a unique idea and a great artistic style.

Te Mātāpuna Mātātahi | Children's University jointly led by UC and Lincoln University aims to raise young people's aspirations for higher education and encourage lifelong learning. This year Professor Donald Matheson worked with undergraduate students to run four sessions for school students aged 7–11 years, aimed at developing their critical media skills. Children's University was on campus on 8 September for a session on geological sciences with Dr Kate Pedley, Professor Ben Kennedy and Chris Grimshaw.

2022 again saw University staff engage with thousands of secondary school students from throughout Aotearoa New Zealand. UC Māori and UC Pasifika staff visited 35+ schools across Christchurch, Auckland and Wellington to engage over 600 Māori and Pasifika students. Outreach programmes to support secondary curriculum content ranged from kitchen chemistry to cryptography to geography to Spanish and the Product Design Dragon's Den.

In a somewhat playful approach to supporting transdisciplinary collaboration, the Faculties of Science and Arts ran a national competition The Art of Science. The competition attracted close to 100 entries from students from Years 5 to 13. Entries took a variety of formats, such as video, music, poetry and illustrations, and showed a wide range of skills, interests and artistic media.

The School of Earth and Environment held its first Whakatane Kura Taiao – Geohazards Science Camp at Wairaka Marae with Te Kura o Paroa. Scientists from GNS Science, UC and Auckland University worked together with teachers and the local community to deliver a camp steeped in mātauranga Māori and volcano, coastal and geothermal science.

Over 4,000 aspiring university students and their whānau from across Aotearoa attended UC's Rā Tōmene | Open Day on Friday 9 September. This is the first time Rā Tōmene has been held in person since 2019 due to COVID-19 restrictions. Students and whānau explored campus, attended subject briefings and got all the information they needed to be able to confirm their study at UC.

Tauhere | UC Connect, UC's popular free public lecture series, continues to offer topical, educational public lectures by experts in their fields and leading thinkers. Nine talks are available online.

## **Education – Accessible, Flexible, Future Focused**

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It is gratifying to see the students and staff come to the end of an academic year that started off with COVID-19 impacting learning and teaching yet again. All our students and staff worked together, using a multimodal approach to providing an accessible and flexible educational experience. The start of the teaching year coincided with Omicron variant becoming more prevalent in New Zealand. This resulted in many students having to isolate and negotiate a range of on-campus and online offerings. The teaching staff also had to make changes offering to students in a variety of modes. While the circumstances have been challenging, new innovative teaching approaches have been developed in response.

For instance, newly appointed lecturer in the School of Earth and Environment, Dr Vanessa Bastos, is in the process of setting up a UC-based YouthMappers Club. YouthMappers uses geospatial technologies and a network of universities around the globe to cultivate a generation of young leaders who will create resilient communities.

Despite the challenges, there was a good uptake of new programmes including the Bachelor of Environmental Science with honours (99 students) and the Bachelor of Data Science (70 students). The Faculty of Health welcomed the first cohort of the Doctor of Health Sciences students. In semester 2, the Aerospace Engineering minor in Aotearoa, was launched by Mechanical Engineering Lecturer Dr Natalia Kabaliuk. This year also saw the approval of new programmes to be launched in 2023 including the Bachelor of Digital Screen. As well The UC Business School | Te Kura Umanga was **re-accredited** under the Equis system in 2022 and so it retained its Triple Crown' accreditation through having its degree programmes accredited by AACSB International (Association for the Advancement of Collegiate Schools of Business (AACSB –International), EQUIS (EFMD Quality Improvement System), and AMBA accreditation (for the MBA programme).

Curriculum development was not limited to on-campus developments. With the success of the MOOCS and the recognition of students wanting flexible learning options, developments in short courses, microcredentials and micromasters were continued. The Organisational Psychology Micro Masters series has been released. The MicroMasters comprises five MOOCS that together offers a deeper understanding of people at work and how organisations can get the best out of them. This development has been a natural pathway building on the success of the Mental Health and Nutrition MOOC.

A substantial contribution to new short courses has also come from UC Business School's Executive Education. A new partnership with the Marketing Association has expanded short course offerings to 50 courses scheduled for 2022. Industry continues to express interest in short courses with Waka Kotahi being our latest partner in creating short courses.

The success of new and existing offerings arises through good teaching and innovative practice. UC has made a commitment to supporting and rewarding good teaching. UC has just announced its UC Teaching Award winners. The Teaching winners for 2022 are: Dr Christian Walsh, Dr Susannah Stevens, Dr Zita Joyce, Dr. Erin Harrington and Theresa Buller, Subject Librarian. It was with delight we heard of the success of

Associate Professor Eileen Britt's Ako Aotearoa Tertiary Educator Award. Eileen is a registered clinical psychologist and biculturally-responsive learning advocate.

As noted student success has been a strong focus this year as Kia Angitu reached its second year of a six-year plan. The focus on Kia Angitu is first-year success. First-year advising has been introduced for the first time in 2022. In addition, Peer Assisted Learning Support has moved from a pilot to being used across six courses. While second semester results are not available, all first semester courses showed improved pass rates. For instance WRIT 101 improved from a 66.3% pass rate to 79.4 %, and ACCT102 moved from 65.5% to 70.1 %. Likewise, students who had attended PALS also did significantly better than their peers who did not. This programme is highly scalable and will begin to make a broader impact to overall retention as it is rolled out more broadly.

## Research – Impact on a Changing World

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UC's research continues to have an impact both nationally and internationally.

KiwiNet is a commercialisation partner network comprising seven universities, all seven Crown research institutes (CRIs) and Callaghan Innovation. UC was well represented again in 2022 with finalists in three of the five categories. Winners from UC were:

- Momentum Student Entrepreneur Ben Scales, University of Canterbury: Designing a better world through smarter materials
- Breakthrough Innovator Award Jonathan Ring, Zincovery/University of Canterbury: Decarbonising zinc recycling
- Researcher Entrepreneur Award Distinguished Professor Maggie-Lee Huckabee, University of Canterbury: Innovative technologies for rehabilitation of swallowing impairment.

In 2022, UC ran its inaugural UC Vision Mātauranga Development Fund and awarded \$100,000 to seven successful projects, chosen from 17 applications across all faculties, as a mechanism to seed-fund the development of new ideas to give effect to Vision Mātauranga. Among the successful applicants who are to lead the research projects, 59% identified as Māori.

UC's transdisciplinary research clusters are, as intended, producing interesting research at the boundaries of traditional disciplines to address key societal challenges. The Cluster for Community and Urban Resilience (CURE) has published recent research around urban accessibility to improve health, sustainability and communities. The work uses geospatial techniques to *determine x-minute walkable neighbourhoods* within all 14 New Zealand urban areas and the 500 most populous US cities. Wellington is New Zealand's most accessible city, where 61% of the population is within 15 minutes' walk of all necessary amenities. The research is published in the academic journal *Cities*.

The Faculty of Education has a new cross-disciplinary research group focused on Pedagogies of Possibility. This group seeks to re-imagine, transform and expand understanding of pedagogical possibilities. Focus areas of its inaugural research include de-streaming in mathematics, possibilities for early childhood education practice across the globe, and sustainability and social justice.

New research by Professor David Frame in the School of Earth and Environment has been published in the prestigious *Nature Climate Change* journal, looking at the expected frequency and impact of heat-waves across Aotearoa New Zealand due to climate change. Interestingly, the greater impact will be in the northern half of the North Island, though eastern coastlines including Canterbury will be impacted to a moderate level.

Associate Professor Kathryn MacCallum, School of Educational Studies and Leadership, has edited a book published by Springer with 52 authors from 11 countries, titled *Industry Practices, Processes and Techniques Adopted in Education*.

Professor Simon Brown has published papers in *Nature Communications* and *Neural Networks* on research that continues to advance nanotechnology development of potential neuromorphic computing.

Since the beginning of the year, UC academic papers have been published in some of the highest-impact journals. A subset of these papers includes:

- “Heterogeneity within and among Co-occurring Foundation Species Increases Biodiversity” by Dr Mads Thomsen (Biological Sciences) and co-authors in *Nature Communications*
- “National Identity Predicts Public Health Support during a Global Pandemic” with Dr Andrew Vonasch (School of Psychology, Speech and Hearing) as a co-author in *Nature Communications*
- “Effective Climate Change Adaptation Means Supporting Community Autonomy” with Professor Jason Tylianakis (Biological Sciences) as a co-author in *Nature Climate Change*
- “Conservation Needs to Integrate Knowledge across Scales”, again with Professor Jason Tylianakis as a co-author, in *Nature Ecology and Evolution*.

New Zealand has one of the lowest rates of open access to research outputs among members of the Organisation for Economic Co-operation and Development (OECD), but UC is accelerating its efforts to increase open-access publishing. The UC Library Repository enables “Green Open Access”, giving the public access to UC’s research and, in turn, increasing citation rates. UC is part of a working group convened by Universities New Zealand after an initial assessment by the Office of the Prime Minister’s Chief Science Advisor.

Open-access publishing is also available via “Read and Publish” agreements with Wiley, Springer Nature and Oxford University Press within the Australian and New Zealand library consortium. Publishing is capped under these agreements.

A new initiative in 2022 was to hold three doctoral supervision workshops. After the first workshops, the kaupapa was revised to incorporate a bicultural contextual model with a focus on pedagogy and principles of effective supervision, in conjunction with the policies and practices associated with roles and responsibilities of supervisors and students.

UC academics continue to win new research contracts with a range of public and private bodies. As of mid-October, UC has active research contracts to the value of \$236.1 million; \$33.6 million in pending final contracts; and research funding applications being prepared or being considered worth \$106.5 million.<sup>1</sup>

In 2022 UC secured significant government funding to lead a high-profile international programme to develop green hydrogen energy. We expect this programme will play a significant role in worldwide moves towards affordable clean energy and contribute directly to SDG 7: Affordable and Clean Energy.

The joint “Food Transitions 2050” Graduate School – with UC, Lincoln University, AgResearch, Plant & Food and Manaaki Whenua Landcare Research as multilateral partners – has received 30 applicants for 10 new funded postgraduate research projects starting in 2023. Food Transitions 2050 continues to build new people capacity around the themes of Food and Future Landscapes, Food for a Carbon Zero Future, Food Consumer Transitions, and Food Governance.

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<sup>1</sup> Research dashboard, Research and Innovation team, and Data and Analytics team.

The development of early career researchers has continued across the year, with success culminating in the awarding of three Rutherford Fellowships to three innovative women academic leaders, Associate Professor Michelle LaRue, Associate Professor Laura Revell and Senior Lecturer Phoebe Macrae. They are leading ground-breaking research in their respective fields. UC secured 3 of the 12 fellowships awarded nationally with each Rutherford Fellow having five year funding to focus on research.

Digital Services is looking to enable the e-research experience here at UC and has begun working with a co-design panel made up of representatives from all faculties. The purpose of the group is to design and deliver a new set of computer, storage and data services for research at UC. Its vision for this new experience is to champion self-service automated access to the right cloud computing in a secure and modern service managed environment.

UC has recently renewed its three-yearly registration with the Office for Human Research Protections in the US Department of Health and Human Services. This credentials UC as having approved human ethics policies to collaborate with US researchers under Federal Policy for the Protection of Human Subjects and the Food & Drug Administration.

## **People – Nurturing Staff, Thriving Students**

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The University has continued to strengthen its commitment to the values developed in 2020 and promulgated in 2021 – manaakitanga, whanaungatanga and tiakitanga. These values guide what we do and how we do things. They challenge and inspire us to empower others and to be the best we can in our work, our studies and our interactions with each other.

Collective employment agreement bargaining has been a major feature of UC employee relations in 2022. It has been constructive at the local level. The campus saw some strike action and other union activities in support of a national union campaign, but local negotiations continue, and disruption to teaching and learning has been minimal.

The People and Culture team has implemented the first stage of the online staff orientation software, Onboarder. The first of those to use Onboarder have been 1,300 semester-only academic support staff. Most of them are students in roles such as tutor and research assistant, and the software provided a way of introducing them to University policy, such as the staff code of conduct. The system will be used to reach all new staff, both continuing and temporary, and provide them with a wide range of information, including health and safety policy. Usage and completion rates can be tracked and reported to line managers for follow-up if necessary.

UC is diversifying its recruitment advertising channels. Following conversation with Te Waka Pākākano, we have begun advertising Māori and Pasifika roles on Ahu Jobs. Ahu Jobs is a new recruitment website focusing on connecting businesses with Māori and Pasifika capability and is now available as part of our Snaphire advertising suite.

Good progress has been made in the project to ensure UC's compliance with the Education (Pastoral Care of Tertiary and International Learners) Code of Practice 2021 (Pastoral Care Code) from the New Zealand Qualifications Authority. Work this year has included appointing a Manager for the Pastoral Care Code and holding a staff hui series where staff outlined UC's progress towards code compliance and discussed the range of ways in which we provide pastoral care.

UC has initiated a new project, Positive Community Behaviours, to address the ongoing and increasing alcohol-related anti-social behaviours within the community adjacent to our campuses. A Steering Group that includes external stakeholders such as the University of Canterbury Students' Association (UCSA), halls,

residents, Police and Lincoln University has been formed to oversee initiatives ranging from education and influencing to early-stage interventions and growing positive relationships with neighbours. An alcohol and drug harm reduction review is under way to inform this programme.

Earlier in the year, the Recreation Centre reopened after an extended closure over the summer to allow for a number of safety improvements. These include refurbishing the main entranceway and changing areas, as well as upgrading infrastructure such as the roof, flooring and the heating and air conditioning systems. The Centre continues to offer exercise options online for students and staff.

Also in the first months of 2022, most of our focus on staff and students was concerned with keeping our community connected and protected against the risks of further spread of COVID-19 and isolation. Alongside this, considerable effort went into communicating well with and providing welfare support for sick and isolating students and staff. During the peak period of COVID-19 cases and close contacts in the halls of residence, a group of about 70 staff volunteered to help halls leadership deliver meals and parcels to residents' rooms. Over 4,000 lunches were delivered, along with a large number of parcels, amounting to about 16,000 deliveries in all. I am grateful to staff for their flexibility and generosity in relieving pressure on our halls colleagues and for contributing in a tangible way to student welfare.

The Student Wellbeing team and COVID-19 response team coordinated a range of vaccination opportunities for students and staff on campus including for measles, mumps and rubella (MMR) and COVID-19 booster vaccination in July.

A successful Mental Health Awareness Week Programme was run for students and staff on campus, which saw good attendance at all related events, seminars and activities. The main event was a Wellbeing Expo where many members of the UC community enjoyed the free barbecue, live music and wellbeing-themed stalls. A total of 35 prizes were awarded to staff and students who had registered for the prize draw when they attended the Expo.

Two initiatives have been instigated to proactively assist with wellbeing. The first is the roll-out of the Kaihāpai Oranga/Wellbeing Supporter Framework. Second, key staff have undertaken accreditation as mental health first aid instructors with Te Pou, the not-for-profit national workforce development centre for mental health, addiction and disability.

Among many other health initiatives during the year, UC supported World Menopause Day and the UCSA Winter Wellness Expo in Haere-roa.

## **Internationalisation – Locally Engaged, Globally Networked**

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Like many of my UC colleagues, this year I was pleased to participate in a number of international conferences both virtually and in person. At UNESCO's 3rd World Higher Education Conference (WHEC2022), I participated as a panellist on Transformative Change Makers in Higher Education. This hybrid event attracted about 10,000 participants online and 1,500 in person. The theme was "Beyond Limits: New Ways to Reinvent Higher Education" and a proposed Roadmap is available.

Following my participation as a panellist at the THE Campus Live ANZ 2022 in Melbourne, UC received an invitation (that included payment of travel costs) for me to speak at THE World Academic Summit hosted in partnership with the New York University. This is the annual event when THE releases its latest rankings of universities. I spoke in two panels; *Shaping the trajectory of merit for institutions* with John Gill, THE Editor; C. Raj Kumar, VC O.P. Jindal Global University; Anton Muscatelli, Principal and Vice-Chancellor (VC) University of Glasgow; and Gabrielle Starr, President Pomona College. My Op-Ed on this topic was published by THE shortly before the panel and was well received. I also participated in the panel: *New*

*measures of societal impact: From ivory tower to town square* with Arthur Ellis, Senior Advisor, Elsevier; Anton Muscatelli, Principal and VC University of Glasgow; and Robin Garrell, President of the Graduate centre, The City University of New York.

Two members of our International Relationships Office team, Dr Anna Foster and Monique van Veen, joined Minister of Education the Hon Chris Hipkins at the NAFSA Association of International Educators Conference that took place in Denver, USA in the first week of June. NAFSA is the largest international education conference in the world, and the New Zealand delegation with Minister Hipkins were there to relaunch New Zealand's international education, letting the world know that New Zealand is back open for business.

The Memorandum of Understanding between all eight New Zealand universities and Peking University was renewed this year, seeing the parties formally agreeing to continue hosting the New Zealand Centre at Peking University. Peking is China's leading university, and 2022 marks 15 years of the relationship. The event also highlighted the 50th anniversary of diplomatic relations between China and New Zealand.

UC has progressed a new 120-point Certificate in New Zealand Foundation Studies, which is a qualification that will be delivered with a partner institution overseas as part of UC's transnational education strategic initiative. This foundation certificate sits within a wider proposal, sponsored by Education New Zealand, to attract students to all universities in New Zealand. The certificate aims to prepare students for study at any New Zealand university, with specific preparation for degrees in engineering, sciences and business. The foundation consists of core academic English and communication courses, along with electives that students can choose to complement their proposed degree pathway. It is complemented by two UC diplomas in Business and Science which package UC's existing 100 level offerings to create offshore pathway opportunities to New Zealand for international students.

UC exchange and Study Abroad activities were severely curtailed in 2022, but plans are in place to return both to a strong programme in 2023. For example, this year we ran a three-day virtual exchange fair where over 30 of our exchange partner universities ran virtual information sessions for UC students interested in outbound exchange.

The University's international recruitment activities have begun to revive in the second half of 2022. They include in-person events in Japan, South Korea and Malaysia.

UC continues to ramp up doctoral enrolment as border restrictions ease and visa processing improves. A pattern is emerging among doctoral students who began their studies while they were overseas and were a part of the Border Exception Scheme or approved under the Critical Worker scheme, indicating their wish to return to New Zealand to study at UC. Approximately 36 PhD students have arrived by mid-October, with the remaining students who are still located overseas required to notify Te Tari Rangahau Tāura | Postgraduate Research Office of their visa application and travel status by 31 October. Additionally, other new international students are arriving to start their doctoral studies on shore. Postgraduate Research Office staff engage with the overseas commencement students before and then when they arrive at the University, to facilitate their transition to on-campus study.

The University was successful in winning bids for multiple international conferences in 2022. Later this year, UC will host the Human-Agent Interaction 2022 conference, led by Associate Professor Christoph Bartneck.

In 2023, UC will host the Australasian Society for Classical Studies Annual Conference 2023, led by Dr Gary Morrison; the Australasian Society for Computers in Learning in Tertiary Education (ASCILITE) annual conference led by Associate Professor Kathryn MacCallum and Associate Professor Cheryl Brown. Associate

Professor Chris Jones and Dr Madi Williams were also successful in bidding to host the Australian and New Zealand Association for Medieval and Early Modern Studies in 2024.

Brett Berquist, Assistant Vice-Chancellor Engagement, hosted 80 local employers at a parkuhui breakfast at the Christchurch Art Gallery to thank them for their support for UC students and graduates in work placements and early career steps. Colin Mansbridge, Crusaders Chief Executive, spoke on leadership qualities.

## **Organisational Efficacy**

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The University continues to improve its long-term sustainability, efficiency and effectiveness through a series of strategic initiatives. These initiatives include the transformation of our digital services, continuous improvement in the efficiency of our processes, continuing efforts to ensure our facilities are safe and sustainable, and an ongoing effort to support our work towards our goal of sustainable growth by 2030.

In January 2022, the University announced our intention to redevelop the 14-hectare Dovedale Campus to focus on digital screen industry education, research and commercial collaboration. The initiative responds to global demand for graduates and research and development in these industries. In addition, it supports many of the University's goals and key objectives. First and foremost, it contributes to our education and research goals. It is also a key plank in achieving sustainable scale, contributing to our positive economic impact on the local economy and making the best use of underused building assets.

The University made very good inroads into its ambitious Digital Services transformation with the confirmation of the platforms that it aims to use to support the implementation of the Digital Strategy. The first platforms are the customer relationship management software (CRM, Dynamics 365), the process and service automation tool (Service Now), clinic management platform (Nookal) and the content management systems including SharePoint Online. Other areas of transformation are management of hazardous substances (Jagger), timetabling (Time Edit), work integrated learning, and higher degree and ethics management.

In August, UC's new intranet platform was launched. This is a significant milestone in modernising how to find information, collaborate and improve UC's communications capabilities. The old intranet that was launched in 2000 (and is now called the 'retronet') lacks many of the modern features expected from an intranet.

With a particular focus on cybersecurity, UC has spent significant time and resource on improving the security of its data and systems. Its new Cybersecurity Strategy is being delivered through a supporting programme to lift UC's cyber resilience significantly over the next three years. This programme will not only invest in technologies to protect UC but also develop cyberculture awareness in our people. As part of that programme, UC introduced multi-factor authentication for access to Microsoft services and others.

Our cyber programme also focuses on ensuring the security of all remote access methods UC staff and students use to access non-Microsoft services. The Digital Services team is currently engaging with different faculties to leverage virtual desktops and labs (both Microsoft and Linux) as an alternative option to using physical labs and workrooms. Through this initiative, students and staff will be able to use more modern capabilities in the future, avoiding the need to remote desktop onto on-premise physical machines, and in this way providing more flexibility and better experiences while also strengthening UC's cybersecurity.

One of the key objectives for the University is to improve the efficiency of its processes. The Service Experience Programme team has implemented a technical platform called Service Now to replace a range of other systems. It has already replaced the Digital Services service request system (Assyst) and, as it is

rolled out, will provide automated service requests and manage support for facilities, for People and Culture and the Library.

The safety of our buildings remains of paramount importance. In 2022, the Kaikōura field station was demolished for safety reasons. In response to a low seismic assessment of the Pūtaiao Koiora building, the UC Council agreed to the demolition of the existing, relatively new building and its replacement with a three-level building in the same location, which will have a larger footprint but a smaller overall area. This is predominately research-based laboratory facility. A thorough refurbishment of the Ann Ballin building is under way (see the next section).

## **Environmentally Sustainable**

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The University has increased efforts on all fronts to both become more environmentally sustainable itself and support the global push to live sustainably. The UC Sustainability Plan has been published to the Sustainability Office website, making the sustainability objectives of the Tangata Tū, Tangata Ora | Strategic Vision 2020–2030 more accessible and transparent.

To advance the University’s carbon net neutral goal, a highly complex, multi-year project to remove coal combustion for space heating was approved. Progress has also been made on replacing the University vehicle fleet with new electric vehicles and using artificial intelligence to gain deeper insights into infrastructure utilisation and performance.

More courses relating to the SDGs are now on offer. In addition, UC’s new and innovative multidisciplinary Bachelor of Social and Environmental Sustainability degree has been approved, along with the new Bachelor of Environmental Science with Honours.

UC is on track to reduce carbon emissions from coal to zero by 2025 and to become carbon net neutral by 2030, in line with the sustainability aspirations of the UC Strategic Vision. Three large projects are currently under way to support these aspirations: the conversion of the coal boilers on Ilam campus to biomass; the conversion of UC buildings to ground-source heat pumps; and the refurbishment of the Ann Ballin building (formerly the Psychology staff building).

The Ann Ballin building has reached the end of its current working life and will be extensively refurbished to provide modern staff and teaching spaces for a further 50 years. Construction has started and is expected to be completed for the start of Semester 2, 2023. To prepare this building for a low-carbon future, the refurbishment will reduce the energy required to heat the building through incorporating double glazing, upgraded insulation, improved fresh-air systems and low-temperature hot-water radiators. This will be the first retrofitted building at UC with these radiators installed ready to connect to ground-source heat pump systems in the future. A new hospital simulation area will help students develop their bedside psychology consultation skills. Other additions will be two new computer teaching labs, gender-neutral toilets, acoustic and kitchen upgrades and new building services.

The site works for ground-source heat pumps in the area between Matariki and the Science Precinct are now well under way. We have taken the opportunity afforded by their central position on campus to use storyboards and other methods to communicate to students and staff about the SDG that this work supports.

This year the Carbon Neutral Government Programme Dashboard was publicly released after review by ministers. Universities are not required to join this programme but are “strongly encouraged” to do so by the Ministry for the Environment. The dashboard shows that UC is among the three leading universities in terms of strategies and reporting requirements and has strong evidence in every category of required

activity. In general, universities in New Zealand are performing better in this programme than many other public bodies.

Sustainability research is growing at UC to the extent that it is not easy to sum up for the year. Areas of research include climate change, political science, psychology, waste, transition energy and hydrogen, land, forestry, and the snow and ice. A small sample of the research is included here.

UC academics have made contributions to the global work on climate change through the IPCC and we continue to support this work.

UC staff and experts from Lincoln University and two CRIs are working to find ways to turn waste products from New Zealand's food production industry – such as milk processing waste and grape marc (skins and stalks) – into high-value soil conditioners and animal feed. This Sustainable Is Attainable project is a collaboration with about 26 organisations.

The UC EPECentre is very active in providing research and consultancy on transition engineering and energy. In just some of its work, it is looking at New Zealand freight energy needs, the future of the power network, and the electric vehicle charger network.

As a member of the National Energy Research Institute, UC along with two other universities and two CRIs has engaged with Ministry of Business, Innovation and Employment science advisors and industry associations to map out the gap between industry needs and newly announced Government strategies and budget announcements, as New Zealand moves towards carbon neutrality.

UC's staff and students continue to work at UC's Nigerian Montane Forest Project. This research is part of the biodiversity-conservation project partly funded by philanthropic donations from Chester Zoo in England and the AG Leventis Foundation.

The University's academics working with snow and ice here, in Antarctica and in the rest of the world have been using new technologies to shed light on the dynamics and effects of pollution, and climate change on snow and ice systems. Studies of the Tasman Glacier, the Southern Alps and Antarctica using sensors, drones, snow radars and other technologies have provided important information on crevasses, snow depth, avalanche risk, the presence of microplastics, and the structure of sea ice.

The new [Sustainability Hub](#) website is now live. It includes options for studying sustainability and also links into research news with a sustainability theme. This is a living site, updated to incorporate new courses and degrees as they develop.

Fourteen PhD students received new UC sustainability scholarships that will help them tackle sustainability issues. These scholarships, which are linked to the SDGs, will enable emerging researchers at UC to pursue projects in areas as diverse as health, early childhood education, indigenous youth leadership, food security, green design, gender and equity, ecosystems, peace and justice, community, carbon capture in oceans, and transport.

Early in the year, a Waste Strategy was drafted to identify key performance targets. This is intended to help frame interventions and provide new benchmarks for our waste services provider. AECOM has been commissioned to deliver a Climate Change Infrastructure Risk Assessment for UC. We expect the final report from Stage One of this multi-stage project to be completed early in 2023. It explores the University's vulnerabilities to climate change impacts in relation to its built and natural assets.

The University has been chosen by ANZ Bank for a case study of our journey towards carbon net neutrality by 2030, in its second ANZ Insights Paper. The [paper](#) profiles businesses, such as UC, that have already made a noticeable difference to their carbon emissions and have a clear plan moving forward.

The sustainability team has held numerous awareness-raising events during the year including marking Biketober with a large Bike Breakfast, attended by over 150 cyclists from the UC community. Te Ngaki o Waiutuutu (Waiutuutu Community Garden) celebrated its 20th anniversary as one of the oldest community gardens in Ōtautahi Christchurch. Te Rua Makerspace engaged with 90 students at the Sustainability Market, spending a day hosting a stall to show students how the makerspace holds a multitude of resources to reuse, upcycle and be creative with in sustainable ways.

I was privileged to deliver the opening keynote speech at an international webinar on “Climate Change, Security and Sustainability of Ocean States” organised by the Commonwealth Climate Resilience Network (CCRN), an affiliate of the Association of Commonwealth Universities. The CCRN is chaired by Distinguished Professor Steven Ratuva. The significance of the webinar was to raise critical issues of climate security and sustainability in Global South oceanic communities and the role of universities in research to address the challenges of vulnerability, mitigation, adaptation and resilience.

On 28 October we ran our first Sustainability Showcase in partnership with the Christchurch City Council. This public event featured speakers, information stalls and research posters. Mana whenua and Pasifika were well represented through a variety of talks.

Early in the year, a draft Memorandum of Understanding was drawn up between Christchurch City Council and UC on the management of the Waiutuutu | Okeover Stream (including a box drain along a portion of Ilam Fields).

Gateway Antarctica Director, Professor Adrian McDonald hosted a delegation of diplomatic leaders from 15 countries. Delegates toured the Wind Tunnel and the Human Interface Technology (HIT) labs. Professor Jenni Adams explained the 1-square-kilometre Neutrino telescope under the Antarctic ice and how it observes cosmic rays and helps advance theoretical physics. Associate Professor Laura Revell shared her project that confirmed the presence of microplastics in the Antarctic.

UC, together with Lincoln University, reached the finals of the Australasian Green Gown Awards <https://ggaa.acts.asn.au/2022awards/>, which recognise exceptional sustainability initiatives that universities and colleges around the world are undertaking.

## Looking Ahead

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Among the many plans underway to celebrate our 150<sup>th</sup> anniversary in 2023, UC launched a game changer scholarship for South Island students coming from low-decile schools. Previous analysis shows that 80%+ of scholarship recipients come from Decile 8-10 schools. This scholarship required UE but does not filter by grades. Rather, it looks at a student’s determination to give back to their community. Response has been strong and drove a marked increase in applications from schools that do not usually apply to UC. The first cohort of 150 recipients has confirmed for 2023. A second cohort of 150 is planned for 2024. The scholarship provides for tuition fees for the duration of the under-grad degree. A grass roots scholarship appeal will take place asking alumni and staff to donate \$150 for 150 scholarships (x two) for our 150<sup>th</sup> anniversary.

## VC Activities

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5 October	Attended a City Dinner in recognition of the 50 <sup>th</sup> Anniversary of New Zealand – China Diplomatic Relations hosted by outgoing Mayor Hon. Lianne Dalziel
6 October	Met with ChristchurchNZ to discuss the Economic Development Strategy
6 October	Panellist at the 2022 UC Business School – Women in Finance Symposium
7 October	Welcomed Ambassadors and High Commissioners at the UC Gateway Antarctica event to celebrate Antarctic season opening.
9 October	Attended a dinner for women VCs hosted by Professor Wendy Thomson, Vice-Chancellor of the University of London in New York
10 October	Panellist at The Times Higher Education World Academic Summit at NYU
11 October	Panellist at The Times Higher Education World Academic Summit at NYU
19 October	Keynote speaker at the Richfield/AAA Research Conference via Zoom
25 October	Hosted Prof Tawana Kupe, Vice-Chancellor University of Pretoria at UC
27 October	New Zealand Qualifications Authority Strategic Session and Board Meeting in Wellington
28 October	Opening Remarks at Sustainability Showcase jointly hosted by UC and Christchurch City Council