

An aerial photograph of Auckland, New Zealand, taken at dusk. The Sky Tower is the central focus, illuminated against the darkening sky. The city's lights are visible, and the water of the harbor is in the background. In the foreground, a lush green hillside is visible, with a wooden walkway or fence line. The overall scene is a mix of urban development and natural landscape.

AUT

AUT SUSTAINABILITY
REPORT 2020

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FOREWORD FROM THE VICE-CHANCELLOR



Kia ora koutou

AUT’s mission is great graduates, and we deliver this by creating exceptional learning experiences for our students that are informed by relevant, globally recognised research. In addition, AUT has a responsibility to contribute to progressing sustainability nationally through our core activities – learning, teaching, and research, as well as our university operations.

AUT’s Sustainability Roadmap includes targets in all these areas, as well as highlighting AUT’s commitment to the United Nations’ Sustainable Development Goals (SDGs). AUT’s inaugural Sustainability Report in 2020 shows our progress against our operational targets and towards the SDGs. It also provides a benchmark for measuring our progress in embedding sustainability in our learning, teaching, and research in the years to come.

LEARNING AND TEACHING DURING COVID-19

While 2020 was a difficult year for many organisations, including AUT, 2020 showed more than ever the importance of responsible global citizenship. New Zealand’s successful COVID-19 response demonstrated the importance of evidence-based policies, and a cohesive society based on shared values and collective actions. This approach has much to teach us, both in our pandemic response, and in our actions towards combatting climate change and creating a more sustainable, equitable, and just world.

The pandemic lockdowns changed working arrangements with online and remote teaching and work implemented to minimise time on our campuses for staff and students. Our staff rose to the challenge and work continued. We began the implementation of a new curriculum structure, enabling students completing academic undergraduate degrees to select majors, minors, and electives from across schools and faculties. Students can now study a range of sustainability courses that promotes interdisciplinary study, which is essential to address complex sustainability issues, particularly climate change. The new structure has been implemented in several degrees already, and the remaining degrees will adopt the new structure over the next four years.

We were pleased to offer the inaugural Bachelor of Architecture and Future Environments and the Master of Architecture (Professional) at AUT in 2020. Many of the courses offered in these programmes focus on the climate emergency, and ecological and regenerative aspects. Both programmes have attracted strong student numbers.

Over the year, 67 sustainability-focused courses were taken by 2,903 students. Of the 67 courses, 20 were postgraduate and 47 were pre-degree or undergraduate courses. Six sustainability-focused majors or minors were offered across AUT, including the Sustainable Enterprise minor within the Business School, the Design for Sustainability minor within the School of Art and Design, and the Environmental Sciences major within the School of Sciences.

FOREWORD FROM THE VICE-CHANCELLOR (continued)

RESEARCH AND ENGAGEMENT

Despite the pandemic and two lockdowns during 2020, we achieved several sustainability research and engagement highlights, including:

- Launching the Health Futures fund, which offers \$20 million over four years to solve complex health problems in partnership with industry, government, and communities. This specifically relates to SDG3 – Good Health and Wellbeing
- Becoming a principal partner of the Mōhio Climate Innovation Lab which aims to drive billions of dollars into the low emissions economy; and
- The Faculty of Business, Economics and Law hosting a Sustainable Impact with Research conference on the SDGs in December 2020. It was designed for faculty academics to present to one another in person and encourage intra faculty sharing of knowledge around the SDGs.

UNIVERSITY OPERATIONS

Our learning, teaching, and research is increasingly reflecting sustainability and so too is our operational response to sustainability. In 2020, our campuses were significantly more energy efficient, achieving energy savings of 25%, or 4.2GWh of electricity and 1.7GWh of natural gas, as compared with the previous year. Approximately 60% of these savings reflected our energy efficiency initiatives, and the remainder resulted from pandemic effects including campus shutdowns. Overall, we decreased our water use, energy consumption, CO₂e emissions and waste to landfill, and our goal is now to embed these gains during a more typical year.

We offered a range of sustainability events during 2020, including vegetable planting workshops on North and South Campuses, bike maintenance workshops and an e-bike trial ride at City Campus, and a biodiversity walk at South Campus. Staff and students installed several new vegetable and herb gardens (māra kai) at South Campus to benefit the community.

Achieving AUT's sustainability targets requires a concerted team effort. Staff and students showed a keen interest in sustainability in their response to Green Impact, a team-based sustainability behaviour change programme offered for the second year. A total of seven teams, including 130 staff and students, chose from a suite of ideas, or created their own, designed to contribute to the SDGs and to progress sustainability initiatives at home and on campus. Participants completed more than 150 actions, ranging from tree planting, soft plastic collections, and composting, as well as hosting repair workshops. Green Impact was won by the Library's Kākāriki team and Annie McKillop from the Library was named Staff Champion in the Australasian Green Impact awards. Teams reported finding great satisfaction from the changes they had made, both in their own lives and for their contribution to the University. Green Impact is a practical reminder of the many ways we can contribute to creating a better world.

This inaugural report is a starting point. We are measuring and reporting against our sustainability targets for the first time and are pleased to note advancements in several key fields, including energy efficiency initiatives and the development of AUT's Draft Green Building Guide. Some areas for further work include developing a reporting system for measuring students' work on an interdisciplinary project that encompasses sustainability concepts. We expect subsequent reports to provide a wider picture of our contribution to sustainability. There is much we have done; there is still much to do.

Ngā mihi nui

Derek McCormack
Vice-Chancellor



INTRODUCTION – FROM THE CHAIR OF THE SUSTAINABILITY STEERING GROUP



We are entering a time of great transition and technological change. This creates untold opportunities for AUT to reinforce its reputation as Aotearoa’s university of technology, and to contribute to solving the grand challenges of the twenty-first century.

AUT’s inaugural Sustainability Report explores how prepared we are, as a university, to play this role. The Report assesses AUT’s progress in 2020 against the ambitions of AUT’s Sustainability Roadmap, launched in October 2018. The Roadmap made explicit what AUT needs to do to be a sustainability leader, to have integrity as a provider of solutions to sustainability challenges. What this Report shows is that AUT has a remarkable network of sustainability-minded staff and students who are already making significant contributions to problem-solving in climate change, biodiversity loss, waste and other areas. But AUT can do so much more. Sustainability reporting is as much about revealing the gaps as the achievements, so we hope this Report encourages further action. In doing so, AUT can assure its ongoing relevance this decade as sustainability becomes an ever-greater priority for research and funding, corporate partnerships and, above all, student aspirations.

A final word on sustainability governance at AUT. The development of AUT’s Sustainability Roadmap was led by the Vice-Chancellor’s Taskforce for Sustainability, chaired by Emeritus Professor Thomas Neitzert. We all owe Professor Neitzert a debt of gratitude for his leadership on AUT sustainability over the years. With his retirement, the Taskforce agreed that new institutional arrangements were needed to put into practice the Roadmap’s aims and objectives. With the support of the Vice-Chancellor, in June 2021 we appointed AUT’s first Director of Sustainability, Lucy McKenzie, to be the champion of the Roadmap, to drive the change that is needed to meet its targets. Furthermore, the Taskforce has restructured itself as the Sustainability Steering Group, in order to reflect its new function of supporting the Director. Subsequently, the Sustainability Steering Group is the guardian of the Roadmap, providing advice and ensuring that progress on targets is being made, and also updating the Roadmap to reflect changes in technology, policy, economy and society.

We look forward to serving the AUT community in this capacity, and we encourage you to engage with us on sustainability-related matters.

Dr David Hall

Chair of the Sustainability Steering Group
Senior Lecturer – Social Sciences and Public Policy

OVERVIEW OF KEY TARGETS

ALL UNDERGRADUATE PROGRAMMES DEVELOP SUSTAINABILITY LITERACY, VALUES, AND PRACTICES



Compulsory sustainability-focused courses are included in eight undergraduate programmes or as a major within the undergraduate programme

MORE STUDENTS HAVE ACCESS TO SUSTAINABILITY MAJORS, MINORS, OR COURSES



Six sustainability majors or minors are offered across AUT; 67 sustainability-focused courses were taken by 2,903 students

MORE MISSION-LED AND LARGE-SCALE PROJECTS ON THE CRITICAL ISSUES OF OUR TIME, INCLUDING THE CLIMATE EMERGENCY



Developing an approach to identify projects and capture data

INTERNAL FUNDING THAT SUPPORTS SUSTAINABILITY RESEARCH PROJECTS



The Faculty of Design and Creative Technologies included an area related to sustainability in their fund. The Faculty of Health and Environmental Sciences funded six sustainability research projects and nine summer research scholarships.

INCREASING PEER REVIEWED SDG RESEARCH OUTPUTS



573
SDG related research outputs
(Source: Scopus)

EXTERNALLY FUNDED SUSTAINABILITY RESEARCH PROJECTS



76
externally funded SDG related research projects

AUT BECOMING A FAIRTRADE REGISTERED ORGANISATION



Only Fairtrade coffee is sold at AUT run cafés
6.2 tonnes
of Fairtrade coffee used in 2020

CO₂e REDUCED BY 50% BY 2025



6,700 CO₂e tonnes*
(51% decrease on 2018 baseline)**

CO₂e FROM ENERGY REDUCED BY 50% BY 2025



2,117 CO₂e tonnes
produced from energy
(29% decrease on 2018 baseline)*

MAINS WATER REDUCED BY 20% BY 2025



95,604 kL
(16% decrease on 2018)*

CARBON FOOTPRINT OF OUR ICT USAGE REDUCED



30 tonnes of CO₂e
apportioned to AUT for third party data centre services

ALL NEW BUILDINGS MEET AUT'S GREEN BUILDING GUIDE



Draft AUT Green Building Guide developed and internal consultation has begun

* AUT’s CO₂e emissions inventory is verified against ISO 14064-1 Greenhouse Gases with an independent organisation. This report has been updated to reflect any changes in total CO₂e emissions post verification.

** Reductions in CO₂e and water against the baseline mainly relate to the effects of COVID, including campuses being shutdown during lockdowns, a ban on international air travel and reduced people on campuses.

AUT'S STRATEGIC SUSTAINABILITY STRUCTURE




AUT DIRECTIONS

AUT Directions is a declaration of AUT's strategic objectives through to 2025 as well as our mission and values. There are five themes within AUT Directions that relate to learning and teaching, research, partnership and community, leadership and our operations.

SUSTAINABILITY ROADMAP

The Sustainability Roadmap is structured around each of the five themes in AUT Directions, complemented by sustainability-related targets for each theme. The AUT Sustainability Report is reporting against all the targets in the Sustainability Roadmap. However, in some instances, there is no metric or outcome to report, which highlights an information gap for further work.

The Sustainability Roadmap also incorporates three vision concepts that are woven through various sections of the Report:

<p>Mauri ora Wellbeing</p> <p>A recognition that human wellbeing is dependent upon the wellbeing of the planet and the web of life that supports and resources our endeavours.</p> 	<p>Ki Tua Futures</p> <p>A viable future is inherent within sustainability and so future-oriented thinking for wellbeing and prosperity is key.</p> 	<p>Whanaungatanga Connectivity</p> <p>The wellbeing of planet and people is enabled by complex global systems, which connect across diverse regions, areas and functions.</p> 
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UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

Within the Sustainability Roadmap there are references to AUT's commitment to the United Nations' 17 Sustainable Development Goals (SDGs). As a university here for the changing world, our contribution to the SDGs is an international reference point for progress on sustainability issues. At the same time, communicating the SDGs within AUT highlights their relevance to our local context, creating a greater level of understanding and meaning among our stakeholders.

AUT has the potential to contribute to the UN's 17 SDGs through all facets of our teaching, research and operations as a university. The Times Higher Education (THE) Impact ranking assesses universities against the SDGs. AUT was ranked 76th in the THE Impact ranking – out of over 1,000 universities. In particular, AUT ranked 6th in the world for SDG 8 Decent work and economic growth and 11th for SDG5, Gender equality.

AUT is also a member of the UN's Sustainable Development Solutions Network (SDSN), which operates to mobilise scientific and technical expertise in support of the SDGs. Throughout the report the different SDG icons are used to highlight which SDGs relate to the relevant targets or case studies.



1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS

SUSTAINABLE DEVELOPMENT GOALS

'Ki te kai ki te inu Ngā Wai o Horotiu'

Drink the waters of Horotiu

Ki te kai ki te inu Ngā Wai o Horotiu uses water as a metaphor for knowledge and as such we must consume knowledge to understand future challenges. It also acknowledges Ngā Wai o Horotiu (AUT marae) as a domain that addresses these challenges.

THEME 1:

LEARNING AND TEACHING – CREATING EXCEPTIONAL LEARNING EXPERIENCES

AUT’s core function is teaching its students – creating great graduates that care, question, act. AUT does this by offering exceptional learning experiences to students, which includes addressing real-world challenges such as sustainability.



THEME 1 - TARGETS TO 2025

SUSTAINABILITY ROADMAP TARGETS	PROGRESS TOWARDS THE TARGETS
Ensure all undergraduate programmes develop sustainability literacy, values, and practices, consistent with the AUT Graduate Profile	AUT is developing an approach for measuring the learning and teaching targets. The information below provides an initial approach to measuring progress towards the targets. In total, there were 34 compulsory sustainability-focused ¹ courses taught across AUT’s undergraduate and postgraduate programmes. Eight undergraduate programmes or a major within the undergraduate programme include at least one compulsory sustainability-focused course.
Increasing the number of students that have access to majors, minors, or courses with a sustainability orientation	Six sustainability-focused majors or minors are offered across AUT; 4,145 enrolments in 67 sustainability-focused courses were taken by 2,903 students. Of the 67 sustainability-focused courses taught, 47 were pre or undergraduate and 20 were postgraduate.
All students will have the opportunity to work on an interdisciplinary project that encompasses the concepts of wellbeing, futures-thinking, and connectivity	There is currently little data to report against this target, information gathering for future reports has begun. An example of a relevant initiative is the Student Consultant Course, which was introduced within the Business School in 2020. Students work in interdisciplinary teams on a project that is sustainability related.
Develop climate emergency and zero-carbon system change curriculum materials for academics	During 2020, climate emergency, ecological and regenerative curriculum material was created for Year 1 of both the Bachelor of Architecture and Future Environments, and the Master of Architecture (Professional). This was the first time the undergraduate and postgraduate programmes were offered at AUT.

As mentioned in the table above, measuring progress towards the learning and teaching targets is an area that requires more focus and something that will no doubt require collaboration across faculties and departments at AUT. A sub-group of Learning and Teaching Committee is working with the Director of Sustainability to align AUT’s learning and teaching goals in the Sustainability Roadmap with those of the Learning and Teaching Roadmap.

1. Sustainability-focused courses – these include courses where the primary, explicit focus is on sustainability, the application of sustainability within a field and/or understanding or solving one or more major sustainability challenge(s) (Source – AASHE – Sustainability Tracking, Assessment and Rating System)

CASE STUDY – AUT’S NEW CURRICULUM STRUCTURE



A new curriculum structure was announced and introduced to AUT in 2020. It is anticipated to take several years for the new structure to be reflected across all schools and faculties. The new structure means that students completing academic undergraduate degrees can select majors, minors and electives from across schools and faculties. This provides students with greater flexibility and opportunities to study sustainability courses or sustainability minors. It also promotes interdisciplinary study, something which is essential to address complex sustainability issues, particularly climate change.

‘Nanao atu ai ki ngā here Pūrengi’

Grasp the ropes of the canoe

Te Pūrengi is the name of the meeting house of AUT, it is also a name that represents the ropes that bind the double hulled canoe together. As a metaphor the ropes propose that people are also bound together on their journey of discovering new knowledge. The hope is that this journey will lead to wellbeing and prosperity.



THEME 2:

RESEARCH – DISCOVERY AND APPLICATION OF KNOWLEDGE FOR WELLBEING AND PROSPERITY

AUT’s broad diversity of research on sustainability issues, particularly climate change, provides benefits on a regional, national and global level. Our research is integrated with the learning experience, so that students build their sustainability and research competencies and can apply those within organisations and communities now and in the future.

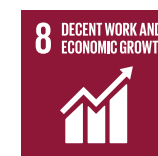


THEME 2 – TARGETS TO 2025

SUSTAINABILITY ROADMAP TARGETS	PROGRESS TOWARDS THE TARGETS
Increase the number of mission-led and large-scale projects on the critical issues of our time, including projects which are tackling aspects of the climate emergency	AUT is developing an approach to measuring this target so metrics can be provided for future reports. An example of a project related to this target is Professor Sebastian Leuzinger’s work, which involved working with other leading academics to identify the ten most important insights from 2020 to inform climate action. Professor Leuzinger contributed to the insight around tropical forests potentially having reached their peak uptake of CO ₂ e.
Providing internal funding mechanisms which support research projects that advance knowledge and its application to sustainability.	Faculties offer contestable research funds to support academic staff. For Design and Creative Technologies, the 2020 fund related to Smart or Future Cities (SDG 11). For Health and Environmental Sciences, six sustainability projects and nine summer student scholarships were funded that provided sustainability research and built sustainability capacity within AUT graduates. Additionally, the university-wide \$20 million Health Futures fund was launched to fund projects, over four years, that focus on solving wicked health problems in partnership (SDG 3).
Host annual research events addressing climate emergency responses and system change (mitigation, adaptation, transformation)	The pandemic severely limited AUT’s ability to hold research events in person. However, at the end of 2020, Business, Economics and Law hosted a conference that was focused on the SDGs. Academics within the faculty presented to their peers about a range of research, all related to the SDGs.
Increasing numbers of peer reviewed research outputs that contribute to the United Nations’ Sustainable Development Goals	573 SDG related research outputs from Scopus were identified in 2020. Elsevier search methodology was used to identify the outputs.
Support local companies that replace international supply chains through R&D	AUT is developing a methodology to measure this target and report on it in future years.

There are targets in the table above where work is required to develop an approach for measuring progress towards the targets, including reporting on sustainability research impact. It is also expected that technology improvements within AUT will also support the gathering of information.

CASE STUDIES – RESEARCH PUBLICATIONS AND THE SDGS



During 2020, academics within the Faculty of Business, Economics and Law contributed to 35 publications that relate to the SDGs, as identified by Dimensions.² There were 228 citations related to these publications and the two SDG areas that achieved the highest number of citations were responsible consumption and production (SDG12) and decent work and economic growth (SDG8). Professor Jarrod Haar, from the Business School completed research relating to the latter SDG in 2020. Professor Haar published research about Living Wage employers and the effects on employees as there is little data in this area. The research indicated that providing a living wage can support organisations through enhanced employee attitudes and behaviours. It also mediates effects around employee turnover and career satisfaction. This research relates to two of the three core concepts of the Roadmap – mauri ora (wellbeing) and ki tua (futures).

2. The University is exploring ways of reporting against the SDGs that encompasses all of the University’s publications.

‘Rangitāmiro ai te kōhao o te ngira’

Weaving together the different strands into the eye of the needle

The message here is collaboration, the weaving and connecting of the different strands together. The eye of the needle represents one common purpose, and as such our commitment to sustainability.



THEME 3: PARTNERSHIPS AND COMMUNITY – RESPONDING TO OUR PLACE IN THE WORLD

The AUT community of staff and students offers rich opportunities for collaboration, yet external partnerships with industry, communities, iwi, and local and national governments enable the provision of solutions to sustainability problems in the world. This typically requires an interdisciplinary and systems-level approach, where different organisations (strands) are woven together to create a diverse range of partnerships, all for a common purpose.



THEME 3 – TARGETS TO 2025

SUSTAINABILITY ROADMAP TARGETS	PROGRESS TOWARDS THE TARGETS
Establishing partnerships with external organisations based on working together towards the UN Sustainable Development Goals and/or becoming low carbon	<p>The Health Futures fund has generated research partnerships with industry, government and communities specifically in relation to SDG 3 – good health and wellbeing. For example, one Health Futures project has been developed with Northland District Health Board to address vaccine hesitancy for preventable diseases.</p> <p>AUT has a strong partnership with the Energy Efficiency and Conservation Authority (EECA) that is enabling energy efficiency projects and reducing CO₂e at AUT. AUT received \$1.29 million from EECA in 2020 as part of the Government’s programme to create a clean-powered public service. In 2020, AUT became a principal partner of the Mōhio Climate Innovation Lab, which aims to drive billions of dollars into the low emissions economy.</p>
Working towards AUT becoming a Fairtrade-registered organisation	<p>AUT only sells Fairtrade-certified coffee in all the AUT managed cafés on the three main campuses.</p> <p>6.2 tonnes of Fairtrade coffee was used in 2020 at AUT. Fairtrade instant coffee and tea is offered to staff in the staff rooms, as well as Fairtrade coffee beans for staff room coffee machines. More work is required to meet other certification requirements such as making more Fairtrade products available for purchase on campus.</p>

CASE STUDY – AUT LIVING LABORATORIES

AUT has partnered with Ngāti Whātua Ōrākei on a research project to restore native forest to vulnerable landscapes throughout Aotearoa by increasing knowledge of the unique characteristics of our native trees and plants, and best practice for partnering with Māori landowners.

Associate Professor Hannah Buckley says there are two focus areas for the research: optimal planting regimes for speeding up the establishment of old-growth forest trees (including tōtara, rimu, matai, tawa, taraire, hinau, maire, kohekohe) to deliver multifunctional forests most effectively; and productive partnership models for landowners, especially Māori landowners, which integrates mātauranga Māori and illuminates the combined environmental, social and economic benefits of integrating Nature-based Solutions into agricultural systems. This partnership relates to a number of SDGs, including life on land and partnerships for the goals and brings an indigenous and local perspective to the global SDGs.



‘Ka takakawehia te ara poutama’

Traverse the path of excellence

Taken from the tukutuku panel design poutama (levels of success) this section of the waiata sings about achieving at the highest level.



AUT staff and students visit Ngāti Whātua Ōrākei where approximately 10,000 trees have been planted.

THEME 4:

LEADERSHIP – BUILDING OUR POSITION AS NEW ZEALAND’S UNIVERSITY OF TECHNOLOGY

A multidisciplinary approach is needed to respond to complex sustainability issues. With disciplines including indigenous development, health, engineering, science, design, and business, there is an incredible opportunity for AUT to apply a solutions-focused approach to research.



THEME 3 – TARGETS TO 2025

SUSTAINABILITY ROADMAP TARGETS	PROGRESS TOWARDS THE TARGETS
Generating sustainability research projects across AUT that attracts external financial support	In 2020, 76 externally funded, SDG-related research projects were completed by AUT academics. For example, an MBIE-funded project is exploring the impact of major urban regeneration on wellbeing, deprivation and livability in New Zealand communities, including aspects, such as residents’ mobility, social contact, physical activity and cultural identity.
Demonstrating innovation in sustainability professional practice within the curriculum and our research	In March 2020, AUT held the first Sustainability Learning and Teaching Symposium, to help academic staff explore how to integrate sustainability education and the SDGs into their own practice. The symposium was led by AUT academics, including Professor Len Gillman, Associate Professor Barbara Bollard, Dr Peter Skilling, Anke Nienhuis, and Associate Professor David White.

CASE STUDY – EXTERNALLY FUNDED RESEARCH – HOLISTIC WELLBEING COMPASS



In 2020, Associate Professor Amanda Yates (Ngāti Whakaue), along with academics from other universities, successfully gained funding from the MBIE BRANZ Building Better Homes Towns and Cities National Science Challenge. The researchers work with a holistic notion of wellbeing that includes social, cultural and ecological dimensions. The mahi is guided by Indigenous-Māori understandings of mauri ora as all-of-life wellbeing, or the vitality of the ‘life-field’. Cultural place-based research, Tiriti (Treaty of Waitangi) partnership and co-creation approaches are part of working with Māori organisations and central to a research methodology guided by Mauritanga (practices of integrated wellbeing) and these approaches. The research project also involves working with non-Māori organisations to develop future-focused holistic wellbeing compasses or data tools that assess and visualise wellbeing now. These action tools are intended to support organisational change towards a just transition for holistic wellbeing.

‘Ko te reo pōwhiri, ko te reo karanga, ko te mātāpuna o te kete Aronui, tau, tau, tau ana e!’

Heed the call of welcome, to the source of knowledge, strive and achieve!

Te Kete Aronui, the basket of knowledge refers to AUT, which captures the essence of this institution. This statement is an invitation for all people to work, learn and achieve at AUT. To bring AUT staff and students to an empowering experience of sustainability in tertiary education.



THEME 5: SUSTAINABILITY ON CAMPUS – BEING A PLACE WHERE PEOPLE LOVE TO WORK AND LEARN

AUT has a responsibility to provide campuses for staff and students that offer an empowering experience of sustainability. On-campus sustainability includes biodiversity, water and sustainable food and, above all, reducing AUT's CO₂e emissions.

THEME 5 – BIODIVERSITY TARGET TO 2025

TARGET	PROGRESS TOWARDS THE TARGETS
<p>Preferring indigenous planting, where appropriate</p>	<p>Only native species were planted across the campuses in 2020. This excludes fruit and vegetable plantings.</p> <p>A planting plan for the North Campus is being implemented to restore native species that were originally found in the area. Plantings are also designed to be teaching spaces for educating students about different forest stands.</p>



CASE STUDY – BIODIVERSITY PESTS AND PREDATORS ON AUT CAMPUSES

Introduced pests and predators are the biggest threat to native biodiversity in New Zealand. In partnership with Pest Free Kaipatiki, three predator monitoring lines were set up at the AUT North Campus in 2020. In partnership with Pest Free Kaipātiki, three predator monitoring lines were set up at the AUT North Campus in 2020 to determine what predators are present and in what numbers. AUT regularly uses predator traps and baits.

Predator numbers were at 5% abundance across the North Campus, which is consistent with best practice for supporting existing bird populations susceptible to predation. A 0% abundance target is not viable as predators will come from off campus. AUT will continue predator monitoring at the North Campus annually and a more targeted control approach will be implemented if the abundance surpasses 5%. Predator monitoring at the South Campus is planned for 2021.

THEME 5 – TRANSPORT TARGETS TO 2025

TARGET	PROGRESS TOWARDS THE TARGETS	COMMENTARY
<p>85% of staff and students take sustainable transport to/from the university</p>	<p>A student and staff travel survey was planned for 2020 but was delayed until 2021 due to the pandemic.</p>	<p>Student and staff travel surveys are usually completed every two years in conjunction with Auckland Transport.</p>
<p>50% reduction in emissions from Air Travel</p>	<p>CO₂e emissions associated with air travel have decreased by 87% when compared to 2018 baseline data.</p>	<p>Due to the pandemic all international travel for AUT business stopped in early 2020, so the decrease relates to this restriction.</p>

The transport portfolio accounts for the largest proportion of AUT's greenhouse gas emissions and includes AUT's vehicle fleet, shuttle bus, air travel, taxis, staff and student commuter travel, mileage claims, car rentals and hotels (associated with travel). CO₂e emissions from AUT's transport portfolio were 3,716 tonnes in 2020, a 63% reduction on the 2018 baseline year. This was largely attributed to a ban on international travel and to a lesser extent on reduced staff and student commuter travel due to lockdowns and increased working from home. Key work in 2020 included taking a deeper dive into staff and student travel behaviours to inform new policies, infrastructure developments and engagement strategies. In addition, the University is represented on a Universities New Zealand air travel working group, which are developing a common set of guidelines for reducing emissions attributed to the sector. New technology was introduced for parking which includes more flexible options to accommodate working from home and better data for reporting on usage.



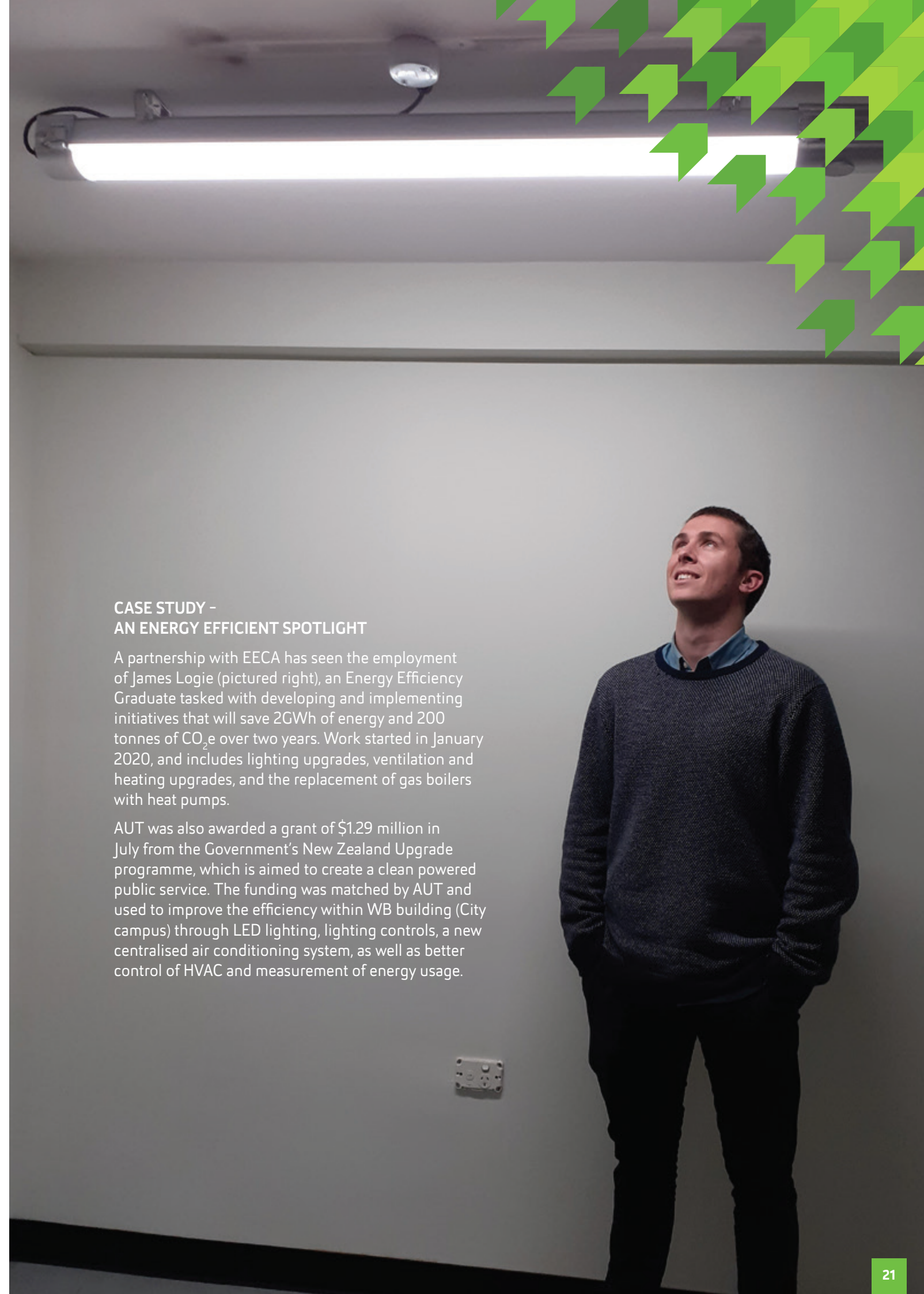
THEME 5 - WASTE, WATER AND ENERGY TARGETS TO 2025

TARGET	PROGRESS TOWARDS THE TARGETS	COMMENTARY
Carbon emissions halved by 2025	AUT's CO ₂ e emissions in 2020 were 6,700 tonnes. ³ This is a decrease of 51% when compared to the 2018 baseline year.	Obviously 2020 did not represent a typical year and this reduction relates considerably to the campuses being shutdown during lockdowns and a ban on international air travel. Much more work is required to achieve this target in a typical year, and AUT should rigorously assess the purpose and benefits of international travel once border restrictions ease.
Emissions from energy reduced by 50% by 2025	CO ₂ e emissions associated with energy consumption in 2020 were 2,117 tonnes. This is a decrease of 29% compared to the 2018 baseline year.	This decrease is due in part to the lockdowns – good shutdown procedures were implemented during lockdowns to maximise reductions – and fewer staff and students being on campus post lockdowns. The latter is not necessarily desirable in the future so mitigation strategies will continue, including greater energy efficiency and energy management measures (some were completed by an energy efficiency graduate in 2020, see case study on page 19).
Mains water reduced by 20% by 2025	95,604kL of water was used in 2020, which is a 16% reduction when compared to the 2018 baseline year.	This reduction is in part due to campus shutdowns due to COVID-19 as well as the rollout of smart meters in WH and WO buildings at the City Campus and throughout the South Campus; a tap infrastructure upgrade and use of non-potable water for maintenance programmes. Smart meters will continue to be installed across the campuses in partnership with Watercare.
Waste reduced by 50% by 2025	437 tonnes of waste was generated at AUT in 2020. This is a reduction of 40% against the 2018 baseline year.	The data is based on best estimates by waste contractors and more accurate data (actual weights) is required. The reduction in waste relates primarily to the campus shutdowns and fewer staff and students being on campus post lockdowns. A 2019 waste audit indicated that 50% of the waste stream was organic and a further 20% was recyclable. Work is underway to divert this away from landfill.

Two lockdowns in 2020 created an unusual year and led to reductions across energy, water and waste on the campuses. In 2020, AUT used around 14.8 GWh electricity and 2.8 GWh of natural gas. Progress is being made to reduce energy consumption regardless of campus lockdowns. About 60% of the energy reduction in 2020 was due to operational and efficiency changes and 40% of the reduction was due to the lockdowns.



3. AUT's CO₂e emissions inventory have been through verification against IOS 14064-1 Greenhouse Gases with an independent organisation.



CASE STUDY - AN ENERGY EFFICIENT SPOTLIGHT

A partnership with EECA has seen the employment of James Logie (pictured right), an Energy Efficiency Graduate tasked with developing and implementing initiatives that will save 2GWh of energy and 200 tonnes of CO₂e over two years. Work started in January 2020, and includes lighting upgrades, ventilation and heating upgrades, and the replacement of gas boilers with heat pumps.

AUT was also awarded a grant of \$1.29 million in July from the Government's New Zealand Upgrade programme, which is aimed to create a clean powered public service. The funding was matched by AUT and used to improve the efficiency within WB building (City campus) through LED lighting, lighting controls, a new centralised air conditioning system, as well as better control of HVAC and measurement of energy usage.

THEME 5 - SUSTAINABLE ICT TARGETS TO 2025

TARGET	PROGRESS TOWARDS THE TARGETS
Carbon footprint of our ICT usage reduced	AUT has two third-party data centre providers. AUT's CO ₂ e emissions from ICT usage reflects a proportion of CO ₂ e from these providers. ⁴ In 2020, 30 tonnes of CO ₂ e was apportioned to AUT for third party data centre services.
The utilisation of computer hardware is improved	We are working to provide a utilisation figure for the 2021 report.

ICT is a significant contributor to global CO₂e generating about 3% of the world's emissions through energy requirements for its data centres and hardware equipment. However, it also provides the possibility of reducing these emissions by up to 15% if fully deployed.

AUT made significant progress in this area in 2020 with key improvements coming from outsourcing its datacentres and greater support for online learning and working from home.



THEME 5 - SUSTAINABLE FOOD TARGETS TO 2025

TARGET	PROGRESS TOWARDS THE TARGETS
AUT uses green supply chains, including locally sourced produce and materials	The majority of red meat, chicken, fruit and vegetables used at AUT are grown in New Zealand. The majority of dried goods are sourced outside of NZ. AUT is exploring including goals around local supply in supplier contracts.
50% of food offered on campus is a plant-based meal	A methodology for measuring this target is being developed so it can be reported in subsequent years.

A range of different factors are involved with creating a sustainable food system, including ethical supply, no waste, nutritious food and local, seasonal fruit and vegetables. AUT operates eight cafés or food outlets across AUT's campuses. There are māra kai (food gardens) at the North and South campuses where fruit, vegetables and herbs are grown. The School of Hospitality and Tourism has seven teaching kitchens at the City Campus, along with a roof garden (Papa Māra) to support students learning about fresh herbs and vegetables (see case study on the following page).



⁴ CO₂e emissions from electricity consumed by ICT equipment is captured through the target relating to AUT's CO₂e emissions from energy consumption on the campuses.



CASE STUDY - CITY CAMPUS PAPA MĀRA

The Papa Māra was created in 2013 and started with eight worm farms and some herbs on a roof of WH building. After the fire in WG building and subsequent repairs restricting access to the māra, the garden was in disrepair. However, in 2020 some funding and students completing an applied project within the School of Hospitality and Tourism resurrected it. The design of the māra was reconsidered to improve production, which includes a pergola to maximise vertical growing space and a greenhouse for raising seedlings. The māra is used as a teaching tool, enabling students and staff to connect with where food comes from. The māra is also used as a space for a staff gardening club, which was initiated in Spring 2020. Staff from AUT meet to learn about seeds, soil, and growing culinary plants in containers or raised beds. The wellbeing of people is connected to the land and subsequently the food we harvest and eat. The surrounding biodiversity, water, and the cycling of organic waste into compost all contribute to creating healthy food for our AUT whānau to enjoy.

THEME 5 - SUSTAINABLE BUILDING TARGETS TO 2025

TARGET	PROGRESS TOWARDS THE TARGETS
All new buildings meet AUT’s Green Building Guide	A Draft Guide is complete. Some aspects of the Guide are already being applied to the design of A1 at the North Campus. Internal consultation around the Draft Guide has begun.
All internal fit-outs meet the New Zealand Green Building Council’s standards	Information is being gathered to report on this target in subsequent years. In 2020, textiles were used on AUT furniture that are durable and made in New Zealand, from New Zealand wool, as well as polyesters made from recycled plastics. A furniture library was also developed that ranked furniture with regard to sustainability credentials, enabling better informed purchasing decisions.

Since 2013 AUT has built three new buildings – two on the City Campus (WG and WZ buildings) and one on the South Campus (MH building). As would be expected significant learnings have been made through each successive building. In 2020, these learnings were applied to the design of the proposed A1 building at the North Campus, which has been designed to use 60kWh/m² annually. This is very low energy usage, which means that powering a low energy building like A1, solely by onsite renewable electricity, with battery storage, is viable.

As well as learning through each successive building, AUT has been growing. Our baseline for many of the operational sustainability targets (eg CO₂e, water and waste) is 2018. Between 2018 and 2020 AUT’s area of buildings we occupy has grown by approximately 10,000m². So, the operational targets that we are aiming for are within the context of a growing building footprint.

SUSTAINABLE PROCUREMENT

At this stage there are no targets within the Sustainability Roadmap related to sustainable procurement. However, work is progressing on a sustainable procurement approach at AUT that focusses on CO₂e emissions and waste from goods and services provided by AUT’s key suppliers.



Render of the A1 Building Atrium, AUT North Campus.

MATERIALITY ASSESSMENT

STAKEHOLDER ENGAGEMENT

Both AUT Directions and the Sustainability Roadmap were developed through stakeholder engagement across the staff and student bodies. Specifically, the stakeholder engagement associated with the Sustainability Roadmap included presentations to and meetings with Faculties, the student union, senior leadership team, consultation workshops across campuses, and online submissions. This Report shows progress against targets within the Sustainability Roadmap that were developed with staff and students.

More general engagement with stakeholders around sustainability occurs on an ongoing basis. The range of stakeholders are listed below along with the range of engagement tools:

- Students – Email, events, website, newsletters, social media, digital screens, Green Impact behaviour change programme
- Staff – email, meetings/forums, website, intranet, events, newsletters, Green Impact
- Suppliers – email, meetings, website, tender processes
- Industry – research
- Community – meetings, website, events
- Partners – meetings, collaboration agreements

Whilst developing this Report, more specific stakeholder engagement occurred with AUT’s school managers and department coordinators within the Business School in December 2020. Together we identified a list of sustainability issues, which formed the basis of a survey with these staff as well as their colleagues throughout all the schools. The survey sought to understand the three most important sustainability issues at AUT. For staff these are identified below:

- Climate Change;
- Waste and Packaging; and
- Employee Health and Wellbeing.

The same survey was sent to students in April/May 2021 through a range of communication channels. There were 65 students who completed the survey and the three most important sustainability issues that students identified are:

- Mental Health and Wellbeing;
- Climate Change; and
- Waste and Packaging.

There is a strong alignment between the two groups around what sustainability issues are most important to staff and students. This alignment also reflects and connects with the three core concepts that underpin AUT’s sustainability vision – Mauri Ora, Ki Tua and Whanaungatanga – which are highlighted below:

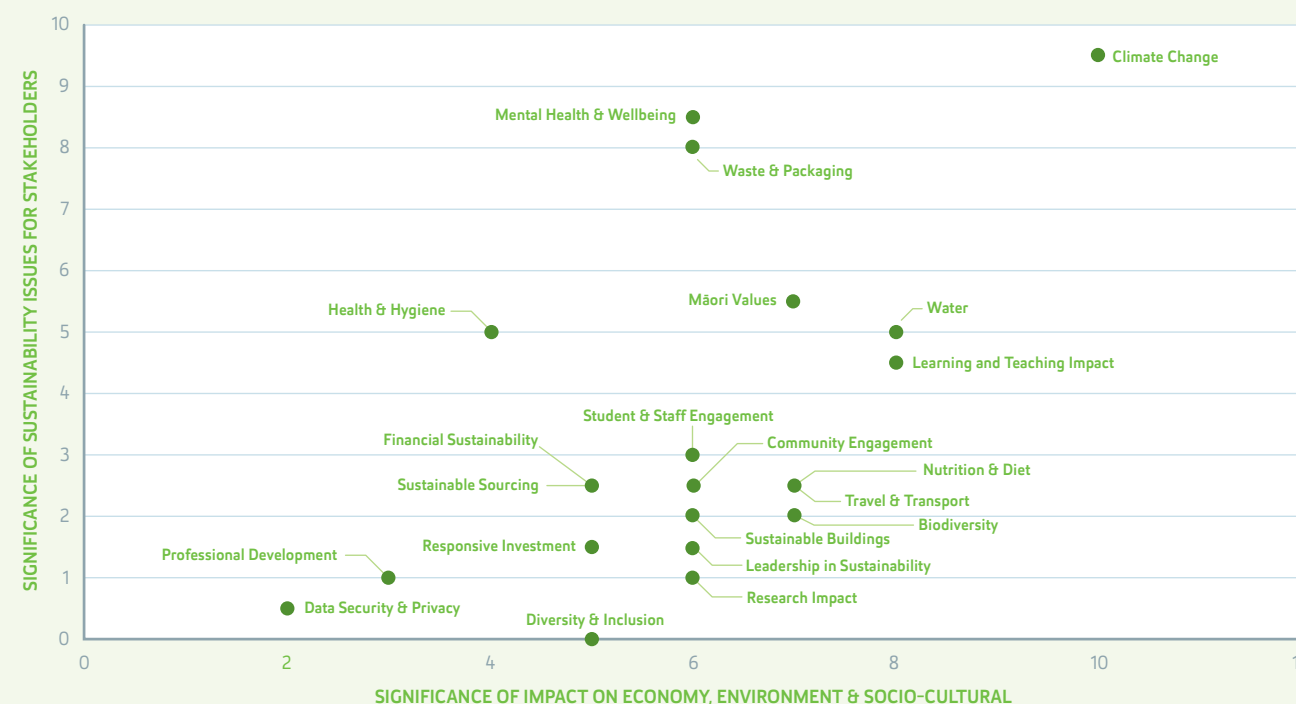
- Mauri ora | Wellbeing – interconnectedness between the wellbeing of people and our planet;
- Ki Tua – Futures – relates to climate change and creating a viable future for people that supports our wellbeing and prosperity; and
- Whanaungatanga | Connectivity – AUT operates within a complex system connecting across organisations, areas and countries. Reducing waste and packaging is one of the initiatives that AUT is progressing within complex connected systems.

MATERIALITY

The sustainability issues as developed with staff stakeholders were ranked and plotted to show the importance of sustainability issues to stakeholders against the significance of impact on sustainability – in terms of socio-cultural, environmental and economic aspects.

This materiality assessment has highlighted the most material topics in the top right-hand quadrant of the above graph. They are climate change, mental health and wellbeing, waste and packaging, Māori values and water. In the context of developing this Report, it highlights to AUT what sustainability issues are most material/important as well as highlighting areas or gaps where additional information and case studies are required for subsequent Reports.

SIGNIFICANCE OF SUSTAINABILITY ISSUES & IMPACT ON SUSTAINABILITY



WHAT NEXT?

This Report has highlighted some figures around learning and teaching and research and has shown where information gaps exist. In terms of understanding AUT’s progress around sustainability related operations, it is likely 2021 will also represent an atypical year. AUT can consider alternative ways of reporting progress towards the targets that reflect sustainability initiatives versus progress associated with lockdowns, for example. Progress in 2021 will also be focused on developing methodologies for gathering data where it is lacking and focussing on the targets in the Roadmap to drive progress forwards.



ACKNOWLEDGEMENTS

Emeritus Professor Thomas Neitzert, former Chair of the Vice Chancellor's Taskforce for Sustainability (now the Sustainability Steering Group), supported and progressed the Sustainability Roadmap through to completion. Isabella Seton, Business School Co-operative student, developed a proposed structure for the AUT Sustainability Report, and Rory Chacko, North Campus Operations Manager, also provided additional guidance and feedback. Lindsey du Preez, Sustainability Advisor and Anneke Morgan, Sustainability Graduate, have contributed to the Report with data and case studies, particularly for Theme 5 of the Report. Professor Chris van Staden, from the Business School, has provided initial guidance and feedback around sustainability reporting generally and in relation to AUT's inaugural Sustainability Report. AUT's Sustainability Steering Group has provided valuable feedback and review at several stages along the development of the Report and is an integral part of developing methodologies for measuring where there are information gaps within the Report.

 We welcome feedback and comments about this Report. Contact sustainability@aut.ac.nz with your comments.



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