ANNUAL SUSTAINABILITY REPORT 2023







ACKNOWLEGEMENT TO COUNTRY

CQUniversity acknowledges the many Traditional Custodians of the land and sea Countries on which we work and learn. We pay our respects to their traditions, languages, cultural practices and knowledges of the lands and seas. We pay our respects to all the Elders, past, present, and emerging.

For over 75,000 years Aboriginal and Torres Strait Islander peoples have been caretakers of lands and seas.

Aboriginal and Torres Strait Islander languages, culture and customs are as broad as the country we live in, it is the strength of connection to family and the connection to Country that is at the heart of all Aboriginal and Torres Strait Islander cultures.

Foreword from the Chief Operating Officer, Narelle Pearse

Since the development of the Sustainability Policy and Framework in 2016, CQUniversity has significantly progressed in our commitment to be an organisation that is socially and environmentally responsible. Our sustainable approach is underpinned by the United Nation's Sustainable Development Goals, which guide the actions we take in our everyday operations, interactions, and relationships to make a sustainable difference.

This report provides information on our efforts during 2022, outlining our performance in meeting our commitment to sustainability as reflected within our Strategic Plan 2019-2023: Our Future Is You, with 'Our Sustainability' featuring as a core pillar guiding the University's direction in sustainable practice. The university recently undertook a project called Education Futures as a discovery piece to inform our next strategic plan. The issue of sustainability remained front and centre, with the megatrend of climate change leading the charge ensuring the long term commitment of the university to sustainability well into the future.

As Australia's most engaged university, we are proud of our partnerships with the communities we serve, particularly those that service our sustainability agenda, like 'Clean Up Australia Day' across our national footprint. In fact, we provide the highest level of support to the Clean Up Australia campaign of any University.

We have also established ourselves as sustainable leaders with our 'Ditch the Disposables' campaign which, since 2019, has limited the use and sale of single-use plastics across our nation-wide campuses and communities. In 2022 we introduce our "Know Before you Throw" campaign which provides information on the proper way to use recycling and waste bins.

As part of our sustainability journey we have developed a relationship with the local crocodile farm so that our student accommodation kitchen take chicken carcasses to the farm for feeding of the crocodiles. This limits the amount of organic waste to landfill significantly.

We are proud of our role as changemakers who lead our communities through our sustainable commitment and approach, and we are certainly proud of what we have achieved as a university, and we are committed to continuing our effort and support in this area through connecting with communities and our association with Ashoka U.

NARELLE PEARSE Chief Operating Officer CQUniversity Australia

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Sustainability in our Strategic Plan

The <u>University Strategic plan (2019 – 2023)</u> consists of six pillars, one of which importantly includes sustainability.

Our sustainability pillar



To remain agile and responsive in an ever-changing and complex global environment, we will create a progressive organisation that is socially, culturally and environmentally responsible, whilst maintaining financial sustainability.

We are committed to embedding sustainable practice into our operations, interactions and relationships, underpinned by the United Nations Sustainable Development Goals.

To achieve this:

- We **will** sustain our reputation through our commitment to financial, social, environmental and cultural sustainability practices.
- We **will** service our Giving Back agenda with authenticity and altruism, playing our part in overcoming disadvantage and barriers to opportunity.
- We **will** ensure our financial future.
- We will seek to maximise our social impact while reducing our ecological footprint.
- We **will** work with communities and industry to deliver education, training and research outcomes to support the development of a more sustainable society.
- We **will** produce graduates who have the knowledge, skills and drive to apply global and sustainable thinking to address complex social, economic and environmental challenges.
- We **will** uphold the principles of the United Nations Sustainable Development Goals through University governance and operational decision-making frameworks.
- We **will not** pursue objectives which imperil our sustainable future.

Goals:

- Maintain and responsibly manage the long-term financial sustainability of the University.
- Improve our efficiency through the optimisation of our human, asset and financial resources.
- Operate more sustainably to reduce the University's adverse impact on the environment.
- Identify opportunities to diversify sustainable income streams.
- Use the levers of price, gender balance, country of origin and location of study to maintain or increase our international student income, whilst reducing our risk exposure.
- Return at least one per cent of our annual turnover to the communities we serve in targeted ways which are designed to make our communities more sustainable.

2022 highlights summary

The topic of sustainability (typically defined by the UN SDGs) across the World is becoming increasingly important and discussed more often and more intensely because sustainability covers such a large and diverse range of items much more than environmental considerations and the World is so dynamic and as COVID-19 highlighted how anyone can be quickly and easily impacted.

As part of the Annual report we have included a very small number of relevant Global and National items, as examples, from 2022 that influenced or impacted the World and that we at CQUniversity should be aware of.

Global influences

WORKING GROUP III

#IPCC #ClimateReport

We are at a crossroads. The decisions we make now can secure a liveable future.

HOFSUNG

We have the tools and know-how required to limit warming.

- In February 2022, Russia invades Ukraine. It has caused significant loss of life and loss of value to the Ukraine people, and has even caused impact in Australia through energy pricing.
- Deaths worldwide due to COVID-19 reach a total of 6,000,000, the number of confirmed cases exceeds 500 million worldwide. The effects of COVID-19 has impacted the production of materials and products globally impacting costs, available stock levels and delivery times.

In November, the world population reaches 8 Billion.

- World climate effects intensify. There is increase in significant weather events: floods, fires in Europe (53,000 die), earthquakes. The Intergovernmental Panel on Climate Change releases a report warning
- In the USA, the Inflation Reduction Act (IRA) of 2022 was created which makes the single largest investment in climate and energy in American history, enabling America to tackle the climate crisis, advancing environmental justice, securing America's position as a world leader in domestic clean energy manufacturing, and putting the United States on a pathway to achieving the Biden Administration's climate goals, including a net-zero economy by 2050.
- Inflation across the world has increased significantly. Most people in Australia are feeling the effect of this through the standard response of inflation control by increasing interest rates.







Australia

- On 8 September 2022, the Australian Parliament passed the Climate Change Act 2022. This Act legislates Australia's targets to reduce emissions by 43% on 2005 levels by 2030 and net zero emissions by 2050.



The Queensland Government released on Wednesday 28 September 2022
 the Queensland Energy and Jobs Plan. The plan outlines a number of key
 renewables targets and actions, to deliver clean, reliable and affordable energy for Queenslanders.
 A bold clean energy future for Queensland has been announced—a 70% renewables target by
 2032—as part of the \$62 billion <u>Queensland Energy and Jobs Plan</u>.

CQUniversity

Table 1 (below) outlines the Key Performance Indicators (KPI's) from our Strategic Plan, which relate to sustainability, and reports on the 2022 results.

During 2022 the University was still strongly feeling the effects of COVID-19 on our business. Despite taking some early actions to minimize losses, the number of students attending and other global and local impacts had an effect on our business and financial results.

KPI's		2022 Results	
Improve the overall financial position of the University	Have a current ratio of 1.5:1	1.4	
	EBITDA of 10% of turnover	5.90%	
Reduce energy usage across CQUniversity	Reduce energy usage across the University by 20% (based on 2015 baseline)	The target was exceeded as we reached a saving of 36%	
	All capital projects to meet a design of at least 5-star, green star rating for new buildings by 2022	Completed and ongoing. Two new buildings were delivered where the design met the requirements of 5-star rating.	

Table 1: Strategic plan 2019 - 2023 sustainability KPI's

On a more general review the University has continued to progress on our Sustainability journey, building on past performances and expanding our activities across all areas including Research and Teaching.

The following information outlines a snapshot of what activities have progressed during 2022.

- Carbon Emissions, Net Zero DFM engaged a consultant to review the carbon emissions from the University to help planning so the University can meet the Zero emissions target for 2050. The University emissions are currently below the threshold for National reporting. We will be developing a plan in 2023 to comply with the requirements of Zero emissions. Planning and managing Scope 1 and 2 emission sources is relatively easy compared to Scope 3 which almost all organisations will find a significant challenge as it involves all your suppliers and partners.
- **Clean Up Australia Day** Our annual clean up day effort across most of our campuses collected 800kg.



Waste and Recycling

Stage 1 recycling rollout was completed across the University.
 Waste audits were conducted during 2022 at our Brisbane,
 Bundaberg and Rockhampton campuses. Our on-site providers
 have adopted plastic free delivery and recycling practises. Trial
 rollout of new external bins at Rockhampton to promote
 recycling.



- Support of the National Recycling week.
- Promotion of our waste education campaign 'Know before you Throw'



Establishing new relationships with local businesses to help dispose of University waste in a sustainable manner including disposal of Chicken carcasses to Korana Crocodile farm, and other organics to High Valley Dawn Permaculture Farm in Yeppoon.

- Smart HVAC Upgrades While undertaking a project to replace old and failing air conditioning
 plant on the Rockhampton campus the project was designed to include new pipework that would
 allow a number of buildings to be joined together allowing for efficient use of the HVAC chillers and
 equipment. The system now allows a larger existing chiller to operate in its most efficient range
 and provide cooling water to three buildings instead of one. Other chillers can be used as back up
 and for support in high temperature days. We have also installed a new chiller that is new and
 claims 0% ozone depletion.
- Containers for Change Many business groups across the University have adopted the "containers for change" program which helps by recycling containers but some also provide the funds towards charities.
- Energy Reduction We have continued to replace high energy lights with LED lights across our campuses and adopt other practices and opportunities to reduce our energy consumption (GJ/m2). Our overall energy results for 2022 were an overall reduction of 36% based 2015 figures. This exceeds the target of 20% that was set for 2022.



 Sustainable Construction – Two new buildings were completed during 2022 in Gladstone and Rockhampton. Both of these buildings were designed to meet the 5 Star Green Star ratings for sustainability.



Printed Paper – The University started a campaign to reduce the amount of printed paper generated across the entire business. One example of savings of printed paper is from our School of Health Medical and Applied Sciences, from CG91 Medical Sonography. Introduction of a laptop system for each ultrasound machine in the sonography labs is used for mock and real assessment marking, as well as provision of weekly student feedback and tutor resources across nine units within CG91. This will prevent the printing out (paper, water and energy wastage) of approximately 48 documents/student. The total of this for the discipline will be around 225,000 printed pages (approx. 12,000 kg!) per year of less waste, as well as saving the resources used to produce it.

CQU sustainability strategies in action

Below are few snapshots of the many activities across the University contributing to our efforts in Sustainability.

Graduation Celebrations

In the spirit of sustainability, the CQUniversity Events team have implemented a few changes to our Graduation ceremonies to improve our impact on the lands on which we celebrate our successes.

Our guests now have access to cold water bubblers and recyclable paper cups at various points around our Graduation ceremony spaces. In 2022, this resulted in a reduction of single use plastic water bottles.

Our Graduation Ceremony booklets are now available online via a QR code which has provides a reduction of printed paper usage.



Sustainable engineering during National Science Week

CQUniversity staff and students explored sustainable engineering solutions for a greener future at the International Science and Eco Fest's Illuminate FNQ event in Cairns in August.

The festival bought together students, families, First Nations Elders and citizen scientists to build knowledge around a sustainable future.

CQUniversity Engineering Lecturers Dr Hassan Baji and Dr Kianoush Emami hosted a range of hands-on science, technology, engineering and mathematics (STEM) activity for high school students which is designed to spark their interest in STEM, including building replica wind turbines that harness energy generated from wind to create electricity.

Attending students also learnt about and implement physics and math concepts within an engineering setting while exploring the exciting civil, mechanical and electrical engineering careers of the future.

On the right track

Funded by the Australian Research Council and led by researchers from CQUniversity in collaboration with investigators at Curtin University and the National Research Centre for Work Environment, the 'Just Right' job design project targets sustainability issues.

This project is being undertaken with the rail industry within Australia and New Zealand across the three modes of rail: tram, train, and freight.

This research project has a focus on sustainability with the aim to (re)design the physical and/or psychosocial elements of work to promote worker health and capacity. In doing so, it contributes to the global goals for individual, company, and thus societal, sustainability. In line with CQU's Sustainability Framework for Research, this project strives to be innovative, collaborative, and practical, and addresses sustainability issues within our society, environment, and industry.

This project goes someway to addressing the UN SDG's of "Good Health and Wellbeing (3)" and "Decent Work and Economic Growth (8)". It is about creating a work system that is "Just Right" through a balance of physical and/or psychosocial exposures to improve workers health and/or capacity during productive work

time. It is also adopting a collaborative approach to job (re)design involving all key stakeholders in the process, such as the workers, managers, health and safety officers, and executives.

The project is looking to help workers sustain or even improve capacity and, thus helping the sustainability of the organisation by not taking workers away from productive work in the short term, and by having a positive impact on the capacity of workers to be productive in the long term.

This work in the rail space which includes this project has also been recognised as "Sustainability Development Goals Aware" by the International Union of Railways, as reflected in the below badge, received in December 2022:



Toads to tadpole baits



Guy Carton, Senior Lecturer – Environmental Science and Technical Officer, Margaret Stockill have initiated some changes to our use of cane toads in first year Biology. Approaching the Capricorn Caves, the team were able to source toads collected routinely by community toad 'busts', where people rally to collect toads and euthanise them humanely, in line with what we would require for class use. Up to 100 toads were required, but all 320 that were donated were accepted. Of these, 100 were discarded because they were unsuitable, 80 toads were put out for student use in residential

schools and the rest were processed by technical staff. All specimens had the paratoid glands removed.

The glands were then sent to Watergum in Brisbane where they will be used to make cane toad tadpole baits. This was a new initiative that arose from the Ethics Committee's request that we make the best use of each animal's life that is taken.

The Capricorn Caves appreciated being able to donate the deceased toads to us so that they would be useful – they intend to advertise this to their teams of volunteers who undertake the work of collecting them. We have plenty of toads for our classes so that our students have the best learning experience – and students were really excited to know that their work would be used in ongoing cane toad tadpole eradication programs. We are supporting environmental work of Watergum who were ecstatic about our donation of glands to them. They had never received glands this way before, but they were very pleased with the quality of the material they received and grateful for our support of the important work that they do.



Times Higher Education Impact Rankings



CQUniversity has cemented its place as a world-leading university for environmental and social impact, ranking 83rd in the world for **overall contributions** to the United Nations' Sustainable Development Goals (UNSDGs) in the latest Times Higher Education (THE) Impact Rankings.

For the first time since the Impact Rankings were launched, CQU has entered the top 100 in the overall ranking, jumping from the 101-200 category in 2021, to 83rd in the world out of 1,406 institutions in 2022.

The University also ranked 10th (up from 29th in 2021) in the world for protecting and restoring life below water (SDG 14), 35th for protecting and restoring life on land (SDG 15) and 32nd (up from 58th in 2021) in partnerships for the goals (SDG 17).

Read more about our success in the impact rankings in the CQUninews story.



Student sustainability

The following information is from one of our Academics, **Mr Saba Sinai (**B. Biomed Sc (Hons), MIPH, Lecturer in Agriculture | School of Health, Medical and Applied Sciences) based at our Emerald Campus.

This demonstrates how we are introducing sustainability and growing global concepts such as Circular Economy to our students.

How important is Circular Economy as a concept to be teaching our students?

As consumers and the public demand more environmental sustainability and environmentally responsible actions on the part of many industries, including agriculture, it's important for our students to have a deeper understanding of the methods and strategies available to them in their future careers. I also think it fosters creativity and innovation. The idea of circular economies strikes me as one where those engaged in it need to be alive to the possibilities of achieving, in agriculture's case, primary production, even when resources are constrained. Those sort of resource-limit pressures can be difficult but they can also result in innovation.

Can you give an example of how this is being done where CQU is involved?

AGRI13009, Resource Smart Food Production: More With Less is principally concerned with the idea of efficient and sustainable food (and fibre) production. Students consider, discuss, research and detail how agricultural production can maximise the efficiency and minimize waste. The consider the use of resources and assets such as land, nutrients, water, transport infrastructure, agricultural chemicals, energy and transport fuels, financial resources, and human resources to create sustainable food systems, largely with a focus at the farm/production level but also with considerations along agricultural supply chains, including the end consumer. The unit also covers climate change and students explore strategies for reducing waste and greenhouse gas emissions in agricultural industries. One example students consider is the use of pig manure collected in piggeries, capturing methane gas, which is then used to produce electricity which powers the piggery.

Are the Students accepting of the concept and does it resonate with them?

It seems to, yes. Students incorporate some of these principles in their assessments when developing strategies to overcome resource constraints. Most students also like to see that there are a range of sustainable and responsible strategies available to them in their field. Again, learning activities geared around circular economy principles spark creativity, and students tend to really engage well with such activities.

Is this being introduced to all our Agriculture courses or some select courses?

This is within the Bachelor of Agriculture Course.

How did you or the course developers get onto Circular Economy?

Circular economy principles are increasingly appearing in the agricultural discourse, and I encounter them in academic literature, media reports, documentaries or government and industry publications. Though in many cases, there are age old strategies that agriculturalists have used throughout centuries which would fit into the definition of the "circular economy". As this mainstreaming continues, it is a natural fit to place

circular economy principles into our Bachelor of Agriculture units. I also find many of the people in my professional network, here at CQUni and elsewhere across the globe, are passionate about circular economy principles, whether that is in agriculture or other fields.

What would be the next steps in the future, say next 2-5 years?

I think as circular economy approaches and relevant technologies advance, more and more examples of circular economy models will become available for analysis and study in our units. I think the changes in global food and fibre supply chains, where governments and communities are seeking to mitigate against the vulnerabilities that we have seen over the past two years in particular, will result in greater adoption of circular economy strategies. Whether this is in plant and animal nutrition, energy sources and/or water use, among many other areas. The public are also demanding greater action on waste and climate change, so in addition to supply chain and economic pressures, I think these factors will create an ongoing appetite for circular economy approaches into the future.

Moving forward – our future direction

During 2023 the University will be developing a new Strategic Plan. Following the release of the new Strategic Plan we will undertake a review of the Sustainability Policy and Framework to ensure alignment and planning to deliver against the new goals and targets that will help us into *our* Future.

2023 University Plan Sustainability KPI's



To remain agile and responsive in an ever-changing and complex global environment, we will create a progressive organisation that is socially, culturally and environmentally responsible, whilst maintaining financial sustainability.

INITIATIVE	UNIVERSITY KPI	2023 KPI				
		TARGET				
OUTCOME 6.1: The long-term financial sustainability of the University is maintained and responsibly						
managed.						
Financial Viability Modelling	>> EBITDA target of 10% of turnover.	10%				
	>> Have a Current Ratio of > 1.0.	>1.0				
Infrastructure Delivery Program	>> Pending funding release, deliver	Deliver				
Stage 1 Rockhampton campus consolidation	on schedule and within budget.					
Cairns campus	>> EBITDA target of 10% of turnover.	10%				
Mackay TAFE heavy automotive training facility	>> Have a Current Ratio of > 1.0.	>1.0				
Mackay Electric Vehicle and Energy Training (MEVET) Centre						
Coastal Marine Ecosystems Research Centre (CMERC)						
Derby Street, Gladstone asset utilisation						
Diversified Income Opportunities from						
Physical Assets.						
Tertiary Education Quality Standards Agency	>> Grow international student					
(TEQSA) Re-Registration	numbers.	725				
	>> New to university students who					
	are not nationals of India or Nepal.					
	>> Increase EFTSL across VET,	15,797				
	Undergraduate, Postgraduate and	EFTSL				
	research courses	HE: 12,541				
		VET: 3,256				
OUTCOME 6.2: Levers of price, gender balance	e, country of origin and location of stud	dy are used to				
maintain or increase our international student income, whilst reducing our risk exposure.						
International Student Markets	>> Grow international student					
Diversification of market opportunities	numbers.	725				
	>> New to university students who	725				
	are not nationals of India or Nepal.					
	>> Increase EFTSL across VET,	15,797				
	Undergraduate, Postgraduate and	EFTSL				
	research courses	HE: 12,541				
		VET: 3,256				
OUTCOME 6.3: Opportunities to diversify sustainable income streams are identified and used.						
Business Development	>> EBITDA target of 10% of turnover.	10%				
	>> Have a Current Ratio of > 1.0.	>1.0				

OUTCOME 6.4: The University's adverse impact on the environment is reduced by operating more sustainably.					
Environmental Sustainability Plan	>> Reduce energy usage across the				
Reduce non-renewable energy consumption	university.	20%			
OUTCOME 6.5: Our efficiency is improved through the optimisation of our human, asset and financial					
resources.					
Service Excellence Process Improvement	>> EBITDA target of 10% of turnover.	10%			
Project	>> Have a Current Ratio of > 1.0.	>1.0			

Other known activities for 2023

- Commencement of the \$15M CMERC project. This project expands on our current our marine research based in Gladstone. The project includes the following items:

» The conversion of outbuildings to house a purpose-built mud crab fishery research facility including an aquaria system.

- » Additional flow-through aquaria (seaweed hatchery).
- » Upgrade of outdoor seagrass mesocosm facilities.
- » A submarine remote operated vehicle (ROV).

» Office space for 21 staff including 4 offices, disability access, mezzanine open plan space for research higher degree students and meeting room; and associated upgrade of toilet facilities.

» Indoor wet laboratory and upgraded infrastructure (plumbing and electrics) to allow larger volumes of experimental activity.

» Additional staffing to support continued growth including an operations manager, senior research fellow, senior post-doctoral research fellow and post-doctoral research fellow in key research areas which support research priority areas.

» Soil and sediment processing laboratory for carbon capture analyses.

» Wave current flume tank to facilitate research on the effects of wave/current/structure interaction under complex environmental conditions, to support nature-based solutions for coastal development research.

- Mackay for Electric vehicles. Commencement of a new facility to provide training in maintenance and support of electric vehicle technologies.
- Emerald Campus. During 2023 we will design and install Solar power at our Emerald campus as
 pt of actions towards Net Zero. This project will investigate a mix of solar panels and batteries to
 best support the operations of the campus. In addition to the normal benefits, this will potentially
 provide opportunity for teaching and research.
- Organic waste treatment. Investigation and possible installation of an Organic recycling plant at our Rockhampton Campus. As part of the University Waste plan we want to reduce the amount of organic waste going to land fill. The University will seek to work with local stakeholders in developing an on-site system that can treat organic matter for other use and remove it from landfill.
- Solar Panel Research. A research project to test solar panel arrays at our Rckhampton Central Queensland Innovation & Research Precinct (CQIRP). 3 sets of panels of about 5 panels each to test different performance parameters of the panels. Test will be a minimum of 1 year.