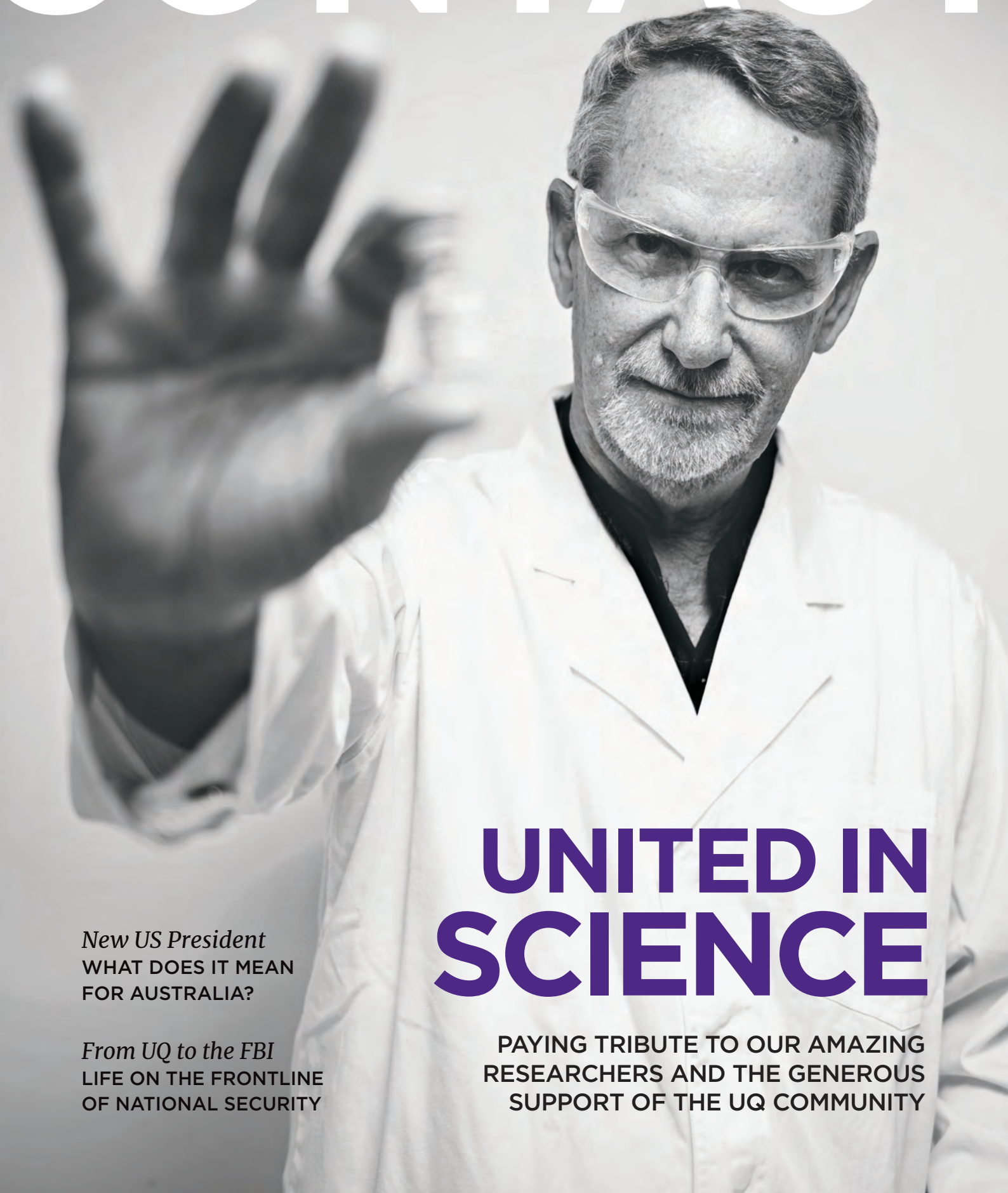


CONTACT

2020 edition



UNITED IN SCIENCE

New US President
WHAT DOES IT MEAN
FOR AUSTRALIA?

From UQ to the FBI
LIFE ON THE FRONTLINE
OF NATIONAL SECURITY

PAYING TRIBUTE TO OUR AMAZING
RESEARCHERS AND THE GENEROUS
SUPPORT OF THE UQ COMMUNITY

Message from the Chancellery



The accuracy of Bill Gates's stark warning at the 2017 World Economic Forum in Davos of the risk of a flu-like epidemic rapidly spreading with devastating consequences through our inter-connected world might seem eerily prescient in 2020. But perhaps it shouldn't.

After all, Gates' prediction was undoubtedly shaped by the weight of evidence generated by the world's foremost experts on the subject.

While there may be no single expert view on anything, following the evidence is what the pursuit of knowledge is based on and certainly better than succumbing to the pull of prejudice or instinct.

Public policy must weigh many competing considerations. As anchors of expertise, universities can make a significant contribution to grappling with complicated public policy issues such as the health and economic consequences of the pandemic.

Within the pages of this print edition of *Contact* for 2020 – the first of what will now be an annual publication, complemented by a monthly e-newsletter – this expertise is manifest.

Alongside alumni highlights of 2020, there is expert commentary on the big issues and events throughout the year: the heroic efforts of UQ's COVID-19 vaccine development team; Indigenous leadership and constitutional reform; the US election; and the bushfires that devastated swathes of our country early in the year. This commentary helps us to better understand the issues and reach our own conclusions about their significance.

While 2020 has been a year of considerable challenge, it has not been

without its bright spots, including the return of Professor Deborah Terry AO as UQ's Vice-Chancellor and President. Debbie is well known to our community, having worked here for 24 years and rising to become UQ's Senior Deputy Vice-Chancellor, before being appointed Vice-Chancellor at Curtin University in 2014.

Within this edition, Debbie has outlined how we have responded to the pandemic, and discusses the role universities can play in driving Australia's economic recovery.

I thank Debbie for her calm and steady leadership and her work with the senior leadership team to steward UQ through this disruptive period.

Thanks must also go to our alumni community, whose generosity of spirit was again evident in the annual Giving Day and particularly through philanthropic support of the UQ COVID-19 vaccine.

To return to Bill Gates, not only was he correct about the pandemic but also about the interconnected world we live in.

As a university, our global connections are one of our great strengths. We are anchored in our community, but we are also traders in the global marketplace of ideas and we must continue to engage deeply with our region and beyond. So too must our country.

There has been much recent commentary on sovereign capability and there is sense in this including diversifying supply lines for critical goods.

But while globalisation may well slow, it will not disappear. At the heart of globalisation sits comparative advantage in trade and the efficient allocation of resources, and we abandon these concepts at our economic peril.

Our wealth as a nation and the living standards of our citizens are best served by an outward looking community, an open economy and a liberalising trade system. COVID-19 does not change that.

Nor does it change the fundamental purpose of the University to push out the boundaries of knowledge and create informed citizens who contribute to their community – whether that community is local, national, or global – and who are committed to enriching our society. If anything, it only reaffirms it.

Peter Varghese AO
Chancellor



COVER IMAGE

UQ COVID-19 vaccine project co-leader Professor Paul Young.

Image: Anjanette Webb

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GET MORE ONLINE

Stay up to date with the big issues and connect with your UQ peers on the *Contact* website. With more online content than ever before – including news, features, opinion, advice, picture galleries and videos – *Contact* brings you the latest UQ and alumni news, plus expert commentary and analysis.

We also encourage you to have your say on the stories and issues that matter to you.

Visit contact-magazine.uq.edu.au.



THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

Preserve and PROTECT

Contact put the question to UQ experts across a range of disciplines: how far should the Australian and state governments go in restricting people's freedoms in the name of public health?

Professor Jolanda Jetten
School of Psychology
Faculty of Health and Behavioural Sciences

For a number of reasons, the answer to this question should be straightforward: very far.

When governments introduce laws to guide citizens' behaviour, there will always be critics who argue the law is an infringement upon 'individual freedom of choice'. The COVID-19 crisis is no exception.

However, in this instance, for at least two reasons, it would seem easy to rebut such concerns and to defend more heavy-handed interventions.

First, we have to be mindful not to introduce a false dichotomy: do we want freedom or health? After all, a COVID-19-infected individual will not be able to reap the benefits of their freedom of choice. And, those fortunate enough to remain healthy will be equally unable to enjoy their freedom in a society brought to a standstill by a pandemic. There is no freedom without health, and it is only by staying healthy that people can have freedoms.

Second, it is worth considering that we have long accepted that governments can curb our individual freedom in order to protect us individually and collectively. For example, we unthinkingly stop for a red traffic light and accept government fire bans during bushfire season. Why do we comply with these restrictions? All these rules limit freedoms, but we also unquestioningly accept that they are in place to protect not just the individual, but also the community at large from harm; from traffic casualties or bushfires. So, how is imposing restrictions on people's behaviour so that we are in a better position to combat one of the biggest threats of our time any different?

As government officials have repeatedly pointed out, the COVID-19 restrictions are introduced to save lives — not just our own but also that of others. This alone would seem a sufficient reason for Australian governments to go as far as necessary to protect us.

JOIN THE CONVERSATION

To have your say, visit contact-magazine.uq.edu.au.

Professor Charles Gilks
School of Public Health
Faculty of Medicine

There is a social contract in representative democracies that governments have the power to restrict individual freedoms to protect the public's health, with citizens trusting their elected representatives to use whatever means are necessary but not to abuse these powers.

In a pandemic, the state therefore has the right and obligation to put in place the necessary measures to reduce and interrupt transmission to protect individuals and society.

The interventions need to be informed by public health experts with the most accurate and up-to-date information. It is critical that governments clearly and regularly communicate to their citizens what needs to be done and why, so that individuals and communities understand and accept the restrictions and act accordingly.

No-one should be seen as exempt. And as the pandemic threat is controlled, citizens must continue to modify their behaviour until elimination has been achieved, or a vaccine can protect the whole population.

Professor Karen Thorpe
Institute for Social Science Research
Faculty of Humanities and Social Sciences

Fundamental to human nature is the desire to make choices about what we do and to influence those around us. Across the life course, the degree to which we have individual freedom affects our wellbeing and capacity for achievement. But human lives are not solitary; they are social. Our individual wellbeing depends on the wellbeing of those around us.

While restricting individual freedom has a high human cost, the loss of others who are important to us does also.

The restrictions imposed on our individual freedom by government responses to COVID-19 are necessary to protect all of society. While there is a risk to public health, no-one is actually free. Some may be more vulnerable than others, but we are all vulnerable. We do not know how long COVID-19 will place restrictions on our individual freedom, but there are two important features of human psychology that will carry us through.

The first is that humans have huge capacity for resilience. Historical examples of prior pandemics, war and the holocaust show individuals survive significant restriction on, or denial of, their rights.

The second is that humans have huge capacity for innovation. During restrictions there have been many everyday examples of individuals innovating, discovering new interests – and rediscovering old.

The pandemic has shone a light on some social inequities and maybe presents an opportunity for social reform.

Dr Rebecca Ananian-Welsh
Law School
Faculty of Business, Economics and Law

Governments are vested with incredible powers that infiltrate most aspects of our daily lives. Getting it right when it comes to protecting safety, security and liberty is no easy task, but our constitutional frameworks and values have evolved with this in mind.

While governments have (and need and must exercise) invasive powers, legal measures used to fight COVID-19 should be carefully scrutinised against some basic principles.

Each measure should be:

- Necessary – Is it justified? Tailored to a legitimate aim? Effective?
- Proportionate – Has a balance been struck between infringements on liberty and potential benefits to public health?
- Reviewed – We are witnessing how difficult it can be to assess necessity and proportionality. Measures should be regularly reviewed against these standards by decision-makers who are both independent and suitably qualified. Effective review also calls for a willingness to reform ineffective or disproportionate measures.
- Time-limited – Extreme threats may call for extreme responses. But when the threat has passed, the measures must be allowed to lapse. Otherwise, extreme measures may normalise, spread to other areas of law and policy, and justify new extremes. For example, since September 11, Australia has introduced more counter-terror laws than any other nation. Despite some measures being of unproven effectiveness, they remain on the statute books.
- Constitutional – COVID-19 demands severe action that will restrict freedom. But it must not be allowed to erode the core values that underpin our system: openness, accountability, a separation (not concentration) of powers, fairness, non-discrimination, the rule of law, and a basic commitment to equality and liberty.



WHAT YOU SAID ONLINE

There is one restriction which I believe has gone too far: the current passenger entry restriction for Australians stranded overseas. Aussies overseas have been forced to wait months to enter Australia despite the fact that they will go into a 14-day quarantine upon arrival and pay for their own quarantine. This is a huge restriction on people's civil liberties, which in my opinion does not balance out with reducing COVID-19 cases.

– Harry Mulgrew

So how many years are we supposed to accept the restrictions? What we need is not only a plan for elimination (assuming we can then get a vaccine that stops reinfection), but also a plan for living without an effective vaccine. When you are only testing people with even the mildest symptoms, it doesn't do any good when a large portion are asymptomatic (especially younger people who are still partying).

– Alan Udell

VOICE

treaty, truth

UQ graduate Professor Megan Davis speaks with *Contact* to reflect on her time at UQ, and to discuss how the university community can help positively influence the concepts of the Uluru Statement from the Heart.

UQ graduate Professor Megan Davis (Bachelor of Arts '97; Bachelor of Laws '99) has dedicated her career to achieving constitutional reform for Aboriginal and Torres Strait Islander people.

The Cobble Cobble Aboriginal woman from south-west Queensland was the first Indigenous Australian to sit on a United Nations (UN) body as Chair of the Permanent Forum on Indigenous Issues, and was instrumental in the development of the Uluru Statement from the Heart – which she read aloud at the First Nations National Constitutional Convention in 2017. The Uluru Statement

represents a historic consensus of Indigenous leaders in seeking constitutional change to recognise First Australians through a Voice to Parliament.

The 2014 UQ Indigenous Community Impact Award recipient is now a Professor of Law, the Balnaves Chair in Constitutional Law, and Pro-Vice-Chancellor (Indigenous) at the University of New South Wales; a Vice-Chair of the United Nations Expert Mechanism on the Rights of Indigenous Peoples; a NSW Land and Environment Court Commissioner; and an Australian Rugby League Commissioner.

What were the key things you learnt as a UQ student and how have you applied them in your daily life?

I loved every minute of being a UQ student, including my time living at Duchesne College. The breadth of subject options was extraordinary, and the critical-thinking skills I gained have served me well for a varied career – from the NRL Commission to sitting on an environment court, and from the Uluru Statement process to the United Nations.

It was such a beautiful Bachelor of Arts degree and classical education that set me up for life.

I learnt to ask for help when I needed it. Around the time my dad died, UQ's Aboriginal and Torres Strait Islander Studies Unit was a saviour, and a home, for me.

What are your proudest career milestones?

When I started on the UN's Permanent Forum on Indigenous Issues, I was nominated by the Australian Government and had to go through an election. You had to persuade around 32 UN member states to vote for you: it's a pretty vulnerable thing to expose yourself to so much scrutiny. But, getting global validation of your knowledge and skills is a good thing.

Another proud aspect was the National Constitutional Convention, when we read the Uluru Statement out and everyone endorsed it. It was an exhausting process for two years, and I'm very proud of the consensus we struck and the legal work we did to prepare people for the dialogue.

What are the key concepts of the Uluru Statement from the Heart and likely future directions for Australia?

The Uluru Statement follows almost a decade of constitutional recognition work in Australia. It's a process that is unprecedented in Australia's history. It was the first time a constitutional convention was convened with, and for, First Nations people.

As the leading constitutional lawyer for the Uluru Statement, I designed the deliberative constitutional dialogue process, in which we conducted 13 regional dialogues and a national convention. This process was a significant response to the exclusion of Indigenous people from the original process that led to the drafting of the Australian Constitution. We engaged through the dialogue with over 1200 delegates, who were appointed on behalf of their First Nations, so we had the most proportionally significant consultation with Indigenous peoples ever undertaken.

After decades of Aboriginal advocacy for constitutional reform, we were able to come up with a consensus law reform proposal for the Referendum Council. That framework is what we call 'Voice, Treaty, Truth'.

Our first priority is a constitutionally enshrined Voice to the Australian Parliament. That Voice is a right of Indigenous people to be at the table when laws and policies are discussed about them and their communities.

Voice is significant because it was more of a priority in our communities than Treaty or agreement-making. It was determined by the First Nations that you cannot enter into

any treaties with the state as First Nations peoples if we don't first have recognition of our Voice. The bulk of our people require enormous amounts of support and resources to get to the threshold of being able to enter into what they call treaties or agreements. That is why the second part of the law reform that follows Voice is the creation of a Makarrata Commission, which will supervise agreement-making across the Federation.

The third reform is Truth, or truth-telling. This is something that has been done for decades, from the *Bringing them Home Report* (1997) to the Royal Commission into Aboriginal Deaths in Custody. Truth-telling was not deemed by any First Nation person in the constitutional dialogues as something that has to be done by a truth and reconciliation commission. They would rather it to be done in their own communities – alongside the Australians they live among – at their own pace.

Key to reforms is the concept of 'constitutional enshrinement'. There's a lot of pressure from old bureaucrats and politicians to say "do it in legislation", but it's not the same thing. The insecurity of legislation and insecurity of parliamentary terms is precisely why Aboriginal Affairs is in the state it's in.

Another concept is the notion of an 'invitation'. We have a population who have lived on our country for more than 200 years and there has never been any formal grappling with that original grievance; the dispossession. There has been no conversation about reparations for that, or the human rights atrocities that followed, nor has there been any real recognition that the legal way the land was dispossessed is not so straightforward. So, addressing the original grievance is the key for our people to flourish, for our health and wellbeing to get better and for us not to be so dislocated from the Australian people and Australian state.

How can the UQ community help to positively influence the goals of the Uluru Statement?

The Uluru Statement has been issued as an invitation to the Australian people to walk with us on this journey.

We want you to take this first step and provide a patch within the Constitution that provides us with some power that no government can claw back. We are trying to elevate our business out of the realm of politics. Until we lift ourselves out of that place where ideology decides what happens to our people – not what is best – things won't change.

We don't want people to feel guilty; we just want people to vote YES for this functional, conservative reform. Then we can work together on what the rest looks like. If politicians feel Australians are behind this, they are going to let it happen.

Makarrata means 'coming together after a struggle'. The Uluru Statement is a coming together after a struggle. It's really important for UQ, with its footprint of influence, to take leadership on the Uluru Statement, endorse the words, and encourage its community and its stakeholders to walk with us.

READ MORE

To read the full interview with Professor Megan Davis, view this article online at contact-magazine.uq.edu.au.



United in SCIENCE

While the UQ COVID-19 vaccine won't be rolled out to fight this global pandemic, the University's researchers have made remarkable progress, and they are confident their powerful vaccine platform will be ready for when the world faces another health crisis.

For 11 months, the UQ COVID-19 vaccine development team worked around the clock in the bright spotlight of a world waiting for hope.

As the team reflects on December's news that its vaccine candidate will not progress to the next phase of human trials, they take comfort that the long days in the lab and nights collaborating with partners in different time zones were not in vain.

They were, of course, devastated in the immediate days after the announcement. But they were philosophical too, pointing out that the world was now in a far better place, compared to when they started their rapid response program.

"In the first half of 2020, we had zero vaccines for COVID-19," UQ vaccine project director Professor Trent Munro told Contact.

"Scientists were unsure that developing a vaccine against COVID-19 was even possible, and the risk-to-benefit ratio was in a completely different place.

"The world is in the fortunate position now where multiple vaccines have reached late-stage efficacy testing. They are showing very promising data, and are starting to be approved by regulators and rolled out.

"If there were no other options ready, we may have been in a different situation heading into the new year."

All the signs had been promising. UQ, The Coalition for Epidemic Preparedness Innovations (CEPI) and biotech company CSL entered into a landmark agreement in June 2020 to manufacture and develop the vaccine.

The Phase 1 trial of the vaccine started in July 2020, to assess safety and the immune response generated in 216 healthy volunteers. Dosing had been completed, and the data showed the UQ COVID-19 vaccine was eliciting a robust response to the virus.

Importantly, there were no observed safety concerns.

But among the reams of positive data from the Phase 1 trial, there was an unexpected finding that would ultimately prevent the vaccine from progressing. ▶



Participants in the trial had generated a low-level antibody response to fragments of a protein – gp41 – used in the ‘molecular clamp’ technology.

Trial participants had been fully informed of the theoretical possibility of a partial immune response to this component of the vaccine when they consented to participate in the trial.

“Yes, we understood there was the risk of this response, but we knew this was not a safety issue for participants if it occurred,” Professor Munro said.

“As the data began to come in and we analysed what this meant for the vaccine, we ordered additional tests.

“When we discovered that this partial antibody response was enough to contribute to diagnostic interference with some HIV screening tests, it was a real challenge for the team.

“To be completely clear, there was no possibility the vaccine could cause HIV infection – and routine follow-up tests confirmed a negative result.”

Members of the UQ team had invented the underlying ‘molecular clamp’ technology to provide a way to stabilise viral ‘spike’ proteins to make vaccines more effective, and able to be scaled up and produced rapidly.

“Of the proteins we originally considered as a stabilising element, gp41 from the HIV virus turned out to be the most promising,” UQ vaccine project co-leader Professor Paul Young said.

“The protein pieces that make up the clamp are completely harmless, and adding them to the spike protein provided the required, enhanced stability. So, we progressed this approach into our proof-of-concept research.

“Our intention was always to explore additional options through the course of our research program.”

In January 2019, the team entered into a partnership with CEPI to look at evolving the technology as a rapid response vaccine pipeline. The plan was to start testing its deployment against some exemplar viruses, like influenza and Middle East respiratory syndrome (MERS) in 2020.

“We would have learnt a lot in that process. But when SARS-CoV-2 emerged and we saw the emergency unfolding, CEPI called on us to respond, so our focus shifted to using what we had in the toolbox.”

In the adrenalin-filled early days of the vaccine quest, everything was falling into place.

“The existing data from examples where the gp41 clamp was used for other viruses suggested that the biology was right, and it would form the basis for a candidate vaccine,” Professor Young said.

“That proved to be correct – we had a viable vaccine candidate in a matter of weeks by using this clamp technology, and we were confident that we could produce a high-quality vaccine at scale.

“There was no question that if we had looked for another protein rather than proceed with gp41, there would have been a minimum six- to 12-month delay – and we would not have had the same level of confidence that it was even going to work.

“Of all the options, it had provided the greatest stability in those earlier studies, and we engineered it in such a way that we removed the major antibody binding sites from the protein to minimise the impact of the potential immune response.”

The HIV testing area is very complicated and, according to Professor Munro, it’s what makes this a very difficult issue to solve.

“The immune response to our vaccine has been shown to interfere with many



first point-of-call HIV tests – indicating a false positive – which in Australia would be followed up with a further diagnostic test,” he said.

“In the weeks following the initial data, we worked with CSL, the Australian Government advisory committees, HIV experts and pathology experts to understand the impact.

“Any tests that do not give someone clarity can create concern. And, fundamentally, anything that interferes with public confidence in vaccines has to be part of the consideration.

“That’s why we understand the decision to halt our vaccine.

“The hardest thing is that from a safety-data and immunogenicity point of view, including a strong immune response in the elderly, everything looks stellar. And I don’t use that word lightly.”

For now, the Phase 1 trial of the UQ vaccine will continue, where further analysis of the

data will show how long the antibodies to gp41 persist.

“The level of antibody response against HIV is actually very low, and initial signs are already showing that this response is waning,” Professor Munro said.

“We’re going to resume our original CEPI program of work – building on what we have learned about this technology and its ability to produce robust, stable vaccines.

“If anything, this year’s results have given us even greater confidence that the underlying approaches will provide the world with an incredibly powerful solution for viral pandemics in the future as well as a raft of viral targets for which vaccines don’t yet exist.”

A statement released by CEPI said the concepts underlying UQ’s ‘molecular clamp’ vaccine technology showed great promise.

UQ COVID-19 vaccine team member Eve Radunz.

Images: Glenn Hunt

VACCINE TIMELINE

2012

Keith Chappell (pictured left), Dan Watterson and Paul Young team up on research that aims to provide stability to the viral proteins that are the primary target of immune defence – leading to the ‘molecular clamp’ invention.

2012–2017

The trio (with a steady stream of students) accrue data to assess the utility of the molecular clamp platform for a range of viruses – including RSV, influenza, Ebola, Nipah virus and MERS.

MARCH 2018

UniQuest files an international patent application for the ‘molecular clamp’ platform. The patent is published in October 2018.

DECEMBER 2018

A UQ-led consortium is selected by CEPI to create rapid-response vaccines, using the patented ‘molecular clamp’ platform technology. To prove the technology, the UQ team were asked to generate three separate vaccines, choosing influenza, RSV and the coronavirus MERS as an emerging pathogen.

31 DECEMBER 2019

Reports emerge of a mysterious pneumonia in Wuhan, China.

10 JANUARY 2020

The UQ team has the first formal meeting with CEPI to discuss the novel coronavirus, and they get to work the next day. By 24 January, CEPI announces it will support UQ to rapidly develop a vaccine using the ‘molecular clamp’ (a day before Australia’s first confirmed case).



MESSAGES OF SUPPORT

“Advance Queensland is proud to have been part of the UQ COVID-19 vaccine journey. The fact that the UQ team developed a vaccine candidate, validated in pre-clinical and early clinical trials to be safe and eliciting a good immune response, demonstrates that their molecular-clamp platform technology works. It was a big ask to develop a vaccine against a complex disease like COVID-19 in a few months, and the team achieved a lot in a short time. They not only achieved that, but brought Queenslanders along the journey, inspiring people to consider science as a career. That’s a big deal and worth celebrating. It shows the strength of impactful Queensland science. And we should all be proud of that.”

Dr Sarah Pearson, Deputy Director-General, Department of Tourism, Innovation and Sport

“I just wanted to pass on our huge appreciation to the monumental efforts made by the UQ team on this project. I’ve had many of our team members reach out to me, keen to pass on their support to you all at this time. We remain steadfastly proud of having been able to assist this important research project.”

Matthew Hart, Head of Public Relations, The Lott, Donor

“The team at the Paul Ramsay Foundation remain very proud of the work undertaken by the UQ vaccine team, and are pleased we could support the project. Like all great research, the advances achieved by you and the UQ team will find their time to shine. The underlying new knowledge from the vaccine development has yet an important contribution ahead.”

Professor Glyn Davis AC, CEO, Paul Ramsay Foundation, Donor

“RACQ always backs Queensland and we’re proud of our organisation’s contribution to the endeavour, and the matching funding contribution from our members. We congratulate the UQ team on their efforts and know they will continue to lead the world in medical research.”

David Carter, CEO, RACQ, Donor

“We share the UQ team’s disappointment and want to acknowledge the dedication of everyone who put so much work into this vaccine research and development. Australian scientists are among the best in the world and we need you to keep working because what you do can make a difference for everyone.”

Glencore, Donor

“I was hoping that UQ would succeed and come out early with the vaccine. I know that our scientists have worked very hard and have done their best.”

Loh Hoon Sun, Donor

UQ’s COVID-19 vaccine project co-leader Professor Paul Young talks with project director Professor Trent Munro.

Images: Anjanette Webb

“CEPI is committed to continuing to work with UQ to resolve this issue so that the platform can be used to develop vaccines against other diseases in the future.”

With the underlying approach now confirmed – that the clamp is effective, it stabilises viral surface proteins and elicits the right type of immune response in a clinical trial – this opens the door for the team to look at how it could be used for other viruses. With the HIV clamp data, they also now have a benchmark to compare, so they will know quickly what good looks like.

“The project demonstrates the clinical trial process and scientific methods can withstand the pressures of speed, and that’s really important, because one of the big debates

has been whether vaccine development is progressing too quickly and cutting corners,” Professor Munro said.

Project co-leader Associate Professor Keith Chappell said the team can look back with pride at how they banded together with the weight of the world on their shoulders.

“Especially during the first lockdown, when the disease was so unknown and everyone was at home feeling completely helpless, watching the death rate rise and hospital wards filling up, to be able to go into work and feel like I was doing something to help – actually contributing – I felt very lucky to have that.”

Professor Young said that the enormity of the task at hand was never far from the researchers’ minds.

“We all have our own strategies to cope, but don’t get me wrong, every day we’ve been feeling the weight of the world’s expectations,” he said.

“We are proud that UQ has been shown to have the talent, collaborations and technology to make a real difference in this crisis. We’ve been humbled to have been part of the collective scientific effort working towards a common goal.”

CEPI had provided significant funds to set up the rapid UQ vaccine pipeline. The Queensland Government provided \$10 million in Advance Queensland funding for the vaccine development, while the federal government contributed \$5 million. More than \$10 million was raised from over

2600 philanthropists and generous members of the public.

Professor Young said the researchers were blown away by the response.

“The ongoing community support has been one of things that has propelled the team forward this year and kept spirits high,” he said.

“The progress we’ve made, and the speed at which we’ve been able to work, shows what happens when people get behind a scientific project.”

“In the end, it wasn’t about whether the vaccine was going to work or not; it was about the impact of diagnostic interference, and for a complex disease like HIV that was ultimately the barrier for progression.”

TRACK THE PROGRESS

To view the full timeline of how the UQ vaccine was developed, visit **contact-magazine.uq.edu.au**.



8 FEBRUARY 2020

UQ creates a bold plan to accelerate vaccine development and manufacturing. To progress the plan, UQ needs to raise \$23.5 million.

12 FEBRUARY 2020

CSL provides UQ with their proprietary adjuvant, MF59, and partners with UQ on pre-clinical development of the vaccine.

14 FEBRUARY 2020

The UQ team selects its lead vaccine candidate.

5 JUNE 2020

UQ, CEPI and CSL enter into a landmark agreement to manufacture and develop the vaccine, if trials are successful.

18 JUNE 2020

The Queensland Government announces the recruitment of 120 Queensland residents to volunteer in Phase 1 trials for UQ’s COVID-19 vaccine.

26 AUGUST 2020

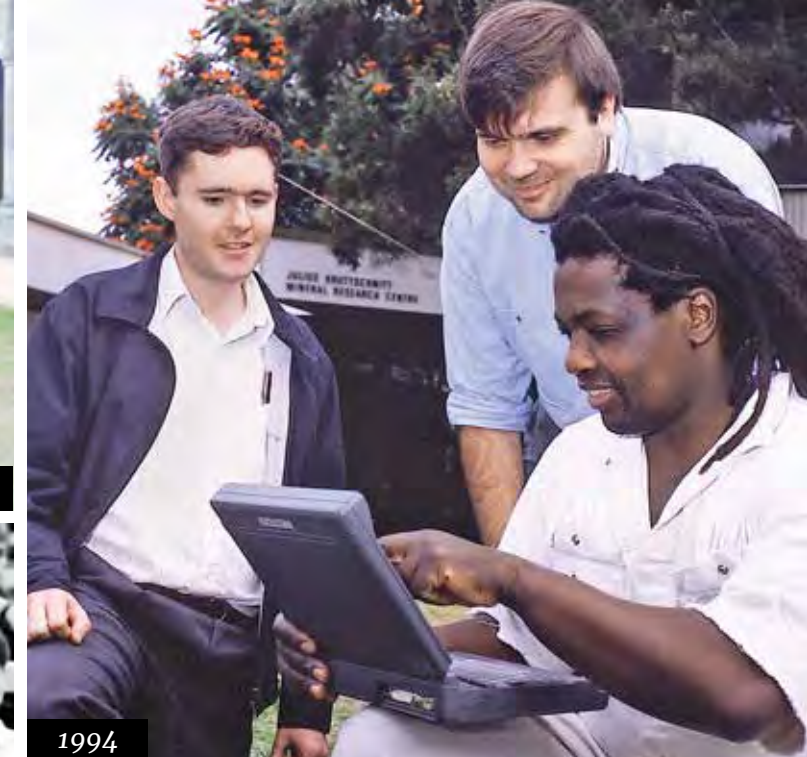
UQ vaccine scientists report encouraging results from pre-clinical testing, and the call goes out for more volunteers to join an expanded Phase 1 trial to test the vaccine’s safety among older people. The trial expanded to 216 participants.

27 NOVEMBER 2020

Interim data from the Phase 1 clinical trial is ‘unblinded’, and analysis confirms that the vaccine is generating a safe and robust immune response.

11 DECEMBER 2020

Following consultation, the decision is made to not progress the UQ COVID-19 vaccine candidate to Phase 2/3 clinical trials.



Back in time FOR CLASS

From the buildings to the transport to the fashion, UQ has changed dramatically since teaching first began in 1911. *Contact* heads to the photo archives to show you just how much things have changed over the past 110 years.



- 1919: N.F. George on a penny-farthing bicycle at UQ.
- 1928: Nora Holdsworth, James Lowson and Dorothy Hill at a UQ geology excursion in 1928. Hill was a pioneer in geological and paleontological research and Australia's first female professor.
- 1962: Students cross through the Great Court on their way to classes.
- 1974: Students hanging out in the Great Court.
- 1986: A packed lecture in the Parnell building.
- 1991: Members of the University Drama Society during O-Week.
- 1994: Professor Gideon Chitombo (with laptop) with mineral research colleagues.

Images: Fryer Library University of Queensland Photograph Collection / University of Queensland Archives

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To see more images of UQ through the years, view the *11 Decades in 11 Weeks at UQ* photo series at contact-magazine.uq.edu.au.



In the line of DUTY

Fred Bradford has spent his career on the secret frontline of US national security operations. As a Special Agent with the US Federal Bureau of Investigation (FBI), he's thwarted spies, served in active warfare and has brought terrorists to justice. After more than 20 years of service, the UQ MBA graduate has handed over his badge, and caught up with *Contact* to reflect on his career.

By Zoe McDonald

The morning of 11 September 2001 was meant to be another ordinary day in New York City. People enjoyed a cup of coffee with their breakfasts, hugged their families goodbye, and took the subway into work as they would any other Tuesday morning.

That all changed at 8.46am when a passenger plane carrying 92 people crashed into the World Trade Center.

There are few events that remain as clear in the world's memory as the September 11 terrorist attacks. People remember exactly what they were doing when it happened, and can recall – in detail – the precise feeling of watching the footage as it came streaming in across the news.

The disbelief was palpable. America was a nation in grief and alive with outrage, and it became very clear, very quickly, that these attacks would be met with the full force of the pain they had caused.

For UQ graduate and FBI Special Agent Fred Bradford (Master of Business Administration '93) – and for the world – things changed in a moment, and they would remain changed forever.

"My mother phoned from northern Virginia and woke me about 6am, telling me to turn on the TV. Within seconds I was watching a live broadcast of the burning north tower of the World Trade Center when another jet hit the south tower," Bradford told *Contact*.

"It was clear that instant this was a coordinated attack. The thought then was how many more aircraft were still to hit, and where. I threw on some clothes, sped to the FBI office, and walked into a room being hastily set up as a crisis centre just as the Pentagon was hit.

"When I later spoke with my mother that day, she eerily recalled hearing the enormous roar of that flight at low altitude as it headed for the Pentagon."

THE POINT OF NO RETURN

Before the September 11 attacks, Bradford worked in the financial crime department at the FBI.

But with the shift in US national security priorities following the attacks, he – like many of his colleagues – was immediately redirected into counter-terrorism. He would never return to his old department for the remainder of his career.

"September 11 and the days afterwards were arguably some of the most visceral I've

experienced in my life. On September 10, 2001, I was a criminal investigator working bank robberies, embezzlements, casino fraud and healthcare fraud. That all changed that Tuesday morning," Bradford said.

"After the attacks, I never worked a criminal case again. I went straight to national security and counter-terrorism, as did about two-thirds of the staff in our office.

"Literally, through the course of one day, the national priority when it came to law enforcement changed to counter-terrorism, and I would argue has stayed very heavily focused on it since."

September 11 remains the single deadliest terrorist attack on US soil, with 2977 fatalities and more than 25,000 injuries.

At 8.46am, American Airlines Flight 11 was crashed into the World Trade Center's North Tower. United Airlines Flight 175 hit the South Tower at 9.03am. At 9.37am, American Airlines Flight 77 flew into the western façade of the Pentagon. United Airlines Flight 93 crashed into a field in Pennsylvania at 10.03am after crew and passengers overwhelmed the hijackers.

Bradford lost one of his closest friends in the attack on the Pentagon.

"Dan Shanower was a Navy commander. He was at the Navy command centre at the Pentagon when it took a direct hit from the jet," Bradford said.

"Over the next several days, we eventually found out that he was among the dead, and that was very difficult. It was very, very personal. My mother attended his burial in Arlington National Cemetery and I spoke at his Memorial Service in his hometown of Naperville, Illinois."

In the days following the disaster, the FBI discovered that all four pilots and other members of the hijacking group had been in and out of Las Vegas multiple times in the months leading up to the attacks. Bradford, who was stationed in Las Vegas at the time, was immediately funnelled into the project.

"The hijackers had taken multiple long-distance flights across the country to Las Vegas and stayed a couple of nights each time. We think it was exploratory on their part," Bradford said.

"We believe they were trying to understand how the protocol played out on the aircraft: when the best time for attacking the cockpit would be, the rhythm of a transcontinental flight."

In the following months, the FBI trawled through thousands of phone calls and emails ►

“Like all of us responding that night, I had no idea what we were going into. I thought all hell had broken loose.”

in an effort to unravel this complicated international plot.

In the autumn of 2002 – a year after the attack – Bradford was called into FBI headquarters for a temporary job in telephonic analysis.

“Even then, we were still working the phone numbers of the September 11 attackers and greater al Qaeda syndicate,” Bradford said.

“We went as far back as we could go, well into the 1990s, just to figure out how long this plot had been cooking.”

At the same time as the US was refocusing its national security efforts on counter-terrorism, the FBI moved to ramp up its domestic operations in counter-intelligence.

Prior to the attacks, there were few counter-intelligence operations in Las Vegas, as most were focused on cities like New York and Washington D.C., where the majority of embassies and consulates were housed.

This quickly changed after the September 11 attacks.

“After September 11, we decided to look at foreign counter-intelligence in Las Vegas, as well as our increased counter-terrorism operations, and it was unbelievable how much foreign government-directed activity was happening in southern Nevada,” Bradford said.

WHEN ALL HELL BROKE LOOSE

On the evening of 1 October 2017, Bradford had been trimming a rosebush in his garden when his wife received a text from a friend about automatic gunfire at the Route 91 Harvest music festival on the Las Vegas strip.

As Murphy’s Law would have it, Bradford’s FBI car was at the mechanic’s at the time, with all his body armour and long-barrelled weaponry. All his loan car had was a set of lights and a siren.

Bradford grabbed a spare FBI raid jacket and a shotgun from his house and sped down to the strip with sirens blaring, unaware of the horror he was about to descend on. He later found out he had arrived only 10 minutes after the final shot.

“What I went into was absolute chaos,” Bradford recalled.

“I could see people being thrown into the back of pick-up trucks to try to get them to hospitals. No one could have conceived this as being one shooter from one location.

“Like all of us responding that night, I had no idea what we were going into. I thought all hell had broken loose.”

The shooting at the Route 91 Harvest music festival remains the deadliest mass shooting in US history, with 59 victims and 868 people injured. The specific motive of the shooter – Stephen Paddock – remains unknown.

By the time Bradford returned to the FBI offices by 5am the next morning, the FBI had already established a fully operational command post to investigate the shooting.

Over the next 19 days, Bradford – who managed the post – coordinated the logistics of the 1000 or so FBI personnel coming in and out of Las Vegas as the bureau sought to understand how such a tragedy had occurred and if other perpetrators were involved.

“The shooter was one of those very meticulous people. Over the course of 10 to 11 months, he had methodically planned the attack,” Bradford said.

“About a week prior to the Route 91 Harvest festival, he’d taken all of his weaponry, ammunition and tools into a room at the Ogden Hotel in downtown Las Vegas.

“Investigations revealed that he may have originally targeted the Life is Beautiful Music and Art Festival. Because of his flawed thinking – and thank goodness it was flawed – he couldn’t book the room he had absolutely obsessed about at the Ogden, which would have overlooked the entire audience of the festival.

“So, he took the stuff back down from the Ogden and then ran it up to the Mandalay Bay hotel a week later to do what he did.

“If he’d been in the Ogden, he would’ve had a much closer shot – perhaps 100 to 150 yards with more than double the audience size, as opposed to the 300 to 400 yards from the Mandalay Bay. We think the body count may have been three or four times higher.”

ENTER THE WAR ZONE

Bradford’s work in counter-terrorism also saw him undertake overseas postings, including several months engaged in active warfare with the US Army.

Bradford and the other agents he was posted with in Iraq between January and May 2003 established the first FBI headquarters near the airport in Baghdad as the US rushed to collect and process intelligence.

Fred Bradford during one of his postings with the US Army (below), at a Las Vegas memorial site for the Route 91 Harvest music festival shooting victims (right), and FBI investigators gather outside the music festival after the shooting in 2017 (inset).

Inset image: MARK RALSTON/AFP via Getty Images..



For Bradford, some of the intelligence hit too close to home.

“There was a trove of photographs we were going through that were coming out of the Iraqi Intelligence Service headquarters, and I was seeing pictures of people standing on the Las Vegas strip,” Bradford said.

“These are obviously people who are connected to the Iraqi Intelligence Service and there they are, a year or two before, right in my home town.”

SKILLS FOR LIFE

Bradford retired from the FBI in July this year. And after more than 20 years of career achievements, there’s still an audible nostalgia in his voice as he discusses his time at UQ during the 1990s.

He accepted his offer to study a Master of Business Administration (MBA) at UQ in 1991.

“I was the newest, big-mouthed Yank in the class at the time, and so those knuckleheads

[in my class] elected me President of the MBA Students Association in 1991–92. We had this really great committee, so we could pursue all sorts of neat ideas,” Bradford said.

“The MBA teaches you that the financial element of anything is hugely important. International terrorists and spies can’t function overseas without money, and I learnt a lot about how international movements of money take place through the MBA program at UQ.

“When I had to build teams in the FBI, I’ve always fallen back on what I learnt in that MBA program and the types of people to surround yourself with.”

UQ MBA PROGRAM

To learn more about the UQ MBA program, visit business.uq.edu.au.



Stepping up to the CHALLENGE

Professor Deborah Terry AO joined UQ as its new Vice-Chancellor and President in the midst of enormous disruption caused by the pandemic. Here she reflects on 2020, the response of the UQ community to COVID-19, and the role of universities in pandemic recovery.

You only need to stop and reflect, momentarily, on what you were doing this time last year to realise that 2020 has been something of a bewildering whirlwind.

The confounding nature of 2020 is best summarised by the way that it has warped our sense of time. Although this year seems to have gone on forever; it's equally hard to comprehend that it's now almost over!

When I originally accepted the appointment as UQ's next Vice-Chancellor in December 2019, I didn't in my wildest imagination consider that crossing the border from Western Australia to Queensland might become a barrier to me taking up the position.

In the end, thankfully, the border restrictions between Western Australia and Queensland lifted and my move back to Brisbane, in late July, became a relatively routine logistical challenge.

My first day as UQ's Vice-Chancellor, on 3 August, coincided with the start of second semester. This was a happy occasion for staff and students alike, because it was the first time in over four months that we had been able to have face-to-face teaching on our campuses.

So, I was fortunate to return to UQ at a time when the most disruptive impacts of COVID-19 had already passed for Queensland. Nonetheless, I have been struck, repeatedly, by the resilience of the UQ community as we have collectively negotiated our way through the many uncertainties and challenges created by the pandemic.

PIVOT TO ONLINE IN SEMESTER 1

Prior to my return to UQ, there was the incredible effort made by our teaching staff in Semester 1 to suddenly pivot to online learning. In the space of just one week – from 16 to 20 March – UQ's staff worked incredibly hard to transition 1529 courses to online delivery. By doing so, they kept our students engaged in learning – and progressing towards graduation.

In the weeks that followed, as the nationwide lockdown came into effect, around 6700 UQ staff quickly shifted to working from home, while another 1300 staff remained on campus to maintain our grounds and facilities, and ensure the continuity of essential research.

SUPPORT FOR OUR STUDENTS

The UQ community also pulled together to provide much-needed support for the thousands of students who were facing hardship because of the pandemic. We established the COVID-19 Student Emergency Support Fund, with the University matching every dollar donated by our staff and donor community to immediately double the impact of their giving. In total, \$1 million in grants was distributed via the Fund to 1300 students facing hardship.

Meanwhile, an army of staff volunteers led by Student Services also played an important role in alleviating hardship by providing more than 9000 food hampers and 28,000 free meals to students this year.

As a globally connected university, we were expecting around 17,000 international students on our campuses in early 2020. However, as international borders closed, many of these students couldn't make it into Australia.

Despite this, most of our international students have continued with their studies this year. In Semester 2, for instance, around 7500 of our students have undertaken their studies, purely online, from an offshore or interstate location. Given they couldn't be here with us on campus, we established a UQ Virtual Village that enables our offshore students to connect with their fellow students, online.

UNIVERSITIES AND PANDEMIC RECOVERY

As we approach the end of this very disruptive year, it is comforting that Australia – and Queensland, in particular – has had real success in slowing the spread of the virus.

This is largely due to the fact that university-based researchers and scientists have been visible in the media on a daily basis, sharing public health advice.

This expertise has filtered into our public discourse – and it's influenced the community's very positive response to the COVID-19 restrictions and the public health measures.

Our researchers are leading the fight against the virus in other ways, too. For instance, our medical scientists are working with clinicians to develop better treatments for COVID-19. UQ researchers even developed a method of detecting viral fragments in wastewater as an early indicator of community outbreaks of the virus.



And, of course, we also have a brilliant team at UQ who spent most of 2020 developing a very promising COVID-19 vaccine. Thanks to the support of UQ's incredible alumni and donor community, as well as Government and industry partners, their candidate was fast-tracked at a record rate and successfully passed Phase 1 clinical trials. The exceptional efforts of everyone involved cannot be understated.

When we do, eventually, emerge from the other side of this pandemic, I'm convinced that UQ – and Australia's universities, generally – will play a vital role in driving Australia's economic recovery in two really significant ways.

First, the university sector will play an important role in supporting our graduates with lifelong learning, so they are gaining the skills required for the future of work. That means offering more skills-based learning opportunities, such as micro-credentials and executive education, to enable our graduates to continuously adapt to changing workplace needs. The other essential contribution that universities will make to Australia's economic recovery is by partnering closely with industry and government to cultivate Australia's innovation ecosystem. There is growing recognition that our home-grown research and development (R&D) has the potential to generate entirely new industries and jobs for Australians. By creating that collaborative culture and a more effective innovation ecosystem it will enable us to translate more of our ground-breaking R&D into commercial and societal benefits for the whole nation.

HAPPY NEW YEAR

In the midst of managing our way through the daily disruptions created by the pandemic, it has been difficult to conceive that 2020 has also ushered in a lot of change that will ultimately prove to be beneficial for Australia and the wider world. Perhaps next year we will gain the space and the perspective to recognise some of those benefits.

From my perspective, it's been uplifting to be welcomed back into the UQ community this year. I'm especially thankful to our staff and the alumni community for the warmth that you've shown me – and the generosity that you continue to show towards your alma mater. Thank you!

My hope for 2021 is that the whole world gets access to multiple effective vaccines and that these vaccines bring the pandemic to a swift end. I hope we can re-open our borders; re-unite with our loved ones; and return to enjoying all the fine things in life that we've missed this year – including travel, the arts, sport and face-to-face learning.

So, I genuinely mean it when I say: Happy New Year!

Prior to commencing as UQ's Vice-Chancellor and President on 3 August 2020, Professor Deborah Terry AO served as Vice-Chancellor of Curtin University in Perth for six years. Professor Terry has a long association with UQ, having worked in a range of academic and leadership positions at the University from 1990 to 2014.

CHAOS RULES *as new era emerges*

UQ graduate Elliot Stein analyses what a Joe Biden presidency will mean for Australia.
But first, the President-elect has to replace Donald Trump in the White House.



If the weeklong 'election night' felt chaotic and unsettling, it will be nothing compared to the weeks ahead as Joe Biden prepares to be sworn in as US President. The transition process – once governed by laws, norms and good faith – is being sidelined and the US will start 2021 weaker and more divided than ever.

Australia and the liberal democratic world should be set to benefit from a more stable, more consistent ally and returned world leader under the presidency of Joe Biden. However, the chaotic outgoing Trump administration,

Congressional obstructionism and ongoing stoking of domestic unrest will distract and hamstring the new US Government.

For Australia, the challenge is capturing the attention of the new administration and overcoming some self-inflicted headwinds.

President-elect Biden faces the greatest concurrent set of threats of any incoming president in US history. They fall into four key areas as he prepares to enter the Oval Office in January 2021.

First, the health threat of COVID-19 that rages and spreads exponentially heading into its third major peak this winter. Second, the economic crisis ravaging the country, with disproportionate impacts on the most vulnerable citizens and a clear inequity towards people of colour.

Third, the legal and political shenanigans of President Trump throwing sand in the gearbox of a peaceful transition. Finally, the domestic and international security threat caused by the current administration's dismantling of the public service and active withdrawal of American leadership globally.

From the halls of the United Nations to the seas of the South Pacific, countries are relying on a return of assertive leadership from the US, especially in places where non-liberal democracies like China and Russia have capitalised on a vacuum.

Early priorities for the incoming Biden administration range from the practical to the rhetorical as part of an overall restoration of US global leadership. As President, Biden has said he will move to re-join the Paris Climate Agreement and the World Health Organization. Facing towards Europe, Biden will need to urgently reaffirm a commitment to NATO, as well as try to piece together the Iran Nuclear Deal and normalise fractured relationships with allies and partners around the world.

For Australia and the non-China Asia Pacific region, while we can be the beneficiaries of a calmer and more normative policy approach, we should not expect to be the focus of the next four years under Biden.

The days of the American pivot to Asia witnessed under President Obama are unlikely to materialise as a top priority, unless there is a concerted effort from the Australian Government to court the new administration. The pressures for Biden are significant. His four policy pillars during the transition period to the White House are COVID-19, economic recovery, racial equity and climate change. Three are domestic and one is now out of kilter with the Australian Government.

Prime Minister Scott Morrison made a deliberate strategic choice to put many eggs in the Trump basket, and the Australian Government's frequent siding with the Trump administration in global forums to slow progressive action on climate change is now wildly out of step with the new administration.

The failure of the Madrid climate talks in 2019 largely fell at the feet of aggressive behaviour from Australia, China, the US and Brazil – even while bushfire smoke smothered Sydney. Noticeably, Biden's 'read out' of his first formal conversation with Prime Minister Morrison included references to working on climate change, a topic downplayed in the Australian Government's description of the call.

The Australian Government has already moved to invite Biden to attend an event commemorating the anniversary of the ANZUS Treaty in Australia next September. On the face of it, this should be a positive step. However, the Prime Minister's decision to announce this invite to the media before raising it with the President-elect – or working on the event via diplomatic backchannels – was striking.

An early visit from Biden would be a boon for the region and for Australia. Yet not all presidential visits align with

ABOUT THE AUTHOR

Elliot Stein (Master of Public Policy and Governance '18) leads Hawker Britton's practice in Queensland, where he provides strategic advice to business on Queensland Government operation. He has more than 11 years' experience guiding government and business through major crises and public policy reforms – including as Chief of Staff in the Palaszczuk Government from 2015–17, and as a Senior Adviser in the Rudd and Gillard Governments. Stein has worked in New York City for The Glover Park Group, a strategic communications firm where he worked for corporate clients and foreign governments with US interests, and has also served as the Director of Public Diplomacy to the Australian Consulate-General.

the policy or political goals of the government of the day. The President-elect's former boss, President Obama, felt comfortable enough holding a summit of local youth on the sidelines of the Brisbane G20 in 2014 to deliver a powerful message in support of climate change, despite the opposition of the Abbott Government.

Australia and the US are firm allies and close friends at a social, structural, institutional and military level. This hasn't changed under Trump and it won't change under Biden. However, with a rocky transition and extreme domestic pressures on the new President, there will need to be an uphill effort to make real progress and engagement in the region.

Biden is focused on restoring the 'soul of the nation' and 'restoring American leadership.' A business-as-usual approach from Australia just won't cut it with these lofty goals.

Australia needs to manage relationships with our foremost security ally and number-one trading partner in the form of the US and China. It can't be understated how bipartisan the approach is of a more 'muscle up' engagement with China among US policy makers. At the heart of the US beef is a belief that China seeks to remould the global order to be more in its own image, rather than the post-Bretton Woods age. As the US re-enters multilateral organisations and trade agreements, Australia may find itself being drawn further into siding with the US as it seeks to reassert normative international standards.

Under Trump, much of the positioning towards China has been rhetorical, leaving a large power vacuum on the global stage. Accordingly, Australia has been able to largely defer significant questions of choosing between an aggrieved and reflexive China and an assertive US.

With a more substantive President backed by bipartisan foreign policy elites, and the public at home, that approach could soon end.

LEARN MORE FROM UQ EXPERTS

For more expert analysis on a range of topics, visit contact-magazine.uq.edu.au.



Margaret Thurgood (middle of back row) at the Freshers Welcome at UQ in 1938, an occasion where dressing up in academic gowns was required.

SCIENCE *by nature*

Margaret Thurgood was a trailblazer in the agricultural science industry at a time when few opportunities were offered for women in the workforce. The 100-year-old graduate sat down with *Contact* to reflect on her time at UQ and her extraordinary life.

By Suzanne Parker

Inspired by her naturalist grandfather and scholarly father, UQ graduate Margaret Thurgood had no choice but to go to university, even though this was not usual for women in the 1930s.

"I have always liked science – particularly chemistry and biology," said 100-year-old UQ graduate Margaret Thurgood, nee Broadbent (Bachelor of Science '39), when asked why she went to university at a time when relatively few females did so.

"I think it stemmed from my grandfather, Kendall Broadbent, who used to collect specimens for the Natural History Museum in London as well as the Australian and Queensland Museums, among others.

"He was always travelling on expeditions around Australia and Papua New Guinea, exploring and observing nature. He even had a bird and fish named after him, the *Dasyornis broadbenti* (*Rufous bristlebird*) and the Broadbent's frogfish (*Batrachomoeus trispinosus*). He really inspired me.

"And then my father, Joseph Broadbent, a barrister and parliamentary draftsman, was always a scholar, so I never thought of anything else."

Except she did.

"Oh yes, around the age of 14 I decided that I wanted to be a hairdresser, and so I told my father I'd like to leave school. He was broken-hearted but told me it was my decision – he didn't push me either way.

"However, by the end of the school holidays, I thought I'd be too lonely if I left school early and so I went back. I just did hairdressing on the side instead; I've always liked doing hair."

The young Somerville House dux had no particular career goal in mind when she enrolled at UQ in 1937. She decided that she would be happy with whatever she could get. In the meantime, she made the most of every opportunity and enjoyed the many social aspects of life as a student.

"We had a lot of tennis parties, cinema outings and dances back then, and there was always singing around the piano as well as sport to watch or play," she said.

"We also seemed to do lots of fundraising – I met my future husband when selling him a sausage roll!"

Of course, there was also hockey practice before lectures, meeting friends on the tram into and out of the city, attending meetings of the Evangelical Union, and mingling with fellow students at lectures and in the lab.

But the absolute social highlight of the year was Commem Week.

"We spent months preparing for this week of celebration. We had to learn so many songs and prepare costumes for our floats in the University Procession that wound its way through the streets of Brisbane.

"I remember dressing up as a baby in 1938 to acknowledge the opening of the new Women's Hospital, and I can still remember the words we had to sing about our own particular areas of study.

"But the crowning glory was the Commem Ball, held at City Hall: I loved it!"

However, university wasn't just about the social life.

"The first thing I had to do when I started in science was to be given a toad and then mount its skeleton on paper," Margaret said.

"The Bachelor of Science was a set course back then. We did four subjects in first year, three in second and two in third year.

"In first year, we had to take physics, which I found difficult because I hadn't studied it before – girls had a different syllabus at high school and physics was only offered to boys – but I ended up getting a Pass+."

"Everyone said that no-one got straight through second year because it was a hard year, and that was true for me: I had to sit for a post-exam in Physiology early the following year but, luckily, I passed.

"During the degree, we had end-of-year exams and no ongoing assignments except one major essay (that was enough!): mine was entitled 'A comparative review of enzymic factors controlling calcareous deposition'. I remember one of our exams having many questions about birth because the wife of the professor setting it had just had a baby!

"We were expected to keep up with our own private study, and we also had two week-long field excursions to Caloundra and Binna Burra, where we were marked each day for collecting specimens such as worms and



Margaret Thurgood (third from right) heading to the cloakroom on her first day of university in 1937 (top image); and Margaret with a friend from the Veterinary Science School at the Animal Health Station in Yeerongpilly.

insects. These excursions were great fun and very social. General science classes were held at George Street and we often combined with dentistry, engineering and medicine students because there were not that many people to fill the lecture room.”

She recalls having to dress nicely to attend university, and wearing academic gowns for special occasions.

By the end of 1939, Margaret had completed her Bachelor of Science and was soon to be engaged to Ken Morton, a dental student she had met on campus. Life as she knew it was about to change completely.

“Straight after my degree, I got a job at the Queensland Museum, where I had to identify specimens as best I could,” she said.

“I also dissected the brain of a strange-looking creature, a ceratodus, which then went on display.

“It was a bit of a dead-end job, so when the Minister for Agriculture and Stock approached my father six months later saying, ‘Your daughter has a science degree: would she like to come work in my Department as Assistant to the Parasitologist?’, I jumped at the chance. My main role would be to conduct a survey of parasites in Queensland poultry.

“Unfortunately, the parasitologist was not so happy because women tended to leave the job, so he tried to put me off early by making me go through a pig’s gut. It was the slimiest, most parasite-riddled thing I’d ever seen in my life, but I did it.”

After this inauspicious start, Margaret – soon to become Mrs Morton – remained at the Animal Health Station at Yeerongpilly until 1943, only leaving to join her husband in Sydney, where he had been posted by the Air Force. Despite the marriage bar for female staff in the Public Service, she had been able to stay on beyond their 1942 wedding because the parasitologist had gone off to war and there was no-one else to replace him.

When husband Ken was later deployed overseas, Margaret returned to Brisbane and

moved in with her parents at West End to await the birth of her son, Roger, in 1944.

So, what was it like living through a world war?

“I always worried about my husband getting killed, of course, but otherwise I managed,” Margaret said.

“We had coupons for food and clothing and some restrictions on activities, but we certainly had more freedom then than we have had in the current pandemic.

“Before I married, I joined the Baptist Girls War League and helped organise entertainment for the soldiers; I also cooked them lots of dinners. Later, I joined the Voluntary Aid Detachment, where one of my jobs was to run from Yeerongpilly to Yeronga when the air-raid sirens went off. It was a busy time.”

After the war, the couple rented at West End while Ken established his dental practice in Queen Street (Brisbane). They later built a house at Jindalee and also expanded their family with the adoption of baby Suzanne. Margaret filled her days with mothering and volunteering duties – mostly for the local church and school – finessing her cake-making skills along the way. Holidays were spent at their Gold Coast beach house.

“We had a wonderful life, until Ken died from pancreatic cancer on my 49th birthday,” she said.

After spending a couple of lonely years at home, in the early 1970s she decided to contact the Department of Primary Industries to see if there was anything she could do for work.

“Fortunately, when I was called in for an interview, I realised that I knew the panellist from my UQ days and, on the basis of my university results, he offered me a job straight away in the agricultural chemistry lab.”

Around this time, Margaret also caught up with old family friend Jack Thurgood, whom she later married, and was once again hit with the public service marriage bar.

This time, she had to resign from her job immediately, but she didn’t really mind as it gave her time to travel with her new husband, take up a range of hobbies and charitable work, and care for her mother – who lived with them until she died at the age of 93.

The pair travelled to England, Europe, America, New Zealand, China, Israel, and Oberammergau in the Bavarian Alps, Germany, and remained active in the church community until Jack’s death in 1999.

So, is she glad of her university education, despite its limited effect on her career?



“Oh yes, I’m thankful I went to UQ because it was there that I discovered the Evangelical Union and what it means to be a Christian.

“I was a bit of a flibbertigibbet and I loved the social life, but I also learned a lot and, of course, I met my husband there and we were very happy. I’ve had an absolutely wonderful life and it all started there.”

“My father studied at UQ (Bachelor of Arts ’36); my son, Roger, studied dentistry at UQ (Bachelor of Dental Science ’67) as did his son, Greg (Bachelor of Dental Science ’95, Bachelor of Science ’00); and Roger’s other son, Rohan (Bachelor of Commerce ’94), studied there – so we have a great family tradition of UQ alumni.

“I can still remember going to the ceremony of the laying of the Foundation Stone by Forgan Smith at St Lucia in 1937: it was a big occasion.”

And does she have any tips for living a long life?

“No, not really. I have never smoked and only drink in moderation. All I can say is that I have learnt not to be as critical as I was when younger and I try to practise what I preach by being more understanding, patient, loving and forgiving. I read a lot and I have also tried to keep learning new skills – patchwork and quilting, quilling, china painting, choral singing, contract bridge and bowls are just some of the things I discovered in later life.

“You’re never too old to learn new skills.”

Margaret Thurgood holding her letter from the Queen, during the celebration of her 100th birthday in February 2020.

SEE MORE IMAGES

To see more images from Margaret’s time at UQ, read this article online at **contact-magazine.uq.edu.au**.



By Robert Burgin

When you ask Professor Tapan Saha about the pride he feels at UQ's giant strides in renewable and sustainable energy projects, there's a lot for him to consider.

That's primarily because he has been a UQ staff member since 1996, and in that time has witnessed a world of positive change, particularly in the past decade.

"I'm very proud, because when you look back, even just 10 years, Queensland as a state had very little renewable activity," Saha said.

"We're now at a stage where UQ can produce more energy than it needs, with the 64-megawatt Warwick Solar Farm, 3.3-megawatt Gatton Solar Research Facility, and 2.5 megawatts from the central St Lucia campus, making us energy neutral.

"A lot of people have contributed along the way – and I think previous Vice-Chancellor Professor Peter Høj AC deserves particular credit for his visionary direction. But for me to be able to say I've been involved since day one

on many of our largest renewable projects is something I cherish.

"I'm heartened to see our students and the wider community having access to the benefits of these facilities, not only to improve their everyday lives, but to harness the research, and understand more about meeting our needs for the future.

"There's a tremendous amount of happiness in the work we do because I know it will benefit students, consumers and ultimately the planet."

The UQ Warwick Solar Farm (pictured) was officially opened in July this year. The power generated at Warwick, in addition to what is being produced at Gatton and St Lucia, will make UQ the first major university in the world to offset 100 per cent of its electricity use with renewable power produced by its own assets.

The output of the solar farm will be about 160GWh per annum – the equivalent of powering more than 25,000 households, or reducing coal consumption by more than 60,000 tons.

The development of the solar farm isn't just an economic decision, with industry and government looking to UQ for expertise and leadership in renewable technologies.

In addition to being the leader of UQ Solar, Saha is supervising the 'Enabling the Queensland Power Systems of the Future' project, funded by the Queensland Government.

The project is developing new platforms to investigate the security of Queensland's power system and support the state's target of 50 per cent renewable energy by 2030.

Saha is also leading research at the UQ Industry 4.0 Energy TestLab, established in partnership with multinational Siemens, and receiving funding from the Australian Government. The TestLab will investigate protecting critical energy infrastructure through cyber security, and focus on power system analytics, energy management and microgrids, complementing UQ's state-of-the-art renewable energy laboratory.

"The reality is that climate change is genuine and Australia is doing well in building capacity for sustainability, but we must maintain high standards," Saha said.

"For businesses to invest the requisite money and attention in renewables – thereby making this a self-perpetuating concern – standards of research, technology and implementation need to be exceptional.

"Renewables are changing the world. Every place and every existing energy system has its own particularities but, day by day, we are learning more about each of these."

Saha said UQ students are receiving "unbelievable benefit" from the vast number of renewable energy projects and facilities being undertaken.

While the area of research presents plenty of challenges, it presents even more opportunities.

"The truth is our graduates are highly sought after, and I can immediately think of one particular organisation in Queensland that has nine UQ PhD graduates from my own research working in the power and energy space," Saha said.

"Our graduates are trained on operational facilities and are trained for real problems.

"Queensland has not commissioned a coal-fired power station since 2007 and, at some stage in the future, there will be a significant drop in the availability of fossil fuel-based electricity, which means more and more renewables will be in the system.

"UQ graduates are well positioned to lead us into the future on sustainable energy."

As Queensland has the highest per-capita penetration of rooftop solar PV facilities in the world – with half-a-million households already enlisted to capture solar energy – clear societal and environmental factors make UQ an ideal place to study the topic.

Faculty of Engineering, Architecture and Information Technology Executive Dean Professor Vicki Chen said the booming renewables sector offers a clear demand.

"Each year we enrol around 1000 first-year engineering students. Industry placement is integral for them and the opportunities in renewables are vast," Chen said.

"Many students have been fascinated to learn about UQ's moves into renewables, including the Warwick Solar Farm. The Master of Sustainable Energy and Master of Renewable Energy students also see it as a privilege to see these renewable energy assets up close and work hands-on with our own data."

RENEWABLE ENERGY AND UQ

To learn more about renewable energy and sustainability at UQ, visit eait.uq.edu.au.



Powering future LEADERS

Australia's renewable energy research capacity has been boosted with the completion of the UQ Warwick Solar Farm in 2020. UQ is also investing in future leaders in this space, with students gaining valuable experience that will help Queensland reach its renewable energy targets by 2030.

JOIN THE CONVERSATION

To have your say and read more responses, visit contact-magazine.uq.edu.au.



Rising from the ASHES

After Australia's devastating bushfires last summer – and predicted floods this summer – *Contact* asked a range of UQ experts: how do we help the country recover from bushfires, and how do we best prepare ourselves for future natural disasters?

ENVIRONMENT

Professor Martine Maron
School of Earth and Environmental Sciences
Faculty of Science

The impact of the bushfires on hundreds of already-threatened species only makes it even more challenging for those species to recover. Emergency responses helped to rapidly assess the damage, and efforts are underway to conserve remaining populations – from protecting refuge habitats that escaped the fires, to bringing individual animals into captivity if the remaining habitat cannot support them.

Encouraging habitat restoration and stepping up management of feral predators and weeds – both of which are advantaged by fire – is crucial. But, in the long term, we need a different relationship with our environment.

We need to manage landscapes to retain water and reduce flammability. We need to halt the ongoing loss of habitat so that there is enough to act as refuge from events like this. Most of all, we need urgent emissions cuts to limit the severity of climate change.

What we are living through – the worsening of fire weather conditions – was predicted and, although it seems unimaginable, it will become worse still if we do not act.

TOURISM

Associate Professor Gabby Walters
School of Business
Faculty of Business, Economics and Law

The tourism sector must work closely with emergency services to ensure disaster management plans incorporate the safety of local communities, as well as tourists. Future planning and preparedness not only enables destinations to act quickly in the event of a bushfire emergency, but reassures potential visitors that the tourism industry has their safety and wellbeing at the forefront of planning efforts.

In 2019–20, fires impacted some of the nations most prized tourist destinations during the peak holiday season. Media coverage of the fires attracted necessary, yet detrimental, attention to these destinations. Now is the time for vulnerable destinations to consider their media management plan and nominate an informed industry spokesperson, who will be available for media consultation should a bushfire occur.

The media also needs to be educated in terms of the damage their reporting can cause to the tourism-reliant economies of disaster-affected destinations.

The tourism industry has been heavily impacted by COVID-19, yet – due to international border closures – regional tourism destinations in particular can expect relatively higher domestic visitor numbers over the upcoming holiday period. Domestic tourists are keen to assist the Australian tourism industry get back on its feet, hence those regions affected by last year's bushfires should be preparing for a busy summer. It is important that all community stakeholders are prepared for this.

FARMING

Professor Kristen Lyons
School of Social Science
Faculty of Humanities and Social Sciences

The impacts of Australia's 2019–20 fire season devastated ecologies and communities. At least 7.7 million hectares were burnt, and the lives of an estimated 1 billion creatures were lost. Australia's summer bushfires were fuelled by the hottest and driest conditions ever recorded. With climate change intensifying extreme bushfire events, last year's fire season and its devastating losses provide a window into our future.

Australian food and agriculture industries – and the communities that support them – were among those devastated by the bushfires. This included widescale destruction of farms, crops and farm animals, as well as loss and damage to critical farming infrastructure, such as roads and storage facilities. Affected rural and regional communities have also borne the brunt of trauma alongside such losses, with Indigenous communities profoundly affected by the destruction of places central to culture and belonging.

Rebuilding resilient and sustainable food systems after Australia's summer bushfires requires reimagining the future within the context of our climate emergency, to which extreme bushfires are a symptom. Such reimagining should include policy and planning supports to expand those agri-food systems that centre ecological diversity and low carbon emissions, including agro-ecological and organic farming systems. It should also include support for shorter – and therefore less vulnerable – supply chain distribution models that connect producers and consumers, as well as models that capture the true cost of food.

Importantly, local communities should also be enabled to play a key role in shaping climate-smart agri-food futures.

PSYCHOLOGY

Professor Justin Kenardy
School of Psychology
Faculty of Health and Behavioural Sciences

A key factor that will help with psychological recovery is community and social connectedness. So, reach out to connect with family, friends, neighbours and councils – as well as local social, religious, sports and business groups. If you can't do this in person, reach out virtually.

The people will be there, even if buildings are not. We also need to consider that support may be available to address the immediate impacts, but those impacts may well have knock-on effects. These effects might not be as traumatic, but can influence mental health for the weeks, months and years afterwards.

Remember too, that those most in need after a disaster are likely to be those who were most vulnerable before, the very young and old, those with compromised physical and mental health, and those under economic and social and interpersonal pressures.

Finally, while helping others is good, don't neglect yourself and those close to you.

ICE BREAK ER



UQ graduate and adventurer Cameron Bellamy has entered the Guinness World Records after surviving the world's most dangerous stretch of ocean – in a rowboat.

By Michael Jones

Cameron Bellamy and his five crewmates hunker down as mountainous 30-foot waves crash over their ocean rowboat.

Soaking wet and freezing cold, they're at the mercy of the fearsome stretch of water known as the Drake Passage. And there's nothing they can do but wait until the churning ocean tames its anger.

It's clear to them now why this voyage has been called The Impossible Row.

The Drake Passage is considered one of the most dangerous stretches of ocean on Earth because of its massive swells and unpredictable weather. Covering almost 1000 kilometres – from the base of South America to Antarctica – it's where the Atlantic, Pacific and Southern oceans converge.

The six men – UQ graduate and endurance athlete Bellamy, US explorer Colin O'Brady, fellow Americans Andrew Towne and John Petersen, Scotsman Jamie Douglas-Hamilton, and their captain, Fiann Paul, from Iceland – had set themselves the challenge of becoming the first crew to row unassisted across the Drake Passage.

They set out from Cape Horn in Chile on 13 December 2019 and, on Christmas Day – after almost 13 days at sea – they did the impossible, reaching Antarctica and entering the Guinness World Records.

It will remain the most memorable Christmas ever for Bellamy (Master of International Economics and Finance '06), who admitted there were moments he feared he and the crew might not make it.

"The 30-foot swells were pretty nerve-racking," Bellamy told *Contact*.

"We couldn't row when the swells were that big, and in those situations the waves would break on top of you. There was always the threat that you might capsize.

"There was one occasion when we were rowing in 10- to 15-foot swells with a tailwind. We were travelling really fast – almost like surfing down the waves – which was scary, but exhilarating. It was like being on a rollercoaster.

"In addition to that, it started to get extremely cold as we approached Antarctica. You can't wear gloves that are too thick because you have to be able to grip the oars, and we started getting the first signs of frostbite on our fingers.

"I eventually got feeling back in my fingers about three weeks after we completed the row."

Bellamy is no stranger to these conditions. He, Paul and Douglas-Hamilton were part of a team that set the Guinness World Record for the fastest crossing of the Indian Ocean in a rowboat in 2014, setting off from Geraldton, Australia, and finishing in Mahé, Seychelles.

We couldn't row when the swells were that big... there was always the threat that you might capsize.

During that voyage, the seven-man crew experienced huge swells, collided with a blue whale, made a daring escape from pirates off the coast of east Africa, and were involved in a heart-stopping mid-ocean rescue of an injured crewmate.

"I've become pretty accustomed to the large swells and cold conditions over the years, but I would have to say one of the main challenges of the Drake Passage row was sleep deprivation," Bellamy said.

"The team rowed in shifts, with three rowers on the oars for 90 minutes, then swapping with the other three, for 24 hours a day.

"During those resting periods you have to eat, change clothes, and do numerous other things. You don't get a lot of sleep and you're stressed out all the time."



Cameron Bellamy and team celebrate as they reach Antarctica on Christmas Day 2019 (above), a map of the Drake Passage (below), and Bellamy on board the Discovery ocean rowboat (right).

Images: Discovery



The recruitment process for the row began more than 18 months before the voyage; however, it gained momentum once celebrity explorer O'Brady came on board.

O'Brady became famous in 2018, when he walked unsupported across Antarctica, and he brought significant publicity to the project.

"Fiann (Paul), a fellow rower from the Indian Ocean voyage, asked me if I wanted to row to Antarctica and I couldn't say no to that," Bellamy explained.

"We continued to recruit the rest of the crew but we didn't have a sponsor, so it was going to cost us quite a lot of money.

"Colin (O'Brady) was the last person recruited and he convinced Discovery (Channel) to sponsor the row. Without that sponsorship we wouldn't have crossed the line.

"The logistics of Antarctica are just incredible and to row a boat there was crazy."

Every expedition is complicated; however, Bellamy said this one was particularly difficult to organise. To make matters worse, a Chilean military plane crashed in the Drake Passage just days before the team left South America.

The search area covered the team's planned route, and they had to decide how to avoid it.

"The world was looking at the Drake Passage because that was where the plane went down and none of the people on board survived," Bellamy said.

"So, suddenly we were going to row across the ocean in the same vicinity as the search

parties. The Chilean Navy actually boarded our boat before we left and went through every document we had before eventually letting us begin."

While the voyage came with its challenges, Bellamy said the wildlife and scenery were like nothing he had experienced in all his previous adventures.

"On the second day, we probably saw 20 albatrosses of all different types – the biggest variety were chilling around the boat. It was pretty amazing," he said.

"We saw killer whales, a blue whale, and penguins. And once we were in Antarctica, it was just the most beautiful place I'd ever seen. We were rowing next to icebergs – just rowing calmly past a huge iceberg, bigger than an entire building. And that's above the water – underneath is a different story."

Bellamy's achievements as an endurance athlete go hand-in-hand with the 38-year-old's career as a businessman and co-founder of African charity, the Ubunye Challenge.

Growing up in what he describes as a privileged home in Cape Town, in South Africa, Bellamy vowed to make a difference after witnessing the inequalities around him. Upon graduating from Rhodes University, Bellamy moved to Australia and completed his master's degree at UQ, while living at King's College.

The 2018 Distinguished Young Alumni Award winner, who returned to UQ in 2020 to study a Master of Quantum Technology,

Antarctica was just the most beautiful place I'd ever seen. We were rowing calmly past a huge iceberg, bigger than an entire building.

founded the Ubunye Challenge in 2011.

Through endurance challenges such as the Drake Passage crossing, Bellamy and his team of athletes raise money to support communities in some of the poorest areas of South Africa and Zimbabwe.

In fact, The Impossible Row raised about \$30,000 for the Eastern Cape-based Ubunye Foundation. The foundation supports 16 early childhood development centres across the Eastern Cape, and the money raised will go towards bringing the internet and tablet-learning to its 360 preschool children.

On top of his world-record rowing feats, Bellamy became only the 11th person to swim the Oceans Seven, the swimming equivalent of the Seven Summits in climbing, in 2018. In the same year, he also became the first person in history to complete a circumnavigation swim around Barbados (96 kilometres in 42 hours).

Last year, he completed the longest channel swim in history – from Barbados to St Lucia – covering 151 kilometres in 56 hours.

"I think I really enjoy the preparation and the training. I want to keep pushing my body to its limits, and pushing the limits of human potential," Bellamy said.

"The events and achievements are really rewarding, but I also get to raise money for charity. So many people will be immediately impacted thanks to the money we have raised as part of The Impossible Row."

WATCH THE VIDEO

To watch a video of The Impossible Row and see more images, view this story online at contact-magazine.uq.edu.au.



WHAT'S NEXT for investors?

The economic fallout from the COVID-19 pandemic is far from over, with the impacts expected to last well into 2021 and beyond. Professor Shaun Bond, UQ's Frank Finn Professor of Finance, considers some specific steps that investors can take to position themselves for life beyond the pandemic.

The past eight months have been a wild ride for investors. At the outbreak of the pandemic, the Australian stock market fell by almost one-third from the record highs of mid-February, with some trading days in March being among the worst on record.

However, with the promising outlook for a vaccine, signs of a recovering economy and record low interest rates, the market has regained around 80 per cent of those losses. At the time of writing (mid-November), the market was trading at very similar levels to the start of the year.

For many of us, the financial reports from our superannuation funds are less scary to read now than they were earlier in the year. But don't just tuck them away in a drawer without taking the time to read your latest statement. Now is an ideal time to review how your funds are invested, and to consider how you responded when markets fell sharply. Your response, particularly if you rushed to sell, may be an indication that your investment mix does not match your risk profile.

Taking the time to review your investments now could be an important step to successfully reaching your retirement goals. When you do this, pay attention to the management fees on each of your investments. There is a lot of research to show that actively managed funds don't outperform passive (index-tracking) funds, and the fee savings from switching can be significant over the life of your investments.

After such a big market upheaval, it's important to consider if you're still on track with your retirement savings. For this step, you might want to make an appointment to

see an independent financial adviser if you're not comfortable with reviewing this yourself. In some instances, representatives from your superannuation fund might be able to assist.

When you consult with the advisor, try to get an estimate on how your current savings rate and asset allocation (mix of investment funds) affect your expected future retirement income. This can be a better measure of your standard of living in retirement than just focusing on how big your superannuation 'pot' will be when you retire. This is particularly important in the current low-interest-rate environment, as the expected income generated by your portfolio might be well below what you expected.

For many people, the market falls combined with low rates of return in the future may mean that it is necessary to increase the amount saved towards retirements.

While low interest rates have hurt savers, it works in favour of borrowers. If you have a mortgage, you should check what rate you are currently paying to make sure it's competitive. It might make sense to refinance given the very attractive rates available now. At the very least, call your bank to see if any better rates are available.

Some people are also using this time to accelerate payments on their mortgage. Whether this is the right strategy for you will depend on your own personal circumstances, as well as what other debts and investments you have.

However, for some people, the comfort gained by paying off their mortgage will more than exceed the potential gain for other uses of those funds.

“After such a big market upheaval, it's important to consider if you're still on track with your retirement savings.”

Low interest rates, a shortage of available properties, and incentives for renovation and new home construction have provided support to the housing market. After an initial dip in house prices at the start of the pandemic, many areas are now seeing house prices starting to rise again. This is particularly true in popular suburbs and desirable regional areas, as more flexible working arrangements have opened up a greater range of location possibilities for many people.

Is now a good time to buy a home? In answering this question, I always consider that, for most of us, a home is more than just an investment and your own personal needs and preferences play an important role in your decision. Even though the current situation is improving, a lot of uncertainty remains about the path of the pandemic and the direction of the global economy.

If you are contemplating taking on a large financial commitment now, you need to be comfortable with your own job circumstances and your ability to meet your mortgage payments, even if rates rise in the future. It is also costly to buy and sell real estate, so you need to be comfortable holding your property for a long time as well as being prepared to ignore short-term price volatility.

The information provided in this column is general in nature only and does not constitute personal financial advice. The information has been prepared without taking into account your personal objectives, financial situation or needs. Before acting on any information in this column, you should consider the appropriateness of the information for your own objectives, financial situation and needs.

LEARN MORE FROM UQ EXPERTS

For more expert analysis on a range of topics, visit contact-magazine.uq.edu.au.



Fighting the

FLAMES

Contact catches up with the UQ Timber and Fire Safety Engineering researchers fireproofing our future.

UQ Master of Engineering
Science (Fire Safety
Engineering) graduate
Andy Wong.

Image: Judit Losh

By Harriet Dempsey-Jones

Keeping our homes safe from fire has been an age-old battle for humanity, ever since humans started building shelters with fire pits inside over 40,000 years ago.

But in the mid-2000s, the rules of this battle changed when a terrifying new type of building fire engulfed multiple skyscrapers around the world.

These fires were unique in the way they spread rapidly across the outside of the buildings. They badly damaged buildings in France, the US and the United Arab Emirates, and were seen in Australia for the first time in 2014 when the Lacrosse building in Melbourne went up in flames, causing an estimated \$24 million in damages.

Then, in 2017, the Grenfell Tower disaster in the UK brought the problem to the world's attention, with 24 storeys burned, 72 people killed, and 70 others injured.

From the ashes of this catastrophe, the cause of the fires finally came into focus. Each of the fire-ravaged buildings was covered in a particular type of metal composite outer shell, known as 'cladding'. Shockingly, it was discovered that these outer panels – used to insulate or decorate the buildings – could be highly flammable.

Reacting quickly to the news, the Australian state and territory governments launched audits to document the existence of potentially flammable cladding on buildings.

"The audits indicated there could be thousands of buildings with flammable cladding materials in their façades," explained Dr Juan Hidalgo, Senior Lecturer in Timber and Fire Safety Engineering at UQ.

"These buildings could pose a high fire risk not just to occupants and fire and emergency services personnel who need to operate in those buildings, but also to neighbouring structures."

While the audits made good headway in identifying which buildings had cladding, the true fire risk still remained unclear.

The Grenfell disaster showed that some cladding panels made of aluminium composite could easily sustain and spread flames. But what about the other types of cladding covering our homes and public buildings? Were they a fire risk too?

ADDRESSING THE CLADDING CRISIS

To answer these critical questions, Queensland's cladding taskforce turned to UQ's Fire Safety Engineering Research Group for their expert technical advice.

With seven dedicated staff and more than 20 higher degree by research students at the forefront of fire safety engineering research, as well as a state-of-the-art fire science lab at UQ's St Lucia campus, the group was perfectly poised for action.

But, the researchers anticipated a problem.

"We quickly realised that the testing being proposed to assess the flammability of cladding was insufficient," Dr Hidalgo said.

"The current standard was a simple test to identify what materials the cladding was made of, and a pass/fail

A holistic fire safety engineering approach should look at all the elements, and the way they interact together as a full building structure.

flammability test. This tells engineers very little about the real fire risk of the materials they were assessing.”

Another problem was that the early testing proposed around Australia only focused on aluminium composite panels with polyethylene cores, similar to those that had caused the Grenfell fire to be so catastrophic.

“This is not sufficient as building façades consist of multiple different products and materials,” Dr Hidalgo explains.

“A holistic fire safety engineering approach should look at all the elements, and the way they interact together as a full building structure.”

To address the issues, UQ Fire devised a new framework to help people identify the flammability of different cladding materials. The testing framework was based on renowned analytical and fire testing methods widely used in the fire engineering and scientific communities.

With seven separate tests, it allowed a thorough characterisation of the flammability of building façade materials. This included screening tests to determine the basic fingerprint of the materials using chemical and thermal composition analyses, which allowed for a better understanding of the flammability – that is, how these materials ignite, burn and spread the flame.

Then, it was time to set a lot of things on fire.

Over nearly 12 months, the team subjected 1095 samples of different cladding materials identified in the audit to their rigorous screening tests.

“It was UQ Fire’s job to analyse the materials from public buildings, but we knew the products we analysed would later be encountered in the private sector,” Dr Hidalgo said.

“So, we economised the problem. With the support of the Department of Housing and Public Works, we created a database that would be publicly available to all engineers, not only in Queensland, but across Australia and globally.

“We wanted to take the opportunity to provide more to the community and to try to improve the system. The database provides a tool to empower fire engineers.”

The Cladding Materials Library was launched by UQ in July 2019. Since then, nearly 2000 users have registered from 98 countries around the world.

STILL MORE TO DO

While the assessment of public buildings is complete, private engineers are now in the process of assessing the cladding fire risks in thousands of private homes and businesses across Australia.

UQ Fire is partnering with the private sector as they move forward with this task.

“At the moment, we’re engaging with private engineers who are finding new cladding products in their survey of private buildings.

“The deal is that UQ Fire tests these new materials as a commercial test for the industry, but the data is donated to the public database for the benefit of the whole community.”

Dr Hidalgo said for real change to happen, the manufacturers of the cladding products need to become part of the conversation.

“Some are reluctant to get into this conversation, but many others want to include their products in the Cladding Materials Library and develop further research to improve the safety of cladding,” he said.

“They realise if more testing is done and the data is made available, the more trust there will be in the community.”

FIXING SYSTEMIC FLAWS

While we now have a much better understanding of which buildings are more at risk of catching fire, the question remains: how did fire safety engineers allow us to end up with flammable materials wrapped around our homes and hospitals in the first place?

The answer is complex, but Dr David Lange, a Senior Lecturer in Structural Fire Engineering and a key member of the UQ Fire team, said it pointed to systemic problems in the professional standards of fire engineering.

Specifically, vague regulations meant that, as a non-structural part of building design, cladding was not required to undergo flammability tests like all other building materials.

Compounding this loophole is the fact that many fire safety engineers are not sufficiently trained to recognise the risks this could cause.

That’s why the UQ Fire team is working hard to equip fire engineers with the tools they need to deal with the pressing issue of cladding.

“We developed an intensive five-day course to upskill fire engineers so they can use the



database to effectively assess risk and provide solutions for private buildings,” Dr Lange said.

However, Dr Lange believes the issue of professional standards in fire engineering extends far beyond cladding, and major changes are needed to better protect us from building fires.

“There are currently no explicit benchmarks that allow us to say when a fire safety engineer can be classified as ‘fully trained’,” Dr Lange said.

“We need a competency framework that describes what is expected of graduates.”

However, Dr Lange said these competencies won’t be useful unless there is somewhere to learn them to an accredited level.

“UQ has the only program in Australia that is accredited by Engineers Australia. And there are only a handful of other programs around the world that are accredited by any of the engineering organisations,” he said.

Dr Lange said different rules across Australia could cause loopholes.

“In Queensland, for example, there’s currently a requirement for anybody providing engineering advice to be a Registered Professional Engineer (in Queensland),” he said.

“In Western Australia, on the other hand, there’s no requirement for any kind of registration, or any kind of formal qualification, for someone providing engineering advice. So you can see there’s a huge contrast.”

Mutual recognition of fire safety accreditation gained in other states adds extra complexity to this issue.

“This means people can shop themselves around from state to state until they get licenced, and then go and practise anywhere,” he said.

SO WHAT IS BEING DONE?

For the last two years, UQ Fire has been working with Sydney-based think tank The Warren Centre to identify the gaps in fire safety professional practice and develop a plan for national change.

To tackle these issues on a global scale, in 2019 the UQ Fire group joined with four other leading institutions to form the International Fire Safety Consortium.

The Consortium gathers together partner universities including The University of Edinburgh (Scotland), The University of Maryland (USA), Lund University (Sweden), and The University of Melbourne and UQ (Australia).

Dr Lange said collaboration was essential, as no university has the capacity to address all facets of fire safety.

“Fire safety is a complex discipline. It involves a lot of sub-disciplines and gathers together many technical and social fields,” he said.

The idea of the Consortium was to gather these world leaders in research and education of fire safety, to allow us to tackle the big issues in fire safety in a more holistic and complete way than was possible on our own.”

In doing so, the group hopes to develop solutions that will prevent another disaster like Grenfell.

Former Bachelor of Civil Engineering student Janal Numapo tests materials for the Cladding Materials Library in the fire safety engineering testing facility at UQ’s St Lucia campus.

Image: Judit Losh

FIRE RESEARCH AT UQ

To learn more about how UQ is leading fire safety engineering research and education, visit civil.uq.edu.au/fire.



The wake-up call to shake up HUMANITY

UQ graduate and global business leader Andrew N. Liveris AO speaks to *Contact* to share his thoughts on how Australia's economy can recover from the COVID-19 crisis, and how the world as we once knew it will change forever.

Andrew N. Liveris AO (Bachelor of Engineering (Honours) '75, Doctor of Science (honoris causa) '05) joined the Australian Government's National COVID-19 Coordination Commission (Commission) this year, tasked with limiting the impact of the COVID-19 crisis on the economy.

The former Chairman and Chief Executive Officer of The Dow Chemical Company (pictured below) whose generous donation helped establish the Andrew N. Liveris Academy for Innovation and Leadership at UQ, was appointed as Special Adviser to the Commission and Chair of the Manufacturing Taskforce to make recommendations to the Commission and Prime Minister Scott Morrison on non-health aspects of the pandemic response, while identifying opportunities for growth in manufacturing to enable Australia to bounce back.

Tell us about your thoughts on a remote workforce? Will this be considered the new normal?

We had the grand experiment, in the corporate sense, with the productivity era of the 1990s and 2000s. Basically, those workers who didn't need an office worked from home, and the advent of technology enabled that. We also went to lower-cost corporate structures via the concept of hoteling and shared office space.

At Dow, we had started to reverse that wave, putting back physical structures and recreating sales offices. The reason was because there is power in having an identity and interactions with co-workers. There was still the concept of shared office spaces, open working spaces and hoteling, etc. But, there was a seminal shift that made us all productive.

I think we're heading for another one of those shifts. We've all learned that digital actually works. If everybody is participating digitally, and knows the company and the people they're working with, then I think we're going to find out we can do a lot more on digital platforms. I believe we're going to work out that we can downsize white-collar office spaces permanently and this will have a profound effect on CBDs, which will in turn have a profound effect on property markets, especially commercial.

How do you think the COVID-19 crisis will transform travel for work and leisure?

Mass travel as we knew it, and even mass business travel – which has a profound effect on the affordability of airlines and aircraft manufacturers – may never return. That discontinuity may tailor humanity to be more regionally focused, and use digital technology for everything else.

We might even change the way we vacation and do a lot more local or regional holidays. I think this is a discontinuity that could change the trajectory of mobility as a tectonic trend. In other words, those in the mobility business will have to rethink their value proposition.

The only recent indicator that suggests humanity is very elastic and we might return to the 'old normal' pretty fast is September 11. There was a period of time after September 11 when people didn't travel due to fear. But it didn't take that long for normal travel to be restored. Maybe humanity is like that. Maybe we just have to be forgetful of the things that made us fearful.

So, how do you think the economy will rebound in Australia and around the world?

I can't see an economic recovery to pre-COVID-19 levels until well into 2021. The economic pain that all global economies



Andrew N. Liveris
Academy scholars with
Academy Director
Professor Peta Ashworth.

will go through will depend on how exposed those economies are to global supply chains. No more so than the one that relates to China. And because of that, economic stimuli have to be of the local kind.

The band-aids being applied by the monetary policies, such as JobKeeper here in Australia, have been good because the recovery from unemployment takes much longer. But nursing that for a period of time has huge ramifications on national debt and doesn't really create new economic paradigms. So, there is a need to create new economic paradigms quickly.

The best example of this is happening in China with infrastructure – roads, rail, bridges, apartment buildings, etc. China has considerable financial reserves, so they can do this without huge ramifications on their national debt. This will create a local economy that's very different to the economy that went into the COVID-19 crisis, which relied on export markets like the US that were already being disrupted by the US-China trade war. This is being mimicked in other economies and I believe it will be mimicked to a large extent here in Australia. Of course, I hope the work we're doing will do more than that, by creating entire new sectors that can help immunise the country.

Those economic stimuli are going to have a cost, such as mounting national debt, which will potentially have a second-wave effect on global economic recovery. One thing that is different now compared to the global financial crisis more than a decade ago, is that the banks have stood up pretty well and the financial system has stayed relatively strong. Because of this, we are able to do what we are doing to create economic stimuli.

My role on the Commission was to help craft an economic recovery plan based on key Australian capabilities, particularly technology and manufacturing, that will enable the economy to diversify its dependency on tourism and services, and even its commodity economy. One aspect that came up pretty quickly was a domestic energy policy that would enable the country to transition to a low-emissions economy in an orderly manner. It would be very hard for Australia to develop a case for scaling up factory capacity and capability if it has one of the highest energy costs in the world.

The Prime Minister and the National Cabinet embraced our recommendations and, with relevant ministers, prioritised a national gas strategy and plan, as well as a modern

manufacturing plan. They were both given resources and a national framework in the recently released budget. This will guide our national and sovereign capability building, skills development and intellectual property scaling so that we can compete in the 21st century – in a world that will still see continual disruption and volatility.

It allows new job creation in sectors such as mintech, agrotechnology, medtech, space, clean energy, recycling and Defence. It allows us to compete internationally but grow domestically.

These policies will not only reset our economy, they will grow our economy. I'm delighted with these decisions and direction for our country.

What role do you see universities playing in helping the world recover from the pandemic?

The manufacturing and innovation sectors are completely connected, and Australian-based research institutions are world-class. The issue Australia has always had is commercialisation.

We are definitely examining, on a sectoral basis, where Australia's strengths are in terms of research capability and how we can help those sectors through a variety of different policy enablers. We take input from academia and universities, and we are building that capability and helping to scale it. We've got founder-based incubators and accelerators going around the country, which are seeing some success already. We have to ensure that we turn these into deep-tech and not just sub-tech. In other words, physical sciences of the biological kind. That's where research-based universities can play a role.

This year's budget gave this centre stage, and I'm confident we have picked the right sectors and will utilise the resources the Australian government is providing to allow public-private partnerships with the academic sector to stimulate invention and innovation. That's where research-based universities can play a role.

ANDREW N. LIVERIS ACADEMY FOR INNOVATION AND LEADERSHIP

To learn more about how UQ is building a generation of effective and inspiring leaders, visit liveris-academy.uq.edu.au.





Celebrating EXCELLENCE

Meet the outstanding recipients of The University of Queensland 2020 Alumni Awards.

An international business leader, an entrepreneur and an Emmy Award winner are among those recognised in The University of Queensland 2020 Alumni Awards.

UQ Vice-Chancellor and President Professor Deborah Terry AO said the awards were an opportunity to celebrate the outstanding talent in the University's global alumni community.

"Since returning to UQ, it's been wonderful to see the depth and breadth of talent of our alumni and to be reminded that the reach of our community extends both near and far," she said.

"We are really proud to have played a role in the career journey of these high-achieving UQ graduates."

One of the Vice-Chancellor's Alumni Excellence Award winners, Deborah Riley, is an award-winning production designer and art director.

Riley has designed film and television sets for *Game of Thrones*, *Moulin Rouge!* and *The Matrix*, as well as

the closing ceremony for the Sydney 2000 Olympic Games, and her awards include Emmy Awards, BAFTAs and US Art Directors Guild Awards.

Former military mechanical engineer and founder of social venture, Two Good Co, Robert Caslick, is another recipient.

After leaving the military, Caslick established Australia's first organic soup kitchen to feed the homeless around Sydney's Kings Cross.

Two Good Co collaborates with chefs like Kylie Kwong, Maggie Beer and Matt Moran to deliver meals and lifestyle products to 26 communities, including those displaced by domestic violence.

Other recipients of the 2020 Vice-Chancellor's Alumni Excellence Awards include Asia-Pacific business leader Lawrence Au, international banking and finance professional Paul Compton, and Professor of Psychology and globally recognised advocate for body-image positivity, Professor Phillippa Diedrichs.

Vice-Chancellor's Alumni Excellence Awards



LAWRENCE AU
Master of Business Administration '82

Au has been at the forefront of Asia's financial industry for more than 35 years. He is a recognised thought-leader and has lived and worked in Hong Kong and Singapore for most of his professional career. He has also been active in mentoring young professionals and business startups, as well as supporting a number of philanthropic causes.



ROBERT CASLICK
Bachelor of Engineering '98
St Leo's College

Caslick is a Mechanical Engineer with a lifelong commitment to serving others, most recently as the founder of social venture Two Good Co. In addition to providing nutritious meals, the business makes a profound difference to women displaced from their homes due to domestic violence, by offering them re-training and work opportunities.



PAUL COMPTON
Bachelor of Economics '86
Bachelor of Commerce '84

Compton is a leading professional in international banking and finance with more than 30 years' experience. During the COVID-19 pandemic, he helped launch The Barclays Foundation, which provides philanthropic support to vulnerable people affected by COVID-19 to lessen the social and economic fallout of the crisis.



PROFESSOR PHILLIPPA DIEDRICHS
Doctor of Philosophy '11
Bachelor of Science (Hons) '04

Diedrichs is a key advocate for body image positivity and an exceptional academic scholar in the field of health psychology. Her work challenges cultural norms and systems to create a world in which people are not judged or limited by concerns, pressures and stereotypes about their appearance.



DEBORAH RILEY
Bachelor of Design Studies '93

Riley is a four-time Emmy Award-winning production designer and art director. Her portfolio includes award-winning film and television sets like *Game of Thrones*, *Moulin Rouge!* and *The Matrix*, as well as the closing ceremony for the Sydney 2000 Olympic Games.

Distinguished Young Alumni Awards



DR MICHAEL BONNING

Master of Public Health '17
Bachelor of Medicine and
Bachelor of Surgery '08

Bonning is a medical doctor with extensive experience in health policy, non-profit and advising corporations. Bonning served 12 years as a Medical Officer in the Royal Australian Navy, and has worked with many non-profit organisations including Beyond Blue, where he served on the Board of Directors.



DR JOHN MAUNDER

Bachelor of Medicine and
Bachelor of Surgery '16
Bachelor of Engineering
(Hons) '12
King's College

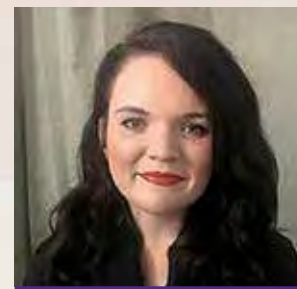
On his graduation day in 2012, Maunder was diagnosed with a form of Hodgkin's Lymphoma. After graduating from Engineering, he realised his passion was in medicine. He has a strong desire to give back to the community and has raised \$100,000 through cancer awareness events.



HOLLY TATTERSALL

Graduate Certificate in
Business Administration '19
Bachelor of Business
Management '10

Tattersall is an entrepreneur committed to empowering women in the digital industry. She is the Founder and CEO of Women in Digital and Digital Talent Co. and was the recipient of the 2016 AIM Emerging Leader Award. She was also listed in the 2016 40 Under 40 Top Young Entrepreneurs in Brisbane for Business News Australia.



TAMARA RICHARDSON

Bachelor of Science '18

Richardson is the Director and Founder of PACE 48, a multinational youth-led platform that promotes access to cultural education across 48 countries in the Asia-Pacific region. She was appointed an Associate of the UNESCO Chair in Inter-cultural and Inter-religious Relations, Asia-Pacific in 2016.



CHARLIE SHANDIL

Bachelor of Science '13

Shandil has held leadership positions across the public, private and non-profit sectors. He is currently a Director in the Australian Government, where he has worked on consecutive Prime Ministers' highest priorities. Shandil is also a non-profit Board Director and, in 2019, he was appointed as the inaugural Obama Leader (Asia Pacific).

Colleges' UQ Alumni Award



SALLY MCPHERSON

Bachelor of Business
Management '03
Bachelor of Arts '03
The Women's College

McPherson is the CEO and Founder of iSeekplant.com.au, Australia's largest online construction hire marketplace. She is also committed to the ongoing development of marketing professionals, establishing an internship program where graduates can undertake a 16-week intensive program in search marketing tactics.

Indigenous Community Impact Award

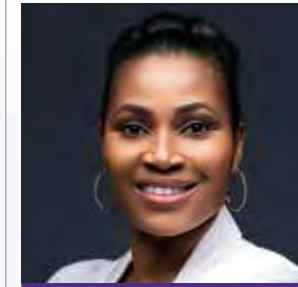


CAMERON COSTELLO

Bachelor of Laws (Hons) '05

Costello is a Quandamooka man and is currently the CEO of the Quandamooka Yoolooburrabee Aboriginal Corporation (QYAC). Costello works closely with the Quandamooka People and Elders, Government and industry to progress strategic plans while focusing on sustainable and culturally appropriate economic development.

International Alumnus of the Year

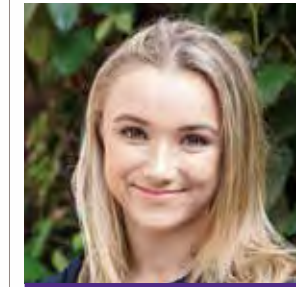


FAUNA USSUMANE RUGUNATO IBRAMOGY

Master of Agribusiness '13

Ibramogy is an agribusiness specialist with 18 years' experience in agricultural and rural development in Mozambique. She promotes market-system development and gender-transformative approaches, and her work has made a significant impact in rural communities across Mozambique.

Awards created by Alumni Friends



UQ GRADUATE OF THE YEAR

JOSEPHINE AUER

Bachelor of Advanced
Finance and Economics
(Hons) '19

Auer graduated from a Bachelor of Advanced Finance and Economics with Honours Class I and the University Medal (2019). While maintaining a perfect GPA of 7, she simultaneously trained at an elite level in athletics.



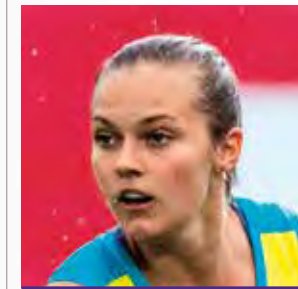
UQ ALUMNUS OF THE YEAR

ADJUNCT PROFESSOR THE HONOURABLE MATT FOLEY

Bachelor of Laws '83
Bachelor of Social Work '75
Bachelor of Arts '71
St Leo's College

Foley is a barrister, former minister and social worker with a lifetime of service to Queensland. He served as a Minister in four governments including as Attorney-General and Arts Minister for the Goss and Beattie governments.

UQ Sportswoman and Sportsman of the Year



REBECCA GREINER

Bachelor of Psychological
Science (Honours) student

Greiner is an Australian field hockey player and Bachelor of Psychological Science (Honours) student. She represented the Hockeyroos at the 2019 FIH Pro League, in which Australia took out the silver medal.



ANGUS SCOTT-YOUNG

Master of Entrepreneurship
and Innovation student
Bachelor of Commerce '19
Bachelor of Science '19

Scott-Young is a professional rugby union player for the Queensland Reds. He was the Reds' Defensive Player of the Year in 2019. Scott-Young also excels off the field, having completed a Bachelor of Commerce and Bachelor of Science degrees with a GPA of 7.

“It's been wonderful to see the depth and breadth of talent of our alumni and to be reminded that the reach of our community extends both near and far.”



To read the full profiles of all award recipients, and listen to the podcasts, view this article online at contact-magazine.uq.edu.au.



ROCK AND A HARD PLACE

The Australian music industry needs a lifeline. *Contact* spoke with UQ's School of Music Senior Lecturer Dr Eve Klein and UQ graduate and music venue owner Scott Hutchinson about the future of Australia's live music scene post-pandemic.

By Greta Usasz

The COVID-19 crisis has seen our everyday lives swept from beneath us, and there have been very few things we can rely on – except music and its incredible ability to dictate our moods or conjure up feelings of nostalgia.

Yet, despite being able to deliver moments of reprieve in recent months, Australia's music and live events industry is reeling as a result of a 'double blow': the COVID-19 lockdowns, and last summer's bushfires.

"Many organisations entered this period without a safety net behind them," said Dr Eve Klein, a Senior Lecturer in Popular Music and Technology at UQ's School of Music.

"Years of getting by on tenacity, ingenuity and hustle have left our sector depleted. Long-term projects, which people have been developing, often for many years, have been cancelled and may not be viable again after the crisis has passed."

Klein said that while the industry had shown resilience by adapting its work to digital platforms, it was not clear whether these activities were generating sustainable incomes for artists that would be equivalent to their pre-COVID-19 activities.

Instead, she believes the future of Australian music lies outdoors.

"I think we can expect outdoor music events and experiences to flourish, like we've seen recently with the Brisbane Festival and the upcoming Opera Queensland Under the Stars," Klein said.

"This is going to require some innovation, while new approaches to presenting music will likely continue beyond the pandemic, especially in Australia."

UQ graduate and music venue owner Scott Hutchinson (Bachelor of Engineering '81, Master of Business Administration '88) said Brisbane's music industry had faced an uphill battle even before the pandemic, with live music venues being torn down in place of large residential towers over the past two decades.

"The Brisbane music scene faced a particularly tough year in 2003 – the famous Festival Hall was demolished and it was the final year of [alternative rock festival] Livid," said Hutchinson, who is also the Chairman of Hutchinson Builders.

"It became clear to me years ago that music venues in central locations just don't stack up from a real-estate perspective."

Yet, this didn't stop Hutchinson from injecting \$40 million into the creation of Fortitude Music Hall, Brisbane's newest large music venue on Fortitude Valley's Brunswick Street Mall.



Dr Eve Klein and Scott Hutchinson.

"JC [John Collins, the bass guitarist from Powderfinger] approached me shortly after I purchased the space saying he'd really like to see a music venue here and I thought, 'that's just too good to be true'."

With the revival of iconic music venues occurring throughout central Brisbane in recent years, Hutchinson said the city had come back to life.

"People of all ages are heading back to the Valley, and we hope this will continue once the threat of the pandemic is over."

While many musicians have been able to move to digital delivery, diehard music fans know that nothing can replace the experience of attending a live music event.

Hutchinson said this could be a saving grace.

"I think the industry will come back stronger. If you've been to the Valley lately, you can see people dancing in the street. They are just so happy to get out and about after living under restrictions. We are still limited in our allowable numbers, but the demand is there."

Klein said there were some silver linings to come out of the COVID-19 pandemic, such as an increase in people listening to music online, or learning how to make music.

"There is real intimacy forming between musicians and their fans as a consequence of COVID-19 restrictions, which goes beyond pre-pandemic social media connectivity," Klein said.

"I'm expecting this will carry forward into the future and we will see a strengthening of patronage, digital tips, crowd-sourced commissioning and digital ticket models."

When asked what the public can do to help the music industry, Hutchinson made it clear.

"Go and watch live music. We need to support the big venues as well as the little ones."

Klein said we can also continue to support the industry from home – for now.

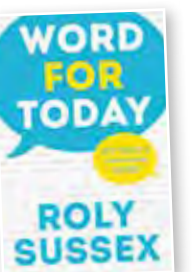
"The best thing we can do to support the Australian arts sector is to contact our government representatives and tell them what the arts sector means to us and ask for more significant support."

GREAT READING WITH UQP



This One Is Ours, by Kate O'Donnell

Sofie is a dreamy young artist with her head in the clouds, but when she travels to Paris, she's awakened to the power of art in inspiring change.



Word for Today, by Roly Sussex

The best of ABC presenter and UQ graduate Roly Sussex's popular 'Word for Today' program are collected in book form.

To see the latest UQP book releases, visit uqp.com.au.



Queensland's time to SHINE

With the 2020 AFL season on the line, Queensland stood up to help keep the game alive, winning the right to host the coveted grand final in the process. But what will hosting the AFL's biggest spectacle mean for the state, the fans and the game itself in the long term?

By Michael Jones

It was the sport story that only 2020 could have provided. NRL glamour club, the Brisbane Broncos, collected the first wooden spoon in the club's history. While across town in the AFL, the Brisbane Lions were flying, riding a wave of local support as they attempted to secure a home grand final.

Nothing in 2020 seemed normal. The impact of COVID-19 on Victoria meant that for the first time in 123 years, the AFL grand final was played outside the state, under lights, in the balmy rugby league heartland of Brisbane.

It was a decision that reignited the debate about regularly sharing the grand final between cities, and showed the potential of a prime-time fixture for broadcasters – dividing purist AFL fans and delighting the progressive campaigners who are desperate to see the game expand. It also pitted state against state in a bidding war, while forcing some to question what impact hosting

such an event would have on the taxpayers' hip pockets at such an uncertain time.

But there's one thing that can't be denied. Queensland – along with Western Australia and South Australia – helped keep the AFL season alive. The majority of the home-and-away season was played in Brisbane and the Gold Coast, with matches also played at the iconic Cazalys Stadium in Cairns. Team hubs were set up on the Sunshine Coast, the Gold Coast and in Cairns, providing a welcome boost for accommodation providers, restaurants and car-rental services.

And on Saturday October 24, the Gabba turned on a spectacle as the nation once again turned to sport when it needed it most.

UQ law and marketing researcher Associate Professor Sarah Kelly was across Queensland's bid to host the grand final at the Gabba, as part of her role as Deputy Chair of the Brisbane Lions and as a board member of Tourism and Events Queensland.

"Queensland objectively saved the AFL and other codes this year, and the hope it brought to the nation was just what we needed," Kelly said.

"It also potentially helped save employment across a huge sector, through enabling the broadcast of the game and the trickle-down effects on the grass-roots growth of the sport.

"The main argument for Queensland hosting the grand final was about legacy – not only for the development of Aussie Rules across Queensland as a development market for the code, but also when considered in the context of a portfolio of mega sporting events planned for the state."

"Hosting mega events like the AFL grand final, the Women's FIFA World Cup in 2023 [Brisbane will host a number of matches during the tournament] and, hopefully, a successful 2032 Olympics bid all translate to economic and social impacts. By this, I mean enhanced sporting, transport and community infrastructure; and enhanced destination brand image more broadly for trade, tourism, events, international diplomacy and also community pride; which are all measurable short- and long-term impacts.

UQ researcher on the economics of professional sport Professor John Mangan said if the AFL grand final promoted Brisbane as a viable alternative for hosting major sporting events in years to come, it will be a good outcome.

Yet, despite reports of a total of \$136 million of economic contribution generated in Queensland as a result of AFL activity – including \$60 million spent by the AFL on player hubs – Mangan questioned how this one-off event would benefit the economy in the long term.

"Sporting events, particularly one-off special events, have some short-term benefits from the spending on accommodation, travel, and consumption from interstate and overseas visitors," Mangan said.

"Spending by domestic fans does not count as it is largely displacement spending. In this case, there were no overseas visitors and fewer interstate visitors than normal because of COVID-19 and the fact that the AFL is not an international sport.

"If the increased AFL spending kept some operators afloat, it will have a disproportionately beneficial impact. The main long-term effect will be keeping existing operators afloat.

"In that respect, hosting the teams and their families in hubs during the season was much more economically significant than hosting the grand final, with crowd restrictions and border-crossing issues.

"On the other hand, professional sports are important for public morale, and a number of studies have shown things like World Cup victories do provide some economic and productivity benefits to a depressed economy.

"If the exact amount that Queensland paid to host the grand final was known, then a proper cost-benefit analysis could be undertaken."

Economics aside, Kelly believes the exposure of the

game to Queenslanders came at just the right time for the AFL as it looks to truly cement itself as Australia's number one football code.

According to an ABC News report in October, AFL Queensland has seen a 10–15 per cent increase in Auskick participants across the state, with 13,000 juniors making up the biggest competition in the country.

"Queensland is an AFL growth market, so just by having something that's so aspirational and highly visible in the state on a weekly – sometimes daily – basis was a boost for the game at a grass-roots level," Kelly said.

Brisbane Lions AFLW star and UQ Sport Elite Athlete Program Officer Emily Bates (pictured) said she noticed more people across Brisbane becoming invested in the 2020 AFL season and the performances of the clubs they support.

"I visited a few junior training sessions during the season and I saw a lot of kids wearing different jerseys – normally you would just see a few Lions jerseys around," the UQ graduate (Bachelor of Exercise and Sport Sciences '18) and dual AFLW best-and-fairest winner said.

"While it will take a while to see the full impact of this exposure on the Queensland market, a spike in AFL media coverage during the season was encouraging.

"We used to be 10 pages deep in the sports section of newspapers. This year, we were on the back page, and we're starting to crawl into that traditional rugby league space."

This might not sit comfortably with traditional rugby league fans, who are already wary of the AFL's slow march into the north-eastern states.

But it's not just rugby league fans who are wary. The decision to move the AFL grand final away from Melbourne and its spiritual home of the Melbourne Cricket Ground (MCG) divided many Victorian AFL fans, as well as Western Australian and South Australian supporters, who believe they deserved it more.

Kelly was thrilled that Brisbane hosted the grand final, but she said the game must be careful not to lose track of what makes it so popular.

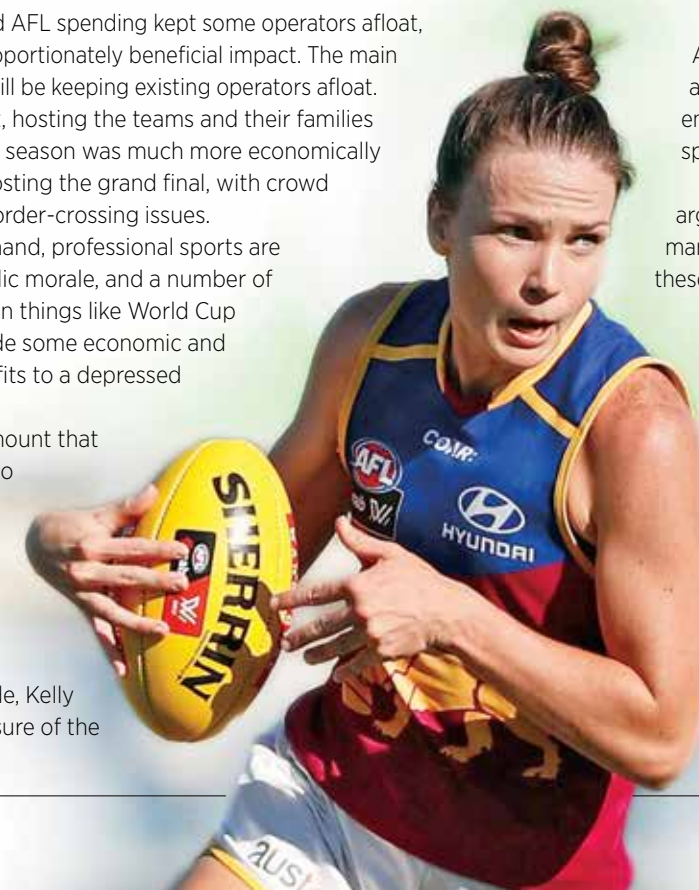
"Something that distinguishes the AFL from other sports is that there are a lot of rituals and traditions that enrich the game, and it is a better spectacle as a live game," she said.

"That being said, I'm all for a strong argument for other development markets and other states getting to host these events as well.

"The COVID-19 curve ball delivered this amazing opportunity to Queensland and it will go down in the history books."

JOIN THE CONVERSATION

Is it time for other states to host the AFL grand final on a regular basis? View this story online and have your say at contact-magazine.uq.edu.au.





THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

CREATE CHANGE

The
**Merle
Pledge**

Take the Merle Pledge and advance gender equity

UQ has launched the Merle Pledge – an initiative that aims to substantially improve women's representation in public and professional forums.

The Merle Pledge is named after legendary feminist, activist, author and UQ academic Adjunct Associate Professor Merle Thornton AM, who received an Honorary Doctor of Letters in November this year.

Merle – alongside friend Rosalie Bognor – famously chained herself to the bar at the Regatta Hotel in 1965 to protest against women not being allowed to be customers at public bars in Queensland.

The protest is considered a pivotal moment in Australian women's liberation movement.

The Merle Pledge requires pledgers to request gender equity as a condition of their participation on or attendance at any conference, panel, or event.

Hundreds of UQ staff have already taken the pledge and we are now asking our alumni community to join this movement.

Join UQ and take the Merle Pledge today to advance gender equity.



Learn more:

bit.ly/merlepledge
#merlepledge



An initiative of the SAGE Athena SWAN program at UQ