1.6 Adjust our approach to the development of new and enhanced offerings so that there is a greater focus on the whole program.

Program Architecture 2 (PA2)

PA2 delivers outcomes that enable the sustainability and relevance of UQ’s portfolio of offerings to provide maximum value for students, staff, employers and the broader UQ community. A significant undertaking across all faculties, PA2 will enable a streamlined framework that facilitates the continuous evolution of UQ offerings to deliver quality programs that maximise graduate outcomes and employability.

Furthermore, the simplification of UQ’s program structure and associated processes, policies and procedures aims to improve the student experience, knowing that some students can find current policies and rules complex and difficult to navigate. This process was implemented in accordance with the ongoing Australian Qualifications Framework review and will be extended to postgraduate programs in 2021.

PA2 has developed and implemented a management dashboard tool for reviewing and analysing offerings; and new program and course design policies enabling a consistent university-wide review of offerings. Resultant curriculum changes are designed to deliver the best possible graduate outcomes in response to the changing needs of the future workforce and to make it easier for students to identify learning opportunities and efficiently plan their study.

The successful implementation of a new curriculum management system, Jac, provides a single information source about programs, plans, and courses. By sharing data with other systems, Jac will prevent double entry of information, enable automation of several downstream processes, and improve governance and management efficiency.

PA2 will continue to enhance the student experience in 2020, with further work planned to provide opportunities for updating the electronic course profile system, automating program planning, checking progression, and processing credit.

New and enhanced programs

In 2020, UQ introduced several new programs in response to local and international demand, including:
- Bachelor of Biotechnology
- Bachelor of Biotechnology (Honours)
- Bachelor of Computer Science (Honours)
- Bachelor of Computer Science/Bachelor of Business Management
- Bachelor of Computer Science/Bachelor of Commerce
- Bachelor of Computer Science/Bachelor of Laws (Honours)
- Bachelor of Computer Science/Master of Cyber Security
- Bachelor of Computer Science/Master of Data Science
- Bachelor of Design
- Bachelor of Engineering (Honours)/Bachelor of Design
- Bachelor of Environmental Science
- Bachelor of Environmental Science (Honours)
- Graduate Certificate in Mental Health Nursing
- Graduate Diploma in Mental Health Nursing
- Master of Urban Development and Design

Twenty-two programs ranging from associate degree to higher doctorate level were also discontinued.

UQx’s MOOCs attracted a record 17,420 verified enrolments in 2020. Thirty-seven programs were also discontinued.

21.3 Digital learning strategy, uConnect

An increase in normalised citations

Category Normalised Citation Impact (CNCI) score1

<table>
<thead>
<tr>
<th>Year</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
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<tr>
<td>UQ’s Gold rank on the proportion of publications that sit in the top 10 per cent globally2</td>
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</table>

Rank in the top 3 in Australia on national competitive grants income

Competitive Grants Category 1 research income

<table>
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<th>2017</th>
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</table>

Rank in the Top 65 global universities across all influential rankings

UQ’s position in global university rankings

<table>
<thead>
<tr>
<th>Rank</th>
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<th>2018</th>
<th>2019</th>
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<tr>
<td>Performance Ranking of World Scientific Paper 5</td>
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<td>40</td>
<td>40</td>
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<td>40</td>
</tr>
</tbody>
</table>

1. UQ’s rank within Go8 for CNCI score 2
2. UQ’s Gold rank on the proportion of publications that sit in the top 10 per cent globally2
5. Source: Performance Ranking of World Scientific Papers.

2.1 Build a One UQ approach to acquiring, maintaining and utilising research infrastructure.

Review of activities

2. Enhancing our high-quality research by improving our capacity to collaborate to achieve greater impact

While rightly proud of our research excellence, over the coming years we need to ensure that our research remains collaborative and continues to achieve great impact. To succeed in our focus areas of leading healthy lives, building better bioeconomies, achieving resilient environments and livelihoods, designing technology for tomorrow, and transforming societies, we will be outwardly focused, while at the same time working across disciplines internally.
A new GCI Director was recruited. GCRNs were awarded and a further 7 have global grand challenges. The Global Change Institute continues to work with industry, government, and the community to tackle global grand challenges. The Global Change Research Network (GCRN) program was launched and received 27 applications from across UQ’s faculties and institutes. Four GCRNs were awarded and a further 7 have been identified as pipeline GCRNs. In 2020, a new GCI Director was recruited.

2.3 Actively pursue strategic and high-quality international collaborations in research and education.

The University of Queensland - Indian Institute of Technology Delhi Academy of Research (UQDAR)

UQ and the Indian Institute of Technology Delhi (IIT-D) are working together to develop a substantial transnational collaborative research program with the flagship initiative of a joint-PhD program. During 2020, work was impacted by the pandemic, which resulted in delays in student commencements. However, business development activities and the establishment of industry partnerships have continued to progress, following the appointment of a new CEO in July. By January 2021, student numbers will reach 50 students.

UQ-University of Exeter (QUIEX) Institute

The Universities of Queensland and Exeter continued to grow their existing partnership through the QUIEX Institute (QUIEX). QUIEX aims to strengthen research and industry collaboration, and to influence public policy. Since 2018, QUIEX has awarded 29 PhD scholarships, completed 26 grant schemes, and held 2 international symposia and one virtual symposium. The collaboration has secured $34 million in external funding and published 34 joint publications. In 2021, QUIEX will focus on 3 interdisciplinary themes: healthy living, global environmental futures, and digital worlds and disruptive technologies.

2.4 Actively encourage researchers to partner with industry, government and the community both within Australia and internationally.

Research partnerships

Through the challenges of the pandemic period, UQ continued to work with our established industry partners and to forge new relationships. Overall, the number of agreements through the Research Partnerships Office was more than 4,100 in 2020, approximately 30 per cent higher than the 2019 total of 3,592, and significantly higher than 2018’s 3,569.

The COVID-19 vaccine project sponsored by the Coalition for Epidemic Preparedness Innovations, with funding support from the Queensland and Australian Governments, was a highlight of the year. In addition to government support, more than 2,500 individual major and smaller donors supported this multi-organisation collaboration involving 17 industry and research partners in Australia and across the globe. Regrettably, production of the vaccine will not be going beyond Phase 1 trials.

UQ Industry 4.0 Testlab

Following its launch in 2019, this new initiative proceeded with a range of virtual events with partners in 2020. Its goal was to create a pathway for forming strategic industry-UQ partnerships by ensuring that industry has access to a simple, coordinated entry point to support collaboration, discussions and interaction with UQ’s wide range of expertise and infrastructure. Four streams were created: Engagement, Capability, Innovation and Leadership. As a result of these workshops, a Memorandum of Understanding was signed with Infosys and a research agreement with Stanwell.

2.5 Develop a more consistent approach to higher degree by research (HDR) training with a focus on ensuring students build research, transferable and professional skills.

In a challenging year with closed borders and restricted people movement, the UQ Graduate School maintained HDR commencements at 912 candidates (95 per cent of expected targets) and supported over 400 co-supervisors.

2.6 Invest in the development of systems and processes for the storage and publication of research data, including the capability for this to benefit future researchers.

UQ Research Data Manager (UQRDM)

UQRDM provides researchers and HDR students with integrated research data storage to securely share, store, re-use, collaborate on, and manage their projects’ research data. A major milestone was achieved by allowing researchers to publish datasets directly to UQ eSpace from within RDM, facilitating the transition from working data to published data. In 2021, 3,901 researchers used RDM for the first time; 4,703 new records were created; 5,531 terabytes of data was stored in RDM; UQ researchers collaborated with more than 1,200 external collaborators through RDM; and the Library held 35 RDM training sessions.

UQ Research Management System

2020 saw further development of MyResearch (formerly known as the Research Management System, or RMS), which will provide UQ with an enterprise-wide, integrated research management solution. Being researcher-centric and project-based, it will enable a holistic view of research project management, administration and compliance across the research lifecycle at UQ. The extrinsic component of MyResearch is due for release at the end of January 2021. Work on MyResearch Projects, the second stage of implementation, progressed in 2020. MyResearch Projects is on track for delivery in early 2022.

Related initiatives for 2.2

1.4 Science Precinct pg 27

1.3 CX program pg 28

4.3 Co-leveraging to build research capacity and capability pg 30

1.4 Science Precinct

pg 27

1.3 CX program

pg 28

4.3 Co-leveraging to build research capacity and capability

pg 30

Related initiatives for 2.3

2.2 Global Change Institute pg 24

2.4 Research partnerships pg 24

3.1 Partnerships Framework pg 27

6.3 Enhancing capability pg 37

2.2 Global Change Institute

pg 24

2.4 Research partnerships

pg 24

3.1 Partnerships Framework

pg 27

6.3 Enhancing capability

pg 37

Related initiatives for 2.4

1.1 Entrepreneurship Strategy pg 18

2.2 UQDAR, QUIEX pg 24

4.6 Western Civilisation pg 32

6.2 New opportunities pg 37

1.1 Entrepreneurship Strategy

pg 18

2.2 UQDAR, QUIEX

pg 24

4.6 Western Civilisation

pg 32

6.2 New opportunities

pg 37

Three Minute Thesis (3MT)

The 3MT competition continued to grow, with a record number of more than 500 PhD students competing at UQ alone, and many more at over 900 institutions worldwide. UQ’s 3MT was strongly contested in 2020, its thirteenth year of competition. Emma Schimke from the School of Health and Rehabilitation Sciences won her presentation, To sleep or not to sleep.
2.7 Develop flexible models to effectively utilise the institution’s intellectual property.

UniQuest

- UniQuest was ranked number one within the Group of Eight universities in the 2020 Survey of Commercialisation Outcomes from Public Research (SCOPR) in measures for the amount of commercialisation revenue received, the number of active startups and the value of equity held by UniQuest in startups formed from UQ intellectual property (IP). UQ’s innovative technologies continued to attract significant global interest in 2020:
  - Startup company Influnxa Ltd was acquired by multinational pharmaceutical company Roche in September in the largest deal for a spinout company from an Australian university, with an upfront payment of €80 million (AU$126 million) plus additional development and regulatory milestone payments. Influnxa is developing potential treatments for a broad range of inflammatory diseases, including inflammatory bowel disease and Parkinson’s disease, based on IP developed by UQ researchers in collaboration with Trinity College Dublin.
  - Startup company Vaxxas will partner with the UQ to test its high-density microarray patch (HD-MAP) needle-free vaccine delivery technology for pandemic influenza, receiving $30 million from the Biomedical Advanced Research and Development Authority. With the support of the Queensland Government, the company will establish a facility at Brisbane’s Northshore Hamilton for the manufacture of products, ensuring that the UQ research continues to be developed in Brisbane. A long-term partnership with Merck & Co Inc has seen the global pharmaceutical company investing $18 million in Vaxxas in a combination of equity funding and option fees.
  - In the first 9 months of 2020, UQ’s other startups attracted over $27 million in investment to advance their technologies towards the market, bringing the cumulative total raised since 1994 to $776 million.
  - The Queensland Emory Drug Discovery Initiative, operated and managed by UniQuest, progressed its pipeline of drug discovery projects based on innovative UQ research, and was awarded competitive funding from the Medical Research Futures Fund to advance the projects in cancer and neurodegeneration to commercialisation.

3.1 Build a centralised resource to support, develop and manage significant partnerships guided by a clear partnership framework.

UQ Industry Partnerships Framework

The UQ Industry Partnerships Framework seeks to support engagement with industry partners external to UQ, with the aim of deriving and delivering maximum impact across research, commercialisation, intellectual property, teaching and learning, and engagement. The term ‘industry’ applies to an expanding range of external partners including private industry, industry associates, not-for-profits, foundations, and many other sectors of the economy. The framework is intended to support all UQ units to facilitate successful engagement with UQ’s industry partners, with an emphasis on strategic-level partnerships earmarked for central coordination. It aims to ensure industry-partner interactions are approached in a coordinated, timely and responsive manner, thus cultivating mutually beneficial relationships in support of the University’s objectives to pursue ‘partnered innovation’ and ‘collaborative partnerships to connect and co-create’, as outlined in the UQ Strategic Plan 2018-2021. Despite some delays due to pandemic-related budget restrictions, the framework and responsibilities were further clarified during 2020, and development of reporting mechanisms commenced.

Research partnership model

The research partnership model has been very successful in supporting UQ to lift its performance in securing industry funding. During 2020, considerable work was undertaken to build capacity, particularly in security industry research income. Innovation brokers were recruited and these roles located within the Global Change Institute, and the snagged recruitment of key staff to support the research partnerships contract administration model was completed. Work will continue during 2021.

IBM/UniQ Centre of Excellence and Innovation

In September, IBM announced the launch of a new collaboration with UQ to address data challenges impacting health, manufacturing and environmental research. Tackling issues associated with significant growth in the amount of data being collected, organised and stored for research purposes, the Centre will also provide a range of new data storage and computer hardware platforms to UQ’s Research Computing Centre for experimentation and evaluation.