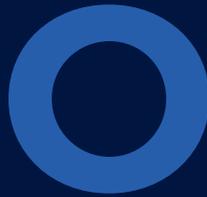


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2018
Annual
Review



UNIVERSITY
OF WOLLONGONG
AUSTRALIA



Stands
for purpose

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Enhancing partnerships to create change that matters

UOW's graduates are recognised for their capability, quality and success in the global workplace. Staying true to our values – and our purpose to contribute to the betterment of society – UOW has earned our place among the top 250 universities in the world. Together with our partners and broader communities, we will continue to create and nurture the next generation of gifted, driven, well-rounded researchers, teachers and students – all who are equipped to create meaningful change across Australia and the world.

GLOBALLY RANKED AMONG THE TOP 250 UNIVERSITIES

- 218th in the world – QS World University Rankings 2019
- 201-250 band – Times Higher Education World University Rankings 2019
- 246th in the world – Academic Ranking of World Universities (ARWU) 2018

GLOBALLY RANKED AS ONE OF THE WORLD'S BEST MODERN UNIVERSITIES

- 16th in the world – QS Top 50 Under 50 Rankings 2019
- 32nd in the world – Times Higher Education Young University Rankings 2018

RATED AMONG ASIA-PACIFIC REGION'S BEST UNIVERSITIES

41st – Times Higher Education Asia-Pacific University Rankings 2018

ONE OF AUSTRALIA'S BEST FOR EMPLOYER SATISFACTION

The 2018 QILT Employer Satisfaction Survey ranked employers' overall satisfaction with UOW graduates at 87.6% (85% national average), placing UOW 3rd in Australia for public universities.

TOP 1% FOR GRADUATES AS RATED BY GLOBAL EMPLOYERS

UOW is consistently ranked in the top 1% of universities in the world for the quality of our graduates. In the 2019 QS Graduate Employability Rankings, we were:

- Rated 23rd in the world for graduate employment rates
- Rated 148th in the world for partnerships with employers
- Ranked in the 181-190 band overall

NO.1 UNIVERSITY IN NEW SOUTH WALES

Quality Indicators for Learning & Teaching 2018 ranked UOW as the No. 1 university in New South Wales for overall undergraduate study.

GLOBAL TEACHING EXCELLENCE

UOW was recognised among the world's best institutions for teaching excellence, receiving a Spotlight Award in the 2018 Global Teaching Excellence Awards. UOW was the only Australian university to be listed as a finalist for the prestigious Global Teaching Excellence Award (GTEA) for two consecutive years.



Vice-Chancellor's overview

I am pleased to present the 2018 Annual Review, showcasing the University's achievements throughout the year across wide ranging areas, from our initiatives that are fostering innovation and improving health and wellbeing; through to ways we are empowering students and delivering research with impact.

UOW's purposeful industry and government engagement ensures our achievements not only contribute to our international standing, but create impact for our partners and broader communities locally and globally. Our commitment to enhancing partnerships is helping us to drive transformation and create change that matters for society.

During 2018, we devoted much attention to establishing a long-term vision for the University beyond 2030. Within our 2030 Vision, we have identified three pillars which are essential for our success – global outlook, trust built through partnerships and taking purposeful action on change that matters. Our solid partnerships and willingness to engage with our communities will continue to see us prosper as a trusted global University.

We routinely rate among the top Australian and global universities in key areas and this year was no exception. We are now globally ranked among the top 250 universities, placed 218th in the world by QS World University Rankings 2019. We are a benchmark for modern universities, ranked 16th in the QS Top 50 Under 50 Rankings 2019 and we are consistently ranked in the top 1 per cent of universities globally for the quality of our graduates.

UOW's outstanding work was acknowledged in the receipt of a number of awards this year, including a Spotlight Award at the 2018 Global Teaching Excellence Awards. Jindaola, an innovative program that weaves Indigenous Knowledges and perspectives into the University's teaching practice, was named the overall winner of the inaugural Australasian Academic Development Good Practice Award. Staff and students of Team UOW Australia-Dubai showcased our innovative spirit to the world when they took out second place in the Solar Decathlon Middle East 2018.

UOW's work to expand our international outlook was recognised in November when UOW Global Enterprises was announced as the 2018 winner of the Australian Export Awards for excellence in education and training. Shortly after celebrating the 25th anniversary of UOW Dubai, we announced our

acquisition of Malaysian private higher education provider KDU, building on the University's successful 10-year track record of providing world-class tertiary education to students in Malaysia.

We continued to be a vehicle of progress nationally with the announcement of new initiatives this year that are focused on equipping students with the skills necessary for the jobs of the future. This included agreeing on a Statement of Intent with the NSW Government (within our NUW Alliance and in collaboration with Western Sydney University) to deliver a collaborative "Multiversity" innovation hub at the Western Sydney Aerotropolis precinct at Badgerys Creek. UOW also became the first Australian university to sign an agreement with the Ramsay Centre and it is expected we will be one of a select group of universities nationwide to offer a version of liberal arts degree focused on Western Civilisation.

We progressed upon our UOW Health and Wellbeing Strategy, officially opening the MIND the GaP mental health and wellbeing facility, commissioning Australia's most powerful microscope and announcing a development partner for our innovative \$500 million Health and Wellbeing Precinct.

In December we were pleased to be recognised for our work on gender equality by receiving an institutional bronze award as one of the pathfinder universities involved in the Science in Australia Gender Equity (SAGE) process.

Through our education, research and partnerships, UOW ensures that our graduates are fully prepared for the challenges of the modern world. Whatever the future brings, we will be ready.

PROFESSOR PAUL WELLINGS CBE
VICE-CHANCELLOR

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Snapshot of the year



STUDENTS

36,000+
total student enrolment

28,317
onshore student enrolments (commencing and continuing students)

7,652
offshore student enrolments (commencing and continuing students)

15,634
international students enrolled in Australia and abroad



STAFF

31.8%
of professoriate staff at UOW are female

73.6%
research-active staff to academic staff

1,094
academic staff (head count)

1,356
professional services staff (head count)

78.9%
of academic staff with PhDs



EDUCATION

5-star
rating in seven categories in Good Universities Guide 2019

9
onshore locations (Wollongong, Innovation Campus, South Western Sydney, Sydney CBD, Shoalhaven, Batemans Bay, Bega, Southern Sydney, Southern Highlands)

4
offshore locations (Malaysia, Singapore, Hong Kong, United Arab Emirates)

3
wholly-owned subsidiary campuses (University of Wollongong in Dubai, UOW College Hong Kong, UOW College Malaysia)

340
undergraduate and postgraduate degrees

6,000+
students undertook an in-curricula work-integrated learning experience in 2018

7,564
degrees awarded in 2018

98%
of UOW disciplines rated at, above, or well above world standard

1st
Australian university to offer a new Bachelor of Arts in Western Civilisation



EQUITY AND ACCESS

29.1%
students from regional and remote areas

19.2%
students from low socio-economic status background

2.22%
domestic students identifying as Aboriginal or Torres Strait Islander

50%
of iAccelerate companies have at least one female founder

One of the 1st
universities in Australia to have received the prestigious Athena SWAN Bronze Institution Award, which recognises the University's commitment to gender equality

50%
Almost 50% of our current domestic students are the first in their family to go to university



GRADUATE SATISFACTION AND OUTCOMES

Top 1%
UOW is consistently ranked in the top 1% of universities in the world for the quality of our graduates in the 2019 QS Graduate Employability Rankings

87.6%
overall employer satisfaction with UOW graduates (2018 ESS National Report)

75.2%
of our graduates secured full-time employment within four months – above national average of 69.6% (Quality Indicators for Learning and Teaching 2017)

81%
Undergraduate Course Satisfaction (Course Experience Questionnaire) – compared to national average of 79.4%

90.2%
International Student Barometer (ISB) – compared to national average of 89.4%

28
HDR student completions per 100 academic FTE

84.87%
retention rates of commencing bachelor students

86.89%
success rate for domestic commencing bachelor students



GLOBAL IMPACT

179
nationalities at UOW

150,000
alumni

179
countries where alumni live

270+
academic and research collaborations globally (formal links)

272
institutions in 44 countries provide Study Abroad and Student Exchange global links

25
exchange partnerships with universities in the top 150 in the world



ECONOMIC IMPACT

\$1.2B
total economic contribution to national gross domestic product (GDP)

\$2.2B
in gross output annually

\$195M
contributed to the Illawarra economy by Innovation Campus each year

\$300M
to be invested in infrastructure from 2016-2020

\$35.5M
contributed to the Shoalhaven economy by Shoalhaven Campus in 2017-2018. Our regional campuses have a strong and connected presence in our communities.



RESEARCH IMPACT

\$127M
in research income (2017 announcements)

6
major research facilities

11
distinguished professors

Top 10
research universities in Australia



INNOVATION AND COMMERCIALISATION

156
start-up companies fostered by iAccelerate – Australia's largest university-led incubator and accelerator – since 2012

29
new companies and 51 students supported by iAccelerate in 2018

131
new jobs delivered by iAccelerate to the community in 2018

600+
companies have joined UOW in-house industry matchmaker Advantage SME

22
innovative multi-industry research collaborations have been contracted by Advantage SME

\$600,000
total project value of Advantage SME collaborations

9
Patents and Licences, Options and Assignments granted

A purposeful future

The University of Wollongong is inspiring a better future through education, research and partnership. We are committed to being at the forefront of change and much of what we have achieved has been through working in partnership with our communities, government and industry.

2030 VISION ESTABLISHED

During 2018, we devoted much attention to establishing a long-term vision for the University beyond 2030. The 2030 Vision strategy white paper will inform the next strategic refresh, outlining the key directions for research and teaching at the University for 2030 and beyond. Our staff have identified three pillars which are essential for our success – global outlook, trust built through partnerships and taking purposeful action on change that matters.

The vision will drive ground-breaking initiatives across wide-ranging areas – from transforming our curriculum to keep pace with the jobs of the future, continuing our world-leading education and research, strengthening global partnerships and championing sustainability. The 2030 Vision – A Purposeful Future – is just the start of an ambitious agenda to define what it means to be a university today, and tomorrow.

UOW VALUES

Intellectual openness: We are driven and determined, yet collegial and ethical in all that we do. We are always looking to serve our communities and share our knowledge and expertise with them for mutual betterment.

Excellence and dedication: We work tirelessly to excel in our research and education, and to address complex, real-world problems in partnership with our communities.

Empowerment and academic freedom: We celebrate the freedom to have different opinions and different ideas. We encourage the asking of difficult questions and discovery of innovative solutions.

Mutual respect and diversity: We aspire to set the standard for inclusiveness, diversity and equity. We welcome – and benefit from – the diversity of our communities within Australia and internationally. We will continue to champion Aboriginal and Torres Strait Islander reconciliation.

Recognition and performance: We celebrate the hard work and dedication of our staff, and recognise and reward their achievements. We expect all our staff to meet the challenges of our changing world by seizing opportunities that deliver continuous improvement.

PILLARS FOR SUCCESS



GLOBAL OUTLOOK

We will continue to focus on interdisciplinary teaching and research that harnesses the collective ideas, innovations and strengths of our global network.

We will understand our responsibility as global citizens and the enormous scope of positive change that is possible as we address the local and global challenges of today and tomorrow.



TRUST BUILT THROUGH PARTNERSHIPS

The strength of our partnerships and willingness to engage with our communities will continue to see us prosper as a trusted global University.

We will collaborate with and learn from academics, policy makers, and industry leaders so that we fearlessly pursue innovations that have a positive and tangible impact for our society.



CHANGE THAT MATTERS

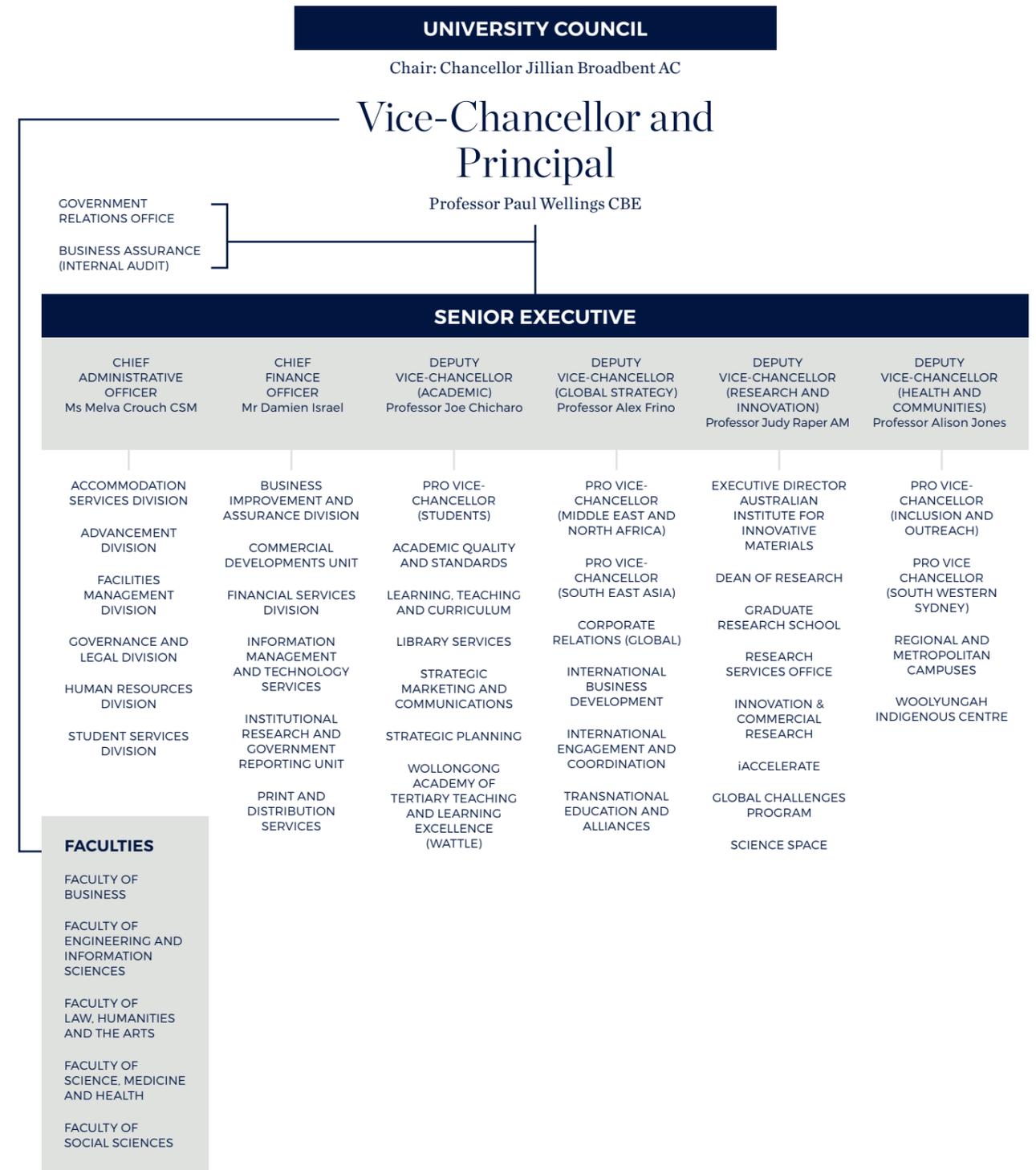
Career ready graduates will be assured through the ongoing transformation of our curriculum, ensuring it meets the changing needs of our students and industry partners.

We will create and use new and transformational technologies that enrich the learning and working environments of all our students and campuses.

We will boldly tackle the social and environmental challenges of our time by focusing on purposeful initiatives and innovations.

We will work collaboratively to embrace and drive change to maintain an environment that builds on our financial sustainability and agility.

Organisational Chart



Driving transformation

UOW stays true to our ideals and values, but we also embrace the need for change. We are continually seeking new ways for a better future.

\$18.7M

UOW has delivered in defence-related research over the past 10 years

\$105M+

the Australian Institute of Innovative Materials has attracted in research funding over the past 10 years

No.1

UOW's Digital Living Lab awarded Best Community Initiative at the 2018 Committee for Sydney Smart City Awards

ADDING VALUE TO OUR REGIONS

UOW's spirit of innovation and collaboration supports our role as an anchor institution for our communities, providing facilities and activity that contribute to economic, social and cultural wellbeing for NSW more broadly. We are driving change that is relevant to regional priorities but with global impact.

This is particularly the case in the Illawarra, where UOW is helping to transform Wollongong into a city of innovation, transitioning from a steel city towards a more diverse, highly skilled globally competitive region. Wollongong's transformation is an excellent case study of how universities can work with local councils and other stakeholders across their region to create new jobs and industries, modernise economies and accelerate smart-city transformation.

UOW's economic contribution of \$1.2 billion to gross domestic product annually shows the value in investing in education and the benefits it brings to the regions we encompass. The social and economic impact of the university is visible through local and global industry and community partnerships. Our value to our communities is also demonstrated through our graduate employment outcomes. The 2018 Graduate Outcomes Survey shows that 75.3 per cent of UOW domestic bachelor level graduates are in full-time employment, compared to the national average of 73.3 per cent. The level for postgraduate students is 88.2 per cent compared to the national average of 85.7 per cent.

Our research, education and training are assisting the expansion of our regional manufacturing innovation ecosystem, along with advancing defence industry capabilities. Work in these areas is also supporting local small and medium-sized enterprises (SMEs) to compete on both a domestic and global scale. We are helping to revitalise the Illawarra and distribute opportunities across NSW for businesses to be exposed to a range of frontier materials and technologies.

We are turning ideas into action so that industry, the university and the community will grow together side by side.

SANDSTONE MEGA-REGION

Finding solutions to the challenges facing communities in NSW is the focus of an alliance of three of Australia's leading universities: the University of Newcastle, the University of New South Wales and the University of Wollongong.

The NUW Alliance spans NSW's Sandstone Mega-Region – a geographic area home to more than 75 per cent of the state's population and 25 per cent of Australia's population. The NUW Alliance educates more than 120,000 students, employs more than 12,700 staff at over 25 campuses across the state and overseas, and has established 14 innovation and entrepreneurship hubs spanning the length of the NSW coast.

In July, UOW hosted the launch of the Committee for Sydney's "Sandstone Mega-Region" initiative, which examined the relationship between Newcastle, Central Coast, Wollongong and the three city regions of Sydney. The Committee for Sydney has been investigating the potential of linking these regions into a single entity – tied together like the sandstone basin our key centres sit on.

The Sandstone Mega-Region paper makes mention of the higher education sector, and in particular, the role of the NUW Alliance in driving collaboration across the region.

The NUW Alliance will help to create smart solutions to the challenges of infrastructure, transport and housing affordability in achieving the growth of a mega-region. A significant challenge discussed is faster train trips between Wollongong and Sydney.

'MULTIVERSITY' PROPOSAL

In September, the NUW Alliance agreed on a Statement of Intent with the NSW Government to deliver a higher education presence at the Western Sydney Aerotropolis precinct at Badgerys Creek, in collaboration with Western Sydney University. The Alliance and WSU envisage a collaborative 'multiversity' innovation hub at the Aerotropolis as a first for Australia, with the four universities to create one campus with strong links to industry, tailored vocational education and training and STEM-focused schooling.

With a 24-hour international airport at its core, the Western Sydney Aerotropolis will be a thriving hub for education and leading industries including advanced manufacturing, aerospace, defence and agribusiness. International experience shows that these types of universities, such as the Massachusetts Institute of Technology in the United States, have a big impact on job creation.



INTELLIGENT FABRICATION

Australia's manufacturing industry is undergoing a period of significant change as adoption of robotic technology steadily increases worldwide.

In response, UOW, TAFE NSW and Weld Australia this year formed a collaboration to provide a unique facility to assist companies identify and implement welding and manufacturing automation-related technology, backed up with technical education, training, and certification support.

The Facility for Intelligent Fabrication (FIF) was officially launched in March and brings together these three partners and their networks to provide expertise, technology, equipment and education in a "one-stop shop".

The FIF delivers integrated solutions to industry needs, with a focus on helping SMEs to adopt technology to sustain, evolve and grow their business. The partners develop and implement solutions to industry challenges, providing demonstrations of technology and proof-of-concept, including prototype development. Training programs are also provided – both general and tailored to company needs.

The facility's networks and industry collaborators extend through government, technology suppliers and equipment suppliers, with members working closely with the Australian Government Advanced Manufacturing Growth Centre.

SMART CITIES REVOLUTION

The rollout of smart technology into local government areas around Australia is happening at speed, with such innovations making our lives easier, safer and healthier.

UOW's SMART Infrastructure Facility is one of the largest institutions in the world dedicated to helping governments and businesses better plan for the future, especially the roll-out of smart technology for city-wide applications.

Led by SMART, the Wollongong Digital Living Lab has transformed Wollongong into a smart city. In September, the Digital Living Lab was awarded Best Community Initiative at the 2018 Committee for Sydney Smart City Awards in September. The open, free-to-air platform is accessible to the entire community to use for research and to test Internet of Things projects. It uses digital networking technology called LoRaWAN to create a wireless network that can cover large distances with low power. The platform already hosts a wide range of applications from a shark alert app to a map for firefighters to find hydrants quickly.

Also as part of the Digital Living Lab, SMART collaborated with Liverpool City Council and industry partners in the Smart Pedestrian Project, which is revolutionising urban design and traffic management. It uses a combination of CCTV, image recognition, Wi-Fi and LPWAN technologies to collect real-time volumes of pedestrian and vehicle traffic in Liverpool's city centre, allowing the council to make informed planning decision with the growing number of residents. This project was named the Best Local Government Initiative at the 2018 Committee for Sydney Smart City Awards.

Through federal funding from the Smart Cities and Suburbs Program announced in November, SMART researchers are also working on the Illawarra-Shoalhaven Smart Water Management Project and the Western Sydney Parkland City Sensor Network Project. The Smart Water Management Project will deliver a network of data sensors that can provide real-time flood risk information during extreme weather. The Western Sydney project aims to reduce congestion and enable more efficient use of lighting and irrigation in public areas.

UOW this year also joined the NSW Smart Sensing Network (NSSN), which brings together smart sensing expertise in academia, industry and government to develop futuristic sensing technologies to tackle major challenges in agriculture, health, security, the environment and industry.

BLUE ECONOMY PROGRESS

UOW, through our Global Challenges Program, is exploring the development of a Blue Economy in the Illawarra and South Coast.

The Launching a Blue Economy project this year continued to connect with stakeholders across public and private sectors to investigate the capabilities of the Illawarra and Shoalhaven regions to build and support a new Blue Economy based on sustainable and equitable use of the natural capital of our oceans.

UOW's expertise in growing a Blue Economy is spread across the Australian National Centre for Ocean Resources and Security (ANCORS), the Global Challenges Program, SMART Infrastructure Facility and the iAccelerate Centre business incubator and accelerator to provide innovative solutions to marine issues.

SMART is collating ABS data to take stock of different subsectors contributing to the Blue Economy in the Illawarra and Shoalhaven regions. Also, the Australian Centre for Culture, Environment, Society and Space (ACCESS) at UOW is collaborating with ANCORS to analyse and document artisanal Aboriginal and migrant fisheries of the Illawarra to better understand the context of sustainable fisheries.

MULTI-FUNCTIONAL MATERIALS

The Australian Institute for Innovative Materials (AIIM) is helping UOW to progress our partnerships with industry through facilities for commercialisation of research and technology.

Located at the Innovation Campus, AIIM has significantly contributed to the University's international standing as a leader in multi-functional materials research and this year celebrated its 10th anniversary.

AIIM is an important asset of the University's manufacturing innovation ecosystem, bringing together chemists, biologists, engineers, physicists and materials scientists to shape the next generation of smart materials. These teams are carrying out work in energy generation, transmission and storage, including battery technology for electric vehicles and ways to increase the uptake of renewable energy. They are also working on health and medical bionics that include bioprinting and soft robotics.

AIIM has attracted research funding in excess of \$105 million over 10 years and its researchers have contributed to 56 per cent of all UOW citations in 2018. Research and outcomes from the institute over the past 10 years have steadily progressed materials science and next-generation fabrication technology throughout Australia and the world.

A CITY TRANSFORMED

In November, Advantage Wollongong hosted "Celebrating Wollongong: A city transformed", to showcase the city's achievements and diversifying economy at New South Wales Parliament House.

The event also helped launch Advantage Wollongong's Investor Prospectus. UOW Vice-Chancellor Professor Paul Wellings CBE said the launch signalled the ongoing commitment by the University and our partners to continue to work together to build a better Wollongong for tomorrow.

Advantage Wollongong is a partnership between the Department of Premier and Cabinet, the University of Wollongong and Wollongong City Council to promote Wollongong and attract new investment and jobs to the region.

At the event, Professor Wellings also said UOW's research, education and training are greatly assisting the expansion of our regional manufacturing innovation ecosystem, along with advancing defence industry capabilities.

UOW has delivered more than \$18.7 million in defence-related research since 2008. The supply of high-quality and relevant research has been driven by UOW's strengths in engineering, materials and IT. Research in next-generation manufacturing at UOW spans 3D printing, high-strength alloys, better battery materials, bionic implants and nanomaterials, along with innovative building materials. Researchers are also developing innovative machinery like 3D printers, high productivity welding systems, metal forming systems and autonomous robots.

Fostering innovation

UOW works with our partners to create greater levels of innovation and impact, and contribute to the creation of new enterprises by providing opportunities for great ideas to move into the marketplace. We are ahead of the game in university and industry collaboration.

iACCELERATE CENTRE FIGURES

29 new companies supported in 2018, taking the total of companies supported to 64	210 new products launched since 2012
51 students supported in 2018	50% of iAccelerate companies have at least one female founder
131 new jobs delivered in 2018	16 new businesses expected to be created by Bega Valley Hub in first two years of operation

100+ UOW staff are undertaking commercial research	154 companies and government institutions engaged in commercial research with UOW
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EMPOWERING CHANGE

The creation of new opportunities for economic development increasingly requires cross-sector partnerships to create environments where entrepreneurship and innovation can thrive.

UOW recognises that a world-class innovation ecosystem requires that university researchers have access to specialised and advanced R&D infrastructure. It also requires that entrepreneurs, start-ups and SMEs – including businesses that spin out of university research – have access to inexpensive space to grow, as well as access to labs and prototyping facilities. Additionally, these groups need institutions that facilitate technology transfer and provide mentoring and advice.

More than 100 UOW staff are undertaking commercial research, and 154 companies and government institutions are engaged in commercial research with the University. Our advances in research and development are putting our communities such as Wollongong on the global map in addition to fostering young entrepreneurs and start-up businesses.

INNOVATION CAMPUS

The Innovation Campus is a nexus in strengthening business, education and research ties locally and globally and has contributed greatly to increased collaboration between UOW and industry.

The award-winning research, innovation and commercial precinct is helping to activate new economic activity and regional jobs as well as increase Australia's innovation performance.

The \$600 million award-winning precinct is home to four of the University's research institutes, along with a well-established community of innovative companies that are strongly engaged with the University, such as NEC Australia. The Campus contributes \$195 million to the region each year, helping attract innovators and investors to one of the most connected regional cities in Australia.

In February, UOW selected development partner Lendlease for the innovative \$500 million Health and Wellbeing Precinct to be built at the Innovation Campus. It is anticipated to be operational by 2022, and will bring significant benefits to the Illawarra community and beyond. The Precinct will integrate research and teaching environments with non-surgical health care and aged-care facilities.



More than 600 businesses have joined the Advantage SME program.

ADVANTAGE SME

Advantage SME is research collaboration in action. It is UOW's in-house industry matchmaker, helping businesses and researchers find their ideal partners and build beneficial partnerships so that research can be transformed into successful new products, services and capabilities.

In 2018, Advantage SME held 20 events and 1,000 unique contacts have joined the program. The program has been selected for Next Practice at the UIIN Asia-Pacific Conference 2019.

Since its establishment, more than 600 businesses have joined the Advantage SME program and 22 innovative multi-industry research collaborations have been contracted, with total project value of more than \$600,000. Driven by UOW, Advantage SME was established in 2016 within the Boosting Business Innovation Program and is funded by the NSW Department of Industry.

The Advantage SME Generator Lab was launched this year and connects SMEs and big businesses with UOW researchers and other SMEs to solve their innovation problems by using disruptive technologies. The first Generator Lab was held in August and connected three large businesses with local SMEs and UOW researchers. This year, Generator Lab connected two global companies – Komatsu and Hitachi – with regional SMEs and researchers.

The reach of the Generator Labs project has already extended to Nowra and SMEs from South Western Sydney are encouraged to become involved. The Advantage SME team is also working with the University of NSW to develop a pilot Flash Build project, where researchers and students travel to factories to "build solutions" together over a few days. This includes work in areas such as the Internet of Things, where factories require sensors to be installed to modernise their operations.

iACCELERATE CENTRE

The iAccelerate Centre is at the heart of UOW's commitment to supporting start-ups and fostering innovation. iAccelerate's proven program assists in developing successful regional start-ups and enabling them to reach markets anywhere in the world.

iAccelerate is the largest university-led incubator and accelerator in Australia and has fostered 156 start-up companies since 2012. The centre supported 29 new companies and 51 students in 2018, taking the total number of current iAccelerate resident companies to 64. Companies supported specialised in a range of fields including tech, hardware, service, education, health, wellbeing and social.

In 2018, the centre delivered 131 new jobs to the community, with 517 new jobs delivered to the region since 2012. In sharp contrast to national averages, 50 per cent of iAccelerate companies have at least one female founder.

Residents reported a 37 per cent year-on-year revenue increase in 2018 and 210 new products have been launched since 2012.



Team UOW Australia Solar Decathlon Middle East 2018 in Dubai in November.

This year, the support available through iAccelerate was extended to the Bega Valley, after federal funding was received to establish the Bega Valley Innovation Hub. The hub was the result of a community effort to address the challenge of creating new jobs and opportunities for people in the region, bringing together local government, regional businesses, UOW Bega and iAccelerate. The hub aims to create 16 new businesses and more than 30 jobs in its first two years of operation.

The hub will be based at the UOW Bega Campus where it will provide the space and access to iAccelerate's education and support programs to help locals grow ideas into viable businesses. To drive regional innovation, it will host outreach programs such as high school start-up camps, education events to help local businesses understand how an innovation support system works and training workshops to help businesses adopt new technologies and other improvements.

DESERT ROSE SUCCESS

Two years of hard work and innovation rewarded Team UOW Australia-Dubai with second place in an international sustainability competition this year.

A dementia-friendly, net-zero energy home designed and built by a team of more than 40 students from UOW and TAFE NSW received second place overall and first for innovation in the Solar Decathlon Middle East 2018 in Dubai in November.

Titled Desert Rose, the house was one of 15 entries from 11 countries in the competition which judged sustainable homes on aspects from architecture to sustainability and suitability to desert temperatures.

The house was designed to support people living with dementia and other age-related conditions and is named after the Sturt's Desert Rose flower that flourishes in the harsh climate of Central Australia. The focus of the design was to improve the quality of life for the ageing, while doing it sustainably and creatively.

Students used innovations developed at UOW's Sustainable Buildings Research Centre (SBRC) and worked closely with aged-care providers and the Dementia Training Australia group to ensure designs met the changing needs of occupants.

"We've created innovative solutions that we hope will revolutionise the way we design and build homes that celebrate life, support wellbeing for people as they age, and provide practical solutions for one of society's great challenges of an ageing population," Project Manager and UOW PhD student Clayton McDowell said.

The house will eventually be positioned at the Innovation Campus where it will be used to further UOW's efforts to support innovation in health and wellbeing.

PITCH@PALACE PARTNERSHIP

In November, UOW hosted Pitch@Palace Australia on Tour Sydney in collaboration with Macquarie University, marking our second year as a key partner in the initiative, which helps connect entrepreneurs and early-stage businesses with potential supporters.



Improving health and wellbeing

An artist's impression of the Health & Wellbeing Precinct.

UOW is positioned as a top-tier health research partner nationally and is a leader in integrated teaching, translational research and clinical services innovation.

UOW is committed to improving the health and wellbeing of those in our communities, particularly people living in rural, regional and remote areas of Australia. We have demonstrated this commitment to improving community health from the training of doctors and nurses with placement programs in regional and rural settings to world-class research programs targeting Indigenous health, early childhood, ageing, dementia and mental health.

We have a robust track record of partnering with government, industry and communities to deliver world-class health and medical research, education and research translations and health outcomes integrating both physical and mental wellbeing.

In 2018, we continued to build upon the UOW Health and Wellbeing Strategy, helping to deliver more initiatives and infrastructure to our communities.

The strategy is a transformational package for health and wellbeing that addresses future learning and teaching, research, clinical and workforce development needs in the Illawarra and further afield.

A raft of interconnected initiatives in this strategy will develop new disease prevention and treatment options, overcome increasing antibiotic resistance, and support ageing populations to live longer, healthier lives.

This year, under the Health & Wellbeing Strategy, UOW officially opened the MIND the GaP mental health and wellbeing facility, commissioned Australia's most powerful microscope, and named a development partner for our innovative \$500 million Health and Wellbeing Precinct.

This work builds on progress already made under the UOW rural training pathways and a Regional Training Hub program to improve the quality of care given to patients in country hospitals and rural practices. Also as part of the strategy, in 2016 UOW established the Nursing Clinical Learning Facility at the Bega Campus to help augment the supply of trained nurses into regional healthcare systems and support further professional training opportunities.

UOW Health and Wellbeing Strategy

INITIATIVES



HEALTH & WELLBEING PRECINCT

MIND THE GAP FACILITY

A community-centred initiative that brings together healthcare professionals, researchers and frontline support services to improve mental health and wellbeing was officially opened in July at UOW's Shoalhaven Campus.

MIND the GaP (Mental Illness in Nowra District: Goals and Prevention) is a joint initiative of the Australian Government, Shoalhaven City Council and UOW to address the high level of mental health needs in the Shoalhaven, particularly among vulnerable and younger people.

A consortium of partners, led by UOW and Shoalhaven City Council and including Lifeline South Coast, Lifeline Australia Research Foundation, COORDINARE, the Illawarra and Shoalhaven Local Health District, Noah's Shoalhaven and the Illawarra Health and Medical Research Institute, will harness their expertise to deliver innovative research, best quality health care practice, clinical services, practitioner training and community outreach and engagement.

MIND the GaP includes therapeutic space and outreach services in partnership with health care professionals, researchers and frontline support services to provide patient-centred, holistic care.

Outcomes from this initiative can be applied to other parts of rural and regional Australia.

HEALTH AND WELLBEING PRECINCT

The Health and Wellbeing Precinct at UOW's Innovation Campus at North Wollongong will revolutionise the integration of research, clinical practice and patient-led care. In February, UOW announced that Lendlease had been chosen as the preferred respondent as development partner for the project, following a national open-market Expression of Interest process.

The Precinct will include Australia's first primary and community health clinic to offer truly integrated, patient-centred health care, as well as aged-care and retirement living facilities, and research and teaching programs.

The hub of the Precinct will be intoHealth, a \$50 million community health clinic, which will be a centre of excellence in integrated healthcare to address key health issues facing the Illawarra and Shoalhaven, including chronic lifestyle diseases (such as diabetes and obesity), mental health, disability and mortality rates. intoHealth is modelled on the patient-centred approach of successful established models of care such as the Mayo Clinic in the United States. It will be the heart of the Precinct, connecting the adjacent network of community, research, residential and aged care facilities. intoHealth will be closely linked with the Illawarra Health and Medical Research Institute (IHMRI) at UOW to enable innovation in healthcare technology.

The Precinct also incorporates the Aged Living initiative which will provide innovative retirement living and residential aged-care services. The first stage of Precinct development will include a 180-bed aged-care facility, with future stages to include 199 independent retirement living units, all supported by integrated and innovative on-site aged-care services. Residents will be part of a vibrant intergenerational on-campus community, enabling them to maintain their independence and quality of life. Operated in partnership with an aged living services provider, the Aged Living initiative within the Precinct will link research, teaching and learning with exceptional care.

This Precinct project represents an investment of up to \$500 million that could generate more than 2,000 new jobs, both during construction and in ongoing development. Construction is tentatively planned to commence in 2020, with the first facilities potentially operational by 2022. Economic modelling indicates that Stage One, in its initial five-year development and operations, will add \$600 million in total value to the Illawarra (in direct, indirect and induced impacts).



UOW attracts a higher proportion of rural applicants than any other NSW medical program.

MOLECULAR HORIZONS

Molecular Horizons – the centre for molecular and life sciences – is the University’s biggest ever self-funded research infrastructure investment. This facility signals UOW’s commitment to research for public benefit, and to position NSW and Australia as leaders in the revolutionary sciences of molecular biology.

It demonstrates UOW’s commitment to impact-driven research where the world’s best molecular research will be put into practice to improve and save lives.

The centre is being built at the Wollongong Campus and will house transformative technology, including Australia’s most advanced and powerful microscope – the FEI ThermoFisher Titan Krios cryo-electron microscope.

In August, the Titan Krios was commissioned at the Australia Nuclear Science and Technology Organisation (ANSTO) in Lucas Heights. UOW and ANSTO have come together to make a facility available to house the Titan Krios while the Molecular Horizons building is constructed. The microscope is now available not just to scientists from UOW and ANSTO, but to researchers from universities and other research institutions across Australia and the world.

The Titan Krios is a game changer in the battle against disease and will accelerate research and discovery. It marks the beginning of an exciting period in scientific research in Australia. The work at Molecular Horizons will provide an understanding of disease mechanisms. This includes how unwanted immune activity can cause disease, how bacteria can become resistant to antibiotics, and how certain cell signalling events drive the development of cancer. This research will open up unlimited possibilities for health-related breakthroughs and better treatments.

Another piece of equipment that will be eventually housed in Molecular Horizons – the FEI ThermoFisher Talos Arctica – was unveiled at an interim location at UOW’s Wollongong Campus at the end of 2017.

RURAL AND REGIONAL HEALTH

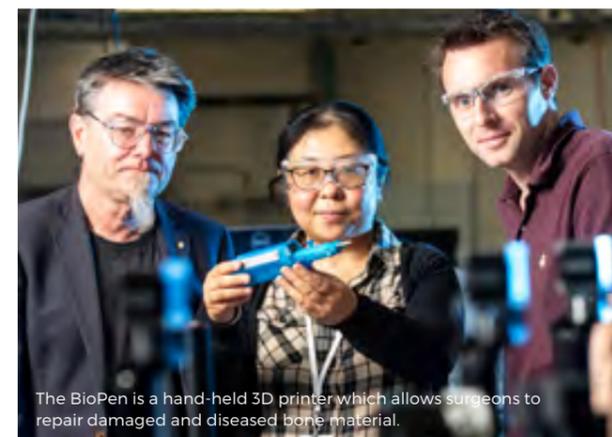
UOW’s medical program was established in 2007 with a core focus on training doctors with the capacity and desire to work in regional, rural and remote areas. It is the only medical school in Australia with an admission process that specifically targets students from rural and regional backgrounds.

UOW attracts a higher proportion of rural applicants than any other NSW medical program, with an average 68 per cent rural intake. We are the only medical school in Australia where all students undertake a 12-month longitudinal clinical placement integrated across community and hospital in a rural (two thirds of students) or regional (one third of students) setting.

A particular strength UOW possesses is our collaborative approach in enhancing the pipeline from medical school to rural practice. We have a strong track record in delivering doctors to the bush and the number of applicants to the UOW program rises each year.

This year included the placement of medical students in 11 regional hubs, facilitating engagement with local communities. Students are placed in over 90 medical facilities in Wollongong, the Shoalhaven, Broken Hill and Mudgee. The Australian Medical Council has welcomed UOW’s approach, noting that two-thirds of our medicine students come from rural backgrounds, the highest in the state. Our students are currently working in rural and regional areas such as Nowra, Jindabyne, Cowra, Wagga Wagga, Dubbo, and in the Northern Territory and Tasmania.

Over the first three cohorts, who have undertaken postgraduate training for 6-8 years, 17 per cent are already trained and registered as specialists – that’s 66 trained doctors added to the workforce in rural and regional locations. UOW Graduate Medicine can boast specialist GPs across rural Australia, from Nowra to Cooma, to Darwin and Armidale, and Latrobe in Tasmania. A UOW graduate specialist in general practice in rural Milton is the regional academic leader for our medical program in that region. We also have graduates working as specialists in emergency medicine in Gosford, and in rehabilitation in Tamworth.



The BioPen is a hand-held 3D printer which allows surgeons to repair damaged and diseased bone material.

BIOPEN EUREKA FINALIST

A hand-held 3D printer developed at UOW that will enable surgeons to create patient-specific knee cartilage was one of 11 projects selected this year for a share of the Australian Government’s BioMedTech Horizons program, which is helping boost health innovations in Australia.

The BioPen project – made up of researchers from ACES (ARC Centre of Excellence for Electromaterials Science) at UOW, St Vincent’s Hospital Melbourne and the University of Melbourne Department of Surgery – was also this year selected as a finalist for the UNSW Eureka Prize for Excellence in Interdisciplinary Scientific Research.

The BioPen is filled with stem cell ink to “draw” live cells and growth factors directly onto the site of an injury – to help accelerate the regeneration of functional bone and cartilage. This innovation has the potential to make a difference in preventing osteoarthritis and will have a significant impact on those suffering from debilitating conditions.

INDIGENOUS HEALTH

In 2018, Professor Kathleen Clapham received \$500,000 for one of only 12 Australian Research Council Discovery Indigenous grants awarded nationally for the project “A place-based model for Aboriginal community-led solutions”.

This project aims to investigate the unique approaches used by Aboriginal community-controlled organisations to enable community ownership of holistic health and social programs in complex community settings. Providing training and employment opportunities for Aboriginal people, this project will include mechanisms for the transfer and sharing of learnings to other locations.

Other research currently being undertaken on Indigenous health at UOW includes the Aboriginal Women’s Tobacco Intervention Project; Developing research capacity of four Aboriginal Community Controlled Health Organisations of the South Coast; Investigating the impact of Chronic Kidney Disease in the Illawarra/ Shoalhaven (a Health Impact Research Cluster collaborative project); and the Koori Kids Wellbeing Program.



Geldom has created condoms to combat the rise of sexually-transmitted diseases.

MEDICAL DEVICES FUND RECIPIENTS

The iFix Pen and a durable hydrogel condom that could help prevent unwanted pregnancies and the spread of sexually transmitted diseases across the world were the recipients of the NSW Government’s 2018 NSW Medical Devices Fund, announced in August.

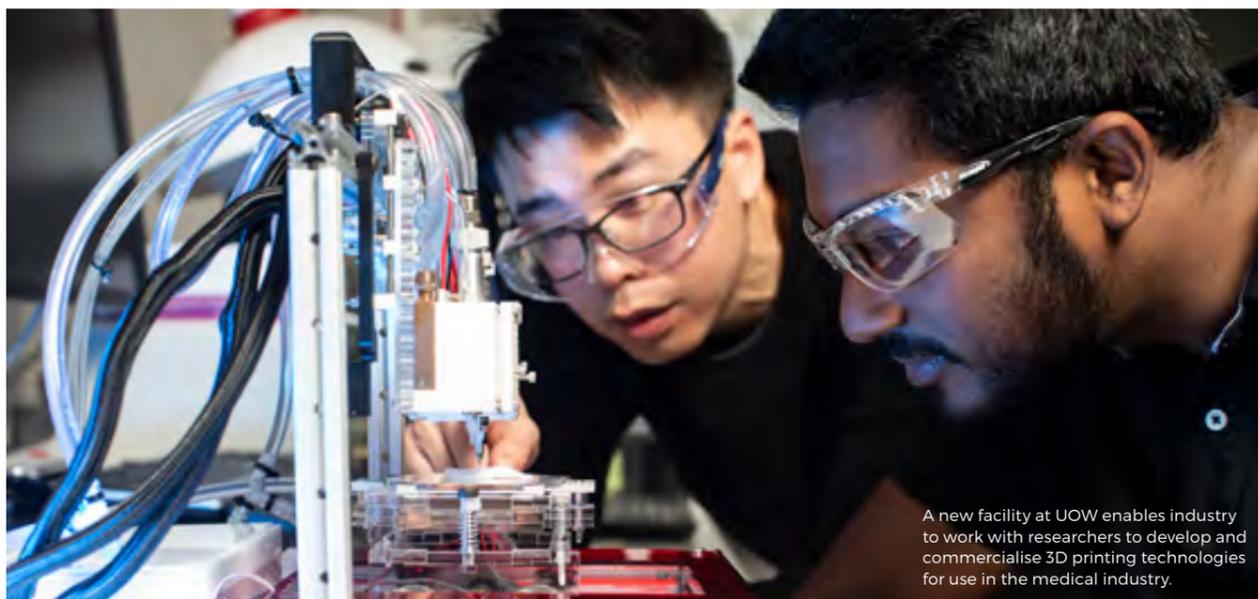
The ACES team received funding to further develop its iFix system, which is a handheld 3D-printing device that delivers a specialised bioink formulation to the eye defect with high accuracy.

Geldom was developed at UOW as part of the Global Challenges Program after researchers came across an initiative from the Bill and Melinda Gates Foundation to combat unplanned pregnancies and the rise of sexually-transmitted diseases such as HIV in developing countries.

GLOBAL CHALLENGES

The Global Challenges Program’s “Living Well, Longer” challenge is improving the lives of older Australians and people with lived experience of mental illness. Within this challenge area, the program has pioneered dementia-friendly communities through its project in Kiama, and has brought together researchers to work on the development of mobility aids, support for driving and dementia and increasing physical activity.

UOW researchers have also teamed up with The Movember Foundation to address mental health issues among adolescent males who play sport. UOW Movember brings together some of Australia’s top sporting organisations, such as Cricket Australia, the AFL, Basketball Australia, Swimming Australia, Football Federation Australia, and Tennis Australia, to examine how to prevent and solve mental health issues among young men.



A new facility at UOW enables industry to work with researchers to develop and commercialise 3D printing technologies for use in the medical industry.



UOW research on green space and health is showing that urban greenery can keep people out of hospital.

HEALTH AND MEDICAL RESEARCH

The Illawarra Health and Medical Research Institute (IHMRI) celebrated its 10th anniversary in November. The milestone provided the opportunity to honour the support and partnerships that maintain the strong connections between community, health and medical research, and UOW.

IHMRI is a joint initiative between UOW and the Illawarra Shoalhaven Local Health District, with researchers working to discover more effective ways to prevent and treat cancer, dementia, mental illness and diabetes. It has been a catalyst for the growth of health and medical research in the Illawarra and over the past 10 years has attracted research funding in excess of \$163 million.

Recent research highlights at IHMRI include projects that have mapped brain changes associated with cannabis use; evaluated the use of omega-3 to reduce violence in prisons; looked at ways to beat Indigenous heart disease; made radiation treatments safer for cancer patients; and developed wearable technology from smart textiles.

TREATING PERSONALITY DISORDERS

In November, UOW hosted the 12th International Conference on the Treatment of Personality Disorders, providing a forum to discuss improving mental health service delivery to children, young people, adults and their families. It is the only conference of its kind in Australia.

The award-winning Project Air Strategy for Personality Disorders is a partnership between the Illawarra Health and Medical Research Institute (IHMRI) at UOW and the NSW Ministry for Health and Local NSW Health Districts. In July, the NSW Government announced an additional \$5.5 million funding over five years to ensure earlier diagnosis of personality disorders and help reduce time spent in hospital due to more tailored treatments.

Established in 2011 by IHMRI researcher Professor Brin Grenyer, Project Air is already operational in 11 NSW local health districts and one network. The additional funding will enable it to be rolled out in the remaining four LHDs of Nepean Blue Mountains, Southern NSW, Murrumbidgee and Hunter New England by 2020.

BIOPRINTING TECHNOLOGIES

A new facility was opened at UOW this year which will connect research and industry to fast-track bioprinting solutions to combat significant clinical challenges.

The TRICEP initiative – Translational Research Initiative for Cellular Engineering and Printing – was officially opened in November and offers SMEs, research institutions and industry the opportunity to partner with leading researchers to develop and commercialise 3D printing technologies for use in the medical industry.

A UOW initiative, TRICEP draws on expertise and facilities available at the ARC Centre of Excellence for Electromaterials Science (ACES) and the Australian National Fabrication Facility Materials Node (ANFF), both based at the Innovation Campus. It is a bold step forward in developing innovative technologies using 3D bioprinting, including printer manufacturing.

The ability to arrange living cells in 3D advanced material structures enables researchers to tackle significant challenges including cartilage regeneration, corneal regeneration, 3D printed ears, and 3D printed structures for islet cell transplantation.

Activities at ACES and ANFF includes active collaborations in more than 50 countries, while an MOU was signed in 2018 with the Korean Society of 3D Printing in Medicine. UOW's world-first 3D Bioprinting Massive Open Online Course has attracted more than 27,000 participants from over 145 countries to date.

NORTHFIELDS CLINIC

Launched in October, Northfields Clinic@Early Start is a facility that has been specially designed to create a positive counselling environment for children and families. The clinic will also house psychology interns and their professional supervisors, not only providing students with valuable work-integrated learning, but also creating new knowledge in best practice in early childhood development, education and counselling.

GREEN SPACE AND HEALTH

Research by UOW's PowerLab (Population Wellbeing and Environment Research Lab) is showing that restoring parks and protecting tree canopies in cities can help keep us cooler, healthier, happier and out of the hospital.

Research is focused on green space and health, with one project being a longitudinal study of over 250,000 adults in Australia to understand how urban greenery promotes healthy ageing, keeps us cooler during heatwaves and potentially reduces the risk of developing Alzheimer's disease.

Funded by an NHMRC Boosting Dementia Research Leadership Fellowship, research findings have already been used in the development of Wollongong City Council's Urban Greening Strategy and have been cited by the World Health Organization.

Work with Western Sydney Diabetes has also identified food deserts and food swamps in Sydney – economically disadvantaged areas where healthy food options are scant or non-existent while unhealthy food is easy to purchase.

PowerLab explores how positive changes can be made to reduce obesity, type 2 diabetes, dementia and social isolation – epidemics of modern times that have been linked to urbanisation.

GRADUATE MEDICINE RESEARCH

Researchers from Graduate Medicine are leading a multi-university collaboration which was this year awarded a \$2 million research grant from the Royal Australian College of General Practitioners.

The research group (UOW, Monash University and the University of Tasmania) is investigating payment structures to enhance quality of care for patients with chronic disease. The project aims to provide high quality evidence for health policy and practice to benefit Australians.

Meantime, researchers, in collaboration with clinical researchers from South Eastern Sydney Local Health District, Sydney Local Health District, the University of NSW and University of Technology Sydney gained funding from the NSW Health Translational Research Grants Scheme to continue a multi-centre randomised controlled trial in Advanced Care Planning. The findings are expected to improve how health professionals communicate with patients who have serious illnesses, and reduce inappropriate and unwanted interventions at end-of-life.

SCHOOL OF NURSING

UOW is committed to growing the number of registered nurses that are able to meet the demands of a rapidly changing healthcare service, and who are transformative in their practice and confident to advocate for themselves and their patients.

Nursing continues to grow its profile at UOW with completions surpassing 400 for the first time this year, which is a five-year growth of 35 per cent.

The School of Nursing at UOW has an excellent reputation both academically and clinically. UOW nursing graduates enjoy excellent employment prospects with 93.1% in full-time employment within four months of graduating compared to the national average of 80.1% (Quality Indicators for Learning & Teaching). 98.1% of UOW Nursing graduates are in full-time, part-time or casual employment four months after completing their course compared to the national average of 94.8% (QILT).

In 2018, UOW's Bachelor of Nursing program was reaccredited for five years. Meantime, there has been increasing interest in nursing studies at the South Western Sydney Campus at Liverpool, which currently offers a Master of Health Leadership and Management, a Graduate Certificate in Health Leadership and Management, and Master of Nursing International. Partnerships with local health districts have grown and clinical placements have been secured at Liverpool Hospital and beyond.

International outlook

UOW Australia Vice-Chancellor Professor Paul Wellings CBE, UOWD President Professor Mohamed Salem, UOW Global Enterprises Group CEO and Managing Director Marisa Mastroianni and UOWD Board Chairman Peter Robson AO at UOWD's silver jubilee.

UOW has significant expertise in delivering undergraduate and postgraduate degrees and tailored professional training in many offshore locations, fostering links in education, research, business and engagement.

GLOBAL IMPACT

The University defines internationalisation as an understanding of the interconnectedness of global, regional and national issues, leading to a greater interaction between different cultures and the opportunity to foster productive partnerships and collaborations. UOW received five stars for Internationalisation in the 2018 QS World University Rankings.

More than 14,000 international students study across UOW's Australian and overseas campuses each year. UOW is a significant international player among Australian universities and currently ranks third in Australia for its overall proportion of international students (onshore and offshore). This profile is driven largely by the size of our offshore cohorts, which currently comprise 57 per cent of all UOW's international students. This makes UOW one of only four Australian universities with more offshore than onshore international students. About 45 per cent of all Higher Degree Research (HDR) students at UOW are international enrolments.

UOW values the depth of our strategic partnerships delivering world-class education programs in Malaysia (INTI Malaysia), Singapore (PSB Academy and Singapore Institute of Management), Hong Kong SAR (UOW College Hong Kong), China (Central China Normal University) and Dubai (University of Wollongong in Dubai).

UOW College Australia has also broadened its international offerings, delivering English programs in Saudi Arabia this year in collaboration with a vocational training institute. English for Tertiary Studies was also delivered in China for the first time as part of the UOW CCNU Joint Institute.

1st

UOW Global Enterprises winner of the Australian Export Awards for excellence in education and training

\$1.2M

funding received by UOW from the New Colombo Plan

3rd

UOW rates third in Australia for overall population of international students. Chinese students form the largest international cohort, followed by Indian students.

730+

UOW students participated in an overseas study experience in 2018

400

UOW partners with 400 international institutes

14,000+

international students study across UOW's Australian and international campuses every year

40%

of incoming study abroad and exchange students are from the United States



An artist's impression of the new Batu Kawan Campus of KDU University.

EXPANSION INTO MALAYSIA

In November, UOW announced our acquisition of Malaysian private higher education provider KDU. Subject to Malaysian Ministry of Education approval, UOW Global Enterprises will acquire a substantive majority interest in KDU's University colleges in Kuala Lumpur and Penang, including the new campus under construction in Batu Kawan.

The acquisition expands UOW's existing global presence and builds on the University's successful 10-year track record of providing world-class tertiary education to students in Malaysia.

Established in 1983, KDU is a pioneer in Malaysian private education, as one of the nation's first private colleges. KDU College was awarded university college status in 2010, reflecting its quality programs and the growth of its international student population.

DUBAI SILVER JUBILEE

Arguably Australia's most successful off-shore higher education facility, University of Wollongong in Dubai (UOWD) was the first private western university in the UAE when it was established in 1993. UOWD now has 380 staff and 3,700 students from 108 nationalities enrolled across 38 degree programs and this year had its licence renewed for a further five years until 2023.

In October, UOWD celebrated its 25th anniversary at a silver jubilee gala dinner in Dubai. The prestigious event drew industry, government and education leaders from across the emirates and beyond. Among the attendees were Australian Consul-General Ian Halliday, Australian Embassy Chargé d'affaires Julie Shams, UOW Vice-Chancellor Professor Paul Wellings CBE, UOWD Board Chairman Peter Robson AO, UOW Global Enterprises CEO and Managing Director Marisa Mastroianni, other members of the UOWD Board and the chief architect of UOWD, University Fellow Dr James Langridge.

To mark the silver jubilee milestone, UOWD launched a commemorative book narrating UOWD's journey of transformation and UOW presented UOWD with a pure silver bullion sculpture commissioned by artist Adrian Ward. The gift symbolises how the written word has been on a journey of transformation, from the development of papyrus to the digital age of computers, all the while always being the key to education.

Future plans for UOWD include a new state-of-the-art campus, which is under construction and expected to be operational by early 2020. A miniature 3D model of the new campus was unveiled during the event. UOWD has grown to around 36,000 students with over 10,000 alumni.

Also this year, UOWD and Politecnico di Milano's Graduate School of Business formed a partnership to develop prestigious luxury brand management postgraduate programs in the Middle East.

GLOBAL ENTERPRISES AWARDED

UOW Global Enterprises was announced as the 2018 winner of the Australian Export Awards for excellence in education and training at a ceremony in Canberra in November.

The Australian Export Awards is an annual program that recognises international success and excellence in the export of goods and services, and celebrates the achievements of Australia's most innovative exporters.

UOW Global Enterprises (a wholly owned subsidiary of the University of Wollongong) won the Education and Training Award for "outstanding innovation and international success in the field of education and training services, expertise and curriculum".

Since its foundation in 1993, UOW Global Enterprises has been driving the export of education and training, and is now a leading international provider of offshore education institutions with University of Wollongong in Dubai, the UOW College in Hong Kong, KDU in Malaysia as well as a UOW College in Australia.

INCREASING STUDENT MOBILITY

UOW is continuing to strengthen our links with offshore campuses and partners through increasing student participation in mobility programs. The University partners with about 400 international institutions, many which make available study abroad and exchange opportunities for students. Our continued focus on outbound student mobility has increased the number of UOW students who participate in an overseas study experience to more than 730.

Eighteen students from UOW have participated in the New Colombo Plan since its inception, enjoying the opportunity to study, work and live across destinations in the Indo-Pacific region. This year, UOW received nearly \$1.2 million in funding through the program, which supports Australian undergraduates to study and undertake internships in the region.

In 2018, UOW established new exchange agreements with 10 global universities including new partners in Japan, the Netherlands, Indonesia, India, France, China, Singapore, Hong Kong, the Philippines and Thailand.

With the introduction of the Global suite of degrees in 2018, there has been a focus on working closely with partner organisations and internal stakeholders to define processes to support the mobility of students between UOW teaching locations. In 2018, there were 29 inbound visits by current and prospective partner institutions and organisations encompassing 17 different countries.



UOW Deputy Vice-Chancellor (Global Strategy) Professor Alex Frino (right) with UOW Global Brand Ambassador Adam Gilchrist AM (left) and Tottenham Ambassador Ledley King at Wembley Stadium in London.

CITIZENS OF THE WORLD

The Global Leaders Development Program (GOLeAD) was launched in Wollongong in 2017 by His Royal Highness, Prince Andrew, Duke of York, in September.

Isabella Panozzo was among the first cohort of students taking part in GOLeAD this year, with 15 students receiving the chance to spend time living and studying at UOW's global campuses.

GOLeAD aims to help UOW attract more high-achieving students from the Illawarra and participants can study undergraduate degrees in Commerce and Computer Science. They receive a \$30,000 travel scholarship to use over the course of their degree and can spend a semester at each of UOW's campuses in Singapore, Hong Kong and Dubai.

The program's aim is to create global-minded graduates with exceptional communication and leadership skills that translate to the real world. Targeting students who score among the top 5 per cent in the HSC, the GOLeAD program provides direct entry into a coveted Honours degree, facilitates up to 18 months of study at the UOW's Dubai, Singapore and Hong Kong campuses and provides generous paid internships with global organisations.

PIONEERING FOOTBALL PROGRAM

English Premier League club Tottenham Hotspur Football Club and UOW will pioneer an innovative Player Development Program to be offered on campus from 2020.

Launched in September, the UOW Tottenham Hotspur Global Football Program will see two FA and UEFA-qualified Tottenham Hotspur coaches train participating UOW students for 36 weeks a year over five years.

The program is open to applications from Australian and international undergraduate and postgraduate students. As well as developing players, the program will boost Australian football's training and development offerings.

In developing the program, UOW is seeking to grow the game locally and attract football playing students to UOW. Tottenham's world-renowned brand positions the program well to attract international students, especially capitalising on China's Football Development Reform Plan (2015-2025).

DIVERSITY OF STUDENTS

UOW's inbound student mobility program is a key contributor to the diversity of UOW's international body. Due almost exclusively to enrolments in inbound exchange and study abroad programs, the United States represents UOW's fifth largest international onshore commencing cohort, and contributes significant enrolments from countries in Europe and North America. These mobility cohorts also contribute to international student diversity by destination faculty, with the spread of subject enrolments across all five faculties.

The Office of Global Student Mobility welcomes students from over 35 nationalities for incoming study every semester, and is actively seeking to increase the number of students from underrepresented nationalities. At present students from the US contribute to 40 per cent of incoming study abroad and exchange students, 23 per cent from China, with a large number of students also coming from Europe, the UK, Latin America and the remainder of the Asia Pacific region.

HONG KONG STUDENT INCREASE

UOW College Hong Kong (UOWCHK) was launched in November 2017, after UOW acquired the Community College of City University (CCCU) in July 2015, strengthening the University's position as a global higher education provider in Northeast Asia.

There was good progress this year in preparatory work for the College's new flagship campus at Tai Wai. It is expected to be available for fit-out by mid-2020 and the campus will provide exceptional access via the Mass Transit Railway system for both staff and students.

UOWCHK is currently undergoing CAP320 registration, the Post Secondary Colleges Ordinance governing the registration and monitoring of post-secondary education institutions in Hong Kong.

New commencing students in 2018 at UOWCHK increased by 65 per cent from the previous year, resulting in a 46 per cent increase in total enrolled students.

Student exchange agreements were established this year with UOWCHK and the Singapore Institute of Management, to promote semester-length student mobility between UOW teaching sites.

In August, 48 students from UOWCHK participated in a study tour to Wollongong and Sydney. The two-week program consisted of academic and cultural activities and a community engagement activity, designed to introduce Associate Degree students to UOW.



PARTNERSHIPS WITH CHINA

This year, 2,980 Chinese students studied at UOW (2,390 onshore and 590 offshore), making it the largest international cohort. In 2018, China was the second most popular destination for Australian students choosing to spend part of their degree studying abroad, and China is the second most popular destination for UOW students for student mobility.

Over 15,000 UOW alumni reside and work in greater China, forging strong partnerships with government and industry leaders.

UOW has engaged with China and its institutions since the 1980s and currently partners with 43 Chinese universities and five academies and research institutes for research, articulation, student exchange and twinning arrangements.

Commencing students in 2018 at the Joint Institute with Central China Normal University (CCNU) increased by 28 per cent from 2017, resulting in a 116 per cent year-on-year increase in total number of enrolled students at CCNU.

UOW is among the top 10 Australian universities that have the most joint scientific and research papers with China. In particular, UOW has the equal second-highest number of joint publications with China in the area of Materials Science. Other disciplines with a large number of joint publications are Chemistry, Energy, Engineering, Physics and Astronomy.

This year, UOW established a partnership with HBIS Group, focusing on cutting-edge research collaborations in advanced manufacturing. HBIS and UOW have agreed to establish a Joint Innovation Centre in Advanced Manufacturing. To leverage UOW's strength in Mining and the heritage of Illawarra region, UOW is also now working with China Coal Technology and Engineering Group (CCTEG) to improve the efficiency, safety and sustainability of mining practices.

In 2018, UOW engaged in a number of new research partnerships which included the Institute of Metal Research CAS China, University of Electronic Science and Technology of China, Xi'an Jiaotong University, Tianjin University, University of Electronic Science and Technology, Northwestern Polytechnical University, Shanghai University; Association for Maternal and Child Health Studies.

PARTNERSHIPS WITH SINGAPORE

UOW has long-standing partnerships with two of Singapore's leading private higher education colleges – the Singapore Institute of Management (SIM) and the PSB Academy.

UOW and SIM signed a student mobility agreement this year to allow greater mobility of students between the campuses. UOW's agreement with PSB Academy has been extended to December 2019 and the agreement is expected to include delivery of the full Bachelor of Commerce program.

Commencing students in 2018 at the Singapore Institute of Management increased by 9 per cent from the previous year, resulting in a 12 per cent year-on-year increase in total number of enrolled students. This growth was especially in Computer Science programs.

PARTNERSHIPS WITH INDIA

UOW's partnerships in India stretch across higher education, government, industry and research organisations. Research collaborations include software development, railway engineering and mining technologies.

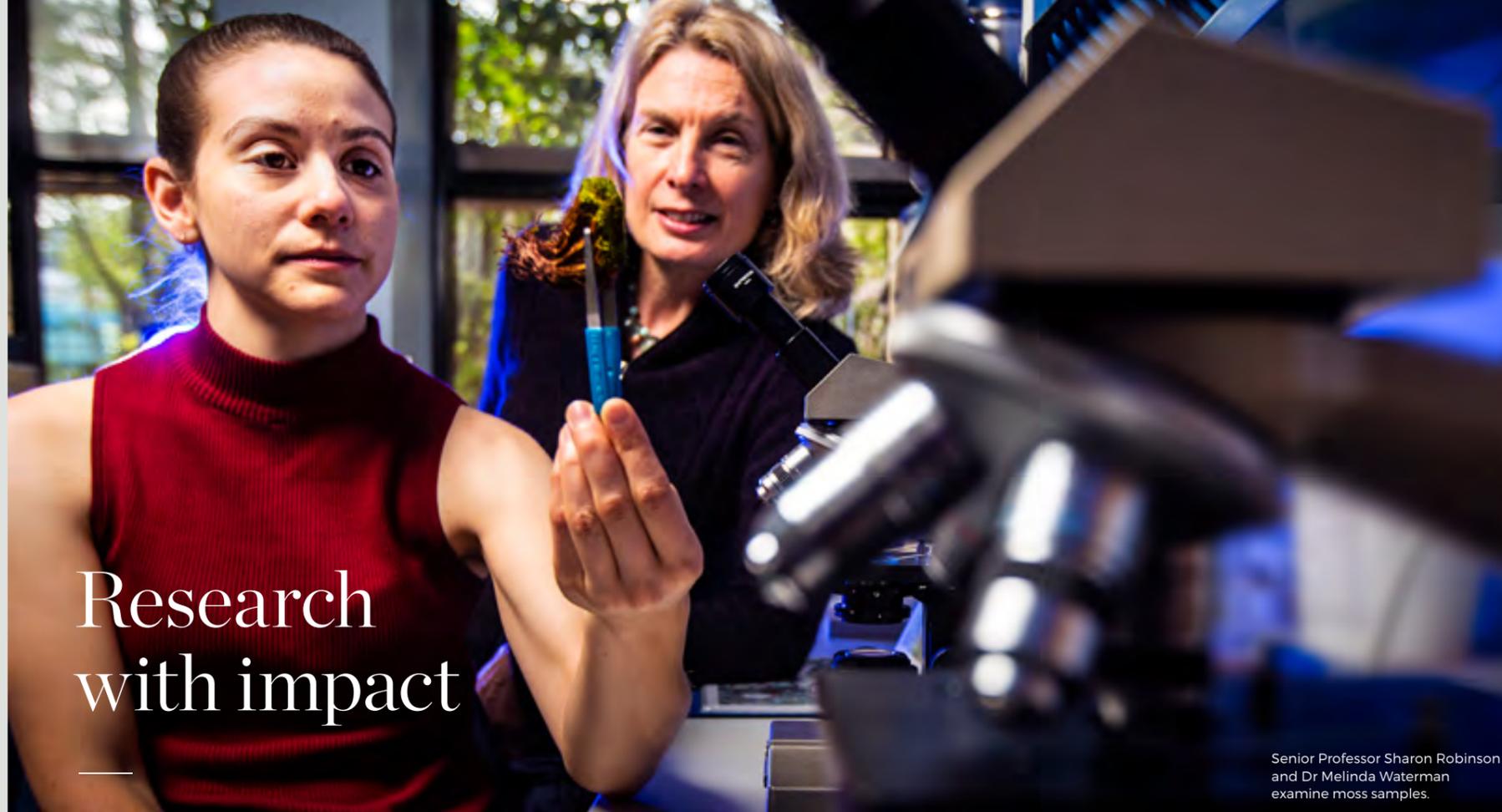
Indian students form the second-largest international cohort at UOW. In 2018, there were over 2,300 Indian student enrolments onshore and offshore, including at UOWD, as well as in programs at Singapore, Malaysia and Hong Kong. Indian students make up 16 per cent of the University's total international students, with 28 per cent studying Engineering and Information Sciences.

PARTNERSHIPS WITH JAPAN

Future educational and research opportunities between UOW and Japan were discussed in July during a visit by a high-level delegation from Wollongong's sister city of Kawasaki. This year marks the 30th anniversary of the Wollongong City Council/Kawasaki City sister city relationship.

UOW has a strong history of student mobility with Japan. The University has 15 exchange partners in Japan, six of whom UOW has partnered with for more than 20 years. Japan is a consistently popular exchange destination for UOW students, particularly for those studying Japanese language, international business, and engineering.

Research with impact



Senior Professor Sharon Robinson and Dr Melinda Waterman examine moss samples.



Dr Nicholas Flament is mapping areas of potential for diamond exploration in Australia.

UOW has a proud history of providing strong research that has national and international significance. We are expanding and enriching our research efforts for the betterment of our students, communities and the world.

TACKLING WORLD'S CHALLENGES

UOW is ranked in the top 1 per cent globally for research quality and we have a strong focus on research impact. Together with our research centres, UOW is creating and nurturing the next generation of gifted, driven, well-rounded researchers who are equipped to create meaningful change across Australia and the world.

The 2018 Nature Index Annual Tables ranked UOW as one of the top 10 institutions in Australia for scientific research. The index ranked UOW at 436 globally (up from 452 in 2017) out of more than 9,000 institutions. Demonstrating our research profile, 10 UOW researchers made the list of 170 Australian academics on the global list of Clarivate Highly Cited Researchers for 2018.

The University has major research centres which are global leaders in health, material sciences, sustainable construction, infrastructure development and early education. UOW invests in excess of \$140 million a year in research and our research programs have attracted almost \$1 billion in competitive funding in the past 15 years. This year, we submitted the required documents to the Australian Research Council for the Engagement and Impact Assessment, with the submission highlighting that UOW has undertaken research across 20 different fields.

Our local and global partnerships between researchers, business, industry and government help build the University's reputation for research excellence and impact.

RESEARCH INCOME

\$72.3M

HERDC research income received (2017 Higher Education Research Data Collection)

\$36.5M

Research Block Grant allocation (2017 Australian Government Research Block Grant allocations)

\$13.57M

ARC grant income awarded (Australian Research Council grants announced in 2017)

\$5.02M

NHMRC grants income awarded (National Health and Medical Research Council grants announced in 2017)

FUNDING OUTCOMES

UOW researchers continued to perform well in attracting funding from competitive grants in 2018, with \$9.7 million in ARC funding awarded to 10 ARC Discovery Projects, totalling \$4.1 million, four Future Fellowships and five Discovery Early Career Researcher Awards, totalling \$5.1 million.

Professor Kathleen Clapham received \$500,000 for one of only 12 Discovery Indigenous grants awarded nationally. UOW ranked 10th nationally relative to size and 12th nationally on total DECRA funding awarded.

Four Linkage Infrastructure Equipment and Facilities grants were awarded totalling \$1.68 million and representing a 100 per cent success rate. UOW ranked second nationally relative to size and eighth nationally on total amount awarded. Our success in ARC Discovery projects ranks us 11th nationally relative to size and 13th nationally on total funds awarded.

Projects which received ARC funding range from smart sensors to help the visually impaired navigate through crowds, to guidelines for parents on how to interact with children during digital play; and from modelling sources and sinks of greenhouse gases in order to mitigate their effects, to understanding why the rate of commuter cycling is stationary while leisure cycling participation rates continue to grow.

Discovery Early Career Researcher Awards (DECRA) were awarded to Dr Zhu Li, Dr Zhixiong Li, Dr Yan Lu, Dr Valentina-Mira Wheeler and Dr Tengfei Zhou.

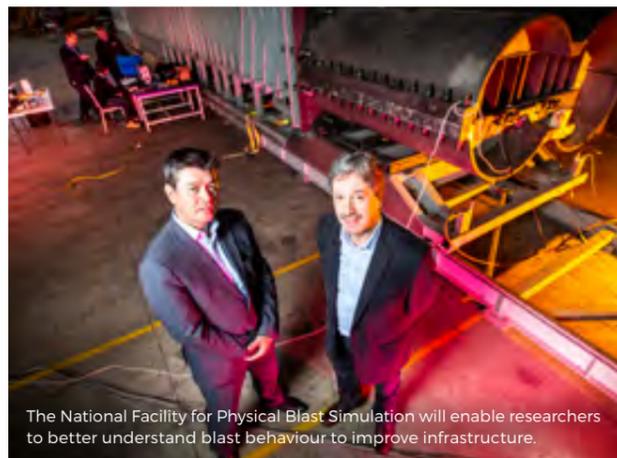
Four ARC Linkage grants were awarded to UOW-led projects over the year in the fields of biology, disability services, mining and materials science, totalling \$1.02 million, augmented by cash and in-kind contributions totalling \$1.8 million from partner organisations involved in these projects. Successful grants include a project led by Associate Professor Melanie Randle to increase workplace participation of people with a disability; a project led

by Dr Nicholas Flament to map areas of potential for diamond exploration in Australia; a project led by Professor Shujun Zhang to develop ferroelectric crystals for transducer applications to reduce harmful effects on human health and the environment; and Dr Phillip Byrne's project will test whether giving individual frogs in a captive breeding program access to superior nutrition improves their ability to survive once reintroduced to the wild.

Four UOW researchers were awarded funding totalling \$3.3 million in the ARC Future Fellowships in August, placing UOW 5th nationally relative to size. Dr Yi Du, Associate Professor Tim Cohen, Dr Nicholas Deutscher, and Dr Mike Morley were awarded their Future Fellowships for research projects in the fields of materials science, geomorphology, atmospheric chemistry and archaeology. Dr Morley's project aims to reveal the processes that drove the dispersal of early humans eastwards from Africa into Southeast Asia – and beyond into Australia. Dr Deutscher will be researching the causes of variability in atmospheric greenhouse gases. Dr Cohen's project will create a record of past periods of climate extremes in Australia, while Dr Du will work to develop new approaches to control structural and electronic properties of two-dimensional materials for clean hydrogen energy generation and carbon sequestration.

Among NHMRC funding announced this year is a study into antibiotic resistant bacteria which brings together scientists from UOW's Molecular Horizons with researchers from Macquarie University and the University of Technology Sydney. Combining expertise in single-molecular microscopy, genetics and genome analysis, this research will pave the way for new drugs that can be used to kill resistant bacteria.

The NSW Government's Medical Devices Fund funded two projects. The hydrogel condom project – Geldom – received more than \$1 million and the iFix system, developed in collaboration with researchers at the ARC Centre of Excellence for Electromaterials Science received \$1.15 million.



The National Facility for Physical Blast Simulation will enable researchers to better understand blast behaviour to improve infrastructure.



Through the new Keystone funding initiative, Global Challenge researchers have formed teams to investigate dementia and makerspaces.

UOW 2018 HIGHLY CITED RESEARCHERS

- | | |
|--|---|
| Distinguished Professor Shi Xue Dou (Materials Science) | Professor Yoshio Bando (Materials Science) |
| Distinguished Professor Hua Kun Liu (Chemistry, Materials Science) | Distinguished Professor Gordon Wallace (Cross-Field) |
| Professor Zaiping Guo (Cross-Field) | Professor Jun Chen (Cross-Field) |
| Professor Jiazhao Wang (Materials Science) | Distinguished Professor Richard 'Bert' Roberts (Social Sciences, general) |
| Associate Professor Shulei Chou (Cross-Field) | Professor Zenobia Jacobs (Social Sciences, general) |

MAJOR RESEARCH FACILITIES

- | | |
|---|--|
| Australian Institute for Innovative Materials (AIIM) | SMART Infrastructure Facility |
| Early Start | Sustainable Buildings Research Centre (SBRC) |
| Illawarra Health and Medical Research Institute (IHMRI) | Molecular Horizons |

NEW CENTRES AND RESEARCH

The \$7.4 million Australian Centre for International Agricultural Research (ACIAR) Project: Pathways to Change in Pacific Coastal Fisheries was launched in January.

UOW's impact with industry was showcased at the official openings of the Facility for Intelligent Fabrication (FIF) and the ARC Industrial Transformation Training Centre for Advanced Technologies in Rail Track Infrastructure (ITTC Rail). A \$3.9 million ARC grant for ITTC Rail was supported by an additional \$3.4 million from the NSW Government, industry and university partners.

Opened in March, the FIF brings together UOW, TAFE NSW and Weld Australia and their networks to provide expertise, technology, equipment and education for advanced manufacturing in a "one-stop shop".

Opened in May, ITTC Rail will train the next generation of rail engineers with the knowledge and skills needed to maintain and upgrade Australia's rail network.

In June, UOW unveiled the National Facility for Physical Blast Simulation, which will enable researchers to better understand blast behaviour to improve security and safety of people and infrastructure.

The TRICEP initiative – Translational Research Initiative for Cellular Engineering and Printing – was officially opened in November and connects research and industry to fast-track bioprinting solutions to combat significant clinical challenges. TRICEP offers SMEs, research institutions and industry the opportunity to partner with leading researchers to develop and commercialise 3D printing technologies for use in the medical industry.

In April, UOW was announced as a research participant in the Future Fuels Cooperative Research Centre, which will support the pivotal role fuels such as hydrogen and biogas play in supplying Australia's energy needs as it transitions to a low-carbon economy.

Also announced this year, UOW will lead the Bushfire Risk Management Research Hub. The NSW Office of Environment and Heritage worked with UOW and the NSW Rural Fire Service to establish the Enhanced Bushfire Research Hub, which is a three-way collaboration between land managers, fire-fighters and researchers. UOW will lead the centre, which includes a team of world-class experts from Western Sydney University, the University of NSW, and the University of Tasmania.

GLOBAL CHALLENGES FUNDING

UOW's Global Challenges is a research initiative that is focused on transformative interdisciplinary research that harnesses the expertise of world-class researchers to address complex, real-world problems – to transform lives and regions. Research themes are "Living Well, Longer", "Making Future Industries", "Sustaining Coastal & Marine Zones" and "Building Resilient Communities".

In 2018, Global Challenges marked its fifth year of supporting interdisciplinary research, with 15 new projects and a total of 113 projects continuing to make an impact in communities locally and globally. In its first five years of operation, Global Challenges has supported projects involving 464 unique researchers.

Global Challenges continues to support the next generation of researchers with over 30 per cent of investigators supported in 2018 being higher degree research students and early career researchers. This year, 40 per cent of all Global Challenges projects were led by female Chief Investigators, with women making up 44 per cent of investigators across all projects.

Global Challenges project teams continue to grow into self-reliant and sustainable initiatives, through brokering connections with industry, government and communities. In 2018, 20 per cent of projects had investigators from external partners.

This year, Global Challenges announced a new Keystone funding initiative for researchers to engage in interdisciplinary research projects at a larger scale. These keystones are supported at \$100,000 a year for two years, with co-funding from faculties and/or external organisations.

The PIECES team (People with dementia can be Included & Enabled through social Connections, Environments & Services) will investigate how connected, active and social environments can be developed to promote health and wellbeing for people with dementia. The team will collaborate with Illawarra Shoalhaven Local Health District, Kiama Council/Blue Haven, Playgroup NSW and IRT Foundation.

The Future Makers team will investigate how makerspaces can impact and contribute to the local economy and STEM education. Future Makers will also partner with Science Space and investigate environmentally-responsible practices.

The Global Challenges program also launched a new challenge area, Building Resilient Communities, with a distinct focus on inequality, vulnerable populations, and disaster resilience.

SMART RESTRUCTURE

The SMART Infrastructure Facility brings together experts from fields such as rail, infrastructure systems, transport, water, energy, economics and modelling and simulation.

A major overhaul to the research structure for the SMART Infrastructure Facility was undertaken this year. The updated research structure is in response to infrastructure needs as well as a need for increased collaboration across the University.

SMART's research is now spread across four key research themes – Water & Energy, Systems & Logistics, Cities & Transport, and Health & Education.

INTERNATIONAL COLLABORATION

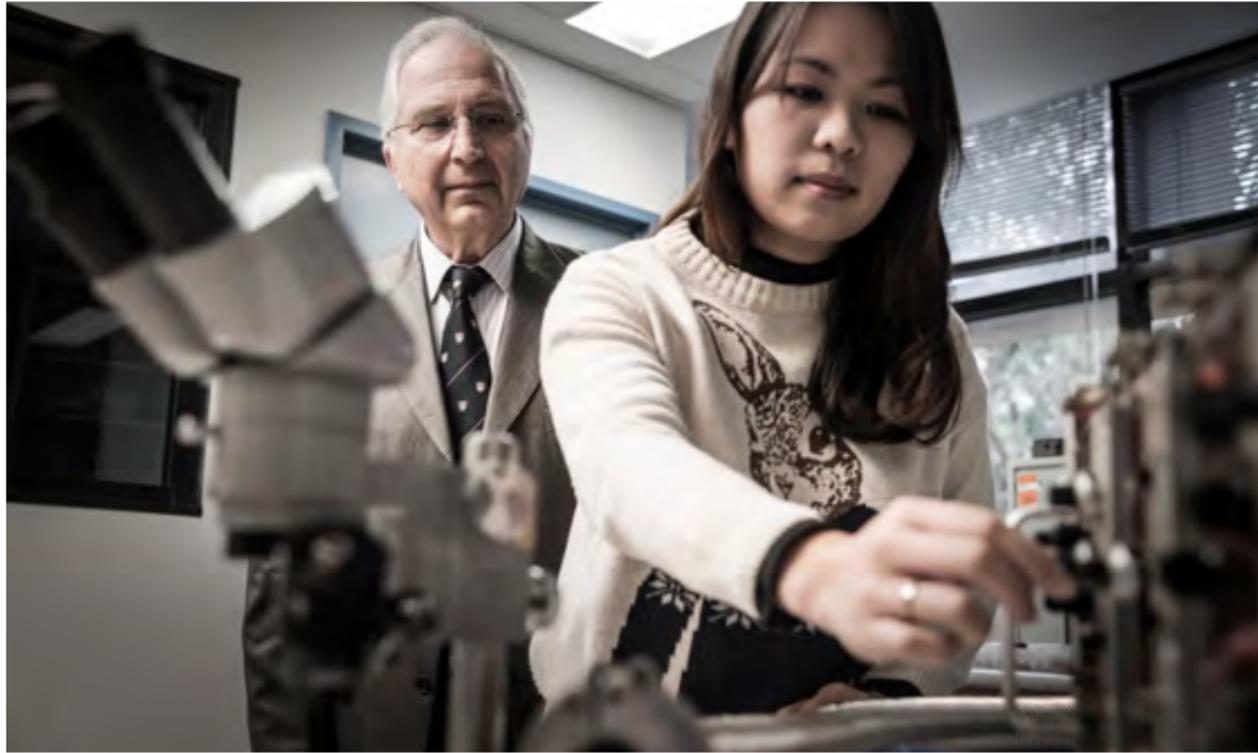
The University Global Partnership Network (UGPN) is an academic consortium spanning four continents, including the universities North Carolina State University (USA), the University of Sao Paulo (Brazil), University of Surrey (UK) and UOW. These research-intensive universities are focused on turning ideas into action by developing sustainable world-class research, education and knowledge transfer.

UOW researchers were involved with six of the 10 funded UGPN Research Collaborative Fund Grants this year. Twenty UOW academics and three professional staff attended the UGPN conference hosted by the University of Surrey in April.

EARLY AND MID-CAREER RESEARCHERS

There were more nominations than places available for the 2018 Early Career Researcher Development Program. Twenty-six staff from all faculties were accepted into the program, with 19 per cent being male and 81 per cent female.

Also this year, the UOW Impact Makers initiative was launched, featuring 44 research partnerships recognising the talent of early and mid-career academics. In September, an all-staff Research and Innovation Forum was held, which included the launch of the UOW Impact Makers initiative and publication. The publication features 44 research partnerships that put the spotlight on early and mid-career academics who are set to deliver real change to the environment, economy and society and culture through their research work.



Examples of impact

The University's major research centres are global leaders in health, material sciences, sustainable construction, infrastructure development and early education.

We maintain our focus on emerging industries and have increased our capacity to commercialise outcomes of our research into services and products nationally and internationally.

The following are examples of the societal, environmental and economic impacts of UOW research:

SOCIETAL

DEVELOPING RADIATION DETECTORS

Out in space, beyond the Earth's atmosphere, cosmic radiation is considered the main health hazard. This radiation attacks the human body in the form of cancer, central nervous system disorders, cardiovascular problems, and tissue degeneration.

Researchers at UOW are further developing a unique microdosimeter that measures the amount of radiation that astronauts, high-altitude aircraft crews and electronic instruments are exposed to.

The patented silicon-based microdosimeter was invented by Centre for Medical Radiation Physics (CMRP) Director Distinguished Professor Anatoly Rozenfeld and his team are now working with partners to design and fabricate a prototype of the radiation detector that can be used on space missions.

CMRP is internationally recognised as a leader in the field of radiation sensors for use in space exploration, medicine, aviation and homeland security. A multidisciplinary team at CMRP has been working on the microdosimeter for a number of years, in collaboration with international agencies including the National Space Biomedical Research Institute (USA), the United States Naval Academy, the Australian Nuclear Science and Technology Organisation, the Australian National Fabrication Facility at UNSW and Norwegian microelectronics foundry SINTEF.

In humans, overexposure to radiation can cause cancer, damage to the foetuses of pregnant women and genetic defects that can be passed onto future generations. It can also cause damage to microelectronics during long-term space missions and high altitude flights.



ENVIRONMENTAL

CLIMATE CHANGE IN ANTARCTICA

UOW's Centre for Sustainable Ecosystem Solutions (CSES) is an interdisciplinary research initiative targeted at ecosystem management, conservation biology and environmental biology. Its work draws upon the core disciplines of ecology, physiology, genetics and animal behaviour.

The Centre's research focuses on invasive species, disturbance regimes (such as seabed disturbance or fire), climate change (understanding how plants and animals are impacted by climate change in Australia and Antarctica), biodiversity (understanding how biodiversity and ecosystems will respond to global environmental change), human inputs (impacts of urban developments on biodiversity), and innovative solutions (using novel technologies for assessing biodiversity and ecosystem health remotely).

Researchers have shown that drone-based monitoring of Antarctic vegetation health produces similar results to traditional techniques, but with much greater efficiency and with no damage to the vegetation. Drones equipped with sensors are able to detect vegetation health indicators more accurately than satellite imagery. Also, a long-term monitoring study by the CSES team has shown for the first time that east Antarctic vegetation is affected by climate change, with species changes and loss of vegetation health over recent decades due to the drying climate.

Within the Conservation Law, Policy and Management research area, the Centre aims to apply the results of its core biological research to better inform the decisions of policy makers both within Australia and overseas. For example, CSES' work in Antarctica informs managers on best ways to protect fragile Antarctic diversity.

Supported by UOW's Global Challenges Program, the researchers will continue to monitor the impacts of climate change on Antarctica.



ECONOMICAL

SUSTAINABLE FISHERIES

For people living throughout the Pacific, fishing is important for food, income and employment. However, there are fears for the region's future food-production capacity and food security as sea levels rise and population grows.

Since 2013, the Australian National Centre for Ocean Resources and Security (ANCORS) at UOW has worked closely with international research agency WorldFish, on research into community based fisheries management in Kiribati, Solomon Islands and Vanuatu.

In January 2018, the Australian Government opened a second phase for the program to build on this work to scale out improvements in the wellbeing of people in Pacific coastal communities through more productive and resilient fisheries and better food and nutrition security. Opened as the Australian Centre for International Agricultural Research (ACIAR) project, Pathways to Change in Pacific Coastal Fisheries (phase 2), it is led by ANCORS.

The project focuses on understanding, testing and adapting the structures, processes and capacity to implement and sustain national programs of community-based fisheries management in Kiribati, Solomon Islands and Vanuatu.

The project team comprises ANCORS, WorldFish, national agencies, and the Pacific Community including Kiribati Ministry of Fisheries and Marine Resource Development, Solomon Islands Ministry of Fisheries and Marine Resources and Vanuatu Fisheries Department. The project has been supported by Global Challenges and is funded by the Australian Government through the Department of Foreign Affairs and Trade (DFAT) and the Australian Centre for International Agricultural Research (ACIAR).

Community-based fisheries management facilitates fisheries management through building partnerships and strengthening two-way communication pathways among communities, local, provincial and national government agencies to combine traditional knowledge with scientific recommendations.

ANCORS' leadership role and expertise in ocean law, maritime security and natural marine resource management was noted during a visit this year from United Nations Food and Agricultural officials, who helped launch a specialist International Fisheries law enforcement course.



Access and equity

UOW delivers successful strategies to ensure that students from underrepresented groups have greater opportunities to gain access to and succeed in higher education.

PARTICIPATION AND DIVERSITY

UOW's vision is to develop and foster collaborative partnerships that enable the aspirations, awareness and attainment of individuals from underrepresented backgrounds in higher education from UOW's communities.

We are a large provider of successful enabling pathway programs, and continue to widen our participation and access initiatives. At UOW, 19.2 per cent of domestic undergraduate students are from a LSES and 29.1 per cent of students are from regional and remote areas. Students with disabilities make up about 12.5 per cent of enrolments.

In 2018, UOW reviewed our approach to the success of equity students through launching a new Access & Participation Enabling Plan for Student Equity in Higher Education 2018-2020. As part of this plan, UOW has identified six core programs to focus on over the next three years to increase the participation of equity students at UOW. These include designing and implementing programs that increase student completion and accessibility to opportunities that will increase their employment beyond university.

In 2018, 483 of 528 enrolled students successfully completed the Year 12 University Preparation Program – a completion rate of 91 per cent. This was a substantial improvement over the previous year's cohort completions, representing a 56 per cent increase on the number of students UOW Higher Education Participation & Partnership Program (HEPPP) funding has successfully put through the program than in 2017. This year, 88 per cent of the UPP cohort applied to UOW Early Admission, with 77 per cent of applicants receiving an offer to study at UOW.

IMPACT OF REGIONAL CAMPUSES

As the 20th anniversary of UOW's regional campus network approaches, we continue to refresh the strategic directions for these campuses to ensure that they address market needs, support community aspirations and remain vibrant and sustainable.

UOW has regional campuses across NSW including Bega, Batemans Bay, Shoalhaven (Nowra), and the Southern Highlands (Moss Vale), providing opportunities for students to obtain a tertiary qualification without leaving their local area.

Each campus runs extensive outreach programs to their schools and communities and has dedicated learning development staff, student support and disability advisors, student counsellors and careers consultants to support students, most who are from underrepresented backgrounds. The Weighted Average Mark at regional campuses is slightly higher than the Wollongong Campus due to this additional support.

For its first two decades the Shoalhaven Campus, like many such regional university campuses, focused only upon teaching and research. However, in the past few years an important new dimension has been actively pursued – that being as a community service hub.

Our regional campuses have a strong and connected presence in our communities. The economic impact of the Shoalhaven Campus in the Shoalhaven was calculated this year, showing that total expenditure in the region supported by UOW activities amounts to \$35.5 million a year. The total economic value-add of UOW activities in the Shoalhaven amounts to \$19.8 million a year and activities in the Shoalhaven support a total of 156 jobs (FTE), of which 80 jobs are direct employees.

About 6 per cent of Shoalhaven Campus students are Aboriginal (three times the proportion for UOW as a whole) and like other UOW regional campuses, many Shoalhaven Campus students are the first in their family to attend a university.

UOW COLLEGE MARKS 30 YEARS

UOW College Australia celebrated 30 years of operation in April this year. In this time, it has helped more than 30,000 students to access higher education and employment.

This year, the College piloted a student feedback and engagement app for students to indicate their understanding of lesson content, allowing teachers to respond quickly to specific learning needs.

UOWC Australia offers a broad range of support services available for students from diverse and disadvantaged backgrounds as well as academic support services to help all students succeed.

The University Access Program (UAP) is a Commonwealth Supported Place scheme that targets low socio-economic status (LSES) students, while the Special Tertiary Entrance Program (STEP to UOW Program) is a preparation program designed for students who have experienced a disadvantage during their secondary school education. Successful completion of the STEP to UOW program provides guaranteed entry to most UOW undergraduate degrees.

This year, the College increased student numbers at the South Western Sydney Campus for both academic pathway and English language students. English for Tertiary Studies was also offered at UOW's Sydney Business School.

AWARD FOR JINDAOLA PROGRAM

Jindaola, an innovative program that weaves Indigenous Knowledges and perspectives into the University's teaching practice, was this year named the overall winner of the inaugural Australasian Academic Development Good Practice Award and also received the Peer's Choice Award.

The innovative teaching and learning model was developed in consultation with local Elders and Knowledge holders based on traditional Aboriginal systems for maintaining knowledge integrity.

The majority of UOW's Australian campuses are situated on Yuin Country, which encompasses the South Coast of NSW. The aim of Jindaola is to ensure the principles of respect, responsibility, and reciprocity, which underpin Yuin ways of conducting business and maintaining knowledge integrity, are firmly ingrained in the University's approach to learning and teaching.

IMPROVING EMPLOYMENT PROSPECTS

This year has seen a focus across UOW on improving employment prospects for equity groups. The Careers Mentoring Program connects students with UOW alumni and the UniSpecialist Employment Partnership supports students with disabilities and graduates into local graduate employment.

The Woolyungah Indigenous Centre (WIC) successfully deployed a sustainable employability model that worked closely with business partners to provide work-integrated learning opportunities for an increasing number of Aboriginal and Torres Strait Island students.

UOW implemented equity programs in a number of recruitment, pathways and co-curricular activities including Discovery Days, Super Study Day, Alternative Admissions Program, AIME Employability Workshops and Pathways and Bridging Programs.

WIC and the CareerTrackers Indigenous Internship Program again partnered to help Aboriginal and Torres Strait Islander students develop their leadership skills in the workplace and community. This year, the program saw a 35 per cent growth on 2017 in the number of participants who have interned at Qantas, Jawun, Indigenous Business Australia and the Reserve Bank Australia.

UOW continues to work with Australian Indigenous Mentoring Experience (AIME) to enable Aboriginal and Torres Strait Islander school students in the Southern Highlands and South Western Sydney regions alongside UOW's outreach programs. This includes careers days, pathway conversations and on-campus days for Aboriginal and Torres Strait Islander students in targeted schools in these regions.

NEW PROGRAM AT EARLY START

UOW is home to Early Start, a unique combination of community outreach, education and research initiatives brought together with the aim of helping children realise their potential. Helping to bridge the gap in educational achievement of students from regional, rural and remote areas of Australia, Early Start advocates for evidence-based policies and programs that address community needs and improve knowledge and understanding of child development.

In 2018, Early Start and In2Uni launched the new program, Go Big! This program is targeted at Year 2 students in schools that have high proportions of equity students enrolled. The program allows students to explore careers and concepts of success early.

ENCOURAGING STEM PARTICIPATION

As part of UOW's participation in the Science in Australian Gender Equity (SAGE) Pilot, UOW secured grant funding under the Women in STEM and Entrepreneurship (WISE) grants program. The grant funded the Festival of STEM – a week-long event held in February 2018 at the Innovation Campus, hosted by the UOW Science Space.

A key goal of this event was to attract female high school students to STEM careers, and promote visibility of strong female role models in STEM. The highly successful event showcased STEM activities to 2,500 Year 8 and 9 students.

The Annual STEM Camp for Girls was held in January, where 60 female high school students participated in a four-day hands-on camp at UOW as well as visiting local industry partners.

Meantime, UOW's Engineering and Information Sciences held two Koori STEM camps in 2018. This program is unique in Australia and aims to establish a stronger sense of identity, connection, pride and empowerment for participating students, by engaging them with their cultural heritage through modern STEM concepts.

UOW awarded the prestigious Athena SWAN Bronze Institution Award from Science in Australia Gender Equity, and again recognised by the Federal Government as an Employer of Choice for Gender Equality by the Workplace Gender Equality Agency. See page 47.

SOCIAL INCLUSION / PARTICIPATION RATE



DOMESTIC ENROLMENTS BY REGION

Illawarra	9,699	Northern Sydney	376
Southern Sydney	3,739	Central Sydney	323
Other NSW	2,695	ACT	275
South Western Sydney	1,972	Overseas	129
Interstate	491	Inner Western Sydney	81
Western Sydney	555		

Empowering students



We enable graduates to be career-ready, for them to contribute to a world that is ever-changing by working in complex teams that cross disciplinary boundaries.

THE COMPETITIVE EDGE

UOW is committed to providing students with academic and non-academic experience that matches the needs of the students and the professions they will enter. We understand and capitalise on the changing demands of our society arising from the expectations of those employing our graduates and from the opportunities arising from trends in demography.

Our success in this is demonstrated by global rankings which show that UOW is consistently ranked in the top 1 per cent of universities in the world for the quality of our graduates (2019 QS Graduate Employability Rankings). We are rated 23rd in the world for graduate employment rates and 148th in the world for partnerships with employers. Our graduates were ranked 5th in Australia by employers in the latest QILT Employer Satisfaction survey, the highest ranking achieved by any NSW-based university.

The Quality Indicators for Learning and Teaching rankings show that 75.2 per cent of UOW graduates secured full-time employment within four months of completing their course. This is above the national average of 69.9 per cent.

With over 12,600 new students in 2018, UOW continued to put in considerable effort for university and employer groups to work together to encourage more opportunities for students to undertake structured work placements and activities to provide the necessary experience in real world situations.

We facilitate student diversity by creating mutually beneficial partnerships with schools, pathway providers and broader communities and by enabling all students to be the best they can be.

WORK-INTEGRATED LEARNING

There is renewed focus on our work-integrated learning and employability across all faculties since the UOW Work Integrated Learning Plan (WIL) was launched in 2017. The plan aspires to increase access to work-integrated learning for all students from first year, and to normalise Career Development Learning through the curriculum.

Work-integrated learning is the most commonly recognised term for student learning that combines theoretical and practical learning experiences within a workplace environment. UOW's Graduate Careers and Employability Unit (GCDE) has developed a suite of workplace programs and credit-bearing subjects to help students increase their employability.

Within this, we are equipping students with the skills necessary for the jobs of the future by working with industry to facilitate internship placements.

The GCDE plays a central role in developing and operationalising key initiatives and practices identified in the WIL Plan. GCDE coordinated and delivered 6 WIL subjects in 2018, with enrolment exceeding 900 students. This enrolment is an increase of 46.1 per cent from 2017. This figure does not include WIL offerings through vocational and accredited degrees. The overall number of students who undertook an in-curricula WIL experience in 2018 across all degrees is estimated to be about 6,000.

More than 160 businesses hosted UOW students through WIL, and these are located from as far north as Sydney, throughout the Illawarra, out to western NSW and as far south as Eden. Significant industry partners who have worked closely with UOW through WIL include Mercer, Novotel and NowChem.

GCDE partnered with the Graduate Research School and launched Career Ready Learning for Higher Degree Researchers. This is a subject designed to support the employability needs of HDR students to recognise the value of their research training across a broad range of career contexts.

GCDE successfully launched the On-Campus Internship program and partnered with organisations such as Pernod Ricard Winemakers, Danone, Illawarra Academy of Sport, South32, Northcott Disability Services, 2WYR and 92.5 Youth Radio.

A combined industry appreciation event was held in November to celebrate employer and alumni engagement with students through WIL, Mentoring and UOWx initiatives.

Tailored GCDE subject offerings launched in 2018 also included Professional Workplace Practice, designed for students undertaking a Master of Nursing International.

Career Ready Learning and Practice is a flagship subject delivered by GCDE career practitioners in partnership with industry. It's one way for UOW students to develop the skills and confidence to transition from university to the workforce.

An SME and Start-up Engagement Strategy was developed with the aim to further develop current industry relationships while creating new relationships with employers, industry, associations, alumni, third-party providers and other relevant groups to increase opportunities for all UOW students.

COUNTING VOLUNTEER WORK

Among UOW's many initiatives to produce graduates who are ready for the workforce is our highly acclaimed UOWx program, which provides formal recognition for co-curricular activities students undertake to help them prepare for the workforce. The program connects students with different types of paid and volunteer roles. It helps recognise the active citizenship of UOW students by volunteering with community organisations, as well as the strong personal and professional skills that students gain from these experiences.

There are currently 236 recognised activities ranging from coaching Indigenous students and work experience opportunities through to serving in overseas aid organisations.

UOWx has experienced enormous growth (almost ninefold) in student engagement since its inception four years ago – 866 students were enrolled in 2015, and in 2018 2,102 students commenced the UOWx program. In response to the growing participation rate, the program has expanded its recognition of co-curricular activities, growing to 236 in 2018, after starting with 34 in 2015.

The UOWx team received a highly commended award as part of the National Association for Tertiary Management 2018 Best Practice Awards, under the category of "Excellence in Student Engagement". These awards recognise valuable contributions towards servicing students, and encourage innovative and professional practices across the higher education sector in Australia.

The program's success was further demonstrated after 1,050 UOWx records and 44 UOWx Awards were issued in 2018 – a 34 per cent increase on 2017. The consistently growing participation rate demonstrates the high calibre of students transitioning into the workforce from UOW and their recognition of the program's value.

23rd in world for graduate employment rates	160+ businesses hosted UOW students through WIL in 2018
900+ students enrolled in work-integrated learning (WIL) subjects in 2018	2,102 students started UOWx in 2018
6,000+ students undertook an in-curricular WIL experience in 2018	1,050 UOWx records issued in 2018 – a 34% increase from 2017

FOSTERING LIFELONG WELLBEING

The new Kooloobong residence took in its first residents in January 2018 and was officially opened in April. The residence provides a substantial increase in on-campus accommodation, with the extra 800 beds resulting in an increase of 107 per cent of student beds on campus and a 43 per cent increase in university accommodation available to UOW students.

Recognised as the world's first positive residence and based entirely on the scientific principles of positive psychology, Kooloobong Village was designed to foster lifelong wellbeing in students who live at on-campus accommodation, giving students the building blocks to flourish. It is an innovative program which supports residents' study programs and mental health.

Located amidst a bushland setting on the edge of Mount Keira, Kooloobong Village houses a diverse population of undergraduate and postgraduate students. It consists of three new eight-storey buildings – Jeroo, Jerrara and Jurunga – with the use of these Indigenous names developed in consultation with members of the local Indigenous community. There are more than 70 nationalities represented at Kooloobong, from the United States, China, India and Malaysia through to Pakistan, Canada, Japan and Vietnam.

It is planned for the Kooloobong Positive Residence Program to be rolled out to other UOW residences in 2019. Student leaders receive extensive training and are actively involved in diverse academic and support programs and receive UOWx recognition.

UOW's student residences have a large and diverse portfolio of community engagement, including school reading programs, nursing home visits, Blood Bank support and charitable fundraising events.

SAFETY AND RESPECT FOR ALL

UOW launched the "Respect is..." campaign in September, with the aim of raising awareness about the importance of safety and respect for all students and staff.

One year on from UOW's participation in Respect.Now.Always – a national initiative that is dedicated to preventing and addressing sexual assault and harassment across the university sector, – "Respect is" continues the conversation around the importance of creating a culture of respect for everyone.

The launch event unveiled an interactive cube outside UOW Library where students, staff and visitors have the opportunity to write what respect means to them. Cubes have been installed at a number of UOW campuses and the campaign will be ongoing.

In July, UOW released a Draft Action Plan, working towards a series of objectives across support and repost avenues, education, student experience and safety.



Educational excellence

UOW delivers student-centred, intellectually challenging programs to the highest standard in technology-rich and immersive teaching environments that prepare students for their roles in society and the global workplace.

FUTURE-FOCUSED PROGRAMS

UOW's programs are informed by leading-edge research and our academic excellence is recognised globally. Our programs are relevant and industry-related with a strong focus on encouraging creative and critical thinking, problem-solving and the development of leadership skills.

UOW has continued our progress in curriculum transformation and ensuring the course offer is future-focused and informed by the needs of the students, the employers and the communities we serve.

UOW was again recognised this year as among the world's best institutions for teaching excellence, receiving a Spotlight Award in the 2018 Global Teaching Excellence Awards. UOW is the only Australian university to be listed as a finalist for the prestigious Global Teaching Excellence Award for two consecutive years. A distinguished panel of judges selected UOW for a Spotlight Award for cultivating a culture among staff and students that continuously promotes and supports learning and teaching, excellence in the leadership of teaching and learning and excellence in student support.

Australia's higher education regulator, the Tertiary Education Quality and Standards Agency (TEQSA) this year renewed UOW's registration as an accredited Australian university until 2025. TEQSA praised the institution for its quality assurance performance, staff, and commitment to Indigenous participation. UOW received six commendations and was re-registered unconditionally. UOW was the first Australian university to complete the assessment against the new standards, which were established in 2015 and came into effect in 2017.

In handing down its decision, TEQSA said UOW demonstrated "strong performance and reputation as a provider of high quality teaching and learning" along with "a strong research culture, led by appropriately qualified and experienced staff, resulting in a strong record of research activity in all faculties". UOW has also been re-registered as a provider of education to overseas students on the CRICOS register for a further period of seven years.

Throughout 2018, 18 course clusters were reviewed to ensure our course portfolio reflects and delivers on evolving market expectations, emerging employment and skills needs, and best practice in teaching and learning – while also continuing to deliver an exceptional learning and positive student experience.

SUBJECT RANKINGS ON THE RISE

Along with other recent awards and rankings, the federal government's Quality Indicators for Learning and Teaching (QILT) ranked UOW overall as the number 1 university in New South Wales, based on the average rank of all of the 13 scales. We were the highest ranked university in NSW overall in QILT 2018 and were the highest ranked in NSW/ACT universities in the study areas of Creative Arts, Humanities, Medicine, and Teacher Education. For postgraduate study, we are also the highest ranked university in NSW for learner engagement and generic skills.

We also continue to strengthen our position in prestigious global subject rankings. UOW ranked among the world's top 100 law schools in the 2019 Times Higher Education World University Rankings by Subject. UOW placed 90th in the world, while QILT ranks UOW as the best university in NSW and ACT for Law and Paralegal Studies. Multiple UOW subjects were ranked by Times Higher Education to be in the world's top 200: Engineering and Technology (87th), Law (90th), Education (126-150th), Physical Sciences (151-175th), Arts and Humanities (176-200th) and Business and Economics (176-200th). UOW also climbed in the ranking for Computer Science up to the top 201-250 band from 250-300 last year.

Released in March, QS World University Rankings 2018 by Subject data showed a strong improvement for UOW across the range of disciplines assessed, with the University achieving a rise in rankings in four of the five broad subject areas. The broad subject areas are Engineering and Technology, Arts and Humanities, Natural Sciences, Social Sciences and Management, and Life Sciences and Medicine. Engineering continues to be the top performer, with the University ranked 24th in the world in the subject of Mineral and Mining Engineering, a boost of two positions from last year. The top 150 included Engineering-Civil and Structural, Materials Science, and Education. The top 200 included Accounting and Finance, Art and Design, Business and Management Studies, Chemistry, Communications & Media Studies, Earth and Marine Sciences, Engineering-Electrical and Electronic, English Language and Literature, Environmental Science, Geography, Law, and Social Sciences and Management.

ARWU rankings 2018 placed Energy Science and Engineering in the top 50 in the world, with Civil Engineering, Nanoscience & Nanotechnology, Transportation Science & Technology, Mining & Mineral Engineering, Metallurgical Engineering, Education, and Hospitality & Tourism Management in the top 100. Within the top 150 were Atmospheric Science, Geography, Instruments Science & Technology, Materials Science & Engineering, and Mechanical Engineering. The top 150 included Atmospheric Science, Geography, Instruments Science & Technology, Materials Science & Engineering, and Mechanical Engineering.

LEADERSHIP PROGRAM FOR TEACHERS

UOW is the only university in NSW to host the Aspiring Principals Leadership Program, a unique initiative designed to shape the next generation of school principals.

UOW is working with the Department of Education's School Leadership Institute to roll out the program, which works with teachers who are on the cusp of leadership positions to ensure they have the support and tools they need to take the next step in their careers.

Announced in November, the program will work with up to 150 participants over the course of 18 months and is based out of UOW's Sydney Business School. The program has been developed in collaboration with the Department of Education, drawing on the expertise of current NSW principals.

RAMSAY CENTRE PARTNERSHIP

In December, it was announced that UOW will partner with the Ramsay Centre for Western Civilisation to deliver a new Bachelor of Arts in Western Civilisation that will provide students with a world-class liberal arts education.

Through a specially designed curriculum, students will engage directly with great works central to Western civilisation, asking and evaluating possible answers to some of the deepest and most abiding philosophical questions. These works will be examined in the comparative context of non-Western ideas and culture, and the beneficial impact of these on Western civilisation through art and traditions.

UOW is the first Australian university to sign an agreement with the Ramsay Centre and is expected to be one of a select group of universities nationwide to eventually offer a version of a Western Civilisation degree.

The Ramsay Centre will fund up to 240 scholarships for students to undertake the program and the appointment of 10 academics to teach it, all of which will be housed in a newly created School of Liberal Arts in the Faculty of Law, Humanities and the Arts. The Ramsay Centre for Western Civilisation was launched in 2017 following a generous endowment by the late Australian businessman Paul Ramsay AO. Mr Ramsay, who founded Ramsay Health Care, sought to invigorate the study of humanities and liberal arts in Australia and promote interest in, and awareness of, Western civilisation.

EMPLOYER SATISFACTION

A national survey released in January found that employers are more satisfied with graduates from UOW than graduates from all other NSW universities. Results from the Australian Government's Quality Indicators for Learning and Teaching 2017 Employer Satisfaction Survey (QILT ESS) ranked employers' overall satisfaction with UOW graduates at fifth in Australia – the highest ranking achieved by any NSW-based university.

The largest survey of its kind, the QILT ESS reports the views of more than 4,300 employers about the attributes of recent graduates from Australian higher education institutions, specifically their technical skills, generic skills and work readiness. The QILT ESS asks direct supervisors of recent graduates to assess their general literacy, numeracy and communication skills as well as their adaptability, teamwork and interpersonal skills, technical skills and their ability to innovate and perform in the workplace.

MORE STUDY OPTIONS AT LIVERPOOL

The South Western Sydney Campus at Liverpool enjoyed its second year of operation, with growth and diversity of its student body, mostly driven by the Masters of Nursing International and the English for Tertiary Studies program. This growth is also attributed to UOW's partnerships with local high schools.

Our South Western Sydney Campus continues to grow with 409 students now attending the campus, while study options for students are also expanding. Early in 2018, the Hon Michael Kirby AC CMG launched our highly ranked School of Law at Liverpool. The Master of Social Work (Qualifying) was also launched at the Campus this year.

No.1

university in NSW and ACT for Law (Quality Indicators for Learning and Teaching 2018)

No.2

university in NSW for Engineering (Quality Indicators for Learning and Teaching 2018)

Community engagement



Left: Artist Gaby Porter AO with her Genesis sculpture that was donated to UOW to mark the 40th anniversary of the unveiling of the Founding Donors Memorial Bench.

Below: The University of Wollongong's (UOW) Early Start has received a \$500,000 grant from the Ian Potter Foundation.



From the very beginning, philanthropy has played a crucial role at UOW. These gifts have benefited every student who has studied at UOW and every researcher who has sought solutions to important issues.

PHILANTHROPY CELEBRATED

The University was founded on the donations of people from the Illawarra and South Coast – from industry and business to community groups, social clubs and private citizens – all of whom shared a vision of a brighter future for the region.

The founding gifts we received were the seeds that grew our exceptional institution. All great universities are built on the values of which they are founded. For UOW, these values are aligned with the community and address the contemporary needs of society.

In November, we celebrated the many donors who have made valuable contributions through their philanthropy with an event marking the 40th anniversary of the unveiling of the Founding Donors Memorial Bench.

The event, hosted by Vice-Chancellor Professor Paul Wellings CBE, celebrated the many donors, past and present, who have made valuable contributions to the University through their philanthropy. The celebration included the commemorative unveiling of the sculpture "Genesis" by Gaby Porter AO, generously donated to the University of Wollongong Art Collection by the artist.

The Memorial Bench pays tribute to the people and organisations whose donations led to the establishment in 1961 of Wollongong University College, which in 1975 became the University of Wollongong.

MORE THAN \$5.1M RAISED

The University this year continued to work in partnership with philanthropists, corporate and community organisations to support shared priorities in education and research. More than \$5.1 million was raised in 2018 to support a range of priorities.

A significant partnership with the Westpac Scholars Trust was announced, with an ongoing commitment until 2022 resulting in 30 undergraduate Engineering and Information Sciences students to be awarded a scholarship to the value of \$15,000 each. The Young Technologist Scholars will also be provided with a range of non-financial opportunities that will serve to further develop their professional skills.

The University has also partnered with the George Alexander Foundation, which focuses on supporting rural students who demonstrate academic aptitude as well as leadership skills.

Community fundraising groups have donated generously this year through a multitude of independently-managed events and activities. A notable example is the Illawarra Cancer Carers, who donated \$170,000 in 2018 to cancer research (Professor Marie Ranson, IHMRI), taking their total giving to more than \$1 million.

LINKING FAMILIES WITH SERVICES

UOW's Early Start this year received a \$500,000 grant from the Ian Potter Foundation to develop a model of service integration that is aimed at connecting families with services that are relevant to their local needs.

The model proposes using early childhood education and care settings, such as childcare centres and preschools, as a safe, trusted and accessible place to connect children and families with relevant services. Health and education services include those targeted at children, such as nutrition or speech pathology, through to help for adults and families with mental health or parent education programs.

"If the community has ownership of deciding the services they need, it will build the trust and connections that are needed to achieve effective outcomes for children and families," said Dr Cathrine Neilsen-Hewett, Academic Director of the Early Years Program at UOW.

Early Start Chief Executive Officer Anita Kumar said the work was important because it recognised that each community's needs are unique.

The Ian Potter Foundation is one of Australia's major philanthropic foundations. It provides grants to support organisations working to benefit the community across a wide range of sectors including the arts, environment, science, medical research, education and community wellbeing.

COMMUNITY ENGAGEMENT GRANT SCHEME

The Community Engagement Grant Scheme (CEGS) provides funding to UOW staff for educational, research or outreach projects that partner with community organisations and groups. More than \$610,000 has been awarded to 73 projects since the scheme was established in 2005.

This year's successful projects address diverse needs in the community.

UOW's Dr Amanda Webster will work with the Australian Autism Asperger's Network to identify ways to help adults on the autism spectrum advocate and make decisions for themselves as they move from school into higher education or employment.

Dr Robert Ogie from UOW's SMART Infrastructure Facility will partner with the State Emergency Service and the Multicultural Community Council of Illawarra to translate emergency messages for people whose first language is Macedonian, Italian, Mandarin, Arabic, Spanish, Serbian or Greek.

Dr Roger Patulny will partner with Settlement Services and CuriousWorks to develop short films to raise awareness of the experiences of newly-arrived migrants in South-West Sydney.

Professor Kathleen Clapham will partner with the Illawarra Koori Men's Support Group to develop and deliver a program for Aboriginal students from Years 5-8.

Along with Associate Professor Rodney Clarke, Director of the Collaboration Laboratory at the SMART Infrastructure Facility, Dr Ogie is collaborating with Multicultural Community Council Illawarra (MCCI) to create a roadmap for effective emergency messaging, known as EmerCALD: Improving Emergency Communications for Culturally and Linguistically Diverse Communities in the Illawarra.

"This is an important issue because there is a real need to be able to communicate during an emergency to all citizens. The Illawarra is a very multicultural community, and often English is not the first language, so this project will look at the best ways to reach people from all backgrounds," Dr Ogie said.

"The aim is not to develop literal translations of emergency messages but rather to find the precise form of words to achieve the desired behaviours at a given point during an emergency. We are asking the community representatives, 'what would you do? What messages will have the greatest impact and achieve the desired behaviours in your community?'" Professor Clarke said.

WORKPLACE GIVING PROGRAM

UOW continues to support and contribute to our communities. A clear demonstration of this is the more than \$45,000 donated by staff to the UOW Cares program during 2017-2018.

As drought continued to affect NSW throughout 2018, UOW Cares moved to assist rural communities for the month of October. Throughout the month, staff were invited to make donations to Rural Aid-Buy a Bale, with donations being matched dollar for dollar by UOW.

The annual UOW Cares Coffee for a Cause campaign ran successfully in September, raising the profile of workplace giving and the Transforming Futures Fund.

COMMUNITY INVESTMENT PROGRAM

UOW has created the Community Investment Program in order to maximise the potential of our assistance within communities. The program facilitates community collaborations that advance social, cultural, environmental and economic development in the region and builds stronger communities.

Current collaborations include Bundanon Trust, the Illawarra Academy of Sport, Southern Stars Arena Spectacular, National Indigenous Football Championships, Wollongong Conservatorium of Music and the Illawarra Business Chamber.

COMMUNITY DISASTER RESILIENCE

A project that demonstrates the value of including refugees in local disaster planning, to help them prepare by acknowledging their skills and experience, was this year recognised for its contribution to community disaster resilience.

The Resilient Australia Awards is a national program, convened by the Australian Institute for Disaster Resilience (AIDR), to promote and celebrate innovation and best practice disaster response.

The NSW Office of Emergency Management announced the award recipients in November, which included a UOW-led project called, 'Resilient Together: Engaging the Knowledge and Capacities of Refugees for a Disaster Resilient Illawarra', which was Highly Commended in the Business Award Category.

Resilient Together was a collaboration between local councils, emergency services, and refugee settlement programs. The project set out to solve a critical gap in humanitarian programs, where refugees are not systematically given information about personal safety and home preparedness for a range of local and natural hazards.

Rather than simply create multilingual information packs, interviews with refugees from Africa, Southeast Asia and the Middle East who have lived in the Illawarra for up to 15 years provided understanding of how they learn about natural hazards and what they already do to feel safe and secure.



DRAGONS PARTNERSHIP GROWS

In August, St George Illawarra announced UOW as a foundation partner for the Dragons' inaugural NRL Women's Premiership team.

Last year's extension of the Memorandum of Understanding between the Dragons and UOW through to 2020 underpinned the mutually beneficial relationship between the two organisations; a relationship which has now extended to support the NRL Women's Premiership team that competes in the elite women's competition.

The NRL Women's Premiership squad have also continued to utilise the training facilities available on UOW's campus since their pre-season commenced at the beginning of August.

Since 2009, the partnership between UOW and the Dragons has delivered positive outcomes for both organisations through research, scholarships, community programs, internships, promotions and facility use as well as supporting good education outcomes for players studying at UOW.

FACILITIES FOR COMMUNITY

We provide important facilities for community members to use, including the UniActive Centre, which provides sporting, leisure, recreational and fitness opportunities. A wide variety of community groups use these facilities here – from learn-to-swim classes to junior sports squads, and people attending fitness classes and the well-equipped gymnasium. There are more than 650,000 visits to UniActive recreation and aquatic centre every year. High profile national and international sporting teams have used our facilities as training bases.

SOUTH WESTERN SYDNEY LINKS

In South Western Sydney, there has been considerable progress made in developing and strengthening relationships with the local community. UOW has established the South Western Sydney Advisory Committee, which has strengthened links with Liverpool Hospital and the Local Health District, Western Sydney Airport Corporation, Western Sydney Migrant Resource Centre, and Liverpool City Council.

VOLUNTARY PLANNING AGREEMENT

This year saw the approval of the Voluntary Planning Agreement (VPA) with Wollongong City Council and the mutual agreement to fund the Gong Shuttle.

The VPA will deliver new and enhanced community assets mutually beneficial to the local community and the University. These include major upgrades at Kooloobong Ovals, Northfields Avenue, and support for the Wollongong Botanic Gardens.

The mutual agreement on funding and service provision for the Gong Shuttle was achieved during 2018. This service ensures a broad network and variety of public transport for the University for staff, students and visitors.

INCREASING SCIENCE LITERACY

The UOW Science Space Centre and Planetarium at the Innovation Campus was given a facelift and new name this year – to be now known as Science Space. The facelift, officially launched in January, makes Science Space the most digitally advanced planetarium in Australia.

The new technology will provide a unique teaching and learning tool, with a full STEAM (Science, Technology, Engineering, Arts, and Mathematics) digital library and access to content created and shared by other planetariums around the world.

As well as the updated Planetarium, Science Space will also be introducing a range of new science shows, a summer workshop program, birthday parties, a dedicated STEM space and professional development courses for local and interstate primary and high school teachers.

Existing to advocate the value of science and technology and increase general science literacy, Science Space brings over 100 interactive exhibits, science shows, workshops and Australia's most advanced Planetarium to the Illawarra region.



Alumni achievements

There were more than 40 events for alumni to attend throughout the year, including gatherings in London.

Our students have graduated to become an invaluable alumni network, connected and influential locally and globally. Our graduates can be found making vital contributions across the globe.

ALUMNI REFLECT UOW VALUES

Throughout our history, it is the successes of our students and graduates that have truly told the story of UOW. We take pride in sharing their stories in the hope of inspiring the next generation to come.

This year, the global alumni community had the opportunity to attend more than 40 events, including 23 events held internationally in 15 key countries, including inaugural alumni events in Nepal and Japan.

There was a focus on engaging alumni in events and programs that connected them with students, academics and researchers and profiled the work of the University.

Throughout the year, alumni were provided with a range of opportunities to give back and help shape the future of the University, including inspiring and mentoring students; opening doors to industry partnerships and providing philanthropic support to students via the Annual Alumni Appeal and the UOW USA Foundation.

Through the support of alumni giving to the Transforming Futures Fund (along with staff), the University was able to award 10 new Learning & Development Scholarships in 2018.

A highlight of the year was the delivery of the new UOW Mentoring Program which involved matching 90 alumni and students for an eight-week mentoring experience.

The UOW Alumni Facebook page now has over 28,000 followers, while the Alumni Relations LinkedIn account has more than 10,000 connections. The UOW Alumni Weibo page, introduced in early 2018, has allowed the Alumni team to disseminate messages relevant to Chinese-speaking alumni on a regular basis.

Other highlights for the year included:

- The new 2018 UOW Mentoring Program, which involved matching 90 alumni and students for an eight-week mentoring experience.
- The UOW Sydney Business School Masterclass Series delivered by key industry speakers including alumni and academics from the School.
- The Desert Rose House Reveal, in collaboration with the UOW Desert Rose Team, Innovation Campus and SBRC, an event which attracted more than 250 alumni, staff and students.
- The inaugural UOW Aboriginal and Torres Strait Islander alumni reunion was held at the Woolyungah Indigenous Centre in June.

179 different countries that our alumni originate from	147 different countries that are home to our alumni
150,000+ global alumni population	33.7% alumni interaction rate

Recognition for leaders

We celebrated the achievements and ongoing two-way linkages between alumni and the University through the 2018 Fellowship & Alumni Awards dinner.

The Alumni Awards recognise the very best – those leading their industry and those who have set their sights on something bigger than themselves.

The night included the presentation of alumni awards to five alumni who are changing lives, innovating, achieving and giving back:

- Young Alumni Award winner Tom Moore
- Professional Excellence winner Tanya de Hoog
- Social Impact winner Diane Manns
- Innovation & Entrepreneurship winner Natalie Chapman
- Research & Scholarship winner Professor James Goudkamp

In addition, UOW researcher and graduate Professor Justin Yerbury was awarded a special commendation in the Research & Scholarship category.

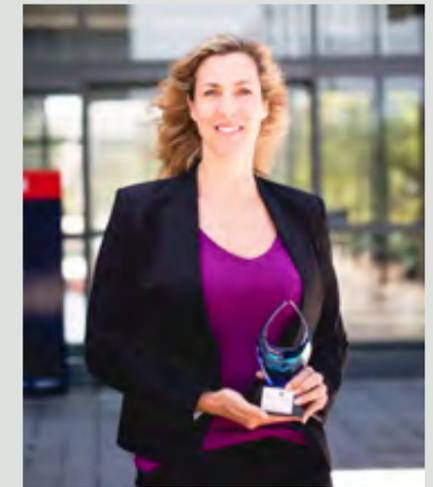


YOUNG ALUMNI AWARD
TOM MOORE

With no commercial experience and a wealth of determination, Tom Moore drew on his own struggle transitioning to civilian life to build a successful business creating rewarding careers for other military veterans.

Tom is co-founder and Global Chief Executive Officer of WithYouWithMe (WYWM), a training and employment organisation that develops and upskills talented military professionals to transition into industry. Offered free of charge to veterans, the innovative model matches mentees to the most appropriate job pathway to translate their military experience into industry skills.

WYWM has expanded rapidly under Tom's leadership and is now an international success story, working with more than 150 employer organisations globally and recently opening an office in Washington DC. The company has also extended its offering to assist other underutilised talent groups, including return-to-work parents, students and professional athletes.



ALUMNI AWARD FOR PROFESSIONAL EXCELLENCE
TANYA DE HOOG

Tanya de Hoog has forged an exceptional career at the highest levels of structural engineering, making a sustained global contribution to the profession.

She is the Principal and co-founding Director of Thornton Tomasetti in London. She designs complex, fast-track structures, including several award-winning projects across Europe, the Middle East, Southeast Asia and Australia.

Tanya's extensive capabilities in structural engineering have earned her international peer respect, accolades and influential appointments. She is a founding member of the Equilibrium Network and is currently exploring how engineers can extend their contributions at all levels of society while maintaining financial sustainability.



ALUMNI AWARD FOR SOCIAL IMPACT
DIANE MANNS

Long before domestic violence made the national agenda, Diane Manns was on the frontline as a tireless and vocal campaigner working to raise awareness, shift attitudes and make a difference in the lives of countless families.

Diane has made an indelible contribution to social welfare in her region and beyond throughout her career. She has spent the last 16 years with Sutherland Shire Family Services (SSFS) of which she is Chief Executive Officer. The not-for-profit organisation supports women and children dealing with domestic violence.

A passionate and engaging leader, Diane has taken the conversation to boardrooms, council chambers, police stations and worksites. She has led a wealth of transformative programs taking domestic violence from behind closed doors and into sharp public focus, and counts the ground-breaking Pull Ya Head In film series exposing domestic violence's hidden effects among her proudest achievements.



ALUMNI AWARD FOR INNOVATION AND ENTREPRENEURSHIP

NATALIE CHAPMAN

Leading a revolution in research-industry engagement, Natalie Chapman helps research organisations and innovative businesses to commercialise new knowledge and technologies.

In 2011, she founded consultancy gemaker to take Australian innovations to global markets in renewable energy, biomedicine, mining, nuclear technology, ICT, education, advanced manufacturing and new materials.

Under Natalie's leadership, gemaker has collaborated on a world-leading professional capabilities framework for the tech transfer sector, trained hundreds of university researchers in industry engagement and accelerated international commercialisation of an Australian invention that reduces suffering after catastrophic storms.

It has also supported the transformation of a small exploration company to an investor-ready high-tech materials producer, developed SME engagement strategy with the Defence Department, created the inspiring #AUSinnovates campaign and won over \$1 million in grant funding for Australian innovators.



ALUMNI AWARD FOR RESEARCH AND SCHOLARSHIP

PROFESSOR JAMES GOUDKAMP

In little more than a decade, Professor James Goudkamp has made a greater contribution to his profession than many others have made in a lifetime, showing proficiency and excellence beyond his years.

An internationally-recognised expert in private law, with a principal interest in torts, Professor Goudkamp's astonishing scholarly output has influenced thinking regarding this notoriously complex area. Since 2017, he has been Professor of the Law of Obligations in the Law Faculty of the prestigious University of Oxford – a coveted position that is the pinnacle of a rapid and impressive career to date.

Professor Goudkamp has demonstrated intellectual mastery and sound legal analysis to bring critical examination and explication to the field of tort law. He has written and co-authored more than 100 publications, several of which have been cited by judges in various jurisdictions.

He has maintained a strong connection with the University of Wollongong, principally through offering to support law students considering embarking on postgraduate study.



SPECIAL COMMENDATION

PROFESSOR JUSTIN YERBURY

Professor Yerbury was enjoying success as a professional basketballer when he discovered that his family suffered from the genetic form of Motor Neurone Disease AKA (MND). From that moment on, he dedicated his life to finding a cure.

He built his own research team at UOW's Illawarra Health and Medical Research Institute and his fresh approach has uncovered seminal observations that have contributed enormously to our understanding of MND, and he has been instrumental in numerous breakthroughs.

Justin has an outstanding publication record and is widely recognised as an international leader in his field. Diagnosed with MND in 2016, Justin continues to lead a productive research group and draws global attention to the pressing need for research and awareness.

Right: University Fellows Associate Professor Robbie Collins, Glen Moore, Professor Denis King and Michael Bassingthwaight with Vice-Chancellor Professor Paul Wellings CBE (far left), Chancellor Jillian Broadbent AC (far right) and awards orator David Vance (centre)



University Fellows

Four University Fellows were admitted during the 2018 Fellowship and Alumni Awards Dinner.

University Fellowships confer the highest recognition for exceptional service to the University and our communities.

MICHAEL BASSINGTHWAIGHTE AM

As the recently retired and much-loved CEO of Peoplecare, Michael Bassingthwaight has made an indelible mark on regional health policy and the Illawarra business community.

In addition to guiding Peoplecare's significant growth while embedding a culture of empathy and collaboration, Michael has been a leader within the wider health sector and business community.

He has served on the Board of Directors of the Illawarra Health and Medical Research Institute and the Australian Health Services Research Institute, supported students from UOW's Sydney Business School and Faculty of Science, Medicine and Health, done guest lecturing for several UOW programs in joint initiatives with the Illawarra Business Chamber and participated in the UOW-facilitated Pitch@Palace program.

ASSOCIATE PROFESSOR ROBBIE COLLINS

Associate Professor Robbie Collins is synonymous with UOW's Shoalhaven campus and with its outstanding success. As Head of Shoalhaven campus from 2002 up until her retirement in 2017, Associate Professor Collins has been indispensable in nurturing it from its beginnings a 'remote' or 'satellite' campus of the University into today's vibrant regional partner.

The campus proudly showcases UOW's world-ranked teaching and learning expertise, and flourishes as a constantly evolving example of both Robbie's and the University's rich engagement with local community.

Despite the heavy demands of her role as Head, Robbie has been a ubiquitous and generous presence around the Shoalhaven campus, offering students advice at open days and careers expos, and one-on-one support throughout their degrees.

PROFESSOR DENIS KING OAM

For more than forty years, Professor Denis King has provided extraordinary service to medicine as a leading consultant and specialist surgeon, and his career has seen him practise, teach and consult in Australia and overseas.

Professor King's exceptional service to medicine, medical education and to professional organisations was recognised in 2010 with the award of a Medal for the Order of Australia. The following year,

his extensive clinical experience in the Australian public health system saw him appointed as Chair of the Illawarra & Shoalhaven Local Health District Board. In this role, Denis is overseeing the growth of the region's clinical infrastructure, working to deliver better health care, services, outcomes and experiences, including the expansion of Wollongong Hospital.

Denis continues to lead community healthcare, improving the delivery of first-class local health services.

GLEN MOORE

Glen Moore is the founder and was, until 2014, the Director of the University of Wollongong's Science Centre and Planetarium. Over a remarkable 48 year-career spent at UOW, Glen has shared his love of the cosmos and has gifted the Illawarra region with one of Australia's most sophisticated and innovative science spaces.

After a stint as a physicist at BHP, Glen began at UOW in the early 1970s as the first senior lecturer in physics and astronomy and he was awarded the Australian College of Education Medal in 1991.

Glen's nearly two decades-old passion project to build a planetarium at UOW became a reality in 1989. Following extensive damage caused by the devastating floods of 1998, Glen's tireless advocacy saw a collective commitment come from the NSW Government, industry and the community to rebuild it and it was reopened in 2000.

Carla Zampatti AC



Honorary Doctorates

CARLA ZAMPATTI AC

Iconic fashion designer Carla Zampatti AC was one of five people to receive Honorary Doctorates from UOW this year. Ms Zampatti was recognised with Doctor of Letters (Honoris Causa) during graduation ceremonies in December for her outstanding services to the fashion industry, her advocacy for the equality of women in business, and her sustained contributions to champion multiculturalism in Australia.

Ms Zampatti, who established her eponymous label in the 1960s, is a legend of the Australian fashion industry and a champion for women in business. Over more than five decades, the Italian-born Australian fashion icon has not only survived the notoriously fickle fashion industry but has gone from success to success, garnering accolades and awards both nationally and internationally.

Ms Zampatti attributes part of her success to the fact that she was an immigrant, and as such, it was important to her to prove her worth. She has long been a strong advocate for women in business and throughout her career has sought to inspire women to become entrepreneurs and leaders.

She has transcended the fashion sector by serving on a number of major boards, sharing her business acumen, knowledge and expertise to shape economic growth and support cultural diversity with organisations such as SBS, Westfield, the Australian Multicultural Foundation, the European Australian Business Council and the NSW Art Gallery.

Ms Zampatti's appointment as the first female Chair of the SBS Board is one she counts amongst her greatest achievements. She was made a Member of the Order of Australia in 1987 for her service to the fashion industry. She was further honoured in June 2009 when her award was raised to the higher level of Companion of the Order of Australia in recognition of her continued contribution to business through leadership and management roles, multicultural broadcasting, and her role as mentor to women.

PROFESSOR MAX LU AO

Professor Max Lu AO, Vice-Chancellor of the University of Surrey in the United Kingdom, received a Doctor of Science (Honoris Causa) in December for his tremendous academic and industry contributions to chemical and advanced materials engineering and his ongoing leadership in the global community of higher education.

Professor Lu, an expert in the fields of chemical engineering and nanotechnology, has a long relationship with UOW through his work with the Australian Institute of Innovative Materials, based at Innovation Campus. A chemical engineer and nanotechnologist by training, Professor Lu has driven academic and industrial innovation in the adjacent fields of thermodynamics, nanomaterials and nanoparticles.

As an international expert, he has consulted extensively to industry and government and has been a Board Member and Director on advisory and review boards such as ANSTO; the CSIRO; the Australian Research Council Nanotechnology Network; the Queensland Children Medical Research Institute; the Queensland China Council, and the Ministerial Advance Queensland Expert Panel. So outstanding have Professor Lu's contributions been that, in 2017, he was awarded the Medal of the Order of Australia for his distinguished service to education, international research, and to Australia-China relations.

Professor Lu's research is widely acclaimed, and he is a Fellow of many highly esteemed professional bodies including the World Academy of Science, the Royal Society of Chemistry UK, the Australian Academy of Science, the Institution of Engineers Australia, and the Australian Academy of Technological Sciences and Engineering. As a co-inventor, he holds over 20 granted world-wide patents. In tandem with his technical expertise, Professor Lu has cultivated a reputation for exemplary leadership and incisive vision in the global higher education sector.

Alongside his service in these roles, Professor Lu has managed an incredible academic output earning him recognition as a double highly-cited researcher – a distinction awarded to those whose published work is widely and frequently cited by others in their field as testimony of the impact of their ideas.

SARAH SPRINGMAN CBE

UOW honoured Professor Sarah Springman CBE, Rector of the Swiss Federal Institute of Technology in Zurich, with a Doctor of Science (Honoris Causa) for her contributions to the field of geotechnical engineering, for the material impact that these have had on a global scale, and for her ongoing international academic leadership.

Professor Springman is a champion for gender equity in engineering and has inspired many young women to pursue a career in this field. She is one of the world's most accomplished geotechnical engineers and a pioneer in the study of soft soil mechanics and ground improvement. Professor Springman's research has directly informed the design and construction of mega-scale projects across several continents and her work has also had a profound impact on natural disaster planning.

Professor Springman is a distinguished alumna of Cambridge University and has garnered numerous awards across the world for her research and teaching, culminating in the honour of induction as a Fellow of the Royal Academy of Engineering. As a reflection of her academic standing, in 2012 she served on the Search Committee for the Queen Elizabeth II Prize – the Nobel Prize for Engineering.

UOW is honoured to have shared common ground with Professor Springman since the 1990s, through her work with our Centre for Geomechanics and Railway Engineering, and the Australian Research Council Centre of Excellence in Geotechnical Science & Engineering, of which UOW is a core member.

Although she does not advertise such, she is also a champion international elite athlete who has served as Vice-President of the International Triathlon Union and is a current member of the International Olympic Committee's Sustainability and Legacy Commission. In recognition of her outstanding service to sport, in 2012 she was made a Commander of the Order of the British Empire for her contributions to national and international sport.

PETER ROBSON AO

In July, Peter Robson AO received a Doctor of Letters (honoris causa) for his significant contribution to the growth and development of quality Australian higher and vocational education both nationally and internationally, and for his distinguished service to UOW.

In 'retirement' Mr Robson continues to give of himself, holding several board positions including being Founder and Chairman of Orange Regional Tourism and Chairman of the Board of University of Wollongong Global Enterprises.

Mr Robson has held a number of executive and Chair positions within key industry and advisory bodies from the 1970s to the present day, including with the Australian Manufacturing Council; the Ministerial Committee reviewing the Textile, Clothing and Footwear Industry Assistance Scheme; the National Procurement Board; the Jackson Committee (which advised Cabinet on manufacturing industries); the Australian Industry Development Corporation Ltd; the Industry Research and Development Board; CEA Technologies Pty Ltd; the Turnkey Group and the NSW Wine Industry Advisory Board.

Mr Robson's commitment to providing alternative pathways to university for low socio-economic groups and international students is reflected in his dedication to the mission of UOW College Australia. He devoted significant personal time and effort to ensuring the future growth and sustainability of the College, and he has been instrumental in shaping the College's mission to provide a supportive learning environment where students build skills and knowledge through quality English language teaching and testing, vocational courses and academic pathway programs to meet their personal, educational and career goals.

He also directed the growth and development of the University of Wollongong's Middle East success story – the University of Wollongong in Dubai (UOWD). Under Mr Robson's leadership, UOWD has grown in its status and reputation as a premium and distinguished university.

In the 2018 Australia Day Honours, Mr Robson was appointed an Officer of the Order of Australia (AO) for his distinguished service to business. The award acknowledged his life-long dedication to the manufacturing industry, trade unions and education.

DR STEPHEN ANDERSEN OAM

Dr Stephen Andersen OAM received a Doctor of Science (honoris causa) in April for his deep connection with UOW, making significant contributions to its history: as an advisor, an educator, a Council member and as Deputy Chancellor.

As well as his outstanding contribution to the University, Dr Andersen is celebrated in the Illawarra community for his business skills and community service. He founded Southern Pathology in 1979 and has served on many advisory boards and panels over the past four decades, including the Wollongong City Mission, the Salvation Army and Lifeline South Coast. For the past three years he has been a member of the Illawarra Shoalhaven Local Health District Board.

Dr Andersen's commitment to providing quality health care saw him move to the Illawarra region in the late 70s to set up a pathology practice. Starting from scratch with only four staff, his hard work and astute business acumen guided and grew the organisation now known as Southern Pathology to its current state, employing 360 staff. Personally, Dr Anderson's services were recognised with a UOW Fellowship in 1998 and, in 2012, he was awarded a Medal of the Order of Australia for service to medical education, to the specialty of pathology, and to the community of the Illawarra region.

Always a strong supporter of the University, Dr Andersen provided exemplary governance leadership over several decades, serving on visiting committees for the faculties of Science and Commerce from as early as 1995, and on bodies such as the University Foundation and the Vice-Chancellor's Advisory Board. Dr Anderson's support for the University's Medical School saw him play a key role in its establishment.

He maintains an ongoing association with Graduate Medicine, serving as an Honorary Clinical Associate Professor with the Medical School since 2005. Dr Andersen also uses his extensive expertise to champion the University's health research programs and to advocate on behalf of the University's medical program in various local and regional health networks.

UOW Vice-Chancellor Professor Paul Wellings CBE, UOW Chancellor Jillian Broadbent AC and UOW Pro Vice-Chancellor (Inclusion & Outreach) Professor Paul Chandler at the opening of Kooloobong.

Infrastructure investment

We are investing to enhance our campuses and align our facilities to changing centres of population and emerging research priorities.

90%
student satisfaction with campus environment

\$300M
to be released from 2016-2020 for infrastructure investment

43%
increase in accommodation available to UOW students in 2018

-22%
Energy consumption at Wollongong Campus decreased 22% from 2011

3,500+
plants established in 2018

MAJOR WORKS IN PROGRESS

UOW is currently in the middle of a large infrastructure program. Our 2016-2020 Strategic Plan outlines a capital expenditure budget of \$300 million over five years. The construction of two new facilities started this year – the Molecular Horizons building and the Social Sciences and Law, Humanities and the Arts (the Western Building).

Construction on the \$102 million Molecular Horizons began in June and the building will be five storeys and approximately 7,000 square metres, separated across two wings. Housing dedicated world-class researchers, the building will be equipped with state-of-the-art facilities that include PC2 laboratories that comprise of modular, flexible and efficient ancillary spaces, Cryo-EM and light microscopy suites, support laboratories, atmospheric chemistry and office accommodation.

The \$76 million Social Sciences and Law, Humanities and the Arts (Western) Building will be a landmark development on the Wollongong Campus. Located adjacent to the Campus Ring Road at the western end of the campus, the building will accommodate the diverse functions of the School of Arts, English and Media (TAEM), School of Health and Society (HAS) and School of Geography and Sustainable Communities (GSC) into a collaborative and engaging hub.

A variety of disciplines will be provided for in the building including student performance theatres and music studios, film and screen production space, media arts, digital design, specialist social sciences laboratories and informal collaborative spaces. The building will be about 10,000 square metres in floor area across four levels and will provide direct access to the community for student performances, visiting the art gallery and engaging with community activities.

Other major works in progress include the Northern Car Park Stage 2 (\$6.5 million). The project is being coordinated with the proposed new Mt Ousley interchange which will provide a new northern entrance into the Wollongong Campus from the M1 Motorway. It is expected to be completed in the last half of 2019.

The \$8.9 million Thermal Comfort, LED Lighting and Solar PV (TLS) Building Services Program is proposing to replace existing lighting technology with energy-efficient LED lighting, as well as increase the amount of renewable energy production across the campus through the installation of additional solar PV arrays.

DEVELOPMENTS COMPLETED

MIND THE GAP

The purpose-built \$3.5 million MIND the GaP building was officially opened in July at UOW's Shoalhaven Campus.

MIND the GaP (Mental Illness in Nowra District: Goals and Prevention) is a joint initiative of the Australian Government, Shoalhaven City Council and UOW to address the high level of mental health needs in the Shoalhaven.

It includes research, consultation and assessment rooms, meeting spaces, a 60-seat conference and training room, outdoor courtyard and children's play area.

KOOLOOBONG STUDENT RESIDENCE

The new Kooloobong on-campus residence was opened in January, adding 800 undergraduate student beds across three separate buildings named Jeroo, Jununga and Jerrara. This resulted in a 43 per cent increase in accommodation available to UOW students.

The residence has been designed to cater to undergraduate students in predominantly self-catered four-bedroom apartments with a limited number of studio apartments. Built next to the existing Kooloobong accommodation, the building incorporates a range of innovative initiatives to enhance the on-campus student residential experience.

The facility also incorporates dedicated car hire, free bicycle hire and many sustainable initiatives including LED lighting and passive systems building design.

SYDNEY BUSINESS SCHOOL

In November, His Royal Highness, The Duke of York, officially opened the new-look Sydney Business School and while there met the Pitch@Palace Australia 2.0 participants.

The Sydney Business School at Circular Quay has been refurbished and relocated, bringing the school together on three consecutive floors. The \$4 million relocation from Level 18 (now across three adjacent floors – level 8-10) has created collaborative student spaces, more efficient office spaces and refreshed executive spaces.

The UOW Sydney Business School is ranked in the top 200 business schools in the world. The refurbishment of the campus in the heart of the Sydney CBD will enhance its ability to deliver programs that reflect the needs of the fast-moving global business environment.

LIBRARY REFURBISHMENT

This year's \$4 million library refurbishment underpins the Future-Ready Library Strategy. The refurbishment of the ground floor space provided improved student facilities offering support for the provision of online learning tools. This included new informal learning spaces, improved technology and collaboration spaces, contemporary furniture and enhanced AV interactions with specific BYO device areas.

UOW SECURITY BUILDING

Construction of the UOW Security Building for the Wollongong Campus, adjacent to the Kooloobong student residences on Northfields Avenue, was completed in October.

SCIENCE SPACE

This year the UOW Science Space Centre and Planetarium was rebranded as Science Space and a significant investment was made to upgrade to the latest planetarium technology, making it now the most digitally advanced planetarium in Australia. More than \$500,000 has been invested in the DIGITAR 6 – the 4K laser projection system is an Australian first.

SUPPORTING SUSTAINABILITY

The Environmental Plan 2017-2020 formalises UOW's commitment to supporting environmental sustainability and applying such principles. The updated plan focuses on consumption of energy, water and materials while ensuring the biodiversity values of campuses are enhanced.

Smart meters have been installed across the Wollongong Campus to analyse electricity and water usage. By having more informed data, leaks can be detected earlier and better informed decisions can be made.

Energy consumption at the Wollongong Campus this year had decreased 22 per cent from 2011. Energy and carbon management initiatives during 2018 included the installation of approximately 2,400 efficient LED lights and the installation of 38 smart gas meters to measure and monitor gas consumption.

The Wollongong Campus landscape provides a habitat for a diverse range of native animals. Over 3,500 plants were established in 2018, with a focus on improving future tree canopy and understorey plantings.

Staff achievements



Left: UOW Batemans Bay 'Mogo & Mudji' Team were awarded a Vice-Chancellor award for excellence in community engagement.

VICE-CHANCELLOR'S AWARD FOR OUTSTANDING ACHIEVEMENT IN RESEARCH PARTNERSHIP & IMPACT

A collaboration between UOW and NSW Ministry of Health

Senior Prof Brin Grenyer, Dr Michelle Townsend, Dr Ely Marceau, Elizabeth Huxley, Kate Lewis, Stefanie Hasleton, Patruschka Frencham, Liesl Radloff, Fiona Ng, Annaleise Gray, Nicholas Day, Caitlin Miller, Nicole Camilleri, Emily Matthews, Kayla Steele, Dr Samantha Reis, Judy Pickard, Jane Cutts
Faculty of Social Sciences

And Arina Baharin, Karlen Barr and Talia Hashmani

Project: Air Strategy for Personality Disorders (Joint Award)

A collaboration between UOW and the Australian Antarctic Division, ANSTO and the CSIRO

Senior Prof Sharon Robinson, Prof Dianne Jolley, Prof Andy Davis, Dr Melinda Waterman and Dr Johanna Turnbull
Faculty of Science, Medicine and Health

Project: Antarctic Ecosystems research: Monitoring and limiting the impacts of climate change and pollution on Antarctic biodiversity (Joint Award)

VICE-CHANCELLOR'S AWARD FOR RESEARCH SUPERVISION

Senior Prof Vera Mackie
Faculty of Law, Humanities and the Arts

Assoc Prof Charles Harvie (Highly Commended)
Faculty of Business

Senior Prof Gursel Alici (Highly Commended)
Faculty of Engineering & Information Sciences

Dr Rose Dixon (Highly Commended)
Faculty of Social Sciences

VICE-CHANCELLOR'S AWARD FOR GLOBAL STRATEGY

Assoc Prof Stuart Johnstone
Faculty of Social Sciences

VICE-CHANCELLOR'S SPECIAL AWARD

Dominic Riordan and Jan Sullivan
Academic Quality & Standards

VICE-CHANCELLOR'S AWARD FOR OUTSTANDING SERVICE FOR PROFESSIONAL SERVICES STAFF

Alan Champion
Faculty of Science, Medicine and Health

Sanja Sreckovic
Faculty of Engineering & Information Sciences

Nathan Riggir
Library Services

Tracey Todd
Pro Vice-Chancellor (Students)

VICE-CHANCELLOR'S TEAM AWARD FOR OUTSTANDING SERVICE FOR PROFESSIONAL SERVICES STAFF

UOWx Team

Kylie Austin, Amy Thompson, Jenna Thorn, Ruby Walsh, Jade Andrews and Samantha Stiff
Pro Vice-Chancellor (Students)

VICE-CHANCELLOR'S AWARD FOR EXCELLENCE IN COMMUNITY ENGAGEMENT

John Littrich (individual award)
Faculty of Law, Humanities and the Arts

Mogo & Mudji Team (team award)

Jaimey Facchin, Adam Gowen, Nicola Bath, Saskia Ebejer and Jade Andrews
UOW Batemans Bay

WORKPLACE HEALTH AND SAFETY AWARD

Roza Dimeska
Faculty of Science, Medicine and Health

ROSEMARY COOPER DIVERSITY AND INCLUSION AWARD

Assoc Prof Trish Mundy
Faculty of Law, Humanities and the Arts

GENDER EQUALITY

UOW was this year awarded the prestigious Athena SWAN Bronze Institution Award from Science in Australia Gender Equity (SAGE), which recognises the University's commitment to gender equality in science, technology, engineering, medicine and mathematics (STEMM).

The Athena SWAN Bronze Institution Award recognises an institution's commitment to advancing the careers of women, trans and gender-diverse individuals in STEMM disciplines.

UOW was this year again recognised by the Workplace Gender Equality Agency as one of the best workplaces in Australia for gender equality, receiving the Employer of Choice for Gender Equality citation. UOW Global Enterprises (UOWGE), a subsidiary of the University with overseas campuses in Dubai and Hong Kong as well as UOW College Australia, was also again honoured with a citation.

CREATING FEMALE LEADERS

A UOW initiative to help female academics move into leadership positions was this year named as Australia's Best Women in Leadership Development Program. The Leadership Program for Senior Academic Women received the accolade at the Australian Institute of Training and Development's 2018 National Training Excellence Awards.

This award is presented to the organisation demonstrating best practices in developing and delivering an effective leadership development program targeted to women aspiring to be leaders or who are in executive level positions.

Established in 2016 as a key initiative under the Science in Australia Gender Equity (SAGE) Pilot, the 10-month program has already achieved results, with 74 per cent of participants assuming a leadership role since commencing the program and 21 per cent successful in applying for senior leadership positions. Across the institution, the program has contributed to a 9 per cent increase in female representation in senior academic leadership roles, such as Associate Deans or Deputy Directors.

SPECIAL ACCOLADES

A number of UOW staff received special accolades this year. UOW's former and highly respected Deputy Vice-Chancellor (Research and Innovation) Professor Judy Raper was awarded UNSW's national Ada Lovelace Medal for Outstanding Woman Engineer for her significant contribution to the profession.

Distinguished Professor Noel Cressie was elected into the Australian Academy of Science in recognition of his outstanding contributions to science and Professor Elizabeth Halcomb was inducted into the International Nurse Researchers Hall of Fame for her world-class research in primary care nursing.

PROGRAM ASSISTS STAFF

The Indigenous Student Success Program assisted eight permanent UOW Aboriginal and Torres Strait Island staff with funds toward their academic journey in 2018.

Aboriginal and Torres Strait Islander staff have continued to be profiled in promotional literature and media. With the aim of being an employer of choice for Aboriginal and Torres Strait Islander peoples, UOW continues to raise our staffing profile within the University and wider community.

UOW invests in our people to collaborate internally and externally to achieve great things.

STAFF AWARDS

The Vice-Chancellor's Staff Awards night was held on 23 August with over 300 guests and 106 award recipients covering nine award categories were honoured on the night.

THE VICE-CHANCELLOR'S OCTAL AWARD

Academic Integrity Program Team

Dr Ann Rogerson and Dr Lynnaire Sheridan
Faculty of Business

Dr Ruth Walker
Learning, Teaching & Curriculum

Emma Purdy
Academic Quality & Standards

Kristy Newton
Library

FACULTY OCTAL AWARDS

Dr Sanja Pupovac
Faculty of Business

Dr Brad Stappenbelt
Faculty of Engineering & Information Sciences

Dr Sasha Nikolic
Faculty of Engineering & Information Sciences

Dr Peter Andersen
Faculty of Social Sciences

Dr Xiaoping Gao
Faculty of Law, Humanities & the Arts

Dr Pranit Anand
UOW College

PROGRAM OCTAL AWARD

Recovery Camp Program

Prof Lorna Moxham, Chris Patterson and Dr Renee Brighton
Faculty of Science, Medicine and Health

Dr Dana Perlman
Faculty of Social Sciences

Ellie Taylor
Research & Innovation Division

SESSIONAL STAFF OCTAL AWARD

Mara Davis
Faculty of Law, Humanities and the Arts

Michelle Gaddes
Faculty of Law, Humanities and the Arts

VICE-CHANCELLOR'S RESEARCH EXCELLENCE AWARD FOR RESEARCHER OF THE YEAR

Distinguished Prof Antoine van Oijen
Faculty of Science, Medicine and Health

Senior Prof Kathy Eagar (Highly Commended)
Faculty of Business

VICE-CHANCELLOR'S RESEARCH EXCELLENCE AWARD FOR EMERGING RESEARCHER

Dr Steven Howard
Faculty of Social Sciences

VICE-CHANCELLOR'S INTERDISCIPLINARY RESEARCH EXCELLENCE AWARD

Assoc Prof Kerrylee Rogers and Prof Colin Woodroffe
Faculty of Science, Medicine and Health

Dr Jennifer Atchison
Faculty of Social Sciences

Dr Mary Kaidonis
Faculty of Business

Prof Robin Warner
Faculty of Law, Humanities and the Arts

And Dr Olivia Dun, Thang Nguyen, Yubing Shi, Chris Owers and Rafaela Salum

Project: Blue Carbon Futures: Mangrove Regeneration in Vietnam, Brazil and Australia

Technology upgrades

Resilient information technology capabilities underpin UOW's digital foundations and associated services and solutions, to enable accelerated delivery of business transformation.

DIGITAL POWERHOUSE

Throughout 2018, the Information Management and Technology Services (IMTS) Division delivered key strategic initiatives while continuing to build the digital foundations and services required to maintain robust and secure IT systems and data.

Strategic programs such as Digital Presence, Student and Corporate Customer Relationship Management, Curriculum Management, Research and Data Storage Management, and International campus programs, all made considerable progress throughout the year, placing UOW in a position to continue to be recognised as an internationally-renowned institution and digital powerhouse.

The Information Management & Technology Strategic Plan 2016-2020 was reviewed. The result of this was the release of the Future Digital Opportunities paper with the purpose of confirming the existing strategic direction in terms of the digital asset development, and to sharpen the focus on how these new digital assets could be leveraged.

Cyber Security awareness training for UOW staff became a focus throughout 2018 to increase awareness of online threats and scams with high risk areas such as Finance and HR. Increased security measures to email and vulnerability scanning also ensured UOW systems are resilient and protected.

STUDENT EXPERIENCE

As part of the overall program to improve recruitment and student service processes through the delivery of a connected, relationships and communications platform, Phase 1 of the Student Customer Relationship Management (CRM) system was delivered in 2018.

A core strategic investment, the Student CRM has been able to improve relationship management and engagement across prospective and current students for UOW, UOWC and UOWD, as well as enhancing recruitment activities.

A major focus for 2018 was the My eQuals project, delivering a digitally authenticated and secure University document repository for students. The project saw the first release of documents successfully produced and delivered to graduating students for the December 2018 graduation.

A new UOW Maps platform (campus map) was launched in mid-2018 with wayfinding capabilities, while IMTS also worked towards a refresh of the MyUOW app.

Following a successful trial, 24/7 Student Computer Labs became operational during session in 2018, while network equipment in Student Accommodation sites was upgraded where necessary.

TEACHING AND LEARNING

The Echo360 Lecture Capture system was successfully upgraded in Q1 2018. The new "cloud hosted" Echo360 Active Learning Platform enables interactive classroom capabilities in addition to the regular lecture recording capacity and personal video capture. These new features have been enabled to engage students in large lectures.

Phase 1 of the new Curriculum Management System, COSMOS, was launched in October. Replacing the legacy paper-based process, COSMOS provides Faculties and stakeholders with an automated system to manage the approvals process for UOW approved Award and non-Award Courses and Subjects. COSMOS will enable a single source of truth for all curriculum data ensuring the integrity, quality and viability of UOW's course and subject offerings.

Major audio visual upgrades were completed in early 2018 in common teaching areas at our regional and main campuses, while the IT Service Desk extended its operational hours of phone and remote support for both staff and students.

INTERNATIONAL DEVELOPMENT

There was a continued focus on supporting our offshore operations in Hong Kong and Dubai, as well as other partner delivery locations during the year.

The UOW Global Enterprises (UOWGE) new staff Intranet was launched in April 2018. UOWGE also transitioned to the enterprise Qualtrics licence, replacing all other surveying tools (such as Survey Monkey and Google Sheets).

IMTS continued to support the five-year transition of Community College of City University to UOW through the Request for Proposal process and subsequent implementation of a student information system for Hong Kong. This program will be delivered Q3 of 2019.

RESEARCH AND INNOVATION

The Research Data, Storage and Management (RDSM) program was implemented this year. RDSM consists of a number of sub projects, including research data storage solutions, research data and metadata management applications and research publication and repository applications.

The RDSM program aims to deliver modern solutions that help UOW researchers with their research outcomes, manage operational and reputational risks for the University and manage costs associated with the exponential increase in data storage requirements. The program has so far seen in excess of 220 Terabytes of data storage provisioned to more than 50 researchers/groups.

IMTS has been working on an Internet of Things (IoT) framework, which is employing the same basis and foundation as the research innovation framework and comprises five pillars: storage, compute, standards, community and platforms. Work on the design of the underlying data architecture was undertaken in Q4 with further planning for this during 2019.

CORPORATE SERVICES

IMTS and the Business Improvement & Assurance Division continued to drive efficiencies through Business Process Management (BPM) initiatives across the University, including the Partner Development program, to assist other units to develop their own solutions using the BPM platform.

The Electronic Document and Records Management System went live towards the end of 2018 and replaced the legacy Records Management System. The new system brings a fully searchable repository of the current 2.2 million records, more refined access and security, automatic and consistent records classification and easier system interactions and integrations. It will enhance the University's compliance with records management legislation.

The electronic signature system DocuSign was released in August and provides UOW staff who need to regularly issue and sign large volumes of documents an easy to use online system also allowing for tracking document signatures. IMTS worked with the Commercial Development Unit (CDU) on the first deployment of the Corporate CRM solution.

GROWING PARTNERSHIPS

IMTS and CDU also explored opportunities to experiment and use the Innovation Campus (iC) as a Smart Campus incubator.

The Health & Wellbeing Precinct, being developed at the iC, will be a showcase for health technologies, with the long-term goal of creating a Health Technology Incubator/ Ideation Hub. Innovations may include the use of wearable devices, the application of the Internet of Things (IoT), and the integration of data into personal records. With the development of the Health & Wellbeing Precinct on the IC, the goal will be to create a Smart Campus, which will be an extension to the Wollongong and Liverpool Smart Cities.

IMTS and UOW were announced as host of The Higher Education Technology Agenda (THETA) conference for 2019, securing sponsorship from organisations such as Google, Huawei, Appian, Ruckus, Blackboard, and Echo360.

In December, UOW IT students were once again given the opportunity to attend a one-week intensive "boot camp" with global BPM software partner Appian. Director of IMTS Fiona Rankin visited Google's office with UOW students for a Design Thinking Workshop. With representatives from the NUW Alliance, IBM Garage conducted a Design Thinking workshop on the potential use of Blockchain.



Financial summary

In the face of an increasingly challenging financial environment, UOW's financial position remains robust according to the latest University Standard and Poor's, reaffirming our AA credit rating. The international ratings agency highlighted our solid market position, robust operating margins, high level of financial resources and relatively low annual debt service.

ADJUSTED OPERATING SURPLUS

The headline operating result for 2018 for the consolidated group was a surplus of \$22 million. This was achieved through income of \$794 million offset by \$772 million of operating expenditure (including tax). Excluding capital grants and abnormal items, the University consolidated group achieved an adjusted operating surplus of \$27 million (3.3 per cent of income excluding capital grants and abnormal items). The University uses adjusted operating result as a key indicator of sustainability and plans for a surplus of greater than 2 per cent.

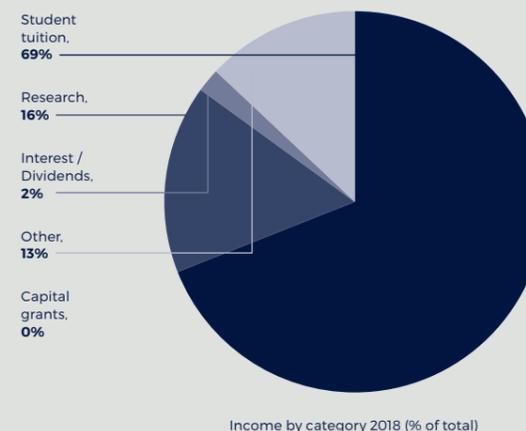
KEY HIGHLIGHTS:

- Continued expansion of the South Western Sydney Campus at Liverpool,
- Consolidation of offshore activities, particularly for UOW College Hong Kong,
- Growth in international student fee revenue offset by subdued income from Government for domestic students, and
- Strong balance sheet and liquidity position, evidenced by maintenance of AA/A-1+ stable Standard and Poor's credit rating.

SOURCES OF REVENUE

The primary source of income for the University continues to be student fees, contributing 69 per cent of income, with research related revenue contributing 16 per cent of income. The income trends are consistent with university expectations and trends over recent years.

Other income includes donations and scholarships, facility user fees, student services and amenities fees, and other minor fees, charges and contributions.

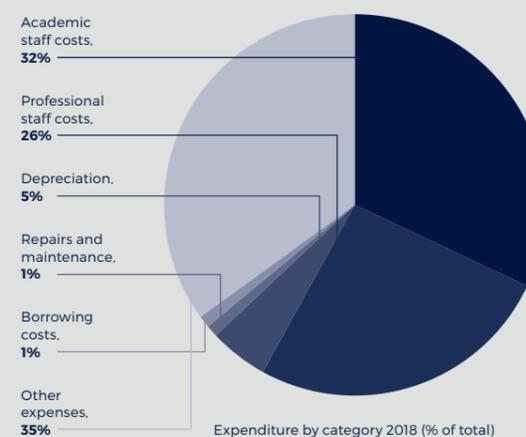


SOURCES OF OPERATING EXPENDITURE

Wages and salaries, at 57 per cent of total operating expenditure, are the largest component of University expenditure. Total employee costs grew 5.78 per cent due to a salary increases in accordance with awards and agreements, and in response to expansion of University operations.

Borrowing costs increased by \$6 million in 2018 due to the 10 year medium term bond issued in December 2017. The level of debt maintained by the University is within the constraints of the finance strategy and the Standard and Poor's credit rating.

Other Expenses grew 11 per cent over 2017. This included a variety of line items including utilities, cleaning, computer maintenance and software, student recruitment costs, advertising and marketing, space and equipment rental, expenses associated with additional retail activities, and scholarships. Contributions to third parties increased as a result of research activities and engagement with partner institutions.



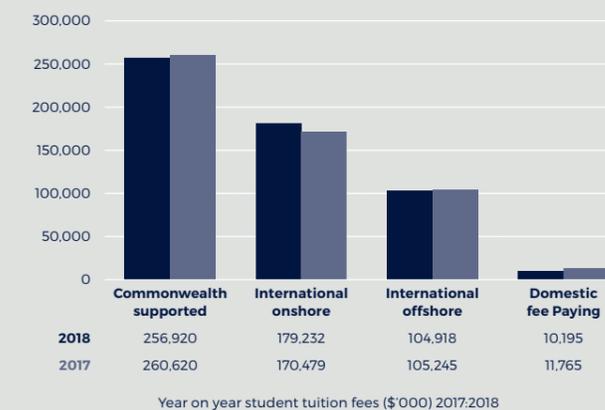
STUDENT REVENUE SOURCES

Student fees generated a total of \$551 million in 2018 compared to \$548 million in 2017.

Revenue from Commonwealth supported students contributed \$257 million, \$3.7 million below the result for 2017 due primarily to government funding caps. These caps are planned to continue through 2020.

Revenue from international student tuition fees (onshore and offshore) recorded an increase of \$8 million (3 per cent) over 2017.

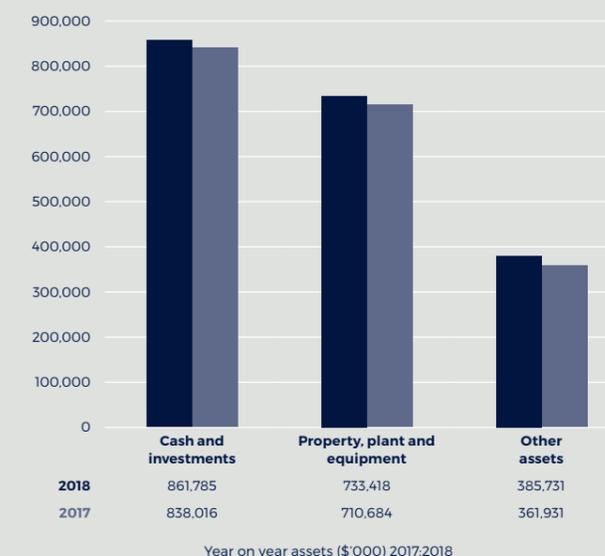
For the University parent, international onshore student enrolments recorded strong growth mainly in the disciplines of Engineering and Information Sciences and Science, Medicine and Health.



FINANCIAL POSITION

The net asset position (assets minus liabilities) of the University grew \$44 million in 2018 to \$1.2 billion. Cash and investments increased \$24 million, mainly due to modest consolidated operating results.

The University continued to make significant investments in infrastructure during 2018, particularly for major projects including the Molecular Life Sciences project and the Social Sciences and Law, Humanities and the Arts (Western) Building.



UOW continually welcomes opportunities to work with government and industry partners nationally and internationally to deliver exceptional outcomes.

OUR MISSION

UOW is a global leader in discovery and learning, working to transform people and the world we live in.

OUR PURPOSE

UOW is a research-intensive university with an outstanding reputation for our learning environments across a broad range of disciplines.

Our commitment to our students is evident in our graduates, who are recognised for their capability, quality and success in the global workplace.

UOW is an international network of campuses and regional learning centres. Together with our partners, we make a strong and connected presence in our communities.

We are a young and vibrant university with undiminished ambitions. We value our research capacity to work on complex and interdisciplinary problems. Our spirit of inquiry drives our research and learning environments and our objective of earning a place in the top 1 per cent of the world's universities.



- **UOW global presence**
UOW campuses & teaching locations
- **UOW global exchange partners**
(size indicates number of partners)

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