

U

2017
Annual
Review

O



UNIVERSITY
OF WOLLONGONG
AUSTRALIA

Stands
for purpose

W

Meeting the needs of an ever-changing world

The University of Wollongong (UOW) is proud to be among the best modern universities in the world. We have an international reputation for world-class research and exceptional teaching quality. Employers rank our graduates as some of the most career-ready in the world.

EQUAL FIRST UNIVERSITY IN AUSTRALIA

The Quality Indicators for Learning and Teaching (QILT) 2017 ranked UOW as equal first in Australia for overall postgraduate study

NUMBER 1 UNIVERSITY IN NSW

QILT 2017 ranked UOW as the Number 1 university in New South Wales

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, ranking in the 151-200 band in the 2018 QS Graduate Employability Rankings; 73rd in the world for graduate employment rates and 167th in the world for partnerships with employers

BEST IN NSW FOR EMPLOYER SATISFACTION

The QILT 2017 Employer Satisfaction Survey ranked employers' overall satisfaction with UOW graduates as fifth in Australia – the highest ranking achieved by any NSW university

ONE OF THE WORLD'S BEST MODERN UNIVERSITIES

- 17th in the world – QS Top 50 Under 50 Rankings 2018
- 30th in the world – Times Higher Education Top 150 Under 50 Rankings 2017

TOP 2% OF UNIVERSITIES IN THE WORLD

- 232nd in the world – QS World University Rankings 2018
- 251-300 band – Times Higher Education World University Rankings 2018
- 201-300 band – Academic Ranking of World Universities (ARWU) 2017
- 313th in the world – U.S. News Best Global Universities Ranking 2017
- 264th in the world for research quality – 2016 Leiden Ranking

5-STAR RATED UNIVERSITY

- 5-Star rating – QS World University Rankings 2016
- 5-Star rating in the 2018 Good Universities Guide. UOW was one of only two Australian universities – and the only publicly funded university – to achieve a clean five-star sweep of all student experience measures: overall experience, skills development, student support, teaching quality, learning resources and learner engagement.

GLOBAL TEACHING EXCELLENCE

Finalist in the 2017 Global Teaching Excellence Awards, recognising teaching excellence



Vice-Chancellor's overview

It is my pleasure to present this publication which outlines our achievements throughout 2017 – a year of significant growth both onshore and offshore for the University of Wollongong (UOW).

UOW is a world-class university which helps drive innovation and equips our graduates for immense changes in the future workforce.

UOW is consistently ranked in the top one per cent of universities in the world for the quality of our graduates. This was demonstrated in results from the Australian Government's Quality Indicators for Learning and Teaching (QILT) 2017 Employer Satisfaction Survey, which found that UOW received the highest satisfaction ratings in NSW, with 88.1 per cent of employers reporting overall satisfaction with our graduates. For the third year in a row, UOW has been ranked in the top 200 universities across the world for graduate employability outcomes, and awarded five stars by the QS Graduate Employability Rankings.

Our reputation as a leader in teaching and learning was reinforced after being the sole university in NSW, and one of five Australian universities, to be shortlisted as a finalist at the inaugural Global Teaching Excellence Awards in London in September.

The impressive growth of our UOWx program demonstrates our success in providing students with strong personal and professional skills. UOWx is the University's co-curricular recognition program, with activities helping to develop and improve students' knowledge, skills and networks. The program has expanded in student engagement from 30 participants in Autumn 2015 to 3,163 students in 2017.

UOW continues to be a leader in collaborating with business and industry for research and development. Our iAccelerate Centre was this year named by alternative investments management company Artesian as a leading accelerator/incubator in Australia.

We were delighted to host His Royal Highness, Prince Andrew, Duke of York, for the Pitch@Palace Australia 1.0 Boot Camp in September. During his visit, The Duke kindly helped launch UOW's GOLEad Global Leaders Development Program. Other international highlights from the year included the launch of the UOW College Hong Kong brand at the Community College of City University, and construction beginning at the Knowledge Park site of the new University of Wollongong in Dubai (UOWD) campus.

Research income for 2016 grew by 14.3 per cent compared to the previous year, according to Higher Education Research Data Collection (HERDC) figures, and we anticipate growth will continue when statistics for 2017 are released. Approaching its fifth year, the challenge-led interdisciplinary Global Challenges Program currently has 57 per cent of projects led by female researchers and 50 per cent by early career researchers.

We are also excited about the potential for medical breakthroughs at the new Molecular Horizons building. In December, the Talos Arctic cryo-electron microscope – the first in Australia – was unveiled at the Wollongong campus in an interim facility during the building's construction. Molecular Horizons is an initiative within UOW's Health and Wellbeing Strategy. Another initiative in this strategy is the MIND the GaP mental health and wellbeing facility at the Shoalhaven campus, which will open in 2018.

Also in 2017, the Australian Research Council (ARC) Centre of Excellence for Australian Biodiversity and Heritage (CABAH) was launched at Parliament House in Canberra. CABAH will pioneer a new understanding of the natural and human history of Australia, Papua New Guinea and eastern Indonesia.

UOW's South Western Sydney campus at Liverpool was opened in April and our Wollongong campus student accommodation was expanded with the opening of Bangalay in March. UOW, the University of Newcastle and University of NSW officially formed the NUW Alliance in July. The alliance will work with industry and the NSW Government to deliver smarter solutions for NSW.

CONTENTS

UOW in numbers	4
Organisational chart	5
Innovation and economic development	6
Research impact and engagement	12
Student experience	18
Access and equity	20
Education quality	24
Global reach	28
Community connections	32
Infrastructure investments	38
Staff	40
Technology	42
Finance	44

Professor Paul Wellings CBE
Vice-Chancellor

UOW in numbers

STUDENTS

34,144
total student enrolment

26,587
onshore student enrolments

7,557
offshore student enrolments

14,453
international students enrolled in Australia and abroad

30.2%
students from regional and remote areas

18.56%
from low socio-economic status background

88.5%
of students satisfied with overall experience (UOW Student Experience Questionnaire)

EDUCATION

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

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

2
wholly-owned subsidiary campuses (University of Wollongong in Dubai, UOW College Hong Kong)

340
degrees on offer

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

INTERNATIONAL LINKS

140,000+
UOW alumni

270
academic and research collaborations globally

155
nationalities at UOW

239
Study Abroad and Student Exchange global links

ECONOMIC IMPACT

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

\$2.2B
in gross output annually

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

RESEARCH IMPACT

\$61.7M
HERDC research income received

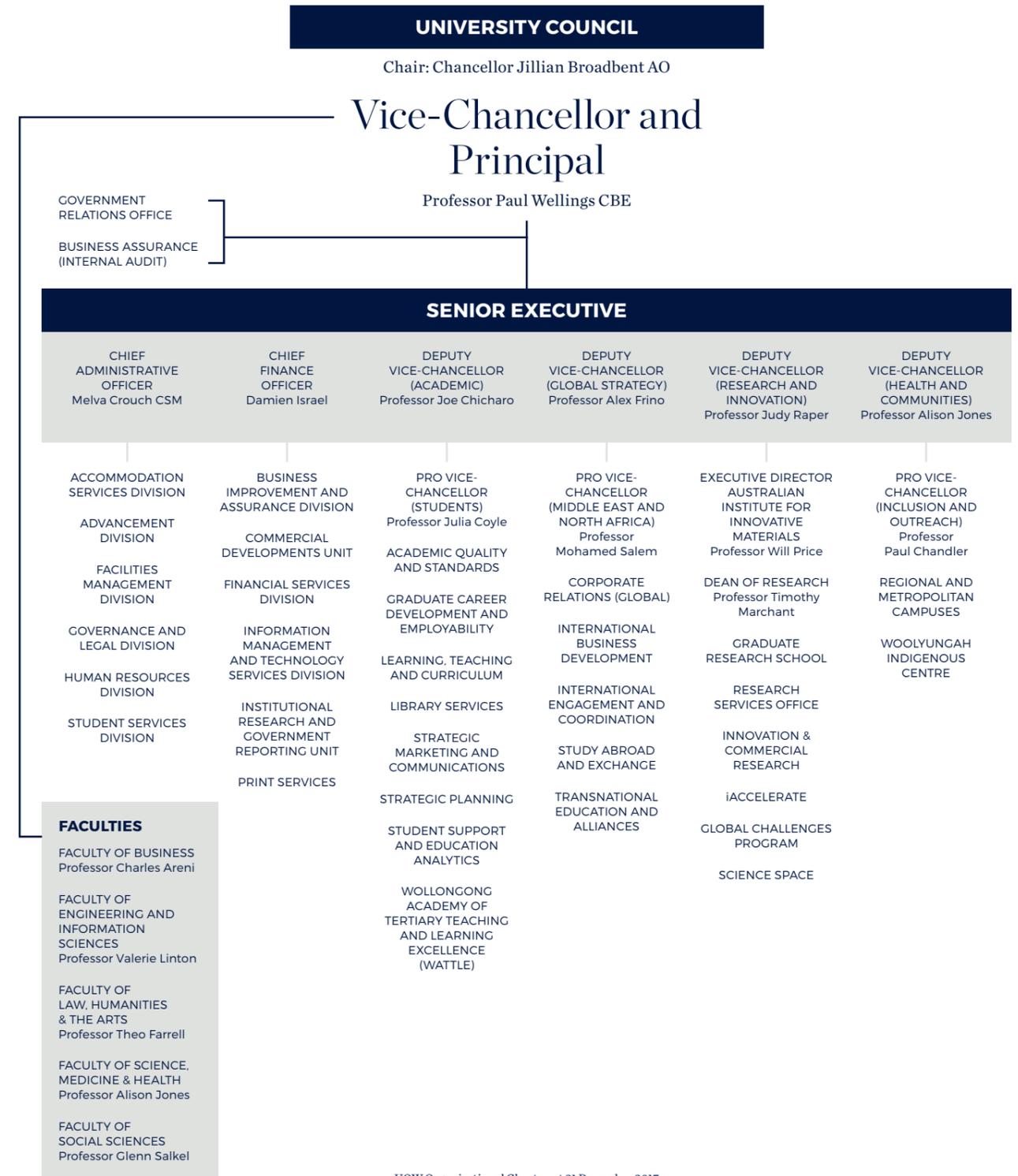
5
major research entities

9
distinguished professors

64,920
publications available on Open Access

213
Academic and research collaborations globally (formal links)

Organisational Chart



*Figures as at 31 December 2017

UOW Organisational Chart as at 31 December 2017

Innovation and economic development

The Illawarra's vibrant ecosystem of business, creativity and innovation is the result of a research-led university which is connected to community. UOW is leading the way in delivering the workforce of the future. Our research and education addresses the needs of local industry, particularly small to medium sized enterprises (SMEs), and contributes to innovation and economic growth.

DELIVERING JOBS FOR THE FUTURE

For more than 40 years, UOW has been an anchor for the Illawarra's economy, providing for the transition to new industries and new jobs in a broader economic landscape. The University continues to be highly adaptable to changing needs as the Illawarra experiences a significant economic transition.

Dedicated researchers and innovators have been at the forefront of transforming traditional industries and bridging the gap between great science and commercial opportunity. We are building our regional innovation ecosystem and preparing a workforce for the future.

Knowledge integration derived from industry and university partnerships helps businesses prosper, resulting in more jobs in our communities. While ensuring that we meet industry needs, UOW is committed to regenerating traditional industries by helping them embrace new technologies in order to remain competitive, particularly in innovative manufacturing, innovative materials and building.

UOW's research contributes to the needs of local industries. This work not only leads to new products and services, but new jobs and industries. There are many examples in this area.

Our Sustainable Buildings Research Centre (SBRC) is a multidisciplinary facility that hosts a wide range of research and industry collaborations to address the challenges of making buildings sustainable. Among projects, the Centre is working with steel producer BlueScope on the development and testing of next generation steel building products.

UOW's interdisciplinary Global Challenges Program established the Southern Manufacturing Innovation Group in 2015 to address the barriers to collaboration between UOW and small to medium sized enterprises (SMEs) in advanced manufacturing.

Our partnerships with communities, organisations, and all levels of government help drive innovation, create the workforce we need into the future, and translate research into social and commercial outcomes.



Left: His Royal Highness, Prince Andrew, Duke of York at the Pitch@Palace Australia 1.0 Boot Camp on September 26.

Below: UOW exposes students to workplaces so they have the opportunity to integrate theoretical knowledge.



UOW delivers more than \$2 billion each year in economic activity for the national good. This includes the generation of more than 10,000 jobs, \$778 million in labour income and a contribution of \$1.2 billion to the gross domestic product.

Our Innovation Campus is at the core of our commitment to grow the Illawarra's innovation ecosystem and contributes \$195 million to the Illawarra economy each year. Innovation and entrepreneurship flourishes here, particularly at the iAccelerate Centre, the Illawarra's start-up incubator and accelerator.

With four world-leading research institutes, the Campus is a research, development and commercial precinct and is a junction for national and international companies, researchers and students to meet and translate products to commercial success.

ROYAL WELCOME FOR ENTREPRENEURS

UOW's strong reputation for innovation and leadership in the entrepreneurial space made it a fitting host for a Pitch@Palace Boot Camp this year.

The Innovation Campus hosted His Royal Highness, Prince Andrew, Duke of York for the Pitch@Palace Australia 1.0 Boot Camp on September 26.

Entrepreneurs representing the 24 finalist businesses worked with prominent Australian business experts to refine their pitch in the morning before presenting to The Duke of York in the afternoon.

The Duke of York founded Pitch@Palace in 2014. Putting a spotlight on the best of Australia's entrepreneurial talent, Pitch@Palace Australia supports entrepreneurs with the amplification and acceleration of their businesses by connecting them with people who can help with the next steps for their business development.

WORK-INTEGRATED LEARNING

Employers are more satisfied with graduates from UOW than those from all other NSW universities and UOW is currently ranked in the top 200 universities in the world for graduate employability outcomes.

It is vital to expose students to workplaces not only so they have the opportunity to integrate theoretical knowledge, but also for the University to establish and maintain partnerships to continue to be responsive to future industry needs.

This led to work commencing this year on the Work-integrated Learning Enabling Plan (WIL), which will see increased UOW full-time employment outcomes by expanding access to authentic degree related work-based experiences for all student cohorts.

UOW's Graduate Career Development and Employability (GCDE) Unit has expanded its suite of workplace programs and credit-bearing subjects to support students' professional development.

For example, the extra-curricular program UniVative brings together multidisciplinary teams of students over the winter and summer breaks to solve real-world business problems. This also helps students connect with prospective employers.

GCDE's general elective subject Career Ready Learning & Practice will place up to 350 students in industry internships in 2018.

GCDE Director Nuala O'Donnell said a key goal of the WIL strategy is to eventually build WIL into all stages of the degree to enhance students' work and career-readiness.

"Ensuring students graduate with the right mix of skills and experience, an informed career plan and a ready-made network will be critical ingredients to maximise their potential to successfully transition to professional work and to lead fruitful careers," she said.

The WIL Enabling Plan is an institution-wide strategy which is closely aligned to the Curriculum Transformation Project. An advisory committee was established in June 2017.



INNOVATIVE HOUSING FOR AN AGEING POPULATION

Traditional housing designs simply don't work for people living with dementia. Desert Rose is a state-of-the-art building designed to improve quality of life for people as they age and address specific needs of people living with dementia.

UOW is working with TAFE NSW and the University of Wollongong in Dubai to create Desert Rose for the Solar Decathlon Middle East Competition 2018 (SDME 2018), often described as the "Energy Olympics".

The Solar Decathlon is the world's largest sustainable building research and innovation competition, challenging university teams to design, build and operate solar-powered houses that are cost-effective, energy-efficient and attractive.

Professor Richard Fleming is the Director of the UOW-based NSW/ACT Dementia Training Study Centre and has worked with the elderly for more than 30 years, while UOW's Sustainable Buildings Research Centre (SBRC) helps the building and construction industry achieve better environmental and economic outcomes through more sustainable energy practices. The work of both Professor Fleming and SBRC underpin the design principles of Desert Rose.

The Desert Rose house construction was launched in December this year, with the competition running through to the finals in November 2018.

Aside from the benefits to students at UOW and TAFE, the project will contribute to general public education, local industrial knowledge and help inform policy makers who are part of drafting the future direction of the government's innovation outlook.

Team UOW is hopeful of a good result after winning the Solar Decathlon China 2013 with the Illawarra Flame, which demonstrated the retrofitting of a traditional Australian "fibro" house into a stylish and sustainable home of the future.



DIGITAL LIVING LAB GROWS SMART CITY

The Digital Living Lab was launched by the University's SMART Infrastructure Facility this year. The Lab is leading the digital revolution in the Illawarra, connecting the city of Wollongong through a network of lower power sensors.

The project provides a test bed for new Internet of Things technologies, and facilitates high impact community projects that address health, safety and environmental issues across the region.

SMART is working with start-ups, local councils, aged-care providers, schools and community groups to develop and deliver projects that will enhance the community and create a smart city in the region.

Projects address a range of environmental factors, including monitoring landslides, mapping fire hydrants, floodwater management, shark monitoring and air quality management. A social factor addressed by the network is the creation of a map of the best accessible routes for wheelchair users around UOW's Wollongong campus, with plans to expand it to Wollongong CBD.

Smart Cities can help achieve better energy efficiency and healthier environments. The focus is on using the Internet of Things to improve the liveability of cities and creating a network that allows residents to share our knowledge as a community.

Since the launch, the network has grown to five gateways around the Illawarra using LoRaWAN technology (University, Mount Warrigal, Mount Keira, Port Kembla and Farmborough Heights), as well as one receiver using Sigfox technology on campus.



PARTNERING FOR A BLUE ECONOMY

A forum was held at UOW's Innovation Campus on October 31 for stakeholders from UOW, local industry and government bodies to discuss the Blue Economy concept and to collate ideas to develop a collegial approach.

In partnership with industry, governments and communities, UOW can provide the research and expertise to support the growth and development of a local, regional, national and international Blue Economy.

UOW's expertise in the Blue Economy is spread across the Australian National Centre for Ocean Resources and Security (ANCORS), the interdisciplinary Global Challenges Program, SMART Infrastructure Facility, Australian Institute for Innovative Materials (AIIM) and the iAccelerate Centre business incubator and accelerator.

The Australian Institute of Marine Science (AIMS) estimates that by 2025 Australia's marine industries will contribute around \$100 billion each year to our economy, with our oceans and coasts providing a further \$25 billion worth of ecosystem services, such as carbon dioxide absorption, nutrient cycling and coastal protection.

The concept of a Blue Economy incorporates the traditional maritime industries of fisheries, coastal tourism, energy and mineral production, boat building, shipping, and ports activity. It also includes new and developing industries, such as aquaculture, renewable energy technologies, bio-products, blue carbon and desalination.



NUW ALLIANCE TO HELP SHAPE STATE'S FUTURE

In July, NSW Premier The Hon. Gladys Berejiklian MP, officially launched the NUW Alliance at a ceremony held in Sydney's CBD. It was attended by representatives from the University of Newcastle (UON), University of New South Wales (UNSW) Sydney and University of Wollongong.

The NUW Alliance will harness the combined power of the three institutions' multidisciplinary research, education expertise and innovative thinking to explore and deliver ways to enhance equality of opportunity, create new jobs and generate economic growth.

Consultation with communities is at the heart of the Alliance's ability to identify priorities so it can get to work in delivering smarter solutions for NSW.

UOW Vice-Chancellor Professor Paul Wellings CBE said the Alliance, which has a geographical reach from the Mid North Coast to the South Coast of NSW, was calling on the business, industry, education and health sectors to contribute their time and ideas to help identify transformational projects.

"The NUW Alliance demonstrates that our universities not only help our students reach their full potential, but also our communities," Professor Wellings said.

The broad community consultation follows consideration of NSW State Plan priorities and initial discussions between the three universities, which have canvassed opportunities to:

- develop skills in critically important new sectors, such as cyber security
- apply 'Smart Cities' technologies to improve the connectivity, productivity and liveability of our regional cities and coastal communities
- create greater access to higher education for students in regional and remote communities - including Indigenous students
- partner with health services to improve health outcomes for the community, including for some of the most disadvantaged groups in the state.



Photo: Department of Defence

NETWORK DELIVERS ON DEFENCE NEEDS

UOW will be at the forefront of defence-related research and development activity in NSW as a founding member of a new Defence Innovation Network (DIN).

The new network, announced on November 3 by NSW Minister for Trade and Industry, the Hon. Niall Blair MLC, will bring together leading scientists and engineers from seven NSW public universities to focus on areas crucial to Australia's defence needs.

The network will be funded by a \$1.25 million investment by the NSW Government, combined with each founding institution demonstrating its commitment by investing \$60,000 and funding two PhD scholarships for defence-related research projects.

The DIN is set to tackle challenges in fields such as autonomous and unmanned systems, signal processing, weapons and communications.

UOW has extensive experience working on defence technology research, particularly through its Defence Materials Technology Centre (DMTC).

The DMTC has made significant research and development contributions to major defence projects, particularly in the fields of welding, robotics, automation and materials. Projects include the Bushmaster (pictured) and Hawkei armoured vehicles built by Thales Australia for the Australian Defence Force, maritime welding and fabrication for the Collins Class submarines and the Air Warfare Destroyers currently under construction.

UOW is planning to form the Facility for Intelligent Fabrication with TAFE NSW and the Welding Technology Institute of Australia (WTIA) in early 2018. This collaboration provides a unique facility to assist businesses to identify and implement welding and automation-related technology, backed up with technical, education, training and certification support.



IMPROVING SYDNEY RAIL CONNECTIONS

The Illawarra Business Chamber (Illawarra First) commissioned the SMART Infrastructure Facility to investigate options to improve the speed and reliability of passenger and freight rail transport services between the Illawarra and Sydney.

The Illawarra region, despite its geographic proximity to Australia's largest city, has historically suffered from relatively higher unemployment, in part due to poor transport connectivity to Sydney and a lack of industrial diversification.

As part of their research, SMART looked at current travel times between the Illawarra and Sydney and how to improve efficiency by either shortening the distance travelled, increasing train speeds safely or investing in line duplication to reduce congestion.

SMART found that by investing in greater efficiency for the South Coast line, this would result in high costs and operational impacts. Subsequently, they shifted focus to the addition of a passenger and freight line between the Illawarra and Sydney, utilising the Maldon-Dombarton line as the South West Illawarra Rail Link (SWIRL) and found that this would result in reduced travel times, improved connectivity, a 1:13 benefit cost ratio and increases in permanent jobs in the Illawarra.

These findings were published in the report, *Upgrading rail connectivity between Illawarra and Sydney* and were released in August this year.



START-UP GROWTH AT iACCELERATE

77 start-up companies supported by iAccelerate in 2017

44% female founders and co-founders at iAccelerate in 2017 (more than double the national average)

54 products launched by iAccelerate resident companies in 2017

33 applications for IP protection in 2017 (with an 86% success rate)

\$27M reported revenues of iAccelerate resident companies in 2017



Futurist Bernard Salt addresses the crowd at the inaugural SME event at the Innovation Campus in March.

COMPANIES THRIVE AT iACCELERATE CENTRE

The iAccelerate Centre at UOW is a dedicated regional entrepreneurial incubator and accelerator facility. It is the largest university-supported program and facility of its type in Australia and offers one of the most comprehensive education programs in the world for start-ups.

iAccelerate is now a leading accelerator/incubator in Australia based on the number of companies that have come through the program, according to alternative investments management company Artesian. The companies involved reached \$27 million in total revenue for the 2017 calendar year. Added to this achievement, the Centre's gender balance remains nearly double that of the industry average, with 44 per cent of female founders and co-founders participating.

iAccelerate plays a key role in the surge of entrepreneurs and innovators who are transforming our economy and making their mark. Its companies are creating jobs with a combined payroll of over \$5 million. These companies have also attracted more than \$8.5 million in equity capital investment in 2017. The Centre has delivered 386 new jobs to the Illawarra region since 2012 and in 2017 delivered 152 new jobs to the community (not including founder jobs and other flow-on opportunities).

About 43 per cent of residents are UOW alumni and this year 10 MBA students were welcomed to iAccelerate and matched with resident start-ups.

Another highlight of the year was that a multi-disciplinary team of researchers from UOW successfully spun out of the University to commercialise their program, Recovery Camp. The program delivers recovery-oriented experiences for health students and people with lived experience of mental illness. This program demonstrates iAccelerate's commitment to support start-ups that are looking to deliver social impact, not just financial returns.

iAccelerate's inaugural IMPACT conference was held in August, focussing on social entrepreneurship and impact investing. The conference included a host of high profile national and international speakers, including a pre-recorded address by former US Vice-President Al Gore.

iACCELERATE CENTRE IMPACT ON LOCAL ECONOMY AND JOBS

Approximately 3 x increase YoY in wages & payment to contractors.



CREATING LOCAL JOBS

iAccelerate delivered 386 new jobs to the Illawarra region since 2012.

In 2017, iAccelerate delivered 152 new jobs to the community (not including founder jobs and other flow-on opportunities).



PATENT APPLICATIONS ON DISCOVERIES

Through the Innovation and Commercial Research Unit (ICR), UOW this year entered into two IP licensing agreements; with a Norwegian research organisation and an Australian SME.

Five provisional patent applications have been filed by UOW, with an additional two provisional patent applications filed collaboratively with a university in China. One patent application has been filed collaboratively by UOW and an Australian science organisation, and another filed collaboratively with another Australian university.

UOW has filed a provisional patent application for the use of arsenic conjugates as an anti-cancer agent. The IP is being licensed to, and further developed in collaboration with a national pharmaceutical company.

UOW has filed two patents in relation to wireless endoscopy technologies and ICR has helped the researchers to access grant funding that will enable them to meet with a potential licensee in China.

One PCT application has been filed for the use of amiloride compounds in the treatment of cancer. Two companies have expressed interest in the IP.

UOW is a joint applicant with an Australian science organisation on a patent related to a new radiation treatment technology for cancer.

Also this year, ICR worked closely with UOW's Sustainable Buildings Research Centre (SBRC) on a number of strategic initiatives.

ICR has played a key role in consultations with an electric utility company, regarding an initiative to build a pilot plant to convert electricity to gas on a site to be provided by UOW.

ADVANTAGE SME HELPS DRIVE OPPORTUNITY

UOW staff and students joined more than 300 representatives from local businesses and industry at UOW's inaugural Advantage SME event in March, where futurist and KPMG partner Bernard Salt was the guest speaker.

At the Innovation Campus event, Mr Salt said the number of small businesses in the Illawarra grew by six per cent between 2014 and 2016, compared with five per cent nationally, which he described as "the right environment for us to create our own future, our own prosperity".

Advantage SME can assist small to medium enterprises grow and thrive in the global economy. The initiative was set up within the Boosting Business Innovation Program, aimed at supporting greater collaboration between research organisations and local businesses to drive innovation. The program has been extended until June 2020. It provides businesses with access to the capabilities and resources on offer at UOW.

The contribution of SMEs to the regional manufacturing sector was celebrated at a World SME Day event at UOW's Innovation Campus on June 27. The event showcased the successful manufacturing transformation at Nowchem (Nowra Chemical Manufacturers). Nowchem Managing Director John Lamont is a long-term collaborator with UOW who has transformed a small, family-owned chemical business into a world-class chemical and pharmaceutical facility. Mr Lamont and his team have collaborated with UOW and Venus Shell Systems using Advantage SME funding.

COMMERCIALISATION AT UOW HIGHLIGHTS

26 invention disclosures received by Innovation & Commercial Research

9 provisional patent applications and one PCT application filed

2 technology licence agreements entered by UOW

535 local businesses have joined the Advantage SME program to date. Since the program began in June 2016, 12 innovative industry-research collaborations have been contracted (value \$128,755 in grants which was matched by industry partners) and a further three are in the pipeline.

Research impact and engagement

UOW's researchers continue to make discoveries that deliver real economic and social benefits for Australians. Not only do we have an international reputation for world-class research, but our work drives greater collaboration with industry. Our investment in research brings a return through commercially useful discoveries and advances that improve the quality of life for us all.

SOCIAL AND ECONOMIC BENEFITS

Research at UOW engages with communities, business, industry, and all levels of government on both social policy and commercial fronts to create outcomes with economic and social benefits.

Research engagement and impact achieved by UOW was again demonstrated in the national competitive research grants awarded to the University this year for funding projects that are addressing global issues.

Research income for 2016 grew by 14.3 per cent compared to the previous year, according to Higher Education Research Data Collection figures, and growth is anticipated to continue when statistics for 2017 are released.

Highlights have included the launch of the \$45.7 million Australian Research Council (ARC) Centre of Excellence for Australian Biodiversity and Heritage, and a \$3.9 million grant received from the Australian Government through the ARC to establish the ARC Industrial Transformation Training Centre for Advanced Technologies in Rail Track Infrastructure (ITTC Rail), to be headquartered at UOW.

Also in 2017, \$1.6 million in funding was announced from the Grains Research and Development Corporation (GRDC) for UOW biostatisticians to provide high quality statistical science to underpin research projects related to the grains industry.

The GRDC has launched phase three of its statistics for the Australian Grains Industry program, which will involve the creation of four nodes across Australia – with the national node to be based at UOW.

A preliminary grant was announced in July for UOW's Australian National Centre for Ocean Resources and Security (ANCORS) as part of an Australian Government program 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.

The project team, which comprises ANCORS, WorldFish, the Pacific Community and national agencies, is funded by the Department of Foreign Affairs and Trade and the Australian Centre for International Agricultural

Research. The funding of \$8 million from the Australian Government's aid program to UOW and partners is augmented by \$2.5 million committed to the project by the University. Collaborating partners in the Pacific region are contributing further in-kind support of \$1.5 million.

UOW researchers were awarded \$8.7 million in Australian Research Council funding in November for 25 projects, which included 13 Discovery Projects (DP), eight Discovery Early Career Researcher Awards (DECRA) and four Linkage Infrastructure, Equipment and Facilities (LIEF) grants. This compares to \$8.3 million awarded in 2016 across the same schemes.

Australian Laureate Fellow, Distinguished Professor Antoine van Oijen, and Distinguished Professor Nick Dixon, were among the successful DP grant winners, awarded \$524,300 for their project to improve our understanding of how a cell's DNA replicates and combating antibiotic resistance in bacterial pathogens. Associate Professor Jane Herbert received \$237,961 for her DP, which aims to better our understanding of the complex relationship between action and perception in young children.

Among successful DECRA applicants was Dr Weijie Li, a research fellow at the Australian Institute for Innovative Materials (AIIM), who was awarded \$353,446 for her project, which has the potential to accelerate the commercialisation of sodium ion batteries. Economic geographer Dr Andrew Warren was granted \$ 374,000 for his study into geographies of transition in Australia's auto repair and maintenance industry.

Under the LIEF scheme, a research team led by Illawarra Health and Medical Research Institute Executive Director Professor David Adams was awarded \$443,311 for an electrophysiology facility that will enable research at the forefront of cell analysis and drug discovery. Also, a team led by UOW's NSW Scientist of the Year, Distinguished Professor Gordon Wallace was awarded \$347,000 for a 3D Additive Biofabrication Facility to create the next generation of bioprinting methodologies and provide new insights into fundamental biological processes.

Under the industry-connected Linkage Project grants announced in May, Professor Zaiping Guo (pictured), an ARC Future Fellow at UOW's Faculty of Engineering and Information Sciences (EIS) and AIIM, was awarded \$420,000 for a project to develop the next generation of high-energy-density lithium ion batteries.

Professor Willy Susilo, Head of the School of Computing and Information Technology in EIS, was awarded \$245,000 to design a highly-secure anonymous access system for online businesses in Australia and worldwide that would enable them to take advantage of customer feedback, while offering privacy protection to the customers.

Dr Md Shahriar Hossain, from AIIM, received \$320,000 for a project to develop superconductors for use in nuclear fusion reactors.

In January, Distinguished Professor Buddhima Indraratna and his team received \$675,000 – the largest grant awarded nationally under the ARC's Linkage Projects scheme – to examine the factors that cause "mud pumping" on rail lines and evaluate the effectiveness of draining to prevent the problem.

Meanwhile, UOW was also awarded \$4.8 million in October for National Health and Medical Research Council (NHMRC) grants. This included a four-year Career Development Fellowship to Dr Xiaoqi Feng from the Population Wellbeing and Environment Research Lab to further her research into the effects of environmental factors on children's health. Professor Rodney Croft's Australian Centre for Electromagnetic Bioeffects Research was awarded \$2.5 million funding over five years for research into the health effects of radiofrequency electromagnetic energy, such as from mobile phones and Wi-Fi. Professor Nadia Solowij was announced as co-director of the new \$2.5 million Australian Centre for Cannabinoid Clinical and Research Excellence and Head of the School of Medicine, Professor Nick Zwar, will be one of the Chief Investigators of a new \$2.5 million National Centre for Sleep Health Services Research.

UOW receives University Global Partnership Network funding: P31
VC staff awards for research: P40

RESEARCH INCOME

\$61.7M

HERDC research income received

\$36.5M

Research Block Grant allocation

\$46M

ARC grant income awarded



RESEARCH EXCELLENCE

57 UOW
disciplines
at, above or well above
world standard

ACADEMICS SHARE THEIR INSIGHTS AT FESTIVAL

UOW's Big Ideas Festival this year again showcased a highlight reel of the University's groundbreaking research and the outstanding academic minds behind the projects – from the promise and pitfalls of smart cities, to autonomous robots and intelligent manufacturing, the history of human colonisation of the planet, and cost-effective strategies for fire prevention and management.

Eleven UOW professors, including Professor Zenobia Jacobs and Professor Valerie Linton (pictured) shared their big idea related to their field of research to the wider community during an evening of entertainment in October.

- Professor Jun Chen: Wearable tech – turning body heat into electricity
- Senior Professor Paul Cooper: Living Buildings: Towards a restorative future
- Professor Barbara Meyer: The fishy business of neural tube development
- Professor Nadia Solowij: Slender in the Grass: A scientist caught in the maelstrom
- Professor Zenobia Jacobs: Lighting up the ancient human past
- Professor Valerie Linton: IF...? The future of intelligent fabrication
- Professor Pauline McGuirk: How smart are smart cities
- Professor Maarten de Laat: Using social analytics to change learning landscapes
- Senior Professor Ross Bradstock: The future of bushfires: Are we ready for the big burn?
- Professor Nick Zwar: Playing hide and seek – why does it matter in health care?
- Professor Fiona Probyn-Rapsey: Extinct & Eradicated: Animal states of Australia.

RESEARCH PARTNERSHIPS RECOGNISED FOR IMPACT

From working with local government to improve community inclusion for people with dementia, to connecting with industry to test new technology to generate power from waste, UOW researchers partner with a range of organisations to deliver evidence-based, real-world societal and technological change.

Launched in August, the UOW Partners for Research Impact initiative profiled more than 40 research projects demonstrating the power of partnership between researchers and industry, government, and community organisations.

For example, the steel industry and UOW have maintained a close relationship through research partnerships, traineeships, scholarships and collaboration on a wide range of industry and community projects.

One of these research partnerships included the BlueScope Steel Metallurgy Centre (BSMC), which was at the heart of the development of BlueScope's flagship range of COLORBOND® steel-painted products.

Another significant initiative of the UOW-BlueScope partnership is the new Australian Research Council Research Hub for Australian Steel Manufacturing (Steel Research Hub), which develops innovative solutions and breakthrough technologies in steel.

BlueScope has also played a key role in the Sustainable Buildings Research Centre at UOW, with a focus on producing innovative new building materials and systems.

The UOW Partners for Research Impact booklet can be viewed online at uow.edu.au/research/partnersforimpact

– See also collaborative research projects funded for 2017-18 between UOW researchers and their colleagues within the University Global Partnership Network: P31

FOUR RESEARCHERS ON HIGHLY CITED LIST

Four UOW academics have been included as Clarivate Analytics Highly Cited Researchers, a respected global list of the most influential researchers, based on citations recorded in Web of Science.

The 2017 Highly Cited Researchers from UOW are Professor Zenobia Jacobs, Distinguished Professor Richard "Bert" Roberts (pictured) and Professor Paul Goldberg from the Centre for Archaeological Sciences, Faculty of Science, Medicine and Health, and Professor Yoshio Bando, from Institute of Superconducting and Electronic Materials, Australian Institute for Innovative Materials.

The list is based on authors' publication of papers that rank in the top one per cent most cited in their fields over a recent 11-year period. It reflects those researchers consistently making findings and producing papers that are judged by their peers to be of high significance and value in their fields.

EXCEPTIONAL RESULT IN WORLD RANKINGS

UOW has made a dramatic climb up the 2017 Academic Ranking of World Universities (ARWU) list, jumping 81 places to be ranked 251st in the world, up from 332nd in 2016.

This is UOW's best ever placing in the table, making it the 12th highest ranked university in Australia, up from 17th in 2016.

The prestigious ARWU listing is a research-based ranking system, drawn from independently sourced data which is used to rank the world's top 500 research universities annually.

Among Australian universities, UOW ranked equal 10th for highly cited researchers; 12th for papers published in Nature and Science; 12th for per capita academic performance; and 15th for papers indexed in major citation indices.

BRIGHTER FUTURE FOR CHILDREN IN NEED

An enduring partnership between UOW and Illawarra social service organisations has produced positive results in attracting more high-quality foster carers for the thousands of Australian children in need of safe and nurturing homes.

For the past nine years a research team focusing on foster care marketing and recruitment, led by Associate Professor Melanie Randle (pictured) from the School of Management, Operations and Marketing, has worked with Illawarra social service agencies; CareSouth, CatholicCare Wollongong and William Campbell Foundation.

It's a partnership which has helped to significantly increase numbers of foster carers for all partner organisations involved. For example, since the partnership began, CareSouth has more than doubled its number of foster placements; William Campbell Foundation has increased its foster carers by more than 300 per cent; and in some regions CatholicCare Wollongong has tripled the number of children placed with foster families.

To achieve these outcomes, the team first had to identify the characteristics of individuals who were likely to be particularly good in the role of foster carer. Subsequently, they had to develop marketing strategies that effectively attracted these types of people.

The team has provided consultation and advice to the NSW Department of Family and Community Services on issues of foster carer recruitment. The project has received Australian Research Council (ARC) funding of more than \$850,000 for foster care marketing research. In addition, the team has recently been awarded another four-year ARC Linkage grant valued at \$326,000 to conduct research in the area of disability services.

Over the next four years, this project will examine changes in perceived consumer value of disability services following the implementation of the National Disability Insurance Scheme (NDIS).

TRAINING CENTRE TO TRANSFORM RAIL INDUSTRY

The Australian Government, through the Australian Research Council (ARC), is funding a new training centre at UOW to equip the next generation of engineers with the knowledge and skills needed to upgrade Australia's rail network.

Funding for the ARC Industrial Transformation Training Centre for Advanced Technologies in Rail Track Infrastructure (ITTC Rail) was announced by the Minister for Education and Training, Senator the Hon. Simon Birmingham, in June.

ITTC Rail was given \$3.9 million in ARC funding, to go with more than \$2.9 million from partner organisations and the NSW Government. At least 20 PhD students will be trained at the Centre over the four years of its funding. ITTC Rail is the first rail ARC Training Centre.

Distinguished Professor Buddhima Indraratna (pictured) from UOW's Faculty of Engineering and Information Sciences will be the Training Centre Director.

"Due to the dependency of the Australian economy on efficient heavy haul, there is a pressing need to upgrade ageing rail infrastructure by rejuvenating higher degree training with a new generation of engineers with advanced knowledge and practice skills," Professor Indraratna said.

Demand for safe and reliable tracks to accommodate faster and heavier traffic in Australia has been increasing steadily in the past decade, and ongoing improvements are essential if the forecast six per cent per annum increase in bulk freight is to be achieved cost effectively.

Through specialist training of industry-focused researchers, ITTC Rail will meet the challenge of designing, constructing and maintaining the rail network.

ITTC Rail is a collaboration between UOW and seven other universities and spans four states.

POWERING UP ON INNOVATIVE ENERGY

Thanks to a team of talented researchers from UOW, inexpensive and reliable sodium-ion batteries are only a few years away.

Supported by \$2.7 million of ARENA funding, the \$10.6 million battery project will develop modular, expandable sodium-ion batteries optimised for renewable energy applications.

Institute for Superconducting and Electronic Materials (ISEM) researchers are currently working out the sodium-ion chemistry that is best suited to large-scale applications. They have partnered with leading Chinese manufacturers to develop the sodium-ion cells and make them into 5 kilowatt-hour (kWh) packs that can be stacked together to create any size battery.

UOW is driving research in areas of high-performance lithium-ion batteries, smart battery management for electric vehicles and developing sodium-ion battery technology to help drive the increased use of renewable energy.

The Energy Storage Materials Research Group at UOW's Australian Institute for Innovative Materials (AIIM) is developing materials and technologies for a new generation of energy storage devices that have high energy density, long life cycles and are low in cost.

ISEM has been undertaking electric vehicle research since 2013.

Meantime, ISEM researchers have also developed numerous advanced materials and novel techniques for use in lithium batteries, supercapacitors, fuel cells, hydrogen storage, and in hybrid electric vehicles and portable technology devices.

Major contributions by these researchers include the development of strategies to enhance the electrochemical performance of lithium-ion batteries used across portable electronic devices, such as laptops and phones, and are increasingly used in transport applications, such as hybrid cars.



SOLUTIONS THAT ARE TRANSFORMING LIVES

Approaching its fifth year, the challenged interdisciplinary Global Challenges Program (GCP) continues to make an impact through its trailblazing projects helping transform lives and regions.

During the year, GCP supported 28 projects, bringing together researchers from across all faculties of the University in collaboration with 18 external partners. 57 per cent of projects are led by female researchers and 50 per cent by early career researchers.

Dementia-Friendly Communities and Organisations is just one of many high-impact collaborations between GCP researchers, Alzheimer's Australia and Kiama Municipal Council.

The project has transformed the town of Kiama into a dementia-friendly environment. Researchers worked with the Kiama Municipal Council and the community to improve services such as street signage, retail design and access to transport.

Dementia-Friendly Communities and Organisations was recognised internationally at the World Health Organisation's seventh Global Conference of the Alliance for Healthy Cities. The project also received a National Disability Award for Community Partnerships and National Local Government Award for Access and Inclusion.

The collaboration has reduced the stigma associated with dementia through awareness and community education. It has assisted local businesses and organisations to become dementia-friendly. Researchers have also developed an interactive website – Our Place – to map dementia-friendly places in Kiama.

As of 2017, 423 unique UOW researchers are collaborating on more than 96 GCP interdisciplinary projects that tackle challenges paramount to the local region, with the potential to make a difference on a global scale.



WALLACE NAMED 2017 NSW SCIENTIST OF THE YEAR

Distinguished Professor Gordon Wallace, Director of the ARC Centre of Excellence for Electromaterials Science (ACES) at UOW, is the 2017 NSW Scientist of the Year.

Professor Wallace is an internationally renowned researcher in the field of electromaterials science for his innovative use of nanotechnology, in conjunction with organic conductors, to create new materials for energy conversion and storage, as well as medical bionics.

As Director of Australian National Fabrication Facility (ANFF) Materials Node, Professor Wallace has led the development of innovative approaches to materials processing and fabrication tools that enable advanced materials to be integrated into practical devices for use in energy and medical bionics. This has facilitated a number of commercial opportunities in both areas.

He has established a national clinical research network to develop customised printing solutions (hardware, software and bioinks) targeted at a range of clinical challenges. His research vision is to develop fully functional implantable 3D printed structures containing living cells, to regenerate damaged cartilage in knees, the ears of children suffering from microtia, bone and even organs.



EXPLORING NATURAL AND HUMAN HISTORY

The Minister for Education and Training, Senator the Hon. Simon Birmingham, officially launched the Australian Research Council (ARC) Centre of Excellence for Australian Biodiversity and Heritage (CABAH) at Parliament House on June 22.

Since the launch, CABAH has achieved significant progress through the recruitment of early career researchers and PhD candidates, the establishment of a strong governance framework, the commissioning of critical new equipment and the establishment of programs in research, research training and ethics, and education and engagement.

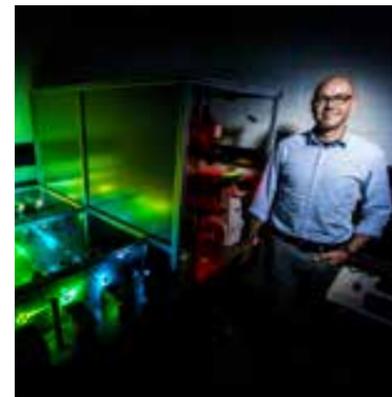
In research, CABAH members have established a series of high-priority sites as the focus of field activities for the coming year. In addition, the Centre has commenced collaborative projects with Indigenous communities in the Northern Territory, Queensland, Victoria and Tasmania.

CABAH's Research Training and Ethics program commenced in November 2017 as part of the Centre's first Annual Symposium, with a goal to train a new generation of researchers capable and confident to traverse different disciplines and cultures.

In Education and Engagement, CABAH has begun projects with the State Library of New South Wales to deliver its research into school curricula across the state. This is complemented in Queensland by partnerships with Tagai State College and the Queensland Museum Network.

CABAH is funded by a \$33.75 million grant from the ARC, \$1 million from the NSW Government, and \$11 million from participating universities, museums and other organisations.

The first continental-scale project of its kind in the world, CABAH will pioneer a new understanding of the natural and human history of Australia, Papua New Guinea and eastern Indonesia from 130,000 years ago until European arrival.



MEDICAL BREAKTHROUGHS ON THE HORIZON

The new Molecular Horizons building will provide researchers with the most advanced technology to find ways to detect and attack disease.

With these discoveries, there is the potential for researchers to create personalised medicine to treat cancer.

The Talos Arctica microscope was unveiled in December and will be one of the cutting-edge pieces of technology to be housed in the building. The high-resolution cryo-electron microscope is the first of its kind in Australia, and the first of several key pieces of infrastructure that will help make UOW's \$80 million Molecular Horizons a world-leading life science research centre.

Cryo-electron microscopy allows researchers to understand how proteins move and interact over time, opening the door to developing new ways to fight diseases from cancer to Alzheimer's and antimicrobial resistance.

The Talos Arctica has been installed on the Wollongong campus and is already being used by researchers. It will work in tandem with the even more powerful FEI Thermo Fisher Titan Krios when it begins operating in 2018.

The Titan Krios will initially be set-up at ANSTO's Lucas Heights facility, before both machines are moved to the purpose-built Molecular Horizons building when it opens in 2019. This will allow more Australian scientists and their collaborators access to revolutionary high-resolution Cryo-EM technology as soon as possible, without waiting for the purpose-built Molecular Horizons labs to be completed. This rare technology is in demand by researchers not only in NSW but all over the world.

World-renowned molecular biophysicist Distinguished Professor Antoine van Oijen (pictured above left) said that by using this type of microscopy, scientists don't have to rely exclusively on circumstantial evidence to design drug molecules that have to very precisely fit into disease-relevant proteins.



"These powerful microscopes allow us to see at the atomic and molecular level, within single cells, how life works and what molecules inside cells are doing. That information can then be translated into actual drugs and actual therapeutic strategies," he said.

Senior Manager of Cryo-Electron Microscopy Dr James Bouwer (pictured above centre, with UOW Deputy Vice-Chancellor (Research and Innovation) Professor Judy Raper at the Talos Arctica unveiling) said Molecular Horizons would make UOW a national and international hub for collaborative research using cryo-EM.

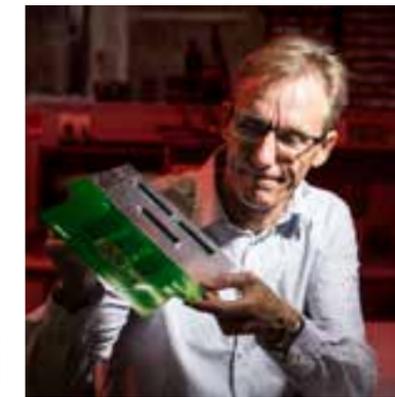
ANTIBIOTIC RESISTANCE UNDER THE MICROSCOPE

Australia has one of the highest rates of antibiotic use in the world and rates of resistance to some common antibiotics are increasing globally.

UOW is taking an interdisciplinary approach to addressing the global issue of antimicrobial resistance. This research aligns with the objectives of the National Antimicrobial Resistance Strategy 2015-2019, which was developed by the federal government in partnership with research organisations and industry.

UOW has been researching microbial systems for more than 20 years and instigated an Australia-wide initiative on antimicrobial resistance in 2017. The University's strategic research initiative, Global Challenges, brought together experts from a variety of disciplines across multiple faculties at an antimicrobial resistance summit to explore ways to collectively tackle the problem.

Through the Centre for Medical and Molecular Bioscience (CMMB), UOW's Faculty of Science, Medicine and Health has renowned strengths in medicinal chemistry, with several research teams working towards development of new antimicrobial drugs. Techniques in molecular visualisation to be used in Molecular Horizons are already contributing to this effort.



SAFER TREATMENT FOR CANCER PATIENTS

UOW researcher Professor Peter Metcalfe from the Centre for Medical Radiation Physics (CMRP) was awarded a \$427,195 Cancer Council NSW project grant to develop a world-first system to ensure the safe delivery of radiation doses to cancer patients.

Other researchers on the project are Distinguished Professor Anatoly Rozenfeld and Dr Marco Petasecca from UOW, Associate Professor Gary Liney from the Ingham Institute for Applied Medical Research, Associate Professor Lois Holloway from Liverpool Hospital, Professor David Thwaites from University of Sydney and Dr Brad Oborn from Illawarra Cancer Care Centre.

Radiation therapy is used to treat 40 per cent of cancer patients in Australia. One of the difficulties with current treatment techniques, which map out the cancer ahead of the radiotherapy, is that tumours move during treatment, for example when the patient breathes.

Magnetic Resonance Image (MRI)-guided radiotherapy now allows the cancer and surrounding organs to be viewed in real time as it is being treated, but at present it is impossible to check the radiation dose in real time. Professor Metcalfe's team aims to solve this problem by perfecting a novel radiation dosimetry (radiation dosage measurement) system that operates with MRI-linear accelerators.

Professor Metcalfe (pictured) said the end benefits of the three-year study will be to enable technology, such as the MRI-linear accelerator to be used to their full potential, resulting in safer, more accurate and more effective treatment for patients.

Student experience

UOW students are among the most satisfied in the country when it comes to their experience at university. UOW's personalised student experience delivers outstanding achievements in student completion and graduate outcomes, particularly in graduate employability. Students are empowered to conduct innovative research and we regularly introduce new courses relevant to emerging industries and global employability.

88%

of UOW graduates employed within six months of graduating

TOP 1% GLOBALLY FOR GRADUATE EMPLOYABILITY

Employers are more satisfied with graduates from UOW than those from all other NSW universities, and UOW is ranked in the top 200 universities in the world for graduate employability outcomes.

Results from the Australian Government's Quality Indicators for Learning and Teaching (QILT) 2017 Employer Satisfaction Survey found that UOW received the highest satisfaction ratings in NSW, ranked in fifth place nationally, with 88.1 per cent of employers reporting overall satisfaction with UOW graduates.

Data released by Quacquarelli Symonds (QS) this year also confirmed UOW's strong position in the graduate employment field. For the third year in a row, UOW has been ranked in the top 200 universities across the world for graduate employability outcomes, and awarded five stars. The QS Graduate Employability Rankings evaluates the links between university practices and graduate employability.

The QS Graduate Employability Rankings 2018 show that 88 per cent of UOW graduates are employed within six months of graduating, which is above the national average of 82 per cent.

Vice-Chancellor Professor Paul Wellings CBE said UOW continues to make its graduates highly sought after by employers through its internship and placement programs.

UOW also shines in student completion. National statistics this year ranked UOW fourth in NSW and seventh in Australia for student completion rates. Of students who commenced bachelor degrees in 2010, 75.2 per cent completed their degrees by 2015. UOW ranked well compared to other non-metropolitan institutions and ahead of several universities in capital cities.

Internal surveys show overall satisfaction of UOW's recently qualified undergraduate students is above both the national and NSW averages, at 84.46 per cent, while overall student experience is rated at 88.5 per cent.



AUSTRALIA'S BEST PUBLIC UNI FOR STUDENT EXPERIENCE

The student experience offered by UOW has been ranked above all other Australian public universities in the 2018 Good Universities Guide.

As well as achieving five-star ratings for staff qualifications and student retention, UOW was one of only two Australian universities – and the only publicly-funded university – to achieve a clean five-star sweep of all student experience measures: overall experience, skills development, student support, teaching quality, learning resources and learner engagement.

All fields of study offered by UOW achieved five stars in at least one category. UOW claimed a five-star rating across every student experience category in the Humanities, Culture and Social Sciences; Science and Mathematics; and Teacher Education fields.

The University also received five stars in the graduate outcomes category across Science and Mathematics; Nursing; Medicine; Engineering; Computing and Information Systems; and Business and Management, including a perfect score (100 per cent) in graduate employment in the field of Medicine.

UOW also performed strongly in the measures of student support and skills development, achieving five stars for each across eight fields of study, and topping the country for student support in the social work field and for skills development in the creative arts field. In Science and Mathematics, UOW reached five stars in seven of the eight measures.

STRONG REPRESENTATION AT LEADERSHIP AWARDS

Two UOW graduates won top honours in a nationwide search for emerging leadership talent, with five more named as finalists in the coveted top 100 list.

Conducted by employment website GradConnection and published in *The Australian Financial Review*, the Top 100 Future Leaders awards celebrate Australia's best and brightest graduates in their final year of study.

Jozo Frankovic (Bachelor of Commerce – Dean's Scholar) won the KMPG Accounting Award, while Leah Ravnjak (Bachelor of Commerce) won the Nestle Supply Chain Award. Finalists were Jessica Kiekebosch-Fitt, Daniel Zanatta, Chontelle Kelly, Gordon Akauma and Rohit Balachandran.

With seven finalists, UOW was the sixth most represented Australian university among the final contenders. UOW ranked equal second in the winners' circle, with two category winners.

Winners and finalists were selected by graduate recruitment specialists in partnership with industry leaders.



UOWX EXPANDS REACH TO DEVELOP NETWORKS

UOWx, the University's co-curricular recognition program, aims to connect students to valuable activities that complement what they are learning in their academic studies. These activities help develop and improve students' knowledge, skills and networks.

Through this framework, UOW has established partnerships with six high-level community organisations, including CanCare, The Smith Family, The Salvation Army, Primary Ethics, Landcare and Surf Life Saving Australia. UOWx recognises the active citizenship of UOW students by volunteering with these organisations, as well as the strong personal and professional skills that students gain from these experiences.

The UOWx program expanded its reach considerably during the year with a significant increase in the number of students who engaged in co-curricular recognition. UOWx attracted 3,163 current UOW students in 2017 against 488 students in Autumn 2016.

This year, 20 UOWx awards and 784 UOWx records were issued. UOWx Award recipients included three students from regional and metropolitan campuses (Shoalhaven, Southern Highlands and Southern Sydney) and 11 international students.

The program has engaged with external community volunteering organisations to recognise student volunteer contributions and personal enrichment opportunities within the community.

Access and equity

UOW has a proud history of working closely with its communities to drive increased participation and attainment among under-represented groups, including Aboriginal and Torres Strait Islanders, those with disabilities, and those from low socio-economic status (LSES) backgrounds, and regional, rural and remote areas. We are a large provider of successful enabling pathway programs.

SOCIAL INCLUSION/ PARTICIPATION RATE

18.56%

Students of low socio-economic status

30.2%

Students from regional and remote areas

2.04%

Students identifying as Aboriginal or Torres Strait Islander

REMOVING BARRIERS TO LEARNING

In 2017, 18.56 per cent of UOW's domestic undergraduate students are from a LSES background, 30.2 per cent of students are from regional and remote areas, and 2.04 per cent identify as Aboriginal or Torres Strait Islander. In 2015, students with disabilities made up 11.3 per cent of enrolments.

Our Outreach and Pathways Program (O&P) plays a key role in our enviable reputation for equity and access to higher education. The O&P Program was this year recognised nationally for its outstanding work in facilitating access to university education.

In 2017, the O&P team was named a winner for Programs that Enhance Learning, in the category of Widening Participation, at the Australian Awards for University Teaching.

Earlier in the year, the team was also a finalist in the Equity and Opportunity category at the Australian Financial Review Higher Education awards.

This award was judged on initiatives undertaken by the University to significantly improve participation rates, engagement, educational outcomes, personal development and employment opportunities of under-represented student groups.

UOW Deputy Vice-Chancellor (Academic), Professor Joe Chicharo, said that in the past year, 86.5 per cent of students who participated in UOW's Outreach and Pathways activities, and were eligible for university, received an offer to transition to higher education. This is a figure significantly higher than the sector average.

The three key programs of the O&P team are In2Uni (including rural In2Uni), Learning Labs (an academic enrichment program for students in Year 1 to Year 10 across UOW's communities), and Pathways to Education (improving participation of LSES, mature-aged and Indigenous people in higher education).

In 2017, 10,500 students from primary, high schools and VET programs engaged with O&P activities, with 103 primary schools and 53 high schools engaged in the In2Uni Program. In 2017, O&P activities were launched at UOW's new South



Western Sydney campus at Liverpool. More than 950 school students descended on UOW's Wollongong and Innovation campuses for the 2017 In2Uni Learning Labs program.

UOW creates mutually beneficial partnerships with schools, pathway providers and broader communities to enable all students to be the best they can be. Our regional campuses are demonstrating best practice in developing sustainable outreach and transition collaborations that support students to success.

UOW is also committed to supporting first-in-family students and has successfully increased the numbers in this cohort, from 44.6 per cent in 2014 to 47.4 per cent in 2016. Of the 396 students across 44 high schools in the Illawarra South East region who successfully completed the University Preparation Program in 2016, 46.1 per cent indicated they would be the first in their family to attend university.

DOMESTIC ENROLMENTS BY REGION

Illawarra	9,600
Southern Sydney	3,683
Other NSW	2,590
South Western Sydney	1,728
Interstate	486
Western Sydney	469
Northern Sydney	337
Central Sydney	313
ACT	277
Overseas	135
Inner Western Sydney	73

SUPPORT FOR INDIGENOUS STUDENTS

UOW was one of two foundation universities that established the Australian Indigenous Mentoring Experience (AIME). It is now Australia's most successful university student mentoring program and UOW has the largest program in the country. This is aided by the positioning of our regional campuses in areas with high numbers of Indigenous people.

AIME was established at UOW in 2008 to help redress the imbalance in high school completion rates between Indigenous and non-Indigenous students, by improving Year 10 and Year 12 completion rates and university admission rates for all participating students.

In 2017, AIME UOW worked with 1080 local Indigenous high school students between Eden and Sylvania and out to Moss Vale and Camden (41 local high schools). At the Wollongong campus, 580 mentees have accessed the program, while 540 mentees accessed through the South Coast campuses of UOW.

The Australian Government's Higher Education Participation and Partnerships Program (HEPPP) helps to ensure the continued delivery of UOW's successful Pathways and Outreach Programs and the Australian Indigenous Mentoring Experience program.

Meantime, the Woolyungah Indigenous Centre at UOW is committed to increasing the participation of Indigenous Australians in tertiary education. The centre provides programs and facilities that encourage and support Indigenous Australians from entry to University through to successful completion. The Alternative Admissions Program administered by Woolyungah offers an alternative pathway for those seeking entry into UOW's undergraduate programs.

The CareerTrackers Indigenous Internship program this year partnered with UOW's Woolyungah Indigenous Centre to deliver an internship program that prepares Aboriginal and Torres Strait Islander students for leadership roles in the workplace and in the community.

To ensure that the UOW curricula reflects Aboriginal perspectives, the Learning, Teaching and Curriculum Unit launched a new initiative, Jindaola, in consultation with local elders and knowledge-holders that models traditional Aboriginal systems for maintaining knowledge integrity.



IMPROVING OUTCOMES FROM A YOUNG AGE

Early Start (ES) is a UOW research entity that aims to break the cycle of disadvantage for children living in vulnerable circumstances, particularly from regional and remote communities. ES is a combination of community outreach, education and research initiatives to help children realise their potential. ES supports teachers, communities and policy-makers in their understanding of how early childhood education influences a positive life trajectory which contributes to the Australian and global economy.

ES this year published the Fostering Effective Early Learning Study to improve professional practices that demonstrate an impact in achieving a positive outcome for children and families. The study explored the relationship between early childhood education and care (ECEC) and children's developmental and learning outcomes, particularly those from disadvantaged backgrounds.

The study states: "From a government perspective, investing in ECEC can offer solutions to a number of socio-economic issues, especially for disadvantaged families. Policy changes and research have shown that ECEC has the potential to ameliorate the effects of poverty, and possibly gender inequality, in the short-term, and to improve children's future prospects in the long-term."

SURGE IN UOW COLLEGE ENROLMENTS

UOW College (UOWC) this year recorded its highest new enrolment (1,200) and its growth in total enrolments was 16 per cent. This year, UOWC also started delivering its academic and pathway programs at the new UOW South Western Sydney campus in Liverpool.

The Higher Education Diploma of Social Science commenced this year and UOWC was accredited as an Occupational English Test (OET) Testing Centre.

UOWC provides a number of pathway programs for domestic and international students regardless of age or previous education. It was the first Australian university college to offer Foundation Studies in 1989 and over the past 30 years has helped more than 29,000 students from 70 different countries continue their education.

Academic pathway programs include The University Access Program and STEP to UOW. English Preparation courses are also available.

UOWC is also a registered Training Organisation and CRICOS provider with vocational training package qualifications accredited by the Australian Skills Quality Authority, while all English language programs are assured in line with the National ELT Accreditation Scheme.

UOW College is an integral part of UOW, working to:

- Support students from regional, rural and remote areas and other underrepresented student groups
- Support international students who are looking to undertake higher education
- Provide a second chance for further education to those who didn't achieve the results they needed.

INSPIRING STEM IN YOUNGSTERS

UOW delivers a comprehensive STEM (Science, Technology, Engineering and Maths) outreach strategy to primary and high schools across NSW. This strategy attracts a broad range of students from local, regional and remote areas from all social and cultural backgrounds to STEM disciplines.

Many STEM activities are presented through the In2Uni program, including Year 12 Summer Master Classes and Learning Labs. UOW's Faculty of Science, Medicine and Health (SMAH) and Faculty of Engineering and Information Sciences (EIS) organises more than 100 events every year to raise awareness of STEM disciplines and careers to primary and secondary school students, careers advisers and parents. These include events at the Science Space at UOW's Innovation Campus.

Two Koori STEM camps were also hosted throughout the year. Students engaged with their cultural heritage and its links to STEM through a number of workshops including Boomerangs and Wind turbines; Storytelling through Digital Media; Sustainability in the Built Environment; and Renewable Energy and the Natural Environment.

Meantime, sustainability, emerging technologies and the skills needed to innovate and revolutionise Australian industries were the focus of a special STEM camp in July, hosted by the Girl Guides Association in collaboration with UOW. During the camp, the girls learned about cryptography, sustainable design, environmental science, Geographic Information Systems (GIS) mapping and drones, artificial muscles and robots.

LEADER IN GENDER EQUITY

UOW has been recognised by the Federal Government as one of the best workplaces in Australia for gender equality, receiving the Employer of Choice Gender Equity (EOCGE) citation by the Workplace Gender Equality Agency (WGEA).

The WGEA Employer of Choice for Gender Equality citation is designed to encourage, recognise and promote active commitment to achieving gender equality in Australian workplaces.

UOW is also a participant in the Science in Australia Gender Equity (SAGE) Pilot. Based on the successful UK Athena SWAN model, this accreditation and improvement program recognises commitment to advancing women's careers in traditionally male-dominated disciplines.

Other policies, strategies and initiatives that UOW actively promotes in order to enhance gender equality include; mentoring workshops, targeted development programs, flexible work arrangements (part-time and job sharing) generous paid parental leave and on-campus childcare facilities.

Education quality

UOW education focuses on providing students with not just specialist knowledge, but the broad skills needed to be adaptable to succeed in the careers of the future. Students gain practical learning and research opportunities because of programs embedded in local and national industries. Every student receives real-world, inquiry-led, technology-enriched, intellectually challenging and globally connected learning opportunities.

INNOVATIVE COURSE OFFERINGS

UOW's reputation as a leader in teaching and learning – and particular strength in peer learning – was reinforced after being acknowledged as a finalist at the inaugural Global Teaching Excellence Awards in London in September.

UOW was the sole university in NSW and one of five Australian universities to be shortlisted for the accolade. The University was identified among 27 leading universities in Asia, Australia, Europe, North America, South Africa and the United Kingdom.

The Global Teaching Excellence Awards are an initiative of the Higher Education Academy, an independent UK-based body which champions teaching excellence, in partnership with Times Higher Education.

Finalists for the awards were selected against three key criteria: Excellence in the Leadership of Teaching and Learning, Excellence in Teaching, and Excellence in Student Support.

Over the course of 2017, faculties have developed and designed more innovative course offerings, including a Master of Autism, a Graduate Certificate in Autism, a double degree in Psychology and Criminology and a Master of Social Work (Qualifying) at Liverpool. Two additional courses are also offered wholly online: a Master and Graduate Certificate in Education (Autism) and a Graduate Certificate of Regulatory Science.

This year, UOW also began offering the first Master's degree with an Advanced Accreditation awarded by the Australian Computer Society (ACS).

The Master of Information and Communications Technology Advanced course is available for applicants who hold an approved Bachelor's degree in ICT with a minimum two years' industry experience.

In November, UOW was ranked seventh in Australia for its global MBA program. The QS World University Rankings for Global MBA (2018) revealed the best business schools in the world for getting a job or becoming an entrepreneur. UOW was ranked in the top 200 in the world and in the top 21-60 across the Asia, Australia and New Zealand category.

UOW's Master of Science (Project Management) was also ranked 77th globally in the Master of Management category; one of only two Australian programs in the top 100.

In September, UOW submitted its application for Tertiary Education Quality Standards Agency (TEQSA) re-registration. This submission was the culmination of a two-year project to review and improve our quality framework to ensure we are operating consistently against the new higher education standards.

STUDENT SATISFACTION REMAINS HIGH

UOW has outperformed all public universities in Australia in the overall satisfaction of undergraduate students.

This year's update of the Federal Government's Quality Indicators for Learning and Teaching (QILT) data showed UOW students are more satisfied with their overall studies and student experience than most other university students in the country.

The overall scores revealed that UOW ranked first nationally in the fields of Engineering and Teacher Education. UOW also ranked number one in NSW/ACT in the subject areas of Agriculture and Environmental Studies, Business and Management, Communications, Engineering, Health Services, Law, Medicine and Teacher Education, and second in NSW for Computer Sciences, Creative Arts, Nursing, Science, and Mathematics and Social Work.

QUALITY INDICATORS FOR LEARNING & TEACHING

QUALITY INDICATORS

1

1st in NSW/ACT

Overall Satisfaction
Generic Skills
Learning Resources
Learner Engagement
Teaching Quality

2

2nd in NSW/ACT

Overall Quality of Educational Experience
Skills Development
Student Support

3

3rd in NSW/ACT

Teaching Scale
Graduates in employment
Graduates in full-time study

FIELD OF EDUCATION

1

1st in Australia

Engineering
Communications
Teacher Education

1

1st in NSW/ACT

Agriculture & Environmental Studies
Business & Management
Health Services & Support
Humanities, Culture & Social Sciences
Medicine

2

2nd in Australia

Science & Mathematics
Law & Paralegal
2nd in NSW/ACT
Computing & Information Systems
Creative Arts
Nursing
Social Work

QILT data revealed the University was ranked in the top 10 nationally across most of the student experience categories of overall quality of educational experience, teaching quality, learner engagement, learning resources, student support and skills development.

The data also showed high levels of satisfaction among UOW graduates in both undergraduate and postgraduate fields, with excellent results for the University in overall satisfaction, teaching scale and skills scale.

QILT helps students and their families make informed choices about their higher education options by bringing together survey data from all Australian universities about students' experiences and graduate job outcomes. The surveys cover the student life cycle from commencement to employment.

NEW SOUTH WESTERN SYDNEY CAMPUS

UOW and Liverpool City Council's shared vision for a university campus in Liverpool came to fruition this year with the official opening of UOW's new South Western Sydney campus on 4 April.

Chief Commissioner of the Greater Sydney Commission, Lucy Turnbull AO, was joined by Liverpool City Mayor Wendy Waller, UOW Chancellor Jillian Broadbent AO, and UOW Vice-Chancellor Professor Paul Wellings CBE to officially open the campus.

The new campus is the first fully fledged university campus in Liverpool and represents a significant, long-term commitment by UOW to the region's future.

Ms Turnbull said the new UOW campus was an important development for the rapidly growing region.



UOW Vice-Chancellor Professor Paul Wellings CBE, UOW Chancellor Jillian Broadbent AO, Greater Sydney Commission Chief Commissioner Lucy Turnbull AO and Liverpool City Mayor Wendy Waller at the opening of the South Western Sydney campus.

“Providing greater choice for quality education and training for new jobs and industries will help ensure the region is ready to embrace the new opportunities being created by the Western Sydney Airport at Badgerys Creek, as well as supporting the future development of the region,” she said.

Liverpool Mayor Wendy Waller said having a university campus in Liverpool would give the city’s young people a chance to build a solid footing for their future without leaving their local support networks and without the burden of a lengthy commute.

The new campus comprises two fully refurbished floors in Liverpool City Council’s Moore Street building.

For the 2017 academic year, UOW’s South Western Sydney campus offered the Bachelors of Arts, Business, Business Information Systems, Computer Science and Information Technology. In 2018, UOW plans to also offer the Bachelor of Business – Bachelor of Laws double degree. UOW College provides the University Access program and diploma programs from the campus.

In 2019, UOW plans to open its Western Sydney Nursing Education and Research Centre (WeSNER) to help train the nurses needed to serve the Liverpool area’s growing population. WeSNER will be the University’s sixth nursing training facility and be similar in size and standard as the nursing school currently operating at its Wollongong campus. Course offerings will expand to include degrees in business, commerce, computer science, IT, International Studies, law and law double degrees, as well as a range of postgraduate degrees in health leadership and management, computer science, nursing and social work.

INSPIRING NEXT GEN OF GLOBAL LEADERS

UOW is always looking for new ways to inspire the next generation of global leaders.

The International Young Leaders Education and Development Program (IYLEaD) is a student mobility program introduced this year focused on high-achieving students. It is backed by funding from local businesses in the form of paid internships.

The program is designed to increase outbound mobility participation by high-achieving current students. It provides the opportunity to gain real-world skills and work experience, all while gaining a global perspective. Financial support is also provided to each student to fund their travel and study costs.

IYLEaD is targeted at current students who achieve a WAM of 85 or above upon completion of their first year of study at UOW. Students undertake their studies at UOW and complete a semester at one of UOW’s global locations – Dubai, Hong Kong or Singapore, or at one of UOW’s top ranked partner universities around the world.



HIGH WORLD RANKINGS IN SUBJECT AREAS

UOW ranked highly in a number of individual subject areas in the 2017 Academic Ranking of World Universities (ARWU) list, ranking 42nd in the world for Energy Science and Engineering, and 47th for Hospitality and Tourism Management.

UOW also scored well in other Engineering subjects, being ranked in the 51-75 band for Civil Engineering, Transportation Science and Technology, and Metallurgical Engineering; 76-100 for Nanoscience and Nanotechnology; 101-150 for Materials Science and Engineering; 151-200 for Chemical Engineering, Instruments Science and Technology, and Environmental Science and Engineering; 201-300 for Electrical and Electronic Engineering; and 301-400 for Computer Science and Engineering.

In other fields, UOW was placed in the 51-75 band for Geography; 101-150 for Education; 151-200 for Chemistry; 201-300 for Psychology and for Ecology; and 301-400 for Management and for Public Health.

The QS World University Rankings by Subject assess the world’s top universities based on their academic reputation, employer reputation and research impact across 46 subjects, grouped into five broad subject areas. UOW features among the world’s elite institutions in 25 of the 46 subjects assessed in 2017 and is represented across all five broad subject areas. This marks an improvement on 2016 results where UOW ranked in 19 out of 42 subjects assessed.

Meantime, the Times Higher Education World University Rankings by Subject placed UOW among the world’s best in several subject fields, with Minerals and Mining Engineering as the University’s top performer.

UOW ranked 26th in the world for Minerals and Mining Engineering.

The Times rankings also placed the UOW School of Law at 85th in the world and eighth in Australia, alongside several Group of Eight universities.

UOW was also ranked in the top 300 worldwide for computer sciences.



Global reach

UOW has a strong international focus and reputation, with more than 14,000 international students studying across its Australian and overseas campuses each year. As a university with a presence in Malaysia, Singapore, Hong Kong SAR, China and Dubai, our students and graduates are connected with global employers. We have 239 study abroad and exchange links in 44 countries, partnering with industry, communities and governments abroad.

Above: His Royal Highness, Prince Andrew, Duke of York, helps launch the GOLEaD Global Leaders Development Program with UOW Vice-Chancellor Professor Paul Wellings CBE, Deputy Vice-Chancellor (Global Strategy) Professor Alex Frino and UOW Global Brand Ambassador Adam Gilchrist AM.

Right: Jennifer Ng, Principal Community College of City University/UOW College-Hong Kong; Marisa Mastroianni, UOW Enterprises Managing Director; Ken Gordon Deputy Consul-General, Australian Consulate-General, Hong Kong; Professor Paul Wellings CBE, Vice-Chancellor & Principal, University of Wollongong; Jacinta Reddan, Interim Chief Executive, The Australian Chamber of Commerce in Hong Kong and Macau (AustCham); Gregory West, Deputy Chair UOW Enterprises Board; Peter Robson, Chair UOW Enterprises Board.

GRADUATES WITH A GLOBAL MINDSET

There has been continued growth at UOW's offshore campuses and this year's highlights included the rebranding of Community College of City University to the University of Wollongong College Hong Kong (UOWCHK), and work beginning on the new campus for the University of Wollongong in Dubai.

UOW continues to broaden its discipline areas across campuses, with strong enrolments.

UOW's partnership with Central China Normal University (CCNU) to establish a joint institute for research collaboration and postgraduate teaching continues to strengthen in its second year. The Master of Computer Science at CCNU commenced in September 2016 with enrolments increasing almost six-fold for 2017. The Master of Engineering (Telecommunications Engineering) commenced in 2017 with 27 students.

In another important partnership arrangement, UOW has renewed three agreements with the Singapore Institute of Management for the next five years, to deliver four programs including the Bachelor of Psychological Science, Bachelor of Business Information Systems, Bachelor of IT (Computing) and Bachelor of Computer Science (with majors in Digital Systems Security, Big Data, and Game and Mobile Development).

Student exchange agreements have been established with UOW in Dubai and INTI Malaysia to promote semester-length mobility with UOW's offshore partners. UOW has also established agreements with nine global universities in 2017, including new partners in Japan, the Netherlands, Indonesia, India, France, Mexico and Italy.

The GOLEaD Global Leaders Development Program was launched in Wollongong by His Royal Highness, Prince Andrew, Duke of York, in September. Targeting students who score among the top five per cent in the HSC, the GOLEaD program will provide direct entry into a coveted Honours degree, facilitate up to 12 months of study at UOW's Dubai, Singapore and Hong Kong campuses and provide generous paid internships with global organisations.



While initially targeting Business and Computer Science students, UOW has plans to expand the GOLEaD program to other discipline areas. The Bachelor of Commerce Global (Hons) and Bachelor of Computer Science Global (Hons) will start in Autumn 2018.

Inbound student mobility at UOW continues to flourish, with an overall nine per cent increase on 2016 numbers, including an increase of five per cent for Exchange program enrolments, and Study Abroad (fee-paying) enrolments up by 13 per cent. Visiting Research Programs, which now make up 17 per cent of Inbound Student Mobility numbers, saw 107 students participating.

The Chinese government's new Double First Class Scheme identifies research-intensive institutions to enhance and accelerate their ascendancy in research metrics. UOW is already partnered with Beihang University, Beijing Institute of Technology, Beijing Normal University, and Huazhong University of Science and Technology. In September, an MOU was signed between UOW and Zhengzhou University for both parties to continue to undertake academic visits, conduct joint teaching programs, and collaborate in research areas of common interest.

Significant efforts have been devoted in forging new partnerships with global universities, including those ranked in the top 150.

UOW currently has exchange partnerships with 25 universities in the top 150, including Seoul National University. An MOU for the Department of Social Work was secured with National Taiwan University in 2017.

UOW COLLEGE HONG KONG LAUNCHED

Through UOW Enterprises (UOWE), UOW owns and operates the University of Wollongong in Dubai (UOWD), UOW College Australia (UOWC) and UOW College Hong Kong (UOWCHK). More than 5,000 students graduated across these three institutes this year.

The Community College of City University (CCCU) was officially renamed UOW College Hong Kong during an event at the Telford campus to celebrate the Wollongong and Hong Kong partnership.

The UOW College Hong Kong brand was launched by UOW Vice-Chancellor Professor Paul Wellings CBE in the same week when the first UOW Hong Kong Top-Up Degree Graduation Ceremony took place.

UOW College Hong Kong offers a range of diploma, associate degree and top-up degree programs aimed at preparing students for further university education, enhancing employment opportunities and supporting personal development. New programs that commenced in 2017 include Master of Nursing (UOW); Associate of Arts in Cultural Studies; Associate of Social Sciences in Legal Studies; Associate of Science; Associate of Business Administration in International Business Management; and Associate of Science in Airport Operations and Aviation Logistics. The Bachelor of Nursing Conversion and Master of Nursing transitioned from delivery at IRI Hong Kong to CCCU/UOW College Hong Kong during the year.

UOW was selected by the Council of City University of Hong Kong to assume responsibility for stewardship and governance of CCCU. A five-year transition towards full independence from City University began in 2015.

Already, growth in total enrolments has increased by 10 per cent since 2016, to 6,168. It has recorded an 80 per cent articulation rate, and graduates seeking employment gain jobs within two months. In September, the second intake into the three top-up degrees commenced with a total enrolment of 80 students.

UOW has a long established presence in Hong Kong that includes research relationships with leading academic institutions, professional corporate training for leading organisations and niche transnational education program delivery.



UOWD President Professor Mohamed Salem and TECOM Business Parks CEO Malek Al Malek at the ground-breaking ceremony.



STUDENT MOBILITY

744

Domestic students participated in outbound studies in 2016

692

International students participated in semester studies or visited research programs at UOW in 2016

WORK STARTS ON NEW DUBAI CAMPUS

The University of Wollongong in Dubai (UOWD) this year began construction of its new campus, with a ground-breaking ceremony attended by senior executives from the University and TECOM Group.

Strategically located in Dubai Knowledge Park, the new development is a short distance from the University's current campus, and will feature state-of-the-art facilities housed in a modern architectural design. The campus is expected to be in operation by early 2020.

Building upon the strong 15-year relationship between Dubai International Academic City (DIAC) and UOWD, the new campus will expand the University's reach in the UAE and engage with more people from around the world looking to come and study in Dubai.

Celebrating the ground-breaking ceremony were, among others, His Excellency Gerard Seeber, the Australian Consul-General in Dubai and Senior Trade Commissioner; Dr Amina Al Rustamani, Group CEO of TECOM Group; Marisa Mastroianni, Group CEO of UOW Enterprises; Malek Al Malek, CEO of TECOM Business Parks; Mohammad Abdullah, Managing Director of DIAC & DKP; and Professor Mohamed Salem, President of UOWD.

The University has continued to grow since it was established 24 years ago and has become an integral part of the city's academic landscape, offering 38 high quality degree programs, including the newly launched Executive MBA.

Contributing to the success of UOWD has been the productive and trusting relationships built with Higher Education regulators KHDA and CAA, ensuring the highest standard of education for UOWD students.

The campus construction started as the UOWD Strategic Plan 2017-2020 was launched. Under the plan, UOWD strives for sustainable growth and enhancement of its reputation as a leading university in the region. Priorities include continuing to evolve UOWD's suite of programs including offerings in new discipline areas, such as Health and Education; conducting high-impact research across disciplines and in collaboration with partners; and engaging industry to align programs to emerging job requirements.

UOWD is a dual-accredited institution, with more than 3,500 students from over 110 nationalities.

New programs that commenced at UOWD in 2017 include Executive Master of Business Administration; Bachelor of Engineering (Civil) and Bachelor of Engineering (Mechanical). There has also been an increase in research output quality at UOWD of late, with 181 publications in 2016, compared to 130 in 2015.

SCHOLARSHIP COMBINES CRICKET AND EDUCATION

A student from the University of Wollongong's Sydney Business School is "elated" to have been honoured with a scholarship bearing the name of one of his heroes: Sir Donald Bradman.

Abhishek Nandigam (pictured), who is studying a Masters of Applied Finance, received the 2018 UOW Bradman Foundation Scholarship during a ceremony at Sydney Cricket Ground in November.

The annual scholarship is presented to an undergraduate or postgraduate student from India – male or female – who demonstrates a strong performance both in the classroom and on the cricket field.

Abhishek, a batsman and wicketkeeper, was honoured to receive the scholarship, which is granted for the duration of the recipient's study program and provides a 50 per cent waiver of tuition fees for the duration of the degree.

He said the ability to pursue his love of cricket while undertaking a world-class education was instrumental in his decision to undertake a Master's at UOW.

Australian cricket legend Adam Gilchrist AM, who has been UOW's Global Brand Ambassador since 2008, said he was proud to be involved with a scholarship that helped further a student's educational and sporting aspirations.

The international scholarship is part of a wider partnership agreement between UOW and the Bradman Foundation to educate, inspire and develop young people.

FOSTERING RESEARCH RELATIONSHIPS

UOW was awarded \$773,500 in mobility funding as part of the 2018 Australia Awards – Endeavour Scholarships and Fellowships. UOW has seen a significant increase in Endeavour Mobility Grant funding for 2018, with a 31 per cent increase compared with the 2017 round.

The program fosters the development of ongoing research relationships at an institutional and individual level across the world.

Five recipients from UOW have been offered a place to undertake professional development, study or research overseas.

UOW Associate Professor Stuart Johnstone was awarded the Endeavour Executive Fellowship and will travel to Peking University, China in 2018. Eden Barrett (Epidemiology) and Patrick McCosker (Chemical Sciences) were both awarded Endeavour Postgraduate Scholarships and will travel to the University of Cambridge, United Kingdom, and Friedrich-Alexander University, Germany respectively. Vivian Pham (Engineering and related technologies) and Dr Sheng Yan (Biomedical Engineering) were awarded Endeavour Research Fellowships to undertake at the University College London, United Kingdom, and McGill University, Canada in 2018.

COLLABORATIONS ACROSS THE GLOBE

Five new collaborative research projects have been funded for 2017-18 between UOW researchers and their colleagues within the University Global Partnership Network (UGPN).

As part of its mandate, the UGPN has established a Research Collaboration Fund to encourage shared research among partners. Five of 10 projects funded by the Research Collaboration Fund in the 2017 round include UOW researchers:

- Global priorities in cannabinoid research excellence (Bilateral: UOW, USP) – Prof Nadia Solowij
- Plant survival in a changing climate: Understanding the plant defence metabolome (Bilateral: UOW, USP) – Prof Sharon Robinson, Prof Kristine French, Prof Paul Keller, Dr Ben Gooden
- Resilience and diversity in early childhood development (Quadrilateral: UOW, UOS, NCSU, USP) – Prof Jane Herbert, Prof Tony Okely
- Flexible functional nano-carbon electrodes for energy devices (Trilateral: UOW, UOS, NCSU) – Prof Jun Chen (pictured above)
- Development and analysis of post-quantum cryptosystems and their applications (Trilateral: UOW, UOS, USP) – Prof Willy Susilo

SHARING IDEAS WITH NEW BRAZIL LINK

An appetite for global collaboration has led to a new partnership with the most prestigious state-based research and development funding agency in Brazil.

In a visit to South America in April for the 2017 UGPN Annual Meeting, an official signing ceremony took place between the São Paulo Research Foundation (FAPESP) and UOW, greatly enhancing UOW's ability to collaborate and share knowledge across an array of fields.

The UGPN sets out to create a foundation for international collaboration enabling academics and students from some of the world's top universities to work together on issues of global importance. The UGPN comprises the Universidade de São Paulo, North Carolina State University, the University of Surrey and UOW.

Held at the Universidade de São Paulo, the UGPN Annual Meeting involved an overview of the partnership, updates on current collaborative projects, a visit to FAPESP and workshops.

EXPANDING LEARNING OPPORTUNITIES

Four UOW students will have the opportunity to study, work and live across destinations in the Indo-Pacific region after being awarded the prestigious Federal Government's 2018 New Colombo Plan (NCP) Scholarship. The latest announcement sees a 28 per cent increase in New Colombo Plan mobility funding awarded to UOW.

The Minister for Foreign Affairs, the Hon. Julie Bishop MP, and the Minister for Education and Training, Senator the Hon. Simon Birmingham, announced the UOW recipients; Kate Fuller, Jacqueline Jamieson, Ellen Maddick and Benjamin Zietsch.

Bachelor of Commerce (Accounting and Finance) student Kate Fuller will travel to Malaysia to undertake a study program in accounting and finance at INTI International College Subang.

Jacqueline Jamieson, who is undertaking a Bachelor of International Studies (Global Sustainable Development), will focus on political studies at Shanghai International Studies University in China.

Ellen Maddick, who has been named a NCP Fellow, is undertaking a Bachelor of Social Science (Human Geography), and will study sustainable development, geography, population and urbanisation at the University of the South Pacific in Fiji.

Bachelor of Mechanical Engineering (Hons) student, Benjamin Zietsch, will study engineering at Japan's Sophia University.

The UOW students form part of 120 Scholars from 33 Australian universities who will be supported by the Australian Government in 2018. They will represent the country as part of a greater plan to expand learning opportunities for Australian students in the region and deepen relationships.

Eleven students from UOW have taken part in the New Colombo Plan since its inception in 2014.



Community connections

UOW's strong and connected presence continues to contribute to our communities and society in many ways. We value the mutual benefit of engaging with our community partners and have a longstanding history of supporting our multiple local communities with the intention of creating a positive economic and social impact.

FUNDING FOR PROJECTS THAT ADDRESS COMMUNITY NEEDS

Students who have experienced domestic violence, Illawarra residents living with autism, Aboriginal and Torres Strait Islander women, women with an intellectual disability and refugees will benefit from a number of community projects that were announced in October.

The Community Engagement Grants Scheme (CEGS) was established in 2005 and has now supported over 69 projects with \$570,000 of funding. A highlight of CEGS this year was the successful launch of the Supporting the Unification of Refugee Families project.

UOW staff and students, in partnership with community organisations, are encouraged to apply for grants of up to \$13,000 to address a community need. CEGS projects must address key challenges in the community and take action to create real and measurable outcomes, build capacity and support the vision of UOW.

One of this year's CEGS recipients, Project ADVOCATE, was initiated to provide support for university students who have experienced domestic violence. With funding support through CEGS, the multi-disciplinary team will create a suite of online resources and an online professional development program for university academic staff, to enable better understandings of and support for students affected by domestic violence.

This year's successful CEGS recipients include:

- Project ADVOCATE: This will create an online professional development opportunity for university academic staff to enable better understandings of and support for university students who have experienced domestic violence.

Left: Community Engagement Grants Scheme 2017 recipients during presentations at the Innovation Campus.

Right: UOW Vice-Chancellor Professor Paul Wellings CBE and St George Illawarra Dragons Chairman Brian Johnston renew their MOU as former Prime Minister the Hon. John Howard OM, AC looks on.

- Supporting refugee farming initiatives: from Mildura to Mingoola and Meroo Meadow – this project is at the forefront of a groundswell of activities unfolding in regional Australia that seek to broaden opportunities for refugees outside major cities. It seeks to capitalise on a successful pilot refugee farming initiative in Mildura, by extending its learnings to Meroo Meadow (Nowra) and Mingoola (northern NSW).
- Refinement of the Life Happens Resource for High Risk Target Groups: Life Happens is an exciting, art-based game used to explore young people's understanding of sexual health, sexual risk and decisions regarding their relationships. In collaboration with the Illawarra Women's Health Centre, the project team will be modifying the game to address issues of relationships and domestic violence with young Aboriginal and Torres Strait Islander women and women with an intellectual disability.
- Autism Friendly Communities – Investigating the Ingredients: This project aims to make the Corrimal community the first autism friendly community in Australia. Autism Spectrum Australia (Aspect) South Coast School (SCS), the Corrimal Chamber of Commerce, and the University of Wollongong research team will work in consultation with the business owners and individuals with autism to develop an audit tool.

PARTNERING FOR QUALITY HEALTHCARE

UOW's Health and Wellbeing Strategy is aimed to deliver health and wellbeing for the Illawarra and beyond through developments at the University and in partnership with its communities.

The Strategy builds on the firm foundation already in place at the University to enhance fundamental and translational research capability in a context of regional and global focused health needs including; aged care, mental health and community-delivered healthcare.

The raft of initiatives is aimed at harnessing the expertise of UOW and its partners in medical research, research application and education, with a strong focus on innovative and appropriate future models for delivering quality research, clinical services and a skilled and agile health workforce for tomorrow.

The Strategy has been developed in line with the University's 2016-2020 Strategic Plan and major health development schemes at the federal, state and local levels.

The six interconnected initiatives are:

- UOW intoHealth (Innovation Campus)
- Integrated Aged Care and Senior Living (Innovation Campus)
- MIND the GaP (Shoalhaven campus)
- Rural and Regional Health (Illawarra and Statewide)
- Nursing Education and Research (Bega and South Western Sydney)
- Molecular Horizons (Wollongong campus)

Work is already well underway on some projects, including Molecular Horizons (Page 17), MIND the GaP (Page 38) and the Nursing Clinical Learning Facility in Bega.



AGREEMENT WITH DRAGONS EXTENDED

The St George Illawarra Dragons and University of Wollongong this year announced an extension of their Memorandum of Understanding, where their longstanding partnership will extend until at least 2020.

The partnership renewal was signed at a formal event in May at the University of Wollongong Sydney Business School, witnessed by special guest speaker and former Prime Minister the Hon. John Howard OM, AC.

The Dragons and UOW initially formalised their association in 2009, committing under an MOU to collaboratively pursue positive outcomes for both organisations regarding research, scholarships, community programs, internships, promotions and facility use.

In 2017, the Dragons have 17 players enrolled at the University studying a broad range of degrees as part of the acclaimed Graduates of League (GOL) program.

BEGA VALLEY PARTNERSHIP

UOW has demonstrated its commitment to students in regional areas, with a new partnership set to provide greater educational opportunities and employment outcomes on the New South Wales Far South Coast.

Professor Alison Jones, UOW's Deputy Vice Chancellor (Health and Communities) signed an MOU between the University and Bega Valley Shire Council during a visit to the regional campus in November.

The MOU will formalise an agreement between UOW and the local council to work together to ensure that the rural location is not a barrier to learning by helping students access a world-class education on their doorstep.

Under the agreement, UOW and Bega Valley Shire Council have pledged to work together to increase participation in higher education among students in the region and develop projects that will contribute to economic development in the community.

Since UOW Bega was established in 2000, more than 450 students have graduated from the campus, which offers degrees in business, humanities, teaching and nursing. In January 2016, a \$1.5 million Clinical Education Unit was opened at the campus, with nursing education and state-of-the-art nursing simulation labs.



UOW alumni Dhaval Patel and Charmian Simmons with UOW Global Brand Ambassador Adam Cilchrist AM at a reception for alumni in New York this year.

COMMUNITY SUPPORT

UOW contributed more than \$300,000 to community organisations through its Community Investment Program. Current community collaborations include: National Indigenous Football Championships, Life Education Illawarra, The Illawarra Academy of Sport, Illawarra Business Chamber, Wollongong Conservatorium of Music, Bundanon Trust, and Southern Stars Schools Arena Spectacular.

UOW continued to develop positive relationship with its community and neighbours by facilitating Community Reference Group and Community Engagement Committee meetings, inviting Wollongong City Council, Neighbourhood Forum 5, and other community representatives to participate in consultation sessions on and off campus on significant projects. In addition, UOW staff participated in a range of public consultation processes on regional issues.

The second UOW Community Fellowship was awarded to the Mudgee Region for their outstanding contribution to regional, rural and remote medicine at a special ceremony in the Mudgee town hall in February.

UOW Cares workplace giving program raised more than \$50,000 during the year for nine charities: SCARF, The Smith Family, Landcare Illawarra, Headspace Wollongong, Autism Spectrum – Aspect South Coast School, Indigo Foundation, The Fred Hollows Foundation, AIME and UOW's Learning and Development Fund. The UOW Coffee for a Cause campaign effectively engaged staff, students, community members and businesses in fundraising for the Learning and Development Scholarship Fund throughout September.

Community campus tours remain popular, showcasing research, learning, outreach activities and facilities to more than 100 new visitors.

UOW co-hosted its 5th annual Community Leaders Iftar dinner in collaboration with Amity College and Affinity Intercultural Foundation. This important community event celebrates cultural diversity and encourages social harmony and joint understanding.

UOW fielded a 200-member team in the 2017 City2Surf. Staff, students and community members celebrated the 21st year of the team by fundraising in support of UOW's Learning and Development Scholarship fund.

\$50,000

Raised by UOW Cares workplace giving program 2017

Alumni help shape future of UOW and the world

Our global alumni population of more than 140,000 live in 175 countries. They reflect the University's values and go on to make an impact at a local, national and international level.

UOW ALUMNI

140,000+
Global alumni population

179
Different countries that our alumni originate from

175
Different countries that are home to our alumni

Graduates are encouraged to stay engaged with the University. The Advancement Division keeps alumni and key stakeholders informed and engaged with a regular program of events, communications, professional development, mentoring, speaking and volunteering opportunities.

Events are held in key locations within Australia and globally, including China, Malaysia, Singapore, Vietnam, Thailand, the United States, the UK, and the UAE. This year, the University offered alumni opportunities to attend more than 114 events, including 31 events held internationally in 10 countries. The University's alumni interaction rate is at 30.3 per cent. Alumni chapters in key regions, including Singapore, Malaysia and China also held networking and business events for alumni and new graduates.

In 2017, the Alumni Relations Team built on the signature engagement program by providing new events designed to inspire and engage alumni with the University at different levels. This included the introduction of the UOW Knowledge Series lecture, featuring thought-leaders in a range of cities across the world.

Good progress was made this year towards the University's alumni interaction and engagement rate with alumni communications. In October 2017, the UOW Alumni Facebook page had more followers than any other Australian university's alumni Facebook page. In an effort to engage Chinese-speaking alumni, the Alumni Relations Team established a dedicated UOW Alumni Weibo page.

Philanthropic support for student scholarships remained strong in 2017, with support from individual donors, community and corporate organisations. A notable highlight for this year was the announcement of \$1.35 million gifted to UOW by the Movement Disorder Foundation. This gift will establish a comprehensive scholarship program supporting students with a movement-related disability. UOW has received more than \$4.6 million in philanthropic donations in 2017.

UOW also provides alumni with opportunities to give back and help shape the future of UOW, including inspiring and mentoring current students, supporting student scholarships and research priorities, and opening doors to industry partnerships.



UOW Vice-Chancellor Professor Paul Wellings CBE and Chancellor Jillian Broadbent AO with Alumni Award winners Matt Bullock, Sally Riley, Dr John Best and Deng Adut.

Excellence, leadership, service and impact celebrated

Four prominent UOW alumni and four distinguished members of the University community were recognised for their excellence, leadership, service and impact at the 2017 Fellowship and Alumni Awards.

ALUMNI AWARD FOR PROFESSIONAL EXCELLENCE

MATT BULLOCK

An innovator in the world of e-commerce, Matt Bullock's foresight and entrepreneurialism has seen him achieve profound international success, which he has used to establish the Spinify Foundation, a registered charity in Australia which supports such non-profit organisations, such as OzHarvest, Ronald McDonald House, and the Kiln Incubator in Canberra.

ALUMNI AWARD FOR RESEARCH AND INNOVATION

DR JOHN BEST

With an eye for unearthing innovative products and processes, Dr John Best has made his mark on an international scale. Now Vice-President, Chief Technical Officer of Thales Australia, responsible for the company's technical capabilities, Dr Best spearheaded a visionary research and development program with UOW's Defence Materials Technology Centre (DMTC) that led to the development of The Bushmaster, the world's most successful wheeled armoured vehicle.

YOUNG ALUMNI AWARD

DENG ADUT

Born in South Sudan, at the age of six, Deng Adut was kidnapped and forced to become a child soldier in the brutal civil war which tore his country apart.

After being granted asylum in Australia, Deng's life took a dramatic turn for the better. He was able to gain an education, learn English and through sheer hard work managed to put himself through extensive tertiary studies. Deng graduated with a Master of Laws (Criminal Prosecution) from UOW in 2014 before co-founding AC Law Group in Western Sydney where he offers free legal aid to troubled youth in Western Sydney.

ALUMNI AWARD FOR SOCIAL IMPACT

SALLY RILEY

Sally Riley has gone from strength to strength in the media world, fulfilling her vision to expand the consciousness of television audiences about Indigenous life and culture. A woman of the Wiradjuri nation, Sally – a UOW alumna with a Bachelor of Creative Arts (Theatre) – has carved out a high profile career as a filmmaker, writer, developer and producer.

Sally won the AFI Award for Best Short Film in 2000 for Confessions of a Headhunter and was appointed to the then Australian Film Commission in 2002.

UNIVERSITY FELLOWSHIPS

University Fellowships are granted in recognition of outstanding achievement, exceptional service and significant contributions. This year's recipients were:

SANDRA MCCARTHY

Deeply committed to social justice, Sandra McCarthy has spent her career creating meaningful connections and building and sharing knowledge to enhance human health, both locally and globally.

IAN BROWN

In a distinguished career at the forefront of education, Ian Brown has demonstrated a gift for innovation and leadership, and a depth of understanding and commitment to teacher education in Australia that has transformed the sector.

CHRISTINE THOMPSON

Christine Thompson was admitted as a Fellow for taking the concept of 'giving back' to a whole new level, dedicating her life to supporting others and building a strong and connected community.

PAUL SHARRAD

As both an acclaimed researcher and engaged educator, Paul Sharrad has not only made a significant and sustained contribution to scholarship in his field, but also to the University's international reputation and engagement.

2017 Honorary Doctorates

One of the pre-eminent scientists of the 21st century, Professor Tim Flannery was one of four remarkable Australians who received an Honorary Doctorate from UOW this year.

Professor Tim Flannery received the title Doctor of Science (honoris causa) for his contributions to science and culture as a palaeontologist, biologist, conservationist, historian, advocate and author.

He has been a significant driver of public engagement with academic science in his role as a science communicator and popular author. He has been a seasoned campaigner in the global climate change debate.

Awarded Australian of the Year in 2007, Professor Flannery has held prominent positions at various institutions including Harvard University, the University of Adelaide, the South Australian Museum and the Australian Museum. He is currently a Professor at Melbourne University Sustainability Institute, a member of the World Future Council, serves on the Sustainability Advisory Board of Tata Power (India), and is scientific adviser to Magaldi Solar (Italy) and the Fondation Segré (Switzerland).

Dr David Gruen received the title Doctor of Science (honoris causa) for his outstanding scholarship, commitment to Australian public policy in the field of economics, and as an author, academic and commentator. Born in Sydney in 1954, the son of a World War II refugee, Dr Gruen's stellar career as an economist started later than most of his contemporaries in the field. While he took a minor in probability theory and statistics in his BSc studies at Monash University, his early interest lay in science. At the age of 29 he switched to the discipline of economics and went on to hold a range of positions in Economic Research and Economic Analysis departments with the Reserve Bank of Australia. In 2003, he joined Australian Treasury where he is now Deputy Secretary (Economic) and G20 Sherpa with the Department of the Prime Minister and Cabinet. As a highly regarded economist and forecaster, Dr Gruen has been a member of many Reviews and Advisory Panels.

Best-selling author, entertainer and health and social justice advocate Kathy Lette received the title Doctor of Letters (honoris causa) for her contribution to society as a prodigious writer, tenacious social commentator and health and wellbeing advocate. One year after she dropped out of high school "to become a writer", Ms Lette co-authored *Puberty Blues*, an autobiographical, proto-feminist teen novel about two 13-year-old southern suburbs girls seeking to boost their social status by ingratiating themselves with a male surfer gang. She spent her early adult years as a newspaper columnist and sitcom writer in Australia and America before relocating to London in 1998. In recent years, Ms Lette has been vocal in raising awareness of Autism Spectrum Disorder (ASD). She is an ambassador for Britain's National Autistic Society and for BioAutism. Ms Lette also champions a wide range of charities for women, children, and community health more broadly.

Dr Adi Paterson has been recognised with a Doctor of Science (honoris causa) for his work at the nexus of public science investment and practical innovation, which has made a positive impact on health, industry and the environment. Dr Paterson has advocated for Indigenous technology and national innovation, developed policy on intellectual policy in publicly-funded research, and co-authored a development strategy that spawned an eight-fold increase in public funding of science and technology. Dr Paterson was appointed to his current role as Chief Executive Officer of the Australian Nuclear Science and Technology Organisation (ANSTO) in March 2009. He has worked to expand nuclear medicine infrastructure and capabilities through the Australian Synchrotron project, and created a viable project to build the world's first synroc nuclear waste plant by 2019. Dr Paterson is committed to deepening the long-running research collaboration between ANSTO and UOW.



Infrastructure investments

Modern processes and outstanding infrastructure continuously improves the standing of the University. This work is achieved through consultation with staff and students, government and industry partners and the local communities. Capital expenditure plans under the Wollongong Campus Master Plan will release in excess of \$300 million from 2016-2020. More than \$20 million was invested in infrastructure during 2017.

SHOALHAVEN FACILITY UNDERWAY

A ceremonial turning of the sod on 17 March at UOW's Shoalhaven campus marked the official start of construction of an innovative facility aimed at improving mental health and wellbeing for the people of the Shoalhaven.

Federal Member for Gilmore, Ann Sudmalis MP, Mayor of the Shoalhaven, Cr Amanda Findley, Lifeline South Coast Chairman, Stephen Long and local Aboriginal Elder, Uncle Tom Moore joined UOW's Deputy Vice-Chancellor (Health Strategy and Communities) and Executive Dean of the Faculty of Science, Medicine and Health, Professor Alison Jones, to turn the first sods together as project partners in the venture.

The purpose-built Mental Illness in Nowra District: Goals and Prevention (MIND the GaP) facility is a joint initiative between the Commonwealth Government, Shoalhaven City Council and UOW that will help address the high level of mental health needs in the Shoalhaven, particularly among vulnerable and younger people.

ENGINEERING BUILDING REFURBISHED

A major refurbishment of the Engineering Building was completed in July 2017.

The \$5 million refurbishment addressed significant functional upgrades, code compliance items and a reduction to backlog maintenance. Many new spaces have provided improved amenity, new student informal learning spaces, improved circulation and better connection with natural light.

Above: The ceremonial turning of sod for the MIND the GaP building was held in March.

Right: UOW's new South Western Sydney campus at Liverpool was opened in April: Postgraduate student Faisal Tubbal moved into Bangalay with his wife and four children.



CAMPUS OPENS IN LIVERPOOL

UOW's South Western Sydney campus was opened in April by Chief Commissioner of the Greater Sydney Commission, Lucy Turnbull AO.

The new campus comprises two fully refurbished floors in Liverpool City Council's Moore Street building.

Renovations and fitout of the campus commenced in July 2016 with construction company FDC Projects selected for the project after a comprehensive tender process.

The 2,400 square metre facility is spread across the building's ground and first floors, which were previously occupied by NSW Police.

Designed by Wollongong-based architectural firm ADM, the innovative design includes five fully-equipped multipurpose teaching rooms, two IT labs, student consultation and collaborative learning spaces, office facilities, a prayer room and a cafeteria. It also features a 1,000 square metre outdoor terrace with synthetic turf, plants and outdoor seating for students, faculty and professional services staff.

INCREASE IN ACCOMMODATION

The newest addition to UOW's student accommodation, Bangalay, claimed silver in the 2017 Sydney Design Awards.

The facility was officially opened by Noel Cornish AM, Deputy Chancellor of UOW on June 15. Bangalay is the result of UOW's vision to provide modern, high-quality, on-campus accommodation for Australian and international postgraduate students, and is the first of two current accommodation expansion projects for the Wollongong campus.

Located directly opposite the University's Wollongong campus, the 254-bed building is fittingly named after the tree whose bark was used by the area's traditional owners, the Dharawal People, to create shelters.

Bangalay is part of an innovative public/private partnership under which UOW licenced its accommodation assets to the Living + Learning Partners consortium in 2014.

NEW SIX-LEVEL CAR PARK

As part of the student accommodation expansion project, UOW completed the construction of a \$10.9 million multi-storey car park in July 2017 which resulted in a net increase of parking spaces for the Wollongong campus.

The six-level car park has allowed more land adjacent to Northfields Avenue to remain available for landscaping. The project incorporates sustainable technologies and initiatives including solar photovoltaic panels, LED lighting systems and green walls to the facade of the building.

Staff

Petria McGoldrick, of Student Support, was awarded the Rosemary Cooper Award.

Rewarding initiative, creativity and performance of all UOW staff continuously improves the standing of the University. We offer career pathways and ongoing support for our staff to optimise their academic, teaching and professional achievements and aspirations.

STAFF ACHIEVEMENTS CELEBRATED

More than 70 academic and professional services staff were recognised for their outstanding contribution to UOW at the 2017 Vice-Chancellor's Awards.

The function, held at the University Hall in August, highlighted the exceptional achievements of UOW staff and their commitment to research, teaching and learning, diversity, outstanding service and community engagement.

THE VICE-CHANCELLOR'S AWARD FOR OUTSTANDING CONTRIBUTION TO TEACHING AND LEARNING

First Year Chemistry Team

Associate Professor Glennys O'Brien
Faculty of Science, Medicine & Health

Dr Simon Bedford
Teaching & Curriculum Development

FACULTY OCTAL AWARDS

Professor Mary Barrett
Faculty of Business

Dr Montserrat Ros
Faculty of Engineering & Information Sciences

Dr Erika Matruglio
Faculty of Social Sciences

Dr Mariolina Pais Marden
Faculty of Law, Humanities & the Arts

Dr Swapna Koshy
UOW Dubai

EARLY CAREER FACULTY OCTAL AWARDS

Dr Silvia Mendolia
Faculty of Business

SESSIONAL STAFF OCTAL AWARD

Dr Annie Werner
Faculty of Law, Humanities & the Arts

SESSIONAL STAFF FACULTY OCTAL AWARDS

Dr Xun Gong
Faculty of Business

Pok Tak Tsang
Faculty of Business

PROFESSIONAL STAFF SERVICES OCTAL AWARD

Brondalie Martin
Teaching & Curriculum Development

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

Professor Gordon Waitt
Faculty of Social Sciences

Professor Xiaolin Wang
Australian Institute for Innovative Materials

VICE-CHANCELLOR'S RESEARCH EXCELLENCE AWARD FOR EMERGING RESEARCHER

Dr Xiaoqi Feng
Faculty of Social Sciences

Dr Lucas Ihlein
(Highly Commended)
Faculty of Law, Humanities and the Arts

VICE-CHANCELLOR'S INTERDISCIPLINARY RESEARCH EXCELLENCE AWARD

Associate Professor Robert Gorkin, Dr Jason McArthur, Associate Professor Christopher Magee, Associate Professor Kate Senior, Laura Grozdanovski, Professor Geoff Spinks
Project: Project Geldom: Designing the Next-Generation Condom

Associate Professor Melanie Randle, Dr Leonie Miller, Joanna Stirling (Highly Commended)
Project: Identifying and Attracting Successful Foster Carers

Professor Andy Davis, Allison Broad, Chantal Steele, Associate Professor James Reveley, Professor Warwick Gullett, Professor Clive Schofield (Highly Commended)
Project: Dragging the Chain: Minimising Impacts of Deep Water Anchorage on Australia's Eastern Seaboard.

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

Professor Long Nghiem, Professor Will Price, Professor Pascal Perez
Project: Research Partnership with Sydney Water: Analytics to predict anaerobic co-digestion and downstream process performance.

VICE-CHANCELLOR'S AWARD FOR RESEARCH SUPERVISION

Professor Weihua Li
Faculty of Engineering and Information Sciences

Associate Professor Peter Kelly
(Highly Commended)
Faculty of Social Sciences

Dr Justin Yerbury
(Highly Commended)
Faculty of Science, Medicine and Health

Professor Cathy Cole
(Highly Commended)
Faculty of Law, Humanities and the Arts

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

Carmen Tang
Faculty of Engineering & Information Sciences

Rochelle Boys
Graduate Career Development & Employability

Steffan Bale
Information Management & Technology Services

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

Samantha Avitaia & Brittany Brown
UOW Bega

VICE-CHANCELLOR'S AWARD FOR EXCELLENCE IN COMMUNITY ENGAGEMENT (TEAM)

Global Climate Change Week Team

Dr Keith Horton
Faculty of Law, Humanities & the Arts

Dr George Takacs
Faculty of Engineering & Information Sciences

Associate Professor Helen McGregor
Faculty of Science, Medicine and Health

Professor Helen Hasan
Faculty of Business

CHI Sexual Health Project Team

Associate Professor Kate Senior
Faculty of Social Sciences

Laura Grozdanovski
Faculty of Social Sciences

MARIE LEWIS AWARD

Rachel Hicks
South Western Sydney campus

WORKPLACE HEALTH AND SAFETY AWARD

Ellen Manning
Faculty of Science, Medicine and Health

ROSEMARY COOPER AWARD

Petria McGoldrick
Student Support

25 YEARS SERVICE AWARDS

Garry Beauchamp
Facilities Management Division

Christine Bray
Faculty of Engineering & Information Sciences

Donna Dee
Library

David Edwards
Financial Services

Dr Joshua Fan
Faculty of Business

Vivien Green
Information Management & Technology Services

Dr Sim Lau
Faculty of Engineering & Information Sciences

Associate Professor Yan-Xia Lin
Faculty of Engineering & Information Sciences

Robyn Lumby
Faculty of Social Sciences

Tina Mak
Faculty of Business

Professor Barbara Meyer
Faculty of Science, Medicine & Health

Andrew Scobie
Faculty of Engineering & Information Sciences

Professor David Steel
Faculty of Engineering & Information Sciences

Gregory Trueman
Information Management & Technology Services

Dr Peter Vial
Faculty of Engineering & Information Sciences

Professor Gordon Waitt
Faculty of Social Sciences

Dr David Wexler
Faculty of Engineering & Information Sciences

Penelope Williamson
Faculty of Science, Medicine and Health

Associate Professor Stephen Wilson
Faculty of Science, Medicine and Health

Sandra Wooton
Library

TWO DEPUTY CHANCELLORS ELECTED FOR FIRST TIME

UOW this year reappointed Jillian Broadbent AO as Chancellor and appointed two Deputy Chancellors for the first time in UOW history.

Ms Broadbent AO was re-elected to the position of Chancellor for a two-year term ending 30 September 2019, Dr Elizabeth Magassy was elected to the position of Deputy Chancellor for a two-year term effective immediately until 18 August 2019 and Robert Ryan was elected to the position of Deputy Chancellor, taking over from Noel Cornish AM, for a two-year term commencing 1 January 2018 until 31 December 2019.

ACADEMIC PROMOTIONS

Effective from 1 January 2018, they are:

TO DISTINGUISHED PROFESSOR

Distinguished Professor Xu-Feng Huang
School of Medicine

TO SENIOR PROFESSOR

Senior Professor Susan Turnbull
School of the Arts, English and Media

Senior Professor Tony Okely
Early Start

Senior Professor Pascal Perez
SMART Infrastructure Facility

TO LEVEL E (PROFESSOR)

Professor Mario Fernando
School of Management, Operations and Marketing

Professor Christian Ritz
School of Electrical, Computer and Telecommunications Engineering

Professor Michael Lerch
School of Physics

Professor Cheng Lu
School of Mechanical, Materials, Mechatronics and Biomedical Engineering

Professor Stephen Ralph
School of Chemistry

Professor James Wallman
School of Biological Sciences

Professor Victoria Traynor
School of Nursing

TO LEVEL D (ASSOCIATE PROFESSOR)

Associate Professor Shahriar Akter
School of Management, Operations and Marketing

Associate Professor Zengxi Pan
School of Mechanical, Materials, Mechatronics and Biomedical Engineering

Associate Professor Tao Yu
School of Civil, Mining and Environmental Engineering

Associate Professor Vinod Jayan Sylaja
School of Civil, Mining and Environmental Engineering

Associate Professor David Stirling
School of Electrical, Computer and Telecommunications Engineering

Associate Professor Duane Robinson
Sustainable Buildings Research Centre

Associate Professor Yang-Wai (Casey) Chow
School of Computing and Information Technology

Associate Professor Siobhan McHugh
School of the Arts, English and Media

Associate Professor Tim DiMuzio
School of Humanities and Social Inquiry

Associate Professor Sheikh Solaiman
School of Law

Associate Professor Trish Mundy
School of Law

Principal Fellow Kerrylee Rogers
School of Earth and Environmental Sciences

Principal Fellow Bo Li
School of Earth and Environmental Sciences

Associate Professor Tim Cohen
School of Earth and Environmental Sciences

Associate Professor Kelly Newell
School of Medicine

Associate Professor Kathryn Weston
School of Medicine

Associate Professor Sarah Howard
School of Education

Associate Professor Emma Barkus
School of Psychology

Associate Professor Bridget Kelly Gillott
School of Health and Society

Associate Professor Xiaoqi Feng
School of Health and Society

Principal Fellow Shulei Chou
Institute for Superconducting & Electronic Materials



Technology

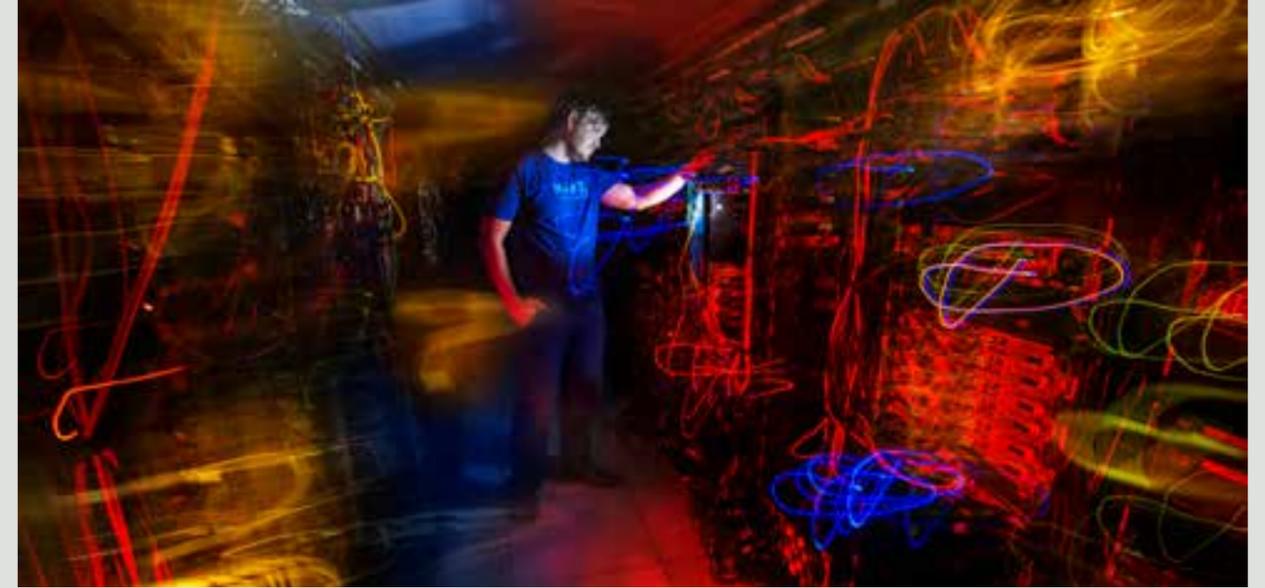
Resilient information technology (IT) capabilities underpin UOW's digital foundations and associated services and solutions, to enable accelerated delivery of business transformation.

DIGITAL POWERHOUSE

Throughout 2017, the Information Management and Technology Services (IMTS) Division delivered key strategic initiatives, 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 Success 360, Research and International, all made considerable progress throughout the year, placing UOW in a position to operate as a digital powerhouse. A review of future digital opportunities commenced and will be announced in early 2018. The review will harness new digital assets and capabilities through a series of initiatives to create a sustainable competitive advantage.

STUDENT EXPERIENCE

Significantly improving recruitment and student service processes through the delivery of a connected, marketing communications platform is the Student Customer Relationship Management (CRM) system. A core strategic investment, the Student CRM will improve relationship management and engagement across prospective and current students for UOW, UOWC and UOWD. Planning continues to progress into 2018 on large initiatives to improve the student experience, such as a modern student service gateway (i.e. Student Portal) via the new content management system (CMS). Broadly across student systems, enhancements improved functionality and usability through initiatives such as upgrades to the MyUOW App, security improvements, fees revenue, student admissions and recruitment, and timetabling. Through a collaboration with the Library and IMTS, 2017 also saw the hugely popular trial of 24x7 Library opening hours during exam periods, which will be expanded upon in 2018. Students residing in UOW accommodation sites had network upgrades delivered and wireless capabilities installed into individual student rooms.



TEACHING AND LEARNING

Substantial investment into updating the technology in a number of teaching spaces was undertaken throughout the year. Bega, Batemans Bay and Shoalhaven campuses were all updated with the latest digital audio visual equipment to continuously improve the teaching and learning experience for staff and students. On the Wollongong campus, flagship locations such as the Hope Theatre were also updated with the latest technologies. The Teaching & Technology Hub (T&T Hub) was opened in time for the start of Autumn Session. The Hub is a place where the latest devices are available to staff to allow them to view and "play" with developing technologies (such as Augmented/ Virtual Reality), to assess the potential to revolutionise teaching and learning.

RESEARCH AND INNOVATION

As part of the Molecular Horizons initiative in the newly established Cryogenic Electron Microscopy facility, IMTS worked closely with the SMAH Faculty to have the University's first high-end CryoEM microscope connected to the UOW network. An agreement with Monash University to use their Monash Research Facility (MASSIVE) has been signed for processing the huge amounts of data expected to be generated by this new research initiative. IMTS has established a comprehensive infrastructure set-up, including Data Management flow and high-speed networking capabilities and connections, to enable a second CryoEM microscope to be installed at ANSTO in early 2018 to transfer the data from UOW to MASSIVE. The Research Data Storage and Management (RDSM) project has seen the deployment of a NetApp Storage Grid solution to provide an initial 200 Terabytes of research data storage.

INTERNATIONAL DEVELOPMENT

There was an increased focus on supporting our offshore operations in Hong Kong and Dubai as well as other partner delivery locations during the year. IMTS continued to support the five-year transition of CCCU from CityU systems to UOW. CCCU continues to deliver UOW top-up degrees using UOW systems and 2017 saw the beginning of the transition to the new name, UOW College Hong Kong. As part of this, the first course under the new institution name, Diploma in General Studies (DiGS), now uses UOW systems bringing it in line with those in the UOW Top-Up Program. Dubai has worked closely with IMTS on enhancements to the student experience, and began the process of adopting the Business Process Management (BPM) platform for Academic Misconduct management, in a step towards creating more efficient operations through the use of technology.

CORPORATE SERVICES

IMTS and the Business Improvement & Assurance Division (BIAD) continued to drive efficiencies through Business Process Management initiatives across the University. This includes the introduction of a University-wide Feedback system, an online Academic Misconduct solution, Student Subject Management and Staff Study Leave solutions. In addition, a new travel and expense management system has been deployed across the University. A new system for the management of student mobility for exchange and short courses has been implemented, reducing application processing time from three weeks down to one day. UOW's e-Recruitment system was implemented in 2017, greatly improving the experience for prospective staff. IMTS, in partnership with the Academic Quality & Standards Division, developed a suite of nine targeted interactive visualisations and reports. These focus on key areas to deliver high quality actionable insights, and to review and improve processes such as Course Reviews and the Faculty/Unit Assessment Committees, while adhering to the Tertiary Education Quality and Standards Agency (TEQSA) requirements.

COMMUNITY AND INDUSTRY PARTNERSHIPS

Since the set-up and launch of UOW's new Liverpool campus, IMTS has worked with Liverpool Council on a successful federal government application for the Smart Cities and Suburbs Program. IMTS strengthened its relationship with IT powerhouses Microsoft, Cisco, NetApp, Appian and NEC. Microsoft partnered with UOW to deliver several seminars focussing on the possibilities of technology and also guest lectured on topics such as Cognitive Services, and Augmented and Virtual Reality for the EIS Faculty. An agreement was executed with NEC to provide support for our telephony platform, improving outcomes and strengthening our partnership. Collaborating with Science Space, the replacement of the Planetarium and other upgrades has greatly improved the experience for visitors. In December 2017, 15 UOW IT students were given the opportunity to attend a two-week intensive "boot camp" with global BPM software partner Appian.



Finance

S&P Global Ratings praised UOW for its very strong financial profile, sound financial policies and strong financial performance in its August Ratings Research Update.

The international ratings agency affirmed UOW's stand-alone credit profile as 'AA' and its outlook as "stable", based on the University's very strong enterprise and financial profiles.

"In our view, UOW benefits from a solid market position and growth in enrolment numbers, and high levels of financial resources and low outstanding debt," S&P Global Ratings said in the report.

ADJUSTED OPERATING SURPLUS

The headline operating result for 2017 for the Consolidated Group was a surplus of \$85 million. This was achieved through income of \$797 million offset by \$712 million of operating expenditure (including tax). Excluding capital grants and abnormal items, the University consolidated group achieved an adjusted operating surplus of \$60 million (7.8 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 two per cent.

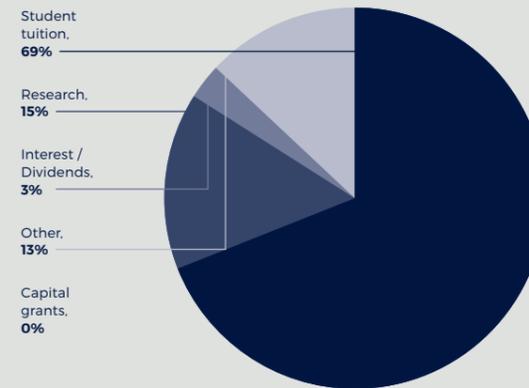
KEY HIGHLIGHTS:

- Continued expansion of the South Western Sydney Liverpool campus
- Consolidation and expansion of offshore activities, particularly for UOW Hong Kong College
- Strong growth in international student fee revenue
- Strong balance sheet and liquidity position, evidenced by maintenance of AA/A-1+ stable.

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 15 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.

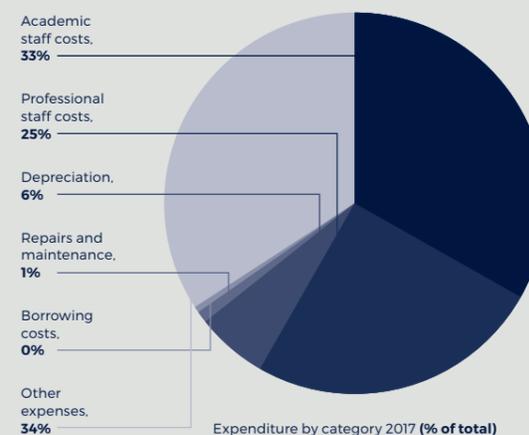


SOURCES OF OPERATING EXPENDITURE

Wages and salaries, at 58 per cent per cent of total operating expenditure, are the largest component of University expenditure. Total employee costs grew 4.75 per cent due to a combination of additional resources required to meet teaching requirements and general salary increases in accordance with awards and agreements.

Borrowing costs remained low during 2017. Low interest rates and CPI applicable to the University's long term bonds contributed to the low borrowing costs. The University increased debt during the year by issuing a 10 year medium term bond in December 2017, however this had minimal impact on borrowing costs for 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 5.4 per cent over 2017. This included a variety of line items, such as 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 increased as a result of research activities and engagement with partner institutions.



STUDENT REVENUE SOURCES

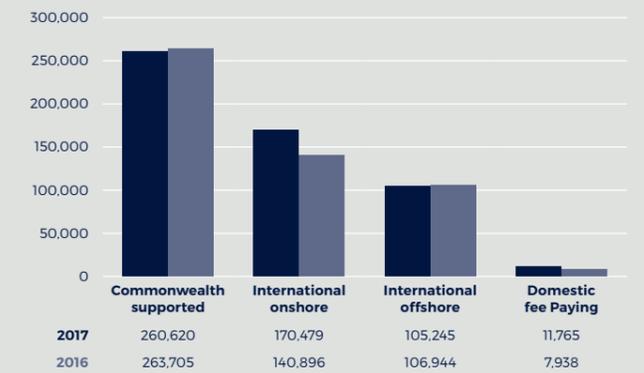
Student tuition fees generated a total of \$548 million in 2017 compared to \$519 million in 2016.

Revenue from Commonwealth supported students contributed \$260 million, marginally below the result for 2016. Commonwealth student revenue for 2016 includes the 2015 Commonwealth Government's efficiency dividend returned to the University during 2016.

Revenue from International student tuition fees (onshore and offshore) recorded an increase of \$30 million (21 per cent) over 2016.

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

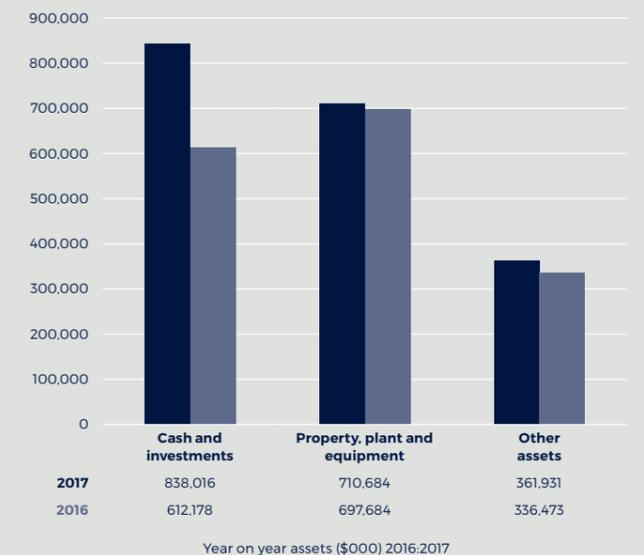
Offshore increased international student tuition fee revenues were generated through operations at the UOW College Hong Kong and UOW Dubai.



FINANCIAL POSITION

The net asset position (assets minus liabilities) of the University continues to grow exceeding \$1.1 billion in 2017. Maintenance of sound cash and investment balances and continued investment in infrastructure contributed to the strong net asset position.

The University continued to make significant investments in infrastructure during 2017, with a number of projects underway or substantially completed during 2017, including expansion into South Western Sydney and the MIND the GaP facility at Shoalhaven campus. Preliminary works continued for major projects to be completed over the next few years including the Molecular Horizons project and Western Building.



Our mission

The University of Wollongong is a global leader in discovery and learning, working to transform people and the world we live in.

Our purpose

The University of Wollongong is a research-intensive university with an outstanding reputation for its learning environments across a broad range of disciplines.

UOW's 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 one per cent of the world's universities.



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

CONTACT

uow.edu.au

[facebook.com/UOW](https://www.facebook.com/UOW)

twitter.com/UOW

+61 2 4221 3555

#ThisIsUOW



**UNIVERSITY
OF WOLLONGONG
AUSTRALIA**