

The cover features a background image of a large, leafy tree with sunlight filtering through the branches. A wide, horizontal band of colorful, multi-colored stripes runs across the middle of the page, partially obscuring the tree. The stripes include various colors like blue, green, yellow, orange, and purple, with some patterns. The text is centered in the upper half of the page.

# Annual Report 2016

Volume 1

# Our 2025 Commitment

By 2025, UNSW will be Australia's Global University and a leading research-intensive and teaching-intensive university, delivering:

1. **World-leading research** of the highest ethical standards and integrity, across the full spectrum of arts, built environment, business, design, law, social sciences, engineering, medicine and science.
2. **Research impact** through the generation of new knowledge applied to solve complex problems, deliver social benefits and drive economic prosperity, locally, nationally and globally.
3. **Exemplary education** for every student through integrating the most innovative developments in digital and face-to-face learning into novel solutions, to improve educational quality and the student experience.
4. **In-demand graduates** optimally prepared for the opportunities and challenges of the 21st century global workplace and motivated by a desire to make a positive impact on society.
5. **Equality of opportunity** for all our students, staff and the wider UNSW community, combined with a commitment to the active promotion of equality beyond the University.
6. **Thought leadership** harnessing UNSW's intellectual capacity to deliver expert contributions to lead and inform debate, policy making and global issues.
7. **A significant contribution to national and global prosperity** through innovative, transformative partnerships with community, industry, government and our alumni, facilitating the translation of research and education into economic and social benefits.
8. **Excellence in international education** leading the world in educating students from overseas, through our innovative and flexible educational platform, offering a truly global experience to all of our students.
9. **Partnerships** with other great institutions in Australia and across the globe, which share our ethos and can collaborate with us in achieving our strategic goals.
10. **Social justice** achievements built on UNSW's work with disadvantaged and marginalised communities in Australia, the Asia-Pacific and globally.





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The University's 2016 Financial & Statutory Reports are in Volume 2.

Cover photo:



This has been an important year for UNSW as we commence implementation of our 2025 Strategy. What we see today is a world-class institution growing stronger each year, with capital resources, research teams and teaching facilities that many other universities can only dream of having.

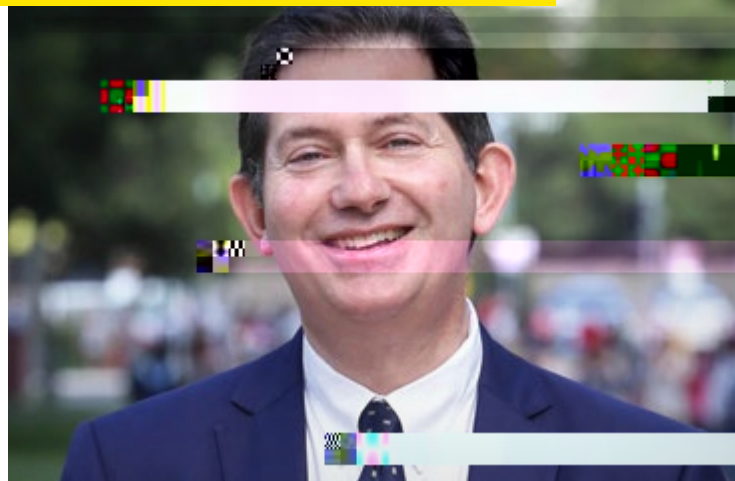
This year, I was again impressed by UNSW's strong standing in the world university rankings. Our 2025 strategy is bold, aiming to place an Australian university in the world's top 50. I believe (as I know our Vice-Chancellor, Professor Ian Jacobs does) that we can make it. The 2025 Strategy is fundamental to that goal, with the scale of investment involved – \$3 billion across the next five years to place an Australian university in the world's top 36.7 (or) -ting.

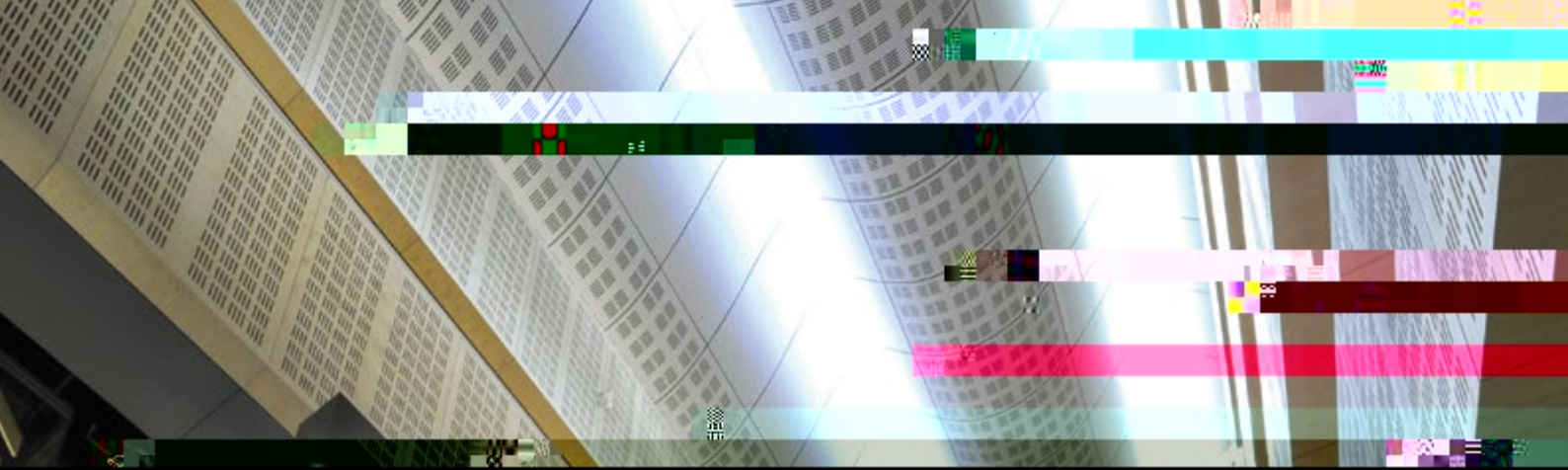
# Message from the President & Vice-Chancellor

It gives me great pleasure to present UNSW's Annual Report for 2016, my second as President and Vice-Chancellor.

This has been a year of important progress for the University. After a wide-ranging consultation in 2015, we completed the detailed planning of our 2025 Strategy and commenced implementation. The UNSW 2025 Strategy aims to position UNSW as Australia's Global University, among the world's top 50, improving and transforming lives through excellence in research, education and a commitment to advancing a just society. These objectives align with our mantra that a great university is above all else a 'Servant of Society', acting for the community, locally, nationally and globally.

We have commenced the process of mobilising and investing





# At a Glance



## About UNSW Sydney

Established in 1949 with a unique focus on the scientific, technological and professional disciplines, UNSW is a leading Australian university committed to making a difference through pioneering research and preparing the next generation of talented global citizens for career success.

UNSW has a proud tradition of sustained innovation, focusing on areas critical to our future – from climate change and renewable energies to lifesaving medical treatments and breakthrough technologies. In the social sciences, UNSW research informs policy and expert commentary in key issues facing society ranging from human rights and constitutional recognition of Indigenous Australians to public health and population ageing.

UNSW offers an extensive range of undergraduate, postgraduate and research programs. We attract talented students from all over Australia and around the world. Our more than 56,000 students come from 128 countries, making us one of Australia's most cosmopolitan universities. Our emphasis on quality continues to push up entry standards – in 2016 we again attracted the largest percentage of the State's top 500 school leavers.

The main UNSW campus is located on a 38 hectare site at Kensington, seven kilometres from the centre of Sydney. Other major campuses are Art & Design in Paddington and UNSW Canberra at the Australian Defence Force Academy.

## Australia's Global University

Our aspiration for the next decade is to establish UNSW as Australia's Global University, improving and transforming lives through excellence in research and education and a commitment to advancing a just society. We aspire to this in the belief that a great university, which is a global leader in discovery, innovation, impact, education and thought leadership, can make an enormous difference to the lives of people in Australia and around the world.

# 2016 Snapshot

(as at December 2016)

## Students

**56,085**

Total Students

**21,582**

Commencing Students

**282,000**

Alumni

**4,215**

Higher Degree Research Candidates

**39,399**

Local Students

**16,686**

International Students

## 2016 Financial Summary

	Consolidated	
	2016	2015
		\$'000
Total revenue and income	1,911,942	1,761,317
Employee costs	(1,003,663)	(964,009)
Other expenses	(761,931)	(719,804)
Accounting result	146,348	77,504
3 FTUSJDUF E GPS TQFDJmD QVSQPTFT Philanthropic funds	(30,977)	(17,668)
Capital grants	(9,513)	(6,720)
4 QFDJmD QVSQPTF HSBOUT	(23,796)	(24,382)
/PO DPSF PQFSBUJOH Investment funds	(29,431)	(30,509)
Operating result	52,631	(1,775)





# Sta

**6,189**  
 Total Sta  
 5,687  
 full-time  
 equivalent

**1,097**  
 Female  


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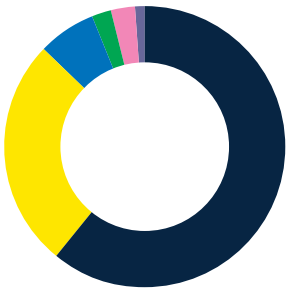
**1,723**  
 Male  
 Academic Sta

**2,163**  
 Female  


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**1,206**  
 Male  
 Professional Sta

## Students by Level of Program:



- Bachelor and Diploma
- Masters Coursework
- Doctorate
- Grad Dip and Grad Certificate
- Non-Award
- Masters Research

## 20 Subjects in World's Top 50

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- » Accounting & Finance
- » Law
- » Psychology
- » Engineering (Civil & Structural)
- » Engineering (Mineral & Mining)
- » Architecture/Built Environment
- » Business & Management Studies
- » Environmental Sciences
- » Art & Design
- » Materials Science
- » Engineering (Chemical)
- » Engineering (Mechanical)
- » Computer Science & Info Systems
- » Economics & Econometrics
- » Social Policy
- » Communications & Media Studies
- » Engineering (Electrical)
- » Medicine
- » Geography
- » Education

49th in the World

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## Global Elite

UNSW is a founding member of both the Group of Eight – a coalition of



laboratory and public health research in a new initiative to create the Australian Partnership for Preparedness Research on Infectious Diseases Emergencies.

## Cancer funds

UNSW researchers working to translate laboratory discoveries into viable cancer treatments receive \$16.6 million from The Cancer Institute NSW.

## World champions defend title

UNSW's robot soccer world champions fly to Germany to defend their title in the RoboCup World Championship.

## July

### New enterprise portfolio

UNSW announces the appointment of Professor Brian Boyle as Deputy Vice-Chancellor (Enterprise), a new portfolio driving the University's innovation agenda.

### The one to watch

Research publisher Nature names UNSW the top "Rising Star" in the Asia-Pacific for its increase in high-quality science publications.

### Grand challenges

UNSW announces the first three leaders of its "Grand Challenges" initiative to establish the University at the forefront of debate and policy responses to the biggest issues of our time.

### Premier opens materials hub

The new home of Australia's leading materials science and engineering research and innovation, the Hilmer Building, is officially opened by NSW Premier Mike Baird.

## August

### Torch shines

UNSW officially launches the \$100 million Torch Innovation Precinct, an initiative that will deliver a major boost to development funding for Australian research. The Precinct will be the first such partnership outside China.

### Students organise UNSW's

The University hosts TEDxUNSW, an inaugural event co-founded by three UNSW students Shariq Nabi, Angela Nguyen and Raymond Zeng.

### Fine fellow

UNSW climate change researcher Scientia Professor Matthew England is elected an American Geophysical Union Fellow, one of the highest international honours in the Earth Sciences.

### Smart sensors

The NSW government invests \$700,000 in a new Smart Sensing Network, a research group formed across UNSW and the University of Sydney.

## Uganda vision

President and Vice-Chancellor Ian Jacobs leads a UNSW delegation to Uganda's Gulu University to explore opportunities for collaboration.

## September

### ) R V V L O ; Q G

Australian researchers including UNSW scientists find the world's oldest fossils in a remote area of Greenland, demonstrating that life emerged rapidly during the planet's early history.

### Millionaire club

UNSW again tops the list of Australian universities with the most millionaire graduates according to a global analysis commissioned by Spear's Magazine in conjunction with WealthInsight and Elite Traveller.

### Centres of excellence

UNSW is awarded \$91 million from the federal government for three national centres of excellence in quantum computing, climate change and the ageing population.

### : R P H Q R I L Q A X H Q F H

Four UNSW academics are named in the AFR/Westpac 100 Women of Influence Awards for their contribution to diversity, innovation, public policy and global issues.

### Quantum investment

UNSW strikes a \$70 million deal to create a consortium of researchers, business, and the federal government to develop and commercialise technology that could lead to the world's first quantum computer in silicon.

### Tall poppies

Work by seven UNSW researchers is recognised in the prestigious 2016 Young Tall Poppies Awards (ACT/NSW).

## October

### Cyber guardian

Dr Gideon Creech from the Australian Centre for Cyber Security at UNSW Canberra becomes one of only 35 people in the world to achieve the title "Cyber Guardian", the highest information security qualification bestowed by the System Administration, Networking, and Security Institute.

### Turnbull joins FBE

Chief Commissioner of the Greater Sydney Commission, Lucy Turnbull, is appointed Adjunct Professor at the Faculty of Built Environment where she will share her skills with the next generation of city makers.

### Quantum pioneer

For her pioneering research in quantum physics, Scientia Professor Michelle Simmons is honoured with a €100,000 International L'Oréal-UNESCO For Women in Science Award.

## Physics honour

Engineer and physicist Professor Andrea Morello is named inaugural recipient of the Rolf Landauer and Charles H. Bennett Award in Quantum Computing by the American Physical Society, the world's leading organisation of physicists.

## Premier's prizes

# Community Impact



2016 marked UNSW's biggest involvement in Sydney's festival season. Staff and students took part in every one of the city's major cultural events, including Vivid, which attracts millions of visitors and transforms Sydney every winter with light installations and live music.

BA Design Honours student Edison Chen created the Love-O-Meter concept and collaborated with fellow UNSW Art & Design Honours student Nila Rezaei, UNSW Engineering graduates Nathan Adler and Sam Cassisi, and Media Arts/Computer Science Engineering students Tom Bremner and Jordan East, to bring the idea to reality. "I wanted the installation to be

carnavalesque," says Chen. "We were aiming for a sideshow alley meets Las Vegas wedding chapel aesthetic." Selena Griffith, Senior Lecturer and UNSW Engineering Scientia Experience Manager, who coordinated the project, said one of the main ideas was that love is open to everyone. "If their declaration is totally off the charts they're rewarded with a special animation," she explained.

Nila Rezaei (pictured left with Nathan Adler) also designed the Exterminia installation, a luminous sea creature-cum public bench that rippled with colour until people sat on it and the colours bleached to white. The idea, she says, was to encourage people to think about how they influence the marine world and events such as coral bleaching.

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## Indigenous student follows her dreams

Growing up in Yarrabah, a remote Indigenous community in Far North Queensland, Destiny Kynuna decided she could make a difference in her community. Emboldened by her parents, the 21-year-old renal unit nurse was accepted into UNSW to study medicine, likely the first person

## 2016 highlights include:

Excellence in Population Health

### Research excellence

- » UNSW was placed 49th in the 2016 QS World University Rankings, and continued its steady march up the Times Higher Education World University Rankings, climbing four spots to 78th in the world. It also ranked 134 in the Academic Ranking of World Universities (ARWU) published by Shanghai Jiao Tong University, and was the only university in Australia to be named in the top 100 in the world in all seven engineering subjects.
- » UNSW was placed 136 in the world in the Nature Index Analysis, and was named a player to watch in Asia-Pacific for its high-quality science publications, scoring the largest increase in publications of any institution in the region between 2012 and 2015.

### Funding

- » UNSW was ranked fourth in the Go8 in NHMRC funding, securing \$60.6m in 2016. This included \$2.5m for a Centre for Research



## Inspiring teaching

- » The Scientia Education Academy was established to recognise outstanding educators, with 15 Scientia Education Fellows appointed to provide leadership, inspiration and vision in learning and teaching across the University.
- » UNSW Management Board approved a \$55m Inspired Learning Initiative business case to support teaching and learning excellence.
- » UNSW's premier outreach program ASPIRE was acknowledged with an Australian Rural Education Award, winning more than \$800,000 in National Priority Funding to develop five major projects.
- » The work of UNSW teaching staff to enhance student learning was recognised with three lecturers and a teaching team receiving citations for Outstanding Contributions to Student Learning in the Australian Government's 2016 Australian Awards for University Teaching. Dr Rebecca LeBard, Dr Leila Morsy and Dr Nalini Pather received individual citations, while LionsHeart Studios, Dr Alberto Motta and Dr Isabella Dobrescu were recognised as a team for their development of a video game 'Playconomics' that transformed their teaching of economics.

## UNSW3+

In late 2016, following an extensive consultation with students, staff and community leaders, Management Board decided to implement an alternative academic calendar in 2019.

The UNSW3+ calendar will have three ten-week teaching terms plus an optional five-week summer term and will offer students:

- » greater flexibility to spread their study load over the year
- » the ability to focus more on each course
- » more opportunities for embedding internships, volunteering and other activities into the UNSW experience
- » better alignment with international university calendars, facilitating more global experiences
- » a more vibrant campus life through more consistent use of facilities across the year.

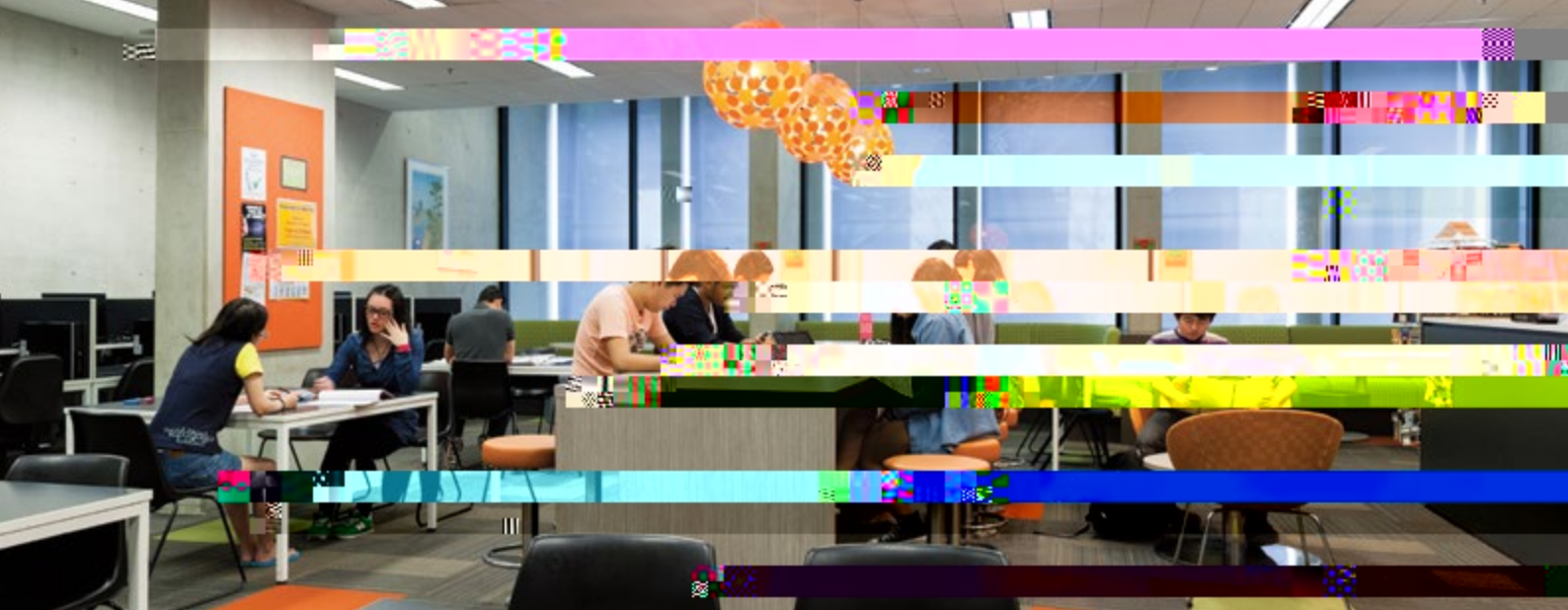
The UNSW3+ calendar is also designed to:

- » reduce the stress associated with studying
- » reduce the pressure on classrooms, labs and facilities
- » provide opportunities for staff who would like to dedicate themselves more fully to teaching.

## Innovation

- » Professor Brian Boyle was appointed as Deputy Vice-Chancellor (Enterprise) to lead a new portfolio to drive the University's innovation agenda as a key part of the 2025 Strategy.
- » UNSW struck a \$70m deal with the federal government, Telstra and CBA, to create a consortium to commercialise world-leading technology that could lead to the first quantum computer in silicon.
- » The Sydney School of Entrepreneurship was established as a company by UNSW and other participating tertiary institutions, and a board and chief executive officer were appointed.

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## Major prizes awarded in 2016 include:

L'Oréal-UNESCO For Women in Science Award in the Physical Sciences (Asia-Pacific)

Scientia Professor Michelle Simmons FTSE FAA, School of Physics/Centre of Excellence for Quantum Computation and Communication Technology

American Physical Society Rolf Landauer and Charles H. Bennett Award in Quantum Computing (inaugural)

Professor Andrea Morello, School of Electrical Engineering and Telecommunications

Foresight Institute Feynman Prize in Nanotechnology (Experimental)

Scientia Professor Michelle Simmons FTSE FAA, School of Physics/Centre of Excellence for Quantum Computation and Communication Technology

Royal Society of Chemistry Faraday Medal

Scientia Professor Justin Gooding FRACI FRSC FAA, School of Chemistry

## Australian Academy of Science

David Craig Medal

Professor David Black AO FAA, School of Chemistry

## Royal Society of NSW

James Cook Medal

Scientia Professor David Cooper AO FAA FAHMS, Kirby Institute

Walter Burtt Prize

Scientia Professor Justin Gooding FRACI FRSC FAA, School of Chemistry

Liversidge Lecture

Scientia Professor Justin Gooding FRACI FRSC FAA, School of Chemistry

Edgeworth David Medal

Dr Muireann Irish, Neuroscience Research Australia

## Premier's Prizes for Science & Engineering

Excellence in Biological Sciences (Ecology, environmental, agricultural and organismal)

Professor Mike Archer AM FAA, School of Biological, Earth and Environmental Sciences

Leadership in Innovation in NSW

Scientia Professor Helen Christensen FASSA FAHMS, Black Dog Institute

Excellence in Engineering and Information and Communications Technology

Scientia Professor Toby Walsh FAA, School of Computer Science & Engineering

NSW Early Career Researcher of the Year

Dr Muireann Irish, Neuroscience Research Australia

## Royal Australian Chemical Institute Awards

Physical Chemistry Lectureship

Dr William Donald, School of Chemistry

Peter W. Alexander Medal

Dr William Donald, School of Chemistry

Athel Beckwith Lectureship

Dr Vinh Nguyen, School of Chemistry

## Engineers Australia Professional Engineer of the Year

Scientia Professor Veena Sahajwalla FTSE HonFIEAust, SMaRT@UNSW

## Australian Financial Review Higher Education Award for Emerging Leader

Professor Emma Johnston FRSN, School of Biological, Earth and Environmental Sciences/ Pro-Vice-Chancellor (Research)

## Westpac 100 Women RI, QÀXHQFH \$ZDUGV

Professor Eileen Baldry, School of Social Sciences

Professor Julie Cogin, UNSW Business School

### Cancer Institute NSW Professor Rob Sutherland AO Make a Difference Award

Professor Minoti Apte OAM, Ingham  
Institute for Applied Medical Research

### Dennis Leslie Mahoney Prize in Legal Theory

Professor Martin Krygier FAHA,  
Faculty of Law

### Women in Law Awards – Academic of the Year

Dr Alexandra George, Faculty of Law

### Australian Professional Society on Alcohol and Other Drugs Early Career Award

Dr Louise Mewton, National Drug  
& Alcohol Research Centre

### Tall Poppy Science Awards

#### ACT Young Tall Poppy Science Award

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Dr Gemma Carey, School of Business –  
UNSW Canberra

#### NSW Young Tall Poppy Science Awards

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Dr Katherine Dafforn, School  
of Biological, Earth and  
Environmental Sciences

Dr Bronwyn Graham, School  
of Psychology

Associate Professor Jason Grebely,  
Kirby Institute

Dr Danielle Moreau,  
School of Mechanical and  
Manufacturing Engineering

Dr Robert Taylor, School of Mechanical  
and Manufacturing Engineering

Conjoint Senior Lecturer Joshua Ho,  
St Vincent's Clinical School

### NSW Fresh Science

Dr Katelyn Edge, School of Biological,  
Earth and Environmental Sciences

Dr Teagan Gale, School of Biological,  
Earth and Environmental Sciences

Dr Alex Patton, Graduate School  
of Biomedical Engineering

Dr Mark Polizzotto, Kirby Institute

Dr Jelena Rnjak-Kovacina, Graduate  
School of Biomedical Engineering

### Fellowship of the Australian Academy of Science (AAS)

Scientia Professor Justin Gooding  
FRACI FRSC FAA, School of Chemistry

Professor Fedor Sukochev FAA,  
School of Mathematics & Statistics

Scientia Professor Toby Walsh  
FAA, School of Computer Science  
& Engineering

### Fellowship of Australian Academy of the Humanities (AHA)

Professor Helen Groth FAHA, School  
of the Arts & Media

Professor Sandra Hale FAHA, School  
of Humanities & Languages

Professor Mina Roces FAHA, School  
of Humanities & Languages

Professor Martin Krygier FAHA, Faculty  
of Law

### Fellowship of the Australian Academy of Health and Medical Sciences (AAHMS)

Professor Richard Bryant AC FASSA  
FAHMS, School of Psychology

Professor Basil Donovan FAHMS,  
Kirby Institute

Professor Greg Dore FAHMS,  
Kirby Institute

Conjoint Professor Simon Gandevia  
FAA FAHMS, Neuroscience Research  
Australia

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## 2016 highlights include:

### Gender equity and diversity

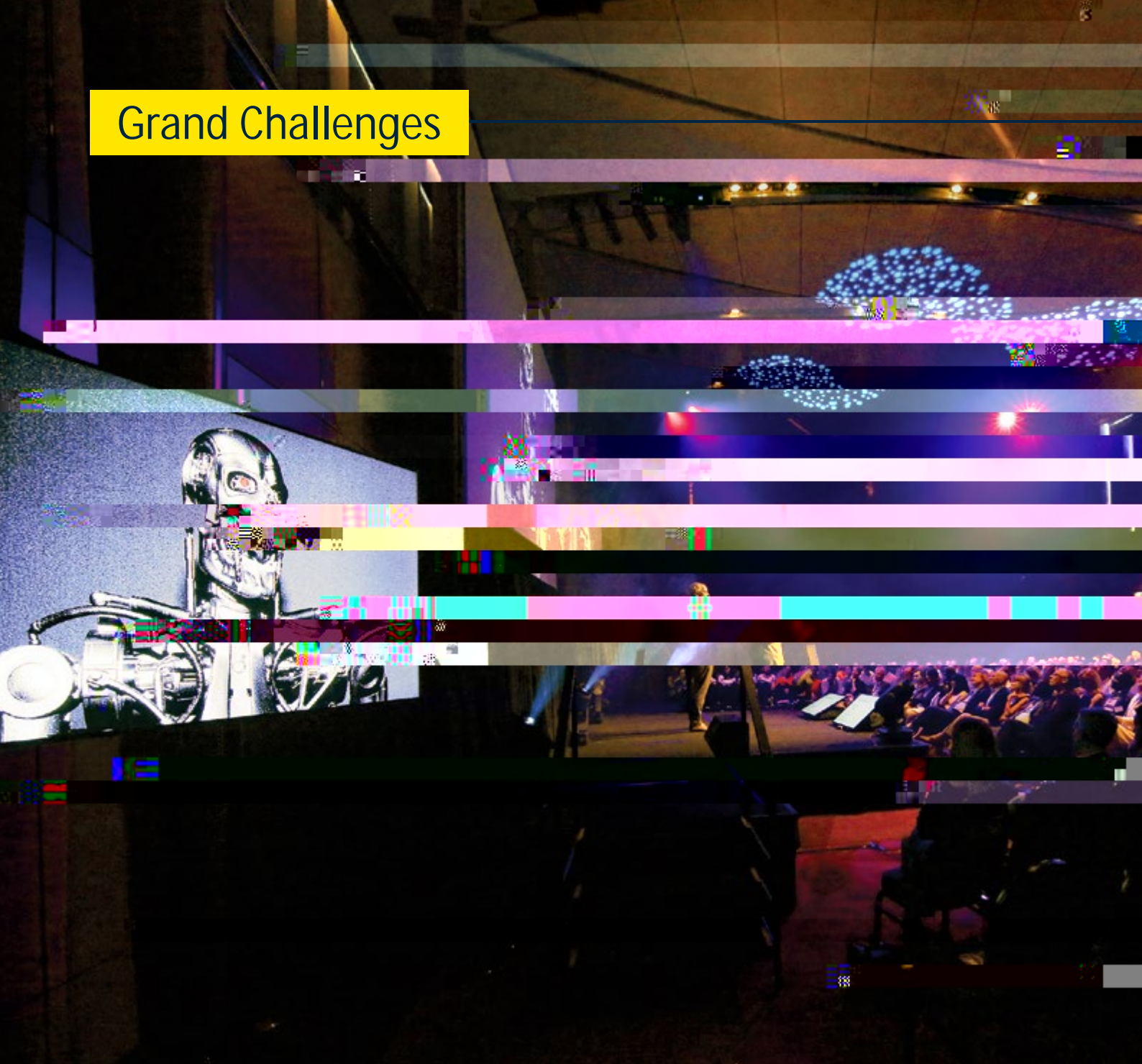
The University took important steps towards fulfilling its 2025 Strategy commitments to equality of opportunity and social justice.

- » A portfolio of Pro-Vice-Chancellor (Indigenous) was announced at the first meeting of the Equity, Diversity and Inclusion Board. Five Diversity Champions were appointed, and an advisory network of staff and student volunteers established to help identify kerolun. 0 -1n<</ActualText<FEFF00BB>>> BDC 8.7519 553257 581(» EMC /T1\_4 1 Tf -0.419 0 Td (»)Tj /T1\_3 1 Tf 0.972

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## Community

# Grand Challenges



## #Focus

Every two years, three new Grand Challenges will be chosen.

## Sleepless in Sydney at the inaugural UNSOMNIA event

Killer robots, disaster recovery, youth depression, climate change and rising inequality were among the pressing global issues tackled at UNSOMNIA, an event to launch UNSW's Grand Challenges program.

UNSW experts were asked "What keeps you up at night" and invited on stage to offer their solutions to some of the 21st century's most complex issues. The Grand Challenges program is a central part of

UNSW's 2025 Strategy to help solve the biggest issues of our time.

The program will include activities around up to six important global themes.



The program is an important element of the UNSW 2025 Strategy and will champion the critical place of universities in public engagement and in leading open and informed debate.

The academics leading the Challenges were selected from the University's highest





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### New Colombo Plan

- » Up to 400 UNSW students received more than \$1.1m in grants under

# Enabling Delivery of Our Strategy

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2016 highlights include:

People and culture

»

**\$681,000**

in Alumni donations and pledges from the annual telephone appeal.

**\$5cn 4**

- » The 2016 President and Vice-Chancellor's Annual Alumni Telephone Appeal was a great success, with about \$681,000 raised in gifts and pledges by 1,545 alumni. The telephone appeal will be expanded and more annual giving opportunities created in 2017.

## Alumni

- » The University continued to work with alumni and community members in events such as the Town and Gown Dinner, the Wallace Wurth Lectures, Meet the CEO events, the Utzon Lecture Series, "So What" lectures and Young Alumni Drinks.
- » A philanthropist novelist, a business leader, a mental health educator and an Australian cricketer were among the high achievers recognised at UNSW's 2016 Alumni Awards. The awards celebrate the success and leadership of ten of the University's most distinguished graduates.

## World-class environments

- » The state-of-the-art Hilmer building was opened in July and is now home to the School of Materials Science and Engineering. Designed by Grimshaw Architects, with input from HDR, Inc. the building was constructed by Brookfield Multiplex for \$143m. The exible environments will help UNSW achieve a world-class environment for research and educational excellence, as envisioned in the 2025 Strategy.
- » UNSW Council approved the nal budget for new buildings totalling \$542.4m, including the Roundhouse Rejuvenation (\$33.8m); Science Engineering (\$210m); Hilmer tout (\$31m); Electrical Engineering (\$104m); Stage 2 of the Biological Sciences building (\$130m); and the Cliffbrook residential campus (\$33.6m).
- » The UNSW Roundhouse was closed for extensive renovation. The character and history of the space will be retained but will there will be signi cant internal and external upgrades. Work is expected to nish in 2018.
- » The UNSW Bookshop at the Kensington campus won the Campus Bookshop of the Year Award from the Australian Publishers Association, the third time in ve years. The award came after UNSW Press's

publishing and sales division NewSouth Books was named Best Small Publisher at the 2016 Australian Book Industry Awards.

## IT LaunchPad

- » UNSW opened the IT LaunchPad, a collaboration and co-design space on level 14 of the Library, accelerating cross-stakeholder discussions and supporting highly technical design activities.

## Light Rail

- » Works continued on the CBD and South East Light Rail with construction commencing on Anzac Parade and University Mall. The Light Rail will provide sustainable and reliable transport from the city to UNSW's Kensington campus. From 2019, services will run every eight minutes to and from Randwick and Kingsford between 7am and 7pm.





# Leadership

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## Management Board (as at 31 December 2016)

President and Vice-Chancellor

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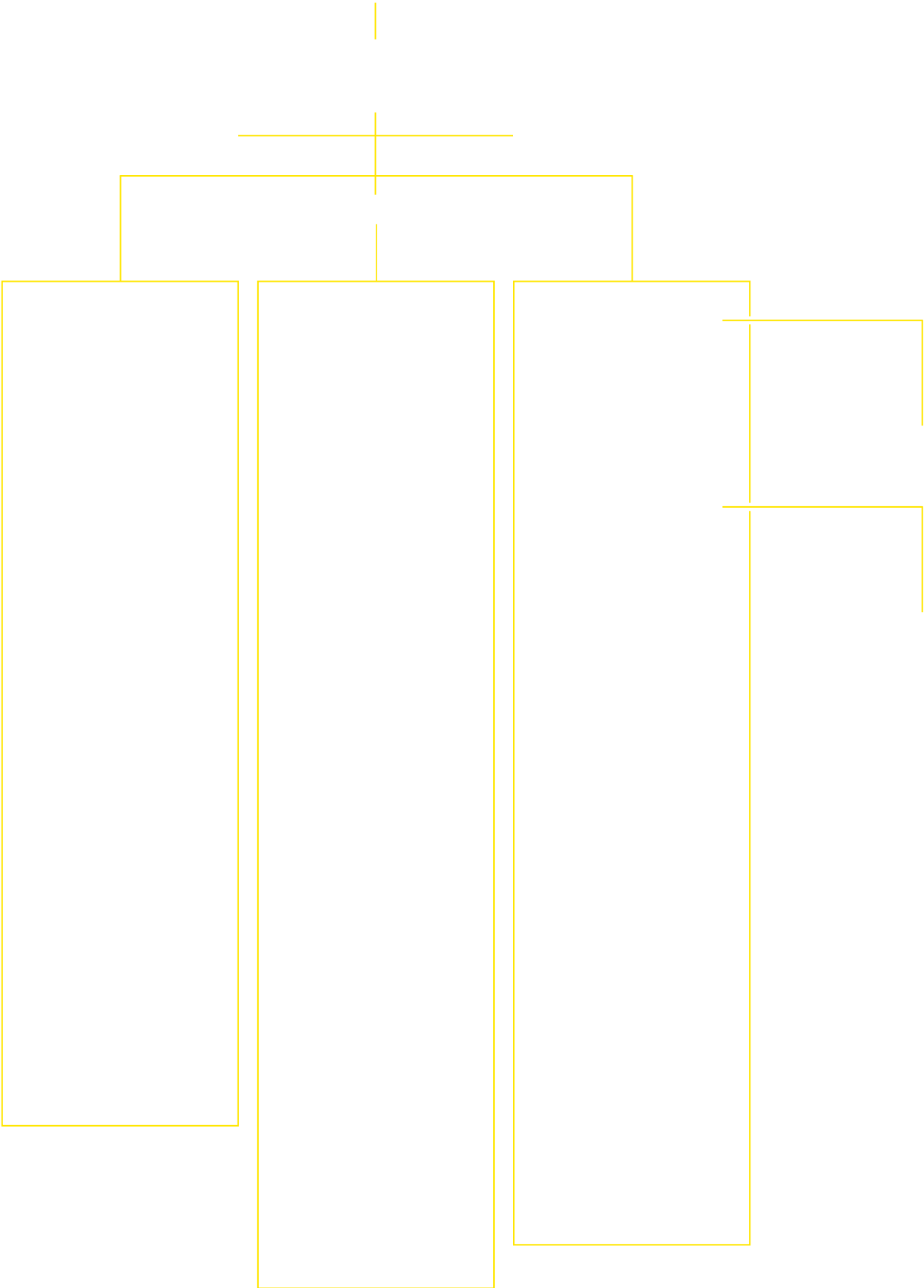
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Hours of business

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.BOZ EFQBSUNFOUT PG UIF 6OJWFSTJUZ PQFSBUF CFZPOE TUBOEBSE CVTJOFTT IPVST

This report is available online at [annualreport.unsw.edu.au](http://annualreport.unsw.edu.au)

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