

**WESTERN SYDNEY**  
UNIVERSITY



# **RESEARCH AND INNOVATION PLAN**

2018-2020



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Western Sydney University is a research institution driven by impact. Our research makes a difference regionally, nationally and globally. We are committed to collaboration with our First Peoples, regional, national and international communities to contribute to their economic, social and environmental well-being.

The 2015-2017 research plan was a watershed for research at Western. Through its pillars of futures, impact and capacity, the 2015-2017 research plan reorientated our research outward while maintaining the research excellence that has underpinned our growth as a research-led University.

The sector itself has taken an outward turn. Australian universities have embraced impact and engagement as they prepare for the first nation-wide assessment of our performance in achieving both. And this is just one of the shifts taking place in the research system. Reforms to the research block grant funding system, to research training, and to government competitive funding schemes, join the assessment of impact in making this period one of profound policy change in the research sector. Through its National Innovation and Science Agenda, the government has signalled a clear intention to couple research activity with industry partnership.

The previous research plan, with its emphasis on shifting our reliance on Australian competitive grant funding and investment in more rigorous processes to support researchers, helped the University absorb these changes and thrive. The 2015-2017 plan implemented central measures like a new Graduate Research School; a reformed central research office, REDI, and a new approach to business development through REDI Business; the appointment of research theme champions to drive interdisciplinary engagement with industry; and new performance metrics. As a consequence, our engagement with industry is the strongest it has been in our history. We have strong PhD enrolments and a growing cohort of Masters of Research students. Western's most recent ERA assessment was its best. The University went from two four digit fields of research to 11 ranked at well above world standard. 80% of our disciplines were assessed at world standard or above.

This plan takes the advances made by its predecessor and drives them through the University, assisting Schools and Institutes to embed the outward facing impetus of the previous plan through coordinated Division, School and Institute activities. We are still driven by impact. This plan ensures this culture is anchored throughout the University.

The structure of the 2018-2020 plan is, therefore, distributed. There are two core plans: Capacity; and Impact and Quality. These plans describe key action areas and supporting projects undertaken by the Division, and set expectations for the activities of Institutes and Schools.

Alongside these plans sit priority area plans for Institute and School Collaboration; Aboriginal and Torres Strait Islander Research; and the Graduate Research School. These supporting plans describe priority areas in the Research portfolio, and were created – and will be led by – the relevant areas.

Finally, the 2018-2020 plan collates all of the School and Institute plans. The Schools and Institutes have themselves created these plans in consultation with the Research Division and in response to the action areas of the core plans. The Schools and Institutes have set their own benchmarks for research performance, and will be responsible for meeting them.

The 2018-2020 plan will further our culture of impact, advance the standing of the University in research and the broader community, and fulfil the University's mission: to be student-centred and research-led.

# IMPACT

# ENVIRONMENT AND SUSTAINABILITY

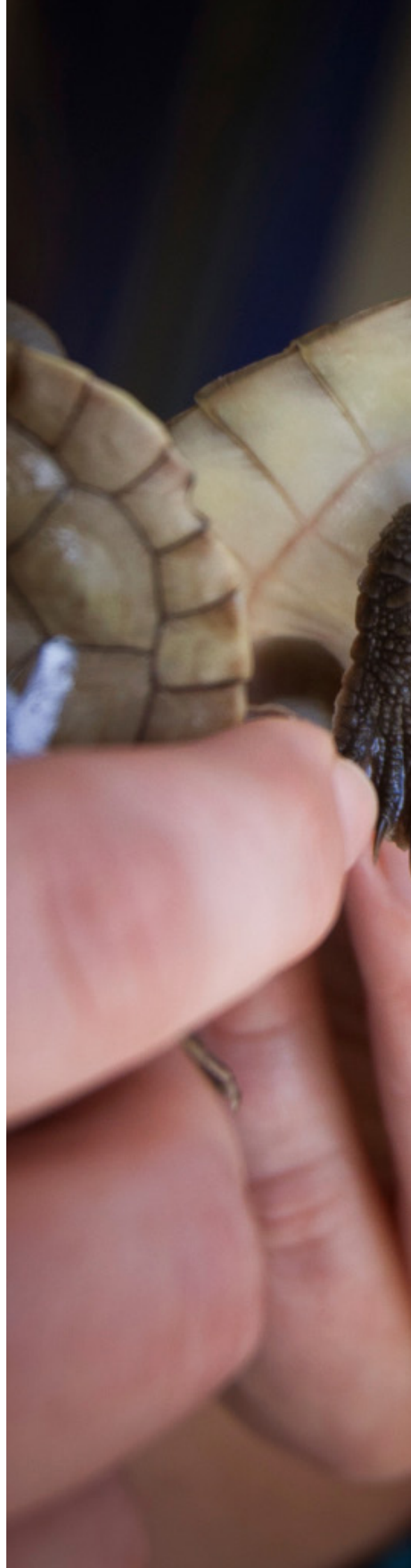
To most Australians who have driven north on the Pacific Highway through NSW, Bellingen is a place to stop off for a bit of North Coast counter culture before braving the holiday traffic. Part of the town's appeal is the Bellinger River, an estuary winding through the town from the hinterland above it.

Most of those passing through don't realise the Bellinger was the site of a devastating extinction event.

Australian freshwater turtles face threats on multiple fronts: foxes, cars, boats, fishing, and wildlife diseases. The Bellinger River Snapping Turtle, found only in the Bellinger River, suffered a catastrophic disease event against a background of climate fluctuations and competition from another more common turtle species, the Bellinger River Turtle. The Bellinger Snapping Turtle is now critically endangered.

Dr Ricky Spencer and his colleagues have formed the WSU Turtle Team (WSUTT) to tackle extinction threats to freshwater turtles across Australia. Their approach is multi-modal. Alongside basic research to clarify species identification, WSUTT has launched an app, TurtleSAT, to mobilise citizen scientists in defence of freshwater turtles. Over 5000 observations of turtles and their habitats have been recorded using the app, leading to better targeting of fox management plans, better road signage to limit car mortality, and the identification of important nesting sites.

And the Snapping Turtle? Ricky and his team, working with government agencies and the local community, collected 17 healthy turtles from the river and transferred them to purpose-built quarantine facilities at Western. These turtles are the hope for the future of the species in the Bellinger.







# CORE PLAN

# CAPACITY

## C.1

### RESEARCH-LED RECRUITMENT

We need to set a new baseline of expectations for academics joining Western.

Orientation for new staff should begin the process of building relationships and setting institutional expectations, binding academics to the University's research mission. At a central level, we can develop better orientation processes for new researchers, including assigning mentors, pre-identification of collaborative research opportunities, and an introduction to REDI before a new researcher commences.

As a normal practice, position descriptions should reflect the need for high-quality, impactful research from all academics.

Our aim is to become an employer of choice for young researchers because we are distinctive, flexible and collaborative.

#### Central Support

- Academic selection panels have representation from a cognate Research Institute for appointments above level C.
- On-boarding process for new academics co-developed between Schools, Institutes and Human Resources.
- Mentoring arrangements with senior professoriate and/or Institute staff from point of hire.

#### School and Institute Expectations

- Clear expectation setting for research outcomes from point of hire, including a career plan for achieving research productivity expectations.

## C.2

### PROFILE BUILDING

A strong, research-informed central media team will better facilitate opportunities for researchers to build profile and disseminate research findings. We need to work in a structured way with our media team to advance research-related stories.

At all appointment levels, it should be expected that academics build their profiles across social media, web, and professional networks. This includes ORCID registrations, Google Scholar profiles and similar activities. These activities form an important part of staff members' professional development and a key link to external stakeholders.

#### Central Support

- Regular meetings with media and events team to ensure research focused media planning.
- Training in the development of engagement and impact narratives to frame approaches to media.
- Improved website profiles for Western researchers.
- Alignment with strategic initiatives to improve international rankings results.

#### School and Institute Expectations

- Academic career plans should include a media strategy that is aimed at generating engagement and impact.
- Schools will appoint academic contacts to act as conduits for story ideas to the central media team and to disseminate media opportunities quickly.
- All researchers have active profiles across a range of platforms, including Google Scholar and ORCID.

## C.3

### RESEARCH IN THE CURRICULUM

While most of our academics have the opportunity to both teach and research, we need to do more to ensure these activities are mutually reinforcing. We need to generate meaningful research experiences for all Western undergraduate students alongside the cultivation of career-relevant research skills.

Western's ongoing curriculum renewal program will create opportunities to revisit the way we embed research and the University's research themes in the undergraduate and postgraduate coursework experience.

#### Central Support

- Research internships for undergraduate students managed through the Graduate Research School. This may take the form of an embedded internships program, and provide a useful pathway into the Masters of Research for students.
- Explore metrics to assess the interaction between researchers and curriculum development.

#### School and Institute Expectations

- Processes within Schools to incorporate research training and research-based assessments as part of any course or program re-development. Directors of Research should take a leading role in this area alongside Directors of Academic Programs, assisted where possible by the Research Institutes.
- Incorporation of senior professoriate and Institute staff in course and program redevelopment to ensure research relevance and rigour.



## C.4

### RED TAPE REDUCTION

Our goal is to create simple, efficient processes for our researchers across the areas that impact on their ability to perform research.

This is a University-wide goal. A number of ongoing reforms are aimed at developing more consistent practices across the institution, rapid adoption of new processes, and better practice-sharing between staff members.

Changes in the way we offer administrative services in the University need to be matched with an understanding of new processes and consistency between central and local activities.

Administrative reforms will present a range of opportunities and impacts for researchers. These will be monitored to ensure staff can freely pursue research opportunities with support when they require it.

#### Central Support

- An approvals and process roadmap to better understand the network of researchers' interactions with the University's administrative processes. This roadmap will assist in identifying 'friction points' across the University, in addition to providing researchers with a guide to important contacts and processes.
- Audit of administrative arrangements to ensure they are working for Western's researchers.

#### School and Institute Expectations

- Easy access to identified School-based resources to support research.
- Practical and consistent information sources across the University for researchers.

## C.5

### WORKLOAD

Research workload is the key input into our research productivity. To ensure that this workload is being allocated effectively and used productively, we need accountability and transparency in workload allocation.

There needs to be consistency both in the form of University work plans and their application. Consistency in work plans across the Schools will facilitate better understanding of performance expectations among staff, and better research outcomes for the University.

#### Central Support

- Reform of research workload arrangements.
- A light-touch "audit" of workload allocations under work plans to assess the consistency of practices across the University and develop indicative research productivity thresholds.

#### School and Institute Expectations

- The School Research Director, or nominee, should be part of the School work plan committee. The same should hold for equivalent roles in the Institutes.

## C.6

### THE NEXT PHASE

Our research capacity has been built through investments in infrastructure and people made in the past. Many of these investments in large-scale infrastructure will, accompanied by commensurate investments in our researchers, bear returns well into the future.

We need to prepare for the next phase of research infrastructure – both hard and soft – to prime our research performance over the next decade. In preparing for this infrastructure and seeking funding to create it, it is unlikely that we will be able to rely on governments as sole funders. Western will need to take its industry orientation and apply it to infrastructure investment.

#### Central Support

- Creation of an interdisciplinary infrastructure taskforce with representation from across the University to produce a ten-year infrastructure plan.
- A new infrastructure bidding process to better prioritise competing proposals.
- An analysis of emerging areas of research strength to identify future University Research Centres and Institutes. This will inform an EOI process.

#### School and Institute Expectations

- Identification of potential funding partners at School and Institute level aligned with University-wide infrastructure priorities.

## IMPACT

# EDUCATION AND ASPIRATIONAL CHANGE

**It might be a truism that it takes a village to raise a child, but most of the time families and communities are left outside the school gates with no way to participate in the education of their children.**

Futuro Infantil Hoy (FIH), a project led by Associate Professor Christine Woodrow from the Centre for Educational Research, addressed the absence of family and community engagement in schools in Chile and Western Sydney.

FIH built peer support for early childhood learning through local, networked communities of practice. Parents were invited to meet with teachers to inform curriculum and pedagogy – not just when their children were in trouble. Through careful and consistent engagement, a new pedagogical model was established that could be owned, adapted and managed by the community. Early childhood centres provided the 'hub' for integration and capacity building among parents, engaging them to be active partners in their child's learning.

The impact of FIH has spread from 20 schools in Chile to 18 pre-schools in Western Sydney, with over 5,000 children and their families – alongside 500 educators – experiencing the benefits of family and community engagement in education, including dramatic increases in language and maths performance.





## HIGHLIGHT

# RESEARCH THEMES

Western's research spans four interdisciplinary themes aligned with internationally recognised strengths, National Research Priorities, and the future of Western Sydney. The themes are complementary, intersecting, and orientate our research to achieve impact for our partners. Research in each theme is future focused and harnesses technologies to drive progressive outcomes.

The research themes run through Western's Schools and Institutes, activating our research in community and industry relevant contexts and the broader Western Sydney region. As platform infrastructure investments are made and governments plan for new urban futures, Western Sydney will play a critical role in the wider city, the state and the nation. The University's research makes an evidenced-based and impactful contribution to civic discourse in this crucial region.

### URBAN LIVING FUTURES AND SOCIETY: PEOPLE, CULTURE, ECONOMY AND THE BUILT ENVIRONMENT

Research within Western's Urban Living Futures and Society theme examines the complex cultural, social, economic, psychological, and environmental forces that are shaping our cities and their liveability. This research considers social relationships, digital disruption, infrastructure development and changes to the built environment through the lens of urban living to understand the connections between key fields such as health, economics, culture, engineering and technology.

The theme works between different research concentrations spread across the University. The Institute for Culture and Society is one of Australia's leading social science and humanities research concentrations, and provides leadership in researching digital cities, equitable economies, mental well-being and cultural diversity. A range of Research Centres and Schools house researchers working in fields such as public health, creative industries, property development, transport, smart construction, architectural design, geography and urban planning.

Western sits at the centre of one of the world's most complex, dynamic and fascinating cities; Sydney is currently undergoing rapid transformation, and Western Sydney is at the forefront of the key challenges in urban development. Allied to the expertise clustered on existing campuses, the theme will use new vertical campuses in Liverpool, Parramatta and Bankstown CBDs to engage in experimental research. Western is a key contributor to, and advocate for, initiatives to bring the community together with all levels of government to support evidence-led decision making in city-building partnerships. The University's researchers generate internationally significant evidence, tools, and theories to tackle our most pressing urban challenges.

### HEALTH AND WELLBEING: TRANSLATION, INTEGRATION AND INNOVATION

Research within Western's Health and Wellbeing theme explores how progressive health initiatives can prevent disease and illness, encourage healthy lifestyles in individuals and communities, and reduce the cost and impact of illness. We take an integrated and inter-disciplinary approach to health research addressing both acute and chronic health needs. Research in this theme recognises that the environments in which people live, their cultural background, and the work they do all affect physical and mental wellbeing.

Despite continuous improvements in medicine and medical care, the need for healthcare is growing. One in four children are overweight or obese. While the amount of Australians smoking has halved since 1991, 12.8% of Australians still smoke. Almost one in five people consume alcohol in such a way that it puts them at risk of an alcohol-related disease or injury. Health and wellbeing are linked. Western's effective, research-led interventions focus on the complex factors contributing to health outcomes.

Western has research expertise across a range of health and medical research specialisations, from e-health service delivery and reaction chromatography diagnostics to translational cancer research and sports science. The NICM Health Research Institute conducts world-leading research into complementary therapies, bridging the gap between these widely used therapies and evidence of their effectiveness. The Translational Health Research Institute conducts research into chronic disease, mental health, Indigenous health, human geography and health services bringing together leading researchers who are oriented to the translation of research into community health services and policy, and concerned with the needs of the individual within a complex health system.

## **ENVIRONMENT AND SUSTAINABILITY: CLIMATE, AGRICULTURE AND LIVEABILITY**

Western's campuses span Greater Sydney's metropolitan cities and its outer urban areas. The University's campuses occupy the traditional lands of the Darug, Tharawal, Gandangarra, Bundjalung and Wiradjuri peoples, and today are thriving living labs for innovation and collaboration through local, national and global research partnerships. While Western's neighbourhood gives it a unique perspective on the interdependence of natural, urban and agricultural systems, our research extends beyond the region and is oriented to the grand challenges and impacts of global environmental change, including those described in the United Nations 2030 Sustainable Development Goals. Research in this theme frames the region's engagement with, and offers innovative responses to, the challenges of food and water security, effective resource management, sustainable cities and climate action.

The Hawkesbury Institute for the Environment leads Western's research into the Environmental Sciences and their application to sustainability. Drawing on the University's unique proximity to areas facing the acute pressures of climate change adaptation and changing land-use, Western undertakes essential research into soil biology, ecosystem integration and function, sustainable agriculture, food security and plant and animal adaptations to a changing climate.

Researchers drawn from across the University work in inter-disciplinary teams at the cutting-edge of their fields and have access to large-scale, innovative research infrastructure to advance global research. EucFACE, the only native forest free air carbon enrichment facility worldwide, allows researchers to field test the effects of increased atmospheric carbon on mature trees. The University's glasshouse research facility is among the most technologically advanced of its kind. The advances in protected and intensive cropping this facility enables are positioning Western Sydney as a global leader in technology augmented food production.

## **EDUCATION AND WORK: ACCESS, EQUITY AND PATHWAYS**

Research within the University's Education and Work theme draws on Western Sydney's socioeconomic and cultural diversity to explore educational access and pathways to employment on a local and global scale. This research theme supports individuals and communities in achieving their economic, social and cultural aspirations through education. Western's research explores education's responsiveness and inclusiveness in the context of rapid social, economic and technological change. Disciplinary experts from fields as diverse as the social sciences, information technology and engineering are drawn together to offer unique and compelling perspectives on contemporary challenges and emerging opportunities for education as a social catalyst. Western's work emphasises the potential for education to transform the way people learn, work and live.

The University's MARCS Institute for Brain, Behaviour and Development has a particular focus on the promotion of improved early childhood learning, focusing on the building blocks of speech and language learning. The Centre for Educational Research is a hub for researchers with a long history of engagement with educational institutions and schools across Western Sydney and beyond. Improving STEM literacy is a critical priority under this research theme, as is the pivotal role of the humanities and arts in optimising educational frameworks and outcomes in a digitally disrupted era.

As Western Sydney's economy increasingly transitions to knowledge intensive and service industries, education must evolve to support it. There is a need for effective, comprehensive and evidence-based education at all levels. Research under this theme looks to identify innovative and integrated responses to current and emerging issues in education from both a regional and global footing.



## IMPACT

# HEALTH AND WELLBEING

### What if your spice rack held the answer to Alzheimer's disease?

One promising avenue of research into the causes of Alzheimer's disease suggests that neuroinflammatory processes might be at play. But the anti-inflammatory drugs we normally use to treat other conditions are ineffective against neuroinflammation. If we can find a new kind of drug, we may be able to treat not just Alzheimer's, but a range of neurodegenerative diseases where inflammation is a factor.

The NICM Health Research Institute is leading research into the effectiveness of a novel drug class, cytokine suppressive anti-inflammatory drugs. These drugs are based on natural anti-oxidant compounds such as lipoic acid, resveratrol, curcumin (a chemical contained in the spice Turmeric) and apigenin. It appears these compounds may suppress the response of immune cells in the central nervous system, reducing neuroinflammation. The NICM Health Research Institute's early research in this field was foundational, developing new techniques to analyse the potency of a variety of anti-inflammatory compounds.

Early signs are promising. Other research groups are also testing the efficacy of cytokine suppressive drugs with some success, and large integrated medicine pharmaceutical companies are in the market with products.







# HIGHLIGHT

# RESEARCH THEME CHAMPIONS

Theme Champions are Western Sydney University academics tasked with expanding team-based, cross-disciplinary research practices across the University's research themes.

## Theme Champions

- create flexible team structures for collaborative research
- develop an overarching vision for their research theme connected to society's grand challenges
- increase research output and impact in complex and interdisciplinary research areas
- increase awareness of, capacity within, and alignment with the research themes.

## KEY ACTIVITIES

### THEME STORMS

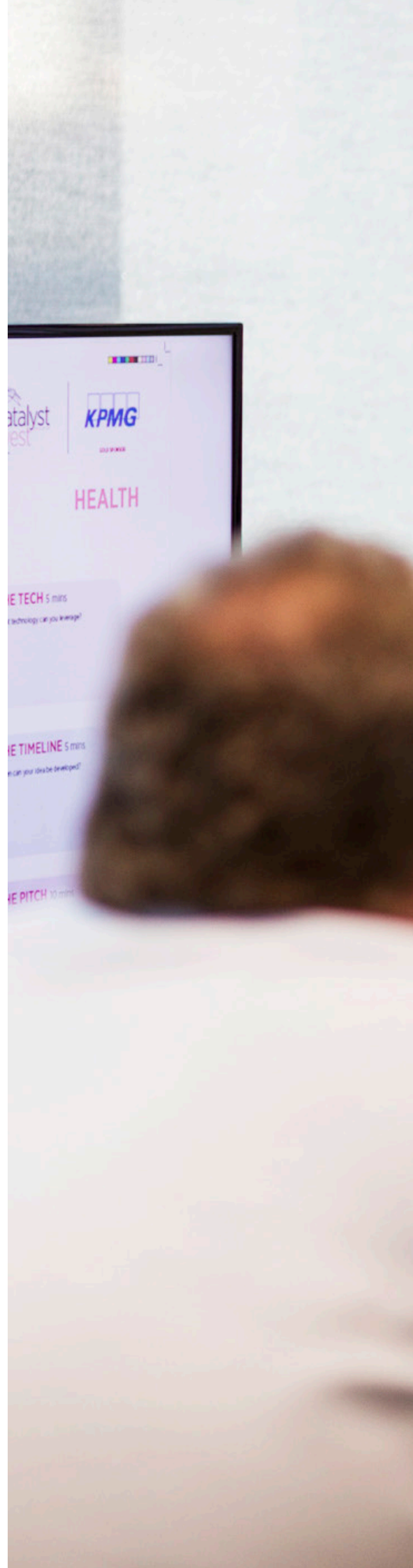
Theme Storms bring together key academics working within a theme area to discuss collaborative research programs and funding opportunities. They also serve as a discovery session for Western's academics to map out research areas of mutual interest.

### THEME FELLOWS

Theme Fellows support the research programs initiated by the Theme Champions. One fellow has been appointed for each theme.

### SEED FUNDING

The theme champions have access to a pool of funding to accelerate existing and seed new collaborative research projects.





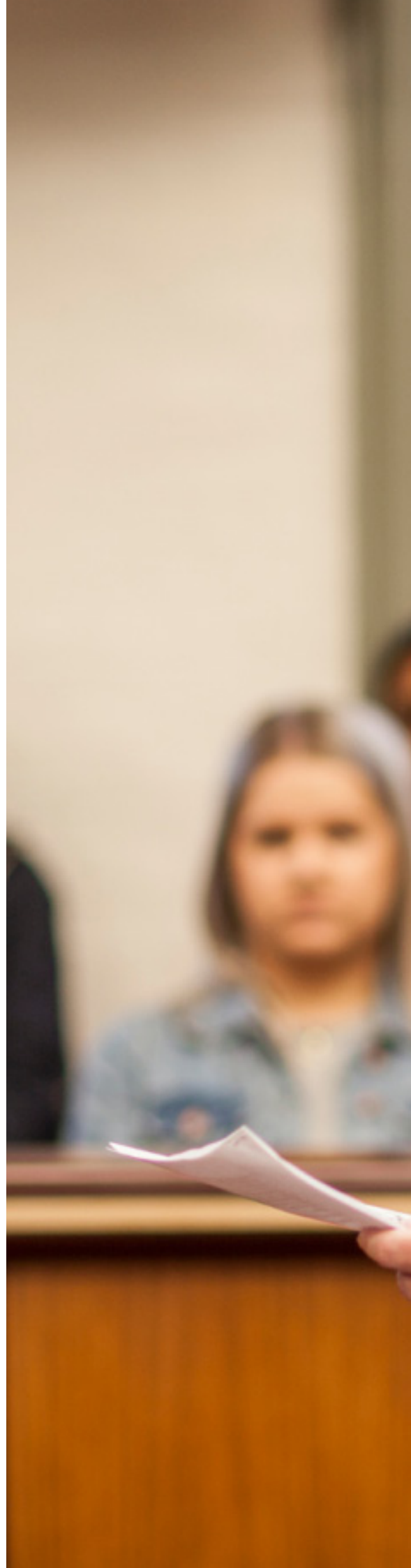
## IMPACT

# URBAN LIVING

**Justice is meant to be blind. But what if it turned out that the court room itself influenced the verdict a defendant received? Western's Justice Research Group, led by Professor David Tait, has been working on a suite of projects that show that the way a defendant appears in court can prejudice juries.**

In most Australian courts the defendant sits in the dock – a separate section of the courtroom away from the accused's legal team and others in the court. Typically, the dock is separated from the courtroom by a partial barrier. Sometimes, if a defendant is under threat or considered a threat, they appear behind a full glass barrier. David and his team have provided vital empirical evidence that placing defendants behind a dock or a glass barrier rather than at the bar table with their solicitor makes it more likely they will be found guilty.

What is the solution? Courts have to strike a balance between security and fairness, and can be reluctant to abandon current practices at further cost. The Justice Research Group is working on a project it believes could be the next step: expanded use of videolink participation in what it calls the Distributed Courtroom.







## CORE PLAN

# IMPACT AND QUALITY

## IQ.1

### EMPOWERMENT

We need to find a balance between encouraging researchers to be independent in their pursuit of opportunities and maintaining proper processes and accountability. Researchers should not feel they need permission to seek external relationships or explore research partnerships with other institutions. At the same time, researchers should not expect all such activities to be facilitated for them centrally.

We also need to provide support to researchers so that they can pursue the right opportunity – be it the project size, income, or long-term potential of the partnership on which that assessment is based.

#### Central Support

- An opportunity response framework with a risk assessment basis to streamline administration – low risk, low approvals required; high risk, more significant approvals and support.
- A best practice guide for costing research and establishing research contracts.

#### School and Institute Expectations

- Schools and Institutes employ a pre-existing permissions framework under which staff can pursue contract and business engagement opportunities.
- There should be members of the professoriate within each discipline who are identified to advise junior staff in pursuing research opportunities where they arise.

## IQ.2

### COLLABORATION

The theme champions are generating interest and opportunities from a range of researchers and external stakeholders. The means by which they are doing so is not complicated: genuine, purposeful engagements that gather like-minded researchers together deliver successful collaborations. These are principles we want to use to seed more research collaborations across the University: simple, repeatable and authentic engagement.

We can apply these principles to our international partnerships. We have a range of formal agreements with universities around the world. We can put flesh on these international connections through practical research partnerships.

#### Central Support

- A central project register that connects researchers across the University to collaborate on ongoing and prospective research projects. This register will be available and searchable for all academic staff on the University's intranet.
- Explore the establishment of new and support existing international joint research centres in areas of research strength.
- Align international research engagement with priority markets to leverage undergraduate recruitment presence. Priority markets include China, India, and Vietnam.
- Review the processes we use to discover research opportunities and promote those opportunities to researchers.
- Solutions for partnership management.

#### School and Institute Expectations

- Research seminars led by the professoriate will be regular fixtures on the academic calendar.
- Strong international visitor programs.

## IQ.3

### METRICS

There is a need to establish consistent quality metrics that can usefully guide researchers. At the moment, Schools use a mix of indicators; some use none. These indicators, sensibly applied, can assist us in raising quality standards across all disciplines. Western aspires to all four digit FoRs being ranked at world standard or above by 2021's ERA.

If, as an institution, we are concerned with increasing the quality of our publications (and limiting the extent of research that we contribute to relatively unrecognised journals) then we have to set clear metrics. We also need systems that support easy access to accurate data and reporting for all staff – not only to assess performance, but to assist in career development.

#### Central Support

- Guides to the most useful quality metrics.
- A quality rating in measures of research output such as the Research Effort Framework.
- A cross-disciplinary taskforce to guide the selection, use and presentation of quality research metrics.
- A new research management system.

#### School and Institute Expectations

- Quality metrics should form part of career planning for research productivity.

## IQ.4

### CAREER

Research relevant career planning is essential to setting performance expectations for academic staff. This needs to happen between supervisors and staff members, where research productivity expectations are discussed, set, and accountability is established.

#### Central Support

- Tools for research career planning, including the Research Career Footprint ,to assist researchers in understanding how to advance their aspirations.

#### School and Institute Expectations

- A research plan needs to be incorporated in the career planning process for all staff members.

## IQ.5

### CELEBRATION

Research Week has been successful in raising awareness of Western's research. But there is a need for more dispersed and more frequent opportunities to celebrate the research achievements of colleagues.

#### Central Support

- A Research Scholars' dinner in alignment with major grant announcements.

#### School and Institute Expectations

- Within the School, research profiles, impact narratives and/or new research projects will be promoted in internal School and Institute communications.

# IMPACT

# ENVIRONMENT

# AND

# SUSTAINABILITY

Coal mines have an impact on the water ways that surround them, but until recently, the government only regulated a handful of these impacts. In the Sydney Basin, this has led to hazardous levels of heavy metals in waterways – including waterways flowing through the Blue Mountains Heritage Area.

Dr Ian Wright's work on the impact of coal mining on the Georges and Wollongambe Rivers has led to better regulation of wastewater discharge impacts from coal mining. To make this change, Ian had to work with government, industry and concerned community stakeholders. By focusing on consensus and evidence, Ian and his team have made breakthrough changes to the health of rivers in Sydney.

One of these changes is improved water quality and aquatic life in the Georges River. The improvements in aquatic life include signs that sensitive freshwater macroinvertebrates (such as mayflies, caddisflies and stoneflies) are returning to the Georges River to reaches that were previously contaminated by mining wastewater. Public reporting of contamination testing required under EPA licence conditions shows substantial reductions in contaminants such as salinity, cobalt, copper, lead, zinc and manganese.







# CORE PLAN | PRIORITY AREA

# GRADUATE RESEARCH SCHOOL

Higher Degree Research is undergoing change across the sector.

There is increased pressure for on-time completions and an indication from government that there will be little, if any, increase in funding. Further, the issue of research impact and translation has become a focal point for government, who want to know they are receiving value for their investment in research training.

Combined with an increasingly diverse cohort of international and domestic students (including age, motivation and experience), there is a need for graduate schools to both respond to and anticipate the challenges ahead.

## GR.1

### RESEARCH CULTURE

An expanded program of shared activities will drive greater collegiality for HDR students and provide vital candidature information.

An effective research culture will assist candidates to complete on time; but it should also prepare students for their careers post-thesis. HDR students need to be ready for changing cultures of work, both within and between academia and industry. Alongside research project-based activity, increased industry networking for HDR candidates is essential to their career preparation.

#### Central Support

- Continuing suite of workshops and research training.
- Cohort development activities, including 'meet the dean' and knowledge translation sessions.
- Boot camps run regularly alongside skills workshops timed to critical periods of the HDR experience.

#### School and Institute Expectations

- Increase engagement between HDR students and industry partners through research projects (including contract research projects) and event-based activities.

## GR.2

### SKILLS DEVELOPMENT

The Graduate Certificate in Research Engagement, Development and Impact will formalise a number of credentials currently received during the HDR candidature, creating a new qualification.

It is expected that the graduate certificate will better structure the HDR experience, lead to increased on-time completions, and will better prepare students for academic and other professions.

Students come to HDR study from diverse pathways. Often, a candidate's highly developed skills in a disciplinary area will need to be supplemented with the acquisition of new skills and improved competencies in key areas.

#### Central Support

- Delivery, coordination and quality oversight of core course components.
- Co-development of communications plan with select industry partners to road-test industry-relevance and promote the graduate certificate.
- Development of diagnostic tools to assess commencing students' literacy and numeracy skills.

#### School and Institute Expectations

- Co-delivery of award through workshops held at Institute and School level.
- Continuing award development, with potential for disciplinary specialisations.
- Co-development of authentic disciplinary numeracy and literacy units delivered flexibly.

## GR.3

### FUNDING SCHOLARSHIPS

With a narrowing Research Training Program funding base, the University will continue to explore alternative ways of funding new HDR scholarships. This includes scholarships based on industry funding with an industry placement component.

A key component of securing research training funding from industry is the development of ongoing relationships with clear reciprocal value. Industry internship programs and co-supervision arrangements that demonstrate the worth of working with HDR candidates will build bandwidth in industry scholarships.

#### Central Support

- Deliver internship unit to promote greater industry engagement.
- Develop a simplified procedure for

administering industry scholarships.

- Work with Advancement and Alumni to identify potential philanthropic funding opportunities.
- Develop guidelines and support for industry-based supervisors, including a register of industry supervisors.

#### **School and Institute Expectations**

- Seek alignment between industry-funded research projects and HDR candidates, increasing internships.
- Actively seek industry funding for HDR study as part of large industry contracts.

## **GR.4**

### **INTERNATIONAL**

To increase our international connections and standing, the GRS will seek expanded dual award arrangements with a number of international universities based on areas of shared research strength.

More dual awards will strengthen our institution-to-institution connections. Better access to international scholarship schemes will increase outbound opportunities for our HDR students and improve our attractiveness to international candidates.

Working with the International Office, the GRS will develop an international recruitment strategy aligned to International's key target markets and existing relationships.

#### **Central Support**

- Develop International recruitment strategy.
- Manage and oversee dual award process with support from International and REDI.
- Identify high value regions and partners to develop dual awards.
- Co-develop guidelines for supervising off-shore students.

#### **School and Institute Expectations**

- Develop international contacts to promote MOUs, collaboration and dual awards.

## **GR.5**

### **SYSTEMS**

The GRS' first phase of systems reforms have led to major improvements in the student experience. The GRS is committed to the next phase of systems improvements as major new backend infrastructure for students is rolled out across the University.

#### **Central Support**

- Prioritise high impact systems improvements for the student experience, including examinations, HDR candidate progression, and thesis submission.
- Develop service performance measures, outcomes and procedures with REDI and benchmark them with leading sector practice.

#### **School and Institute Expectations**

- Advise on the implementation of improved systems and procedures to manage the HDR experience.
- Monitor and feedback on areas of improvement.

## **GR.6**

### **MASTERS OF RESEARCH**

Western's Masters of Research is one of the leading degrees of its kind in the sector. The University will continue to improve the integration of the MRes across the University, including through increased industry connections and block mode delivery of program elements to better service Aboriginal and Torres Strait Islander students.

#### **Central Support**

- Delivery, coordination and oversight of the MRes..
- Delivery of core units and support.
- Coordination of School/Institute involvement in MRes.
- Implementation of block mode delivery.

#### **School and Institute Expectations**

- Continue to promote the MRes, with improved uptake of program and development of pathways to the MRes within undergraduate programs.

## **GR.7**

### **SUPERVISION**

The GRS will continue to communicate regularly with supervisors concerning developments in the research training sector through channels such as the Supervisor Digest and Supervisor Forums.

The GRS will expand its supervisor development program alongside increased capacity for comprehensive supervisor performance data and reporting.

#### **Central Support**

- Expand supervisor development to include identifying external sponsorship opportunities and best practice HDR recruitment, among other emerging areas of supervisor practice.
- Develop systems to better identify, reward and/or address supervisor performance.

#### **School and Institute Expectations**

- Take an active role in monitoring progression and completions for supervisors, implementing support programs to assist supervisors in improving progression and completion.



## IMPACT

# HEALTH AND WELLBEING

**Western Sydney faces an epidemic of diabetes. Western Sydney's diabetes hospitalisations are almost twice that of the rest of Sydney. In the health districts of Western Sydney over half the population is overweight or obese.**

Diabetes costs the Australian health system around six billion dollars every year. Interventions that lower rates of illness and reduce costs here in western Sydney, the diabetes frontline, will work Australia-wide.

Professor David Simmons and a team of researchers from Western Sydney University are working with clinicians from hospitals and general practices across western Sydney to end the epidemic. Their goal: lower rates of diabetes in western Sydney through initiatives to prevent obesity, diabetes and associated complications.

David and the team are taking a threefold approach. Prevent diabetes in relation to other illnesses and conditions, including pregnancy, retinopathy, nephropathy and cardiovascular disease; educate health professionals in diabetes management; and support those with the illness to self-manage.

One project—Reducing the Impact of Diabetes in the Samoan Community—is supported through the University's Translational Health Research Institute (THRI). David is working with the Samoan community's church network, Local Health Districts and Primary Health Networks to reduce the diabetes epidemic in this community.





# CORE PLAN | PRIORITY AREA

## INSTITUTE AND SCHOOL COLLABORATION

Institutes will provide flexible interdisciplinary connections in research between the Schools, and scaffold a range of research-based interactions in teaching, staff recruitment, and orientation across the University.

To achieve this, the Institutes will collaborate as a group as well as with cognate Schools. The Institutes will guide the co-development of a research mentoring program, a research-focused on-boarding experience for new staff, and disseminate grant development expertise alongside other reforms and areas for action.

Many of the actions outlined under this plan build on and extend current practices undertaken by Schools and Institutes to increase collaboration.

### CN.1

#### GOVERNANCE

Routine governance relationships between Institutes and Schools will generate a mutual stake in decision-making, an increase in co-working opportunities, and shared objectives.

Ex-officio appointments across Institutes and Schools will ensure that both have a voice in, and mutual responsibility for, collective decision-making.

##### Central Support

- A new working group of Research Institute and School research leaders will be formed to assist the Institutes in acting in concert on matters that require collective action.

##### School and Institute Expectations

- The aligned Research Institute Director (or nominee) will be appointed to appropriate academic unit research and/or executive committees.
- The relevant senior academic leader from the Schools (or nominee) will be appointed to the Research Institute Executive, and/or key strategic planning forum.

### CN.2

#### TEACHING

This plan aims to increase the visibility of the teaching contribution of the Institutes alongside ensuring a more strategic deployment of their teaching capacities.

Like all staff, Institute staff should contribute to the teaching programs of the Schools according to their strengths and expertise. The Institutes' primary focus is research. Areas such as research-informed course design, industry placement coordination with research partners, research internships and undergraduate research opportunities accord with the expertise of the Institutes. Schools will be expected to take advantage of this expertise when acquitting the teaching requirements of the relevant work unit.

##### Central Support

- It is expected that Institutes will fulfil the 20% workload commitment to teaching/teaching related activity for each eligible staff member.

##### School and Institute Expectations

- Institutes may explore, in consultation with relevant Schools, running intensive courses, masterclasses, taking a role in executive education programs and/or developing masters by course work programs.



## CN.3

### RESEARCH TRAINING

Co-supervision arrangements between Schools and Institutes generate opportunities for Institute-based HDR students, access to accomplished researchers within Schools and Institutes, and the development of larger and more diverse HDR networks. While these arrangements are already common between Schools and Institutes, they should be strengthened and extended.

#### Central Support

- Wherever possible and where appropriate, HDR students will have a supervision panel comprising Institute and School-based academics.

#### School and Institute Expectations

- Students will be able to access activities and resources across the Schools and cognate Institutes in which they are enrolled.
- Further, HDR students should be able to access the industry partner network of Institutes and Schools through co-supervision arrangements, internships, or, where relevant, for end-user assistance in research design.

## CN.4

### RECRUITMENT

Expectations of research performance and an understanding of the University's research culture need to be fostered in new staff when they start with Western Sydney University. Schools and Institutes should participate in building the research capacity of the University through recruitment and selection processes. Joint School and Institute input into the selection process will establish collegial links with new staff from the time of recruitment.

Joint appointments between Schools and Institutes will build working points of contact and establish broader collegial networks. The Institutes will employ a range of appointment and secondment structures that improve staff flows between Schools and Institutes.

#### Central Support

- All Institute academic appointments at level B or above will have a School representative on the appointment panel. Subject to capacity, the reverse will apply for School-based appointments at level C or above.

#### School and Institute Expectations

- The Research Institutes and their cognate Schools will co-develop a research induction process for new staff. As part of the process, new staff members at C or below will be assigned a research mentor from either the aligned Research Institute or the School Professoriate.

## CN.5

### GRANT DEVELOPMENT

The Research Institutes lead Western's competitive grant success. The processes, knowledge and networks that have been built in grant development will be more broadly shared to seed increased grant success across the University.

#### Central Support

- The Institutes will collectively develop grant development masterclasses that will be made available to the University on a regular basis timed to grant application timelines.

#### School and Institute Expectations

- Wherever there is capacity, Institutes and Schools will take part in the peer-review of grant applications for colleagues, and will mentor ECR grant applicants through the stages of the grant application process.



## IMPACT

# URBAN LIVING

The experience of young people in contemporary Western Sydney rarely appears in fiction and poetry. Writers from the region – due to disadvantage and diversity – have fewer opportunities to work in their chosen field.

**The Writing Western Sydney project is changing that.**

The Writing Western Sydney Project engaged with arts organisations and young writers in Western Sydney by establishing the Western Sydney Writers' Workshop (the Workshop) in 2007. The Workshop nurtured and enabled young writers in the region to develop and represent the literary voices of Western Sydney. These writers wrote Western Sydney into Australian literature.

Led by Professor Ivor Indyk, four emerging writers – Luke Carman, Michael Mohammed Ahmad, Felicity Castagna and Fiona Wright – engaged with School-aged writers in the community to build confidence and capacity. Sweatshop, the intensive writing program they developed together, has created a virtuous cycle, engaging disadvantaged young people with an interest in writing, many of whom continue to university study.







## CORE PLAN | PRIORITY AREA

# ABORIGINAL AND TORRES STRAIT ISLANDER RESEARCH STRATEGY

This strategic intent addresses three interwoven aims to recognise, preserve and advance Aboriginal and Torres Strait Islander Peoples' knowledge systems at Western Sydney University. The first is to recruit, enable and facilitate the development of Aboriginal and Torres Strait Islander individuals as researchers. The second is to build and embed excellence in research co-created with Aboriginal and Torres Strait Islander individuals, communities and organisations across the university and its partners. The third is to build organisational capacity to frame the first two.

Our vision is to recognise and build a community and culture where Aboriginal and Torres Strait Islander researchers and research thrives, focused on a series of themes that have been identified, refined, activated and endorsed through a process including with our Elders on Campus, specified research fora, students, staff, external collaborators and the wider community. By taking this holistic and inclusive approach, Aboriginal and Torres Strait Islander students, staff and supervisors will choose Western Sydney University to study, work and grow to fulfil their capacity for excellence.

This intent recognises the knowledge, strength, contribution and experience that Aboriginal and Torres Strait Islander Peoples bring to the entirety of the research endeavour and establishes a frame of reference regarding the ongoing development of this research agenda for Western Sydney University.

This intent is strengths-based, and aims to harness the aspirations and expressed objectives that frame the development of researchers and research capability which supports and strengthens individuals, their workplaces, communities and the University as a whole.

Moreover, the intent asserts principles for research that build on best practise exemplars of Aboriginal and Torres Strait Islander research and practice. We focus on the need for the immediate contribution of research to wellbeing and capacity, based in recognition of and respect for the knowledge and input of Aboriginal and Torres Strait Islander individuals, communities and organisations.

## WORKING WITH AND FOR COMMUNITY: PRINCIPLES OF RESEARCH EXCELLENCE

Universities Australia states that:

Culturally competent research relies on having mechanisms in place to ensure that research is culturally safe and of benefit to Indigenous peoples and the community from which the research is drawn.

It is imperative that Aboriginal and Torres Strait Islander research generates positive impacts for individual, social, and national wellbeing. Highlighting and driving best practice in Aboriginal and Torres Strait Islander research provides models for appropriate and impactful research more broadly.

### Central Support

- The development of the University's research themes considers regional, national and international priorities for Aboriginal and Torres Strait Islander research.

### School and Institute Expectations

- Researchers apply principles of best practice.
- Researchers understand the intellectual property and cultural implications of Aboriginal and Torres Strait Islander research in a digital environment.
- Researchers manage data in culturally appropriate ways.

## HELPING OUR PEOPLE TO BE THEIR BEST: BUILDING THE ABORIGINAL AND TORRES STRAIT ISLANDER RESEARCH WORKFORCE

Individual Aboriginal and Torres Strait Islander researchers bring a diversity of histories, skills, and capacities to their academic careers. This Strategy recognises and responds to that diversity through a strengths-based and holistic approach that focuses on the development of clear and appropriate pathways for researchers, understanding these pathways will differ according to educational experience.

### Central Support

- HDR and undergraduate programs and services are aligned to create pathways across the academic spectrum.
- HDR recruitment and scholarships identify and attract our best researchers.

### School and Institute Expectations

- HDR students are appropriately supported across their program of study.
- HDR supervisors are equipped to encourage and nurture excellence.
- The number of Early and Mid Career Researchers is increased.

## BUILDING BETTER FRIENDS, ALLIES AND WORKPLACES

The institutional and academic culture within which researchers work frames their capacity and development.

Western Sydney University prides itself on its Indigenous Graduate Attribute. However, academic staff members seek the competence and capacity to appropriately deliver this attribute. There is therefore great opportunity, desire, and need to develop staff competence in this attribute across teaching, research, and supervision.

Both individuals and the organisation share a responsibility to articulate expectations of cultural competence and enhance its application.

### Central Support

- The University recognises Aboriginal and Torres Strait Islander knowledge systems within the context of intellectual property and copyright.
- Ethics processes include consideration of and representation by Aboriginal and Torres Strait Islander Peoples.
- The visibility of Aboriginal and Torres Strait Islander research is enhanced.

### School and Institute Expectations

- All staff undertake cultural competence development.
- Academics confidently deliver the Indigenous Graduate Attribute in all aspects of their HDR programs.

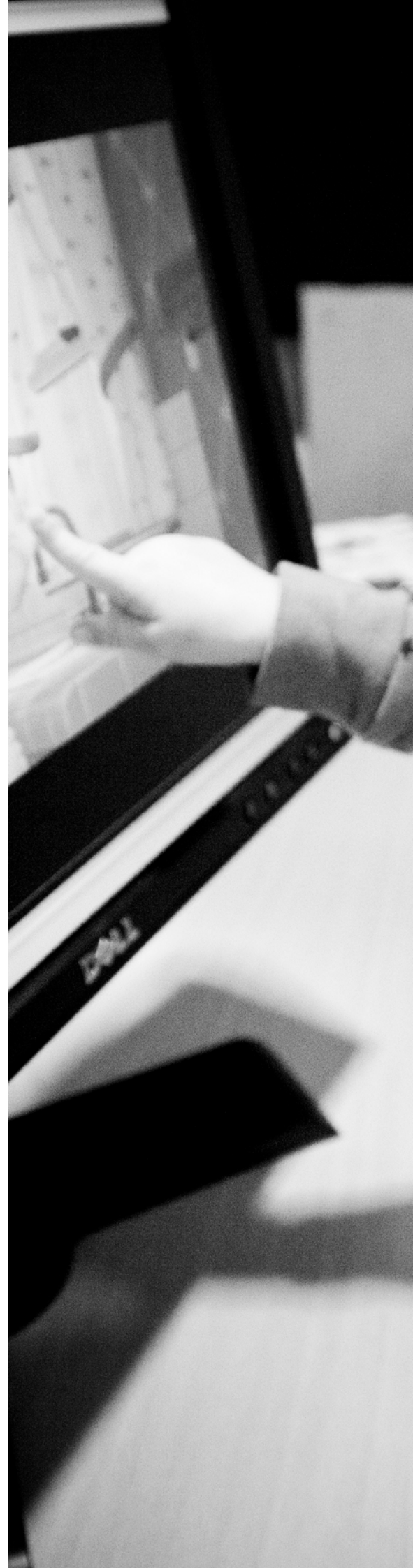
## IMPACT

# EDUCATION AND ASPIRATIONAL CHANGE

Western Sydney University's BabyLab research program has led the world in exploring the earliest emergence of language and communication in infants. The BabyLab harnesses experimental techniques and insights from psychology, neuroscience and the language sciences to expand our understanding of how language develops and how language development can be assisted through interactions between caregivers and infants.

The BabyLab has changed our understanding of how early and how well infants tune in to speech patterns and words in their native language(s). Now, we can offer new tools in fields such as speech pathology. One of these tools is OZI, an Australian English checklist for infants aged 12-30 months. Using OZI, parents and professionals can measure infants' early communicative and linguistic development – something that was, in Australian English, impossible before.

Prior to the BabyLab, there were relatively few studies of very early language development in infants of mothers with postnatal depression, in infants from low SES families, or in infants exposed to tonal languages (spoken by half of the world's population), and dyslexia (reading difficulty) was thought only to be identifiable once the child had arrived in school. Western Sydney University's research from the BabyLab has made ground-breaking progress in all these areas, and is best known internationally for expanding our understanding of the characteristics and use of infant-directed speech (or 'baby talk', which features slower speech rate, exaggerated intonation, and hyperarticulated vowels); and how to reliably measure early vocabulary.





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