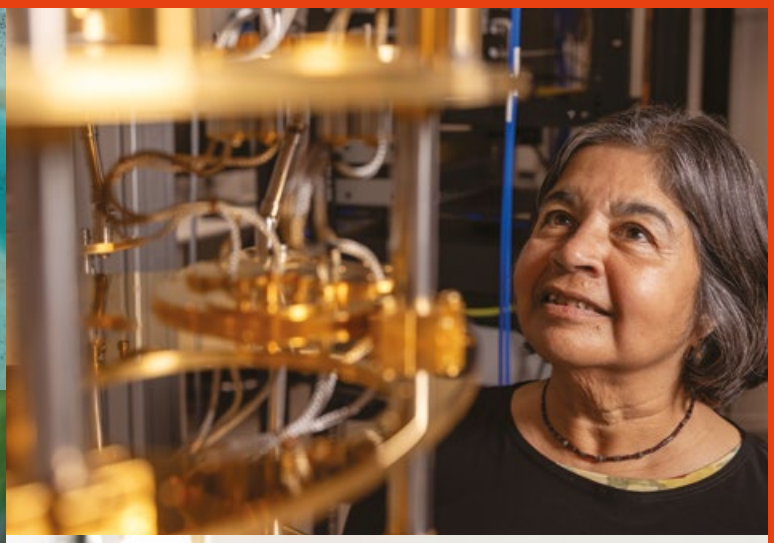
Faculty of Science

THE UNIVERSITY OF SYDNEY

Strategic Plan 2026-2028



Acknowledgement of Country

Ngyini ngalawangun mari budjari Gadinurada.[1]

We meet together on the very beautiful Gadi Country.

The University of Sydney's Camperdown Campus sits on the lands of the Gadigal with campuses, teaching and research facilities on the lands of the Gamaraygal, Dharug, Wangal, Darkinyung, Burramadagal, Dharawal, Gandangara, Gamilaraay, Barkindji, Bundjalung, Wiradjuri, Gureng Gureng and Gagadju peoples.

We recognise and pay respect to the Elders and communities of these lands, past and present, who for thousands of years have shared and exchanged knowledges across innumerable generations, for the benefit of all.

We respect and value the knowledges, cultures and traditions of Aboriginal and Torres Strait Islander peoples. There is no place in Australia – water, land or air – that has not been known, nurtured and loved by Aboriginal and Torres Strait Islander peoples.

We acknowledge that people identify by their Clan, Mob and/or Country. For the purposes of this document, we respectfully refer to Aboriginal and Torres Strait Islander peoples as Aboriginal and Torres Strait Islander throughout, First Nations as a collective and Indigenous in reference to programs or data only.

Artwork: *Sharing Knowledge* by Yaingayaingarra.

1. The language of the Gadigal is used in our acknowledgement of Country in recognition that the University's first campus at Camperdown sits on Gadigal land. We acknowledge Ray Davison Snr, Cameron Davison, Joel Davison and Professor Jakelin Troy who contributed to the One Sydney, Many People Strategy's use of language that we follow in this strategy.

Contents

Leadership foreword

We are living through a profound acceleration. Artificial intelligence (AI), automation and data-rich technologies are reshaping how knowledge is produced, how decisions are made, and how societies understand truth. In this context, the role of science is ever more important—and the role of humans in shaping science, ever more critical.

If you're wondering whether these words—or this strategy—were written by me or by generative AI, the honest answer is both. AI aficionados will spot the em dashes in this foreword, characteristic of today's language models. I could have edited them out, but I've come to appreciate their value, and I've started to use them myself. AI learns from humans, but we can learn from AI too.

Generative AI is new, but science has ancient roots. Philosophers from Aristotle to Galileo grounded scientific thinking, and this method of understanding ourselves and the universe around us has evolved over millennia. More than a set of techniques, science is a disciplined way of paying attention: of asking better questions, testing assumptions and building evidence people can trust. That is why our faculty exists: to push knowledge forward, nurture curious minds, and serve our communities with evidence they can rely on—so discovery delivers lasting benefits for people and the planet.

Science endures because it is reflexive to new knowledge and capabilities. Science evolves. What does not change is that humans decide the direction of travel for science—what we study, why it matters, and how we use what we learn to make wise choices. Accordingly, investment in science must focus on the human qualities that matter most in this new era: curiosity, commitment and care.

This strategy maps a three-year journey towards an ambitious horizon: by 2032, we aim to be ranked number one nationally across all our science disciplines. This ambition is not a vanity metric; we pursue it because Australia needs world-class science as both engine and conscience. Critically, we believe we can achieve it.

This strategy comes down to doing the important things well: giving students a great education and a strong start to their careers; supporting the deep, curiosity-driven research that underpins future breakthroughs; and working with industry, government and community partners to make sure our science is useful in the world.

An important focus of our strategy is deepening engagement with First Nations communities. We are at an early stage in understanding how our work can respectfully honour Indigenous Knowledges, and how these ways of knowing can strengthen scientific practice and impact. Realising this in a meaningful way depends on growing First Nations representation in our faculty community. We are committed to creating a culture where Aboriginal and Torres Strait Islander students and researchers feel at home in our faculty.

Culture pulses beneath everything we do. Culture is what will sustain our performance over time. Culture is about people. I'm reminded of a moment early in the strategy development process. I walked into a workshop room where the questions had been laid out carefully on each table, and butcher's paper smoothed onto the walls, ready to be filled. Over the following hours, people pressed handwritten Post-it notes onto the paper one by one: hopes, concerns, bold ideas, hard truths. That thoughtfulness and care is embedded through every sentence of this strategy, and it will be essential in bringing it to life.

This strategy is both a statement of who we are and where we want to go, and an invitation to join us on this journey. Our success will be shaped not only by what we discover, but by how we choose to work, learn and lead, together.

The future of our faculty will not be written by generative AI. It will be written by our people.

Professor Marcel Dinger
Dean of Science

Who we are

Our purpose

We exist to advance science, grow curious minds and serve our communities with knowledge they can trust. When we bring together our research, our teaching and our partnerships around this purpose, discovery becomes more than just an idea on a page – it becomes an enduring benefit for people and for the planet.

What we value

Our values guide how we behave, make decisions and work together. As part of the University's *Sydney in 2032* strategy, our institutional values of **excellence**, **trust and accountability** provide a strong and consistent foundation across the faculty in how we teach, research and lead.

As a Faculty of Science, united by scientific methodology and a focused commitment to education and research, we are also guided by values that are intrinsic to our disciplinary DNA. **Curiosity**, **care and commitment** reflect how we approach discovery, support our students and colleagues, and pursue impact with integrity and purpose.

Our values in practice

University of Sydney values

Excellence

We pursue outstanding performance in service to our communities. Excellence is reflected in continuous improvement and academic rigour across education, research and professional practice.

Trust

We actively create an inclusive and collaborative environment where people feel respected and supported. Trust is built through integrity, transparency, open communication and constructive feedback.

Accountability

We take responsibility for our decisions, actions and outcomes. Accountability means setting clear expectations, engaging in candid conversations, learning from experience and sharing both successes and lessons learned.

Faculty of Science values

Curiosity

We are driven by a relentless desire to ask questions, solve problems and explore new ideas. Curiosity fuels discovery, interdisciplinary thinking and innovation, and encourages us to challenge assumptions and embrace change.

Care

We care deeply about our students, our staff, our work and making positive impact. We act with empathy, respect and professionalism, creating an environment where people feel supported, included and able to do their best work.

Commitment

Our commitment to our students, staff and our work is reflected in how we lead and deliver. We work with courage, pragmatism and integrity, making decisions that are principled, practical and focused on long-term impact.

Our schools

Our eight schools are the disciplinary heart of our faculty, and home to our academic workforce of more than 1500 researchers, educators and Higher Degree Research (HDR) candidates. Led in partnership between Heads of School and School Managers, and supported by our professional services teams, the academics and HDR candidates in our schools educate students across our core disciplines, lead and progress our research, and provide discipline-specific strategic direction and leadership.

School of Chemistry

Australia's first dedicated School of Chemistry – at the forefront of innovative research and education that tackles challenges in health, energy and sustainability.

School of History and Philosophy of Science

Offering the top-ranked program critically investigating science by integrating philosophical, historical and social perspectives.

School of Geosciences

Shaping a sustainable future by addressing climate change, resource management and sustainability through interdisciplinary insights from Earth's deep past to present.

School of Life and Environmental Sciences

Understanding life at its core and harnessing our disciplinary breadth to solve global challenges in the fields of climate change, sustainability, biodiversity, health and food security.

School of Mathematics and Statistics

The top-ranked mathematical sciences school in Australia (and among the largest), offering a culture of research excellence and dynamic learning environments.

School of Psychology

Conducting world-leading psychology research that advances knowledge, improves society and enhances people's lives.

School of Physics

The leading physics department in the country, leveraging world-class facilities and global collaborations to explore the universe's mysteries.

Sydney School of Veterinary Science

Ranked 1st in Australia for Veterinary Science, championing world-class education and research to make a global impact on animal health and welfare.

Our centres

Our faculty centres bring together a critical mass of complementary expertise to lead research and education. They connect and align capabilities across disciplines, providing strategic direction and serving as visible focal points for collaboration and partnership with industry and the community.

Sydney Institute of Agriculture

Sydney Mathematical Research Institute

Sydney Institute for Astronomy

Centre for Complex Systems

Institute of Medical Physics

Key Centre for Polymers and Colloids

Marine Studies Institute

Poultry Research Foundation

Dairy Research Foundation

Psycho-oncology Co-operative Research Group

Plant Breeding Institute

Centre for Veterinary Education

Sydney Precision Data Science Centre

Institute of Photonics and Optical Science

Centre for Medical Psychology and Evidence-Based Decision-Making

Our faculty

Our faculty teams provide strategic, academic and operational leadership, supporting the delivery of education, research, engagement and partnership activities across our schools and centres. Through effective governance, planning and service delivery, our faculty teams enable us to operate cohesively and respond to evolving academic and institutional priorities.

Our faculty

Capability	Our student-focused education is transformational
Leadership	• Associate Deans: Education; Student Life • Director of Academic Leadership and Innovation • Heads of Portfolio: Education; Partner Engagement and Outreach
Events, communication and networking	• Student events, prize nights and newsletters • *The Faculty Has Your Back* program • Supporting student societies • Careers Month and employability support • Education-focused Community of Practice
Training and programs	• Student professional development and leadership training • Peer mentoring program • Employability programs • Casual Academic Training Program • Staff Learning and Teaching workshops and training
Specialist support and funding	• Student enquiries and academic advising • Case management of progression, academic integrity, appeals and non-standard admissions • Institutional policy and project integration • Curriculum governance • Course proposals and reviews • Systems and process support • Coordination of honours and faculty units
External engagement	• Student placement and Work Integrated Learning (WIL) management and support • Relationship management for industry partners • Outreach and pipeline development programs

Our research is excellent and contributes to the common good	Our community thrives through diversity and we are valued as outstanding partners	A better place to work and a place that works better
• Associate Deans: Research; Research Education • Heads of Portfolio, Research & Research Training; Partner Engagement and Outreach	• Associate Deans: Community and Culture; Indigenous Strategy and Services • Heads of Portfolio: Partner Engagement and Outreach; Strategic Partnerships and External Engagement; Research & Research Training • Faculty External Advisory Board	• Deputy Dean • Heads of Portfolio: Executive Services and Facilities; Remote Sites and Operations; Partner Engagement and Outreach
• Faculty Research Mission Symposia • Researcher Weekly newsletter • Faculty HDR candidate ball and conference • Grant Establishment Pack • Research Administration Community of Practice • HDR welcome and onboarding initiatives • HDR candidate events, prizes and newsletters • Science HDR Hub • Three Minute Thesis competition	• Supporting Gadigal, My Sydney and Dalyell and international student cohorts	• Faculty newsletter, social media, intranet and internal communications • Faculty staff awards and prizes • Faculty Teaching and Learning Showcase • Faculty Shout-Outs initiative
• Impact Catalyst training program • Grant Writing Navigator workshops • Research student skills workshops	• Partnership development workshops • Strategic Promotion Advice and Mentoring (SPAM) program	• Faculty Professional Staff Lunch and Learn development program
• $500K faculty funding towards competitive grant support packages across discovery and translational research • Strategic grant reviews and post-award support • Research and HDR data insights, analytics and reporting • HDR admissions • Faculty centre governance and reporting	• Supporting major prize entries • Liaison for donor and alumni relations • Gift implementation • Science communication specialists • $100K faculty EDI research support funding schemes	• Faculty infrastructure planning and development • Facilities, remote sites, space and infrastructure management • Liaison for major campus projects • School reviews and reporting • Service navigation • Digital and enterprise solutions • Safety, risk and emergency management • Faculty governance and compliance • CAPEX advocacy and facilitation
• HDR recruitment and scholarships • Translational research pipeline development • Research promotion and media support • Research impact case studies and campaign development • HDR candidate careers panels • Development and management of research partnerships	• School outreach programs • Khuda Women in STEM, Tahgara and Gadalung outreach programs • Event and public program management • Faculty scholarship development and recruitment • Liaison for government and industry engagement • Partnership development and relationship management • Strategic sponsorships • Centre for First Nations Community and Practices	

Science by numbers

A HISTORY:

1882
The Faculty of Science established

1890
First dedicated science building constructed

1924
Physics building constructed

1951
First female PhD graduate, Dr Eleanor Clara Gyarfas

1956
Australia's first supercomputer, SILLIAC, built: 10 miles of wiring and weighing 5 tonnes

FACULTY COMPRISED OF:

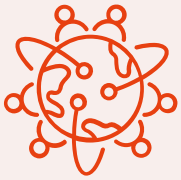
8 schools

3705
continuing, fixed-term and casual academic and professional staff

13,964
undergraduate and postgraduate students

GLOBAL ALUMNI:

73,000+
engaged global alumni across 130 countries



STUDENT SOCIETIES:

SciSoc is the University's largest student society

2661 members

POSTGRADUATES:

79.4%

2024 HDR graduates in employment in 2025

79% female
80% male

IN THE FIELD:

1 Great Barrier Reef research station

2 satellites in space

5300
farming hectares

4400+
head of livestock

RESEARCH:

16,122
research publications in the past 5 years

$495M+
research income 2020–2024 (categories 1–4)

1685
HDR candidatures, including 1495 PhDs (past 5 years)

$214M+
philanthropic funds raised since 2019

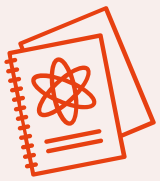
OUR FOLLOWING:

Social media following of

35,000

across Instagram, Facebook, X and LinkedIn

ACADEMIC EXCELLENCE:



20
Fellows of the Academy of Science

7
academics on the Clarivate Highly Cited Research list (2025)

12
active spinouts

Ranked 1st in Australia for Veterinary Science
(QS World University Rankings 2025)

Ranked 1st in Australia for Mathematics
(QS World University Rankings 2025)

Where we are going

By 2032 we are ranked #1 nationally, across all our science disciplines.

Our vision for 2032 is bold and ambitious: to be recognised as **Australia's number-one Faculty of Science across all our core disciplines**. This is not an abstract aspiration. It is a statement of confidence in the quality and impact of our education, research and our people, and an acknowledgement of our unique responsibility in shaping Australia's future.

How we focus our time, energy and resources over the life of this strategy will be critical. We are confident this ambition is achievable because we are building from strong foundations – within our schools, across the faculty and as part of one of Australia's leading universities.

Science today

Today, the Faculty of Science is already a place of national leadership and global relevance. Two of our eight schools, the School of Mathematics and Statistics and the Sydney School of Veterinary Science, are ranked number one in Australia, reflecting their exceptional strength in both education and research. These achievements demonstrate what is possible when disciplinary excellence is matched with strong leadership, sustained investment and a clear sense of purpose. Importantly, we believe this potential exists across all our schools, supported by an extraordinary community of academic and professional staff.

As a cornerstone faculty within the University of Sydney, one of Australia's highest-ranked universities, we benefit from strong institutional support, world-class infrastructure, a deep network of local and international partners, and highly engaged alumni and donors. Our location in Sydney further strengthens our position: an iconic global city offering access to vibrant and culturally diverse communities, industry and innovation ecosystems, beautiful natural environments and a stable democratic context that attracts talent and investment.

Our research foundations are equally strong. The faculty is home to two nationally significant Centres of Excellence in quantum security and protein engineering, which together have secured approximately $70 million in research funding over the coming seven years. These centres position our faculty at the heart of Australia's knowledge ecosystem in areas of national importance. We are also supported by a vibrant cohort of more than 1000 HDR candidates, who are our engine of discovery, innovation, education and future leadership.

Our capacity for impact is expanding rapidly. The Sydney Biomedical Accelerator, opening in 2028, will bring together leading researchers working at the interface of discovery and translation, in partnership with the Sydney Local Health District and Royal Prince Alfred Hospital. The Sydney Launch Fund – a sector-leading $25 million pre-seed fund – provides researchers, students and alumni with access to the risk-tolerant capital needed to turn ideas into high-impact ventures. In education, the faculty is a key driver of the $100 million Khuda Women in STEM Program, expanding access to STEM education for high school students and strengthening the pipeline of women into science over the next 25 years. We are also national leaders in embedding artificial intelligence into teaching, ensuring our students are prepared for the realities of a rapidly changing world.

Science tomorrow

While we are building from a position of strength, achieving our ambition demands an uplift in performance and sustained excellence over time. We must continue to deepen our science education, producing confident, job-ready graduates with strong disciplinary foundations, a clear understanding of Australia's historical context and an appreciation of First Nations knowledges. We need to improve student satisfaction and graduate employment outcomes, ensuring our educational excellence is reflected in our student feedback.

We must grow our research capability, increase our global citation impact and strengthen pathways to translation, including spinouts, patents and policy influence. To do this, we must attract and retain the best and brightest students and researchers from around the world, and we must create the cultural and built environments that enable them to do their best work.

Finally, we must strengthen how we partner and engage beyond our faculty with industry, government, communities, and our donors and alumni. We must improve how we engage and partner with Aboriginal and Torres Strait Islander communities to ensure our work benefits them and advances our commitment to reaching population parity of 3.8% in our faculty staff and student cohorts. We must also embrace the challenge of building future scientific leadership that is mission-driven and focused on real impact.

Science together

We will achieve our ambition by focusing on six integrated strategic priorities:

Science ignites

Sparking passion and launching bold careers in STEM

Science inspires

Creating the next generation of problem solvers

Science discovers

Driving fundamental research in science

Science amplifies

Unlocking and accelerating our research impact

Science cultivates

Uniting, growing and empowering our community

Science elevates

Raising the profile of our work so it lifts up others

We will attract outstanding students from diverse backgrounds and support them to translate their scientific training into impactful careers. We will do this by strengthening pathways from study to work, expanding industry-embedded learning, and ensuring our graduates are recognised as adaptable, ethical and future-ready.

We will deliver a deep, contemporary science education shaped by teaching excellence, innovation and care. By investing in our educators, we will improve student experience, learning outcomes and satisfaction so that our graduates feel equipped to tackle the complex challenges of today and the future.

We will advance world-leading discovery research that expands the frontiers of knowledge and addresses issues of national and global significance. By building depth, collaboration and coherence across disciplines, we will strengthen our research reputation and long-term research impact.

We will translate discovery into real-world benefits through stronger industry partnerships, policy engagement and support for entrepreneurship. We will also prepare our HDR candidates for diverse, high-impact careers across academia, industry, government and beyond.

We will foster a values-led, inclusive and high-performance culture that supports our people to thrive. Strong and visible leadership, capability development and alignment will underpin sustainable excellence.

We will deepen engagement with partners, donors and alumni by creating meaningful opportunities for them to contribute to shared goals that advance science-led progress for Sydney, Australia and the world.

Science *ignites*

Sparking passion and launching bold careers in STEM

Today

Today, Science at Sydney is home to a vibrant community of almost 14,000 undergraduate and postgraduate students, and over 1000 HDR candidates. Our students choose us for our immersive, world-class teaching and research environment in Sydney, Australia – one of the most iconic and liveable cities in the world.

Joining us from more than 90 countries, from regional and remote communities across Australia, and from across Sydney, our students bring diverse backgrounds and include first-in-family-to-attend-university high school leavers, as well as those balancing work and family commitments.

Our students are full of ambition and build careers of astonishing breadth. Many move into research, policy, analytics, conservation and entrepreneurship, while others go on to create entirely new industries. Their success shows the enduring reach and impact of a science degree.

While we are proud of our student community, we know there is scope to improve representation and better meet student needs. Learning thrives when our students feel confident in their study choices, well supported, and are connected to peers, mentors and the wider scientific world. Our students tell us that their learning environment matters and is essential in shaping their relationships, confidence and future pathways.

Tomorrow

- Our students graduate with industry experience, employer networks and the confidence to launch bold careers.
- Our partners and employers actively seek our graduates because they are recognised as curious, creative and highly capable.
- Our classrooms are inclusive, energising spaces where every student feels seen, respected and inspired to learn.
- Our students and HDR candidates live and breathe science, building relationships in connected environments across our campuses.
- Our students and HDR candidates know where and who to turn to for support and they trust their challenges will be met with care.
- Our students and HDR candidates feel a deep sense of belonging, connection and purpose, knowing they are valued members of our science community.
- We have closed the gap in Aboriginal and Torres Strait Islander representation across our student and HDR cohorts, creating a community that reflects the full diversity and strength of the lands on which we learn.

Together

We will embed employability and make career pathways visible from Day 1 of every science student's university journey.

We will redesign and strengthen our student-advising model, delivering coordinated and consistent guidance that students trust.

We will proactively seek to understand and deliver on our students' and HDR candidates' expectations, clearly communicating the value of our science education and training.

We will create learning spaces that foster belonging and collaboration, so our students and HDR candidates can achieve their full potential on campus.

We will equip our staff with the resources needed to support diverse student cohorts, ensuring an inclusive and responsive learning environment.

‘Studying science at the University of Sydney has challenged me to think critically and apply my learning in meaningful ways. My degree has given me a strong foundation while encouraging curiosity, problem-solving and a deeper understanding of how science can contribute to real-world outcomes.’

Samantha Tozer, Bachelor of Science (Data Science) and Bachelor of Advanced Studies student

Supporting student success in Science

Our teams support student belonging and success through programs that build connection, confidence and wellbeing across each student’s journey, while preparing our graduates for their future careers. Our student engagement initiatives, such as *The Faculty Has Your Back*, *Peer Mentoring* and *STEMtember* careers month, help students navigate university life, build relationships with their peers, and empower them with the networks and knowledge to make confident and ambitious decisions about their careers.

Science *inspires*

Creating the next generation of problem solvers

Today

There has never been a more exciting time to study science, and our offerings are among the most comprehensive in Australia. Sydney Science students choose from majors spanning Physics, Medicinal Chemistry and Wildlife Conservation, and learn across a distinctive footprint extending from metropolitan Sydney to Taronga Zoo, our farms in Narrabri, Western Sydney campuses and our One Tree Island research station on the Great Barrier Reef. Learning unfolds every day in labs, clinics, animal hospitals, local communities and coral reefs.

We lead the sector in how we use artificial intelligence (AI) to support learning, guided by educators deeply committed to student success. Innovation is embedded across our entire education workforce and our Casual Academic Training Program (developed through our 2024–25 Strategic Plan) has strengthened consistency and quality in how tutors and demonstrators support learning.

Our education workforce is also expanding. We have welcomed a host of new education-focused (EF) academics and Postgraduate Teaching Fellows, who, alongside our strengthened faculty leadership in education, reflect our sustained commitment to excellence in teaching.

But we know we can do more. Employers value science graduates with disciplinary depth as well as the confidence to work across fields. Science students want clearer connections between their learning and skill development, with academic feedback that supports their growth. As our education workforce evolves, we have a critical role in supporting and integrating our educators, while foregrounding Indigenous knowledges and perspectives.

Tomorrow

- Our graduates have the breadth, depth and strong scientific foundations that employers value.
- Our graduates are empathetic, culturally curious and understand the historical context of the lands on which they learn.
- Our graduates are known for their creative, responsible and ethical use of emerging technologies.
- Our educators are leaders in using emerging technologies to enhance student learning.
- Our students value, learn and grow from the feedback they receive.
- Our educators have the capacity to teach creatively, lead with empathy and build strong relationships with students.
- Our faculty exemplifies an integrated academic ecosystem that nurtures, supports and celebrates outstanding educators.

Together

We will redesign our science degrees and core curriculum to strengthen foundational knowledge, embed Indigenous knowledges and support successful transition into university learning.

We will enable our academic workforce to represent Indigenous knowledges through a Community of Champions for Indigenising Curriculum.

We will develop new approaches to assessment that encourage constructive and ethical engagement with AI and enhance learning outcomes.

We will launch a future-focused feedback campaign giving students clear, practical guidance to strengthen their learning across their studies.

We will progress our Creative Capacity Project, freeing up academic time to teach with creativity and enhance strong relationships with students.

We will create clear development and promotion pathways for our EF academics and connect our education workforce to share best practice and continuously improve teaching quality.

We will celebrate excellence in teaching, amplifying the transformational impact of our educators.

‘I love seeing students engage with a challenge we set for them, and grow academically, professionally and also personally throughout that journey, and then apply that as leaders out in the world.’

Dr Sabin Zahirovic, Unit of Study Coordinator for Earth, Environment and Society (GEOS100), School of Geosciences

From classroom experiment to faculty-level innovation in AI

Associate Professor Uri Keich, School of Mathematics and Statistics

When Associate Professor Uri Keich, a leading mathematics researcher, realised that generative AI could complete many of the assessments in his second-year statistics unit, he recognised a turning point for teaching. Rather than resisting the technology, Uri chose to work with it, integrating AI into tutorials, assessments and labs. Uri's classroom experiments led to his taking on the faculty Academic Lead role for AI and assessment in 2025 to ensure our teaching programs securely assess student achievement, and to inform how AI can be used transparently and responsibly to improve teaching and learning.

Casual Academic Training Program (CATP)

Education Portfolio, Faculty of Science

Our casual academics, as tutors and demonstrators, are often the primary touchpoint for our students and play a vital role in shaping student learning in science. Complementing school training programs, the CATP equips our tutors and demonstrators with the skills, knowledge and confidence to provide science students with the support they need and an exceptional learning experience.

Science *discovers*

Driving fundamental research in science

Today

Fundamental research is about curiosity. It is the work of asking big questions without always knowing where the answers may lead. Discoveries in fundamental science shape our everyday lives: penicillin, lasers and nuclear medicine are innovations we depend on, but emerged through curiosity rather than seeking application to known problems. While the path from discovery to real-world impact is often unpredictable, history shows us that sustained commitment and investment in fundamental science consistently delivers extraordinary benefits over time. Fundamental research is central to who we are as a faculty, and our diversity is our strength. Our researchers produce outstanding, globally significant science across fields including quantum computing, agriculture and drug discovery. Through our Faculty Research Missions they push the boundaries of knowledge, tackling some of the biggest questions in science. Guided by talented academic leaders, and supported by our community of more than 1000 HDR candidates, they turn bold ideas into groundbreaking discoveries.

However, funding discovery science is becoming more challenging. Its value is not always immediately apparent beyond academia, and the costs of research continue to rise. At the same time, Australia's ambitions in innovation and economic leadership demand a highly skilled STEM workforce, yet the scholarship model supporting our HDR candidates is under growing pressure. Additionally, our academic community is spending more time than ever on non-academic activities, limiting their capacity for the curiosity-driven deep thinking essential to transformational discovery and providing high-quality supervision for the next generation of scientists. And while our heritage-listed buildings are a defining feature of our main campus, they constrain our ability to undertake modern science research.

Tomorrow

- Fundamental science is widely understood and valued as a cornerstone of national progress, resilience and economic strength.
- Our fundamental research is resourced by a diversified, resilient and sustainable funding base.
- Our research community is connected through mission-driven, multidisciplinary collaboration.
- Our researchers have clear and supported pathways that sustain a strong STEM talent pipeline, from HDR candidates to established scientists.
- Our academics have time and capacity for curiosity-driven discovery and high-quality supervision.
- Our research takes place in contemporary facilities that enable multidisciplinary research excellence.

Together

We will champion the value of discovery research through compelling storytelling that clearly communicates its context and potential for long-term impact.

We will provide faculty-level support for large, multidisciplinary grant applications that enable ambitious, mission-driven research.

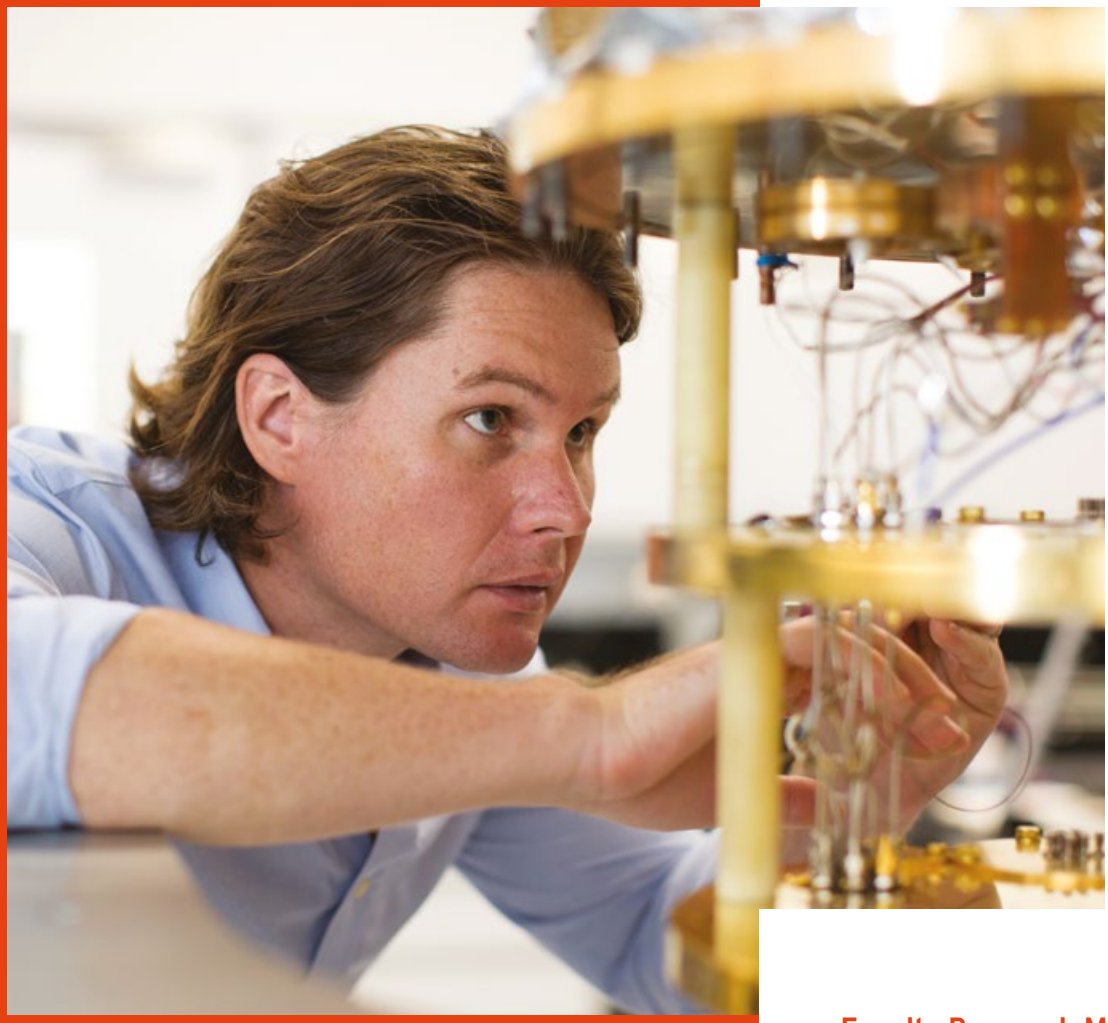
We will strengthen collaboration by delivering Research Mission symposia that connect our research community across the faculty.

We will deliver high-quality training and support for HDR candidates and their supervisors, strengthening research capability and graduate outcomes.

We will advocate for the essential role and contribution of HDR candidates within our academic ecosystem.

We will free up academic time for deep thinking, discovery and supervision.

We will develop faculty-level principles to prioritise and position us for future infrastructure investment.



‘Fundamental, curiosity-driven research is the foundation of innovation, cementing our understanding of how nature works and throwing up counter-intuitive surprises. It is on top of these foundations that we develop the technologies that underpin our modern way of life and power the world’s economies.’

Professor David Reilly, CEO Emergence Quantum, School of Physics

Faculty Research Missions

Our Faculty Research Missions unite our research around four bold themes:

1. Expanding the frontiers of science
2. Improving health and wellbeing
3. Enabling a sustainable and resilient world
4. Innovating for tomorrow’s industries

The missions focus our efforts on where science can make the greatest impact. Developed through deep consultation with our academic community, our missions make our research more accessible and encourage interdisciplinary collaboration across our research community and partners.

Science *amplifies*

Unlocking and accelerating our research impact

Today

Our faculty is home to some of the University's and the nation's most impactful innovations. From million-dollar spinouts with global reach to patents that shape entire industries, our researchers work with industry, government and communities to translate discovery into real-world outcomes. Their work spans communication technologies, food security, targeted therapeutics, environmental resilience and community services. Our graduates carry this impact forward into leadership roles across policy, entrepreneurship, industry and the public sector.

Our faculty is distinguished by the breadth and depth of its expertise. As one of the most comprehensive science faculties in the southern hemisphere, we bring together expertise across the physical, life, environmental and mathematical sciences. Our multidisciplinary culture allows us to address complex challenges end to end, from fundamental discovery through to application, and positions us at the centre of Australia's innovation system.

This opportunity is strengthened by our global context. Sydney is widely recognised as a stable, connected and attractive destination for long-term investment in research and innovation. The faculty sits at the heart of this ecosystem, supported by proximity to major research infrastructure and innovation precincts that enable sustained collaboration and investment.

A key area of emerging ambition is our role in the Sydney Biomedical Accelerator (SBA). The SBA signals a long-term intent to bring discovery science, clinical insight, industry capability and capital together at scale. Alongside this, philanthropy amplifies our ambition. As the University of Sydney attracts the highest level of donor support of any university nationally, we are able to invest in bold ideas, early-stage translation and long-horizon partnerships that prioritise public benefit alongside impact.

We also recognise that research translation is changing. The most meaningful impact increasingly comes from working with partners early to shape research questions together, including genuine partnership with Aboriginal and Torres Strait Islander communities. To realise this opportunity, our researchers and graduate researchers need the confidence, capability and networks to collaborate across sectors and maximise the impact of their ideas in a rapidly changing world.

Tomorrow

- We are the preferred partner for high-quality, mission-driven research and development in science, with industry, government and Aboriginal and Torres Strait Islander communities.
- We are viewed as a hub for innovation and impact across the globe, and our research attracts substantial philanthropy and returns on investment for funders and partners.
- Our researchers and HDR candidates are confident and capable in how they partner with groups beyond the University and how they commercialise their research.
- Our HDR candidates graduate with strong, collaborative networks and clear pathways into diverse, impactful careers.

Together

We will grow our translation capability through our Impact Catalyst initiative, providing training across communication, partnering and commercialisation.

We will connect our research community with industry, government and community partners through our Faculty Research Mission symposia and other faculty-level engagement initiatives.

We will provide faculty-level support for translational research projects with high potential for economic, social and cultural impact.

We will amplify the impact of our research through clear storytelling and accessible engagement initiatives, highlighting both the process and outcomes of translational research.

We will celebrate and recognise our innovators for their work and the impact they create.

We will establish a Centre for First Nations Community and Practices, supporting First Nations-led research partnerships and relationship development.

‘As a science HDR student at Sydney, the most impactful lesson I learnt is to ask – ask for the secrets of the universe, for connections to foster and for opportunities to pursue – so as to be an agent of change in the world.’

Sunny Lee, PhD candidate and HDR representative, School of Life and Environmental Sciences

Science shaping digital futures

Dr Jasmine Fardouly, Horizon Fellow, School of Psychology

Dr Jasmine Fardouly’s research explores how social media platforms, appearance norms and digital design influence body image and mental health, particularly for young people. Her work informs industry practice and public policy conversations around platform responsibility, online harm and inclusive representation. By engaging with influencers, regulators, educators and the media, Jasmine’s research helps shape healthier digital environments and encourages industry-led change that supports wellbeing at scale.

Better batteries for a Net Zero world

Gelion, founded by Professor Thomas Maschmeyer, School of Chemistry

As the world shifts toward renewable energy, the need for safe, affordable and scalable energy storage is critical. Gelion, a Science spinout founded by Professor Thomas Maschmeyer, is addressing this challenge by developing advanced zinc-based battery technologies using abundant, low-cost materials. Built on fundamental chemistry research, Gelion’s approach offers a safer, more sustainable alternative for grid-scale energy storage, supporting the transition to clean energy systems globally.

Science *cultivates*

Uniting, growing and empowering our community

Today

Our faculty is a community of people driven by curiosity and a shared commitment to solving complex problems. Whether developing machine learning models that advance computer science or delivering operational services across our remote field stations, we approach complexity with confidence, care and professionalism.

We recognise the responsibility that comes with building Australia's future STEM workforce. Today, Aboriginal and Torres Strait Islander representation across our staff and student cohorts sits at 1.8%, well below population parity of 3.8%. Women hold only around 40% of tenured academic roles. These patterns reflect challenges across the sector, but they also make clear where we must do better.

Through our 2024–25 Strategic Plan, we have taken important steps forward. We welcomed new Associate Deans in Indigenous Strategy and Services (ISS) and Community and Culture, strengthened governance structures, and launched our first Faculty of Science Indigenous Strategy, with implementation underway. These foundations position us to lift our ambition and act with purpose.

As a discipline, science is strengthened by diversity of expertise and experience. Great science is about people. While our community hums with talent and dedication, it can be difficult to connect and collaborate across teams and roles, particularly for early career researchers, international students and people from communities and groups historically underrepresented in science.

Like many large organisations, our systems and processes can sometimes feel complex to navigate, meaning experiences within and beyond the faculty can vary. Alongside colleagues across the University, we are working to improve alignment across education and research, connect digital systems, and provide clearer, more accessible support for staff and students, making it easier to work, teach and study at Sydney.

Tomorrow

- Our faculty more fully reflects the diversity of the world around us.
- Staff and students feel a powerful sense of belonging within their school, the faculty and the University.
- Our community feels safe to work and study in an environment that balances shared values with diverse perspectives.
- Support is easy to access, and systems and processes enable learning, research and work.
- Our partners and University colleagues value us for our creativity, collegiality and commitment.
- Our community feels connected to faculty leadership and informed about our direction and progress.
- Staff understand how their roles contribute to our strategy and are empowered to act.

Together

We will bring our Faculty of Science Indigenous Strategy 2025–2028 to life, strengthening relationships and attracting, supporting and retaining Aboriginal and Torres Strait Islander staff and students.

We will prioritise wellbeing, belonging and connection by improving access to development and support for staff and students, and by creating more opportunities for collaboration and shared experience across schools, disciplines and roles.

We will simplify how we work by aligning faculty processes with University-wide reforms, reducing unnecessary complexity and supporting evidence-informed decision-making.

We will embed our strategic priorities into all faculty roles and position descriptions, supporting a values-driven way of working.

We will empower people at all levels and model the culture we seek to create, building trust with schools and other University teams through clear, connected leadership and open communication about our progress against the strategic plan.

‘What I care about the most is helping build a culture where leadership shows up through trust, collaboration and shared responsibility.’

Cynthia Kiu, Executive Officer, School of History and Philosophy of Science; Education Support Officer, School of Mathematics and Statistics; Faculty of Science Emerging Leader prize winner (2025)

Putting people first

Associate Professor Helen Paterson, Associate Dean Community and Culture

Dr Jordan Pitt, Associate Dean Indigenous Strategy and Services

Helen Paterson and Jordan Pitt are our newest faculty leaders. When Jordan met Helen, her openness and generosity in sharing what she knew about equity, diversity and inclusion helped him find his feet. When Helen met Jordan, she loved learning about his vision for Aboriginal and Torres Strait Islander peoples in Science at Sydney. Now, together, they work in lockstep, modelling the culture they’re inspired to create – where respect, support and collaboration enable everyone to succeed.

Science moves FAST

Faculty of Science Executive Services Portfolio

When changes to entry pathways led to a surge in student numbers, our schools needed more support, quickly. In response, we established the Faculty Agile Support Team (FAST), a service delivery model co-designed with our schools to provided targeted and timely support where and when it is needed most. Establishing this team taught us more about how we like to work: collaborative and transparent decision-making, flexible resourcing and balancing faculty coordination with school-specific insights. The result has been better-aligned support and a more sustainable way to meet the needs of a growing student cohort.

Science *elevates*

Raising the profile of our work so it lifts up others

Today

Today, we are fortunate to work alongside a wide network of industry, government and community partners who believe in the power of science and choose to collaborate with us on research, education and meaningful career pathways for our students.

In 2024, we earned $60M+ in Category 2–4 funding, including $19M+ philanthropic support from donors who share our ambition and potential for impact through science. Our alumni community now spans graduates across the world. They are leaders, creators and problem solvers whose achievements continue to elevate our faculty's reputation for impact globally.

To strengthen how we connect beyond the University, we established a Faculty External Advisory Board, bringing together leaders and alumni from sectors that employ our graduates and depend on our research – sectors including agriculture, clinical diagnostics, AI, emerging technologies and wildlife conservation. These relationships help us stay attuned to the changing world around us.

At the same time, we recognise there has broadly been a reduction in public confidence in institutions, including higher education. This challenges us to demonstrate, through our actions, that our work is grounded not in privilege but in service: service to knowledge, to progress and to the elevation of the communities we exist to support.

Tomorrow

- We are the partner of choice for organisations seeking collaboration in research, workforce development and innovation.
- Our alumni and donors feel proud of their connection to the Faculty of Science and invested in our future direction.
- Innovation is embedded in how we work, supported by systems that encourage experimentation and help ideas grow.
- Our work strengthens public confidence in science, universities and evidence-based decision-making.

Together

We will strengthen our partnerships across industry, government and community to support research translation, workforce development and long-term positive impact.

We will establish clear faculty-level principles for engaging with Aboriginal and Torres Strait Islander communities, advancing the ambitions of our faculty *Indigenous Strategy* through respectful, long-term relationships.

We will deepen collaboration with the Faculty External Advisory Board, using its members' insights to guide priorities and respond to emerging challenges with agility and purpose.

We will reduce barriers to participation by expanding outreach and opportunity for women in STEM, through programs such as the Khuda Women in STEM Program.

We will make it easier for alumni and donors to engage meaningfully with our priorities and contribute to shared impact.

We will support public confidence in academic institutions by telling clear, compelling stories about our research and teaching, showing how science improves lives, shapes industries and serves the community.

‘My vision for the Faculty of Science is that it continues its long tradition of serving as a hub for mentoring, education and inspiration – empowering the next generation of scientists and entrepreneurs to drive positive outcomes for our planet and contribute to Australia’s economic prosperity.’

Dr Alison Todd AM FTSE, Co-Founder SpeeDX Pty Ltd, alumna and Faculty External Advisory Board member

Partners in koala care

The Koala Care Centre, Sydney School of Veterinary Science, Camden NSW

Our Koala Care Centre is building lasting capability in wildlife conservation through a dedicated focus on assessing, treating and rehabilitating koalas and other native species. Developed in partnership with the NSW Government through a $4.5 million investment, the centre expands clinical care, on-call veterinary support and pre-release rehabilitation, with the final stage of the new facility currently in development. We’re confident that over time the Koala Care Centre will strengthen regional wildlife networks, support volunteer carers and help us train the next generation of veterinarians and conservation scientists.

Conservation leadership with Taronga Zoo

Bachelor of Wildlife Conservation (Taronga), School of Life and Environmental Sciences

Designed and delivered in partnership with the Taronga Conservation Society, our Wildlife Conservation degree is a distinctive program that combines world-class science education with real-world conservation practice. Learning alongside leading conservation academics and scientists who support 4000 animals across 350 species at Taronga, our science students gain hands-on experience, strong professional networks and the skills needed to protect biodiversity and drive conservation in Australia and across the world.

Alignment with the University's *Sydney in 2032* strategy

University aspirations

Our student-focused education is transformational

Our research is excellent and contributes to the common good

Faculty 2026–2028 deliverables

A visible, end-to-end science student pathway

Clear pathways from entry to graduation that integrate employability, industry exposure and mentoring, improving student confidence, satisfaction and graduate outcomes.

A contemporary, future-ready science curriculum

Redesigned degrees and core curriculum that strengthen foundations, embed Indigenous knowledges and support ethical engagement with emerging technologies.

A strengthened environment for fundamental research

Mission-driven, multidisciplinary research supported by diversified funding, contemporary infrastructure and reduced administrative burden.

An inclusive and connected student community

Learning environments and support that strengthen belonging, wellbeing and peer connection, improving retention and equity outcomes, including closing the First Nations participation gap.

A confident, connected education workforce

An integrated academic teaching community with clear development and progression pathways, recognised for excellence in teaching and student-centred practice.

A sustainable research talent pipeline

Clear pathways from graduate researcher to established scientist, supported by strong supervision, training and development.

Graduates recognised for career readiness and impact

Science graduates sought after for disciplinary depth, adaptability and ethical practice, reflected in strong employment outcomes and employer engagement.

Improved learning quality and student experience

Consistent, high-quality assessment and feedback that support student growth and improve learning outcomes and satisfaction.

Stronger recognition of discovery research value

Greater visibility of fundamental science as a driver of national progress, resilience and economic strength.

– Science ignites

– Science inspires

– Science discovers

Our community thrives through diversity

A better place to work and a place that works better

Expanded research translation pipelines

Faculty capability supporting partnership-led research, early-stage translation and commercialisation, aligned with the Sydney Biomedical Accelerator.

A diverse, inclusive and connected faculty community

Progress toward First Nations population parity, stronger belonging and wellbeing, and improved connection across schools, roles and disciplines.

Strategic external partnerships

Long-term relationships with industry, government, community, donors and alumni supporting research, education and workforce needs.

Researchers equipped for impact beyond academia

Researchers and HDR candidates confident to work with industry, government, First Nations communities and the public.

Enabling simpler ways of working

Faculty processes aligned with University reforms, delivering clearer pathways, reduced complexity and more consistent experiences.

A trusted faculty voice in science and society

Greater public confidence through visible, credible engagement grounded in service and impact.

Increased impact investment and philanthropy

Growth in translational funding and partner investment supporting bold ideas, long-horizon projects and public benefit.

Empowered people aligned to shared purpose

Staff and students who understand their contribution to faculty strategy and feel trusted to act.

A connected and engaged alumni and donor community

Alumni and supporters connected to the faculty's direction and contributing to shared science-led ambitions.

– Science amplifies

– Science cultivates

– Science elevates

Science collaborates

Conducting our work and interactions in the faculty with curiosity, commitment and care ensures we embed collaboration into decision-making, delivery and continuous improvement. This allows our strategy to be not only aspirational, but achievable.

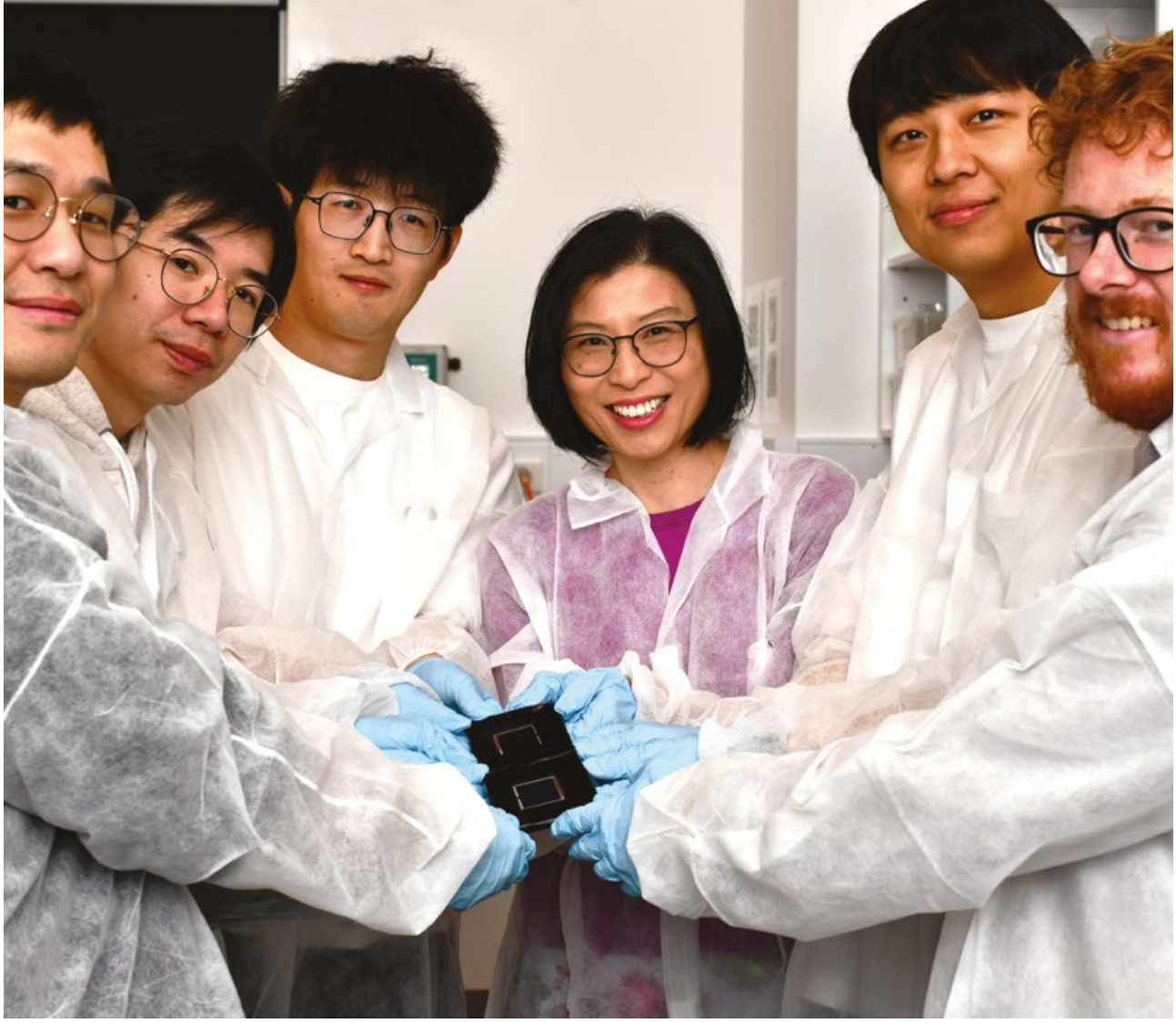
Through collaboration, we can transform our vision into impact, together.

How we developed this strategic plan

We developed our strategy through a comprehensive consultation process, placing our community's experience and voices at its centre. This included:

- Sixteen targeted focus groups involving more than 60 faculty and central professional staff, and 30 undergraduate, postgraduate and HDR candidates. Our focus groups spanned education, student experience, discovery research, translational research, the HDR experience, student diversity, infrastructure planning and Indigenous Strategy and Services.
- Three half-day faculty leadership workshops where we welcomed our internal partners, shared our learnings and tested our logic across our core domains of education, research, culture and ways of working.
- Hosting a faculty strategy town hall session, attended by more than 150 staff, providing a forum for questions, discussion and direct feedback with faculty leadership.
- A faculty staff and HDR candidate survey, used to test our strategic logic and priorities, which attracted 95 responses.
- Providing monthly updates to our community through our faculty staff newsletter, *Inside Science*.
- We ensured the alignment and relevance of our strategy beyond the faculty through:
  - Close development alongside the University's Collective Excellence 2028 program, an institution-wide initiative aiming to improve alignment across the University's faculties, schools and portfolios.
  - Highlighting the University's key performance drivers in every focus group and workshop, and designing our initiatives with these front of mind.
  - Fielding strategic guidance and feedback from our Faculty External Advisory Board members.

Our strategy draws on and supports existing faculty-level strategies. These include our faculty *Indigenous Strategy 2025–2028*, *Research Missions and Impact 2025–26*, and our *Decadal Infrastructure Strategy*, as well as our Student Life and HDR strategies.



How we will approach implementation

We will implement our strategy through a collaborative and adaptive approach. Delivery will be shaped through ongoing consultation and co-design with our schools and our University portfolio teams, underpinned by a clear partnering model that defines roles, responsibilities and shared accountabilities. An innovative governance approach will connect strategic priorities with operational expertise. With improved clarity around roles and responsibilities, and a shared sense of purpose, we will reduce reliance on hierarchy and empower staff and students at all levels to use their creativity, expertise and commitment to drive the ambitions of this strategy.

Our strategic priorities will be embedded into faculty position descriptions and aligned closely with the University's institution-wide *Collective Excellence 2028*, *Digital Sydney* and *Professional Service Review* programs. We will implement this strategy with intent and accountability, ensuring our initiatives make meaningful progress against the University's key performance measures, and that our implementation plan and progress are visible and accessible to all members of the faculty through transparent reporting and governance.

Throughout delivery, our work will be underpinned by the University's values of trust, accountability and excellence, and we will lead with our faculty values of curiosity, commitment and care. In the spirit of science, we will test, learn and adapt our approach to achieve lasting impact.

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Learn more about the *Faculty of Science Strategic Plan 2026–2028*

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Faculty of Science
sydney.edu.au/science

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