



UNSW
SYDNEY

UNSW Science Strategy

2025 - 2035



UNSW Science Strategy 2025-2035

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Acknowledgement of Country

UNSW Science is committed to creating an environment where Aboriginal and Torres Strait Islander students, researchers, teachers, and staff, can thrive in alignment with the UNSW Indigenous Strategy.

We recognise Aboriginal and Torres Strait Islander peoples as the first peoples of the Country on which we work, study, and learn. Further, we acknowledge Aboriginal and Torres Strait Islander peoples as Australia's first scientists and knowledge creators. Their deep Knowledges and Connection to the land, the sea, and the sky is integral to our scientific understanding of the world. We commit to respecting the unique and critical role of Aboriginal and Torres Strait Islander peoples in scientific research, teaching, and societal impact. We will work to improve the respect for Aboriginal and Torres Strait Knowledges, Cultures, and ways of knowing, being, and doing in everything we do.



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Dean's Foreword

I am excited by the opportunity to set ourselves a long-term vision for UNSW Science. It is a vision that will lift us beyond our day-to-day perspective and provide a compass that everyone in the Faculty can reach for, together.

The UNSW Science 10-year strategy is a shareable guide for all members of the Faculty of Science. It provides a blueprint for what matters to us and what makes us distinctive, particularly our ambition to contribute meaningfully to global societal challenges through science.

Our strategy is built on the strengths of our unique mix of Schools and our capabilities across fundamental and applied science. Our strategic vision is enabled by our commitment to equity, diversity and inclusion and our people-centric culture.

We start this journey from a place of strength. We already have a strong reputation as a trusted partner and for delivering outstanding graduate and research outcomes. Our disciplinary capability is deep, diverse and excellent, giving us a firm foundation for our aspirations. We are also a community of people who care and are focused on creating collaborative, inclusive, and enriching student and staff experiences.

Our strategy will be supported by detailed implementation plans containing measurable initiatives and indicators to action our vision. It is on us to define what we want to be and create a step-by-step plan for how to get there. We must do this together – as a unique set of Schools and as a single Faculty of Science.

I look forward to creating this shared future with each of you.



Professor Sven Rogge
Dean of UNSW Science

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Our Vision for UNSW Science

Our Vision is to advance knowledge and provide solutions at scale for an ever-changing world through collaboration.

In 2035, UNSW Science will continue to be at the forefront of fundamental research and have a global reputation as a trusted and accessible partner in addressing global challenges. The Faculty's strength, scale and identity will remain grounded in its Schools and existing strengths in fundamental research. The Faculty will also be an interdisciplinary space between the Schools, in collaboration with our cross-faculty UNSW colleagues and wider partner network, and this is where we will increasingly innovate, advance and translate knowledge. UNSW Science will equally value and demonstrate excellence in discovery-driven and translation-driven science research and teaching, understanding that scientific progress and innovation require fundamental research to address complex and unforeseen societal challenges.



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Our science community is making a difference

Our eight UNSW Science schools are home to leading academics and internationally recognised researchers exploring the foundations of science, pushing research frontiers, and translating discoveries into real-world solutions.

Aviation

Australia's only standalone university aviation school combining leading research, world-class facilities and practical teaching to advance aviation knowledge, safety and innovation.

Biotechnology & Biomolecular Sciences

One of the largest and most prestigious schools of scientific research and teaching in Australia, covering genomics and bioinformatics, microbiology and microbiomes, and molecular and cell biology.

Biological, Earth & Environmental Sciences

The national voice for the natural world; from microbes to whales, from mountaintops to ocean depths, we explore the biological and the physical.

Chemistry

A leading centre for both teaching and research excellence in chemistry in Australia – developing cutting-edge knowledge to solve complex challenges and address real-world problems.

Materials Science & Engineering

One of Australia's top-ranked materials schools, recognised for world-class facilities, strong industry engagement and research spanning discovery through to application.

Mathematics & Statistics

Boasting an unusually high level of international collaboration, our school's programs cover a wide spectrum of courses in pure and applied mathematics, and statistics. An internationally connected school with strong research breadth across pure and applied mathematics and statistics.

Physics

One of the leading physics departments in Australia. Our teaching and research staff are at the forefront of exploration, training the next generation of physicists within a strong research culture.

Psychology

One of Australia's leading centres for research across a diverse range of topics from social behaviour to the causes and treatment of psychological disorders.

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In 10 years, the Faculty will be internationally renowned for the following:

Education

A distinctive approach to producing well-rounded graduates, who draw on their science education to create societal impact, through a unique UNSW Science Education Experience where scientific rigour, innovation, and educational excellence converge in an experiential learning environment.

Research and Enterprise

Addressing some of the world's most pressing challenges through our fundamental and applied research. Leadership in research for impact, whether in the academic community or society, through the communication, implementation, translation, and commercialisation of outstanding research.

Engagement and Partnerships

Authentic and meaningful ways of collaborating and partnering, compelling communication, thought leadership and as a trusted source of scientific information. Our staff, students, alumni, and partners will be increasingly engaged and networked across all corners of society.

Culture

A mindset that we are a Faculty that does things that matter, in a collegial and approachable way. We will continue to support and develop our people, and readily collaborate with our partners and each other.

Equity, Diversity and Inclusion

Inclusivity and cultural safety for students and staff of all backgrounds. We will continue to implement and evaluate evidence-based initiatives to promote equity, diversity, and inclusion.

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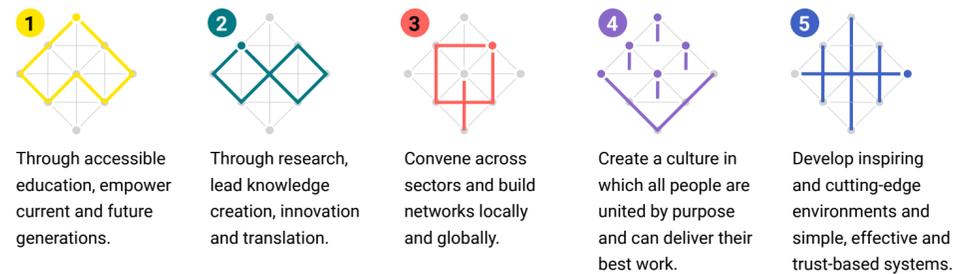
Our strategy

Our vision to advance knowledge and societal impact will be achieved through strategic ambitions and initiatives in Education, Research & Enterprise, and Engagement & Partnerships. Central to our strategy and reflecting current and emerging Faculty strengths are our Science Societal Challenges: Blue-sky discovery, Scaling a net-zero and circular economy, Building a liveable and healthy future, Healthy minds, healthy bodies, Decision-making in complexity, and Shaping the quantum and AI world. Additionally, we will launch a flagship, long-term student project focused on delivering real-world impact across our Societal Challenges.

Our Science Societal Challenges will serve as umbrella communities providing a way to apply scientific evidence to complex problems and decisions in partnership with others.

These challenges will unite our Faculty, connect with broader UNSW Progress for All and engage society at large. Supporting the portfolios of Research & Enterprise, Education, and Engagement & Partnerships are Equity, Diversity and Inclusion (EDI), and Culture, which work together to strengthen and guide all strategic activities.

Impact Pathways



Impact Focus Areas

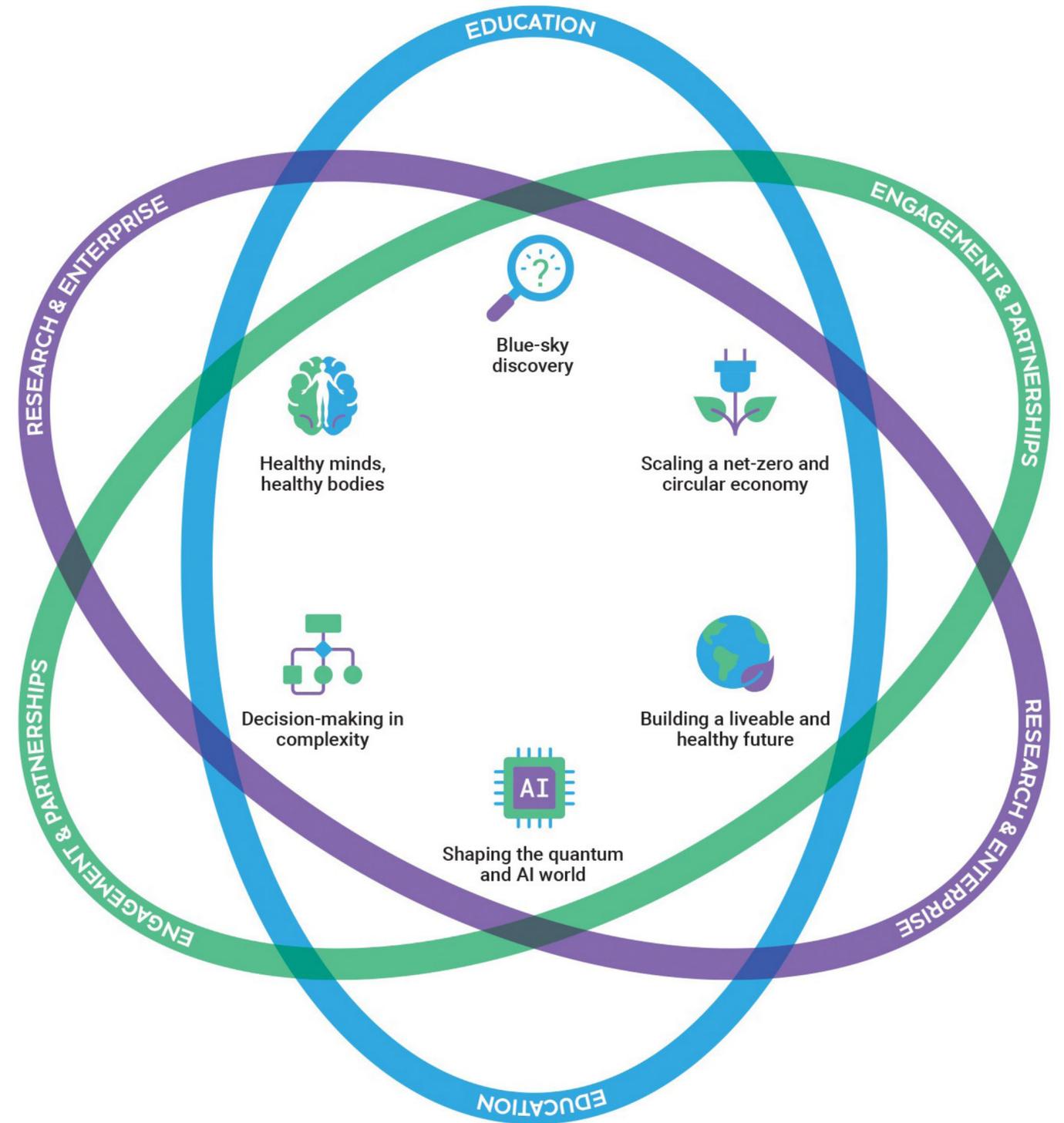
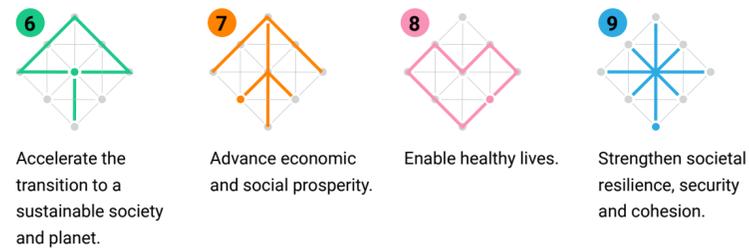


Figure 1. How elements of the strategy work together to deliver impact.

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Education



We are committed to redefining science education by creating a community of graduates with the skills and mindset to solve Societal Challenges who will be globally recognised for their societal impact. We will engage students in an experiential science education, designed and delivered by educators and researchers recognised as leaders and innovators in their fields to ensure our graduates have the necessary skills, are ready to lead science for impact, and navigate increasingly complex career journeys.

Partnerships will be core to our approach – connecting with students, an expansive industry network cutting across sectors, our alumni community, and the productive collaborations we strengthen and create with central UNSW divisions.

Ambitions

1.1. A science education for the future

We will create a science education for the future that empowers students to build agency and engage actively in their education across their lifetime. Our educational offerings will be research-informed, curiosity-driven, industry-led, technology-rich and highly experiential.

Indicative initiatives

- Co-create and embed the UNSW Science Education Experience across the breadth of our reimagined portfolio from undergraduate to lifelong learning, positioning Societal Challenges and the importance of impact as core values in our program and course design.
- Scale the adoption of active and collaborative learning to drive learner engagement and a vibrant education experience.
- Use AI in an industry-relevant and ethical way to transform how science is taught, learned and practised.

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1.2. Distinctive student experiences and outcomes

We will deliver distinctive student experiences and outcomes by building a vibrant student community defined by a strong sense of belonging, using data insights to create a flexible, inclusive and personalised education, and graduating students with a disciplinary edge and technology fluency who have the skills to drive societal impact.

Indicative initiatives

- Develop approaches to support student wellbeing and forge a strong sense of belonging, embedded into our courses and programs.
- Scale the provision of experiences to connect disciplinary learning with professional practice for all our students, including Work Integrated Learning (WIL), such as internships, and Research Integrated Learning (RIL).
- Scale development of Transnational Education (TNE) programs in collaboration with UNSW Global.

1.3. Educators of excellence

Our scientific ethos will permeate our education. We will be educators of excellence, supporting our educator community and the leadership of our education-focused staff. United, we will promote a scholarly culture, that recognises, values, and rewards excellence in education, and influences the local and global discourse on education.

Indicative initiatives

- Build capability and capacity in our education community to deliver the UNSW Science Education Experience using a partnership approach.
- Overhaul our teaching support and delivery model to transform the student experience acknowledging the importance of a joint contribution from professional and academic staff.



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Research and Enterprise

Our researchers and Higher Degree Research Students (HDRs) will be equipped to shape and succeed in the future research landscape. They will be committed to the need for science-informed decision-making, informed by critical thinking, and skilled at fundamental discovery, collaboration, and translating the outcomes of their work. Through partnerships, public engagement, and involvement with UNSW entrepreneurship accelerators, our researchers and students will contribute to a society where STEM catalyses societal transformation, addressing national priorities and global Challenges. Our desire for impact, and a sustained translational pipeline, means that outstanding fundamental research will remain a foundation of our work.

Ambitions

2.1. Innovation through Science capabilities and building connections across our research communities

To address Societal Challenges and drive innovation, we will establish Science intra- and inter-collaboration scheme. This will encourage excellent interdisciplinary research, bringing our researchers and educators together around important problems, encompassing fundamental and applied research, and will be refreshed as the Faculty and the world's Societal Challenges evolve.

Indicative initiatives

- Our global ambition and key research strengths will be enhanced through our Science Societal Challenges. Participation and contributions will be encouraged from all researchers from all Schools, enhancing intra- and inter-School collaboration.



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2.2. Research excellence and impact

Our research ecosystem will be balanced, sustaining excellence across the research pipeline and supporting early career researchers through to our research leaders.

Indicative initiatives

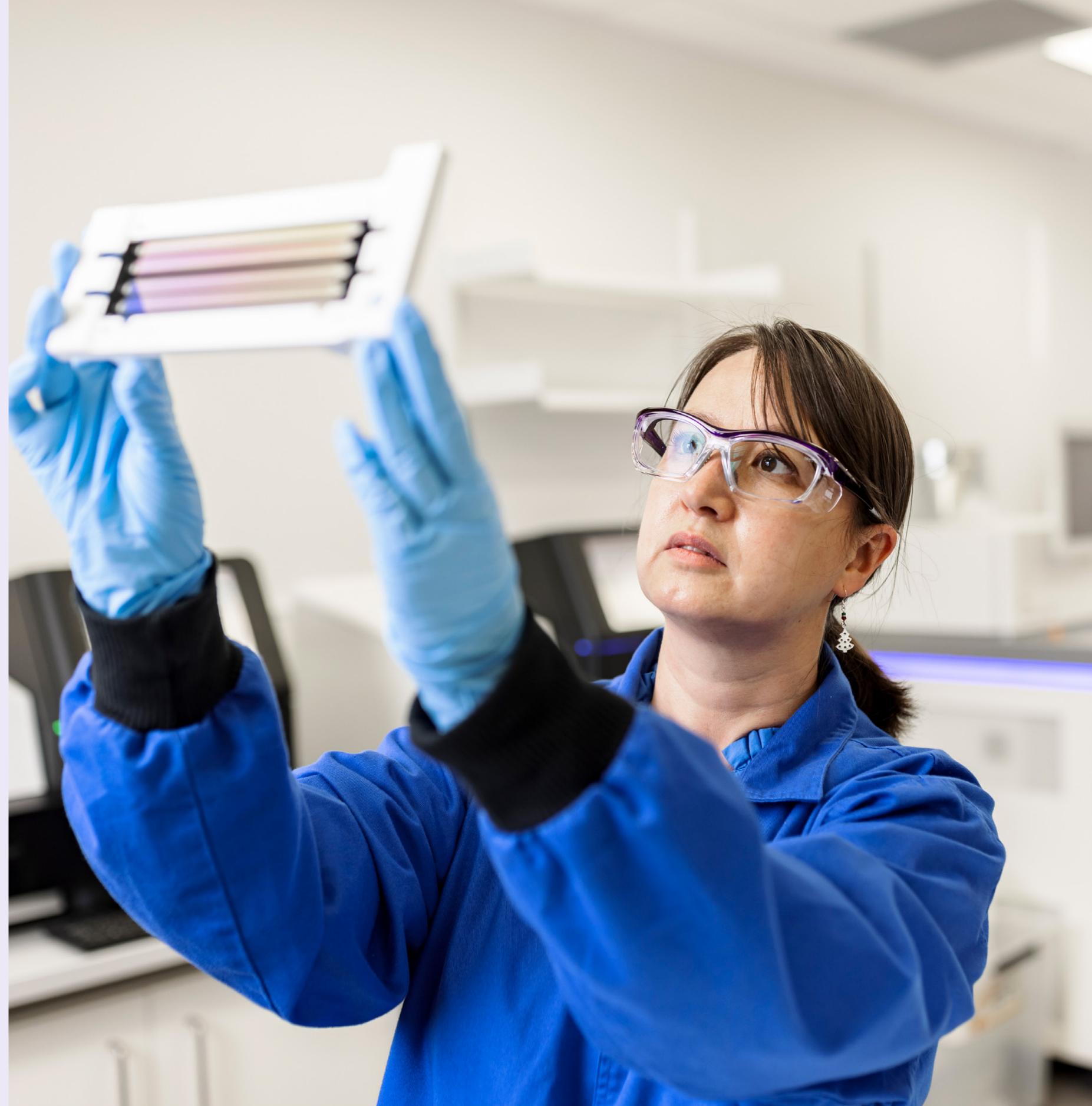
- Articulate and support a consistent, high-quality researcher and HDR experience across the Faculty, for fundamental and applied science. This will include targeted professional development and support, and excellent physical, digital, and technical infrastructure.
- Embed a new research impact framework that values collegiality and teamwork and supports excellence in research leadership.

2.3. Societal impact through collaboration and translation

We will scale research and grow societal impact by increasing collaboration between our Schools, other UNSW Faculties, and external partners.

Indicative initiatives

- Foster our researcher-led, synergistic activity within the Faculty and continue to build our interdisciplinary research with other Faculties.
- Map and facilitate pathways for impact, involving collaboration with government, non-government organisations, community groups, professional societies and with industry.
- Map and facilitate pathways for impact involving commercialisation.



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Engagement & Partnerships

The Societal Challenges we aim to solve, alongside everything we do, require knowledge exchange and partnerships with diverse stakeholders. Through our accessible and clear approach to engagement and partnerships, we will demonstrate the impact and influence of all our work. UNSW Science academics will be internationally recognised as leaders in their field by their peers, as trusted partners outside academia, and as advisors to government, NGOs and industry.

In short, we will support our staff and students as trusted experts to advocate, steward, partner, and problem-solve. Increasing scientific and technical literacy in our society will be a hallmark of our engagement and partnership strategy as global challenges come increasingly into view, STEM breakthroughs continue to rapidly advance, and the media landscape transforms.

Ambitions

3.1. External engagement is a part of who we are

We will strengthen the culture of external engagement at UNSW Science.

Indicative initiatives

- A collaborative portfolio in UNSW Science uplifts all activities around external engagement and nurtures our unique ecosystem of people and partners to maximise the Faculty's reach locally, nationally, regionally, and globally.
- Improve recognition of the value of external engagement activity through revised impact indicators and procedures for promotion and performance review.



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3.2. Impact-driven partnerships

We will build impact-driven partnerships between UNSW Science and our partners in education and research, with shared values, purpose, and mission.

Indicative initiatives

- Develop and strengthen partnerships to connect the educational experience and research to real-life contexts and professional practice.
- Increase the visibility of our community engagement and commitment to giving back to the community, particularly with the beneficiaries and users of our research and advocacy (e.g. through Pact for Impact, citizen science, storytelling, op-eds, social media, advice to governments, on-campus events and sabbaticals into industry).

3.3. "UNSW Science for Life"

We will develop a "UNSW Science for Life" pipeline that will create a UNSW Science community starting with high school students through to undergraduate students, postgraduate students, lifelong learning students, and alumni.

Indicative initiatives

- Strategic engagement programs and campaigns that effectively convert future students to current students, including HDRs. These campaigns will be supported by coordinated and personalised communication with students that reflects where they are in their lifelong study journey.
- Expand lifelong learning offerings, guided by industry, alumni, government and the community.



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Culture

The culture of UNSW Science already sets us apart from our peers, embodying a collaborative, collegiate and supportive approach aligned with UNSW's Values in Action, that breaks down barriers and supports our people to achieve their goals.

Our ambition is to strengthen our culture further so all our staff and students can maximise their potential, recognising that an excellent experience of work and study is a crucial foundation for supporting people to be highly motivated and to collaborate positively. We will always strive to improve our culture as the Faculty and its operating environment continue to change. This culture will be driven and exemplified by the Faculty's leadership team who will be accountable for it.

Ambitions

4.1. Building connections and synergetic teams

We will drive collaboration across all staff groups and with our partners by focusing on improving communication to foster connectivity. We will work as an integrated Faculty, recognising and respecting the diverse expertise of our staff community.

Indicative initiatives

- Establish guiding principles and a detailed plan for flows of communication in the Faculty, that is proactive, transparent, and inclusive, with a consistent focus on enabling the success of collaborative teams wherever opportunities arise.
- Deliver a sustained series of cross-School and cross-Faculty events to showcase capabilities and support academic and professional staff networking, involving students as appropriate.

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4.2. Enhancing wellbeing

We will prioritise staff wellbeing, through sustainable workload processes and initiatives that support staff to feel valued and fulfilled.

Indicative initiatives

- Develop a whole-of-faculty framework to support an equitable and sustainable workload that recognises differences amongst Schools and aims to enhance productivity and wellbeing.
- Expand how we recognise, celebrate and reward the diverse contributions of our staff.

4.3. Nurturing the development of our people

We will develop a culture that individually and collectively nurtures the growth and careers of all our staff; to support the recruitment and retention of talented people and ensure they are adaptable, successful and fulfilled across all our activities.

Indicative initiatives

- Sustainably support professional development including mentoring and training by creating capacity through the creation of the workload model referred to above and through the identification of activities we can do less of.
- Identify, promote and support internal transfer opportunities, particularly for professional and technical staff.



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Equity, Diversity and Inclusion

UNSW Science aims to provide an equitable place of work and study that will stimulate innovation, productivity and progress. We believe diversity and inclusion are essential to producing robust, credible, and pioneering science of global impact, and to train the next generation of scientists for success. Our actions will be led by data and focused on advancing meaningful structural and sustainable changes for people with diverse lived experiences, backgrounds and identities while recognising the importance of raising awareness and celebrating diversity. UNSW Science will aim to progress work in all areas of EDI but has identified gender equity, Indigenous Cultural safety and recognition, and educational access and success as key focus areas.

Ambitions

5.1. Gender equity and diversity across levels (staff and HDR)

We will achieve gender equity and diverse representation across academic, professional and HDR cohorts. Progress will be driven by recruitment, retention, promotion, development and support activities.

Indicative initiatives

- Continue to purposefully pursue new and proven EDI initiatives to achieve and sustain representation targets and create a culture of inclusion and belonging.
- Demonstrate UNSW Science's leadership in EDI by reporting and showcasing our activities and processes, and their evaluation and impact.

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5.2. Indigenous Cultural safety and recognition

In partnership with the broader University, we will foster a Culturally safe environment that respects, acknowledges and incorporates Aboriginal and Torres Strait Islander perspectives, Knowledges and connection to Country, and enables increased research, education and collaboration with Aboriginal and Torres Strait Islander peoples.

Indicative initiatives

- Infuse Indigenous Knowledges and experiences for students and staff, appropriately, throughout our curriculum.
- Create pathways for Indigenous recruitment and career development for new and existing staff guided by an Aboriginal and Torres Strait Islander staff advisory group.

5.3. Educational access and success

We will increase the accessibility of Science education and the opportunities for success for students from low socio-economic backgrounds and remote, rural and regional locations.

Indicative initiatives

- Enable greater access for equity groups through our leadership in the UNSW Gateway Admissions Pathway and Program.
- Enhance individualised student support for equity groups to ensure student success.





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