We share a common purpose: to provide transformative education and research relevant to our communities. More than ever, our communities face significant intergenerational challenges such as population aging, climate change, and environmental degradation. Our faculty is committed to addressing these challenges through our education and research—ensuring that the knowledge we forge today serves society and the generations that succeed us.

Key to achieving this will be to ensure our support of Indigenous Australian engagement, success and empowerment is unequivocal, informed and carried out in a spirit of partnership and shared learning.

Future Directions outlines the key goals we will strive to achieve as a faculty over the next five years. It describes how we will:

• deliver transformative learning experiences that empower professionals with the real world skills and networks needed to lead tomorrow’s industries
• develop unique research capabilities and grow our partnerships to ensure our innovations deliver excellence and impact for the communities we serve
• foster a socially responsible and inclusive educational culture, where staff and students can be their ‘whole selves’ and realise their inherent potential to create positive change.

I wish to thank the many staff and stakeholders who helped developed these goals. I look forward to working together to achieve this future state.

Professor Ana Deletic
Executive Dean, Faculty of Engineering
Our edge

Our future direction as a faculty is steeped in QUT’s long-standing real-world approach to higher education and research.

Our emphasis on employability, social mobility and inclusion, industry collaboration and impact are all integral to how we conduct education and research.

Creating opportunities for our students to connect with authentic, transformative and industry-engaged learning is a key point of differentiation with other leading higher education providers, and we will continue to strengthen these distinctive student experiences.

Our research is focused on addressing the key challenges facing society and is delivered with, and for, Australian industries and communities.

Our faculty is located in the centre of Brisbane—one of the fastest growing and most liveable metropolitan cities in the country.

Our city is set to host the 2032 Olympic and Paralympic Games.

These are our strengths and the key to our future successes.

Our vision

QUT’s Faculty of Engineering leads Australian education and research in technologies and the built environment for a sustainable future.

For more information about QUT’s Faculty of Engineering, go to qut.edu.au/about/faculty-of-engineering
Our people, place and culture

**GOAL 1:** To engage with Aboriginal and Torres Strait Islander communities to support their priorities and build relationships.

**PRIORITIES:**
- Lifting our cultural competencies to effectively engage with Aboriginal and Torres Strait Islander communities and embed their perspectives as a core knowledge base throughout our faculty.
- Establishing a dedicated research group focused on co-designing research and educational programs with Aboriginal and Torres Strait Islander stakeholders and communities in response to their priorities and aspirations.
- Supporting the implementation of the Indigenous Australians PhD/Professional Doctorate to Postdoctoral Fellowship (P2P) Program across the faculty.
- Integrating QUT’s Campus to Country positioning strategy into our education and research programs.

**GOAL 2:** To foster a culture that values ambition, curiosity, integrity, inclusiveness and innovation to achieve academic excellence.

**PRIORITIES:**
- Implementing an engineering gender and cultural diversity strategy (such as female-only academic positions) to achieve set targets for diversity in student and staff cohorts.
- Implementing a faculty-based mentoring program for all academics as well as a capacity-building program for early and mid-career academics.
- Ensuring academic workload is managed strategically, transparently and equitably to allow all staff to develop their individual strengths and expertise.
- Boosting our capabilities through the strategic recruitment of academic talent.

**GOAL 3:** To create a functional and collaborative physical environment—with space to grow.

**PRIORITIES:**
- Co-locating staff within their respective schools.
- Creating a Sustainable Technology and Infrastructure Living Lab at Gardens Point campus to increase our research capacity, showcase our capabilities and deliver on QUT’s Campus to Country strategy.

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1. Professor in urban studies and planning, Tan Yigitcanlar is the Director of Research Training as well as an Academic Promotions Club Champion—supporting academic career development throughout the faculty.

2. ARC Future Fellow Dr Laura Bray is investigating the biological mechanisms that drive blood vessel formation and function to improve drug efficacy and safety testing.

3. PhD researcher, Somayeh Huissani (front) is developing a machine learning model to detect aircraft. Pictured with co-supervisors Dr Jasmin Martin and Professor Jason Ford.

4. Dr Mark Limb is the Director of Socially Responsible Innovation for the Faculty of Engineering.
Our educational experiences

**GOAL 4:** To achieve the highest student and employer satisfaction in Australia by strengthening our real-world focus.

**PRIORITIES:**
- Refreshing our curriculum to embed contemporary tools, technologies and career-ready skills, and maximise opportunities for industry-engaged education and international mobility.
- Implementing a consolidated Student Success Strategy that targets curriculum and co-curricular experiences for each faculty-led course.

**GOAL 5:** To reshape our educational offerings to reflect changing industry and community priorities.

**PRIORITIES:**
- Delivering immersive engineering and built environment learning experiences through the QUT You Curriculum Framework.
- Aligning our course offerings to explicitly address emerging societal priorities around sustainable technologies and built environments.
- Co-designing postgraduate courses in areas of research strength with industry in response to global demand.
- Freeing up teaching capacity by rationalising our unit offerings and reducing duplication across faculty-led curriculum.

**GOAL 6:** To inspire a broader, more diverse cross section of prospective students to study with us including women, Aboriginal and Torres Strait Islander, low-SES and remote, rural and regional students.

**PRIORITIES:**
- Increasing our outreach activities with Aboriginal and Torres Strait Islander school students and supporting their pathways toward successful careers in engineering and built environments, in collaboration with the Oodgeroo Unit.
- Implementing a targeted engagement plan for selected feeder schools to attract high-achieving students.
- Increasing our participation in existing QUT recruitment and outreach activities.

1. **Dr Fiona Lamari** is a senior lecturer in Construction Management who has designed a Virtual Construction Site Tour which enables students to take a 360° look at a real-life worksite at different stages of the construction project.

2. **Dr Sam Cunningham** received an Australian Award for University Teaching Citation for Outstanding Contributions to Student Learning in 2021 for his innovative use of technology in large electrical engineering classes.

3. **ASPIRE - Applied STEM Projects for Immersive Real-world Education** – is a partnership with Mabel Park State High School that delivers on-campus mentorship and STEM projects to high school students.

4. Bachelor of Design (Architecture) student Connor Pukallus with a concept of the Brisbane Olympics behind. Connor was one of the students who worked on a brief from Populous architects to reimagine the stadium of the future.
Our research and innovation

GOAL 7: To consolidate and grow our research capacity in priority and emerging areas to achieve internationally recognised research excellence.

PRIORITIES:
• Strengthening our international standing in key disciplines—such as robotics and biomedical engineering—by increasing our international collaborations and industry engagement.
• Creating new large scale, interdisciplinary research capacity in sustainable technologies and built environments.
• Seeding new areas of research of relevance to Australian industry, communities and governments, such as opportunities arising from the Olympics 2032.
• Increasing significantly our publishing in top-tier journals and outlets.

GOAL 8: To become the first-choice partner for industry-focused research.

PRIORITIES:
• Establishing faculty-based schemes to boost industry contract research and collaborative programs.
• Increasing uptake of higher degree research (HDR) industry internships.
• Increasing our visibility with industry through engagement events such as a Research Showcase series that targets specific sectors.
• Partnering with Indigenous Australian organisations and NGOs to support Aboriginal and Torres Strait Islander research priorities.

GOAL 9: To increase philanthropic and collaboration opportunities for research, education and infrastructure through engagement with our alumni and corporate partners.

PRIORITIES:
• Partnering with key alumni in each of our courses/majors and facilitating engagement with faculty and school-level connections.
• Partnering with philanthropic arms of key corporates.

1. The LarvalBot project, which is led by Professor Matthew Dunbabin from QUT’s Centre for Robotics, enables the distribution of coral larvae to support regeneration of damaged parts of the Great Barrier Reef and restore healthy coral populations.

2. Associate Professor Veronica Garcia-Hansen’s research focuses on the interplay between building design and performance, visual and thermal comfort and human health and wellbeing in partnership with American multinational engineering firm AECOM and Light Naturally.

3. Dr Tatheer Zahra has designed a 3D-printed product that could help protect buildings from collision damage and other high-impact forces.

4. Professor William Doherty has worked extensively with the Australian Sugarcane Industry to develop impactful biotechnologies and sustainable bio-based energy.
Our performance measures

The faculty will monitor its performance according to the following measures:

### 1: PEOPLE AND CULTURE

#### 1.1 Students
- Number of Indigenous students
- Percentage of female students
- Percentage of low-SES and remote, rural and regional students

#### 1.2 Staff
- Number of Indigenous staff at all levels
- Percentage of female academics (focusing on levels D and E)

### 2: EDUCATION

#### 2.1 Students
- Overall unit satisfaction (percentage positive)
- Feedback experience (percentage positive)
- Teaching quality (percentage positive)
- Attrition rate
- ATAR entry score

#### 2.2 Society and industry
- Percentage of units with Aboriginal and Torres Strait Islander perspectives
- Percentage of units with industry partners
- Percentage of units with sustainability

### 3: RESEARCH AND RESEARCH TRAINING

#### 3.1 Field of research
- Field Weighted Citation Impact (FWCI) for key disciplines
- Number of Q1 publications (including Q1 equivalents)
- Percentage of D1 publications of all publications
- Category 1 research income

#### 3.2 Society and industry
- Category 2-4 research income
- Number of HDR students
- Number of HDR student completions
- Number of HDR industry internships
- Number of Aboriginal and Torres Strait Islander research partnerships and HDR students
Alignment with strategic framework:

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Faculty of Engineering

QUT is committed to sustainability.
The paper used in Faculty of Engineering
Future Directions has the following credentials: