MONASH University

MONASH INNOVATION LABS

2025 GROWTH REPORT

A Managed Innovation Ecosystem Inside One of Australia's Leading Research Universities

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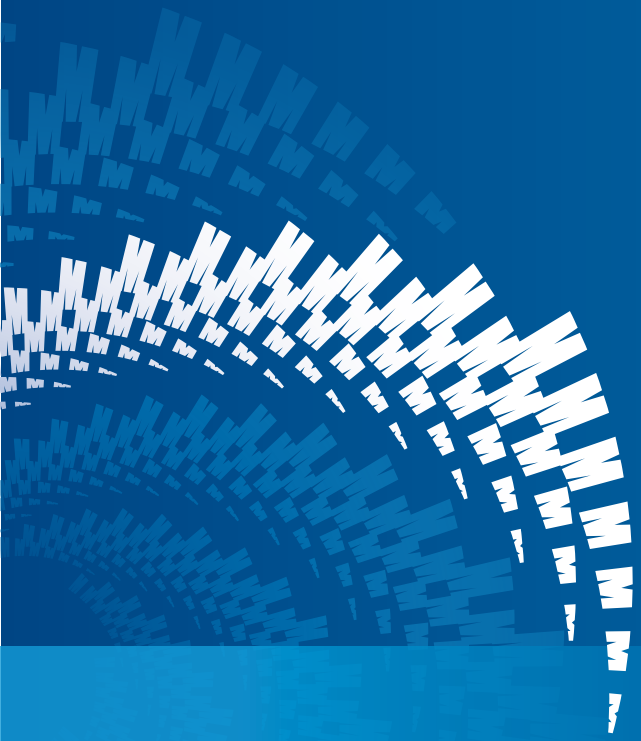
Companies are thriving with Monash Innovation Labs

Just as top students choose Monash to launch their careers, businesses come to access expertise, equipment, and networks that only a leading research university can provide.

"The reason we are here as a company is owing to how we deployed resources whilst we were part of Monash Innovation Labs."

Sahan Ranamukhaarachchi
CEO, Proton Intelligence



Monash University recognises that its Australian campuses are located on the unceded lands of the people of the Kulin Nations, and pays its respects to their Elders, past and present.

Celebrating Innovation and Impact
at Monash Innovation Labs

In 2025, Monash Innovation Labs grew into a focal point for innovation at Monash University. Since opening our doors in 2023, our resident companies and industry partners have launched new products, secured major partnerships and attracted significant investment. From health technologies improving patient outcomes to sustainability pioneers developing greener materials, these companies are shaping industries and delivering tangible benefits to society.

This progress reflects the strength of the environment in which they operate. Being part of a leading research university enables our resident companies and industry partners to work alongside talented students and researchers, tackle complex technical challenges and grow within a supportive and ambitious community.

Looking ahead, our ambition is to extend this impact even further. In 2026, we will open MiLabs Pilot Works, a new 500sqm large-format industrial environment for deep tech ventures, build a more connected and supportive innovation ecosystem and broaden our reach to support more businesses at the stages where capability access matters most.

Our focus is on helping companies scale faster, more confidently and with the right capabilities around them, because when companies grow inside a university, students get real industry experience, researchers find commercial applications for their work, and Monash's impact extends well beyond the campus.

By strengthening partnerships with established industry groups and deep-tech startups alike, we will continue to connect organisations to Monash University talent, applied R&D expertise and advanced facilities through a curated, managed innovation ecosystem.

To our resident companies and partners: your achievements inspire us every day. We look forward to what comes next. On behalf of the MiLabs team, thank you for your partnership, trust and commitment.

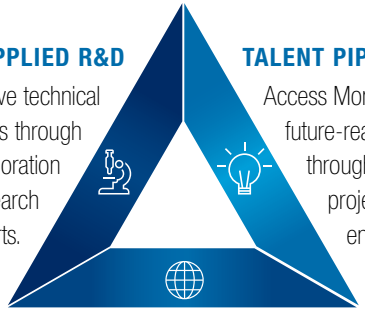
Professor Adrian Neild
Director and Founder of Monash Innovation Labs

What is
Monash Innovation Labs?

Monash Innovation Labs exists for companies with hard technical problems. Without access to the right talent, equipment and fit-for-purpose space, testing and iteration becomes slow, costly and difficult to sustain.

MiLabs removes those barriers by embedding companies directly within a leading research university, connecting them to research expertise, specialist facilities and student talent through a managed ecosystem built around commercial outcomes.

The MiLabs Model



APPLIED R&D

Solve technical challenges through hands-on collaboration and applied research with leading experts.

TALENT PIPELINES

Access Monash's future-ready talent through applied, project-based engagements.

SPACES AND FACILITIES

Leverage advanced labs, workshops, and Monash infrastructure to design, test, and build.

Impact snapshot (since launch):

13 RESIDENT COMPANIES SUPPORTED

$64.9M TOTAL INVESTMENT ATTRACTED BY RESIDENT COMPANIES

95+ JOBS CREATED ACROSS RESIDENT COMPANIES

54 STUDENT COLLABORATIONS DELIVERED

30 MONASH STUDENTS HIRED BY RESIDENT COMPANIES

18 INDUSTRY-RESEARCH COLLABORATIONS SUPPORTED

$3.1M CASH CONTRIBUTIONS TO MONASH RESEARCH

At the centre of a thriving innovation ecosystem

MiLabs sits at the centre of Monash's innovation ecosystem, co-located with Monash Generator, Monash Ventures and Monash Makerspace, and embedded within the Monash Technology Precinct.

Connected to partners including Monash Velos and CSIRO, MiLabs creates clear pathways from experimentation to commercialisation within one of Australia's most concentrated research and innovation environments.

MiLabs
Resident Companies

In 2025, resident companies grew their teams, secured significant investment, and brought new products closer to market. From climate tech to biotech, diagnostics to advanced materials, these companies are tackling genuinely hard problems and making real commercial progress.

What connects them is a shared stage of growth. Proximity to researchers, student talent, and fellow founders within MiLabs shapes how challenges get solved and how quickly.

2025 highlights

ELECTRALITH

Global momentum in sustainable lithium extraction

In 2025, ElectraLith strengthened its position as one of Australia's most exciting deeptech companies while continuing to shape the MiLabs community as a founding resident. Built on Monash research, the company is commercialising a next-generation lithium extraction and refining process critical to global battery supply chains and the energy transition.

- **Raised $27.5M** in investment and grew the team to **25+ staff**
- Advanced commercialisation of its DLE-R process, producing lithium without water, chemicals, or waste
- Co-founders named among **The Australian's 100 Innovators** of 2025
- **Recognised by** Fast Company, Forbes Asia, and the World Economic Forum.

Watch the video case study here

ALT LEATHER

Plant-based materials gaining global traction

- Developed a **100% plant-based, biodegradable leather alternative** meeting key durability standards
- Named **Best Newcomer finalist** at the Governor of Victoria Startup Awards
- Featured in **The Australian's 100 Innovators of 2025**
- **Runway debut at Paris Haute Couture Week**, featured in Yuima Nakazato's *GLACIER* collection

"We were the first company to move into Monash Innovation Labs, and looking back the experience here has been great. We have access to the best in class in terms of the facilities itself, but also the best professors, PhD students, academics and support. The Monash MBA program even did a case study on us, and we have three Monash interns, so we really make the best of it."

Charlie McGill, CEO ElectraLith

2025 highlights

ENZIDE

Advancing biodegradable plastics from proof to trials

- Delivered its **first proof-of-concept** product
- Progressed toward **commercial trials** with industry partners
- **Secured the Minderoo Foundation** as a cornerstone partner, supporting scale and impact

JUPITER IONICS

Monash-born innovation scaling green ammonia

- Demonstrated technology operation at **1,000× scale-up**, a key precursor to pilot deployment
- Achieved **major advances** in process chemistry, feeding into 2026 products
- **Expanded patent portfolio** with new grants in Australia and the US
- Consolidated operations at MiLabs, enabling team growth and system integration

Watch the video case study here

"As the company grew it became clear that leasing space in academically-focused labs could not give us access to the kinds of equipment, expansion space or facilities that we needed. So we took space at Monash Innovation Labs and recruited more people to work on a broader range of challenges."

Charlie Day, CEO, Jupiter Ionics

NANOFYND

From prototype to production in diagnostic technology

- Leveraged MiLabs' specialist infrastructure to accelerate benchtop validation and early-stage testing of NanoFynd's nanostructured chip technology
- Transitioned from **prototype development to early-stage chip production**, progressing toward scalable manufacturing pathways
- Advanced development of an **integrated testing system**, including consumables, hardware, and software components
- Progressed validation pathways in **collaboration with one of Australia's largest drug testing companies**, including alignment toward accredited laboratory frameworks
- Began collaboration with global analytical instrumentation manufacturer to develop a pre-screen test for PFAS.

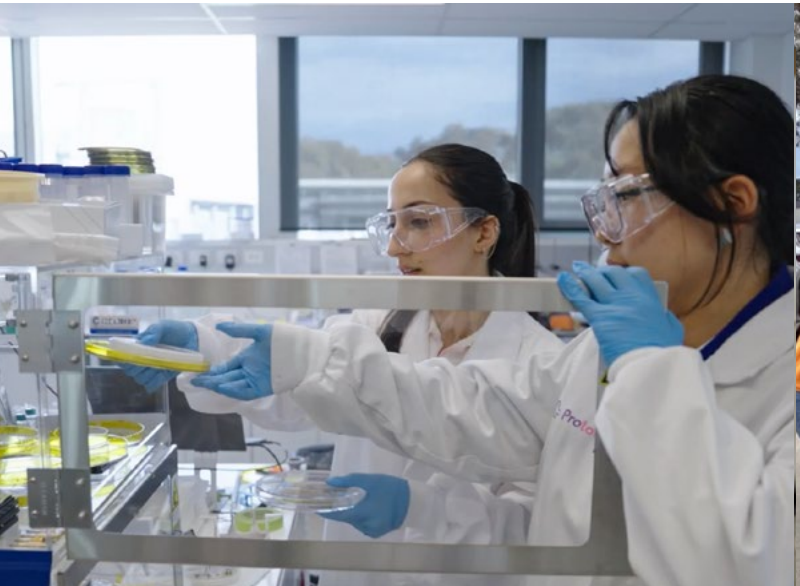
PROTON INTELLIGENCE

MiLabs' first Alumni company

In 2025, Proton Intelligence became MiLabs' first alumni company. Over two years at MiLabs, the team built out chemistry and engineering labs, ran their first clinical trial, and produced every device and prototype that went into it. Their graduation is exactly what the MiLabs model is designed to produce.

- Graduated from MiLabs into **1,100sqm of dedicated space** on Wellington Road, within the Monash Technology Precinct
- Scaled from early prototyping to **completing first-in-human clinical testing** for continuous potassium monitoring, a globally significant milestone
- **Raised USD $12M** across pre-seed and seed rounds while resident at MiLabs
- Built a team of 28, with around **70% Monash graduates**, demonstrating the talent pipeline in action

Watch the video case study here



Applied R&D
at the Smart Labs

Most companies reach a point where a technical problem needs solving, but building the internal capability to solve it, the equipment, the expertise, and the time is not practical. That is why the Smart Labs exist.

Throughout 2025, MiLabs' three purpose-built applied R&D environments were upgraded with new equipment across advanced manufacturing, chemical and biological processes, and AI and machine learning.

Resident companies and industry partners brought their hardest technical challenges and worked through them alongside Monash researchers, technical specialists, and student talent, using Monash infrastructure rather than their own.

Monash Smart Manufacturing Lab

SIMULATE PROCESSES AND IMPROVE EFFICIENCIES WITH DIGITAL TWINS, ROBOTICS AND ARTIFICIAL INTELLIGENCE

Throughout 2025, the Monash Smart Manufacturing Lab supported industry partners to test, simulate and validate advanced manufacturing systems using AI-driven modelling, robotics and digital twin technologies.

Home to the Monash Automation Student Team, the lab brought together mixed project teams of Monash students and technical experts to deliver applied R&D projects for industry partners. These projects included deploying machine-learning solutions to reduce downtime, automate training and maintenance processes, and enable safer remote operation of complex or hazardous environments through real-time system control.

In 2025, the lab undertook 10 applied R&D projects involving approximately 70 students. Targeted equipment upgrades expanded capability across manufacturing, materials, and computing, supporting faster prototyping, validation and deployment.

Case Study:

FROM STUDENT TEAMS TO AN INDUSTRY PROJECT

Fifth-year engineering and biomedical science student Hashani Ekanayake partnered with MiLabs resident Gelteq through the Industry Innovation Program to build a prototype model gut system, offering a practical alternative to animal testing in pharmaceutical development.

Developed as her Final Year Project with support from MiLabs researchers and the Smart Manufacturing Lab, the working model mimics how gel-based medicines, foods, supplements and other large doses travel through and disperse in an environment that simulates the dimensions of the gastrointestinal system. Gels or pharmaceuticals can be added, tracked along the gut mimicking pathway, and changes in chemistry or physical form can be monitored at multiple points over time.

The successful testing of prototype systems demonstrates the advantages that fearless engagement in student–industry collaboration can contribute to new design and the advancement of biotechnology tools.

"Working with Hashani through the IIP gave us a practical way to advance something we genuinely needed. The gastrointestinal modelling dissolution and absorption apparatus is showing real promise in understanding how our formulations work and addressing the limitations of techniques applied inappropriately.

This solution came from enabling a student in a final-year project. It says a lot about what's possible through this kind of collaboration, but, more importantly, the creative output that is possible when we permit students to be their best."

Paul Wynne, Chief Scientific Officer, Gelteq.

Read more here

MiLabs SAMPL

DEVELOPING CHEMICAL AND BIOLOGICAL PROCESSES FROM BENCH TO PILOT SCALE

MiLabs SAMPL (Student Analytical Makerspace and Pilot Laboratories) is a purpose-built applied R&D environment for chemical and biological processing.

Students, researchers, and industry partners develop, test, and scale novel processes from early experimentation through to pilot-scale validation, supported by two specialist pilot labs and a central analytical laboratory. In late 2025, SAMPL's analytical capability was further strengthened through an equipment agreement with Agilent Technologies, expanding access to advanced chemical and biological analysis.

In 2025, more than 250 students worked in SAMPL, gaining authentic, hands-on experience that supports pathways into advanced research training and employment. During the year, the facility supported 39 projects, including eight industry-linked projects, with Bridge Renewables, EdenBrew and Woodside.

Case Study:

CARBON CAPTURE AT MILABS

A long-running research programme led by Professor Paul Webley is investigating how carbon dioxide can be captured directly from the air and converted into useful molecules, from dry ice to e-fuels. Based in MiLabs' SAMPL, the programme brings together PhD researchers, Final Year Project students and the MC3 student team, all working across different conversion technologies in the same shared environment.

The work spans multiple years and multiple student cohorts. Projects that began as Industry Innovation Projects have evolved into PhD research, for example, Maksis Darzins has been building and refining a novel Direct Air Capture (DAC) technology starting from gram scale in the lab and now operating at pilot scale, capturing 10kg CO2 per day. Supported through a partnership with Woodside, the programme represents one of the most sustained examples of industry-linked deep tech research running through MiLabs.

"Our partnership with Monash has supported some genuinely promising early-stage research into direct air capture. The mix of students, researchers and industry working in the same space is what makes it productive."

Dr Claudia De Los Rios,
Innovation Adviser – Woodside Energy

Monash Smart Infrastructure Lab

WHERE AI, IOT AND DIGITAL TWINS BRING SPACES TO LIFE TO SHOW HOW ENVIRONMENTS RESPOND TO PEOPLE IN REAL TIME

The Smart Infrastructure Lab delivers applied R&D projects that connect physical infrastructure with digital systems, helping organisations design, validate and deploy intelligent solutions in real-world environments.

Working across AI, IoT, data platforms, and digital twins, the lab supports partners to move from concept through to deployment-ready systems. Using live and semi-live environments, projects focus on technical validation, system integration, and evidence-based decision-making for infrastructure, buildings, transport and civic systems.

In 2025, the lab progressed six applied R&D projects for industry across smart cities, smart manufacturing, and smart healthcare, alongside two student-led projects. Collectively, the lab engaged four industry partners, four academics, and more than 20 students across Final Year Projects, Masters degree and PhD research.

"The facilities at Monash and collaboration have been critical for Enzide to advance their technology from TRL3 to 5 and progress to a capital raise, with the support of investment brokers and venture capitalists, owing to our amazing achievements at MiLabs over the last 12 months."

Dr Pete Cass,
Chief Scientist, Enzide Technologies

Case Study:

TURNING AI INTO A PRACTICAL TOOL FOR COUNCILS

An applied R&D project with MiLabs student talent is helping councils modernise how they manage worksite safety and infrastructure. Working with MiLabs resident Civil Design and the City of Monash, the team developed a privacy-compliant, AI-powered camera system mounted on everyday council vehicles.

As vehicles travel routine routes, computer-vision algorithms automatically detect construction-related hazards such as mud on roads, damaged footpaths, and unsecured fencing, while built-in privacy controls anonymise faces and number plates.

Ten councils have seen the prototype in action.
Several are now progressing toward pilot programs.

"Having the Smart Infrastructure Lab downstairs has been genuinely valuable for our business. The team has been an amazing research partner, and that proximity makes collaboration happen in a way that's hard to replicate elsewhere."

Kanchana Withana, Principal Engineer – Civil Design

Read more here

Talent and **Skills** on campus

BUILDING CAPABILITY THROUGH EMBEDDED STUDENT TALENT

MiLabs enables organisations to work alongside high-performing Monash students through structured, industry-led talent programs designed to deliver real technical outcomes. Partners gain access to Australia's #3-ranked engineering faculty, rigorously selected job-ready students, and world-class facilities, including our specialised Smart Labs.

MiLabs talent programs are open to organisations across the Monash Technology Precinct and beyond. However, organisations that engage through MiLabs benefit from a uniquely integrated model that connects student talent directly with applied R&D environments, specialist facilities and academic expertise under one roof.

Talent engagement at MiLabs goes beyond coursework. Students are embedded into clearly defined innovation challenges through supervised, milestone-driven projects delivered with academic oversight and industry alignment, ensuring outputs are commercially relevant, technically rigorous and directly connected to business needs.

Talent Programs at MiLabs

While MiLabs supports access to a range of Monash talent pathways, the **Industry Innovation Program (IIP)** and **Industry Teams** represent the most effective way for organisations to engage across the full MiLabs model, integrating talent, applied R&D and Smart Lab capability in a single engagement.

INDUSTRY INNOVATION PROGRAM (IIP)

MiLabs' flagship talent program, IIP, connects innovators with high-performing STEM students to solve defined commercial or technical challenges within MiLabs' applied R&D environments. Projects are structured and supervised, with access to Smart Labs where relevant. Outputs range from feasibility analysis and early prototyping through to validation planning and technical reporting, enabling partners to test ideas, de-risk decisions and accelerate progress.

INDUSTRY TEAMS

For broader or multidisciplinary challenges, Industry Teams bring together cross-disciplinary student groups within a structured framework. These projects enable organisations to tackle more complex problems through coordinated academic supervision and closer integration with MiLabs facilities and technical expertise.

Additional talent pathways

For organisations engaging with MiLabs, structured talent projects can be complemented by additional Monash programs coordinated through MiLabs as a single point of entry, including:

- Industry Doctoral Program (IDP)
  – long-term, industry-led applied PhD research
- Engineering Co-operative Program
  – six-month paid student placements
- Monash Innovation Guarantee (MIG)
  – interdisciplinary, challenge-based student projects

Together, these pathways support organisations to build future workforce capability aligned to technical roadmaps and long-term growth plans.

"Over the past 12 months Gelteq has grown from a private company to a publicly listed company on Nasdaq. Through our R&D base at MiLabs we have truly integrated our team and utilised the fantastic resources available to us onsite. We have engaged with two projects via the IIP program, taking on three students to solve two different problems that allow us to take prototypes through to production post finalisation, with a real market need."

Nathan Givoni, CEO, Gelteq

Case Study

FROM MANUAL INSPECTION TO REAL-TIME AI

Two Industry Innovation Projects (IIP) with MiLabs have helped InfraBuild move from manual dimensional inspection to real-time, AI-powered quality assurance on the production floor.

Working with the Smart Manufacturing and Smart Infrastructure Labs, students Lachlan Dragovic and Rahul Mudaliar developed a machine vision system capable of measuring reinforcing steel as it exits the bending head, detecting deviation before it becomes a costly rework.

The project has since progressed into a pilot phase, with Lachlan transitioning into a research assistant role to continue development. A second collaboration has begun applying the same machine vision approach to safety compliance monitoring in truck loading operations.

Read more here

"Working with student talent through the Industry Innovation Program gave us access to fresh thinking unencumbered by current InfraBuild practices and real technical capability. Academic supervision was an essential component for success, bringing oversight and governance; this was applied research, not just an internship."

Sharmy Franics,
The Innovation Manager – Infrabuild

Impact across the MiLabs community

In 2025, MiLabs' talent programs delivered measurable outcomes for students and industry partners:

51+ **STUDENT COLLABORATIONS DELIVERED BY RESIDENT COMPANIES**

28+ **MONASH STUDENTS HIRED BY MILABS RESIDENT COMPANIES**

31 **STUDENTS CONTRIBUTING ACROSS 17 IIP PROJECTS**

MiLabs collaborated with partners across technology, health, energy, infrastructure, and advanced manufacturing, including Gelteq, InfraBuild, Australian Clinical Labs, Woodside, Bucher Municipal, Orica, and Proa, as well as major student-led teams such as Nova Rover, Monash Connected Autonomous Vehicles, Deep Neuron, and Monash Automation.

Momentum at a Glance

Year-on-year growth across the MiLabs community

MiLabs Resident Companies contributed:

2024 – 2025

CAPITAL RAISED

$21.4M – $43.6M

STUDENT COLLABORATIONS

24 – 30

MONASH STUDENTS HIRED

10 – 20

JOBS SUPPORTED

45.5 – 50

In 2025 alone, **MiLabs companies contributed $1.31M** to Monash research and delivered nine active industry–research collaborations.

OUR COMMUNITY

Alt.

ASTON DYNAMICS ENGINEERING EXCELLENCE

CIVIL DESIGN

EAR SCIENCE Institute Australia

ElectraLith

enzide

GELTEQ

JUPITER IONICS

LISAM

NANOFYND

paperseal

PSCBiotech

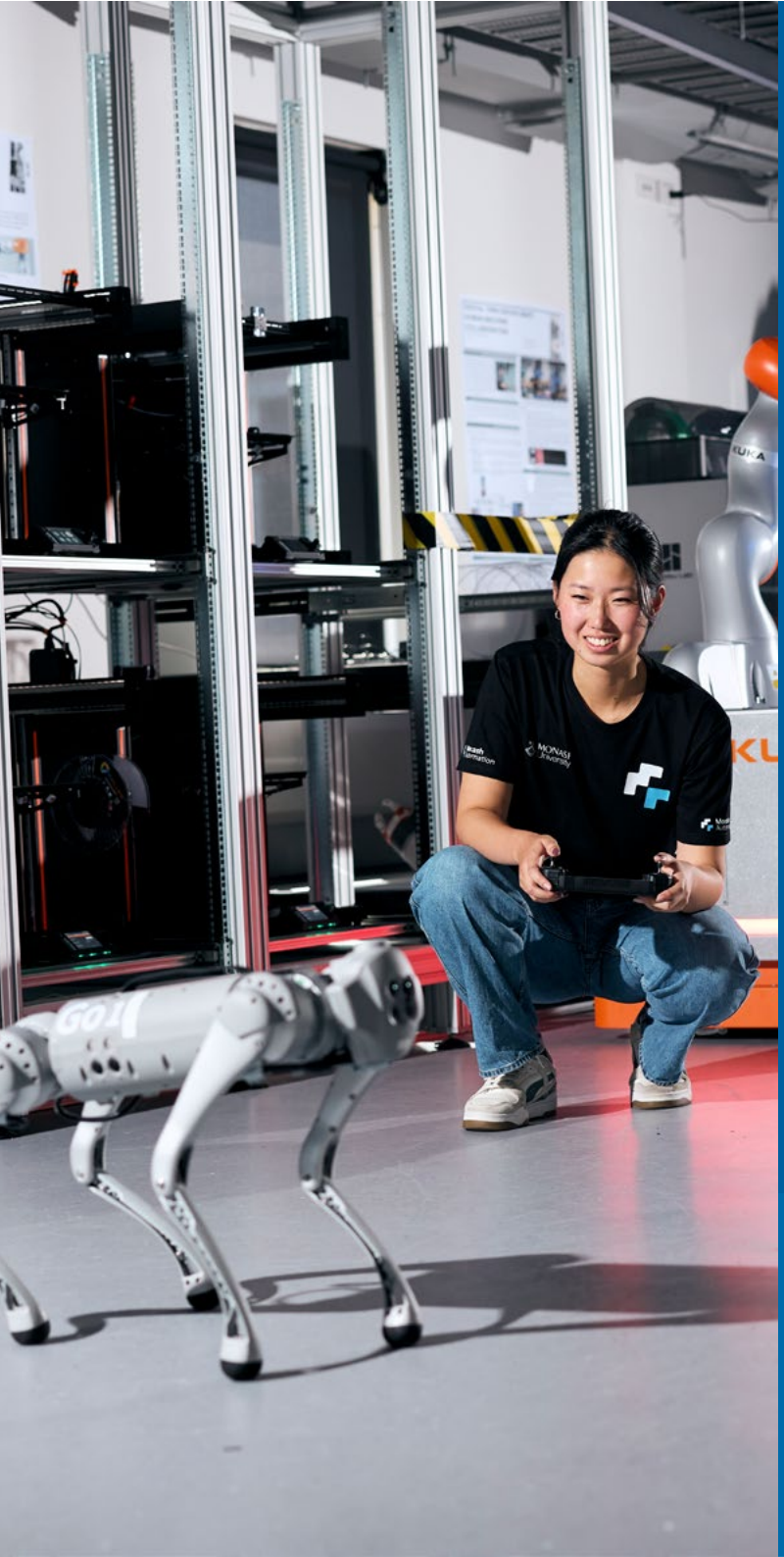
OUR PARTNERS

Agilent

HEXAGON

OUR ALUMNI

Proton Intelligence



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from the report

MONASH
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From student talent programs to applied labs, prototyping spaces, and startup residencies, MiLabs is a managed ecosystem that helps move from prototype to product, lab bench to market, and startup to scaleup.

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monash.edu/monash-innovation-labs