Year in Review 2023

Sydney Knowledge Hub

THE UNIVERSITY OF SYDNEY

We acknowledge the Gadigal, the traditional owners of the land on which the Sydney Knowledge Hub stands. We pay our respects to Elders past and present, and to those who have cared and continue to care for Country.

Sydney Knowledge Hub 2023 Year in Review

THE UNIVERSITY OF
SYDNEY

Sydney
Knowledge Hub

The Sydney Knowledge Hub supports research commercialisation and facilitates industry collaboration at the University of Sydney

A Note From The Director

This year, the Sydney Knowledge Hub transitioned out of its early development period. It has become a recognised platform connecting researchers with the infrastructure, network, and education necessary to make an impact through the market.

This increased visibility has led to a broad engagement from researchers across various faculties with the Sydney Knowledge Hub. Over 40 researchers have participated in our new cohort-based programs, including the Partner Engagement for Research Impact (PERIscope) Commercialisation Award, Inventor Mentoring Program, and the SPARK program. These programs are focused on market discovery, game planning, and partnerships, supporting participating researchers with the skills and network to translate their groundbreaking ideas into tangible solutions.

Throughout the year, we organised a calendar of varied events, aiming to bring sunlight to the people, programs, and funding opportunities both for our researchers and for our support staff.

"It is a completely different commercialisation environment here at the University than it was four years ago. I know where to go, and I know what resources are available," Prof. Ollie Jay said to me today, reflecting on the impact the Sydney Knowledge Hub has had in our four years of existence.

Our coworking space was full for the first time, with 29 companies choosing the Sydney Knowledge Hub as their primary base of operations this year. Increasingly, more of these member organisations are new ventures led by University of Sydney researchers. These members can leverage our network of venture capital, programs, advisors, and service providers to help build the foundations of their early-stage businesses.

The University of Sydney has increased its commercialisation ambition in 2023, and the work of the Sydney Knowledge Hub over the last four years has contributed substantially to that.

Rupal Ismin
Director
Sydney Knowledge Hub

A Note from the Pro Vice-Chancellor (Research Enterprise)

2023 has been a cracker. We kicked off a new strategic initiative that focuses on research commercialisation and enterprise. We've supported the newly established PERIscope Commercialisation Award that is being run by the Sydney Knowledge Hub, and will allow teams of researchers to undertake a comprehensive market assessment for their discoveries. We've created new training and venture support in the Commercialisation Office and we have doubled the size of the funding pool that supports Proof of Concept grants.

As of November 2023, we have already seen a 35% increase in records of invention compared to 2022. We are also presenting a more unified and visible infrastructure for research translation to our researchers and the external community, creating a better understanding of the services of the Commercialisation Office, the Sydney Knowledge Hub, INCUBATE, Genesis and Inventing the Future.

2024 is shaping up to be equally exciting. We are actively planning wet laboratory support to Sydney Knowledge Hub member organisations, and better access to early stage venture capital and expertise for our entrepreneurial researchers. I look forward to following the continued success of the Sydney Knowledge Hub and its members and celebrating our five year birthday together!

Prof Julie Cairney
Pro Vice Chancellor,
Research

The Team

Rupal Ismin
Director

Greta Stevens
Community & Operations Manager

Karla Perez Romero
Partnerships & Events Manager

Jane Cockburn
Program Manager

2023 Governing Council

Prof Julie Cairney – Chair
Pro Vice-Chancellor
(Research Enterprise)

Prof Emma Johnston
Deputy Vice-Chancellor,
Research

Kirsten Andrews
Vice-Principal
(External Relations)

Prof Richard Miles
Pro Vice-Chancellor
(Education – Enterprise
and Engagement)

Prof Marcel Dinger
Dean, Faculty of Science

Andrew Tindell
Principal Enterprise Officer

Prof Mark Rees
Deputy Executive Dean
(Research Partnerships),
Faculty of Medicine and
Health

Prof Ken–Tye Yong
Associate Dean
(External Engagement),
Faculty of Engineering

Merewether Building

Renovated in 2019, the Merewether Building is a microcosm of the University of Sydney's support from ideas to impact.

It is home to multi-disciplinary students working on industry-problems for a semester through the Industry and Community Project Units, prototyping facilities in the Hardware Lab, data modeling from our Sydney Informatics Hub, and event space for commercialisation and industry programming.

It is also home to the Sydney Knowledge Hub coworking space.

The Sydney Knowledge Hub is an incubator for research-fuelled startups and facilitates collaboration with industry. Through its on-campus coworking space, its rich array of events, and its programs for research entrepreneurs, the Sydney Knowledge Hub supports commercialisation at the University of Sydney.

We work to:
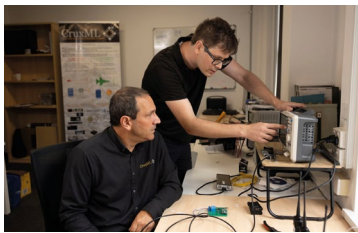
Dr Barry Flower and Dr Stephen Tridgell of CruxML

Bring industry onto campus: We facilitate work-integrated learning experiences for students, research collaborations, and market understanding opportunities through our space in the Merewether Building, home to 29 member organisations.

Dr Eugenia Gasparris speaks with Geoff Waring, Stoic VC

Grow the number of research entrepreneurs at the University: Through cohort-based programs designed for researchers and a full schedule of lunch-and-learns, workshops and panels, we help researchers develop their capabilities and understanding.

Connect @ Tech Central event

Connect industry to the research community, and connecting researchers to commercialisation resources: We work to shine a spotlight on the people, funding, and other commercial opportunities internally and externally that fuel the translation of University intellectual property.

"The team and infrastructure have been very helpful for our interactions with potential partners, advisors, and supporters, all of which were fundamental for the direction of the early stage business."

Dr. Gustavo De Cerqueira
CEO, BiomeMega

By the numbers

29
Companies operating
out of the space

80
New members
this year

26
Students have worked
within member
organisations

40
Researcher entrepreneur
teams in long-term,
cohort-based programs

35
Events produced

1,310
registrations for
our events

Dr Nhan Duy Troung and Brown Xu of BrainConnect

"The Sydney Knowledge Hub continues to provide the team an excellent base to grow our activities through premium facilities and their extensive network."

Prof Patrick Brennan
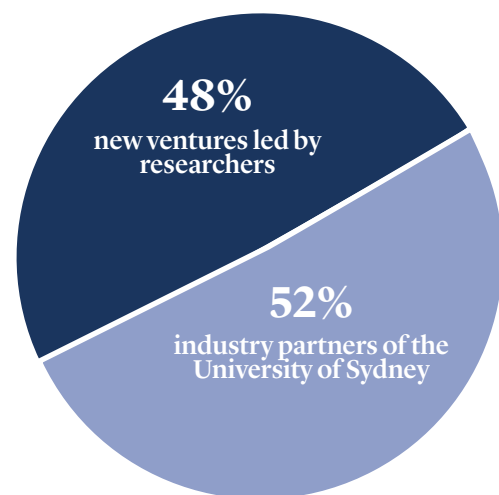CEO, DetectedX

Industry on campus

In 2023, we had 29 member organisations working out of the space.

The coworking space, located in the centre of campus in the Merewether Building, is the beating heart of the Sydney Knowledge Hub. The space is a tangible manifestation of the commercial work of the University of Sydney.

For our spin outs, the coworking space provides a vital springboard for connection to other founders and the Sydney startup ecosystem.

For companies and nonprofits that collaborate with the University, it offers a beautiful home on campus adjacent to research infrastructure, researchers, and a talented pool of students.

Member Organisations by Type

48%
new ventures led by researchers

52%
industry partners of the University of Sydney

"The Sydney Knowledge Hub is an excellent workspace for our team that keeps us closely connected to our collaborators and partners at the University of Sydney."

Dr. Barry Flower
CEO, CruxML

Member Highlights

- **DetectedX** won the Research Commercialisation Award in the renowned AFR Innovation Awards.

- **CruxML** successfully delivered a series of technically complex projects for the Australian Defence Force.

- **Resonait** launched their clinical trial with the Black Dog Institute.

- **Pharos Therapeutics** and **AliveX Biotech** two international therapeutics startups, opened in Australia with their base at the Sydney Knowledge Hub.

- **VirtuPharma** expanded their work with the University of Sydney and secured their international patent.

- **Gradient Institute** released a report with the National AI Centre at CSIRO on Implementing Australia's AI Ethics Principles which Minister of Industry and Science Ed Husic said "every business must read".

- **Vellocet Clean Energy** was funded by the University of Sydney's Living Labs for conducting a feasibility study for two on-campus microgrid/virtual power plants.

- **BCAL Diagnostics** established their own dedicated lab.

- **Bush Heritage Australia** planted 130 hectares of bushland to restore biodiversity.

MEMBER SNAPSHOT

OurFutures Institute

OurFutures Institute, an nonprofit startup, has a mission to change young people's relationship with drugs and alcohol. They do this through the world's most effective online prevention programs, pioneered by The Matilda Centre at the University of Sydney.

Alongside Prof Maree Teeson and Prof Nicole Newton at The Matilda Centre, OurFutures Institute are educating school-aged children about the harms of alcohol and drug use and addiction. This industry collaboration has allowed OurFutures Institute to scale, with forecasts of reaching 20,000 students next year. OurFutures are scaling their impact bringing on new products to tackle the vaping crisis with goal to export internationally and solve a global problem.

"In the wake of the devastating war in Tigray, Ethiopia, which caused widespread destruction to the healthcare system, DetectedX has generously provided complimentary access of their radiology learning platform to Ayder Hospital's medical students and registrars, restoring access to critical medical education."

Saron Berhane
Founder, Zoshon

Clusters of Members

The community of member organisations spans across industries. In 2023, a few clusters of sectors began to emerge, helping shape our strategic partnerships and programming efforts.

Neurotech Cluster

There has been a growth in neurotech, a category of devices and methods for understanding the nervous system, and we have seen this trend reflected in our community. This year, we have sponsored a Sydney neurotech meetup, led by member Cameron Higgins, founder of Resonait.

BrainConnect is a startup developing novel solutions in long-term interfacing with the brain and body.

Neurgeon is developing closed-loop solutions, including software and hardware, to accelerate post-stroke rehabilitation based on decoding the brain's unique 'thought' associated with a movement.

Resonait is developing a new medical device for depression treatment to accelerate the pathway to recovery for depression patients.

SoundMind is supercharging sleep. Their deep sleep headband monitors brain activity and increases the efficiency of deep sleep with auditory stimulation.

Biotech Cluster

The Sydney Knowledge Hub fostered the growth of a cluster of biotech and drug development companies, paving the way for industry engagement in the Sydney Biomedical Accelerator. Along with the Drug Discovery Initiative and the Commercialisation Team, we host the SPARK program, which supports projects that need to progress to clinical trials.

AliveX Biotech generates and combines multi-omics data with computational biology and knowledge-empowered modeling to achieve a higher success rate of drug development for immune-mediated diseases.

BCAL Diagnostics is developing and commercialising a universal screening test for early detection of breast cancer by analysing lipids in the blood.

BiomeMega is creating a platform of high value Omega-based products.

Equinox Medical designs, manufactures, and distributes high-quality medical devices throughout Australia and New Zealand. Products include orthopaedic implants, pathology diagnostic systems, operating theatre consumables and PPE.

Kinoxis Therapeutics is an Australian-based, clinical stage biotechnology company developing novel therapeutics for substance use disorders and social dysfunction in neurological and psychiatric disorders.

Pharos Therapeutics develops novel drugs for rare and refractory diseases using "Chemiverse", a new drug development platform using AI technology.

Zoshon makes durable biomaterials using a proprietary biomanufacturing process as well as left over residues from the agriculture industry.

MEMBERS

Net Zero Cluster

The demand for net zero solutions and the opportunities that presents are evident across all faculties and at the Sydney Knowledge Hub. We actively contribute to the Net Zero Initiative and remain steadfast in our support for the climate tech funding landscape. Our members represent the diversity of this sector, encompassing advancements in cleaner energy generation and transportation, optimized energy consumption in buildings, safeguarding the biodiversity of critical ecosystems, and decarbonizing heavy industries.

Aquaticus Green Hydrogen are developing and manufacturing large-scale seawater to hydrogen technology.

Bush Heritage Australia's aim is to return the bush to good health working closely with researchers at the University. They buy and manage land, partnering with Aboriginal people and other groups.

CMA designs innovative belt conveyor technologies to materially improve safety, dramatically lower haulage emissions, and reduce reliance on personnel in bulk materials handling.

GreenCoat is a next-generation plasma coating smart window solution that changes the opacity of windows in response to real-time environmental conditions to improve the thermal insulation and energy efficency of buildings by reducing unwanted heat transfer through windows.

H2Potential is a consulting company focused on hydrogen. Their goal is to enable growth in Hydrogen market and incubate new technologies to do so.

FootprintLab is the expert source of credible carbon footprint data. They are empowering climate solutions by making Scope 3 emissions intensities accessible, transparent and easy-to-use.

VCE is an Australian engineering company specialising in renewable energy. They are leading the way in the development of distributed energy resources solutions, particularly microgrids and energy storage, for commercial customers

"The team at the Sydney Knowledge Hub pushed me into a leadership role in the Sydney neurotech community. This has been enormously helpful to the company in ways I hadn't foreseen."

Cameron Higgins
Founder/CEO

2023 Member Organisations

This year, we reached full occupancy with 29 companies operating out of the space.

AliveX BioTech
Bio Tech, Life Sciences, AI / ML

AliveX generates and combines multi-omics data with computational biology and knowledge-empowered modeling to achieve a higher success rate of drug development for immune-mediated diseases.

alivexbiotech.com

Aquaticus Green Hydrogen
Advanced Manufacturing, Clean Tech, Sustainability

Aquaticus Green Hydrogen are developing and manufacturing large-scale seawater to hydrogen technology.

Archer Materials
Advanced Materials, Bio Tech, Semiconductors, Quantum

Archer Materials is a technology company developing advanced semiconductor devices, including processor chips that are relevant to quantum computing.

archerx.com.au

BCAL Diagnostics
Diagnostics, BioTech

BCAL Diagnostics is developing and commercialising a universal screening test for early detection of breast cancer by analysing lipids in the blood.

bcaldiagnostics.com

BiomeMega
Bio Tech, Advanced Manufacturing, Advanced Materials, Ag Tech, Circular Economy, Food , Med Tech

BiomeMega is creating a platform of high value omega-based products.

biomemega.com

BrainConnect
Advanced Manufacturing, AI / ML, Digital Health, Smart sensing

BrainConnect is a startup developing novel solutions in long-term interfacing with the brain and body.


brainconnect.com.au

Bush Heritage Australia
Environment, Conservation

Bush Heritage Australia's aim is to return the bush to good health working closely with researchers at the University. They buy and manage land, partnering with Aboriginal people and other groups.

bushheritage.org.au

Compassion Creamery
Food

Compassion Creamley produces oat milk-based cream cheese products.
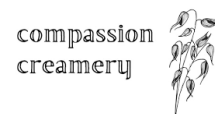
compassioncreamery.com.au

Conveyor Manufacturing Australia
Climate Tech, Clean Tech, Energy, Industrials, Civil / Construction Engineering

CMA develops innovative belt conveyor technologies to materially improve safety, dramatically lower haulage emissions, and reduce reliance on personnel in bulk materials handling.

cmacv.com

CruxML
AI / ML, Defence

CruxML provides foundational technology for real-time and embedded machine learning.

cruxml.com.au

DetectedX
EdTech, MedTech

DetectedX is a medical education technology company created at the University of Sydney that transforms disease detection through intelligent, interactive, web-based educational programs for any clinician or student interested in medical imaging.

detectedx.com

Enigma2
AI / ML, Media & Entertainment, NLP

Enigma2 allows for foreign films to be transformed to English through Neural Rendering.

enigma2.ai

Equinox Medical
MedTech, BioTech

Equinox Medical designs, manufactures, and distributes high-quality medical devices throughout Australia and New Zealand. Products include orthopaedic implants, pathology diagnostic systems, operating theatre consumables and PPE.

equinoxmedicalgroup.com

FootprintLab
AI, Social Climate Tech, Big Data, Fin Tech, Sustainability

FootprintLab is the expert source of credible carbon footprint data. They are empowering climate solutions by making Scope 3 emissions intensities accessible, transparent and easy-to-use.

footprintlab.com.au

2023 Member Organisations

This year, we reached full occupancy with 29 companies operating out of the space.

Gradient Institute
AI, Social

Gradient Institute research which design choices for AI-driven decision-making systems will lead to more ethical decisions to assist organisations to deploy ethical AI systems.

GRADIENT INSTITUTE
gradientinstitute.org

GreenCoat
Advanced Materials, Clean Tech, Climate Tech, Smart sensing, PropTech

GreenCoat is a next-generation plasma coating smart window solution that changes the opacity of windows in response to real-time environmental conditions to improve the thermal insulation and energy efficency of buildings by reducing unwanted heat transfer through windows.

GreenCoat
bit.ly/greencoat-tech

H2Potential
CleanTech, Energy, Sustainability

H2Potential is a consulting company focused on hydrogen. Our goal is to enable growth in hydrogen market and incubate new technologies to do so.

H2POTENTIAL
h2potential.com

iNOWAYTiON
AI / ML, Transport

Inowaytion develops advanced data-driven solutions empower better decisions for governments, businesses, and individuals.

iNOWAYTiON
The way to know
inowaytion.com

Kinoxis Therapeutics
Bio Tech

Kinoxis Therapeutics is an Australian-based, clinical stage biotechnology company developing novel therapeutics for substance use disorders and social dysfunction in neurological and psychiatric disorders.

KINOXIS
THERAPEUTICS
kinoxistherapeutics.com

Neurgeon
Med Tech, AI / ML, Semiconductors

Neurgeon is developing closed-loop solutions, including software and hardware, to accelerate post-stroke rehabilitation based on decoding the brain's unique 'thought' associated with a movement.

Neurgeon
neurgeon.com

Ohlive Health
Digital Health

Ohlive Health is your pocket pharmacy. It is reimagining how pharmacies will run in a digital world.

Ohlive Health
ohlivehealth.com.au

OurFutures Institute
EdTech, Social

OurFutures Institute creates innovative and engaging evidence-based health education courses to empower students to improve their health and wellbeing.

OUR Futures
ourfutures.education

Pharos Therapeutics
Bio Tech, AI

Pharos Therapeutics develops novel drug for rare and refractory diseases using "Chemiverse", a new drug development platform using AI technology.

pharos-therapeutics.com.au

Resonait
Med Tech, AI / ML, Big Data

Resonait is developing a new medical device for depression treatment to accelerate the pathway to recovery for depression patients.

resonait.com

ResusRight
MedTech, AI/ML

ResusRight was founded by a group of clinicians and engineers with a shared mission to improve outcomes for infants that need resuscitation at birth by creating technology that empowers clinicians to deliver high quality care.

resusright.com

SoundMind
Health Tech, Neurotech, Sleeptech, Med Tech, Wellness, Mental Health

SoundMind is supercharging sleep. Their deep sleep headband monitors brain activity and increases the efficiency of deep sleep with auditory stimulation.

soundmind.co

Vellocet Clean Energy
Clean Tech, Renewable Energy, Civil / Construction Engineering

VCE is an Australian engineering company specialising in renewable energy. They are leading the way in the development of distributed energy resources (DERs) solutions, particularly microgrids and energy storage, for commercial customers

vellocet.com.au

VirtuPharma
Big Data, Robotics, AI / ML, Life Sciences

Since becoming a member in 2020, Virtupharma has been working with the School of Pharmacy. Virtupharma is now creating "digital twins" of the school's high-end equipment connected with industry for remote access and training on industrial settings. This virtual access enables unlimited users to have personalised training with more throughput on the machines and creates new revenue opportunities for its users.

virtupharma.com.au

Zoshon
Climate Tech, Bio Tech, Food , Circular Economy, Green Chemicals

Zoshon makes durable biomaterials using a proprietary biomanufacturing process as well as left over residues from the agriculture industry.

zoshon.com

Researcher Collaboration

Industry Collaboration

Member organisations collaborate with university researchers, research infrastructure, and students. The Sydney Knowledge Hub has strong ties across the institution to facilitate this collaboration.

85% **of members that are industry partners are collaborating or are actively working to collaborate with researchers at the University of Sydney**

One-third of external members (i.e., industry partners collaborating with the University) utilise the labs, core research facilities, or other research infrastructure at the University of Sydney. This close proximity fosters a collaborative environment where industry partners can directly engage with researchers, access cutting-edge facilities, and accelerate their innovation.

MEMBER SNAPSHOT

Pharos Therapeutics and the Drug Discovery Institute

Prof Julie Cairney (left), Dr Kyu-Tae Kim from Pharos Therapeutics and Prof Michael Kassiou. Photo: Stefanie Zingsheim

In May, the University of Sydney signed a memorandum of understanding with member organisation Pharos Therapeutics, the Australian subsidiary of South Korean pharmaceutical company Pharos iBio. Together, Pharos and the University will use artificial intelligence to identify promising compounds for rapid development into treatments for cancers and rare diseases.

The MOU will provide access for the University's Drug Discovery Initiative to Pharos iBio's proprietary AI drug development platform, Chemiverse, Pharos will benefit from working with the University's world-class team of researchers and state-of-the-art drug-discovery infrastructure.

Based in the School of Chemistry, the Drug Discovery Initiative is an interdisciplinary academic network that brings together the best people, technologies, and tools to accelerating early-stage drug development.

"As a lab-less and fab-less semiconductor company, we have greatly benefitted from co-locating our scientists and engineers in proximity to the world's top-level researchers and research facilities. The University has been a wonderful partner in commercialising discoveries that had their genesis on this campus."

Dr. Olha Krechkivska
Program Manager,
Archer Materials

Vellocet Clean Energy and Living Labs

The Vellocet Clean Energy team

Vellocet Clean Energy (VCE) is a specialised engineering firm that develops control systems for distributed energy resources.

VCE has been commissioned by the University's 'Living Labs' program to evaluate the feasibility of three demonstration virtual power plants (VPP) for receiving and providing energy. Two VPPs are located at the Darlington campus, and one will supply the Narrabri campus. The primary objective is to achieve substantial reductions in energy costs and emissions.

In collaboration with Prof Gregor Verbic in Electrical Engineering and Prof Branka Vuketic in Information Engineering, VCE also engages with the Sydney AI Centre, fostering an interdisciplinary approach. VCE sponsors two University of Sydney PhD students and one Engineering Sydney Industry Placement Student on their team.

Core Research Facilities

Members of the Sydney Knowledge Hub conduct their advanced development in the Core Research Facilities at the University of Sydney. These facilities provide access to high-end research infrastructure and support a range of research services.

EQUINOX

Sydney Manufacturing Hub
Equinox Medical worked with the Sydney Manufacturing Hub to prototype novel bone clamping forceps to improve clavicle plate fixation and reduce surgery time.

Sydney Mass Spectrometry
Prior to opening their independent clinical laboratory in May 2023, BCAL Diagnostics collaborated closely with Sydney Mass Spectrometry in development of their blood-based test for early diagnosis of breast cancer.

Research and Prototype Foundry
Archer Materials is utilising the world-class facilities of the Research and Prototype Foundry to develop their qubit processor that potentially can operate at room temperature.

Programs and Events

Many of our researchers have had little experience bringing their solutions to market. Capability for business planning, partnership development, market understanding, and other entrepreneurial activity are critical to develop in our researchers to uplift the commercial outcomes of our inventions.

This year, we have expanded our program offerings to include three cohort-based programs tailored to the specific commercialisation needs of researchers. In partnership with the Commercialisation Office and industry partners, the Sydney Knowledge Hub offers three programs designed for researchers to:

- Uplift commercialisation skills
- Connect to industry
- Develop milestones for commercial projects

The aim of all of these programs is to accelerate the translation of research developed on campus.

Uniseed providing input in the Inventor Mentoring program

1 PERIscope Commercialisation Award

THE UNIVERSITY OF SYDNEY

PERIscope Commercialisation Award

Partnership Engagement for Research Impact

A new funding and training scheme to validate the market potential of an invention.

Unburdening researchers from the challenges of traditional commercialisation programs, the PERIscope Commercialisation Award grants researchers a three-month reprieve from their current research or teaching obligations, enabling them to devote their full attention to market validation activities.

This pilot program accommodates teams within the Sydney Knowledge Hub for the program's duration. During their residency, these teams engage in discussions with industry experts, potential customers, and key stakeholders to assess the viability of their inventions. The program concludes with a comprehensive market report for each invention, accompanied by expert recommendations for future endeavors.

2 Inventor Mentor Program

One-on-one mentorship to develop a commercialisation game plan

The Sydney Knowledge Hub spearheaded and executed the inaugural pilot program, culminating in April 2023. This initiative brought together cohorts of 12 researchers and 12 venture capital and bridging organisation leaders from companies like Stoic Ventures, MTP Connect, and Investible for one-on-one mentoring over a seven-month period.

The results were outstanding. Results from mentee researches include:
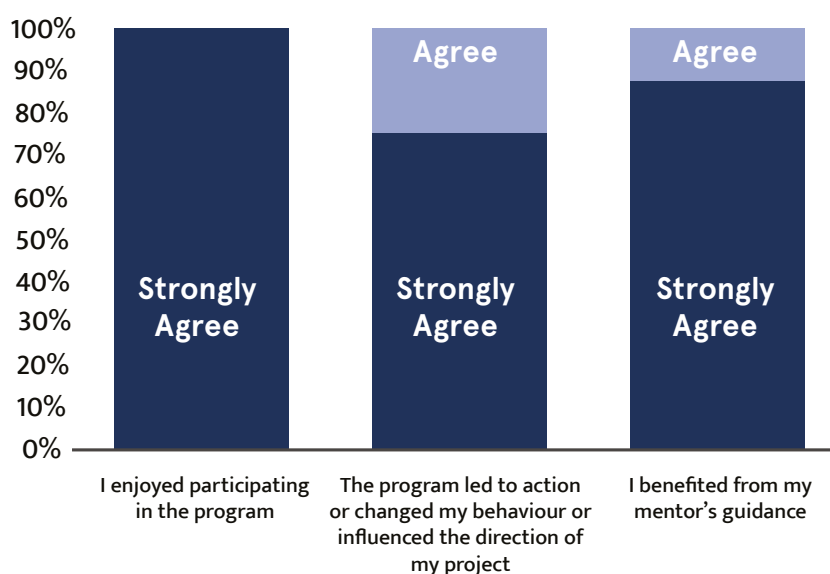
100%

of mentors said they would 'absolutely' be willing to participate as a mentor in the next cohort, and they followed through with participation in the second cohort kicking off in October 2023.

The second cohort of the program kicked off in October 2023 with 13 researchers and 13 mentors.

"The mentorship program at the Sydney Knowledge Hub was instrumental in shaping my whole commercialisation journey. Through this program, I learned how to seek advice to navigate through the commercialisation ecosystem."

Dr. Sina Naficy
Sr Research Fellow, School of Chemical and Biomolecular Engineering

3 SPARK

Education and mentorship for translating early stage medical technologies and therapeutics

The Sydney Knowledge Hub is hosting the SPARK program for two years. This prestigious program, developed at Stanford University, provides essential education and mentorship to accelerate the development of early-stage therapeutics, pharmaceutical innovations, and medical device inventions, paving the way for their journey from the laboratory to the patient's bedside.

Six teams from both the Darlington and Westmead campuses will gain access to specialised knowledge and technical expertise from industry experts throughout the two-year program. This invaluable guidance will empower them to refine their research, overcome challenges, and ultimately bring their groundbreaking inventions to life, improving patient care and transforming the healthcare landscape.

Prof Michael Kassiou presents to the SPARK program participants

Rebound: Women Leaders at the Sydney Knowledge Hub

In November, the Sydney Knowledge Hub ran a women's leadership program for researchers, members, and professional staff at the University.

Rebound was designed for women who are builders within a team or steering from the helm. The program was for people who want to understand themselves better to make real change in their teams and in their own lives.

22 people registered for three full mornings of facilitated networking, collaborative learning, practical workshops, engaging discussions, coupled with moments of movement, meditation and wellbeing.

Rupal Ismin leads a group conversation with Petra Andren,creator Cities Commission

Networking in nature on University grounds

Programs and Events

The Sydney Knowledge Hub does little alone. The team works in close partnership with groups across the University to amplify commercialisation and industry engagement initiatives. This year, that included:

- **Commercialisation Office:** Collaborated extensively with the Commercialisation Office on the design and delivery of numerous programs and events.

- **Business School:** Partnered with the Business School on the PERIscope Commercialisation Award, with with the School contributing an evaluation framework and incorporating an MBA student into the core teams.

- **MDI and research network support:** Co-produced and hosted over a dozen workshops, events, and showcases for the Net Zero Initiative, the Drug Discovery Initiative, Digital Sciences Initiative, and more, in collaboration with MDI and the research network.

- **INCUBATE:** Supporting research founders across various stages of the commercialization journey. INCUBATE alumni that are also members or have participated in our programs include:

Inventor Mentoring Program alumni Prof Rebecca Moles, Director, SetDose, at the INCUBATE Demo Day 2023

THE UNIVERSITY OF SYDNEY
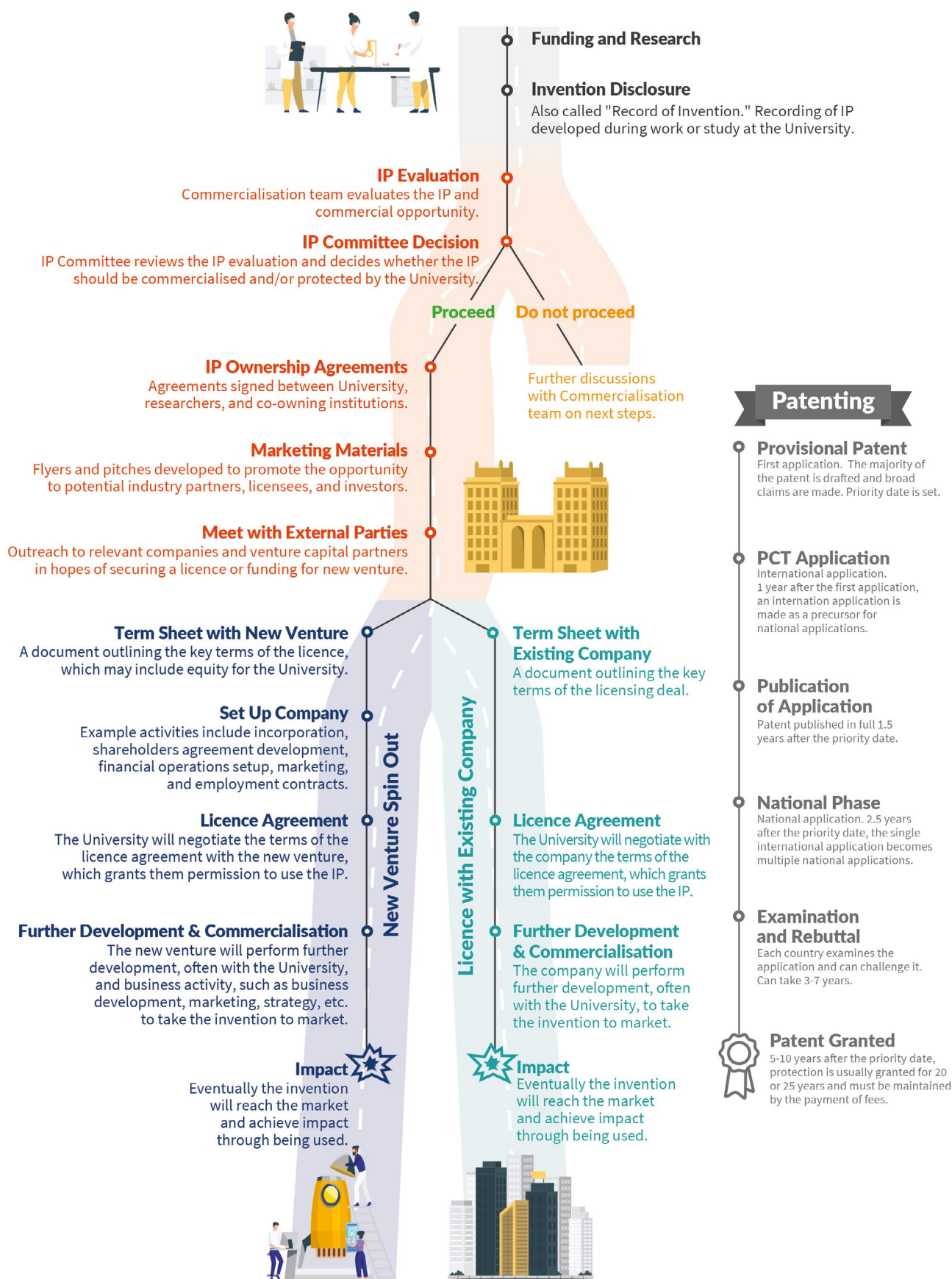
The Commercialisation Journey

You and the University of Sydney have a common goal:
to bring your academic research to the market to benefit society. To do this, there are
a series of steps and milestones that are on the journey to commercialisation.

Funding and Research

Invention Disclosure
Also called "Record of Invention." Recording of IP
developed during work or study at the University.

IP Evaluation
Commercialisation team evaluates the IP and
commercial opportunity.

IP Committee Decision
IP Committee reviews the IP evaluation and decides whether the IP
should be commercialised and/or protected by the University.

Proceed   **Do not proceed**

IP Ownership Agreements
Agreements signed between University,
researchers, and co-owning institutions.

Further discussions
with Commercialisation
team on next steps.

Patenting

Marketing Materials
Flyers and pitches developed to promote the opportunity
to potential industry partners, licensees, and investors.

Provisional Patent
First application. The majority of
the patent is drafted and broad
claims are made. Priority date is set.

Meet with External Parties
Outreach to relevant companies and venture capital partners
in hopes of securing a licence or funding for new venture.

PCT Application
International application.
1 year after the first application,
an internation application is
made as a precursor for
national applications.

Term Sheet with New Venture
A document outlining the key terms of the licence,
which may include equity for the University.

**Term Sheet with
Existing Company**
A document outlining the key
terms of the licensing deal.

**Publication
of Application**
Patent published in full 1.5
years after the priority date.

Set Up Company
Example activities include incorporation,
shareholders agreement development,
financial operations setup, marketing,
and employment contracts.

New Venture Spin Out

Licence with Existing Company

National Phase
National application. 2.5 years
after the priority date, the single
international application becomes
multiple national applications.

Licence Agreement
The University will negotiate the terms of the
licence agreement with the new venture,
which grants them permission to use the IP.

Licence Agreement
The University will negotiate with
the company the terms of the
licence agreement, which grants
them permission to use the IP.

**Examination
and Rebuttal**
Each country examines the
application and can challenge it.
Can take 3-7 years.

Further Development & Commercialisation
The new venture will perform further
development, often with the University,
and business activity, such as business
development, marketing, strategy, etc.
to take the invention to market.

**Further Development
& Commercialisation**
The company will perform
further development, often
with the University, to take
the invention to market.

Patent Granted
5-10 years after the priority date,
protection is usually granted for 20
or 25 years and must be maintained
by the payment of fees.

Impact
Eventually the invention
will reach the market
and achieve impact
through being used.

Impact
Eventually the invention
will reach the market
and achieve impact
through being used.

Many researchers are unaware of the steps and milestones required to transfer intellectual property out of University of Sydney.
The Commercialisation Office and the Sydney Knowledge Hub developed an infographic of the Commercialisation Journey, which
has now been shared with hundreds of researchers.

June 2023

From Lab to Market: A Showcase of Research Impact through Commercialisation

August's event showcased the highs and lows of four projects' journey from lab-bench breakthroughs to transformative market solutions. The take home message from the event was that it takes a village to commercialise, and research commercialisation is now an integral part of research at the University.

The Sydney Knowledge Hub produced a full calendar of events for researchers, the Tech Central community, and for our members. In 2023, we had:
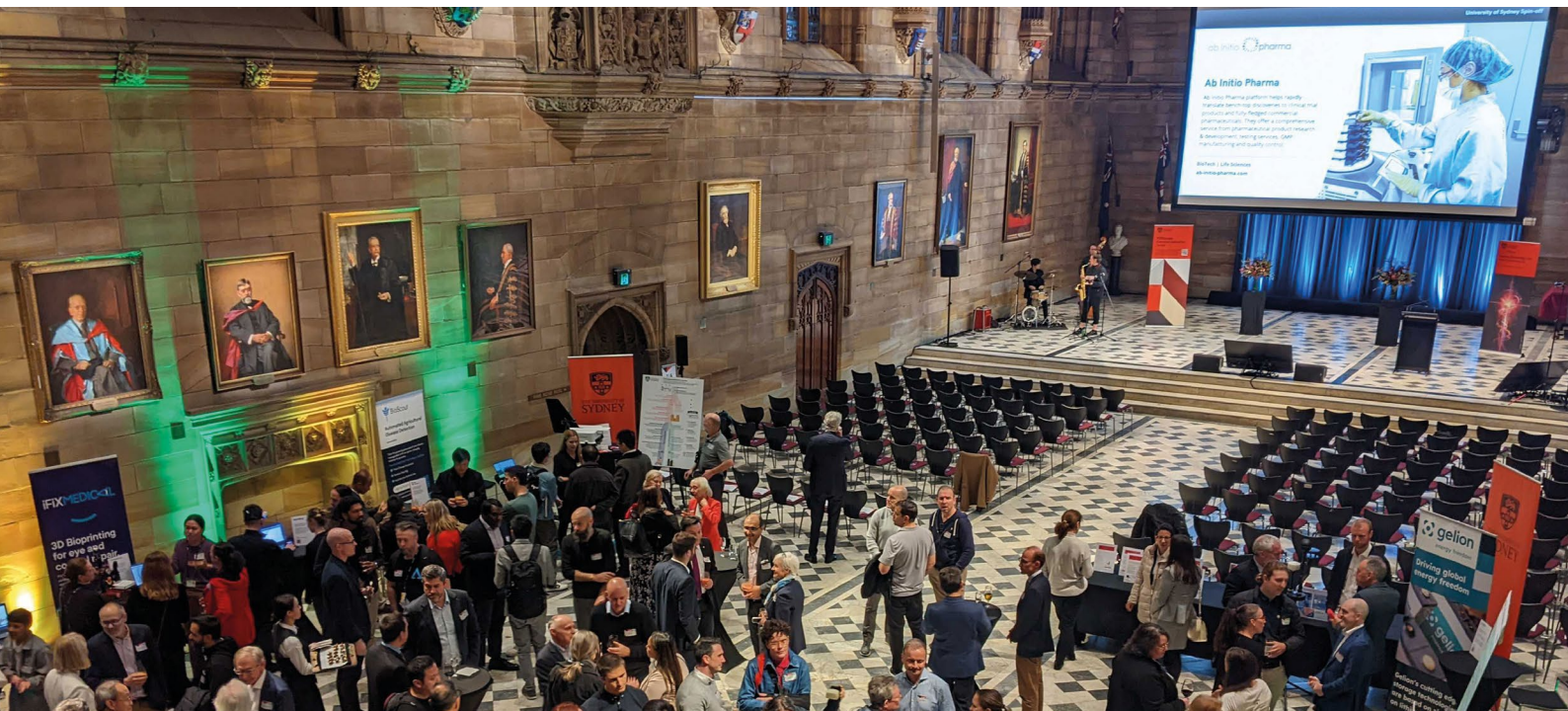
35
events
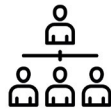
1,310
registrations

687
attendees

"The Sydney Knowledge Hub is deeply committed to building a community of innovators and entrepreneurs in Sydney. While it takes full advantage of its location at the University of Sydney, it reaches well beyond to cultivate a rich ecosystem of ideas and impact that we at the NSW Smart Sensing Network have found incredibly value."

Nicholas Haskins
COO, NSW Smart
Sensing Network

Gradient Institute and the age of AI

In today's AI-driven world, Gradient Institute stands as a beacon of responsible innovation. This non-profit organisation is dedicated to ensuring that AI is developed and used in a safe, ethical, and accountable manner.

Their work spans various domains, from collaborating with Prof Kimberlee Weatherall on AI regulation to releasing practical guidelines for businesses adopting AI. Their report, "Implementing Australia's AI Ethics Principles," has been recognised by the federal Minister for Science and Industry, Ed Husic, as essential reading for all businesses.

As they move forward, Gradient Institute is committed to fostering partnerships across industries, government, and the philanthropic sector to promote the responsible use of AI in Australia. Their efforts will undoubtedly shape the future of AI, ensuring its positive impact on society.

Gradient Institute

Harikesh Pushpapathan of Stoic VC speak with Cameron Higgins of Resonait at October's Neurotech Meetup

Resonait and the Neurotech Community Meetup

In the face of Australia's escalating mental healthcare crisis, Resonait, a neurotechnology startup, emerges as a beacon of innovation, offering a solution to the accessibility bottleneck. Founded by Cameron Higgins, Resonait is developing a medical device that complements traditional psychotherapy, expanding the reach of mental health services to more patients.

Recognising the scalability limitations of conventional therapy, Resonait's device aims to bridge the gap between demand and supply. Collaborating with renowned researchers at the University of Sydney, Resonait is tapping into cutting-edge expertise in biomedical engineering and brain signal analysis.

Prof Alistair McEwan, an expert in biomedical engineering, is providing valuable insights into the reconstruction of brain signals from electrical signals. Prof Ben Fulcher, a specialist in brain dynamics and neurophysics, is lending his expertise in predicting brain network dynamics.

Resonait has cultivated a thriving neurotech community through a series of meetups. The Neurotech Meetup, co-led by Resonait and the Sydney Knowledge Hub, has 100+ in its community of entrepreneurs, researchers, and clinicians.

Resonait's proof-of-concept study conducted at the Black Dog Institute this year marks a significant milestone in their journey.

The Sydney Knowledge Hub Team: Karla Perez Romero, Rupal Ismin, Greta Stevens, Jane Cockburn

Sydney Knowledge Hub

sydney.edu.au/sydney-knowledge-hub

knowledge.hub@sydney.edu.au

in @sydneyknowledgehub

Level 2, Merewether Building

University of Sydney, NSW 2008