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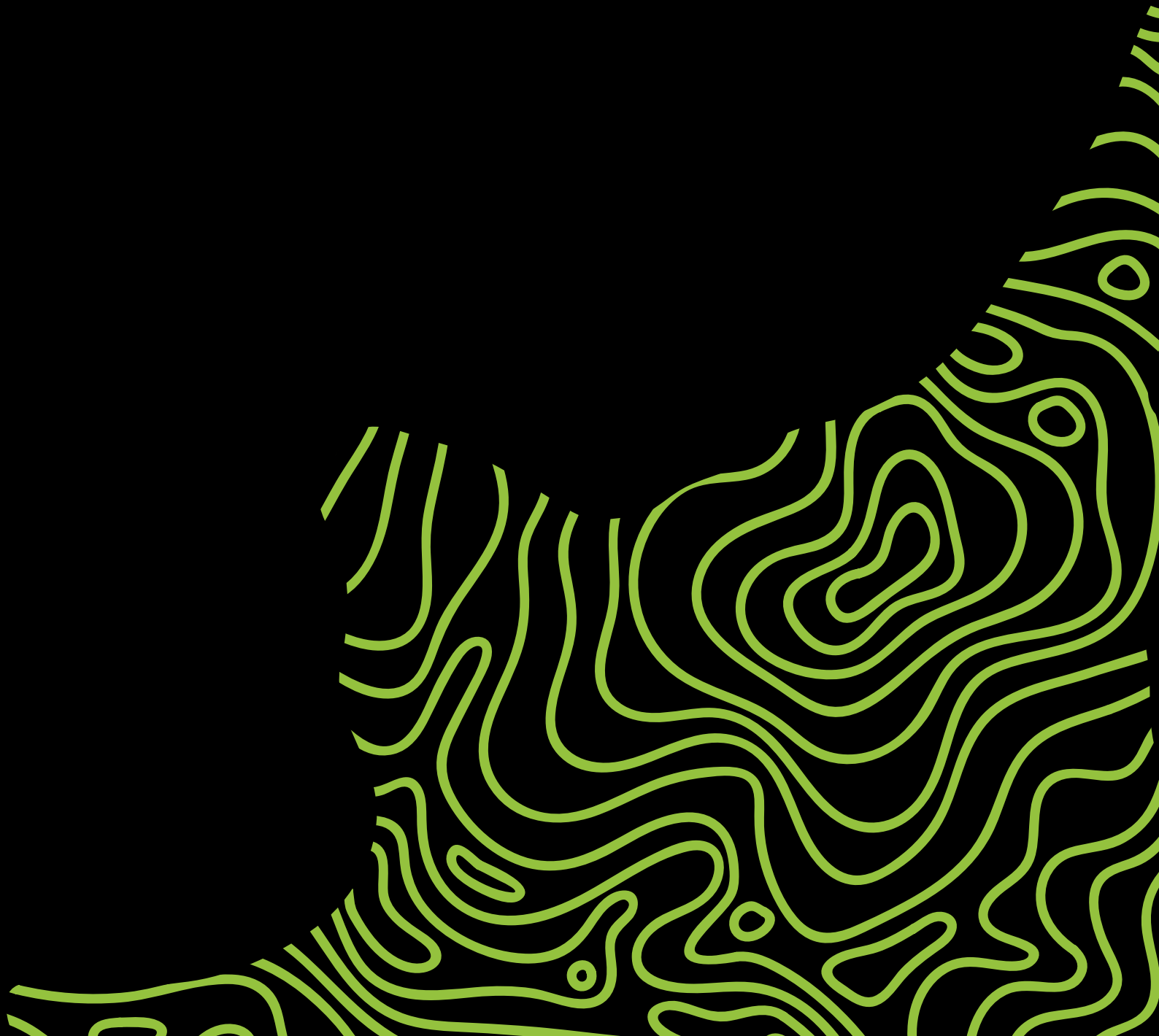


**DRIVING  
PROSPERITY  
FROM SCIENCE  
AND  
INNOVATION**

ANNUAL  
REPORT



WE BELIEVE IN THE  
**POWER OF NEW  
ZEALAND SCIENCE**  
TO TRANSFORM  
LIVES AND CHANGE  
THE WORLD





# TRANSFORMING SCIENTIFIC DISCOVERIES INTO NEW BUSINESS



## ABOUT KIWINET

Since its inception, KiwiNet and the wider Commercialisation Partner Network have demonstrated the power of bringing together diverse players across the science & innovation ecosystem, to work towards a collective vision for New Zealand. Together they transform cutting edge research discoveries into new products and services, driving us towards a globally competitive technology sector that delivers significant economic growth and prosperity.

KiwiNet is the combined power of New Zealand's Universities, Crown Research Institutes and other research organisations who receive public funding. Together these research organisations represent a total combined research expenditure of over \$800 million and represent 80% of the publicly funded researchers in New Zealand.

## FUNDING

KiwiNet is funded from the shareholder research organisations, corporate partners, and the Ministry of Business, Innovation and Employment.

## TABLE OF CONTENTS

Chairman's Report	06
CEO's Report	07
Celebrating '50' milestones	08
Highlights	09
Strategy	11
Investment Committee	13
Advocacy	21
Researcher Entrepreneurship	28
Commercial Capability	37
Private Sector Engagement	38



A map of New Zealand is shown in a light green color. Several dark green squares are placed on the map, indicating the locations of various research and innovation organizations. Surrounding the map are the logos of these organizations, including:

- AUT VENTURES**
- Plant & Food Research** (Rangahau Ahumāra Kai)
- agresearch** (āta mātai, mātai whetū)
- waikatolink** (University of Waikato Commercialisation)
- CallaghanInnovation**
- SCION** (FORESTS • PRODUCTS • INNOVATION)
- WELLINGTON UNIVENTURES**
- CAWTHRON** (The power of science®)
- GNS SCIENCE** (TE PŪ AO)
- E/S/R** (Science for Communities)
- Lincoln University** (Te Whare Wānanga o Aoraki, CHRISTCHURCH, NEW ZEALAND)
- Manaaki Whenua Landcare Research**
- UC UNIVERSITY OF CANTERBURY** (Te Whare Wānanga o Waitaha, CHRISTCHURCH NEW ZEALAND)
- Massey Ventures** (Supporting Research Innovation)
- OTAGO INNOVATION** (A UNIVERSITY OF OTAGO COMPANY)

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Shareholders (Universities, Crown Research Institutes, Entities and independent research organisations) as at 30 June 2020.

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KiwiNet is working to ensure that all publicly funded research discoveries with commercial potential are delivering maximum impact and growing New Zealand for all.

# CHAIRMAN'S REPORT

The well-known saying “the only constant in life is change” has never been more fitting than right now.



The way out of an economic downturn is to embrace change and accelerate our most promising ideas to market. We are fortunate that this is KiwiNet's core purpose and focus.

COVID-19 and the subsequent lockdown period has created much change for all of us as the world experiences heartache, hardship and significant health challenges. It has also, however, created enormous opportunities for New Zealand.

During a crisis investment tends to slow down, boards and owner-operators become more risk adverse and the economy struggles to maintain speed. Yet this is when new ideas are more critical than ever.

New Zealand's future depends on cutting-edge research discoveries to rebuild the economy and to create new opportunities for existing businesses and sectors that are struggling. We are already seeing innovation in tourism, events, and hospitality - three of the hardest hit sectors - and in rapid medical advancements around the world, including here in New Zealand.

The way out of an economic downturn is to embrace change and accelerate our most promising ideas to market. We are fortunate that this is KiwiNet's core purpose and focus.

At KiwiNet we're inspired by the wave of incredible research discoveries coming out of our universities and research institutes with the potential to transform lives. We're proud to support the people who are championing the best ideas to make a difference for New Zealand.

This year KiwiNet reached an exciting milestone - our triple 50th.

50 deep tech companies have been launched following KiwiNet PreSeed funding. And 50 Emerging Innovators have been trained, motivated, and

supported, with generous input from 50 Commercial Mentors who have given their time and expertise to our cause. That is 150 capable, entrepreneurial teams and individuals chasing their dreams, making a difference, and inspiring others to do the same.

The KiwiNet Board is delighted to have had the experience, expertise and intelligent contribution of our new directors Steve Lorimer and Debra Hall this year.

And it is with a mark of sadness that we will soon farewell director Andrew Turnbull after his ten-year contribution to the KiwiNet team. Andrew capably chaired the Investment Committee until last year when the reins were smoothly handed to Debra Hall and his tenure on the KiwiNet Board will also end in the coming months. Andrew's unique perspective, informed input and exceptional dedication are enormously appreciated.

KiwiNet's management team continues to amaze us with their professionalism and huge impact for such a small team. The Board and the team thank our shareholders for their continued belief in the collaborative process and our Corporate Partners for their ongoing support.

The coming year will be another one of change. Let's make it change for the better.

Ngaio Merrick / June 2020  
Chairman, KiwiNet

# CEO'S REPORT

We have an amazing opportunity to nurture new ideas that can change our world for the better.

Let us imagine the New Zealand economy as a rainforest ecosystem. Our economy is currently akin to a forest, with three or four different types of trees. However, when even just one of these species is uprooted, such as our tourism sector, we don't have much left to sustain the ecosystem.

What if we used the COVID-19 recovery to rebuild a diverse rainforest full of complementary species? There could be no better time to accelerate forward emerging deep-tech start-up companies that will help to rebuild our rainforest, create a more diverse ecosystem, and provide the resilience and capability needed to better withstand future crises.

In recent months at KiwiNet we have sharpened our focus to how we can support this acceleration of new ideas alongside our member organisations. As a first step, we held a workshop to coordinate a collective response to the challenges of COVID-19, and to plan how we can remobilise industry and stimulate the local economy. This work is ongoing and will be a key focus over the coming year.

Creating a growing pipeline of research innovations is key to this plan and has been a commitment of ours for the past two years. We are pleased to have seen unprecedented demand for KiwiNet PreSeed funding this year with no signs of this slowing down – a clear signal of the strength of our pipeline and depth of ideas coming out of our research institutes.

We are also celebrating three significant milestones in our work towards scaling our pipeline, building commercial capability, and creating opportunities with the private sector. Thanks to the collective and colossal efforts of our member organisations, the 50th start-up company launched from the KiwiNet PreSeed pipeline. Furthermore, we partnered with our 50th Commercial Mentor, and welcomed our 50th Emerging Innovator

to our ever popular and impactful Emerging Innovator programme.

This year we added another string to our bow with the successful launch of Rewa, our first pre-accelerator programme, and the first of its kind in New Zealand. Rewa means 'to elevate, lift up', and this is what the programme delivered, bringing together seven teams with 15 expert mentors, to elevate their early-stage ideas.

Another important focus for us is engagement with Māori enterprise. Qualities such as innovation and sustainability are embedded within Te Ao Māori, and we can all truly benefit from working more closely together. We look forward to expanding a partnering relationship and facilitating opportunities for Māori within the KiwiNet community.

Finally, it has been a year of growth for the KiwiNet Management team. We added three new members to the fold, appointing a Commercialisation Manager based in Christchurch to support our South Island members, and new hires to double-down on our private sector and marketing efforts.

Thanks are also due to this year's new independent Investment Committee members, Dana McKenzie and Nick Willis, who have expanded the breadth and depth of the IC. We are continually grateful to the efforts of all our IC members.

A collective effort is needed to rebuild a rainforest. We look forward to working together, to ensure our best deep-tech ideas propagate, thrive, and make a difference.



Dr James Hutchinson / June 2020  
CEO, KiwiNet



Thanks to the collective and colossal efforts of our member organisations, we are proud to celebrate the 50th start-up company launched from the PreSeed pipeline.



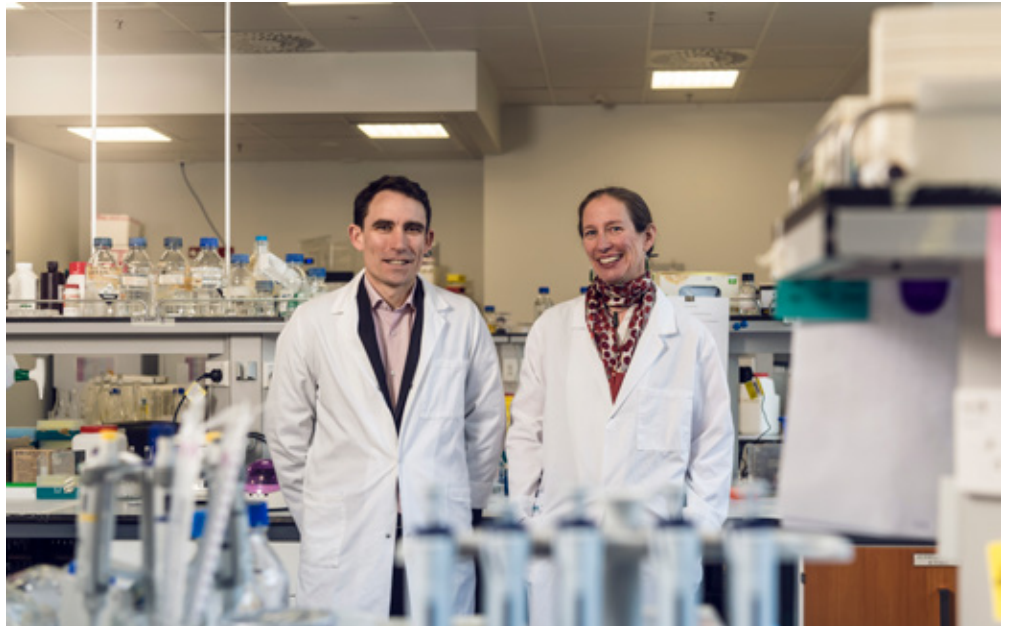
# KIWINET IS PROUD TO CELEBRATE THE NUMBER 50

This year KiwiNet member organisations hit three major milestones.

## START-UP BUSINESSES

### The 50th start-up company to spin out of KiwiNet PreSeed Funding launched in late 2019

Recover Therapeutics is a spin-out from Wellington UniVentures. They are developing a new treatment for multiple sclerosis (MS) with the potential to reverse the disability, by repairing damaged nerves in the brain. This treatment could have life-changing outcomes for people living with MS, of which there are 2.5 million worldwide. Recently, the company received investment from the Innovation Booster Fund (NZIB), a partnership between Booster Financial Services and Wellington UniVentures. This funding will support preparations for a human clinical trial as the team works towards translating its science to improve outcomes for people with MS around the world.



## COMMERCIAL MENTORS

### We partnered with our 50th commercial mentor since the KiwiNet mentor programme started

Stuart McKenzie is CEO of ArcActive, a spinout company from the University of Canterbury. Originally an engineer, prior to ArcActive Stuart spent ten years as partner and director of two venture capital firms. Stuart has been involved in the development of numerous technology businesses and is on the Innovation Board at the NZ Ministry of Science and Innovation. As a KiwiNet Commercial Mentor, Stuart is generously lending his private sector expertise and time to support Fraser Hughson, an Emerging Innovator and PhD candidate at Victoria University of Wellington.

# 50

## EMERGING INNOVATORS

### KiwiNet supported its 50th Emerging Innovator through our Emerging Innovator Programme

Fraser Hughson is a PhD candidate at Victoria University of Wellington. Fraser's research focus is on creating new battery chemistries for high-powered applications, that are cheap, safe, and sustainable. He is passionate about driving the commercialisation of this technology to make a real difference in the renewable energy sector.





# HIGHLIGHTS



## Investment Committee

The Investment Committee met eight times across New Zealand and reviewed a record 133 new commercialisation projects. KiwiNet PreSeed Accelerator Fund investments are generating a greater than eight-fold return to New Zealand, in terms of business revenue and jobs created. Three Pipeline Committee meetings have been held and are a valuable mechanism for efficiently managing projects and increasing the quality of their execution.

## KiwiNet Awards

The seventh KiwiNet Research Commercialisation Awards brought together the innovation community to celebrate successes and inspire others. Tickets sold out two weeks in advance with 392 people attending from 141 organisations. The 15 finalists and winners were showcased in style. The event reinforces the value of research commercialisation in the innovation ecosystem, the value of the Commercialisation Partner Network, and the importance of KiwiNet as a champion of the pre-commercial space.

## KiwiNet's Corporate Partners

KiwiNet's Corporate Partners provide expert support to research commercialisation projects and Emerging Innovators. They play a key role in nurturing new talent and driving projects forward to achieve their full potential. MinterEllisonRuddWatts, Baldwins and PwC have supported 16 projects.

## Operational Funding

The Ministry of Business Innovation and Employment (MBIE), has provided an additional \$25.5M funding for the CPN, PreSeed funding and the Tech Incubators through to July 2023. This investment is a strong signal of confidence in KiwiNet and its Shareholders' success, and the value that this cohort delivers from publicly funded research. It provides a solid platform for KiwiNet to target strategic initiatives and ramp-up its investment, to strengthen the research commercialisation eco-system.

## Rewa Pre-Accelerator Programme

In partnership with SftI National Science Challenge, KiwiNet launched a new 10-week, Trans-Tasman pre-accelerator programme in March 2020. Through Rewa, five facilitators and 15 mentors, supported 26 participants across seven teams to grow their early-stage ideas through skills-building, overseas connections, and market insights. Several are preparing to utilise PreSeed funding to accelerate their commercialisation journey.

## KiwiNet Emerging Innovator Programme

The Emerging Innovator programme has gone from strength to strength with a total of 52 innovators having progressed through the programme to date. In February 2020 KiwiNet ran a "Pitching for Investment" workshop for our alumni. 11 innovators officially graduated this year.

## KiwiNet Internship Programme

KiwiNet's Commercialisation Intern Programme sees interns placed within a KiwiNet partner organisation for six months where they work on real technology commercialisation projects, gaining early experience to pave a way into careers in commercialisation. Eight interns have been placed within Scion, AUT Ventures, AgResearch, Plant & Food Research and Wellington UniVentures, as of 30 June 2020.

## Building Commercial Capability

More than 500 researchers and 59 tech transfer professionals took part in KiwiNet commercialisation training initiatives last year as well as events led by our partners. Events included GetFUNDED with CreativeHQ, GetINVESTED with Daniel Batten, and Market Validation workshops with WNT Ventures, plus the KCA conference.

## KiwiNet Management Team

KiwiNet has three additional full-time staff, significantly enhancing our ability to deliver. We recruited a Commercialisation Manager in Canterbury to better support KiwiNet's South Island stakeholders, a new Commercialisation Engagement Specialist focusing on the private sector, and a new Marketing and Communications specialist.

## Commercialisation Best Practice Review

In November 2019, KiwiNet undertook a Real-Life Practices study focusing on commercialisation practices across all of New Zealand's universities and Crown Research Institutes. It spans commercialisation directives, barriers, perceptions from leadership, culture, teams, processes, measuring success, and international comparisons.

## CORPORATE PARTNERSHIPS

KiwiNet is delighted to have ongoing sponsorship from our wonderful corporate partners:

- **Strategic Partner, Bank of New Zealand** – substantial support around events and promotion, helping us raise the profile of research commercialisation.
- **Major Partners, Norman Barry Foundation and K1W1** – provide ongoing support for the Emerging Innovator Programme.
- **Major Partner, Baldwins** – provides in-kind IP advice to our Emerging Innovators and research commercialisation events and projects.
- **Major Partner, MinterEllisonRuddWatts** – provides in-kind legal advice to research commercialisation projects from across the country to ensure early stage projects get off on the right foot.
- **Major Partner, PwC** – provides in-kind consultancy for each project and provides lead support in the development of the KiwiNet Advisory Panel and Deep Tech Leaders programme.
- **Photography Partner, Sciencelens** – provides excellent photographic services for our flagship Awards events.

It is exciting to work alongside these leading businesses, who generously offer their time, expertise, and support to drive prosperity from publicly derived science and innovation in New Zealand.

Proudly  
supporting  
science-led  
innovation

BNZ Partners  
Business Centre



# STRATEGY

## OUR PURPOSE

KiwiNet exists to drive prosperity from science and innovation.



Photo credit:  
Manaaki Whenua - Landcare Research



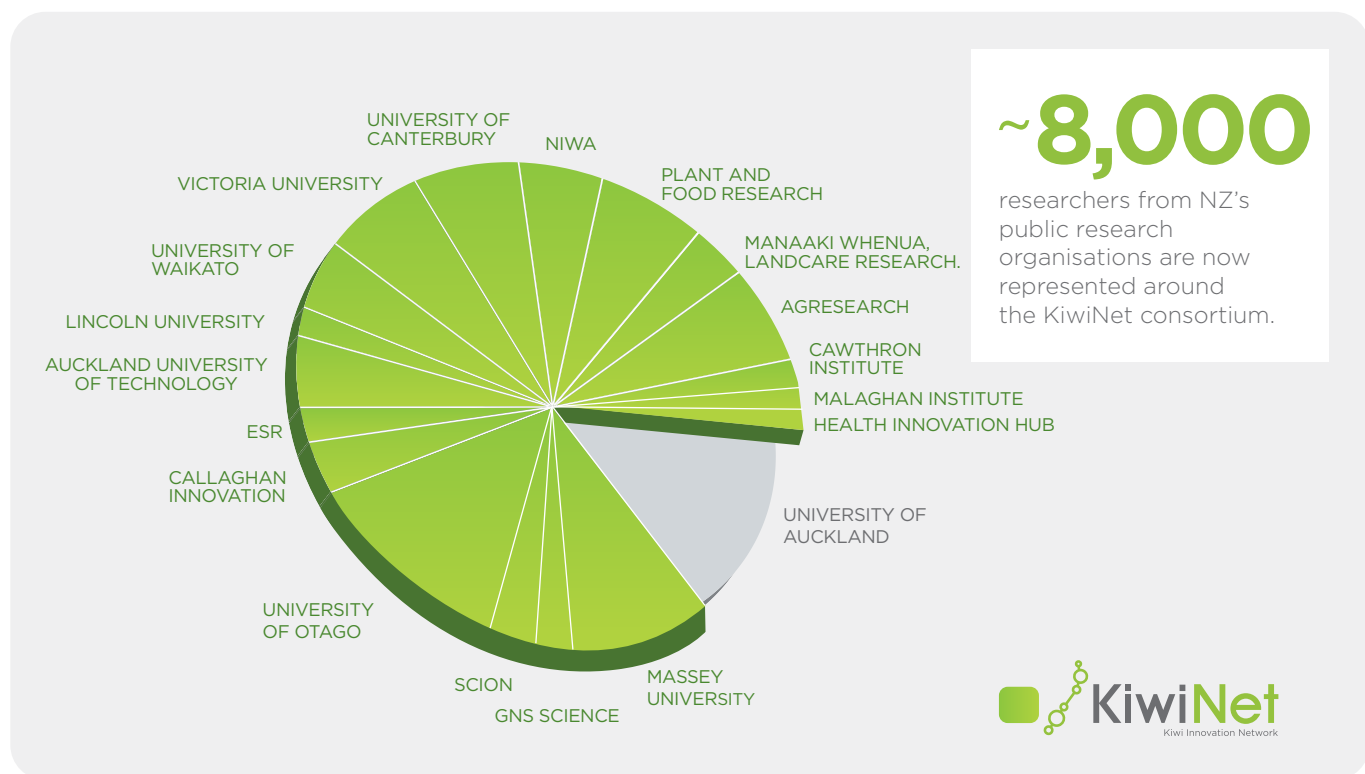
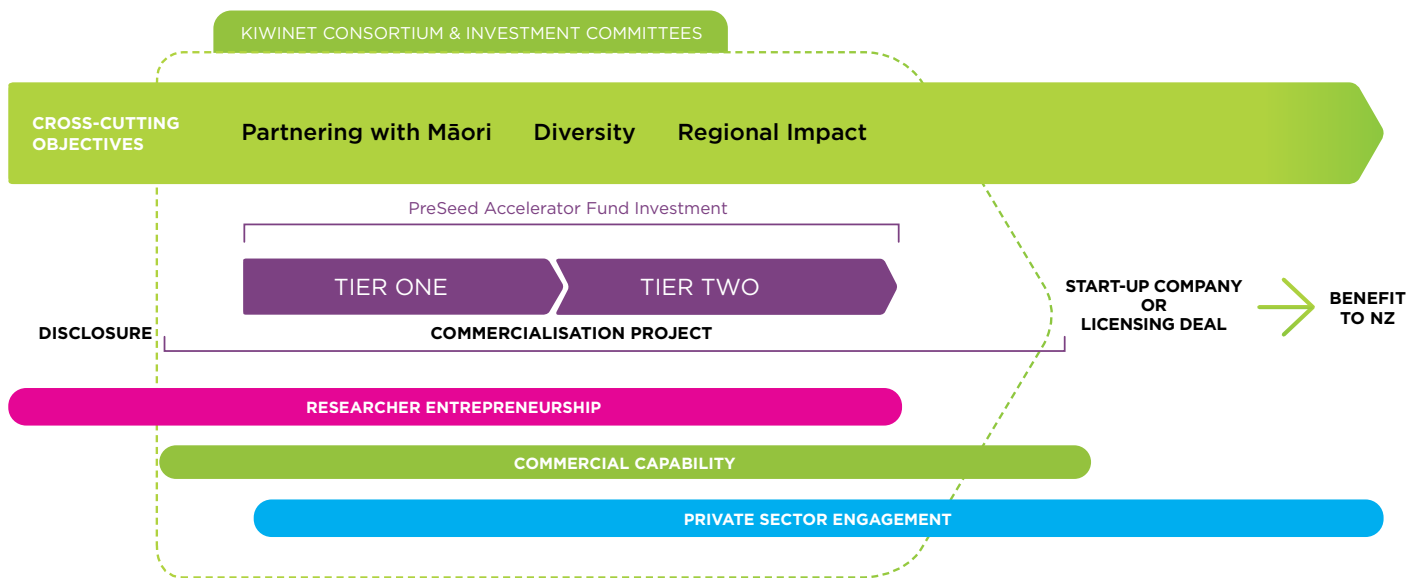
# STRATEGY

## OUR VISION

A globally competitive technology sector, driving a high-value economy for New Zealand.

## OUR PASSION

We believe in the power of New Zealand science to transform lives and change the world.



# KIWINET INVESTMENT AND PIPELINE COMMITTEES

A thriving commercialisation community & PreSeed pipeline, delivering massive impact for New Zealand.



# KIWINET INVESTMENT COMMITTEE HIGHLIGHTS

## PRESEED INVESTMENT

In July 2019, KiwiNet was awarded \$9.94M PreSeed Accelerator Funding (PreSeed), by the Ministry of Business Innovation and Employment (MBIE), to July 2021. PreSeed funding is a vital mechanism for transforming discoveries from New Zealand's top research organisations into tomorrow's deep-tech products and services.

## INVESTMENT COMMITTEE PARTNERSHIPS

With 18 research organisations collaborating through the KiwiNet Investment Committee (IC), it now represents approximately 80% of researchers in public research organisations in New Zealand. Since 1 July 2019, 154 projects have been presented to the Investment and Pipeline Committees from 16 different research organisations.

## KIWINET PIPELINE COMMITTEE HIGHLIGHTS

The KiwiNet Pipeline Committee (PC) is proving an invaluable, complementary mechanism to the KiwiNet Investment Committee, to advance partner projects. Three meetings were held to support the increased demand for project review and advice. The committee is proving an important forum for strengthening commercial capability and growing the next generation of IC members. Committee members are passionate about collectively accelerating deep-tech opportunities to market.



**“THE PROJECTS BROUGHT TO THE IC ARE ABOUT INNOVATIVE, RELEVANT, AND RIGOROUS SOLUTIONS TO KEY NZ SECTORS. THE SCIENTISTS BEHIND THESE PROJECTS ARE PASSIONATE ABOUT MAKING A LONG-LASTING CONTRIBUTION, THAT STRENGTHENS NZ’S VALUE PROPOSITION IN THEIR AREAS OF EXPERTISE IN A GLOBALLY COMPETITIVE MANNER.”**

**DANA MCKENZIE**  
INDEPENDENT KIWINET INVESTMENT COMMITTEE MEMBER AND  
CHAIR BOARD OF DIRECTORS AT DEXIBIT.

# 1112

PROJECTS REVIEWED BY KIWINET  
INVESTMENT COMMITTEE

\*(and its predecessor UniCom) (Since July 2008)

# \$40.6

MILLION OF PRESEED  
INVESTMENT RESULTING IN

# 484

COMMERCIAL DEALS  
SINCE 2003 AND

# \$340

MILLION KNOWN REVENUE FROM ALL  
PRESEED INVESTMENTS

# \$646

MILLION POTENTIAL EXPORT EARNINGS  
OVER THE NEXT FIVE YEARS.

# 441

FTE JOB OPPORTUNITIES  
SUSTAINED IN NEW ZEALAND.

THESE FIGURES REPRESENT A  
RETURN TO NEW ZEALAND OF  
EIGHT-TIMES GREATER THAN  
THE PRESEED INVESTED.



“BRIDGING THE GAP BETWEEN THE SCIENCE AND BUSINESS WORLDS IS A CRITICAL PART OF THE JOURNEY TOWARDS ACHIEVING IMPACT FROM OUR SCIENCE. BEING PART OF THIS PASSIONATE AND TALENTED TEAM HAS BEEN AN INVALUABLE OPPORTUNITY FOR MY PROFESSIONAL GROWTH AND HAS PROVIDED A MUCH NEEDED SENSE OF FELLOWSHIP AND CONNECTION TO THE WIDER COMMERCIALISATION ECOSYSTEM.”

AMANDA DAVIES  
OPPORTUNITY AND INVESTMENT MANAGER, SCION AND MEMBER OF THE KIWINET PIPELINE COMMITTEE



154

Proposals, project previews and Emerging Innovators presented to the Investment and Pipeline Committees. (SINCE 1 JULY 2019)



15

Public organisations pooling PreSeed investment.



16

Different research organisations presented projects to the Investment and Pipeline Committees. (SINCE 1 JULY 2019)

**\$9.94m**  
PRESEED TO INVEST\*

**NIWA** | **Massey Ventures** | **Plant & Food Research** | **waikatoLink** | **OTAGO INNOVATION**  
**SCION** | **Lincoln University** | **UC UNIVERSITY OF CANTERBURY** | **GNS SCIENCE**  
**health** | **CAWTHRON**  
**WELLINGTON UNIVENTURES** | **CallaghanInnovation**  
**Manaaki Whenua Landcare Research** | **agresearch**  
**E/S/R Science for Communities** | **AUT VENTURES** | **MALAGHAN INSTITUTE OF MEDICAL RESEARCH**

\*Announced by MBIE in July 2019.



KiwiNet Investment Committee and observers, Christchurch.

## ACTIVITIES

### INVESTMENT COMMITTEE PARTNERSHIPS

With 18 research organisations collaborating through the KiwiNet Investment Committee, it now represents approximately 80% of researchers in public research organisations in New Zealand.

### PIPELINE COMMITTEE

A joint committee of commercialisation professionals from research organisations, who assess new projects, provide input into KiwiNet initiatives and design initiatives to support commercialisation.

## OUTCOMES

Since 1 July 2019, a record 154 projects have been presented to the Investment and Pipeline Committees from 16 different research organisations.

Over the year to April 2020, three Pipeline meetings were held with an average of 14 attendees at each. Projects were discussed among the research organisation representatives, combining expertise and connections to help accelerate commercialisation.

“Taking on the role of Chair of the KiwiNet Investment Committee late last year was in equal parts daunting and exhilarating. Daunting because it’s never easy stepping into the shoes of a mighty and longstanding predecessor, and I salute Andrew Turnbull for building such a fine platform for our success. But also daunting, because of the huge opportunity that KiwiNet presents to truly grow NZ Inc, through the talent and energy of our researchers and commercialisation professionals across our 18 stakeholder organisations. The words “don’t stuff it up” spring regularly to mind!

The exhilaration comes from seeing it happen, and continue happening ... the commitment of the PROs to getting the research out into the world, the excitement of the researchers in seeing their ideas turned into value for society, and sheer size of the opportunity truly make a difference, for our people, our country and the world.

My heartfelt thanks to the KiwiNet team, who make my job so much easier, and also to the rest of the IC, our shareholders, and our independent members, who commit the time and energy to building a unique collaborative model that proves that working together does indeed deliver outcomes much greater than the sum of the parts. Thank you!”

### DEBRA HALL

CHAIR OF THE KIWINET INVESTMENT COMMITTEE





## SUCCESS STORIES



### WAIKATOLINK'S CYBERSECURITY SOFTWARE GAINS SIGNIFICANT SEED FUNDING

International connections and a unique partnership are enabling First Watch Ltd to accelerate at speed.

The growth of the Internet of Things and modern inventory management has led to the rapid proliferation of connected devices in industrial networks. However, these networks were not originally intended to be connected to the Internet, and so were not built to be secure.

The problem is that these new connections provide multiple entry points for hackers and security breaches. And attacks on these unsecured systems – which often control critical infrastructure such as water systems, energy, and manufacturing plants – are increasing.

Researchers at The University of Waikato working with WaikatoLink built a cybersecurity software suite to address this gap.

First Watch launched as a spin-out company jointly owned by WaikatoLink and Combined Technology Ltd (CTEK) in October 2019. Its software is designed specifically for Industrial Control Systems, to prevent and reduce the risk to these systems and their follow-on failure effects – which, in worst-case scenarios, include loss of life and destruction of assets.

In December 2018 the project received \$340,000 in KiwiNet PreSeed funding, with further investment from WaikatoLink and CTEK, New Zealand's leading provider of industrial control and automation systems. In less than two years the project has reached incredible milestones which often take software start-ups many years to achieve.

A major factor in its success are the strong relationships WaikatoLink and CTEK have built together, and with overseas markets. "Our partnership with CTEK has given us deep, expert knowledge, access to pilot customers here and in Asia-Pacific and allowed us to validate the product in a way that simply wouldn't have been possible otherwise. They have also opened doors to highly skilled and specialised talent needed to grow the company further," says Matt McMahon, General Manager of Commercialisation at WaikatoLink.

Additionally, relationships built early-on in Asia-Pacific recently helped First Watch to secure substantial Seed Round funding, including support from SingTel Innov8 and NUS Singapore.

Significantly, The University of Waikato continues to provide R&D for First Watch, looking longer-term at the next generation of the product. This means that First Watch can focus on its current product strategy, to meet client needs and market fit right now. The unique relationship between University, Company and Tech Transfer Office is enabling the product to accelerate at speed.

The company now has a team of 10 based in Hamilton and is on a rapid cycle of product development, securing pilots with major plants in critical infrastructure, engineering and dairy, both locally and in Asia-Pacific. It is on a path to launch its first commercial product in 2021.

"Whilst this couldn't have happened without our partner CTEK, it also could not have happened without the investment of PreSeed accelerator funding at a critical point in time."  
- Matt McMahon,  
General Manager  
Commercial,  
WaikatoLink

waikatolink   
University of Waikato Commercialisation

 **FIRST WATCH**  
PROTECTING CRITICAL INFRASTRUCTURE

## SUCCESS STORIES



This 100% plant-based supplement developed by Plant & Food Research was a world first for weight management when it launched in 2018.

The secret to its success? Amarasate®, an extract from New Zealand hops, which researchers found to be an effective compound to trigger the 'Bitter Brake'™ – a natural evolutionary response whereby bitter compounds trigger a 'stop eating' signal in the brain.

The Amarasate extract project was presented to the KiwiNet Investment Committee in March 2017 and received \$122,000 in PreSeed funding, to find the best path to market through a global partner and ensure the commercialisation strategy maximised value to New Zealand.

With support from KiwiNet PreSeed funding, Plant & Food Research was able to determine the product to be Generally Recognized As Safe and gain health claim substantiation through US experts. After completing US market validation in the UCLA GAP program, Plant & Food Research filed a provisional patent, and contracted the world's leading company for capsule production. The technology was then licensed to a group of New Zealand senior executives backed by private equity.

Calocurb, a product containing the Amarasate® extract, launched in May 2018 across the US and New Zealand. By selling directly to its customers from the outset, Calocurb was able to enter offshore markets quickly to develop direct consumer relationships.

However, success did not come easily. The first 18 months were challenging for Calocurb, as the team expanded quickly across geographies and had to grasp the fast-paced complexities of operating largely online. The company is now seeing impressive 400% year-on-year growth, across five geographies.

Calocurb employs five FTEs in New Zealand, with plans to expand into four further markets in the coming year.

As well as providing strong financial returns for New Zealand, Calocurb continues its science-first approach. It is currently partnering with Plant & Food Research to conduct world-leading research into the use of the Amarasate® extract to reduce hunger during fasting, aiming to enter the new, fast-growing consumer segment of intermittent fasting diets.

The company is now seeing an impressive 400% year-on-year growth across five geographies, with plans to expand into four further markets in the coming year.

# SUCCESS STORIES

## AVALIA IMMUNOTHERAPIES IS FIGHTING CANCER, HEPATITIS, AND NOW COVID-19



### Avalia has fast become New Zealand's leader in immunotherapies and vaccine development.

Launched out of Wellington UniVentures and the Malaghan Institute of Medical Research, Avalia Immunotherapies is developing a powerful, world-first vaccine technology.

Avalia was formed after a decade-long research partnership between Victoria University of Wellington's Ferrier Research Institute and the Malaghan Institute of Medical Research. Its foundation project was a vaccine technology that stimulates the most powerful immune cells in the body, with an initial focus on developing cancer therapies.

A testament to the company's capabilities, Avalia was recently awarded funding of \$100,000 from the Ministry of Business, Innovation and Employment to address the security of supply for a SARS-CoV-2 prophylactic vaccine. This grant brings together leading New Zealand science organisations and industry alongside Avalia, including the Malaghan Institute, University of Otago, Victoria University of Wellington, AgResearch and South Pacific Sera.

The funding is going towards initial research and preparations for the development, testing and manufacture of a SARS-CoV-2 vaccine for New Zealand. Avalia and collaborators are currently working with government to finalise details of their role as part of the New Zealand Government's COVID-19 vaccine strategy.

Incorporated in 2015 to commercialise its patented technology, Avalia now operates virtually with a core team of five, and more than 15 consultants and advisors supporting multiple preclinical programmes. It has

expanded its patent portfolio to seven patent families and 31 pending and granted applications.

KiwiNet provided PreSeed funding in the early stages of commercialisation, to support the development of Avalia's preclinical package and strengthen its intellectual property portfolio. This gave Avalia a strong platform from which to license and partner across a broad range of applications.

"Commercialising our technology gave us the mandate to explore how it could be modified to impact different diseases, and allowed us to start developing other treatments," says Dr Shivali Gulab, CEO of Avalia Immunotherapies. "We firmly believe that despite our small size, New Zealand has a strong role to play in supporting the development of global treatments and vaccines."

Avalia has further expanded its focus from cancer therapies to develop preventative vaccines for malaria and influenza, and a treatment for people with chronic hepatitis B.

Wellington UniVentures and the Malaghan Institute of Medical Research continue to be ongoing and committed shareholders, and in 2018-19 helped the company raise significant investment, including from NZ Innovation Booster and Malcorp Biodiscoveries Limited.

The company is currently working on validating its novel immune therapy and vaccine platform in a clinical setting, placing it on a path to further accelerate its other pipeline programmes and strategic partnerships for market approvals.

Since incorporation, Avalia has raised more than \$4 million in capital from investors and has received a Callaghan Innovation Project Grant and other non-dilutive funding of \$2 million.

**M** MALAGHAN  
INSTITUTE  
OF MEDICAL RESEARCH

**avalia**  
immunotherapies

## SUCCESS STORIES



### GLOBAL DEMAND FOR WAKE®FIELD RASPBERRY DRIVES FURTHER INVESTMENT

Photo: Plant & Food Research

The raspberry variety with a unique licensing model is now delivering significant returns.

'Wakefield' (marketed as Wake®Field) is a red raspberry cultivar which boasts improved disease resistance and firm fruit perfect for machine harvest, with increased levels of compounds good for health. Developed by Plant & Food Research, it has many benefits over other commercially grown raspberry varieties.

In 2014 Wake®Field launched into the Pacific Northwest of North America - the world's highest value process raspberry industry - where it quickly became the most sought-after new raspberry variety, making up 15% of all process raspberries planted in the region.

It was early support from KiwiNet PreSeed funding that allowed the team to highlight the benefits of Wakefield Raspberry, increasing investor confidence and accelerating the timeframe, scale, and ultimate success of the product's launch.

However, to generate revenues that justified a plant breeding programme and represented a fair benefit to investors, Plant & Food Research had to develop a unique commercialisation model. Its model, based on direct-to-grower licences with an annual area-based licence fee, enabled grower, nursery, and Plant & Food Research to share in the significant commercial success of the variety.

Wake®Field is seeing increasing interest from growers wanting to meet demand for a sustainable, profitable, locally grown product. It is now commercially planted in Australia and New Zealand, and evaluation is underway in Chile. In 2015, trials were supported by an AGMARDT grant, to facilitate the adoption of Wake®Field's international best practice growing techniques in New Zealand. And in 2019, an agent was appointed for the commercialisation of Wake®Field in Europe.

Its success has also enabled further research investment by Plant & Food Research, including an ongoing raspberry breeding programme in the US and a joint venture company Pacific Berries LLC. Pacific Berries has since released a second complementary variety, 'NN08002', marketed as Wake®Haven. Wake®Field is now underpinned by a robust intellectual property strategy including a US Plant Patent, Plant Variety Rights (in 15 countries), and registered trademark.

Plant & Food Research together with Pacific Berries have continued to invest and build on the initial KiwiNet PreSeed project, supporting ongoing success for investors and the Wake® family of varieties, and ultimately success for New Zealand.

In the first year Wake®Field plants sold out in the Pacific NorthWest, and saw orders exceed 1 million units for the following year.

# ADVOCACY

Collaborating with the research community, Government stakeholders, Callaghan Innovation, CPN partners, investors, and private sector stakeholders, to create the best supportive environment for research commercialisation.



# ADVOCACY

## ACTIVITIES

### GOVERNMENT AGENCY ENGAGEMENT

KiwiNet engages with government departments and agencies who are working in similar and complementary areas.

### COMMERCIALISATION PARTNER NETWORK ENGAGEMENT

KiwiNet is collaborating with our Commercialisation Partner Network (CPN) partner Return On Science to accelerate our common goal of achieving better economic outcomes from the commercialisation of publicly funded research in New Zealand.

### MĀORI PARTNERSHIP PROGRAMME

Our Māori Partnership Programme aims to build meaningful and longstanding relationships with Māori and upskill both our member organisations and Māori stakeholders to scale the partnership between the research commercialisation world and Te Ao Māori.

### KIWINET MANAGEMENT TEAM

KiwiNet's management team works in partnership with research organisations and commercialisation professionals across New Zealand to deliver KiwiNet's strategic objectives.

## OUTCOMES

KiwiNet has been working closely with the Ministry of Business Innovation and Employment (MBIE), to provide a clear picture of research commercialisation activities in New Zealand. Reports provided to MBIE include:

- An annual report on KiwiNet's PreSeed portfolio.
- An annual report on Commercialisation Partner Network outcomes.

In July 2019, KiwiNet was awarded \$9.94M PreSeed Accelerator Funding by MBIE to July 2021. PreSeed funding is a vital mechanism for transforming discoveries from New Zealand's top research organisations into tomorrow's deep-tech products and services.

MBIE's ongoing support demonstrates a strong commitment to realising the value that can be created from publicly funded research. It is a clear acknowledgement of the success that has been generated since KiwiNet's inception in 2008.

- Return On Science supported KiwiNet in celebrating the 2019 KiwiNet Research Commercialisation Awards with the introduction of a new and very popular Momentum Student Entrepreneur category.
- In June 2020, the HealthTech Supernode Challenge was launched by KiwiNet and ChristchurchNZ, with the view to increase, support, collaboration, and accelerate commercial initiatives in the South Island. This is one of our four regional Supernodes (Health Tech Access and Resilient Communities, Food Fibre and Agritech, Aerospace and Future Transport, and High-Tech Services) identified as strategic growth areas for Canterbury. KiwiNet is actively driving strategy and engagement at the heart of the programme. Advisory Boards have been established and a CRI roadshow was undertaken to drive visibility and engagement.

- KiwiNet hosted Te Komanawa, a workshop in November 2019 alongside Māori stakeholders to provide more visibility of the PreSeed technology pipeline, and Commercialisation Professionals and Emerging Innovators a direct insight into Māori ambitions in our space.
- We convened a hui of 12 Māori Engagement Representatives from our partner organisations to strengthen collaboration.
- We worked with Māori innovation stakeholders to develop a mechanism to begin incorporating Te Ao Māori into Investment Committee meetings.

KiwiNet has a core team of eight, who are supplemented with contracted professionals and interns. Our team runs the Investment and Pipeline committees, works with our partners to prepare business plans for PreSeed investment, and runs events and initiatives to support research commercialisation.

01 // Where  
Auckland, Shed 10

02 // When  
Wednesday 7th August 2019

# NEW ZEALAND'S 7TH ANNUAL RESEARCH COMMERCIALISATION AWARDS

The KiwiNet Awards celebrate the ability for science to drive our prosperity, putting the spotlight on those who successfully commercialise clever Kiwi ideas. This PREMIER EVENT is highly anticipated on New Zealand's innovation calendar, raising the profile of research commercialisation nationwide.



# 2019 KIWINET AWARDS WINNERS

## 01 //

### Baldwins Researcher Entrepreneur Award

This award recognises an entrepreneurial researcher who has made outstanding contributions to business innovation or has created innovative businesses in New Zealand through technology licensing, start-up creation, or by providing expertise to support business innovation.

## 02 //

### BNZ Supreme Award

This award celebrates the supreme entry which demonstrates overall excellence in all core areas of research commercialisation.

## WINNER

Distinguished Professor,  
Dame Margaret Brimble -  
University of Auckland



## Pioneering drug discovery and development

A pioneer in drug discovery in New Zealand, Distinguished Professor Dame Margaret Brimble has discovered a treatment for Rett Syndrome, Fragile X Syndrome and autism disorders. Trofinetide, currently entering phase III human clinical trials, is the first drug successfully developed by a New Zealand spin-out company and one of very few discovered in an academic laboratory.

Professor Brimble is founder of start-up biotech company SapVax, which is developing “first-in-class” cancer vaccines based on a novel peptide platform technology and funded by US accelerator BioMotiv. This work was awarded the 2018 George and Christine Sosnovsky Award for Cancer Therapy by the Royal Society of Chemistry.

Her work has recently resulted in two series of lipopeptide compounds, being licensed to Living Cell Technologies (LCT) for the treatment of obesity and migraine.

An inventor of 50+ patents, Professor Brimble holds the Chair of Organic Chemistry and is Director of Medicinal Chemistry in the Schools of Chemical Sciences and Biological Sciences at the University of Auckland, and Principal Investigator in the Maurice Wilkins Centre. She is past-President of the International Union of Pure and Applied Chemistry Organic Division, the International Society for Heterocyclic Chemistry, and the RSNZ Rutherford Foundation.

She is a Dame Companion of the New Zealand Order of Merit for Services to Science, Fellow of the Royal Society London, the Royal Society of Chemistry UK, the NZ Royal Society Te Apārangi, the Royal Australian Chemical Institute and the New Zealand Institute of Chemistry. She is a recipient of the 2016 Marsden Medal, the 2012 RSNZ Rutherford Medal and the MacDiarmid and Hector Medals. She was the 2007 L’Oreal-UNESCO Women in Science laureate in materials science for Asia Pacific and won the 2014 Westpac Trust Women in Influence Award for Science and Technology.





**03 // Norman Barry Foundation Breakthrough Innovator Award**

This award recognises an upcoming entrepreneurial researcher who is making outstanding contributions to business innovation or is creating innovative businesses in New Zealand through technology licensing, start-up creation or by providing expertise to support business innovation.



**04 // MinterEllisonRuddWatts Commercialisation Professional Award**

This award recognises a commercialisation professional working in a New Zealand research organisation, who has made an outstanding contribution to the commercialisation of publicly funded research.



**WINNER**  
Dr Shalen Kumar, AuramerBio

**Precision diagnostics made faster, cheaper, and mobile**

Dr Shalen Kumar, Co-Founder and CEO of AuramerBio started developing aptamers (synthetic bio-receptors), to enable new high-end precision diagnostic solutions that are affordable and mobile. Shalen started research on Aptamer technology during his undergraduate studies at Victoria University of Wellington. He has a passion for providing high-quality accurate, robust, and sensitive medical diagnostic solutions for developing communities and environmental monitoring.

In the US\$10b POC biosensor market, AuramerBio is developing total solutions for mobile testing for illicit drugs and female fertility markets. AuramerBio has developed multiplex quantitative tests for up to eight target molecules in saliva samples in under three minutes. AuramerBio also has Aptamers for steroid and protein hormones, environmental contaminants, amino acids, nutritional compounds, and various diagnostic biomarkers in its catalogue for future market expansion.

AuramerBio has both National and International partner companies, currently using Auramer's Aptamers in their platform tech, to offer novel diagnostic solutions for their market verticals.



**WINNER**  
Will Charles, Auckland UniServices and University of Auckland

**Supercharging the commercialisation activities of the University of Auckland**

Will Charles has had a significant impact on tech transfer in New Zealand over the past 13 years, while leading the commercialisation activities at Auckland UniServices Limited.

Key achievements include: designing and implementing best practice processes for Return On Science; the expert advisory available to all research organisations in New Zealand; setting up over \$65M in venture funds via the Trans-Tasman Commercialisation Fund and University of Auckland Inventors Fund; together with top Australian universities, attracting \$200M of investment funding from the IP Group; and becoming a member of the \$220M+ Medical Research Commercialisation Fund. Will led the sale of HalolPT to QualComm, the US\$10M investment into Soul Machines led by Horizon Ventures, and played an important role in PowerbyProxi's recent sale.

During the past 30 months under Will Charles' leadership, Auckland UniServices has accelerated its commercialisation activities resulting in 30 new companies, over 150 licensed patents, transacted or exited deals worth over \$350m, generating \$61M in revenues for itself and its start-up companies. Its new companies have attracted \$99M of external capital and generated 283 new jobs. Over the same period, Auckland UniServices has sourced and reviewed over 300 new ideas from the campus.

Will's strategic ability and leadership have been core to Auckland UniServices' growth and ability to attract large pools of investment capital.

## 05 //

**PwC Commercial Impact Award**

This award celebrates excellence in research commercialisation delivering outstanding innovation performance and the potential for generating significant economic impact for New Zealand.

**WINNER**

Plant & Food Research and  
Compac Sorting Equipment

**World-leading fruit grading and sorting technologies**

Ensuring that fresh produce looks and tastes good is key to the horticulture industry maintaining a supply of premium produce. Efficient sorting of fruit allows marketers of fruit and vegetables to grade produce effectively and efficiently, ensuring consumers are not disappointed by the quality of their food.

Compac Sorting Equipment's technologies have revolutionised the sorting of fruit and vegetables, enabling fresh produce industries to meet customer expectation for consistent blemish-free produce. Plant & Food Research and Compac work together to develop and enhance these technologies, ensuring that new concepts and developments target industry needs. This seamless collaborative research approach allows continual improvements to Compac's technologies and was critical to the development of the Spectrim™ and Inspectra2™ technologies, released onto the market in late 2016. Through a shared vision, Plant & Food Research and Compac have worked together to build and validate these new technologies, which have allowed Compac to stay ahead of the market and double sales revenue in only four years.

Spectrim™ and Inspectra2™ has allowed marketers to reduce manual handling of fruit and vegetables, while increasing the volume of produce graded as premium. The Spectrim system is an optical and visual sorting platform, while Inspectra uses near-infrared (NIR) light, to determine the internal characteristics of produce to allow efficient, automatic grading. Benefits of the system include the high-resolution detection of external and internal defects in 10-15 fruit per second, as it moves along the grader. Sales of Compac technologies have exceeded expectations in the two years since release, with sales of the system in over 50 countries, and have led to increased manufacturing volumes and capabilities at the Auckland-based factory.

## 06 //

**Momentum Student Entrepreneur Award**

The award recognises a highly motivated university student who is making outstanding contributions to commercialisation and innovation or has created an innovative business in New Zealand.

**WINNER**

Cynthia Hunefeld, Victoria University  
of Wellington

**HerbScience: Back to the future**

Cynthia Hunefeld is on a mission to bring herbal medicine into the 21st century with the help of modern science. With 20 years of experience in the field of integrative medicine and an academic background in ethnobotany, clinical herbal medicine, and clinical research, she identifies potential new medicines from a unique perspective.

Helping her father overcome an antibiotic resistant infection using a plant extract was a defining moment for her and led to the discovery of an active constituent that can kill bacteria. The active constituent can also express poly-pharmacological actions to minimise the occurrence of single-step bacterial resistance, inhibit biofilm and bacterial adhesion, and ameliorate tissue damage at the same time.

Cynthia is currently studying towards her Master's degree in Innovation & Commercialisation to establish the path for a novel plant-based treatment for E. coli-induced urinary tract infections (UTIs). She is aiming towards the development of a dietary supplement and is working towards an evidence-based integrative medicine within the next three years.

UTIs are the most common bacterial infection worldwide that affect over 150 million people each year, with a market value of 4.69 Bn. The World Health Organization has indicated that there is a significant shortage of new medicines for E. coli-induced UTIs and states that "Novel treatment regimens that are assembling non-toxic medicines are desperately needed".

The project has received recognition with a regional AMP scholarship and was awarded PreSeed funding by the Momentum advisory board.

# CELEBRATING INVENTIVE KIWI TALENT



392 attendees  
15 finalists  
5 winners



## RESEARCHER ENTREPRENEURSHIP

Championing Kiwi researchers to find a more effective pathway for their discoveries to be recognised and make a difference in the world.



+



Photo credit:  
Wellington UniVentures

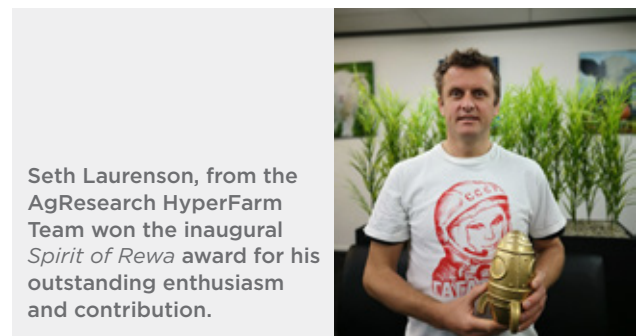
# REWA AND EXP90 PROGRAMMES

## Rewa Pre-accelerator Programme

KiwiNet’s latest offering to deepen our support of commercialisation of both research and commercialisation professionals, is a Trans-Tasman pre-accelerator programme called Rewa, meaning “to be elevated”. Launched in partnership with the Science for Technological Innovation National Science Challenge (SfTI), Rewa enables teams from public research organisations to strongly validate a deep tech solution to a real-world problem. Through rigorous market engagement, they validate, modify or refute their ‘solutions’. It is an opportunity to test paths for IP, know-how and technology, through a proven process of customer discovery and market validation.

Rewa encompasses eight residential days and 50 hours’ commitment per team member over 10 weeks. The programme begins with a four-day residential boot camp, has a mid-programme two-day team building residential and concludes with a showcase event that profiles teams’ achievements to a general audience. This includes an assessment of each team’s understanding of “gaps”, and how they could resource the next steps of that projects journey.

The pilot programme was successfully pivoted to be a completely virtual experience in 2020, due to the Covid-19 lockdown.



Seth Laurenson, from the AgResearch HyperFarm Team won the inaugural *Spirit of Rewa* award for his outstanding enthusiasm and contribution.



**“Rewa has utterly transformed the way I will do my work – I’ve discovered how science can deliver social and commercial value, and that really excites me.”**

- Mike MacKay, Social Scientist, AgResearch

## Exp90

- ‘Exponential Founders’ Programme

KiwiNet supports New Zealand’s future scientific leaders who are keen to flex their entrepreneurial muscles and poised to be the next founders of businesses that deliver economic, social, and environmental well-being.

The Exp90 Programme supports commercial champions in their development of leadership, team-culture building, mindset, and pitching skills underpinning high-growth, deep tech companies. Unlike mentoring or incubation that focus on building business skills, this programme focuses on the “strong skills” necessary for successful decision-making and driving start-ups to success. Exp90 also provides participants with the confidence that makes them uniquely qualified to take the initiative and make bold decisions as they navigate their unique commercialisation journeys.

The programme has a peer-support focus. Friendships with others going through the same experiences enables mutual accountability. Excellent coaches who flex with the participants, deliver content that supports their needs in a virtual setting.

## EMERGING INNOVATOR PROGRAMME

May 2020 marked the milestone of the 50th researcher entering the KiwiNet Emerging Innovator Programme. Over the past four years, this programme has successfully strengthened entrepreneurship and nurtured commercial aspiration in our scientists. It empowers them to transform scientific discoveries into new business that will drive prosperity for New Zealand.

The Emerging Innovator Programme effectively fast-tracks Kiwi scientists with entrepreneurial DNA to commercial success. It provides a wide range of initiatives and resources to support recipients on their commercial journey. These include commercial mentors, coaching in media engagement, and training courses in pitching for investment and commercialisation.

Many Emerging Innovators have progressed along the KiwiNet commercialisation channel securing PreSeed Accelerator Funding, with four forming new start-up companies. We have already seen a direct impact on deal flow from the programme, as well as a recruitment effect. Emerging Innovators can powerfully influence colleagues, growing an entrepreneurial, commercial culture among researchers.



**“IT’S A PLEASURE TO BE INVOLVED IN KIWINET’S EMERGING INNOVATOR PROGRAMME. THE RAW POTENTIAL OF THE PARTICIPANTS IS TRULY IMPRESSIVE, AND IT’S HUMBLING TO PLAY A SMALL PART IN HELPING TO NURTURE THE TALENT AND TECHNOLOGIES THAT WILL DRIVE NEW ZEALAND’S ECONOMY FORWARD.”**

**DAVID REES**

PARTNER AT CONVERGENCE PARTNERS LIMITED  
AND KIWINET COMMERCIAL MENTOR

# \$525,000

from

## NORMAN BARRY FOUNDATION



## 52 EMERGING INNOVATORS AWARDED

# 28

GRADUATES

# 4

START UP  
COMPANIES

In-kind support from

MinterEllison  
RuddWatts

intellectual  
property

Baldwins™



**To be eligible**, scientists must be working within a public research organisation in New Zealand. Recipients receive \$25,000 of funding, a commercial mentor, media training, publicity, and access to in-kind expert legal support from MinterEllisonRuddWatts and Baldwins.

## MEET THE EMERGING INNOVATORS



“Thanks to my KiwiNet experience, I have a much clearer understanding of how the commercialisation process works – and this has had a significant impact on how I carry out my day-to-day research activities. Examining the ‘problem’ from the point of view of an existing business and using that as the motivation for research has already significantly improved the value of my research outputs.”

**Ged Finch, Victoria  
University of Wellington**

### The X factor inside waste-free buildings

**It’s not an understatement to say that Ged Finch’s innovations could totally transform the way we think about buildings. The Victoria University of Wellington PhD student is fast-tracking the commercialisation of his structural frame solution for waste-free buildings, with support from the KiwiNet Emerging Innovator Programme.**

Approximately half of all New Zealand’s waste—about 1.6 million tonnes every year—is generated by the construction sector. Finch’s game-changing building design, a self-braced interlocking wood design that clips together eliminating the need for single-use fixings, has the potential to eliminate waste and reduce the amount of raw materials being used by the building industry.

Ged, with Wellington UniVentures’ support, is working to commercialise his framing system, which can be disassembled and re-used at the end of a building’s useful life, meaning zero waste. His work has attracted significant industry interest both locally and internationally, with businesses and investors backing his prototyping and independent structural testing.

In 2019, KiwiNet’s Investment Committee awarded Ged a place in the Emerging Innovator Programme and provided him with introductions to scientists from Scion, who are developing natural adhesives

from forest waste products, plus network connections with Auckland-based company Fastmount, which manufactures reusable clips that connect interior wall linings with the structure. These materials perfectly complement Ged’s technology. KiwiNet also provided Ged with a business mentor, Rob Bernstein, to provide ongoing one-on-one advice. Ged describes these connections as “magic!”

Thanks to KiwiNet emerging innovator support and help from industry, Ged completed two major proof-of-concept prototype buildings in late 2019. The success of these prototypes was then leveraged to secure X-Frame a place in the nine-month Circular Economy Start-Up accelerator programme, run by the Innovyz Institute in South Australia. Now, with the help of Innovyz, Wellington UniVentures, and KiwiNet, Ged is in the final stages of preparing his Circular Economy building technology for market.

# Dr Swati Gupta

## Swati Gupta, Founder, Inclusys

"The launch of Talk With Me in July 2019 was a milestone achievement. I could not have done this without KiwiNet's support, and I cannot thank you all enough for your help and motivation."

## Unlocking the world of communication for children with special needs

**Many children on the autism spectrum struggle with social interaction skills. Opening the world of communication for these children and their parents, caregivers and educators is Dr Swati Gupta's passion. It has led her develop Talk With Me, a novel resource that is empowering autistic children to relate to and connect with others.**

Talk With Me employs NLP (Natural Language Processing)-based proprietary algorithms, and uses touch screen tablets as a platform, to empower children to follow fundamental tenets of social interaction, like turn-taking, and communicating with each other. Talk With Me was first conceptualised by the Callaghan Innovation Assistive Devices team, led by Swati Gupta, Principal Research Scientist, where end-user testing provided proof-of-concept for the technology in 2015-2016.

Recognising the potential of Talk with Me, Swati, with support from Callaghan Innovation, KiwiNet, and several other organisations, invested time and energy to develop Talk With Me as a valuable resource for parents and educators to help children with autism learn social interaction skills. Thereafter Swati founded Inclusys to develop Talk With Me further and make it accessible to people. Inclusys is now based out of Auckland, New Zealand and Delhi NCR, India.

Swati's commercialisation journey was fast tracked in 2016 when she secured a place in KiwiNet's Emerging Innovator Programme. She used the experience to further develop a Talk With Me prototype, conduct market research, discover its business potential, engage with end users and industry experts, and conduct trials at special needs schools in Christchurch and India, with very promising results.



In 2018 Swati won a special award for the 'Start-up with Best Social Value' from Zino Ventures. Swati is a passionate champion of the commercialisation pathway to maximise the impact from her science. She is enthusiastic to inspire others to commercialise their research, having spoken about her journey at KiwiNet's 'GetFUNDED' workshop for researchers, and various other outlets.

Inclusys has attracted significant private investment and is set to take on the world, with eager early adopters lined up for commercial trials. Talk With Me can also help with speech and language disorders, Cerebral Palsy, and ADHD.

Swati is focussing on expanding the Talk With Me customer base to countries like Australia, UK, US, Singapore and India, by collaborating with autism-related organisations, schools and communities. She hopes to develop a series of offshoot products in the future.





“We really need to fundamentally change the way our economy does things – how we produce, use, and reuse resources. There is a foundational shift needed that begins with researchers coming up with new ideas, and they won’t have impact without the intersection of technology and the business world. As Jonathan’s mentor, I brought insights into what the market for this technology would be looking for, how to communicate, and how to anticipate the kind of questions that industry and investors would be asking.”

**Michael Lakeman, Principal  
at Rock Stack Innovation and  
KiwiNet Mentor**

## Zincovery for a cleaner, greener future

**Galvanising factories produce large amounts of waste acid that contains zinc, iron, HCl, and trace heavy metals such as lead and cobalt. Disposing of this acid waste is costly to galvanisers and current recycling technologies are expensive and unreliable.**

Masters student Jonathan Ring from the University of Canterbury used his place in the KiwiNet Emerging Innovator programme to develop a technology, that not only recovers wastes from the galvanising industry and significantly reduces the costs of waste disposal, but also generates and recovers the value from the waste.

Jonathan’s aim to find an environmentally friendlier solution while also extracting the high value zinc and iron trapped within the waste is now showing real commercial promise and direct benefit to industry. Through the Emerging Innovator Programme, Jonathan worked to:

- Identify appropriate business model(s) and unearth potential investors
- Support the construction of a pilot-scale prototype
- Underpin and strengthen the development of a further funding application to get the technology investor ready

Jonathan also met with New Zealand industry leaders, and actively worked towards increasing his commercialisation ability by completing KiwiNet’s GETFUNDED course and attending multiple seminars focussed on intellectual property and models for commercialisation.

The Emerging Innovator Programme also provided Jonathan with a commercial mentor, Michael Lakeman, who focussed on developing his communication and business skills. Michael’s aim was to put Jonathan in the driver’s seat to engage early on with potential business partners, funders, and investors.

Jonathan is now realising his dream to be a link between the scientific and business world, bring ideas that can better the world, and change the marketplace. His motivation is the excitement that entrepreneurship offers and a genuine desire to benefit the lives of others.

# Dr Lari Dkhar

## Lari Dkhar, Venture Advisor, AUT Ventures

"I learned a lot about commercialisation pathways and IP management, including how science should be protected to bring out its full potential - for a researcher this is an entirely different perspective. I realised that collaboration between scientists and business is required to create a change and if we can grow a culture like that, we will have many more interesting technologies making an impact in people's lives."

## Breathing new life into nasal implants



**Following sinus surgery, more comfortable healing and improved management of potential complications are key to improving patient outcomes. Nasal packings commonly used today are extremely uncomfortable, particularly when removed in the clinic. They also do not promote proper wound healing and lack long-term effectiveness.**

Having identified the gap in the market for a more comfortable and effective solution, Auckland University of Technology (AUT) PhD student Lari Dkhar, was motivated to commercialise her science - a revolutionary 3D-printed dissolvable nasal scaffold, which prevents tissue adhesion and is capable of drug delivery. Lari leveraged her place in KiwiNet's Emerging Innovator Programme to gain experience and connections to translate her innovative science into a commercially viable product. To help guide her on this journey, Dr Pablo Lepe was engaged as a commercial mentor. As a bio-nano investment consultant, broker, analyst, and science entrepreneur, with over 10 years of experience in bio-nanomaterials engineering, Pablo offered extensive networks across a wide range of industries all around the world.

Lari also consulted with various domain and commercialisation experts in the medical device space to help develop her commercialisation strategy. The end goal was to get a better understanding of the plastic surgery market, understand the regulatory hurdles, and what an animal study could look like depending on potential commercial/interested partner needs, and start to engage with investment groups.

The ultimate outcome of Lari's time in the programme was a stronger investment strategy for the technology, with the hopes of attracting additional external grants to refine the design and carry out animal efficacy and safety tests, bringing this device a step closer to commercialisation.

Having completed her PhD, Lari is now pursuing her passion for research commercialisation, working for AUT Ventures as a Venture Advisor, and gaining broader and more hands-on experience as she takes biomedical research into the market.



# Chris Smith

“For me, the most rewarding part of the Emerging Innovator Programme was being able to dedicate myself to the technical aspects of the project while also being able to start to learn the business side of things. Getting to meet other people involved with business and getting to do the market validation and exploration has shown me I really thrive in a diverse environment.”

**Chris Smith, Manaaki Whenua - Landcare Research**

## Cultivating the culinary delights of New Zealand’s native mushrooms

Fungi enthusiast, Chris Smith, a researcher at Manaaki Whenua - Landcare Research, used his place in the KiwiNet Emerging Innovator Programme to introduce spectacular new varieties of mushrooms to the restaurant dining experience.

Chris investigated the potential to commercially produce three unique species of New Zealand mushrooms, each with unique flavour and aesthetic attributes, distinct from every major commercial competitor currently on the market.

Alongside advances on the scientific front, Chris also undertook extensive market validation. He engaged with many chefs and restaurant owners, confirming their strong desire to purchase and work with the mushrooms to develop creative new dishes. This information enabled an initial estimate of volume demand and pricing to make an offering viable.

Over the course of the project the trend for alternative meat/protein sources also continued to grow as a potential market. This trend represents demand for a high-quality protein source that is appealing to almost all dietary requirements.

Chris has also socialised the programme with several iwi groups who have shown interest in exploring what a commercial production deal could look like if results continue to look positive.

The next big step is to setup a small-scale production facility, enabling production on a large enough scale to supply some restaurants, which in turn will enable a better assessment of commercial viability going forward. Chris is also keen to explore production on a larger scale as well as scope the potential of international markets.

# RESEARCHER ENTREPRENEURSHIP

KiwiNet is proud to champion researchers across New Zealand to find a more effective pathway for their science discoveries to be recognised and make a difference in the world.

## ACTIVITIES

### COMMERCIALISATION TRAINING

KiwiNet provides a range of training programmes including partner-led workshops for researchers to help develop practical commercialisation skills.

### REWA PRE-ACCELERATOR PROGRAMME

In partnership with the National Science Challenge (SfTI), KiwiNet launched a new 10-week Trans-Tasman pre-accelerator programme in March 2020. Rewa enables teams from public research organisations to strongly validate a real-world problem and then through rigorous market engagement, validate, modify, or refute their solutions.

### EMERGING INNOVATOR PROGRAMME

The KiwiNet Emerging Innovator programme aims to discover, inspire, and nurture Kiwi scientists with entrepreneurial DNA and fast-track them to commercial success.

### EXP90 PROGRAMME FOR BUDDING STARTUP FOUNDERS

The Exp90 Programme is directed towards our commercial champions to support their leadership, team-culture building, mindset, and pitching skills needed to grow a high-growth deep tech company. Unlike mentoring or incubation that focus on building business skills, this programme uniquely focuses on the “strong skills” necessary for successful decision making.

## OUTCOMES

More than 500 researchers took part in KiwiNet commercialisation training initiatives last year, as well as events led by our partners.

Events included GetFUNDED with CreativeHQ to help define the unique value proposition, GetINVESTED with Daniel Batten to help better communicate the idea, and Market Validation workshops with WNT Ventures held after each of our three intakes of Emerging Innovators.

Through Rewa, five facilitators and 15 (half from New Zealand, half from Australia) mentors supported 26 participants across seven teams to grow their early-stage ideas through skills-building, overseas connections, and market insights. Several are preparing to utilise PreSeed funding to accelerate their commercialisation journey. Based on the success of the inaugural Rewa programme, the 2021 edition has been announced.

The programme has been generously supported by the Norman Barry Foundation and KIW1, with total support of \$525,000 to date. 52 Emerging Innovators have participated in the programme since its inception, with several now attracting private investment.

15 new Emerging Innovators funded in the year up to May 2020. 11 graduated in February 2020.

The Exp90 Programme is providing a kickstart for many of our Emerging Innovator graduates, as they have embraced the social license to commercialise their work. Our first two cohorts with 10 participants have been very successful, with participants saying that it has enhanced their entrepreneurial drive and confidence – making decisions they would not have made before. 80% of participants are chasing direct private investment for the next steps in their projects and two are spinning out companies.



GetFUNDED 2019 attendees, with CreativeHQ

# COMMERCIAL CAPABILITY

KiwiNet is proud to champion research commercialisation professionals, who work tirelessly behind the scenes to find a more effective pathway for science discoveries to make an impact. Together we're building a community of capable and driven commercialisation professionals, delivering a robust pipeline of investable research propositions.

## ACTIVITIES

### KNOWLEDGE COMMERCIALISATION AUSTRALASIA (KCA)

KiwiNet worked with KCA to deliver their annual conference in September 2019. This was a valuable opportunity to bring together technology transfer professionals from across New Zealand and Australia to learn from each other and drive best practice.

### COMMERCIALISATION PROFESSIONAL DEVELOPMENT

#### Professional Development Framework

KiwiNet's Professional Development Framework enables current and aspiring Commercialisation Professionals across New Zealand to access training and support to build their capability.

#### Professional Development Opportunities

KiwiNet provides a range of in-house and partner-led training solutions to help develop core commercialisation skills.

#### Online Learning Platform - LinkedIn Learning

KiwiNet has created "Learning Pathways" - a series of online learning content that enables Commercialisation Professionals to upskill, at a time and place that suits them.

#### Commercialisation Internships

KiwiNet Interns work on real technology commercialisation projects, gaining early experience in commercialisation. They work with local commercialisation teams to develop business plans, cases to support the development of new technologies, and impact analysis of emerging science technologies.

#### Commercialisation Secondments

Early career Commercialisation Professionals can now apply for six-month secondments at KiwiNet's partner research organisations and Brandon Capital.

## OUTCOMES

KiwiNet's CEO, James Hutchinson and Commercialisation Manager, Seumas McCroskery, spoke at the 2019 KCA event. KiwiNet's Operations Manager, May Low, is part of the KCA 2021 organising committee for the next annual conference. KiwiNet's Commercialisation Manager, Alexandra Stuthridge, was also appointed NZ KCA Network Chair in January 2020.

External training offerings are now built into the framework and we are exploring the Registered Tech Transfer Professionals (RTTP) Accreditation. Benchmarking of roles and salaries across career stages has been completed.

Five opportunities have been facilitated including Rewa, GetFUNDED, GetINVESTED, an intermediate LESANZ, and a Market Validation Course with a total of 59 participants.

100 people within our partner organisations now have access KiwiNet's LinkedIn Learning platform (over 14,000 certified online courses - e.g. market validation, pitching and financial analysis and many more). Already 1800 video courses have been viewed and 70 training courses completed.

Eight interns have been placed within four KiwiNet partner organisations: Scion, AUT, AgResearch, Plant & Food Research and Wellington UniVentures. Internships are for six months. 15 potential interns have also applied for placement, via KiwiNet's new "Talent Pipe" as of 30 June 2020.

KiwiNet's new online tool allows prospective secondees to submit their profile and CV to our database, to be matched with organisations.

# PRIVATE SECTOR ENGAGEMENT

An engaged and supportive investment & business community working alongside research organisations creates new successful deep-tech ventures and licensing arrangements. Engaging early and often with the private sector builds the best possible expertise around technologies to maximise chances of success.

## ACTIVITIES

### INTERNATIONAL ENGAGEMENT

Connecting with similar organisations overseas to identify opportunities for collaboration and leverage their connections into foreign markets.

### INCUBATOR ENGAGEMENT

KiwiNet works closely with each of the technology incubators as a key provider and facilitator of potential deal flow.

### EXPERT ADVICE & ENTREPRENEUR CONNECTIONS

Delivering the best possible advice and guidance for researchers and commercialisation staff.

### INVESTOR CONNECTIONS

KiwiNet engages with the investor community to help transform scientific discoveries into investor ready opportunities.

### CORPORATE PARTNER PROGRAMME

KiwiNet Corporate Partners (BNZ, PwC, MinterEllisonRuddWatts and Baldwins) provide in-kind support including international networks, finance, business development, legal services and IP advice for commercial opportunities emerging from KiwiNet partner organisations.

### COMMERCIAL MENTORS

KiwiNet commercial mentors support researchers and organisations with everything from identifying new commercial opportunities to mentoring high potential projects. Commercial mentors are driving significant pipeline growth while helping research organisations overcome limited tech transfer resources.

## OUTCOMES

KiwiNet is proactively developing an international engagement programme. This has included engagement with international funds such as AirTree and Blackbird Ventures through presentation of potential investment opportunities coming through the KiwiNet pipeline. We have also facilitated several collaborations with companies and research institutes in China.

Through IN-PART, a business match-making platform, KiwiNet has showcased several projects, resulting in introductions and initial due diligence undertaken by offshore companies.

Our engagement with the technology incubators continues to develop, with strong interest in the KiwiNet pipeline. With the announcement of four new incubator contracts in April 2020, KiwiNet has presented several opportunities which have resulted in pre-incubation interest for two projects.

KiwiNet provides access to expert advice such as SaaS business planning, board advisory, product design, and market entry to its partner organisations. These services continue to accelerate products into market and maximise their chance of success.

KiwiNet actively engages with the Angel, High Net Worth, and investment fund community. This included sponsorship of the Angel Summit in 7-8 November 2019.

KiwiNet also has on-going regular meetings with NZGCP, Callaghan Innovation and NZTE through the Investor Heartbeat team. This initiative is a cross agency forum developed to accelerate capital raising activities.

Booster (KiwiSaver Fund) is listing a deep-technology fund on the NZX and is currently looking for Limited Partners. KiwiNet is engaged in discussions to utilise this and other tools to connect the Māori investment sector with deep-tech opportunities.

KiwiNet's corporate partners continue to provide invaluable guidance and advice to many projects. This year 16 projects have been referred to corporate partners, leveraging specialist expertise and broadening networks.

KiwiNet's Advisory Panel comprises senior representatives from each of our four corporate partners. Nine projects have been presented to two Advisory Panels in the year to date.

KiwiNet has placed over 30 commercial mentors to support researchers and provide commercial direction for 30+ projects over the year to June 2020.





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