



KiwiNet
Kiwi Innovation Network

**2022
PRESEED REPORT**

ABOUT THIS REPORT



This report from Kiwi Innovation Network Ltd (KiwiNet) is prepared on behalf of 17 public research organisations (PROs). These 17 PROs receive funding through the PreSeed Accelerator Fund (PreSeed) as pooling partners of KiwiNet. Since its inception, KiwiNet and the wider Commercialisation Partner Network (CPN) has demonstrated the power of bringing together diverse players across the science and innovation ecosystem to work towards a collective vision for New Zealand. Together, they are driving towards a globally competitive technology sector that delivers significant economic growth and prosperity.

The foremost ingredient for success is collaboration. KiwiNet is a standalone company run by seven universities, six Crown Research Institutes (CRIs), one Crown Entity (Callaghan Innovation) and one independent research organisation (Cawthron Institute). KiwiNet exists to drive prosperity from science and innovation. We achieve this by joining forces to transform scientific discoveries into new business.

KiwiNet’s Investment Committee (IC) makes all major PreSeed investment decisions for KiwiNet. The committee brings together independent experts, with extensive business and investment experience, and technology transfer leaders from across 19 research organisations in an environment of openness, transparency, trust, and mutual support. The IC is a focal point for collaboration between research organisations where projects are discussed, supported, and funded on the merits of their commercial promise. This review summarises the outcomes of the KiwiNet IC PreSeed investments made between 1 July 2019 and 30 June 2022 (current contract), together with an update on commercialisation outcomes from earlier PreSeed projects (including those preceding or not funded through KiwiNet). Section Two provides a selection of impact case studies resulting from projects within the KiwiNet portfolio.

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EXECUTIVE SUMMARY

PreSeed Accelerator Funding (PreSeed) is an intervention unique to New Zealand. It is successfully driving prosperity from science and innovation by transforming scientific discoveries from Public Research Organisations (PROs) into new products and services. By incentivising investment from PROs and business into research commercialisation, PreSeed takes early-stage discoveries with commercial promise from publicly-funded research and progresses them to a point where they are 'investor-ready.' The KiwiNet Investment Committee funds PreSeed (50% of project costs) into projects with the greatest potential for creating jobs and generating export revenue for New Zealand business. A total of \$16.2M in PreSeed funded 416 projects between 1 July 2019 and 30 June 2022.

Highlights from the PreSeed project portfolio (current contract) include:

- \$16.2M in PreSeed funding provided across 416 projects
- \$4.0M in business co-funding into PreSeed projects, across 104 companies
- \$15.9M in co-funding alongside PreSeed from other (non-business) sources, including PROs

An important objective of PreSeed funding is to foster greater connections between research organisations and business. These interactions enable New Zealand businesses to directly benefit from publicly-funded scientific research by empowering them to develop new disruptive products and services while driving improvements in productivity and efficiency and diversifying the economy.

Commercialisation outcomes from projects in the current PreSeed contract (since July 2019) include:

- 1,392 businesses meaningfully engaged in PreSeed projects, with 526 international connections made
- 67 commercial deals to date, across 35 projects
- 18 New Zealand start-up companies formed (plus 7 formed from pre-July-2019 projects)
- \$16.3M in commercial returns to NZ businesses and research organisations to date
- \$903M in potential export earnings (first 5 years of sales, once in market)
- 125 employment opportunities generated or sustained in New Zealand

As PreSeed projects mature, substantial economic returns are generated for New Zealand and productive relationships are formed between research organisations and business.

The following data represent *known* economic returns generated by PreSeed projects since 2003:

- \$56.5M in PreSeed funding across 1,586 projects by KiwiNet pooling partners since 2003
- \$23.8M in business co-investment into PreSeed projects
- Over 2,900 known connections made between research organisations and businesses
- 558 commercial deals across 184 projects
- 76 NZ start-up companies formed
- Over 650 employment opportunities generated or sustained in New Zealand
- \$464M in total known financial returns to NZ, including export revenue to NZ businesses

These figures represent a **return to New Zealand over eight times greater than the PreSeed invested**. PreSeed is successfully harnessing New Zealand science to drive a globally competitive technology sector that fuels business innovation, job creation, and growth in export earnings.

COMMERCIAL HIGHLIGHTS FROM THE KIWINET PRESEED PORTFOLIO

This report summarises some of the commercial benefits realised by projects receiving PreSeed investment in KiwiNet’s current MBIE contract (covering the period 1 July 2019 to 30 June 2022). It also includes an update on commercial progress on historical projects from within the KiwiNet portfolio. Experience monitoring PreSeed projects shows that tangible commercial outcomes and impacts from PreSeed investment often take time to mature. For this reason, KiwiNet continues to monitor the commercialisation outcomes of historical PreSeed projects, and we are committed to ensuring optimal returns from projects that have received PreSeed from previous contracts. **KiwiNet is happy to provide detailed project information, figures, and outcomes on request.**

1.2 PRESEED PROJECT PORTFOLIO

PreSeed funding is a critical government intervention at the point where scientific discoveries can be transformed into investable technologies for uptake by the private sector. Early-stage discoveries that enter the KiwiNet PreSeed process begin with limited commercial and market validation, limited intellectual property protection, and limited technical validation. The outcome of a PreSeed project is an investable commercial proposition that can be transferred into the private sector in the form of a start-up company, joint venture, or high-value licensing deal. The endgame is an innovative new product or service that is adding value to the economy and delivering impact for New Zealand. Acceleration is the key, and many projects will be ‘fast-failed’ alongside those that are successful – the purpose being to scale our collaborative commercialisation process across a maximum number of early-stage research discoveries. KiwiNet’s rigorous PreSeed investment processes, alongside the Public Research Organisations’ (PROs’) own systems and processes, empower research organisations to accelerate good opportunities to market while maximising benefits to New Zealand.

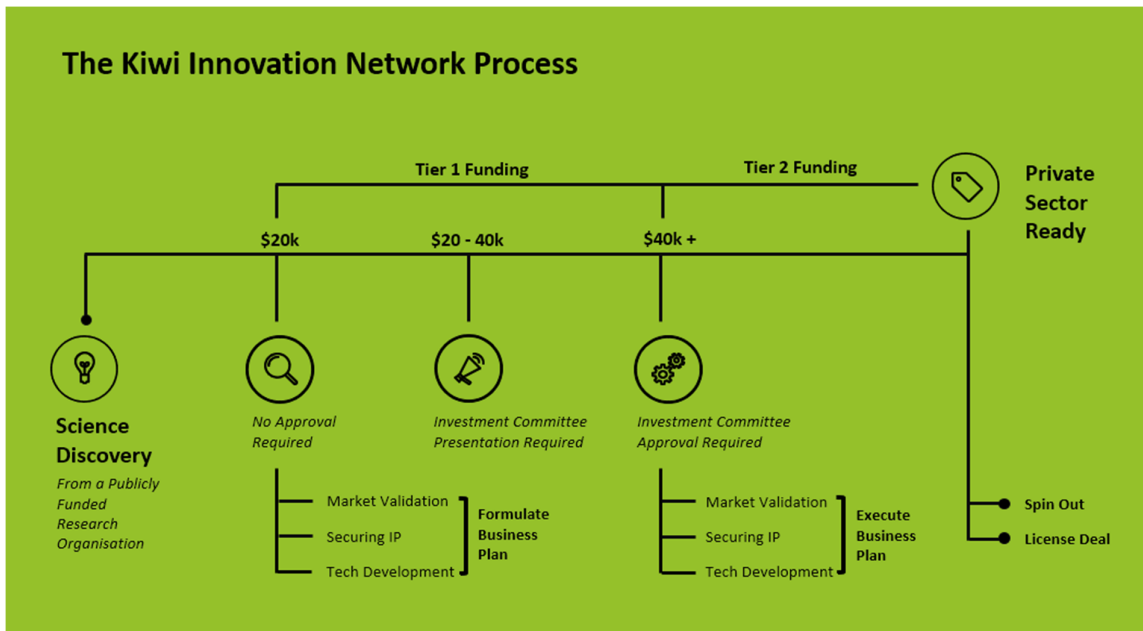


Table 1 summarises total research commercialisation investment into PreSeed projects, in both the current and earlier contracts, for the 17 research organisations that access pooled KiwiNet PreSeed funding.

Of the total \$31.6M invested in research commercialisation in the current contract to 30 June 2022, 41% is allocated from PreSeed funding, 49% from research organisation co-investment, and 10% from business co-investment. KiwiNet takes no equity stake or other benefit share from PreSeed Accelerator Funding.

The considerable number of abandoned projects reflects the early stage, high-risk nature of projects into which PreSeed is initially invested. Additionally, abandoned projects are a welcome outcome, as technology opportunities are accelerated towards ‘fast-fail’ or an alternative (non-commercialisation) impact pathway. This process enables valuable commercialisation resource to be subsequently redeployed within research organisations and a suite of commercialisation opportunities to be rapidly triaged over a given time period. Abandoned projects typically make up a small percentage of the total *quantum* of PreSeed investment, since Tier One investment normally provides sufficient validation to determine whether further investment will deliver commercial success.

Business co-investment is an important validation for the market opportunity. It is typically attracted because PreSeed investment lowers the risk for businesses to participate in the commercialisation process earlier than they would normally. Businesses that co-invest alongside PreSeed often become manufacturing or co-development partners, or eventual licensees of resulting technology.

The IC approved the continuation of 76 projects from the 2016-2019 PreSeed contract (ending 30 June 2019) into the current fund.

Table 1: Commercialisation Investment into KiwiNet PreSeed Projects

	Current Contract	Historical* (pre 01/07/19)	TOTAL
Number of PreSeed-Funded Projects	416	1171	1586
<i>Of which are:</i>			
<i>Completed</i>	183	1002	1186
<i>Abandoned</i>	57	145	202
<i>On-hold</i>	8	2	10
<i>In Progress</i>	167	22	188
PreSeed Funding Allocated	\$16,200,142	\$44,357,241	\$60,557,382
PreSeed Funding Invoiced to Date	\$12,983,030	\$43,651,076	\$56,634,106
PRO Co-Investment into PreSeed	\$15,581,880	\$35,526,312	\$51,108,192
Business Co-Investment into PreSeed	\$3,976,049	\$19,851,750	\$23,827,800
<i>Number of Business Co-Investors</i>	104	178	282
Investment from Reprioritised MBIE Funds	\$324,580	\$9,366,508	\$9,691,088
Total Investment into Commercialisation	\$31,567,575	\$108,395,646	\$139,963,221

* NB: data on historical projects will likely be incomplete due to the reliance on historical reporting processes and associated attenuation of project intelligence within research organisations over time.

1.3 PORTFOLIO PERFORMANCE

The goal of PreSeed investment is to accelerate the commercialisation of new products and services from our world-class scientific research for the benefit of New Zealand. This is achieved through increasing export revenue, employment opportunities, and improving productivity and efficiency of NZ firms. Bringing new innovations from publicly-funded research into the world also delivers a pathway to non-economic impact, including social, health & well-being and environmental benefits, while interfacing with *te ao Māori* and enriching the Māori economy.

Commercialisation outcomes such as business-PRO interactions, revenue from deals, jobs created, new licensing arrangements, and the formation of start-up companies are important markers of PreSeed success. Not only can these outcomes be directly measured, but they also represent important first steps in the journey towards meaningful impact for New Zealand.

Table 2 summarises *known* commercialisation outcomes of KiwiNet PreSeed investments to date. A total of 1,392 businesses have been meaningfully engaged in PreSeed projects in the current contract to date. These interactions led to some form of legal agreement (such as an NDA), co-investment in PreSeed projects, commercial deals, and commercial partnerships – some of which have led to ongoing strategic relationships.

These interactions empower NZ businesses to directly access scientific knowledge and technology in public research organisations. This in turn fuels the innovation of new products, processes, and services, while bringing important private sector expertise and investment to bear on early-stage technology opportunities to maximise their chances of successfully reaching the market. PreSeed investment is working to de-risk the early steps of the innovation process for NZ businesses and investors.

Of the 1,392 recorded business interactions, 526 international connections have resulted. These have generated export revenue, provided opportunities for our world-class science and innovation on the world stage and have, in some instances, leveraged foreign direct investment into NZ ventures and R&D.

KiwiNet PreSeed investments since July 2019 have so far resulted in 67 commercial deals, across 35 projects. Of these, 18 start-up companies have been formed (see Appendix One), alongside 7 new start-ups from older projects (pre-July-2019). Of the start-ups formed from PreSeed projects funded in the current contract, one has entered Callaghan Innovation's technology-focused incubators. Private investment into new ventures arising from PreSeed projects totals \$16.2M to date. A grand total of 76 start-ups have resulted from all KiwiNet PreSeed projects to date.

It should be noted that commercial returns are typically lower for more recent investments, given the time required for research commercialisation projects to mature (often 5-7 years or even longer). Intellectual property protection and business engagement figures are up significantly compared with historical data, reflecting an increasing focus on forming an IP strategy quickly and engaging with business early.

Table 2: Commercialisation outcomes of PreSeed projects to 30 June 2022

	Current Contract	Historical* (pre 01/07/19)	TOTAL
Patents Filed	336	553	889
<i>Patents assigned or transferred to external parties</i>	35	40	75
Other IP Secured (copyright, trademarks, trade secrets)	551	251	802
Total Pieces of IP Secured	922	844	1,766
Number of Businesses Meaningfully Engaged Including:	1,392	1,554	2,946
<i>International Connections</i>	526	515	1,041
Number of Commercial Deals	67	491	558
Number of Projects Generating Deals	35	149	184
<i>Of these:</i>			
<i>Number of Start-ups Formed</i>	18	58	76
<i>Tech Incubator Engagement</i>	56	26	82
<i>Tech Incubator Uptake</i>	1	16	17
<i>% Resulting in Start-ups</i>	51%	39%	41%
<i>% Resulting in Contract Research, Licensing, Technology Sales, or Consultancy Deals</i>	49%	61%	59%
PRO Revenue from Licensing, Contract Research, Technology Sales, and Consultancy	\$67,000	\$144,723,244	\$144,790,244
Private Investment into New Ventures	\$16,220,000	\$146,494,320	\$162,714,320
Total Private Investment into New Ventures and PRO Revenue to Date	\$16,287,000	\$291,217,564	\$307,504,564

* NB: data on historical projects will likely be incomplete due to the reliance on historical reporting processes and the attenuation of project intelligence within research organisations over time.

1.4 ECONOMIC RETURNS TO NEW ZEALAND

PreSeed commercialisation projects have a significant impact on the NZ economy and our research and innovation ecosystem. Revenue to NZ businesses and follow-on investment develops over time as projects mature and technologies reach the market as new products and services. Employment opportunities are created, and export revenues grow. New business is created based on disruptive and innovative technologies that are helping diversify the New Zealand economy.

Table 3 summarises the wider impact of PreSeed commercialisation projects to date. This data represents only that disclosed to KiwiNet and will not, therefore, represent a complete picture of the revenue generated by the many private entities that benefit from the innovations arising from PreSeed investment. Research organisations are in some instances made aware of follow-on benefits experienced by the end-users of PreSeed technologies, and these are captured in our data. Outcomes include both domestic and export sales, follow-on private investment in new ventures and an increase in technological capability which can lead to Business Expenditure on R&D (BERD) and further innovation.

PreSeed projects receiving investment from the most recent fund have yet to generate follow-on investment and NZ business revenue. It is expected, however, that this number will rise over time, since downstream returns from research commercialisation do not typically occur until a project has fully matured (often in the range of 5-7 years, if not longer). Known follow-on investment and direct revenue to NZ businesses resulting from the entire KiwiNet PreSeed portfolio (including historical projects) is \$308M and is likely to represent only the ‘tip-of-the-iceberg.’

These figures, combined with revenue outlined in Table 2, contribute to a **total known revenue from all KiwiNet pooling partner PreSeed investments of at least \$463M**, originating from a total PreSeed investment of \$57.0M and representing a **greater-than eight-fold incremental return to NZ from PreSeed funding**.

Within research organisations, individuals involved in PreSeed commercialisation projects benefit from the resulting expertise and experience they gain. This strengthens NZ’s innovation capabilities by providing direct, first-hand experience of research commercialisation, while helping to foster a culture of innovation across our science base. Many individuals go on to form start-up companies, work in high-technology companies or pursue new research commercialisation opportunities. 125 FTE employment opportunities have been created as a direct result of projects in the current contract and over 600 FTEs since 2003.

Table 3: Known economic impact of PreSeed commercialisation projects

	Current Contract	Historical* (pre 01/07/19)	TOTAL
Follow-on Business Expenditure into R&D incurred as a result of the PreSeed project	\$3,992,854	\$131,142,871	\$135,135,725
Number of Jobs Created (FTEs)	125	533	658
Potential Revenue to NZ from Export Earnings in First 5 Years of Sales	\$903,007,555	\$2,693,946,222	\$3,596,953,777
Known Follow-on Investment in New Ventures and NZ Business Revenue	\$16,287,000	\$291,217,564	\$307,504,564
Total Known Revenue to NZ Businesses and PROs from PreSeed Projects to Date	\$18,377,000	\$445,008,218	\$463,385,218

** NB: data on historical projects will likely be incomplete due to the reliance on historical reporting processes and the attenuation of project intelligence within research organisations over time. The number of individuals gaining commercialisation experience and level of follow-on investment will, therefore, likely be higher than that reported.*

PRESEED SUCCESS STORIES

2.1 ALLEGRO ENERGY – WELLINGTON UNIVENTURES

Allegro Energy is accelerating the transition to a circular economy



Allegro Energy is entering the portable battery market, estimated to be worth \$1.0T, with their sustainable high-performance energy storage solution.

Conventional energy storage devices are harming the environment, and they contain toxic and flammable materials that cause immense damage when things go wrong. They also come at an extremely high price point.

Dr. Fraser Hughson and his co-founders, Professor Thomas Nann and Dr Rohan Borah, have discovered a greener alternative. They have invented a water-based electrolyte system for use in supercapacitors and redox batteries that they are commercialising through their spin-out company, Allegro Energy.

The technology not only achieves the same voltage as existing supercapacitors but is also more sustainable and 90% cheaper to produce. With this huge cost advantage, Allegro Energy's technology could potentially be part of the power solution for all types of e-mobility, including EVs, e-buses, e-trucks and light rail.

The portable battery market, estimated to be worth \$1.0T is fast-growing, and is forecasted to grow to a massive \$1.5T by 2024.

Allegro Energy was founded in April 2021, following an initial jointly funded project by KiwiNet PreSeed and Wellington UniVentures. This work supported the securing of an initial IP position and assessment of the market opportunities around redox flow batteries and supercapacitors.

Fraser also joined the Emerging Innovator Programme in 2019, which allowed him to develop his own understanding and experience in deep tech commercialisation through participation in market validation research and engagement with prospective industry partners.

Now, having recently completed his PhD in chemistry, Fraser is Allegro Energy's chief technology officer. The team is gearing up to get their technology out of the lab and into the world, providing a clean, safe, and low-cost energy storage solution needed for a circular economy.

2.2 LIGAR - WAIKATOLINK

Pioneering molecular extraction at scale



Ligar is revolutionising the food manufacturing industry on a global scale after a decade of developing their transformative nanotechnology.

Ligar's Molecularly Imprinted Polymers (MIPs) based technology solves a growing need for many industries to be able to extract desirable or unwanted molecules from various liquids.

The science behind Ligar originated from Dr. Miruna Petcu, a Wintec-based chemist, who developed commercial applications for Ligar's MIP-based systems.

With commercialisation support from Waikatolink at the University of Waikato and investment support from KiwiNet's PreSeed Accelerator Fund, the MIPs were developed to proof-of-concept stage.

In 2012 Ligar became a successful spinout company led by its founding CEO Nigel Slaughter – now Chief Exploration Officer of Ligar and originally General Manager of Commercialisation at Waikatolink.

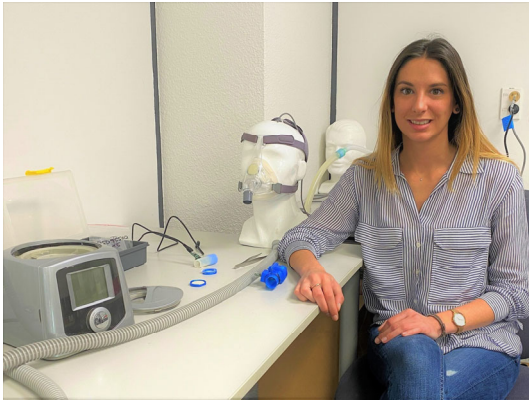
Now in 2022, after over a decade of developing their MIP-based systems, Ligar's immense potential is being realised. The company is about to launch three regulatory-compliant products alongside their industry partners situated across the globe. These are:

- A multi-territory license with Jackson Family Wines, an industry leading family-owned wine company with celebrated wineries including Kendall-Jackson, La Crema and Cambria. Ligar's MIP technology will be used in the remediation of wines affected by wildfire smoke and are also working together to explore new MIPs for taint remediation to preserve the integrity and quality of fruit in wine.
- The development of a large-scale MIP-based caffeine capture system that will enable the production of decaffeinated coffee that tastes like the real thing.
- A partnership with Maratek to enter the global cannabinoid extraction and purification market – a market worth USD \$25B and growing at pace. Ligar's revolutionary cannabis purification system produces large volumes of cannabis extract at a higher quality and reduced cost than traditional methods.

With its 25-strong team, Ligar continues to develop a wide range of applications with commercial partners across the globe and working closely alongside other research partners to enhance their R&D results, together allowing complex science to be easily used on an industrial scale.

2.3 RESPIRAQ – AUT VENTURES

Turning a global pandemic into an opportunity for disruption



AUT Ventures' latest spin-out, RespirAq, is set to make a real difference to hospital patients requiring respiratory support with their high-performance medical airway humidification.

The core component of RespirAq is a chemically activated smart fabric, invented by AUT PhD student Dr Sandra Grau Bartual and AUT Professor Ahmed Al-Jumaily. The smart fabric changes state from capturing moisture on the out-breath to releasing moisture on the in-breath in a rapid 100-millisecond timeframe.

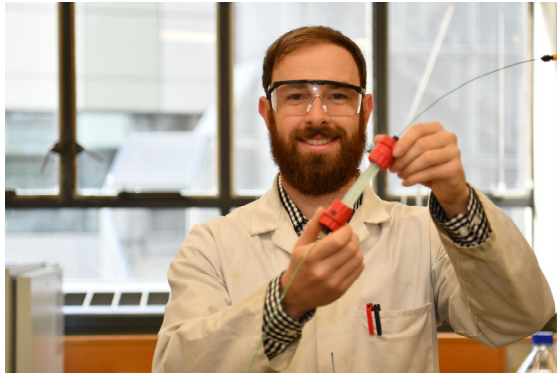
RespirAq's humidification device prevents damage to patients' lungs and airways when they are on a ventilator or other respiratory support, and is more effective, simpler, and safer than other currently available devices.

The successful deep-tech spinout company is set to disrupt a \$2B segment of the global medical device industry with their product – the first fundamentally new technology of its kind in decades.

RespirAq was the first project to take part in KiwiNet's pilot Spin-Out Programme, where teams are supported by corporate partners and mentors to fast-track their project to investment stage.

RespirAq is now led by Sandra – its inventor, CEO, and founder. With a growing team of eight and world-class business and clinical advisors on their side, RespirAq's success is creating an inspiring legacy for future entrepreneurial researchers.

2.4 SEAN FEAST – PRECISION CHROMA – UNIVERSITY OF CANTERBURY



Transforming the manufacturing process for biological pharmaceuticals

University of Canterbury (UC) researcher Sean Feast is leading the growth of Precision Chroma, a spinout that's pioneering technology poised to transform the bio-separations industry.

Dr Sean Feast is leading the commercialisation of the University of Canterbury's 3D-printed chromatography columns that are set to disrupt the global bio-separations industry – projected to be worth \$14B USD by 2026.

Sean's experience in KiwiNet's Emerging Innovator (EI) Programme supported his evolution from researcher to CEO of Precision Chroma, a spinout from the University of Canterbury. The EI Programme and mentoring he received gave him the capability and skills to develop the science behind Precision Chroma to the point of commercialisation.

Precision Chroma separates biological material from solutions through 3D printed porous columns. Their columns can be applied to anti-bodies, proteins, DNA, and viruses, which can be used in vaccines and cell and gene therapies, from insulin to treat diabetes to genetic diseases such as muscular dystrophy.

This revolutionary technology is the invention of Sean's tutor and mentor, Professor Conan Fee, who bestowed responsibility to Sean to further develop the science and launch Precision Chroma.

The 3D-printed columns address a historically lengthy and expensive manufacturing process for biological pharmaceuticals. With the rising demand for purified biologicals from the pharmaceutical industry, this technology will prove to be particularly disruptive.

University of Canterbury's relationship with New Zealand-based deep-tech incubator Bridgewest Ventures, has seen them launch Precision Chroma together to scale the technology.

With two staff onboard, Sean aims to first release the technology into New Zealand and Australia markets and have a minimum viable product ready within the next 12 months.

2.5 ANDREA BUBENDORFER – CALLAGHAN INNOVATION



Andrea Bubendorfer, Head of Physical Technologies at Callaghan Innovation, has passionately contributed towards transformative change in Aotearoa’s science and commercialisation spaces.

Andrea’s passion for deep tech originated from her drive to democratise access to the miniaturisation industry, and level the playing field for New Zealand businesses.

This led to the launch of MicroMaker – a novel scalable 3D printing type of technology, co-invented with colleague Andrew Best, for making devices for applications in sensors and electronics. This ground-breaking technology has the potential to shake up bigger players in global markets.

Andrea’s work with MicroMaker sparked her entrepreneurial development journey as she went through KiwiNet’s Emerging Innovator and Exponential Founder programmes. Through KiwiNet’s Exponential Founders Programme, Andrea learned important commercialisation skills and how to develop a resilient entrepreneurial mindset.

This enabled her passion and commitment to her mahi to shine through and paved the way to create more impact. Andrea has since been chosen to drive cultural change at Callaghan Innovation. First, she was promoted to Group Manager of the Data and IoT Group in 2021, now more recently she has been appointed to Head of Applied Technologies.

Andrea says that the key to commercialising science to make a difference is through empowering others and creating a culture where people can bring their whole selves to work.

“I believe that harnessing that diversity gives us strength, and I often see that the most exciting innovations happen at the extremes. I aim to lift up as many people as I can – this way we all win,” she says.

KIWINET OPERATIONS

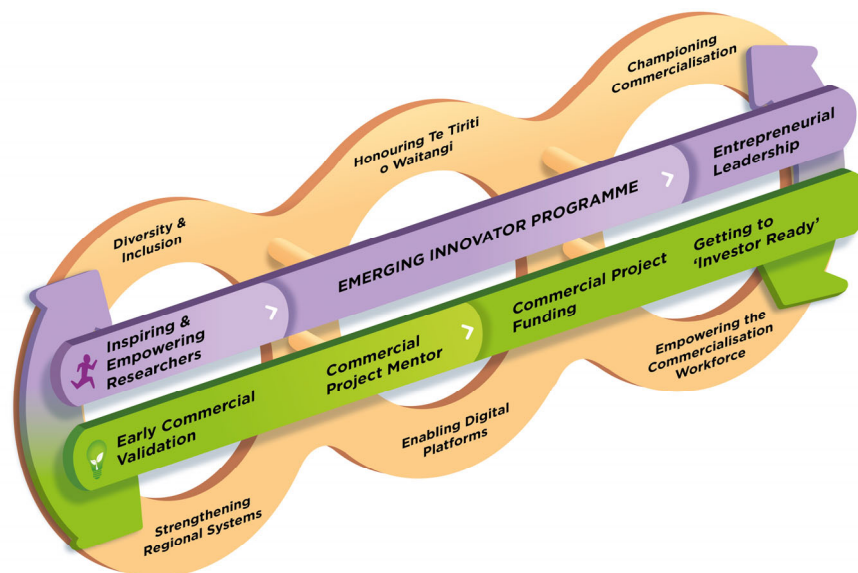
KiwiNet was established in July 2011, building on the foundation of a consortium of four universities which were awarded a devolved PreSeed contract in 2008 (under KiwiNet’s precursor, UniCom). The group now comprises 15 shareholder organisations and 17 organisations (from July 2019) that access pooled PreSeed Accelerator Funding through KiwiNet. Together, they work in an open environment of trust and collaboration, as part of the Commercialisation Partner Network (CPN).

KiwiNet now represents the combined power of 19 of New Zealand’s Universities, Crown Research Institutes and other research organisations who receive public funding. They are dedicated to taking a collaborative approach to transforming scientific discoveries into new business. Together, these research organisations represent a total combined research expenditure of over \$715 million per annum and represent over 80% of the publicly funded researchers in New Zealand.

The KiwiNet IC includes 27 commercialisation experts, supported by 11 KiwiNet Management staff and numerous external experts. This provides a support network with extensive technical and commercial expertise to grow the pipeline and deliver impact. The IC fills the gap between public research organisations and the private sector to strengthen commercialisation and act as a focal point for collaboration and co-ordination. Together the consortium has a proven track-record of investing PreSeed into research commercialisation to deliver significant benefits to New Zealand.

MBIE provides Commercialisation Partner Network (CPN) funding for KiwiNet activities outside of the IC including the Board of Directors and Management team. CPN funding has enabled KiwiNet’s scope of activities to expand beyond the operation of an IC to a much broader facilitation role within the research commercialisation ecosystem. KiwiNet invests CPN funding from MBIE into delivering a programme of activities and initiatives across five strategic themes that are aimed at powering up research commercialisation across the ecosystem.

KiwiNet’s strategic themes are:



1. **Project Pathway** – Focuses on accelerating opportunities through our pipeline by facilitating committees to allocate funding and provide support and connections, wrap-around opportunity support by the KiwiNet team and initiatives that support opportunities that are past PreSeed funding.

GOAL: A project pipeline that is delivering massive impact for New Zealand.

2. **Researcher Pathway** – Focuses on inspiring, incentivising, and empowering researchers to pursue commercialisation of their discoveries to create new business.

GOAL: Researchers that are engaged with the commercialisation pathway and have social license to commercialise

3. **Guiding Principles and Leadership** – Ensuring initiatives that break down barriers to participation, build capability equally, and advocate widely for the value of commercialisation are woven through KiwiNet’s work programme.

GOAL: A more diverse, integrated, and vibrant science, research, and innovation ecosystem.

GOAL: KiwiNet is a credible and trusted leader in the science, research, and innovation ecosystem.

4. **Ecosystem Building Blocks** – Providing core ecosystem building blocks to provide commercialisation projects and teams a secure base to grow from. This includes supporting regional ecosystem activity, resources, support, and opportunities to collaborate on projects and empowering commercialisation teams.

GOAL: An empowered and savvy commercialisation profession.

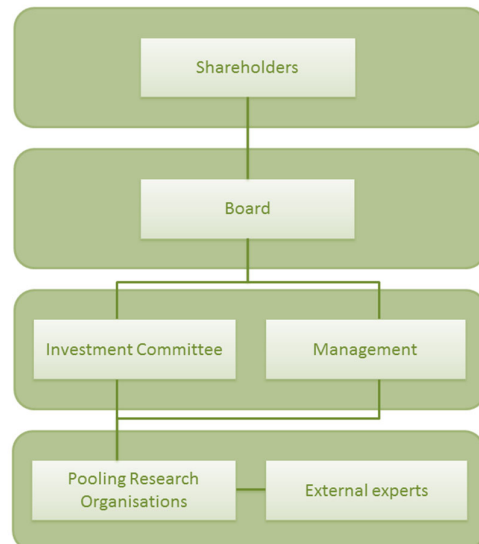
The KiwiNet structure is depicted below. The Investment Committee (IC), not the KiwiNet Board or Management, is entirely responsible for the governance of PreSeed investment, including all investment decisions.

KiwiNet Shareholders

KiwiNet shareholders currently include seven universities, six Crown Research Institutes, a Crown Entity, and an independent research organisation (see Appendix Two for a full list of shareholders and PreSeed pooling research organisations).

KiwiNet Board of Directors

The Board reports to the shareholders and MBIE. The Board members are chosen for their considerable business experience, understanding of early-stage commercialisation and personal interest in growing New Zealand’s economy. The Board has six members, including four independent directors (Will Barker– Chair, Vignesh Kumar, Debra Hall and Katherine Sandford), one CRI representative (Amanda Davies, Scion) and one university representative (Mark Cleaver, Massey University). The Board is not funded using PreSeed funds.



3.1 KIWINET INVESTMENT COMMITTEE

The KiwiNet IC is responsible for the allocation of MBIE PreSeed investment. The committee is governed by an Operations Policy (available upon request) that has been ratified by the KiwiNet Board and Shareholders. The IC Operations Policy is amended to ensure compliance with MBIE and the objectives of KiwiNet. The committee is scheduled to meet face-to-face 8 times per year and is a forum open to all PROs to share ideas and opportunities. All people attending are under strict confidentiality agreements and conflicts of interest are managed for every project. The IC's functions include:

- **Investment allocation** – Approving investment allocation into projects, monitoring project progress and reviewing portfolio outcomes and impact.
- **Expert guidance** – Leveraging the combined expertise and networks of each committee member to provide expert technical and commercial advice.
- **Networking between PROs** – Creating a forum for senior technology transfer staff to build relationships and identify collaboration opportunities.
- **Capability development** – Provide an open forum for PRO staff to attend as observers and watch projects being discussed (under confidentiality).
- **Shared connections** – Share industry and investor connections between PROs to help each other pursue commercial opportunities.
- **Vision Mātauranga** – Consider opportunities to involve Māori knowledge, resources, and people in the commercialisation process as channel-to-market partners and/or end-users.

3.1.1 Investment Committee members

The Committee has 21 members comprising six independents and a representative from each of the 15 shareholder organisations. The independent members are:

- | | |
|--|--|
| • Debra Hall (18 Limited) – IC Chair | • Nick Willis (Nick Willis Consulting) |
| • Daniela (Dana) McKenzie (Yolana Limited) | • Brigitte Smith (Suppar Pty Ltd, Australia) |
| • Nathan Bryant-Taukiri (Itsoo Limited) | • Andrew Kelly (BioPacific Partners) |

The KiwiNet shareholder representatives bring with them a wealth of personal expertise as well as deep knowledge of the activities and capabilities of their respective organisations:

- | | |
|---|---|
| • Simon Lovatt (WaikatoLink, University of Waikato) | • Peter Cook (Plant & Food Research) |
| • Steve Corbett (AUT Ventures, Auckland University of Technology) | • Anne Barnett (Viclinc, Victoria University of Wellington) |
| • Andrew Kay (Callaghan Innovation) | • David Christensen (Otago Innovation, University of Otago) |
| • Travis Glare (Lincoln University) | • Rebecca Warr (University of Canterbury) |
| • Steve Lorimer (Landcare Research) | • Dion Sheppard (ESR) |
| • Sheena Thomas (GNS Science) | • Amanda Davies (SCION) |
| • Mark Cleaver (Massey Ventures) | • Eric Swale (Cawthron Institute) |
| • Vikki Yeoman (AgResearch) | |

The committee encourages openness and involvement between all PROs and MBIE. Representatives from these organisations are encouraged to attend IC meetings as observers. The IC is an MBIE approved CPN Investment Committee, meaning it is open to any PRO seeking feedback and advice or seeking approval for PreSeed investment greater than \$60k.

3.1.2 Decision Independence

The Investment Committee includes representatives from the PROs. The IC operations policy contains the following rules to ensure independent decision-making:

- The Chair must be an independent member;
- Investment allocation requires a majority vote, including a majority of independent members;
- Presenting organisations cannot vote on their own projects and must leave the room during final decision making.

3.2 KIWINET PRESEED INVESTMENT PROCESSES

The KiwiNet investment process strikes a balance between empowering the PRO partners and ensuring IC oversight. It is essential that PROs can make quick decisions to pursue opportunities as they emerge. However, the partners recognise the importance of independent oversight and guidance from the IC.

KiwiNet invests PreSeed using a two-tiered system, with each tier unlocking greater PreSeed investment, but requiring increasing diligence and greater scrutiny by the IC. This system is reviewed and amended regularly to ensure it is fit for purpose.

3.2.1 Tier One

Up to \$40,000 PreSeed investment per project

Tier One PreSeed funding is invested in earlier-stage commercialisation activities and small project commercialisation. Tier One activities can include market validation, recruitment of experts, business plan preparation, IP protection, and preliminary prototype development.

PROs do not need IC approval to allocate Tier 1 to a project; they just need to notify of project commencement by submitting a [Project Notification Form](#). Each PRO has their own internal decision-making processes for Tier 1 investment. However, to ensure the IC has visibility of these projects, PROs must present the project for feedback before more than \$20,000 of PreSeed is invested.

Small scale projects may reach the “investor ready” stage within the Tier 1 budget. For projects that require more than \$40,000 PreSeed, Tier One enables PROs to prepare a [Project Development Plan](#) that is submitted to the IC for Tier 2 investment.

3.2.2 Tier Two

Above \$40,000 PreSeed investment

Investment in Tier Two projects must be authorised by the IC. PreSeed funding is approved to execute a Commercial Development Plan based on a business plan, milestone plan, and budget. The plan should map the full pathway to an ‘investor-ready’ outcome and research organisations are expected to provide quarterly progress reports.

The IC requires the level of due diligence carried out for each project to appropriately reflect the level of PreSeed funding requested.

3.2.3 Other Allocations

- Up to 6.75% of the investment pool may be used to fund costs of portfolio management and the operation of the investment committee.
- Matched allocation for organisations to run a Tech Jumpstart competition and carry out basic market assessment on the resulting opportunities.
- Contribution to the costs of registration fees and eligible travel expenses incurred in sending staff members to events and courses that will help further their professional development in the technology transfer area.

3.2.4 Reporting

The IC monitors the outcomes from all PreSeed investments. The following on-going reporting requirements are expected by the IC:

- **Quarterly Progress Reporting** – PROs present a written and verbal progress report to the IC for all Tier Two projects each quarter. These reports give the IC the opportunity to provide further support and guidance as the project progresses.
- **Fund Management Report** – KiwiNet provides a quarterly report on the PreSeed project portfolio, which is reviewed by the IC.
- **Project Status Changes** – Research organisations must submit a Project Change Request to the IC for all proposed PreSeed investment or project end-date changes.
- **Annual outcomes reports** – Completed projects are periodically reviewed by the IC to monitor their ongoing progress and outcomes, including all Tier One projects.

3.3 KIWINET MANAGEMENT

The KiwiNet management team (see Appendix Two) works alongside technology transfer staff from PROs and other external organisations. The management team does not lead commercialisation projects *per se* but does provide substantial support around project planning. The role of the KiwiNet management team can be grouped into three main functions:

- Administration of the investment portfolio and reporting to MBIE to ensure a high standard of portfolio management and impact tracking.
- Supporting research organisation staff who are engaging with the investment committee to prepare and implement high quality commercialisation plans.
- Implementing initiatives to power-up research commercialisation across the network, in-line with the KiwiNet strategy, to maximise the size and impact of the PreSeed investment portfolio.

KiwiNet management is mostly funded with CPN funding. Only costs directly associated with IC governance and portfolio management are claimed from the PreSeed fund.

3.4 INVESTMENT COMMITTEE OUTCOMES JULY 2019 – JUNE 2022

The KiwiNet Investment Committees met 37 times between July 2019 and June 2022 to provide feedback on projects and approve investment into proposed PreSeed projects. During this period, the KiwiNet IC has allocated \$16.9M in PreSeed funding across 453 projects from 16 pooling research organisations. This includes:

- 30 major projects where project plans were approved by the committee (Tier Two), totalling \$6.2M PreSeed.
- 401 projects where the decision to invest was devolved to the research organisation (Tier One), totalling \$7.8M PreSeed.
- 76 projects that were started in the previous contract (prior to July 2019) and for which the IC made the decision to continue their investment into the recent contract, totalling \$2.4M PreSeed.
- \$491,158 in PreSeed compliance and operational costs, including operation of the IC.

A total of 105 projects from 13 research organisations have been presented to the IC for feedback and approval over the 12 months from 1 July 2021 to 30 June 2022, including:

- Eight full proposals for PreSeed funding reviewed by the KiwiNet IC, seven of which were eventually approved for Tier 2 investment. This equated to \$1.2M PreSeed allocated to Tier Two projects by the KiwiNet IC, all of which came from the KiwiNet PreSeed pool.
- 23 project previews were presented for feedback from the committee. Of these projects, one was from TiDA, a publicly funded research organisation seeking non-devolved funding and support from KiwiNet.

APPENDIX ONE: KIWINET MANAGEMENT AND SHAREHOLDERS

KiwiNet receives Commercialisation Partner Network (CPN) funding from MBIE to operate a national network that promotes greater collaboration and increased impact from commercialisation of public research.

Staff and management are employed by WaikatoLink Ltd (WLL) and seconded to KiwiNet under a management services agreement to maximise the efficient use of CPN funding. All staff seconded into KiwiNet report directly to the KiwiNet CEO. Consultants are contracted where appropriate to bring specialist independent expertise onto projects.

Key Personnel (full time)

Name	Position
Dr James Hutchinson (WLL)	CEO (Hamilton)
Kate Webby (WLL)	Marketing and Events Manager (Ham)
Shannon Barclay (WLL)	Marketing and Communications Specialist (Ham)
Glen Beattie (Contractor)	Private Sector Engagement Lead (AKL)
Dr Seumas McCroskery (WLL)	Researcher Entrepreneurship Lead (Ham)
May Low (WLL)	COO (Ham)
Megan Fowlie (Contractor)	Advocacy & Comms Specialist (AKL)
TBC (WLL)	Private Sector Engagement (AKL)
Dylan Watson (WLL)	Finance and Administration Assistant (Ham)
Alan Hucks (WLL)	Commercialisation Manager (Wellington)
Mindy Wu (Contractor)	Financial Accountant (Ham)

Current KiwiNet Shareholders

KiwiNet is wholly owned by the following organisations through equal shareholdings:

- AUT Ventures Ltd (Auckland University of Technology)
- WaikatoLink Ltd (University of Waikato)
- Victoria Link Ltd (Victoria University of Wellington)
- University of Canterbury
- Lincoln University
- Institute of Environmental Science and Research Ltd (ESR)
- New Zealand Forest Research Institute Ltd (SCION)
- Massey Ventures Ltd (Massey University)
- Otago Innovation Ltd (University of Otago)
- AgResearch Ltd
- The New Zealand Institute for Plant & Food Research Ltd
- Landcare Research New Zealand Ltd
- Callaghan Innovation
- Institute of Geological and Nuclear Sciences Ltd (GNS Science)
- Cawthron Institute Ltd

KiwiNet PreSeed Pooling Partners

The following organisations access pooled PreSeed funding through MBIE's devolved contract* with KiwiNet:

- AUT Ventures Ltd (Auckland University of Technology)
- WaikatoLink Ltd (University of Waikato)
- Victoria Link Ltd (Victoria University of Wellington)
- University of Canterbury
- Lincoln University
- AgResearch Ltd
- Lincoln Agritech Ltd
- Cawthron Institute Ltd
- Health Innovation Hub (HIH)
- Massey Ventures Ltd
- National Institute of Water and Atmospheric Research Ltd (NIWA)
- Malaghan Institute of Medical Research
- The New Zealand Institute for Plant & Food Research Ltd
- Landcare Research New Zealand Ltd
- Callaghan Innovation
- Institute of Environmental Science and Research Ltd (ESR)
- Institute of Geological and Nuclear Sciences Limited (GNS Science)

* Other public research organisations not formally in the KiwiNet pool are also eligible to access PreSeed funding through what was formerly known as MBIE's non-devolved fund.