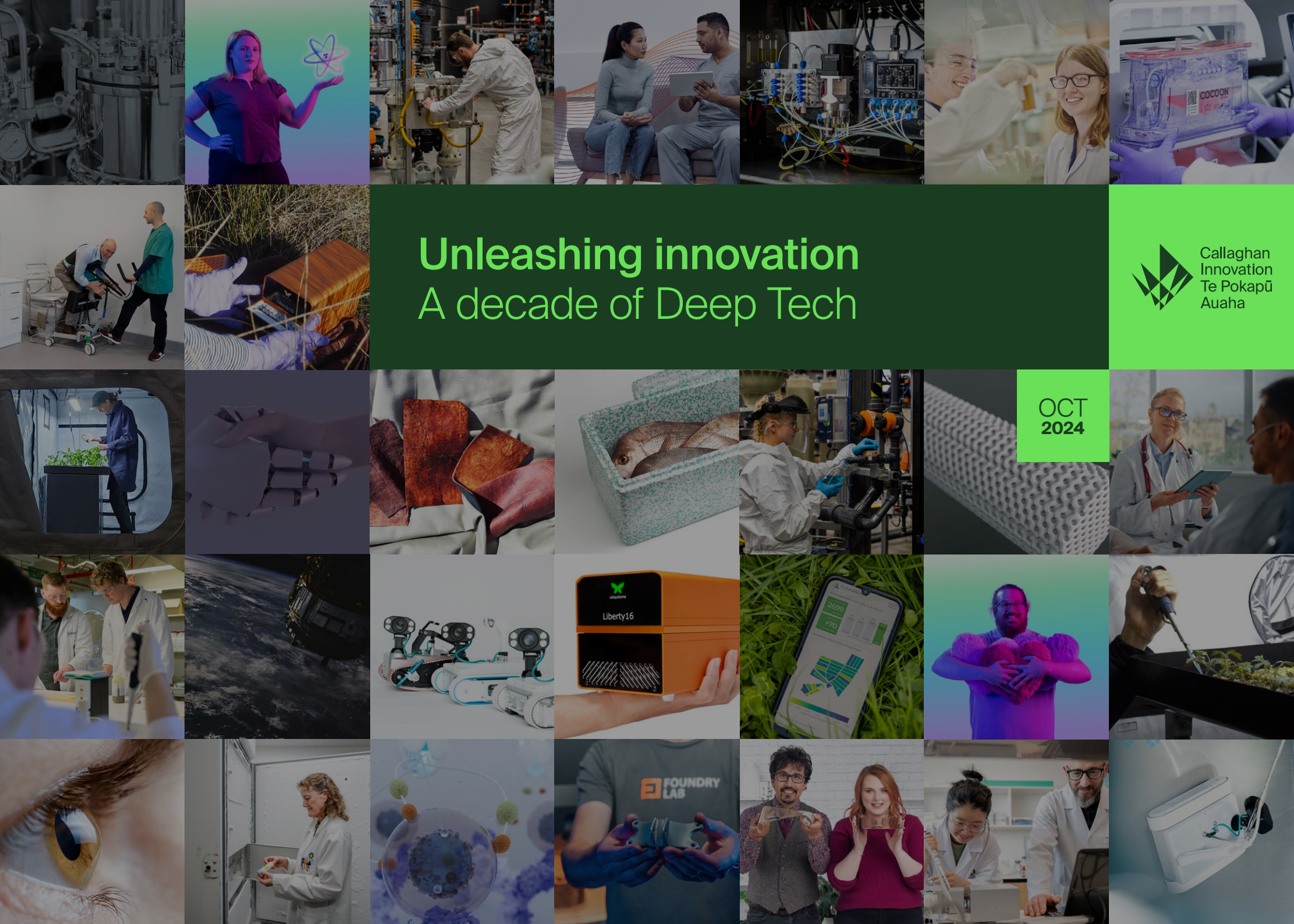


Unleashing innovation

A decade of Deep Tech

Callaghan Innovation Te Pokapū Auaha

OCT
2024

Contents

Foreword

Stefan Korn CEO, Callaghan Innovation

Our commitment to incubating success

When Callaghan Innovation launched the Deep Tech Incubator Programme in 2014, we had a vision of nurturing world-class deep tech startups right here in Aotearoa.

Today, I can confidently say we've exceeded those early expectations.

The numbers speak for themselves: over $80 million in private investment has been committed to startups while they've been in the programme, and $300 million in follow-on capital has been raised. We've supported around half of the deep tech companies that have emerged in the last decade.

But beyond these figures, it's the transformative innovations and the passionate entrepreneurs behind them that truly showcase the programme's success.

I'm particularly heartened by the progress we've made in diversity. With 39% of founding teams including women — nearly double the global average — we're setting new standards for inclusivity in the deep tech space.

This diversity isn't just a feel-good statistic; it's driving real innovation and broadening the perspectives shaping our future technologies.

Looking ahead, I see immense potential. The refreshed programme launched in 2020 has already shown promising results, attracting international partners and increasing funding support for startups.

As we continue to refine our approach, I envision New Zealand becoming a global hub for deep tech innovation, particularly in areas where we have natural advantages like agritech and cleantech.

Here's to the next decade of deep tech innovation and supporting the next generation of founders.

Our Deep Tech Incubator Programme

Across Aotearoa New Zealand, scientists, engineers, inventors and entrepreneurs are devising complex, technical solutions to global problems.

These bold, brave and occasionally bizarre ideas might today sound like science fiction, but with the right business support and solid investment, they have the potential to positively impact millions of people.

The Deep Tech Incubator Programme is designed to help them do just that. Delivered in partnership with five of Aotearoa New Zealand's leading Incubators and venture capital firms, all highly experienced in deep tech and with specific focus areas, the programme has already assisted more than 80 deep tech startups.

Successful applicants get a minimum of $1 million in funding – $750,000 of which is a repayable grant and a minimum of $250,000 in equity investment – to drive the commercialisation of their innovative technologies.

The mission

To grow the early-stage deep tech sector and build on Aotearoa New Zealand's knowledge economy. The programme is bridging the investment gap at the earliest and riskiest stage of a deep tech venture's commercialisation journey, supporting ventures to get off the ground. To achieve this, we partner with deep tech incubators who supports science and technology-intensive ventures with commercial capability and the early capital needed to create an investible deep tech venture.

Deep Tech Incubator Programme partners include:

BRANDON CAPITAL

BRIDGEWEST VENTURES

PACIFIC CHANNEL

SPROUT BREAK NEW GROUND

wnt ventures DEEPLY INVESTED

What is ‘Deep Tech’?

Deep Tech refers to **advanced technologies that are based on significant scientific or engineering innovation**. These products and services typically require extensive research and development, and significant investment capital. They also have the potential to disrupt industries, and lead to the creation of high-value products and services not thought possible before.

A decade of innovation

Deep Tech Incubator Programme highlights

In 2024, Callaghan Innovation's Deep Tech Incubator Programme marks its 10th anniversary — a decade of fostering groundbreaking technological advancements and nurturing the next generation of innovators in New Zealand.

This milestone offers an opportunity to reflect on the programme's significant achievements, its impact on the innovation ecosystem, and the transformative milestones that have defined its journey.

Beyond trackable numbers, with the benefit of time, we are now also able to see the spillover benefits of building entrepreneurial capability. There is a recycling of founder and startup teams' capability into new ventures, further fuelling the innovation ecosystem.

84
Deep Tech startups funded between September 2014 and September 2024.

49%*
of all Deep Tech startups founded in Aotearoa in the past decade are funded by the programme.

47%
of Deep Tech startups supported spun out from Public research organisations.

$44m+
in repayable grants awarded.

$81m+
private investment committed.

$300m+
follow-on capital raised.

72%
startup survival rate.

80%
startups raised follow-on investment post incubation.

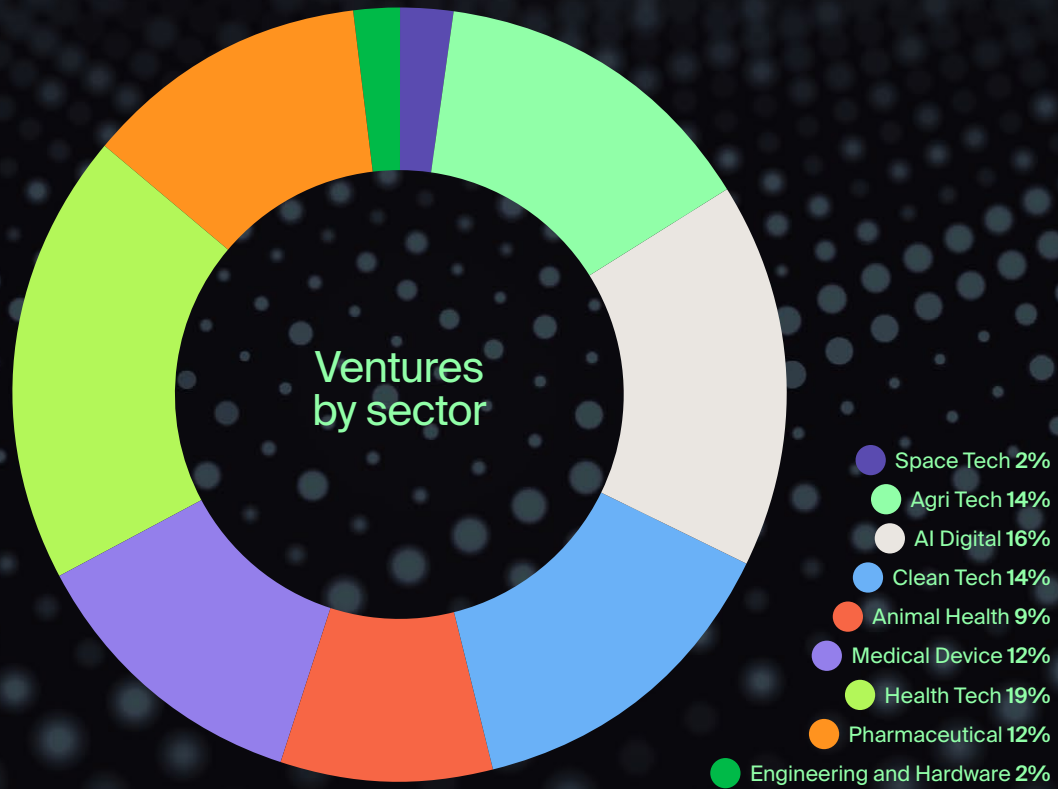
*Data from Young Company Finance, NZGCP and Deep Tech Incubator Programme between 2014 and 2023. It is assumed that the data comprehensively lists all new deep tech deals generated in Aotearoa.

More Deep Tech Incubator Programme highlights

39%
women-led/co-led startups (21% average for Kiwi startups).

600+
jobs created.

$26m+
cumulative revenue generated by startups.



Why we support Deep Tech

For many investors, early-stage deep tech ventures are often just too risky.

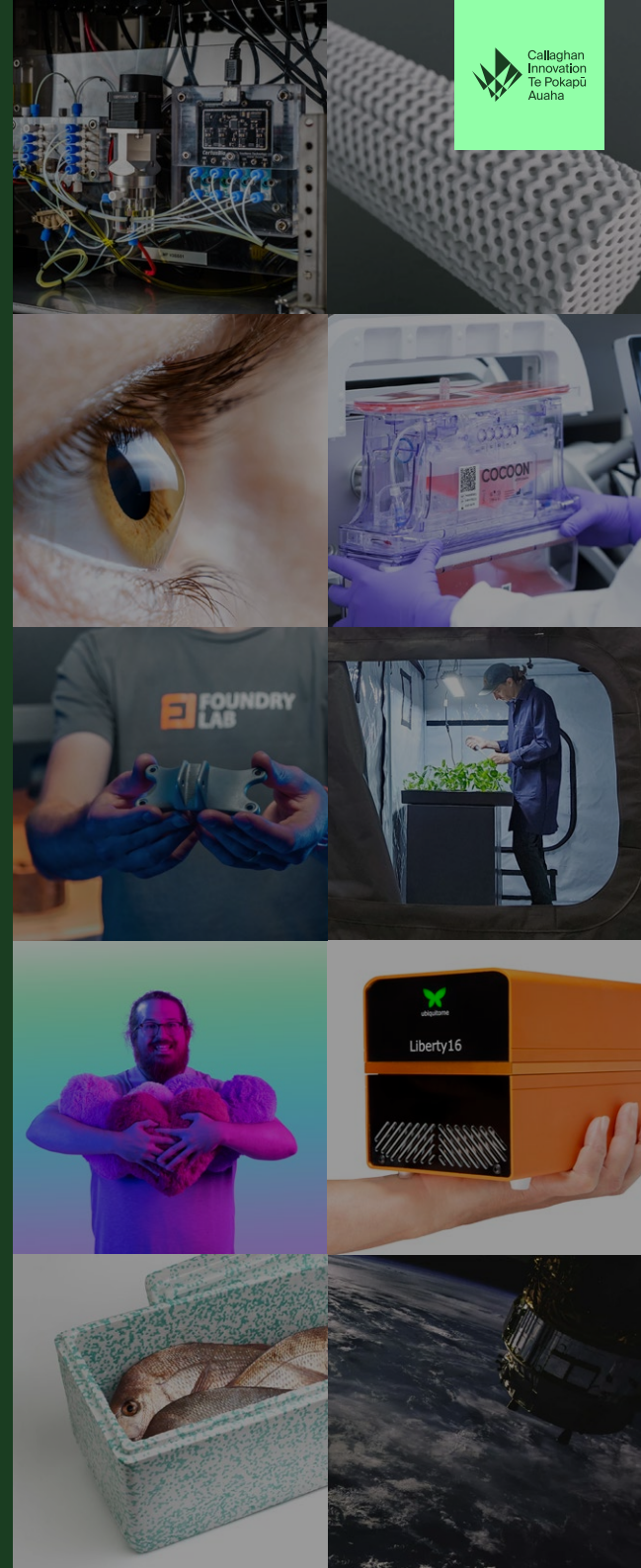
Deep technologies have a longer pathway to commercialisation, can require access to specialised and expensive equipment and inputs, and often face extensive regulatory hurdles. But, as the success of Aotearoa New Zealand deep tech startups like LanzaTech and Mint Innovation shows, the rewards for taking a longer-term view can be significant to our economy.

The Deep Tech Incubator Programme was created to fund and support deep tech innovators to develop awe-inspiring, out-there ideas from concept to reality and, ideally, long-term success. The rewards, for founders, investors, and society, along with the broader Science and Innovation ecosystem can be huge.

All over the world, deep tech incubators play a crucial role in fostering innovation and supporting deep tech companies in developing cutting-edge technologies. Every innovation ecosystem in the OECD has a government intervention to bridge the investment gap that exists.

Successful examples internationally include Deep Science Ventures (UK), IndieBio (US) and T-Hub (India). These incubators support ventures in de-risking early-stage technologies with:

- Technical validation and proof-of-concept support.
- Market validation and customer discovery assistance.
- Initial funding or grants to support early-stage development.
- Connections to specialised investors familiar with deep tech.
- A community of like-minded entrepreneurs and researchers.



How the incubator programme has evolved

Government-led incubator and accelerator programmes have been part of the innovation landscape in New Zealand since 2001.

The programmes generally supported innovative founder-led startups with capability building and connections but were not set up with the unique capability required to support advanced science and engineering ventures.

In 2013, the government identified a critical gap in the commercialisation support of deep technology-focused start-ups. Consequently, it transferred the Incubator Support Programme from New Zealand Trade & Enterprise to Callaghan Innovation and gave the agency responsibility for the Deep Tech Incubator Programme. With a deep understanding of early-stage science and deep tech ventures' commercialisation journey, we were well placed to support deep tech ventures through the programme alongside complimentary products and services.

The aim was to embed technology incubators in the innovation ecosystem and support "**businesses and industries in New Zealand that are investing in R&D and developing technology-intensive new products**".

This move aligned with the start of a period of rapid investment growth in in the deep tech space. **A November 2023 report by Boston Consulting Group** found that "deep tech claims a stable 20% share of venture capital funding, up from about 10% a decade ago".

Programme inception and early successes (2014-2016)

Callaghan Innovation's Deep Tech Incubator Programme was launched in 2014 with the vision of supporting high-tech startups that leverage cutting-edge science and engineering. Founding incubator partners and investors included WNT Ventures, Powerhouse Ventures and Astrolab. Within its first two years, the programme successfully incubated over 20 startups. It offered a $450,000 repayable grant, with matching capital of at least $150,000 from the incubator partner. In this period Callaghan Innovation awarded around $12m in repayable grants.

Expansion and increased funding (2017-2019)

Recognising the Programme's potential, Callaghan Innovation and its partner incubators expanded its resources and funding. By 2019 it had supported more than forty startups with a further $10m in repayable grants funding. This period also saw the establishment of strategic partnerships with international tech hubs, facilitating global market access for Aotearoa New Zealand startups. Sixty-three per cent of the startups supported in this first five years went on to secure early-stage funding and partnerships with industry leaders.

Breakthrough innovations and market penetration (2020-2024)

The Deep Tech Incubator Programme was re-launched in 2020 with a refreshed panel of incubator partners who have access to significant commercialisation capability, follow-on investment capital, and international connections to support the incubation of future global enterprises. The new line-up of incubators included founding partner WNT Ventures, Sprout Agritech, Bridgewest Ventures and Brandon Capital.

The repayable grant was increased to up to $750,000 to provide startups with a longer runway and more rapid growth.

Credit is due to the incubators that had to adapt to pandemic restrictions through this period, as they supported their startups through lockdowns and supply chain disruptions that added substantial complexity.

The Deep Tech Incubator Programme saw increased activity as interest in science-based, early-stage companies increased in Aotearoa New Zealand to become the largest category attracting pre-seed and seed-stage startup investment. In 2024, Pacific Channel joined the programme, increasing the number of incubators involved in the programme to five.

Deep Tech ventures we've supported

2.2 GForce
Aquafortus Technologies
Auramer Bio
Avalia Immunotherapies
Cirrus Materials Science
CropLogic
Deliveon Health
Dock Bio
Edpotential
Envisi
FHH
FiComms
Fishery Logistics
Flow Holdings
Fluent Scientific
Helix ID
Hi-Aspect
Hot Lime Labs
Invert Robotics
Koti Technologies
Luminoma Diagnostic
Metrovate
Moxion
NPX Environmental
Objective Acuity
Orbis Diagnostics
Organic Bioactives
Pheromite
Pop In Technologies
Quick Sense
Silventum
Tiro Medical
Transfection
Ubiquitome
Upstream Medical Technologies

More than the money

Deep tech incubators play a crucial role in the startup ecosystem, far beyond just raising investment funding.

Incubators serve as comprehensive support systems for emerging companies, offering a blend of education, strategic advice, and emotional support to founders.

Here are some of the ways Deep Tech Incubator Programme partners have supported the startup ecosystem:

Where the deep tech community meets

The inaugural Impactful Investing conference, hosted by Deep Tech Incubator Programme partner Bridgewest Ventures in 2022, marked a significant milestone for the organisation and the Aotearoa New Zealand startup ecosystem. Held in Wellington, the event brought together a diverse group of stakeholders, including venture capitalists, entrepreneurs, researchers, and policymakers. The 2024 conference was held in Auckland and saw an even larger turnout and a more diverse range of participants, reflecting the growing interest in deep tech and its potential to drive transformative change.

Callaghan Innovation has also supported the Angel Association New Zealand since 2020, connecting aspiring founders and investors.

Supporting women in deep tech

In 2021 and 2022, life sciences venture capital firm and programme partner Brandon Capital launched its Women in Leadership Development (WILD) pilot programme in New Zealand with the aim of increasing the number of women holding top positions in science, technology, engineering and maths (STEM) disciplines in New Zealand. Since 2022, Callaghan Innovation has supported the OnBoard programme, which upskills women with the aim of increasing their participation in startup governance.

Commercialising public science

Over the last decade the Deep Tech Incubator Programme has supported 40 startups that have been spun out from most of this country's public research organisations. The University of Auckland had nine spinouts supported by the Programme, including Luminoma Diagnostic, PhaseFoam and Tamorx. Crown Research Institute spinouts included ScentianBio (spun out of Plant & Food Research, Zealafoam (spun out of a collaboration between AgResearch, Plant & Food Research and Scion), and Bspkl (spun out from GNS Science).

Pathway to exit

Deep tech incubators, as mentors and investors, support startups with raising follow-on capital and on mergers and acquisitions. In 2018, WNT Ventures portfolio company Onesixone (SoundSwitch) was acquired by US DJ products maker Denon. In 2022, EdPotential, a Wellington UniVentures spin-out company specialising in education software-as a service that participated in the Powerhouse Venture tech incubator, was sold to Education Perfect. Also in 2022, US tech giant Autodesk bought Auckland startup Moxion, which makes digital daily footage packages for filmmakers. Moxion was incubated at Astrolab.

Case Studies

Case study Avasa + Bridgewest Ventures

AVASA™

BRIDGEWEST VENTURES

Opportunity

Surgeons all over the world face the challenge of tediously hand-sewing micro arteries to re-establish blood flow to transplanted tissues.

Solution

Avasa's arterial coupler makes microvascular surgery quicker and safer empowering surgeons to securely and efficiently link microvascular arteries in under 10 minutes.

Helping a technical founder address an urgent medical need

New Zealand's deep tech ecosystem is gaining momentum, thanks in part to the critical mass that has developed through the Callaghan Innovation Deep Tech Incubator Programme.

One success story emerging from this initiative is Avasa, a medical device startup founded by Nandoun Abeysekera. Avasa's journey highlights the crucial role deep tech incubators like Bridgewest Ventures play in nurturing innovative companies and helping them access the resources needed to succeed.

Assisting in surgeries as part of his plastic surgery residency, Abeysekera became obsessed with a particular clinical problem. Reconstructive surgeries often involve transferring tissue from one part of the patient's body to another. For the tissue to survive it needs to be reconnected to the arteries and veins in its new location.

A coupling technology for veins had long since been developed, but arteries still required surgeons to hand sew them, a process that took 30 - 60 minutes per artery. In 2018, Abeysekera left the clinical space to set up Avasa.

Since then, his small team has developed the AVASA Coupler – an implantable device designed to help microsurgeons connect microvascular arteries and veins safer, simpler, and 80% faster than the current standard of care. The University of Auckland's commercial arm UniServices provided pre-seed funding for Avasa.

Abeysekera was introduced to Bridgewest Ventures by fellow medical device startup co-founder, Professor Greg O'Grady. Avasa joined Bridgewest's deep tech incubator in 2022, taking advantage of the repayable grant from Callaghan Innovation.

The funding was crucial in proving key technological milestones and attracting further investment, says de Ridder, with the non-dilutive nature of the grant making it "particularly attractive for early-stage companies" says Kathryn de Ridder, Portfolio Investment Manager at Bridgewest Ventures.

Avasa has benefited from Callaghan Innovation's expert database and Career and Experience grants, allowing the company to access specialised knowledge and talent.

"Building a startup is really hard and you need to take all the help you can get" Abeysekera explains.

“Bridgewest's expertise in areas like strategy development, capital raising, and building a team has been invaluable.”

De Ridder says the Deep Tech Incubator Programme was a key factor in Bridgewest, a global venture firm, choosing to set up operations in New Zealand. This influx of international networks and experience is helping to elevate the entire ecosystem.

However, challenges remain. Both Abeysekera and de Ridder highlight the need for more specialised infrastructure, particularly in areas like medical device development. They also emphasise the need for patience in deep tech, where timelines for commercialisation are often longer than in other sectors.

Says Abeysekera: “It’s literally impossible to do this alone so surrounding yourself with the right support is really important."

> I really think the tech incubator model meant that Bridgewest saw this emerging market as the one to set up shop in.
>
> **Kathryn de Ridder** Bridgewest Ventures

> Building out a medical device company is tough, particularly in New Zealand. It’s riddled with all kinds of gotchas.
>
> **Nandoun Abeysekera** Avasa

$2.65
million

RAISED TO DATE

Case study Bspkl + WNT Ventures

Opportunity

Green hydrogen can help decarbonise the global economy but technical barriers currently make it expensive and energy-intensive to produce.

Solution

Bspkl's high-performance catalyst coated membranes reduce the costs of producing green hydrogen, making it a viable green energy source.

Sparking a green hydrogen revolution

Just about wherever you look around the world, green hydrogen is being touted as a means of decarbonising transport and industry.

There's just one problem — the electrolysis technology required to split water into hydrogen and oxygen is expensive and energy-intensive. That's where Bspkl, GNS Science's first spin-out company comes in.

Its co-founder, Dr Jérôme Leveneur developed a new way of manufacturing the Catalyst Coated Membranes (CCMs) that are required for green hydrogen production. Bspkl's name derives from the speckled coating the company's process applies to the catalyst, which results in 25% less catalyst material being used.

That has huge implications for the cost equation of producing green hydrogen powered by renewable energy sources. Leveneur and his colleague at GNS, Christina Houlihan, teamed up to commercialise the technology. The next step was to find a funding partner, which led them to the door of WNT Ventures, the deep tech investor and longest-serving Callaghan Innovation Deep Tech Incubator Programme partner.

Bspkl joined the incubator in 2023. Initially, WNT provided crucial support in securing B.spkl's first capital raise of $2.8 million, which included a $750,000 repayable grant from Callaghan Innovation. As the relationship matured, WNT Ventures Managing Partner, Maria Jose "MJ" Alvarez joined B.spkl's Board, offering ongoing strategic guidance.

"One of the most valuable things MJ did is she became the third member of our team for a while," says Houlihan.

This hands-on approach helped B.spkl navigate the complex early stages of licensing, foundation building, and capital raising.

Houlihan says WNT's support goes beyond just financial investment, providing a "friendly hand" as they navigate the challenges of building a deep tech startup and ramp up production of their catalysts at the Gracefield campus in Lower Hutt, Wellington.

WNT's approach to incubation is tailored to each company's needs, typically lasting 12-14 weeks and covering areas like market insights, financial modelling, intellectual property, and business model development.

Alvarez stresses that their role is to make the startup journey easier for founders, while also providing honest feedback when needed.

Bspkl has also been working extensively with the Callaghan Innovation-led New Zealand Cleantech Mission, which works to develop stronger connections between NZ CleanTech innovators and international investors, and multinational corporations.

“It’s growing in momentum, in no small part thanks to the work of Phil Anderson at Callaghan who has been organising us to get over to clean tech forums internationally. Apart from the loan, the greatest value that Callaghan Innovation has provided Bspkl has come from that work Phil does,” says Houlihan.

The pre-incubation grants of $35,000 also on offer from Callaghan Innovation, also boost WNT’s ability to do due diligence on ventures they are considering for inclusion in the incubator, says Alvarez.

“Add to that the ancillary services from Callaghan, like the R&D Tax Incentive, and the student grants, and I don’t think people realise the value that is being added to deep tech startups and how it boosts their ability to raise capital and commercialise their technology.”

> We're looking at global opportunities, global problems. Is this addressing something that is going to disrupt an industry?
>
> **Maria Jose Alvarez** WNT Ventures

> You look for the fund you have the best fit with and when it came to WNT, it was the support of our vision, and having the same goals. They also have one of the longest track records investing in deep tech in New Zealand.
>
> **Christina Houlihan** Bspkl

$2.8
million

RAISED TO DATE

Case study Foundry Lab + WNT Ventures

Opportunity

Manufacturers need faster and more convenient ways to prototype products to increase innovation and speed to market.

Solution

Foundry Lab's lets manufacturers cast on-demand, production quality metal parts at a fraction of the cost and time of a traditional foundry.

From backyard project to Series B capital raise

David Moodie's "backyard project" became the basis of the startup Foundry Lab after the Wellington-based industrial designer received a visit from WNT Ventures.

"WNT's Laura Faulconer came down to see one of my clients and she had an hour to kill before her flight. She said, what else are you working on?" Moodie recalls.

That backyard project he showed Faulconer was a metal casting system that combines the ease of 3D-printing with the density of metal casting. Moodie wasn't looking to raise money or go global with his invention.

But the due diligence process the team at WNT Ventures undertook on Moodie's system revealed the huge cost savings and timesaving it could deliver manufacturers seeking to prototype metal products, allowing them to go from CAD design directly to production in a single day.

Foundry Lab was born in 2018 and quickly joined WNT's deep tech incubator. The $150,000 injection of capital from WNT and $450,000 repayable grant from Callaghan Innovation allowed Moodie to further develop his own prototype of the Foundry Lab system, while WNT advised him on how to find potential customers in the all-important US market.

"They took a huge risk when they came on. I had cast a few parts but not a full system. They saw the potential for the market even more than I did," says Moodie.

"They were great listeners and were very fair and measured when I talked through what I had in mind."

A $35,000 pre-incubation grant allowed WNT to go deep on exploring the viability and market potential of Moodie's technology.

"We are an active investor," says WNT Ventures Managing Partner Carl Jones, who has been on the Foundry Lab board since 2018.

"Finding a trusted partner really early on is critical to a lot of these companies and the founders, especially when they are a little bit less experienced. That's the value we add."

Critical too was the technical expertise Foundry Lab was able to draw on within Callaghan innovation's scientific ranks.

"Callaghan just happened to have a powder ceramicist. We were able to develop something that was first in the world and is world-leading because we had access to people who really knew what they were doing," he says.

Interns funded through Callaghan Innovation-funded student grants have gone on to become employees at Foundry Labs, which raised money from Founders Fund & Promus Ventures in 2020, followed by a series A round in 2021 with funding from Blackbird, GD1 and Icehouse Ventures. Foundry Lab is now preparing its Series B funding round and has opened a demo facility in California.

We've gone full circle at Foundry Lab after getting access to capital and machinery from Callaghan. We've now developed our own sophisticated machinery, employed 31 people and are about to raise more capital. It shows the economic impact of that early support," says Moodie.

> Having access to that extra capital was the difference between sinking and swimming... We wouldn't have got anywhere without it.
>
> **David Moodie** Foundry Lab

> Over the last decade, we've built deeper technical and funding pathways offshore, and a deeper pool of founders who have been there and done it, and can recycle themselves back into helping each other.
>
> **Carl Jones** WNT Ventures

$14
million

RAISED TO DATE

Case study Brandon Capital

Opportunity

We need more cutting-edge medical breakthroughs to produce medical devices and treatments that can improve health outcomes for everyone.

Solution

Brandon Capital has the funds, experience and expertise to support life science companies from proof-of-concept through to commercialisation.

Giving life science startups a place to thrive

As New Zealand's deep tech ecosystem continues to evolve, Brandon Capital has emerged as a key player in nurturing innovative local startups setting out to change the world.

The global venture capital firm has raised over $1 billion so far through six funds, investing in local innovations TamoRx and Amaroq Therapeutics, two companies targeting novel cancer treatments which have collectively raised over $30 million between them.

Brandon Capital's approach to running a deep tech incubator is characterised by a focus on nurturing high-quality, science-driven opportunities with commercial potential," says Duncan Mackintosh, Brandon Capital's Senior Investment Manager, New Zealand.

"We love good science. We love novel biology. The more generated in New Zealand, the more chance we've got of matching it with an unmet disease need and creating new therapies that can make a difference to people's lives," he says.

Brandon Capital partnered with Callaghan Innovation in the Deep Tech Incubator Programme in 2019 with participating companies benefitting from the $750,000 repayable grant offered through the scheme.

The incubator takes a hands-on approach, says Mackintosh, working closely with researchers and academic founders to build out business cases for their innovations. That crucial commercial guidance is complemented by Brandon's connections with more than 55 research organisations across Australasia, and its international networks allowing the incubator to leverage existing infrastructure and expertise to support its early-stage participants.

Mackintosh says the Deep Tech Incubator Programme has bolstered efforts to gain momentum in life sciences, an area that is both challenging technically, and from a regulatory point of view.

"The appetite and interest from mid-career researchers in the commercialisation pathway has really grown over the last 15 - 20 years. There's a much greater interest in and the importance of impact by our startups," he says.

One area of opportunity is to play to New Zealand's strengths in animal health, says Mackintosh, who has a background in veterinary science.

"Animal health uses much of the same capability in pharmaceutical manufacturing and biological science. But the capital requirements to get a product to market can be closer to $10 million rather a billion dollars, which some suggest is what many drugs developed for humans cost."

Despite Brandon's funds, a key challenge remains the capital required to progress a candidate along the drug development lifecycle to commercialisation.

"The funding that New Zealand and Australian companies need to be able to compete globally, is significant, with current estimates suggesting it takes one billion dollars to bring a drug to market" says Mackintosh.

"Although we're careful and efficient in New Zealand, it is a long, expensive journey."

> In a country like ours where everything is spread out and it's hard to get scale in a particular area, it takes time and patience. That's where having early access to grant funding really helps.
>
> **Duncan Mackintosh** Brandon Capital

Case study Scentian Bio + Sprout

Opportunity

The world needs more intelligent decision making and problem solving to detect disease, ensure our food and water is safe to consume, and our air is safe to breathe.

Solution

Scentian Bio's biosensor technology, based on insect olfactory receptors combined with AI, has created a detection that is 1000x more sensitive than that of even the best beagle.

Sensing an opportunity in smell receptors

Over hundreds of millions of years, insects have developed finely-tuned smell receptors allowing them to find mates, sniff out food, and detect predators.

Based on pioneering work undertaken by Dr Andrew Králíček at Plant & Food Research, spin-out Scentian Bio has developed biosensors designed to detect a wide range of chemical compounds with high sensitivity and specificity. The technology has potential applications in agriculture, healthcare, environmental monitoring, and food safety.

The path to commercialising this unique technology moved up a gear when Králíček participated in Sprout Agritech's Founder Accelerator programme, where he was mentored by entrepreneur and 1000memories co-founder Jonathan Good.

That led to Scentian Bio also joining Sprout's Deep Tech Incubator, where numerous accelerator graduates have migrated, and Good joining Scentian Bio's Board, followed by a much more hands-on role as Chief Executive Officer in 2023 to work alongside Králíček. Sprout's Chief Investment Officer Warren Bebb, says Sprout focuses on aligning cutting-edge technologies with the right people to create successful companies.

"Our approach is very much about getting the right people alongside the technology to help develop it into a company that is attractive to investment," he says.

Scentian Bio is one of ten companies in the incubator, drawn from around 80 companies that have gone through Sprout's Founder Accelerator since 2020, which was when the deep tech incubator was established. The incubator participants not only benefit from mentorship, support and access to local and international expertise but access to precious capital as well. Scentian Bio has raised a total of $7.2 million to date, including a $3.5 million seed funding round last year featuring Toyota Ventures, and Sprout's long-standing investment partner Finistere Ventures.

Good says Sprout helped Scentian Bio transition from a technology-focused entity to a market-oriented business. This included identifying initial market opportunities in the food industry and developing a strategic roadmap.

"Deep tech is hard, and the Callaghan Innovation repayable grant made a big difference by enabling us to prove a couple of key technology proof points supporting us to then raise subsequent capital," says Good.

Through Sprout's network, Scentian Bio has also assembled a team of global experts in technologies essential to advancing their innovative solutions.

"We're at the conjunction of synthetic biology, nanotechnology and AI, and we've got PhDs and world-class folks in each of those to be able to do what we're working on," says Good who has also been able to tap into Callaghan Innovation expertise through the agency's Health Tech Activator.

The homegrown support, and growing momentum provided through the likes of a US$1.7 million grant secured from the Bill & Melinda Gates Foundation, has positioned Scentian Bio to achieve its goals.

Says Good: "Our ambition at Scentian Bio is to change how we live. We're about unlocking the power of real-time chemical information to provide humanity with remarkable new abilities."

> It's about aligning great technologies with the people you need to make them great companies.
>
> **Warren Bebb** Sprout Agritech

> We have the aim of building a multi-billion dollar business, based here in New Zealand, that changes lives all around the world.
>
> **Jonathan Good** Scentian Bio

$7.2
million

RAISED TO DATE

A view from the public research sector

Dr Peter Cook
General Manager - Business Development
Plant & Food Research

Dr Peter Cook has first-hand experience with the Deep Tech Incubator Programme, including as part of the team that spun out Scentian Bio where he serves as a Board director.

What do you see as the main value deep tech incubators can provide in the Aotearoa New Zealand innovation ecosystem?

Deep tech incubators have filled a specific niche in Aotearoa's venture capital ecosystem as the earliest, highest-risk investors. They are open to looking at very early-stage technologies and emerging venture opportunities.

For my team, the ability to engage early and get feedback and insights from investors with domain expertise is valuable. This information often helps to guide our decisions around technical or commercial de-risking.

We have put several teams through Sprout Agritech's accelerator programme. This programme has been great for our founding teams to learn and develop their thinking around the technology's competitive advantage, potential customers and the business model.

Have you any reflections on how deep tech incubators have developed here over the last decade and any brief observations on how they need to evolve to meet the needs of Kiwi startups in the next decade?

The deep tech incubators have started to work more closely with universities and Crown Research Institutes. This has led to more constructive and open interactions between commercialisation professionals, scientists/ founders, and investors. Seeing this continue to evolve and strengthen will be essential if we are pulling through more deep tech innovations from publicly funded research.

Working together
The next ten years and beyond

Working together
The next ten years and beyond

Building on a decade of fostering science, innovation and technology in New Zealand, Callaghan Innovation's Deep Tech Incubator Programme is set to enter an ambitious new phase from 2024 to 2027 (the end of the current funding period).

The programme aims to continue accelerating the growth of New Zealand's deep tech ecosystem, driving economic value, and positioning the country as a global leader in transformative technologies.

We aim to:

- Support at least 60 more deep tech ventures over the next three years, in conjunction with our programme partners.
- Enable more spinouts from public research organisations.
- Build New Zealand capability in strategic areas like bio-manufacturing, animal health, AI and clean tech.
- Attract talent and foreign investment to build a reputation for New Zealand as a deep tech economy.
- Provide a clear pathway for researchers to commercialise their work.
- Encourage Māori deep tech innovators to embark on the commercialisation journey.

We will build on our past successes

The programme will leverage lessons learned and relationships built over the past decade. Key strengths to build on include:

- A long-term 'patient' capital approach, recognising that deep tech requires extended development timelines.
- Strong partnerships with research institutions and industry.
- Proven track record of supporting ventures from early stage through to international success.
- Expertise in navigating regulatory and commercialisation challenges specific to deep tech.

Continue contributing to the New Zealand economy

Startups that have participated in the Deep Tech Incubator Programme have generated hundreds of jobs, millions of dollars in revenue, and boasted export earnings.

The programme is poised to build on that success by:

- Creating high-value jobs in knowledge-intensive sectors.
- Developing exportable intellectual property and products.
- Attracting international investment and partnerships.
- Building a skilled workforce experienced in commercialising advanced technologies.
- Positioning New Zealand as an innovation hub in key areas like clean tech and biotechnology.

Working together
The next ten years and beyond

Celeste Peh
Deep Tech Incubator Product Manager
Callaghan Innovation

Building Deep Tech capability

“Our five partners in the Deep Tech Incubator Programme are constantly on the hunt for impactful science and technology that can help tackle the big issues facing society” says Celeste Peh, Callaghan Innovation’s Deep Tech Incubator Product Manager. “We are seeing significant startup activity in strategic areas including biotech, cleantech, agritech, drug development and artificial intelligence. These are the areas where we are building capability in New Zealand, and these ventures are being closely supported by teams at Callaghan Innovation”.

2034 and beyond

"Game-changing, disruptive deep tech innovations that we saw ten years ago have seamlessly integrated into our lives” says Celeste. “Today, we are seeing Kiwi scientists and researchers with life-changing innovation and ideas that seem far-fetched – however, I’m confident and excited that with the right business support and funding, we will see these disruptive ideas come to fruition in the next ten years and become part of our everyday lives” she adds.

> What’s perhaps most exciting is the not knowing what new ventures and big ideas will emerge from the programme in the coming years. The science and technology being developed is so advanced that we can’t even consider its full impact. What’s certain is that with the right investment and support, these organisations will play a vital role in the future of the country.
>
> **Celeste Peh** Callaghan Innovation

Meet the incubators

Callaghan Innovation currently has five partner investment firms in its Deep Tech Incubator Programme.

Powerhouse Ventures and Astrolab made important contributions as part of the first cohort of investment firms in the programme with their involvement ending in 2020.

Brandon Capital Partners, established in 2007, is a leading life science venture capital firm with a New Zealand and Australian presence

As a life science deep tech incubator, Brandon curates and seeds promising life sciences research discoveries, providing access to capital, expertise and hands-on training to support the next generation of New Zealand life science companies. With networks and capacity generated through the Medical Research Commercialisation Fund (MRCF), and with staff in NZ, Australia, USA and the UK, it brings a strong international perspective.

Sector expertise: Life Sciences, Biotech, Animal Health.

> We're very much a conviction investor, and drugs and medical devices spaces are our sweet spots. We came to New Zealand in 2016 because New Zealand had world class science. We love wandering the corridors, finding research that can become pharmaceutical drugs or medical devices with global appeal.
>
> **Duncan Mackintosh** Senior Investment Manager

Bridgewest Ventures is part of the Bridgewest Group,a US-based investment company, which also operates a private investment firm in San Diego, California.

Bridgewest Ventures has been successful in its ability to incubate and launch major global innovation-led companies and intends to leverage this experience to replicate the same successful model in New Zealand. Bridgewest's deep technology experience is wide-ranging and includes biotechnology, agri-tech, pharmaceuticals, UAV technology, IoT and semiconductor, AI and software development, as well as drug discovery and deep research into health technology. It leverages its connections, international reach, and commercialisation experience to transform New Zealand opportunities into world-class companies.

Sector expertise: Biotechnology, Semiconducting, Artificial Intelligence, Hardware (Devices), Medtech.

> Bridgewest identified New Zealand as a good emerging market to diversify into because of its top-tier universities and ease of doing business. I really think that the Deep Tech Incubator Programme has opened up New Zealand to the Bridgewest global ecosystem.
>
> **Kathryn de Ridder** Portfolio Investment Manager

Meet the incubators

Pacific Channel

Pacific Channel is the newest specialist deep tech venture capital firm to join the programme.

Comprising academics, industry experts, serial exited entrepreneurs, investment professionals, venture partners, advisors, and strategic consultants, the Pacific Channel team offers deep tech companies across Asia Pacific commercialisation support, international and local connections, and access to the investment capital they need to achieve value inflection points.

Sector expertise: Clean Tech, Climate Tech, Agri Tech, Medical Technology, Biotechnology, Artificial Intelligence, Advanced Manufacturing.

> We recognise the vast potential of Deep Tech innovation in this country. For two decades Pacific Channel has worked with researchers, founders and entrepreneurs seeking to leverage groundbreaking innovations striving to address complex, global challenges. We are excited that this partnership will enable us to back Deep Tech ventures at their earliest stage.
>
> **Marny Reakes** Venture Partner

Sprout Agritech

Sprout Agritech is a business accelerator based in Palmerston North and has been working with agrifood tech start-ups since 2014.

Its focus is investment in technologies that improve efficiency and sustainability in food tech and agritech.

A Callaghan Innovation-appointed deep tech incubator since 2020, Sprout provides emerging agritech and future food start-ups with a pathway to global markets and international investment networks. Sprout's deep tech incubator has a mix of international, local and sector-focused investors including Fonterra, Finistere Ventures and OurCrowd.

Sector expertise: Agri Tech, Food Tech, Climate Tech.

> Sprout is about aligning great technologies with the people who need to make them great companies. We're very passionate about building out that ecosystem and getting the right people in the room and with people who are passionate about helping.
>
> **Warren Bebb** Chief Investment Manager

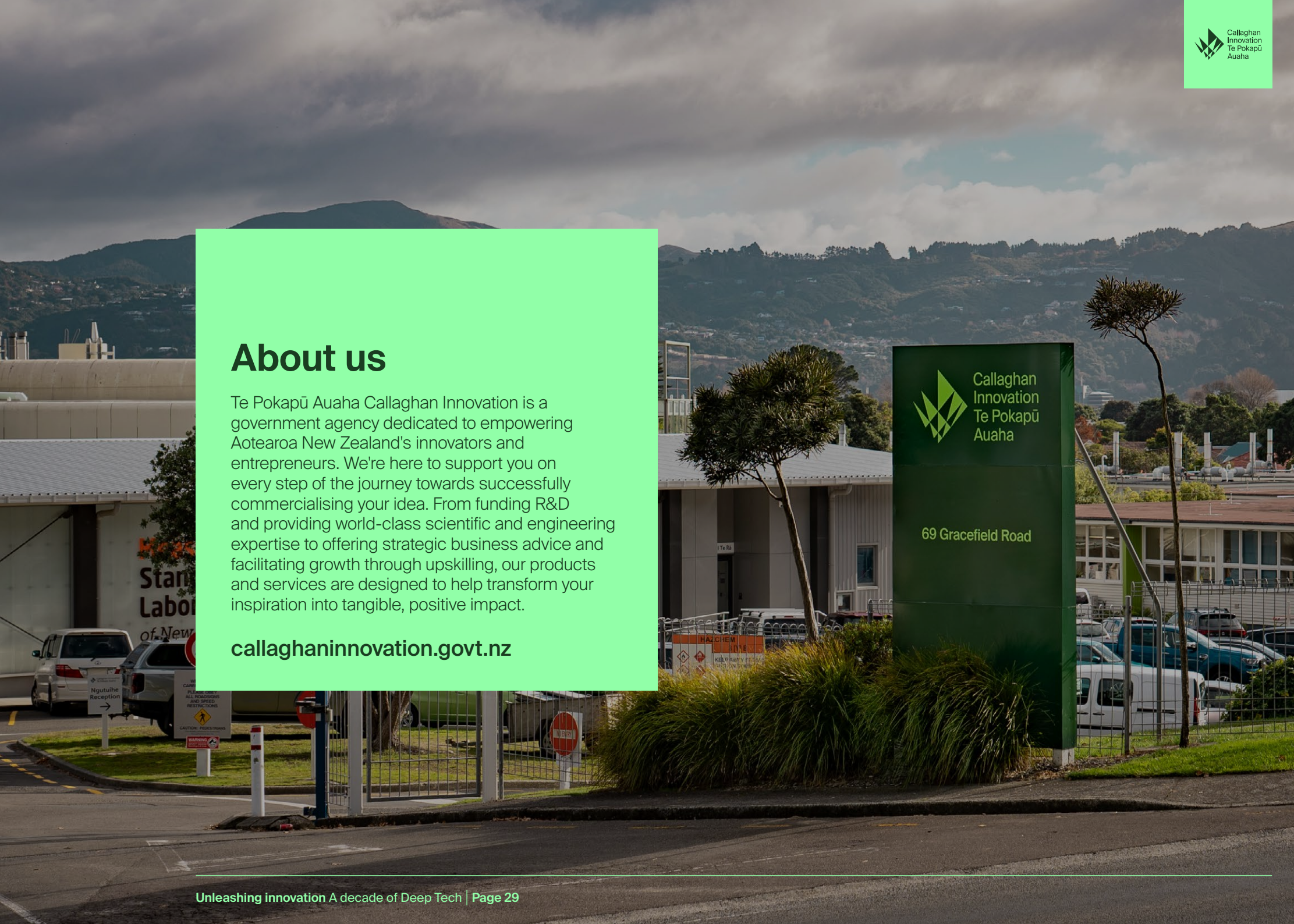
WNT Ventures

WNT Ventures, the Tauranga and Auckland-based deep tech incubator was founded in 2014 and has been with the programme since day one.

WNT's mission is to support the commercialisation of complex technology by sourcing, investing in and incubating high-growth early-stage businesses with global potential. WNT has interests in sustainability, agritech and food, artificial intelligence, medtech, engineering, sensing and industrial automation.

Sector expertise: Advanced Manufacturing, Medical Technology, Climate Tech, Commodity Recycling, Artificial Intelligence, Aerospace, AgriTech, Automation, Sensing, Advanced Materials.

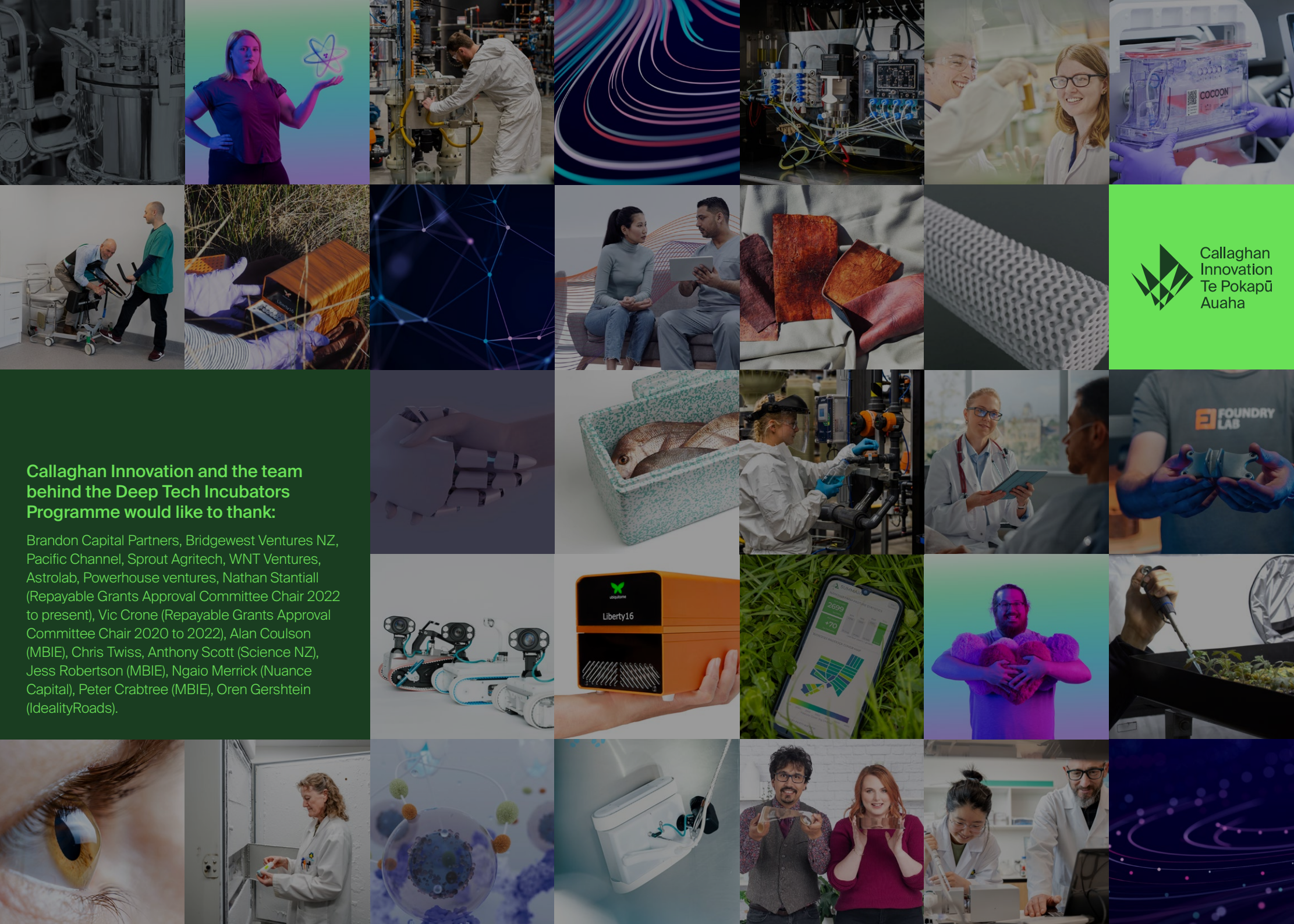
> What we are doing these days at WNT is a product of ten years of experience and a whole bunch of people's insights. There have been successes and mistakes and it has made us stronger investors and advisors. Our current fund, fund three, is full of excellent companies, and around 60% are female-founded too.
>
> **Carl Jones** Managing Partner



About us

Te Pokapū Auaha Callaghan Innovation is a government agency dedicated to empowering Aotearoa New Zealand's innovators and entrepreneurs. We're here to support you on every step of the journey towards successfully commercialising your idea. From funding R&D and providing world-class scientific and engineering expertise to offering strategic business advice and facilitating growth through upskilling, our products and services are designed to help transform your inspiration into tangible, positive impact.

callaghaninnovation.govt.nz



Callaghan Innovation Te Pokapū Auaha

Callaghan Innovation and the team behind the Deep Tech Incubators Programme would like to thank:

Brandon Capital Partners, Bridgewest Ventures NZ, Pacific Channel, Sprout Agritech, WNT Ventures, Astrolab, Powerhouse ventures, Nathan Stantiall (Repayable Grants Approval Committee Chair 2022 to present), Vic Crone (Repayable Grants Approval Committee Chair 2020 to 2022), Alan Coulson (MBIE), Chris Twiss, Anthony Scott (Science NZ), Jess Robertson (MBIE), Ngaio Merrick (Nuance Capital), Peter Crabtree (MBIE), Oren Gershtein (IdealityRoads).