Startup Investment

| AUTUMN | 2022

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pwc

ANGEL ASSOCIATION NEW ZEALAND

NZ GROWTH CAPITAL PARTNERS

Big ambitions in a world of uncertainty

Welcome to the Autumn 2022 edition of Startup Investment

The startup ecosystem in New Zealand continues to thrive and mature, with 2021 delivering a record level of deal activity. Early Stage Investors invested $257.5m in startups (a 63% increase compared to 2020) and for the first time the median deal size for follow-on capital reached $1m. This growth in the face of economic, social and environmental uncertainty is an incredible achievement. Continuation on this trajectory in a world of uncertainty and political instability requires unwavering focus on what makes the New Zealand startup ecosystem unique – its ability to deliver solutions to globally important problems.

This focus is illustrated in the 2021 deal data, with $106m (41%) invested in deep tech startups that are solving problems presented by climate change, sustainability and in healthcare, compared to $17m (11%) in 2020.

In this edition, we explore the trend towards climate-based investing in more depth. We speak with Outset Ventures, Nuance Capital and CoGo on how we can be incentivised to make more conscious investment decisions that have a positive impact on the planet. We also look at startups that are creating game changing solutions to some of our greatest climate issues. This includes Carbonclick and Cropsy Technologies who are helping the agricultural sector reduce its carbon footprint and its impact on the environment, as well as deep tech startups Mint Innovation and Aquafortus that are 'turning waste into gold' through innovative approaches to repurposing waste.

We only begin to scratch the surface of how our startups are engaging with the climate challenge. New Zealand, which has a reputation for efficiency and innovation, has the potential to be a leader in climate tech, and that requires a strong, focused, well-funded startup ecosystem.

LISA DOUGLAS
DIRECTOR, PWC

“New Zealand, which has a reputation for efficiency and innovation, has the potential to be a leader in climate tech, and that requires a strong, focused, well-funded startup ecosystem.

Frenetic energy should be harnessed to sustainable outcomes ↓

Towards the end of last year someone asked me what sort of numbers I thought 2021 would reveal in terms of early stage venture investment.

I said I had a feeling we would punch through $200m for the first time and, wow, we sure did!!

We invested $257.5m across 174 deals, which is $99.5m up on the $158m invested in 2020.

Prior to this, the biggest jumps in investment levels were a $26m uplift between 2016 to 2017, and a $30m jump between 2019 to 2020.

With respect to the jump in deal volume, for the last decade we've been closing between 100 and 130 deals a year, so to be another 40+ deals up reflects a frenetic level of activity and energy.

Our experience in Aotearoa mirrors ecosystems elsewhere in the world. At the beginning of 2020 Crunchbase figures were tracking at around US$24bn, yet Crunchbase reported four months of venture funding surpassing US$60bn in the last months of 2020.

While these massive leaps are energising, this record level of growth isn't sustainable in the long term, particularly when other parts of the economy are enduring tough times.

That's why, rather than letting the focus be on the unprecedented growth, we should keep our eyes on the long-term prize – a sustainable, value generating ecosystem. While these records are inspiring – encouraging budding startups and raising awareness of the asset class – we are really only just getting started.

I'm heartened to see venture investment in Aotearoa backing founders to build startups that aim to solve the problems and pain so many people have been suffering – addressing health and social equity challenges and helping tourism to rebound.

Over the last sixteen years, 575 startups have received $1.23bn in funding.

> “I'm heartened to see venture investment in Aotearoa backing founders to build startups that aim to solve the problems and pain so many people have been suffering.

To reap the huge benefits kiwi born startups can deliver, we need to be priming our ecosystem for the next billion dollars of investment to be made in a third of that time.

We all have a role to play in achieving this – government, academia, professional services, corporate New Zealand and private investors. Our mokopuna are relying on us all to do so. They need huge problems like climate change solved and they need the jobs startups will create.

SUSE REYNOLDS
CHAIR, ANGEL ASSOCIATION NZ

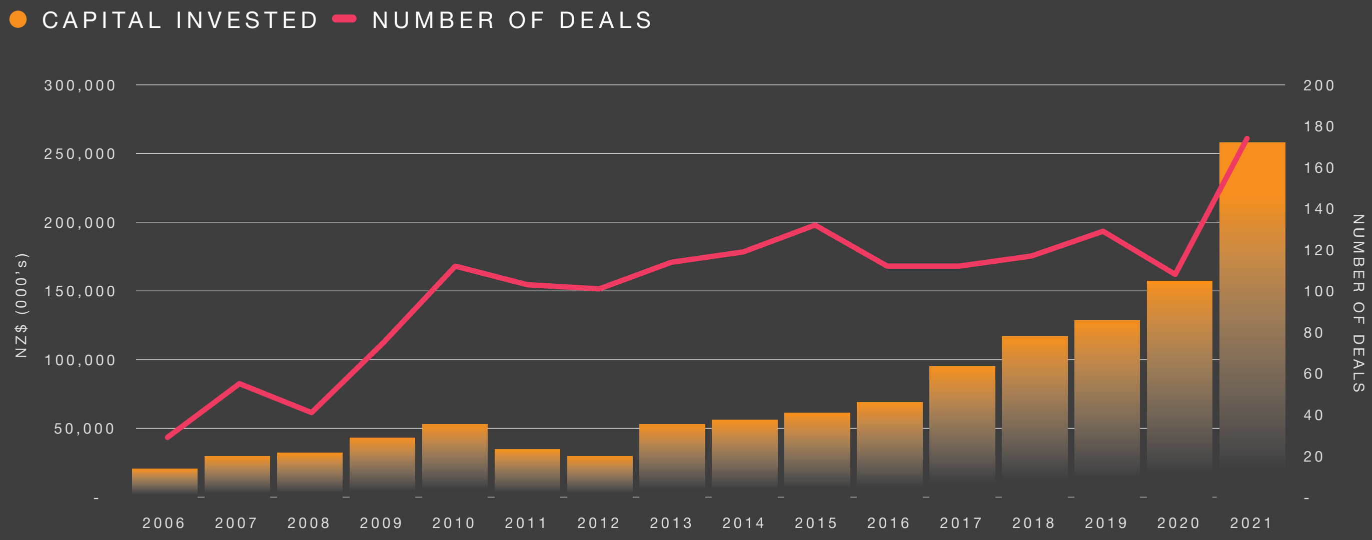
Startup investment trends ↑

The latest Young Company Finance deal data confirms that 2021 delivered record growth for the number of deals completed and the amount of capital invested. Early Stage Investors provided funding of $257.5m, across 174 deals, representing a 63% growth in funding and a 61% growth in the number of deals (compared to 2020). This has continued to have an impact on the median deal size for follow on investment, which increased to $1 million (compared to $769k in 2020), while the median deal size for new investment remains stable at c.$750k. This growth has been supported by the increase in funding provided by venture capital funds, which provided 55% of total early stage funding (compared to 29% in 2020). On-going syndication with angel investors remains central to the startup investment ecosystem, with 75% of all deals being syndicated.

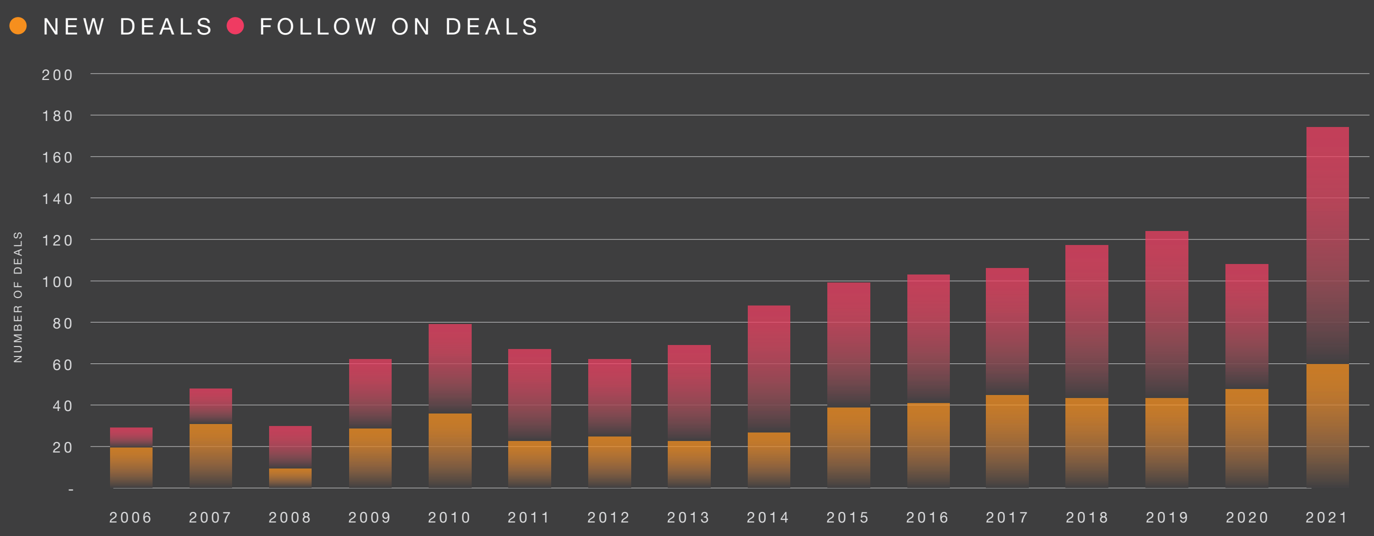
Early Stage Investors are increasingly focused on Deep Tech*, which received 41% of total startup investment, across 33% of deals. This represents a shift away from software and services, which received 38% of total early stage investment in 2021 (down from 61% in 2020).

**Deep Tech includes pharmaceuticals, biotechnology & life sciences, technology hardware & equipment, aerospace, and industrials.*

TOTAL INVESTMENT PROVIDED BY EARLY STAGE INVESTORS (2006 – 2021)



NEW AND FOLLOW ON DEALS COMPLETED BY EARLY STAGE INVESTORS (2006 – 2021)



During
2021
Early stage investors provided **$257.5m** of funding for New Zealand startups.

63%
Increase from 2020

$88.6m
New capital

$168.9m
Follow on capital

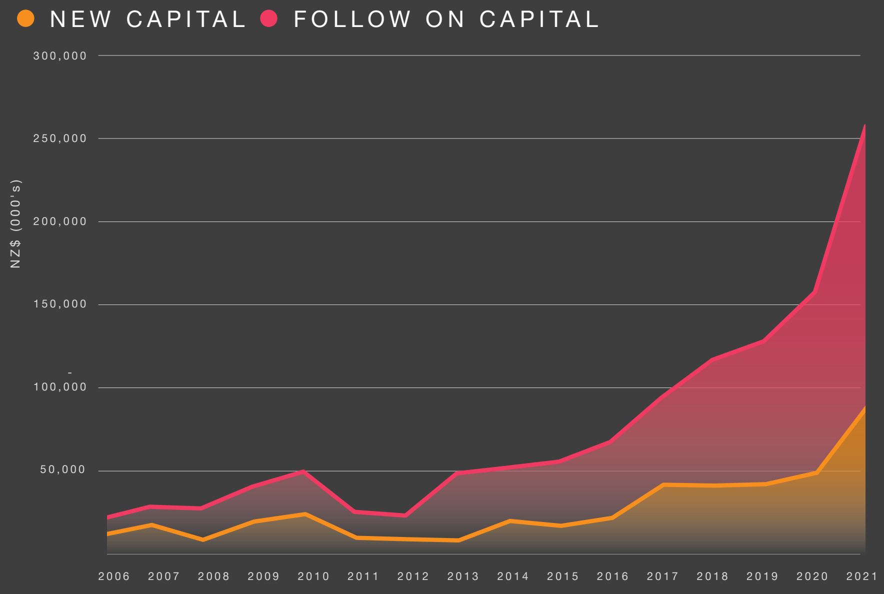
$257.5m
Total invested

75%
of deals were syndicated (down from 85% in 2020)

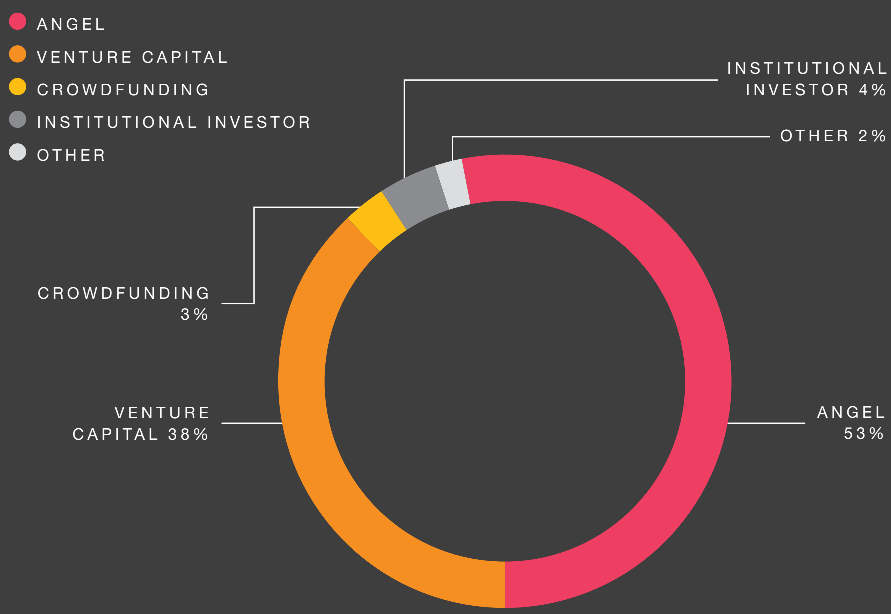
In 2021, the median deal sizes were: **$1m** for follow on capital; **$750k** for new capital

$146m
of early stage funding was invested in Deep Tech startups, representing 41% of total early stage investment across 33% of deals (compared to 11% of funding across 21% of deals in 2020)

NEW AND FOLLOW ON CAPITAL PROVIDED BY EARLY STAGE INVESTORS (2006 – 2021)

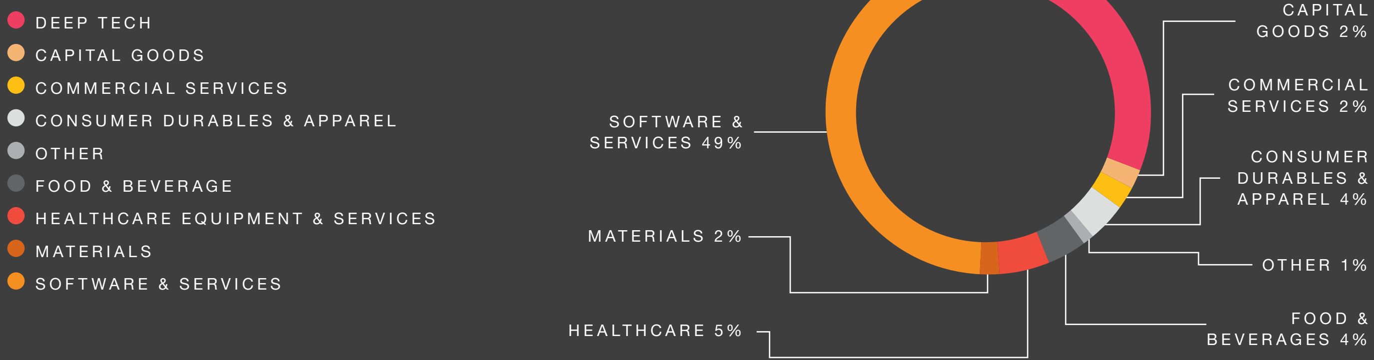


BREAKDOWN OF LEAD EARLY STAGE INVESTORS (BY DEAL) IN 2021



**Other includes: Incubator, Accelerator, Corporate, Private Equity and Other. Angel includes: Private Investor, Angel Funds, Angel Network".*

DEALS COMPLETED BY SECTOR DURING 2021



Increasing focus on purposeful impact ↓

Over the last two years, startups and early stage investors have had to navigate the uncertainty brought about by the ever-changing impact of COVID-19. However, despite early indications to the contrary, the sector bounced back remarkably well in 2020, a trend that continued in 2021.

The local ecosystem has benefited enormously from a significant increase in the availability of domestic venture capital and the strong global capital conditions with record low interest rates, record M&A activity, and buoyant equity markets. Combined with a high-quality pipeline of startups, this has resulted in strong growth in the total amount invested and the number of investments in 2021.

The main beneficiaries of the growth in capital invested were deep tech startups – companies solving substantial scientific or engineering challenges – attracting 41% of the early stage capital invested in 2021, 30% more than in 2020. Encouragingly, we're seeing both investors and founders seeking purposeful impact in addition to commercial returns, with an increasing focus on solving societal problems such as healthcare, climate change, and food and water security. Overall, the number of deep tech investments made remained lower than in software, but the higher average deal sizes highlight the maturing of this pipeline and the capital-intensive nature of commercialising these ventures.

Uncertain economic conditions, political instability, and the reverberations of the pandemic will continue to impact global market confidence, which will flow through to the early stage investment ecosystem in 2022 and beyond. However, the ecosystem has matured significantly, and our hope is that it's better able to withstand turbulent conditions and continue this growth trajectory.

There also remains more work to be done to ensure that a strong pipeline of early technology companies continues to emerge from the significant research and development being undertaken, and to increase the diversity of both founders and investors.

Emerging companies in this sector promise to transform New Zealand's economy by increasing labour efficiency, reducing inequality, and driving sustainable economic activity, and we look forward to seeing more ambitious startups become global successes.

"Encouragingly, we're seeing both investors and founders seeking purposeful impact in addition to commercial returns, with an increasing focus on solving societal problems such as healthcare, climate change, and food and water security.

JACQUES RICHTER
ASSOCIATE INVESTMENT DIRECTOR, NZGCP

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With New Zealand's abundant renewable energy sources, our government's commitment to a carbon-neutral economy, a strong pipeline of emerging IP and a national ethos of innovation – it's no wonder sustainable investment opportunities, specifically in the clean tech sector, are having their moment in the sun.

As New Zealanders, we are inherently values based and that extends to both the way New Zealand companies do business and NZTE's mandate to grow companies for the "good" of New Zealand and the world. Currently, 30% of NZTE's deal pipeline is impact related and this continues to grow. The growth of startups in the clean tech sector has been exceptional and has empowered us to run a specific CleanTech investment showcase, two years running.

The investee companies showcased are real game changers, with companies including CarbonScape, AFCryo and Emrod all making big gains, following on from pioneers that include Mint Innovation, Geo40 and UBCO. Our experience with companies in clean tech and deep tech has highlighted the need for our investment managers to spend more time supporting companies in articulating their value proposition and path to profitability.

When this is done well, and incorporates an articulation of an ESG strategy, global investor engagement is forthcoming. An ESG strategy is no longer a nice to have but a prerequisite for investors, and is something companies need to be ready to respond to. In the past three years NZTE has successfully supported 35+ companies with a sustainable element to raise $160m of investment, with that investment coming from Australia, United States, East Asia and, most prominently, New Zealand.

As the New Zealand economic strategy drives towards a high wage, low-emission economy, NZTE is committed to supporting these innovative technologies and connecting with 'good' investors for a brighter future.

DYLAN LAWRENCE
GENERAL MANAGER, INVESTMENT
NZTE

Investing for good: climate solutions delivering positive impact ↓

Arguably the greatest innovation challenge humankind has ever faced is staring us in the face. The world has ten years to halve global greenhouse gas emissions and until 2050 to reach net zero.

In April 2022 the Intergovernmental Panel on Climate Change presented its latest report with a stark prediction – the world is on track to increase global warming well beyond the target set by the 2015 Paris accord. On the report's release, the United Nations said greenhouse gas emissions must be curbed by 45% this decade, but current climate pledges will lead to a 14% increase.

As such, climate solutions are critical to enable this transformation and are attracting growing investor interest.

Outset Ventures co-founder and chief executive Imche Fourie says there's a clear need for climate-based investments.

"The world has dug itself a hole that we now need to innovate our way out of," Imche says.

"We need to promote adaption and we need to build resilience, as well as reduce emissions."

Nearly half of Outset Ventures' investments are in climate tech companies, all over the last 18 months when, what was then called LevelTwo switched from being a startup hub, support space and incubator to funding as well.

Imche says the team's approach to climate tech investment is the same as any other.

"We're asking, is this a good team, does it have compelling technology, is there a market for it? I think that approach speaks to the fact that climate investments are good investments."

But what else goes into that selection mix?

"We have a very clear picture of what we think the future should look like, so any technology that comes to us and builds towards that future is investable."

For Outset Ventures, that future vision includes abundant clean energy and is less reliant on carbon-intensive industries. Companies that support that future also need to be equitable, Imche says. By this, she means a significant positive impact on people is required and not just the bottom line.

At Nuance Capital, investment manager Mitali Purohit believes there's more wholesale acceptance and focus on the need for climate tech, which has become more apparent to investors and consumers over the last two years.

She says the impact of Covid-induced lockdowns partly contributed to growing awareness.

"People saw changes when the planes weren't flying and cars weren't on the roads," Mitali says.

"Also, people spent more time in front of the TV and reading news and were noticing the acceleration of climate change-related natural disasters."

She says the only way to fast-track emissions reduction is through innovation and technology which can scale quickly and be rolled out globally.

They look for companies with passionate founders who are mission-driven, with good plans and disruptive ideas to take to the world.

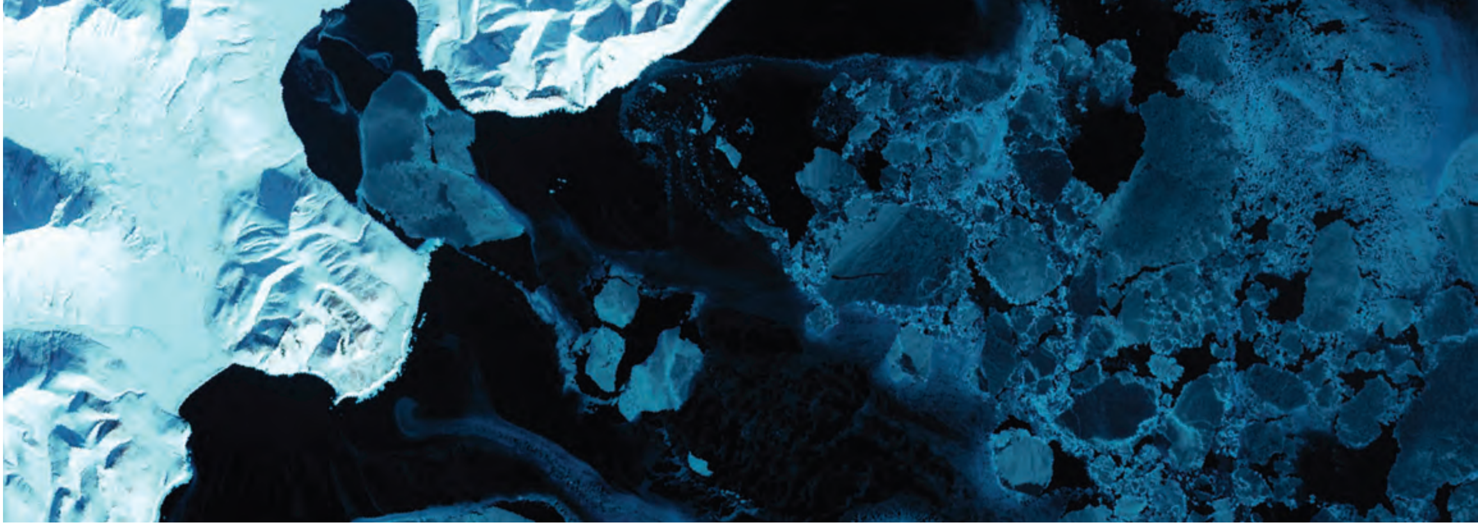
"Part of our investment screening, internally, is asking this question: Are they missionaries, not mercenaries?"

Outset Ventures and Nuance Capital want to see bold visions in the companies they back that will lead to substantial support for the climate or sustainability and have a generational impact.

Both point to Kiwi start-up EnergyBank as a great example of technology that supports other climate-based initiatives in electricity production – such as wind and solar – to better distribute electricity when needed.

Shifting the dial – what's important for New Zealand Inc?

The goal of net-zero emissions by 2050 requires across-the-board commitment, says Mitali. Greater government support with the right regulation, policies, non-equity funding and a more determined focus on research from



universities will encourage further investment in climate and clean tech.

"In New Zealand, climate tech and clean tech are not separated, and that's a problem because climate tech doesn't get a specific focus, and it's because climate tech doesn't get a specific focus, and it's the least funded of the two," she says.

"We need investors coming together along with the policymakers to help with not just funds but the infrastructure to develop and trial these technologies and then, hopefully, scale them in New Zealand before we start exporting."

The risk of this not happening, she says, is that talented people and their innovations will go elsewhere, or not bother at all.

Mitali adds that investors are also important for mentoring founders, who are often first-time entrepreneurs who need governance support, access to local and global networks and other innovators.

Imche Fourie says several changes in thinking are required to shift the dial, which has a dual purpose of encouraging innovation and helping consumers understand how new ideas will change their lives.

For example, she says people clearly understand the need to move from fossil fuels.

"But, we also need to shift our mindset from energy conservation to energy abundance, because to really increase quality of life, we will be using more power. A realistic thing to be targeting is how we create more energy, better."

Finding opportunities

Alongside energy production, storage and distribution innovation, Imche believes New Zealand is well-positioned to develop future foods at scale and heavy industry should also have a focus to reduce its carbon footprint.

Increased investment, over time, will lead to improved export returns, reducing the economy's reliance on companies like Fonterra and sectors like tourism.

In addition, as founders and investors exit successful companies, more funding is available for fresh innovations.

Mitali says along with the need for innovators, policymakers and regulators to work together, New Zealand needs to be at a point where it specialises in just three to five vertical streams. She includes sustainable food production practices in her list, along with the clear need to improve farming emissions, and infrastructure development for improved mobility and energy technology.

Agriculture is important for New Zealand investors, Mitali says, because one of the biggest challenges faced by innovators in climate tech and clean tech is the journey from proof of concept to commercial scale.

"In agriculture we have farms and we have space to trial the products and test in our own home ground before we export. We've also got early adopters here."

Returns to New Zealand Inc are tangible too, Mitali believes, with the retention of talent and the growth in reputation as specialists in the deep-tech space.

Encouraging behaviour change in consumers

Wellington-based Cogo has developed a way to inspire consumers and small businesses to be more conscious of how they're contributing to the problem as individuals by tracking emissions linked to their spending activity.

The solution is at the crossroad between financial technology and climate tech, providing analytical software that drills into transactional data to extract the carbon cost of consumer spending.

Cogo investor and chairman Serge van Dam says that while many might think the nature of capitalism has led to the world's climate crisis, it's actually capitalism providing the solutions for it.

"There's a misnomer that capitalism is the cause of all our troubles. But it's not actually that, it's human nature. Hacking capitalism for good is the only way out of these problems. Cogo is a perfect manifestation of that.

We are building a profitable business that scales globally, but also trying to create a bottom-up change."

Cogo founder Ben Gleisner says people are wrong to assume that climate or sustainability investments attract a lower return.

"Society demands companies like ours. You can create positive environmental and social good and make money, and there are lots of reasons why," Ben says. These include the relative ease of hiring and retaining staff and a growing consumer desire to "do the right thing".

Serge says the nexus of a company, along with the talent and passion of the founders behind it are what he looks for as a key part of his decision before making any investment.

"The second question I ask is the problem worth solving? And the answer is pretty obvious in this case. Should we try and have more sustainability in the way businesses and consumers spend their money?"

Ben grew up with environmentally-minded parents which ultimately led to his views on fighting for a more just and sustainable world. Cogo was the result after an earlier, charitable, iteration focused on waste management. Serge explains that he has a similar set of values.

That, coupled with his experience in investing made for a marriage, of sorts, that leverages Ben's technical approach and Serge's ability to drive growth, further investment and good governance.

Climate tech companies are becoming more attractive, Serge says, not just because of the returns, but because investors are starting to crave being part of the solution.

"Software as a service and technology generally, are going to be bigger than tourism and agriculture put together for New Zealand in 10 years and we want to be part of that wave building our own very large company."

Cogo is in five markets currently, including the UK, and is looking to expand into North America and Asia. The company is also working to apply its analytics beyond banking – supermarkets and general retail are on the list.

"We want to be able to measure in real-time the impact we're having and over the next year, we want to show the actual change in behaviour we're contributing to. We want to be a role model by doing that," Ben says.

Serge cautions success rarely happens overnight, "unless people get lucky", which does occur.

"Investors shouldn't be hoping for luck. It's really about long-term resilience and a company needs to have people who are prepared to get punched in the face a few times. Success will follow."

"There's a misnomer that capitalism is the cause of all our troubles. But it's not actually that, it's human nature. Hacking capitalism for good is the only way out of these problems. Cogo is a perfect manifestation of that. We are building a profitable business that scales globally, but also trying to create a bottom-up change."

IMCHE FOURIE
OUTSET VENTURES
CO-FOUNDER AND
CHIEF EXECUTIVE

BEN GLEISNER AND
SERGE VAN DAM
COGO FOUNDER AND
INVESTOR/CHAIRMAN

MITALI PUROHIT
NUANCE CAPITAL
INVESTMENT MANAGER

Sustainability focused startups

Kiwi startup Carbonclick's roots were very local, with a couple of its co-founders working with a large New Zealand company to help offset its emissions with a bespoke platform they'd developed.

After five years refining their system, they realised a more significant impact and uptake was possible if they built more transparency, traceability and trust into the platform.

The result is a solution that offers businesses a deep understanding of their sustainability journey and provides consumers with an opportunity to offset the carbon emissions related to their purchase. Funds collected from consumers are invested in both carbon-neutralising projects, such as tree planting close to the source of production, and activities that contribute to sustainability and emissions reduction in other ways, such as clean energy.

"That really resonated with me and I offered to back them in their friends, family and fools round. We gelled really well and they asked me to come on as a co-founder as well and be the CEO," recalls chief executive Dave Rouse.

"That was an opportunity I couldn't say no to. It was in a space that I was deeply concerned about, so I thought, right, hold my beer, let's do this properly. I saw the opportunity to do a really simple and small thing with massive global potential."

Two-and-a-half years later, following friends and family and seed rounds, the team has launched a series A round which is going well.

Dave says a lot of investors want to have some ESG elements in their portfolio alongside more traditional e-commerce companies. And because of that, Dave says a lot of those investors have the right connections to support Carbonclick's plans.

That's not to say the investment journey has been easy, but Dave explains that Carbonclick is ticking boxes in a noisy space where there are lots of startups emerging.

"Investors are looking for a point of difference – the one, two or three leading horses in this race. Carbonclick has an approach where we already network with what I call leading horses with the idea that there could very well be a roll-up in this space down the track. I think we're well-positioned to be one of those leaders from day one."

Dave says having a "bootstrap culture" is attractive to investors too.

"We get things done on a lower budget and we're very creative with their cash. They see New Zealand as being quite a lot safer with their money compared with other attitudes around the world. I think that's inherent in most Kiwis."

The latest fundraising round will position Carbonclick for further global growth. Already 80% of its customers are offshore. It's now looking to engage a large sales team in the United States to directly target some of the world's largest enterprises – "the Nikes of the world" as Dave explains.

"And this all helps to put New Zealand on the map."

DAVE ROUSE
CHIEF EXECUTIVE
CARBONCLICK

Gaining insights

Companies that impact the visibility and understanding of New Zealand's deep tech capability will likely benefit other startups in the future.

A new one is Cropsy Technologies, founded by four University of Auckland engineering and science graduates. They're now considering what an exit plan might eventually look like and already have a list of enterprises they hope will line up to court them.

Co-founder Leila Deljkovic says the journey began when fellow co-founder Ali Alomari was thinking about pain points experienced by hydroponic growers in the horticulture industry, and what sort of automation could be developed to reduce them.

Ultimately, the idea morphed into a vehicle-mounted device that monitors grapevines to provide insights on crop performance, measurements and ailments.

The technology combines a unique imaging device for continuous and GPS-tracked image capture and AI-enabled software to analyse the crops right down to leaf level. This empowers growers to understand the precise state of their crop, optimise every crop management decision, and utilise the land to its fullest potential. A happy side effect is an uptick in sustainability for growers because resources can be allocated exactly when they're needed.

Leila says the technology was developed by focusing on what a grower needed and fitting in with how they worked.

"We discovered there wasn't a lot of technology readiness in the sector."

She says other solutions didn't consider the needs of the grower, how they did their work and the existing tools, like vehicles, they used.

"That's when we thought maybe there's something here that we can make."

A self-funded prototype was developed to prove the idea, and contacts provided by an early mentor introduced the fledgling company to investors and others who offered advice.

"This was a good process because we learned about things we weren't thinking about like IP protection, which was the biggest thing for us."

Leila also explains that the team needed to learn how to best communicate with investors.

> "Ten years ago, sustainability was pretty much a niche I think. But now if you haven't thought about the sustainability impact of a company, you're not thinking about viability because no company is going to survive without a sustainable approach.".

"It's been a long journey for us to secure investment. We tried actively raising three times. But in hindsight, I do think that was a really important process for us to go through because we grew a lot as a team and as a company during that time."

Also, through the interaction with potential investors and networking, the team started to understand the scope of the technology was bigger than they thought.

"We realised that we have a lot of data and that there was more we could do to help growers solve more of their problems and actually provide a vertically integrated solution for managing the crop, rather than just targeted treatment.

"That actually blew our minds to be honest."

Cropsy was already receiving early attention with R&D funding from Callaghan Innovation and the Agricultural and Marketing Research and Development Trust. It was also winning awards – including two out of four Fieldays innovation awards in 2021 – and gained acceptance into two accelerator programmes.

Trial partners include global heavy hitters Pernod Ricard Winemakers and Indevin, along with Marisco Vineyards in Marlborough.

Angel Investors Marlborough lead investor Tracy Atkin helped the company raise $1.5 million in its first round, which was oversubscribed to $1.8 million in commitments, earmarked to help the company commercialise.

“They were looking for strategic investors and being based in Marlborough, NZ’s wine capital, they approached us at Angel Investors Marlborough.”

Also on board is NZGCP’s Aspire NZ Seed Fund, K1W1, Icehouse Ventures, Angel HQ, Enterprise Angels and Impact Enterprise Fund, which invests in sustainable startups. This provides a mix and depth with strong links to horticulture and viticulture.

“I see angel investing as a bit of a team sport. This is a huge advantage with deep tech because you need a team, not just the expertise of one person. The saying, ‘it takes a village’, is really relevant to investing in startups because you need to have the ecosystem approach,” says Tracy.

This has also led to the creation of a governance board to fill the experience and expertise gaps to take the company on its path to commercialisation.

Sustainability considerations are far more important for investors now than ever before. Whether they’re working to avoid investing in certain types of companies with links to perceived negative impact or activity, or actively searching for companies with positive ESG impact that are doing good things.

“Ten years ago, sustainability was pretty much a niche I think. But now if you haven’t thought about the sustainability impact of a company, you’re not thinking about viability because no company is going to survive without a sustainable approach.”

“That’s what I love about Cropsy. They’re solving real-world problems and helping growers.”

Tracy explains that the impact of companies like Cropsy for investors is important, because they’re providing a solution for growers who are part of a global industry where consumers are becoming ever more sensitive and aware of the impact their choices have on the world.

The idea is that growers who use tools like Cropsy will be well placed, with better practices and data, to back up good sustainable credentials and be part of the rapidly increasing demand for greener products.

AIM also led the seed round funding for Carbonclick.

Tracy says through its carbon offset work, Carbonclick had strong links with the wine industry and approached AIM as a potential strategic investor.

“We liked them so much we didn’t just invest, we led the whole round for them.”

LEILA DELJKOVIC
CO-FOUNDER
CROPSEY TECHNOLOGIES

TRACY ATKINS
ANGEL INVESTORS
MARLBOROUGH

Turning waste into gold ↓

Humans are messy. Even tidy people contribute to building landfill mountains, produce climate-warming emissions – or buy stuff from companies that do – and dirty up waterways.

The human circle of life is quite different from what Disney suggests in the Lion King, because every generation makes it a little bit worse for those who follow.

But now humans have cottoned on to the idea that we've not been prioritising well.

While news headlines scratch the surface by pointing out the general problems that plague the planet, it's entrepreneurs who lead the charge for change; developing ideas and turning them into real-world solutions that chip away at the damage that's been done, and stopping more of it occurring.

Icehouse Ventures chief executive Robbie Paul says entrepreneurs will ultimately fix the world. It's not going to happen just because people choose to recycle or take an electric bus to the office.

"It's staring everybody in the eye. None of us is unaffected by the changes that are happening and the risks that lie ahead. If you're an entrepreneur, your purpose is to find big problems and create real solutions," Robbie says.

However, it takes more than just a great idea to change the world and effect real change. Investors have to be on board to help make it happen.

And, Robbie says, it's not just about people who want to save the world as part of a philanthropic approach. Many of the ideas flowing from the minds of entrepreneurs have real consumer-focused outcomes with huge markets.

One of those that Icehouse backed is Mint Innovation, which has developed a process using microbes to extract valuable metals from various waste streams – such as e-waste – so they can be used again. This mostly automated process recovers metals like gold, palladium, copper, cobalt and lithium. The plant can be built close to the source of waste which removes the need to export the problem somewhere else, where a range of negative human and environmental outcomes result.

"If anything, there's a better business case investing in companies that are solving real-world problems, that are mission-driven."

And there's a simple reason.

"The people that you need to align with your mission – investors, founders, employees and government supporters – more of those people are likely to align to companies that have missions that are bigger than money."

"From an investment point of view, we still look at the pedigree of the team, the quality of the tech and the robustness of the plan. Assuming those things check out, it's easier to invest in companies like Mint that are addressing a problem and creating a better impact in New Zealand and the world, than just a bit of money.

"There's a tidal wave of capital and human capital heading for companies that can create an impact. Investors will be directing more of their resources and energy towards companies like Mint which can both become magnificently large as companies and very impactful with the problem they're solving."

Robbie says while there's no ubiquitous focus on sustainability-focused companies he's seen, over the last five years there have been magnitude changes in the amount of capital that is being directed towards high-impact companies – such as those addressing waste streams.

As more companies commercialise, more positive outcomes will happen.

"Entrepreneurs define the future. They're the ones thinking day and night, challenging the status quo, and inventing new ideas and perspectives. They open the eyes of others to possibilities and when that happens, people's perceptions and behaviours change."

And from an investment perspective, outside of market variables and demand, few limits constrain companies operating in this space compared with more traditional investments.

"For example, there's no finite ability to create software."

And, in the case of Mint, Robbie says it could become the biggest gold producer in the world, as he wonders whether there's more gold now above ground than below it.


Refuse
Recycle

Creating value responsibly

Mint is an example of a company that solves a problem and produces valuable and usable products at the end of the line.

Not all waste-busting ideas have something shiny to sell at the end of the process, but create significant value in other ways.

Aquafortus tackles problems created with wastewater.

While there are many companies with high water use that take their responsibilities seriously, it often comes with significant costs and huge energy consumption.

Aquafortus' technology treats high salinity wastewater that, up until now, could only be processed using thermal evaporation methods, which uses a huge amount of energy.

Instead of heat, Aquafortus has a non-thermal recovery and crystalisation process with a two-stage solvent exchange process and a proprietary absorbent as the transfer medium for water. A regenerant ensures the absorbent can be continually reused. The result is clean water, costing about 60% less to produce and saving about 90% of prior energy use.

The applications for the technology are vast, and include mining and petrochemical operations, industrial manufacturing and desalination.

Chief operating officer Jessica Lam says the journey towards cleaning the world's water and attracting investment hasn't been easy. Initial funding came from developing good networks and attracting high net worth investors.

"But given that we're a deep tech company means that we're very capital intensive. That meant the level of funding required to commercialise was beyond what was available in New Zealand. We needed to look overseas and that was difficult because New Zealand is so far away and when you're at an early stage a lot of investors want to see what you're doing. So it was only when we were further ahead that we could attract the overseas investors."

Chief executive Darryl Briggs says attracting investors was like running a marathon.

"We just had to keep chipping at it. Momentum is incredibly important and we also had to go to the US and set up as a US company to attract a US investor. That was no simple task – a New Zealand company becoming a US company is challenging."

Jessica says the strength of networks was key.

"We really tapped into our networks to get a US investor, DCVC (which led series A investment). We talked to maybe 30 or 40 investors and, like Darryl said, it's an endurance race. Due diligence can take anywhere from three months to almost a year, so it's a very long process, especially when we had to give them comfort because we're so far away and the technology isn't fully commercialised yet."

Darryl says the challenge every startup will face is identifying the lead investor.

"That's what you're going through the due diligence for because once a VC becomes the lead investor, everyone else will just fall behind them."

He says touchpoints between early investors and later ones were extremely helpful, including NZGCP, K1W1 and Burnt Island Investors.

ROBBIE PAUL
ICEHOUSE VENTURES
CHIEF EXECUTIVE

"That interconnection really helped. It's very much about networking. Once you've got that snowball rolling, it will grow. You'll get better connections which just improves it. Our next round will probably be going through connections to DCVC."

Aquafortus is about to seek bridge funding of about $15 million before opening a series B round about March next year to raise a further $100 million for commercialisation.

The team is putting the finishing touches on a small pilot plant as proof of concept and later in the year a bigger plant processing 100 cubic metres of water a day will be deployed in the United States, focused on oil and gas operations.

"This will give our customers the ability to touch and feel it and throw whatever wastewater they like at it," Jessica says.

Over the next three to five years, Aquafortus wants a number of plants in the field and is in full expansion mode. Customers are being targeted in the United States, the Middle East and, eventually, Asia and South America, with Australia clearly in their sights as well.

JESSICA LAM
AQUAFORTUS CHIEF OPERATING OFFICER

> "There's a tidal wave of capital and human capital heading for companies that can create an impact. Investors will be directing more of their resources and energy towards companies like Mint which can both become magnificently large as companies and very impactful with the problem they're solving"

About Startup Investment ↓

This biannual publication is put together by PwC New Zealand ('PwC'), Angel Association New Zealand ('AANZ') and New Zealand Growth Capital Partners ('NZGCP'), using Young Company Finance deal data supplied by NZGCP.

The purpose of this magazine is to provide insight and commentary on the startup sector in New Zealand and what it means to invest in startups as an asset class.

We welcome your feedback on our content and suggestions for future editions.

NZGCP Young Company Finance deal data

NZGCP Young Company Finance deal data represents data collected from NZGCP's own investments, together with details of the transactions reported to NZGCP by its co-investment partners as well as other early-stage investors in New Zealand. The data includes that provided by selected angel groups, incubators, university funds and venture capital funds which invest in early-stage companies.

The data aims to cover the majority of start-up funding activities by investors across the country.

NZGCP Young Company Finance deal data classifies investment into the following categories:

Seed

Often pre-revenue, negative cash-flow, managed by founders and part time employees, little formal governance / nascent Board of Directors, generally no prior investment, round size < $1m.

The purpose of seed investment is to enable development, testing and preparation of a product / service to the point where it is feasible to start business operations.

Startup

Revenues <$3M, negative cash-flow, FTE <20 with incomplete senior management team, governance a mix of founders & early stage investors, first investment round (if no Seed round).

The purpose of Start-up investment is to enable business operations, further development of products / services, sales and international growth.

Early Expansion

Neutral cash-flow (EBITDA + CAPEX) based on aggressive re investment policy, structured management & governance.

Generally an investment into a company at this stage will be used to build out the sales and marketing teams, establish / expand offshore offices and / or scale up its production facilities.

Expansion

An investee company is in the mid-expansion stage of its development if the investment provides capital to expand commercial production and marketing and where the company is normally breaking even or trading profitably. Generally, Venture Capital investments.

Acknowledgement:

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As the data is provided voluntarily, NZGCP cannot guarantee the completeness of the data provided and the data excludes investments into early-stage companies by corporate organisations, family offices, high net worth individuals or family & friends of the investee companies unless they have been provided by other sources (e.g. the investee companies themselves or which NZGCP has been able to obtain from other sources such as media announcements). NZGCP does not undertake to validate the information provided and therefore makes no assurances to the accuracy or completeness of the data reported.

Capturing as complete a set of data as possible enhances the reliability of the information that can be reported. NZGCP warmly welcomes other parties to contribute their data in the future editions by contacting reporting@nzgcp.co.nz

About PwC

PwC is dedicated to helping startups with great ideas make their way in the world. We provide support through tailored financial reporting, tax advisory and compliance, structuring, strategic advisory services as well as networking opportunities. We collaborate with others in the local ecosystem including NZTE, AANZ, NZGCP, KiwiNet, and other New Zealand VC funds. Alongside publishing StartUp Investment NZ, we are sponsors of KiwiNet Awards and the NZ Hi Tech Awards. Please get in contact using the details below if you'd like to know more.

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About AANZ

AANZ exists to support the creation of New Zealand born, world changing businesses delivering exponential financial, social and economic returns through mutual support, connectivity and collaboration. AANZ is working to increase the quantity, quality and success of angel investments in New Zealand and in doing so create a greater pool of capital for innovative start-up companies. It was established in 2008 to bring together New Zealand angels and early-stage funds. AANZ currently has 50 members representing over 900 individual angels associated with New Zealand's key angel networks and funds. Since 2006 over $1bn has been invested in 1500 deals. AANZ works with NZ Growth Capital Partners, PwC New Zealand and a number of public and private sector partners. For more, please visit: www.angelassociation.co.nz

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About NZGCP

New Zealand Growth Capital Partners (NZGCP) was established by the New Zealand Government in 2002 to build a vibrant early-stage technology investment market in New Zealand. We aim to achieve our vision by supporting Kiwi tech companies, innovators and investors to become world class. Alongside operating our Elevate and Aspire funds which are designed to stimulate private investment into this space through a fund of funds and co-investment model, we also have a market development mandate that includes sponsorship and support of programmes, events and other initiatives to benefit the ecosystem.

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