



Growing the pie

How entrepreneurs
are creating a better NZ

CallaghanInnovation
New Zealand's Innovation Agency





How time flies when you're having so much fun. Was it really only in 2004 that one of our biggest technology companies, Navman, was sold to a US buyer for just over \$100 million?

At the time, it seemed such a good deal. But today it seems like peanuts. With companies like Rocket Lab, LanzaTech, Xero and Pushpay now valued in the billions, it's tempting to think we've finally cracked the formula for creating world-class businesses in our own backyard.

There are certainly encouraging signs that our innovation ecosystem is exploding. Many businesses seem to have got the message that R&D matters, and have ramped up their spending by more than half a billion dollars over the past two years. It's the highest increase in a decade, and it's paying off — our tech industry is now our third-largest export earner.

But despite the great progress we are making, there are several aspects of being an entrepreneur here that are still not well understood.

The first is that we still seem to struggle with what success means. In more mature economies, a successful exit is almost always a cause for celebration. It's understood that the entrepreneur, and others in the innovation ecosystem, will reinvest the money they've earned and the lessons they've learned back into their communities. They're highly likely to grow another business, invest in new start-ups, or help to improve the lives of those in their community.

The second is that we forget that ideas and technologies often have a shelf life. Sometimes a sale occurs simply because it's better for the entrepreneur to move on to another, more promising, project. Or a sale may be the best opportunity for that idea or technology to scale and change the world.

The third is that we don't seem to realise how lucky we are that Kiwi entrepreneurs have such a deep connection to this country, and its values, and how much they give back. Even those who have made their fortunes overseas often find themselves wanting to return to their turangawaewae, to do their bit to help make it an even more special place than it already is.

As this report so clearly demonstrates, our taonga are our people — the entrepreneurs who are battling for success against enormous odds, and in the process creating billions of dollars of value for this country. Many of them are also helping to create a better Aotearoa for all of us, and for future generations.

We need to figure out how we help them achieve their vision of success — whether it is a sale, a public listing, or global expansion. Because almost all of them are helping to grow the pie for all of us, regardless of what happens next. And often that's in a social sense, as well as an economic one.

No one understands that better than those of us at Callaghan Innovation who deal every day with hundreds of businesses determined to keep ahead of the curve. And we're really keen for you to understand it, too.

Vic Crone
CEO, Callaghan Innovation

Contents

Perspectives 5

Sir Stephen Tindall	6
Cecilia Robinson	8
Rod Drury	10
Theresa Gattung	12
Sean Simpson	14
Bridget Coates	16
Greg Cross	18
Rowan Simpson	20

What success looks like 21

The innovation lifecycle	22
Case studies	23

Navman – where are they now? 25

Growing the pie	26
Sir Peter Maire	27
Navman – where are they now?	29

Our billion-dollar babies 30

Putting a price on success	31
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The background features a complex geometric design. It includes several overlapping shapes in various shades of green and yellow. A prominent yellow shape on the left side contains a grid of small green crosses. The word "Perspectives" is centered over these shapes in a large, white, sans-serif font.

Perspectives



Sir Stephen Tindall was recently given New Zealand's highest honour, a Knight Grand Companion of the New Zealand Order of Merit, for his unparalleled contribution to community, business and the environment for the past 40 years. Among his many other accomplishments, he helped to found K1W1, the Tindall family's \$250 million seed and venture capital fund, which has so far invested in more than 200 start-up and early-stage businesses.

CI/ How do you think NZ benefits from the sale of our start-up companies to new owners?

ST The benefit of the exit is it gives you the ability to recycle your money and invest into more similar investments. I personally think the big benefit is just growing the whole market and creating more and more innovative businesses. I see it as growing the nation, as we transition from being just SMEs and farmers and property investors, to people who really think about how we grow global companies. When we exit them, then obviously we use the profits to grow more of them, so it's a whole ecosystem.

CI/ Do you think NZ should be trying to develop its own unicorns (companies worth more than \$1 billion)?

ST Fonterra is probably already that company for NZ, but I honestly see other companies getting to a couple of billion dollars easily. Rocket Lab is already \$1.5 billion, and I could see Rocket Lab getting to \$5 or \$6 billion. But I think if you've got all your eggs in one basket it's dangerous, which is why we need an ecosystem.

CI/ Should we be concerned about the US investment in Rocket Lab?

ST Rocket Lab is a bit unique because there's absolutely no way we'd be launching rockets with the permission of the US unless it was a US company. As I understand it, the US has got the power to stop us, so it really had to happen in this way.

I THINK EVERYBODY HAS GOT TO BE IN TOGETHER ON THIS. PRIVATE ENTERPRISE CAN'T DO IT ALL ON THEIR OWN.

I REALLY DO BELIEVE WE SHOULD JUST KEEP POURING PETROL ON THE FIRE, AND DON'T BE SCARED ABOUT SELLING SHARES OFFSHORE.

CI/ Do we actually need overseas investment in Kiwi start-ups?

ST At K1W1, we often only have 10% or 15% of companies, and my philosophy is it's better to only have 10% or 15% of a very, very successful company than it is to fully own one that doesn't do well at all. I really do believe we should just keep pouring petrol on the fire, and don't be scared about selling shares offshore. I don't think we need to get hung up about owning the companies, provided we can hang on to our share of them.

CI/ Is there a funding gap in New Zealand?

ST Maybe there's not the propensity here to pick up \$20 million in one whack, so sometimes there are overseas people invited in. But we were involved in a local one recently where they had to pass the hat around for \$5 million and it was done very easily. A few of us put in \$500,000 each and we got there.

CI/ How has NZ entrepreneurship changed since you set up K1W1?

ST If I was to do a stocktake of what was going on with start-ups 15 years ago, you could say 'very little'. Now, you could say 'one hell of a lot'. Just in our own portfolio, there are dozens and dozens of innovative businesses that are bubbling away all over New Zealand. It's just amazing really.

CI/ How have the profits made from innovative businesses helped other parts of NZ society?

ST The best example of what we've done is through the NZ Housing Foundation. They have already built about 1000 houses and really changed the landscape for a lot of people in terms of affordability.

CI/ It must be very gratifying to finally see some rewards from the risks you've taken over the years.

ST It was a big risk and big punt to begin with, and I've got to say, we lost a lot of money on a lot of companies. But the way I look at it is there's a long term goal we're trying to prove here. Of late, those things have come to fruition, so we've had some really great exits. And the likes of LanzaTech, while it's been a real struggle to get to where it is now, it's just starting to really hit its straps, and you can see it's going to zoom.

CI/ But isn't LanzaTech an example of one of the ones that 'got away'?

ST They're still a Kiwi company and they haven't sold out, but they've attracted investment from all over the world. As well as grants from Callaghan Innovation, they've been able to access grants and subsidies in the States. I would dearly love that company to still be here but if it was I don't think it would be as successful as it is. They've got so many projects on in the States, Europe and China, and it is a little bit easier when you're in the northern hemisphere.

CI/ What role do you think the Government has in stimulating innovation?

ST I think that NZVIF makes a big difference, and so does Callaghan Innovation. And I think the new tax regime for R&D will help as well. Those extra incentives make people really think about whether they can actually afford to do a lot more R&D and keep up. I think everybody has got to be in together on this. Private enterprise can't do it all on their own.

CI/ Is keeping up sufficient in this age of radical disruption?

ST I was just talking to some people recently who do a lot of R&D, and their company is now outperforming its rivals by miles. They've done much more innovation, and so they're really reaping the benefits of that now. Those things do make a huge difference and governments can help make that happen.



**Cecilia
Robinson**

Cecilia and James Robinson are one of NZ's most successful entrepreneurial couples. They have founded and sold two successful companies — Au Pair Link and My Food Bag — and continue to invest in and drive start-ups.

WE ALL GAVE \$1 MILLION BACK TO OUR TEAM WHO HAD BEEN THERE FROM DAY ONE. I CAN TELL YOU THAT BENEFITTED A LOT OF PEOPLE.

CI/ Did you start your first company with a plan to sell it?

CR Our first company, Au Pair Link, happened almost by accident, and certainly not by design. It was a hobby that turned into something that became all-consuming. We eventually exited out of it, and we had a successful exit, but it wasn't intentional. We started another business, and we eventually had to choose between them.

CI/ Why did you start My Food Bag?

CR At the time it sounded crazy, with a newborn baby and an existing business, but we loved the concept and thought it was a great idea. We also wanted to show that we weren't just a one-trick pony. It might sound cheesy, but we felt we actually had the ingredients to make something else successful.

CI/ Why did you sell your businesses?

CR Both times when we sold we were approached, so that accelerated the decision-making process. Six weeks into My Food Bag's launch we were first approached to sell the business. It was very quick. And from that point, we were door-knocked basically every month. Eventually, it was a deeply personal decision. We were temporarily living in Australia, and we had a 20-month-old child. I was five months pregnant with our second baby and we lost our baby. It was really challenging. We realised life is short and while we loved our journey, we loved our team, and we loved the destination it took us on, we had a lot of other responsibilities, and we had to fulfil those other responsibilities to our family first.

I SEE A HUGE AMOUNT OF AMBITION IN KIWIS, BUT PEOPLE ALSO NEED TO VIEW THEIR PRIORITIES HOLISTICALLY AND WHAT'S RIGHT FOR THEM AND THEIR FAMILIES.

CI/ Do you think Kiwi business owners still aim for the bach, the boat, and the BMW?

CR The whole 3Bs thing — it's such an antiquated way of looking at things. It suggests people aren't ambitious. I see a huge amount of ambition in Kiwis, but people also need to view their priorities holistically and what's right for them and their families. For us, our priorities were really clear in terms of what we wanted to achieve: our goalposts, what does success look like, and what does success not look like.

CI/ What other benefits did the sale have?

CR We all gave \$1 million back to our team who had been there from day one. I can tell you that benefitted a lot of people, and that was a wonderful thing for a lot of our team. It's adding to the economy, and in particular to NZ, when companies stay here, right?

CI/ Would you have sold to an overseas owner?

CR We had a lot of overseas buyers interested, but as owners and directors, we felt at the time that My Food Bag needed to continue to be NZ-owned and operated. When you sell down the first time, it's different from subsequent transactions. The dynamics change after that. And look at Peter Beck. We need to be celebrating Kiwi businesses, even if they're Kiwi American businesses, you know?

CI/ Do you think My Food Bag could end up having overseas owners?

CR It might be right for a company to go overseas at some stage. There's merit in that, and opportunities, and there can be benefits for NZ. I think for us, an IPO is something we're interested in but it's not the be-all and end-all. I think it's very much a wait-and-see approach and doing what's in the best interest of our customers, the team, and the business.

CI/ Have you got plans to start another business?

CR The short answer is, yes. While we sold the majority of the business because we wanted to focus on our young family, the entrepreneurial brain never stops and we love to challenge, and be challenged in return. At the same time, we are also incredibly involved parents and enjoy living in a world where we can be successful in all aspects of our lives.

CI/ Do you notice more female entrepreneurs these days?

CR There are so many hugely successful women founders but I don't think they're as lauded as male founders. I think successful female entrepreneurs need to continue to step up — often they need to be more loud and proud of what they and their businesses have achieved. But I think there's also a real lack of sponsorship and support as well. Only a tiny percentage of private equity money goes into female-led start-ups. This needs to change and we need to move into the 21st century. We need to drive that forward.

CI/ What does success mean to you?

CR My husband has always said: 'It's not about getting what you want, it's about wanting what you have'. So many entrepreneurs just strive for the next big thing and are not happy in the moment. You don't get automatically happier because you live in a house with a bigger pool. So for us, we were really aware of that. We're happy with our lives; we're happy in our marriage; we've got two beautiful kids; and wealth doesn't necessarily change that.

I THINK SUCCESSFUL FEMALE ENTREPRENEURS NEED TO CONTINUE TO STEP UP — OFTEN THEY NEED TO BE MORE LOUD AND PROUD OF WHAT THEY AND THEIR BUSINESSES HAVE ACHIEVED.



Rod Drury

Rod Drury is one of NZ's best-known serial entrepreneurs. A veteran of the tech sector, he proved with the creation of accounting software company Xero that Kiwis can build global businesses from home.

THERE'S A REAL CONFIDENCE NOW AND IN THIS PART OF THE WORLD, WITH GLOBAL POWER STRUCTURES CHANGING, WE'RE IN AN INCREDIBLY STRONG POSITION FOR ALL SORTS OF OPPORTUNITIES.

CI/ Do you think Kiwi entrepreneurs are less cautious about overseas expansion now?

RD I think most New Zealanders now in tech are building global businesses from day one. It's such a big opportunity and we've got such a small market. It's fantastic. Most entrepreneurs don't think about building domestic businesses any more.

CI/ Is the tyranny of distance still a problem?

RD It's physically hard to build global technology businesses from this part of the world. You end up travelling a hell of a lot. The internet helps, but you are doing meetings at 4am. I'm not sure you make any less trips. The travel is really, really hard and it wrecks you for days.

CI/ Do NZ start-ups sell out too early?

RD Those who say that should go and build their own businesses, and then they can comment. One of the issues about a sub-scale market is there'll always be larger companies with lots of funding that are always looking for smaller companies to buy, and they'll be worth more to that buyer. For start-up founders, it's a very rational decision. Is it the right thing for the business? Is the money you're receiving now better for shareholders than a long-term hold? It's usually easy maths.

CI/ How does that actually benefit New Zealand, though?

RD More experience comes in to the network, and more capital, which funds the next angel and venture capital round. A lot of money gets recycled quite quickly, so it's a fantastic thing. It doesn't take long for all the people who get a big cheque to find they're busy working on something else, or they're helping other people, or investing in new businesses.

CI/ Sales to overseas buyers don't always go well, though, do they?

RD There's normally an earn-out, and you've still got to keep your eye on the ball and make sure you hit those earn-outs. There's a lot of experience in the network now about how to do a good earn-out and make sure you maximise returns and maximise local jobs. There are lots of examples of sales where R&D has been increased and they've done more here, which is really cool.

CI/ How have those profits helped other parts of NZ society?

RD It's hard to see sometimes, because people are a bit private, but it's absolutely happening. Sam Morgan's doing amazing things all around the world but it's all below the radar. Annette and Neal Plowman are doing a huge amount. I'm doing things that interest me and learning but I'm not talking about it because I don't need to. All investors who do okay in NZ feel a strong social obligation to get out and do the right thing for their communities.

CI/ Are NZ entrepreneurs any different to those overseas?

RD Equality is a key value here, which doesn't exist in many other places. You never meet an NZ business owner who isn't thinking about how to create jobs and make communities better. When you get together, those are the sort of things we talk about. And more so now, with the world being what it is, there is a lack of leadership and values from some of the big global brands. I think it's our time to demonstrate those.

CI/ Do you think Kiwi business owners still aim for the bach, the boat, and the BMW?

RD I think people underestimate how hard it is building a business from NZ. I went for years without ever having a Labour Weekend. These are often 24/7 businesses and as a founder they are merry-go-rounds you can't get off. So depending on the size of the exit, you either go 'Okay, that's enough, I've worked hard for 10 years and now I need to spend more time with my family', or you go 'Okay, that's not quite enough, so I need to deploy the capital and go again'. And even in the first option, you tend to invest in a bunch of other companies as well.

CI/ Are you optimistic about the entrepreneurial future for NZ?

RD There's a real confidence now and in this part of the world, with global power structures changing, we're in an incredibly strong position for all sorts of opportunities. There is an absolute pride in our businesses of scale. We have companies like Rocket Lab that are shooting rockets into space — that's awesome. And look at all the movies that Weta's putting out — they're unbelievable. We're pretty good at a lot of hard things. But we're being very passive about it. We need to have a plan going forward and have a discussion about what we should be doing in a coordinated fashion.

CI/ What sort of opportunities do you have in mind?

RD We could be much more aggressive on renewable energy; we should be very active on 5G; domestic payment networks are now lagging behind — there's all sorts of cool things we could be doing.

CI/ Does NZ have a funding gap?

RD There is a lot of money around for experienced people but normally start-ups don't have a whole lot of capital, so the first couple of deals mean you end up with enough money to do bigger and bigger things. But there's plenty of capital around globally for good businesses. Xero has shown that — we raised a further US\$300m at the end of last year. One of the really interesting things now is we're starting get a bit of money from sovereign wealth funds. Now we've got a track record of quality companies, there's really good opportunities to create great investments for New Zealanders and I think we can be a bit more ambitious. Australia is realising this now, too.

**ALL INVESTORS WHO DO OKAY IN NZ
FEEL A STRONG SOCIAL OBLIGATION TO
GET OUT AND DO THE RIGHT THING FOR
THEIR COMMUNITIES.**



Theresa Gattung

Theresa Gattung is one of NZ's best-known business leaders. A former CEO of Telecom NZ, she now chairs insurer AIA and promotes female entrepreneurship through various organisations, and as an investor. She was made a Companion of the NZ Order of Merit in 2014.

ENTREPRENEURS ARE INSPIRED BY SEEING OTHER PEOPLE HAVE AN IDEA, BUILD A BUSINESS, EXIT PROFITABLY, AND LEAVE A LEGACY.

CI/ How do you think the sale of start-ups benefit NZ?

TG First of all, there's the role-modelling impact. Entrepreneurs are inspired by seeing other people have an idea, build a business, exit profitably, and leave a legacy. I think you have to have an entrepreneurial ecosystem to inspire entrepreneurs to really get going. Once upon a time, one wouldn't have seen NZ as a place for entrepreneurs, but it has got much more of an entrepreneurial climate now.

CI/ What about Kiwis who've gone overseas?

TG Very seldom do Kiwi entrepreneurs leave NZ for good. I can't think of many successful Kiwi entrepreneurs who have sold a company, gone and lived overseas, taken all their money with them, and had nothing to do with NZ ever again. Claudia Batten, who founded Massive, is in America but she has quite strong links back here. And Zuru founder Nick Mowbray is still spending time here, he's still mentoring people here, and he's still spending his capital here.

CI/ Do you notice more female entrepreneurs these days?

TG I think we're making good progress, although it's still harder for women to get funding, from venture capitalists in particular. The VCs assume that as the business scales up, it's going to swap out to a 'real' leader. And women still tend to think too small and that leads to them giving away too much of the business too early on. That's one of the reasons why I brought SheEO to NZ, because that combination of capital and mentoring is what a lot of women are looking for.

CI/ How have our attitudes to success and entrepreneurship changed?

TG When I went through business school, there was no such thing as an entrepreneur. I went down to Wellington and worked for TVNZ because there were no entrepreneurs. Even the tall poppy syndrome has gone now, especially in Auckland, although maybe not in Wellington. You see McLarens driving around in Auckland now – they can't all be leased!

CI/ Do you think Kiwi business owners still aim for the bach, the boat, and the BMW?

TG I can remember being on the first Growth and Innovation Advisory Board, and trying to get businesspeople to have bigger aspirations. But that 3Bs thing was a conversation then — I don't think it is now. Just look at Nick Mowbray. We might even have our answer to Bill Gates in this generation.

CI/ Do some founders still sell out too early?

TG Some founders do end up giving up control too soon because they can't get enough funding, or investors want too big a chunk of it. I think NZ founders are still a bit unsophisticated. In America they understand that retaining control is so important.

CI/ Do you think NZ should be trying to develop its own unicorns (companies worth more than \$1 billion), or lots of smaller companies?

TG The latter. Nokia was all we talked about for a while and 10 years on, they've had their Kodak moment. That's the reason you want an entrepreneurial culture rather than all your bets on black. The other buzzword, with some validity, is 'intrapreneurship'. Corporates have got to change because the world has changed, and customers have changed, and staff have changed. So you can't put entrepreneurship in this little box — it's actually got to be societal.

CI/ Is the tyranny of distance still a problem?

TG When I was at Telecom it was exhausting going backwards and forwards to Australia — really, it was. It's still an issue. If you're living in NZ and growing a global business, you have to be where the customers are some of the time — or someone does. If you've only got one founder and they don't want to live overseas, or a couple of founders and neither of them want to live overseas, that's a problem. Travel is still terrible and it's getting worse, not better.

CI/ How have the profits made from start-ups helped other parts of NZ society?

TG Sam Morgan has been really influential, partly because of what he's doing with his own investments, and partly because Trade Me's success has encouraged so many other entrepreneurs. It's part of this virtuous circle of entrepreneurialism. I'm personally interested in the models of bringing together commercial outcomes and making meaningful change in a country, so I'm an investor in the first social enterprise impact fund, and SheEO is part of that in a way. It's a booming category.

CI/ Do you think we should be wary of sales to overseas owners?

TG There have to be multiple ways to exit and NZ doesn't really have enough large-sized corporates to buy up all the smaller companies. The others are going to be sold, or involved in roll-ups, and some are going to be sold to overseas PE firms, or to overseas trade players. Those entrepreneurs don't have a wider duty to NZ, but many of them are so pro-Kiwi that they will continue to do good things for the country. There's just no way that an NZ entrepreneur would exit and then not create other opportunities.

WE MIGHT EVEN HAVE OUR ANSWER TO BILL GATES IN THIS GENERATION.



Dr Sean Simpson

Dr Sean Simpson is the chief scientist and co-founder of one of NZ's most spectacular success stories, LanzaTech. The company, which is now based in Chicago, is turning carbon waste into sustainable fuel for the world.

IN NZ YOU'RE ALLOWED TO HAVE THESE DREAMS AND ONCE YOU'VE GOT SOME DATA, YOU CAN PUT SOME FLESH AROUND IT AND BUILD IT INTO A COMPANY.

CI/ Was it inevitable that LanzaTech would eventually move overseas?

SS I don't think it was inevitable. When we started out, we were next door to Rocket Lab in the same building. They stayed and we left, and there are good reasons for both decisions. NZ has inherent advantages for launching rockets, and equally it has inherent disadvantages when trying to commercialise a global fuel and chemical company that involves the use of genetically modified organisms.

CI/ Could LanzaTech have stayed?

SS Yes. At one point we offered the Government a package to establish a Centre of Excellence. There were always going to be facilities and offices offshore, but fundamentally it was very expensive for us to operate from NZ. It's much less expensive to operate from the US. And finding key staff was also an issue.

CI/ What does that mean for our burgeoning industrial biotech industry?

SS Why is there a superyacht industry in NZ? Is it because of the high density of billionaires? No, it's because we had the expertise and it grew into an industry. My hope is the same thing will become true of industrial biotech. There's some challenges we've got to confront, but there's a long and very exciting history in this area in NZ. We've already got some great companies.

CI/ Does NZ have a funding gap?

SS It's more an experience gap. It's far too easy to raise a small amount of money in NZ. But to raise a serious amount becomes really challenging because the team that raised the small amount haven't gone through the discipline required for that. So if we make it harder to get a small amount of money, that will make it easier to get the large amount. Another way to grow the ecosystem is to structure it and to bring discipline to it. Groups like the Angel Association are trying to do that, but it's a cat-herding exercise.

CI/ How do we address that?

SS NZ needs to build and retain experienced entrepreneurs, or at least people who have experienced working in a start-up. The thing we said would happen with LanzaTech — that a bunch of companies would start up in our place from the people who didn't come with us to the US — has happened. I'm super-proud of that. Those guys — Avertana, Mint, Dotterel, and a couple of others — do know what it takes to start a company, and so they're able to raise sophisticated money.

CI/ We're still uncomfortable with the idea of overseas investors, though, aren't we?

SS NZ needs to get comfortable with the fact that some kids leave home, and some don't. People who leave don't leave because they hate NZ. They go because there's a better opportunity and guess what, they usually come back. This is the great NZ dilemma. When we were in NZ, everybody was like, 'Nah, that will never work'. And then you leave, and people ask what they could have done, and I say, 'Well, you could've listened'.

CI/ What did you think of Apple buying PowerbyProxi?

SS I can guarantee that Fady Mishriki worked his guts out trying to secure all the funding he needed, and in the end selling to Apple was commercially the best option. And everybody should celebrate that. It was a wonderful outcome that was a success for NZ, a success for the PowerbyProxi team, and a success for Apple. And now Apple know that out of NZ come these great companies.

CI/ Is the tyranny of distance still a problem?

SS The amount of travel is a big sacrifice. However, I could never have started LanzaTech in Europe or the US because government policy in each of those geographies was directing the sustainable fuel industry in a very specific direction. In NZ you're allowed to have these dreams and once you've got some data, you can put some flesh around it and build it into a company.

CI/ How do we get the maximum benefit for the NZ economy?

SS By starting more companies, and recognising who starts companies. By the time we left NZ, something like 95% of all the capital we raised was from offshore. And people were complaining that we'd been given Government grant money. I matched all the grant money three or four times over, and we paid wages, and we grew facilities, and we paid rent, and all those things. And now further companies have been created in that environment, and they're all high-value tech jobs.

CI/ What more could the Government do to encourage entrepreneurialism?

SS They could think about immigration policy. Migrants are far more likely to start a successful business. There's a lot of data on this. What if we gave permanent residency to every student who passed a higher degree in a tech subject in NZ? That would attract really smart people who not only wanted to get an education, but also wanted the opportunity to live in a different place.

CI/ Do you think Kiwi business owners still aim for the bach, the boat, and the BMW?

SS Maybe small businesses, but not the sort of businesses we're talking about. The driver is to be wildly successful or nothing. I used to joke to people that LanzaTech was going to be either Exxon or Enron. You're either going to own all the baches, and all the boats, and all the Beemers, or you're not.

CI/ Are you optimistic about the future for entrepreneurs in NZ?

SS I have tremendous optimism. My intention is to start something else in NZ. I'm on the board of two companies in NZ. I love helping them grow, and I truly believe it's a great place to start companies. But there's this cultural history that means many New Zealanders are naturally pessimistic. There's this need to own everything, and for everything to last forever. But companies have lifecycles: they start, they stop; they have babies, they don't. Guess what — the world's changed.



Bridget Coates

Bridget Coates has been at the coalface of Kiwi innovation for more than two decades, helping start-ups expand overseas, running her own innovative businesses, and helping govern some of our biggest blue chips. In 2014 she was awarded a New Zealand Order of Merit for her services to business.

SUCCESS IN THIS COUNTRY REVOLVES AROUND GREAT INTERNATIONAL LINKAGES EITHER IN PRODUCTS OR IN SKILLS OR IN SERVICES OR IN CAPITAL, OR WHATEVER THE GAP MIGHT BE HERE.

CI/ Do you think it's important for us to develop our own unicorns (companies worth more than \$1 billion)?

BC In the early days, we studied some successful global innovation ecosystems in depth. One of the things we noticed was that lots of smaller companies tended to cluster around the major 'whales'. And that's exactly what has happened more recently in NZ, with companies like LanzaTech and Rocket Lab. We've now got a waste industry and a space industry emerging here. It's the offshore capital, skills and networks, and in some cases the regulatory frameworks, that have helped create these industries in New Zealand.

CI/ How important are those overseas links?

BC Success in this country revolves around great international linkages either in products or in skills or in services or in capital, or whatever the gap might be here. Each industry is different, but those who succeed are not shy about saying: 'New Zealand is 4 million people, we can't do it by ourselves'. A closed loop geographically typically won't work beyond a certain point.

CI/ But how does the rest of NZ benefit from those links in a tangible way?

BC This depends on the industry but often we have investment in infrastructure, and in people, occurring here. Rocket Lab, for example, has created many jobs that didn't previously exist, which is a great economic growth story.

CI/ Does NZ have a funding gap?

BC If that's true, then I think it's because we've not yet had as much experience, or as many attractive exits, as investors have had in other markets. Some offshore commentators argue that there's plenty of early-stage capital in this country, it's just that it's being allocated too generously at the angel or very early-stage level. Maybe angel investors need to think a bit more about funding Series A or growth-stage businesses? But I'm not sure the NZ Super Fund is the answer to the Series A gap, as they are a wholesale investor with quite a different focus.

CI/ Do you think Kiwi business owners still aim for the bach, the boat, and the BMW?

BC People of my generation maybe had that view. I don't think younger people do. Allbirds founder Tim Brown is an extremely good example of a hugely aspirational, hugely successful entrepreneur who accessed capital and expertise very early from the northern hemisphere. That overseas expertise was very likely a significant part of their success. Undoubtedly, the aspiration and motivation from the US investors has been a factor in their sustained global growth.

CI/ Do Kiwis sell their businesses too early?

BC Looking back at some of the companies that might have been described as selling early, where was the opportunity here to access the kind of skills and networks they really needed to grow? Especially in tech, as tech businesses tend to be part of an ecosystem. Having said that, there are also examples of where we could, and arguably should, grow businesses here and the agri and food industries are obvious examples. We are the best in the world at clean food and we can certainly grow innovative new food businesses from NZ.

CI/ But aren't taxpayers right to be annoyed when overseas investors reap the profits from businesses that have had NZ government funding?

BC There are ways of addressing that. If a 100% sale offshore occurs then the public funding arguably needs to be repaid. That's seems appropriate as long as these conditions are clear at the time of the initial financing.

CI/ Is the tyranny of distance still a problem?

BC The pressure of building a new business is quite extraordinary, and Rod Drury is just such a good example. The distance is a major factor in that challenge. I know of very few businesses who have been successful basing themselves here, because of the relationships you have to build with customers and the depth of knowledge of the market you will require. Trying to run a global start-up from here is really, really hard work.

CI/ How else does NZ benefit from successful sales of start-ups?

BC As the first round of companies are sold, investors are able to reinvest in other start-ups. Sir Stephen Tindall is a very specific example because his generosity and support have been sustained over such a long period of time. Now Stephen has been joined by others such as Sam Morgan and Craig Nevill-Manning from Google. A lot of our successful offshore entrepreneurs now invest back in New Zealand and we certainly greatly value their networks and expertise.

CI/ How else has our innovation ecosystem changed?

BC Something that's not often commented on is the degree of investor specialisation that has emerged in recent years. There are a lot of very specialised tech investors now and they have an enormous amount to contribute in helping their investee companies access global networks and supply chains. That's an example of a more mature, more sophisticated ecosystem — one which is much more embedded in the northern hemisphere. It's a stronger, more resilient and more professional industry than it was a few years ago.

THERE ARE A LOT OF VERY SPECIALISED TECH INVESTORS NOW AND THEY HAVE AN ENORMOUS AMOUNT TO CONTRIBUTE IN HELPING THEIR INVESTEE COMPANIES ACCESS GLOBAL NETWORKS AND SUPPLY CHAINS.



Greg Cross

Greg Cross is a serial tech entrepreneur who has helmed two of NZ's most promising tech companies – PowerbyProxi and Soul Machines. He is also the Sir John Logan Campbell Executive in Residence at the University of Auckland Business School.

IF WE'RE NOT GETTING EXITS THAT MEANS ALL OF OUR COMPANIES ARE EITHER SUCCEEDING AT A LEVEL WHICH WE KNOW IS IMPOSSIBLE, OR THEY'RE FAILING. SO EXITS ARE A GOOD THING.

CI/ How do you think NZ benefits from the sale of our start-up companies to new owners?

GC An exit is just a natural part of the lifecycle of a tech company. If we're not getting exits that means all of our companies are either succeeding at a level which we know is impossible, or they're failing. So exits are a good thing. It means a bunch of Kiwi founders and employees are going to get a payout for their years of hard work. And they are going to turn around and reuse a combination of their money and their experience to feed that back into the ecosystem.

CI/ Is there a funding gap in New Zealand?

GC I hear the noise about the lack of Series A and Series B funding, and should NZ have a venture capital industry. But I never thought the Silicon Valley VC model was particularly suitable for NZ because the gestation of our companies is longer, for a bunch of reasons. And even if there was a vibrant venture capital community in NZ, there aren't people here who are prepared to write \$50m cheques. The guys who can, ACC and the NZ Super Fund, aren't interested in this asset class.

CI/ Does that mean we will always need overseas investors?

GC If you're going to compete internationally, you're competing with the best in the world. And if you're that good, you're probably going to need international money at some stage. My personal approach is to sort out the smartest investors on the planet that I can find. The smarter that capital is, the more it can do for you. Having super-smart top-tier money from overseas overcomes a lot of the other barriers that we face, coming from so far away.

CI/ Is the tyranny of distance still an issue for NZ entrepreneurs?

GC In some respects the world is shrinking, and in some respects the level of challenges remain the same. I did 30 long-haul trips last year, which was really hard. But I choose to live here, so that's my fault. With Soul Machines, the US and China are the two biggest AI markets in the world, so I'm going to have to put more and more of my executive leadership teams into those two countries. At that point, funding is coming from offshore, and more and more of the management and governance of the company is based offshore. Increasingly there's only going to be a core hub of R&D people based around what we do in this country.

CI/ What about the sale of PowerbyProxi to Apple?

GC That company grew out of the world-class expertise at the University of Auckland, and I worry about the future of deep tech and deep science coming out of our universities. In this case, Apple has invested in new offices for them in Auckland, and the team has now grown substantially in size. They remain the best wireless charging engineers on the planet, and after the acquisition they're still working here. That remains a good outcome.

CI/ Do you think too many Kiwi business owners still aim too low?

GC Personally, I've always hated that cliché about the bach, the boat and the BMW. The narrative we keep repeating was largely the aspiration of our baby boomer entrepreneurs, many of whom were NZ-centric, but the world we live in today is completely different. The aspiration has changed because the technology has changed, and because of some of the conversations we've had. More Kiwi businesses are aspiring to be the best in the world, in part because they have the confidence and expertise from previous ventures.

HAVING SUPER-SMART TOP-TIER MONEY FROM OVERSEAS OVERCOMES A LOT OF THE OTHER BARRIERS THAT WE FACE, COMING FROM SO FAR AWAY.

CI/ It doesn't always work out, though, does it?

GC Once companies get acquired, bad things can happen. Their new owners can run into all sorts of problems, and they just shut the NZ operation down. Is it disappointing? Sure. Does it completely remove the economic benefit for that sale? No it doesn't, because you've still got a bunch of entrepreneurs and talent who have experience and money to offer.

CI/ Are you optimistic about the future for entrepreneurs in NZ?

GC Without a doubt, the entrepreneurial community is bigger. There are more kids aspiring to be entrepreneurs, and obviously our tech industry is growing. But what's the vision for the next 10 years? A lot of the things we're doing now are things we were doing 10 years ago. We seem to be scared to blow things up and come up with new ideas. To me, exits are part of the wider conversation around what sort of tech industry do we really want in this country. We need to think about the globalisation of education, and what that will mean for NZ. But the biggest challenge for NZ businesses in general is that we live in a very small and relatively unsophisticated, relatively uncompetitive economy.

CI/ Aotearoa is now a place where talent wants to live, though, right?

GC I certainly choose to live here, although I might have to go back to the US this year. And many of our most successful entrepreneurs choose to live here. Sam Morgan, Mark Sagar and Peter Beck could all live anywhere in the world, but they live here. With Rocket Lab, we can be very proud of what Peter is doing. He needed overseas shareholders because of the size of the cheques he needs, and he's managed to keep a big team of Kiwis employed here. But there are people who are assuming NZ is going to have a long-term space industry, and there's a leap of faith involved there.



Rowan Simpson

Rowan Simpson was part of the founding team at Trade Me, and has since been involved in many tech start-ups. He continues to work closely as both an investor and adviser with a new wave of technology businesses.

IN MY OPINION WE'VE DONE A VERY POOR JOB OF CLEARLY DEFINING WHAT IT IS THAT WE WANT FROM HIGH-GROWTH EARLY-STAGE BUSINESSES.

CI/ How do you think the original sale of Trade Me affected other Kiwi businesses?

BS The people who worked on Trade Me in that early stage, leading up to and just following the original sale to Fairfax, have gone on to be involved in a long list of subsequent successful ventures, including Xero, Star Now, Vend, Webstock, Beauty Bliss, Timely, Rubber Monkey, Movac, and many others. It's a long list.

CI/ The effect is wider than just that, though, isn't it?

BS Yes, that's just the direct commercial impact. Many of those ventures and funds have themselves seeded subsequent ventures. It also doesn't consider the non-profit and philanthropic things that have been funded and enabled by the proceeds of the sale. And none of that counts the much wider group of people who were inspired to start their own businesses, having seen the success of Trade Me. And that pattern repeats for every successful venture — most notably Xero, which has built on the domestic success of Trade Me and has proven that it's possible to create a globally significant business from New Zealand. Of course, this is how a vibrant natural ecosystem is created — bio-matter from the previous generation is recycled to create a richer and more diverse flora and fauna in the future.

CI/ Yet sales of local businesses still attract controversy, don't they?

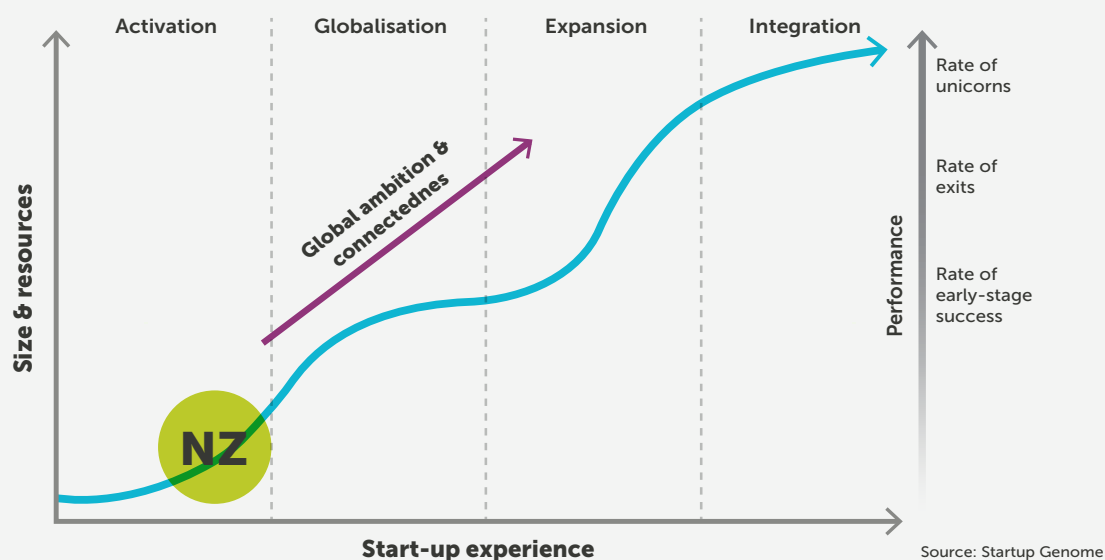
BS Yes, it's somewhat surprising. On the other hand, it's not surprising at all. In my opinion we've done a very poor job of clearly defining what it is that we want from high-growth early-stage businesses. Is it jobs and, if so, do we care about the types of jobs? Is it export revenue? Is it profits? Is it majority local ownership? Is it to grow the capital base that can be re-invested in the future? To optimise for any one of those requires compromise on at least one of the others. So when the answer is 'all of the above' it shouldn't surprise that there is going to be some confusion about what is a good outcome. Sadly at the moment we seem to be going backwards and focussing instead on measuring 'inputs', like the number of companies started, the amount of capital raised or the amount spent on R&D.

The background features a complex geometric design. It includes several overlapping shapes in various shades of green and yellow. A prominent yellow shape on the left side contains a fine grid of small green crosses. The overall composition is modern and abstract, with a clean, minimalist aesthetic.

What success looks like

THE INNOVATION LIFECYCLE

How NZ rates on the innovation lifecycle



In 2018, New Zealand took part in the Startup Genome report, a global study of 55 cities across 27 countries, with support from 35 governments. The aim of the research is to help start-ups succeed by supporting local ecosystems to build consensus for action on key challenges.

The research showed that New Zealand start-ups are ambitious and born to export. But we trail the global average in terms of founder relationships with other founders, investors and experts. We're also less active in start-up communities, and in attending local start-up events.

Compared to many other countries, our early-stage founders also lack global relationships, and access to knowledge to create world-leading business models. Despite this, our start-ups are better than average at going global. But they could still do better at increasing their global market reach.

We know this is important, because studies show that both local and global connectedness is an essential factor for growth. And global connections are vital to develop world-leading products. In fact, start-ups who go global early grow two times faster than those who focus on their own market¹.

At Callaghan Innovation, we recognise that New Zealand is early in its innovation lifecycle. Our mission is to help accelerate this process by helping businesses to grow faster. And in April we are launching a key initiative to help make this happen.

Scale-Up NZ is a free online platform that will showcase our most innovative business to each other, and on the world stage. Created from a model that's hugely successful overseas, it will make it faster and easier for local people and organisations to find and connect with the people, capital and other help they need to innovate and grow, both here and offshore. It's also intended to help investors and multinationals discover innovative businesses in Aotearoa.

As our ecosystem grows, so will the size of our exits. We are already starting to see this happen, and as long as we continue to innovate, and keep feeding our knowledge and our profits back into the ecosystem, the pie will continue to grow.

¹ Global Startup Ecosystem Report 2018



LevelTwo operations coordinator Lachlan Macdonald, director Mat Rowe, and general manager Imche Fourie.



PowerbyProxi founder Fady Mishriki.

LevelTwo

In an unremarkable building in a leafy Auckland street is a hi-tech hub that has spawned some of Aotearoa's most remarkable success stories.

Like New Zealand itself, 24 Balfour Road in Parnell was once a wool store, but these days it provides a home for start-ups on the bleeding-edge of science and technology.

Waste-to-energy firm LanzaTech, aerospace superstar Rocket Lab, and high-flying drone technology start-up Dotterel all got their start on the second floor. Although it became an innovation hub by accident, these days it's a breeding ground for many more businesses involved in what is known as deep tech.

Early residents included agritech venture BioConsortia, medical diagnostics company Pictor, and fellow Genesis Research offspring LanzaTech. Two years later, Peter Beck began filling the basement with smoke as Rocket Lab started to take shape.

Waste technology start-up Avertana also arrived around this time. Other current residents include Mint Innovation, the biometallurgy company turning e-waste into gold; NZeno, which is aiming to supply pig kidneys suitable for humans; and Hydroxys, a clean-tech start-up extracting water from industrial waste.

Callaghan Innovation took over the hub in 2013, but it has since been set up as a commercial enterprise. To date the cluster, now known as LevelTwo, has created well over \$1 billion in economic growth for the New Zealand economy. It holds over 300 patents, and has raised over \$600 million in investment.

PowerbyProxi

Fady Mishriki arrived in New Zealand as a 16-year-old teen from Egypt. Today, he heads Apple's Auckland outpost.

It was at the University of Auckland, where he studied engineering and commerce, that he became involved in wireless power technology — a field the university has led the world in for many years.

The business he founded, PowerbyProxi, was bought by Apple last year for an undisclosed sum. As it required Overseas Investment Office approval, it is known to be well north of \$100 million.

Mishriki's team has grown under Apple's ownership, and has moved into a new purpose-built facility in the Wynyard Quarter. Job ads have described the team's 'bleeding-edge wireless charging designs that are central to Apple's products — the iPhone, Apple Watch, Air Pods, AirPower and more'.

Callaghan Innovation was an early supporter of the business.



Virgin founder Sir Richard Branson and LanzaTech CEO Dr Jennifer Holmgren celebrate the world's first commercial flight using sustainable jet fuel.

LanzaTech

In October last year, a Virgin Atlantic plane made an historic flight between Orlando and London. It was the first time sustainable jet fuel had been used for a commercial flight. Virgin founder Sir Richard Branson was, of course, on hand to celebrate. And grinning alongside him was LanzaTech CEO Dr Jennifer Holmgren.

It was a particularly sweet moment for LanzaTech, which began as the brainchild of two Kiwi scientists, Dr Sean Simpson and Dr Richard Forster. Long before the term 'clean-tech' was even coined, their bright idea was to see if they could turn various waste resources into biofuels.

Just over a decade later, the company is the world leader in gas fermentation technology. It turns waste gases from industrial facilities and turns them into ethanol, jet fuel and high-value chemicals. It also works with organic waste, enabling the sustainable production of products such as rubber, plastics, and synthetic fibres.

What began life in a test tube is now a fully functioning commercial plant in China. The plant takes waste gas from a steel factory and uses it to make around 45,000 tonnes of ethanol a year. Many more plants for many more industries are underway all over the world.

The business moved from Auckland to Chicago in 2014, and now employs around 150 people. In February, it was named by *Fast Company* as the world's most innovative energy company, and among the 30 most innovative companies on the planet.

So far, it has raised around US\$250 million. Callaghan Innovation was an early supporter, and the Tindall family's K1W1 fund, and the NZ Super Fund, remain key investors.



Fusion Entertainment is the world leader in premium entertainment systems for boats.

Fusion Entertainment

Founded 20 years ago as a Kiwi car audio brand, Fusion Entertainment is these days the world leader in premium entertainment systems for boats.

Tech veteran Sir Peter Maire invested in the company in 2005, after seeing it at the annual CES consumer electronics show in Las Vegas. He later upped his stake to 90%, but was forced to sell in 2014 when he was unable to raise more money to fund the company's expansion.

Now owned by US navigation giant Garmin, Fusion continues to be based in Auckland. Under Garmin's ownership, it has tripled its staff numbers from 30 to 90, and continues to grow.

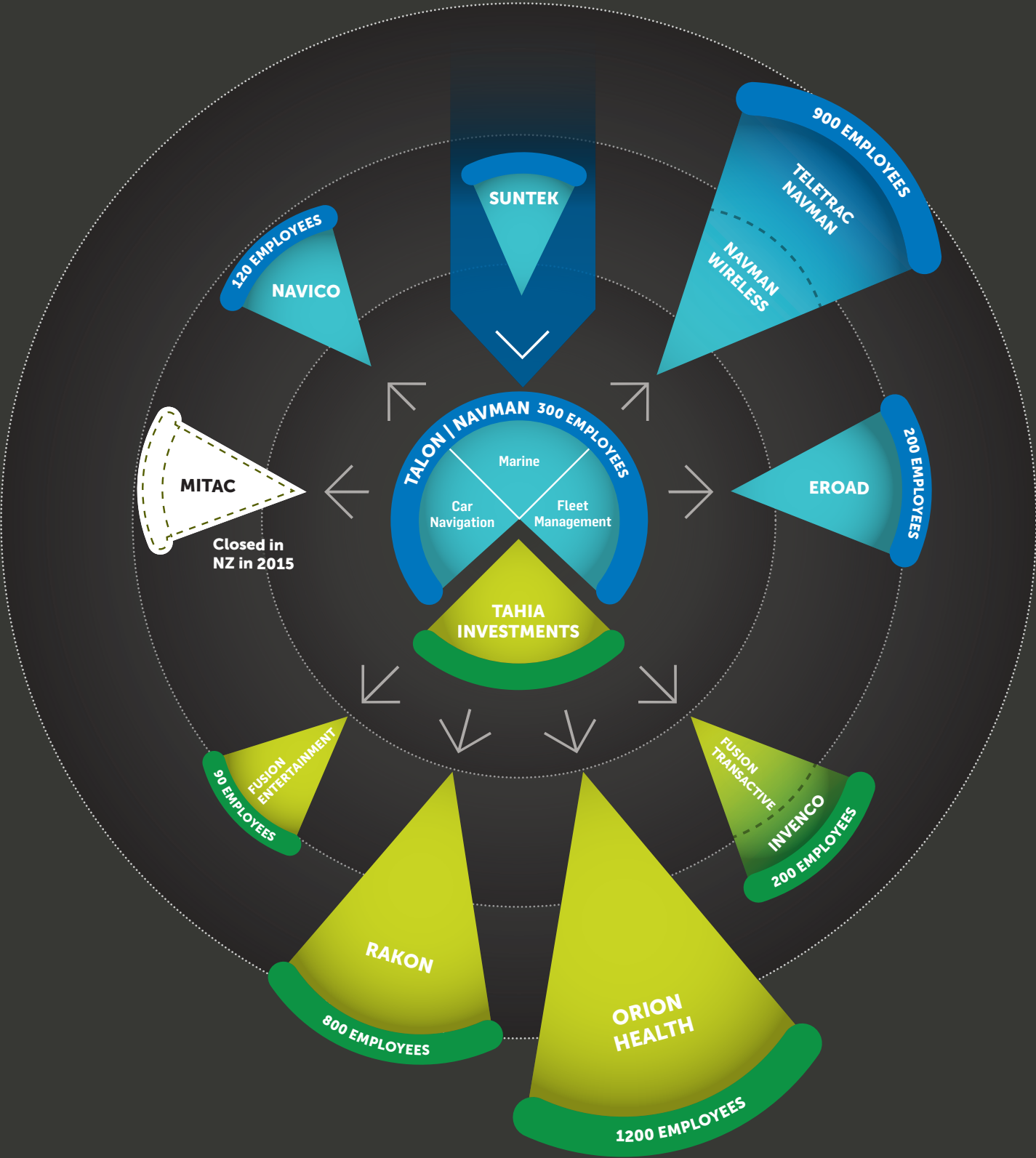
Support from Callaghan Innovation has helped it design and engineer world-class products. In the last four years it has doubled its R&D team, and increased sales by two-thirds. It is now expanding into the recreational vehicle market.

The background features a complex geometric design. It includes several overlapping shapes in various shades of green and yellow. A prominent yellow shape on the left side contains a grid of small green crosses. The overall composition is modern and abstract.

**Navman –
where are
they now?**

Growing the pie

How Sir Peter Maire has helped to shape the tech industry in NZ





Knighted in 2009 for his services to business and technology, Sir Peter continues to be involved in the tech industry. He was an early director of Callaghan Innovation and remains chairman of Invenco.

Sir Peter Maire

Sir Peter Maire's entrepreneurial journey is hardly the stuff of 'rags to riches' tales the public loves to lap up. But along the way, his eye for an opportunity and his persistent focus on the future have helped to shape an entire industry.

An electronics technician by training, he dabbled with various start-ups as a young man but it was Talon Technology, which became Navman, that made his name. At its peak, it was one of the largest privately-owned technology companies in New Zealand.

The company was sold to a US buyer in two bites in the mid-2000s. But its core technology, car navigation, faced challenges on several fronts, including the rise of mobile phones. Within a couple of years, it was broken up and sold off.

Sir Peter used the proceeds from the original sale to form an investment company, Tahia Investments. Tahia has had mixed success: its investments in GPS crystal maker Rakon and health tech company Orion have been rollercoaster rides. He no longer owns Fusion Entertainment, and his investment

in payment technology company Cadmus, which later became ProvencoCadmus, ended badly. However, he managed to rescue part of the ProvencoCadmus business, turning it into another huge success story, now known as Invenco.

Although the sale of Navman is perceived by the public to have been a disaster, Sir Peter has no regrets. "Sometimes people who sell businesses don't want to admit the real reason," he says. "Sometimes it's just because you want to bail out. With Navman, we figured we would never be able to scale to compete with companies that already had a multibillion-dollar market cap in that industry."

Instead, the profits and experience gained from the formation of Navman have since been ploughed into many more ventures, which now collectively employ thousands of people all over the world.

"There's nothing wrong with selling up," he says. "It's more about figuring out who you should sell to, and how much you have learned. And in the case of tech businesses, making sure you're not going to be the next Kodak."

HOW SIR PETER MAIRE HELPED TO SHAPE THE TECH INDUSTRY IN NZ

Suntek

Sir Peter's entrepreneurial journey began when he and a partner bought the Marlin fishfinder business and turned it into a marine electronics company called Suntek. They sold the business in 1987, just before the sharemarket crashed.

Talon/Navman

Together with Lionel Rogers, Sir Peter founded Talon Technology in 1988. It started life as a marine electronics company but eventually moved into GPS navigation. The field was expanding rapidly and Talon changed its name to Navman, after buying the trademark for \$1. By 2003, Navman was NZ's largest privately-owned tech company, with revenue of more than \$400 million and more than 300 staff. A US-listed manufacturer of marine engines and outdoor equipment, Brunswick Technologies, took over the company in two bites in the mid-2000s.

Navico

Brunswick sold Navman's marine electronics business to Norwegian company Navico in 2007. Navico is now the world's largest supplier of marine electronics for recreational boats. It has continued to expand, but the core of all its development platforms and most of its products remain in NZ. Although its NZ factory closed in 2010, it still has around 120 staff at its Auckland office in Albany.

Teletrac Navman

Originally known as Navman Wireless, this was the original fleet tracking division of Navman. In 2007, several managers got together with US private equity firm Prairie Capital to buy the company back from Brunswick. It was sold to giant US tech firm Danaher Corporation in 2013, then merged with Teletrac in 2016. Danaher then included Teletrac Navman in a new conglomerate it carved off and listed on the NYSE under the name Fortive Corporation. It is now one of the world's largest telematics businesses, with 40,000 customers globally and 900 employees in the US, Europe and Asia Pacific, including over 100 people in its head office on Auckland's North Shore.

MiTac

Navman's car navigation division was sold to Taiwanese company MiTac in 2008 and remained in NZ until 2015, when what was left of its assets were shifted to Australia. At the time, MiTac blamed global market pressure, a reduction in GPS unit sales and the cost of doing business in NZ for the move. Navman and Magellan GPS products are still distributed in NZ, but the company has ceased trading here.

Rakon

Tahia Investments took a 20% stake in Rakon in 2006. The company, which was founded in 1967, has since become one of the largest global providers of frequency control and timing solutions for the telecoms, positioning, space and defence markets. It now has five manufacturing plants and six R&D centres in India, China, the UK, and France, as well as New Zealand, and employs more than 800 staff. It listed on the NZX in 2006 and has a current market capitalisation of around \$80 million.

Orion

Founded in 1993, Orion Health is a global provider of healthcare IT. Tahia Investments took a stake in the company in 2006, and Sir Peter remained on its board until 2011. It now employs around 1200 people in 25 offices across 15 countries. It listed on the NZX in 2014 and has a current market capitalisation of around \$110 million.

Invenco

When eftpos provider ProvencoCadmus collapsed into receivership in 2009, Sir Peter bought the petroleum payments division from the receiver and renamed it Fusion Transactive. The company, now trading as Invenco, has become a world leader in global self-service payment technology and is growing rapidly. Headquartered in Auckland, it also has offices in Malaysia, the US and UK, and was named Company of the Year in last year's Hi-Tech Awards.

Eroad

When Navman was sold to Brunswick, Navman executive Steven Newman decided to strike out on his own, focusing on a cellular-based road-charging system for the transport industry. The company has since expanded into Australia and the US. It listed on the NZX in 2014, and has grown from around 20 staff in 2011 to around 200 staff today. It has a current market capitalisation of around \$185 million.

Fusion Entertainment

Fusion was founded in 1998 as a Kiwi car audio brand. Tahia Investments bought a slice of the company in 2005, and later increased his stake to 90%. It is now the world leader in marine audio products, and has also expanded into the recreational vehicle market. Needing money for expansion, in 2015 it was sold for a reported \$20 million to US navigation giant Garmin. However, it continues to be based in Auckland, and currently employs around 90 staff, including many former Navman employees.

WHERE ARE THEY NOW?

Many former Navman employees now play senior roles in New Zealand's tech industry.

John Scott

John Scott joined Navman in 2002 as global product manager, and stayed on as global operations manager under Brunswick. Since 2008 he has been chief operating officer of the New Zealand division of Navico, which is Navman's original marine electronics business.



Ian Daniel

Ian Daniel joined Navman in 2002, and was part of the management team who bought back the fleet tracking business from Brunswick. He has continued to run the business through various ownership changes, and his official title is now vice president and managing director of the Asia Pacific region for Teletrac Navman.



Marc Michel

Navman's international sales and marketing manager, and head of marine operations, has held a variety of roles since the company was sold. He worked for airport systems company BCS Group for eight years, and was briefly CEO of timing tech company Tekron, before becoming CEO of Mastip, a pioneer in the global plastics hot runner industry.



Chris Baird

Chris Baird was head of Navman's Australian operations. After Navman was sold, he started his own GPS business, then moved to Fusion Electronics when Sir Peter Maire invested in the company. He remains CEO of the business, which is now called Fusion Entertainment.

Steven Newman

Steven Newman was Sir Peter's right-hand man for many years. He was general manager of Talon Technology, and became joint CEO and CFO of Navman. After the sale of Navman, he founded transport tech company Eroad, where he remains as CEO.

Brian Ryan

Navman's director of product development and marketing continued in marketing roles in two more of Sir Peter's companies after Navman was sold: Provenco and Fusion Transactive (now Invenco). He has also worked with interactive whiteboard company Smart Technologies, touch-screen company NextWindow, and was group general manager of emerging technologies at power company Vector. He is currently vice president of innovation at National Grid in the UK.

Jim Doyle

Jim Doyle was joint chief executive of Navman and was a loyal Sir Peter lieutenant for many years. After the sale to Brunswick, he became involved in Tahia Investments, and chaired several tech companies with links to Maire. However, his leadership of payment technology company ProvencoCadmus was unable to save it from receivership. He has since been heavily involved in rugby league on both sides of the Tasman, retiring last year as chairman of the Warriors.

Lionel Rogers

Lionel Rogers owned Taurus Plastics when he met Sir Peter more than 30 years ago. Together, they founded the company that became Navman. Rogers has maintained interests in MacRennie Construction and app maker Experieco, but is best known these days for his impressive car collection.



Our billion-dollar babies

Putting a price on success

They're known as unicorns — the private start-up companies valued at over US\$1 billion. When venture capitalist Aileen Lee coined the term in 2013, there were only 39 companies globally that could claim the title. Today, there are estimated to be well over 300.

In New Zealand, it is hard to put a price on our unicorns, because most valuations are confidential, and coverage by global research firms is patchy. The following figures are estimates only, based on published information, and may be based on different valuation methods. The list may not be exhaustive.

For those tech firms that are no longer private, we have listed their current market capitalisation.

Over \$1 billion

Company	Approx valuation	Approx sale price	Market cap (in March 2019)
A2 Milk			\$8.8b
Xero			\$7b
Anaplan			\$7b
FNZ	\$3b+		
Trade Me		\$2.6b (2019)	
Allbirds	\$2b		
Rocket Lab	\$1.4b+		
Telogis		\$1.4b (2016)	
LanzaTech	\$1b+		

Over \$500 million

Company	Approx valuation	Approx sale price	Market cap (in March 2019)
Diligent		\$940m (2016)	
Pushpay			\$900m
F&P Appliances		\$930m (2012)	
Vista			\$820m
Scales Corporation			\$670m
Sistema		\$660m (2017)	
Massive		\$580m (2006)	
Buckley Systems	\$500m+		

Over \$100 million

Company	Approx valuation	Approx sale price	Market cap (in March 2019)
Gentrack			\$470m
Transaction Services Group		\$360m (2015)	
Qualcare		\$380m (2008)	
90 Seconds	\$200m+		
8i	\$200m+		
AFT Pharmaceuticals			\$200m
NZ Pharmaceuticals		\$200m (2015)	
Vend	\$150m+		
Endace		\$160m (2013)	
Pacific Edge			\$150m
Banklink		\$140m (2013)	
My Food Bag		\$120m (2016)	
NextWindow		\$120m (2010)	
Manuka Health		\$110m (2016)	
PowerbyProxi		\$100m+ (2018)	
Grinding Gear Games		\$100m+ (2017)	
Orion Health			\$110m
Seequent		\$100m+ for 70% (2018)	
Simcro		\$100m+ (2018)	
Zeakal	\$100m+		
Harmony	\$100m+		
Magic Memories	\$100m+		

Over \$50 million

Company	Approx valuation	Approx sale price	Market cap (in March 2019)
Nyriad		\$75m+	
Wherescape	\$70m+		
Straker Translations			\$70m
Compac		\$70m (2016)	
BBC Technologies		\$65m (2018)	
BCS Group		\$50m+ for 80% (2014)	
M-Corn		\$60m (2011)	
Phitek Systems		\$60m (2017)	
GFG Group		\$50m+ (2014)	
Leasing Solutions		\$50m (2009)	
Aroa Biosurgery	\$50m+		



"One hundred inspired New Zealand entrepreneurs can turn this country around. That is the challenge for us all."

Sir Paul Callaghan, 1947-2012



**Rukuhia te wāhi ngaro,
hei maunga tātai whetū.**

Explore the unknown,
pursue excellence.

AUCKLAND / WELLINGTON / CHRISTCHURCH

callaghaninnovation.govt.nz / info@callaghaninnovation.govt.nz / 0800 422 552

Callaghan**Innovation**

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