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S1 00:11 Hello, and welcome to the Moxie Podcast, Episode 14. This is the companion week show to the Moxie Sessions. The Moxie Sessions is an internet economy discussion group held once a month in Auckland, New Zealand. It's purpose is to bring together a group of interesting technophiles from across the economy to talk about how New Zealand can take advantage of the internet to improve it's economic performance. I'm Glen Williams. I'm with you here in London today, and I have a fantastic panel of guests on the show. A few days ago, another Moxie Session was held in Auckland, this time at the Chorus Lab, and this one was all about the challenges and opportunities for commercializing science in New Zealand. Are they still missing bits to the system, or have recent creations such as Callaghan Innovation filled the last of the gaps? And what are the relevant measures of success when it comes to science anyway. While mulling over this topic, the very same experts that are on this podcast with us today. First up, it is my pleasure to welcome the General Manager of New Zealand Trade and Enterprise, it is David Downs. Welcome David.

S2 01:15 Good morning. How are you doing over there in London?

S1 01:16 Very good. Thank you very much. How are you there in Auckland?

S2 01:19 Bright and shiny and early.

S1 01:22 Nice one. Also joining us is Russell O'Brien from Callaghan Innovation. Hello to you, Russell.

S3 01:28 Hello, Glen.

S1 01:28 Lovely to have you on with us as well also in Auckland. Also joining us is the Managing Director of Pacific Channel, that is Brent Ogilvie. Welcome to you, Brent.

S4 01:40 Good day to you, Glen.

S1 01:41 And lovely to have you and also three guests with me in Auckland today. Actually, Russell, could we bounce off back to you? In the opening there, I mentioned Callaghan Innovation and the fact that it might have filled, perhaps possibly, the last of the gaps in the system of getting science right through from the inventors, all the stages that are required to actually grow the business and therefore grow the New Zealand economy. Can you tell us a little about Callaghan innovation, and what it is and why it was set up?

S3 02:12 Callaghan innovation, Glen, is a new government agency, similar in stages to New Zealand Trade and Enterprise, with the purpose of accelerating the commercialization of innovation in New Zealand. One of the key problems we are trying to tackle is to increase the number of high growth companies, that

New Zealand creates from our science base. I am not so sure that we are filling in all the gaps yet , but we certainly have a number of very interesting initiatives on the goal at the moment that aims to increase the number of companies.

S1 02:49

David, let's go back to you now, because you've got a little bit of history and background, because you've been - from what I understand - working on a bit of a book, and you have dug up, and been through the some of the history books, and found the area of science and inventing, littered with, let's say, things that didn't go quite so well. Can you tell us about that?

S2 03:14

Sure, yes, I've been - almost as a personal interest - been creating a book about New Zealand inventions and innovations, which is going to be called, 'Number Eight Rewired.' And will be published in New Zealand about August or September this year. And as part of the book that's been filled with a passion I suppose I've had for a long time, I've been looking at the history of innovation and invention in New Zealand, and what we find pretty clearly in the data is that we have had a very proud and strong inventive history. New Zealand inventions are world leading, but we're seeing, certainly over the last 23 years, a real piling off, in terms of the number of patents filed and the triatic suits, which means patents filed across multiple geographies, and the listening of our kind of innovation, coming out of science, which is where Callaghan Innovation fits in. And just to illustrate [?] a really good story, I'll quickly tell you about a guy called John Eustace, which is a really good reason about why you should commercialize. Why you should think about commercialization as a path when you begin something. John Eustace around the turn of the 19th, 20th century, created the world's first idiotype tin lid. He came up with a model where you could get a tin and you could-- worked out a way that you could get a lid to push inside it. Which at the time was really important because air tightness was something that had been sought after by packaging manufacturers for a long time. So he came up with this way of doing it in this dye, which is a way of cutting the middle to fit together really nicely. He patented it in New Zealand and proceeded to print a whole lot of them and make a bit of money in New Zealand. He decided to go internationally and thought he needed to scale his delivery model so he sent off some samples of his tin lid model to England, to London where you are. And it was met with really great interest.

S2 05:03

In fact, he got a letter a couple of months later after he'd seen it - remember, this was a long time ago - asking if they could buy the rights to patent this technology, which he got a bit excited about until he realized himself that he'd forgotten the patent in the UK or outside of New Zealand. And unfortunately, received a letter about a week later saying, "Actually, forget about what we just said; we're taking your idea and we're just going to do it ourselves." And unfortunately, New Zealand lost out on what was a significant industry and John Eustace probably missed out on what was a significant fortune to be made. We see a little bit that pattern repeating again and again about the slight naivety about how are you going to take a commercial product and really turn it into this, in my case, a worldwide phenomenon [?]. But actually even just the commercialization of taking good product is a struggle for many Kiwis.

S1 05:58

And that brings up this issue of the difference between entrepreneur and innovators and I think we'll talk about that a little bit later. But I want to bring Brent Ogilvie in. Now you're in the business of funding Clean Tech companies, and I read that you actually look at around about 100 deals a year as part of the

Pacific Channel. So tell us about Pacific Channel and the challenges and opportunities that you see for science entrepreneurs in New Zealand.

- S4 06:25 So Glen, we do look at Clean Tech. We look at all hard sciences. So material sciences, life sciences as well. We best get down to software technologies. And you're right, I guess we see about 100 deals a year now. I said the other night, about half of them really aren't that novel. A simple Google search might reveal that to the promoter. Of the remaining, there's maybe 10 or 20 that you look at more carefully. The initial screen - more often than not - comes down to, has the intellectual property been well protected? Or, is there possibility to do that in the future? And then really the next for us is, is the right person there to commercialize the technology? This is my belief anyway, that there's lots of risk capital available in New Zealand and increasingly so. There's some great world class inventions from the universities and peoples carriages. But actually what we're relatively poor at is the international commercialization of that IP.
- S1 07:28 But is it our distance? Is it our turny of distance when it comes to taking things to the next level?
- S4 07:34 I don't believe in the turny of distance anymore. I think that's gone completely out the window and anyone who uses that excuse anymore is just hiding behind it. I mean the internet's closed all distance barriers. We - in New Zealand - have a slight turny of geography, which is the fact the we have four and a half million people spread out over a very large land mass with big mountains in the way. And that has breed a little bit of distrust of the other folks within the country, and that could be a bit of a problem for us at times. What is a frequent rivalry on the sports ground sometimes means we don't collaborate. There's a certainly well-founded science that shows that Kiwis are quite different in the way that we think about collaborating together and the way that we think about learning from others, which is that we're not very good at it, at either of those two things. What you'll see in this increasingly complicated world is that people have to collaborate and they have to learn, and they have to admit we don't know something. Those are not traits fit to here, that we're not very good at.
- S1 08:29 So are we talking about personalities, as the sort of people who are inventors don't necessarily have the skills to be able to carry it all the way through. And it's the people that are involved in a particular idea that are crucial. What are your thoughts, Russell?
- S3 08:47 I think that's a key point and quite often the people who are good at creating knowledge are not necessarily the people best positioned to commercialize that knowledge. Not in all cases but certainly in many. I think there are a number of theories to touch on David's point around why that is. I mean there's one school of thought that says there's a cultural aspect to this, whereby our pioneering past makes us very courageous and brave at starting businesses but also fuels a strong desire for autonomy, which means that we don't necessarily collaborate externally then in terms of growing them. There is a second school of thought which suggest that it's [inaudible] an understanding on what the best approach is and that once we actually understand what the best approach to commercializing technology is, we actually adapt and do quite well at it. So, it'd be interesting to see how we develop in both of those areas.
- S1 09:48 What in particular makes science as a sector special compared to other sectors, whether it'd be primary or technology, which, I guess, is related or bricks-and-

mortar sort of business? What make science particular special. I'll go to you Brent.

- S4 10:05 I think partly it's because it's not like selling another ton of land, there is quite a complex explanation required of what might be possible with the under-pinning science and the future and what resources are acquired from the other partner in order to realize that. So, it's certainly a, what I call a consortative based sale as opposed to a transactional sale, and that's part of it. And it's picking up on a cultural issue. I spent a lot of time in the US and my perception there of most New Zealanders there that are promoting products there, is we tend to understate what we have, usually, by at least a factor of two. The Americans are used to salesmen that overstate things by equally by a factor of two, so we rarely get the sale, but if we do we massively over deliver, and that's a generalization, but I think we could really learn a lot from, for example, the Israelis and how they go about the international business development of their science.
- S1 11:09 Tell us a little bit more about the Israelis and what your experience with what they've been up to.
- S4 11:15 Well firstly they use their diasporic extremely well. So you'll see in the US, there's a big Jewish community, and strong relations with Israel. Secondly their very effective sales people. So there just seems to be a stronger commercial drive. Their just seems to be much more urgency, particularly than most of our companies have, and maybe that is part of the geographic isolation that we just spoke about. You don't necessarily see in the building down the street, that there's another 20 bright guys doing the same thing and you better go quick.
- S1 11:54 What we're seeing in a couple of places at the moment is the beginnings of some good clustering and calibration activity. I was leading a tech company in Takapona, about six or eight months ago and it was a really interesting company, 30 or 40 people doing some really interesting stuff that was going around the world. And I said to the guy, "Oh do you know company X is just sort of 300 meters down the road that way, who's doing a similar sort of thing, about 50 people and targeting some of the markets." They never met each other. They never really thought that they should collaborate here in New Zealand before they commercialized off shore. But what's happened now which is really good is that there's this thing called [inaudible] which has actually gone up in the last few months which turns out there's a whole bunch of tech companies, just in one part of Auckland, that have decided to collaborate and share kind of best practices. The more we see that sort of stuff, and it doesn't have to be physically geography based, but the more we see some of that the more we see more of that, the more we'll start to see the cross-over affect of ideas spreading a little bit more directly.
- S1 12:50 So, but that idea of sharing doesn't come naturally to Kiwis. Getting the idea out there and sharing it around so they can find more people with the expertise and plug the holes, patch that they have in their business, we're not so good at. Is that what you're saying?
- S4 13:07 I think we, someone, I think it was Russell who said it before, the pioneering spirit, the thing that made New Zealand really successful was, you're a long way from the nearest shop. You had to fix your own machinery. You had to do everything yourself. You owned your own farm. The idea of giving up ownership

was a very strange concept to a lot of that kind of mentality, and that sort of burned itself into our culture, in the way that we own houses, and the way that we consider that that's a really important thing. So when you see a company, for example, a founder/owner, who's willing to give up a part of his company to take on growth capital or take on partnerships that's not IP, is actually relatively rare in New Zealand. Hopefully, we're going to improve that. But, there's a real fight sometimes to get the founder/owners to sort of step back and think about how they could use and work with others and give up ownership as part of that.

S1 13:56

Also, because you're a New Zealand enterprise not dealing with just science. Have you got a handle on what makes the science sector particularly unique, and there are particular skill sets required to be successful in that field?

S4 14:12

I have an opinion. I don't know if I've got that science, but an interesting idea is that someone said to me recently that all the easy things have been done in science. And I mean that we've always thought that through history, but the reality is to create a unique value proposition and product today is quite a complex thing, because you can't just go until you shoot and create a widget. And he's the widget that the world wants, because all the widgets are out there. Today's widgets are much, much more complex than new ones and require deep IP, deep science behind them, and therefore require a multi-disciplinarian. And so basically you'd end up with this structure that needs you to have a lot of skill sets to collaborate to get at. If you look at currently successful science companies like Mesynthes or CX, [?] and pharmaceuticals, Lanzatech, you'll see within them, yes deep science, but also engineering as a secret discipline, also commercialization, also legal and it's very difficult to bring all those things together into one hit.

S1 15:14

Let's move on, and look at the internet side of things and how the engineer can assist in building great science-based businesses in New Zealand. We've been hearing about this fiber backbone that's being built and now is being rolled out to homes around the country, as well. Are science-based businesses in New Zealand really taking advantage of these at all, again Russell have you seen any evidence?

S3 15:36

Yes, I think defines a knowledge creation in the Science sector in general has been leveraging the ultra fast broadband network for quite some time, and that's now starting to trickle through to businesses. We see that particularly in the areas of big data, and the movement of data, and the processing of data that's now sort of a global phenomenon, so New Zealand has access to the same sort of tools in many cases that will be available for two company, for instance in the US, which has access to the best infrastructure. So it would be my guess that it's making a difference and will continue to do so.

S1 16:14

What does it actually do? It is just shifting around scientific data; is that the basics of how the ultra fast broadband network can assist a scientific business?

S3 16:26

Yes and access to big processing capabilities so that you've got the ability to crunch large amounts of data remotely, so that you can access big data warehouses and data centers, [?] storage.

S1 16:39

So cloud computer.

S3 16:41

Yeah, exactly.

- S1 16:41 Right. And that sets something most people don't really think of initially. The fact that you can have access to this amazing process and power on the other side of the world from your filly rudimentary PC that you could be started up your business from a New Zealand. That is a rather extraordinary thought really.
- S3 17:02 Yeah, someone was telling me a couple of days ago that there's more processing power now in the cellphone than there was in the entire space shuttle when it was first launched.
- [laughter]
- S1 17:10 Sure.
- S4 17:10 Good news when you're dealing with that, actually we have a New Zealand company that's right at the leading edge of this whole remote computing concept with-- GreenButton, whose a Wellington-based company, who took their under utilized capacity from the-- with the studios massive arise of Linux devices and has made super computing available to that desktop computer - as you see there - remotely, so you can run a little app, send off a bunch of data and have it processed on a second super computer, by a New Zealand company, which was really, really cool.
- S1 17:39 Yeah, that really is amazing and I guess also the easy access to, we call it overseas labor, but experts from overseas that may not live in New Zealand but they can contribute to a New Zealand based business, would that be accurate?
- S4 17:54 Yes, that's probably a big area for us to even further improve, and I know that Callaghan Innovation has a big focus on their global expert model on finding expertise wherever it exists in the world and making it available and getting these people to connect with Kiwis. So Russel's organization has really got that on their focal point.
- S3 18:13 So Glen on a science using the internet, a good example to come to mind is Caldera Health. It's a prostate cancer diagnostic development company in Auckland; there's half a dozen people there. But they've been able to access enormous data bases offshore. As soon as they have developed a new thesis - if you like - of a prostate cancer marker or an association with the progression of the disease and they can go and test those against those large data bases. So it's been enormously helpful to them.
- S1 18:45 I think it would be really cool now to hear of some recent success stories from each of you. If you can think of any businesses that you've particularly been involved with that you'd like to highlight that are actually working and the system is actually working for them as well. Go to you, Russel.
- S3 19:03 Rather than talking about specific examples maybe if I just refer back to an initiative that was born in Israel that we're starting to roll out in New Zealand, which we think will have a big impact on the number of successful high growth companies that are created. And, we're looking to mirror the Israeli model, whereby the government is actually going to take more of the upfront investment risk for some of these high growth start ups that are coming out of the Universities. So, the type of project that might be close to what Bren'ts organization would look at, but probably just a little bit too early stage for him and the government is putting up 31.3 million dollars to work with the private sector to lower the risk of investment into those firms. Today we probably

produce maybe 30 of this types of companies a year. We'd be looking to at least double that in the coming years and that has an on going multiplier effect - if you like - in terms of the wider economy. And the net result of that being that we create a greater number of higher value companies that attract directly foreign investment into New Zealand. So it's quite an exciting and different approach from the New Zealand government.

- S1 20:21 Yeah, that does sound extremely different. Does that mean that the government is prepared through Callaghan Innovations, is it prepared to take a higher risk or more risks than say private equity or investment firms?
- S3 20:36 Yeah, how it works is the government will appoint some technology incubators who are assessed to have expertise in raising capital and commercializing signs based companies. Then they will loan the start-up companies up to \$450,000, providing it's matched by investment of a \$150,000 from the private sector, creating cash flow of \$600,000 from day one for a capital-intensive, high-risk, science-based start-up. What we're seeing is, in Israel, is that approximately 60% of those types of firms go on to be reasonably successful and some of them go on to be stunningly successful.
- S1 21:23 Wow!
- S3 21:23 So, it's just looking to help build a higher quality pipeline for investment organizations such as Pacific Channel and a range of others.
- S1 21:32 Does it open the door to more failures as well?
- S3 21:38 Well, the experience in Israel is that 40% of the firm's failed, but we actually think 40% is not a bad failure rate when you're talking about such high-risk, early-stage, and complex-type companies.
- S1 21:50 But that's something that New Zealand, in particular, has been rather averse to. We sort of shied away from investing in a lot of small firms to only championing the few that we know that are going to be successful.
- S3 22:04 Yes, perhaps historically. But I think more recently, we're starting to see a lot more angel capital come through. I think there was probably close to an 80% increase in the amount of angel investment this year over last year. Might be something to do with New Zealand's emergence from GFC-type world. So I think our appetite for risk is building.
- S1 22:29 Which has got to be a good thing. Brent, what do you make of that and how does that work in tandem with what you do in the private sector there at Pacific Channel?
- S4 22:39 We're very positive about the innovation from Callaghan. I think it's also impressive of the way they looked at another country and benchmarked in what they've done well and looked to integrate that model into New Zealand. Anything that can help build that pipeline and bridge the very high-risk and capital-intense gap between an exciting scientific innovation in getting into a marketplace is helpful. You asked before that recent successes, so a couple from last-- [Sarmasutics?] was a company that we co-founded with a scientist, he recognized it and had the skills to take it forward and as [?], other skills required commercial legal, build a company around that and importantly, we finally found a guy that had success in taking a part to market internationally. He became the CEO. It was a [sleep?]and haunting look so a [?] product was sold for

hundreds of dollar per kilogram and that was eventually sold to a New Zealand listed company and I see they are now achieving significant sales into China, which is fantastic.

S1 23:48

Wow.

S4 23:49

Second is Zed Energy just announced, end of last week, that they're investing a further 21 million dollars into one of our start-up technologies; the company was Ecodiesel; it was spelled as ZED. It was a technology, which converted tallow waste animal fat into bio-diesel, which will hopefully through ZED, now soon be available in the New Zealand market. Finally, this one is more of a market research breakthrough, but we've been working with a physicist at the University of Auckland and we've cracked a step, which is important in how we separate male and female [bearing?] sperm cells using photons or pulses of light so very gentle and embedded in a lab on a chip, very cheap and high [?] technology.

S1 24:40

Wow, fantastic. That sounds like some really great businesses. Just staying though on the clean tech side of things, how big is the opportunity for New Zealand and has the horse bolted, or are we able carve our niche and be seen as leaders in the world, or are we far behind now?

S4 24:59

I don't know that we're far behind, but it is a challenging sector for New Zealand. Clean Tech by nature, generally is for a capital of [intenseness?], while remaining high risk and that's a tough combination to finance from [inaudible]. You could be too you know lead by choosing specific sectors and saying, 'this is where we're strong', but I do think we are obviously strong in [Darey?]. We see some very interesting technologies in converting Darey shade waste into to energy. Interesting technologies also [inaudible] of the animal processing industry, and I think from what I've seen in anyway, in some of those niches where we've got an opportunity to excel. But as I said you can't be blinded by just those niches because there are pockets of genius around New Zealand and the Lanzatech story comes from a Shawn Simpson, Richard Forester combination, individuals like that get together and create world class science.

S1 26:02

I guess the reason I'm bringing up because it sells a story, doesn't it? A country like New Zealand, islands down there in the the Pacific, got this so called, clean green image, and still for better or for worse, if there was a bigger clean-take industry in New Zealand, it would help be part of this bigger story. Because we look at the danes and we say - whether it's true or not - we look at them and say, "Well, they're innovators in that in that seat and that's what they're known for. Look at New Zealand, it's sheep and cows still, which isn't a necessarily a bad thing. But if you were looking to create something, a new industry and really be a shining light in the world, it's a bit of a problem, isn't it?

S4 26:43

Well, [inaudible] in bungee jumping, so at least not to yet to hung up. But just to answer the correct question though - one of the things that we should acknowledge and as a government employee, I think I can say this and [inaudible]. It's really dangerous when a government organization starts to strong-pick winners. We're in a model and we've setup a model, I think in New Zealand, where we allow innovation in it's [nearly?] forms to flourish; we try to. That's what we should be trying to encourage the system up. When we try and pick a signal up like Green Tech or Clean Tech, we may end up making some significant errors. I mean over the, sort of the 80's and 90's, we've missed a lot

of millions into clean technology. Mostly without much output to be frank. It's probably, no one would have predicted for example, that New Zealand would be the home of two of the largest baggage handling systems in the world, or one of the world's most dominant player in the video industry or the film production area, for example.

S4 27:43

We end up with the interesting innovations that cop up if you get the seatings right. The challenge we've got, I think as a nation, is making sure that we can get our seatings and realize that that means that company is pretty much almost from day one, has to be thinking level, because the market here in New Zealand is far, far too small for us to really compete here. You talked before, and Russell mentioned about, this sort of fear of failure, which is something we have to get over as a nation. We have to absolutely acknowledge that a significant portion of what we do will be valued, because that's the way design works; that's the way the process works. We also, as a nation, have this unique fear of success problem, which for many years we called the [inaudible] syndrome. You see that still today, although it's lessening somewhat, thankfully. But when you see great success stories, there is this feeling that we need to see what was wrong with the angle or what did they do differently? We really need to be able to celebrate success and accept failure. If we can get those two things right then that's a big part of how we'll see New Zealand future exist.

S1 28:43

Very good point. Can I get you to pick a winner then, David, or do you want to shy away from that?

S2 28:50

It couldn't be put better a couple times already, and I hope you won't mind if I talk again about Lanzatech. Interesting, because in the news in the few days, even since we held the Moxie Session, the news has come out that Lanzatech is going to shift a proportion of their R and B off shore and just to use as an example of Lanzatech, as I know went very well, this was an amazing piece of science-that these guys have really put out a lot of thinking into commercialization. The way they did it is almost sort of a textbook of how you grow a fast moving science-based organization and yet they have felt many times criticized for doing in it. So for example, it's very capital intensive, so they have to take on new investors all the time, which means they're basically selling down and diluting their share in the company, which interestingly then means - and the price - they're quite often being criticized for no longer being a New Zealand business. They're bringing a whole lot of off shore talent, because they need really great science and engineering talent in New Zealand and we just don't have enough here, so they are criticized in some ways for bringing in off-shore talent into New Zealand [crosstalk].

S1 29:51

Which way is the money flowing though?

S2 29:53

Typically from China or from other parts of the world into New Zealand. Some of the yearly state funding came from New Zealand, which is fantastic but we just don't have enough capital, but these guys have up to [inaudible], nearly 100 million dollars of growth capital that I probably plowed into Lanzatech. And so of course, they had to go diverse and their customers are diverse. So it's interesting, because to me that is always the text book of how you should think about running a global company, right? But at a test lab here in New Zealand, they used the [?] steel mill as they test. They've kept a retained portion of the R and B for a hell of a long time here in New Zealand. Recently, they have

unfortunately moved a few jobs off-shore, are going to have a few jobs off-shore, but they retained about 20, 30 people here in Panel. So to me, yeah you can look at that and say, "what a shame, it's a New Zealand company leaving the off-shores", but actually it's a success story. It's a New Zealand company that came out of nothing and has grown to be globally relevant and retains a portion of it's footprint here, so that's my success story.

- S1 30:54 Good, well I think it's a nice success story to finish up the show on. It has been a real pleasure having such an important key people here on the Moxie podcast to talk about science and commercializing science, in particular in New Zealand, and some of the challenges, and some successes that we've seen there as well, and definitely opportunities. All that's left to do is to get you guys to blow the trumpet and let us know what you're up to, and we have people who can find out a little bit more about what you are doing. First of all, Brent Ogilvie at Pacific Channel, how can people catch up with your activities?
- S4 31:32 So we've got a website of course, pacificchannel.com. Folk can contact us through that, or I'm on Twitter, [brent_ogilvie](https://twitter.com/brent_ogilvie). We're currently working on number of technologies; would be keen for people to join the mission. My general view of this is that it requires a Mauian effort. So effort from both the government guys, from private sector and critically [inaudible] from investors.
- S1 32:05 Good stuff. I really like these kiwisms--kiwinizing, all these phrases; it's very cool. Thank so much Brent for being on the show, thank you. David from New Zealand Trade and Enterprise. David Downs he's the general manager from there. Where can people catch up with your activities?
- S2 32:22 Well probably the best way is through, NZTE.govt.nz or on twitter [DWDDowns](https://twitter.com/DWDDowns), my name, and I'm going to steal Mauian. I think that's a fantastic phrase--
- S1 32:34 Yeah, isn't it? It's great.
- S2 32:35 That's what you needed. I think it's wonderful. And thanks for this mornings session. I think it was great, really good to talk to these guys, and learn there's a whole lot of kindred spirits. [In a holla?].
- S1 32:45 [In a holla?]. Someone needs to put that on a t-shirt and give that to Prince George while he's over there at the moment - Mauian effort. Thanks David. Russell O'Brien at Callaghan Innovation, where can people catch up with your activities?
- S3 33:01 So callaghaninnovation.govt.nz, surprise, surprise and in the interest of international collaboration, you can catch me on twitter at hashtag [IrishRussell](https://twitter.com/hashtag/IrishRussell).
- S1 33:11 Hashtag [IrishRussell](https://twitter.com/hashtag/IrishRussell). Thanks so much to you Russell. Really a pleasure having you on the show. Cheers. Thank you for tuning in whether you were watching the video or checking out the audio version of the show. It's all on the one website as well; it's themoxiesessions.co.nz. That's where can find different versions of the show, the archive, as well as the transcripts, and you can catch up with the next session, which we're having next month, as well. Thanks so much for tuning in, my name is Glen Williams with you here in London. Until next time, see ya.
- [music]