Hon Judith Collins KC

Attorney General
Minister of Defence
Minister for Digitising Government
Minister Responsible for the GCSB
Minister Responsible for the NZSIS
Minister of Science, Innovation and Technology
Minister for Space
Lead Coordination Minister for the Government's Response to the
Royal Commission's Report into the Terrorist Attack on the Christchurch Mosques

Ref:JCOIA-138

Tara McAllister
Via fyi.org.nz
fyi-request-27497-c70e68f6@requests.fyi.org.nz

Dear Tara

Thank you for your email of 4 July 2024 requesting, under the Official Information Act 1982 (the Act), the following information:

> *all of your communications which mention or are about the following topics: Vision Mātauranga, Mātauranga Māori, Māori research, science of innovation.*

I have considered your request and following a search I have found three communications which I believe to be in the scope of your request.

One is a response letter I sent to an anonymous correspondent which is enclosed with this letter.

The other two communications are written comments I made on two briefings dated 24 May 2024 and 6 June 2024. I am withholding these two comments in full under the following sections of the Act:

- 9(2)(f)(iv), to maintain the constitutional conventions for the time being which protect the confidentiality of advice tendered by Ministers of the Crown and officials;
- 9(2)(g)(i), to maintain the effective conduct of public affairs through the free and frank expression of opinions by or between or to Ministers of the Crown or members of an organisation or officers and employees of any public service agency or organisation in the course of their duty.

There is also publicly available information on communications I have made in relation to the topics you requested. I partially refuse your request for this information under section 18(d) of the Act as the information requested is or will soon be publicly available.

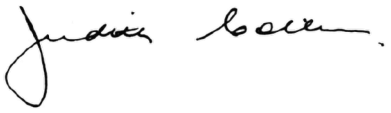
For your reference, I have enclosed a transcript from my recent appearance at the public meeting of the Economic Development, Science and Innovation Committee on the 17th of June 2024, which is also available to be viewed here:

https://vimeo.com/showcase/10758044/video/949338221

I am satisfied that the withholding of any information is not outweighed by other considerations that render it desirable to make the information available in the public interest.

You have the right to seek an investigation and review by the Ombudsman of this decision, in accordance with section 28(3) of the Act. Information about how to make a complaint is available at www.ombudsman.parliament.nz or freephone 0800 802 602.

Yours sincerely,



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Anonymous ECR
anonecr@gmail.com

Dear Anonymous ECR,

Thank you for your email of 7th January 2024 expressing concern about how Māori involvement and relevance are being considered in research funding assessments.

I am concerned to hear that you were advised at your university that including a Māori component is mandatory for research proposals to be successful. This advice does not align with guidelines for the general research funds administered by MBIE.

For research funds, such as the Endeavour Fund, the requirement is to *consider* the involvement of Māori people and knowledge (the Vision Mātauranga policy) *where it is appropriate* for the research being proposed. It should not be forced in as mandatory where it does not make sense to do so. Where a proposal does align with Vision Mātauranga, it must do so well and perform strongly against the criteria of the fund.

There are a small number of research funds where a Vision Mātauranga component is required, such as the Vision Mātauranga Capability fund. These funds have a specific purpose of increasing the participation of Māori in the science, innovation and technology system, and are less than five per cent of MBIE-administered research funding.

It would not be appropriate for me to comment on the specific example that you have cited, as the independent assessors consider several aspects of science excellence and impact in their scoring. However, I have directed officials to be clearer to research organisations and assessors that including a Māori component in proposals is not mandatory for an excellent application to be successful.

I see great potential for our science, innovation and technology system to deliver benefits for all New Zealanders, if researchers both here and overseas have confidence that their proposals will be treated fairly. I and my officials will work to ensure that we have processes of the high standard expected of a world-class science, innovation and technology system.

Yours sincerely

Hon Judith Collins KC MP
Minister of Science, Innovation and Technology

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Hansard transcript

2024-25 Estimates for Vote Business, Science and Innovation (excluding appropriations related to the Retail Crime Subsidy, the Health Research Fund, and New Zealand Trade and Enterprise)

Economic Development, Science and Innovation Committee

17 June 2024

Members

Dr Parmjeet Parmar (Chairperson)
Dan Bidois (remote)
Hon Casey Costello
Reuben Davidson
Hon Willie Jackson
Hon Dr Deborah Russell
Tanya Unkovich
Dr Vanessa Weenink (remote)
Scott Willis

Witnesses

Hon Judith Collins KC, Minister of Science, Innovation and Technology, and Minister for Space

Ministry of Business, Innovation and Employment
Carolyn Tremain, Chief Executive
Robyn Henderson, Acting General Manager, Science, Innovation and Technology
Danette Olson, General Manager, Science System Investment and Performance
Prue Williams, General Manager, Future Research Systems

Callaghan Innovation
Dr Stefan Korn, Chief Executive

Parmar — Thank you, Minister Collins, for coming to the select committee. We have the Ministry of Business, Innovation and Employment, and I believe we have Callaghan Innovation here as well. Thank you for your time. We have 90 minutes—thank you, Minister. We don't have a structured agenda. I also note that you have sent a PowerPoint presentation just before, this morning. As the letter stated that the introductory remarks need to be short, I just wanted to know if this presentation is part of your introduction?

Collins Yes, it is. Thank you very much. First, I'd like to acknowledge the chair, Dr Parmjeet Parmar, and the members of the committee. Lovely to see you here. I'm pleased to be here as the Minister for both Science, Innovation and Technology as well as the new Space portfolio. I'm joined here today by the Secretary of MBIE, Carolyn Tremain, on my right, and her team of SI&T officials. Robyn Henderson is with me, and she's on the left. I'm also joined by Stefan Korn, the chief executive of Callaghan Innovation. As the Minister of these two important portfolios, I'm excited by the opportunity in front of us to ensure that our investment in science innovation can underpin future economic growth and that we are leveraging our advantages in the aerospace sector.

I will start my opening comments today by outlining how I'm approaching both these portfolios. My office has prepared a presentation for the committee to help outline this and to go along with the presentation. To deliver the economic growth we need to sustain the quality of life for all New Zealanders, we must ensure that our science innovation system is optimised and focused on the right things. Since becoming the responsible Minister six months ago, I have been interested in ensuring that our investment in science, innovation, and technology has sufficient focus on tangible economic outcomes alongside the environmental and social outcomes it also serves.

Our scientists produce amazing work. With me is not actually a lunch box but it is a Lumi drug detection kit. I don't propose actually testing anybody for it. I'm failing that test right now. If you can open it up—there you go, Robyn. It can currently detect P, or methamphetamine, ecstasy, MDMA, and cocaine, and results appear on the app within seconds. It does, however, need a degree to get into it! Someone will assist—awesome. This device is world leading, and it won the prestigious Excellence in Forensic Science award at the 2023 World Police Summit in Dubai. Here it is here.

Now, see, you take this—as I said, they won't let me have an operating one, so I can't test you—and you have your drug in here, or what you think is your drug. You don't have to take it out of the plastic, which is the most innovative thing, which means that you can—from an evidential point of view, it is actually very sound. Then you just pop it on there and up it comes with the result. So that's ESR—one of our CRIs. They actually invented that. So this is a world-leading invention coming out of one of our CRIs—and with a foolproof box!

Even with all this amazing work, the status quo simply cannot go on. The CRIs, or Crown Research Institutes, and Callaghan Innovation are not performing financially, and the sector in general is not fit for purpose to deliver the value that New Zealand needs and that our scientists deserve. To get our sector performing, the Ministry of Business, Innovation and Employment has recently convened a Science System Advisory Group led by Professor Sir Peter Gluckman. This group has been tasked with developing a set of evidence-based recommendations to strengthen the science, innovation, and technology system and ensure its future success. This group will be thinking through a range of different issues with our current science and innovation system.

On top of this work to streamline the SI&T system is my other key piece of work to pass enabling gene technology regulation and establish a gene technology regulator. This will bring about numerous benefits for New Zealanders by giving our country access to new cancer treatments, emissions reduction technology, and biosecurity tools.

Before handing over to the committee, I would also like to talk briefly about my Space portfolio. I'm very proud to be the first Minister for Space, and I see huge potential for New Zealand in leveraging our existing strengths in this high-growth global industry. New Zealand punches above its weight as one of only a handful of countries in the world with space launch capabilities and as the fourth-most active launch country over the past year. Just to give you an idea, this is the size of what satellites can be now—that still have amazing things happening in them. Most of them are a bit bigger than that, but not that much bigger. So it's quite extraordinary what can happen.

The potential here is immense. The global space sector is predicted to be worth over $1.8 trillion per annum by 2040. New Zealand's 0.27 percent share of the global market was worth $1.75 billion in 2019. Taking advantage of our natural and policy advantages, we could increase our global market share. A New Zealand sector worth $10 billion a year is conceivable within the coming decade. I'm working with my colleague the Hon Simeon Brown, as the Minister of Transport with oversight for the Civil Aviation Authority, to ensure that our regulatory framework for emerging aviation is enabling and supportive of new innovation in the aerospace sector.

I've also recently introduced the Prime Minister's Science Prize, along with the Prime Minister, to help attract new talent to the space sector. Across both these portfolios—Science, Innovation and Technology, and Space—I want to acknowledge the significant contribution that our businesses are making to our economy and the intent that I have in these portfolios to back this for future expansion and growth. We have a world-class research sector, with leading academics in a number of important fields. I look forward to working with both research and industry communities over the coming year to implement the much-needed reforms to bring our SI&T system into the 21st century, to enable it to underpin and drive our future economy. Happy to have some questions.

Parmar Thank you, Minister, for that overview.

Russell Thank you, Chair. Thank you, Minister. It's a fantastic field to be working in and to have the oversight on. I'm just going to note in passing that that wonderfully innovative drug detection kit won a prize in 2023—so, clearly, it came out of CRIs as they were. So they are doing some great work already.

Collins And we can do better.

Russell Indeed. Minister, you and I both enjoy a similar delight in words and the use of words. I think "lessons" versus "learnings" is one of our favourites.

Collins Ah, yes, I know! It drives me bonkers.

Russell Indeed. But I just want to note that this portfolio was previously named Research, Science and Innovation. And under this current Government, it's shifted through to Science, Innovation and Technology. So it looks, on the surface, like a de-emphasis on research and more pushing towards the innovation and technology sector. Is there a reason?

Collins Well, I think it's just because these portfolios don't normally have more than three names. So that's all. I mean, the science, research, innovation, tech—the previous Government didn't have a Minister for technology, either. And I don't think the previous Government would want to say that it didn't care about technology. The fact is, you have to have three words, apparently, otherwise it causes conniptions!

Russell OK. Well, we'll work on that one.

Collins We worked on that one.

Russell Look, Minister, you have signalled—and it's a pretty broad-ranging document you've brought into this discussion and a pretty broad-ranging change to the way our science system is set up in New Zealand. There was an extensive green paper and white paper process followed through under the previous Government with the Te Ara Paerangi Future Pathways approach, but that seemingly has been set aside and this new, as yet unspecified, approach adopted instead. Can you tell me why you thought it was better to set aside all that work and do something completely new instead of building on what had already been set in place?

Collins Yes, I'm happy to answer that. Look, I don't wish to cause offence, but I thought that that paper wasn't worth the paper it was written on, and I say that primarily because I was looking for some substantive change. There was almost nothing about gene technology. There was nothing about addressing the system as it is. It did not deal with things such as the ridiculous situation we have at the moment where scientists in seven CRIs and Callaghan and universities are often competing for the same research money for the same scientific areas, which is a total waste of their time and totally debilitating. I actually thought it was a missed opportunity.

Very early on when the then Minister, Dr Ayesha Verrall, became the Minister, I approached her and said, "Look, would you like us involved in this? Because we'd like to be part of it so we can talk about how we need to change the system." And she said that I could consult like every other person— I could make a comment—and that was about it. Look, you know, there's a reason we're talking about these things now, because I actually want to be able to involve this committee in some of that thinking that we're waiting for from the report. I expect we want to be very full with saying to you, for instance, and other members of Parliament who are interested in this area, "This is our thinking on it. What do you think?" So that you actually have an input, because there's no point having a system set up that changes with every single Government change. So it's a very important thing for the future that we do that.

Russell OK. Thinking still more in this space, about something that was going on under Te Ara Paerangi, was a little bit of an emphasis on the value of research and, in particular, on fundamental research. I noticed that in this current Budget there is no increased funding for the Marsden Fund, and similarly, over in the universities, which of course impacts on this, the PBRF has been halted and funding has been continued just at existing levels. So it looks rather as though funding for fundamental research has been frozen. And, of course, in effect, with current economic conditions that does mean it's effectively a cut in funding for fundamental research. What do you see as the value of fundamental research in the science system?

Collins Well, clearly, fundamental research is extremely important, but I've been looking at what Ireland's done and looking at what Singapore's done, and what I've seen is where research is—obviously, you need fundamental research, as in terms of, say, the public good research, but we also need to have research that turns our scientists into knowing that their work is actually going to an end, which means they can invent things, that they can have some share in the proceeds of that, that we can protect our intellectual property, that we can also think more economically about what science and research, innovation, and technology can do for us.

I mean, our share of the Budget is, what, $1.2 billion. That is not to be sneezed at. It's a big chunk of money. And, of course, it hasn't gone up yet, and the reason is, of course, we don't have our new science system in place, but also, it's really important we get those fundamentals right. But I'm not going to stand back and have our scientists all competing for the same money. That is just ridiculous when we have that and that's what's happened. So we just need to fix that, and that's one of the things we're trying to fix. But, while you're fixing it, you can't pour more money into it.

Russell Right. I take your point. What I'm hearing from the sector, of course, is a whole lot of uncertainty, and that's unsurprising, but that uncertainty—and coupled with extensive public sector cuts—is creating real anxiety and a whole lot of people who say that that makes them question whether or not there is a place for them to do science in New Zealand. When do you think people in the sector will have some more certainty about what the sector is going to look like?

Collins I think once we get the report through from the Science System Advisory Group and Cabinet has had a look at it and decided what it's prepared to do. Also, I think, too, once people realise things like scientists have been leaving New Zealand for years, from things such as biotechnology not being enabled in this country. Australia is on to it. The European Union is on to it. These are the sorts of things that are going to make a big difference. And I think there's a lot of scientists who are going to see that there's a real point in them being here.

But we do need to understand that there is always change, and change does bring about uncertainty, but it also brings about opportunities. There's some of our scientists graduating with their PhDs looking for work, and they may well find that the new system, once it's put in place, will actually have quite a lot in it for them. I expect that there will be quite a lot around innovation, and it's just the fact that that's where we need to be. If I'm looking at very successful countries in this, like Ireland and Singapore, they're not holding back on what they do, but they're not only doing what they once did 30 years ago, which is what we've been doing.

Willis Thank you, Minister. And I note your point about stability. I think the Parliamentary Commissioner for the Environment has also talked about the need for stability in funding, and we've seen that the National Science Challenges have come to an end and that funding, rather than being reallocated into the system, has gone. It seems to have been taken out of the system. So I'm wondering, firstly, what is the risk? It seems to create uncertainty and a lack of stability to the workforce, to the capability that we have within the sector, when we lose that funding and we lose those programmes.

Collins Look, I understand, Mr Willis, that it is really hard for people going through uncertain times, but what I'd also say is the Government is not the only funder of science and research, and that much of the research and science developed in this country is from the private sector. But we cannot continue down the pathway, which the National Science Challenges ended up doing, where we had—at one stage, I think it was seven of the CRIs all competing for similar funding on a similar issue. It's simply not acceptable, and I've had scientists say to me that they've had to become experts in trying to put funding proposals together, and all slightly tweaked differently depending on which fund they're applying to. But I think what you'll find is that even though that money is not there in this Budget, the Science System Advisory Group will come up with some ideas around how we handle that research funding and what is the gatekeeper, rather than multiple gatekeepers—how do we deal with it? And so these are some of the things we're trying to look at. I think it's really important that our scientists have a clear path forward, which is why this report is due relatively soon. We'll have it in the next few months, and we'll be able to actually give people some certainty.

Willis The National Science Challenges have come to an end, clearly, but there are the Centres of Research Excellence, and it looks as though that's an appropriate place. But if we've taken the resource out of it and we're not putting it back into that research, do we risk a bleed? Do we risk losing bright minds?

Collins I think we're going to have some scientists who choose to end their careers with us, but we'll have plenty of other scientists wanting to start their careers with us. But remember, too, that much of research funding comes from the private sector, and so many of our successful industries help fund our research sector as well. So we just need to be aware of it. It's not only Government money, as in taxpayer money; it's also the private and industry-led groups. The fact that we have, for instance, 25 industry research institutes tells me that the current system is not working for them, otherwise they wouldn't be funding 25 separate industry research institutes. It's really important that we look at the whole sector.

As to money that has been lost to the Science Challenges, it was only ever a 10-year programme. It was only ever funded for 10 years. It's not a cut, because it was never expected to continue on after that. In terms of what other Budgets might do in the future, that's very much in the future, but we're not going to be pouring money in until we sort the sector out.

Bidois Thank you, Minister, and to your team. Just a supplementary on this. So, yes, there has been some cuts, but I also noticed there's some increase in funding for various funds—for example, the Endeavour Fund, the Strategic Science Investment Fund; I'm looking at the Catalyst Fund, and so forth. I'm wondering if you could talk us through what's the rationale for the increases there? What do you hope to achieve, and how are we going to measure success for those increases in funds?

Collins I'll ask Robyn to because she's got a very detailed knowledge of it.

Henderson Yes, thank you. So, in Budget '24, we were able to reprioritise some funding from within the Science, Innovation and Technology portfolio. That funding was able to be allocated to some initiatives that were otherwise going to have to come to an end—that funding had finished; they were on time-limited funding arrangements. So some funding has gone into supporting ongoing work around an infectious diseases platform. There'll be $42 million going into that, starting next year. The national hazards and resilience platform, which has been work that's been under way since, I think, about 2009, and it was picked up in one of the National Science Challenges—that work will be able to continue with this funding of $40 million. We were also able to continue the MedTech translator. This is an initiative that is in the health sector. It's very much around enabling some of our health-tech companies to develop their ideas and apply them in a healthcare setting.

Similarly, the HealthTech Activator, which is work that Callaghan Innovation have been doing over the last few years—that didn't have ongoing funding, so we've been able to keep that going. And that will work, again, with quite early stage healthcare health-tech companies to grow that industry. Also funding into the Product Accelerator. This is an initiative that is based in Auckland University, but it works with lots of other universities around the country and matches researchers with different manufacturers and helps them solve the real-world problems that they're grappling with as a business and links them into the particular research expertise that could help solve those for them.

And then other initiatives are Space Institute, also based at Auckland University; funding for the Prime Minister's Chief Science Advisor—the new appointment will be announced on that soon; and then also some funding into the Strategic Science Investment Fund, and that will be useful for when the Science System Advisory Group reports back with its recommendation.

Parmar I just want to make everybody aware, all the witnesses and the Minister, if you see members on line, as we are running a hybrid system—if you see members with their electronic hand up and their one finger, two fingers, that is the indication for primary or supplementaries.

Collins I am so pleased. As long as they get those around the right way!

Weenink Thank you, Madam Chair, and thank you, Minister. Earlier this year, along with yourself and some other people, I attended a meeting where the Horizon Europe initiative was brought up. I was just wondering how we're going to be leveraging the opportunity through that initiative.

Collins Yes, well, thank you for that question. The Horizon Europe initiative was something that the previous Government was able to put in place last year, and we completely supported that from Opposition, looking to the best interests of New Zealand. And, to date, around 90 New Zealand partners have been involved in consortia applying for Horizon Europe funding. So far, we have a relatively high success rate of 23 percent—so that's 12 out of the 51 projects with funding decisions. At this moment, it's going very well.

Recently, I was at the OECD on Science meeting. I shouldn't tell you the name of the country, but there was one Minister of science from a country who came to me and said she wanted to know how—oops, she/he; any gender at all—wanted to know what our feelings were about the success of New Zealand joining into Horizon Europe. And I said we're finding it very successful, because our scientists want to work with scientists from around the world, and getting them into labs or being part of even virtual labs in consortia actually helps them hugely, and they can still live in the best country in the world.

Willis Thank you, Minister, again. I think we can all agree that the creation of a scientifically literate public is essential to a healthy science ecosystem, but we've had cuts to MBIE in particular, I'm thinking about, that created the loss of Unlocking Curious Minds funding, which was outreach—it was science outreach going out into the communities. And we've seen the great exhibition that Tūhura Otago Museum put on recently where the containers would go out into communities to help build awareness in the communities. Do you think there is a need to relook at the way in which we build more scientific understanding in our communities, and where the budget lines might be found for that?

Collins Well, I think, speaking hypothetically—because, obviously, I can't talk about what might happen in future, but what's really clear to me is not enough people in our country understand the crucial role that science and technology has in the fact that we are an agricultural and a horticultural giant. We're a giant because of science and technology and, obviously, our willingness to accept science and technology. But that wonderful place needs to be—also, we have to understand that we have something else to sell to the world, and that is our scientific expertise and our technological expertise.

So we have to stop thinking that we've got it all made. It's like in business: as soon as you think you've got it all sorted, then, actually, probably someone else has surpassed you. It's the same in politics, frankly, as well: once you think you know it all, you've actually lost the plot. So it's really important. I think we do need to do a lot more talking up science and tech—the innovation side, the research side. We need to be constantly talking about the frozen container shipments, all these sorts of things—basically, invented through New Zealanders taking risks and taking chances and looking at the science that they knew then. These are really important things, and we're just holding ourselves back.

If I can give an example—and I've talked to a lot of audiences, and you will too; not necessarily science audiences, just people about various things. And I talk to them about the fact that we have, in Scion, one of our Crown Research Institutes, the science to end wilding pines, and that science can't be used at the moment because we don't have a biotech-enabled regulator to enable this to be even field trialled. This would mean that pines, instead of dropping pine cones—therefore their seeds everywhere—would not drop pine cones and their seeds everywhere. Imagine what a wonderful product; we could then sell that to the world. And, by the way, that could help other countries not have wildling pines everywhere, ruining our biodiversity and actually just ruining our beautiful places all around Central Otago and other areas.

So these are some of the things we could do, but we need to be talking it up and telling people what that means. We tend to talk about science and sciences are good, which is right, but, actually, most people need to know what's in it for them. What are we going to do for them? It's like the CAR T-cell therapy being undertaken at the Malaghan Institute, which is actually one of my favourite things at the moment, because it cures cancer using someone's own cells. I mean, it's amazing: stage 4 breast cancer cured in the woman who had this CAR T-cell therapy, which at the moment was able to be used, given special permission for her to be able to have it. If we could have that available to people in our health system, it's a lot better than pretty tough drugs that are having to be given to people, with chemotherapy.

We've got some solutions, but we need to talk about what's in it for the New Zealand public and also the world—great inventions to sell, so we're not known only for our wonderful kiwifruit and our wonderful dairy products and our wonderful meat, but, actually, for our wonderful science and health tech, which I just love, too.

Willis And do you think—because we're also seeing cuts across the Public Service, and in NIWA it looks as though the cuts are leading to the loss of 10 of our gold-plated climate scientists. Now, it does look—and to your point that we do need this expertise, and we need to be showing leadership, and we particularly need climate scientists who understand the specific situation we face in Aotearoa, particularly for our agriculture, for our primary sector, do you think we are in a good place when we are losing some of our brightest minds? And what can we do to ensure that those losses aren't there, because it's hard to build up that capacity? That's not something you can just hire. They're not cogs; they're bright minds.

Collins Well, I think one of the things to always bear in mind is that decisions about which staff are let go or whose job changes are for those boards and for the chief executives of the CRIs. I can tell you, though, that part of our climate change response needs to be around what the solutions are, and the solutions cannot be destroying our agricultural and horticultural sectors. They have to be about solutions that enable those sectors to continue the good work they've been making over the years. Those are the sorts of things. So I just think we need to—I can't get into the detail about individual scientists or parts of it, because those are absolutely to the board and the chief executive of those CRIs, including NIWA. I also feel that we just need to look constantly at what's the solution, because we've got plenty of people, by the way, who can tell us the problems; we need solutions as well, and I'm sure that those scientists will find other work in the system as well.

Willis And I've certainly been talking with both older and younger scientists concerned about the changes in the sector, and a student who works on climate change adaptation and mitigation wrote to me and said that the Government's decision to reverse the $450 million lifeline given to the science sector, Wellington Science City time, meant to create a Wellington science city, "really ruined any hope I have of being able to stay in New Zealand". This is a massive funding opportunity that would've fostered the scientific community in New Zealand and helped us retain our most highly skilled young graduates and young people. The money simply isn't there.

Collins Oh, you're talking about the Gracefield project?

Willis This is the Wellington Science City. So we're seeing students who are finishing off their PhDs who no longer see a future in New Zealand, in science, because the funding is drying up or it's not in the places that they see are crucial. And I wonder, if we're thinking about stability, it looks as though, instead, we've created instability.

Collins Look, I appreciate you reading that out fully. The student seems to have been misinformed, because even though we're not going to fund the Gracefield new project, the reason for that is that, number one, most of that money was going to buildings, and it was only part of what was needed. So that was really clear from Callaghan when I became the Minister: that there was a major financial problem there. And so the $400 million was only the start of it. In fact, Stefan might be able to help me with this. Do you want to just come up here, Stefan? Stefan Korn, the chief executive of Callaghan. So, Gracefield?

Korn There was about $200 million ring-fenced from the $450 million for infrastructure improvements at Gracefield. So most of this does need to go into infrastructure. I see the point about, for scientists to be able to work, obviously they do need fit for purpose infrastructure and equipment, but also one thing that I would highlight, which was actually part of Wellington Science City as well, was the mobility of the workforce. I think, for a lot of our younger scientists, I would encourage them to also look at—you know, it's not only research jobs in Government; there's research being done a lot in industry, and I think what we need to do is to encourage them to say, "Let's not set up your career so that you have to rely on the Government making all of these things available, but you can actually dip in and out, go between businesses and public sector, and all that."

Collins Universities too.

Korn Yeah, universities as well.

Collins Some of the really—I don't know, Madam Chair, if I can just sort of throw this in here, if your committee might be interested into having a look at some of the research that's going on at the moment. If you go to the Robinson Research Institute, businesses like OpenStar and others—really exciting work. And I think, if you want to have a field trip, we could help organise that.

Parmar We will discuss that.

Collins I'm thinking also Auckland University. I'd really love you to be able to see, if you haven't already, the aerospace institute there, where there's a mission control and they're involved in the Rocket Lab launches, and it's very exciting but also incredibly cutting-edge stuff. And, also, the other part there would be the health tech—what's it called, the advanced—

Unidentified Biological institute, ABI.

Collins ABI—the Auckland biological institute. That is involved in some incredible health tech stuff, like using science and tech to avoid operations and all sorts of things. It's just amazing stuff. So I think it would be quite good. At the moment, this is going on in these different places, like the universities and the private research institutes, and the CRIs are doing some great work here and various other parts, but there's not a lot of cohesion. That is really what Sir Peter Gluckman's group is looking at: how can we do this more? We don't really have anything that's dedicated to things like AI, for instance; quantum; these sorts of biotech, either. So how do we have our system that's fit for purpose for not only our older technologies, our older needs, but our newer needs? And I think that's one of the things we're trying to get right. So it's going to be—you know, any change is always challenging for people, but it's also, I think, enormous opportunity for us to deliver a lot more for our people—a lot more.

Russell Thank you, Chair. I want to go back to the Endeavour Fund, because I'm confused by some of the numbers here. In this current year, we've seen an increase in the Endeavour Fund—the funding that's gone to it—of about—

Unidentified Nine million.

Russell Something like that. Yes, it's gone from about $236 million to $245 million, or something like that. But then if I look in the return of funding for—

Collins I've got a specialist for this one—so off you go!

Russell If I look at the return of funding for science, innovation, technology—so I'm looking on page 69 of vote business, science, and technology. And we look down there and it says in the—this is the return of funding; the money going back into the Crown. It says, in the 2027-28 year, there's $9 million going back. So it looks like $9 million on one hand this year and then $9 million back in future years. The same thing has happened with the health research fund, but I know the Minister is talking to the Health Committee about that. The Marsden Fund: there's $3 million going back off the Marsden Fund in that 2027-28 year, and so on it goes. So, over time, there's a pretty significant return of funding. If you could just talk me through that, it would be really helpful.

Olsen Sure. There's two things happening with the Endeavour Fund. The $9.5 million that you've pointed out—or $9.7 million, I think it might be—in 2027-28—that was cost savings in the current Budget process. So that was also the Marsden decrease that you're referring to. So Marsden and Endeavour have taken small cuts in 27-28 as part of Budget '24. But the other thing that's happening—so, you know, there was a cost savings—

Russell So we are taking from the future in order to fund today? That's the way I'm hearing it.

Olsen No, no, no; there's a separate thing, and I'll explain the phasing in a minute. The first thing is Cabinet '24 made a decision to reduce funding for Endeavour in the year 27-28. That's just a decision of the baseline funding into the future. The other movements that you're seeing in the Endeavour Fund is because we need to phase the funding each year. So the Endeavour Fund funds two sets of initiatives: Smart Ideas, which are for up to three years, and research programmes, which can be anywhere between three and five years. And the amount of funding for research programmes is quite variable. So that we can have a funding round every year of about the same amount of money—so currently about $39 million—we have to phase the funding. We sometimes move money between financial years to ensure that we've got enough money to pay for the contracts that the Science Board enters into each year. So most of that is just a movement of money to align with contract payments.

Russell OK, but can I see the—is this shown over the four out-years anywhere in these documents?

Olsen Not to the degree of granularity, I think, that you're looking for, but it's something we could get and give to the—

Russell It would be useful, because otherwise I'm not going to—because it does look like just—it'd be good to get that granularity—

Olsen It's simply about phasing to align with contracts.

Collins If we could get that to the committee?

Olsen We can do that.

Russell Thank you. That would be great. And the same thing on the Marsen Fund as well: $3 million down in—

Olsen Well, that was a Budget '24 decision.

Russell OK. So it's not just that it's continued; it's actually $3 million down in the out-years?

Olsen Correct.

Russell OK. All right. Thank you. There's another few that are like that as well, but I might come back to you post the hearing—

Parmar All right, we'll go to Hon Willie Jackson.

Jackson Minister Collins.

Collins Hello.

Jackson How are you? I'm really interested in the relationship and your view in terms of Māori going forward. I don't really see anything, Minister, but I know that there is some history there in terms of National and Māori and partnerships going forward. Where do you see that going?

Collins Well, actually, thank you. I accept that the National Party has been a great partner with Māoridom over the years and has delivered more than many others. I think it's really important, for instance, that we look at how we enable and encourage Māori, particularly at school and at universities, to take up careers in science and maths, and that the best way forward for Māori is for young people to be at school, active, interested, and seeing a future in science and maths in particular, because I'm just such a keen person on science and maths, and tech.

So, if I look at things in particular, I would say the Data Iwi Leaders Group, which has been involved in discussions around the use of AI and AI in Government, and I'll pull this in because it is actually part of this portfolio. I have found my discussions with the Data Iwi Leaders Group to be invigorating and actually really enlightening on how progressively the Data Iwi Leaders Group is thinking about how to use data and technology for better outcomes for the people that they are most concerned with, which are Māori, obviously, for no particular reason. And they are actually showing us a way forward to us using this in Government and giving us a lot of ability to do so. So these are the sorts of things that I think are important.

In terms of mātauranga Māori, I think it's really important that we properly define and work out what we mean, and that's part of what the Science System Advisory Group is looking at. We have people on that group who are well versed in the area. But we also are very aware—and I'm not at all concerned to say—that not every application for funding should have to have a Māori component. People should be able to put their applications for funding that fall or rise based on their ability to actually show why they should have it and also what it is they're about to achieve. But I actually think that the worst thing that we could possibly do is not to encourage more children, more tamariki, to be interested in and see themselves as having careers in science. I just think it's just—and tech. And I have yet to find one young person who's not interested in tech—everyone is.

Jackson Your previous Government, of course, invested in mātauranga Māori. In fact, Vision Mātauranga was something that Minister Mapp green-lighted, and actually talked about Māori components being part of everything. So I just want to get some—

Collins I'm not sure that I would see it as necessarily involved in everything, but I do think—and I've certainly had complaints from researchers who have said that they couldn't get any research funding unless they had a Māori component to it, and they felt that that was unfair and it was holding them back. So some of those people were looking to Australia and other countries. But I think that it's much—we don't have to be so blunt as that. What we can do is we can look to see where the value is and the value—there is a lot of value. You know, I feel I'm quite good chums with Sir Ian Taylor, and we've often talked about that particular issue. I think there are huge opportunities for us as a country, but what we shouldn't do is to word everything so that a whole chunk of researchers feel that they're being left out when they don't need to be. We can actually be in it together. In this country, we're too small, with just over 5 million people, to feel we need to be divided. We need to be working together.

Jackson But would you agree, though, Minister, that, in fact, it's been Māori researchers who have been left out, because the investment in terms of Māori research from your own organisation—and you've said it, Carolyn, and your organisation has said this—there's been minimal investment in terms of Māori research. And that's why your former Minister was very clear in terms of mātauranga Māori that aspects and components of mātauranga Māori should be included in everything that comes forward, because of the minimal investment in Māori, Minister.

Collins Well, look, Hon Jackson, Dr Wayne Mapp hasn't been the Minister for science for a very long time. We've had a couple of Governments since then, and Wayne Mapp and I are good chums—good friends—and his views will be well-known. I'm looking to the future. That's why, when Dr Mapp was the Minister for science, we didn't have AI, for instance—or if we did, we didn't know we had it. We didn't have quantum; we didn't have biotech like we should have. There's lots of things that have changed. I actually think the best thing we can do is to get people interested, excited, and understanding that there are genuine careers. Personally, I'd like to see—and this is completely going to upset all those people with communications degrees. I'd just like to see more kids taking science and maths at school, and less in communications and media.

Jackson Could I ask one more question?

Collins I think we've got some parents who'd agree with me!

Parmar There's a supplementary. I'll go to Vanessa. Vanessa Winnick, do you have a supplementary?

Weenink Thank you. Just a supplementary on that. Minister, are you aware of any partnerships with any of our many fantastic [*Inaudible*] that are enabling our advanced aviation and aerospace sector?

Collins Yes, thank you. That was all about advanced aviation and aerospace. So there's the University of Auckland space institute, Te Pūnaha Ātea, and then there's also Tāwhaki, just south of Christchurch, which was set up in a partnership between local rūnanga and the Government—the Crown. So that's doing a lot of advanced aviation, in terms of horizontal launch—so drones, uncrewed aircraft, those sorts of things; uncrewed air taxis, I hope, in the future, as we get across the blockages in Auckland transport! And then we have the University of Auckland space institute, which I've already said you should go and visit as a group, if you wish to. These are both good innovations, which, obviously, we support, and we believe that it is important. I would say, though, that the most productive of all would have to be the one owned by Rocket Lab at Mahia Peninsula. I mentioned before in my speech that New Zealand is the fourth-most prolific launcher in the world—successful launches—and when I look at what we do in the sector, a lot of it's down to Sir Peter Beck, actually, and his innovation and his courage. I just look at that and think, wow, I'm really pleased that we're part of it.

Bidois Thank you, Madam Chair and Minister. Great comments about encouraging more people in STEM subjects—very, very encouraging indeed. I just want to zoom out and talk more about private R & D. So you've mentioned before there's actually probably a lot more R & D going on in the private sector than public. What's the latest estimates that you have on how private R & D is going in New Zealand, because I understand that, relative to OECD countries, our proportionate rates of private sector R & D are quite low. I'm keen to get a sense from you on what the current data is showing us. What are the low-hanging fruit, and what's your aspirations to improve it?

Collins Look, that's a really good question, thank you. There's some interesting figures on this. Our R & D expenditure as a percentage of GDP is about 1.5 percent. The business R & D expenditure—so the private sector—is actually 1 percent. That puts us as 27th in the world, on the figures I've been given. Interestingly, Ireland has 1 percent R & D expenditure and business R & D is 0.8 percent, and they're 21st in the world. We've got Israel at 6 percent, Switzerland at 3.3 percent, Denmark at 2.9 percent, Singapore at 2.2 percent—you know, clearly it's not just about the money, but it's how it's used, and what we consider science funding as well.

So, look, I think there's no doubt that we do need to research more, but we also need to implement more. It's like there's no point in Scion, our CRI based in Rotorua, having the answer to wilding pines that does not involve chemicals poisoning things and helicopters, and that sort of thing, if we can't implement it. We have to look at, from a Government point of view, it's not just about providing the money; it's about providing the right regulatory environment so that things can get done and people can get the benefit from it. So, yes, there's stuff we can do, but I just really think we need to make the regulatory system useful and fit for purpose.

Parmar That's good, and, members, can I just say that this discussion is not about general policy stuff, policy direction. It's about the Estimates. So if you could just bring your questions back to the Estimates—that's what we are scrutinising.

Russell Thank you, Madam Chair. Just in terms of increasing our percentage of R & D as a proportion of GDP—that's what I'm trying to get the words out for—it's interesting to see that the expenditure on the R & D tax incentive is going up a little more than we expected; so that's tricky because you've got to fund it somehow—yada, yada. Are you happy with that kind of swap over, or that increase there, or do you see any risks floating through?

Collins I think it's quite easy to get fixated on percentages of GDP. I mean, because if you really want the GDP percentage, all you can do is—you know, you can actually shrink the economy, and suddenly it becomes a bigger percent. So let's not do that—let's not do that one. The private sector: at the moment, it's, what, 0.95 percent; so it's about 1 percent total R & D—1.47. We'd love to see more, but the fact is it's not so much that—it's not just that; it's implementation. When we have solutions for some of the world's great problems, around climate change, around all sorts of things, we have to be able to implement them, if we can implement them—I mean, that's the way. I'd love to see more, but I'm also realistic. I know there's a health budget; I know there's everything else. Everyone else has got budgetary needs, including defence.

Russell Yeah, it just strikes me that one of the issues there—and I'm sure you'd probably agree with me—is often not so much the research but what can legitimately get called development and so be eligible for this.

Collins That's right. And I mean, I think some of the rules that we always put in place—because everybody has to put in rules around these things, right? If the rules are too easily gamed, we could end up with very strange things happening—

Russell And not even just the strange research.

Collins No, just very strange research that seems to have very little to do with actually an innovation that you wouldn't just consider a bit of a tweak. And, of course, that is all money that's not then being used for other things, as well. So it's about having a balance and also, I think, being flexible enough to deal with, and to change rules when they need to be changed.

Russell And just one final point on this—I mean, I take your point about you could faff around with all sorts of ways to measure this, but are you still hopeful of increasing or working towards increasing the amount of R & D as a share of GDP—no matter that we can fool around with numerators and denominators there?

Collins Well, I think the main thing, from my point of view—and I know that Carolyn Tremain wants to make a comment, and she's going to in just a moment—which is I'd like the economy to keep growing faster. So that would be helpful. But, anyway, Carolyn.

Tremain Thanks, Minister, and just to say that we are coming up to a five-yearly evaluation of the R & D tax credit incentive. I think that'll look not only at the administration of the system but also the impact and compliance—so that issue about re-characterisation of research.

Russell That's good information.

Collins But you're right—I mean, as a tax policy person yourself, you will know—

Russell There are ways to manage that.

Collins There are ways to manage, and I think we have—you know, fewer massaging of it and a little bit more actual would be good.

Davidson Thanks, Madam Chair, and I thank the Minister for your answers so far. Just to pick up on the "T" for tech that's replaced the "R" for research in the portfolio, and looking specifically at the balance, I guess, in relation to the game development sector rebate scheme. So, I mean, I guess the first question is the balance between the $38 million for the rebate versus the just over $2 million going towards the Centre of Digital Excellence, and the decisions around getting that balance—some comments on that, and then some supplementaries.

Collins From memory, we actually, basically, kept the same policy that the previous Government announced last year on this, so that there wasn't too much of a change. But you might have some—any further detailed information? Just a moment; we'll get the current expert. That's the thing with MBIE: there are experts.

Henderson Sorry, was the question around whether it's—

Davidson It was, really, around the balance between the rebate, at about $38 million, versus the investment into the Centre of Digital Excellence, at around $2 million.

Henderson Yeah, so I think it's about—yeah, another $10 million was allocated to the Centre of Digital Excellence over four years. So that was enabling that to continue, but it was to have a broader national focus—so not just being based in Dunedin. It now has to work with gaming companies around the country.

Collins I think they were very worried that they were going to lose that whole—

Henderson The momentum.

Collins —the momentum that they had—because, you know, I'm quite permissive on this sort of stuff. I think that computer gaming is not what I do, but I love that other people do it, and I think New Zealand has some great gaming people, who need to be able to create more games and sell them to the world, because it's the—whatever generation it's called these days! Whatever that generation is, it's their entertainment. They don't go to movies; they do this and create them, and we have some great expertise. It's a fledgling industry, but I think last year it sort of contributed—what was it—about $400-and-something million—

Henderson I think so.

Collins —to the economy. And it's a weightless export. So it's really great in all sorts of other ways, and we have such creative people. I'm sort of trying to hope that this is one of those things that gets everyone excited about tech—particularly at school—and they want to do anything to do with tech and science and create new careers.

Davidson And less comms and media?

Collins And less comms and media. I know that that's going to upset all the media people here, and Willie, but that's—you know, I just take that on board. But I do think that we need to—I mean, comms and media needs to be into this world, too, in many ways. It's understanding that this is a potential massive growth area for us, and it's worth a bit of investment.

Davidson So the supp' on that, really—and just to dig a bit deeper into it—is around the balance of that funding, because it's such a relatively small percentage that goes into the development, which is the part that, arguably, is going to drive the growth. So it's really around—is there a case, or was there a case, for investing more funding into the development side of things, potentially retaining the rebate at the level it is? Is that something you looked at or you plan to look at in the future?

Tremain It's, really, only the first year that the rebate will come into play, so I guess we'll get a better understanding of how it's being utilised. I would expect, in the first year, it'll probably be underspent.

Collins We'll see how it goes, because this is the first one. I mean, the previous administration announced it and we said, yes, we'd do the same, and I think that they felt they needed to do it, and we agreed, because the Australians were trying to grab all our game developers, because our game developers, obviously, are superior to theirs. Well, you know, we're not stealing theirs. So I think we'll see how it goes. But we think it's probably enough, but we'll see.

Jackson I just wanted to touch back on what we were talking about earlier, Minister, in terms of Māori relationships and funding going forward, given, as I said earlier, your good chum Wayne Mapp certainly kicked things into shape—

Collins Well, watch it or I might start talking about some of your good chums, too.

Jackson In 2010, when he was—

Collins 2010! You're so last—almost last century!

Jackson Yeah, your former Government, and he was ahead of the game and he initiated Vision Mātauranga and supported it, and I thought he was exceptional, "Mappy", doing that sort of stuff. What I need to know is, going forward, what—and I take into account some of your comments. What is the plan in terms of the funding? Will you continue the work that he started, and that we continued, in terms of Vision Mātauranga? And can I ask you and your officials: will the investment strategy that MBIE had put in place—the Tumanakotanga investment objectives, which was about partnering up with iwi, hapū, communities, Māori groups. Is that still in place in terms of a strategy going forward for this Government—because it certainly was in place last year? Will there be a continuation of that partnering strategy and investment in terms of Māori?

Olson Kia ora. Yes, we're continuing with our investments in a number of funds. So the Vision Mātauranga Capability Fund, which was started under Minister Mapp, continues, and we run an annual round of that. Then we have a range of investments in what we call Expanding the Impact of Vision Mātauranga. They're continuing. So there's the Ka Toro fund, which is enabling iwi Māori organisations and communities to engage with the science and technology portfolio. These are really small grants that they can apply for—$50,000, $100,000—to start to make those connections. And we're sort of taking this stepwise approach. So then there's another fund, called Ka Hua, which are large, partnership-based funds. We're going to be making some announcements about those shortly. There'll be three organisations who'll be proceeding through the process to write research programmes that we'll assess and determine if they align to the objectives of the funds—so that's continuing. We've got a range of investments in some fellowships, which was a one-off scheme to enable Māori organisations to engage with international agritech businesses in the US—so that's continuing as well. And then we've got some funding through the new Tāwhia te Mana Fellowships that the Royal Society administer, which are fellowships at different career levels, which are open to everyone, but there's an opportunity for Māori to engage in that process.

Jackson No, no, and I can see that. All Governments have struggled too, in terms of investment with Māori. I think we all recognise that—that the investment, in terms of research, has been low; I think around 2.5 or 3 percent. Are there plans in terms of strengthening that investment?

Collins So you're passing back to me, are you?

Olson I think that's SSAG, isn't it?

Collins Well, it is. That is, absolutely—the Science System Advisory Group. That's one of the things they're looking at. So we'll let you know.

Jackson Thanks for that.

Willis Thank you. Looking at this globally, it looks as though we're seeing a pivot away from building a more science-literate public and community—mainly through some of the unintended consequences of cuts that we've talked about: the cuts to the Unlocking Curious Minds funding, the loss of science at NIWA—and are more focused biotech as a sort of hopeful silver bullet. Do you think this is the best way to encourage STEM subjects and interest in science when we do face a climate crisis and we do need bright young minds to help us through this? But we also need a really engaged community. Do you think—hoping that we're going to have the tech solutions when we have so many other solutions and we need that science?

Collins Well, this is science. These are science solutions, primarily, but I think those bright young minds, they want solutions, and those solutions can't be just not doing things. We have to have the science solution. So gene technology, biotechnology—that is science. But, anyway, I'm going to ask you if you'd like to talk to that one too.

Olson I thought it might just be helpful to understand Unlocking Curious Minds in context. It was a small fund, as part of the Science in Society investments that we make. So we're still investing in a large range of Science in Society activities. The Unlocking Curious Minds was started at the same time as the National Science Challenge—so in the same ilk—and had a natural end point. But we are investing in Science Learning Hubs; our science teacher leadership programmes to improve education of children's science; the Science Media Centre, which is about communicating through to the science community; the science prizes—the Prime Minister's science prize is a way of really highlighting science achievements in New Zealand. We have the applied PhD scheme that's about to be initiated, which is to get students into PhDs that are in the more applied space, to enable commercialisation of technologies that the Minister's been speaking about, and then the expanded fellowship scheme that I mentioned just a moment ago, which is targeting—it didn't use to target early career researchers, and so now there's an opportunity for early career researchers, mid-career, and then esteemed researchers to get fellowships. So there's a range of these initiatives that are about lifting engagement in science and technology, and also training and development of future scientists in New Zealand.

Collins Can I perhaps just add to that too, about the STEM subjects, because you might have seen, or might not have seen, that we've got these joint research projects with NASA, which has been allocated $9 million from us, and those are all around Earth observation research projects to contribute to the Artemis programme, and some held in reserve for emergent opportunities. So these are some of the things where we've got students involved, we've got PhD students involved, we've got school students involved. We're trying to get people to see that there is not just a career as a science teacher—although that is a very valuable thing, and we need more science teachers, and I want people to know that—but people need to see that there are exciting careers in New Zealand and overseas, and jointly overseas as well, for us. But we need to do those STEM subjects at school. Without that, we're not going to get anywhere. But we've got these projects.

Tremain And I think we do quite a bit, when we have senior visitors from NASA and New Zealand, to try and get quite a bit of social media and normal media channels interested in this, just purely to create the environment where people want to study and contribute more in the science field.

Collins In fact, recently, I visited the European Space Agency's Earth Watch—I think it's Earth Watch Project; it's an institute—just outside Rome, on the way back from the defence thing, to that. We went to see them, and they showed me their real-time satellite images of the world and the greenhouse gas emissions. You'd be thrilled to know New Zealand was very good. Everyone else was pretty bad, and some places like China and India were really bad, and New Zealand was looking really good on it. But they are constantly—I mean, this is science actually working in terms of giving people good information, that people can be very well aware that what we're doing is obviously significantly better than almost anyone else that we could see. But they also do things like mapping the Antarctic, the Arctic—you know, ice floes, all those sorts of things. You know, this is how you do it these days—it's with satellites. So space is also a major—I wouldn't say it's *the* solution, but it's an enabler of people getting better understanding and, therefore, looking for solutions and finding them.

Parmar All right. So I actually have a supplementary on this, Minister, and this is in regards to your role as Minister for Space. My understanding is that the Minister for Space is not responsible for any specific appropriation and the work is supported by teams in the ministry, which is funded through the Economic Development appropriation. We know you're the first Minister for Space, so how do you see this working? You're not responsible for an appropriation, but ministry—

Collins Well, of course, space is primarily, from my point of view, around—and we have to work very closely together, the Minister for Economic Development and myself, because she's also the lead Minister in MBIE—so they're always helpful. But one of the big things is our space regulator, the New Zealand Space Agency—do we have anyone from the space agency here?

Tremain Yes, we do—Andrew.

Collins —yeah, Andrew—which is a very small agency, but it is absolutely top of the pops, as far as I'm concerned. How many have we got—Andrew—

Tremain 17½.

Collins —17½ people, and we do so much better than so many other space agencies with massive budgets. But this is the space agency—and the regulator as well—that enabled Rocket Lab to do what it does at Mahia, and I'm now working with CAA to help them do good work with the advanced aviation side. So we're, really, the regulator on that side, but we also try—and I get to sign off all the payloads that are sent up from New Zealand. So I have responsibility for making sure that they're in the national interest. So that's really what we do. We're not NASA. We don't pay for other people to put rockets up; we're the people who enable that to be done here, and we do it on the basis that it's in New Zealand's best interest. But I actually think it's a great model, and when I've been to some of these other big space agencies, we've got more rocket launches—successful ones—than they've got, and they've got enormous budgets that just blow our minds: almost as big as the country. So we do really well, and I think they're a great model for an agency.

Parmar So that means you're saying, Minister, that you're happy with the Minister for Space not having responsibility for any specific appropriations, and the way it works?

Collins Look, we're the regulator. So—

Parmar So you're happy with the current model and the way it is funded?

Collins Well, yes, because I'm not putting up rockets anytime soon. Although some people have suggested that they might like to go to the moon, but it would only be a one-way trip because we have budgetary restraints!

Parmar All right, so that's good. Thank you. We have—

Collins We don't put up anything—yeah.

Parmar All right, OK. We have—

Collins Oh, you've got some questions.

Parmar —a supplementary from Vanessa Weenink.

Weenink Thank you, Madam Chair, and I appreciate that you're doing a bit of a balancing act here—so thank you for that. Minister, further around the stuff around space, because, as you know, I'm very interested in all of this. The aerospace opportunities, in terms of the advanced aviation stuff: what do you think—you mentioned that there is a potential for growing the space sector. Where do you see the advanced aviation sector, and what sort of proportion of that growth do you think could come from that?

Collins OK, well, thank you for that question. I mean, if we're looking at advanced aviation, I'm mostly talking horizontal launch. We have some really promising emerging companies like Dawn Aerospace, Syos, Kea. These businesses that are actually taking—mostly they're engineers or physicists, and they've got together and they've worked out ways to do things, whether or not it's heavy loads for drones or whether it's horizontal launches to take things up to space stations—all sorts of things going on. We've got these really great people, and what they need is really great regulation from us, because we don't have billions of dollars to spend on this. But we do have people who want to invest in these companies, but they need us to have light-handed enabling regulation that enables them to get on with their job.

So one of my jobs is to, having taken over just recently the advanced aviation space—sorry about that pun—advanced aviation area is to work with CAA, the Civil Aviation Authority, to make sure that they become the wonderful regulatory agency like the space agency is. And I just want to say that the New Zealand Space Agency does everything it possibly can. Without their really good touch, we wouldn't have a space industry. Mind you, if we didn't have Sir Peter Beck's innovation and courage, we wouldn't have a space industry, either. And one of the great things is we're at the bottom of the world—this particular trajectory, which is apparently very important for advanced aviation and launches—and we don't have any near neighbours. I think there's one flight that goes across Mahia Peninsula each week.

We've got some real opportunities, and we need to make use of this, because we can't be entirely dependent on primary industries, as we have become, and tourism. We need to have other strings to our bow. So it's not "instead of"; it's "as well as". So that's how we've got to grow the economy. I see no way forward to grow the economy other than science and tech, and that includes space and gaming, and everything else fun.

Bidois Just to change tack a little bit, to talk about AI, which I know, Minister—

Collins Please do—thank you very much.

Bidois —you're very passionate about.

Collins Yes, I am.

Bidois Certainly there's a big opportunity for New Zealand in that AI space. I'm just wondering what the coalition's plans are to support the use of AI and support the sector but, at the same time, make sure that any downside risks are well managed—downside risks around data and—yeah. Happy to just leave it to you, but really keen to get your thoughts on that.

Collins Well, first off, a big thanks to those members of the committee and everyone else who's been part of our AI cross-party group, which I set up last year in Opposition because it was clear to me that something needs to be done and we need to understand a lot more than we did then. What I see as really important for us—and if I've got the Data Iwi Leaders Group as an example—is it's really important for us to get on board with this and to understand that we collect data all the time—you know, banks do; everybody does. How do we make that work for people so that New Zealanders out there are getting better services from the public sector, as well as the private sector, based on that? I know that it's sort of fashionable at times to get very worried about AI, but, let me tell you, the bad actors in the world are using AI, and so the good actors need to be using it too. We need to get with the programme.

One of the first things that MBIE has done is to put out an AI road map to harness and to focus on AI for productivity, economic growth, diversification and resilience, and that is a vision of an AI-enabled sector. On the other hand, I also have my digitising Government sector as well. I have the Department of Internal Affairs working on how Government can be using AI better. But we need certain principles around it. Parliament passed—when was it—two years ago changes to the Privacy Act so that we protect data. The other thing is the digital identity. That is really important for getting rid of this clunkiness that we have at the moment in trying to engage with Government agencies on a digital platform.

But the other thing to remember is that this sort of stuff has to be voluntary, because we know that there are some New Zealanders who worry deeply about their digital identity. If we try and do almost anything, whether it's to rent a property, get a loan, or open up, I don't know, probably a power bill, actually—anything like that, you have to turn up with your driver's licence, your passport, or your digital identity, all your identity, and then someone takes a photocopy of it and puts it in their filing cabinet, which is subject to burglaries and everything else. So we're not doing enough as a people to protect ourselves, and this is one of the ways to do it, so we're fully embracing that.

One of the things we are trying to do as well is sort of guidance to businesses based on risk management, and I've been meeting with our Australian counterparts on this area too. They see it as "honey pots". If you look at honey pots, they have exactly the same issues. You know, rental agencies, real estate agents—everyone wants all your details when you deal with them, right? So who are these people and why do they have your details? They have your details because we don't have something that we can say that "That is actually me." We do use the RealMe thing, which was set up in about 2011. It is pretty clunky. I mean, I'm one of few people I know who's got it who uses it, but lots of other Kiwis don't. They did not get it, they didn't understand it, they didn't see a need for it, but actually, with cybersecurity such an issue as it is now, we've got to have some certainty and protection.

So we're working on all of those sorts of things. AI is crucial for that, but also AI is crucial when it comes to things like us making sure that the right people—as in, those that need it—are the people who get the most help. That's really important, and that's where I think the Data Iwi Leaders Group are so far ahead of where we've been in Government, and that's why I'm really excited about our working together on this.

Parmar That's good. Dan, do you have a supplementary or—

Bidois No, thank you. Thank you, Minister.

Parmar All right, good. We'll go to Deborah Russell.

Russell Thank you. I do have about three primaries, but I'm happy to take them in turn—

Parmar All right. So we'll see the time—

Collins Is there something wrong with the air conditioning in here, team? It's very warm in here. It must be the warmth of your welcome—either that or we're saving money on heating.

Russell If I don't get to all of my questions, I'll submit them after the session. But, Minister, you've talked several times about gene technology, and we haven't really talked about it in depth, and I am interested in that. You've talked about—

Collins Good. Are you going to come and have a briefing?

Russell I'd love to.

Collins Good—excellent. All right, we'll do that.

Russell You've talked about setting up a risk-proportionate future focus and an enabling legislative framework—so a couple of questions around that. When can we expect to see some of that first coming out—so some indications of what that's going to encompass? And also, I wonder if you could talk a little bit about what you mean by a risk-proportionate framework?

Collins Well, I can talk about some of that. Now, our Cabinet policy decisions are expected to be made by August this year, and legislation is expected to be introduced by the end of this year, and legislation is expected to commence following a full select committee process in the second half of 2025.

So what we've looked at is the Australian model, which they set up in 2015. We've also looked at the work that's going on in the EU—so the EU is going down the same pathway as we are—and we've looked at similar countries with similar needs. So everyone's pretty much moving in this direction—that we can see—and if I say that gene technology has advanced incredibly rapidly in recent years. So CRISPR technology, which was in 2012 the big thing that changed everything—so that meant that instead of having to take a gene and stick a gene from some other entity on to it, or whatever, you could take one gene and do a little tweak inside that gene. That's where you get the ability to do things like CAR T cell therapies and using your own cells to save you from cancer—those sorts of things. It's incredible technology. It won the Nobel Peace Prize about—oh, was it four years ago? It was 2021—three years ago.

It's like the technologies have moved and we haven't, so we've stayed stuck. If I tell you that the Environmental Protection Authority has approved nine GMOs for release in New Zealand since 2015, all of which are for medical use, but at the same time things like the Scion development in wilding pine technology can't even be trialled, and the downside would be that it would stop wilding pines. It's like things have got out of proportion. So it's very important, but we're not trying to do anything that is radical. What we're trying to do is to be very much the Australian model, with improvements, because we've learnt from the Australians, and they've said if they did theirs again, they'd do this, this, and this, and that's what we're doing. Do we have anyone from our team on this one here? Prue, why don't you come up—Dr Williams? Actually, there's one thing in dealing with the science area: everyone's a doctor, pretty much.

Russell Mine's wretched philosophy, though, rather than science!

Collins I know, it's the wrong one, but I mean, Prue's got one in the right area! So perhaps, Prue, if you could speak a bit more. You know, that's the time thing—so full process, we go through it all, and there's got to be benefits.

Williams Well, certainly, as the Minister has said, we're trying to make sure that we can enable our scientists to use the latest technologies and to use that to make advances, and, as the Minister has said, the rest of the world is doing this. With our approach, which was really based around the Biotechnology Task Force of many, many years ago and some regulations that were set up then, and what those regulations said—there was a royal commission at the time who said we need to embrace these technologies and we need to advance. So, at the moment, it's not that you can't. It's not against the rules to release a field test—say, these pine trees out in the environment. The challenge is that you need to go through a process of making the application and allowing people to speak to it, and it's actually quite difficult and challenging. So scientists don't bother to go through the process. By updating legislation and bringing in the new updating to take account of the new technologies, we'll be able to make some forward progress.

Russell So "risk-proportionate"—that's interesting. That feels a bit red raggy to me—red rag to a bull—so that's the bit I'm—

Collins I'd rather cure cancer, frankly.

Russell Well, I agree. I agree, but that's why I want to understand that "risk-proportionate" phrasing.

Williams I think that this is about—with any technology, you need to weigh up the risks and the benefits. One of the challenges for us is being able to think about, with a new technology, just what are those risks. The risks of the new technologies are different to the ones of the old technologies when we first started out. That's one of the things we're trying to catch up on. So, for instance, as the Minister said, when we first were using biotechnology 20 years ago, you had to bring in a different species of gene. You would splice the piece that you had and you'd bring in some foreign DNA, and now we can manipulate it all within in the same species. The risks are quite different, so we need to update that.

Collins One of the things, too, is that there's been some feedback from some organics people and they're worried about that—mind you, they have neighbours next door to them who aren't organic, and it [*Inaudible*] But I'd also point out that organics are 0.7 percent of our exports, and 90.9 percent of those go to markets that produce or are proposing to produce products using very similar gene technologies to what we're using. So it's simply, you know—if you are subject to, in just a practical sense, Cyclone Gabrielle and you had your apple orchards wiped out in Hawke's Bay, that will take, what, five to six years for those trees to be able to fruit again. There is science in one of our CRIs that can produce those apple trees producing fruit in a year. So, instead of entire families being wiped out economically and a whole series—and, dare I say it, Australian apples getting into markets that should be ours—there's opportunities here, and since apples are all grafted anyway, it's not affecting anything else around. We have the most amazing science, but then we're not using it. I've certainly been to Adelaide, where they set up a very friendly biotech area, and a whole chunk of New Zealand scientists are working there because they can't work here. I mean, it's just enormous, and a lot of it's in medicine. So we're just missing a trick and, worse than that, we're holding our health back and we're holding all these other opportunities back.

Parmar So, Minister, are you saying that you're giving assurance to the committee that the changes would just include something that can be done with CRISPR, or are you not giving that assurance?

Collins No, there's a different range of things. Once the legislation is drafted, it will be coming here, obviously—I expect it will be this select committee. CRISPR is the major area, but there are new technologies as well.

Parmar But you're not giving any assurance of that—

Collins Well, we're saying we don't need to do those other things.

Parmar It's just going to be limited to that, or it will be wider than that?

Collins I think, until we get the full draft of the legislation, and before things go through Cabinet, I can't really say much more, because it still has to go through Cabinet, and I can't give you assurances on anything, really, other than this is the time frame which was asked for and that technologies have moved on a long way from 30 years ago.

Parmar Right, thank you. So we have just one minute left. Are there any concluding remarks, Minister, you would like to make?

Collins Thank you very much for your interest, and I think, if you want to do some of those little field trips, particularly around space and quantum and stuff, you'd really enjoy them. I think everyone likes space—the number of even little kids who think I'm the "Space Lady" is great.

Parmar Thank you, Minister, for that. Thank you for your time, and thank you to the Ministry of Business, Innovation and Employment, and Callaghan Innovation as well. Thank you, everyone.

conclusion of evidence