From: no-reply@mbie.govt.nz

To: Research, Science and Innovation Strategy Secretariat

Subject: Draft Research, Science and Innovation Strategy submission

Date: Sunday, 10 November 2019 8:40:43 p.m.

Attachments: Online-submission-form-uploadsdraft-research-science-and-innovation-strategy-submissionsRSI-

consultation-UC-Final.pdf

Submission on Draft Research, Science and Innovation Strategy recevied:

Are you making your submission as an individual, or on behalf of an organisation?

Organisation

Name

Professor Ian Wright

Name of organisation or institutional affiliation

University of Canterbury

Role within organisation

Deputy Vice-Chancellor

Email address (in case we would like to follow up with you further about your submission)

ian.wright@canterbury.ac.nz

Which of the below areas do you feel represents your perspective as a submitter? (Please select all that apply)

If you selected other, please specify here:

Gender

Ethnicity

Name of organisation on whose behalf you are submitting, if different to the organisation named above

In which sector does your organisation operate: (Please select all that apply)

Research, Government, Professional services, Interface of research and industry

If you selected other, please specify here:

How large is your organisation (in number of full-time-equivalent employees)?

More than 830 research academics and >1000 PhD students

Please indicate if you would like some or all of the information you provide in your submission kept in confidence, and if so which information.

Please upload your submission document here

RSI-consultation-UC-Final.pdf - Download File





Research, Science and Innovation Strategy Submission form

The Government is developing a Research, Science and Innovation (RSI) Strategy to set out our vision for RSI in New Zealand and its role in delivering a productive, sustainable, and inclusive future.

We are keen to hear the views of New Zealanders on the draft Strategy so that we can get a better understanding of what our country needs from RSI. We also are looking for feedback on how we can take action to ensure New Zealand's RSI system is optimised for success. These views will inform the direction of Government investment in RSI and the research and innovation areas for us to focus on as a country, as well as help us understand the challenges we need to overcome.

We encourage anyone with an interest to make a written submission.

How to have a say

We have included a number of questions in the draft RSI Strategy document to highlight issues on which we would like further input. We encourage you to use these questions as a guide when submitting your feedback.

This document provides a template for you to provide your answers. Please upload the completed document using our <u>online submission page</u>.

You do not have to fill out every section - we welcome submissions on some or all of the questions.

The closing date for submissions is 10 November 2019.

After the consultation period finishes, we will analyse the submissions received and incorporate the feedback in the final version of the strategy.

Confidentiality

Please note: All information you provide to MBIE in your submission could be subject to release under the Official Information Act. This includes personal details such as your name or email address, as well as your responses to the questions. MBIE generally releases the information it holds from consultation when requested, and will sometimes publish it by making it available on the MBIE website.

If you do <u>not</u> want some or all the information you provide as part of this consultation to be made public, please let us know when you upload your submission. This does not guarantee that we will not release this information as we may be required to by law. It does mean that we will contact you if we are considering releasing information that you have asked that we keep in confidence, and we will take your reasons for seeking confidentiality into account when making a decision on whether to release it.

If you do not specify that you would prefer that information you provide is kept in confidence, your submission will be made public. While we will do our best to let you know that we plan to publish your submission before we do so, we cannot guarantee that we will be able to do this.

Contribution of Research, Science and Innovation

This strategy is about New Zealand's Research, Science and Innovation (RSI) at a high-level. Its aim is to identify challenges and opportunities that will have the broadest impact on our research and innovation activities. For this reason, it mentions few specific areas or sectors of research and innovation. For this draft version of the Strategy, we are keen to hear from researchers, innovators, businesses, and providers of public services on what the RSI system could be doing to accelerate progress on Government's priorities.

Question 1: Where can the RSI system make the greatest contribution towards the transition to a

clean, green, carbon-neutral New Zealand?

Question 2: Where else do you see it making a major contribution?

Question 3: What else could else the RSI system be doing to accelerate the progress towards the

Government's priorities*?

st see list of the Government's twelve prioritiesincluded in Part f 1 of the draft Strategy.

Please type your submission below. If applicable, please indicate the question(s) to which you are responding.

The RS&I system can make the greatest contribution by funding research and establishing incentives that encourage research in areas that will support research informed policy making, and positive societal change, which can include economic, social and environmental impacts.

The University of Canterbury agrees with the proposed focus on initiatives that support the transition to a clean, green, carbon-neutral New Zealand, and also believes that the RSI system can make major contributions to other areas that address New Zealand issues and opportunities, specifically: medical devices, agritech, niche manufacturing, digital health and New Zealanders' well-being, and should have influence the New Zealand "RS&I agenda" over at least a 5 – 10 year horizon.

The University of Canterbury agrees that the RSI system should be funding initiatives that lead to better connectedness. One way to do this would be to re-establish the Partnership scheme as that was an excellent tool to encourage collaboration between industry and researchers. We make additional suggestion specific to encouraging connectedness in that section of the feedback document. Further, support and incentives, beyond the newly instituted R&D tax, for sector and business-funded post-doctoral fellows that would address specific research and innovation projects (including be being proportionately imbedded in such business), but still affliated with universities or CRI's with access to the requisite research infrastructure and intellectual leadership.

The RS&I system should also consider expanding the mechanisms that support translation of research into impact, post-research. The strategy as proposed does not address the importance of translation well. The role of the Commercial Partner Network in research commercialisation needs better highlighting, access to international capability in technology incubation needs improving, and the issue of access to capital whilst keeping innovations onshore needs to be considered more fully. Likewise the proposed focus on the Frontier risks New Zealand not being able to capitalise on existing data and discoveries that have not yet been made accessible or translated into uptake. Some consideration as to how this might be achieved would enhance the strategy.

Whilst the University of Canterbury commends MBIE on its aspirations for the research and innovation sector, we believe that to achieve the vision of New Zealand being a global innovation hub and a world class generator of new ideas by 2027, requires a more ambitious goal regarding R&D expenditure. The 2% target will simply raise us to the same level as comparator nations, not lift us above them. Australia

has recently set a goal of 3% and we feel this should be an aspirational target for New Zealand, if we are to achieve the goals of the strategy.

Researching and innovating towards the frontier

Question 4: Do you agree that the RSI Strategy should be focused on innovation at the "frontier" (creating new knowledge) rather than behind the frontier (using existing knowledge to improve the ways we do things)?

Question 5: In which research and innovation areas does New Zealand have an ability to solve problems that nobody else in the world has solved? Why?

Question 6: In which areas does New Zealand have a unique opportunity to become a world leader?

Why?

Question 7: What do you consider to be the unique opportunities or advantages available to the RSI system in New Zealand?

Question 8: What RSI challenges are unique to New Zealand, that New Zealand is the only country likely to address?

Question 9: What are the challenges of innovating in the public sector? How do they differ from those in the private sector?

Please type your submission below. If applicable, please indicate the question(s) to which you are responding.

The University of Canterbury agrees that there should be a strong focus on research at the frontier, but there are also opportunities for creating innovation out of existing knowledge, so a coordinated set of funding mechanisms that can support both kinds of research activities is needed, e.g. using the Marsden Fund to support at the frontier research and the Endeavour Fund to support innovation, which can include projects focussed behind the frontier as long as there is obvious benefit to New Zealand.

Given the increased focus on research at the frontier, we believe a good way to do this would to increase the size of the Marsden Fund in line with the levels of blue-sky research funding provided by other comparator countries, as we currently lag behind.

Focusing solely on research at the frontierrisks marginalising industry innovation and does not support the concept of "protect and advance". We are concerned that the proposed RS&I strategy sees the responsibility for behind the Frontier innovation being transferred exclusively to economic development agencies, which might negate innovation aimed at social or environmental impact, and hugely limits New Zealand's ability to leverage existing results, data and technologies for public good and policy interventions. Therefore whilst we welcome the increased focus on research at the Frontier we would

like reassurance in the next iteration of the strategy that some funding will be maintained in the front end of the RS&I system to support behind the Froniter research and innovation, and not just anticipate that this need will be served at the Economic Development agency level.

New Zealand has the ability to solve problems that are of specific interest and relevance to our physical and social context. As such, we endorse the unique attributes articulated in the strategy on page 18: geology, Antarctica, hazards, Māori/indigenous studies, natural sciences/New Zealand's unique ecology and geography, agritech, novel manufacturing and processing, our societal values, social mix and size.

We agree that challenges to innovation in New Zealand include regulation, the relatively small size of companies, the fragmentation of industry and poor access to funding of sufficient scale. In some situations, regulations can limit innovation e.g. constraints due to regulation by the Commerce Commission and we strongly support initiaitives to address these. We also acknowledge that New Zealand doesn't have the investment or industry depth to support conversion of research into innovation as our businesses are predominately small-medium enterprises. We are hopeful that the R&D tax credit might help overcome these limitations but are sceptical that it is of sufficient scale to produce the predicted uplift in business R&D expenditure and feel that the strategy should have a monitoring plan in place to see how this is tracking and suggest a risk mitigation plan should it not reach the levels anticipated.

Our key challenge - Connectivity

Question 10: Do you agree that a key challenge for the RSI system is enabling stronger connections?

Why or why not?

Please type your submission below.

We agree that connectivity is a key challenge given our island nation status and distance from many key international partners, and relative greater fragmentation of delivery of research, science and innovation. The University of Canterbury would encourage initiatives to improve connectedness nationally and internationally but they need to be strategic i.e. aligned to priority areas, and backed with investment to facilitate travel/interactions that enable collaborative research and innovation. Any facilitated connectedness also needs to be meaningful, i.e., it must result in doing or leading to something, not just be a talkfest. Again the role of the Commercial Partner Network should be considered here, together with investor networks and industry partners from both New Zealand and overseas.

Finally, connectedness is not necessarily going to crystallize New Zealand's research and innovation potential, if at least within New Zealand, if connectedness is not going to increase collaboration, coherence, and critical mass of effort.

Guiding Policy - Excellence

- Question 11: Do you agree with the definition of excellence presented here as the best thing possible in its context? Why or why not?
- Question 12: How can we achieve diversity within our research workforce? What are the current barriers preventing a diverse range of talent from thriving in the RSI system?
- Question 13: Do you agree that excellence must be seen in a global context, and draw from the best technology, people, and ideas internationally? Why or why not?
- Question 14: Do you agree that excellence is strengthened by stronger connections? Why or why not?

Please type your submission below. If applicable, please indicate the question(s) to which you are responding.

We do not entirely agree with the definition of Excellence – specifically in regard to the definition of 'excellent partnerships.' What is described is co-authorship, which is just one aspect of partnership. Partnership excellence could include obtaining industry funding, co-creation of bids, international connectedness, working with Māori to understand and address their priorities etc., and not just be restricted to traditional academia definitions of publications/citations.

We also feel that the guiding policy section is currently too focused on the research front end, not the whole innovation process. The definition of Excellence needs to be explicit that innovation is not just done by academics, there are a range of different roles involved in turning research into innovation. The focus should be on creating teams with the full complexity of skills sets required for innovation, as opposed to simply putting together 'excellent' people.

We agree that diversity should be nurtured and appreciate MBIE acknowledging and responding to this. The strategy could be furher enhanced by development of a cross-governmental strategy that supports a diversity pipeline. We highlight the need to ensure that early education and beyond, supports a range of cultures that allow all members of society to participate. We encourage the development oftargets and measures and their transparent reporting to place value on supporting diversity excellence. As part of MBIE's commitment to Equity Diversity and Inclusiveness it should introduce tools to reduce the unconscious bias of assessors and provide dedicated training on Vision Mātauranga assessment.

Excellence should also be seen in the global context, remembering excellence can be research excellence or impact excellence. We shouldn't replicate what has been done elsewhere - but there may be cases where we could innovate on knowledge generated elsewhere to have excellent impact. We also need to recognise that although we want the best, New Zealand struggles to compete internationally as salaries are not as good and we do not have the same research infrastructure available.

Stronger connections support excellence, but these connections need to be appropriate. As well as researchers, they should also include investors, industry, community, etc.

Guiding Policy - Impact

Question 15: How can we improve the way we measure the impact of research?

Please type your submission below.

The Government needs to provide additional monies to support the measurement of impact, either by funding post-research contract activities (measure the impact of specific projects) or contracting organisations to do this (produce case studies to articulate projects with impact).

We believe tht it is the responsibility of MBIE to fund a review of the value of their investments – their priority is to fund and drive impact, whereas the priority of research organisations is, largely, to do excellent research and to fund impact assessment ourselves would divert tightly constrained resources from that mission.

Any work in this space needs to coordinate with any potential changes to the PBRF. There should be aligned funding to support the measurement of impact, with agreed standard measures, across government departments.

Guiding Policy – Connections

Question 16: Where do you think weak connections currently exist, and what are the barriers to connections at present?

Question 17: What actions will stimulate more connectivity between parts of the RSI system?

Question 18: How could we improve connections between people within the RSI system and people

outside it, including users of innovation, and international experts, business

communities, and markets?

Please type your submission below. If applicable, please indicate the question(s) to which you are responding.

We believe that current connections with Māori and post-research partners are weak. Connections with Māori could be improved by developing a network that focuses on supporting engagement with Māori, similar to how KiwiNet supports engagement in the commercialisation/technology transfer space.

Connectivity is improved by establishing strong relationships over a period of time. Making minimal changes to the Endeavour Fund has helped this process, as the certainty has enabled us to craft bids over a number of years, giving trust to build authentic partnerships. We encourage MBIE to keep this funding mechanism in place as is.

Connectivity is also improved by ensuring there are incentives for all partners in the work, and that there is funding for organisations to raise the awareness of the importance of strong engagement and to facilitate it happening.

Connections could be improved by reframing the dialogue so the "people outside" the RS&I system are considered an integral part of it. To do this, we need to remove hindrances (e.g. regulation/compliance) and establish incentives (e.g. the Endeavour Fund/ the Pre-sed Acelerator Fund) to let excellent research and innovation happen. Further, the Commercialisation Partner Network could be doing more to bring in international investors and venture capitalists, and policy makers should be more connected with researchers, industry, and stakeholders.

Actions - Making New Zealand a Magnet for Talent

- Question 19: How can we better nurture and grow emerging researchers within New Zealand and offer stable career pathways to retain young talent in New Zealand?
- Question 20: How could we attract people with unique skills and experience from overseas to New Zealand?
- Question 21: What changes could be made to support career stability for researchers in New Zealand? What would be the advantages and disadvantages of these approaches?
- Question 22: Do you agree with the initiatives proposed in the Strategy to support and attract talented researchers and innovators? Are any changes needed for these initiatives to be successful? Are there any other initiatives needed to achieve these objectives?

Please type your submission below. If applicable, please indicate the question(s) to which you are responding.

The University of Canterbury supports initiatives that see more funding available to nurture and grow emerging researchers, including a range of options for different career stages. One way to do this would be to introduce a specific Endeavour-like Funding pool for emerging researchers, similar to the Marsden Fund 'Fast-Start'. The strategy should also consider supporting other careers needed in the pathway, such as impact brokers, engagement specialists, research managers, industry-based researchers etc.

We recognise that we need to pay our researchers more and make our immigration rules more flexible if we want to attract the best global talent to New Zealand – the strategy needs t consider ways in which this might be achieved. We also need to reduce competition for funding and the reliance on soft money to support researchers so that key capabilities can be maintained. To this end, much of the strategy assumes explicitly or implicitly the current New Zealand system for researcher / innovator development (or attraction to New Zealand) is "fit for purpose", and accortdingly it seems odd that there is little connection or linkage to Ministry of Education / Tertiary Education Commission ambitions, given that the New Zealand tertiary sector strategy is currently being reviewed.

Actions – Connecting Research and Innovation

- Question 23: What elements will initiatives to strengthen connections between participants in the RSI system need to be successful?
- Question 24: What elements will initiatives to strengthen connections between participants in the RSI system and users of innovation need to be successful?
- Question 25: What elements will initiatives to strengthen connections between participants in the RSI system and international experts, business communities, and markets need to be successful?
- Question 26: Are there any themes, in addition to those proposed in the Strategy (research commercialisation and international connections), that we need to take into consideration?

Please type your submission below. If applicable, please indicate the question(s) to which you are responding.

Strong connections will result from initiatives that motivate all parties to be involved because they all benefit – this might be support to do the research you want to (for researchers), getting the research you need done (end users/policy makers), having involvement in something that might lead to a business opportunity (industry/investors), and meeting New Zealand's strategic needs (government / public). To do this the pathway from ideas to impact needs to be clearly understood and articulated in the strategy and there need to be benefits to each participant at each stage that can be identified.

Whilst we support initiatives that encourage better connections with international investors, we are concerned about how the innovation ecosystem will manage the balance between benefit to New Zealand and the benefit to international interests. The strategy needs to be clear about the drivers for seeking international investment and what trade offs are permissible in so doing. NZTE needs to be well aligned with this space given its role in supporting foreign investment.

Consideration should be given to funding engagement and connection work ahead of project proposal development and funding applications.

A funding scheme to enable companies and research organisations to engage international experts, like the previous Global Experts scheme would be helpful. This could potentially be run by the Commercialisation Partner Network.

Intellectual property management and jurisdictional intellectual property issues need to be taken into consideration when connecting different parts of the innovation ecosystem, especially internationally. This will require clear policy positions to ensure optimal benefit for New Zealand is captured.

The Vision Mātauranga Capability Fund aims to encourage connection with Māori. However, the requirement for Māori to provide co-funding can potentially discourage use of the fund and therefore inhibits connection. The position re-cofunding requirement in relation to this Fund should be reconsidered.

MBIE should reinstate the Partnership Fund which was an excellent tool for connecting businesses with researchers in a mutually beneficial way to solve real problems.

Actions - Start-up

Question 27: How can we better support the growth of start-ups?

Question 28: Do the initiatives proposed in the draft Strategy to support growth of start-ups need to be

changed? Are there any other initiatives needed to support start-ups?

Question 29: What additional barriers, including regulatory barriers, exist that prevent start-ups and

other businesses from conducting research and innovation?

Please type your submission below. If applicable, please indicate the question(s) to which you are responding.

New Zealand could better support the growth of start-ups by:

- Increasing international involvement in New Zealand's tech incubators. Currently most incubators only use local talent and local investors, which does not expose our companies to the breadth and depth of expertise/capital they require.
- Government funded tech incubators need to be focussed on achieving quality outcomes from their investments rather than meeting arbitrary targets, such as number of start-ups formed.
- Making sure that NZTE are aligned with the RS&I strategy and understand the expectation on them to support it. This will require changing NZTE's focus to equally support new spin outs and emerging companies, not just high growth/established companies as it does currently.
- Simplifying and increasing the R&D tax credit scheme, as uptake of the current scheme is unlikely
 to be as successful as hoped for, as the benefit is not a big enough incentive to change industry
 behaviour and it has compliance and reporting issues. We are regularly losing high growth
 companies off shore given more attractive schemes elsewhere e.g. Australia.

Another point we wish to highlight is that there is very little government funding to take research from proof of concept to investor ready/scale up, and some funding comes with constraints e.g. the Endeavour Fund requires commercial partners to be New Zealand based and that more than one partner should benefit from the research. Consideration of some flexability in these regards and a potential increase to the Pre-seed Accelerator Fund would be welcomed, and indeed is likely essential if we are to become a global innovation hub.

Actions - Innovating for the public good

Question 30: How can we better support innovation for the public good?

Question 31: What public-good opportunities should our initiatives in this area be focused on?

Please type your submission below. If applicable, please indicate the question(s) to which you are responding.

We can better support innovation for public good by changing the Endeavour Fund investment ratio of economic (70%), environmental (25%) and social (5%) projects, so that more social and environmental projects are funded. We should also consider ways to actively engage the public, through citizen science initiatives and better communication of success stories, specifically of the National Science Challenges.

Considering ways to increase the R&D budget of government departments (e.g. DHBs / Dept. Conversation, Ministry of Envrionment) so they can contract more research in areas relevant to the public good would also be helpful.

We also believe there is a significant opportunity to address public-good issues via funding access to, and translation of, existing knowledge. This would leverage and maximise the return of previous research investments, i.e. have some targeted focus Behind the Frontier.

In regards to the strategy, should there be any new public good initiatives, these need to coordinate with the National Science Challenges to avoid duplication and create synergies.

We believe that areas of focus should be identified via a transparent decision making framework, as opposed to simply asking for suggestions, as so many parties are conflicted/likely to act in self-interest.

Actions - Scale up

Question 32: What is the best way to build scale in focused areas?

Question 33: Do the initiatives proposed in the Strategy to build scale in focused areas need to be changed? Are there any other initiatives needed to build scale?

Note: see following page to comment on possible areas of focus

Please type your submission below. If applicable, please indicate the question(s) to which you are responding.

We are highly supportive of establishing commercialisation facilities and pilot plants as proposed.

We do not think the initiaitives proposed need to change.

Scale up - Choosing our areas of focus

For this draft iteration of the strategy, we seek input on the selection of possible areas of focus. We will consider establishing around five focus areas, but, depending on the eventual selection, are likely to introduce them over time, rather than immediately. In addition to the criteria set out in the Strategy document, we invite stakeholders to consider the following factors in their suggestions —

- The ambition of this strategy to focus efforts in the RSI portfolio at the global frontier of knowledge and innovation.
- Ways in which the RSI system can accelerate progress on the government's goals.
- The focus areas already determined by From the Knowledge Wave to the Digital Age.
- Work already underway where we are already seeking to build depth and scale in the R\$L system.

The following areas could be a useful start, and are highlighted in From the Knowledge Wave to the Digital Age:

- Aerospace, including both autonomous vehicles and our growing space industry.
- Renewable energy, building on recent investments in the Advanced Energy Technology Platform.
- **Health technologies** to improve delivery of health services and explore opportunities in digital data-driven social and health research.

We invite comment on these suggestions and welcome input on other possible focus areas.

Please type your submission below.

We believe that MBIE should facilitate a process to decide what the five focus areas to be based on New Zealand's priority needs and evidence of opportunities and strengths, rather than asking the public/those with vested interests to nominate.

The framework for deciding on the focus areas needs to be articulated in the strategy and ideally it should include input from futurists and international experts.

Actions – Towards an Extended Vision Mātauranga

This section of the draft Strategy signals our intention to consult and collaborate further with Māori stakeholders to co-design our responses and initiatives. From that perspective, we consider the signals in the draft Strategy to be a start, rather than a set of final decisions. Nonetheless, we are keen on initial feedback in the following areas.

Question 34: Does our suggested approach to extending Vision Mātauranga focus in the right five areas? If not, where should it focus?

Question 35: How can we ensure the RSI system is open to the best Māori thinkers and researchers?

Question 36: How can we ensure that Māori knowledge, culture, and worldviews are integrated

throughout our RSI system?

Question 37: How can we strengthen connections between the RSI system and Maori businesses and

enterprises?

Please type your submission below. If applicable, please indicate the question(s) to which you are responding.

The strategy for advancing Vision Mātauranga does not appear to be well developed There is no reference to working in true partnership, community needs and aspirations, priority issues for Māori, or a co-development approach to research. MBIE should be engaging with Māori to have a more culturally inclusive and responsive approach.

The National Science Challenges have developed good approaches to Vision Mātauranga. We recommend that MBIE refer to the NSC Vision Mātauranga group for advice on how to improve the approach to an extended Vision Mātauranga strategy.

We need greater variety in funding schemes (how they operate and what they fund) to better support Māori researchers and Māori research interests. Specifically, MBIE need to engage further with Māori to better understand their priorities and needs and proactively fund these areas.

As part of MBIE's commitment to Equity Diversity and Inclusiveness, it should introduce tools to reduce the unconscious bias and provide mandatory training in Vision Mātauranga assessment to all members of its College of Assessors.

We also ned to ensure that projects fairly recognise the value of Māori involvement in research projects by including funding for Māori participation/consultation as a permissible expenditure in project budgets.

MBIE should also consider investing in specialised roles for staff who understand Te Ao Māori and can help MBIE become more biculturally competent in their principles and processes.

MBIE could also consider creating a nationwide network of Māori engagement specialists to share and develop expertise in this area (similar to KiwiNet). Such a network needs to include research support and Māori business representatives.

Actions – Building Firm Foundations

Question 39:

Question 38: Do the current structures, funding, and policies encourage public research organisations to form a coordinated, dynamic network of research across the horizons of research and innovation? What changes might be made?

Is the CRI operating model appropriately designed to support dynamic, connected

institutions and leading edge research? What changes might be made?

Question 40: What additional research and innovation infrastructure is necessary to achieve the goals

of this Strategy? What opportunities are there to share infrastructure across institutions

or with international partners?

Question 41: What elements will initiatives in this area need to be successful?

Please type your submission below. If applicable, please indicate the question(s) to which you are responding.

Whilst we welcome the introduction of R&D tax credits, these are not available to companies when industry co-funding is required as part of a government funding scheme. This is an impediment to encouraging business investment in the RS&I system and should be removed.

The focus on collaboration and increasing emphasis on connection, which we support, can lead to bids being more complicated and larger, yet MBIE Endeavour Fund is actively discouraging expansive bids and applying greater scrutiny when presented. Government needs to ensure that its investment policy aligns with its investment practice, with clearer guidance as to what is an acceptable upper limit. Perhaps consider putting in place a restriction as to how much of a fund and organisation can apply for, as has been done historically.

Use of the CRI Strategic Investment Fund is not transparent, which is problematic for understanding and managing the research landscape, and MBIE are encouraged to consider better reporting. That said, the current CRI model which often requires researchers to secure funding to maintain their jobs is risky – the dependence on soft funding leads to precarious research careers.

Universities and CRIs could work better together if they were co-located or even part of the same organisation as they could benefit from shared infrastructure and administration.

It's important to look at how the various RS&I funds work together and are managed as a whole. At the moment the map of funding is clumpy, and there are no cross connections between government departments or shared policies. TEC, MBIE, Callaghan Innovation, NZTE, and Education NZ need to all agree to the proposed RS&I strategy, and their roles within it.

Actions – General

Question 42: How should the Government prioritise the areas of action, and the initiatives proposed under each area?

Please type your submission below.

The priority of these actions are:

- 1. Towards an extended Vision Mātauranga this is a priority as it is out of date
- Connecting research and innovation this will realise the full potential of our research via knowledge transfer
- 3. Building firm foundations these should be designed to support other priorities-
- 4. Better and coherent "start-up scale-up" support
- 5. Making New Zealand a magnet for talent if the other actions are done well, New Zealand will become a magnet for talent. This will happen by improving funding, ensuring regulation enables research and innovation, establishing the right infrastructure to support research and innovation.

General

Question 43: Do you have any other comments on the Strategy which have not yet been addressed?

Please type your submission below.

Sector priorities have not been incorporated into the strategy, nor is there any indication of the framework that will be used to determine these. This needs further developing and articulating in the final strategy.

The strategy does not provide details of how actions will be achieved which is an omission that needs addressing.

The strategy needs some clear measures to track if actions are being achieved over time. There should also be a risk management plan if measures show the strategy is not working. For example, what happens if the introduction of R&D tax credits does not produce the growth in business R&D funding predicted??

The strategy should focus on New Zealand values on a 5-10 year horizon.

The University of Canterbury fully supports and has contributed to the submissions from Universities New Zealand and KiwiNet.