From: no-reply@mbie.govt.nz

To: Research, Science and Innovation Strategy Secretariat

Subject: Draft Research, Science and Innovation Strategy submission

**Date:** Tuesday, 29 October 2019 9:06:15 a.m.

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

<u>Draft-Research-Science-and-Innovation-Strategy-submission-Oct-2019.docx</u>

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

Lynley Cvitanovic

#### Name of organisation or institutional affiliation

Whakauae Research for Maori Health and Development

#### Role within organisation

Researcher

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

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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

N/A

In which sector does your organisation operate: (Please select all that apply) Research, Non-profit

If you selected other, please specify here:

How large is your organisation (in number of full-time-equivalent employees)? 8 FTE

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

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# 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\*?

\* see list of the Government's twelve priorities included in Part 1 of the draft Strategy.

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

Part 1 Background: The opening statement in this section of the draft document sets the right tone: "This government is committed to a productive, sustainable, and inclusive New Zealand".

Consistent with that tone, it is necessary here to clearly identify the key component of what is a unique about inclusivity in this country; specifically the Crown /Māori partnership enshrined in Te Tiriti o Waitangi with all that it means for the full participation of both Māori and Tauiwi in determining and achieving wellbeing for all.

The vision statement "By 2027, New Zealand will be a global innovation hub, a world-class generator of new ideas for a productive, sustainable, and inclusive future" would similarly be strengthened if it encompassed what is unique about us; that we are a nation founded on Te Tiriti o Waitangi with all the potential that offers for our future as both Māori and Tauiwi. As it stands, the vision statement included in the draft document could be readily adopted by any number of other countries, simply by substituting their name for ours, which in itself is neither inspiring nor innovative.

The draft goes on to state that "Inclusive means the ability to participate in and benefit from RSI, which will be widely and equitably shared". A fair system justifiably prioritises equity however, in the context of Aotearoa New Zealand, it is essential that we specifically reference equity to Te Tiriti o Waitangi and to the rights of Māori, as tangata whenua.

## 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.

(Part 1 Our RSI System): This section of the draft document begins on p14. The first reference to Mātauranga Māori however, is included in the following statement on p17: "Our definition of research is intended to include the distinctive 'ways of knowing' that make up Mātauranga Māori, as well as the many different knowledge systems that collectively form global research practice".

It is important, in the context of a New Zealand RSI Strategy, that we recognise and position New Zealand as a nation which is unique being founded as it is on Te Tiriti o Waitangi. That positioning requires that Mātauranga Māori be acknowledged in the opening paragraphs of this section alongside Western bodies of knowledge rather than it being buried some way into the discussion. This would contribute to signalling the embedment of Vision Mātauranga in the RSI Strategy.

As this section includes a description of the characteristics of the existing RSI system it would be appropriate to propose definitions of key concepts at the earliest opportunity in preference to deferring this to p17 of the draft. It would also be appropriate in proposing definitions to acknowledge, for example, that research can be considered as being a political and subjective exercise as much as an apolitical and objective one.

Innovation in this country, the draft suggests (p18), is most likely to happen in one of four ways. The third of those listed is by "making the most of our unique opportunities, such as our unique geology, biodiversity, and <u>our heritage of Mātauranga Māori</u>". Whilst we welcome reference to Mātauranga Māori, we would argue that doing so here as a 'tack on' does little to underscore the primacy of Māori knowledge systems guaranteed under Te Tiriti o Waitangi nor to usefully embed Vision Mātauranga in the proposed RSI Strategy.

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.

(Part 2 – The /A Key Challenge): We note that the draft RSI Strategy document describes formulating stronger connections as being <u>The</u> key challenge for the RSI system not <u>A</u> key challenge as identified above.

Clearly enabling stronger connections is <u>A</u> key challenge for many of the reasons cited in the draft. However, other compelling challenges exist most critically developing an RSI system predicated both on Mātauranga Māori and on Western bodies of knowledge with Vision Mātauranga being fully embedded.

As a further observation, we note the apparent assumption that researcher 'success' can be measured in relation to the nature of publications produced: (p20 "Our researchers also appear to be making impact within their academic fields. Relative to other countries in the OECD, the ratio of New Zealand's very highly cited research papers (ie, research papers in the top 10 per cent of publications) to papers with few or no citations is just above the OECD average, although we still fall behind other SAEs on this measure"). This kind of perspective encourages our researchers to approach their work in a competitive and individualistic ways in the 'race' to be most prolific in terms of academic outputs etc. It is more important that we frame 'success' in terms of what we can do together taking a collaborative approach to research across sectors, across disciplines and across regions. Furthermore, consideration must be given to the end-users of the research. For many (decision-makers, community and lwi/hapū for example) academic papers are not the most useful form of dissemination, nor the most accurate "gauge" of success. Translation and uptake of research findings in Māori settings tends to occur in spite of academic publications, not as a consequence of them

## **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?

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

Part 3 Guiding Policy – Excellence (Q11): This section should place emphasis, and a priority, on improved opportunities for Maori to participate in RSI linking this with Te Tiriti commitment (rather than simply referencing Maori participation at the close of the subsection: People, thereby minimising the critical importance of ensuring improved opportunities for Maori participation).

Q12: The research workforce will better reflect diversity, and attract the people we need, when the research environment is broadened beyond privileging Western bodies of knowledge, individualistic, competitive and siloed approaches to research and a disciplinary focus. A research environment that supports Mātauranga Māori, Māori equity in relation to opportunities as well as outcomes, co-created research, flexibility, innovation, connectedness, the building of enduring research relationships, collaborative as well as multi-disciplinary approaches, and an emphasis on research impacts for social wellbeing will be invaluable in contributing to research workforce diversity.

Q14: Excellent research makes a positive impact on community wellbeing and development; it starts at home. Some of that research will be globally influenced and it will in turn influence the global context. Clearly these endeavours are inextricably linked.

## **Guiding Policy - Impact**

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

#### Please type your submission below.

Part 3 Guiding Policy – Impact: We can improve the way we measure the impact of research by ensuring that the research is well-connected to Māori and Tauiwi communities locally and nationally, as well as to communities internationally where relevant, and by actively including community input in assessing impact. Taking a step back from impact measurement, we need to first of all ensure that the process of research problem identification is more inclusive, collaborative and multi-disciplinary. Diverse standpoints and perspectives will contribute to enhanced research problem identification, richer research processes and the potential for more significant impacts.

## **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.

Part 3 Guiding Policy – Connections: We need to significantly increase the support already available to build Māori engagement, connections and leadership across the science and research sector.

We need to strengthen the high level connections between our researchers and policy makers to enhance politicians understanding of science issues in relation to policy.

We need to strengthen the high level connections between our researchers and our communities to enhance public understanding of science issues in relation to broad health and social services design and development.

## 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.

Part 4 Actions 1: We can better nurture and grow emerging researchers within New Zealand by embracing a much more diverse research environment (refer response to Q12 above).

The five proposed main action areas require re-ordering (change 4 to 1) and in one case renaming:

1. Fully embedding Vision Mātauranga in RSI

Please also refer to our response to Part 1: Our RSI System above.

## **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?

No further comment.

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.

# 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. No further comment.

# 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. Part 4 Actions 3: Please reference our responses to previous questions (above).

# 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.

Part 4 Actions 3: Please reference our responses to previous questions (above).

## 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 RSI 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.

## 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 Maori 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 Māori businesses and enterprises?

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

Part 4 Action 4: For greater impact, and in recognition of the pivotal role of Mātauranga Māori in a Tiriti-informed approach to RSI, this section of the draft (Actions – Towards an Extended Vision Mātauraganga) needs to be introduced much earlier than it is. It is critical that Vision Mātauranga be embedded across the RSI strategy lifting it above just being "extended".

Please also reference our responses to previous questions (above).

## **Actions – Building Firm Foundations**

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?
 Question 39: 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.

Part 4 Action 5: Please reference our responses to previous questions (above) in relation to an enhanced research environment.

#### 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.

Part 5 – What will success look like?: The draft highlights "In some cases, we already have a well-established set of indicators that we can use to track progress on the outcomes (including those presented in Figure 2 and Figure 3)". We note that there is room to review and improve indicators in relation to some research outputs including those 'counted' as Kaupapa Māori research when it they in reality represent Māori-centred research.

Please also refer to our previous responses (above).

#### General

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

#### Please type your submission below.

Annex Two – Indicators of Success: Our impression is that the first two proposed success indicators are at odds with each other. 1. An increase in the number of researchers operating at the forefront of their field (eg, number of researchers in top 1% by citations in international journals, weighted by country size will almost certainly encourage siloed discipline-focused activity that is individualistic and competitive with little emphasis on positive impacts for wellbeing. This success indicator does not encourage the development of the collaborative, multi-disciplinary, relationships-based, co-design research environments we need to be fostering. Nor does it fit well with 2. promoting the increased diversity of the RSI workforce in particular the proportion of Māori in the RSI workforce (please refer also to our previous responses).