

From: no-reply@mbie.govt.nz
To: [Research, Science and Innovation Strategy Secretariat](#)
Subject: Late submission on draft RSI strategy
Date: Wednesday, 13 November 2019 9:27:42 a.m.
Attachments: [Online-submission-form-uploadsdraft-research-science-and-innovation-strategy-submissionsHealthier-Lives-NSC-response-to-draft-NZ-RSI-strategy.docx](#)

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

Organisation

Name

Jim Mann

Name of organisation or institutional affiliation

Healthier Lives National Science Challenge

Role within organisation

Director

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

jim.mann@otago.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

If you selected other, please specify here:

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

3.7 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

Healthier-Lives-NSC-response-to-draft-NZ-RSI-strategy.docx - [Download File](#)

Response from Healthier Lives National Science Challenge to *New Zealand's Research, Science and Innovation Strategy: draft for consultation*

Thank you for the opportunity to comment on the draft Research, Science and Innovation (RSI) strategy. We welcome the strategy, and especially the introduction of connectivity as a third principle for guiding science strategy, alongside excellence and impact. National Science Challenges have been focussing on improving connections across the science system for the past few years, and our experience over this short period confirms that connectivity is critical to enhancing excellence and impact. We note that forging good and useful connections requires time and resources to build relationships of trust.

Question 1: Where can the RSI system make the greatest contribution towards the transition to a clean, green, carbon-neutral New Zealand?

One of the most important areas where the RSI system can contribute to a carbon neutral New Zealand is by exploring the link between environmental sustainability and health, already well recognised internationally. Recent research from the University of Oxford has shown that the predominantly plant-based foods which are best for human health are also best for the environment. The draft RSI strategy tells us that transitioning to a clean green future is not just about 'climate change but biosecurity, conservation, fresh water, and numerous other projects in related areas' and refers to the need to reduce methane emissions from dairy cattle. It stops short of making the crucial link between environmental sustainability and human health. New Zealand's economy is unique in the world for its dependence on export earnings from agriculture. It will not be enough to find technical solutions to the problem of methane emissions (although these will play an important part) – we also need to investigate ways to transition away from the dominance of meat and dairy-based farming and diets and towards a future where plant-based agriculture and diets will benefit our environment, health and economy.

Question 3: What else could else the RSI system be doing to accelerate the progress towards the Government's priorities*?

The inclusion of equity impact assessments in science policy and funding decisions would help to ensure that science investment supports or aligns with the goal of improving equity in the science system and New Zealand society more broadly because what gets measured is more likely to get done.

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)?

No, both approaches are required. 'Behind the frontier' work is required to realise the benefits of 'frontier' work as well as demonstrating the value of science to New Zealanders.

Despite the assurance that the term 'frontier research' does not imply exclusively novel activities, such as basic or 'blue skies' research, the use of this terminology is confusing. One definition of translational research, which is essential for the realisation of research impact, is the use of existing knowledge to improve the way we do things. It would be disappointing if translational research was disadvantaged by the RSI strategy because it was perceived to not be 'frontier' research. While the

authors of the draft strategy certainly understand this, there is potential for misunderstanding at later stages of its implementation. It would be useful to have very clear definitions that specifically encompass translational research.

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

New Zealand currently has world leading administrative data and a generally very supportive legislative environment for linked data research, resulting in our data being more accessible to researchers than in other countries with high quality data (e.g. Sweden). However, realising this opportunity will require constructing reliable and scalable systems for managing and analysing this data that is compatible with world leading research. There is an opportunity for NZ to transform its data resources into a world leading and sustainable research resource of international relevance. However the absence of the investment in governance and data systems is currently restricting the quantity and quality of research using our administrative data. Not only is NZ missing out on high quality information that is specific to the NZ context, it is missing out on an opportunity to be an acknowledged leader in the area of linked administrative data research. Meanwhile, NZ risks missing this opportunity as other countries (e.g. Australia, Singapore) are investing heavily in novel ways to manage and apply their own data resources.

New Zealand also has a unique population and location in the Pacific region. New Zealand has an opportunity to lead the world in co-design approaches to research with indigenous communities.

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

The size of New Zealand's population and the scale of our economy means that it is relatively easy for researchers to network with potential stakeholders in the public and private sectors. Supporting the extension of successful collaborative networks would assist in making this engagement more enduring and less reliant on individual personal contacts.

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

It can be difficult for science to engage with the public sector in order to inform innovation. The combination of financial constraints, staff turnover and the timing of the budget bid process means there are few resources available within the public sector to research potential innovations in a timely and responsive manner. Building research relationships with the public sector can be resource and time intensive due to the siloed nature of activity and the scarcity of routine pathways for external engagement with the research sector. The private sector is more likely to be able to reallocate resources promptly in response to research or innovation opportunities.

Question 10: Do you agree that a key challenge for the RSI system is enabling stronger connections? Why or why not?

Yes. Our direct experience within Healthier Lives has been that greater connectivity has led to more effective research, with a stronger social licence.

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?

There appears to be a steady drain of Māori PhDs from the science system, especially in the field of health, and as a result there is considerable strain placed on Māori researchers who remain in the system from the many demands on them. We don't have ready answers to this problem but it would certainly be worth further investigation.

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?

Yes, in general but we also need to be careful about how we judge excellence. A measure such as the number of citations in the top 1% worldwide is not a predictor of excellence for Māori and Pacific research because the rest of the world does not have the same level of interest in it as New Zealand does.

Question 14: Do you agree that excellence is strengthened by stronger connections?

Yes.

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

One important way to achieve greater connectivity will be to provide stable career pathways for researchers. Without that stability, it is difficult for research to be passed onto the 'next set of hands'.

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?

Emerging researchers need stable career pathways, i.e. the opportunity to apply for permanent research posts. Opportunities such as the Rutherford Fellowship are useful stepping stones but cannot substitute for a career pathway. University staffing is currently based on teaching income, and the teaching load assigned to young researchers is often so heavy it precludes research. CRIs continue to offer some career opportunities but there has been a reduction in research posts within universities over recent years. To attract the best talent from New Zealand and abroad, we need permanent research posts in universities and recognition of the importance of research opportunities for all staff members.

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

No. The Vision Mātauranga policy and approach require review as it is very out of date and poorly aligned with both current Māori needs and science structures. Realising Māori potential within the science system will require a new approach, designed on the basis of a Treaty partnership (briefly acknowledged on p.27).

Submitted: 11 November 2019