

From: no-reply@mbie.govt.nz
To: [Research, Science and Innovation Strategy Secretariat](#)
Subject: Draft Research, Science and Innovation Strategy submission
Date: Monday, 14 October 2019 4:06:41 p.m.
Attachments: [Online-submission-form-uploadsdraft-research-science-and-innovation-strategy-submissionsubmission-form-research-science-and-innovation-strategy-v2.docx](#)

Submission on Draft Research, Science and Innovation Strategy received:

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

Individual

Name

Name of organisation or institutional affiliation

Role within organisation

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

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

Researcher

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)

If you selected other, please specify here:

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

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

submission-form-research-science-and-innovation-strategy-v2.docx - [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 [online submission page](#).

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 not 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 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.

Q1: By adding a vision that the top priority is response to the multiple effects of climate change.

Q2 - no comments

Q3 – no comments, other than above

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.

Q4: I think this is mostly semantic. The definition of the frontier is based on existing knowledge, it defines where that knowledge ends. So any research should be done at the frontier, otherwise it would just be duplication.

Q5: New Zealand is a key player in renewable energy use, and making this more effective is a place where Kiwi's can make an impact. Also, we are a place where many natural hazards converge (earthquakes, volcanism, and in future more frequently typhoons. With many coastal cities, natural hazards are a key issue in New Zealand, and their characterization, as well as mitigation through monitoring adaptation, would be other key areas.

Q6: I think to become a world leader, it is critical to provide world class funding, in any area considered. At currently 1.32% of the GDP, raised to only 2% GDP by 2027, becoming a world leader in any area will be very difficult. Most other small advanced economies already fund R&D at >2% of their GDP. New Zealand will have to be more ambitious and aim to annually raise R&D funding by 0.2% of the GDP up to 2030 to take the lead.

Q7: A unique advantage is New Zealand's geographical isolation. It may be seen as a problem, but in fact it forces researchers to look for overseas collaborators to make an impact. The RSI system should include overseas collaboration into the strategy as one factor that will rank highly, when available.

Q8: Again, interplay of many natural hazards on a small geographical scale.

Q9: The biggest challenge is infrastructure building for sustainable living, and this should probably be done by working on connections and financing of both public and private sector industries.

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.

I think it is one key challenge, but not the only one. Also, given that the RSI system now handles many actors that all need to be connected, I think financially it is going to be hard to be successful at forging these connections if overall funding to Research and Innovation is not more substantially increased.

I think that one of the things that the strategy is currently lacking is vision. What are the key problems and opportunities that will New Zealand face in the next ten years? How can we keep building and enhancing our strengths and make sure that our strengths are sustainable in a rapidly changing environment impacted by climate change.

This rapidly changing environment has effects on many aspects of R&D in several branches:

Environment and Planning

Health

Ecology

Political Sciences and Business

And to characterize these changes, and to adapt, we will need to additionally fund

Earth and Environmental Sciences

Material Science and Engineering

Sustainable Development

Health Sciences

In fact, all of the above are connected with each other and require connections of research and private sector industries through the general issue at hand, climate change.

Rather than providing limited funding into making connections without vision, it would be wiser to have the vision that we are prepared for what is coming in the next 10 years, and poor sufficient funding into meaningful connections with the vision of climate change effect characterization, mitigation, and adaptation.

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.

Q11: The definition of excellence is not as important as clear guidelines on how it will be measured. These are currently missing from the strategy, and should be added.

Q12 – I have no comments on this.

Q13: Yes, I agree. We need both domestic and international connections, see also above as to why international connections are important.

Q14: Typically yes, but not always. However connections are normally quite important, so emphasizing them is a good point of the strategy. They should however be emphasized with a clearer vision, see above.

Guiding Policy – Impact

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

Please type your submission below.

Q15 – no comments.

PROACTIVELY RELEASED

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.

Q16 – no comments

Q17: I think putting a vision to this strategy will automatically result in connections that are useful and necessary to drive this vision, there does not need to be any extra stimulus.

Q18 – no comments

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.

Q19: Provide funding for long-term fellowships that are provided in negotiation with the research sector (universities etc.) with the provision that the award will only be made if a permanent position is offered following successful completion of the work, with a clear definition of what success means.

Q20: Finance international research and connect this with advertisement of long-term fellowships outlined above.

Q21 – no comment

Q22 – no comment, other than 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?
- 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.

Q23-25 – no comments

Q26: The RSI system needs a vision, and the most pressing topic of the next 10 years is climate change and the multitude of effects that it will bring with it, see above.

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.

Q27: Provide a specific pool of funding for start-ups that employ the latest research towards fulfilling the vision of combating climate change or adaptation to climate change. Provide loans that can be repayed if the start-up becomes successful.

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.

Q30-31: no comments, other than above

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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.

In response to these questions, to build scale one needs to be more convincing in terms of financing the RSI system – aiming for 2% of the GDP by 2027 is simply not ambitious enough and will drive success in any of the areas that the current strategy is hoping to build.

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.

Please type your submission below.

Natural Hazard needs to be part of it.

Climate Change response and adaptation needs to be part of it.

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 Māori businesses and enterprises?

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

In response to all of the above, it is important that VM inclusion is not forced, so as to not stifle fundamental research, which is going to be necessary for playing at the forefront of global research and innovation.

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.

No comments.

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 government should think hard about the next ten years, and what changes are expected during this period. And the strategy should be built to respond to this anticipation.

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General

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

Please type your submission below.

No.

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