

**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 3:00:20 p.m.  
**Attachments:** [Online-submission-form-uploadsdraft-research-science-and-innovation-strategy-submissionsubmission-form-research-science-and-innovation-strategy\\_MCE-alumni\\_Lydia-Liew.docx](#)

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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**

Lydia Liew

**Name of organisation or institutional affiliation**

Master of Commercialisation and Entrepreneurship (University of Auckland) alumni

**Role within organisation**

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

l.liew@auckland.ac.nz

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

Researcher, Entrepreneur

**If you selected other, please specify here:**

**Gender**

Female

**Ethnicity**

Malaysian Chinese

**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.**

No confidential information has been provided.

**Please upload your submission document here**

submission-form-research-science-and-innovation-strategy\_MCE-alumni\_Lydia-Liew.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.

### Question 1 & 2

LL - Global economies are trending towards "dematerialisation" and in combination with NZ's geographical isolation:

- NZ should focus in on areas or sectors which "generate value out of nothing", such as software, intellectual property (pharmaceuticals, technology), knowledge and skills (services economy).
- I.e. Move away from an export economy that relies on moving goods/materials across the world and shifting our focus away from sectors that require intensive materials resourcing.

## 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.**

LL

**Question 4:**

While I agree that there should be a focus on innovation at the "frontier", and that new and novel (riskier) science and technologies can return greater impact for the NZ economy. Considerations should be made towards a "balanced portfolio" approach, in which a proportion of funding is directed at frontier research, without sidelining or neglecting incremental research that should happen alongside.

The system should have built-in flexibility to adapt, balancing "risky" versus "incremental" research projects.

Different research subjects have different timelines. Innovative research (in certain subject areas) that have the potential to return huge rewards may take a long time and require repeated access to funding. It would be useful to consider this within the time frames in which it would take to acquire new skills and capabilities in new research areas.

A strong bias towards funding innovation/research at the frontier could risk getting initiatives started, only to have to be abandoned at a later stage, due to lack of funding for "non-novel" research.

Supporting incremental science and innovations also have the potential to provide ROI in shorter timeframes and has the ability to impart overall stability to the system.

## 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.

LL: Yes, connectivity is crucial for linking discovery, then translation and later the commercialisation of research, science or any innovation. The skills required for each stage of the process are somewhat discrete and are not often all to be found within an individual or an organisation.

PROACTIVELY RELEASED

## 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.

LL

### Question 12

The RSI system could improve its ability to attract a diverse range of talent by introducing initiatives to help individuals or organisations to mitigate the risks from pursuing a start-up idea, for example. This could be salary buy-out schemes or an entrepreneurial fellowship.

Not all science PhD graduates seek out a career path in academia. However, current opportunities for science jobs in the private industry within NZ are limited. Furthermore, the current RSI system allocates merit based on metrics to reward “academic success” rather than to the ancillary skills and talent required for a (more holistic and) successful RSI system. Examples include developing networks beyond science and academia, taking time out of an academic career to work in industry etc.

The RSI system needs to be more intentional in creating ecosystems that will be able “house” a range of diverse talent. For example, if a specialist loses his/her job, he/she should be able to look within the ecosystem for another position to be able to redeploy their skills. Otherwise, they might be more inclined to build their career/lives elsewhere in the world that could offer them better job security.

## Guiding Policy – Impact

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

Please type your submission below.

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.**

LL

### Questions 16

Weak connections exist in the system where the funding source does not motivate individuals/organisations to participate in collaborative activities. In these examples, the individuals/organisations tend to adopt a more resource hoarding mentality (because they have to compete from the same funding pool) and tend to be more secretive.



## 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.**

LL

Question 19

New Zealand needs to support the growth of private industries (start-ups/established firms from overseas) in tandem with in the areas of science that it chooses to focus on. These need to be developed together to be able to offer career options (stability) to young NZ talent.

## 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.**

LL

### Question 23

Help/encourage universities to reduce overheads to help attract external partners.

Our local institutions produces high quality research and have the ability to attract external/international partnership opportunities. However, these are often co-funding opportunities and these have to be turned away because we are unable to raise the capital necessary to co-fund significant opportunities.

## 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.**

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## 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.

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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.

PROACTIVELY RELEASED

## 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.**

LL

In addition to health technologies, NZ is already well set up to continue to develop and grow their drug discovery research. This is a high-value sector with particular focus on generating and monetising knowledge.

## 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.**

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## 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.

## 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.

PROACTIVELY RELEASED

## General

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

Please type your submission below.

PROACTIVELY RELEASED