# #59

# COMPLETE

 Collector:
 Web Link 1 (Web Link)

 Started:
 Monday, March 07, 2022 12:02:15 PM

 Last Modified:
 Monday, March 07, 2022 4:16:53 PM

 Time Spent:
 04:14:38

Page 2: Section 1: submitter contact information

# Q1

Name

Confidentiality - 9(2)(ba)(i)

# Q2

Email address

Privacy - 9(2)(a)

# Q3

Can MBIE publish your name and contact information with your submission?Confidentiality notice: Responding "no" to this question does not guarantee that we will not release the name and contact information your provided, if any, as we may be required to do so by law. It does mean that we will contact you if we are considering releasing submitter contact information that you have asked that we keep in confidence, and we will take your request for confidentiality into account when making a decision on whether to release it.

Are you a researcher or scientist?

Q4	Yes
Can MBIE contact you in relation to your submission?	
Page 3: Section 2: Submitter information	
Q5	Individual
Are you submitting as an individual or on behalf of an organisation?	
Page 4: Section 2: Submitter information - individual	
Q6	Yes

No

# Te Ara Paerangi - Future Pathways submission form

<b>Q7</b> Age	Privacy - 9(2)(a)
Q8 Gender	
<b>Q9</b> In which region do you primarily work?	
<b>Q10</b> Ethnicity	
Page 5: Section 2: Submitter information - individual <b>Q11</b> What is your iwi affiliation?	Respondent skipped this question
Page 6: Section 2: Submitter information - individual <b>Q12</b> If you wish, please specify to which Pacific ethnicity you identify	Respondent skipped this question
Page 7: Section 2: Submitter information - individual <b>Q13</b> What type of organisation do you work for?	Crown Research Institute or Callaghan Innovation
<b>Q14</b> Is it a Māori-led organisation?	Νο
<b>Q15</b> Which disciplines are most relevant to your work?	Agricultural, veterinary and food sciences, Biological sciences, Environmental sciences
<b>Q16</b> What best describes the use of Mātauranga Māori (Māori knowledge) in your work?	There is some Mātauranga Māori, but it is not the main science knowledge

Page 8: Section 2: Submitter information - organisation

Q17	Respondent skipped this question
Organisation name	
Q18	Respondent skipped this question
Organisation type	
Q19	Respondent skipped this question
Is it a Māori-led organisation?	
Q20	Respondent skipped this question
Where is the headquarters of the organisation?	
Q21	Respondent skipped this question
What best describes the use of Mātauranga Māori (Māori knowledge) in your organisation?	

Page 9: Section 3: Research Priorities

# Q22

Priorities design: What principles could be used to determine the scope and focus of research Priorities? (See page 27 of the Green Paper for additional information related to this question)

I think there are two streams of priorities. Firstly, there are the "wicked problems" that the vast majority of people can see need solutions (i.e., climate change, plastic and chemical pollution, degradation of water quality and soils and ecosystems, biodiversity loss, pandemics, anti-biotic resistance...). These problems are likely to be easy to identify, are likely to have cross-political party and cross-cultural support (at least in the identification of the problems if not in the ways to solve them), will require long-term funding (that increases with inflation), innovative solutions, funding that can be increased in response to crisis or to speed up solution development, international linkages to ensure speedy access to new information, and clear targets/impacts to be achieved. These targets can be set and measured by govt and the public: failure to meet these targets will trigger review of the target and the research. Maaori must be part of the selection of priorities rather than just asked their opinion/co-developed once the priorities have been set.

A second set of priorities should be determined in a more competitive-type process, like the current MBIE Endeavour process but with a number of improvements. (1) Anyone should be able to submit an idea/problem/solution (public, researchers, industries, govt) via a portal. (2) These ideas should be appraised by a team at MBIE for (a) existing solutions that the submitter can be informed of (indicating that full impact of the research has not been achieved and further effort is needed to disseminate that knowledge/solution (could be resolved through the development of an extension team for the whole of NZ RSI system)); (b) further information is required and the MBIE team would contact the submitter for that information. (3) The MBIE team would then write up the idea in a consistent manner for consideration by a panel: if all ideas are written equally with no names associated with them, then all ideas can be considered based on their merits rather than on how well they are written or who has submitted them. (4) The panel should be experts in the area. Ideally, being on a panel is part of the job of any RSI employee and each person would be allocated hours for this work each year. These panels would need to be diverse in gender, age and culture. (5) Ideas that were supported by the panel for funding would then be workshopped to ensure the best team is involved and the panel remains available for monitoring and evaluation of the research.

Priority-setting process: What principles should guide a national research Priority-setting process, and how can the process best give effect to Te Tiriti? (See pages 28-29 of the Green Paper for additional information related to this question)

Selection of priorities by the government or the panels mentioned above must include Maaori consultation - ideally through including Maaori in parliament and on the panels, preferably in equal numbers to pakeha, as well as including equal numbers of waahine and taane, and a range of ages, across cultures.

### Q24

Operationalising Priorities: How should the strategy for each national research Priority be set and how do we operationalise them? (See pages 30-33 of the Green Paper for additional information related to this question)

Ideally we learn from the strategies used in the past (e.g. COREs and NSCs). Even from within the science system it is difficult to see how successful these systems have been. I have personally found the NSCs frustrating: I have been involved with two Challenges in terms of providing time and ideas and development of strategies, and yet I have had no funding from either NSC. From the outside it has seemed like a lot of the \$ went to admin/governance/travel, and programmes/teams were selected partly by those who knew each other. I know this is almost inevitable in NZ because we are a small place, but it makes it difficult for emerging researchers to break into systems like the NSCs.

However, if the NSCs achieved what they were meant to achieve, and the impact has been in proportion with the investment, then perhaps this is a good system to use. However, I would question whether they reduced competition, increased collaboration, and resulted in the best teams doing the best research.

Review of the systems that are currently in place will enable the best aspects of each to be maintained. For instance, things I find difficult are: a lack of transparency around decision criteria; inability to discuss decisions. Good = shorter, to-the-point applications; feedback on those applications (but this needs to be more clear/honest).

Page 10: Section 4: Te Tiriti, mātauranga Māori, and Māori aspirations

# Q25

Engagement: How should we engage with Māori and Treaty Partners? (See page 38 of the Green Paper for additional information related to this question)

With honesty, openness, generosity and a desire for equality.

#### Q26

Mātauranga Māori: What are your thoughts on how to enable and protect mātauranga Māori in the research system? (See pages 38-39 of the Green Paper for additional information related to this question)

Encourage more Maaori to undertake science degrees - ideally with courses investigating the similarities and differences between the current science system and Maatauranga Maaori. Develop the NZ RSI system so that it is more welcoming and accepting of Maaori. Enable more Maaori to enter the RSI workforce - and as researchers not just engagement facilitators.

# Q27

Regionally based Māori knowledge hubs: What are your thoughts on regionally based Māori knowledge hubs?(See page 39 of the Green Paper for additional information related to this question)

If this would suit Maaori then it's a good idea.

# Page 11: Section 5: Funding

# Q28

Core Functions: How should we decide what constitutes a core function, and how do we fund them? (See pages 44-46 of the Green Paper for additional information related to this question)

I find this one difficult to answer. I have a database that has been built over many years and is very useful for a lot of research I and my colleagues do and is currently also been used by some Australian collaborators. The organisation I work for has never supported this database or my time to maintain it: all funding has been provided through research grants. I am certain that the information in the database would be useful for others, but I have had no success finding someone within my organisation to help me make it publicly available. I do not have the time or skills to do it myself. At the same time, I worry that if the database was moved to a platform that I could not maintain, then it would eventually become inaccessible as has happened with other databases (e.g. HortNet). I equally worry that while it is not publicly accessible, someone may generate something new that would replicate something we already have. At the same time, I recognise that this database is insignificant in the overall science system.

I imagine that there are many databases/pieces of equipment/systems that are in the NZ RSI system that are very similar.

Perhaps the first step would be to build a resource that everyone can access so that we can all see what is available and how to access it? From within that list, it may then be possible to identify the items that are irreplaceable, benefit the whole of NZ (or at least several industries/regions), need stable long-term funding vs those that are duplicates or industry specific etc?

#### Q29

Yes

Establishing a base grant and base grant design: Do you think a base grant funding model will improve stability and resilience for research organisations?(See pages 46-49 of the Green Paper for additional information related to this question)

Establishing a base grant and base grant design: How should we go about designing and implementing such a funding model? (See pages 46-49 of the Green Paper for additional information related to this question)

I think that a successful re-vamp of the RSI system in NZ should result in more \$ for research and core functions, better collaboration, greater impact from research, better pathways for new/emerging researchers - I honestly believe this is what we need.

I have been within the CRI system for more than 20 years. Over that time, a number of things have changed, and recently I really do feel that my job has become much harder. It has become more difficult to achieve what I would like to achieve (i.e., improvements for NZ Inc). There are many problems, and I will try not to focus on those, and instead outline possible solutions.

#### Problem 1: overheads.

The overhead costs on any project I apply for far outweigh the costs of the research. Reducing overheads could be achieved by combining CRIs so that there is less duplication (e.g., each CRI has a staff member that interacts with MBIE; a communications dept; a payroll dept; a marketing department; - is this duplication necessary?). It could also be achieved through reducing the need for each CRI to market itself - if they are research entities rather than companies then there's no need for the competitive marketing and branding. I know it is difficult for many research staff to cope with the fact that some of the research funding \$ we bring in goes to paying for the salaries and equipment needed by non-research staff. The pressure on research staff to bring in money, cover the overheads, cover our own salaries and those of our teams (which are much less than many of the overhead staff salaries), as well as the costs of research, is overwhelming. We were not trained to write applications and act as salespeople for our ideas. We are researchers. In addition, the salaries of all staff should be separate to the other overhead costs. There is a need to separate the budgets so that the institutes are not deciding whether to use the money to increase salaries or refurbish a building. I believe a lot of \$ could also be saved by having fewer executive staff who have very high salaries and are duplicated across CRIs.

#### 2. salaries

If the base grant covered the overheads that are needed to run research entities (rather than profit-driven companies) and the salaries of all staff, then it would be possible for each staff member to do the work that they are best at. For instance, current research budgets are built so that the staff on higher salaries (i.e., those that have a wealth of experience and knowledge) have very few hours on a project because they cost too much: this is irrespective of the actual time the staff member will put into a project. If everyone's time in a project cost the same amount, then the person who was best for a particular task would get the hours for that task. Likewise, when workshopping a programme for a new research priority, everyone with an interest in the topic could be involved without a concern for funding their time. This would increase collaboration and enable emerging researchers to be involved from the start of a programme. The outcome would be more effective, impactful research done by the right people. In addition, when expertise is needed to solve a problem, the expertise can be given without the need to find funds to cover the time required. This would be particularly beneficial to NZs smaller industries that do not have a lot of \$ to access the current CRI system.

#### 3. Flexibility/personal development/mentoring/job-sharing

There is a need for more flexibility within the RSI system, and I feel this contributes to the lack of a clear pathway for new graduates and a lack of development opportunities for existing staff. If the base grant covered research salaries, then it would be possible to build more fluidity into each research position. For instance, where a researcher wished to contribute more to the priority panels (see the earlier section), it may be appropriate for them to "job-share" their research position with a more junior researcher. This would enable development of the junior researcher (e.g., in team and/or project leadership) and they could be mentored by the senior researcher (e.g., through co-leadership). The junior researcher could then job-share their existing role with a new graduate/intern. The intern could have two of these split roles, or a post-doc and a job-share, and this may enable them to determine their area of greatest interest for a future role.

#### 4. Royalties:

Where royalties are an outcome of previously-govt-funded research, these royalties should go back to the govt research fund.

#### 5. Base Grant flexibility

I wonder if there is a fear that if all science salaries are naid by a base grant there will be no way to measure how the time is

# Te Ara Paerangi - Future Pathways submission form

being spent. However, I wonder if we have a way to measure that currently? In the current system, staff move up into higher ranges but do not move back down if their outputs/achievements/impacts do not continue at that higher level. All systems have their faults and are open to miss-use, and I cannot say that our current system is fair, equal, or responsive to change. I would like to see metrics for performance determined by a diverse group of staff with input from the PSA and other experienced employment practitioners. A similar system would be needed for non-research staff, and to determine the amount of annual non-salary overhead funds needed.

# Page 12: Section 6: Institutions

# Q31

Institution design: How do we design collaborative, adaptive and agile research institutions that will serve current and future needs? (See pages 57-58 of the Green Paper for additional information related to this question)

I think a lot of the issues here can be resolved with a base grant that covers overheads and salaries across a smaller number of institutes. Staff will have the stability to take on longer-term research projects, maintain longer-term relationships, spend time on improving these rather than constantly chasing \$. Through greater accessibility to experts with funded time, smaller industries will be able to address problems: costs for them will be purely the costs of the research that needs to be conducted rather than people's time and company overheads.

Ideally, all institutes will be so inter-related that it will be easy for new teams to be built quickly around new problems or requests for expertise from across the institutes. At the moment I am so busy that it would be fantastic to be able to contact one of the other people I know who do similar work at other CRIs to take on some work, but at the moment that is not possible.

We currently collaborate for use of infrastructure with Universities, but rarely with CRIs: usually we need a subcontract with the CRI.

Many of my colleagues are happy to be in a commercial environment, and so perhaps my solution is not for everyone, but for those of us who want to do long-term, often high-risk, public-good research, the commercial model really isn't working.

Something else that I feel doesn't work properly at the moment is the separation between the "native estate" and "productive" landuses. This separation in terms of both the CRI set-up and the way in which programmes are funded often means we can only work in one or the other, however this doesn't fit with Te Ao Maaori, nor does it fit with the way organisms use NZ landscapes. It would be good to remove this barrier in any future RSI system.

# Q32

Role of institutions in workforce development: How can institutions be designed to better support capability, skill and workforce development?(See page 58 of the Green Paper for additional information related to this question)

I think flexibility in roles is key here. Many people would like to reduce the hours they work, and at the same time, there are new researchers who would like a job. In addition, there is often no way to obtain experience in a role until one day when you are given that role and expected to know what you are doing (e.g., many researchers are made team leaders but have no skills (or desire) to do this job). Enabling job-sharing where a junior researcher can be mentored into a new role, or at least can have some experience in a role to see if they like it, would be good for both: the senior mentor may need the time to write up papers, or be on selection panels etc, so having someone take on some of the other work would benefit both.

Enabling a new graduate to take on an internship that enables them to experience a number of different roles and tasks would be helpful both for the graduate (working out what they want to do) and the institute(s) (wanting to employ a staff member in a short-term project). For example, I am currently part of a number of scoping projects that are very interesting but for which I don't have as much time as I need to contribute all that I can: if some of my other tasks could be taken on by, for example, someone who wishes to be a team leader in the future, that would free up my time. While I have put this in place myself, it would be easier if it was the "norm" within the organisation.

Better coordinated property and capital investment: How should we make decisions on large property and capital investments under a more coordinated approach? (See pages 58-59 of the Green Paper for additional information related to this question)

It would be great to take a "whole-of-NZ RSI system" approach to this: what do we have? what do we need? where would be the best place to have those things? One of the things that I really like about the current CRI model is the number of regional research centers. This enables the RSI system to cover more land-uses than we would otherwise, provides opportunities for climate-change research, allows us to respond to regional (e.g., pest and weed management) problems, etc. I would like these to remain part of the RSI system so that we remain flexible to problems experienced across the whole of NZ. These problems can be very different for different regions, and are likely to become even more variable with climate change.

One of the things I don't like about the current CRI system is the tendency to let some buildings fall into dis-repair, and the affected staff can do nothing about it. For the past 20 years, me and most of my colleagues have worked in buildings that have been variously marked for demolition, condemned, un-condemned, and generally not maintained. It is embarrassing to show visitors our workspace, and yet we all have many national and international collaborators who work with us.

A more coordinated approach to the whole of the RSI system, whereby some are not left feeling neglected, would be appreciated.

#### Q34

Institution design and Te Tiriti: How do we design Tiriti-enabled institutions? (See page 59 of the Green Paper for additional information related to this question)

Design them with Maaori.

#### Q35

Knowledge exchange: How do we better support knowledge exchange and impact generation? What should be the role of research institutions in transferring knowledge into operational environments and technologies? (See pages 60-63 of the Green Paper for additional information related to this question)

At the moment, research staff are involved with people management, writing funding applications, building networks, managing research programmes, managing budgets, writing reports, doing monitoring and evaluation of our projects, writing papers, writing documents for the CRIs... Asking us to do the extension work as well is a big ask. Many of us do it, but I'm sure it would be more successful if there were people doing it who had it as their primary role, as occurs in the US. Having a specific group dedicated to extension across NZ's RSI system would ensure the greatest dissemination and impact from our research outcomes.

While many researchers are great communicators, not all are. Perhaps a separation of our current roles so that those who are suited to the different parts of the current roles can be given a role that is more focused around that (e.g., rather than everyone doing everything, have a variety of writing roles, or communication and extension roles, or people and project management roles)?

#### Page 13: Section 7: Research workforce

#### Q36

Workforce and research Priorities: How should we include workforce considerations in the design of national research Priorities? (See pages 69-70 of the Green Paper for additional information related to this question)

See earlier comments on diverse panels of experts choosing priorities.

Also, there are currently very few post-docs available - funding these would be a good stepping stone for new Phd graduates. I would also ask that care is taken to ensure that those who are good at promoting themselves are not the ones who get all the panel/leadership positions.

Base grant and workforce: What impact would a base grant have on the research workforce? (See pages 70-71 of the Green Paper for additional information related to this question)

See earlier comments on flexible roles, internships, long-term relationships, etc.

I would also like to see more equality in wages and progression of staff across portfolios, sectors, gender, age-groups, cultures, etc. Before I started my current job I did a lot of volunteer work to help employers to see my capabilities: I wonder if this is still normal for everyone? I hope not.

# Q38

Better designed funding mechanisms: How do we design new funding mechanisms that strongly focus on workforce outcomes? (See page 72 of the Green Paper for additional information related to this question)

Include emerging researchers in panels and/or during the initial workshops around a new idea. Enable job-sharing though a base grant for salaries. Research costs (other than salaries) then to be covered by govt priority funding, national and international competitive funding grants, industry funding, royalty streams...

Page 14: Section 8: Research infrastructure

# Q39

Funding research infrastructure: How do we support sustainable, efficient and enabling investment in research infrastructure? (See pages 77-78 of the Green Paper for additional information related to this question)

Combining facilities across the RSI system does seem sensible. I wonder if the pandemic can be seen as a benefit here? I know that many of my colleagues no longer feel safe working at the research centre - especially if their work can be done at home - and particularly if their workspace is open-plan. Perhaps new infrastructure will require fewer desks? Perhaps we can go back to proper offices, but fewer of them and with better ventilation. Perhaps some of the open-plan office space could be turned into research infrastructure (labs, climate-change/controlled-environment spaces, etc)? This could free up a lot of space within existing facilities. Surely we've all proved that we can be trusted to work at home, and that we are safer when we do so?