

# Feedback on Te Ara Paerangi Future Pathways Summary 2021

Nov 2021

Dr Greg Barkle  
Land and Water Research  
Privacy - 9(2)(a)

## Employment history

36 years variably funded public good research and deliver of commercially funded applied research solutions in the Land and Water sector.

Approx timeline	Employer	Public good research funder	Public good funding mechanism
1985 to 1993	NZAEI, non-teaching department of Lincoln University	Vote Agriculture through MAF  FRST	Grant  1-year contestable PGSR funding process
1993 to 2004	Lincoln Ventures, company owned by Lincoln University	FRST	1-year and then multiyear contestable PGSR funding process, multiyear funding
2004 to 2019	Director of Aqualinc, private Res. & Dev. company	FRST, MSI, MORST, MBIE	Multiyear contestable funding responding to RFP's and then research identified priorities
2019 to current	Sole practitioner and owner of Land and Water Research	MBIE	Sub-contractor on ESR, NIWA and Lincoln Agritech, MBIE funded programmes

To provide feedback on the fundamental redesign of public good, funded research described in the Te Ara Paerangi Future Pathways I have initially summarised the high-level big challenges and needs in the existing Research Science and Innovation sector.

Based on this summary, I have determined on a similarly high-level a potential stickman solution, along with some fundamental commentary as to how this potential solution would address the current challenges and needs.

Following this, the questions asked by the green paper are considered with respect to the proposed solution.

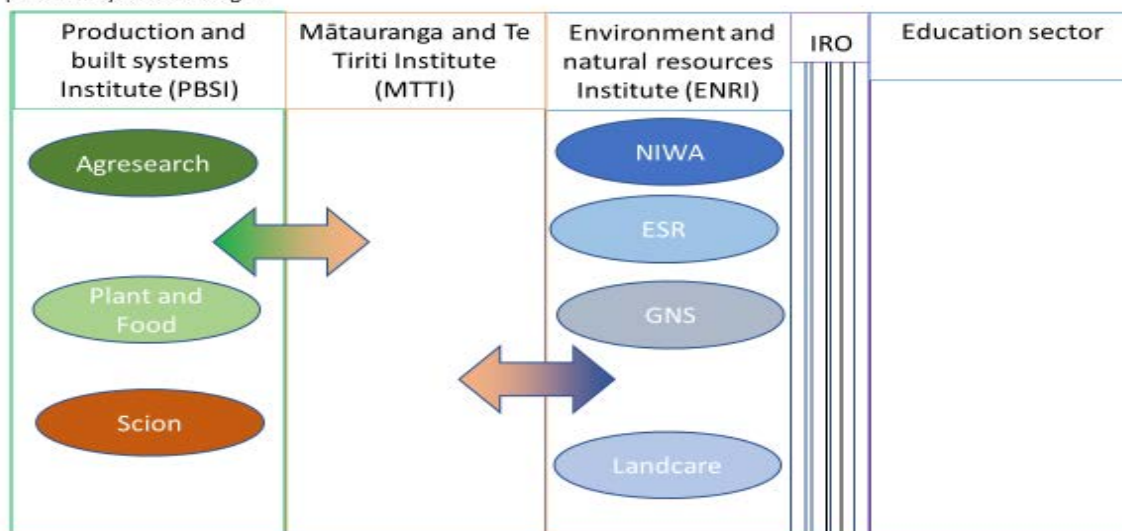
## Current big challenges of existing RSI sector

Current big challenges to existing RSI sector	Issues relates to	Solution
Funder's priorities are not being given effect	Research priorities, funding mechanisms and evaluation process are not providing effect to the funder	Clarify and redesign funding process so funders priorities are clear, and effect included
Lack of effect to Te Tiriti	Currently too fragmented and lack of focus on Te Tiriti	New research institute focused on Te Tiriti and Mātauranga
Unproductive competition between CRIs	Too many overlapping work areas between CRI, leading to inefficient funding, competition, and lack of collaboration. Endeavour competitive process success rate too low (15%)	Amalgamate existing CRI into two new research institutes (NRI), internal competition within the institute boundary for SFFI funding, limit total value of bids submitted to Endeavour by each bidder.
CRI objectives - own value or national benefit?	Unavoidable, CRI's must be profitable, while providing national benefit	Reality
Workforce development	Clarity of responsibility and appropriate funding	Restructre CRI's as described above and recognise workplace development as part of ringfenced foundational funding of the new institutes
Funding of infrastructure	Funding mechanism	Clarify roles and incorporate infrastructural funding into negotiated ringfenced foundational funding

## New RSI sector

The suggested redesigned research landscape would have three new research institutes (3NRI), the transition of the current CRI's predominately into one or two of the new Research institutes is shown below.

Three new research and innovation institutes focused on enhance the wellbeing, value, productivity of NZ through...

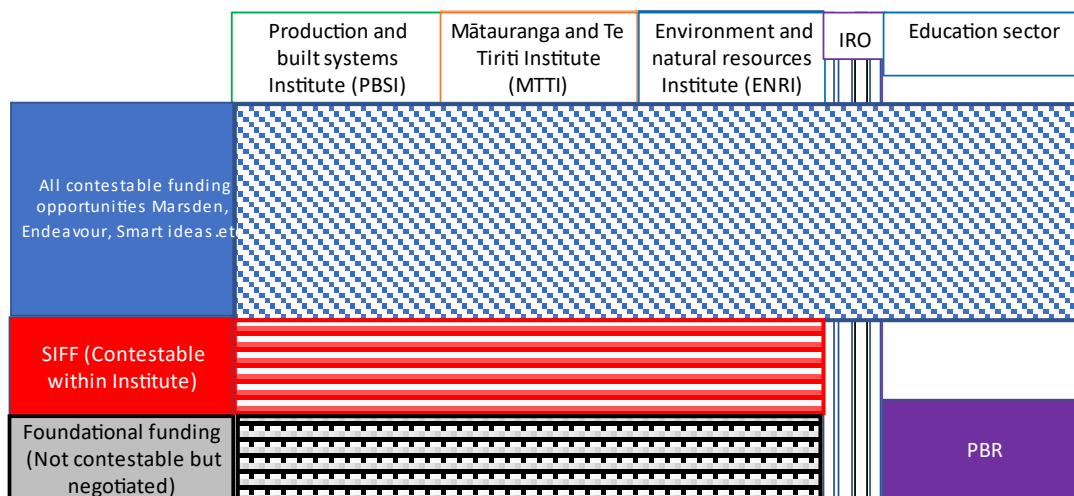


### Notes:

- The Production and built systems Institute (PBSI) has a focus on agriculture, horticulture, forestry systems, industry and built systems.
- The Environment and natural resources institute (ENRI) has a focus on water, soil, geological, groundwater, biological and natural systems.
- The focus on Mātauranga and Te Tiriti lives with the other new Research Institute.
- IRO are the Independent Research Organisations.
- Staff and resources will pass between MTTI, i.e. collaborate with the other two NRI on relevant research project basis to provide the required capacity as required in PBSI and ENRI.
- Not all the staff currently within one CRI, will necessarily end up in the same new Institutes – the diagram is just a high-level thrust of direction.
- Current Māori researchers will mostly reside in the new MTTI institute, but not all. Both PBSI and ENRI will have relevant area focused Māori researchers within them to enable the desired cross-institute flexibility.

## Funding

Three new research and innovation institutes focused on enhance the wellbeing, value, productivity of NZ through...



### Notes:

- Science challenges are no longer required, as effective collaboration between science areas will occur within the 3NRI. The only new Institute that will have a major across function through Institutes is MTTI, where Mātauranga and Te Tiriti delivery will be included in production, environment, and natural resource science areas by PBSI and ENRI.
- The unproductive competition between current CRI will effectively disappear, as all researchers within current work areas reside within the appropriate Institute.
- Fiscal limits on allowable bidding values for all research providers will be established in the Endeavour funding to limit the unproductive time spent bidding in this fund.
- The 3NRI will have within institutional competition for bidding rights into the Endeavour fund, which will be managed by the institutes themselves.
- The Foundational Funding (FF) is for the core purpose and infrastructural (including collections) roles of each of the 3NRI. This funding is not contestable, but it is negotiated with MBIE for a set period and on an indicative rollover basis by,
  - Draft FF purpose statements are developed by the 3NRI with stakeholders.
  - These FF statements are negotiated and agreed with MBIE.
  - Costing of these core functions is then prepared by the 3NRI.
  - FF are then fully negotiated for rolling set periods for these tasks with MBIE.
  - The 3NRI will need to report and be evaluated on their performance on these statements.

	Research responds to priorities set by MBIE	Research responds to priorities driven by applicants (community)
All contestable funding opportunities Marsden,		100 %
Endeavour,	50 %	50 %
Smart ideas etc.		100 %
SIFF (Contestable within Institute)	40 %	60 %

- SIFF is also a negotiated funding stream allocated to the 3NRI, 40% of the funding must respond to funding signals specified by the MBIE, and 60% is competed for within the Institute. Again, reporting and evaluation on their performance on the programmes funded within the SIFF mechanism will be required.
- Research priority setting for Smart Ideas, Marsden etc. will be determined as currently used with justification occurring within the bidding process.
- Within Endeavour funding, 50% of the money will be allocated to RFI bids and the remaining to researcher justified programmes.

## Questions raised by Te Ara Paerangi Future Pathway Summary 2021 Green Paper

### 1. What principles should be used to determine the scope and focus of research priorities?

Much work has been published and developed on methodologies for determining research priorities, however in summary the guiding principles could be,

- The objectives and outcomes of what the funder is wishing to achieve with their research investment must be absolutely clear and transparent to themselves, the targeted recipient of the investment, as well as the research provider.
- There is not one method or set of principles to determine research priorities – adaption reflecting the desired target and outcome is required.
- Effective discussion and consultation is essential with the parties or communities that are the targeted recipients of the research outcomes, to set priorities is essential.
- Not all research priorities should be set by the funder but allowing research providers within relevant funding streams identify priorities, with suitable justification, as discussed previously.

- Realistic evaluation of the success of the research project to deliver the outcomes to the targeted area or community is essential to identify new priorities.

2. What principles should guide a national research priority-setting process and how can the process best give effect to Te Tiriti?

- The development of the core purpose statements of the 3NRI would be tasked with achieving this role of setting national priorities, alongside MBIE, and the communities or parties that will benefit from the research.
- In particular MTTI will be tasked with ensuring that Te Tiriti is given effect.

3. How should the strategy for each research priority be set and how do we operationalise them?

By using RFI process within Endeavour and SIFF the funder, can more easily direct operationalised function to occur.

4. How would you like to be engaged throughout the Future Pathways programme?

If MBIE see any value in this feedback, then direct contact and engagement with me should occur. If MBIE see little value, then I can become part of the workshop, white paper, processes etc. or I retire knowing I tried 😊.

5. What are your thoughts on how to enable and protect Mātauranga Māori in the research system?

This is tasked to the MTTI and becomes one of their core purposes, and funded appropriately through foundational funding.

6. What are your thoughts on regionally based Māori knowledge hubs?

Again, yes, they would appear to be an appropriate core purpose function of the MTTI, partly funded by foundational funding and competitively funded within SIFF (within Institute) and via full contestable researcher in the Endeavour fund. The MTTI would need to determine how important function these regional hubs are in achieving their negotiated core purposes.

7. How should we determine what constitutes a core function and how do we fund them?

Draft core purpose statements developed by the 3NRI. These are negotiated with MBIE. Costing of these core functions is then prepared and again funding negotiated for these core purposes with MBIE. The performance against these roles will be reviewed.

8. Do you think a base grant funding model will improve stability and resilience for organisations? How should we go about designing and implementing such a funding model?

Yes, this is what the Foundational funding is.

9. How do we design collaborative, adaptive and agile research institutions that will serve our current and future needs?

To be successful on,

- a set of negotiated core functions,
- with a combination of funding models,
- for a range of specified and self-determined research priorities and
- with evaluation

the 3NRI will need to operate adaptively and be agile.

MBIE can design the environment, but prescription beyond this is too difficult, specify the outcome but allow the delivery to design the process.

Collaborative need is effectively minimised as this occurs within the 3NRI, with this change the risk of loss of income is removed. However, competition is still a desirable feature.

MBIE only facilitates the process via a range of funding streams that ensures a mix of external and internal competition, stability, and excellence in delivery on a range of funder identified and research led priorities.

10. How can institutions be designed to better support capability, skills and workforce development?

These components are a recognised part of Foundational funding of the 3NRI so is negotiated and audited for performance.

11. How should we make decisions on large property and capital investments under a more coordinated approach?

Again part of foundational funding – recognised roles that attracts negotiated Foundational funding, which is reviewed and audited for delivery performance.

12. How do we design Te Tiriti enabled institutions?

As explain we the dedicated MTTI that has this task as a core purpose and must work within its own, and also across the other two institutes, to meet this objective.

13. 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?

This is being done in a reasonable manner now. The 3NRI will have stakeholder interests well represented in their governance and they will need to keep these tasks closely aligned to their operation and function to succeed.

14. How should we include workforce considerations in the design of research Priorities?

Workforce consideration are not really a research priority – but a requirement and role that the 3NRI will be expected to delivery, and therefore is to be Foundational funded.

15. What impact would a base grant have on the research workforce?

Exactly, what I am suggesting and what is required.

16. How do we design new funding mechanisms that strongly focus on workforce outcomes?

Workforce outcomes are considered part of foundational funding.

17. How do we support sustainable, efficient, and enabling investment in research infrastructure?

Again, this is funded in the foundational funding, so appropriate infrastructure identified by the 3NRI, checked and consulted with MBIE, costed and negotiated with MBIE, reviewed and audited on regular basis.