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Enabling **businesses** to **think** strategically and **act** decisively



Privacy - 9(2)(a)

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Ministry of Business, Innovation & Employment
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Tena koutou e te Rangatira / Kind greetings to you all,

RE: Submission to Te Ara Paerangi Future Pathways Green Paper 2021 consultation

Thank you for the opportunity to add my voice into your Te Ara Paerangi Future Pathways consultation. Below you will find my submission.

Nā mihi / With kind regards,

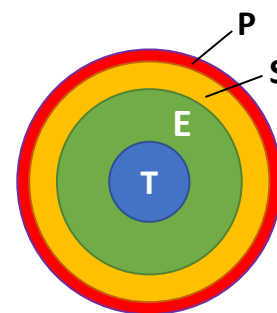
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Lora Hagemann, PhD

Introduction

My objectives

Please note that I am unlikely to directly respond to the specific questions asked within *Te Ara Paerangi Future Pathways Green Paper*. I anticipate that you will get many responses about these from other submissions. Instead, I would like to focus on concepts and issues that I would classify as ‘enabling’ (E), ‘supporting’ (S) or ‘protective’ (P). That is, I wish to focus within those (ESP) spaces that progressively surround the direct ‘targets’ (T) for potential change. Change does not happen in a vacuum, and if MBIE is seeking to embed positive change, then actions within these other strategic (ESP) spaces are equally (if not more) important.



To restrict this submission to a reasonable length, I will only provide brief discussions of five key topics. Because there is insufficient space to do these topics justice, I invite you to follow up with me directly to discuss anything of interest further. I can be reach as shown above and welcome communication via phone Privacy - 9(2)(a) in the first instance.

Who I am

Because my knowledge and life experiences will influence the content and tone of this submission, I also wish to provide a synopsis of I am. I have been part of the Aotearoa Science & Innovation System since September 1991, when I emigrated within a week of receiving my PhD at the University of Wisconsin – Madison, USA. Thus, one could say that I have ‘grown up’ in and in parallel with the System that this Green Paper reflects upon.

When I arrived in Aotearoa, I started as an OECD post-doctoral fellow at DSIR Grasslands. On 1 July 1992, the Crown Research Institutes were formed, and I became a young scientist within AgResearch Ltd. In those early days of aligning related research teams originating from DSIR or MAF, I was relocated to the Ruakura campus in 1993. I worked as Scientist/Senior Scientist for 10 years ongoing further restructures until taking up a position as a Science Strategist AgResearch Corporate Office. More job title changes resulted from more organisational restructures over the next 10 years. Nevertheless, a key aspect of my role was always to lead what might be called nowadays AgResearch’s Research Office -- that is, I was the key relationship manager to MBIE (and its predecessors) and coordinated internal processes for bidding, contracting and reporting. I also represented AgResearch at the ACRI Strategy Managers group from 2001 until 2012. In 2012, I left AgResearch to work as an independent consultant. One of my services continues to be advising research organisations and research teams in their Endeavour Fund bidding activities.

I am currently studying for my Applied Masters of Indigenous Studies at Te Wānanga o Aotearoa (*He Waka Hiringa*). This programme is self-directed and relevant to the ‘practice’ of each taura. My practice sits within the spaces between three distinct Knowledge Systems – Kaupapa Tauwi Research (Western Science; KTR), Homeopathy and (as a taina) Mātauranga Māori. More specifically, Rongoā Māori has been my learning doorway to Te Ao Māori. A concept I explore in my thesis (to be completed in October 2022) is Trans-Kaupapa Research, a term I use to mean knowledge-development activities where different Knowledge Systems can stand together -- each in equity and mana -- to understand more fully and holistically the complex problems that we must resolve.

Submission

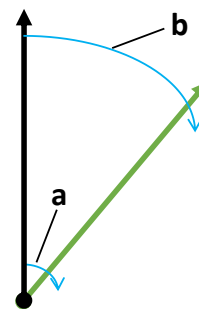
The following are the five key topics I wish to address. They are presented in an order that I hope will build your understanding as the reader, rather than to suggest an order of priority.

Topic 1. Clear and nuanced communication

- **Change is tapu.** That is, it is a context where mindfulness – mindful navigation, mindful action – is critical. Change can be physically, emotionally, psychologically and spiritually disruptive, especially if one’s career path/livelihood is at stake. Change can also be confronting if one is expected to commit to new mindsets and behaviours without adequate understanding about what is expected and why, and inadequate time/space for self-reflection and learning to make these changes. Consequently, clear, concise but nuanced communication is vitally important.
- **Language and word definitions matter.** Misunderstandings enable (a) unproductive, disruptive and obstructive argument, (b) distrust and breakdown of relationships, and (c) poor progress in achieving desired change. A flourishing community requires a shared language, a common understanding of the underlying concepts for words/terms.
- For example -
 - *Te Ara Paerangi Green Paper*, p8, para2 (Te Hōkaitanga subsection), “...‘research’ when used as a single word should be read to encompass all activities usually understood as such ...”. You may understand what you mean when you wrote this. I know how I define ‘research activities’. Yet, the two of us might have widely different understandings of the reality of ‘research’.
 - ‘Science’ is another oft misunderstood word. Some people use the term to exclusively mean KTR (Western Science). Some even use the word as if science has personhood and agency – as in “Science tells us ...” when they should say, “According to the methodology we have used to observed nature, we understand that ...”. **The belief that one Knowledge System holds ownership of the word ‘science’ creates the opportunity for bias and prejudice against other legitimate Knowledge Systems.**
 - Another example can be found in *Vision Mātauranga* booklet, p16, para2 (Discussion subsection), “...*Mātauranga Māori – distinctive knowledge traditionally held ... that may yet make a contribution to RS&T*”. This paragraph suggests that Mātauranga Māori is simply a traditional repository of information that is minable for the benefit of KTR, and suggestive that Mātauranga Māori requires KTR to verify its veracity. I wholeheartedly disagree with these sentiments (although they might prevail within the current Aotearoa Science & Innovation System), and I request MBIE officials to review and consideration correcting misaligned content of these and other policy documents in active use.
 - Further, rich and complex concepts in Reo Māori should never be distilled down and (poorly) translated into a single English word. For example, ‘karakia’ ≠ ‘prayer’, ‘atua’ ≠ ‘god’, ‘mauri’ ≠ ‘life force’. Instead, these should be learned and understood in their original language.
- I note that *Te Ara Paerangi Green Paper* avoids potentially contentious words such as ‘decolonisation’. Doing this may provide short-term comfort, but will it be at the expense of long-term progress?

Topic 2. Conscious and ethical action

- Change is tapu. **Careful (strategic) selection about when, where, how and how much change one imposes on others should be uppermost.** Some leaders/managers impose change to appear active. Structural alterations (e.g., changing reporting lines within an organisation) are usually more observable, but disruptive to the informal networks and practices that build up over time to get things done. Consequently, structural changes usually do not achieve important social, cultural or philosophical advancements that one is looking for (e.g., increased prevalence and quality of collaboration). To achieve many of the goals consciously/unconsciously expressed in *Te Ara Paerangi Green Paper*, MBIE should give priority focus to making conscious social, cultural or philosophical transformations in the first instance over structural changes.
- I want to further note that **minimal course adjustment** at the point of change ('a' in the figure to the right) **can have significant impacts over space and time** ('b'). This is especially true for social, cultural or philosophical change, particularly if targeted change is accompanied by enabling, supportive and protective (ESP) actions.
- As MBIE notes throughout *Te Ara Paerangi Green Paper*, the Aotearoa Science & Innovation System is not fully under MBIE influence. Over the past 30 years, the coherency of a single Aotearoa Science & Innovation System (as originally envisaged by Simon Upton) has been eroded. Bits-n-pieces have (re-) fragmented and are sitting elsewhere in governmental ministries/departments, research and learning organisations, private businesses and industry entities. Therefore, **MBIE is called to exercise leadership and diplomacy** to ensure those parts of the System not under its direct control still aligns well with the new direction MBIE wants the System to go.



Topic 3. He Tangata, He Tangata, He Tangata

- MBIE does not fund impacts. Nor does it fund ideas. These things do not exist in a vacuum. Instead, **MBIE invests in people who are (directly and indirectly) engaging Ideas that, when executed, result in Impacts.** Therefore, the Aotearoa Science & Innovation System workforce are free people, and the 'resource' is their individual and collative creativity. If free people are disengaged, exhausted, confused, etc, they cannot be fully creative and may be unwilling to share their creativity.
- There are many different people/roles who inhabit the Aotearoa Science & Innovation System landscape (Tangata Innovation). Many Tangata Innovation (especially those who operate within the ESP spaces) might not affiliate with conventional research entities, hold expected job titles or have other attributes that KTR traditionally values. Some of these will overlap with attributes valued by other Knowledge Systems (such as Mātauranga Māori), but not all. Therefore, hold an **expanded definition of who is Tangata Innovation that include the 'unusual' and 'unexpected'.** Growth comes from non-complacency, minimal limitations and plentiful uncomfortableness.
- However, this discomfort and desire for change needs to be in the correct sphere. For people to have the capacity to be high creative and effective problem-solvers and for doing deep, personal work (such as decolonisation). They require their basic needs (e.g., stable funding, psychologically

safe working conditions, sufficient resources and support) to be met. They need space to explore. Tangata Innovation have experienced considerable instability over the past 30 years which has eroded confidence that the basic needs for Tangata Innovation are met.

- My networks tell me they feel exhausted. They feel a lack of resilience. They feel stretched across too many projects. For example, MBIE notes that Tangata Innovation Māori currently only constitute 5% of the Aotearoa Science & Innovation System, yet there is an expectation that they must be woven into 100% of the funded research. A laudable desire to ensure Mātauranga Māori is well integrated into the Aotearoa Science & Innovation System has resulted in an unintended (but equally unethical) consequence of overburdening a selected portion of our Tangata Innovation.
- Solutions could lie within a set of **Tangata Innovation ‘rights’ that are upheld across the wider Aotearoa Science & Innovation System landscape**. These could include (but are not limited to) –
 - **Sabbaticals**: Individuals might wish to spend time in another organisation within Aotearoa or overseas or embed within a community. They might seek new training and education opportunities or take time to pursue new interests or create new works. Restrictions (e.g., who, when, where, etc) should be minimised in order to maximise manifestation of new thinking, new practices and new solutions.
 - **Universal access to KTR literature**: This might be included under a heading of ‘intangible infrastructure’ led by MBIE. See Appendix 1 for more detail on this idea.
 - **Investment in the development and usage of contemporary Reo Māori** pertinent to the Aotearoa Science & Innovation: As above, this would be an ‘intangible infrastructure’.

Topic 4. Funding

- The inordinate and sustained level of competition in the Aotearoa Science & Innovation System has been brutal. Yet, even simple considerations and gestures to the humanity of Tangata Innovation (manaakitanga) can make a noticeable difference. For instance –
 - **Use score brackets rather than quintile number**: Bidding teams often misinterpret their quintile score as something relative to the 7-pt assessment system and receiving a low quintile score is humiliating and confidence destroying. Instead, if MBIE were to use a set of score buckets (one that is reflective of that round’s particular score range), then this confusion will not arise and distress more likely to be averted.
 - **Change proposal submission dates**: Allow Tangata Innovation to have proper summer holidays each year by avoiding post-summer submission dates. Returning Endeavor Fund contracts back to 1 July-30 June contract year might help in this regard. It would also re-align contractual and Government annual reporting once again. The original reason for moving to a 1 October-30 September contract year appears irrelevant nowadays.
- Some Innovation Stakeholders develop 100+ year strategies because they understand that wicked problems are not rapidly solved. This is inconsistent with Government-funded research contracts which run seven years or less with no expectations of renewal or long-term continuity. Further, Public/political priorities change can shift at any time (especially during election years with change of Government), which can (and has frequently) meant that the Science Board’s funding decisions

are made under investment expectations that are different to when proposals were written. **One under-appreciated aspect of the independent Foundation for Research, Science & Technology (FRST) was that it could smooth out some of these variabilities for Tangata Innovation.**

- A key funding priority is supporting the transition to a low emissions and climate resilient economy. Everyone needs to do their bit for climate change, and so too should the Aotearoa Science & Innovation System -
 - **Robust Environmental Benefits calculations:** For all Endeavour Fund proposals, robust calculations of the potential Environmental Benefits (e.g., carbon footprint calculations) should be provided, just as robust Economic Benefits are presented currently.
 - **Funding decision-making:** Likewise, the carbon footprint of the research activities themselves should also be at least understood (if not taken into consideration) when the Science Board is making its investment decisions. How can we expect our stakeholders to change their decisions for Environmental good if the Aotearoa Science & Innovation System does not also role model this behaviour?

Topic 5. Decolonisation

- Decolonisation is a fraught issue, but an important one for the future of our inclusive, bi-cultural nation. Importantly, **people decolonise themselves first**, then they decolonise systems and institutions. For myself, I describe my journey towards an authentic non-Indigenous practice within Indigenous (Māori) spaces as ‘uku pākehā’. This term is intentionally written in lower case to signal it is an aspirational verb that describes a state of becoming (or wishing to become) something with all the inherent successes, missteps and failures along the way. Not all Pākehā/Tauīwi within the Aotearoa Science & Innovation System are uku pākehā (or ready to be so). Can you use the energetic potential of those who are uku pākehā to share in the decolonisation mahi? **What can we do to help accelerate progress?**
- By definition, as a Pākehā (uku pākehā or otherwise), I cannot undertake Kaupapa Māori Research. But as uku pākehā, I could undertake **Restorative Research – that is, research where the direct Impacts *consciously* intends to seek rebalance and redress of past grievances** (e.g., between colonisers with tangata whenua or human people with non-human people, etc). Consider opportunities to fund activities in this category of research. This work might need to include activities that are outside the conventional KTR space.
- A critical difference among various Knowledge Systems is their epistemic foundations. While most Knowledge Systems consider Empirical observations as an acceptable epistemological source, KTR is particularly strong in this respect. Other Knowledge Systems, such as Mātauranga Māori, accept additional epistemological sources that Positivist KTR does not recognise. Thus, there are Aotearoa-relevant questions that can only be asked/answered within Mātauranga Māori because of its broader epistemic foundation. For example, “Who is the atua of grasslands?” and “What is our whakapapa (relationship with) with her children (e.g., cattle, sheep, forages) whom we have brought here in abundance through sustained cultural contact and colonisation?” An important philosophical question for MBIE then is “What aspects of Mātauranga Māori is MBIE willing to fund?” Would the answer be all aspects of Mātauranga Māori? Or only that portion which looks and acts most like KTR and is comfortable for Positivist KTR practitioners?

Attachment

NZ Inc Accessibility of Science Literature (SciLit4NZ)

Prepared by L.J. Hagemann, PhD

Version: 20190227

Aim

To establish a service to empower NZers¹ access² to published scientific literature³ more effectively, efficiently and affordably. The exact nature of this ‘service’ has not yet been determined, but a public-good, self-sustaining business model is preferred.

Foundation principle

Empower NZ through equity of scientific knowledge for professional use and personal development.

Values

- NZ Inc – negotiating with publisher through strength in numbers; desire to build the scientific literacy of all NZ (not just affiliated professionals)
- Empowering/enabling - supporting Creative Commons, new ideas/knowledge from out-of-the-box places/people
- Stakeholder-focus
- Ethical – ethical business model; ethical privacy policies
- Forward-thinking
- Inclusive – broad access to scientific literature that supports community diversity (cultural, gender, different world views)
- Effective use of e-technologies – good user interface; effective use of big data
- Robust cyber security – this should not be a back door for hackers

Why?/What are the problem(s) this would this address (no particular order)

- Increasingly fragmented national Science Capability reduces overall ability to access non-open access Science literature, resulting in an iniquitous class structure within the profession.
- Reduces inefficiencies and increases cost savings because all Research/Educational organisations having untapped, excess capacity in their journal subscriptions.
- Enables opportunities for developing transformational ideas by expanding the range of journals users could access (i.e. reading outside one’s field/organisation’s core areas).
- Helps to restore a more equitable balance between Users (i.e. NZ research community) and Publishers.
- Promotes Scientific Literacy in the general NZ population in a ‘post-fact world’ by enabling wide, general access.
- Strengthens ‘NZ Inc’ approach within the Science Sector

¹ ‘NZers’ in this context = professional scientists, research, academics and teachers, journalists, healthcare providers and others within Intensive-Knowledge-Use-&-Dissemination employment, as well as, lay people (aka *People of Curiosity*)

² While the definition of ‘access’ may be debated, it is the view of the author at this time that ‘access’ = paid access at a ‘reasonable’ cost (rather than fully open access).

³ ‘Published scientific literature’ = international/national journals

Relevant role models (more or less) — with some positive/cautionary tales (list not exhaustive)

- PHARMAC (NZ)⁴
- Bibsam Consortium (Sweden)^{5,6,7}
- Projekt DEAL (Germany)^{8,9}

Likely Stakeholders (list not exhaustive)

- **Users/Customers/Direct Beneficiaries:**
 - CRIs, Universities, Wānanga, other Tertiary Educational Institutes, Research Associations, Research Businesses (on behalf of their professional scientists and students)
 - Independent professional researchers
 - Professional bodies in knowledge-rich sectors (e.g. medicine/health care/veterinary, engineering, etc)
 - Central/Regional/Local Government personnel
 - Journalists/Communications and Media companies
 - *People of Curiosity*
- **Patron(s):** MBIE, NZ Government (sufficient gravitas to negotiate good deals for the benefit of NZ); Royal Society of New Zealand
- **Interested parties:** SciNZ, TEC, HRC, Callaghan Innovations
- **Indirect beneficiaries:** Industry, lay communities, tangata whenua

Regulatory implications (if any)

- To be explored

Risks/Possible Unintended Consequences (list not exhaustive)

- Over-emphasis on codified Western Science knowledge, suggesting a judgement that it is a more valued knowledge source compared to indigenous and non-codified knowledge
- Potential for misinterpretation of science literature by untrained users or misuse of science literature for nefarious intentions.
- The benefits (tangible/intangible) to the Collective are perceived to be insufficient when compared to the tangible administrative costs/user subscription fees.

Suggested first steps

- **Socialise concept and form a coalition** – people/entities who can provide moral support or peer-review and strategic steering, be project champion(s), volunteer their skills/capability for implementation and/or provide financial resources
- **Form an initial Working Group** – up to 8 volunteers (e.g., range of people representing the Users/Direct Beneficiaries and Patrons) to develop a project plan and take the concept forward
- **Commission an initial 'business' case** – including an analysis of business model options, red flags to consider and requirements.

⁴ An example of a national-level purchasing agent for pharmaceuticals on behalf of the NZ Health Sector

⁵ <http://www.kb.se/bibliotek/centrala-avtal/Bibsam-Consortium/>

⁶ <https://www.kb.se/Dokument/Bibliotek/databaser/BIBSAM%20in%20English.pdf>

⁷ <https://www.researchinformation.info/news/swedish-consortium-agrees-read-and-publish-deal-cup>

⁸ <https://www.projekt-deal.de/about-deal/>

⁹ <https://www.the-scientist.com/news-opinion/universities-in-germany-and-sweden-lose-access-to-elsevier-journals--64522>