

16 March 2022

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Te Ara Paerangi/Future Pathways Submission

Thank you for the opportunity to comment on the Te Ara Paerangi/Future Pathways green paper.

We welcome and endorse the main thrust of the paper. It correctly recognises the need for institutional and funding mechanism reforms. We support the move to rebalance an over-reliance on a contestable funding model to one that recognises the importance of nationally significant core functions. This will help engender a greater external focus on delivery of outcomes and impact for stakeholders, rather than internal RSI 'market share' competition. Importantly, it will also enable a much more proactive approach to investment in future workforce capability.

We would encourage the next stage of this process to consider national research priorities as not solely centred around topic-based priorities, but to also consider advanced capability development, connections, and underpinning infrastructure, as key direct or cross-cutting priorities. We feel this is particularly critical to advancing the mātauranga Māori ambitions of the green paper.

We are encouraged to see the prominence given to better embracing mātauranga Māori and giving effect to Māori aspirations within the paper, and would welcome being involved in supporting/piloting a regionally-based Māori knowledge hub.

An area we felt was lacking consideration within the paper was the role of science outreach and engagement. The RSI system's social licence is predicated on public trust of researchers and their understanding of science and the scientific process. Moreover, this spills over into influencing the scientific literacy of our society and our future STEM and mātauranga Māori pipelines.

Museums are independent and trusted institutions with a public-facing culture, which provide an ideal – but underutilised – vehicle for the translation, extension and engagement of public, business, and stakeholders with science and technology. Although initiatives such as *Curious Minds* have been very impactful, the level of investment remains miniscule relative to the wider RSI envelope.

Recommendation: 1

The White Paper sets an expectation that external partnerships and public science engagement is the norm, not the exception or fringe activity, within the RSI system, and provides investment levels that better reflects this status.

One of the most pressing and systemic issues facing the RSI system is the management of its underpinning research collections and databases. Despite several reviews of the current status quo acknowledging serious shortcomings in how it is coordinated and supported – including *Discovering Diversity: A Decadal Plan for Taxonomy and Biosystematics in Australia and New Zealand 2018-2028* – there has been no meaningful change. We therefore welcome the explicit prominence given to Research Infrastructure in the green paper.

We would like to highlight some key facts and issues that have not been widely canvassed to date in the green paper’s consultation process:

- Historically, the major legislated metropolitan museums (Otago, Canterbury and Auckland) have not been engaged¹ by FRST/MoRST nor MBIE in the policy setting process around research priorities, infrastructure, and funding, despite these museums hosting the majority of Aotearoa’s research collections.
- Subsistence level funding from local government is currently subsidising an ever-increasing demand on these organisations by the RSI community. These include increasing demands around digitisation needs, handling the burgeoning workload associated with curating genomic data/haplotypes, and supporting more mātauranga Māori-based projects (as the repositories for the majority of collected taonga).
- There are already well acknowledged shortages of critical capabilities (e.g., in terrestrial and marine invertebrate taxonomy), yet no ability to fill these gaps.
- Digital representations (high-resolution images, 3D scans, photogrammetry, genetic sequences, etc) are becoming increasingly demanded by the research community, yet there is no training or digital infrastructure support available to service this need.
- The increasing need to collate and curate citizen science data.

As a result of the above there is a pressing need to explicitly include museums within the RSI infrastructure support system to guard against the potentially imminent loss of access to nationally significant collections and databases.

Recommendation: 2

The White Paper includes a specific recommendation to develop a work stream to:

- a. Better integrate and support the research, collection maintenance, and science engagement aspects of the major museums through this reform process and within the nationally supported RSI infrastructure;**
- b. Progress a national data aggregator that spans and connects research organisations nationally and that includes mātauranga Māori.**

¹ Including not being engaged via the National Significant Databases process in the 1990s which has reinforced their exclusion from subsequent MBIE processes.

Finally, we note that both the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and Te Tiriti recognise indigenous communities' heritage and relationships to cultural landscapes. Aotearora's future research priorities must therefore include recognition and protection of such taonga.

Recommendation: 3

That mātauranga Māori be recognised as a nationally significant taonga, that needs dedicated collating, curating, protection, and connection across the wider science system, and develop an associated investment strategy that provides for inter-generational protection of, and access to, haplotypes, salvaged heritage, and cultural taonga.

We thank you again for the opportunity to participate in this process, and look forward to progressing these ideas and conversation further.

Ngā mihi nui,



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Director