

5 Aug 2024

Submission: Phase 2 Consultation University Advisory Group

Introduction

This submission by the National Energy Research Institute (NERI)¹ addresses the questions raised in respect of “*The Range of Disciplines*” Q7-11.

The issues raised are strongly influenced by the expectations placed on Universities by the Science System. These expectations, and how they change over time, will be major drivers of where research and teaching capability and new graduates will be required.

Therefore, we draw upon our earlier submission to the SSAG² that addresses these issues and summarise the key points below.

We acknowledge that universities have a much wider role than just contributing to NZ’s science system, and our comments will need to be put into that wider context. In particular this submission has implications for the question raised under Policy Setting (Q17). Regardless of the respective roles ultimately decided for MoE/TEC and MBIE, our submission is to ensure there are clear and formal processes for managing the interfaces between them so that they support NERI’s recommendations to the SSAG.

NERI Submission to SSAG: Key points

- NERI considers the public investment in Science, Innovation and Technology (SI&T) needs to be better aligned with the needs of research-intensive Sectors in New Zealand.
- It considers that current practices for much of that investment are weak, operate at too high a level, with limited formal input from the relevant Sectors.
- We propose two main changes to address this:
 - The mandating of “Sector SI&T Roadmaps” to identify the research-intensive Sectors’ public SI&T investment needs, and to align these with national priorities.

¹ The National Energy Research Institute (NERI) is a NZ Charitable Trust. Its primary purpose is to enhance NZ’s sustainability and to benefit the NZ community by stimulating, promoting, co-ordinating and supporting high-quality energy research and education within NZ. Its research members are GNS Science, Scion, University of Canterbury, and University of Otago, and its industry association members are the Bioenergy Association of NZ, BusinessNZ Energy Council, the Carbon and Energy Professionals New Zealand, Energy Resources Aotearoa, Gas NZ, the New Zealand Geothermal Association, the New Zealand Wind Energy Association, la Ara Aotearoa Transporting New Zealand, and Tourism Industry Aotearoa.

² <https://www.neri.org.nz/resource/Files/Submissions/Submission%20to%20SSAG.pdf>

- Establishing a statutory agency to identify the research-intensive Sectors, develop SI&T Roadmaps with them, and make investments within Government-approved settings based on these.
- A similar approach with suitable adjustment be used to manage public investment in Technology/Capability Platforms.
- Some adjustment to SI&T providers' responsibilities, coverage and operations will be required to ensure the multi/transdisciplinary needs of Sectors/Platforms are met, while the benefits of agglomeration to building capability in the relevant disciplines are achieved.
- Greater emphasis be placed on innovation at the Industry/Sector level rather than the current focus on start-ups based on specific innovations.

Implications for *Range of Disciplines* questions

The system proposed by NERI for determining NZ's public SI&T investments would provide universities with a basis for investing in the range of teaching and research disciplines New Zealand's research-intensive sectors require. It would also allow universities to participate in this process and contribute their understanding of current and emerging themes, domestic and international. (Q7)

The system proposed by NERI also provides for the development of Technology/Capability Platforms in areas where NZ has emerging competitive advantage. It is almost certain that these will evolve out of the science providers, i.e. universities and CRIs, and NERI's proposals would provide a more structured way to develop and fund these. (Q10)

The general emphasis on Industries/Sectors, and developing roadmaps to support them, provides a basis for developing trans-disciplinary and inter-disciplinary research and graduates. Improving the performance of Industries/Sectors inevitably goes beyond a single discipline. (Q8)

Finally, the issue of how to support the university/education sector with advanced technologies suggest this should be an area where a S&I Roadmapping exercise is indicated. (Q9)

The Submission Questions also raise how to support disciplines with low demand. NERI has no particular view that could assist. (Q11)

Recommendations

That UAG **notes** NERI's recommendations to the SSAG and **supports their implementation** for the benefits this would bring to universities in addressing NZ's needs for teaching, research and graduates.



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