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Science System Advisory Group  
Ministry of Business, Innovation and Employment

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Tēnā koe

## **RE SCIENCE ADVISORY GROUP – PHASE TWO SUBMISSION**

Thank you for the opportunity to submit on the Science System Advisory Group's phase two consultation. Engineering New Zealand represents over 23,000 professionals who contribute to our country's infrastructure, technology, and innovation landscape.

This submission responds to Phase Two questions that are most relevant to the engineering profession. It builds on the themes outlined in our [Phase One submission](#) – the need for stable, focused investment, and more effective collaboration between academia and industry.

### **Q1. In what areas must New Zealand have or develop in-depth research-based expertise over the next two decades?**

#### ***Levels of research prioritisation (1A)***

Research prioritisation should occur at all levels. New Zealand's research sector is small by international standards and cannot afford to be fragmented. Investment must be strategically focused, and better coordinated, with priorities clearly defined and aligned from central government through to individual institutions to ensure effective use of limited resources.

Prioritisation should focus on areas of enduring national interest where New Zealand has the potential to maintain or build a competitive advantage. This includes sectors that underpin our economic base such as advanced manufacturing and digital technologies - both of which are closely tied to engineering-intensive industries that are critical to lifting productivity.

We also support prioritising environmental resilience, particularly in the context of natural hazards, climate change, and infrastructure adaptation. These long-term challenges will require sustained engineering expertise and innovation. Additionally, we recognise the importance of Mātauranga Māori and Indigenous knowledge in developing research that is grounded in Aotearoa's unique context and identity.

As we noted in our Phase One submission, prioritisation must also reflect New Zealand's national scale. There must be a more focused and coordinated approach in order to deepen impact, avoid duplication, and respond effectively to emerging risks and opportunities.

### *Criteria for research selection (1B)*

Criteria should include alignment with national research priorities, novelty and potential impact, scientific and technical quality, and the ability to deliver. In our Phase One submission, we stressed the importance of industry relevance in research design. Therefore, where appropriate, the presence of industry partnerships should be considered. This would ensure that the system supports both core capability and responsiveness to new opportunities.

### *Value of research roadmaps in priority areas (1C)*

We see the development of clear research roadmaps as an important tool to support strategic focus. This would provide direction, enable long-term planning, and help identify where capability needs to be built or maintained.

## **Q2. Does New Zealand need to rationalise funding mechanisms?**

### *Roles and coordination between agencies (2A)*

We support efforts to create a more coherent and better-aligned research funding system. However, we do not support merging existing agencies. The Ministry of Business, Innovation & Employment, Tertiary Education Commission, Health Research Council and Royal Society Te Apārangi, each have distinct functions and institutional knowledge that are critical to the system's effectiveness. In our view, the priority should be on improving coordination across agencies and ensuring that investment decisions are informed by a clear and shared set of national priorities.

As we noted in Phase One, better coordination is needed to reduce fragmentation, align research investment with national priorities, and create a more connected and strategic research system.

### *Funding models and instruments (2B&D)*

We consider a balanced funding model to be essential to support a resilient research system. Long-term, non-contestable funding is needed to maintain core capability and provide stability. At the same time, contestable funding is well-suited to shorter-term, high-risk, high-reward research, particularly in emerging areas like technology development. Both forms of funding are necessary to ensure responsiveness and continuity across the research landscape.

### *Infrastructure investment (2F)*

We also support strategic investment in nationally significant research infrastructure. Access to resources such as supercomputing, specialist laboratories, and large-scale data systems should be supported where it aligns with national priorities. Where this alignment is not clear, institutions are best placed to assess the value of investment. We further support exploring international partnerships where shared access to infrastructure is a more viable and efficient alternative to building and maintaining domestic capability.

**Q3. What does New Zealand do to improve workforce retention and develop the research workforce from the early career to the mature? How does New Zealand ensure the retention of research/innovation leaders?**

Workforce retention and development remain a critical issue across the research system. In our view, funding must be consistent, predictable, and indexed to inflation to provide the certainty needed for long-term capability. Sudden changes, such as the removal of National Science Challenges, undermine stability and deter talent from entering or staying in the sector.

In Phase One, we highlighted the disconnect between graduate outputs and the skills needed by the private sector. While the system provides strong foundational knowledge, it often falls short in preparing graduates with the specialised skills needed to meet evolving workforce demands. We encourage stronger links between research institutions, employers, and industry to support retention and alignment.

**Q4. Are there other key issues (beyond the quantum of funding) that should be considered in the science and innovation system not yet addressed in this or the previous report and consultation?**

The research system must be prepared to respond to the opportunities and challenges posed by emerging technologies, such as artificial intelligence (AI). Developments in AI are already beginning to influence how research is conducted. While the pace and implications of AI are uncertain, we encourage the Group to assess how the science system can prepare for and respond to these shifts.

We also reiterate from our Phase One submission, that the system must break down silos. Traditional models between academia and industry limit the exchange of knowledge and innovation. The Group's review is an opportunity to encourage more integrated partnerships that support collaboration and reduce barriers to commercialisation.

**Conclusion**

The science and innovation system has a significant role in shaping New Zealand's productivity, resilience and global competitiveness. We urge the Group to continue prioritising long-term capability, workforce development, and stronger partnerships between research and industry.

We appreciate the opportunity to contribute to this consultation and would welcome further engagement with the Advisory Group.

Nāku, na



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Chief Executive