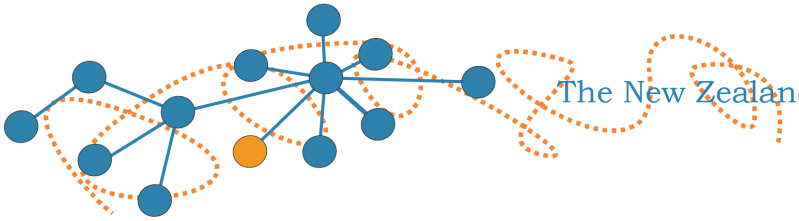
Briefing



The New Zealand Association of Scientists
contact@scientists.org.nz

NZAS Briefing for Incoming Minister Science, Innovation & Technology; Universities – Tertiary Education

https://scientists.org.nz/

04/05/2026

Research, Science, Innovation and Technology (RSIT) supports the economy, society and environment of our nation. A well-performing RSIT system is essential in lifting our nation's performance to match that of peer nations. Since 2020, major reforms of the RSIT system have been in development and are likely to be most effective if they also include the university system.

Reform presents both enormous opportunity and risk. We are deeply worried that the present reform attempts to oversimplify, creating gaps and breaking more than it fixes. Through adjustments outlined in our diagram below (Figure 1), RSIT reforms can still achieve the Government's goal of simplifying RSIT, while avoiding the obvious dangers of oversimplification – including destabilisation, fragmentation and gaps, which all raise costs including overheads (MBIE, 2025*a*).

We explain our concerns and recommendations in the following pages.

In short, now is the time to realign proposed actions that will increase costs and exacerbate problems, to achieve solutions that reduce costs and support the workforce, infrastructure and connections.

- Pillars and RFNZ now duplicate the structure of the three merged PROs plus NZIAT:
  - Building RFNZ with gaps in expertise and insufficient independence risks creates risks of costly bureaucracy.
  - Devolving leadership to PROs will enable them to move forward strategically as designed now that the mergers have been carried out.
- Advanced Tech and the structure of NZIAT:
  - Depicting Advanced Tech as a permanent Pillar will limit the intended agility, which is better served through an agile 'rocket' plus a horizontal platform that helps elevate existing strengths where it intersects with Pillars.

The best way to bring costs and stability within internationally comparable ranges that encourage government and private investment through PROs and Universities (as in other SAEs) is to invest in stabilising workforce capacity (See Workforce Strategy Appendix) and infrastructure. This also makes it more efficient for the government to achieve its priorities through Pillar approaches and missions.

Background – the value of well-functioning RSIT systems

RSIT funding, invested well, pays off with multiplier effects over many years — partly through visible ventures, but mainly through almost invisible productivity, skills, and innovation gains.

Destabilising cuts, gaps, and fragmentation undermine the many pathways along which these benefits flow and multiply. The government must be the investor wherever these gains are difficult for the private sector to capture. Among these are the multiplier effects that require foundational knowledge and connections which are put at risk by destabilising cuts, gaps and fragmentation.

Around 0.6% of GDP is a practical target for long-term foundational public RSIT investment, on which short-term opportunity-driven private and public research and development builds. A sound foundation should allow a pay-off of approximately $5 or more for every $1 invested, as the framework of pillars and cross-cutting layers, as well as business-led R&D build upon it.

Our concerns and solutions

The beginnings of reform have been announced with the goal of simplifying the fragmented, underperforming research system. However, the scientific community is concerned that the reform *over*simplifies the system, causing ongoing uncertainty as well as escalating costs.

Key concerns are:

- Advanced Technology has been misclassified as a Pillar when it should mainly be a cross-cutting support platform intersecting with other research pillars.

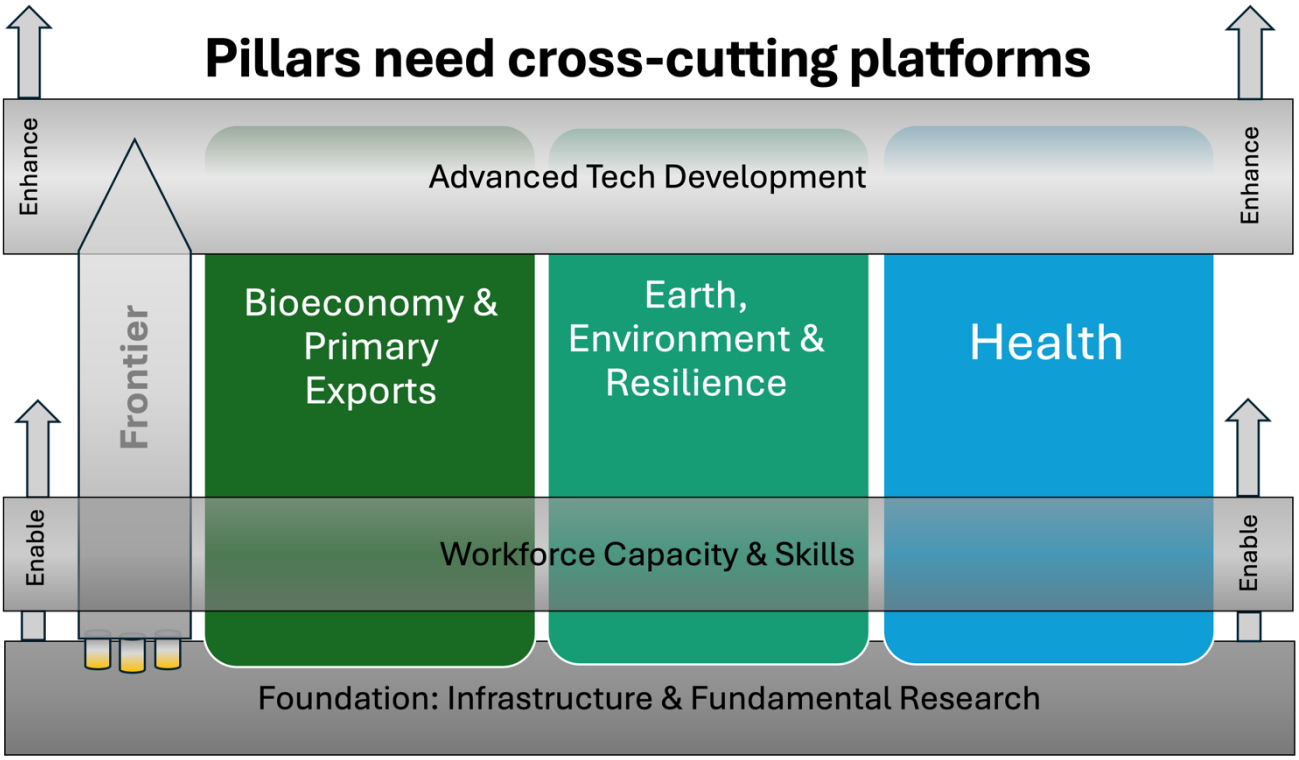


Figure 1: NZAS's reimagined pillars diagram

- Reforms cannot succeed without addressing workforce and infrastructure as the essential cross-cutting supports (foundations) of the sector, yet these areas are unaddressed and lack a clear strategy. *See our Workforce Strategy.*[1]

- Shortcuts in the reform process, including loss of independence, continue to undermine the trust and connections that are known to make RSIT systems effective.

Each of our key concerns is made worse by current approaches to the quantum of funding. A long-standing de facto policy has been abandoned: existing research funding typically does not receive increases with inflation. Historically, this meant new funding could support the new initiatives prioritised by the government of the day, while previous priorities sat under the sinking lid of inflation. This de facto arrangement kept research funding well below international comparators. Plans to repeatedly cut (a.k.a. 'deprioritise') existing areas of research to 'reprioritise' funding to address the government's initiatives will cause lasting damage with economic consequences.

The Misclassification of Advanced Technology as a Pillar runs counter to Institute for Advanced Technology (NZIAT)'s agile hub and spoke model as well as potential for the intersections of a horizontal Advanced Technology layer with strengths in other pillars to become focal points where success can be enhanced and accelerated. Presumably this is one reason PMSITAC repeatedly questioned the misclassification (in August PMSITAC (2026*a*), pp. 2 and November PMSITAC (2026*b*), pp. 4). The net effect of this error, if continued, will be a strong tendency to float new initiatives with limited chances of success, requiring decades of development and directing benefits mainly offshore. We should support Advanced Tech initiatives that overlay themselves on existing strengths to enable rapid progress, elevating the research most important for enhancing productivity through innovation and skills.

Undoubtedly, some emerging activities such as aerospace or OpenStar's fusion research are outside our well-established Pillars – perhaps introducing confusion when ensuring these initiatives are better supported. These are commonly termed Frontier science and are better depicted as shown. The Advanced Technology Institute (NZIAT)'s agile hub and spoke arrangement are more consistent with depiction as of a horizontal layer coupled with some Frontier activity. A rocket is a better analogy as shown in our system diagram, noting these areas could become a pillar with sustained success.

The current PMSITAC Prioritisation Report proposes that agricultural research and environment should be 'deprioritised' using evidence we consider biased, poor, or erroneous. The bioeconomy and primary sector exports pay our way in the world, and planned cuts of 22% will slash the competitiveness and growth of the current $62 billion in exports in these areas, undermining a signature strategy to double these exports. Costs will continue

[1] Our Workforce Strategy, also in this issue: https://doi.org/10.26686/nzsr.v80.10986

to blow out in PROs, in which the costs of funding research delivery are already much higher than international competitors, resulting in further divergence from Small Advanced Economies (SAEs) that succeed compounding growth in the bioeconomy and food sectors, such as Switzerland. There and in similar SAEs, evidence provided to PMSITAC showed government research institutions host massive expenditure on agriculture, much of it from the private sector.[2] We need to rebuild the attractiveness of our PROs as a nexus of government and business investment through the matrix of pillar and horizontal support as shown in the diagram above.

The opportunity of Advanced Tech, including Gene Tech, should be seen as the greatest where it can be overlain as a multiplier on our existing strengths.

The essential role of the workforce and infrastructure as cross-cutting supports or foundations of success has been ignored. Successful national RSIT systems and strategies build in accountability for the costs, including underinvestment, of these areas. A key briefing to your predecessor shows our system has lost track of this key accountability (MBIE, 2025*a*). It must be restored and funded transparently to improve cost effectiveness and rebuild the trust that government and industry can invest through PROs. We support moving to at least 60% mission funding, but with a focus on paying for the bulk of the workforce and infrastructure with improved stability and strategic planning.

The workforce cross-cutting platform should host strategic initiatives that ensure the RSIT workforce enables desired goals and outcomes (see our Workforce Strategy[3]). Workforce initiatives should include strategic analysis of deficits in workforce capacity. These are now about ongoing careers in contrast to historic approaches funding PhDs and entry-level positions. For example, successful missions require social science research. Social science funding must be restored following cuts to National Science Challenges and redirection of the Marsden Fund. The PMSITAC Prioritisation Report shows this has been an area where NZ significantly underinvests relative to SAEs – 3% of total research funding versus an average of 13% elsewhere.

Arrangements for Research Funding NZ (RFNZ) and PROs will benefit from reconsideration to ensure independence, stability and accountability. We express deep concern that short cuts have undermined all five of the fundamental principles underpinning successful modern national research systems (Bush, 1945).

The five fundamentals can be summarised as:

1. Stability is paramount
2. Expertise is required to administer funding
3. The government should not directly operate or direct institutions funded
4. Universities and institutes should operate with clear independence
5. Independent administration must be fully accountable for public funding

Pillars overlapping the areas of the three PROs create unnecessary duplication that undermines efficient independent administration. The new Research Funding New Zealand body also lacks appropriate independence from the government of the day. The veneer of independence promoted for RFNZ will fail to provide independence when it matters most and will undermine trust inside and outside the sector. We therefore recommend:

- Halting or delaying the assimilation of the Health Research Council (HRC) into RFNZ until consequences are better understood.
- Regular evaluation and monitoring of the consequences of moving the Marsden Fund's administration into RFNZ.
- Developing the leadership of strategic mission science from within the PROs, as had been previously recommended (Recommendations 3-6 and 19, Crown Research Institute Taskforce (2010)) and initially implemented successfully.

Without building independence and capacity, leadership through PMSITAC and RFNZ is more likely to invest in pipe dreams than stable and effective research. An "Ignition" fund to more quickly realise opportunities illustrates this problem, and flexible funding within PROs provided a much more effective alternative until management of the system moved to MBIE in the early 2010s (Upton, 2010). The exception to this is Frontier research, which does need this type of funding.

Business R&D had grown strongly in the last decade, but expenditure plateaued in 2024 with no growth observed in 2025 and a loss of 6-8% of the research workforce (Stats NZ, 2025). The poor buoyancy of Business R&D likely reflects decreasing quality of the public foundation for the RSIT sector leading to decreasing connectivity between business, universities and PROs. Research from the OECD suggest we have a problem with overdependence on the R&D Tax Incentive (RDTI) and a lack of complementary policies. A review of the RDTI supported its continuation, but the Nobel Prizes in Economics announced last year underscore the danger that dependence on the RDTI alone favours incumbents over innovators, smothering the growth and productivity gains the RDTI is intended to provide (Ryan-Charleton et al., 2025).

Gene Tech legislation remains stalled yet should remain a high priority. We support the continuation of efforts to plan for successful legislation following the upcoming election. However, ongoing delays in implementing a more permissive regulatory framework suggest that capacity related to Gene Tech is best preserved and supported within the BioEconomy Pillar awaiting an

[2] Briefing info provided to PMSITAC, compare the GERD in slide 12 to GBARD in figure 2 of Prioritisation Report (MBIE, 2025*b*)

[3] Also in this issue: https://doi.org/10.26686/nzsr.v80.10986

overlying platform of Advanced Tech (as a horizontal cross-cutting platform). Experience suggests that funding a standalone Pillar related to Gene Tech will lead to gaps and misallocation.

Our national data on how RSIT investment builds benefits and outcomes is uniquely poor. We recommend continuing to invest in the NZ Research Information System (NZRIS) and undertaking work to understand how the high and unmeasured indirect costs (overheads) that consume most public RSIT funding can be reduced and stabilised through stable and direct investments in workforce capacity and infrastructure through horizontal cross-cutting platforms that make investment in pillars more agile and efficient.

Regional deals are a key opportunity. We are pleased to see that Auckland's regional deal includes an innovation hub linked to the University of Auckland. Including local strengths in RSIT, linked to universities and PROs, is an opportunity for you, as the Minister in these portfolios, to ensure RSIT and skills are valued locally and regionally. Most other nations see local government (including states in federal systems) as a crucial component of successful research and innovation systems that achieve critical mass of capacity on issues of local interest.

Missed opportunities and gaps will develop and open given the approach the government has announced so far, where oversimplification can result in omission of support for critical components of success.

A disastrous gap has already become evident: the disappearance of the horizontal Māori and Pacific cross-cutting capacity. Particularly for Māori, who can reasonably be expected to have leadership roles in nearly all significant research, this marginalisation is particularly concerning. It reverses a situation where New Zealand is seen as a world leader not just in indigenous research, but rather including indigenous perspectives in research that proudly serves the nation.

Similarly, there are deep concerns that social science capacity and expertise is being marginalised despite its crucial role in achieving mission outcomes across the focal points created by the intersections of Pillars and the supporting horizontal layers in our RSIT system diagram. The scale of this concern is starkly illustrated by Figure 3 in the Prioritisation Report where it is Government's budget allocation to R&D (GBARD) to the Society category is proposed to be trimmed from what is currently less than 4% of the total to less than 1%, while comparable Small Advanced Economy average 13%. This proposed trajectory clearly risks missing outcomes and undermining social cohesion and trust in research.

With regard to universities: we support the broad idea of removing the Quality Evaluation from the funding that is becoming the Tertiary Research Excellence Fund (TREF), including the implementation of metrics-based approaches.

- We have some concerns that plans for metrics-based approaches should be implemented with greater public discourse and transparency, and a diversity of metrics should be employed.

Centres of Research Excellence (CoREs) should be seen as a key focal points for potential improvements that benefit both RSIT and the role of universities.

- We recommend considering how to fund CoREs properly to achieve their missions, avoiding hypercompetitive rounds funding all CoREs at the same time.
- Action can be taken to test these goals by funding new CoREs in key areas of need such as energy and climate change.

The incoming Minister has the opportunity to address our concerns. We look forward to seeing a re-invigorated RSI system emerge at a time when it has never been more needed. To get there, we suggest the following strategic narratives would be useful to develop KPIs supporting the effectiveness and resilience of the RSIT system, with focus on the intersections of business and horizontal layers with pillars and the frontier activity.

1. Rebuilding connectivity between business, universities and PROs reflects successful support for the public foundation of RSIT enabling and enhancing the agility of the system to bring people together to build major advances.
2. Reconstruction of trust in the RSIT system follows function, as the pipeline of discovery builds through a network of connections constructed on stable foundations to respond to needs and opportunities with agility, across stewardship, priorities and innovation.
3. Workforce strategy invests with considered foresight to retain and build the capacity required within focal points around our strengths and priorities.
4. Advanced Tech enhances our existing strengths and frontier opportunities, rebuilding economic growth and labour productivity.

References

Bush, V. (1945), 'Science – The Endless Frontier 75th Anniversary Edition'. https://nsf-gov-resources.nsf.gov/2023-04/EndlessFrontier75th_w.pdf

Crown Research Institute Taskforce (2010), 'How to enhance the value of New Zealand's investment in Crown Research Institutes'. https://www.mbie.govt.nz/assets/7502750043/how-to-enhance-the-value-report-of-the-cri-taskforce.pdf

Ministry of Business, Innovation and Employment (2025*a*), 'BRIEFING: Overheads, infrastructure and science services in the new funding system'. https://www.mbie.govt.nz/dmsdocument/31287-briefing-0017004-overheads-infrastructure-and-science-services-in-the-new-funding-system

Ministry of Business, Innovation and Employment (2025*b*), 'New Zealand's R&D investment landscape and tools for prioritisation '.
https://www.mbie.govt.nz/dmsdocument/31915-new-zealands-r-and-d-investment-landscape-and-tools-for-prioritisatiog-supporting-information-for-the-pmsitac-proactiverelease-pdf

PMSITAC (2026*a*), 'Prime Minister's Science, Innovation and Technology Council (PMSITAC) Meeting summary notes and actions [August]'.
https://www.mbie.govt.nz/dmsdocument/31913-prime-ministers-science-innovation-and-technology-council-pmsitac-meeting-summary-notes-and-actions-august-2025-proactiverelease-pdf

PMSITAC (2026*b*), 'Prime Minister's Science, Innovation and Technology Council (PMSITAC) Meeting summary notes and actions [November]'.
https://www.mbie.govt.nz/dmsdocument/31908-prime-ministers-science-innovation-and-technology-council-pmsitac-meeting-summary-notes-and-actions-november-2025-proactiverelease-pdf

Ryan-Charleton, T., O'Kane, C., Maré, D., Hyslop, D. and Blamey, A. (2025), 'Research and Development Tax Incentive (RDTI) Five-Year Evaluation'.
https://www.motu.nz/our-research/productivity-and-innovation/science-and-innovation-policy/rdti-five-year-evaluation

Stats NZ (2025), 'Research and development survey: 2025'.
https://www.stats.govt.nz/information-releases/research-and-development-survey-2025/

Upton, S. (2010), 'Review of Crown research institutes finds just the right balance', *The Dominion Post* .
https://www.stuff.co.nz/dominion-post/comment/3421554/Review-of-Crown-research-institutes-finds-just-the-right-balance