



**MINISTRY OF BUSINESS,
INNOVATION & EMPLOYMENT**
HĪKINA WHAKATUTUKI

NOT GOVERNMENT POLICY
NOT FOR DISTRIBUTION

New Zealand's R&D investment landscape and tools for prioritisation

Supporting information for the PMSITAC



Context

- The Prime Minister's Science Innovation & Technology Advisory Council (PMSITAC) will play a central role in the new SI&T system, setting priorities and fundamentally changing New Zealand's approach to science investment
- You are tasked with providing advice to Government on a clear set of national priorities (including areas to deprioritise) which will guide investment decisions across the system.
- The purpose of this pack is to provide you with information to develop a list of focussed investment priorities for the SI&T system, along with areas that could be deprioritised, in time to inform advice for Budget 26 (required by late 2025).
- **The Government has identified advanced tech as the key area for additional investment. To match the average OECD investment (as a percentage of GDP), around \$100m-\$200m of science funding will need to shift from existing areas into advanced tech. The Minister is seeking advice on where this funding should come from **and** which areas of advanced tech to invest in.**
- Given existing investments, the areas available for reprioritisation are funding for basic research, or research that supports environmental, primary sector, natural hazards or health outcomes. For your next meeting MBIE will be able to provide you with information on specific areas for potential deprioritisation.



Intended outcomes from today

- Agree a framework and process for identifying priorities
- Deliver a clear recommendation on which broad areas of SI&T should be further explored to support decisions on prioritisation and de-prioritisation

Roadmap to priorities

TODAYS MEETING: INITIAL DISCUSSION ON PRIORITIES

Outcomes:

- Approve a framework and process for identifying priorities
- Deliver a clear recommendation on which broad areas of SI&T should be considered for prioritisation and de-prioritisation

Supporting material:

- High-level overview of the current state of investment in R&D,
- A data framework summarising the landscape across NZ's SI&T system
- Overview of international comparisons of research priorities
- Examples of frameworks and decision-making tools for setting priorities.

Next steps:

- Prepare a shortlist of SI&T priorities, including areas for de-prioritisation

AUGUST:

WORKING TOWARDS A LIST OF PRIORITIES

Outcomes:

- Produce an initial list of SI&T priorities, including areas of de-prioritisation
- Analyse the impacts of increasing and decreasing investment in context of total available SI&T investment

Supporting material:

- Detailed data on the shortlist of SI&T priorities and areas of de-prioritisation.
- Refined decision-making frameworks and tools

Next steps:

- Develop a detailed breakdown of the areas which will be prioritised and de-prioritised including for critical emerging technologies, against existing investment

SEPTEMBER:

MAPPING OF PRIORITIES AGAINST EXISTING INVESTMENTS

Outcomes:

- Evaluate the proposed list of SI&T priorities against current investments and highlight where SI&T investment may need to be increased or reduced
- Deliver initial draft report on priorities

Supporting material:

- Outline of early draft report on list of priorities

Next steps:

- Draft advice on priorities presented to Minister SI&T

OCTOBER:

POTENTIAL FOR FURTHER REFINEMENT OF PRIORITIES

Outcomes:

- Finalise and present clear, evidence-based advice on SI&T priorities, including recommended areas for focus, deprioritisation, and investment adjustment
- Submit report to the Prime Minister.

Supporting material:

- Updated draft report on list of priorities

Next steps:

- Deliver initial advice to the Prime Minister

NOVEMBER:

CONFIRMED PRIORITIES

Outcomes:

- Final confirmed list of priorities and areas of de-prioritisation
- Priorities list is published publicly

Supporting material:

- Final report to the Prime Minister on list of priorities
- Plan to deliver an SI&T Investment Plan by Budget 26

Next steps:

- Deliver final advice to the Prime Minister

Contents

The material in this pack consists of three sections:

Section 1: Domestic and international R&D context

- This section provides a high-level overview of the current state of Government and business investment in R&D, domestically and internationally.
- This will help create a shared understanding of NZ's SI&T investments and why prioritisation is necessary.

Section 2: New Zealand SI&T investment framework

- This section present a data framework summarising the landscape across NZ's SI&T system including investment, capability and outcomes.
- This section will help you identify areas of opportunity and to consider for de-prioritisation.

Section 3: What does this mean for New Zealand SI&T research priorities

- Following the investment landscape, we present some international research strategies and areas of prioritised research to show where other countries focus their research spending.
- This section also provides examples of practical tools to support PMSITAC advice. This includes decision-making tools tailored for PMSITAC, criteria and templates for evaluating and ranking investment priorities and risk analyses.



Section 1 - : Domestic and international R&D context

- Purpose: Set the stage by providing a high-level view of government investment in R&D, both domestically and internationally.



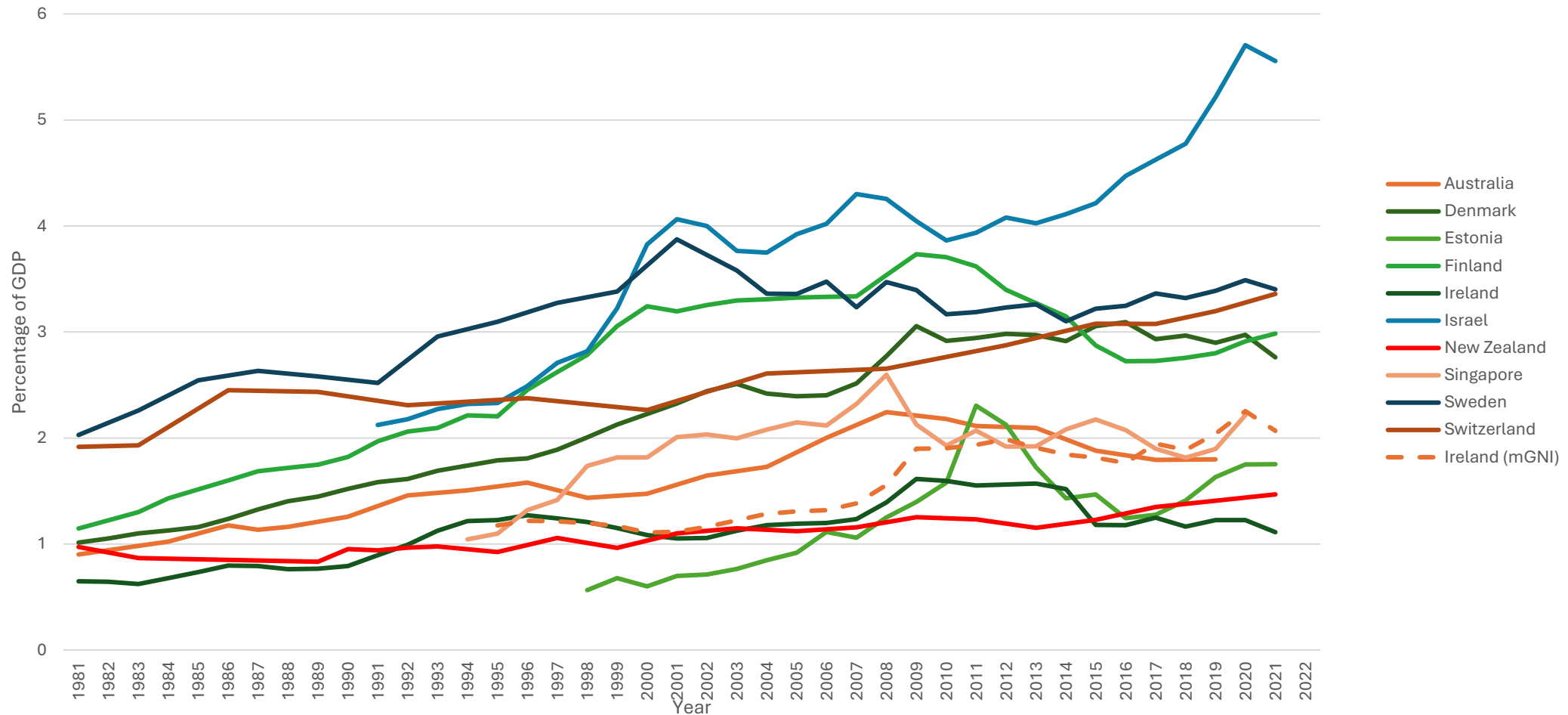


**MINISTRY OF BUSINESS,
INNOVATION & EMPLOYMENT**
HĪKINA WHAKATUTUKI

New Zealand underinvests in advanced tech research compared to other small advanced economies



New Zealand's overall investment in R&D is low compared to other small advanced economies



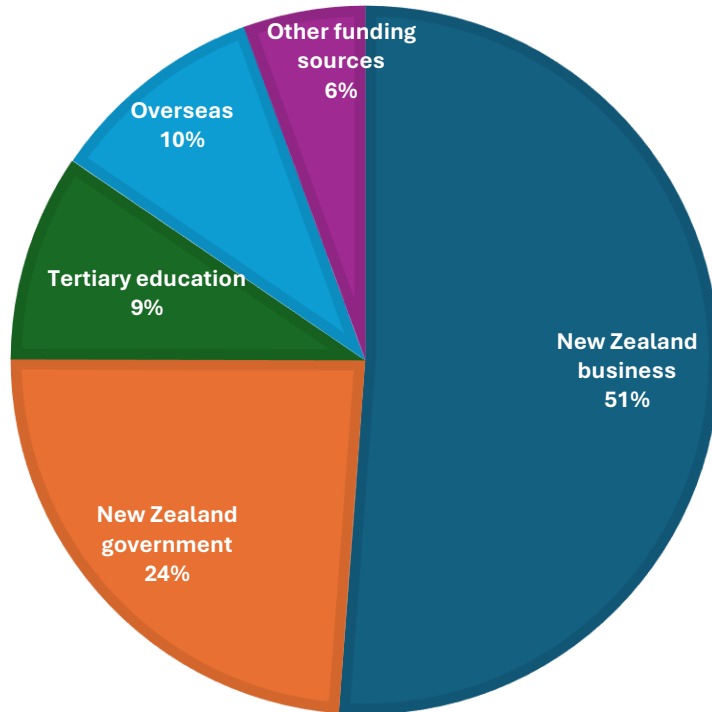
Source: OECD Main Science and Technology Indicators database



In New Zealand, the public sector pays for a larger proportion of research than the OECD average

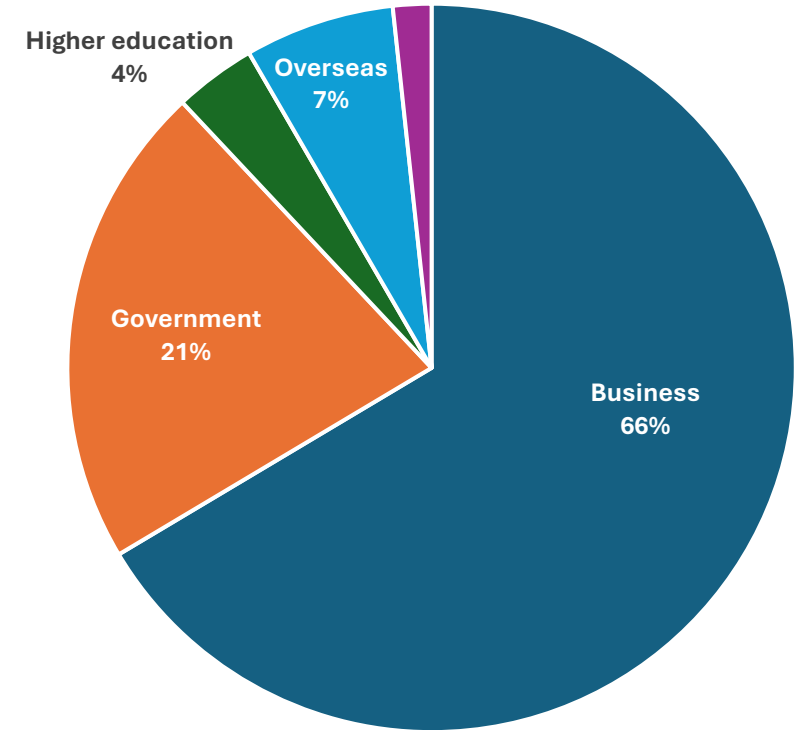
SOURCE OF FUNDS – NEW ZEALAND

- New Zealand business
- New Zealand government
- Tertiary education
- Overseas
- Other funding sources

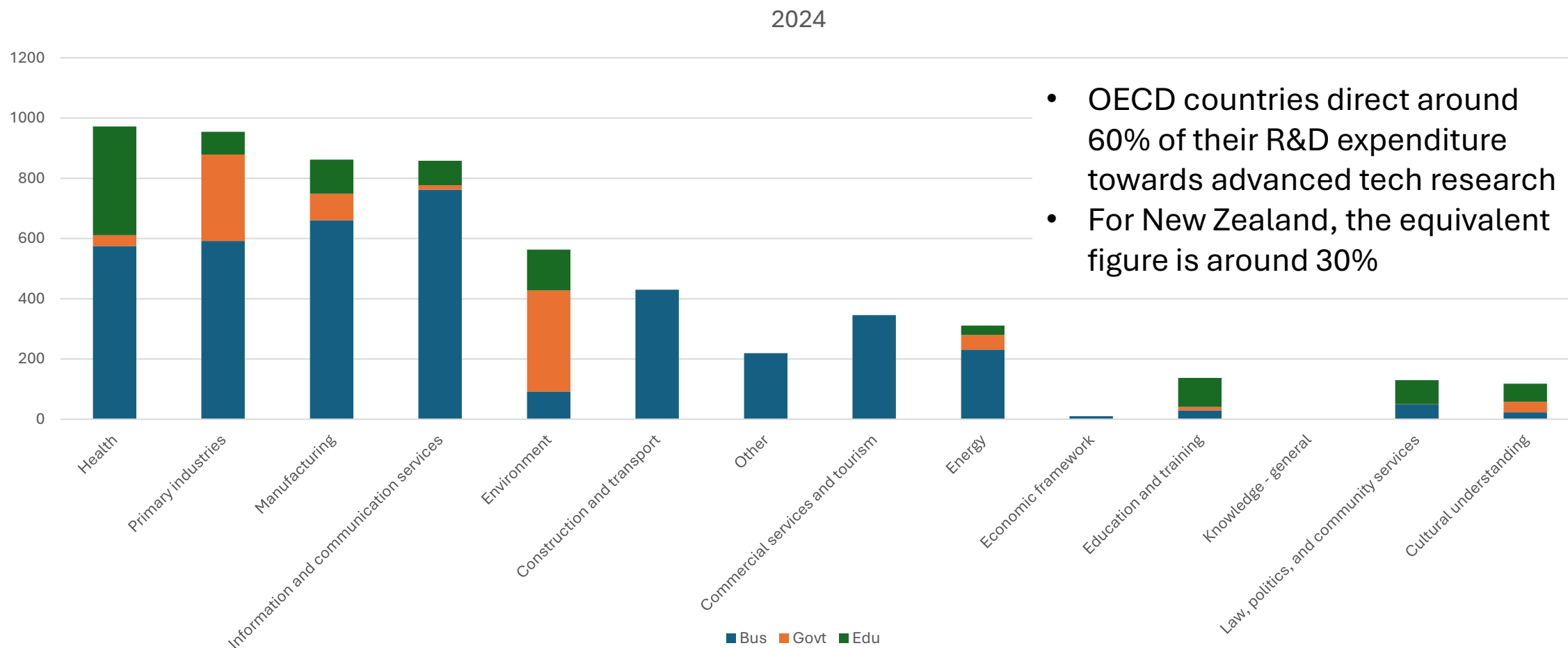


SOURCE OF FUNDS – OECD (representative sample)

- Business
- Government
- Higher education
- Overseas
- Other



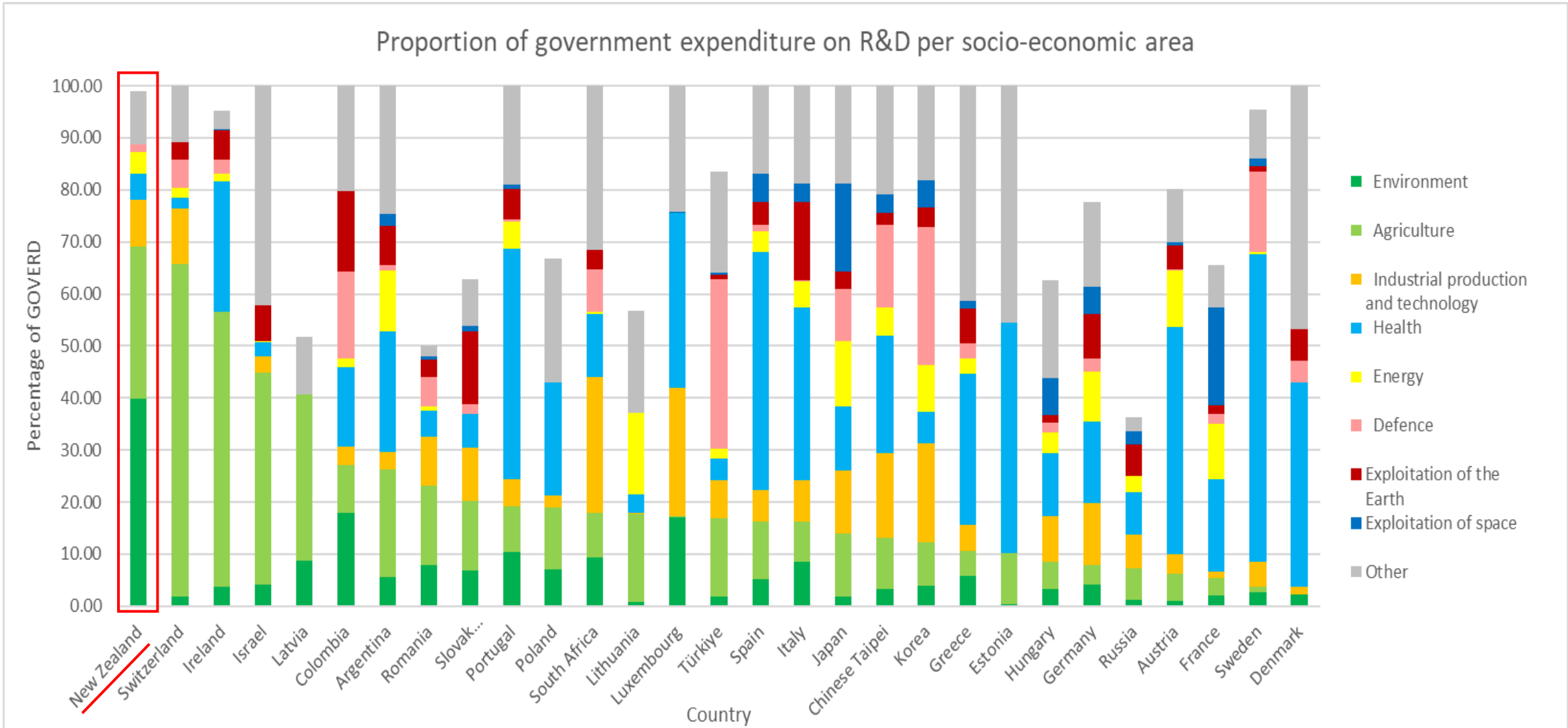
The NZ Government's \$1 billion SI&T investment is focused on our traditional area of competitive advantage, the primary sector and the environment, plus our key social challenge of health



NB Manufacturing also includes food & beverage manufacturing so has strong alignment to the primary sector

Source: Research and Development Survey 2024

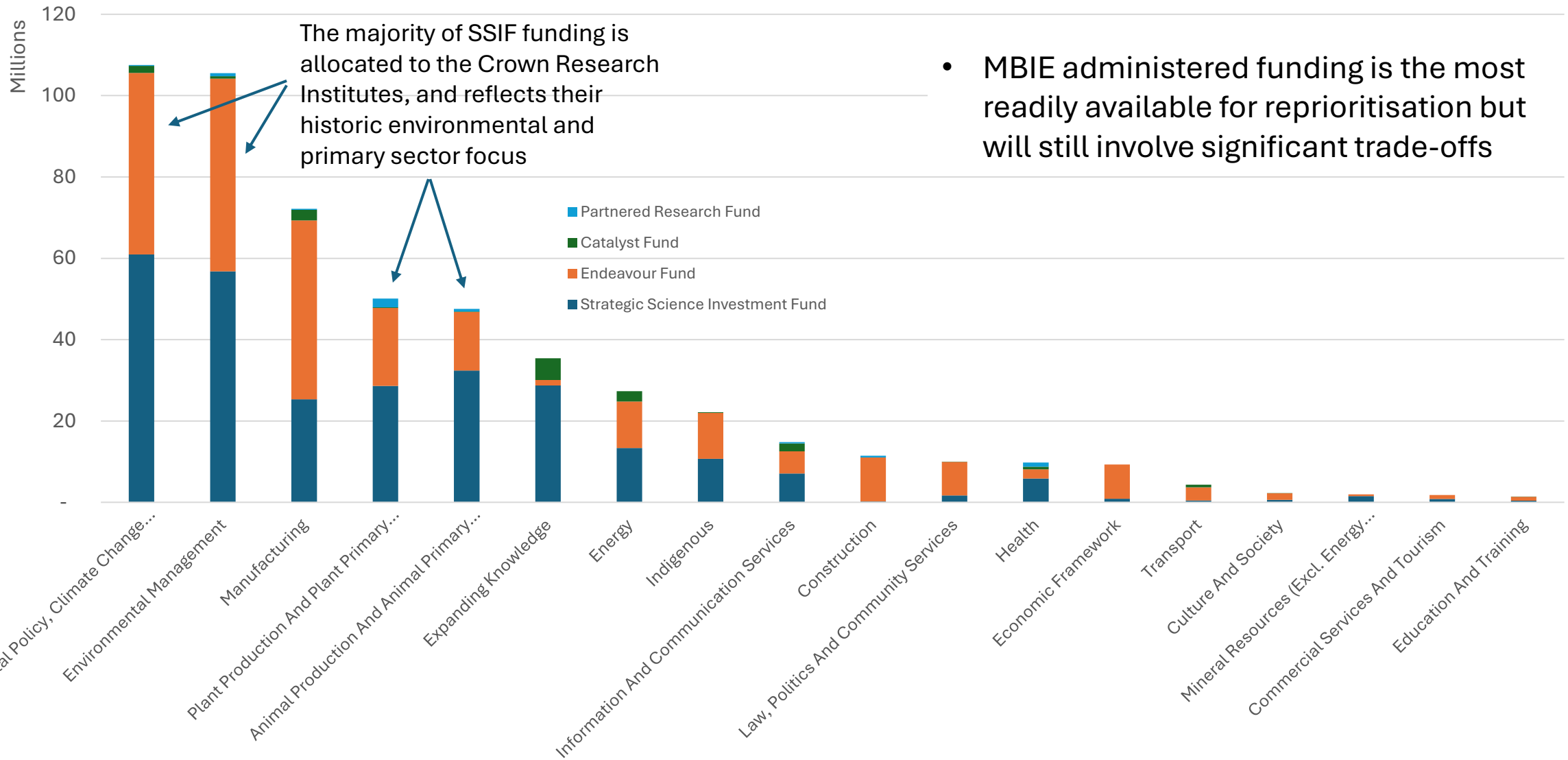
New Zealand is extremely unusual, even amongst countries with significant agricultural sectors, in how focused government expenditure is on the primary sector and environment



Some countries do not break down government expenditure by socio-economic area (eg Singapore, Finland). Of those that do, some do not report all socio-economic areas resulting in data not summing to 100%. Rounding issues also result in small discrepancies for some countries.



The high expenditure on the environment and primary sectors is reinforced through MBIE's funds



- MBIE administered funding is the most readily available for reprioritisation but will still involve significant trade-offs

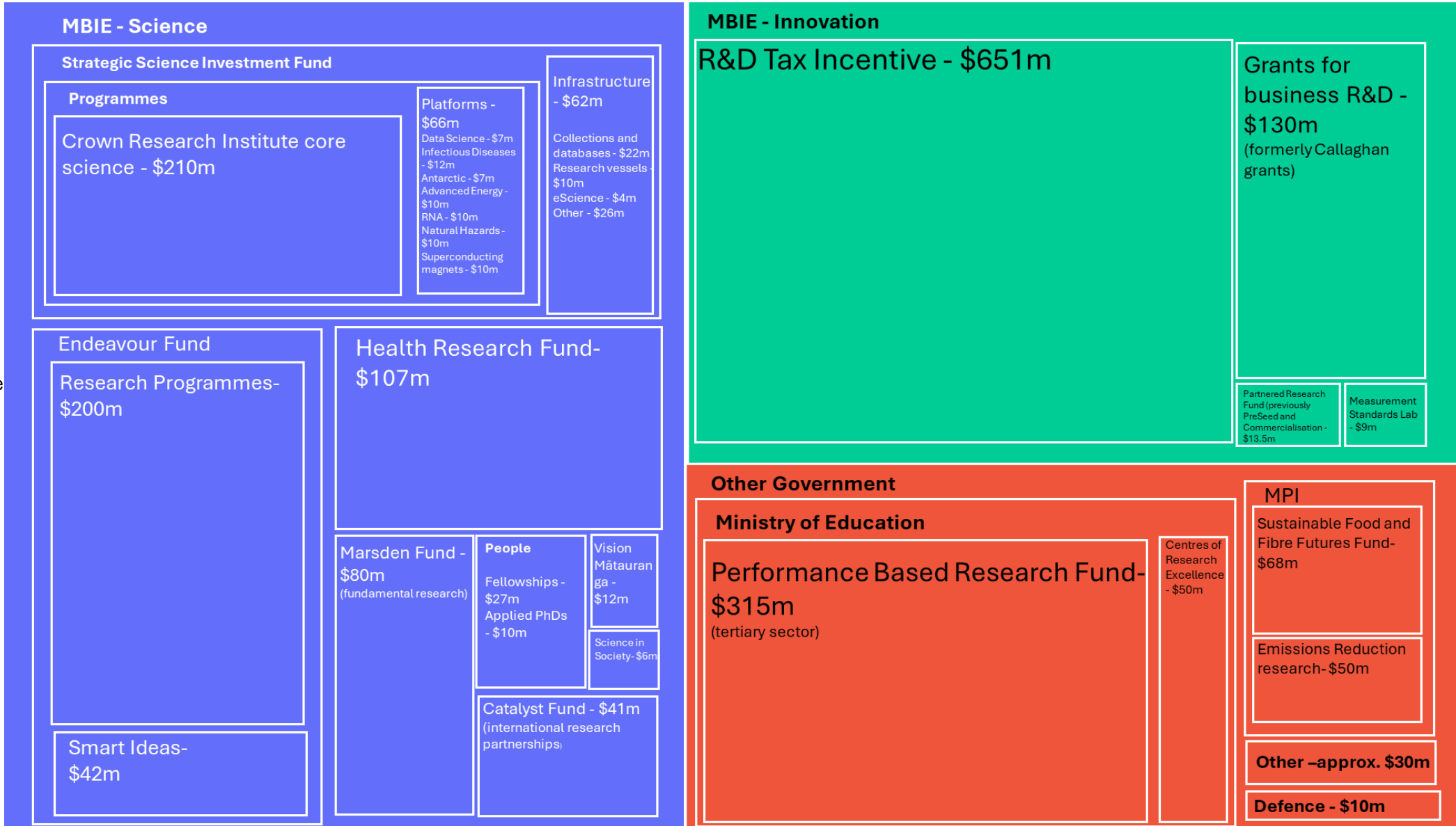
Not shown – devolved funding that MBIE does not administer: \$115M – Health Research Council funding, primarily in ‘health’
 \$79M – Marsden Fund, primarily in ‘expanding knowledge’

The Marsden Fund Council does not categorise research by outcome area, only by academic field of research



Non-MBIE funding supports the priorities of other Ministerial portfolios, but represents a significant chunk of government funding that you may want to factor into your recommendations

- Core science funding for:
- Institutions
 - People
 - Infrastructure
 - Science delivery



Innovation funding, primarily for business R&D

Other portfolio support for R&D and innovation

Questions for discussion

The following questions have been developed to guide discussion and analysis, with the aim of identifying which broad areas of Science, Innovation and Technology (SI&T) should be further explored to support informed decisions on prioritisation and de-prioritisation:

- What is the role of SI&T in light of the future economic and environmental challenges NZ is facing?
- What areas of research require prioritisation to ensure we maintain and strengthen existing areas of competitiveness?
- What would need to be true to move funding out of our existing areas of focus (agriculture and environment) over the next 5 years? Could these sectors pay for more of their own R&D?



Section 2 - : New Zealand SI&T investment framework

- Purpose: present a data framework summarising the landscape across NZ's SI&T system including investment, capability and outcomes





The Government is reshaping New Zealand's SI&T system to have greater focus on creating economic opportunities

- Purpose: Provide an overview of the changes the Government is making to New Zealand's science, innovation and technology system, including mechanisms to drive investment in advanced technologies



The data reflect New Zealand's science system as it was before the Government's ambitious reforms

The reformed system will include the following key changes:

- **Creation of the PMSITAC** to advise on national science priorities
- **Transformation of the CRIs into three new Public Research Organisations** focused on Bioeconomy, Earth Sciences and Public Health
- **Establishment of the New Zealand Institute for Advanced Technology**, a new Public Research Organisation focused on advanced technology
- **Changes to funds and funders** to align activities and resourcing to priorities
- **Strengthen incentives for knowledge translation** through changes to intellectual property and other technology transfer mechanisms
- **Establishment of InvestNZ** to attract multi-nationals and foreign investors, with a particular focus on the SI&T system



MBIE’s advice is largely aligned with the SSAG’s recommendations for establishing a single decision-maker for SI&T funding

TABLE 1: SSAG recommendations on the funding decision-maker	
SSAG recommendation	MBIE policy proposal
<ul style="list-style-type: none"> The Marsden Fund, the Endeavour Fund, the Catalyst Fund, the Health Research Council (HRC), and other contestable or allocative Crown funds (including components of the Strategic Science Investment Fund (SSIF)) are merged into a single National Research Council (NRC). The NRC assumes the role of balancing different types of research investment to allocate available funding across individuals and research programmes. 	<ul style="list-style-type: none"> We support consolidating decision makers into a single decision maker for the funding system. MBIE’s proposal expands the NRFC’s role to providing advice on the development of pillar strategies.
<ul style="list-style-type: none"> The NRC be organised around distinct pillars, including one to support research in the social sciences and humanities and another to support activities with a mātauranga Māori focus or where the specific matters of interest directly focus on Māori. 	<ul style="list-style-type: none"> We support a pillar-based investment framework with broad based pillars rather than smaller subject area pillars such as the Marsden Fund panels. MBIE’s advice proposes pillars as enduring domains that provide a stable framework for analysis and investment. MBIE agrees that cross-cutting factors such as basic research, infrastructure, mātauranga Māori, and ‘white space’ type funding for emerging areas of potential growth are vital to a high-performing system and should be factored into the development of system strategies and continue to be funded. We envisage these areas as horizontal investment that cut across and underpin the vertical domain pillars.
<ul style="list-style-type: none"> The NRC provide procurement services on behalf of government agencies when requested to do so, provided the agencies agree to fund it. 	<ul style="list-style-type: none"> MBIE will provide advice to the Minister of SI&T on the scope of funding for the NRFC and transitioning funding. This advice does not include consideration of funding from other agencies and portfolios. Cabinet can revisit and broaden the funds under NRFC’s scope later if desired.
<ul style="list-style-type: none"> During SSAGs workshops, when discussing the NRFC – they spoke about the NRC being independent with decisions around the fund design and allocation (for funds in their remit), but this is not specifically detailed in the report. 	<ul style="list-style-type: none"> MBIE recommends that decision-making for the design of pillars and funding structures remain with you. MBIE’s proposal for roles and responsibilities in the funding process is that we will work with the NRFC in a way to best leverage their expertise in developing investment mechanisms and funding processes. However, final decision-making will rest with the Minister of Science, Innovation and Technology to ensure alignment with the broader system strategy and integration of PMSITAC priorities into the funding framework.

Funding decision-makers from comparable overseas jurisdictions show that funding councils typically handle most contestable SI&T investment decisions

The table below provides a comparison of funding decision-makers in other jurisdictions. In summary, other jurisdictions have arms-length funding decision-makers that make awarding decisions and have a role in providing advice to Government on investment strategy.

Feature	Australian Research Council	Research Ireland	UK Research and Innovation	Singapore National Research Foundation
Entity form	<ul style="list-style-type: none"> Statutory agency with independent board. Provides policy advice and runs grant funding. 	<ul style="list-style-type: none"> Statutory body under the Research and Innovation (R&I) Act 2024. Operates within Govt set priorities, designs and manages funding programmes and operational delivery end-to-end 	<ul style="list-style-type: none"> UKRI operates through 9 councils that advise and deliver strategies. Decisions are shaped by the UKRI Board. 	<ul style="list-style-type: none"> Based in the Prime Minister’s Office. Leads the national R&I strategy and advises Government through the Research, Innovation and Enterprise (RIE) secretariat.
Functions & scope	<ul style="list-style-type: none"> Covers non-medical research only Health research sits within a similar National Health Medical Research Council NHMRC. ARC administers approx. one third of the total government science and research funding in Australia with approx. \$800 million administered per year. 	<ul style="list-style-type: none"> Manages competitive R&D funding only. Annual funding envelop €270 million – approx. 75% of national competitive R&D funding 	<ul style="list-style-type: none"> Manages most public R&I funds but under the Department for Science, Innovation and Technology (DSIT) strategy. Allocates more than £8 billion of investments annually, typically around 90% of the UK’s publicly funded research budget. Not responsible for all fundings streams. 	<ul style="list-style-type: none"> NRF provides strategic direction and funding schemes. Allocated SGD\$1.3B in research funding for 2023/24 (26% of total annual public R&D spending) Agency for Science, Technology and Research (A*STAR) executes internal R&D and commercialisation activities. Funds competitive schemes like the NRF Fellowship, NRF Investigatorship. Also runs, the NRF Competitive Research Programme and White Space funding. A*STAR manages internal grants and platforms.
Role in industry policy/economic growth strategy & direction	<ul style="list-style-type: none"> None Department of Industry, Science and Research (DISR) has funding/policy mandate for industry science /CSIRO 	<ul style="list-style-type: none"> Supporting role in shaping research and innovation landscape that informs and compliments industry policy 	<ul style="list-style-type: none"> None Strategy is set by Departments 	<ul style="list-style-type: none"> Strategic role in shaping industry policy through research, innovation and enterprise (RIE) agenda, and ecosystem development.

Our current funding system is organised by different funding instruments that vary in ...

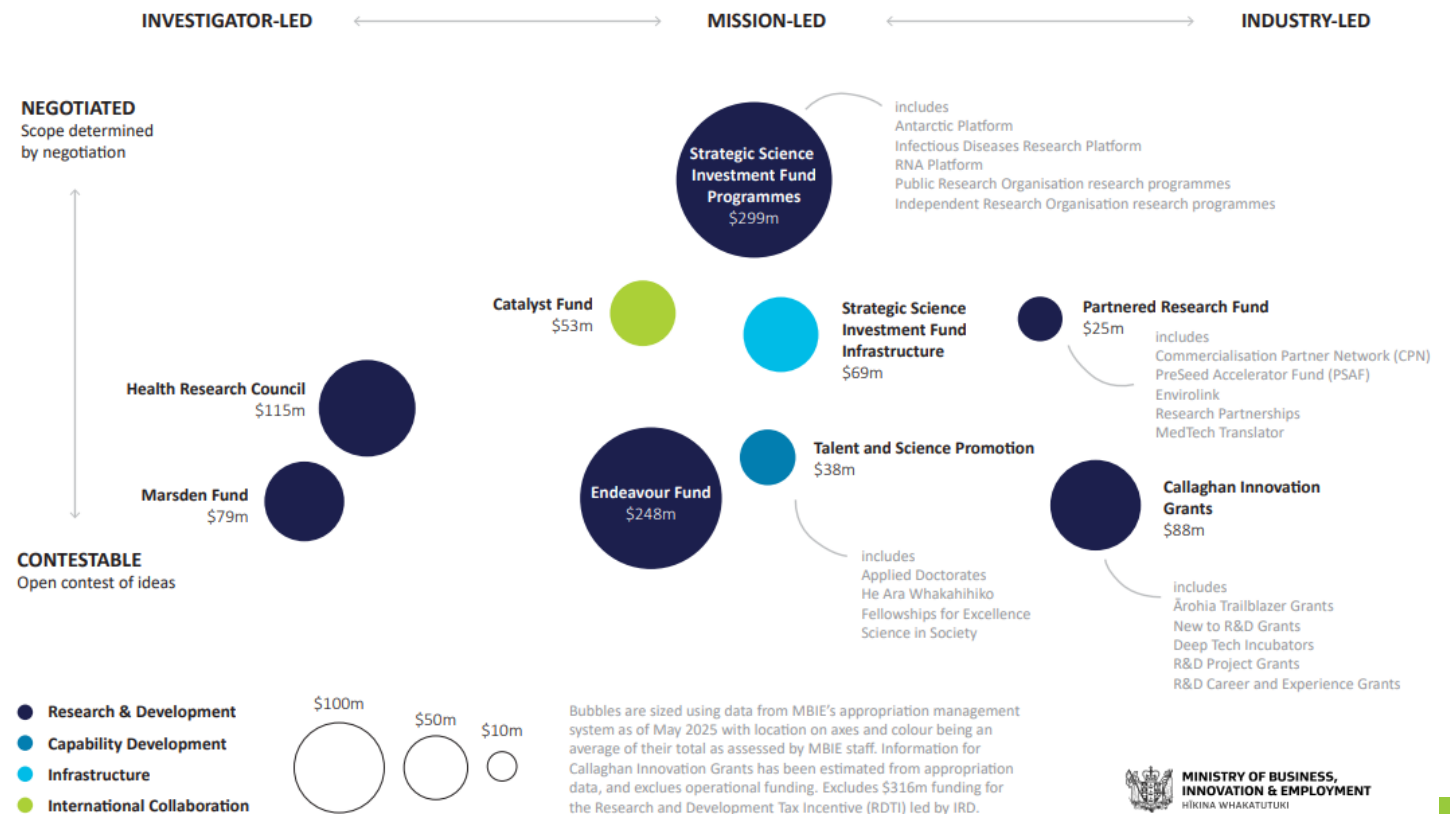
- who specifies the outputs (e.g Government, users, researchers)
- the types of outcomes sought (e.g sector specific, system etc,)
- distance from market or place along the pipeline of ideas
- methods of allocation (e.g. institutional, competition, negotiated)

MBIE SCIENCE, INNOVATION & TECHNOLOGY FUNDS

2024/25

TOTAL

\$1 billion



The future funding system being proposed is strategy-led and aligns SI&T activity and resourcing to priorities

The diagram below illustrates a potential alignment between funding instruments and mechanisms with strategic pillars. While these pillars are not finalised, they reflect domains commonly used in comparable countries and are considered a sensible starting point.



Note: If we were to map current SI&T (Science, Innovation & Technology) investments against this diagram, it would reveal significantly lower investment in the 'New Economy & Advanced Technology' pillar.

We imagine PMSITAC advice to interact with funding decision-making boards in two ways....

1. The allocation of funding across pillars/buckets
2. The identification of priority areas

An example of a priority being implemented through the system might look like...

The PMSITAC may advise that **quantum sensing** is a priority. To implement this priority:

- a **strategic research platform** could be created under the 'New economy and advanced technology' pillar for quantum
- **contestable mechanisms** could provide a pool of novel ideas that the platform would build upon.
- **capability funding**, including fellowships and applied doctoral training funding, would underpin the necessary talent pipeline.

In this way, the platform will act as a catalyst and focal point for broader system activity.

NZ Institute for Advanced Technology (NZIAT)

A new PRO focused on advanced technology development and commercialisation

NZIAT aims to drive economic growth, industry transformation, and global competitiveness.

Why NZIAT?

- NZ lacks a coordinated strategy for advanced technology (e.g., AI, aerospace, clean energy)
- There is a risk of falling behind global innovation leaders
- NZIAT fills this gap with strategic leadership and commercial pathways

NZIAT will inform and advise PMSITAC by:

- Maintaining a critical technologies list
- Engaging on advanced tech research strategy
- Seeking advice on spoke investments – this may include advice on quantum, synthetic biology, AI or other areas to be determined by PMSITAC



Indicative timeline





NZ SI&T investment framework

- Purpose: Introduce a structured approach to prioritising across sectors



Data Framework for Research Priority Setting Based on achieving sector outcomes

- To align science funding with New Zealand's strategic sector outcomes and Government priorities, an effective research priority framework must integrate diverse data sources.
- This includes StatsNZ's economic and R&D data, MBIE's funding records, and sector R&D capability assessments from institutions and PBRF data. A schematic shows how these inputs form a data matrix.
- The following slides highlight example sectors of interest. MBIE can provide full sector-level analyses on specific sectors of interest before your next meeting. Some definitions:
 - Investment:** Sources of funding for sector R&D
 - Capability:** Where the R&D expenditure/activity occurs

Data	Investment	Capability	Outcome
Sector	Government Private Higher Ed	Government Private Higher Ed	Stewardship Commercial New Ideas
Primary Sector			
Environment			
Advanced Manufacturing			
Additional Sectors (as needed)			

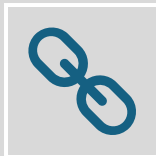
Primary sector insights



Integrated capability in the Government sector with the formation of the new Bioeconomy Institute



Strong economic linkages already making big contributions to GDP and exports

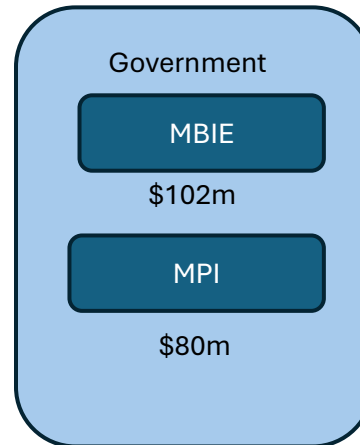


Cross-sectoral impact with significant overlap between primary sector and environmental goals

Primary Sector

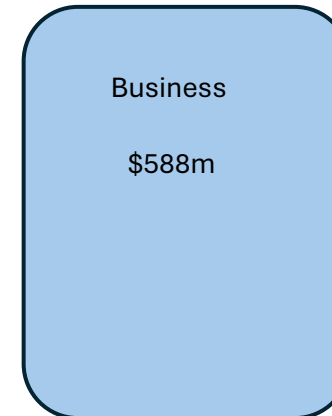
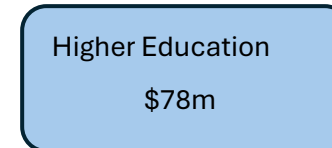
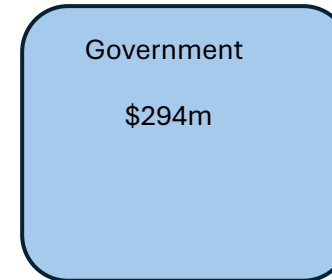
Investment

Total \$954m

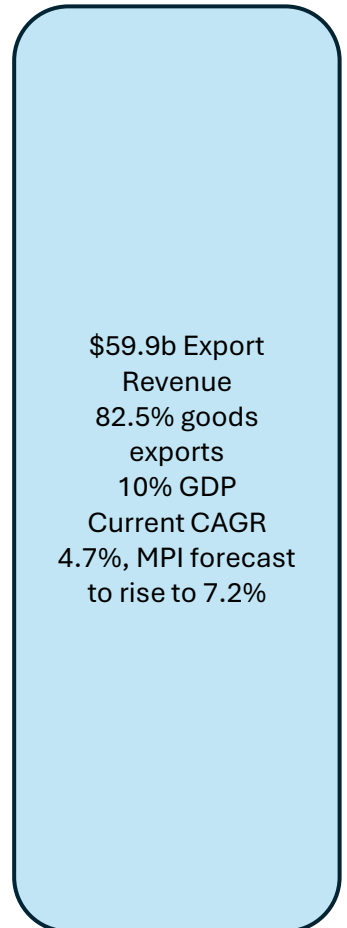


Capability

Total \$954m



Sector Performance



Environment sector insights



Government-led research dominates, reflecting central role in stewardship and policy development

Critical infrastructure needs – collections and databases play a foundational role in environmental monitoring and resilience



Strategic gaps in data access
– science-supported data not meeting needs of other agencies

Environment Sector

Investment

Total \$563m

Government

MBIE

\$233m

MPI

~\$35m*

DOC

~\$20m*

MFE

~\$4m*

Councils

~\$70m*

Higher Education

\$Unknown

Business

\$Unknown

Capability

Total \$563m

Government

\$336m

Higher Education

\$135m

Business

\$92m

Sector Performance

Two largest sectors of NZ Economy based on environment.

Data needed to monitor and manage environment lacking.

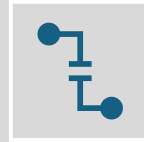
Climate change a growing threat.

Data needed to manage and respond to natural hazards

Health sector insights



Rapid growth in business-led R&D, including clinical trials and medical device development



Fragmented capability landscape, spanning universities, CRIs, hospitals and private sector, making coordination complex



High global market relevance, including pharmaceuticals and wellness industry, with high potential economic (and other) benefits

Health Sector

Investment

Total \$972m

Government

MBIE*

\$24m

HRC

\$128m

Higher Education

\$ Unknown

Business and Overseas

\$ Unknown

Capability

Total \$972m

Government

\$36m

Higher Education

\$361m

Business

\$575m

Sector Performance

NZ spends 11% of GDP on Health delivery.

NZ Medical Technology Company revenue \$1.94b.

Underpins Medical and health staff training.

Good academic publishing reputation.

Manufacturing sector insights



Distributed and diverse capability, across over 700 firms, with R&D highly tailored and closely held

History of government support, though often fragmented and sub-scale



Strong innovation legacy, with government research seeding major tech companies like F&P healthcare, RocketLab and Lanzatech.

Manufacturing Sector

Investment

Total \$862m

MBIE
\$52m

Higher Education
\$ Unknown

Business and Overseas
\$ Unknown

Capability

Total \$862m

Government
\$88m

Higher Education
\$113m

Business
\$661m

705 firms Undertaking R&D

Sector Performance

Manufacturing sector contributes \$21b (9% of GDP)

Top 200 Tech Companies (Manuf. And ICT) export \$13b

Digital tech sector insights



Explosive growth in business R&D, with ICT R&D nearly doubling in seven years, strongly supported by the R&DTI



Low direct government investment, with science funding contributing only 2% of ICT R&D funding



Strategic potential for export growth, with companies like Xero leading global exports.

ICT Sector

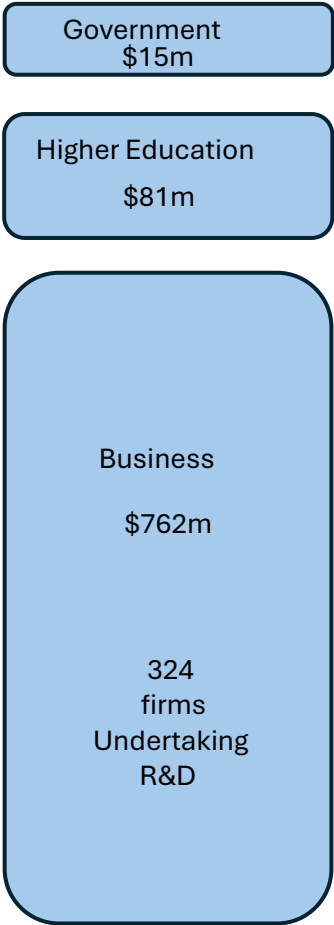
Investment

Total \$858m



Capability

Total \$858m



Sector Performance



Questions for discussion

The following questions have been developed to guide discussion and analysis, with the aim of identifying which broad areas of Science, Innovation and Technology (SI&T) should be further explored to support informed decisions on prioritisation and de-prioritisation:

- Are there sectors of future competitive advantage that New Zealand can generate more economic return from?
- What is the role of the SI&T funding system to support this?
- What areas of research would then need to be deprioritised to enable more emphasis on future growth opportunities?
- What's the right level of investment to enable continued return from traditional areas of strength



Section 3 – How to approach prioritisation and de-prioritisation

- Purpose: To present different approaches to prioritisation and de-prioritisation, including potential lessons from overseas and different risk or opportunity lenses that can support you to make recommendations





**MINISTRY OF BUSINESS,
INNOVATION & EMPLOYMENT**
HĪKINA WHAKATUTUKI

How other countries have approached prioritising their research



Comparator countries typically produce priorities which reflect both their specific contexts and more general challenges across advanced economies

Country and its context	Research strategy	Priority Research areas	
<p>Ireland Ireland focuses on societal challenges and economic competitiveness. An impact focussed and mission-driven approach is supported by a new unified funding agency (Taighde Éireann)</p>	<p>Impact 2030 will maximise the impact of research and innovation on many national priorities. It will progress objectives shared across the Irish R&I system such as maximising its impact on public policymaking and implementation, and nurturing and attracting talent.</p>	<p>Climate, Environment & Sustainability Focus on green technologies, renewable energy, and climate adaptation.</p> <p>Digital Transformation Investment in AI, cybersecurity, quantum computing, and digital infrastructure.</p> <p>Health & Wellbeing Research in public health, medical technologies, and mental health.</p> <p>Economic Competitiveness Innovation in advanced manufacturing, fintech, and global trade.</p> <p>Agriculture, Food & the Marine Sustainable food systems, agri-tech, and marine biodiversity.</p>	<p>Source: Impact 2030</p>
<p>Israel Israel targets areas of strategic advantage and global leadership, focusing on multidisciplinary innovation and national security.</p>	<p>National R&D Priorities (2022–2027) focuses on maintaining the country's global leadership in high-tech and science-driven innovation.</p>	<p>Bio-Convergence Integrating biology with engineering, AI, and computation to revolutionize healthcare and biotech.</p> <p>Foodtech Developing alternative proteins, sustainable agriculture, and food security technologies.</p> <p>Renewable Energy & Storage Advancing solar, hydrogen, and battery technologies to support energy independence and climate goals.</p> <p>Civilian Space Industry Promoting satellite technologies, space data applications, and commercial space ventures.</p> <p>Bluetech (Marine Innovation) Focusing on desalination, marine energy, and sustainable aquaculture.</p> <p>Quantum Computing & Artificial Intelligence National programs to lead in quantum technologies and AI infrastructure</p>	<p>Sources: Strategy and Policy - English Innovation Site National R&D Priorities (2022–2027)</p>

What lessons can New Zealand learn from the approaches of other countries? What challenges and opportunities do we have in common?

Country and its context	Research strategy	Priority Research areas	
<p>Finland Finland integrates R&I with sustainability, digital transformation, and social welfare. Innovation is a shared responsibility across sectors.</p>	<p>Vision for Research and Innovation 2030</p>	<p>Climate and Energy Solutions Carbon neutrality by 2035, Renewable energy, smart grids, and energy efficiency</p> <p>Health and Wellbeing Aging population, digital health, and preventive care Mental health and personalized medicine</p> <p>Digitalisation and Artificial Intelligence AI, quantum computing, cybersecurity Data economy and digital infrastructure</p> <p>Bioeconomy and Circular Economy Sustainable forestry, agriculture, and waste management Green chemistry and materials innovation</p> <p>Education and Skills Lifelong learning and digital pedagogy Research-based education and teacher training</p> <p>Security and Resilience Crisis preparedness, hybrid threats, and societal resilience Technological sovereignty and critical infrastructure</p>	<p>Source: https://www.aka.fi/en/about-us/what-we-do/what-we-are/strategy/</p>
<p>Singapore Singapore aims to maintain global competitiveness and resilience, translating research into enterprise and policy impact.</p>	<p>Singapore's national research and innovation strategy is defined by the RIE2025 Plan. This strategy (2021–2025) continues Singapore's long-term commitment to R&D as a driver of economic growth, societal well-being, and global competitiveness.</p>	<p>Manufacturing, Trade and Connectivity (MTC) Advanced manufacturing, logistics, global trade systems</p> <p>Human Health and Potential (HHP) Biomedical sciences, aging, mental health, and human capital development</p> <p>Urban Solutions and Sustainability (USS) Smart cities, energy, water, and climate resilience</p> <p>Smart Nation and Digital Economy (SNDE) AI, cybersecurity, quantum tech, and digital infrastructure</p>	<p>Sources: RIE2025 (Research, Innovation and Enterprise Plan)</p>



Ways of approaching SI&T prioritisation

- Purpose: Provide examples of practical tools that may support your decision-making around prioritisation and de-prioritisation



Sector opportunity analysis (choice of sectors is illustrative only)

Sector	Globally expanding or changing, and dynamic market	Clusters of research excellence in New Zealand	Anchor firms in New Zealand	Early-stage companies in New Zealand	Active investor activity	Evidence of hard advantages and lack of disadvantages	Role for gov science investment
Biotech	Rapid global growth driven by health, food, and climate needs. Market projected to reach USD\$4.25T by 2033.	NZ has top-ranked universities and strong life sciences research, but GMO regulation has been a barrier.	Few global players; notable examples include LanzaTech, Zespri, and Fonterra.	211 companies identified in 2020, mostly early-stage.	Some VC activity via Bridgewest and Brandon Capital (poor data here)	Strong alignment with future economy goals, but regulatory hurdles exist.	TBD
Aerospace	Sector growing with satellite and launch demand. NZ's share was NZD \$2.47B in 2023-24.	Universities have strengths in space engineering and science, but industry collaboration is limited.	Rocket Lab is a globally credible anchor firm.	Mix of startups and small firms; 45 companies noted in 2021.	Rocket Lab attracted NZD\$454M in 2021; global investment growing.	Launching state status, broad launch angles, and enabling regulation. Govt is not a major customer.	TBD



Example criteria for a prioritisation discussion – ranking based approach

	Criteria	Description	Examples	Weight
Long-term societal challenges	National resilience	Economic diversification, climate, environmental, and defence resilience	Defence research, climate change	
	Critical stewardship science		Earthquake and volcanic research	
Economic growth	Economic potential	Innovation & IP potential		
	Commercialisation potential	Scalability & export potential		
	NZ competitive advantage potential	niche research strengths and technical capabilities	Agritech, Rocket launch capability R&D	
Strategic alignment	Alignment to strategic settings and Government priorities		Economic research, Mātauranga Maori research	
	Ability to improve productivity		Digital & tech research	
Global and future oriented trends	Global relevance	International partnerships offer significant opportunities to advance, Treaties Research required to stay globally relevant	Antarctic research	
	Future capability			

Note this is an example of set of criteria the PMSITAC may wish to consider, modify and use toward their comparative analysis. We can work iteratively with the council to further develop a set of criteria, apply weightings and support a multi criteria analyses.



Example of an indicative decision-making framework – risk-benefit approach

Sector	Sub sectors	Success measures (potential ROI, bibliometrics, research uptake, export indicators)	Strategic fit / Importance	Benefits	Risks	Overall weighting
Environment	Freshwater, Minerals research Antarctic research		High Critical research that supports our overall resilience	++ national security (short and long term) and resilience to natural disasters	-- Risk that NZ specific research will not progress if not funded - research cannot be imported or extrapolated from other countries. -- Loss of critical capability to other sectors or lost overseas.	
Primary industries	Animal products processing		Medium	++ Highly commercial sector ++ Well-developed NZ market and export market	-- Lack of support for emerging high potential sectors -- Vulnerable to adverse weather events, which could disrupt economic growth potential	
Health						
Technology	AI, quantum					

Note this is an example of a framework the PMSITAC may wish to use to compare several research areas considering multiple competing factors. Each box can be populated with data upon request and can be at the sector or subsector level. This example isn't intended to capture the full spectrum of risks and benefits that you may want to consider.

Comparative risk analysis (for an illustrative set of research areas)

Risks of deprioritisation	Environment	Primary industries
Disruption of critical science services can increase the nations vulnerability and reduce our resilience to threats from natural disasters	-- High risk to national security (short and long term) and increased vulnerability to natural disasters.	≈ Low risk
Disruption of scientific progress in areas that are de-prioritised	- Risk that NZ specific research will not progress if not funded by NZ. This research cannot be imported or extrapolated from other countries.	-- Risk that if Govt does not fund primary industries there will be a break on innovation and diversification of the sector. products/services.
Disruption of sectors (goods and services) which have short-medium term economic impacts.	-- Reduced funding means that innovation and diversification will be slower putting a break on economic growth from the sector.	- Reduced funding means that innovation and diversification will be slower putting a break on economic growth from the sector.
Disruption of workforce and consideration of a long-term transition planning.	-- Loss of critical capability to other sectors or lost overseas.	- Loss of critical capability to other sectors or lost overseas.

Note that this is an example that compares sectors at the highest level, a similar risk analysis can be undertaken for specific research areas that need to be traded off against each other.

Actions

The following statements have been developed to support the meeting's objective: to approve a clear framework and process for identifying Science, Innovation and Technology (SI&T) priorities, enabling structured and informed decision-making.

- **Clarify** the types of information on New Zealand's current science investments that are essential for confidently identifying areas for potential reprioritisation.
- **Identify** international models that are particularly relevant to New Zealand and could provide valuable insights for shaping our prioritisation approach.
- **Specify** the additional material or guidance required from MBIE to effectively support decision-making on SI&T prioritisation and de-prioritisation.

