MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

BRIEFING

Strategic choices for the Science, Innovation and Technology portfolio

Date:	27 November 2023	**Priority:**	High
Security classification:	Budget - Sensitive	**Tracking number:**	2324-0953

Action sought		
	Action sought	**Deadline**
Hon Judith Collins **Minister for Science, Innovation and Technology**	**Review** options for making fiscal savings within the Science, Innovation and Technology portfolio, including their implications. **Provide** direction on next steps.	4 December 2023

Contact for telephone discussion (if required)			
Name	**Position**	**Telephone**	**1st contact**
Nic Blakeley	Deputy Secretary, Labour, Science and Enterprises	Privacy of natural persons	
Iain Cossar	General Manager, Science, Innovation and International	Privacy of natural persons	✓

The following departments/agencies have been consulted

Minister's office to complete:

☐ Approved ☐ Declined
☐ Noted ☐ Needs change ☐ Seen
☐ Overtaken by Events ☐ See Minister's Notes ☐ Withdrawn

Comments

MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

BRIEFING

Strategic choices for the Science, Innovation and Technology portfolio

Date:	27 November 2023	**Priority:**	High
Security classification:	Budget - Sensitive	**Tracking number:**	2324-0953

Purpose

To provide reprioritisation options in the Science, Innovation and Technology portfolio to support the Government's fiscal savings objectives.

Executive summary

The Science, Innovation and Technology portfolio includes the work programmes and appropriations from the previous Research, Science and Innovation portfolio, as well as the digital technology work programme within the previous Digital Economy and Communications portfolio. Both aspects are canvassed in this paper.

Governments invest in science and innovation to support a range of outcomes, including economic prosperity, social wellbeing and environmental management.

The key points around the current fiscal picture for the SI&T portfolio include:

- Spending in 2024/25 on research, science and innovation activity comprises approximately $1.5 billion, plus $466 million in Vote Revenue for the Research and Development Tax Incentive. The former drops to $1.2 billion in 2025/26, in part due to some appropriations supporting research and development coming to an end.

- The funding supports a wide range of activities to improve environmental, economic and societal outcomes for New Zealand. Examples include:

    - Commercialisation of deep tech projects of early-stage start-ups.
    - Development of new tools to test drinking water quality and monitor methamphetamine levels.
    - Research to understand Antarctica's impact on the global climate.
    - Research to understand and inform New Zealand's response to geological hazards.
    - Research to strengthen New Zealand's ability to use and commercialise Ribonucleic Acid (RNA) technology, such as developing vaccines.
    - International research collaborations in quantum physics that contribute to new and advanced technologies.

- While New Zealand's investment in research, science and innovation is, on the face of it, a significant amount of public funding, our proportion of public and private investment in research and development to GDP is well below the OECD average. New Zealand

currently invests 1.46 per cent of GDP in research and development, against the OECD average of 2.7 per cent.

- In the Rapid Savings Exercise announced in August this year, $115 million was reprioritised from the previous RSI portfolio. This included a one-off $65.9 million saving from Callaghan Innovation grants that had been slow to be awarded, and $49.4 million (over four years) from public good science funds.

- Much of the SI&T non-departmental funding is allocated via longer-term contracts of differing durations, so at any given point in time, some funding will be available for reallocation. It is therefore possible to identify two per cent of non-departmental funding ($30 million per year) to contribute to the Fiscal Sustainability Payment. There are different options for this, with varying implications. We are keen to discuss these with you and to gauge your preferences.

- While larger reductions are certainly possible, they would take more time to realise. We recommend a more strategic, targeted approach given the current structural issues in the research system, the implications for the balance of the overall funding system, and impact on research organisations and research-able businesses. We would work with relevant agencies (other government departments) to identify the implications of different savings options.

- Investment directly in the technology sector is $63.4 million in this financial year, dropping to $53.6 million next year and $45 million from 2026/27 onwards. Active consideration

- Aside from this, and funding for policy advice around the digital technology sector (approximately $1.5m per annum), the funding has been allocated as part of the Digital Technologies Industry Transformation Plan. Under the National Party – Act Coalition Agreement, we note the immediate stop-work notice on Industry Transformation Plans. Assuming no replacement work programme with the technology sector, this then provides an amount that can be returned to the Crown.

- Within Departmental funds, we are working to realise savings across SI&T policy and operational budgets to contribute to MBIE's wider savings programme.

- In our operational area, resourcing is driven by the size and complexity of the funds being managed. Little to no operational savings are realised when funds are "trimmed" in size and while some efficiencies could be achieved if funds were merged, larger savings are only possible when whole funds are closed. We note our resourcing for funds management is low by international standards.

- MBIE is facing a cost pressure of Active consideration around operational management of Pītau – a new fund management system.

- Savings in policy capability are being managed centrally across MBIE with a 10 per cent intended reduction overall, and resources being reorganised against Ministerial priorities.

- Callaghan Innovation is looking at how it might be able to realise a two per cent reduction to its operational funding, noting that it is already working through several significant cost pressures.

- A summary of portfolio funding is below:

Funding type	**Baseline funding ($ million)**					
	2023/24	**2024/25**	**2025/26**	**2026/27**	**2027/28 & outyears**	**FTE**
Departmental	41,465	36,233	35,758	35,758	35,758	142.5**
Non-Departmental*	1,900,996	1,418,561	1,204,573	1,183,119	1,184,341	413***
Total Crown	1,942,461	1,454,794	1,240,331	1,218,877	1,220,099	
2% Non-Departmental reduction	*38,849*	*29,096*	*24,807*	*24,378*	*24,402*	

* Includes Capital expenditure (of $461.2m in 2023/24) but not RDTI funding which is in Vote Revenue.

** This includes 12 Enablement FTEs (i.e. corporate & support functions such as finance, legal, communications, ICT, Ministerial Services.

*** Callaghan Innovation staff only actual Sept 2023 level (not CRIs)

Recommended action

The Ministry of Business, Innovation and Employment recommends that you:

a **Agree** that, to support a whole-of-agency approach, you will meet with the MBIE portfolio Ministers to discuss reprioritisation options.

Agree / Disagree

b **Note** that the two per cent saving for the Fiscal Sustainability Payment ($30 million per annum) can be taken from uncontracted funding in SI&T appropriations from 2024/25.

Noted

c **Note** that while larger savings are possible, with options around strategic choices presented in this paper, we are keen to discuss your portfolio priorities with you before providing final advice.

Noted

d **Note** that there are additional options identified in the MBIE ownership fiscal briefing (2324-0917 refers) and these savings will be apportioned to your portfolio.

Noted

e **Note** that in addition to the reductions in policy capability funding that will flow from the options noted in Recommendation d above, some savings may be possible across SI&T operational functions, with the exact amount depending on your priorities for the portfolio, and decisions around specific science funds (noting also that Active consideration is needed to manage a cost pressure around Pītau – the new research fund management system).

Noted

f **Agree** to discuss this advice with officials with a view to defining a recommended approach.

Agree / Disagree

Nic Blakeley
Deputy Secretary
Labour, Science and Enterprise
MBIE

27 / 11 / 23

Hon Judith Collins
Minister of Science, Innovation and Technology

..... / ..... / .....

Strategic choices for the Science, Innovation and Technology portfolio

1. Science, innovation and technology underpins New Zealanders' standard of living and broader wellbeing. It underwrites the productivity and competitiveness of key industries and contributes skills and knowledge to the creation of new ones. It allows us to better understand and manage our natural environment, and assess the risk of, and respond to, natural hazards. It supports the development and adoption of new medical technologies and provides us with the underlying knowledge to help New Zealanders live healthy lives.

2. MBIE's view is that the New Zealand economy needs to transform over the next 25 years to sustainably deliver prosperity for current and future generations. To meet the multiple challenges it faces, New Zealand needs to export a more diverse set of products and services to a wider range of countries, producing them with lower emissions and higher rates of productivity. This cannot be achieved without a clear commitment to supporting science, innovation and technology.

3. It is our understanding that the Science, Innovation and Technology (SI&T) portfolio includes the work programmes and appropriations from the previous Research, Science and Innovation (RSI) portfolio, as well as the digital technology work programme from the previous Digital Economy and Communications (DEC) portfolio.

4. Together this comprises expenditure in 2023/24 of $1,481.8 million ($1,418.3 million from RSI and $63.5 million from DEC) in Vote Business, Science and Innovation and a further $466.3 million in Vote Revenue for the Research and Development Tax Incentive.

5. Your reprioritisation options are best assessed in light of the strategic issues we are working on within the portfolio. This includes the potential for the science system to respond to government priorities, the balance of funding across different types of research, innovation and technology activities and outcomes sought, and existing pressure points and gaps.

Our level of investment in research, science and innovation is low by international standards and is constraining productivity growth

6. We believe that the low levels of investment in research and development over many decades have been an important contributor to New Zealand's stubbornly low levels of productivity growth. All advanced nations spend proportionately more on research and development and have committed to increasing their investments given the strong correlation between research and development and enhanced productivity. In addition, our level of investment is declining in real terms.

7. In 2021, New Zealand spent 1.46 per cent of GDP on research and development. This compares to the OECD average of 2.7 per cent and a Small Advanced Economies average of 2.8 per cent. Successive New Zealand Governments have set a target of 2 per cent of GDP. Most advanced economies are at, or have plans to get to a level higher than 3 per cent of GDP.

We need to rebalance our investment towards activities that will support future prosperity

8. Over time, investment within the system has resulted in an imbalance across different areas. We believe these require specific correction to ensure that the system is set up to deliver the outcomes that New Zealand will require in the future. This includes:

a. **Mission-focussed research.** Investigator-led funds (like Endeavour and Marsden) allow researchers to pursue projects they consider worthwhile, usually via competitions that assess the potential quality and impact of their research. Mission-led funds are where Government can be more directive about the goal of the research. We believe that New Zealand should follow international trends and invest more in mission-led research projects to explore areas of future strategic importance to the country.

b. **Advanced technologies research.** New Zealand spends a higher proportion of government expenditure on agricultural science and environmental science than any other country in the OECD, and this continues to contribute to the success (and importance) of those sectors. However, we significantly under-spend in advanced technology. This means we have little research capacity in key technology areas that will be increasingly important to both our economy and society in years and decades ahead. In particular, health, defence and new or emergent technologies.

c. **Commercialisation.** A relatively small amount of focus is given to encouraging and supporting commercialisation activities that enable value to be derived from the application of publicly funded research by businesses and industry. Compared to other countries, New Zealand businesses have relatively weak connections with the research sector. We fund a number of small-scale initiatives that could be streamlined and empowered to deliver more impact across a wider number of businesses.

Reform of our institutions is needed to ensure that they are set up to deliver on government priorities

9. Crown Research Institutes (CRIs) are not currently well set up to respond and deliver on evolving government priorities. There are some accountability mechanisms that we can use to improve this (e.g. Board Chair appointments, Statements of Performance Expectations). The Wellington Science City programme was established with an objective of enabling stronger collaboration and integration between relevant CRIs and Callaghan Innovation using co-location of shared infrastructure and facilities. Over time this could evolve towards integration of some of those agencies. Other relevant work includes the review of MetService & NIWA services, Active consideration

10. Some CRIs do not have sufficient stable funding to support their core purpose and delivery of public good services (e.g. earthquake monitoring). Public revenue for CRIs is a mix of the Strategic Science Investment Fund (SSIF),[1] contestable funding and contracts of varying duration with central and local government entities. This means that funding can be variable over time and drives focus within the CRIs towards opportunities to secure new funding. It also constrains your ability to redeploy funds without having significant consequences for organisations and core capabilities within the system.

11. We recommend a cross agency process with relevant agencies e.g. the Ministry for Primary Industries (MPI), the Ministry for the Environment (MfE), the Department of Conservation (DOC), MBIE (Energy markets, Economic Development, Building and Construction, Space) and National Emergency Management Agency (NEMA) to provide collective advice to Ministers on how we can better deploy funding more effectively across CRIs, and in light of the government's priorities.

[1] The Strategic Science Investment Fund (SSIF) funds strategic investment in research programmes and scientific infrastructure that have long-term beneficial impact on New Zealand's health, economy, environment and society.

Investment in our international connections will be increasingly important

12. Our ability to connect with partners overseas will be increasingly important as geostrategic dynamics play out and large economies look to support their domestic industries and supply chains, and protect national security. Collaborations with international researchers have been a vital means of bringing new knowledge back into New Zealand; recent global events make this even more strategically important to ensure that New Zealand remains with some useful connections to the global knowledge frontier.

We understand the need to find fiscal savings in the short term

13. Despite the pressures on a science system that is struggling to meet the needs of its multiple users, we understand the need to identify savings from it – most immediately the two per cent Fiscal Sustainability Payment. We believe that it will still be possible to work towards resolving some of the strategic challenges in the system, even while making fiscal cuts, if we apply them in a way that tries to rebalance investment.

We can identify a two per cent saving from Non-Departmental SI&T appropriations [~$30million]

14. Much of the SI&T Non-Departmental funding is allocated via longer-term contracts, for example, in core capability in primary sector and environmental sciences through to investigator-led research projects. At any given point in time, some funding will be coming up for reallocation.

15. There are uncontracted funds in the SI&T appropriations from 2024/25 from which we can provide a two per cent saving (equal to $30 million per annum). Some options for this include:

    a. Using funding currently supporting the National Science Challenges (the Challenges). The Challenges conclude in June 2024 and the funding is tagged for supporting a next phase of mission-led research projects in strategic, future-focused areas of importance to New Zealand. Confidential advice to Government

    b. If you wanted to protect this funding for future mission-led strategic research (noting the balance point above), you could look to reduce uncommitted funding in a collection of funds, such as Active consideration that has not yet been invested, or the contestable investigator-led research funds such as the Endeavour, Marsden or Health Research funds.

    c. In the digital technologies area, you could choose Confidential advice to Government

16. Realising savings from funding currently supporting the National Science Challenges is the **least disruptive option** in short-term. We are keen to discuss options with you, including how savings could be configured over a four-year forecast period. For example, taking $30 million from the funding currently supporting Challenges in Year 1, but retaining it in outyears as savings are realised from contracts ending in other funds (for example, the contestable, investigator-led funds, and the Strategic Science Investment Fund).

We are working towards a saving across Departmental policy and operational areas in SI&T

17. As an organisation MBIE is looking to identify savings across different Departmental funding lines.

18. MBIE has a multi-category appropriation in each of its Votes, these all cover a range of policy functions to provide flexibility in delivering against government priorities. MBIE is proposing an overall 10 per cent reduction to policy activities. The current allocation of resourcing reflects existing work programmes, therefore we recommend that MBIE Ministers discuss how best to allocate the remaining 90 per cent across portfolios, given the incoming Government's priorities. Further advice on this matter is covered in the MBIE ownership fiscal briefing (2324-0917 refers).

19. For SI&T, savings can be realised across both policy and operational areas. This would largely be implemented by confirming a number of vacancies, and potentially larger decisions Confidential advice to Government

20. We can potentially reduce FTEs in science fund administration roles (commencing with 2 FTE positions initially, and working up to 6 FTE operational positions TBC)] but decisions would be needed from Ministers/Cabinet around merging or closing research funds. We could make savings Active consideration Active consideration These savings would be realised over time as these changes took effect. We note that the Vision Mātauranga fund might fall within the category of public services that the Coalition Agreement with New Zealand First says should be prioritised on the basis of need, not race. We would like to discuss the Government's intentions about this part of the Coalition Agreement with you.

21. We do note however, that we have a cost pressure around the annual operating costs for Pītau, a new fund management system. This will need to be offset against the operational savings that are possible.

We are keen to understand your intent around the current reform of the research, science and innovation system – Te Ara Paerangi

22. A policy team is in place to lead this timebound work, but it is only funded until June 2024. The underlying issues that inform the focus of Te Ara Paerangi remain in the sector, as detailed above in paragraphs 1-12 and in the Briefing for the Incoming Minister of Science, Innovation and Technology. If you wish a reform programme to continue in some form then resources will need to be allocated in the cross-ministerial process mentioned above (para 18).

We also note the intent to review plans for Wellington Science City

23. We are keen to talk to you about this, including to present more detail around the intent of this work programme. Particularly the underlying science infrastructure needs (irrespective of the programme itself) and what options are available to reduce the scale/cost and/or phase the focus of the work. Depending on preferences there may be savings that can be identified.

24. We will provide a separate briefing on this work.

Further reductions into non-departmental budget lines are possible and we can discuss options with you

25. Larger reductions in the Non-Departmental appropriations are possible but the implications are more significant. We recommend a targeted and more strategic approach, and potential options that you may want to explore are provided below.

Fiscal background for the SI&T portfolio

26. The portfolio includes expenditure in 2023/24 of:

    a. $1,418.3 million in Vote Business, Science and Innovation for research, science and innovation activities (this drops from 2025/26 due to appropriations relating to research and development support coming to an end)

    b. $63.5 million in Vote Business, Science and Innovation for support for the digital technologies sector

    c. $466.3 million in Vote Revenue for the Research and Development Tax Credit.

27. The outyear profile across Departmental and Non-Departmental appropriations looks like the following:

Funding type	**Baseline funding ($ million)**				
	2023/24	**2024/25**	**2025/26**	**2026/27**	**2027/28 & outyears**
Departmental	41,465	36,233	35,758	35,758	35,758
Non-Departmental[2]	1,900,996	1,418,561	1,204,573	1,183,119	1,184,341
Total Crown	**1,942,461**	**1,454,794**	**1,240,331**	**1,218,877**	**1,220,099**

28. A significant amount of funding (particularly in the research, science and innovation area, but also for some of the digital technologies funding) is allocated via multi-year contracts of differing durations for specific projects and services. These commitments place some constraints on our ability to reprioritise unless the Crown is prepared to break contracts mid-way through their term. However, it does give longer term flexibility. This funding underpins the ongoing viability of seven CRIs (for example, via the Strategic Science Investment Fund) and Callaghan Innovation, as well as indirectly the research capability of our universities and independent research organisations.

The current portfolio baseline has different categories of spending

Item	*FY2023/24 $m*	*% of total*
Departmental expenditure (policy and contract management)	41.2	1.7
Funding for Research	954.7	*39.6*
Other non-departmental programmes	73.8	3.1
Callaghan operational funding	85.9	3.7

[2] Includes Capital expenditure (of $461.2m in 2023/24) but not RDTI funding which is in Vote Revenue.

Item	*FY2023/24 $m*	*% of total*
Support for Business R&D and Innovation	285.6	11.9
Game Development Sector Rebate scheme	39.9	1.7
Total (operating expenditure)	**1,481.1**	**61.5**
Capital expenditure	461.2	19.1
Total (Vote BSI)	**1,942.5**	**80.6**
Research and Development Tax Incentive (in Vote Revenue)	466.3	19.9
Total	**2,408.6**	**100.0**

29. *Funding for Research* includes appropriations that support a range of research and science services. This includes the Strategic Science Investment Fund (SSIF), which funds services performed by CRIs and research programmes and infrastructure; mission-led research funding (currently the 10 National Science Challenges which are ending in June 2024); and the contestable, investigator-led funds – the non-sector specific Marden and Endeavour Funds, and the sector-specific Health Research Fund.

30. *Other non-departmental programmes* include support for talent and capability within the research community (including research fellowships, and applied training) contract management; the Innovative Partnership Strategic Facilitation Fund, and projects under the Digital Technologies Industry Transformation Plan.

31. Callaghan Innovation receive funding to run their services (providing general innovation support to businesses, and maintaining technical scientific capability), as well as to administer specific funds, including the Research and Development Tax Incentive and related research and development grants.

32. The *Game Development Sector Rebate* has been effective since July 2023 and supports New Zealand gaming studios by providing a 20% rebate on eligible expenditure.

Changes to the portfolio over recent years

33. Some key changes within the portfolio over the last five years include:

    a. The introduction of the Research and Development Tax Incentive in June 2019, and related changes to grant programmes managed by Callaghan Innovation. The tax incentive replaced the earlier Callaghan Growth Grants and is complemented by other grants (such as the Arohia Trailblazer Grant, and the New to R&D Grant). In 2017/18 funding in this area was $198 million; in 2023/24 it is forecast to be $592 million (refer paragraph 51 for a summary of evidence on research and development support)

    b. The increase in investment via the tax incentive and other grants has been matched with an upturn in the level of research and development activity occurring in New Zealand businesses (see paragraph 53 below for a summary of the relevant evidence around this)

    c. The allocation of continency funding in Budget 23 for Wellington Science City (comprising $400 million Capital; $117 million Operating expenditure)

    d. Research organisations are absorbing inflationary cost pressures which is impacting the purchasing power of our investments in research, science and innovation

e. A sum of $115 million over four years was offered back in the Rapid Saving Exercise announced in October this year, which involved closing specific science funds (for example Unlocking Curious Minds) and returning underspends from Callaghan Innovation grants ($65 million one-off).

f. New funding for the technology sector has been allocated through recent Budget processes. The main focus areas include support to New Zealand's gaming sector through the establishment of a new rebate and the expansion of the Centre of Digital Excellence (CoDE) to support smaller gaming companies, funding to build international awareness of New Zealand's technology capabilities (through the New Zealand Tech Story) and funding to support a range of initiatives that are tasked with increasing the level of digital skills in New Zealand.

Opportunities for further reprioritisation

Reprioritisation options for the SI&T portfolio

34. As described above we propose an initial set of saving options:

    a. Two per cent from Non-Departmental Appropriations ($30 million per annum), from the appropriation tagged to invest in research priorities (baselined at $79 million per annum, currently used to fund National Science Challenges); Active consideration [redacted] (see paragraph 36b below), or from a combination of savings from business research and development grants and fellowships.

    b. Savings in Departmental Policy and Operational areas within the Ministry. Some of this will be realised via the 10 per cent reduction in overall MBIE Policy capability funding (para 18 above) – the rest is from possible reductions in SI&T operational staff, depending on decisions around specific science funds, and once the Pītau cost pressure is resolved.

35. An additional two per cent reduction in operational funding to Callaghan Innovation may be possible, and further advice can be provided on this.

Implementing the stop-work notice on the Digital Technologies Industry Transformation Plan (ITP)

36. Funding has been allocated to the Digital Technologies ITP. Given the direction to stop this work under the National and Act Coalition Agreement, you may want to use this funding to realise savings.

    a. *Digital Technologies Industry Transformation Plan Digital Skills Funding* – Budget 2023 provided a total of $27.012m over 4 years for enhancing the digital technology skills and talent pipeline. The October Baseline Update process transferred $7.131m to the Department of Internal Affairs for implementation of the Skills Framework for the Information Age (SoFIA) across the public service. Of the remaining funding, the following amount could be reprioritised by ceasing all work on the digital technology skills and talent pipeline, with a commensurate negative reaction from the digital technologies peak groups:

$m	2023/24	2024/25	2025/26	2026/27	Total	FTE
Enhancing the digital technology skills and talent pipeline	9.098	5.616	3.206	1.536	19.456	1

b. *Digital Technologies Industry Transformation Plan Game Development Sector Rebate*– Budget 2023 established a $40 million per annum rebate scheme designed to support medium to large-sized game development studios. Although still relatively new (the rebate is now be administered by NZonAir), Confidential advice to Government

$m	2023/24	2024/25	2025/26	2026/27 & Outyears	Total	FTE
Gaming Development Sector Rebate	27.800	40.000	40.000	40.000	147.800	1

c. *Digital Technologies Industry Transformation Plan Centre of Digital Excellence Regional Hubs* – Confidential advice to Government

$m	2023/24	2024/25	2025/26	2026/27 & Outyears	Total	FTE
Centre of Digital Excellence Regional Hubs	1.125	2.250	2.250	2.250	7.875	-

37. The following programmes have time limited funding:

    a. kiwiSaaS – Budget 2022 provided $11.2m over three years to create a learning community to accelerate the growth of New Zealand's Software-as-a-Service (SaaS) firms. This funding expires on 30 June 2025

    b. International Tech Story – Budget 2022 provided $4m over 2 years to create and deploy a unified, national brand for New Zealand's tech sector to attract international investment and talent (called See Tomorrow First). This funding expires on 30 June 2024, and

    c. Domestic Tech Story - Budget 2022 provided $4m over 4 years to encourage more New Zealanders into technology careers. This project (Tech Step) is led by the Auckland Business Chamber and funding expires on 30 June 2026.

38. Noting your manifesto commitments to boost the tech sector, you may wish to consider whether to extend funding for the International Tech Story given this has a high degree of alignment with your goals to grow the technology sector's presence and could be extended for around $1m per annum.

Scenarios within the research, science and innovation system can highlight trade-offs if savings of more than two per cent are needed

39. Three high-level savings scenarios and possible implications for finding savings beyond two per cent are provided below. The direction will be shaped by your preferences in light of the strategic challenges within New Zealand research and innovation system.

40. We recommend that a process involving other interested agencies is used to develop a recommended approach. MBIE is not positioned to provide investment advice across the full system – we need to bring in other interests to inform collective advice to Ministers.

41. This can be done at pace, if necessary, but would take some time to do properly (a number of months) and would not be ready for a pre-Christmas Budget process. We could work to a second quarter 2024 timeframe.

42. We also note that a decision was taken to extend SSIF contracts with CRIs for two years (to June 2026) which provides an opportunity to work towards a reallocation of funding across the portfolio, without making quick decisions that may have very disruptive consequences.

Scenario 1: Further cuts into uncommitted funding

43. You may wish to extend on the two per cent option above and take more from currently uncontracted funds. This would include looking at the remainder of the National Science Challenge appropriation, the annual funding rounds of the contestable funds (Endeavour, Marsden and Health Research), and business grants administered by Callaghan Innovation (some of which are time limited, constraining saving options into future years).

44. The downside of this approach is that it is relatively indiscriminate. You are sheltering projects that happen to be mid-way through at the time of the analysis, which may exclude funding that otherwise would be relatively preferable to cut. However, this scenario could be implemented relatively quickly as contracts would not need to be re-negotiated.

45. An alternative approach would be to take a more strategic look at targeted funding. This could be designed to help address some of the longer-standing imbalances in the system but would need to be done carefully and with a multi-year approach. Two scenarios below illustrate the trade-offs (noting that you may choose to take a blended option).

Scenario 2: reduce support for publicly funded research

46. The funding reduction in this area could be increased but it will require difficult decisions and take more time to implement. There are three broad choices within this category of funding – reducing SSIF funding for CRIs; reducing the amount of funding available in the contestable funds, or taking the remaining funding available for mission-led research.

47. For the first area (SSIF funding) there's a natural point for implementing changes, with a number of funding arrangements coming to an end in June 2026. In this option, there would be implications around the ability for some research organisations to retain science capability and, in the extreme, their overall viability. Any funding changes made from the SI&T portfolio need to be cognisant of possible changes happening to other funding sources for individual CRIs. We strongly recommend that the process to identify these types of savings include relevant agencies and research organisations given their interests in the research that would be impacted.

48. Reductions in the contestable funds (Marsden, Endeavour and Health Research) would be felt by a number of researchers and research organisations as there would be less funding in the system to support investigator-led research. Taking all of the funds currently supporting National Science Challenges is an option, but would remove a lever for you to direct mission-led research in areas of strategic importance to New Zealand.

Scenario 3: reduce support for business research and development

49. Conversely, there is an option of targeting R&D and innovation support for businesses. Savings could be made here, that would centre largely on the services and grants administered by Callaghan Innovation.

50. The pros of this approach include that these services are relatively easier to switch on and off. However, this option would further exacerbate the imbalance in the SI&T portfolio towards primary sector and environmental research, and would limit the level of financial support provided to innovation and commercialisation activity.

51. Active consideration

Some of these grants are also timebound.

52. The primary purpose of government research and development support is to increase the rate of business investment in research and development, which in turn generates spillover benefits in terms of additional research and development by other firms, both within the same industry and in adjacent industries. The additional research and development then flows through to increases in economic outputs such as innovation and productivity.

53. There is a growing body of evidence that documents the impact of government research and development support on research and development. Recent studies on the United Kingdom, Australian and Canadian schemes all found positive impacts.[3] Bloom, Van Reenen & Williams (2019) found that taking all the macro and micro studies together, it is reasonable to conclude that funding received through a Research and Development Tax Incentive results at least a great an increase in research and development in the long run.

54. Active consideration

[3] Dechezleprêtre et al. (2016) found that every £1 of taxpayer money invested in the UK R&D Tax Relief Scheme between 2006 and 2011 induced £1.7 of private research and development and that aggregate UK business research and development would have been about 10per cent lower in the absence of the policy. Holt, Skali & Thomson (2016) found that Australian firms spent an additional $1.90 on research and development for every $1 of tax revenue foregone due to the Research and Development Tax Incentive policy. Agarwal, Rosell & Simcoe (2020) generated similar findings for the Canada's Scientific Research and Experimental Development policy, specifically that the policy led to a 17 per cent increase in total research and development among eligible firms.

Wellington Science City is a further area you may want to look at for options

55. In addition to these options, we plan to provide an overview of the funding plans around the Wellington Science City proposal and discuss options in this context, noting this funding is currently in a Budget Contingency.

Summary view of high-level scenarios

Options for savings	**Types of funding affected**	**High-level implications**
Scenario 1 (10% saving) Target uncontracted funding	National Science Challenge appropriation Contestable funds Callaghan R&D grants Active consideration	Least disruption, shared burden. Less funding in the system, and for agreed future research priorities. Does not address structural imbalances within system.
Scenario 2 (10% saving) Target public good Protect business R&D	Strategic Science Investment Fund National Science Challenge funding Contestable funds	Impact on some CRIs. Risk of losing science capability that we will not be able to easily replace and to the financial viability of the organisations.
Scenario 3 (10% saving) Target business R&D Protect public good research	Callaghan Innovation grants Active consideration Contract management	Less support for innovating firms, and emerging industries. Significant impact on Callaghan Innovation.

We will need to work through a number of initiatives and projects that have time-bound funding within the portfolio

56. The savings options need to be mindful of a number of existing initiatives that will run out of funding in the short to medium term, where the initial investments were made with time-limited funding, often to address a specific Government priority. For example, the funding for the Food Safety Research Centre and MedTech Translator end in 2023/24, while funding for the Infectious Diseases Platform ends in 2024/25.

57. A decision is needed to determine whether upcoming time-limited investments should continue to be funded and, if so, how they could be funded relative to savings initiatives. We will provide you with this advice once your broad preferences around savings options are known.

58. As noted above, MBIE is facing a cost pressure of Active consideration around management of Pītau – a new fund management system. We plan to use some of the operational savings identified to resolve this.

Reprioritisation options in stewardship and enablement functions

59. MBIE has considered a wide range of options for reprioritisation. This includes stewardship (such as economic strategy), enablement functions (such as human resources and finance) and shared services (such as call centre services).

60. The financial impact of these options on this portfolio will depend on the scale of changes progressed, and the relative change in sizes of each portfolio (for example, property costs are allocated as a share based on head count in each location). Further savings will likely emerge based on decisions Ministers take in portfolios. MBIE will provide final advice on re-sizing its enablement functions and financial implications by portfolio.

Next steps

61. We look forward to discussing this briefing in more detail at your convenience to gain a sense of your overall priorities and how any further savings options should be considered.

An All-of-MBIE approach to reprioritisation

62. MBIE operates a number of functions that operate across portfolios, as well as working to realise synergies between them. We therefore recommend considering the portfolios as a suite. This enables:

    a. Consideration of enablement and stewardship functions as part of the whole (which will have proportional savings for each portfolio)

    b. Opportunities to align and consolidate related functions between portfolios, including Crown Entities

    c. Enabling trade-offs across functions in order to calibrate/equalise impacts, such as directing policy resource.

63. We recommend that MBIE Ministers meet to consider their portfolios jointly.

Reprioritisation submissions

64. Treasury has indicated the likely process for reprioritisation to deliver the Fiscal Sustainability Payment included in the PREFU ($110 million per annum for MBIE). In addition, reprioritisation will be required for Budget 2024 and any preparatory work for that.

65. We will take direction from Ministers on which of the potential reprioritisation options in this briefing should be included in those submissions.

MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

Fiscal Summary for Science, Innovation and Technology

Current Baseline

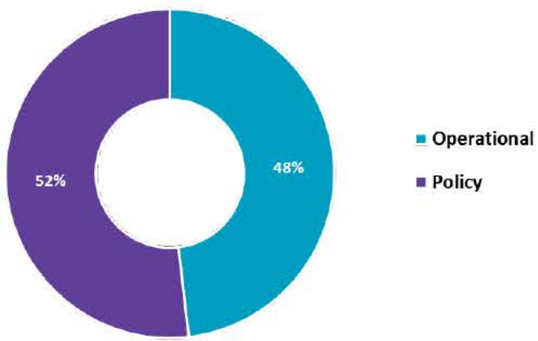
The following table sets out the appropriated funding for the Science, Innovation and Technology portfolio, by funding source. Departmental funding is received by MBIE to directly provide services. Non-departmental funding is provided via MBIE to other agencies, including Crown Entities, Crown Research Institutes and grant recipients.

Baseline $million	2023/24	2024/25	2025/26	2026/27	2027/28 & Outyrs	Current FTE
Dept.	41,465	36,233	35,758	35,758	35,758	130.5
Non-Dept	1,900,996	1,418,561	1,204,573	1,183,119	1,184,341	413*
Total Crown	**1,942,461**	**1,454,794**	**1,240,331**	**1,218,877**	**1,220,099**	

* Note that this is FTEs at Callaghan Innovation. CRIs are not included.

People Resources in MBIE

The SI&T portfolio is supported by MBIE with 130.5 FTE as of 30 September 2023, which is 2.1 per cent of total MBIE workforce. This is broken down as follows:



Portfolio FTE by Function

Function	Portfolio FTE	Portfolio %
Operational	62.9	48%
Policy	67.7	51%
Total staff	**130.5**	**100%**

Fiscal Sustainability

The following table summarises options identified for reprioritisation within the Science, Innovation and Technology portfolio (either within the portfolio, or for return to the centre). This includes programmes that could be stopped, and others that can be scaled.

Option for reprioritisation (NB – Options below need to be discussed with incoming Minister to determine whether they match her priorities for the portfolio).	**Fiscal implication $million pa**	**FTE implication**	**Implementation**	**Comment**
National Science Challenges (NSCs) appropriation	30	0	Money becomes available July 2024 and is ongoing. Straightforward to implement. This amount selected to meet 2% FSP	Taking from this appropriation will mean that there is less funding for future mission-led strategic research projects. If more taken from this appropriation, it would enable a 2 FTE reduction of MBIE staff in addition who are currently working on NSCs
Active consideration				
Digital Technologies ITP funding (skills development, CoDE)	27 (over 4 yrs)	1	Will involve terminating some planned contracts	Skills funding was targeted at encouraging more NZers to develop digital skills needed to work in tech sector, including from under-represented groups.
A share of cross-MBIE reprioritisation options	To be determined	To be determined	This savings will be apportioned to portfolios, following discussions with Ministers.	The MBIE ownership fiscal briefing includes options for reductions in core services (both immediate efficiencies, and further "right-sizing" following portfolio decisions), 15% reduction in specified discretionary spend, and 10% reduction in policy capacity with resources to be redirected based on Government priorities.
Reduced operational capability	TBC (~$1.9m over 3 yrs)	5 TBC	Phased implementation, then ongoing	From some operational changes to fund management Not replacing vacancies and one DSA when contract ends A cost pressure around Pītau (a new fund management system) needs to be resolved Active consideration
Total	Active consideratio in 2024/25			The amount varies by year

The Fiscal Briefing has further details on options and the implications of these choices. Items marked *are drawn from, or consistent with, Manifesto Commitments and/or the Coalition Agreement. Options with FTE implications will need to be phased, and may incur transition costs.

Manifesto Commitments/Coalition Agreement

The National Party has manifesto commitments in the 'Boosting the Tech Sector' Plan. These sit in other portfolios (Immigration and Revenue).

Source	**Manifesto Commitment/Coalition Agreement**	**High level cost estimate $million pa**	**FTE implication**	**Implementation**	**Comment on estimates**
National	New visa categories to attract overseas talent to tech sector, and changes to tax treatment of options issued by start-ups to their staff	In baselines	In baselines	TBC	Active consideration