Office of the Minister of Research, Science and Technology

Office of the Minister of Finance

Cabinet Economic Growth and Infrastructure Committee

Crown Research Institute Taskforce Report: Government Response

PROPOSAL

1. This paper seeks agreement from Cabinet to endorse the intent of the recommendations of the Crown Research Institute Taskforce report and to begin to implement them. It also seeks agreement to publicly release the Taskforce report.

EXECUTIVE SUMMARY

2. On February 10, 2010 the Crown Research Institute Taskforce (the Taskforce) delivered its report to shareholding Ministers. The report presents a set of recommendations on how the Government can get greater economic impact and benefit for New Zealand from its investment in Crown Research Institutes (CRIs).

3. The Taskforce's recommendations focus on the need to change the attitudes and behaviours of CRIs through streamlined funding processes, strengthened governance structures and clear goals for each CRI.

4. The Taskforce report is part of a wider suite of science and innovation initiatives. This includes: setting clearer priorities for the Government's investments in RS&T; simplifying the science funding system; improving incentives for business research and development (R&D); and developing a large-scale research infrastructure investment strategy.

5. Viewed collectively, we believe this suite of initiatives constitute the most significant reform to the science system in 20 years.

6. We propose that Cabinet agree to endorse the overall intent of the Taskforce's recommendations and agree to publicly release the report and begin implementation of the recommendations.

BACKGROUND

7. The Minister of RS&T established the Taskforce in October 2009 (STR Min (09) 18/1 refers) following a request from the Prime Minister. The Taskforce was convened to provide advice on how CRIs can increase their effectiveness in delivering benefit to

New Zealand and, in particular, to assist in achieving a more innovative and higher-productivity economy.

8. The Taskforce presented its interim findings on 3 December 2009 and on 10 February 2010 delivered its final report to shareholding Ministers. The Taskforce has revisited the purpose, operation, governance and funding of the CRIs and provided a set of recommendations detailing the actions required to position CRIs as more powerful engines of future growth.

9. Appendix 1 provides additional information on the Taskforce composition and Terms of Reference.

10. Appendix 2 provides the executive summary and overview of recommendations of the Taskforce report.

11. The Taskforce report and recommendations is part of a wider science and innovation package comprising complementary initiatives to:

- set clearer priorities for the Government's investments in RS&T;
- simplify the science funding system;
- improve incentives for business R&D; and
- develop a large-scale research infrastructure investment strategy.

COMMENT

12. The following sections present:

- an overview of the Taskforce report's recommendations;
- our view of the recommendations;
- an analysis of the implications of the recommendations;
- implications for other science organisations;
- a proposed implementation pathway;
- alignment with government's research, science and technology priorities; and
- details on the process for the public release of the Taskforce report.

OVERVIEW OF TASKFORCE RECOMMENDATIONS

13. The Taskforce's overarching conclusion is that CRIs play a pivotal role in New Zealand's innovation system and their importance is increasing as science plays an ever more critical role in New Zealand's economic development. The Taskforce believes that CRIs are delivering substantial economic, environmental and social benefits to the nation but that they can contribute much more. The Taskforce has

concluded that the main factors impeding CRI performance relate to their funding, ownership and governance arrangements.

14. Taskforce members have prepared a set of recommendations and actions, which in summary propose that Government:

    - provide greater clarity on the role and purpose of each CRI through the development of Statements of Core Purpose;
    - provide greater certainty of funding to CRIs to deliver their core purpose and that this funding form a more significant proportion of the total Vote RS&T investment in CRIs;
    - strengthen Board accountability and control over funding and improve institutional governance;
    - improve science quality and technology transfer through the use of independent scientific advisory committees with international members and end-user panels to inform and evidence the development of CRI research strategies, scientific programmes and technology transfer activities;
    - develop a more balanced and comprehensive set of performance indicators;
    - develop a tailored approach to setting financial targets that reflect the requirement to be financially viable (rather than financially profitable);
    - strengthen and make more effective CRI partnerships with business and collaborative partnerships between research institutions.

15. Contestable, open access, funding should remain an important element in CRI funding to generate new ideas and drive high performance in the science system.

16. The Taskforce report raises issues around the multiple lines of accountability that CRIs are required to navigate. This includes a number of funding and monitoring agencies, each with differing, and sometimes contradictory, perspectives and requirements that CRIs must meet.

17. It is the view of the Taskforce that ownership and investment responsibilities for CRIs should be brought together into a single entity. This will strengthen the ability of Government to hold CRIs to account, and to direct investment in areas of greatest priority.

18. The Taskforce also believes that research funding and institutional arrangements can be further simplified by the single agency also having responsibility for managing all other Vote RS&T funds, and for providing policy advice on the whole RS&T system.

19. The Taskforce does not believe that changing the number of CRIs, their company status or their employment arrangements would significantly improve their contribution to New Zealand.

OUR VIEW OF THE RECOMMENDATIONS

20. Treasury and MoRST's view of the main recommendations is attached as Appendix 3.

21. We broadly agree with the recommendations. We think higher levels of long term funding can work and will reduce transactions costs, provided this is supported by a level of contestable funding, better accountability and monitoring, and better incentives to engage externally and transfer technology.

22. The Minister of Finance and I have concerns about bringing together science policy, funding and monitoring into a single agency (Recommendation 25 of the report, paragraph 17 of this paper). We suggest institutional arrangements in science are addressed through the ongoing machinery of government review processes currently being undertaken by central agencies.

23. We also have concerns about abandoning a return on equity as a performance measure. As a general rule, those CRIs with a clear sense of mission are also financially sustainable. A proper financial objective is an important measure of performance.

IMPLICATIONS OF RECOMMENDATIONS

24. In our view the recommendations in the Taskforce report, if taken up as a complete package, represent the most significant change to CRIs since their formation in 1992. We expect to see:

- ***Clarity of purpose*** – through Statements of Core Purpose, CRIs will be required to put technology transfer and value creation for their public and private sector end-users firmly ahead of themselves.
- ***Alignment of government signals*** – positioning government as a true ownership investor will create consistency in signals. It will compel CRIs to focus on their customers and end-users. It will increase the attention CRIs pay to obtaining a return to New Zealand from their operating funding, in addition to securing a return on the Crown's equity. It will remove funding uncertainty as an excuse for under-performance.
- ***A shift in the point of tension*** – more secure CRI core funding will reduce the time scientists spend on preparing funding applications. It should increase dynamism by allowing CRIs to move resources to those projects that are most likely to deliver results. The key point of tension in CRIs will accordingly shift from securing funding to delivering value for their end users.
- ***Increased accountability*** – the *quid pro quo* for more CRI core funding will be increased accountability of CRI Boards for science quality and delivery of value to New Zealand, through independent science panels, improved performance monitoring and independent five-yearly organisational reviews.

- *Increased collaboration* – funding changes will place a far greater emphasis on collaboration between CRIs, other research providers (e.g. universities), industry and public sector partners to generate benefit to New Zealand.
- *Ongoing use of competition*: The competitive tensions in the system will still remain. Around two thirds of CRI funding will still be sourced through contestable and commercial means.

25. The successful implementation of these recommendations will require a substantial change in behaviour in CRIs. It will create an opportunity to position CRIs as a critical part of the Government's growth agenda over the next 5-10 years.

IMPLICATIONS FOR OTHER SCIENCE ORGANISATIONS

26. While the report focuses on CRIs, universities and other research organisations will continue to play a vital role in the science system. The proposed changes will have flow on effects to these institutions. There will be a perceived reduction of access to research funding available outside of CRIs.

27. In making its recommendations the Taskforce's intention is for there to be better use made of the funds available through Vote RS&T and that no particular party is advantaged or disadvantaged. The Taskforce considers that the funding changes proposed will ultimately benefit all parties through increased incentives to collaborate.

28. This issue constitutes a key risk as to how this report will be received by the wider sector. It will be important to continue to support and acknowledge the contribution of the other players as these changes are put in place.

29. The research sector, and especially CRIs, will also likely be disappointed over the lack of attention to overall funding levels for science in the recommendations. Over time, the Government will need to consider how it wishes to maintain real levels of investment in science. The greater accountability and focus on outcomes mooted by the wider Taskforce recommendations will provide a better basis to allow government to invest with more confidence in CRIs in the future.

IMPLEMENTATION PATHWAY

30. The report recommends that a start be made on the proposed changes as soon as possible. Although the recommended single agency requires further consideration, it is our view that this should not delay implementation, as a number of changes can be put in place prior to the establishment of the single agency. The final shape and form of such an entity will require further consideration by central agencies and Cabinet in a separate process.

31. The Minister of State Services will be reporting to Cabinet on 8 March, 2010 with proposals to address the recommendation to align the funding, policy and ownership

of CRIs into one government entity. In the interim, and in the interests of maintaining the momentum and expectations generated by the Taskforce process, it is our view that many of the recommendations can begin to be implemented immediately.

32. We propose that MoRST lead the following implementation work streams, working together with Treasury, the Foundation for Research, Science and Technology (the Foundation) and other agencies as necessary to embed the changes within CRIs ongoing operations:

- engage with stakeholders to produce an initial set of Statements of Core Purpose for CRIs. This will need to be completed by September 2010 to inform the development of CRIs' strategy and then Statements of Corporate Intent for 2011-12;
- map existing funding streams onto the proposed new funding arrangements ready for consolidation into new contracts and suitable contracting arrangements for CRIs;
- commence work on developing a set of key performance indicators, additional to the existing measures of performance, and methods for conducting rigorous independent evaluations;
- develop requirements for the establishment of independent scientific advisory committees and end-user panels by CRIs;
- identify opportunities for legislative change which are either desirable or required to embed the recommendations for the long term; and
- use the CRI Board appointment process currently underway to examine current Board make-up with a view to briefing shareholding Ministers on the appropriate mix of skills and experience required to manage the change process.

33. MoRST and Treasury will report back to the Ministers of Finance and RS&T on any implementation matters requiring further Cabinet decisions. It is expected that future Cabinet report backs will include:

- endorsement of the CRI Statements of Core Purpose;
- the execution of proposed science funding changes and associated risks and issues;
- a report on any legislative changes considered advantageous to implement the Taskforce's recommendations; and
- a report on Board composition and the skills required to manage the changes signalled in the recommendations.

ALIGNMENT WITH THE GOVERNMENT'S PRIORITIES FOR RESEARCH, SCIENCE AND TECHNOLOGY

34. On 16 December, 2009 the Economic Growth and Infrastructure Committee (EGI) agreed to a new set of priorities for research, science and technology to come into effect on 1 July, 2010 [EGI Min (09) 28/9]. The Taskforce's recommendation to develop Statements of Core Purpose for each CRI provides an opportunity to closely align the CRIs with the Government's new priorities.

35. The Minister of RS&T was requested to report back to EGI by 30 April, 2010 with a complete set of Ministerial Notices and a Statement of Science Priorities [EGI Min (09) 28/9]. There are clear interdependencies between the new science priorities, the CRI Taskforce recommendations and the wider business R&D initiatives.

36. In order to ensure a coherent and coordinated approach the Minister of RS&T seeks agreement to rescind the 30 April, 2010 report back and instead consult individually with relevant Ministers to develop a set of interim Ministerial Notices and Statement of Science Priorities. These will come into force as of 1 July, 2010. The interim set of Notices will allow for the potential changes arising from the CRI Taskforce Report recommendations and business R&D initiatives to be updated at a later date.

PROCESS FOR RELEASE OF TASKFORCE REPORT

37. We seek your agreement to release publicly the Taskforce report and the Government's response to it on 4 March 2010. The report and the Government's response to it will then be made available on the MoRST website with accompanying background material and a set of questions and answers. Printed copies of the report will also be available.

38. We seek your agreement to the Prime Minister releasing a statement endorsing the report and placing it in the context of the wider Government priorities.

CONSULTATION

39. The Ministry of Agriculture and Forestry, Ministry of Economic Development, Ministry of Education, Ministry for the Environment, Ministry of Fisheries, the Tertiary Education Commission, Ministry of Health, Department of Conservation, New Zealand Police and the New Zealand Food Safety Authority have all been consulted in the development of this paper. The Department of Prime Minister and Cabinet and the State Services Commission have been informed. Departments are supportive of the Taskforce's recommendations.

40. The Prime Minister's Chief Science Adviser has also been consulted and has written to the Prime Minister to endorse the Taskforce recommendations.

FINANCIAL IMPLICATIONS

41. There are no immediate fiscal implications arising out of the proposals in this paper. Short-term costs in the current financial year for initiating the changes can be managed within existing departmental baselines. Long-term resource requirements will be determined subject to decisions on agency arrangements.

HUMAN RIGHTS

42. There are no human rights issues arising out of the proposals in this paper.

LEGISLATIVE IMPLICATIONS

43. In the view of officials, implementation of the recommendations does not require immediate legislative change. However, as part of the implementation, officials propose to provide advice on opportunities to embed long-term change in legislation.

REGULATORY IMPACT AND BUSINESS COMPLIANCE COST STATEMENT

44. No regulatory impact statement has been prepared for this paper. Regulatory impact statements will be prepared for responses to Taskforce implications that have regulatory implications.

RECOMMENDATIONS

45. The Ministers of Finance and Research, Science and Technology recommend that the Committee:

    1. **Note** that on 17 September 2009, the Prime Minister requested that the Minister of RS&T establish a Taskforce to provide recommendations on how to derive better national good from investment in CRIs.

    2. **Note** that the Taskforce delivered its interim findings on 3 December 2009 and final report on 10 February 2010 to shareholding Ministers in accordance with its Terms of Reference.

    3. **Note** that the Taskforce report is part of a wider science and innovation package that includes the Minister of RS&T's new priorities for research, science and technology, a business R&D package to support the Government's Medium Term Economic Growth Agenda and the development of a large-scale research infrastructure investment strategy.

CRI Taskforce main recommendations

4. **Note** that the Taskforce recommendations, along with the new priorities for research, science and technology and the business R&D package represent the most significant changes in the New Zealand science system in 20 years and create an opportunity to position CRIs as a key part of the Government's growth agenda.

5. **Note** that implementing the recommendations will require a significant behavioural shift in the CRIs, in particular a reduction in the use of competition to drive performance and a commensurate shift of responsibility to the CRIs' Boards to lead and be held accountable for their results.

6. **Note** the Taskforce's view is that a sense of urgency is required to initiate action to implement the recommendations and that delay may lessen the momentum, support and appetite for change currently within the science system.

7. **Note** that the Prime Minister's Chief Science Adviser has written to the Prime Minister to endorse the Taskforce's recommendations.

8. **Agree** to endorse the overall intent of the recommendations set out in the Taskforce report, subject to further consideration by Ministers of Recommendations 21(financial performance measures) and 25 (institutional arrangements).

Science institutional arrangements

9. **Note** that the Minister of State Services will be reporting to Cabinet on 8 March, 2010 with proposals to address recommendation 25 of the report relating to science institutional arrangements.

Implementation

10. **Agree** that the Minister of RS&T, in consultation with the Minister of Finance, and Minister of State Services as appropriate, has overall responsibility for the implementation of the recommendations of the Taskforce's report.

11. **Agree** that MoRST lead the implementation of the Taskforce recommendations working with Treasury, the Foundation and other agencies as required to:

    - Engage with stakeholders to produce an initial set of Statements of Core Purpose for CRIs by the end of September 2010 to inform the development of CRIs Strategy and Statement of Corporate Intent for 2011-12.
    - Map existing funding streams onto the proposed new funding

arrangements and develop new contracting methods.

- Commence work on developing a set of suitable performance indicators and evaluation methods, to complement measures of financial performance.
- Develop requirements for the establishment of independent international scientific advisory committees and end-user panels by CRIs.
- Identify whether any opportunities for legislative change are either desirable or required to embed changes.
- Use the CRI Board appointment process currently underway to examine current Board make-up with a view to briefing shareholding Ministers on the appropriate mix of skills and experience required to manage the change process.

12. **Authorise** the Minister of RS&T and the Minister of Finance to make decisions on the details of the proposed implementation process, without further reference to Cabinet, subject to the these details being consistent with the intent of the recommendations set out in the Taskforce's report.

13. **Agree** that MoRST and Treasury will review any resource requirements to implement the recommendations through Budget 2010.

14. **Invite** the Minister of RS&T to report to Cabinet on any matters requiring further Cabinet decisions as part of the implementation process.

15. **Note** officials' expectations that future Cabinet report backs are likely to include:

- endorsement of the CRI Statements of Core Purpose;
- the execution of proposed science funding changes and associated risks and issues;
- a report on any legislative changes considered desirable to implement the Taskforce's recommendations; and
- a report on board composition and the mix of skills required to lead the changes signalled in the recommendations.

Alignment with the Government's priorities for research, science and technology

16. **Note** that the Taskforce's recommendation for each CRI to develop Statements of Core Purpose provides an opportunity to align the CRIs core purpose with the Government's new priorities for research, science and technology.

17. **Note** that the Minister of RS&T was invited to report back to EGI by 30 April, 2010 on the government's priorities for research, science and technology with a set of Ministerial Notices and Statement of Science Priorities [EGI Min (09) 28/9].

18. **Agree,** that in order to develop a coordinated approach to the wider science and innovation package, to rescind the 30 April 2010 report back and develop a set of interim Ministerial Notices and Statement of Science Priorities to be developed by the Minister of RS&T in consultation with relevant Ministers by 1 July 2010.

Public release

19. **Agree** to release the CRI Taskforce report and the Government's response to it on the MoRST website on 4 March 2010.

20. **Agree** to the Prime Minister making a media statement endorsing the general policy direction of the CRI Taskforce report on 4 March 2010.

Hon Bill English
Minister of Finance

Hon Dr Wayne Mapp
Minister of Research, Science and Technology

Appendix 1
Background material on the Crown Research Institute Taskforce

Membership of the Crown Research Institute Taskforce

Neville Jordan—Chair

Neville Jordan, CNZM, is a graduate engineer and holds an honorary Doctor of Engineering from Canterbury University. In 1975, he founded MAS Technology Ltd, a telecommunications microwave company. He grew this from a start-up to a significant multinational company and achieved a successful IPO on the NASDAQ main Board. Neville then founded Endeavour Capital.

He has served on several Ministerial advisory committees, six years on the Board of a Crown Research Institute, AgResearch, and three years each on the Boards of the Foundation for Research, Science and Technology and the Prime Minister's Growth and Innovation Advisory Board.

He has received the Governor-General's Supreme Award for Exporting and was invested as Companion of the New Zealand Order of Merit in 1999.

Neville was inducted into the New Zealand Hi-Tech Hall of Fame in 2005 and the Business Hall of Fame in 2006. He was President of the Royal Society of New Zealand from 2006 to 2009.

Dr Rod Carr

Rod Carr is Vice-Chancellor of the University of Canterbury and a former Managing Director of Jade Software Corporation. He is also a former Acting Governor and Deputy Governor of the Reserve Bank of New Zealand and has held senior executive roles at the Bank of New Zealand and National Australia Bank. Rod is currently Vice-President of the Canterbury Employers' Chamber of Commerce and is a Director of Lyttelton Port Company Ltd and Taranaki Investment Management.

In May 2009, Rod was appointed as the Chair of the National Infrastructure Advisory Board.

John D. McKenzie

John McKenzie is currently the Group General Manager of the Seeds, Grains and Nutrition Division at PGG Wrightson, where he is responsible for the global seed business with operating units in New Zealand, Australia and South America. Prior to this role, John was the Managing Director and major shareholder of the proprietary seed company Agricom, which was founded in 1985 and sold to PGG in July 2005.

John also owns a 520 ha arable and horticulture farm and has an interest as equity partner in a 1,900-cow irrigated dairy unit. He has been Chairman of the Foundation for Research, Science and Technology plant and genetech reference group and is a member of the New Zealand Plant Breeding & Research Association.

Dr Ron Sandland

Ron Sandland, AM, was previously CSIRO's Deputy Chief Executive, Australia. He joined CSIRO's Division of Mathematics and Statistics in 1969 and became chief of the division in 1988. In 1999 he became Deputy Chief Executive of CSIRO and led the Flagship Initiative.

Ron was made an Honorary Life Member of the Statistical Society of Australia in 1998 and won the CSIRO Medal for Lifetime Achievement in 2006. He is a Fellow of the Australian Academy of Technological Sciences and Engineering, and was made a Member of the Order of Australia in 2007.

Dr Helen Anderson

Helen Anderson became Chief Executive of the Ministry of Research, Science and Technology (MoRST) in February 2004, after being MoRST's Chief Scientific Adviser for more than five years. She has a PhD in Geophysics from the University of Cambridge. She was a practising scientist at both New Zealand's Department of Scientific and Industrial Research and one of its successors, Geological and Nuclear Sciences (GNS), a Crown Research Institute.

Prior to her roles at MoRST, Helen was the Director of Earth and Ocean Sciences in Dunedin, a collaborative effort between GNS and Otago University.

In 2009, Helen was elected as a Companion of the Royal Society of New Zealand and was appointed to the Board of Fulbright New Zealand. She is an inaugural member of New Zealand Global Women, a leadership organisation formed in 2009, which comprises leaders from a range of disciplines and industries.

Murray Bain

Murray Bain joined the Foundation for Research, Science and Technology as Chief Executive in April 2004. His previous experience in the science sector included acting as Director for a Crown Research Institute and a start-up ICT company.

Murray was Acting Chief Executive Officer and Chief Operating Officer for the Accident Compensation Corporation, a Foundation Executive in the establishment of Industry New Zealand, and an Assistant Governor at the Reserve Bank of New Zealand.

Murray began his working life as an IT professional with Trust Bank Canterbury and the Trust Bank Group nationally. His various roles with Trust Bank Group included heading the Treasury function, finance, and the banking side of the group. Murray has a Bachelor of Science in Pure Mathematics and a Master of Commerce (Honours) in Economics from the University of Canterbury.

Andrew Kibblewhite

Andrew has been the Director of the Policy Advisory Group at the Department of Prime Minister and Cabinet since November 2004. Previous positions have included General Manager R&D Operations at Industrial Research Ltd, and General Manager Innovation and International at the Ministry of Research, Science and Technology. He also worked for 14 years in a range of management and analytical positions at the New Zealand Treasury, providing advice on regulatory, environmental, health, commercial tax and public management policy. Earlier in his career, Andrew spent two years as Budget Manager at the Department of Conservation.

Andrew has a BSc(Hons) from Canterbury University, a BCA from Victoria University and a MBA from Stanford.

Struan Little

Struan Little is Deputy Secretary, Dynamic Economy at the New Zealand Treasury. He has worked in a range of economic policy roles in the public and private sector. Since joining the Treasury in 1987, he has held various senior positions including Manager, Macroeconomic Policy, Head of the Treasury's Strategy Unit, Assistant Secretary responsible for international, infrastructure and environmental issues and Acting Deputy Secretary, Economic Performance. Between 1993 and 1995 Struan was seconded from the Treasury to the World Bank, where he held an adviser position at New Zealand's shared constituency office.

Taskforce original Terms of Reference (October 2009)

Introduction

This Terms of Reference sets out the purpose, context, scope, process, deliverables and timeframe for the CRI Taskforce.

Purpose

Government wants CRIs that respond strategically to the needs of their end-users in a way that will drive future economic growth.

The Taskforce will contribute to work to position the New Zealand RS&T system for the future. There is a need and opportunity to position the CRIs to deliver future benefits to New Zealand. The Taskforce will recommend changes to the settings under which CRIs operate. The goal is to enable each CRI to increase their effectiveness in delivering benefit to New Zealand, and in particular to assist in achieving a more innovative and higher-productivity economy.

Context

The Prime Minister has written to the Minister of Research, Science and Technology and asked him to establish a small Taskforce. Its role is to recommend ways to derive better national good from public investment in CRIs.

To achieve this, the Prime Minister has asked that the Taskforce recommendations include, among other things, the following:

- The development of clear and tailored statements for each CRI that set out their core purpose, specific role, responsibilities and performance expectations in delivering national benefit.
- Supporting this through appropriate funding mechanisms that balance long-term capability needs and shorter term dynamism.
- Strengthening CRIs' accountability for delivery through appropriate governance, and periodic whole-of-organisation review of both financial and non-financial performance measures.
- Improving CRI working relationships with other New Zealand research and education providers and particularly how they serve their appropriate business stakeholders.
- Ensuring CRIs are effectively internationally connected in their areas of responsibility.

Scope

The CRI Taskforce will provide advice on the following:

- Recommendations and assessment of any alternative or additional initiatives that could be taken to strengthen the CRI model, including the merits of reconfiguring the number and scope of CRIs.
- Guidelines for developing 'statements of core purpose' for each CRI, including how stakeholder views should be incorporated and how often such statements should be issued.
- Advice on how to improve the overall governance of CRIs including consideration of how to strengthen their Boards.
- Guidelines for reviewing performance against statements of core purpose and other performance measures.
- Recommendations that will ensure CRIs partner with other research providers and with the private sector, with specific reference to:
    - relationships with universities and the alignment of staff incentives, career paths and the opportunity for staff interchange
    - relationships with CoREs and the opportunity for staff interchange

- relationships with the private sector and appropriate incentives for transferring knowledge.

- Assessment of the current method of measuring financial performance and viability, any views on alternative methods of ensuring financial performance and viability, and any suitable non-financial performance measures for individual CRIs.
- Principles for determining core funding levels for each CRI including how to achieve a balance between long-term capability needs while ensuring continued short-term dynamism.
- The impact of any changes to core funding to CRIs on wider RS&T funding mechanisms (e.g. whether core funding to CRIs leaves a critical mass for funding via contestable processes).
- Relationships with international research organisations and other international linkages.
- How any recommended changes to the CRI model fit within the wider RS&T system.
- Any necessary changes to the organisational form of the CRIs including changes to the Crown Research Institute Act (1992) or other legislation.
- An assessment of the timing for introducing change to the CRIs.

Appendix 2 – CRI Taskforce Report: Executive summary and overview of recommendations.

Executive summary

CRIs play a pivotal role in New Zealand's innovation system

Crown Research Institutes (CRIs) matter to New Zealand. Their importance is increasing as science plays an ever more critical role in the nation's economic development. Research and the other services provided by CRIs help address New Zealand's most pressing issues: achieving economic growth by making the tradable sector more productive; improving the sustainable use of natural resources; and managing exposure to risks that could otherwise destabilise society, the environment and the economy.

Research and development generates profound and enduring benefits for New Zealand society. Ongoing government investment is essential. The Government established CRIs to improve the economic, environment and social wellbeing of New Zealand, and they are delivering substantial benefits. However, the evidence received and our deliberations have led us to conclude that CRIs can and should contribute much more.

CRIs have the potential to be powerful engines of economic growth, forging national and international collaborations at the cutting edge of research and science. CRIs already attract international attention because of their strong links to business, government and other science organisations. We believe, however, that through greater collaboration CRIs can perform much better. Such collaborations will, the Taskforce believes, become more important in delivering benefits to New Zealand.

What needs to change so that CRIs contribute more to New Zealand?

We do not believe changing the number of CRIs, their ownership status, or their employment arrangements will significantly improve their contribution to New Zealand. The question is not how many CRIs New Zealand should have, but what structures will best provide research services that address the problems and opportunities New Zealand faces. It is our opinion that the main factors impeding CRI performance relate to their funding, ownership and governance arrangements, as follows:

- Currently, it is not clear if a CRI's objective is to create value for itself, as a company, or to generate value for New Zealand. Current ownership arrangements seem to place undue emphasis on research and development that produces outputs that individual CRIs can capture in their statements of revenue and balance sheets, rather than on research that contributes to the wellbeing and prosperity of New Zealand. This can reduce quite significantly the overall impact of Government investment in CRIs.
- There are multiple lines of accountability that dilute the CRIs' sense of purpose and direction. Each CRI is accountable to the shareholding Ministers, directly and through

the Foundation for Research, Science and Technology (the Foundation), the Crown Ownership Monitoring Unit in Treasury (COMU), and the Ministry of Research, Science and Technology (MoRST). Each agency has its own perspective and requirements.

- CRIs are heavily dependent on competitive contracts, which are often short-term relative to the time frame in which science produces results. This makes it difficult for CRIs to operate strategically.
- We believe that existing funding and governance arrangements for CRIs inhibit collaboration, position natural partners such as universities and firms as competitors, and interferes with CRIs' adoption of best-practice research management. Governance and institutional arrangements can be considerably simplified so that CRIs have a stronger sense of purpose and direction.

KEY ACTIONS

The Taskforce believes that the Government must be more explicit about what it wants each CRI to achieve and must fund them accordingly, so that they can deliver more for the national benefit. CRIs can do this if the Government encourages them to plan and operate for the long-term, cooperate with complementary components of the New Zealand, as well as the global, research and innovation system, and use diverse and creative approaches to transfer knowledge to those in New Zealand best able to use it. This means having talented people in top leadership and management positions, giving them the authority they need to take strategic decisions and then holding them to account for the performance of their CRI. The measure of a CRI's success should be the positive impact it has on New Zealand – be that economic, social or environmental – not the commercial return a CRI has been able to achieve.

To set this up, we propose the following specific set of actions listed in the recommendations. In summary, we believe that:

- CRIs were set up to address enduring challenges and opportunities that New Zealand faces. CRIs are still needed to do this, but the Government needs to clarify in a Statement of Core Purpose the exact role each CRI should play in delivering benefits to New Zealand. The Statement of Core Purpose should recognise the distinctive role of each CRI relative to other research organisations, including universities.
- The Government should fund CRIs to achieve their core purpose. A significant proportion of CRI funding (much greater than at present) should be allocated directly, on a long-term basis, to support the delivery of the core purpose activities of each CRI. The current level of contestable and 'at risk' funding renders CRIs vulnerable as businesses, creates uncertainty and undermines their ability to act strategically.

- CRIs face unnecessary compliance from an excessive number of contracts. Core purpose funding should be consolidated into a single contract, as soon as practicable. The core purpose funding should be negotiated against a rolling five year research strategy that is developed in consultation with relevant stakeholders and agreed with the Government through the CRI's Statement of Corporate Intent.
- A greater degree of certainty will enable CRIs to retain and develop capability, manage risk, and operate within a longer time frame to deliver excellent and relevant research.
- Contestable, open access funding should remain an important element – albeit on a smaller scale – of Vote Research, Science and Technology (RS&T) funding. This is vital to generate competing ideas and new entrants. However, we believe the system should put less emphasis on contestable processes as a way to drive better performance. Instead, more emphasis needs to be placed on holding organisations accountable to deliver benefits as defined in their Statement of Core Purpose, rather than allocating funding against promises of activity. Reducing the proportion of contestable funding is consistent with the findings of the 2007 OECD review of our innovation system, which found it to be too competitive and fragmented.
- A portion of Vote RS&T funding should be set aside for major national collaborative challenges, akin to the funding available to the Centres of Research Excellence. This would provide incentives for collaboration in new multi-disciplinary areas of research.
- In return for moving to reduce the proportion of contestable funding, CRIs need to be more accountable for delivering value to New Zealand. There is a need for the Government to improve the upfront surety of funding and to balance this with the following measures to improve performance:
    a. strengthen Board accountability, by having public Annual General Meetings and annually monitoring and evaluating performance against the core purpose and Statement of Corporate Intent.
    b. measure CRIs against more balanced and comprehensive performance indicators. Primary responsibility for monitoring all aspects of CRI performance should rest with one entity. Performance indicators should explicitly include:
        - technology transfer as a core and measurable responsibility for all CRIs, so that the benefit of their ideas contributes to the wealth and well-being of New Zealand and not just the CRIs' balance sheets;
        - measures that ensure CRIs remain financially viable and accountable for all Government funding. There is a current perception, not reflected in practice, that CRIs are always expected to meet a nine percent return on equity target;

- tailoring the approach to setting financial targets to reflect a need to be financially viable, as opposed to financially profitable; and
- expectations and targets around collaboration with international and national components of the research and innovation system

c. Measures of scientific excellence, to be assured through the greater use of independent expert science panels.

d. Making a percentage of CRI core funding at-risk, subject to performance against agreed milestones, if Boards do not manage appropriately.

- To address the currently diffuse governance, investment and monitoring arrangements facing CRIs, the Government should combine its long-term CRI investment, ownership and policy responsibilities into one entity. The entity should also be responsible for managing contestable funds and funding infrastructure.
- CRIs are just one part of the research and science system, alongside private research organisations and universities. The Taskforce concluded that for some issues a wider view of the system is needed. We recommend a national research infrastructure strategy to rationalise and ensure open access to major research infrastructure, where it is clear that national economies of scale apply.

In making its recommendations, the Taskforce intends to make better use of the funds available through Vote RS&T and not to advantage and/or disadvantage any particular parties. An underlying theme of our recommendations is to strengthen and improve the effectiveness of the linkages between CRIs and all their stakeholders. These linkages are critical for deriving economic and other benefits from CRI research.

Making these changes will give CRI Boards greater clarity and control over their funding. The changes will give them a stronger mandate to set strategic priorities and give them the authority to respond flexibly and quickly to the complex environments they operate in. We believe our recommendations will give CRIs greater certainty of purpose and provide the right settings for them to deliver greater benefit to New Zealand from the Government's investment in RS&T.

Implementing the recommendations will provide enhanced confidence and attractiveness for increased operational and equity funding from Government.

The Taskforce notes that many of the recommendations we have reached are consistent with the views held by the Prime Minister's Chief Science Adviser.

Our recommendations

The CRI Taskforce recommends

ROLE AND PURPOSE

1. The Government retain CRIs as key components of the national science system, recognising that each CRI fulfils a unique role in helping New Zealand address issues and opportunities of national importance. The Government should also note that each CRI contributes in its own way, with CRIs differing from each other in the services they offer and the stakeholders they serve.
2. The Government should provide a clear, explicit and enduring strategic role for each CRI in a Statement of Core Purpose. It should develop this through a high-level dialogue with CRIs and their stakeholder communities and in accordance with Government's priorities for the RS&T system.
3. The Government maintains the CRIs as Crown companies but acknowledge that it uses a company legal structure to encourage efficient management rather than to operate CRIs as for-profit, commercial businesses.
4. Each CRI develops a Statement of Corporate Intent, to be agreed by Government, and updated annually. This should set out how the CRI will meet its core purpose over the next five years and what its shareholders will receive for their investment.

FUNDING

5. The Government directly fund CRIs to deliver their core purpose in accordance with their strategy, as outlined in a Statement of Corporate Intent. The direct funding for delivering the core purpose should form a significant proportion of the CRIs' total Vote RS&T funding.
6. The Government negotiate and consolidate streams of funding for delivering the core purpose for each CRI as soon as practicable.
7. The Government require CRIs to use an agreed proportion of their core funding to form stable relationships with collaborative partners. The plan to meet this requirement should be set out in each CRI's Statement of Corporate Intent and monitored using key performance indicators.
8. The Government retain in Vote RS&T contestable, open access funding for investigating novel ideas. Open access funding should be awarded solely according to the merit of the proposals put forward. Although CRIs should continue to bid for these funds, the open access nature of the funds would allow new entrants into the RS&T system.
9. The Government include, as part of its open access investment programme, funding to support inter-institutional, collaborative research. This should be managed by nominated

research directors from within research organisations across the RS&T system, including universities. This funding can be awarded through negotiation or contest.

10. The Government agencies contracting with CRIs take into account the need to maintain a secure supply of the services they use and negotiate contracts of sufficient size and length to ensure this, while also being consistent with the procurement guidelines of the Controller and Auditor-General.

TECHNOLOGY TRANSFER AND PARTNERSHIPS WITH BUSINESS

11. The Government encourage CRIs to develop stronger long-term partnerships with New Zealand businesses. These partnerships will, among other things, help to develop both research talent and the application of knowledge. Each CRI should describe its business engagement strategies in its Statement of Corporate Intent and support these strategies through core purpose funding.

12. The Government identify technology transfer as a core responsibility for all CRIs and require CRIs to develop, invest in and manage IP with the intent of moving that IP from their balance sheet into the private sector as soon as possible. Government should discourage CRIs from investing in commercialisation activities for profit maximising purposes—such as new start-up companies. Any commercialisation activity must be preceded by a full consideration of other options and the inherent risks of equity ownership.

PROVISION OF INFRASTRUCTURE

13. The Government develop a national research infrastructure strategy to rationalise investment in RS&T infrastructure and to ensure its most effective use. CRIs should continue to finance business-as-usual infrastructure from their own resources. Where economies of scale or scope exist and the capacity of the infrastructure exceeds the needs of any one organisation, the investment and financing decisions should take place within the context of a national strategy and recognise the need to provide appropriate access.

GOVERNANCE

14. The Government require CRIs, at the very least, to meet the disclosure standards expected of public companies. Government should require CRIs to hold an Annual General Meeting at which they describe and account to shareholders and the public, for their activities over the previous year, identify the benefits they have produced for New Zealand and respond to questions.

15. The Government require the Chairs of CRI Boards to follow the Institute of Directors' best practice on how to manage the performance of the Board, Directors and Chair, and how the Board and Chief Executive should manage their relationship.

16. The Government to follow the Institute of Directors' best practice in appointing Boards; and review the current composition of Boards to ensure they reflect an appropriate

balance of expertise between science, technology transfer, finance, management and governance. Each Board should include at least one eminent scientist to provide research leadership and science expertise.

17. The Government consider reappointing well-performing directors beyond the common two-term maximum, given the long-term nature of science, the importance of having directors take a long-term view and the time it can take for a new director to develop a full understanding of the range of CRI activities.

18. The Government consider appointing individuals as members of more than one CRI Board concurrently, to help Boards coordinate and find opportunities for collaboration that are consistent with the national good purpose of each CRI.

19. The Government require CRIs to establish independent scientific advisory committees and end-user panels to inform and verify the development of sound research strategies, scientific programmes and technology transfer activities.

MONITORING AND EVALUATION

20. The Government monitor each CRI's progress against its Statement of Corporate Intent on an annual basis. Performance indicators should provide evidence of: collaboration, technology transfer, quality assurance, sector impact, and financial viability. Government should not own CRIs to deliver financial returns. However, Government should monitor financial viability to ensure that the CRI is able to deliver against its core purpose.

21. Each CRI agree with shareholders a cash flow target and tailored rate of return on equity. This should take into account the requirements for the CRI to be financially viable, invest in new assets and absorb risk.

22. Each CRI continue to retain surpluses for reinvestment if their Board can identify good investment opportunities; that is, those that will enhance the benefits that CRIs can deliver to New Zealand. The Government should retain any excess surplus in a pool of funds available to the wider science system to develop initiatives that will benefit the nation.

23. The Government evaluate the performance of each CRI against its Statement of Core Purpose on a five year rolling basis, using a set of key result areas agreed between the CRI Board, Government and the CRI's intended beneficiaries. CRI evaluation teams should include independent, international scientists and technology experts who can provide a broad perspective on the performance and relevance of each CRI to New Zealand.

PERFORMANCE MANAGEMENT

24. The Government hold the Board accountable for the performance of the CRI against its Statement of Corporate Intent. The Government should manage poor performance by providing expert advice and support to the Board. The ultimate sanction for continued poor performance should be the removal of the Chair and/or Board. Government should place some portion of the core purpose funding to CRIs at risk, subject to performance against agreed milestones.

ROLE OF GOVERNMENT AGENCIES

25. The Government align the funding, ownership and policy functions for CRIs into a single entity. The single entity could also manage contestable and infrastructure funding, and be responsible for developing policy and strategy for the whole RS&T system.

NUMBER OF CRIs

26. The Government make no immediate changes to the balance and number of CRIs as there is no strong case at present for mergers or realignment. CRIs should continue to explore opportunities for realigning their capability where it will benefit New Zealand, and improve their efficiency by combining appropriate scientific and administrative functions.

LEGISLATIVE IMPLICATIONS

27. The Government respond to this report and implement its recommended changes as soon as possible. The Government should review the existing legislation, with a view to providing security for the new arrangements and protecting them from short-term and opportunistic decision making in the future.

Appendix 3 – Analysis of Taskforce Recommendations

CRI taskforce recommendations

	Taskforce recommendation	Treasury/MoRST view
CRI purpose	• The Government owns CRIs to address issues of national importance, including as drivers of economic growth. They are not owned in order to generate financial returns for the Crown.	We support.
Funding	• More 'long-term' (i.e. core purpose) funding for CRIs, funded through an amalgamation of non-contestable funding pots and by a reduction in contestable funding. • CRIs should use a portion of their core purpose funding to form collaborative relationships with other research providers. • Contestable (open access) funding be retained (at a lower level than present) and include an investment programme to fund inter-institutional, collaborative research.	In the past, we have supported high levels of contestable funding as a means of driving efficiency – it is likely to result in contracts with the best quality and standard, for roughly a given price. However, at least some revenue certainty is needed to allow CRIs the confidence to develop collaborations with end-users, build capability, and purchase expensive and long-lasting equipment. The RS&T system has been moving away from a purely contestable basis in recent years. We think higher levels of long term funding for CRIs can work to improve their performance, provided it is supported by an appropriate level of contestable funding, better accountability and monitoring, and better incentives to engage externally and transfer technology. It will probably cut transaction costs. This change recognises that quite a large part of Vote RS&T already goes to CRIs in a number of different long-term funding pots, and that a large part of current contestable funding is awarded to the same entities over multiple funding rounds (e.g. when the capability being sought is found in only one entity).

	Taskforce recommendation	Treasury/MoRST view
Infrastructure	• A science infrastructure strategy be developed and that key science assets have open access between research providers. • Any CRI dividends to be used for capital needs in the science system.	We agree that there may be research assets with potential use across several research organisations, with no obvious way of funding at present. MoRST is currently working on a strategy to identify these research assets. Treasury is concerned about the size of new research infrastructure proposals that may arise, and considers the best use of funding is on initiatives that encourage or leverage private sector R&D spend. We think it is unlikely that CRI dividends will be sufficient to cover the cost of new infrastructure proposals. In the absence of new money, significant prioritisation will be needed to fund new infrastructure.
Technology transfer	• Technology transfer to end-users should be a priority for CRIs (especially transferring IP to the private sector), but they should be discouraged from investing their equity in risky commercialisation activities like start-up companies.	We support, particularly the emphasis on transferring IP to the business sector quickly. Treasury has some concern that if Government is to actively discourage CRIs from investing in commercialisation, this might in some instances limit legitimate options for transferring knowledge.

	Taskforce recommendation	Treasury/MoRST view
Accountability & Monitoring	• A new, enduring accountability document: a 'Statement of Core Purpose', setting out what Government wants the CRI to achieve. The CRI's Statement of Corporate Intent would state how it would meet the Statement of Core Purpose. • Rolling five-year reviews, by independent experts, of CRIs to assess their effectiveness, alongside annual monitoring of KPIs. • Better non-financial KPIs, and a return on equity expectation for each CRI to be agreed between the CRI and shareholders. • Use of science panels and end-user committees. • Enhanced rewards and sanctions for performance. • Profits retained by the CRI if the Board has good investment opportunities.	We support. MoRST believes a stronger emphasis on reporting non-financial KPIs would create greater public awareness of the national benefit derived from CRIs. Treasury supports having part of the long-term funding at risk, dependent on performance in external engagement and technology transfer, would also be beneficial. The Taskforce report leaves room for this.

	Taskforce recommendation	Treasury/MoRST view
Sector governance / machinery of government	• Combine into one entity science policy, long-term funding, some contestable funding, infrastructure funding, and CRI ownership monitoring. COMU to provide financial and Board appointment expertise.	Potentially the most contentious of the Taskforce's recommendations, given its impact on the machinery of government. Ministers may have concerns about the ability of agencies to effectively manage this change. We agree that it would make sense to combine policy, long-term funding (as we consider that long-term funding can be considered 'equity-like' with strong links to ownership matters), and non-financial monitoring. This would reduce fragmentation in science policy which is a recognised problem. We agree COMU should provide financial and Board appointment expertise, as they do for all Crown companies. Treasury would recommend Ministers consider whether contestable funding should remain in a separate agency. This would ensure the contestable funding body stayed independent from CRIs providing a more level playing field across public and private research organisations, and some checks and balances on the combined RS&T entity. We note that machinery of government options will be considered as part of SSC's machinery of government process. We also note that the Taskforce's recommendations have not taken account of where support for business R&D should fit within the funding system.
No or little change recommended	• company model • Board appointments • number and configuration of CRIs	We support, particularly, moves to make the role and operations of CRIs (where appropriate) more publicly accountable.