

30 September 1999

Hon. Maurice Williamson  
**Minister of Research, Science and Technology**

**Report of the Ministry of Research, Science and Technology  
For the year ended 30 June 1999**

I have the honour to present to you the Report of the operations of the Ministry of Research, Science and Technology and its audited financial statements for the year ended 30 June 1999. The Report has been prepared pursuant to the requirements of the *State Sector Act 1988* and the *Public Finance Act 1989*.



James Buwalda  
**Chief Executive**  
**Ministry of Research, Science and Technology**

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## **DIRECTORY**

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WestpacTrust

**GLOSSARY**

APEC	Asia Pacific Economic Cooperation Forum
CRIs	Crown Research Institutes
EEO	Equal Employment Opportunities
E&I Team	The Government's Enterprise and Innovation Team
FRST	Foundation for Research, Science and Technology
GST	Goods and Services Tax
HRC	Health Research Council
IBAC	Independent Biotechnology Advisory Council
Innovation	Using research, science and technology to enhance economic, social and environmental benefits
Innovation System	The set of distinct institutions which jointly and individually contribute to the development and diffusion of new technologies and which provide the framework within which governments form and implement policies to influence the innovation process. As such it is a system of interconnected institutions to create, store and transfer the knowledge, skills and artefacts which define new technologies (Metcalfe, S., <i>The Economic Foundations of Technology Policy: Equilibrium and Evolutionary Perspective</i> , Blackwell, 1995)
KRA	Key Result Area
MFAT	Ministry of Foreign Affairs and Trade
MfE	Ministry for the Environment
NERF	New Economy Research Fund
Non-DOC	Non-Departmental Output Class
NZDMO	New Zealand Debt Management Office
OECD	Organisation for Economic Cooperation and Development
OIA	Official Information Act
OOS	Occupational Overuse Syndrome
Outcomes	The impacts on or consequences for the community of the outputs or activities of government
Outputs	The actual goods and services produced – in this case, under research contracts
PGSF	Public Good Science Fund
R&D	Research and Development
RSNZ	Royal Society of New Zealand
RS&T	Research, Science and Technology
RS&T:2010	<i>RS&amp;T:2010: The Government's Strategy for Research, Science &amp; Technology in New Zealand to the Year 2010</i>

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MINISTRY OF RESEARCH, SCIENCE & TECHNOLOGY

SSC

State Services Commission

## THE MINISTRY'S MISSION

The Ministry's Strategic Plan, July 1997, clearly states the Ministry's mission:

**'To be leaders for New Zealand's future as a knowledge society'**

This mission confirms the Ministry's ongoing commitment to the goals articulated in *RS&T:2010: The Government's Strategy for Research, Science and Technology in New Zealand to the Year 2010*. The mission also recognises that the Ministry's activities must be consistent with the fundamental changes to our institutions, businesses and jobs that will be caused by the knowledge revolution. This is represented in the Mission's three principal elements.

## THE MINISTRY'S VALUES

In achieving its mission, the Ministry will demonstrate the following values and attributes as an organisation:

### **Public Service**

A commitment to public service, recognising the integrity and ethics the community expects of public servants, and understanding the requirements on us to provide free and frank advice and to implement Government policies.

### **Outcome Focus**

A firm sense of the important role of science and technology in contributing to New Zealand's future as a knowledge society.

### **Stakeholder Awareness**

An awareness of, and responsiveness to, the needs and views of those with whom we interact and work.

### **Professionalism and Excellence**

A professional approach, based on informed and competent analysis, wide and objective enquiry, high standards of integrity, a striving for excellence and continual improvement, and a pride in achieving high quality, timely and effective results.

### **Teamwork and Diversity**

A commitment to working in flexible and multidisciplinary teams for the delivery of high quality results, recognition of the full potential of each employee, respect for diverse needs and interests, and openness and tolerance.

### **Consultation**

Particular emphasis on consultation with the science and technology community and users of science and technology, including Māori and the wider community.

## INTRODUCTORY INFORMATION

### **Towards a knowledge society: the role of the Ministry of Research, Science and Technology in the innovation system**

The Government invests in research, science and technology (RS&T) to generate new knowledge, foster linkages and information flows, promote awareness and understanding, and build technological capability. In this way, the Government underpins innovation throughout all sectors of New Zealand, but it cannot work in isolation. Innovation must be focused on the needs of end-users – whose lives, environments and enterprises will be affected by new knowledge and technological change.

The Ministry of Research, Science and Technology is the primary adviser to the Government on science and technology policy, including advice on science priorities and funding. The Ministry is also responsible for gathering and disseminating statistics and descriptive information on RS&T activities, evaluating the outcome of the Government's science and technology investment, and representing the Government's interests in RS&T at an intergovernmental level. The Ministry also provides scientific and technical advice for public policy development and coordinates science funding and activity on topics of national importance, where a range of funding agencies and science organisations is involved.

To perform its particular role within the science and technology system, the Ministry is required to interact at many levels with purchase agents, relevant government departments, and providers and end-users of science and technology. These groups, as well as the Minister and the Government, represent the Ministry's key stakeholders.

### **Towards a knowledge society: the Government's strategy for research, science and technology**

In 1996, the Government published *RS&T:2010: The Government's Strategy for Research, Science and Technology in New Zealand to the Year 2010 (RS&T:2010)*. This strategy is based on a vision for a society that understands and values science and technology and their critical role in assuring New Zealand's future prosperity and well-being, and that maximises the contribution of science and technology to wider economic, social and environmental goals through scientific research and technological innovation of the highest quality.

To fulfil the vision for RS&T, *RS&T:2010* includes three broad goals:

- fostering societal values and attitudes that recognise science and technology as critical to future prosperity;
- ensuring an adequate level of investment in science as a component in national life which has cultural value in its own right; and
- maximising the direct contribution of science and technology to diverse social, economic and environmental goals.

The strategy also includes an Action Agenda and Investment Framework that will guide the Ministry's priorities and work programme.

## RELEVANT GOVERNMENT OUTCOMES

During 1998/99 the Government established a set of Overarching Goals and Strategic Priorities to describe where it expects to see change and achievement of results. These goals and priorities strongly focus on what must be done to lift New Zealanders' productive capacity; developing smart people with a sense of opportunity, and fostering innovation in products and markets.

### STRATEGIC PRIORITIES:

"We will expand our knowledge base and technological capability."

The Government's research, science and technology investments will also contribute to other strategic priorities, including strengthening families, improving the health, employment, education and housing status of Māori, and safeguarding indigenous biodiversity.

The Government's goals and priorities focus and guide the work-plan of the Ministry. They operate in conjunction with the goals and objectives of *RS&T:2010*. The goals and priorities are directly linked to the Ministry's Key Result Areas (KRAs).

### Key Result Areas (KRAs)

The Ministry identified the following KRAs, which support the mission and represent long-term priorities:

- 1 establish a contemporary rationale for public investment in RS&T, based on a 'knowledge and learning' paradigm supporting strategic goals outlined in *RS&T:2010*;
- 2 achieve strategic alignment of public investment in RS&T with the Government's broad goals, outlined in *RS&T:2010* by managing this investment within a coherent framework;
- 3 implement enhanced systems for ensuring that Government decision-making is effectively informed by scientific and technical advice;
- 4 ensure holistic management and integration of the Government's science and technology investments;
- 5 establish a capability within the Ministry to provide leadership in defining and communicating New Zealand's future challenges and opportunities as a knowledge society.

### Achievement of Results

#### OVERARCHING GOALS:

"We value innovation and our ability to build on new ideas and technologies. Our future prosperity depends on our ability to adapt, and we must be prepared to create and take advantage of new opportunities. As Government, we are committed to lifting educational standards and achievement. We want to encourage New Zealanders to gain and use the new skills and knowledge needed to enable us to participate in the global knowledge economy."

## CHIEF EXECUTIVE'S REPORT

### Towards a knowledge society: Significant Events and Highlights

Following the establishment of the Cabinet Enterprise and Innovation Team (E&I Team), Ministry officials have interacted extensively with officials from other departments associated with this team. There have been two key areas of focus for these interactions:

- 1999 Budget – New initiatives from all departments associated with the E&I Team were considered together to develop an integrated package for consideration by Treasury Ministers and Cabinet. The Ministry successfully developed the largest single initiative within this package ('Creating Innovation Opportunities' – New Economy Research Fund (NERF));
- 5-Steps Ahead – This programme involved Ministry officials in the design of the consultation exercise and associated publicity, participation in selected regional forums, analysis of forum feedback and development of policy responses.

Through this new team, the Ministry has established much stronger and closer working relationships with officials in Commerce, Education and Labour in particular.

### Foresight Project (*linked to KRA1*)

The Foresight Project, a major Ministry initiative over the last two years, encouraged strategic thinking about the future across diverse communities, and used insights gained to develop new priorities for the Government's RS&T investments. The Ministry developed and applied innovative approaches to consultation. Extensive use was made of web-based processes for disseminating information, enabling interaction between stakeholders, and increasing the range and scope of feedback on policy proposals.

About 140 sector-based strategies, outlining future innovation opportunities, were developed. These strategies were a significant resource as new policies and procedures for the Government's RS&T investments were developed. These new policies and procedures respond to the Government's overarching goal, to develop the skills, knowledge and technologies to enable New Zealanders to participate effectively in the 'global knowledge economy'.

*Blueprint for Change* was published in May 1999, to communicate the Government's policies and procedures for its RS&T investments. The core policy principle, of fostering the integrity and capacity of the innovation system, was confirmed. In contrast to past statements of the Government's priorities for its RS&T investments (which focused primarily on expenditure targets for various Public Good Science and Technology outputs), *Blueprint for Change* provides a strategic focus for all investments within the Government's 'science envelope'. This strategic focus is included as a set of four overarching goals and a set of 14 target outcomes. The explicit recognition of a Māori development target outcome represented a significant commitment to the partnership principles of the Treaty of Waitangi.

**Evaluation (*linked to KRA2*)**

During the last year, the Ministry made significant progress in developing and applying methods for evaluating the progress and effectiveness of RS&T investments. A comprehensive evaluation of the Public Good Science Fund (PGSF) was published in December 1998, to coincide with an APEC conference on evaluation hosted by the Ministry. International experts participating in this conference recognised this evaluation as world-class in design and execution. This evaluation has been further recognised through subsequent interactions with European Union practitioners. The PGSF evaluation results highlighted considerable differentiation of benefits of public good science and technology, ranging from new skills, underpinning knowledge, technology development, provider-user partnerships and improved strategic planning within user sectors. Aggregate benefits were considered to be very high in every area of PGSF research examined.

A new performance management framework for the Government's RS&T investments was developed through the Foresight Project. This new framework includes a set of 'impact expectations' characterising how RS&T outputs can contribute to the target outcomes for this investment. These impact expectations are not a basis for accountability (which is provided through contract management procedures), but will generate significantly improved information for decision-makers at all levels within the RS&T investment system.

A key component of the performance measurement framework is a set of 10 stewardship expectations characterising how purchase agents should be managing the Government's RS&T investments. These expectations have already been incorporated into purchase agreements between the Minister of Research, Science and Technology and his purchase agents (Foundation for Research, Science and Technology (FRST), Health Research Council (HRC) and Royal Society of New Zealand (RSNZ) for 1999/2000. Legislative frameworks for FRST and HRC were successfully reviewed during the year.

**Building New Zealand's RS&T Profile Internationally (*linked to KRA3*)**

An international strategy was developed increasing the emphasis on international partnerships and networks, and increasing understanding and awareness of global challenges and opportunities. *Blueprint for Change* included a 'stewardship' expectation – 'Optimising Global Connectedness'. This is to ensure that the Government's RS&T investments both contribute to, and draw from, the global knowledge base. The Ministry has developed a strategy for enhancing global linkages to support this expectation.

A visit to Argentina, Brazil and Chile in October raised New Zealand's science and technology profile. Rapid and relatively stable economic and political development in these countries has led to increased demand for advanced scientific and technological expertise, products and services. New Zealand has a relatively low profile in South America and the purpose of the trip was to highlight strengths in this field and increase access to these significant markets for New Zealand's exporters and research agencies.

At the invitation of the United Kingdom Government the Minister of Research, Science and Technology, accompanied by a delegation which included Ministry officials, visited the United Kingdom in May. The delegation also elected to visit Finland and Ireland in order to observe and investigate the rationale for, and instruments of, successful Government initiatives to spur innovation in three contrasting European countries.

### **Science and Technology Awareness and Understanding (*linked to KRA4*)**

The Ministry extended its networks and reputation for providing and/or facilitating effective science and technology advice to inform Government decision-making. Highlights included:

- recognised leadership and critical contributions in the development of science strategies in various areas of the Government's interest, including biodiversity, biosecurity, oceans, Antarctica, biotechnology, social science;
- review of management arrangements for coordinating science and technology activity in various areas of direct interest to the Government, including possum/TB control, climate change and sustainable land management.

The last year has seen significant public interest and concern regarding several science and technology issues. Differing public perceptions on the benefits and risks of new technologies have been demonstrated. Issues such as biotechnology (especially genetic engineering), food irradiation, cell-phone towers, and reliability of forensic DNA evidence have been extensively publicised.

The Ministry developed policy advice to support the formation of the Independent Biotechnology Advisory Council (IBAC), established by the Government in May 1999. IBAC has two key functions: to provide the Government with high quality independent advice and to stimulate informed public dialogue on biotechnology. IBAC has 10 members, drawn from a range of backgrounds. The Ministry is providing secretariat services to IBAC. Further information on IBAC's activities is available at <http://www.ibac.org.nz>

The growing importance of ethical issues related to rapidly developing new technologies was addressed in a commissioned report. This work will underpin the Ministry's future activities in addressing barriers to innovation.

The Ministry, through the Science and Technology Promotion Programme (*Wow! It's science*) has worked with the wider science and technology promotion community to focus on promoting the value of science and technology to New Zealanders. This programme, launched in May 1998 by the Minister of Research, Science and Technology, seeks to create an environment in which decision-makers in society, community, business, education and in social groups of all kinds, better appreciate the value of science and technology and their importance in everyday life.

The programme has developed an award-winning website (<http://www.science.net.nz>) that provides exciting access to science and technology for 15-20 year olds, while also delivering resources to the growing science and technology promotion community in New Zealand. The Ministry will

continue to lead a small advisory group to set the future direction for the programme.

Through interactions with the APEC Women Leaders Network, the need for societal understanding of science and technology to be based on broad participation by women and minority groups has been identified. Barriers and choices affecting these groups must be understood before defining appropriate policy interventions.

### **Likely Developments**

The Ministry will continue to emphasise and focus on skill, knowledge and technology challenges associated with New Zealand's development as a knowledge society. In particular, this will involve ongoing efforts to foster societal values and attitudes that recognise science and technology as critical to future prosperity and well-being. Based on the Government's core policy principle of fostering the integrity and capacity of the national innovation system, the Ministry will seek to optimise the balance of generating new knowledge, promoting awareness and understanding, increasing linkages and information flows, and building technological capability.

The Ministry will continue to foster linkages between RS&T and other aspects of enterprise and innovation. Building and maintaining economic and social performance requires a sustained national capacity for innovation. At the same time, a rapidly changing global economy is placing new demands on our national innovation system. In particular, the Ministry will place increased emphasis on integrating RS&T policies with policies for education and enterprise.

A key focus during the next year will be the implementation of the policies and procedures for the Government's RS&T investments, published in *Blueprint for Change*. This will include a review of the output classes for Vote: RS&T. The new investment framework resulting from this review will lead to new relationships between providers and users of science and technology.

### **Organisational Changes (linked to KRA5)**


The Ministry's strategic plan highlights the need for integration of the 'strategic assets' of people, information and communications, to underpin achievement of the Ministry's overall goals.

During 1998/99 development of these areas was seen as fundamental to improving the quality of the Ministry's performance. A programme-based structure was developed and refined. The organisation thrived on a dynamic mix of skills and attitudes, linked with carefully developed processes and relationships, to support the realisation of the leadership-based vision.

Both human resource and communications strategies were designed, identifying key areas for further skill and competency development. The information management strategy continued to be implemented, resulting in initiatives such as an Intranet - setting in place systems for effective internal communications and retention of institutional knowledge.

At the same time the Chief Adviser roles for Policy, Science and Resources were further developed to encourage a Ministry-wide focus on results, leadership and competency development.

The Ministry has had a productive year, focusing on the development and implementation of policy advice, communications and consultation with key stakeholders, and the necessary infrastructure to enable a strong contribution to New Zealand's future as a knowledge society.

A handwritten signature in black ink, appearing to read 'James Buwalda', written in a cursive style.

James Buwalda  
**Chief Executive**

**OTHER INFORMATION (*linked to KRA5*)****Good Employer Requirements**

Section 56 of the State Sector Act 1988 requires the Chief Executive to operate policies that comply with the principle of being a 'good employer'. Such policies must provide for the fair and proper treatment of employees in all aspects of their employment.

We have continued to look for ways to improve our policies in these areas. Specific achievements are discussed under the respective headings below.

**Organisation Structure**

In the 1998/99 financial year, the Ministry conducted its core business through a series of programmes, each of which corresponded to an output purchased by the Government. Each sits within one of the Ministry's two output classes.

In summary, a programme-based approach offers the following advantages:

- the presentation of a clear identity to external stakeholders;
- the ability to focus on contracted commitments with flexible application of organisational resources;
- easy modification of programme specification in response to changing priorities and/or needs;
- strengthened teamwork to ensure that institutional knowledge is developed and protected;
- opportunities for collaboration and communication.

A programme-based approach views the organisation as a dynamic mix of skills and attitudes, linked with carefully developed processes and relationships, which can support the realisation of a vision based on leadership. Under this approach, programme leaders were accountable for operational programme management, including communication and liaison with stakeholders. Staff working within programmes were drawn from groups representing the competencies of the Ministry.

The Chief Policy Adviser and Chief Scientific Adviser respectively provided leadership for the Ministry's policy and science interests. This involved responsibility for general policy and science issues as well as management of the Policy and Science Groups. The Chief Adviser, Resources provided management leadership and was primarily responsible for enabling the business of the Ministry, as well as for the management of the Resources Group.

Over the course of the year all three groups (Policy, Science and Resources) have, through the programme-based work approach, continued to integrate their activities and effectively utilise Ministry-wide knowledge.

## **Human Resource Management**

During the 1998/99 year, the Ministry finalised development of a Strategic Human Resources Management Plan, which provided the people management link with the Ministry's Strategic Plan.

This plan identified the following areas of focus for 1999/2000:

- identifying new core organisational competencies;
- introducing a new performance and development agreement for staff;
- developing a new induction process;
- revising the Ministry's Human Resource policies.

These initiatives will help ensure that human resource systems, structures and policies reflect the Ministry's vision, values and strategic goals. They will also enable development of the capabilities required by the Ministry to achieve its strategic objectives.

Performance management initiatives developed during the previous year have been further implemented. The Ministry continues to maintain harmonious employee relations. A new staff consultation process utilising the Intranet to facilitate dialogue was implemented.

The Ministry continues to emphasise public service integrity through specific seminars, ongoing discussions and provision of relevant information.

During the year, a project management methodology for the Ministry was formalised and successfully implemented.

The advent of the Ministerial E&I Team has provided opportunities for the Ministry to have far greater involvement with other departments, further increasing the intellectual capital of the Ministry. The need to work widely and in cross-functional teams has produced advice that has greater consensus across the public service.

## **Equal Employment Opportunities**

The Ministry's two key EEO objectives for the year were consistent with the intent of the wider public service's EEO Objectives and were specifically targeted to issues of particular relevance to this Ministry.

The first key objective was to improve the induction of new staff to assist them to be successful in their jobs. Some developmental work was undertaken on this during 1998/99 and further work is targeted for 1999/2000.

The other key EEO objective for the year was enabling increased Māori participation in the core business of the Ministry. Three new Māori staff were actively recruited during the year. As Māori make up only a small percentage of science graduates, the focus was on methods other than recruitment to increase the Ministry's engagement with Māori to ensure that Māori perspectives are taken into account in RS&T policy development. To this end, the Ministry worked on enhancing its public profile within the Māori community. Support was provided for a Mauriora ki te Ao scholarship – aimed at increasing the number of qualified

Māori entering employment with the public sector. The successful candidate (a Māori tertiary student) was also offered part-time and vacation employment at the Ministry under a work programme organised to provide her with a range of experience. In addition, marae-based tikanga Māori courses were held for all staff to encourage greater understanding of Māori issues and protocol.

As part of its support for EEO, the Ministry in 1998/99 continued its membership of The EEO Trust. Other EEO actions during the year included sponsoring a Pacific Island staff member to improve her formal qualifications through the Tu'anaki Project, and providing sponsorship to post-doctoral students at the Leadership Priorities Conference. The Ministry maintained its commitment to a 'family friendly' workplace by continuing to be responsive to staff requests for flexible work arrangements in order to meet family obligations.

As at 30 June 1999, women made up 53% of the staff at the Ministry and 50% of the management team. EEO target groups represented in the staff of the Ministry at 30 June 1999 included:

	<b>% Total Staff</b>
Women	52.5
Māori	5.0
Pacific Islanders	2.5
Asian	5.0
Other ethnic groups	7.5

### **Communications Strategies**

The Ministry continued to develop communications capability. A robust stakeholder consultation process was undertaken. The Ministry also completed a communications strategy designed to enable the implementation of clear, consistent and effective communications. The strategy segmented stakeholder groups and identified issues related to each. It then went on to identify objectives, key messages, appropriate communication tools and performance measures for each segment. Again, the emphasis was placed on aligning with Human Resource and Information Management Strategies. The Ministry aims to effectively communicate an understanding of the dynamics of the knowledge society and the role of RS&T in that society.

### **Information Management**

The Information Management Strategy (IMS), established in 1998, continues to be implemented. The IMS is based directly on, and includes, the principles of the Policy Framework for Government Held Information. Building on the IMS, a Records Management Project was implemented which includes the development of systems for the organisation, archiving, retention and disposal of current and future records held by the Ministry. The project implements and documents a more logical filing and reference framework for the Ministry which staff can

access via the Intranet. This framework encourages the sharing of information and cross-Ministry collaboration in areas of work.

An example of our policies at work can be seen in the Foresight Project with the development of sector strategies. This was achieved by consultation with sectors, analysis in conjunction with stakeholders, incorporation into policy advice and then publication of public material on the Foresight section of the Ministry website. The resultant database was branded as the *InnovationLink:2010* Database and is still maintained by the Ministry. It will be at the centre of future developments currently in the planning stage.

### **Māori Responsiveness**

To enable meaningful Māori participation and consultation the Ministry has increased its network of contacts with representatives from a wide range of organisations interested in Māori research. Māori perspectives contributed significantly to the Foresight Project. These were reflected in *Blueprint for Change*, with the inclusion of dual goals of Māori advancement and Māori development in consultation with Māori. Initial work identified likely indicators in respect of monitoring responsiveness to Māori in the purchase of RS&T. Specific indicators will be developed in the coming year.

Ministry staff contributed at several Māori hui, including an ethnobotanical conference and a hui looking at Māori perspectives on genetic engineering. Staff attended tikanga Māori courses, tailored to include topics relevant to the Ministry's core business such as matauranga Māori.

### **Y2K**

The Ministry, in complying with the requirements of the State Services Commission (SSC), completed its Y2K readiness preparations and intends to continue to monitor its state of readiness. Linked to this was the completion of the Business Continuity Plan which is to be tested in September 1999.

### **Health and Safety in Employment**

There were no workplace accidents during the year. Being an office-based workplace, the primary health and safety risk for staff is from Occupational Overuse Syndrome (OOS). To minimise this risk, ongoing OOS-awareness and monitoring initiatives continued throughout the year, with individual workplace assessments and ergonomic alterations carried out as required, and information on OOS-prevention being disseminated regularly to all staff.

The Ministry's Employee Assistance Programme policy was utilised, with financial and practical support being provided to a number of staff to assist them to deal with personal difficulties that were impacting negatively on their work. In addition, the Ministry maintained its commitment to contributing to the cost of eye tests and the provision of corrective lenses for VDU use, and to providing health and fitness subsidies to encourage improved physical well-being of staff.

**Accommodation**

The Ministry operates in good quality accommodation in the Reserve Bank Building on The Terrace in Wellington. The Ministry occupies the 10th and part of the 11th floors occupying in total 1365m<sup>2</sup>; common space accounts for 217.3m<sup>2</sup>. The lease runs until December 2001. The lease cost for 1998/99 was \$276,000 (excluding GST) and net of hard fitout, depreciation and capital charge.

The usable space allocation per employee is 30.2m<sup>2</sup>, which is higher than the average for public service departments but reflects both the configuration of usable space within the Reserve Bank Building and the relatively large common areas (e.g. Library, conference room) required to operate effectively. Occupancy costs (which include maintenance and electricity) are \$225 per m<sup>2</sup>, which is also higher than the public service average, reflecting the small size of the Ministry and the location of its accommodation in the central business district.

**Self Review and Corporate Development**

A programme of internal review and improvement continued throughout 1998/99, focusing on extensive and open consultative processes, and integration of corporate strategies in the areas of human resources, information management and communications.

Corporate programmes encompassed a regular analysis of risk factors, routine internal audits, organisational development including development of both human resource and communications strategies, and the development of an Intranet (as part of the IMS) which set in place systems for effective communications with staff.

A survey of key stakeholders was undertaken to assess perceptions of the Ministry's performance against established benchmark data. Ad-hoc qualitative research was undertaken to check the depth and level of understanding amongst stakeholders about the changes to the Government's policies and procedures for its RS&T investments.

During the year, the Senior Management Team also undertook a mid-term review of the Strategic Plan and reconfirmed the strategic direction outlined in the plan.

In 1999/2000 the Ministry will continue to develop and integrate the 'strategic assets' identified in the Strategic Plan (1997): people, information and relationships and networks.

## FOLLOWING THE BLUEPRINT

(NB. This summary is reproduced here as an illustration of the Ministry's work and its influence on the development of the RS&T system.)

### How the New Zealand RS&T sector is moving into the knowledge-based future.

How does the New Zealand Government know it is getting an effective return on its annual investment in public research, science and technology?

A strategic approach to planning and investment is now helping the sector to know where it's going, how it's going to get there, and how much progress is being made from year to year.

#### Setting the scene

Change is not a new story in New Zealand's RS&T system. It has been going on more or less full bore since the late 1980s.

The New Zealand Government has had a key role in these changes as it has pursued three goals for the sector: a better return on investment, more efficient transfer of technology into the wider economy, and more accountability in the sector.

It started the change process by looking at the management structure of the sector. Along with this came a range of new organisations and a new terminology.

In 1989, the Ministry of Research, Science and Technology was set up to provide policy advice, along with a separate organisation, FRST, to manage the Government's RS&T investments. FRST is called a 'purchase agent' because it purchases research (i.e. invests) on behalf of the Government. The HRC and the RSNZ (Marsden Fund) are also 'purchase agents'.

Then, in 1992, attention turned to the organisations 'doing' the science and research. The DSIR, the Government department doing most of the research, was broken up and 10 new Crown Research Institutes (CRIs) were created.

These changes were in line with other public sector reform at the time. They separated the policy advice from the funding, and the funding from the delivery to create clearer lines of accountability.

**Constant  
change 1980s  
onwards**

**Seeking a more  
efficient RS&T  
sector**

**Structures first**

**A new language,  
new  
organisations,  
1989**

**Change at the  
coal-face, 1992**

**Separating key  
parts in the  
chain**

Science organisations (or 'providers') such as the CRIs, Universities and Research Associations were now bidders for contracts with the 'purchase agents', to carry out research which met the Government's priorities for RS&T investments.

Since then priorities for investment have been reviewed and new funds set up. The Government's major RS&T investment, the PGSF, was reviewed in 1992 and 1995. The Marsden Fund was created in 1994 and the Technology New Zealand programme in 1997.

Strategic change of this scale is seldom easy. While the new system initially made it easier to see who did what and how much was spent, it brought an even bigger question into view for the Government. Why are we doing it? What difference does RS&T make?

It was easy to say how much money the Government was spending, but difficult to say what outcomes or value it, or New Zealand, was getting in return.

An exercise was needed to get the whole system focused on these critical questions. This was the impetus for the Foresight Project, which was launched by the Prime Minister in December 1997.

A series of conferences, workshops, debates and discussions was held around the country. There were unprecedented scenes of business people working alongside people from social organisations and alongside researchers – all asking what kind of society do we want and how can RS&T help make it happen?

A total of 140 sector groups submitted sector strategies including groups from health, horticulture, culture and heritage, information technology, animal products and the plastics industry, to name a few.

Arising from this came a new focus for RS&T in New Zealand, one with the potential to pull people together and unleash a lot of energy – pointing the way for New Zealand to become a knowledge society.

### **Bidding for contracts**

### **Other changes, 1992–1997**

### **What difference does RS&T make?**

### **Spending versus value**

### **Foresight Project launched, 1997 - 1998**

### **Where is RS&T headed?**

### **Wide involvement, 1998**

### **Going after a knowledge society**

**Making it happen**

The rise of the knowledge society around the world is a story in its own right. Developed countries are scrambling to keep pace with the revolution in which *creating, sharing* and *using* knowledge have become key factors in the prosperity and well-being of their people. A tide of media coverage, opinion, research and investment confirms the knowledge model as our likely economic future. These are some of the things commonly said about a knowledge society:

- knowledge is a major source of economic advantage;
- rapid changes in technology will happen;
- greater investment in research and development will be needed to generate new ideas;
- greater use of information technology will happen;
- more knowledge-intensive businesses will develop and grow;
- increased networking and working together will be needed for success;
- there will be rising skill requirements in order to support increased research, business, technology and development.

It is also clear that RS&T will play a central role in these major changes.

New Zealand's development as a knowledge society is still very much a 'work in progress'. A Government document published in May 1999, set out practical steps on the path forward. This was *Blueprint for Change*, the Government's official statement of policies and procedures for RS&T investments for the next few years.

It is a lot different from previous statements about priorities. For a start, instead of defining how much the Government wants to spend, it focuses on what the Government wants to achieve.

Secondly, it applies to all of the Government's RS&T investments, not just the PGSF, as previous statements have done.

It also takes a well rounded approach to the purpose of RS&T – beneath the aim of developing a knowledge society are goals for innovation,

**Knowledge – a key factor in prosperity and well-being**

**Expected changes**

**RS&T a central role**

***Blueprint for Change sets out the way forward for RS&T***

**Focus on achieving**

**Broad view**

**Covers innovation,**

economic prosperity, environmental and social well-being. All will have to be met, if New Zealand is to achieve an RS&T system that is responsive and responsible to its needs as a knowledge society.

The *Blueprint for Change* also identifies a structure by which public spending on RS&T can be focused under the broad goals. This is achieved through 14 statements about our future which came from the Foresight Project. They are the 'target outcomes' of the new system. Together they make up an appealing vision of what the emerging knowledge society could be like for New Zealand.

Here are a couple of examples of target outcomes:

*Wealth from new knowledge-based enterprises.*

New Zealand in the year 2010 is a country where "New Zealanders recognise that ideas are the basis for new wealth-creating business. The entrepreneurial capacity to generate and exploit ideas is highly developed and highly valued." This target outcome could, for example, guide investment towards emerging areas such as biotechnology, nanotechnology, advanced materials and new communications technologies. In turn this generates the new ideas that businesses in a knowledge society need to prosper.

*People living in safe and healthy environments.*

The advent of the knowledge society does not mean we turn our back on environmental concerns. Healthy and safe environments are important to us. The key point is that we must develop our understanding of how to manage environments better, as this target outcome suggests.

It is important to acknowledge that RS&T alone cannot deliver on these 14 outcomes – other economic and social factors will also be important.

But RS&T can make a difference. Below the level of goals and outcomes are day-to-day, year-to-year RS&T outputs. These are the goods and services being produced by RS&T and are specific and measurable. Science providers must be accountable to taxpayers for the RS&T outputs they have been contracted to deliver.

**economic,  
environmental  
and social areas**

**14 target  
outcomes the  
engine room of  
the new system**

**Examples of  
target outcomes  
in action**

**Other factors  
also important**

**Bringing it all  
together**

The future looks bright for New Zealand as a knowledge society. RS&T will be playing its part in creating this.

The challenge now is for all people in the system to define and understand their roles, based on the *Blueprint for Change* framework. Now you're being asked: "What will you be doing to make a difference?".

**Challenge for the participants**

**Making a difference**

*Blueprint for Change* is already being put into action.

The 'purchase agents' (FRST etc) are working with science providers around the country to focus their activities and outputs on the 14 target outcomes. Existing RS&T contracts are being redirected so they fit better with the new priorities.

The Ministry is also reviewing the structure of the funds which deliver investment (such as the PGSF, Marsden Fund, Non-Specific Output Funding and the like).

Also, new research proposals aimed at the target outcomes are being fostered and encouraged. The New Economy Research Fund is an example. From next year around \$36 million per year will be invested in research designed to provide starting points for tomorrow's knowledge based businesses.

These positive developments are being carried out within the necessary disciplines for managing public expenditure, such as the Public Finance Act.

Each year the 'purchase agents' will account to the Minister (Government) for their investments. The reporting processes will enable the system to be continually improved. It will be more rigorous than it was previously and provide better quality information. From now on the Government will have a much better idea of the way its annual expenditure of around \$600 million has contributed towards the outcomes it has set, rather than just the outputs it has purchased.

Change is a constant in the current era – only the focus of it has moved. The essential elements and goalposts of the system have now been set, and the new wave of change will be increasingly user

**From plans to action**

**Review underway**

**New research areas**

**Disciplines maintained**

**Improved reporting**

**Change a constant**

and researcher driven.

So what happens now?

The emphasis is returning to the creativity and commitment of science providers to come up with ways to meet the target outcomes.

Expect more innovative funding arrangements, more emphasis on transferring technology to the marketplace and more cross-disciplinary research work.

The story of the next period will be one of action and achievement – of progress towards the target outcomes, facilitated by a Government equipped with better tools to measure progress towards the constantly changing demands of our knowledge-based future.

**Unleashing  
energy**

**Greater  
innovation**

**On target**

### Summary: how has the system changed?

So let's summarise how the new system will be different from the old. There are five main areas of difference:

#### *The big picture*

The Government's statement of priorities now applies to all of its RS&T investments, not just the Public Good Science Fund. It describes what the Government wants to achieve, not just how much it wants to spend. It also focuses on the future – recognising that to become a knowledge society we cannot keep on doing what we were doing before.

**Future focus**

#### *From allocation to investment*

Purchase agents, such as FRST, will focus on getting the best return for the Government's RS&T investments, rather than simply allocating money from funds. If there are no worthwhile projects, then the available money won't be invested. If there is insufficient money available for investing in worthwhile projects, then they will advise the Government of this.

**Investment  
approach**

#### *Focus on results*

In the past, purchase agents such as FRST used a lot of detailed processes for rationing the limited RS&T funding. In many ways, the focus was on rules rather than results. Now, purchase agents will focus on the results the Government wants to achieve. They will negotiate with science providers to find the best mix of RS&T projects for

**Guidelines  
rather than  
prescriptions**

investment. They will also work closely with users of publicly funded RS&T, to ensure the work carried out is relevant to their needs.

*Better information*

The new policies and procedures include new ways of looking at the results being achieved. Science providers must be accountable for what is being done. Rather than simply reporting on numbers of experiments carried out and papers published, people will gather more information on the difference their RS&T activities have made. This understanding about the impacts of RS&T will assist the Government to make better decisions about future investments.

*Government as facilitator*

Through *Blueprint for Change*, the Government has set the directions and identified in broad terms what it wants to achieve using its RS&T investments. Now, the energies and innovation of the science providers and users can be unleashed. They can work out how best to make progress towards these goals. There will be less top-down control, and more information and networking in all directions - downwards, upwards and from side-to-side.

*What doesn't change?*

Other aspects of the RS&T investment system will stay just as they were. The requirement for robust and transparent allocations of public funding stays the same. The requirement to report to Parliament on how this funding was used also remains. The definition of funding categories and levels of funding for each of these categories, set in the annual Budget process, also stays the same.

The new arrangements provide a system which is better able to contribute to, and cope with, the fast changing demands of New Zealand's future as a knowledge society.

**Identifying the difference RS&T has made**

**A dynamic system**

**Controls still in place**

**Overall**

**STATEMENT OF RESPONSIBILITY**

Pursuant to Section 33 of the *Public Finance Act 1989*, the financial statements for the Ministry of Research, Science and Technology set out the financial results for the Ministry for the period from 1 July 1998 to 30 June 1999.

The Ministry has established accounting procedures and policies designed to ensure reasonable assurance of the integrity and reliability of financial reporting and has in place internal audit procedures to ensure the Chief Executive's responsibilities for an appropriate system of internal control are met. In our opinion, the attached financial statements are a fair reflection of the financial position and the Ministry's operations in the review period.



James Buwalda  
**Chief Executive**



Foo Juay Loong  
**Finance Manager**

## **REPORT OF THE AUDIT OFFICE**

### **TO THE READERS OF THE FINANCIAL STATEMENTS OF THE MINISTRY OF RESEARCH, SCIENCE AND TECHNOLOGY FOR THE YEAR ENDED 30 JUNE 1999**

We have audited the financial statements on pages 32 to 70. The financial statements provide information about the past financial and service performance of the Ministry of Research, Science and Technology and its financial position as at 30 June 1999. This information is stated in accordance with the accounting policies set out on pages 49 to 51.

#### **Responsibilities of the Chief Executive**

The Public Finance Act 1989 requires the Chief Executive to prepare financial statements in accordance with generally accepted accounting practice which fairly reflect the financial position of the Ministry of Research, Science and Technology as at 30 June 1999, the results of its operations and cash flows and the service performance achievements for the year ended 30 June 1999.

#### **Auditor's Responsibilities**

Section 38(1) of the Public Finance Act 1989 requires the Audit Office to audit the financial statements presented by the Chief Executive. It is the responsibility of the Audit Office to express an independent opinion on the financial statements and report its opinion to you.

The Controller and Auditor-General has appointed E M Mason, of Audit New Zealand, to undertake the audit.

#### **Basis of Opinion**

An audit includes examining, on a test basis, evidence relevant to the amounts and disclosures in the financial statements. It also includes assessing:

- the significant estimates and judgements made by the Chief Executive in the preparation of the financial statements; and
- whether the accounting policies are appropriate to the Ministry of Research, Science and Technology's circumstances, consistently applied and adequately disclosed.

We conducted our audit in accordance with generally accepted auditing standards, including the Auditing Standards issued by the Institute of Chartered accountants of New Zealand. We planned and performed our audit so as to obtain all the information and explanations which we considered necessary in

order to provide us with sufficient evidence to give reasonable assurance that the financial statements are free from material misstatements, whether caused by fraud or error. In forming our opinion, we also evaluated the overall adequacy of the presentation of information in the financial statements.

Other than in our capacity as auditor acting on behalf of the Controller and Auditor-General, we have no relationship with or interests in the Ministry of Research, Science and Technology.

### **Unqualified Opinion**

We have obtained all the information and explanations we have required.

In our opinion the financial statements of the Ministry of Research, Science and Technology on pages 32 to 70:

- comply with generally accepted accounting practice; and
- fairly reflect:
  - the financial position as at 30 June 1999;
  - the results of its operations and cash flows for the year ended on that date; and
  - the service performance achievements in relation to the performance targets and other measures set out in the forecast financial statements for the year ended on that date.

Our audit was completed on 30 September 1999 and our unqualified opinion is expressed as at that date.



E M Mason  
Audit New Zealand  
On behalf of the Controller and Auditor-General  
Wellington, New Zealand

## PERFORMANCE INFORMATION

### Introduction

The Government invests in RS&T to foster the integrity and capacity of the innovation system, by:

- generating new knowledge;
- fostering linkages and information flows;
- promoting awareness and understanding; and
- building technological capability.

The Ministry of Research, Science and Technology:

- is the primary adviser to the Government on science and technology policy, including advice on investment priorities and management;
- is responsible for facilitating technical advice for public policy development, evaluating outcomes of the Government's science and technology investments, and gathering and disseminating information on research, science and technology activities; and
- represents the Government's interests in RS&T at an intergovernmental level, and occasionally coordinates science funding and activity on some topics of national importance; and
- manages, on behalf of the Crown, contracts for the provision of science and technology services.

### Accountability Statement

The departmental outputs of the Ministry for the year to 30 June 1999 were divided into two output classes:

D1 – Science and Technology Policy Advice;

D2 – Management of Contracts for Non-Departmental Output Classes.

The Chief Executive of the Ministry is accountable to the Minister of Research, Science and Technology for the use of the Crown's investment in the Ministry, and for the production of the outputs detailed in the Estimates of Appropriation for 1998/99.

## STATEMENT OF OBJECTIVES AND SERVICE PERFORMANCE

### Generic Output Measures

Generic quality, quantity, timeliness and cost measures for outputs supplied within all the output classes are given below. More specific measures for individual outputs are listed where appropriate.

### Quantity and Timeliness

Outputs will be of a size and scope and with target dates for delivery as described in the performance standards set out in the Purchase Agreement negotiated between the Minister and the Chief Executive of the Ministry. These can be modified by agreement between the Minister and the Chief Executive during the course of the year.

*This measure was assessed by comparison of the actual work produced and its timeliness, in comparison with the commitments set out in the Purchase Agreement or as modified by agreement with the Minister during the year.*

### Coverage

A background service will be provided which includes: the capacity to react urgently; regular evaluation of the impacts of government policy, regulation and expenditure on the outcomes desired by the Government; timely briefings that can anticipate issues; and support for the Minister as required in Cabinet Committees, Caucus Committees, Select Committees and in the House.

The coverage achieved will however depend on the resources required to supply the work specified under each output, as this specified work will have priority.

*This measure was assessed by ad hoc verbal and written responses from the Minister during the year, with a written summary assessment provided by the Ministry at year-end and endorsed by the Minister.*

### Cost

Outputs will be produced within the overall appropriation levels for each output class.

*This measure was assessed by the comparison of actual costs with those set out in the Estimates or as modified in the Supplementary Estimates.*

## Quality of Documents

Individual items of work will satisfy quality characteristics required for Cabinet papers and other important documents. These characteristics are:

Purpose:	The objective of the paper is clearly stated, it answers the questions asked by Ministers and demonstrates a clear understanding of the desired outcome(s) of the Government or the Minister.
Scope and Relevance:	The paper identifies the symptoms and causes of the 'policy problem' and makes explicit the assumptions behind the advice. The analysis is linked to the Government's science and technology strategy and other related government policies and goals. Implications for other government policy areas are identified.
Logic:	The paper offers a logical argument linking information and assumptions to the conclusions.
Accuracy:	All relevant information is included and is accurate, stating the range of uncertainty. The paper is based on the maximum practicable information and identifies known gaps that could significantly affect the conclusions.
Options:	A range of options is presented that provides clearly differentiated choices and these are rigorously evaluated using an appropriate analytical framework. Costs, benefits, consequences, and risks of the options are assessed as part of the analysis.
Consultation:	Evidence of thorough and timely consultation with other government departments and other stakeholders is presented, and their views incorporated as appropriate.
Implementation:	Issues of transition and implementation, technical feasibility, practicality and timing are considered, and compliance, administrative implications and costs are identified. Specific recommendations are made to ensure Ministers decide who is responsible and accountable for the process of implementation and accountable for the policy as implemented. Legislative implications are identified.
Presentation:	The paper is written in good, simple English, has an accurate and concise summary, meets format requirements of the Cabinet Office Manual, and presents recommendations unambiguously and concisely.
Funding:	The paper accurately and comprehensively describes the funding implications for the Government of the proposals put forward.
Publicity:	The paper provides advice on how publicity arising from decisions on the paper should be handled, including an assessment of key stakeholders who should be informed and how.

*These quality characteristics were assessed by:*

- *a written summary assessment provided by the Ministry at year end and endorsed by the Minister;*
- *the results of the annual survey of key stakeholders to review their satisfaction with the Ministry's consultation processes; and*
- *ad hoc feedback from the Cabinet Office indicating that the Ministry's Cabinet papers met Cabinet Office standards of presentation, including conciseness, clarity and consultation.*

## OUTPUT CLASS D1 — SCIENCE AND TECHNOLOGY POLICY ADVICE

This output class comprised the provision of RS&T policy advice, including rationale and strategy, for the Government's role in science and technology, performance of the science and technology system and the Government's investments, management and integration of the science and technology system, and the provision of Ministerial Services.

The work undertaken was classified under the following output headings:

Output No.	Output Name
1.1	Ministerial Services
1.2	Rationale and Strategy
1.3	System and Investment Performance
1.4	System Management and Integration
1.5	Scientific and Technical Advice for Public Policy Development

### Output Class Achievement

#### The Foresight Project

The Foresight project provided the focus for the most significant work carried out in this output class. This ambitious programme saw:

- a series of public conferences and discussion documents, utilising leading-edge web-based consultation methodologies, leading to the establishment of a database of more than 120 sector strategies and the final publication of the *Blueprint for Change* in May, 1999;
- a series of five Cabinet papers which set the framework for the Government's investment in RS&T. These papers introduced the role of the Government in ensuring the capacity and integrity of the national innovation system. This supports the knowledge creation and innovative activity underpinning New Zealand's future development.

#### Evaluation of the PGSF

A two-year programme of work evaluating the contribution made by the PGSF to New Zealand was completed. The results of the exercise highlighted the strategic importance of the Government's investment in RS&T, and demonstrated huge, diverse and complex benefits. Linkages between research providers and end-users were shown to have improved markedly. In particular, significant improvements were seen in the capacity to innovate and in the successful transfer of knowledge.

### New Economy Research Fund

Development of proposals for the 1999 Budget resulted in establishment of a new output class 'Creating Innovation Opportunities' which supports the NERF. NERF will provide opportunities for researchers to work in areas that could form the nucleus of tomorrow's new businesses.

### Other Significant Achievements

In addition to the three 'signature' areas described above, a number of other significant achievements in this output class rate particular mention:

- review of the Foundation for Research, Science and Technology and Health Research Acts;
- completion of the R&D survey which showed R&D expenditure in New Zealand reached a record high in 1997/98 at 1.1% of GDP. Total R&D expenditure increased on average at 6.2% per year from 1990/91 to 1997/98, giving New Zealand one of the highest R&D growth rates in the OECD;
- the completion of a Māori science and technology strategy which challenged the RS&T system to consult and identify future research needed for Māori development;
- development of a website link to highlight opportunities for collaboration with South American countries;
- advice on the roles and responsibilities of National Science Strategy Committees to ensure their effective contribution in the new post-*Blueprint for Change* purchase environment.

### Quality Achievement

The following performance measures applied as appropriate to the outputs within this output class.

Performance Measure	Performance Standard	
All policy advice will conform with the Quality of Documents criteria set out on page 33 of this report		
	<b>Target</b>	<b>Actual</b>
Substantial reports subjected to peer review	>85%	All major reports peer reviewed, and all other work internally assessed

Key stakeholders provide positive feedback of Ministry consultation processes on selected major policy advice proposals	Results of annual satisfaction survey	Positive feedback on consultation processes
Policy proposals supported by relevant and measurable indicators	Performance indicators always incorporated	Achieved

**Financial Performance (GST exclusive)**

<b>30/6/98</b>		<b>30/6/99</b>	<b>30/6/99</b>	<b>30/6/99</b>
<b>Actual</b>		<b>Actual</b>	<b>Main</b>	<b>Supp.</b>
<b>\$000</b>		<b>\$000</b>	<b>Estimates</b>	<b>Estimates</b>
			<b>\$000</b>	<b>\$000</b>
4,898	Revenue Crown	4,760	4,732	4,760
85	Revenue other	46	0	27
4,983	Total revenue	4,806	4,732	4,787
4,798	Total expenses	4,784	4,732	4,787
185	Net surplus	22	0	0

*Note: In 1998/99, there were two Departmental output classes compared with three in the 1997/98 year. For comparative purposes, the actuals for 1997/98 have been reclassified accordingly.*

**Output 1.1 — MINISTERIAL SERVICES****Description and Quantity**

This output comprises preparation of draft replies for letters to the Minister, information requests, Parliamentary Questions and Official Information Act requests.

**Performance Standards**

<b>1997/98 Actual</b>		<b>1998/99 Actual</b>	<b>1998/99 Estimated</b>
193	Ministerials (incl. OIA requests)	184	260
68	Parliamentary Questions	72	0
261	TOTAL	256	260

**Quality Achievement**

<b>1997/98 Actual</b>		<b>1998/99 Actual</b>	<b>1998/99 Target</b>
99%	The extent to which Ministerials were completed on time and to a standard acceptable to the Minister.	96.9%	90%
3.5%	The acceptability of Ministerials as measured by the level of rejection by the Minister.	2%	10%

## Output 1.2 — RATIONALE AND STRATEGY

### Description, Quantity and Timeliness

This output comprised advice to the Minister on the rationale for public investment in RS&T, and on policy principles and strategies to maximise the benefits of this investment. This includes: development of issues papers, literature summaries and position papers on all key policy issues; the establishment of principles for priority-setting and the development of funding strategies at the levels of the science envelope Vote: Research, Science and Technology and the PGSF; and advice on new investment.

### Performance Standards

The performance standards comprised the following key groups of deliverables:

- Key papers relating to the role of the Government in promoting new knowledge and technological learning in a knowledge-based society.

*A discussion paper was produced on the New Zealand national innovation system (NIS). This paper provided a brief summary of the features of the 'New Economy' and of the demands it is placing on the effectiveness of the NIS which underpins the development of a 'knowledge society'. It also identified two policy areas – developing the integrity of structures and linkages in the NIS and developing the capacity of the NIS to search out innovation opportunities – as central policy principles for Government action.*

*A second report on linkages to international bodies reviewed New Zealand's involvement in both APEC and OECD science fora. It recommended, in particular, proactive input by the Ministry into participation in the OECD Committee for Science and Technology Policy.*

- Advice on new policy positions and funding strategies through the science envelope and promotion of existing policy, through symposia, meetings and internet-based fora.

*Work in this area focused on operation of the Foresight Project. This saw:*

- *the MidSight Conference in July, designed to energise and focus the sector-based strategy development process. This conference was broadcast over the web and was computer networked;*
- *publication of the 'Criteria' Discussion Document, which introduced the 'smart purchase', outcomes and innovation system concepts;*
- *an 'Outcomes Conference', which was held in November 1998 to reflect initial analysis of the sector strategy documents;*

- *following the conference, an Outcomes Discussion Document was published which solicited template-driven, web-based feedback. Over 140 responses were received to this document. This feedback was used in the final development of the set of 14 target outcomes.*

*The Innovation Link:2010 database was established. This is the repository of all the sector strategies received throughout the Foresight project and is designed to be the focal point for ongoing sector foresight activity.*

- Preparation of the 1999 Budget 'new initiatives' submission for Vote: Research, Science and Technology

*A new initiative was submitted through the E&I Team as part of the budget process. Called 'Creating Innovation Opportunities' it supports the NERF focused on research in newly emerging areas, such as biotechnology, materials science and nanotechnology, in which future economic activity develops around the idea.*

- Development and overall management of a priority-setting process for the PGSF.

*The development of advice in the priority-setting activity flowing out of the Foresight Project was reflected in five Cabinet papers:*

- *the Framework paper (September 1998) introduced the basic arrangement of goals, target outcomes and a performance measurement system;*
- *the Goals paper (December 1998) defined four goals for the science envelope;*
- *the Outcomes paper (March 1999) described 14 target outcomes to which RS&T makes contributions;*
- *the Performance Measurement System paper (March 1999) described its arrangement and 6 impact areas for which performance measures will be developed;*
- *the Blueprint for Change provided the public document to describe the new system arrangements and introduced descriptions of the roles and responsibilities of different parts of that system together with a series of 10 Stewardship Expectations for purchase agents.*

## Output 1.3 — SYSTEM AND INVESTMENT PERFORMANCE

### Description, Quantity and Timeliness

This output comprised advice to the Minister on the performance of the Government's investment in science and technology, with reference to both the immediate outputs and outcomes over the longer term. Key issues are the design and implementation of appropriate performance measures for each of the separate output classes; assessing research performance against impacts on science and technology, the economy, society and the environment; and analysis that will inform investment decisions.

### Performance Standards

The performance standards comprised the following key groups of deliverables:

- Advice on the performance of the PGSF, through further development of the evaluation programme begun in 1996/97, and relevant to the development of priorities for this investment, and including advice on the impact on small-medium enterprises.

*This advice was provided through the periodic R&D survey together with two other targeted pieces of work which:*

- *described the current activity in the New Zealand biotechnology business sector and sought feedback from respondents on opportunities for and impediments to increased activity;*
- *investigated governance issues in the RS&T system in relation to enabling a knowledge society.*
- Development of methodologies for surveying the national innovation and knowledge systems.

*Position papers were prepared which discussed proposed indicators and methodology for collection of information on human resources in science and technology.*

- Advice on impacts of public investment on the dynamics of technological innovation, and the alignment of the PGSF to support technological innovation.

*Evaluation of all 17 outputs of the PGSF was completed. This work was presented at an international evaluation experts' conference hosted by the Ministry in Wellington as part of a joint APEC project with the People's Republic of China. The work was highly acclaimed and was regarded as leading edge work in the evaluation field.*

- Advice on the performance of Non-Departmental Output Class (Non-DOC) research through implementation of one evaluation study.

*A report was completed with RSNZ on evaluation of the ISAT linkages programme and its contribution to RS&T:2010 goals.*

*A review, and Cabinet paper, reporting on operations of the Technology New Zealand scheme was completed. The paper focused on measures relating to the scheme's stated performance indicators to provide an overview of operational aspects of the scheme during its first year of operation. During this time the Technology New Zealand scheme established a solid platform for future development and delivery of outcomes. The need to sharpen the strategic focus of the scheme was identified.*

## Output 1.4 — SYSTEM MANAGEMENT AND INTEGRATION

### Description, Quantity and Timeliness

This output comprised advice to the Minister on the management and integration of the Government's investment in RS&T. This includes integration of the investment within Vote: Research, Science and Technology and with other Government investment in related areas, and ensuring that the investment fits with the Government's wider strategic goals (including commitments under the Treaty of Waitangi).

### Performance Standards

The performance standards comprised the following key groups of deliverables:

- Advice on implementation of the 'science envelope' concept for public investment in RS&T, including the role of research in tertiary education, and implementation of 1998 Budget decisions and preparation for the 1999 Budget.

*A series of regional roadshows in August and September 1998 highlighted the importance of science and technology to New Zealand's future. Throughout the year a science and technology promotion advisory group coordinated media and promotion activities across research purchasing agencies, including a one-day workshop for 65 science communicators from throughout New Zealand. A specialist report was delivered at the end of the year outlining how the Ministry will fulfil its stewardship role in ensuring that information is managed effectively across the wider science sector.*

- Advice on the legislative and statutory responsibilities of the Minister which will include: a review of the FRST legislative framework; advice on how the PGSF and health research could be more fully aligned and advice on the implementation of the 1998 Budget decisions and preparations for the 1999 Budget.

*The Foundation for Research, Science and Technology Act (1990) and Health Research Council Act (1990) were reviewed in tandem and advice was provided to the Minister of Health and the Minister of Research, Science and Technology on how the acts could be improved to take account of the new operating environment.*

*Cabinet agreed to four high level goals across the science envelope, which influenced decisions made around the RS&T departmental contestable pool. This pool transferred funding to departmental votes in order to catalyse operational research activity in 99/2000. Preparations for the 1999 Budget also drew on the learning from the Foresight Project and emphasised the need to support new and emerging areas of New Zealand's economy with strong fundamental research.*

- Advice on aligning public investment in RS&T with agreed knowledge needs for Māori economic development and cultural heritage.

*A Māori science and technology strategy was developed which challenged the RS&T system at a number of levels to consult with Māori to identify the crucial research needed for future Māori development. This advice was implemented through Blueprint for Change and involved setting a target outcome related to Māori development, and an expectation on purchase agents that they will design research portfolios that are responsive to the needs and diversity of Māori.*

- Support will be given to the ongoing coordination of science and technology to ensure that the Government's investment works in a complementary way. Co-ordination arrangements linked to possum and bovine TB control, climate change, sustainable land management, and applied social sciences will be supported as required.

*The ongoing role of the National Science Strategies (possum and bovine TB control, climate change and sustainable land management) was reviewed in light of the wider coordination activity across Government and the new processes foreshadowed in Blueprint for Change. Three research strategies linked to family dynamics, ageing and Māori/non-Māori disparities were produced to support the work of the Officials' Working Group on Applied Social Science.*

- Advice on and implementation of bilateral and multilateral science and technology inter-governmental relations and coordination of science and technology participation in Government level international fora.

*Development of a website link to highlight opportunities for collaboration with South American countries was a significant follow-up from a successful Ministerial-led delegation to South America. Participation in the Third APEC S&T Ministers' Meeting in Mexico allowed the Minister and officials to profile the Foresight Project and have policy dialogue with key APEC S&T partners on a range of emerging S&T issues.*

*An international strategy has been developed which signals an increased emphasis on creating a richer variety of international partnerships and networks for our RS&T system, and increasing understanding and awareness of global challenges and opportunities. Greater efforts will be made to integrate RS&T issues, and awareness of the nature of the global knowledge economy, into all aspects of our foreign policy. In line with this direction, the Blueprint for Change includes a stewardship expectation around 'Optimising Global Connectedness' to ensure that the Public Good RS&T contributes to and draws from the global knowledge base.*

## Output 1.5 — SCIENTIFIC AND TECHNICAL ADVICE FOR PUBLIC POLICY DEVELOPMENT

### Description, Quantity and Timeliness

This output comprised the provision of information, analysis and independent expert advice for the development of public policy, to ensure that policy advice is soundly informed by scientific and technological knowledge, and includes projects initiated by the Minister or Cabinet and contributions to the policy work of other departments, both directly and through officials' committees.

### Performance Standards

The performance standards comprised the following key groups of deliverables:

- Proactive liaison with other government departments, in order to enhance their 'in-house' scientific and technological capabilities contributing to public policy development, including the provision of advice and assisting with facilitation, peer review, research strategy development, research planning and understanding national science priorities and policies, including Foresight.

*Advice on departmental research strategy development was provided to the Ministry for the Environment (MfE). The Ministry provided advice to the SSC on the insertion of appropriate expectations for research and evaluation into departmental performance planning processes administered by the SSC. A number of departments were actively involved in the Foresight process. This included MfE and the Department of Conservation in the environmental sector and the Department of Social Welfare in the social sector. This involvement has been subsequently used by some departments to assist in developing their research and evaluation programmes.*

*There had been discussion with the Ministry of Foreign Affairs and Trade (MFAT) to introduce appropriate RS&T issues into New Zealand's foreign policy. Liaison has taken place with relevant government departments (including MFAT and MfE) to enhance the integration of the new research portfolio funding system with Government policy development.*

- Independent scientific and technical advice will be provided on specific policy issues required by Cabinet and/or the Minister, or to complement departmental advice and operations, both national and international, including the role of the Foresight Project.

*Scientific and technical advice has been provided in a wide range of areas of activity including biosecurity, biodiversity, biotechnology, environment and marine and hydrographic issues. Substantive input has been made into technical and policy aspects of legislation affecting human reproductive technology and animal welfare. Advice was also provided on the implications of legislation affecting research and*

*commercial applications of biotechnology on New Zealand's research and innovative capacity.*

*As well as providing considerable economic opportunities, the fast moving science of biotechnology also raises ethical issues and public concerns with its implementation. The Ministry advised on the ways in which informed public debate on the technology could be encouraged, and provided advice on the establishment of the IBAC by the Minister of Research, Science and Technology.*

*The role and responsibilities of the three National Science Strategy Committees were reviewed to ensure that they would contribute in an effective manner to the new research portfolios and funding mechanisms being implemented as a result of the Foresight Project.*

- The Ministry will initiate the identification and analysis of key scientific and technical issues of importance to Government decision-making.

*The Ministry identified a need to promote the research necessary to underpin the activities to meet New Zealand's biosecurity needs now and in the future. The framework for a biosecurity research strategy for New Zealand was developed for the Biosecurity Council and agreement reached on the development of the full research strategy.*

*The level of public acceptance of new technologies varies with the particular technology and the public perceptions of its effects. The Ministry examined the ethical issues raised by new technologies with a view to encouraging informed public debate about new technologies before they are widely utilised.*

*The Ministry has advised on the strategic issues relating to marine and fisheries research, the links with Government policy development, and the future management of physical and biological resources of New Zealand's continental shelf.*

- A review of means by which strategic scientific and technological issues that are likely to have significant impacts on public policy can be identified and incorporated into public policy, will be carried out.

*The Ministry has reviewed the means of enhancing evidence-based public policy development. The findings of Ministry-commissioned research, international literature and interviews with experienced policy and research practitioners have been collated to assess the means of improving policy development. The review examined the current system, alternative models and the general attributes of sound research and science systems, which input into public policy.*

## OUTPUT CLASS D2 — MANAGEMENT OF CONTRACTS FOR NON-DEPARTMENTAL OUTPUT CLASSES

### Description

This output class comprised the management, on behalf of the Crown, of contracts for the provision of science and technology services in Non-DOCs. These services include the provision of policy advice on science and technology, contract management for science and technology outputs, public good science and technology, non-specific output funding for public good science and technology, promotion of technology for business growth, the Marsden Fund, science and technology publications, national measurement standards, promotion of science and technology, human resources development for science and technology, international science and technology relations, and membership of the Convention du Metre.

### Quality Achievement

The following performance measures applied as appropriate to the outputs within this output class.

Performance Measure	Performance Standard
Purchase Agreements and contestably awarded contracts with suppliers of Non-DOCs fully reflect contractual parameters set down by the Minister of Research, Science and Technology, are based on full cost disclosure by the provider and stipulation of separate prices for each output class	<i>Contractual parameters fully reflected. All contracts based on full-cost disclosure</i>
Agreements are negotiated by specified deadlines, and payments are made by the due dates and are correct	<i>Achieved</i>
The extent to which critiques of monitoring reports identify any deficiencies in the reports and in the performance of the provider organisation or the Non-DOCs being managed, and critiques provided within specified time limits	<i>No substantial deficiencies identified</i>
Purchase Agreements require provider reports summarising delivery against agreed specification, identification of significant variations and corrective actions proposed and potential risk	<i>Achieved</i>

### Performance Standards

The performance standards comprised the following key groups of deliverables:

- Negotiation and monitoring, against agreed performance standards, of purchase agreements with pre-specified providers for particular Non-DOCs within Vote: Research, Science and Technology, in accordance with the instructions of the Minister, with these providers to include, especially, FRST, RSNZ, and Industrial Research Limited (for national measurement standards).

*Purchase agreements were negotiated and agreed in accordance with instructions from the Minister and Government policies for RS&T. All reports were delivered by providers and critiqued against performance standards agreed in purchase agreements.*

- Management of contracts for the provision of specific outputs within various Non-DOCs, including international science and technology linkages, and promotion of science and technology.

*Contracts were negotiated and managed in accordance with instructions from the Minister for the provision of outputs within these Non-DOCs.*

### Financial Performance (GST exclusive)

30/6/98 Actual \$000		30/6/99 Actual \$000	30/6/99 Main Estimates \$000	30/6/99 Supp. Estimates \$000
434	Revenue Crown	509	600	509
0	Revenue other	0	0	0
434	Total revenue	509	600	509
423	Total expenses	508	600	509
11	Net surplus	1	0	0

## STATEMENT OF ACCOUNTING POLICIES

### FOR THE YEAR ENDED 30 JUNE 1999

#### Reporting Entity

The Ministry of Research, Science and Technology is a government department as defined by section 2 of the *Public Finance Act 1989*. The Ministry was established on 1 October 1989 and commenced effective operations in December 1989.

The financial statements have been prepared in accordance with section 35 of the *Public Finance Act 1989*.

#### Measurement System

Reported results and financial position have been measured on an historical cost basis.

#### Accounting Policies

##### *Budget Figures*

The Budget figures are those presented in the Budget night *Estimates of Appropriation 1998/99*, as amended by the *Supplementary Estimates of Appropriation 1998/99* and any transfer made by Order of Council under section 5 of the *Public Finance Act 1989*.

##### *Revenue*

The Ministry derives revenue through the provision of outputs to the Crown, for services to third parties, and interest on its deposits with the New Zealand Debt Management Office (NZDMO). Such revenue is recognised when earned and is reported in the financial period to which it relates.

##### *Cost Allocation*

The Ministry has derived the costs of outputs using the cost allocation system outlined below:

- *Criteria for Direct and Indirect Costs*

'Direct costs' are those costs directly assigned to an output.

'Indirect costs' are those costs that cannot be identified in an economically feasible manner with a specific output.

- *Direct Costs Assigned to Outputs*

Direct costs are charged directly to outputs. Personnel costs are charged by actual time incurred based on a time recording system.

*For the year ended 30 June 1999, direct costs accounted for 47% of the Ministry costs (1998: 45%).*

- ***Basis for Allocating Indirect and Corporate Costs to Output***

Indirect costs are allocated to outputs based on a proportion of budgeted direct staff costs for each output.

*For the year ended 30 June 1999, indirect costs accounted for 53% of the Ministry's costs (1998: 55%).*

### ***Debtors and Receivables***

Debtors and Receivables are recorded at estimated realisable value, after providing for doubtful debts.

### ***Leases***

The Ministry leases office premises. As the lessor effectively retains all the risks of ownership, these leases are classified as operating leases. Operating lease costs are expensed in the period in which they are incurred.

### ***Fixed Assets***

Fixed assets costing more than \$1,500 have been capitalised and recorded at historical cost.

### ***Depreciation***

Depreciation has been provided on a straight-line basis so as to allocate the cost of assets, less any estimated residual value, over their useful lives. The rates of depreciation were:

Computer equipment	33.3%
Motor vehicles	17.5%
Office equipment and furniture	20%
Office Fitout	*15.6%

\* - The cost of office fitout is capitalised and amortised over the unexpired period of the lease, including the next right of renewal or the estimated remaining useful life of the fitout, whichever is shorter.

### ***Provision for Employee Entitlements***

Annual leave is recognised as it accrues to employees on an entitlement basis at current rates of pay. Long service leave is recognised on an actuarial basis based on the present value of expected future entitlements.

### ***Foreign Currency***

Foreign currency transactions are converted at the New Zealand dollar exchange rate at the date of transaction. Where a forward exchange contract has been used to establish the price of a transaction, the forward rate specified in that foreign exchange contract is used to convert that transaction to New Zealand dollars. Consequently, no exchange gain or loss resulting from the difference

between the forward exchange contract rate and the spot exchange rate on date of settlement is recognised.

The Ministry does not have assets or liabilities outside of New Zealand.

### ***Financial Instruments***

Revenue and expenses in relation to all financial instruments are recognised in the Statement of Financial Performance. The Ministry enters into foreign currency forward contracts to hedge foreign currency transactions. A related loss or gain on the item being hedged generally offsets any exposure to gains or losses on these contracts.

Apart from foreign currency forward contracts, all financial instruments are recognised in the Statement of Financial Position.

### ***Goods and Services Tax***

The Statement of Financial Performance, Statement of Movement in Taxpayers' Funds, Statement of Cash Flows, Statement of Commitments and Statement of Contingent Liabilities are exclusive of GST. The Statement of Financial Position is also exclusive of GST except for Creditors and Payables and Debtors and Receivables, which are GST inclusive. All other statements are GST inclusive.

The amount of GST owing to or from the Inland Revenue Department at balance date, being the difference between Output GST and Input GST, is included in Creditors and Payables.

### ***Taxation***

Government departments are exempt from the payment of income tax in terms of the Income Tax Act 1994. Accordingly, no charge for income tax has been provided for.

### ***Commitments***

Future expenses and liabilities are disclosed as commitments at the point a contractual obligation arises, to the extent that they are equally unperformed obligations. Commitments relating to employment contracts are not disclosed.

### ***Contingent Liabilities***

Contingent liabilities are disclosed at the point at which the contingency is evident.

### ***Changes in Accounting Policy***

There have been no changes in accounting policies, including cost allocation accounting policies, since the date of the last audited financial statements. All policies have been applied on a basis consistent with other years.

**STATEMENT OF FINANCIAL PERFORMANCE****FOR THE YEAR ENDED 30 JUNE 1999**

30/6/98 Actual		Notes	30/6/99 Actual	30/6/99 Main Estimates	30/6/99 Supp. Estimates
\$000			\$000	\$000	\$000
<b>REVENUE</b>					
5,332	Crown	2	5,269	5,332	5,269
85	Other	3	50	0	27
30	Interest	4	19	20	20
<b>5,447</b>	<b>Total revenue</b>		<b>5,338</b>	<b>5,352</b>	<b>5,316</b>
<b>EXPENDITURE</b>					
2,461	Personnel costs	5	2,817	2,450	2,871
2,328	Operating costs	6	2,144	2,501	2,100
364	Depreciation	7	263	313	257
68	Capital charge	8	68	68	68
<b>5,221</b>	<b>Total expenses</b>		<b>5,292</b>	<b>5,332</b>	<b>5,296</b>
<b>226</b>	<b>Net operating surplus</b>		<b>46</b>	<b>20</b>	<b>20</b>

*The accompanying accounting policies and notes form part of these financial statements.*

**STATEMENT OF MOVEMENT IN TAXPAYERS' FUNDS****FOR THE YEAR ENDED 30 JUNE 1999**

30/6/98 Actual		30/6/99 Actual	30/6/99 Main Estimates	30/6/99 Supp. Estimates
\$000		\$000	\$000	\$000
616	<b><i>Taxpayers' funds brought forward as at 1 July</i></b>	616	616	616
226	Net surplus	46	20	20
226	<b><i>Total recognised revenues and expenses for the year</i></b>	46	20	20
(226)	Provision for repayment of surplus to the Crown	(46)	(20)	(20)
<b>616</b>	<b>Taxpayers' funds as at 30 June</b>	<b>616</b>	<b>616</b>	<b>616</b>

*The accompanying accounting policies and notes form part of these financial statements.*

## STATEMENT OF FINANCIAL POSITION

AS AT 30 JUNE 1999

30/6/98 Actual		Notes	30/6/99 Actual	30/6/99 Main Estimates	30/6/99 Supp. Estimates
\$000			\$000	\$000	\$000
<b>616</b>	<b>TAXPAYERS' FUNDS</b>		<b>616</b>	<b>616</b>	<b>616</b>
Represented by:					
<b>CURRENT ASSETS</b>					
327	Cash		255	36	129
900	Short term deposits	9	400	500	450
<u>1,227</u>	<i>Composition of cash</i>		<u>655</u>	<u>536</u>	<u>579</u>
8	Prepayments		23	15	8
11	Debtors and receivables	10	22	22	11
<u>1,246</u>	<b>Total current assets</b>		<u>700</u>	<u>573</u>	<u>598</u>
<b>NON-CURRENT ASSETS</b>					
660	Fixed assets	11	858	680	858
<u>1,906</u>	<b>Total assets</b>		<u>1,558</u>	<u>1,253</u>	<u>1,456</u>
<b>CURRENT LIABILITIES</b>					
985	Creditors and payables	12	802	530	745
226	Provision for repayment of surplus to the Crown		46	20	20
79	Provision for employee entitlements	13	94	87	75
<u>1,290</u>	<b>Total current liabilities</b>		<u>942</u>	<u>637</u>	<u>840</u>
<b>616</b>	<b>NET ASSETS</b>		<b>616</b>	<b>616</b>	<b>616</b>

The accompanying accounting policies and notes form part of these financial statements.

**STATEMENT OF CASH FLOWS****FOR THE YEAR ENDED 30 JUNE 1999**

30/6/98 Actual	30/6/99 Actual	30/6/99 Main Estimates	30/6/99 Supp. Estimates
\$000	\$000	\$000	\$000
<b>CASH FLOWS – OPERATING ACTIVITIES</b>			
Cash provided from:			
5,332	5,269	5,332	5,269
85	46	0	27
30	21	20	20
<u>5,447</u>	<u>5,336</u>	<u>5,352</u>	<u>5,316</u>
Cash disbursed to produce outputs			
(2,469)	(2,802)	(2,450)	(2,875)
(1,958)	(2,374)	(2,501)	(2,340)
(62)	(68)	(68)	(68)
(16)	19	0	0
<u>(4,505)</u>	<u>(5,225)</u>	<u>(5,019)</u>	<u>(5,283)</u>
<b>942</b>	<b>111</b>	<b>333</b>	<b>33</b>
<b>Operating activities net cash flows</b>			
<b>CASH FLOWS – INVESTING ACTIVITIES</b>			
Cash provided from:			
20	5	24	0
Cash disbursed for:			
(292)	(462)	(380)	(455)
<u>(272)</u>	<u>(457)</u>	<u>(356)</u>	<u>(455)</u>
<b>Investing activities net cash flow</b>			
<b>CASH FLOWS – FINANCING ACTIVITIES</b>			
Cash disbursed for:			
(154)	(226)	(17)	(226)
<u>(154)</u>	<u>(226)</u>	<u>(17)</u>	<u>(226)</u>
<b>Financing activities net cash flows</b>			
516	(572)	(40)	(648)
711	1,227	576	1,227
<u>1,227</u>	<u>655</u>	<u>536</u>	<u>579</u>
<b>Closing cash and deposits</b>			

*The accompanying accounting policies and notes form part of these financial statements.*

## RECONCILIATION OF NET SURPLUS TO NET CASH FLOW FROM OPERATING ACTIVITIES

### FOR THE YEAR ENDED 30 JUNE 1999

30/6/98 Actual		30/6/99 Actual	30/6/99 Main Estimates	30/6/99 Supp. Estimates
\$000		\$000	\$000	\$000
<b>226</b>	<b>Net operating surplus</b>	<b>46</b>	<b>20</b>	<b>20</b>
	<i>Add non-cash items</i>			
364	Depreciation	263	313	257
<b>364</b>	<b>Total non-cash items</b>	<b>263</b>	<b>313</b>	<b>257</b>
	<i>Add/(Less) movements in working capital items</i>			
20	(Increase)/Decrease in debtors and receivables	(11)	0	0
10	(Increase)/Decrease in prepayments	(15)	0	0
323	Increase/(Decrease) in creditors and payables	(183)	0	(240)
(8)	Increase/(Decrease) in current employee entitlements	15	0	(4)
<b>345</b>	<b>Working capital movements – net</b>	<b>(194)</b>	<b>0</b>	<b>(244)</b>
	<i>Add/(Less) investing activity items</i>			
7	Net loss/(gain) on sale of fixed assets	(4)	0	0
<b>7</b>	<b>Total investing items</b>	<b>(4)</b>	<b>0</b>	<b>0</b>
<b>942</b>	<b>Net cash flow from operating activities</b>	<b>111</b>	<b>333</b>	<b>33</b>

The accompanying accounting policies and notes form part of these financial statements.

**STATEMENT OF COMMITMENTS****AS AT 30 JUNE 1999**

The Ministry has long-term leases on its premises in Wellington. The annual lease payments are subject to review six years from the date of commencement and three yearly thereafter. The amounts disclosed below as future commitments are based on current value.

30/6/98 Actual \$000		30/6/99 Actual \$000
<b>Operating lease commitments</b>		
283	Less than one year	296
283	One to two years	296
402	Two to five years	147
0	More than five years	0
968	<b>Total operating lease commitments</b>	739
0	<b>Capital Commitments</b>	0
<b>968</b>	<b>Total commitments</b>	<b>739</b>

There are no material non-cancellable contracts (1998: nil).

*The accompanying accounting policies and notes form part of these financial statements.*

**STATEMENT OF CONTINGENT LIABILITIES****AS AT 30 JUNE 1999**

The Ministry of Research, Science and Technology had no contingent liabilities as at 30 June 1999 (1998: nil).

**STATEMENT OF UNAPPROPRIATED EXPENDITURE****FOR THE YEAR ENDED 30 JUNE 1999**

The Ministry of Research, Science and Technology did not incur any unappropriated expenditure for the year ended 30 June 1999 (1998:nil).

*The accompanying accounting policies and notes form part of these financial statements.*

## STATEMENT OF DEPARTMENTAL EXPENDITURE AND APPROPRIATIONS

FOR THE YEAR ENDED 30 JUNE 1999

(Figures are GST inclusive)

	30/6/99 Expenditure Actual \$000	30/6/99* Appropriation Voted \$000
<b>VOTE RESEARCH, SCIENCE &amp; TECHNOLOGY</b>		
<b>Appropriations for departmental output classes</b>		
D1 - Science and Technology Policy Advice	5,385	5,385
D2 - Management of Contracts for Non-Departmental Outputs	571	573
<b>Total departmental output classes</b>	<b>5,956</b>	<b>5,958</b>
<b>Total appropriations</b>	<b>5,956</b>	<b>5,958</b>

\* This includes adjustments made in the Supplementary Estimates of Appropriation 1998/99. See supplementary information on page 68.

*The accompanying accounting policies and notes form part of these financial statements.*

## STATEMENT OF NON-DEPARTMENTAL EXPENDITURE AND APPROPRIATIONS

FOR THE YEAR ENDED 30 JUNE 1999  
(Figures are GST inclusive where applicable)

	30/6/99 Expenditure Actual \$000	30/6/99* Appropriation Voted \$000
<b>VOTE RESEARCH, SCIENCE &amp; TECHNOLOGY</b>		
<b>Appropriations for Non-Departmental Output Classes</b>		
O1 Contract Management for Science and Technology	9,211	9,211
O2 Human Resources Development for Science and Technology	5,235	5,235
O3 International Science and Technology Linkages	958	1,038
O4 Marsden Fund	21,839	21,839
O5 Non-Specific Output Funding for Public Good Science and Technology	15,472	15,472
O6 Policy Advice on Science and Technology	400	400
O7 Promotion of Science and Technology	3,677	3,711
O8 Promotion of Technology for Business Growth	26,131	26,131
O9 Provision of National Measurement Standards	4,154	4,154
O10 Public Good Science and Technology	317,735	317,735
O11 Science and Technology Publications	467	467
<b>Total Non-Departmental Output Classes</b>	<b>405,279</b>	<b>405,393</b>
<b>Appropriations for Other Expenses to be Incurred by the Crown</b>		
Convention du Metre	100	100
<b>Total Other Expenses to be Incurred by the Crown</b>	<b>100</b>	<b>100</b>
<b>Total appropriations</b>	<b>405,379</b>	<b>405,493</b>

\* This includes adjustments made in the Supplementary Estimates of Appropriation 1998/99. See supplementary information on page 70.

*The accompanying accounting policies and notes form part of these financial statements.*

**NOTES TO THE FINANCIAL STATEMENTS****FOR THE YEAR ENDED 30 JUNE 1999****Note 1: Budget Composition**

	30/6/99	30/6/99	30/6/99
	Budget	Estimates	Budget
	Forecasts	Changes	Total
	\$000	\$000	\$000
<b>REVENUE</b>			
Crown	5,332	(63)	5,269
Other	0	27	27
Interest	20	0	20
<b>Total revenue</b>	<b>5,352</b>	<b>(36)</b>	<b>5,316</b>
<b>EXPENDITURE</b>			
Personnel costs	2,450	421	2,871
Operating costs	2,501	(401)	2,100
Depreciation	313	(56)	257
Capital charge	68	0	68
<b>Total expenses</b>	<b>5,332</b>	<b>(36)</b>	<b>5,296</b>
<b>Net operating surplus</b>	<b>20</b>	<b>0</b>	<b>20</b>

**Note 2: Revenue Crown**

This is revenue earned for the supply of outputs to the Crown.

**Note 3: Other Revenue**

30/6/98 Actual		30/6/99 Actual	30/6/99 Main Estimates	30/6/99 Supp. Estimates
\$000		\$000	\$000	\$000
83	Contribution from CRIs for review of priorities for public good science and technology	0	0	0
0	Revenue received from conference fees	46	0	27
0	Net gain from sale of fixed assets	4	0	0
2	Library services	0	0	0
<u>85</u>		<u>50</u>	<u>0</u>	<u>27</u>

**Note 4: Interest Revenue**

The Ministry invests surplus cash with the NZDMO and earns interest at variable rates.

**Note 5: Personnel Costs**

30/6/98 Actual		30/6/99 Actual	30/6/99 Main Estimates	30/6/99 Supp. Estimates
\$000		\$000	\$000	\$000
2,465	Salaries and related training and recruitment costs	2,808	2,441	2,862
(4)	Long service leave	9	9	9
<u>2,461</u>	<b>Total personnel costs</b>	<u>2,817</u>	<u>2,450</u>	<u>2,871</u>

**Note 6: Operating Costs**

30/6/98 Actual		30/6/99 Actual	30/6/99 Main Estimates	30/6/99 Supp. Estimates
\$000		\$000	\$000	\$000
851	Consultancy	423	467	390
24	Audit fees to auditors for audit of the financial statements	25	25	25
7	Loss on sale of fixed assets	0	0	0
295	Operating lease rentals	288	310	288
70	Equipment maintenance	63	28	46
1,081	Other operating costs	1,345	1,671	1,351
<u>2,328</u>	<b>Total operating costs</b>	<u>2,144</u>	<u>2,501</u>	<u>2,100</u>

**Note 7: Depreciation**

During the year, the Ministry changed the rate of depreciation for Office Fitout by extending the useful life by another three years to December 2004. The additional three years is the minimum period of lease extension allowed under the next right of renewal.

**Note 8: Capital Charge**

The Ministry pays a capital charge to the Crown on its average taxpayers' funds as at 30 June and 31 December each year. The capital charge rate for the year ended 30 June 1999 was 11% (1998: 11%).

**Note 9: Short-term Deposits**

As at balance date the following term deposit had been placed with the NZDMO:

30/6/98 Actual \$000	Counterparty	Interest Rate	Term	30/6/99 Actual \$000
<u>900</u>	NZDMO	3.69%	1 week	<u>400</u>

**Note 10: Debtors and Receivables**

30/6/98 Actual \$000		30/6/99 Actual \$000
9	Trade debtors	22
0	Less: Provision for doubtful debts	0
9	Net trade debtors	22
2	Interest accrued	0
<u>11</u>	<b>Total debtors and receivables</b>	<u>22</u>

**Note 11: Fixed Assets**

30/6/98 Actual \$000		30/6/99 Actual \$000
	<b>Computer Equipment</b>	
517	At cost	743
<u>(247)</u>	Accumulated depreciation	<u>(407)</u>
<u>270</u>	<b>Net book value</b>	<u>336</u>
	<b>Office Fitout</b>	
606	At cost	799
<u>(302)</u>	Accumulated depreciation	<u>(371)</u>
<u>304</u>	<b>Net book value</b>	<u>428</u>
	<b>Office Equipment and Furniture</b>	
130	At cost	164

(72)	Accumulated depreciation	(91)
<u>58</u>	<b>Net book value</b>	<u>73</u>
<b>Motor Vehicles</b>		
41	At cost	41
(13)	Accumulated depreciation	(20)
<u>28</u>	<b>Net book value</b>	<u>21</u>
<b>TOTAL FIXED ASSETS</b>		
1,294	At cost	1,747
(634)	Accumulated depreciation	(889)
<u>660</u>	<b>TOTAL FIXED ASSETS – NET BOOK VALUE</b>	<u>858</u>

**Note 12: Creditors and Payables**

30/6/98		30/6/99
Actual		Actual
\$000		\$000
501	Trade creditors	361
471	Accrued expenses	409
13	GST Payable	32
<u>985</u>	<b>Trade creditors and payables</b>	<u>802</u>

**Note 13: Provision for Employee Entitlements**

30/6/98		30/6/99
Actual		Actual
\$000		\$000
13	Long service leave	24
66	Annual Leave	70
<u>79</u>	<b>Total provision for long service and annual leave</b>	<u>94</u>

**Note 14: Contingencies**

The Ministry does not have any contingent assets as at 30 June 1999 (1998: nil).

Contingent liabilities are separately disclosed in the Statement of Contingent Liabilities.

**Note 15: Financial Instruments**

The Ministry is party to financial instrument arrangements as part of its everyday operations. These include instruments such as bank balance, investments and accounts receivable.

***Credit Risk***

In the normal course of its business, the Ministry incurs credit risk from trade debtors, and transactions with financial institutions and the NZDMO.

The Ministry does not require any collateral or security to support financial instruments with financial institutions that it deals with, for example the NZDMO, as these entities have high credit ratings. For its other financial instruments, the Ministry does not have significant concentrations of credit risk.

***Fair Value***

The fair value is equivalent to the carrying amount disclosed in the Statement of Financial Position.

***Currency Risk and Interest Rate Risk***

The Ministry has no significant exposure to interest rate risk on its financial instruments.

All interest earned on short term deposits with the NZDMO is returned to the Crown as part of the surplus repayable to the Crown (refer to Note 9).

The Ministry has no foreign exchange exposures.

**Note 16: Related Party Information**

The Ministry is a wholly owned entity of the Crown. The Government significantly influences the roles of the Ministry as well as being its major source of revenue.

The Ministry enters into numerous transactions with other government departments, Crown agencies and state owned enterprises. These transactions are not considered to be party related transactions.

**Note 17: Major Budget Variations*****Statement of Financial Performance***

There were no major budget variations.

***Statement of Financial Position (and Cash Flows)***

The increase in composition of cash is largely due to a higher amount brought forward as a result of increased current liabilities as at the end of 1997/98. The fixed assets balance has also increased due to office renovation to re-locate staff from two floors to one floor, and a lower depreciation rate for Office Fitout (see Note 7).

**Note 18: List of Consultants for Projects of \$5,000 or more**

Business and Economic Research Limited

CRESA

Cluster Navigators Limited

CW Cunningham

Datatorque

Harris Consulting

I To I Solutions

Landcare Research NZ Limited

Martin Jenkins & Associates

Martech Consulting Group Limited

Massey University

McKinlay Douglas Limited

Navigate

Neville Reeve

New Zealand Institute of Economic Research

Swim Limited

Taskforce Holdings Limited

Team Comtex

Web Research

**SUPPLEMENTARY INFORMATION ON APPROPRIATIONS****DEPARTMENTAL APPROPRIATIONS****RECONCILIATION BETWEEN MAIN ESTIMATES AND SUPPLEMENTARY ESTIMATES FOR THE YEAR ENDED 30 JUNE 1999****(Figures are GST inclusive)**

	30/6/99 Main Estimates \$000	30/6/99 Changes \$000	30/6/99 Supp. Estimates \$000	Explanatory Notes
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**VOTE RESEARCH, SCIENCE AND TECHNOLOGY****Appropriations for Departmental Output Classes**

D1 - Science and Technology Policy Advice	5,324	61	5,385	1
D2 - Management of Contracts for Non-Departmental Outputs	675	(102)	573	2
<b>Total Departmental Output Classes</b>	<b>5,999</b>	<b>(41)</b>	<b>5,958</b>	

**Explanatory Notes**

- Increase is due to re-allocation of overheads from the Management of Contracts for Non-Departmental Output Classes of \$102,000, additional cost of \$30,000 for hosting the APEC Science and Technology Evaluation Conference, but offset by a one-off expenditure reduction of \$71,000. The expenditure reduction consists of a required 1% government savings and a decrease in Government Superannuation Fund employer rate contribution.
- Decrease is due to re-allocation of overheads to the Science and Technology Policy Advice output class.

## SUPPLEMENTARY INFORMATION ON APPROPRIATIONS

## NON-DEPARTMENTAL APPROPRIATIONS

## RECONCILIATION BETWEEN MAIN ESTIMATES AND SUPPLEMENTARY ESTIMATES FOR THE YEAR ENDED 30 JUNE 1999

(Figures are GST inclusive)

	30/6/99 Main Estimates \$000	30/6/99 Changes \$000	30/6/99 Supp. Estimates \$000	Explanatory Notes	
<b>VOTE RESEARCH, SCIENCE &amp; TECHNOLOGY</b>					
O1	Contract Management for Science and Technology	9,611	(400)	9,211	1
O2	Human Resources Development for Science and Technology	5,235	0	5,235	
O3	International Science and Technology Linkages	1,038	0	1,038	
O4	Marsden Fund	21,839	0	21,839	
O5	Non-Specific Output Funding for Public Good Science and Technology	26,131		26,131	
O6	Policy Advice on Science and Technology	400	0	400	
O7	Promotion of Science and Technology	3,511	200	3,711	2
O8	Promotion of Technology for Business Growth	15,694	(222)	15,472	2
O9	Provision of National Measurement Standards	4,154	0	4,154	
O10	Public Good Science and Technology	317,335	400	317,735	1
O11	Science and Technology Publications	467	0	467	
	<b>Total Non-Departmental Output Classes</b>	<b>405,415</b>	<b>(22)</b>	<b>405,393</b>	

**Appropriations for Other Expenses to be Incurred by the Crown**

Convention du Metre	78	22	100	2
<b>Total Other Expenses to be Incurred by the Crown</b>	<b>78</b>	<b>22</b>	<b>100</b>	
<hr/>				
<b>Total Non-Departmental Appropriations</b>	<b>405,493</b>	<b>0</b>	<b>405,493</b>	
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**Explanatory Notes:**

- 1 Efficiency gains savings in Health Research Council transferred to Public Good Science and Technology to fund additional health research outputs.
- 2 Transfers from Promotion of Technology For Business Growth output class to the Promotion of Science and Technology output class to support funding for the development of social science research strategies for cross-portfolio social science research (\$200,000), and a transfer of \$22,000 to Convention du Metre to meet increased subscription costs.