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Chapter 2: The tertiary education system

New Zealand's tertiary education strategy describes how the tertiary education system is expected to contribute to national goals. It includes three areas through which the tertiary education system is expected to contribute to the success of all New Zealanders: lifelong learning; creating and applying knowledge to drive innovation; and strong connections between tertiary education organisations and the communities they serve.

In 2007, work began on a framework to monitor and evaluate New Zealand's progress against the second tertiary education strategy. The approach taken was similar to that used for the first strategy.

When it developed the Tertiary Education Strategy 2007-12, the government also made changes to the way tertiary education was managed. Substantial changes were made to the systems for the steering and funding of tertiary education and to the approach to quality assurance and monitoring. The new funding, steering and monitoring arrangements took effect from 1 January 2008.

The sector worked towards the implementation of these reforms throughout 2007.

The system reforms have split the funding of tertiary education so that 70 percent of funding supports the costs of teaching and learning and 30 percent supports tertiary education organisations to ensure that they have the capability needed to focus on their core role and distinctive contribution. The different contributions of each type of tertiary education organisation were included in plans that providers developed with the Tertiary Education Commission throughout 2007.

The tertiary education organisation component comprises both a core component and a strategic component. In addition to supporting the distinctive contribution of providers, the core component supports industry training organisations, the Performance-Based Research Fund and an element that provides an incentive for providers to achieve government's tertiary education goals.

A new system of capital funding for tertiary education was also introduced in 2008 with the establishment, over three years, of a tertiary education capital investment fund.

2008 year

In 2008, the new approach to planning, funding, quality assurance and monitoring for tertiary education organisations was introduced as set out in New Zealand's second tertiary education strategy. Funding of tertiary education will no longer be 'demand driven' and it will be set as a three-year funding path. Support for access to tertiary education is provided through tuition subsidies and a range of student support, including student allowances, merit- and needs-based scholarships, and student loans that are interest-free for students who remain in New Zealand. Also, the Fee and Course Costs Maxima policy will ensure that students' financial contributions through fees are affordable and predictable.

To ensure that tertiary education resources are focused on courses that meet the goals of New Zealand and New Zealanders, the investment in tertiary education organisations will be on the basis of plans negotiated by the Tertiary Education Commission with providers. In 2008, three-year plans were finalised for 110 tertiary education organisations and the remaining plans are expected to be finalised in 2009.

As part of the 2008 tertiary education reforms, Cabinet has agreed to a system that integrates quality assurance and monitoring information to inform investment decisions. This system is expected to provide transparent and robust assurance that public money is well invested and spent, ensure good outcomes for students and other stakeholders, and foster quality enhancement. The new tertiary education system aims to support a sector-wide culture in which tertiary education organisations focus on improving their own performance, responding to strategic change and continuing to build their capacity for self-improvement.

In 2008, a report from the Expert Advisory Group on a new quality development system was published. In 2007, this group undertook a review to ensure that the legislative and regulatory requirements – such as the current quality assurance standards and criteria for provider registration and accreditation, and course approval – are coherent and clear and that they support tertiary education organisations to achieve the intentions of the tertiary education reforms. The assessment process will also include an external evaluation and review. This involves a systematic assessment by an external body of the quality of what is being provided by tertiary education organisations, in terms of the outcomes attained in meeting stakeholder needs. The external evaluation also provides feedback to the tertiary education organisation on performance, and on the validity of their own assessment of their performance.

In September 2008, the Organisation for Economic Co-operation and Development released their annual publication *Education at a glance: 2008 OECD indicators*, a collection of indicators that compares the performance of the education systems of its member countries. The indicators in this report provide an opportunity to view the performance of our system against the systems of other countries. Despite some data limitations, the *Education at a glance* indicators give us the most reliable and complete basis for comparison currently available to us. At the same time as the release of the OECD indicators, the Ministry of Education released a report, *Measuring up*, that looked at the tertiary education indicators and examined in more detail how New Zealand performs on the most important indicators. *Measuring up* reports:

- New Zealand's tertiary education qualification completion rates are below the OECD average. But this is influenced by the fact that we have a relatively high proportion of part-time students. New Zealand is above the mean for the countries that can report completion rates for full-time degree students.
- The New Zealand government's spending on tertiary education – at diploma and degree level – was 1.5 percent of gross domestic product in 2005. This was sixth in the OECD and above the OECD average of 1.3 percent. The funding available to tertiary education providers in New Zealand – from government funding plus fees and including the fees from international students – is also 1.5 percent of gross domestic product, equal to the OECD average.
- At every age above 17 years, the enrolment rate in tertiary education in New Zealand is above the OECD average and ahead of the United Kingdom but slightly behind Australia.
- New Zealand was second only to Australia in 2006 in the percentage of tertiary students who are international students. Comparing 2006 with 2000, New Zealand had the highest growth rate of any country in the OECD on this measure.

Tertiary education in New Zealand

Tertiary education includes all post-school education:

- foundation education, such as adult literacy and education for those with low qualifications who are looking for employment
- certificates and diplomas
- bachelors degrees
- industry training, including Modern Apprenticeships
- adult and community education, and
- postgraduate qualifications, many of them requiring students to conduct substantial original research.

Tertiary education also includes programmes delivered in secondary schools, such as Gateway and the Secondary-Tertiary Alignment Resource (STAR).

Tertiary education makes a unique and invaluable contribution to New Zealand's national development in all dimensions – social, economic and environmental. It passes on skills needed in the workforce, gives people the opportunity to build careers, contributes to social cohesion and is responsible for much of the country's innovation and knowledge creation. The diversity of the tertiary education sector is evident in the mix of organisations that make it up: public tertiary education institutions, private training establishments, industry training organisations, adult and community education providers, and others. In addition, employers provide industry-related training and training in the workplace.

There are three kinds of public tertiary education institutions – universities, institutes of technology and polytechnics, and wānanga. Another 13 tertiary education providers, known as 'other' tertiary education providers, also deliver programmes of national significance and receive government funding. In addition, there are 734 registered private training establishments that cater for a range of learners.

Note that at the beginning of 2007 the last two remaining colleges of education merged with their neighbouring universities. The major function of the colleges of education was to provide training and research mostly related to early childhood and compulsory education. Most of this is now carried out by the universities.

Distinctive contributions

Universities

Universities are primarily concerned with advanced learning, and offer the opportunity to pursue disciplines from the undergraduate level to advanced postgraduate study and research. Universities develop new knowledge that underpins their teaching and undertake research in a wide range of fields. They are expected to have well-established international links and to meet international standards of scholarship. There are eight universities spread throughout New Zealand. In 2007, the eight universities collectively enrolled 170,000 students, including 23,300 international students. These enrolments represented 129,000 equivalent full-time students.

Institutes of technology and polytechnics

Institutes of technology and polytechnics are mainly focused on vocational training at certificate and diploma level, especially in trades and other applied areas, although this role has expanded over the past 16 years to meet the increasingly diverse needs of learners and the economy. Many polytechnics offer applied degree-level education and are involved in research activities, particularly applied research and research in technological areas. They provide pathways into tertiary education for adult learners and for learners with low prior qualifications, preparing them to achieve at higher levels. Institutes of technology and polytechnics offer regional tertiary education; there are 20 polytechnics spread across the country. The number of students enrolled in 2007 was 217,000, including 9,680 international students. These enrolments represented 77,200 equivalent full-time students.

Wānanga – Māori centres of tertiary learning

Wānanga were formally recognised as public tertiary education institutions in the last decade. They offer study at all levels, from foundation education to postgraduate study and research, where *ahuatanga* Māori (Māori tradition) and *tikanga* Māori (Māori custom) are an integral part of the programme. Wānanga provide Māori-centred tertiary education that supports *te ao Māori*, provide pathways for Māori learners into other tertiary education institutions and promote the development of *kaupapa* Māori provision. There are three public wānanga. Wānanga had 42,400 students or 22,300 equivalent full-time students in 2007.

Private training establishments

The distinctive contribution of private training establishments is to support the government's investment decisions in tertiary education. Some offer training for specific employers on a full cost-recovery basis. Others are funded by the government for the delivery of targeted training programmes and some have arrangements with industry training organisations to deliver programmes funded through the Industry Training Fund. Private training establishments may also receive tuition subsidies through the student component of the Integrated Funding Framework, while some receive no Crown funding at all. Many of those that receive no funding are English language schools that cater to full-fee-paying international students.

Registered private training establishments must meet financial, educational and management quality requirements set by the New Zealand Qualifications Authority to provide safeguards for learners. They must also meet financial and management requirements set by the Tertiary Education Commission.

In 2007, some 369 private training establishments received government funding through the student component as well as Youth Training and Training Opportunities, the two largest targeted training programmes funded by the Tertiary Education Commission.

Government training establishments

There are eight government agencies that provide training, including the Armed Services and Police. These are recognised as government training establishments.

Workplace learning

There is also considerable formal training activity in the workplace. Some of this is funded through the Industry Training Fund (which includes Modern Apprenticeships), while the rest is supported by business. Workplace learning facilitates lifelong learning for employees that counts towards a qualification and, for employers, it provides productivity gains. Industry training is facilitated through industry training organisations. At the end of 2007, there were 37 industry training organisations in New Zealand with trainees, established by particular industries or groups of industries and recognised by the Minister of Tertiary Education under the Industry Training Act 1992.

Industry training organisations facilitate workplace learning in employment by:

- setting national skill standards for their industry
- developing appropriate training arrangements for their industry that will lead to qualifications recognised on the National Qualifications Framework and arranging for the delivery of the training
- moderating the assessment of training within their industry against the established national standards
- monitoring training quality
- providing leadership to industry on skill and training needs, and
- providing information and advice to employees and their employers.

Industry training raises the workforce skill levels and boosts competitive advantage for business. Its delivery is flexible. Industry training can be conducted on-job, off-job, through a registered training provider, through training provided by other staff in the workplace, or through a combination of these. On-job training can take a number of forms. The learning can be self-paced, or the training can be delivered by an experienced staff member or an external trainer. Some businesses run formal training sessions, while others train staff through their workplace tasks. Often, the relevant industry training organisation will provide training guides and resources.

Industry training is jointly funded by the government through the Industry Training Fund and by industry through financial and in-kind contributions. In 2007, industry contributed \$65.5 million in cash to industry training, representing 26 percent of the total cost.

The tertiary education strategy

The Tertiary Education Strategy 2007-12, released in December 2006, incorporated the statement of tertiary education priorities for the years 2008 to 2010.

The government's expectations and priorities for New Zealand's tertiary education system will be used to guide the Tertiary Education Commission's investment decisions in order to maximise the sector's contribution to our national goals.

Strategic contributions

The strategy identifies three areas where the New Zealand tertiary education sector is expected to make a significant contribution:

1. Success for all New Zealanders through lifelong learning.

Within the period of the strategy there are five areas of focus for improved levels of achievement and continuation of learning:

- ensuring maximum educational opportunity for all New Zealanders
- strong foundation skills
- successful transitions from schooling: ensuring the 'baby blip' generation achieves its potential
- building relevant skills and competencies for productivity and innovation, and
- building skills and competencies for social and cultural development.

2. Creating and applying knowledge to drive innovation.

The three areas of focus below aim to improve the alignment of our research efforts with national goals:

- supporting links between research, scholarship and teaching
 - focusing resources for greatest effect, and
 - improving research connections and linkages.
3. Strong connections between tertiary education organisations and the communities they serve.

There are three areas of focus for strong connections between the tertiary education system and the communities it serves. These connections are to:

- improve quality and relevance of education and knowledge
- support economic transformation, and
- support social, cultural and environmental outcomes.

Priority outcomes

The strategy outlines four priority outcomes where government believes there should be increased effort in order to achieve a shift in the system.

The priority outcomes are:

1. increasing educational success for young New Zealanders – with more achieving qualifications at level 4 and above by age 25 years
2. increasing literacy and numeracy levels for the workforce
3. increasing the achievement of advanced trade, technical and professional qualifications to meet regional and industry needs, and
4. improving research connections and linkages to create economic opportunities.

The Tertiary Education Commission will use these priority outcomes to guide its investment discussions with tertiary education organisations. Within the overall control on funding, the commission will continue to invest in a broad range of relevant and quality education and in research that fits within tertiary education organisations' distinctive contributions.

The legislation relating to tertiary education

The main piece of legislation on tertiary education is the Education Act 1989. Among other things, this Act:

- sets up the government's tertiary education agencies and defines their roles and responsibilities
- gives the authority for the tertiary education strategy
- describes the basis for the funding of tertiary education, and
- defines the constitution and functions of different types of public tertiary education institutions.

In 2007, the Education Act was amended to provide the mechanisms for the tertiary education reforms to be implemented in 2008.

The amendment gave effect to a new system for planning, funding and monitoring the provision of tertiary education. The objective of the amendment was to ensure that the tertiary education sector contributes towards tertiary education outcomes that are more closely aligned with the social, economic and environmental interests of New Zealand.

There are other pieces of legislation that also apply in tertiary education. In particular, the Industry Training Act 1992 and the Modern Apprenticeship Training Act 2000 cover parts of the system, while aspects of the operation of tertiary education institutions are governed by the State Sector Act 1988, the Crown Entities Act 2004 and the Public Finance Act 1989.

The government agencies responsible for tertiary education

The main government agencies with a responsibility for tertiary education are the Ministry of Education, the Tertiary Education Commission, the New Zealand Qualifications Authority and Career Services Rapuara. During 2005, the State Services Commission led a review of how the government's main tertiary education agencies – the Ministry of Education, the Tertiary Education Commission and the New Zealand Qualifications Authority – work together. This review made proposals for improvements in how the agencies interact and coordinate their work. To address the review's recommendations, the agencies continued in 2008 to collaborate on a strategic work programme.

The Ministry of Education

The Ministry of Education is the government department responsible for developing the broad policy framework for tertiary education and for advising Ministers on the development of the tertiary education strategy and the statement of tertiary education priorities. It is also responsible for monitoring the success of the strategy, collecting and managing data on tertiary education, and monitoring the performance of the overall system. The Ministry also works with the Ministry of Social Development and Inland Revenue on the system for financial support of students.

The Tertiary Education Commission

The Tertiary Education Commission – Te Amorangi Mātauranga Matua – is a Crown agency. The commission is made up of a board of six to nine commissioners appointed by the Minister. The commission's responsibilities are as follows:

- giving effect to the tertiary education strategy
- allocating the government's tertiary education funding to tertiary education organisations according to funding mechanisms determined by the Minister
- advising government on the tertiary education strategy, tertiary education priorities, sector activities and the performance of the sector
- monitoring the performance of tertiary education institutions
- providing advice to the minister on tertiary education policy
- developing the multi-year plans to steer the tertiary education system, and
- conducting research and monitoring in support of its roles.

The New Zealand Qualifications Authority

The New Zealand Qualifications Authority is also a Crown agency. Like the commission, it has a board appointed by the Minister. Its functions are to:

- provide an overarching quality assurance role for the tertiary sector
- develop and quality assure national qualifications
- administer the National Qualifications Framework
- register private training establishments
- conduct quality assurance at private training establishments, wānanga and Unitec New Zealand

- establish and maintain the New Zealand Register of Quality Assured Qualifications
- administer the trade, vocational and school sector qualifications system, and
- evaluate overseas qualifications for immigration and employment purposes.

New Zealand Career Services Rapuara

New Zealand Career Services provides information, advice and guidance services that are designed to help people make informed career choices. Effective career information, advice and guidance provide a link between education, the labour market and the skills, interests and abilities of New Zealanders.

Career Services' work includes:

- developing and providing career information
- providing individuals with advice on how best to use career information
- providing career guidance services, and
- developing and enhancing the skills of individuals and organisations that facilitate career information, advice and guidance for others.

To enhance access to career information, advice and guidance, Career Services has developed three vehicles for delivery – via the internet, by telephone and face to face. This allows individuals to access Career Services in a manner that best matches their needs.

As well as these bodies, there are a number of other government agencies that have an involvement with tertiary education.

Ministry of Social Development

The Ministry of Social Development is responsible for providing leadership in the areas of social development and social policy, and the delivery of social services, particularly income support.

Financial support is provided to students by StudyLink, a service of the ministry. StudyLink is responsible for the administration and delivery of student loans, student allowances and other income support to students while they are studying, and income support for students unable to find employment during vacation breaks. This includes assessing entitlements, making payments, and maintaining partnerships with key stakeholders, including other government agencies, tertiary education providers and student groups.

Inland Revenue Te Tari Taake

Inland Revenue is responsible for the assessment and collection of student loan repayments once loans have been transferred for collection. Inland Revenue also determines entitlement to interest write-offs for borrowers.

In addition, Inland Revenue is responsible for the Student Loan Scheme Act 1992 and the annual regulations made under that Act which set the interest rates for borrowers overseas and the repayment threshold.

The Department of Labour

The Department of Labour is the agency that advises the government on all matters to do with New Zealand's labour force. As part of that role, the department collects and analyses a great deal of information about the skills needed in the labour market and about how the tertiary education system interacts with the labour market.

How the tertiary education system works

The New Zealand tertiary education system is designed to work around four main elements:

- quality assurance
- investment and funding decisions. Multi-year plans developed by tertiary education organisations in collaboration with the Tertiary Education Commission steer government funding in tertiary education and align funding with the government's tertiary education strategy
- provision of government funding, and
- monitoring of the performance of tertiary education organisations and of the sector as a whole.

Quality assurance

High-quality qualifications and study programmes are a key requirement for students in the tertiary education sector. Quality assurance of tertiary education in New Zealand is intended to provide a minimum standard for the quality of the learning outcomes for students. It focuses on the systems and processes that support delivery of learning by tertiary education organisations. Quality assurance is currently undergoing a major reform. The following information describes the system as it operated in 2007 and 2008, but also includes information on the new system and how it differs from the existing approach.

Quality assurance agencies decide whether providers, qualification developers and the programmes they deliver meet appropriate quality standards. There are currently two quality assurance agencies:

- the New Zealand Qualifications Authority, and
- the New Zealand Vice-Chancellors' Committee.

The New Zealand Qualifications Authority

The New Zealand Qualifications Authority has an overarching responsibility for the system of quality assurance in tertiary education. It has delegated some of its powers to the Institutes of Technology and Polytechnics of New Zealand and this organisation has created a quality assurance body, ITP Quality, to give effect to that delegation and to manage the quality assurance processes for polytechnics' qualifications at the undergraduate level.

As the delegating authority, the New Zealand Qualifications Authority has responsibility to audit ITP Quality's quality assurance systems. The New Zealand Qualifications Authority retains responsibility for course approval and accreditation for all qualifications offered by providers, other than universities and polytechnics, and for postgraduate qualifications offered by polytechnics.

Quality assurance in tertiary education in New Zealand

Only those tertiary education courses, qualifications and providers that have been quality assured by a quality assurance body (see next page) are able to access government funding, industry training funding, student loans and allowances, and Training Opportunities, Youth Training and Skill Enhancement funding.

The New Zealand Qualifications Authority's audit requirements are aimed at improving the quality of providers and courses. While those audited to date have found the process challenging, they generally recognise that it has the potential to lift quality standards and identify problems more quickly. A number of potential academic and financial risks have been identified through the audit process. As a result, the New Zealand Qualifications Authority and the Tertiary Education Commission have carried out monitoring and auditing of academic quality, student record operations and financial viability.

New Zealand Register of Quality Assured Qualifications

One of the mechanisms for managing quality is the New Zealand Register of Quality Assured Qualifications. The register imposes certain common standards on qualification development and nomenclature. Each qualification has: an assigned level (1 to 10); an outcome statement for the whole qualification and each of its components; a credit value (120 credits is equivalent to one year of full-time study); and a title consistent with other qualifications on the register. The register is further described in chapter 3.

ITP Quality

The Board of ITP Quality operates as a quality assurance body under the authority delegated to the Institutes of Technology and Polytechnics of New Zealand by the New Zealand Qualifications Authority under section 260 of the Education Act 1989. ITP Quality was established in 1991 and has been operating the delegation independently since January 1993.

ITP Quality is responsible for approving polytechnic programmes at undergraduate degree level and below and for accreditation of institutes of technology and polytechnics to deliver approved programmes. ITP Quality has also been granted the authority from the New Zealand Qualifications Authority to audit institutes of technology and polytechnics for compliance and effectiveness against academic standards. A polytechnic that successfully meets the standards may be awarded 'quality assured' status for a period of four years.

The New Zealand Vice-Chancellors' Committee

The New Zealand Vice-Chancellors' Committee derives its authority from the Education Act 1989. It provides quality assurance for university qualifications through its Committee on University Academic Programmes.

The New Zealand Universities Academic Audit Unit carries out quality audits of the eight universities.

This committee is a standing committee of the New Zealand Vice-Chancellors' Committee that considers academic matters across the university system. These include: inter-university course approval and moderation procedures; advice and comment on academic developments; the encouragement of the coherent and balanced development of curricula; and the facilitation of credit transfer between qualifications.

Within policy determined by the New Zealand Qualifications Authority, the committee sets criteria for validating and monitoring university qualifications. It approves new qualifications in the university system. It also has responsibility for oversight of inter-university subject conferences. Its membership includes representation of other tertiary education interests and the student body.

A sub-committee on university entrance coordinates advice on the common standard of entrance to universities. The sub-committee also regulates discretionary entrance and coordinates the evaluation of overseas qualifications for the purposes of admission to university.

The New Zealand Universities Academic Audit Unit

The New Zealand Vice-Chancellors' Committee established the New Zealand Universities Academic Audit Unit to carry out academic quality audits of the eight universities. The unit also identifies and disseminates information on good practice in developing and maintaining quality in higher education and publishes reports and monographs. The unit maintains professional relationships with all quality assurance bodies working in tertiary education in New Zealand, and with similar agencies internationally.

The Inter-Institutional Quality Assurance Bodies Consultative Group

Established by the New Zealand Qualifications Authority as a forum for quality assurance bodies, this group brings together all the quality assurance oversight bodies – the New Zealand Qualifications Authority, the Vice-Chancellors' Committee and the Institutes of Technology and Polytechnics of New Zealand. The aim is to provide a system-wide focus on the quality of tertiary education provision and qualifications.

The group provides a forum for quality assurance bodies. It also provides a mechanism for cross-sector initiatives. In the past, these have included establishing working groups to provide input into the policy development relating to the New Zealand Register of Quality Assured Qualifications and credit recognition and transfer.

Investing in tertiary education

The tertiary education strategy spells out the contributions the government expects the tertiary education system to make to national goals. The Tertiary Education Commission's role includes giving effect to the government's tertiary education strategy. The Tertiary Education Commission is also responsible for operating the government's funding mechanisms – allocating funding to tertiary education organisations. The key instrument the Tertiary Education Commission uses for managing these responsibilities is the multi-year plan developed with tertiary education organisations.

Quality improvement focus

As part of the tertiary education reforms, the government has set new direction for quality assurance.

Quality assurance in tertiary education around the world has mostly focused on making sure that the organisations delivering tertiary education and the qualifications that people enrol in meet minimum standards. That will continue to be an important component of the new quality system being developed for the New Zealand tertiary education sector.

Under the new system, this emphasis on minimum standards will be complemented in the future by a quality improvement focus – that will see greater emphasis on, strengthening of and more harmonisation of the processes for continuous improvement in tertiary education organisations.

A set of quality indicators is being trialled that organisations will use as part of ongoing self-review. These indicators have an evaluative focus – organisations will look at the value of their work, with an emphasis on how well they are helping to improve outcomes for students.

Examples of the kind of indicators are 'learners acquire useful skills and knowledge and develop their cognitive abilities' and 'programmes reflect changes in subject content, resources, teaching practice and technologies'.

Self-review will be accompanied by a system of external evaluation and review that will give assurance to students, government and other stakeholders that organisations' self-review and quality systems are helping improve outcomes.

Multi-year plans

In 2008, multi-year plans began to replace the charters and profiles used previously, with 110 tertiary education organisations operating on plans. The plans set out a three-year funding path. In developing a plan with a tertiary education organisation, the Tertiary Education Commission looks for evidence of alignment with distinctive contributions, and to the priority outcomes of the Tertiary Education Strategy 2007-12. The plan defines the role of each tertiary education organisation in the network of provision and the range and scale of provisions the government will fund. The plan also describes the organisation's engagement with other providers and stakeholders. An approved plan is the first prerequisite for eligibility for public funding for quality-assured providers. The remaining tertiary education organisations will move to multi-year plans as the basis for their funding from 2009.

Monitoring and evaluating New Zealand's second tertiary education strategy

The Ministry of Education is responsible for monitoring the progress of the tertiary education sector towards the goals of the Tertiary Education Strategy 2007-12.

The overall approach to monitoring this second tertiary education strategy is similar to that used for the first. The Ministry has developed a monitoring framework and will publish a series of annual monitoring reports and undertake some evaluation of the effect of the strategy.

Monitoring will provide ongoing, timely information that will help provide insight into the extent to which the intended changes are happening and to what degree. The monitoring information will provide a broad picture that enables understanding of:

- the contribution of tertiary education to government goals
- the general direction and trends in tertiary education in relation to the focus areas of the strategy
- overall progress towards the priority outcomes, and
- the effect of the tertiary education reforms, including investing in a plan, developing a network of provision and the focus on the distinctive contributions of tertiary education organisations.

The results of the monitoring project will:

- inform ministers of the overall progress being made against the strategy
- provide system-level contextual information to inform planning and the decisions of tertiary education organisations and the Tertiary Education Commission
- provide context for the monitoring of the education Crown entities
- provide alerts to any possible need to reconsider the policy mix
- inform the next set of tertiary education priorities and future investment plans, and
- feed into developing the next strategy.

In setting the amount of funding available the government takes account of inflation pressures, expected demographic change, student demand and competing priorities within and outside the education sector. The new investment-based approach will expect and reward high performance. An assessment of the organisation's performance will increasingly inform investment. The quality assurance and performance monitoring system will have an increased focus on outcomes. There will be greater transparency in the performance of the tertiary education system, and of tertiary education organisations within the system, as the quality of performance information improves and is made more available to students and the public.

A significant focus of the new system is expected to be on supporting the development of capability. There will be an explicit funding of capability through the tertiary education organisation component. The new system will also include a student achievement component. The funding split has been set at 30 percent for the tertiary education organisation component and 70 percent for the student achievement component.

Tertiary education organisations report on their performance and financial targets in an annual statement of service performance. The Tertiary Education Commission, the New Zealand Qualifications Authority and the Ministry of Education also carry out a range of other monitoring activities.

How funding works

The tertiary education system funding framework complements the tertiary education reforms and the tertiary education strategy. Its purpose is to resource and steer the tertiary education system, while providing tertiary education organisations with the flexibility to operate in a responsive and innovative way. It has three broad components:

- funding for the teaching and learning of domestic students
- funding for research (through centres of research excellence funding and the Performance-Based Research Fund), and
- funding to build tertiary education provider capability.

Funding for student achievement

Student achievement component funding provides the government's contribution to the costs of teaching and learning and other costs related directly to student numbers. The volume of provision and the types of courses funded through the student achievement component are approved by the Tertiary Education Commission through each tertiary education organisation's three-year plan.

The student achievement component rates are differentiated by discipline to reflect the costs associated with different types of study. For example, the funding rates for arts courses are lower than those for science courses. These funding categories were last reviewed in 2005.

The student achievement component rates differ for each sub-sector, as government agreed to a 70 to 30 ratio between the student achievement component and the tertiary education organisation component. The Tertiary Education Commission calculates and publishes revised funding rates annually.

Funding for tertiary education organisations

The tertiary education organisation component is a single fund comprising a core component that supports the distinctive contribution of providers and a strategic component which promotes and supports innovation in teaching and learning and assists providers when making major changes in their portfolio of provision. There is no tertiary education organisation component set for private training establishments.

The core component has a number of elements.

- Tertiary education institutions base investment – this ensures that eligible providers have the capability to provide high-quality, relevant research and that they can focus on their core role and distinctive contributions. This is the largest core element.
- Industry training organisations – this provides a contribution towards the leadership and standard-setting roles of industry training organisations.
- Performance-Based Research Fund – this contributes to the cost of research and research-based teaching and learning in tertiary education organisations and it raises the quality and focus of research while providing incentives for improved investment in basic research in the tertiary sector.
- Priorities for focus – this provides an incentive for tertiary education organisations to achieve government goals as articulated in the tertiary education strategy or other national or regional priorities.

The strategic component has two elements.

- Supporting change – this supports institutes of technology and polytechnics and wānanga to make changes to align their portfolios of provision with national and regional priorities.
- Encouraging and supporting innovation – this promotes innovation, particularly where it will benefit learners and stakeholders outside the tertiary education sector by supporting a range of initiatives including skill development, innovative delivery systems, infrastructure improvements, research linkages, and relationships to enhance technology and knowledge transfer and exchange.

The funding for each element will be reviewed annually.

Funding for tertiary education capital injections

A tertiary education capital investment fund has been established. This fund provides a vehicle for the capital injections in tertiary education institutions made by government as a strategic initiative. Applications to the fund will be considered by a panel comprising sector representatives and people with financial, management and governance expertise. The panel will advise the Tertiary Education Commission and the minister on proposals.

The fund is to be established in 2008 and \$95 million over three years was allocated in Budget 2008. It is expected that further funding will be appropriated annually to replenish the fund.

Funding for research

In 2007, the introduction of the Performance-Based Research Fund was completed. Under this fund, providers are allocated funding on the basis of their research performance, using a set of performance indicators complemented by peer assessment of the quality of their research. Before the introduction of the Performance-Based Research Fund, the main funding for the research activities of tertiary education organisations was delivered as part of the student component funding for degree and postgraduate enrolments. This system of funding was phased out over the period 2004 to 2006.

In 2002 and 2003, the government invited bids from tertiary education organisations to host centres of research excellence – inter-institutional research networks focused on areas of established research excellence of importance to New Zealand. Seven centres were funded, each for a period of six years. In 2006, bids were invited for extension of the programme and in May 2007 the government announced that the centres will receive \$31.4 million of operating funding in addition to a one-off capital funding of \$20 million. The following centres were given extended funding:

- the Allan Wilson Centre for Molecular Ecology and Evolution (hosted by Massey University) – studying topics ranging from molecular rates of evolution and biodiversity, through to molecular anthropology
- the Maurice Wilkins Centre for Molecular Biodiscovery (hosted by the University of Auckland) – extracting new knowledge from genomic and proteomic (protein) data
- The MacDiarmid Institute for Advanced Materials and Nanotechnology (hosted by Victoria University of Wellington) – covering the spectrum from fundamental science to applied technology and combining expertise in chemistry, physics and engineering to discover and understand new materials and technologies
- the National Centre for Advanced Bio-Protection Technologies (hosted by Lincoln University) – pursuing multidisciplinary research and development to meet the biosecurity and pest management needs of New Zealand

- the National Centre for Growth and Development (hosted by the University of Auckland) – concentrating on the biology of early development and its lifelong consequences for health and disease
- Nga Pae o te Maramatanga – Horizons of Insight (hosted by the University of Auckland) – The National Institute of Research Excellence for Māori Development and Advancement, and
- The Riddet Centre (hosted by Massey University) – advancing knowledge in foods and biologicals.

In addition to these sources of research funding, tertiary education organisations active in research are expected to raise additional research revenue through the contestable science funds supported by the government through Vote Research, Science and Technology. Tertiary education organisations also bid for contracts to provide research for firms and other organisations that want research reports for the purposes of their businesses.

The research funding system and how its components relate to each other is explained more fully in chapters 13 and 16 of this report.