

Lincoln University

Investment Plan - 2015-2017

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Please note that because of the commercial sensitivity of the information, Appendix 1 has been withheld under the provisions of the Official Information Act 1982.

Introduction

Lincoln University is New Zealand's only specialist land-based, research intensive, tertiary education institution. Internationally renowned, its distinctiveness stems from comprehensive provision of systems-based thinking, education, training, research, development, demonstration and extension for land-based communities and industries.

Lincoln University maintains a global reputation in this area, being ranked amongst the top universities globally. This reputation was further enhanced in 2013 by an invitation to become a partner of the prestigious Euroleague for Life Sciences (ELLS). Despite its small size, Lincoln University is also rated not only in the QS-500 ranking of top universities, a recognition of its quality and international reputation in its land-based specialisation but also in the top 100 agricultural Universities. In 2014, Lincoln rose a further 70 places in the QS-500 rankings.

“Land-based” goes far beyond just the land and acknowledges that the true value-addition is through sophisticated, integrated innovations across the entire value chain. It is how people interact responsibly with, create value from, and utilise the land and associated resources for commercial, social, scientific, environmental and cultural purposes and advancement.

Lincoln University recognises the land-based industries as a system based upon the stewardship of resources and the environment, maintenance of the public well-being and the livelihood of billions of people globally. This includes, but is not limited to, agribusiness; elements of biology and ecology; land, air and water resources management; production processes; marketing; transformation and use of food; consumption and human well-being; recycling; and, waste disposal. As such, it includes the social, engineering, biological and physical sciences and encompasses the economic and business systems, and innovation that bring these biological, resource, engineering, farm management and physical systems together and make them operate.

Since 2012, Lincoln University has undergone transformation change, focused on not only its operations but also its strategic direction. In 2013, the Lincoln University Council released a new Strategic Plan 2014-2018, and will look to review progress from mid-2015. In addition, Lincoln University has reformed its qualifications, revised its plans for attracting student growth, introduced a new research strategy, aligned with the Lincoln Hub, and put forward, and has had approved, a significant Crown investment through the Better Business Case (BBC) process.

In July 2014, the Crown announce a commitment to Lincoln University of \$107.5 million to enable substantial rebuild of key facilities – as part of Lincoln University's revised direction.

Accordingly, the Investment Plan is not a stand-alone document. The strategic plan, research strategy and Crown business cases, together with other key documents capture the overall direction and performance the University is targeting. The Investment Plan is a part of that portfolio of key documentation, but to be viewed in the context of the suite of documents.

The strategic focus for Lincoln University is encapsulated in our three goals: “Feed the World”, “Protect the Future” and “Live Well”. These goals sit alongside a very clear framework established by our three domains of capability: Agriculture and Life Sciences; Environment, Society and Design; and Agribusiness and Commerce. The interplay of these disciplines, both in teaching programmes and through the quality and focus of research provide the foundation to achieve these goals, including importantly through work-ready and industry valued graduates.

These goals and strategic focus inform this 2015-2017 Investment Plan. In this Plan, we:

- Review the main achievements of the last two years and the current status;
- Present the global and New Zealand opportunities and challenges that place the Lincoln University strategic focus and goals in context;
- Explore the uniqueness of Lincoln University (including the Lincoln Hub) and its operational environment; ;
- Discuss how Lincoln University contributes to Government priorities within the Tertiary Education Strategy; and,
- Provide Mix of Provision and Plan Commitments for 2015-2017.

Performance Story

Prior to the Canterbury earthquakes of 2010 and 2011, Lincoln University had already commenced a programme of work to strengthen its land-based specialisation. The Canterbury earthquakes only increased the urgency of this transformational process. The earthquakes also required swift and pragmatic responses. Along with staff and student welfare, the most obvious pressing need was temporary space to enable business continuity. As a result of the loss of significant buildings (13,710sqm) including key science and student facilities, the University swiftly created some temporary facilities to enable it to maintain capability. These necessary steps, including the use of previously inconceivable and aged facilities, drained the remaining University's cash reserves.

The University also accelerated a transformational change agenda, implementing a set of changes unprecedented in scale, scope and speed in any New Zealand university. This began in 2012 with the appointment of a new Vice-Chancellor and a new Executive Team, together with a clear Council directive to grow revenues and achieve financial sustainability.

Since 2012, Lincoln University has achieved:

Facility remediation for business continuity: Completion of the urgent and necessary renovation of temporary facilities scattered across the Lincoln campus to ensure business continuity for research and teaching. The earthquakes resulted in the loss of 13,710sqm of primarily teaching, research and student space. Lincoln University used its remaining financial reserves for the creation of temporary facilities within a range of aged and unsuitable buildings across the campus, as well as creating 2,994sqm of new, temporary space (including 2,544sqm within a large shed-like structure) in time for the 2013 academic year, and to enable completion of valuable research contracts.

A new University Strategy: A new Lincoln University Strategy based on growth and a focus on the New Zealand land-based sector, productivity and environmental performance has been created and published. This Strategy deepens the University's land-based specialisation, and places a clear premium on quality over quantity and targets growth to a desired level approaching 5,000 Equivalent Full-Time Students (EFTS). This specialised and focussed approach aims to enhance Lincoln University's position as a global centre of excellence in the land-based sector, for the benefit of the whole New Zealand tertiary sector and New Zealand's primary and tourism sectors, and the environment.

The Lincoln Hub: Lincoln University has actively progressed the Lincoln Hub initiative with its initial Hub Partners (AgResearch Limited, Plant and Food Research, Landcare Research and DairyNZ) – an initiative which is a step change to enhancing the performance of the New Zealand economy through

increased capability, research, technology transfer and extension, and which is also a critical factor in the future growth and sustainability of the University itself. The Lincoln Hub, is an unprecedented collaborative commitment for a New Zealand university, replicated internationally by only limited exemplars. The Lincoln Hub was launched by key Government Ministers in April 2013. The University's transformational change agenda will result in even greater benefits for the land-based sectors once the Hub, and its facilities as currently contemplated, are achieved. This is a 'once in a generation' opportunity to leverage the investment in science facilities at Lincoln University, with the facilities forming part of the AgResearch Future Footprint Programme, for the benefit of the New Zealand economy.

Unprecedented qualifications reform: Lincoln University reviewed and dramatically reformed its qualifications programme – this resulted in undergraduate programmes reducing from 44 to 24 and the number of courses falling from 376 to 332 (with more refinement still to come), together with the implementation of three common courses, compulsory for all undergraduate programmes – all based on the land-based specialty. Postgraduate qualifications portfolio reform has resulted in clear differentiation between research masters and taught masters and provides clear pathway and stair-casing options for learners. A sub-degree reform programme of a similar scale is nearing completion in 2014 within similar unprecedented timeframes and scope.

International recognition: The inclusion of Lincoln University within the top rated rankings of global universities, alongside the significant achievement of being invited to be one of only four non-European partners within the prestigious Euroleague for Life Sciences (together with Cornell University (USA), China Agricultural University (China) and The Hebrew University (Israel)), further cements the University's global recognition and reach.

A revamped marketing approach: New and highly targeted approaches to marketing and student recruitment, focussed on the land-based specialisation across both New Zealand and international markets were introduced and implemented, together with the sweeping reform of qualifications. Growth in student numbers, particularly for degree level and above is key to our future.

Fees simplification: A major revision created greater certainty and simplicity of international fees and, within regulatory limits, a de-cluttering of its domestic fees.

A new Research Strategy: A new Lincoln University Research Strategy has also been completed. This Strategy aligns directly with the University Strategic Plan and specifically seeks to: amplify the connectedness with Industry and commercial entities, features the development of a Postgraduate School with Lincoln Hub Partners, and provides a platform to develop focussed Research Themes aligned to the University's Strategic Plan.

Student experience earthquake recovery: Focussed earthquake recovery efforts to support the recovery of student experience across the significantly limited post-quake facilities were implemented with the aim of retaining and attracting students.

Campus master planning: A Lincoln Campus (including Lincoln Hub) Master Plan was completed providing the conceptual footprint for an efficient and well-planned campus and a long term capital programme.

Whenua Strategy: Aligned with the overall Lincoln University Strategy, the Whenua Strategy was completed in 2013. Whenua is a platform for the development and implementation of related strategies, activities and projects that will, over time, enable more constructive, focussed direction for Māori land-based responsiveness.

A major cost reduction programme: Immediate actions to implement cost reductions and operational efficiencies to address the University’s financial position, and funding changes were implemented in late 2013. This change included a \$1.1m reduction in operating costs and a University-wide programme in early 2014 towards a targeted \$4 million reduction (by 2015) in personnel costs.

Lincoln University’s Strategic Focus – The Opportunities and Challenges

The Global Opportunity

Global population is expected to peak at between 9 and 10 billion (a 40% increase) in the next 40 to 60 years, with most growth occurring in developing nations. Alongside this, by 2030 relative wealth in India and China is expected to rise by over 200% and 300% respectively. This massive growth in population and wealth is predicted to increase demand for food by over 60%. Associated with this is the increasing emphasis on safe, health-promoting and high quality foods, many of which are largely derived from animals. This is New Zealand’s specialisation. Growth in population and wealth will also increase demand for all other resources and hugely boost tourism, adding further to the importance of protecting the environment.

The New Zealand Opportunity

New Zealand is positioned very favourably to respond to this growth in demand. It has reasonable soils, copious freshwater, favourable temperatures and high luminosity, has a low population density and landmass that can produce food at scale, and enjoys a remoteness that provides a useful degree of bio-security. Surrounded by vast oceans, the land will not heat dramatically as a consequence of climate change. Significant, latent potential exists to increase the productivity of New Zealand’s land-based industries, these being principally food, fibre, textiles, bio-energy and tourism, with this effort being entirely consistent with the Government’s Business Growth Agenda goal of lifting the ratio of exports to GDP from 30% to 40% by 2025. Approximately \$36.4 billion¹ (roughly 70%) of New Zealand’s merchandise exports, comprise food and fibre products, whilst the tourism industry (which is partly reliant on forestry and farming) generates a further \$7 billion. In the year to December 2013 export earnings from New Zealand’s top 10 exports were: milk powder, butter and cheese (\$13.3 billion); meat and edible offal (\$5.3 billion); logs, wood, and wood articles (\$3.9 billion); fruit (\$1.5 billion) and wine (\$1.2 billion)². This is evidence that the primary sector has the principal role to play in lifting the contribution of New Zealand’s exports from 30% to 40% of GDP by 2025.

The New Zealand government has targeted GDP growth through its six pronged Growth Agenda, comprising: *Export markets, Innovation, Infrastructure, Skilled and Safe Workplaces, Natural Resources, and Capital*. Land-based sectors are significant contributors to all of these Agendas.³

“The scale and importance of New Zealand’s primary sector exports (55% of our exports currently) means this sector is critical. In the past decade the value of primary

1 Ministry for Primary Industries (2014), Situation and Outlook for Primary Industries – Update January 2014.

2 Statistics New Zealand: http://www.stats.govt.nz/browse_for_stats/industry_sectors/imports_and_exports/OverseasMerchandiseTrade_HOTDec13.aspx.

3 NZ Treasury (Hall, J & Scobie GM) (2006), The Role of R&D in Productivity Growth: The Case of Agriculture in New Zealand: 1927 to 2001. Appendix 7: NZ Treasury (Blakeley, N., Lewis, G., Millis D.) (2005), The Economics of Knowledge: What Makes Ideas Special for Economic Growth?

sector exports grew by almost half in real terms and the sector has achieved productivity growth (an average of 2.1% per year since 2000) that is greater than the wider New Zealand economy.

An estimated world population of 9.1 billion by 2050, with an associated increase in the middle-class, which could grow global demand for food by 60%.”⁴

The land-based sectors comprise 70% of New Zealand’s merchandise exports and, as a consequence, the value of food and fibre-based exports must double in the next 11 years for New Zealand to meet its economic goal. This is frequently referred to as the “Export Double”.

“...the Government has established a strong, ambitious export goal – increasing exports as a percentage of GDP from 30 per cent to 40 per cent by 2025. This involves roughly doubling our exports.”⁵

“New Zealand has a strong primary sector. Seventy percent of our goods exports by value are primary products, about half of which are unprocessed. A significant proportion of export growth in the last eight years has come from primary products. We need to build on this strength by innovating and moving up the value chain, and also take advantage of our strength in agricultural technologies.”⁶

The Ministry for Primary Industries is focussed on achieving the Government’s Business Growth Agenda. It identifies the Export Double as its key goal in the MPI Statement of Intent.

“To emphasise the alignment of Our Strategy 2030 with the Government’s BGA export goal, MPI has developed the Export Double goal. While Our Strategy 2030 is broader than one goal, achieving Export Double will realise an important part of our vision of “Growing and Protecting New Zealand”.

The goal of doubling the value of primary sector exports by 2025 is challenging. By taking the year ended June 2012 as a baseline, achieving the Export Double goal would require a \$32 billion increase in the total real value of New Zealand’s primary exports by 2025. This requires an average real export growth rate of 5.5 percent per annum, in 2012 dollars, between June 2012 and 2025. This compares with 3.0 percent per year for the previous 13 years, and 2.2 percent per year from 1990 to 1999.”⁷

Within New Zealand’s Business Growth Agenda timeframe, the only realistic prospect for such growth sits with the land-based sector, particularly ruminant animals – dairy cows, beef cattle, sheep, and to lesser extent, deer and goats. The volume of wood cannot change by 2025 on the basis of actions taken now and its value is unlikely to double, whilst the country’s leading fruit is constrained by PSA (bacterial kiwifruit vine disease). Wild harvest of seafood is quota-limited and aquaculture, working off a small base, cannot access sufficient water space in the time available.

With international dairy prices achieving record highs in 2013 and 2014, and the rate of conversion from sheep to dairy farming tailing off, the two most substantive opportunities to (at least) double

4 NZ Government (August 2012), The Business Growth Agenda. Building: Export Markets Progress Report, page 12.

5 NZ Government (2013), The Business Growth Agenda Progress Report 2013, page 13.

6 NZ Government (August 2012), Building Innovation Progress Report, page 7.

7 Ministry for Primary Industries (2012), Statement of Intent 2013 – 2018, page 6.

the worth of ruminant exports in the next 11 years are producing greater volume of products, or more efficiently, through:

- Better exploiting the inherent genetic potential of existing animals through superior nutrition and farm management; and
- Increasing the volume of freshwater applied to farmland through additional irrigation.

New Zealand is currently seeing the benefits from increased demand for New Zealand goods, and importantly market access, through the reduction of tariffs as a result of trade agreements. Between 2012 and 2013 (December) New Zealand's merchandise trade to Asia grew by 15.8%; in dollar terms trade grew by over 3 billion from \$19.1b to \$22.2b. The largest change in the last 12 months was in exports to China which grew by 45% from \$6.9 billion to \$10 billion.⁸ Significantly, 95% of exports from New Zealand to China are primary goods⁹. Other markets have also grown in the last 12 months as a result of relatively recent free trade agreements, for example: Singapore (21%); Thailand (12%); Republic of Korea (5%). Traditional markets such as Australia, United States, Japan and United Kingdom also continue to have strong demand for New Zealand goods. Overall, trade to New Zealand's top 20 export countries has grown by 5.6% in the last 12 months from \$37.1 billion to \$39.2 billion¹⁰.

Trade will increase into the future as already signed agreements evolve and increase returns and new agreements are negotiated with countries such as those in the Trans-Pacific Strategic Economic Partnership (TPP) (eleven countries including US and Japan); India and the European Union, along with numerous others¹¹.

The Global Challenges

Whilst the opportunity is great, so too is the challenge. Increasing demand is already placing great pressure on productive land. In 1960, each hectare of agricultural land on the planet supported 60 people. It currently supports about 140 people and by 2060 each hectare is expected to have to support 200 people. Moreover, if real food prices were to be maintained at current levels, by 2020 (just six years' hence) either productivity will have to rise on every farmed hectare by more than 30%, or 80% of the remaining 'agriculturally-viable' yet unutilised land must be brought into production to meet the predicted increase in demand for food. The scale of change is, literally, staggering.

Feeding 10 billion humans nutritiously will not be without an ecological impact. Concern is mounting globally over pollution and species extinction that results from intensified agricultural production and habitat loss to farming. This farming activity is eroding natural resources such as soils and natural reservoirs of freshwater and is also polluting large areas, be this with uncontrolled discharge of nutrients, pesticides and herbicides, or emission of potent greenhouse gases. Reconciling food security with ecological preservation will pose a significant challenge. Food production systems will increasingly need to demonstrate resilience in the future, especially with the body of scientific opinion now firming on anthropogenically-induced climate change warming the planet by an average

8 Ministry for Primary Industries (2013), Situation and Outlook for Primary Industries. Appendix 13: Statistics NZ (2014), Merchandise Trade Figures December 2013.

9 Ministry for Primary Industries, The World's biggest challenge – NZ's greatest opportunity.

10 Statistics New Zealand: http://www.stats.govt.nz/browse_for_stats/industry_sectors/imports_and_exports/OverseasMerchandiseTrade_HOTDec13.aspx.

11 Ministry of Foreign Affairs and Trade: <http://mfat.govt.nz/Trade-and-Economic-Relations/2-Trade-Relationships-and-Agreements/>.

>4°C within 200 years. These arguments are supported in the IPCC's Fifth Assessment Reports on climate change released late in 2013¹², with mitigation of the impacts of climate change being a key theme of these reports.

The New Zealand Challenges

It is not an exaggeration to assert that more and better land-based education and training, informed by more and better research and development, and supported by more and better demonstration and extension, are pivotal to New Zealand's future.

The largest, immediate challenge to New Zealand in realising the full potential of its land resources is the requirement to meet rapidly-rising environmental standards pertaining to pollution (nutrient discharges and gaseous emissions) and resource use (principally freshwater, soils and land area). Owners and managers of land, such as farmers, are not yet sufficiently ready or supported to operate in a manner that robustly meets these new standards of environmental performance (let alone whilst increasing production), and beyond these reside yet-to-be-applied and much more stringent standards in animal welfare and landscape design.

There are at least three specific challenges to realising this potential:

- The science of mixed (pasture and supplements) nutrition of ruminant animals is poorly understood.
- The ability of farmers to adapt farming systems to greater intensity of nutrition and irrigation whilst remaining profitable is, on average, poor.
- Regulatory limits to the discharge of nitrogen from farms on the Canterbury Plains are likely to be set, on average, as much as 50% below current rates of discharge, with similar challenges likely nationwide.¹³

Evidence strongly suggests that the greatest factors inhibiting New Zealand's (and much of the rest of the world's) ability to grasp the opportunity and resolve the challenges are insufficient skill, knowledge and confidence in how to manage land and all upon it, in the required new fashion.¹⁴

The Building Natural Resources progress report states that the future prosperity and wellbeing of New Zealanders depends on how our natural resources are managed and used productively, while maintaining high quality environmental standards that preserve and enhance the quality of our environment.

"The challenge is how we use those resources productively, while maintaining high quality environmental standards that preserve and enhance the quality of our environment for ourselves and future generations."¹⁵

12 <http://www.ipcc.ch/index.htm>.

13 Environment Canterbury Regional Council (2013), Canterbury Water Management Strategy Targets.

14 ANZ Insight (October 2012), Greener Pastures: The Global Soft Commodity Opportunity for Australia and New Zealand, pages 41 and 65. KPMG in conjunction with Dairy NZ (October 2012), Growing Human Capability in the Primary Sector. Riddet Institute (June 2012), A Call to Arms – A Contribution to a New Zealand Agri-Food Strategy, pages 28, 54, 62 -63. BERL Economics (2009), Horticulture Skills, Employment and Training to 2012 Updated Projections.

15 NZ Government (2012), Building Natural Resources Progress Report (page 5).

One example of specific risk to agricultural and horticultural production is biosecurity incursions. Managing these risks relies on quality science in order to prevent incidents and to mitigate and manage them once they have occurred. The PSA-V outbreak which has significantly impacted New Zealand's kiwifruit industry illustrates the cost of these incidents to the New Zealand economy, estimated to be around \$600 million in the next ten years.¹⁶

Key to this is enhancing the skill level and knowledge within businesses, and applying the latest scientific knowledge to ensure the most productive use of resources. In doing so, New Zealand can achieve an enduring economic and environmental advantage in primary sector production. For example, it has been estimated that lifting the average performance of pastoral farmers to that of the top 25% would increase exports by \$3 billion annually, just by using existing knowledge and resources¹⁷.

Efforts to quantify the capability gap in the primary industries (excluding tourism) indicate that the dairy industry alone needs to employ approximately 1,000 graduates (at diploma level and above) per annum and that the agricultural sector as a whole requires closer to 2,000 such graduates per annum¹⁸. These graduates must be educated so as to grasp the opportunities and meet the challenges discussed above. Over the next decade the need for graduates will increase as a result of the ageing New Zealand workforce both on-farm and in technology transfer¹⁹. Currently the median age of farmers is approaching the mid-50s.²⁰

It needs to be realised that graduate-need estimates are based on the current situation. As New Zealand production and exports grow the need for more graduates will also grow. Based on the current rate of export returns growth and the Government's goals to double primary industry returns, the need will significantly increase.

More and better land-based education and training, supported by research, as well as greater development and application of new technologies, are pivotal to New Zealand's future. The export returns that New Zealand receives are powered by people. The land-based sectors in New Zealand employs nearly half a million people, or around 20% of the working age population. This includes over 120,000 people working directly on the land, and over 110,000 involved in the processing and distribution of products from the land. The remainder are involved in the tourism and recreation sectors; providing support innovation and value-add to the land-based sectors (such as environmental management, supply chain, food, agribusiness and commerce); or providing scientific, educational and technical support.

Lincoln University

Uniqueness of Lincoln University

As New Zealand's only specialist, land-based university, Lincoln University makes a significant contribution to the regional and national tertiary education network, offering vertically-integrated qualifications from certificates, diplomas, and undergraduate degrees to postgraduate programmes, with a focus on the integration and application of knowledge from science, agribusiness, commerce, environment and social science. Its programmes are integral to the land-based sectors. The range of qualifications that Lincoln University provides, for example, from Agribusiness and Food Marketing to

16 AERU (2012), The Costs of Psa-V to the New Zealand Kiwifruit Industry and the Wider Community.

17 Ministry for Primary Industries (2011), Briefing for Incoming Ministers.

18 KPMG in conjunction with Dairy NZ (October 2012), Growing Human Capability in the Primary Sector.

19 ANZ Insight (October 2012), Greener Pastures: The Global Soft Commodity Opportunity for Australia and New Zealand, page 41.

Ministry for Primary Industries, Survey of Technology Transfer Services to Farmers and Growers in New Zealand, page 20.

20 Fairweather J and Mulet-Marquis S (2009), Changes in the age of New Zealand Farmers: Problems for the future? NZ Geographer 65, pages 119-125.

Land, Water and Environmental Management, means that it can influence productivity gains and environmental sustainability at every stage of the value chain, not just in production.

Over 135 years, Lincoln University has established a rich and strong understanding of the land we are connected to, the industries we serve, and the communities we support. Lincoln University is focussed on the strategic challenges of the future, while preparing our students, focusing our research and supporting land-based businesses to live and work successfully in the world today and in the future.

Lincoln University continues the implementation of an unprecedented Change Agenda, to build on its land-based specialisation, by the refocussing of its capability and offerings away from areas of generic commerce and social sciences towards natural, environmental and social sciences, and agribusiness and innovation relevant to the land-based sector. The Lincoln University research and development activity is thus now more than ever highly relevant to the New Zealand economy and environment.

The outcome of the implementation of the Change Agenda to date, is already significant. The desired mix in students and courses of study is already evidenced by changes in enrolment patterns towards specialist land-based and science programmes; the drivers and direction of research and collaboration of scientists and academics towards the Lincoln Hub is occurring; the financial position of the University is being re-based to reach sustainability; and the University's strategy and efforts have been refocused and committed to its unique place in the New Zealand economy.

Increasingly, Lincoln University focusses its efforts on the more scientific, technical and managerial requirements of these industries. In particular, it seeks to integrate capability across these areas of education and training. Its graduates and its science and technology will have a significant impact in addressing land-based opportunities and challenges, in New Zealand and globally. Lincoln University's specialist programmes already attract students with a strong interest in the natural sciences, the social sciences and/or commerce from throughout New Zealand, as well as from over 60 countries across the globe. Courses combine robust theory with practical applications, all of which are highly-informed by the international quality research undertaken by the University's academics.

The University works to identify best practice and is involved in demonstrating and extending that knowledge to firms, industries and environmental regulators. New technology, products, or techniques can be applied to farms, orchards and forests across New Zealand, increasing returns from thousands of business units across the country and materially boosting the volume and value of exports, while working to reduce the ecological impact of agricultural horticultural and silvicultural activities.

Lincoln University's academics are currently increasing agricultural productivity and methods of sustainable resource management through research, as well as training future farmers and lifting the capability of primary producers, thereby increasing the ability to understand, interpret and apply new or best practice.

The unique contribution by Lincoln University is not just science – it's also about systems. Lincoln University integrates specialist knowledge from business, science, environmental and social disciplines via the farm business management discipline, into farms, horticulture and downstream systems. Improved farm practice generates increased export returns.

Such knowledge and skill sets are also exportable in their own right with New Zealand farm management and agricultural science skills and training being internationally valued. Further, those skills are in short supply globally as a result of 30 years of under investment. Lincoln University's land-based education is part of the solution to this under investment.

Lincoln University is research intensive. It attracts a higher proportion of external research income than any other New Zealand university (reflecting its strong connection to land-based industries) and earned the number one ranking for research intensity per student at degree level or above, and the number two ranking per postgraduate student subset, under the Tertiary Education Commission (TEC) Performance-Based Research Fund (PBRF) 2012 assessment²¹. The research activities of Lincoln University staff focus on producing and applying relevant new knowledge and technologies for the land-based sectors.

There is a direct relationship between the science at Lincoln and its graduates, and New Zealand's merchandise export earnings returned via primary industries. Having its larger campus located on the Canterbury Plains (where both opportunity and challenge for New Zealand's land-based sectors are, arguably, greatest) means that the University is ideally-placed to help double the worth of primary sector exports by 2025.

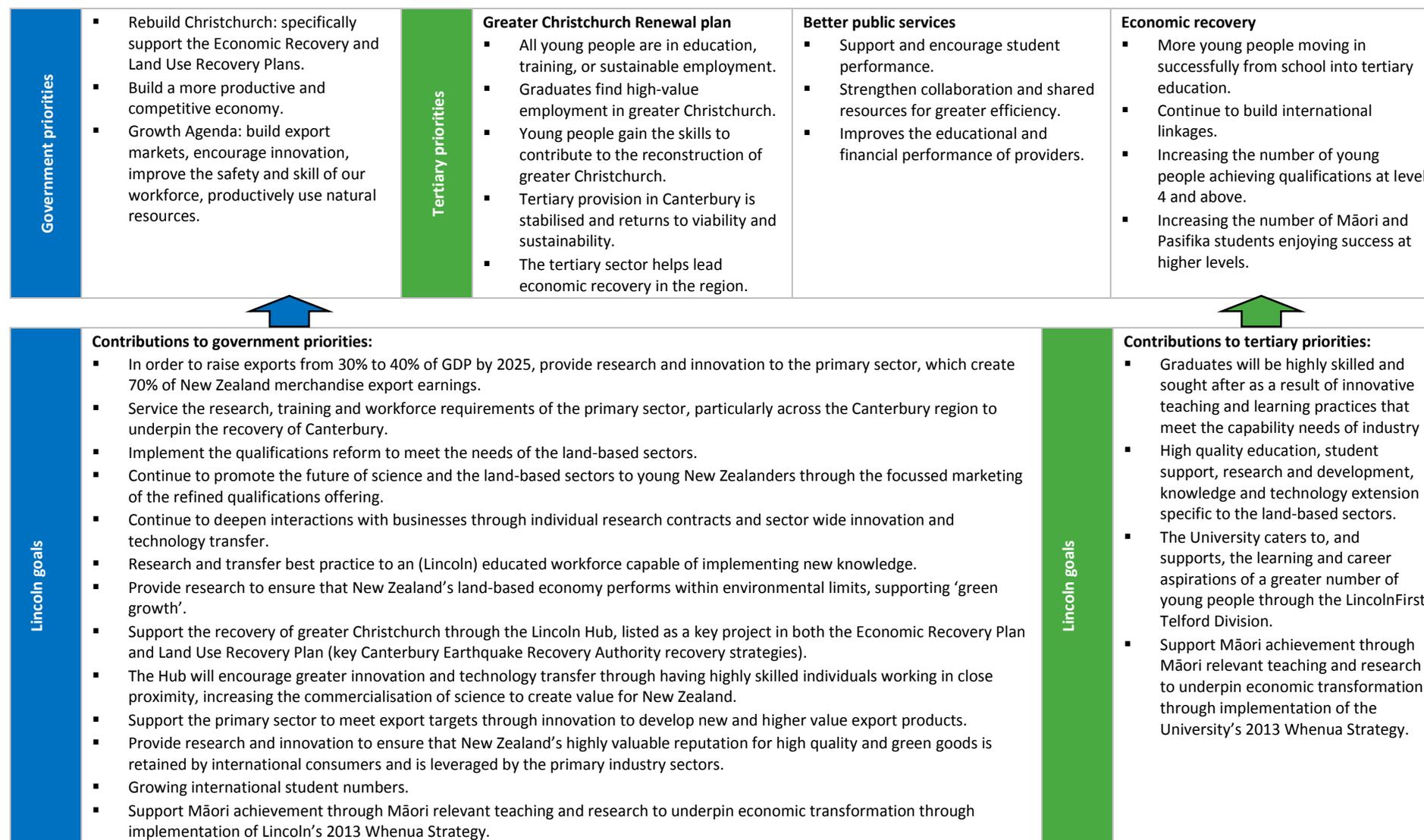
Lincoln University is currently:

- Producing highly-tailored graduates with skills in great demand by land-based entities.
- Producing science and technology highly relevant to improved ruminant productivity with a lower ecological footprint.

Lincoln University's strategic contribution to Government priorities are illustrated in Figure 1 below.

²¹ Tertiary Education Commission (2012), Performance-Based Research Fund: Evaluating Research Excellence – the 2012 Assessment (Final Report) and <http://www.otago.ac.nz/research/pbrf/>.

Figure 1: Strategic Contribution



Lincoln University as Part of the Lincoln Hub

The University prides itself on its working relationships with Crown Research Institutes (CRIs), industry, environmental regulators, industry-good entities and other universities. These result in a high degree of collaboration, research in real-world environments and the rapid application of findings and employment-ready graduates.²² Lincoln University seeks to further strengthen this collaborative effort through formulation of the Lincoln Hub.²³

The Lincoln Hub's vision is to create a globally significant science, research and industry cluster to substantially contribute to New Zealand achieving its goal to double the value of exports from the primary sector by 2025, and enhance New Zealand's ability to tackle the associated environmental and commercial challenges. The Lincoln Hub will both enable significant expansion of research and capability development focussed on the land-based sectors, and facilitate stronger transfer of knowledge and technology into industry, thus boosting productivity and meeting environmental challenges.

With over 900 research and industry professionals, the Lincoln Hub will be of a scale seen only in major scientific centres elsewhere in the world. This will be a centre of truly global scale and quality. It will be a major catalyst for a step-change, providing significant capability and infrastructure for co-operation at Lincoln and elsewhere in New Zealand. It will change the way academics, scientists and students work together with industry, industry-good bodies and environmental regulators. This collaboration will be of benefit not only to the land-based sector and the Government's Business Growth Agenda, but also to other parts of the tertiary education sector, particularly those supporting education and training in the land-based sectors.

A viable Lincoln University, in conjunction with the Lincoln Hub, will make a significant contribution to maximising development opportunities in New Zealand's most important productive sectors. This is especially important in the Canterbury region, where the primary sector is increasingly a key part of the New Zealand economy, and at the base of the economic rebuild of Christchurch. The benefits and outcomes from Lincoln University's education and research increases New Zealand's GDP, environmental and social wealth rather than being directly reflected in the University's profitability.

Contribution to Government Priorities

Delivering Skills for Industry

Lincoln University is New Zealand's only tertiary education entity that combines land-based research and development with education and training, and demonstration and extension from certificate-based qualifications through diploma, degrees, and masters to PhDs. Its capacity to do this is genuinely unique domestically and, indeed, rare internationally. It is eminently placed to further raise the performance of the country's land-based industries.

Lincoln University has refocused on its land-based specialisation and reviewed and dramatically reformed its qualifications programme to support the greater numbers of skilled and knowledgeable employees required in the land-based sectors. The University has radically consolidated and simplified its programmes at the undergraduate level, and is implementing change of similar scale for its postgraduate, diploma and certificate level programmes. This has resulted in a critical shift in the

²² Ministry of Education (2014), Tertiary Education Strategy 2014-2019.

²³ AgResearch, DairyNZ, Landcare Research, Lincoln University, Plant & Food Research (2013), Productive Land Innovation Hub Plan.

profile of enrolments to 'specialised' programmes focussed on the land-based sectors. Further, Lincoln has implemented three common courses which are compulsory for all undergraduate programmes and all based on the land-based specialty. The University can now clearly and unambiguously promote its programmes to the student market, both within New Zealand and internationally.

Late 2013, Lincoln launched new undergraduate programmes designed to offer an innovative, coherent portfolio of qualifications built around its three key domains:

Bachelor of Science – with majors in Agritech, Biosecurity and Bio-protection, Conservation and Ecology, Food Science, and Land, Water, Environment, and related specialist degrees; Bachelor of Agricultural Science, Bachelor of Agriculture, and Bachelor of Viticulture and Oenology.

Bachelor of Environment and Society – with majors in GIS and Environmental Informatics, Land and Society, Māori and Indigenous Environmental Management, Water Management, and related specialist degrees; Bachelor of Environmental Management and Planning, Bachelor of Environmental Policy and Planning, Bachelor of Landscape Architecture, Bachelor of Sport and Recreation and Bachelor of Tourism Management.

Bachelor of Commerce – with major in Accounting and Finances, Food and Resource Economics, Information Technology, Marketing and Supply Chain Management, and related specialist degrees: Bachelor of Agribusiness and Food Marketing, Bachelor of Commerce (Agriculture) and Bachelor of Land and Property Management.

Together with industry and Government, Lincoln will be able to share its expertise and capability so that the serious shortfall of land-based sector skills can be addressed. Over the last three decades, enrolments in subjects critical to New Zealand's land-based sectors have not been sufficient either for industry need, or to enable future financial sustainability for Lincoln University. In recent years, however, there has been the beginning of a realisation across New Zealand of the importance of these sectors to the New Zealand economy, and thus the start of a shift in student demand for these programmes.

No other New Zealand university has such a direct link with the key drivers of the New Zealand economy and its Business Growth Agenda, nor with the industries that drive that economy. There is a direct relationship between Lincoln University, its graduates, and the 70% of New Zealand's merchandise exports returned from the primary industries, including Lincoln University's on-going contributions to mitigate and minimise environmental effects.

Lincoln University has the support of the land-based sectors as demonstrated by the formal correspondence in support in its recent Project Business Case submission and the Qualification Reform.

Lincoln University has recently announced the establishment of 100 Global Challenge Scholarships. These Scholarships are for first-year students only. The Global Challenge Scholarships support a broader Global Challenges Programme that will trial with selected secondary schools. This Programme aims to design and prepare material that school teachers can readily use in curricula associated with achievement standards, and will complement Lincoln's successful distance education programme through LincolnFirst Telford that offers unit standards in agriculture, horticulture and equine. The Global Challenges Programme will also include dedicated events and outreach activities to schools.

A programme of strategic approaches to individual land-based industry businesses with the proposal that they contribute to the Global Challenges Programme by themselves funding scholarships has **Lincoln University, New Zealand's specialist land-based university**

been implemented. This will add to the pool of the 100 scholarships created and to date a number of businesses have committed to this request.

The Global Challenges Programme and associated Global Challenge Scholarship regime is a significant investment and action by Lincoln University.

Lincoln University will continue to build on its vertically integrated programme portfolio and tradition of educational delivery appropriate for programmes that prepare graduates for careers in land-based sectors, with a strong experiential component. Laboratories, field trips, field tours and other off-campus experiences will continue to contribute to the attainment of the aim and objectives of many courses, while workplace experience remains an integral part of academic programmes.

Getting At Risk Young People into a Career

Lincoln University seeks to contribute to the Government priority of attracting and engaging at risk young people primarily through its LincolnFirst Telford delivery.

Lincoln University merged with Telford Rural Polytechnic in January 2011. The LincolnFirst Telford offers vocational (certificates and diplomas) courses in agriculture, horticulture, forestry, apiculture (bee), equine and rural fire and safety skills, both at the Telford campus in Balclutha and, for the majority of delivery, with partners throughout New Zealand, providing a distributed delivery network throughout New Zealand. Study of these LincolnFirst qualifications is delivered through a mixture of face-to-face and qualifications by correspondence.

As a continuation of the University's qualifications reform, Lincoln University has undertaken a strategic review of its delivery portfolio at Levels 2-6 on the NZQF. This qualification reform organises delivery at Levels 2-6 under the brand of LincolnFirst. LincolnFirst has four sub-brands – LincolnFirst-Land, SchoolLinc, LincolnFirst-Accelerate and EnglishLinc. The LincolnFirst Telford Division is substantially responsible for delivery of LincolnFirst-Land and plays a major role in SchoolLinc.

LincolnFirst-Land delivers a focussed portfolio of qualifications for the primary sector. It is a rationalisation of qualifications with clear pathway and staircasing relationships between qualifications. 'LincolnFirst-land' also establishes a new set of delivery relationships with a small number of specialised partners.

The merger of Lincoln University and Telford is serving the needs of the primary sector for high quality graduates at all levels of the NZAF, with the delivery profile changing dramatically since it became part of Lincoln University – both as a result of revised strategic direction, but also due to the very significant funding changes by the TEC (for Levels 1 and 2 in particular). A commendation on implementation of the merger was given in the 2012 Cycle 4 Academic Audit of Lincoln University.

New approaches to Lincoln from 'elite' training farms (Smedley, Mendip Hills, Waipoa), and other tertiary organisations (Aoraki Polytechnic, Te Wānanga o Aotearoa) have establish new delivery partnerships. These organisations are choosing to align with Lincoln University/LincolnFirst Telford qualifications.

There is increased interest from and engagement with schools and trades academies to deliver primary industry courses via broadcast and face-to-face. The LincolnFirst Telford Division worked with 166 schools in 2013, a twofold increase from 70-80 schools in 2010. With integration between NCEA achievement standards and unit standards, LincolnFirst Telford has enabled students to attain

credits towards a vocational pathway, thereby qualifying them into level 3 training following departing secondary school.

New level 3 Certificate in Farming (Dairy) and a new suite of Equine qualifications at levels 3 and 4 have been introduced onto the NZQF, and the Certificate in Farming (Dairy) provides a clear demonstration of how the University is using its research in pastures, nutrient management and human resources to shape workforce entry qualifications.

The Hon Bill English, Deputy Prime Minister recently “cut the ribbon” on the Fibre Optic Installation at LincolnFirst Telford’s Balclutha campus. The fibre optic investment will allow the University to transition its schools delivery onto a digital platform to better support schools in delivering the primary industries vocational pathway through the Network for Learning (N4L). This infrastructure will also allow other Lincoln University content to be made available for schools, consistent with the University’s position as an open access university.

There has been strong demand on the Telford campus for residential programmes with 2014 enrolments being the highest experienced in the history of Telford.

Lincoln University has formalised a collaboration between Northland College at Kaikohe and Lincoln University, primarily through LincolnFirst Telford. At the centre of this collaboration lies the recently signed Five Year Strategic Plan, designed to formalise the strategy for optimising the farming and educational opportunities from the neighbouring Northland College Farm.

Lincoln University has been delivering NCEA Level 2 and 3 programmes to Northland College students for some time via distance learning through LincolnFirst Telford. However, the relationship has since expanded to include a Farms Committee, responsible for transforming the fortunes of the dilapidated Northland College Farm. The goal is to make it functional, high-performing and profitable, as well as an advanced educational resource providing students with valuable primary-sector skills conducive for securing long-term, meaningful employment in the land-based industries.

Since the expanded relationship with the University (together with other school initiatives), student numbers have increased by 10 percent and truancy has halved. It is believed that improving these statistics will not just advance the fortunes of the school, but particularly the young people of the region as well – and therefore the regional economy.

Boosting achievement of Maori and Pasifika

Māori are currently a large contributor to the land-based sectors and there is potential to deliver significantly more. Collectively Māori own over 1.5m ha of land. It is estimated that only 20% of Māori freehold land is fully-utilised for agricultural purposes, leaving 1.2m ha with potential for development.²⁴ Farm management, farming skills, access to professionals and technical advice are limiting factors.

“... the ability to give effect to those [plans] are often limited by available farm management and farm skills and access to skilled professional and technical advice.”²⁵

24 Ministry Agriculture and Forestry (2011), Māori Agribusiness in New Zealand: A Study of the Māori Freehold Land Resource.

25 Ministry Agriculture and Forestry (2011), Māori Agribusiness in New Zealand: A Study of the Māori Freehold Land Resource, page 14.

The tangible benefits from introducing more Māori freehold land into production include realising an additional nominal \$8b in gross output and \$3.7b in value added above MPI baseline pastoral sector forecasts between 2013 and 2022. To achieve this return just under \$3b would need to be invested.²⁶

Significant engagement with iwi and Māori commercial companies as well as Pacific communities in New Zealand and the Pacific Islands is a key strategy in our 2014 – 2018 Strategic Plan. Our teaching and research specialisations in land and resource based production linked to sound social, economic and environmental outcomes, provide critical opportunities for many of these communities. The institutional mechanisms to drive this engagement forward are the Whenua Māori Strategy (approved in 2013) and the Motu Pacific Strategy (due for approval in 2014). Both strategies aim to better align our specialisations with Māori and Pacific development aspirations.

To ensure the maximum performance and growth of Māori-owned land-based assets, more trained and skilled thought leaders are needed. This will require higher participation rates of Māori in degree and postgraduate degree level programmes but also the creation of pathways from pre-degree to higher levels to improve uptake.

The Whenua Strategy has nine key pillars or focus areas to underpin its contribution to the transformation of Māori people and communities around the land based industries and aligned sectors. These are:

- **Whenua Rangatira:** To guide the development and implementation of strategic relationships with Iwi and Māori for education, training, research, professional development and commercial engagement.
- **Whenua Whanui:** To guide decision making and projects for regional delivery of LincolnFirst academic programmes (i.e land based certificates and diplomas) and study pathways to higher level learning for Māori.
- **Whenua Whakatairanga:** To ensure relevant communication, marketing and branding to engage the Māori community.
- **Whenua Tauhere:** To drive the engagement with Māori commercial partners around key commercial, technological, and professional activities
- **Whenua Whakaturia:** To improve processes leading to increased Māori responsiveness within the institution, and build Māori staff capability.
- **Whenua Rangahau:** To define Māori research outcomes across the university so as to facilitate Māori responsive research and build Māori research capacity and capability
- **Whenua Whakanui:** To develop learning spaces and physical environments more welcoming to Māori students and Māori communities
- **Whenua Arotake Akoranga:** To develop academic programmes at all levels – pre degree, undergraduate and postgraduate while accommodating kaupapa Māori pedagogy, content, delivery and appropriate pathways
- **Whenua Tu Tangata:** To enhance Māori student experience and achievement through good support systems for learning, pastoral care and cultural affirmation leading to improved retention and quality of learning.

Under this rubric the University already has significant teaching and research relationships with Ngāi Tahu (Whenua Kura), Te Rarawa and Ngapuhi, Ngati Apa, and Te Runanganui o Ngati Porou (through Te Toka) with strong interest being shown from many other Iwi, Māori land Trusts and Pan Tribal organisations and entities throughout the country.

²⁶ Appendix 45: Ministry For Primary Industries (2013), Growing the Productive Base of Māori Freehold Land.

Similarly, the Motu Strategy is being developed around six key pillars or focus areas, again to contribute to the transformation of Pacific people and communities around the land based industries, aligned sectors and other areas of Pacific social and economic advancement - both in New Zealand and the wider Pacific. These include:

- **Motu Pacific Leadership:** To support the training of the next generation of Pacific thought leaders across the land and resource based sector, and other areas of social and economic advancement linked to Lincoln Universities specialisations
- **Motu Pacific Community Engagement:** To guide the development and implementation of strategic relationships with Pacific entities, organisations and communities for education, training, research, and professional development.
- **Motu Pacific Research Excellence:** To define Pacific research needs and opportunities across the university and facilitate Pacific responsive research, while building Pacific research capacity and capability
- **Motu Pacific Student Access and Success:** To improve Pacific student access and success through coherent academic pathways, adequate stair-casing from pre-degree qualifications to degree level study, coupled with culturally appropriate pastoral care and academic support
- **Motu Pacific Programmes and Curricula:** To work with Pacific communities to identify programme and curriculum needs and opportunities to advance their social, economic, environmental and associated interests.

Under this rubric, the University has already established teaching and research relationships with various organisations and entities in Papua New Guinea. The aim is to extend this approach across other Pacific nations while at the same time providing an explicit focus on engagement with domestic Pacific communities – particularly in the North Island in the biological primary industries, tourism, sport and recreation, landscape and urban environments, nature conservation, and food science linked to improved health outcomes.

Improving Adult Literacy and Numeracy

Literacy and Numeracy provision in SAC funded provision at Lincoln is confined to the sub-degree LincolnFirst portfolio of programmes. It is intended, by the end of the period covered by this investment plan, that targeted learners in all Levels 2-3 programmes in this portfolio will show gains in literacy and numeracy commensurate with the demands of the programmes they are enrolled in and, where possible, gain literacy and numeracy credits (via Literacy and Numeracy Unit standards) towards NCEA level 2. In addition to this, in selected Level 4 programmes (where stair-casing opportunities requiring university entrance exist) English for Academic Purposes Unit Standards and Numeracy Unit Standards will be available to learners.

We are currently updating the Literacy and Numeracy policy so that it incorporates the additional requirements of the sub-degree portfolio of programmes.

Currently the LincolnFirst Telford Division is using the Assessment Tool (Reading strand only) consistently for all on campus delivery. Learners who test at steps 1-3 are encouraged to complete an individualised reading programme. Learners who have completed this programme have shown gains. We are currently bedding in processes to use the Assessment Tool (Reading or Numeracy) with Delivery Partners and Correspondence learners. By the end of 2015 we envisage meeting TEC targets for assessment tool usage across all delivery modes.

Currently the learning progressions are not used in any formalised way. By the end of 2015 we envisage that all Level 2-3 programmes will be mapped to the progressions. Once ascertained information about the literacy and numeracy demands of each programme will be incorporated into learning outcomes, used to inform teaching and learning decisions (including the development of individualised learning plans), and included as pre-entry information in our marketing collateral.

At present literacy and numeracy provision is mainly delivered by literacy specialists separately from our mainstream teaching. As more of our vocational staff (including delivery partner staff) and course material writers are NCALE (Voc) trained or have attended professional development in embedding practices course material will be embedded as programmes and courses are reviewed. We envisage that embedding will be an ongoing process throughout the life of this investment plan with the initial iteration completed in conjunction with our portfolio review by mid-2016.

Subsequent iterations will be based on analysis of the efficacy of our initial embedding (as evidenced by learner gain and/or acquisition of literacy and numeracy unit standards, course and programme completions, and learners moving on to higher level study). We will rely heavily on specialist material/exemplars and expertise available from that National Centre for Literacy and Numeracy guidance. Pathways Awarua will be used particularly with our Correspondence learners.

Several of our staff members hold NCALE (VOC) and we have two specialist literacy advisors. A significant programme of work is to be undertaken in 2015 to initially upskill staff in embedding. We are currently exploring avenues for this work which will most likely be undertaken as distance provision supplemented by face to face tutorials. Subsequent to the initial upskilling a programme of continuing professional development will be undertaken – this programme will be driven by the community of practice that results from the initial upskilling programme and involve specialists from the National Centre for Adult Literacy and Numeracy, attendance at the national symposium, and conference and workshop attendance.

Strengthening Research-Based Institutions

Lincoln University has a distinctive research profile, reflecting its specialist, land-based orientation. Overall, Lincoln University's research revenue per academic FTE has been the highest amongst New Zealand's universities. This in turn means that a key feature of Lincoln University's distinctive pedagogy is that its students (undergraduate and postgraduate) are learning in a research-intensive environment.

Lincoln University's research is focussed on the land-based sectors and delivered across the University's faculties and disciplines. The majority of externally generated research revenue has been secured through the Agriculture and Life Sciences Faculty (AGLS) and the Bio-Protection Research Centre (Centre of Research Excellence), both of which occupy the facilities most affected by the Canterbury earthquakes.

Lincoln University's farming assets are also an integral, and unique, part of the Lincoln research programme. That land also provides a key driver for the projected success of the Lincoln Hub.

Research (including scholarship, externally-funded contract research, commercially funded technology and product development) is a critical component of Lincoln University's overall activity. It is a vital dimension of the University's learning environment and central to the relevance and value of the University to the land-based industries to which it is aligned.

Consistent with its recent and wide-ranging change programme, in early 2014, Lincoln University completed Research For Lincoln, A Research Strategy: 2014-2018. The research strategy is consistent

with Lincoln's overall Strategic Plan – launched in 2013 – and specifically seeks to: amplify the connectedness with Industry and commercial entities, features the development of a Postgraduate School with Lincoln Hub Partners, and provides a platform to develop focussed Research Themes aligned to the University's Strategic Plan.

It is envisaged that implementation of the Research for Lincoln Strategy will improve the quality and quantity of research outputs by progressing the following strategic objectives.

- Strengthen and sustain a foundation of disciplinary excellence – to improve the university's PBRF scores in the next PBRF assessment.
- Develop and promote thematic priorities – to strengthen stakeholder engagement.
- Nurture emerging researchers and teams – to build new capability to underpin future research performance and impact
- Build clusters of interdisciplinary excellence – to establish a track record and external reputation for interdisciplinary excellence.
- Establish a post-graduate school for the Lincoln Hub – to become the recognised post-graduate school for the emerging Lincoln Hub.
- Develop and strengthen strategic research partnerships – to increase external research revenue through strategic research partnerships.
- Reform research support structures and functions – to establish fit for purpose research support functions, structures and mechanisms.

With the arrival of the Lincoln Hub and the opportunity for strengthened partnerships, we expect to establish or, in some cases, strengthen already existing relationships and to enhance the University's professional and successful research culture. The expected knowledge exchange with our Hub partners, and collaboration with national and international stakeholders, is expected to result in greater teamwork and research specialisation and create a stronger and more viable knowledge base. The resulting quality research outputs will enhance Lincoln University's reputation and lift the performance capability of all participants to produce a more highly skilled workforce and to help fill the current capability gap nationally. It is expected that an improvement in social, economic and environmental outcomes will follow.

The benefits of the Lincoln Hub will include:

- Greater capacity for improved, more industry-relevant, land-based education and training at all levels, including postgraduate;
- Stronger and more collaborative land-based research and development, including enhanced pathways to commercialisation;
- Stronger demonstration, extension and technology transfer to industry;
- Greater numbers of better skilled employees in New Zealand's land-based sector, enabling the growth in productivity of that sector.

The “Research for Lincoln” research strategy also contains a number of objectives which build on this strength and the relationships developed in the commercialisation and innovation ecosystem. The specific objectives related to this include:

- Develop and strengthen strategic research partnerships and
- Reform research support structures and functions.

Actions associated with these objectives include the renaming of the former Research and Commercialisation Office to Lincoln Research and Innovation, to reflect its move away from a largely administrative function to supporting the whole innovation system. New positions and structures targeted at supporting knowledge transfer, improved commercialisation and better relationships with commercial entities in growth industries have been implemented, including the creation of a new position “Research Manager – New Funds and Innovation” and the recent alignment of the University’s Business Development Managers to the Research and Innovation team.

Lincoln University actively participated in the National Science Challenges planning processes, playing a highly active role in the three Challenges most closely aligned to our land-based focus and New Zealand’s primary and manufacturing industries, namely, “Our Land and Water”; “New Zealand’s Biological Heritage” and “Science for Technological Innovation”.

Future plans include building profiles for key industry groups, highlighting their research interests and opportunities for Lincoln University to meet these, together with developing plans for enhanced engagement.

Growing International Linkages

Lincoln University continues to grow strong international linkages, reflecting growing global awareness of Lincoln as an attractive, reputable and highly relevant academic destination. This has a strong proven base including nearly 30% of students at the Lincoln Te Waihora campus in 2013 being international students.

International markets are a key component of Lincoln’s marketing plans, with the strategic growth of international linkages and international student enrolment critical to Lincoln’s ability to deliver on its mission.

During 2014, Lincoln University enrolled international students from 84 different countries.

Internationally, Lincoln is the only university in New Zealand to be invited to become an International Observer Partner of the EuroLeague for Life Sciences (ELLS). This is a prestigious network of seven leading agricultural, life sciences and natural resources institutions in the European Union. Just four universities have been invited to join the League from the rest of the world: Cornell University in the USA, China Agricultural University, Hebrew University of Jerusalem and Lincoln University. Membership of the ELLS Network offers promotional and brand benefits and will open opportunities for bilateral collaboration with ELLS member institutions.

During 2013, Lincoln University has also signed Memoranda of Understanding with a number of overseas institutions in order to foster collaborative opportunities, such as joint research and student exchanges. These institutions include:

- China Agricultural University, Guangdong Ocean University and Henan Agriculture University in China.
- The Indian Institute of Management.

- Institut Pertanian Bogor (IPB) (Bogor Agricultural University) in Indonesia.
- Kasetsart University and Maejo University in Thailand.

International rankings, as well as its existing global recognition, are key aspects for Lincoln.

Lincoln University is ranked in the top 500 by Quacquarelli Symonds (QS) and in the top 100 in the field of agriculture and forestry. Lincoln was one of only two New Zealand universities to experience a rise in the world rankings in 2014, rising some 70 places. Lincoln is now recognised as sitting in the top five percent of world universities and the top 14 percent of those ranked.

Lincoln's focus on addressing some of the world's critical challenges had led to its knowledge and approach being called on to support key developments in the global management of land, food and water. This focus enables Lincoln to continue to cultivate and grow institutional relationships with support research and student pathways.

Summary of Activity

The templates providing Lincoln University's Mix of Provision is contained in Appendix 1 of this document.

Performance Commitments

Performance Commitments for Lincoln University – Levels 1 and 2

SAC Eligible EFTS:

			2013 Actual	2015 Forecast	2016 Forecast	2017 Forecast
			%	%	%	%
Participation						
The proportion of EFTS who are:	Under 25	Levels 1 and 2	6.3	6.0	5.0	5.0
	Māori	Levels 1 and 2	2.6	3.0	2.0	2.0
	Pasifika	Levels 1 and 2	0.4	0.3	0.3	0.3
Educational Performance						
Course Completion						
The successful course completion rate for:	All students	Levels 1 and 2	76.9	78.0	79.0	80.0
Qualification Completion						
The qualification completion rate for:	All students	Levels 1 and 2	71.1	60.0	65.0	70.0
Student Retention						
The student retention rate for:	All students	Levels 1 and 2	49.9	50.0	50.0	50.0
Student Progression						
The student progression rate from Levels 1 and 2 to a higher level for:	All students	Levels 1 and 2 to a higher level	22.9	25.0	27.0	30.0

Performance Commitments for Lincoln University – Levels 3 and Above

SAC Eligible EFTS:

			2013 Actual	2015 Forecast	2016 Forecast	2017 Forecast
			%	%	%	%
Participation						
The proportion of EFTS who are:	Under 25	Level 4 and above	54.0	55.0	57.0	60.0
		Level 8 and above	New	3.0	4.0	5.0
	Māori	Level 4 and above	4.4	5.0	6.0	7.0
		Level 8 and above	New	0.5	0.7	1.0
	Pasifika	Level 4 and above	0.9	1.0	1.2	1.5
		Level 8 and above	New	0.1	0.1	0.2
Educational Performance						
Course Completion						
The successful course completion rate for:	All students	Level 4 and above	86.4	87.0	88.0	89.0
		Level 8 and above	New	90.0	91.0	92.0
	Under 25	Level 4 and above	87.0	88.0	88.0	88.0
		Level 8 and above	New	90.0	91.0	92.0
	Māori	Level 4 and above	76.2	80.0	81.0	82.0
		Level 8 and above	New	75.0	77.0	80.0
	Pasifika	Level 4 and above	62.1	65.0	67.0	70.0
		Level 8 and above	New	50.0	50.0	50.0
Qualification Completion						
The qualification completion rate for:	All students	Level 4 and above	87.3	80.0	82.0	83.0
		Level 8 and above	New	85.0	85.0	85.0
	Under 25	Level 4 and above	73.2	72.0	73.0	75.0
		Level 8 and above	New	90.0	90.0	90.0
	Māori	Level 4 and above	82.5	60.0	65.0	72.0
		Level 8 and above	New	60.0	65.0	70.0
	Pasifika	Level 4 and above	20.7	50.0	55.0	60.0
		Level 8 and above	New	75.0	76.0	80.0
Student Retention						
The student retention rate for:	All students	Level 3 and above	59.1	60.0	60.0	60.0
	Māori	Level 3 and above	52.0	50.0	52.0	55.0
	Pasifika	Level 3 and above	45.6	45.0	47.0	50.0
Student Progression						
The student progression rate from Levels 1 and 2 to a higher level for:	All students	Levels 1 to 3, to a higher level	24.9	20.0	22.0	25.0
	Māori		26.1	20.0	22.0	25.0
	Pasifika		23.3	20.0	22.0	25.0

Performance Commitments for Lincoln University – Other Commitments

			2013 Actual	2015 Forecast	2016 Forecast	2017 Forecast
			%	%	%	%
The number of international student EFTS	All students	All levels	528	551	596	666
PBRF-Participants only						
The amount of external research income earned (University only)	All students	All levels	\$23,291,000	\$22,397,000	\$23,517,000	\$24,693,000
The number of Research Degrees completed	All students	All levels	105	78	73	74

Appendix 1

Mix of Provision

Section withheld under the provisions of the Official Information Act 1982 because of the commercial sensitivity of the information.