



**TE RĀNGAI RANGAHAU, PŪTAIAO, AUAHA O
MANAWATŪ ROHE**
**MANAWATŪ REGION
RESEARCH, SCIENCE AND INNOVATION SECTOR**

WHAKARĀPOPOTO
EXECUTIVE SUMMARY

HŌNGONGOI 2021
JULY 2021

Executive Summary

The purpose of these economic sector profiles for the Manawātū region is to describe the contribution of key sectors to the economic wellbeing of the region. Seven sectors are expected to contribute to a significant share of future growth in the number of jobs and incomes in the region over the next 25 years. They are healthcare, public administration (including defence), logistics, construction, tourism, professional, scientific and technical services, and manufacturing.

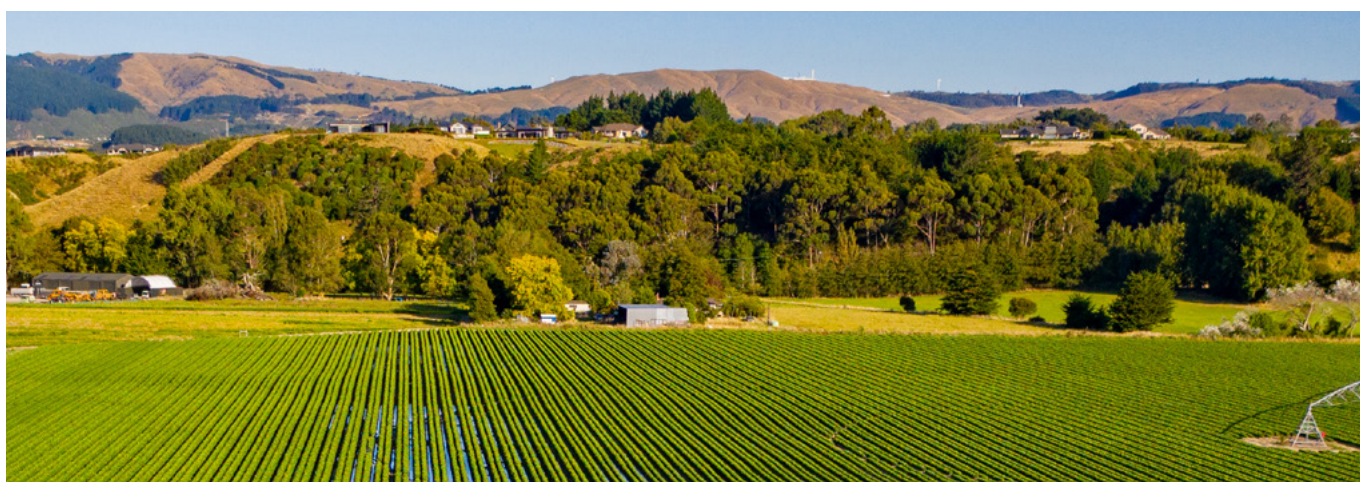
Research, science and technology have long been recognised in economic theory and in government policy internationally as important to increasing quality of life and future prosperity. In New Zealand, the government has been a significant funder of research and development activity, with significant funding flows currently through Crown Research Institutes (CRIs) and universities. Funding is also provided through research grants to private businesses, independent research institutes and other not-for-profit institutions, and more recently through tax credits for businesses.

Enhancing economic growth is a primary focus of central and local government and is achieved through a steady process of increasing productive capacity of the economy, and hence increasing national income. There is still widespread debate on the primary drivers of economic growth but the main determinants are the rate of growth of the labour force, the proportion of the national income saved and reinvested and the rate of technological improvements (including increasing skill of the labour force, and managerial efficiency).

The research, science and technology sector is a significant contributor to the Manawātū regional economy (Palmerston North City and Manawātū District) through the employment of researchers and support staff and

the creation of knowledge, which assists the growth of other business based in the city and the wider region. The sector is also important to economic development in the city because of the skilled migrants and international students it brings to the city and the businesses which are attracted to the city because of the presence of strong research, science and technology, and education.

Measuring the economic benefits derived from research and development (R&D) activity in the region is not straightforward. While there are several major institutions in the city which are primarily focussed on research and development outputs, the activity of research, science and technology is spread across many government, not-for-profit and private sector institutions. Research and development activity nationally is measured regularly through bi-annual surveys by Statistics New Zealand. The survey collects data from organisations at a national level but does not identify the regional activity of major institutions. Measuring the flow-on impacts of that research and development activity on the local commercial sector, through the number of new businesses developed, new or improved products created or improved productivity, is even harder to measure at a local level.



The presence of a major university, several significant Crown Research Institutes, research associations and major business research centres in the region provide significant wealth for the region through the salaries and wages paid and the associated commercial development of knowledge developed in the region. Estimates prepared by the Council using national and regional Statistics New Zealand data suggest that:

- an estimated 2,500 were people directly employed in research in the region (3.9 percent of the workforce in the region in 2020).
- estimated salaries and wages paid to employees in the research and development sector in the region were \$99 million in 2019 (3.0 percent of total salaries and wages paid in the region).
- total research expenditure is estimated to have been \$188 million, 4.1 percent of the national total in 2020.
- the estimated GDP of the research, science and technology sector in the Manawatū region was \$222 million in 2020, 3.4 percent of total GDP in the region.

The following estimates are based on the Statistics New Zealand Research, Science and Technology 2020 survey, Statistics New Zealand annual employee counts for scientific research organisations in the region and data provided by Massey University:

Estimated research and development expenditure (2020)	Manawatū region (\$ million)	New Zealand (\$ million)
Business expenditure on R&D	61	2,709
Higher education R&D	89	1,082
Crown research institute and other government institutions	38	758
Total estimated R&D expenditure	188	4,549

The concentration of research expertise within the city is demonstrated by annual employment data published by Statistics New Zealand, which shows that Palmerston North has the second highest number of people employed in dedicated research organisations, second only to Auckland. These figures cover research across all discipline areas, and data from the public sector research organisations show more food related researchers are located in Palmerston North than Auckland.

Central Economic Development Agency (CEDA) has managed the Callaghan Innovation programme since July 2015 and has overseen a steady increase in R&D activity, especially in the agritech and digital sectors. There has been an increase in the level of student funding that Callaghan Innovation provides to allow companies to utilise the skills and knowledge of tertiary students.

The Manawatu region has significant strengths in food innovation. The university, CRI and business research and development organisations previously described have extensive food-related expertise. These are further complemented by a range of other food focussed collaborative organisations including FoodHQ, the Riddet Institute Centre of Research Excellence, the Hopkirk Institute, the New Zealand Food Safety Science and Research Centre and the New Zealand Leather and Shoe Research Association. This is New Zealand’s most significant concentration of food science and innovation capability, and collectively is arguably the largest food innovation centre in the Southern Hemisphere.

These strengths in food innovation are key to the future economic development potential for the region and New Zealand. Significant opportunities exist to add value to primary products produced in New Zealand, develop new primary sector opportunities, industrial processing machinery, technology, and software that supports food innovation. These could lead to the export of intellectual property, food ingredients and products, processing equipment or software.



Economic benefits from commercialisation of R&D

Economic benefits also occur in the city and broader Manawatū region from the commercialisation of knowledge from research and development activities. The commercialisation of knowledge is more likely to be based on knowledge developed from R&D conducted in the city but is not solely dependent on locally sourced knowledge. Location linkages are obvious from the strength the city has in the agricultural machinery and equipment manufacturing sector. In 2020 there were nine manufacturing business units producing agriculture machinery and equipment, employing 220 people in the Manawatū region, 10 percent of national employment in the sector.



EMPLOYEE COUNT



2,500

3.9% of total employment

EARNINGS



\$99M

3.0% of total earnings

GDP



\$222M

3.4% of total GDP

CEDA
CENTRAL ECONOMIC
DEVELOPMENT AGENCY

MANAWATU
DISTRICT COUNCIL

PALMY
PAPAIOEA
PALMERSTON
NORTH
CITY