PAPAIOEA
PALMERSTON
NORTH
CITY

PALMERSTON NORTH CITY COUNCIL

AGENDA

ECONOMIC DEVELOPMENT COMMITTEE

1PM, WEDNESDAY 15 SEPTEMBER 2021

CONFERENCE & FUNCTION CENTRE

354 MAIN STREET, PALMERSTON NORTH

MEMBERS

Leonie Hapeta (Chairperson)
Vaughan Dennison (Deputy Chairperson)
Grant Smith (The Mayor)

Brent Barrett
Susan Baty
Rachel Bowen
Zulfiqar Butt
Renee Dingwall
Lew Findlay QSM
Patrick Handcock ONZM
Orphée Mickalad
Bruno Petrenas
Aleisha Rutherford
Ruma Karaitiana

AGENDA ITEMS, IF NOT ATTACHED, CAN BE VIEWED AT

pncc.govt.nz | Civic Administration Building, 32 The Square
City Library | Ashhurst Community Library | Linton Library

Heather Shotter

Chief Executive | PALMERSTON NORTH CITY COUNCIL

Te Marae o Hine | 32 The Square
Private Bag 11034 | Palmerston North 4442 | New Zealand
pncc.govt.nz

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ECONOMIC DEVELOPMENT COMMITTEE MEETING

15 September 2021

ORDER OF BUSINESS

1. Apologies

2. Notification of Additional Items

Pursuant to Sections 46A(7) and 46A(7A) of the Local Government Official Information and Meetings Act 1987, to receive the Chairperson's explanation that specified item(s), which do not appear on the Agenda of this meeting and/or the meeting to be held with the public excluded, will be discussed.

Any additions in accordance with Section 46A(7) must be approved by resolution with an explanation as to why they cannot be delayed until a future meeting.

Any additions in accordance with Section 46A(7A) may be received or referred to a subsequent meeting for further discussion. No resolution, decision or recommendation can be made in respect of a minor item.

3. Declarations of Interest (if any)

Members are reminded of their duty to give a general notice of any interest of items to be considered on this agenda and the need to declare these interests.

4. Public Comment

To receive comments from members of the public on matters specified on this Agenda or, if time permits, on other Committee matters.

(NOTE: If the Committee wishes to consider or discuss any issue raised that is not specified on the Agenda, other than to receive the comment made or refer it to the Chief Executive, then a resolution will need to be made in accordance with clause 2 above.)

5. Presentation - Central Economic Development Agency (CEDA) Page 7

6. Presentation - Manawatū Chamber of Commerce Page 9

7. Confirmation of Minutes Page 11

"That the minutes of the Economic Development Committee meeting of 16 June 2021 Part I Public be confirmed as a true and correct record."

8. Summary report on the June 2021 Palmerston North Quarterly Economic Monitor and Major events held during the year to June 2021 Page 15

Memorandum, presented by Peter Crawford, Economic Policy Advisor.

9. Research, Science and Innovation Sector Profile - July 2021 Page 41

Memorandum, presented by Julie Macdonald, Strategy and Policy Manager.

10. Committee Work Schedule Page 87

11. Exclusion of Public

To be moved:

"That the public be excluded from the following parts of the proceedings of this meeting listed in the table below.

The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter, and the specific grounds under Section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution are as follows:

General subject of each matter to be considered		Reason for passing this resolution in relation to each matter	Ground(s) under Section 48(1) for passing this resolution

This resolution is made in reliance on Section 48(1)(a) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by Section 6 or Section 7 of that Act which would be prejudiced by the holding of the whole or the relevant part of the proceedings of the meeting in public as stated in the above table.

Also that the persons listed below be permitted to remain after the public has been excluded for the reasons stated.

[Add Third Parties], because of their knowledge and ability to assist the meeting in speaking to their report/s [or other matters as specified] and answering questions, noting that such person/s will be present at the meeting only for the items that relate to their respective report/s [or matters as specified].

PRESENTATION

TO: **Economic Development Committee**

MEETING DATE: **15 September 2021**

TITLE: **Presentation - Central Economic Development Agency (CEDA)**

RECOMMENDATION(S) TO ECONOMIC DEVELOPMENT COMMITTEE

1. **That the Economic Development Committee receive the presentation for information.**

SUMMARY

Mr David Wright, Interim Chief Executive Officer from Central Economic Development Agency (CEDA), will give an update to the Committee on their work.

ATTACHMENTS

Nil

PRESENTATION

TO: **Economic Development Committee**

MEETING DATE: **15 September 2021**

TITLE: **Presentation - Manawatū Chamber of Commerce**

RECOMMENDATION(S) TO ECONOMIC DEVELOPMENT COMMITTEE

1. **That the Economic Development Committee receive the presentation for information.**

SUMMARY

Ms Amanda Linsley, Chief Executive Officer from Manawatū Chamber of Commerce, will give an update to the Committee on their work.

ATTACHMENTS

NIL

PALMERSTON NORTH CITY COUNCIL

Minutes of the Economic Development Committee Meeting Part I Public, held in the Council Chamber, First Floor, Civic Administration Building, 32 The Square, Palmerston North on 16 June 2021, commencing at 9.00am.

Members Present: Leonie Hapeta (in the Chair), and Councillors Brent Barrett, Susan Baty, Rachel Bowen, Zulfiqar Butt, Vaughan Dennison, Renee Dingwall, Lew Findlay QSM, Patrick Handcock ONZM, Orphée Mickalad, Bruno Petrenas, Aleisha Rutherford and Ruma Karaitiana.

Non Members: Lorna Johnson, Billy Meehan and Karen Naylor.

Apologies: The Mayor (Grant Smith) (council business).

12-21 Apologies

Moved Leonie Hapeta, seconded Vaughan Dennison.

The **COMMITTEE RESOLVED**

1. To receive the apologies.

Clause 12-21 above was carried 16 votes to 0, the voting being as follows:

For:
Councillors Leonie Hapeta, Brent Barrett, Susan Baty, Rachel Bowen, Zulfiqar Butt, Vaughan Dennison, Renee Dingwall, Lew Findlay QSM, Patrick Handcock ONZM, Lorna Johnson, Billy Meehan, Orphée Mickalad, Karen Naylor, Bruno Petrenas, Aleisha Rutherford and Ruma Karaitiana.

13-21 Public Comment

Ms Amanda Linsley, Chief Executive and Mr Rob Campbell, Chair of the Chamber of Commerce addressed the meeting concerning the new parking proposal for the CBD.

Mr Campbell and Ms Linsley spoke on the proposal to extend the paid parking hours contained in the 10 year plan (LTP) and the effect this would have on businesses, staff and shoppers in the city centre. A significant amount of feedback has been received outlining people's concerns including; the impact on customers, safety and security of staff, church goers and disabled people.

Business owners were particularly upset that no consultation had been undertaken by Council with them to discuss Sunday parking charges. The Manawatū Chamber of Commerce had spoken extensively with businesses in the city centre and none of them had been approached for comment. Those spoken to did not object to the parking rate increase only the extension of

paid hours.

Moved Leonie Hapeta, seconded Vaughan Dennison.

The **COMMITTEE RESOLVED**

That the public comment from Ms Amanda Lindsay, Chief Executive and Mr Rob Campbell, Chair of the Manawatū Chamber of Commerce be received for information.

Clause 13-21 above was carried 16 votes to 0, the voting being as follows:

For:
Councillors Leonie Hapeta, Brent Barrett, Susan Baty, Rachel Bowen, Zulfiqar Butt, Vaughan Dennison, Renee Dingwall, Lew Findlay QSM, Patrick Handcock ONZM, Lorna Johnson, Billy Meehan, Orphée Mickalad, Karen Naylor, Bruno Petrenas, Aleisha Rutherford and Ruma Karaitiana.

14-21 Presentation - The Factory

Presentation, by Mr Dave Craig (The Factory), Mr Stephen Bentley (Roller Blaster) and Mr Mike Creed (Morrison Creed Advisory).

Further information (Powerpoint presentation) was tabled at the meeting for circulation to Elected Members.

Mr Dave Craig (The Factory) provided an overview of The Factory and an update of what had taken place since their last presentation in December 2020.

Mr Stephen Bentley (Roller Blaster) was one of the Factory's success stories. He outlined how he heard about the Innovate programme on the radio and entered the initiative. Since then he has developed his commercial paint roller cleaning machine and is about to start discussions with distributors.

Mr Mike Creed (Morrison Creed Advisory) outlined to the Committee his role as a mentor in the programme. This was a way he could give back to the business community and promote Palmerston North as a successful place for people to live and work.

Moved Leonie Hapeta, seconded Vaughan Dennison.

The **COMMITTEE RESOLVED**

That the Economic Development Committee receive the presentation from Mr Dave Craig (The Factory), Mr Stephen Baty (Roller Blaster) and Mr Mike Creek (Morrison Creed Advisory) for information.

Clause 14-21 above was carried 16 votes to 0, the voting being as follows:

For:
Councillors Leonie Hapeta, Brent Barrett, Susan Baty, Rachel Bowen, Zulfiqar Butt, Vaughan Dennison, Renee Dingwall, Lew Findlay QSM, Patrick Handcock ONZM, Lorna Johnson, Billy Meehan, Orphée Mickalad, Karen Naylor, Bruno Petrenas, Aleisha Rutherford and Ruma

Karaitiana.

15-21 Confirmation of Minutes

Moved Vaughan Dennison, seconded Billy Meehan.

The **COMMITTEE RESOLVED**

That the minutes of the Economic Development Committee meeting of 17 March 2021 Part I Public be confirmed as a true and correct record.

Clause 15-21 above was carried 15 votes to 0, with 1 abstention, the voting being as follows:

For:
Councillors Leonie Hapeta, Susan Baty, Rachel Bowen, Zulfiqar Butt, Vaughan Dennison, Renee Dingwall, Lew Findlay QSM, Patrick Handcock ONZM, Lorna Johnson, Billy Meehan, Orphée Mickalad, Karen Naylor, Bruno Petrenas, Aleisha Rutherford and Ruma Karaitiana.

Abstained:
Councillor Brent Barrett.

16-21 Manufacturing Sector Profile - April 2021
Memorandum, presented by Peter Crawford, Economic Policy Advisor.

Moved Leonie Hapeta, seconded Patrick Handcock ONZM.

The **COMMITTEE RESOLVED**

That the memorandum titled 'Manufacturing Sector Profile – April 2021', presented to the Economic Development Committee on 16 June 2021, be received for information.

Clause 16-21 above was carried 16 votes to 0, the voting being as follows:

For:
Councillors Leonie Hapeta, Brent Barrett, Susan Baty, Rachel Bowen, Zulfiqar Butt, Vaughan Dennison, Renee Dingwall, Lew Findlay QSM, Patrick Handcock ONZM, Lorna Johnson, Billy Meehan, Orphée Mickalad, Karen Naylor, Bruno Petrenas, Aleisha Rutherford and Ruma Karaitiana.

17-21 Summary report on the March 2021 Palmerston North Quarterly Economic Monitor, Palmerston North Commercial Property Market Survey and quarterly retail spending
Memorandum, presented by Peter Crawford, Economic Policy Advisor.

Moved Leonie Hapeta, seconded Patrick Handcock ONZM.

The **COMMITTEE RESOLVED**

That the memorandum titled 'Summary report on the March 2021 Palmerston North Quarterly Economic Monitor, Palmerston North Commercial Property Market Survey, and quarterly retail spending', presented to the Economic Development Committee on 16 June 2021, be received for information.

Clause 17-21 above was carried 16 votes to 0, the voting being as follows:

For:
Councillors Leonie Hapeta, Brent Barrett, Susan Baty, Rachel Bowen, Zulfiqar Butt, Vaughan Dennison, Renee Dingwall, Lew Findlay QSM, Patrick Handcock ONZM, Lorna Johnson, Billy Meehan, Orphée Mickalad, Karen Naylor, Bruno Petrenas, Aleisha Rutherford and Ruma Karaitiana.

18-21 Inner City/CBD Portfolio Update (June 2021)

Memorandum, presented by Councillor Leonie Hapeta, Lead Portfolio Holder for Inner City/CBD.

Moved Vaughan Dennison, seconded Rachel Bowen.

The **COMMITTEE RESOLVED**

That the Inner City/CBD Portfolio update report for June 2021, presented to the Economic Development Committee on 16 June 2021, be received for information.

Clause 18-21 above was carried 16 votes to 0, the voting being as follows:

For:
Councillors Leonie Hapeta, Brent Barrett, Susan Baty, Rachel Bowen, Zulfiqar Butt, Vaughan Dennison, Renee Dingwall, Lew Findlay QSM, Patrick Handcock ONZM, Lorna Johnson, Billy Meehan, Orphée Mickalad, Karen Naylor, Bruno Petrenas, Aleisha Rutherford and Ruma Karaitiana.

19-21 Committee Work Schedule

Moved Brent Barrett, seconded Rachel Bowen.

The **COMMITTEE RESOLVED**

That the Economic Development Committee receive its Work Schedule dated 16 June 2021.

Clause 19-21 above was carried 16 votes to 0, the voting being as follows:

For:
Councillors Leonie Hapeta, Brent Barrett, Susan Baty, Rachel Bowen, Zulfiqar Butt, Vaughan Dennison, Renee Dingwall, Lew Findlay QSM, Patrick Handcock ONZM, Lorna Johnson, Billy Meehan, Orphée Mickalad, Karen Naylor, Bruno Petrenas, Aleisha Rutherford and Ruma Karaitiana.

The public part of the meeting finished at 10.01am.

Confirmed 15 September 2021

Chairperson

MEMORANDUM

TO: **Economic Development Committee**

MEETING DATE: **15 September 2021**

TITLE: **Summary report on the June 2021 Palmerston North Quarterly Economic Monitor and Major events held during the year to June 2021**

PRESENTED BY: **Peter Crawford, Economic Policy Advisor**

APPROVED BY: **David Murphy, Chief Planning Officer**

RECOMMENDATION(S) TO ECONOMIC DEVELOPMENT COMMITTEE

1. **That the report titled 'Summary report on the June 2021 Palmerston North Quarterly Economic Monitor and Major events held during the year to June 2021' presented to the Economic Development Committee on 15 September 2021, be received.**

1.1 This memorandum presents a summary of:

a. the key themes in the latest Palmerston North Quarterly Economic Monitor for the June 2021 quarter; and

b. A brief overview of major economic events held in the Manawatū region in the year to June 2021.

1.2 The latest Palmerston North Quarterly Economic Monitor report indicates a 4.8% increase in GDP in the City in the year ended June 2021. The high level of growth recorded partly reflects the level of recovery from the Covid-19 level-3 and 4 activity restrictions during the first half of 2020. Infometrics estimates GDP in the City increased by 12.9% in the June 2021 quarter, while New Zealand GDP increased by 16.7%. Infometrics' revised estimates for the June 2020 quarter show a decline of 4.2% in the City, while the decline for total GDP in New Zealand was 11.2%. The latest estimates are provisional and will be revised once annual labour force data is published next year.

1.3 The report includes new annual estimates for employment based on place of residence. The new estimates suggest there were 35,584 Palmerston North residents employed in the June 2021 quarter, increasing by 2.9% from the June 2020 quarter. The number of jobs in New Zealand increased by 1.2%.

1.4 The employment data does not capture the people who commute into the City for work. Statistics New Zealand will publish advance employee count

estimates on 9 September, based on place of work. However, previous advance place of work data has not been reliable, with the March 2021 estimates suggesting a loss of 3,324 jobs in Palmerston North between March 2020 and March 2021. The challenge with the advance data is the apportionment of employee data from businesses that operate across New Zealand.

1.5 Economic impact data for events in the Manawatū region in the year ended June 2021 shows a total net economic impact of $40 million from the events for which an estimate was provided. Events facilitated by CET Arena contributed $25 million in economic benefit (this does not include events held at CET Arena but facilitated by other organisations) and events facilitated by Sport Manawatū contributed nearly $8 million.

2. PALMERSTON NORTH QUARTERLY ECONOMIC MONITOR – JUNE

2.1 Infometrics estimates gross domestic product (GDP) in Palmerston North increased by 12.9% in the June 2021 quarter. New Zealand GDP is estimated to have increased by 16.7% in the quarter.

a. GDP in Palmerston North is estimated to have increased by 4.8% in the year ended June 2021. New Zealand GDP is estimated to have increased by 4.2%.

2.2 Infometrics estimates for employment suggest 35,584 people living in Palmerston North were employed in the June 2021 quarter, an increase of 1.2% from the June 2020 quarter, or an increase of 1,013 people. The number of people in employment in New Zealand was 1.2% higher than the previous year.

a. An average of 35,205 people living in Palmerston North were in employment in the year ended June 2021, an increase of 0.8% from the previous year. There was a 0.1% decline for New Zealand.

2.3 Annual median salaries and wages paid in Palmerston North in the year ended June 2020 were $54,500, increasing by 3.3% from the previous year, while median salaries and wages for New Zealand were $55,600, increasing by 2.6% from the previous year.

2.4 Total annual salaries and wages paid in Palmerston North in the year ended June 2020 were $2,944 million, increasing by 6.5% from the previous year, while annual salaries and wages for New Zealand were $136,816 million, increasing by 4.3% from the previous year.

2.5 The average quarterly worker turnover rate in Palmerston North in the year ended June 2020 was 12.8%, declining from 13.6% in the year to June 2019, while the average worker turnover rate for New Zealand was 14.8%, declining from 15.9% in the previous year.

2.6 Electronic card retail spending in Palmerston North in the June quarter was $333 million, an increase of 36.3% from the June 2020 quarter, while national growth increased by 37.1%. COVID-19 restrictions in 2020 resulted in a decline of 19.9% in the June quarter in Palmerston North, while national retail spending declined by 21.7%.

2.7 Annual electronic card retail spending in Palmerston North for the year ended June 2021 was $1,337 million, an increase of 12.6% from 2020. There was an increase of 8.7% for New Zealand.

2.8 The total value of building consents issued in Palmerston North in the June 2021 quarter was $142 million, compared with $147 million in the June 2020 quarter, a decline of 5%. National consent values increased by 33%.

a. Building consents to the value of $373 million were issued in Palmerston North in the year to June 2021, an increase of 1.5% from the previous year. National consent values increased by 18% over the year to June 2021.

b. Consents for 162 new residential dwellings were issued in Palmerston North in the June 2021 quarter, compared with 202 in the June 2020 quarter, a decline of 20%. National consents increased by 36% from 2020.

c. Consents for 513 new residential dwellings were issued in Palmerston North in the year ended June 2021, compared with 565 in the previous year, a decline of 9.2%. National consents increased by 18%.

a. Non-residential consents to the value of $158 million were issued in Palmerston North during the year to June 2021, a decline of 8% from the previous year. National consents increased by 13% over the same period.

2.9 The average value of residential properties in Palmerston North was $705,306 in the three months ended June 2021, an increase of 38.6% (increase of $196,590) from the June 2020 quarter (QV estimate). The average value for New Zealand was $906,532, an increase of 22.8%. The values used in the Infometrics report are an average of the past 12 months and are based on REINZ house sales data.

2.10 Car registrations in Palmerston North increased by 8.2% in the year ended June 2021 (national registrations increased by 2.5%) while the number of commercial vehicles registered declined by 4.1% (compared to a national increase of 9.1%).

2.11 It is estimated the annual average unemployment rate in Palmerston North in the year ended June 2021 was 4.3%, which was below the unemployment rate of 4.7% for New Zealand.

2.12 The number of people in Palmerston North registered for the MSD Job Seekers benefit declined by 5.5% in June 2021 from June 2020, while the number in New Zealand declined by 0.1%. The MSD benefit numbers reported in the Infometrics report are based on the average of the last four quarters.

2.13 Traffic flows in Palmerston North in the year to June 2021 increased by 15.8% from 2020, while there was an increase of 9.6% for New Zealand.

2.14 Electronic card tourism spending in Palmerston North was $277 million in the year ended June 2021, increasing by 19.5% from the previous year. New Zealand increased by 5.4%.

a. Domestic visitor spending in Palmerston North was $268 million in the year ended June 2021, increasing by 22.8% from the previous year (29.9% increase for New Zealand).

b. International visitor spending in Palmerston North was $11 million in the year ended June 2021, declining by 27% from the previous year (69% decline for New Zealand).

2.15 The number of health enrolments in Palmerston North averaged 82,442 people in the year to June 2021, an increase of 1.3% from the previous year, or 1,038 people. The number of people enrolled in New Zealand also increased by 1.3%.

2.16 The Palmerston North Quarterly Economic Monitor report for the June 2021 quarter is attached as Appendix 1.

3. MAJOR ECONOMIC EVENTS HELD IN YEAR TO JUNE 2021

3.1 Event information received from the City Council Events team, Sport Manawatū, Central Energy Trust Arena, Manfeild, Manawatū District and the Regent on Broadway shows a total net economic impact of events of $40 million in the year to June 2021. Total Palmerston North City and Manawatū District Council funding for economic and community events was $1,058,852 in the last year. Economic impact estimates were not provided for events at the Regent, most Manfeild events and the Rural Games.

3.2 COVID-19 restrictions during the last 12 months impacted on events in the region. Level-2 restrictions were in force between 12 August to 21 September, 14 February to 17 February and 28 February to 7 March.

3.3 A response was not received from the Globe Theatre by the deadline for completing the report.

3.4 Responses received from organisations are included in Appendix 2 attached.

4. COMPLIANCE AND ADMINISTRATION

Does the Committee have delegated authority to decide? If Yes quote relevant clause(s) from Delegations Manual 166	**Yes**
Are the decisions significant?	**No**
If they are significant do they affect land or a body of water?	**No**
Can this decision only be made through a 10 Year Plan?	**No**
Does this decision require consultation through the Special Consultative procedure?	**No**
Is there funding in the current Annual Plan for these actions?	**No**
Are the recommendations inconsistent with any of Council's policies or plans?	**No**
The recommendations contribute to Goal 1: An Innovative and Growing City	
The recommendations contribute to the achievement of action/actions in Economic Development The action is: Implement Inward Investment Strategy	
Contribution to strategic direction and to social, economic, environmental and cultural well-being	Reporting on economic trends in the city and Manawatū region, and the longer-term outlook for growth, is important for encouraging local businesses to invest in growing their business and attracting new businesses to the city.

ATTACHMENTS

1. Palmerston North Quarterly Economic Monitor - June 2021 ⇩
2. Major events held in the Manawatū region in the year ended June 2021 ⇩

Infometrics

Quarterly Economic Monitor

Palmerston North City June 2021

Overview of Palmerston North City

Economic recovery in Palmerston North continues to outpace the national average with Infometrics provisionally estimating that economic activity in the city grew 4.8%pa in the June 2021 year compared with 4.2%pa nationally. It has been a mixed bag in employment terms with employment of Palmerston North residents growing just 0.8%pa in the June 2021 year. Job gains in construction, healthcare and professional, scientific and technical services have been offset by job losses in admin and support services, and financial and insurance services. Despite weak job growth, the City's unemployment rate has remained low through the last 12 difficult months. The number of Jobseeker Support Recipients is also trending downwards from a recent high of 3613 in the December 2020 quarter to 3171 in the June 2021 quarter – a fall of 12%. On an annualised basis, Jobseeker Support recipients grew 17%pa, but this is comparing the year to June 2021 with the year to June 2020.

Consumer spending in Palmerston North rose 11%pa in the June 2021 year, an abnormally strong result because the previous year includes the lockdown-affected June 2020 quarter. Tourism spending grew 19% in the June 2021 year, a result which was also influenced by the lockdown-affected June 2020 quarter, but also emphasises the strength of domestic tourism in the city.

Worryingly, house price inflation in Palmerston North accelerated to 38% in the June 2021 quarter. House sales are close to their 10-year average. Residential consents, despite falling 9.2% in the June 2021 year, have been strong in the March and June 2021 quarters. If consents result in more properties entering the market, this could help keep the lid on further house price rises.

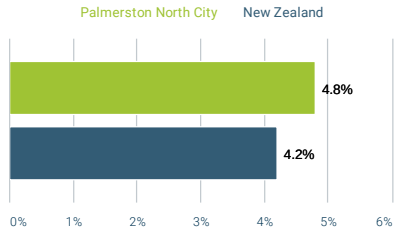
Non-residential consents are at historically high levels, despite falling 8.0% in the June 2021 year. Two-thirds of non-residential consents in the June 2021 quarter were for factory and industrial buildings.

Indicator	Palmerston North City	Manawatū-Whanganui Region	New Zealand
Annual Average % change			
Gross domestic product (provisional)	4.8 % ▲	4.8 % ▲	4.2 % ▲
Traffic flow	15.8 % ▲	14.3 % ▲	9.6 % ▲
Consumer spending	11.2 % ▲	10.5 % ▲	7.7 % ▲
Employment (place of residence)	0.8 % ▲	1.1 % ▲	-0.1 % ▼
Jobseeker Support recipients	17.3 % ▲	15.0 % ▲	27.7 % ▲
Tourism expenditure	19.2 % ▲	16.9 % ▲	5.4 % ▲
Health enrolments	1.3 % ▲	1.0 % ▲	1.3 % ▲
Residential consents	-9.2 % ▼	6.7 % ▲	17.8 % ▲
Non-residential consents	-8.0 % ▼	14.1 % ▲	13.1 % ▲
House values *	38.2 % ▲	39.4 % ▲	27.3 % ▲
House sales	14.5 % ▲	15.5 % ▲	39.7 % ▲
Car registrations	8.2 % ▲	11.6 % ▲	2.5 % ▲
Commercial vehicle registrations	-4.1 % ▼	10.6 % ▲	9.1 % ▲
Level			
Unemployment rate	4.3 %	4.5 %	4.7 %

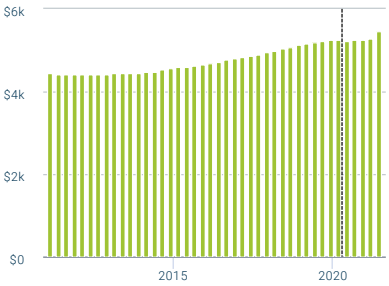
* Annual percentage change (latest quarter compared to a year earlier)

Gross domestic product

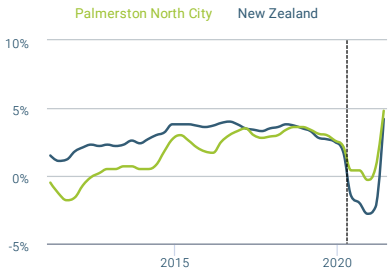
Gross domestic product growth (provisional)
Annual average % change June 2020 - June 2021



Gross domestic product ($m)
Annual level, Palmerston North City



Gross domestic product growth
Annual average % change



Highlights for Palmerston North City

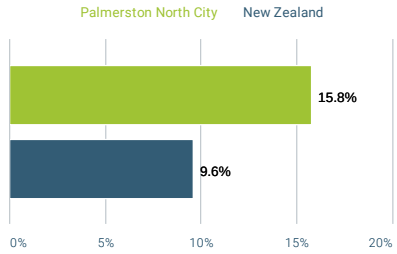
- GDP in Palmerston North City was provisionally up 4.8% for the year to June 2021 compared to a year earlier. Growth was higher than in New Zealand (4.2%).
- Provisional GDP was $5,458 million in Palmerston North City for the year to June 2021 (2020 prices).
- Annual GDP growth in Palmerston North City peaked at 4.8% in the year to June 2021.

National overview

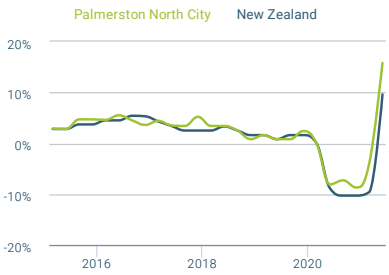
Economic activity across New Zealand continues to press higher still, with supply chain issues and skills shortages threatening to limit further growth. Provisional estimates from Infometrics show economic activity up a whopping 17%pa in the June 2021 quarter to take year-end growth to 4.2%. However, the strength in activity is clouded by the comparison June 2020 period including the nearly five-week Alert Level 4 lockdown. Compared to June 2019, economic activity is sitting 3.7% higher, with further expansion seen since the surprisingly strong result in March 2021. Strong construction activity, coupled with higher healthcare and manufacturing activity, are leading the continued improvement in economic activity. Although short-term headwinds may restrict growth going forward, risks to longer-term growth also persist as the economy overheats and drags future growth into the here and now. Higher interest rates in response to booming economic activity might well cool down the economy into 2022, towards more sustainable levels.

Traffic flow

Annual change in traffic flows
Annual average % change June 2020 - June 2021



Traffic volume growth
Annual average % change



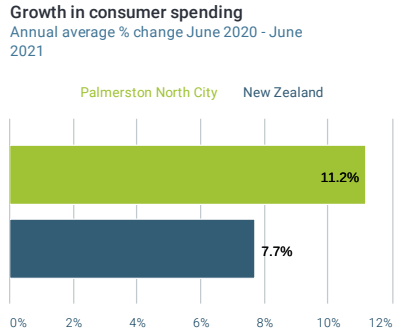
Highlights for Palmerston North City

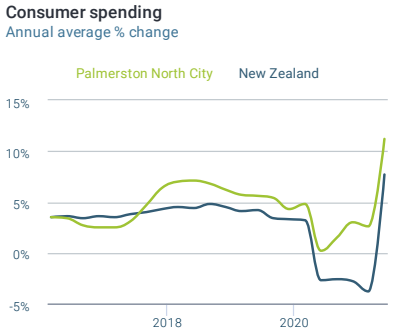
- Traffic flows in Palmerston North City increased by 15.8% over the year to June 2021. This compares with an increase of 9.6% in New Zealand.

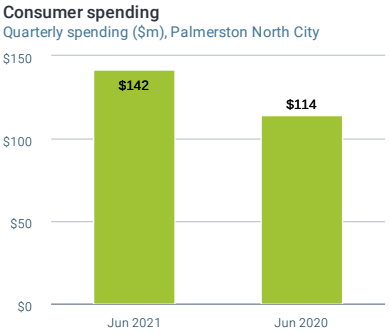
National overview

Traffic activity rose 9.6%pa over the 12 months to June 2021, as the plunge in traffic movements during Alert Level 4 drop out of the numbers. June 2021 quarter traffic flows were sitting 2.6% higher than June 2019 quarter, indicating the strengthening level of traffic movements across the country. Traffic activity remains generally stronger across the North Island, with softer growth in the South Island. Changes to current economic drivers, including across tourism, construction, primary sector, manufacturing, and freight continue to be felt.

Consumer spending







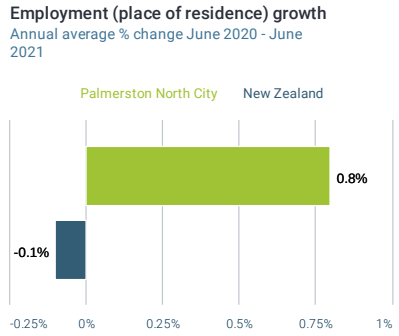
Highlights for Palmerston North City

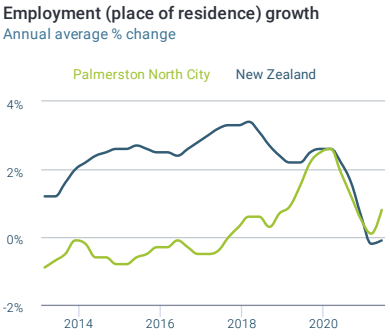
- Electronic card consumer spending in Palmerston North City as measured by Marketview, increased by 11.2% over the year to June 2021 compared to the previous year. This compares with an increase of 7.7% in New Zealand.

National overview

Spending activity across New Zealand continued to rise in the June 2021 quarter, with strong demand conditions across the economy. Spending rose 33%pa in the quarter to take year-end growth to 7.7%pa according to Marketview data. However, this roaring growth is heavily exaggerated by comparing to the 12 months to June 2020 which includes the nearly five-week Alert Level 4 period. Underlying spending growth remains strong, just not that strong, with June 2021 spending up 6.5% compared to the June 2019 quarter. Unsurprisingly, main urban centres and tourism-based economies continue to show slower growth than other parts of New Zealand.

Employment (place of residence)

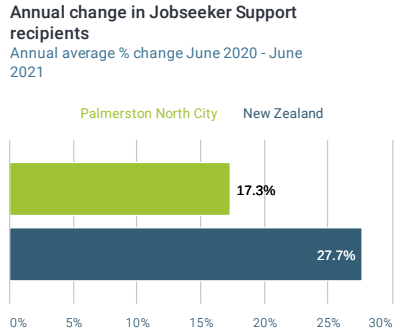


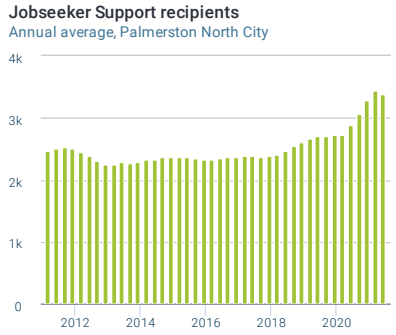


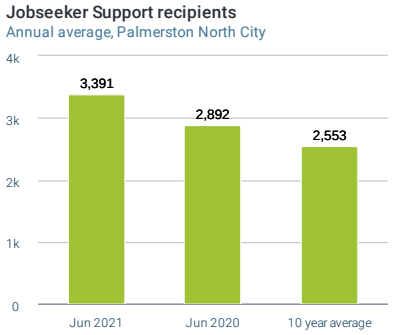
Highlights for Palmerston North City

- Employment for residents living in Palmerston North City was up 0.8% for the year to June 2021 compared to a year earlier. Growth was higher than in New Zealand (-0.1%).
- An average of 35,205 people living in Palmerston North City were employed in the year to June 2021.
- Annual employment growth for Palmerston North City residents peaked at 2.6% in the year to March 2020.

Jobseeker Support recipients







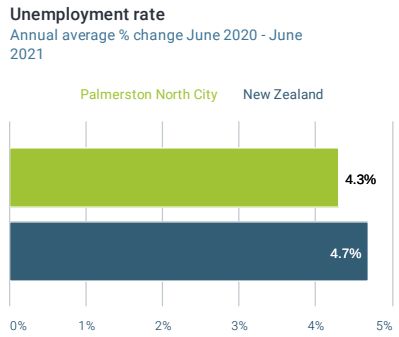
Highlights for Palmerston North City

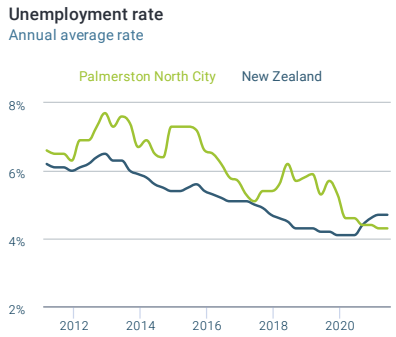
- Jobseeker Support recipients in Palmerston North City in the year to June 2021 increased by 17.3% compared with previous year. Growth was lower relative to New Zealand (27.7%).
- An average of 3,391 people were receiving a Jobseeker Support benefit in Palmerston North City in the 12 months ended June 2021. This compares with an average of 2,553 since the start of the series in 2012.

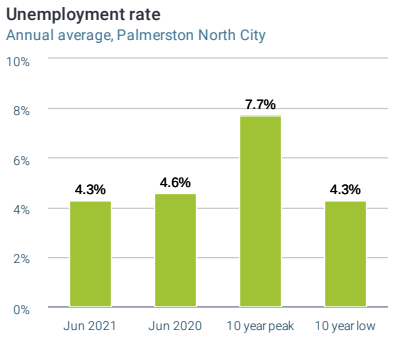
National overview

Jobseeker Support recipients continue to fall, reflecting a continued improvement in the jobs market and work by government and local job brokers to support better employment outcomes. June 2021 quarter recipient numbers were sitting at 190,260, 0.1% lower than in June 2020, after the bulk of additions to benefit support occurred. Continued falls in quarterly figures, coupled with the June 2020 skyrocket falling out of the current year numbers, means average Jobseeker Support recipients over the last 12 months have stabilised and will show reductions in future quarters. Jobseeker Support recipients remain substantially above pre-pandemic levels, with 54,000 more people on this benefit in June 2021 than in June 2019. With the jobs market strong, issues around skills matching are expected to become more pertinent.

Unemployment rate







Highlights for Palmerston North City

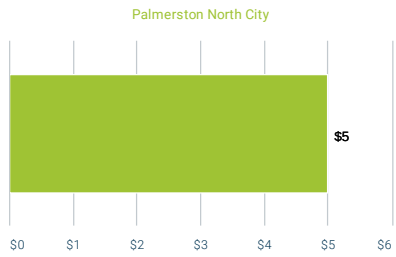
- The annual average unemployment rate in Palmerston North City was 4.3% in June 2021, down from 4.6% 12 months earlier.
- The unemployment rate in Palmerston North City was lower than in New Zealand (4.7%) in June 2021.
- Over the last ten years the unemployment rate in Palmerston North City reached a peak of 7.7% in December 2012.

National overview

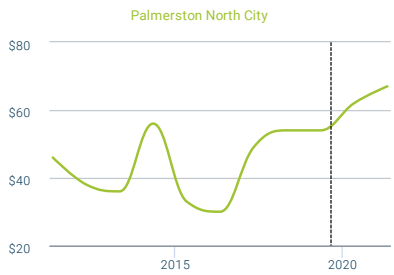
The unemployment rate plunged to 4.0% on a seasonally adjusted basis in June 2021, as the underutilisation rate also dropped to 10.5%. The fall in the unemployment rate was the sharpest drop on record over the last 35 years, underscoring the substantial improvement in the labour market. The sharp tightening also highlights the pressures faced to meet rampant demand even as the supply of skills remains restricted. The strong labour market performance backs up lower spare capacity in the jobs market, with strong filled jobs growth in June, record job ads, and businesses reporting both the most difficult period to find workers, and highest levels of job churn, on record. Pay increases rose in response, with more pressure on wages expected throughout 2021.

Dairy payout

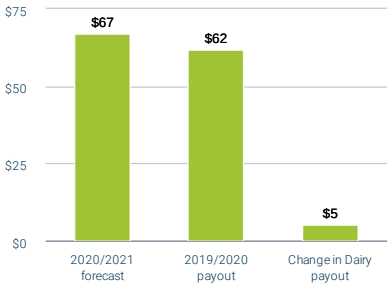
Total dairy payout (provisional)
Change ($m) between 2019/2020 and 2020/2021 seasons



Total dairy payout
$m each season, Palmerston North City



Total dairy payout
$m each season, Palmerston North City



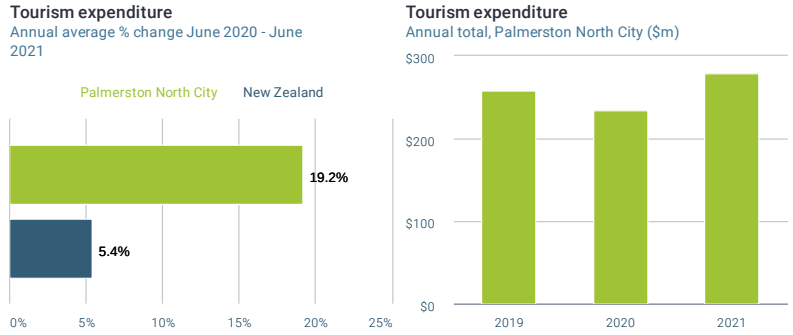
Highlights for Palmerston North City

- Palmerston North City total dairy payout for the 2019/2020 season is estimated to have been approximately $62 million.
- Palmerston North City's dairy payout for the 2020/2021 season is expected to be approximately $67 million, $5 million higher than last season, assuming that production levels from last season are maintained.
- The total dairy payout for New Zealand is estimated to have been approximately $13,537 million in the 2019/2020 season, and is expected to be $1,168 million higher in the 2020/2021 season.

National overview

Dairy sector activity remains robust, with commodity prices coming off their peaks in recent months. Milk production across the country has been stronger than expected, with milk volumes sitting 2.6%pa higher in the 2020/21 season. Higher milk volumes have seen milk prices soften a touch for the season ahead and have also seen Fonterra narrow their farmgate milk price to $7.45-$7.65/kgms. This $7.55/kgms midpoint is 5c below the previous midpoint, but the higher milk collection means our pay-out estimate has edged up 0.6% for the 2020/21 season from our March update, with $14.7b now expected. This pay-out would be around $1.2b (8.6%) higher than the 2019/20 season. We expect the 2021/22 season pay-out to decline slightly from the current expected estimate given supply levels.

Tourism expenditure



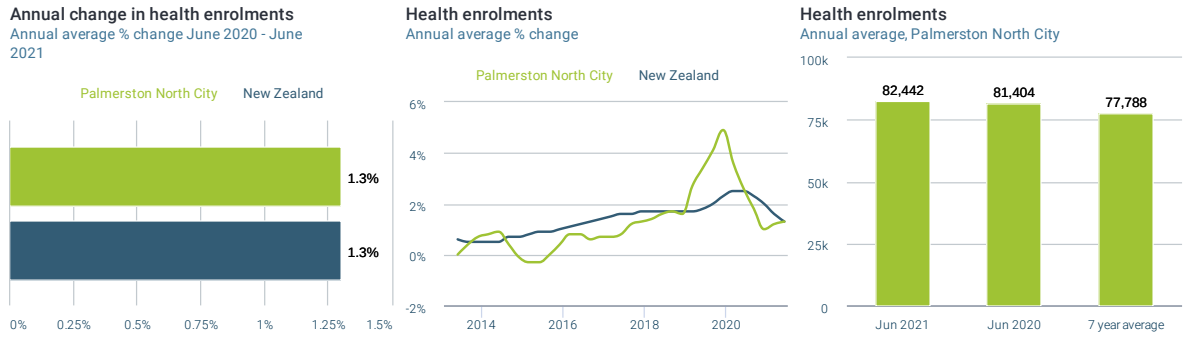
Highlights for Palmerston North City

- Total tourism expenditure in Palmerston North City increased by 19.2% in the year to June 2021. This compares with an increase of 5.4% in New Zealand.
- Total tourism expenditure was approximately $279 million in Palmerston North City during the year to June 2021, which was up from $234 million a year ago.

National overview

Total visitor spending over the 12 months to June 2021 was sitting 5.4% higher than in 2020 – a period that included the Alert Level 4 period when tourism was non-existent. This growth overemphasises the position of the tourism sector, but robust tourism activity is supporting spending. Relative to 2019 levels, total tourism spending is 5.2% lower, with international spending down 73%, but domestic tourism spending up nearly 18% from pre-pandemic levels. The Trans-Tasman bubble helped for a period but hopes for further recovery in tourism activity was dashed as the bubble popped and looks unlikely to reopen any time soon.

Health enrolments



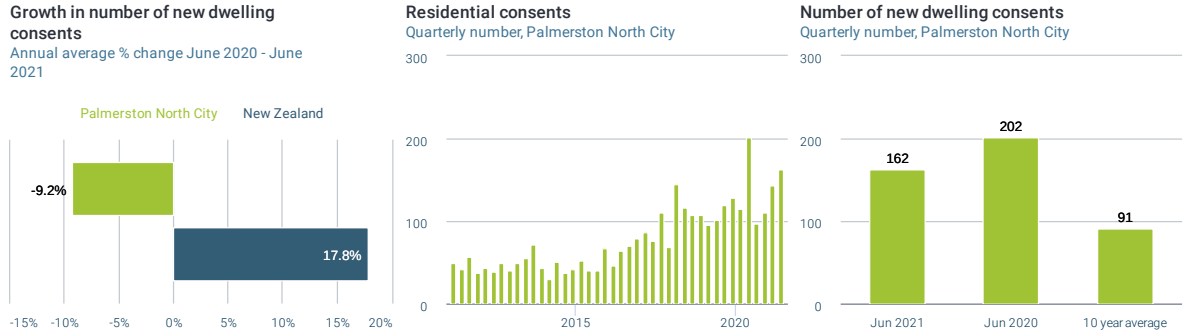
Highlights for Palmerston North City

- The number of people enrolled with a primary health organisation in Palmerston North City in the year to June 2021 increased by 1.3% compared with previous year. Growth was the same as in New Zealand (1.3%).
- An average of 82,442 people were enroled with primary healthcare providers in Palmerston North City in the 12 months ended June 2021. This compares with an average of 77,382 since the start of the series in 2014.

National overview

Slower population growth is evident across New Zealand as the collapse in net migration continues. Health enrolments rose by 1.0% in the June 2021 quarter compared to June 2020, the slowest pace in six years. This continued slowdown dragged year-end growth to 1.3%, considerably lower than the 2.5%pa growth seen in early 2020. The lack of migration into New Zealand has contributed to the pressures in the labour market, with the lack of skilled workers severely impacting a number of sectors. MIQ allocations are if anything lower than previously which will keep a low cap on arrivals into New Zealand.

Residential consents



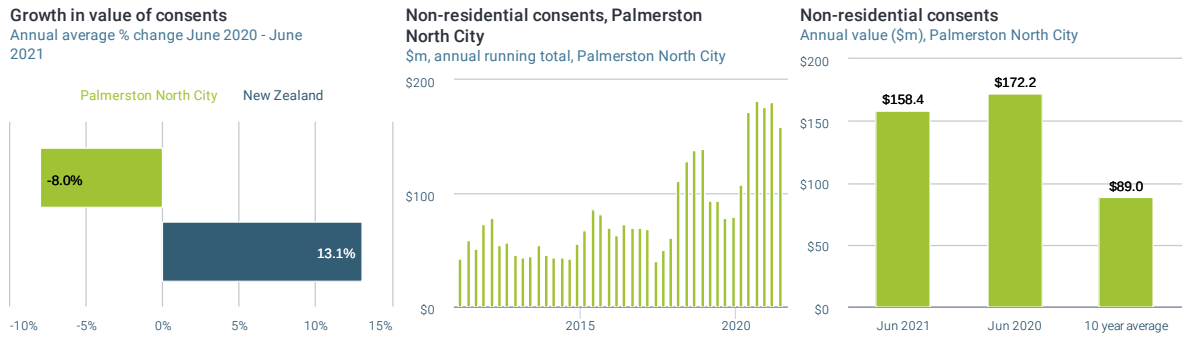
Highlights for Palmerston North City

- A total of 162 new residential building consents were issued in Palmerston North City in the June 2021 quarter, compared with 202 in the same quarter last year.
- On an annual basis the number of consents in Palmerston North City decreased by 9.2% compared with the same 12-month period a year ago. This compares with an increase of 17.8% in New Zealand over the same period.

National overview

Residential building consents continue to climb to new record highs. Annual dwelling consents are sitting at 44,299 in the year to June 2021, up a staggering 18% compared to the year prior. Sustained and rampant house price growth has highlighted the need for more housing stock. Additionally, new government policy has been implemented to encourage investors to build new housing. We expect consents to maintain their strength over the remainder of the year, but capacity constraints are becoming a more pressing issue to convert these consents into actual building activity.

Non-residential consents



Highlights for Palmerston North City

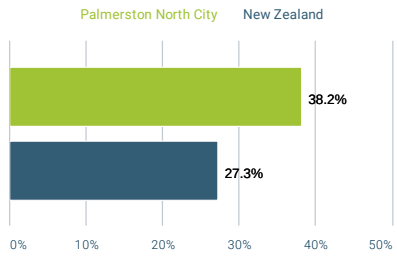
- Non-residential building consents to the value of $158.4 million were issued in Palmerston North City during the year to June 2021.
- The value of consents decreased by 8% over the year to June 2021. By comparison the value of consents increased by 13.1% in New Zealand over the same period.
- Over the last 10 years, consents in Palmerston North City reached a peak of $181.7 million in the year to September 2020.

National overview

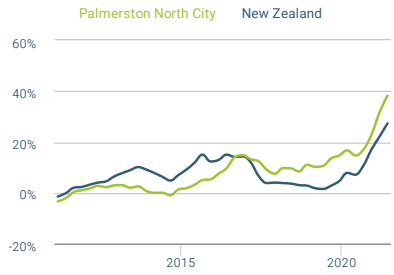
The value of non-residential building consents climbed 13% over the year to June 2021. Factory building consents have continued to show strength over the past year. Uncertain international supply chains and rising freight costs provide a strong argument for self-reliance and have helped encourage new factory building. Public consents have also shown incredible strength over the past year, particularly for education, hospitals, and social, cultural, and religious building consents. Strong fiscal stimulus to support the economy coming out of lockdown has helped boost public consents by 51% over the year to June 2021.

House values

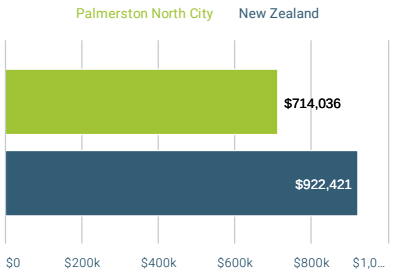
Annual change in house value
Annual % change in house value June 2020 - June 2021



House value growth
Annual % change



Average current house value
Average house value in June 2021 quarter



Highlights for Palmerston North City

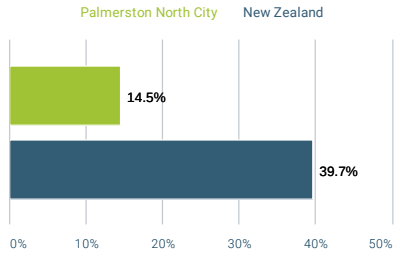
- The average current house value in Palmerston North City was up 38.2% in June 2021 compared with a year earlier. Growth outperformed relative to New Zealand, where values increased by 27.3%.
- The average current house value was $714,036 in Palmerston North City in June 2021. This compares with $922,421 in New Zealand.

National overview

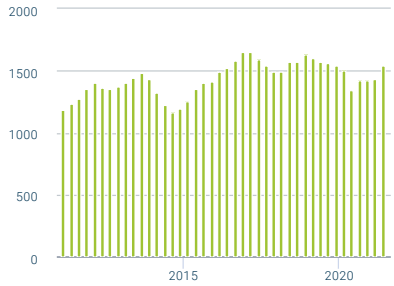
House prices continue their rampant run across the country, with house price growth reaching 27% in June 2021. Record low interest rates have encouraged many buyers into the market, with the low rates keeping mortgage repayments affordable despite record prices. As sales outstrip listings, a lack of supply is contributing to pushing up prices further. In recent months, sustained inflation in the economy has become a much more pressing issue, which will likely lead to an increase in the Official Cash Rate sooner than initially thought, and therefore higher mortgage rates, which may contribute to helping slow house price growth.

House sales

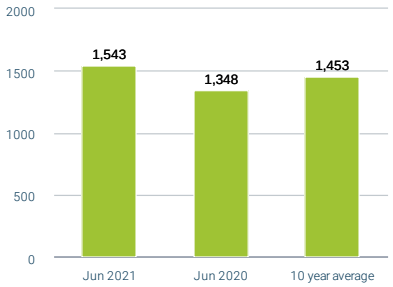
Annual change in house sales
Annual average % change June 2020 - June 2021



House sales
Annual number, Palmerston North City



House sales
Annual number, Palmerston North City



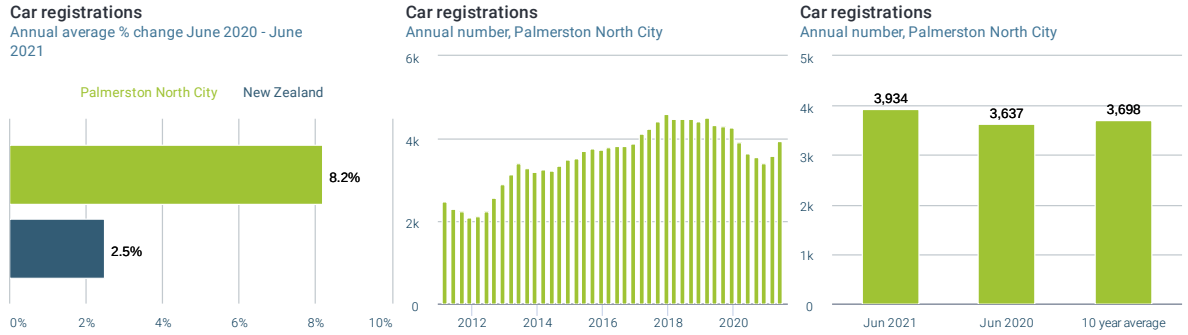
Highlights for Palmerston North City

- House sales in Palmerston North City in the year to June 2021 increased by 14.5% compared with the previous year. Growth underperformed relative to New Zealand, where sales increased by 39.7%.
- A total of 1,543 houses were sold in Palmerston North City in the 12 months ended June 2021. This compares with the ten year average of 1,453.

National overview

House sales have grown 40% over the year to June, a growth rate exaggerated by lower sales during Alert Level restrictions in the first half of 2020. Record low interest rates have encouraged buyers into the market. Rampant sales over the past year have meant supply has been unable to keep up with demand. As a result, in recent months house sales have started to show signs of a slowing trend. As prices are continuing their growth, it becomes obvious this slowing of sales is driven by a limited number of listings available for purchase, rather than a drop off in demand. This lack of supply is only contributing to further house price growth.

Car registrations



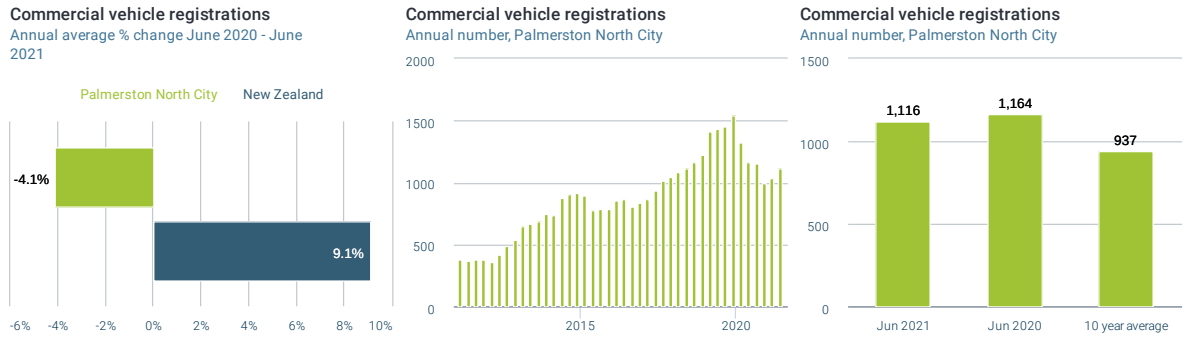
Highlights for Palmerston North City

- The number of cars registered in Palmerston North City increased by 8.2% in the year to June 2021 compared with the previous 12 months. Growth was higher than in New Zealand (2.5%).
- A total of 3,934 cars were registered in Palmerston North City in the year to June 2021. This compares with the ten year average of 3,698.

National overview

Passenger car registrations rose 2.5%pa in the 12 months to June 2021, as the fall in registrations during Alert Level 4 in 2020 moves out of the numbers. The underlying trend for car registrations is continuing to strengthen, with June 2021 quarter registrations sitting just 1.3% lower than 2019 levels. Registrations still have a way to go, with June 2021 year registrations of just under 231,000 still sitting nearly 7% below the 10-year average. Demand for vehicles remains strong, but supply chain issues have hampered registrations, forcing car prices to rise. Stronger demand for EVs is apparent since the government's new rebate was introduced, but its unknown yet how the introduction in 2022 of fees on high-emitting vehicles might influence the market.

Commercial vehicle registrations



Highlights for Palmerston North City

- The number of commercial vehicles registered in Palmerston North City decreased by 4.1% in the year to June 2021 compared with the previous 12 months. Growth was lower than in New Zealand (9.1%).
- A total of 1,116 commercial vehicles were registered in Palmerston North City in the year to June 2021. This is higher than the ten year annual average of 937.

National overview

Commercial vehicle registrations have shown continued strength in 2021, with annual registrations of over 54,600 sitting 9.1% higher than in 2020. Stronger economic activity across construction, retail, primary sector, manufacturing, and freight sectors have boosted commercial vehicle needs, and annual registrations are sitting 8% clear of the 10-year average. Relative to 2019 levels, current registrations look a touch weaker, but the last few years prior to COVID-19 showed exceptionally strong registration levels. Sustained strong economic conditions are expected to keep registration levels up, and recent government moves may bolster light commercial registration numbers in 2021 ahead of new fees being added to high-emitting vehicles in 2022.

Technical Notes

Building Consents

Building consents data is sourced from Statistics New Zealand. The number of residential consents issued for new dwellings is the measure for residential consents. For non-residential consents, the measure is the value of both new buildings and alterations.

Consumer Spending

The consumer spending data is sourced from Marketview. It measures total electronic card spending using spending through the Paymark network and adding to it an estimate of non-Paymark network spending using the pattern of BNZ card holder spending at non-Paymark retailers. For further breakdown of the data by storetype and other variables contact Marketview.

Employment (place of residence)

Employment data is based off a range of Stats NZ employment datasets, and represents the number of filled jobs, based on the area of residential address for the employee (rather than workplace address). This place of residence location means that the employment series reflects trends in employment of an area's residents, which may be different to trends in employment at businesses in an area, particularly when there are strong commuting flows. The most recent quarter is based off the average of Monthly Employment Indicator (MEI) filled jobs from Statistics New Zealand for the past three months, with previous quarters being backcasted using the percentage change in the quarterly Business Data Collection dataset published by Statistics New Zealand.

Gross Domestic Product

Gross Domestic Product is estimated by Infometrics. A top down approach breaks national industrial production (sourced from production based GDP measures published by Statistics New Zealand) is broken down to TA level by applying TA shares to the national total. Each TA's share of industry output is based on earnings data from LEED. GDP growth in recent quarters is based on a model which uses the various partial economic indicators presented in this report as inputs. Estimates of GDP for these most recent quarters are provisional until Infometrics updates its annual GDP series in the Regional Economic Profile at the beginning of each year. Gross domestic product is measured in 2020 dollar terms.

Health Enrolments

Health enrolments are sourced from the Ministry of Health. They record the number of people in each area who are enrolled with a Primary Health Organisation (PHO). Enrolment is voluntary, but most New Zealanders enrol at a general practice for health reasons and for the benefits of enrolment, such as cheaper doctors' visits and reduced costs of prescription medicines. Changes to how the Ministry of Health recorded this data led to Infometrics revising our approach to health enrolment figures for the March 2019 Quarterly Economic Monitor onwards. Our new approach completely revises our timeseries of health enrolments, so care should be taken when comparing the March 2019 report with previously downloaded reports.

Previously, the data provided was only for those people whose addresses are able to be accurately recorded by the Ministry of Health. We have now switched to breaking down TA-level health enrolments based on trends in stated health enrolments by area, to ensure that the total number of enrolees published in the Monitor align with the national-level figures published by the Ministry of Health. A new system for classifying and recording health enrolment addresses from March 2019 onwards by the Ministry means significantly higher numbers of unallocated enrolees, resulting in the need to review our model.

House Sales

The number of house sales is sourced from REINZ. The indicator measures the number of house sales at the point when the sale becomes unconditional. The unconditional date is the date when all the terms of an agreement have been satisfied and the sale and purchase can proceed to settlement.

House Values

House values (dollar value) are sourced from CoreLogic. The levels quoted in the report are average values for the quarter.

Jobseeker Support Recipients

In July 2013 the New Zealand's welfare system changed to better recognise and support people's work potential. As part of this the Jobseekers Support benefit was introduced. This benefit is for people who can usually look or prepare for work but also includes people who can only work part-time or can't work at the moment, for example, because they have a health condition, injury or disability.

Data presented for the September 2013 quarter onwards is provided by the Ministry of Social Development (MSD). Data prior to September 2013 are Infometrics estimates based on re-grouping pre-July 2013 benefit categories to be consistent with the post-July 2013 benefit categories. The pre-July 2013 benefit categories used to estimate the number of Jobseekers Support recipients are: Unemployment Benefit and Unemployment Benefit Hardship; Unemployment Benefit Training and Unemployment Benefit Hardship Training; Sickness Benefit and Sickness Benefit Hardship; Domestic Purposes Benefit - Sole Parent (if youngest child is 14 or over); Women Alone and Widow's Benefit (without children or with children 14 or over)

Tourism Expenditure

New Tourism Electronic Card Transactions (TECTs) are an interim replacement for the Monthly Regional Tourism Estimates (MRTEs). We have removed our previous timeseries of MRTEs and published the three annual snapshots provided in the TECTs. The TECTs reflect the expenditure for all electronic card transactions (ECTs) in New Zealand related to tourism. Marketview use a base of spending on the Paymark network (approximately 70 per cent of total ECT spend) to scale up to total ECT spend.

Traffic Flow

Traffic flow growth rates are calculated from the number of vehicles passing approximately 110 sites monitored by New Zealand Transport Agency. Each of the sites has been mapped to a territorial authority.

Unemployment Rate

Regional level unemployment rates are sourced from Statistics New Zealand's Household Labour Force Survey. Trends in the number of Jobseekers are used to break down regional unemployment rates to TA levels. The TA level unemployment rates are benchmarked on census following the release of each census. To reduce volatility the unemployment rate is presented as an average for the last four quarters.

Vehicle Sales

Car and commercial vehicle sales data are sourced from New Zealand Transport Authority. Sales are based on new registrations which include the first time registration of new vehicles and used vehicles imported from overseas.

Weekly Rents

Rents ($ per week) are averaged across the quarter in question from monthly rental data sourced from MBIE. Rental data pertains to averages from data collected when bonds are lodged and does not control for specifications of the home (eg. size, number of bedrooms, age of home, etc).

ITEM 8 - ATTACHMENT 1

Overview of events held in the Manawatū region in the year ended June 2021		
Event facilitator	Estimated economic impact	Council funding
PNCC Events Team[1]	$867,245	$763,538
Sport Manawatū	$7,865,560	$227,864
CET Arena	$25,000,000	$0
Regent	Not estimated	$0
CEDA	$349,800	$50,000
Manfeild[2]	Not estimated	$0
Manawatū District	$5,987,032	$17,450
Total	$40,069,637	$1,058,852

1. Economic benefit not estimated for the Rural Games

2. Economic benefit not estimated for most events. The Central Districts Field Days are covered in the Manawatū District response

A response was not received in time from the Globe Theatre

Palmerston North City Council Events Team events during the year ended June 2021

Dates	Event	Venue	Brief description of event	Increase in regional income	Participants/ spectators		Visitor nights	Council financial contribution
					Local	Visitors		
20-27/09/2020	Moon Festival	The Library, Globe Theatre	Cultural Festival Celebrating the tradiitional Autumn Moon Festival	$0	800		0	5,100
29/10-1/11/2020	Jazz Festival (Decanted)	Globe Theatre	Reduced and rescheduled Jazz and Blues Festival, impacted by Covid	$40,000	300	20		30,000
31/10/2020	Dia de los Muertos (Palmy Unleashed)	Youth Space	Mexican day of the dead celebration	$5,000	400	0	0	5,000
5/11/2020	Fireworks over the Rover	River Walkway	Guy Fawkes 15 minute public fireworks display	$8,000	5,000		0	15,000
7/11/2020	Diwali in The Square	Te Marae o Hine - The Square	Public stage performances and food vendor event to celebrate Diwali	$15,000	1,000		0	5,100
11/11/2020	Armistice Day	Te Marae o Hine - The Square	Military Commemeration	$4,700	300		0	4,700
12/11/2020	Downtown Winter Market (Palmy Unleashed)	Downtown	Craft, food and activitiy market to provide post-covid retail activiation and activity	$9,545	3,137		0	1,538
14/11/2020	Kōanga Spring Bonfire	Ahimate Reserve	Bonfire and performances	$3,000	1,500		0	15,000
3-6/12/2020	A Very Palmy Christmas	Te Marae o Hine - The Square	Tree Lighting, Ice Rink, Concert and Parade	$130,000	4,000		0	125,000
31/12/2020	New Year's Eve	Te Marae o Hine - The Square	Concert	$110,000	7,000		0	95,000
22-25/1/2021	Manawatu Cycling Spree	Various	Gravel and Tar UCI Classic, Over The Line finish line activation	$100,000	1,000		2	42,000
13/02/2021	Lunar New Year	Te Marae o Hine - The Square	Cultural Festival Celebrating the tradiitional east asian Lunar New Year	$6,000	800		0	5,100
17-21/2/201	Papaioea Festival of The Arts	Various	Arts Festival	$70,000	1,000		1	65,000
24-27/2/2021	Festival of Cultures	Te Marae o Hine - The Square	World Fair, stalls, stage programme, lantern festival and wrap around events	$130,000	17,000		0	110,000
12-14/3/2021	Rural Games	Te Marae o Hine - The Square	Rural sporting events and activations		20,000	10,000	2	65,000
18/04/2021	Explore Esplanade Day	Victoria Esplanade	Commnuity Event, performances, craft and food stalls	$90,000	8,000		0	70,000
25/05/2021	Anzac Day	Te Marae o Hine - The Square	Military Commemeration	$0	3,000		0	35,000
3-8 June 2021	Jazz and Blues Festival	Various	Ticketed Music Festival	$26,000			1	30,000
25/06/2021	150th Business Dinner	Regent on Broadway	Networking seated dinner and entertainment	$120,000	300	20	1	40,000
Total				**$867,245**				**$763,538**

Sport Manawatū major events in the Manawatū region during the year ended June 2021

Dates	Event	Venue	Brief description of event	Increase in regional income	Participants/ spectators		Visitor nights	Council financial contribution
					Local[1]	Visitors[1]		
14 March - 11 October, 2020	Various Gymnastics Events	Manawatu Gymsports	Three competitions; one caters for high level gymnasts, the second caters fro recreational gymnasts and the third brings teams of gymnasts together from around the country.	$105,129	72/400	297/200	2	1,975
31 August-4 September, 2020	Lower North Island Secondary Schools Premiership Hockey Tournament	Hockey Manawatu/Massey University	One of the regional competitions across NZ in lieu of The Major Secondary School Rankin Cup and Federation Cup Tournaments (due to C-19)	$573,426	64/1678	432/254	5	0
23 - 26 September, 2020	Squash NZ B Grade Superchamps	SquashGym PN	This event brings the top clubs from around NZ to play for the B grade "SuperChamps" title.	$149,624	12/180	188/20	5	6,122
1 - 3 October, 2020	Basketball Manawatu Regional Secondary Schools Championships	CET Arena	One of the many regional competitions across NZ in lieu of the National Championships (due to C-19 restrictions).	$79,178	24/400	156/20	2	14,857
31 Oct - 1 Nov 2020	Muslim Inter District Games 2020	CET Arena	Event that brings the Inter District Muslim community to Palmy to compete in different sports.	$161,980	276/100	300/100	2	4,000
26 - 29 November, 2020	SquashGym Summer Open and PSA	SquashGym PN	Final event in the Squash Calendar that brings professional and amateur players together to compete for precious PSA ranking points!	$48,846	74/50	83/0	3	1,600
5-9 December, 2020	CD Stags First Class Cricket Matches	Fitzherbert Park, PN	Exciting games between the Stags and other regional teams!	$166,824	50/750	100/250	5	7,037
14-16 December 2020	Central Districts Under 15s Girls Cricket Festival	Ongley, Manawaroa and Fitzherbert parks	Cricket festival for under 15 year old girls that brings together representation from the Central districts and South Island.	$116,789	80/20	147/60	3	4,967
18-20 December, 2020	Manawatu Jr. Triathlon Festival	Manawatu region/Linton	Replacement for the Futer ChampioNZ Festival, this event offers junior triathletes from across NZ the opportunity to participate in an event alongside elite triathletes	$113,153	252/0	208/200	3	2,000
8 - 10 January, 2021	Lower North Island U15 Softball Tournament	Colquhoun Park, PN	Representatives from the Lower North Island gather in Palmy after the disbandment of the National U18/˜5s age troup tournaments.	$396,774	42/100	459/500	3	4,883
23 - 26 January, 2021	Manawatu 125th Anniversary Celebrations	Fitzherbert Park, PN	Interprovincial Exchanges and other activities to commemorate 125 years of Cricket	$101,465	80/50	130/100	4	4,346
5 - 7 February, 2021	NZ Racketlon Championships 2021	Massey Rec Centre	Unique event that combines four racket codes into one sport. This is the most important racketlon event in NZ.	$26,166	65/20	45/5	3	2,500
6 - 7 February, 2021	Tenzin Hillary Cup	CET Arena	The Tenzin Hillary Cup is a football tournament played between various Nepalese ethnic-based football teams from different cities in NZ	$128,083	130/600	432/0	2	6,700
20 February, 2021	Ethkick and Ethsport	CET Arena	Free Football event designed to bring the community together in friendship through sport	$0	594/600	0	1	5,000
4 - 6 March, 2021	Brian Green NZ Super 6s	Manawatu Golf Club	Professional and Amateur event that strongly promotes Golf to girls and women.	$169,971	20/300	268/50	2	15,000
5 - 6 March, 2021	NZ Nationals Leisure Marching	CET Arena	A two day display and marching event for seniors from across NZ	$270,396	75/100	675/10	2	2,296
22 - 26 March, 2021	NZ Secondary Schools Volleybal Championships	CET Arena	NZ's biggest secondary schools event comes to Palmy with teams from across the country disputing a national title.	$2,536,114	220/500	2290/1000	5	40,000
23-26 March, 2021	Secondary Schools Div 2 Softball Nationals	Colquhoun Park, PN	Secondary Schools Division 2 Softball Nationals bring teams from across NZ to dipute a Softball Div. 2 National title.	$306,348	44/100	208/500	4	3,837

Dates	Event	Venue	Brief description of event	Increase in regional income	Participants/ spectators		Visitor nights	Council financial contribution
					Local[1]	Visitors[1]		
3 - 4 April, 2021	NZ Athletics Inter Provincial Competition	Massey Athletics Track	Provinces from around NZ put forward their best teams composed of 12 and 13 year old athletes to compete in four different athletics disciplines.	$199,612	60/200	505/50	2	6,293
3 - 4 April, 2021	Cultural Cricket Festival	Fitzherbert and Manawaroa parks PN	Teams from Wellington, Auckland, Whanganui, Taranaki and Manawatu with players of subcontinental descent (India, Pakistan, Bangladesh and Sri Lanka) play this Indian Premiere League style Cup.	$102,244	56/20	420/20	2	4,346
9 - 11 April, 2021	Squash NZ Doubles Championships	SquashGym PN	Teams from across NZ gather to claim the national titles up for grabs. This is a Commonwealth Games selection event for the top players in NZ.	$97,986	70/200	185/20	3	5,640
17 - 19 April, 2021	MTB Regional Competition	Arapuke Park	This competition aims to encourage school participation and competition for youth from the Manawatu - Wanganui regions.	$392,274	137/370	302/530	4	21,422
18 April, 2021	Pulse v.s. Tactix	CET Arena	Pulse v.s. Tactix Netball game of the ANZ premiership league.	$50,428	88/870	210/130	1	10,000
7 - 9 May, 2021	Manawatu Parafed National Events	CET Arena	Teams from around NZ come to Palmy to dispute wheelchair Rugby and wheelchair Basketball events.	$222,785	93/200	362/100	3	3,515
23 - May, 2021	Striders Marathon	PN / Massey	Marathon, half marathon, 10 km, 5km and free kids Marafun event, held at Massey University and utilising Riverside walkway and He Ara Kotahi path.	$37,520	900/0	200/0	1	0
27 May - 1 June, 2021	Sentinel Homes Trans Tasman Hockey Seires	Massey Hockey Turf	After 14 months of no international cricket, the Australian and New Zealand men's and women's squads square off in preparation for Tokio '21	$1,130,168	8/4000	187/2000	8	45,000
11 - 13 June, 27 June 2021	Manawatu Badminton Regional Events	CET Arena	Badminton Regional and teams events for under 13, 15, 17 and 19 year old participants.	$182,277	435/0	215/150	2	4,528
Total				**$7,865,560**				**$227,864**

1. The breakdown reflects local participants/spectators (Manawatu residents) in column one and visitor participants/spectators in column two.

Note: These were multi-event projects. One event took place during the 2020-2021 and the other are due to take place this financial year (2021-2022).

In the case of Parafed, the 2021-2022 event projects an economic benefit of $55,696 that could be subtracted from the gross figure of 222,785, giving a net benefit for the 2020-2021 year of $167,089

The same could be done with the support it received from SEPF. From a combined total of $3,515, the second event got $879, leaving the 2020-2021 event with $2,636of SEPF support.

In the case of Badminton, the 2021-2022 event projects an economic benefit of $60,759. The apportioned SEPF support for the 2021-2022 event would be $1,509

CET Arena major events in the Manawatū region during the year ended June 2021

Dates	Event	Venue	Brief description of event	Increase in regional income	Participants/ spectators		Visitor nights	Council financial contribution
					Local	Visitors		
	Mitre 10 Cup x 3	CET Arena	National Provincial Rugby Game	$150,000	7,000			
1/08/2020	Lego Expo	CET Arena	Exhibition	$40,000	3,000			
24/07/2020	Property Brokers Company Day	CET Arena	North Island Real Estate Agents 1 day forum/ dinner	$400,000	500			
Oct 2020-May 2021	Speedway x 16	CET Arena	Meetings held outside of Teams Champs	$15,000,000	55,000	9,000	2	
12/12/2020	Property Brokers Christmas Dinner	CET Arena	Real estate agents from all over NZ	$450,000	100	582	2	
5/12/2020	Ithaca	CET Arena	Indoor arena performance	$200,000	2,000	500	1	
20/11/2020	Manawatu Home Show	CET Arena	3 Day Exhibition	$500,000	28,000	2,000		
14/11/2020	Blindspott Concert	CET Arena	Music Event	$200,000	1,300	200		
24/10/2020	Womens Lifestyle Expo	CET Arena	2 day Exhibition	$100,000	4,500	500		
6 & 7 February 2021	Speedway Teams Champs	CET Arena	Speedway National event (2-day event, this many people per day)	$5,200,000	4,000	12,000	3	
26/02/2021	Show Your Ability Expo	CET Arena	Exhibition of equipment for impaired people	$40,000	900	100	2	
5/06/2021	Basketball Regional U15 & U17	CET Arena	Age grade tournament	$60,000	100	400	3	
1/06/2021	Hunting & Fishing Expo	CET Arena	Tradeshow	$150,000	100	400	2	
17/06/2021	Property Brokers Company Day	CET Arena	North Island Real Estate Agents 1 day forum/ dinner	$400,000	500			
27/05/2021	Maori Wardens Conference	CET Arena	Large conference and dinner etc	$500,000	100	700	2	
11/06/2021	Devilskin/ Kora Concert	CET Arena	Music Event	$200,000	1,300	200		
April-June 2021	6 x Jets Basketball	CET Arena	National League Basketball	$120,000	6,000	1,200		
8/05/2021	Rose City Quilters	CET Arena	Exbition/ awards	$450,000	100	700	2	
22/05/2021	Womens Lifestyle Expo	CET Arena	2 day Exhibition	$220,000	10,000	1,000		
15/04/2021	Futsal Tertiary Champs	CET Arena	National Tournamnet	$520,000	200	1,300	4	
1/08/2020	Palmy Brick Show	CET Arena	Lego Exhibition	$100,000	9,000	1,000		
Total				**$25,000,000**				**$0**

ITEM 8 - ATTACHMENT 2

Regent on Broadway major events in the Manawatū region during the year ended June 2021

Dates	Event	Venue	Brief description of event	Increase in regional income	Participants/ spectators		Visitor nights	Council financial contribution
					Local	Visitors		
7th Aug - 5-Sept 2020	Sister Act	Regent on Broadway	Local Operatic Production. Split between local/Visitors Not Known 3750 attendances					Nil
25th Sept - 1st Oct 2020	Palmerston North Dance Assn	Regent on Broadway	Dance Competitions for Lower Nth Island Split not Known 2500 attendances					
10th - 11th Nov 2020	Ko Whiri Tika Mai	Regent on Broadway	Local Kapa Haka Competitions 2520 attendances					
19th - 20th Nov 2020	Massey Graduation	Regent on Broadway	5 x Massey Graduation Ceremonies 5500 attendances					
11th Feburary 2021	Russell Howard	Regent on Broadway	British Comedian 1000 attendance					
17th - 20th Feb 2021	Te Papaioea Festival	Regent on Broadway	Palmerston Norths inaugural Arts Festival 700 attendances					
12th - 14th March 2021	Palmerston North Dance Assn	Regent on Broadway	Dance Competitions for Lower Nth Island Split not Known 1200 attendances					
23rd - 24th March 2021	Ucol	Regent on Broadway	2 xGraduation Ceremonies 2000 attendances					
25th March 2021	Crowdwd House	Regent on Broadway	Capacity House for this international Act 1360 attendances					
31st March 2021	Wiggles	Regent on Broadway	2 x capacity Houses for these well loved childrens entertainers 2700 attendances					
1st April 2021	Bill Bailey	Regent on Broadway	Capacity House for this British Entertainer 1360 attendances					
10th April 2021	Sol3 Mio	Regent on Broadway	Capacity House for these talented local performers 1360 attendances					
3rd - 6th May 2021	Massey Graduation	Regent on Broadway	6x Massey Graduation Ceremonies 6000 attendances					
28th June 2021	Te Pae Tamariki	Regent on Broadway	Local Kapa Haka Competitions 1300 attendances					

CEDA Agri-food week major events in the Manawatū region during the year ended June 2021

Dates	Event	Venue	Brief description of event	Increase in regional income	Participants/ spectators		Visitor nights	Council financial contribution
					Local	Visitors		
3-9 May 2021	New Zealand AgriFood Week 2021	Multiple	This week-long event series boasts an extensive line-up of events, forums and thought-provoking discussions that delves into the opportunities and challenges faced by our food sector, as well as the research and development, projects and innovative solutions that are meeting these head on; this is about excellence in agrifood and agritech, inspiring the next generation of farmers, scientists, innovators and consumers.	$349,800	900	300	130	$50,000

Manfeild major events in the Manawatū region during the year ended June 2021

Dates	Event	Venue	Brief description of event	Increase in regional income	Participants/ spectators		Visitor nights	Council financial contribution
					Local	Visitors		
31 July - 1August 2020	PN Hot Rod Swap Meet	Manfeild	5,000 visitors over 2 days					
26 - 27 September 2020	Manawatū Tatoo	Manfeild	1,500 attendees over the 2 shows					
9 - 10 October 2020	Feilding Craft Market	Manfeild	6,000 attendees over 2 days					
14 - 15 November 2020	MG Classic Race Meet	Manfeild	3,500 attendees over two days					
20 - 21 January 2021	D1NZ Race Meeting	Manfeild	2,500 attendees over 2 days					
18 - 20 March 2021	Cemtral Districts Field Days	Manfeild	30,200 attendees	$1,000,000	13,200	17,000	7,500	nil
2 - 5 April 2021	Baptists Christian Youth Easter Camp	Manfeild	2,200 attendees over 4 days					
17 - 18 April 2021	4 & Rotary North Island Jamboree	Manfeild	2,500 attendees over 2 days					
29 - 30 May 2021	Central Districts Dressage Equestrian Event	Manfeild	400 participants over 2 days					
17 - 19 June 2021	United Fire Brigades Crash Rescue	Manfeild	300 attendees over 3 days					

Manawatū District major events in the Manawatū region during the year ended June 2021

Dates	Event	Venue	Brief description of event	Increase in regional income - all approx.	Participants/ spectators	Visitor nights	Council financial contribution
Jul-20	Mighty Manawatū Crafter Market	Feilding Civic Centre	Craft Market				0
Sep-20	Manawatū Tattoo	Manfeild Park Stadium	Pipe and brass bands, dancing and other entertainment	$50,000	250		
Oct-20	Rural Day	Manchester Square, Feilding	Family fun day. Brings the farm into town, with entertainment, animals, rides, food	$30,000	1,500		4,950
Oct-20	Feilding Craft Market	Manfeild Park Stadium	Craft Market				0
Nov-20	MG Classic	Manfeild Park	Classic car show				
Dec-20	Feilding Christmas Carnival & Parade 2020	Feilding town centre	Family Carnival and Parade	$390,000	10,000		9,500
Dec-20	Feilding Xmas Train	Palmerston North - Feilding	Train from Palmerston North - Feilding to bring visitors to attend the Feilding Christmas Carnival & Parade	$15,000	180		0
Jan-21	Manawatū Cycle Spree / Gravel & Tar	Throughout Manawatū region - start line Feilding CBD	Road cycle race throughout Manawatū region, starting in Feilding, ending in Palmerston North				
Jan-21	Himatangi Beach Big Dig	Himatangi Beach	Family event held at beach. Entertainment and activities				
Mar-21	Central District Field Days	Manfeild Raceway	Agricultural Trade Show	$5,500,000	27,000		0
Apr-21	Kimbolton Sculpture Festival	Kimbolton Domain					
Apr-21	Mighty Manawatu Crafters	Feilding Civic Centre					0
Apr-21	Filly Skateboard and BMX Compeition	Mangakino Flow Park, Feilding	Skateboard and freestyle BMX competition		200		2,000
May-21	Eat The Market	Manchester Square, Feilding	Event held as part of NZ Agri Food Week.	$2,032	40	-	1,000
May-21	54th Annual Manawatu Jazz Festival	Venues throughout Manawatū Region	Music festival				
Jun-21	Feilding Craft Market	Manfeild Park Stadium	Craft Market				
Jun-21	Matariki 2021	Feilding Civic Centre	Matariki festival.Kapa Haka performances from local schools				
	Total			**$5,987,032**	**39,170**	**-**	**$17,450**

MEMORANDUM

TO: **Economic Development Committee**

MEETING DATE: **15 September 2021**

TITLE: **Research, Science and Innovation Sector Profile - July 2021**

PRESENTED BY: **Julie Macdonald, Strategy and Policy Manager**

APPROVED BY: **David Murphy, Chief Planning Officer**

RECOMMENDATION(S) TO ECONOMIC DEVELOPMENT COMMITTEE

1. **That the memorandum titled 'Research, Science and Innovation Sector Profile – July 2021' presented to the Economic Development Committee on 15 September 2021, be received for information.**

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1. RESEARCH, SCIENCE AND INNOVATION SECTOR PROFILE – JULY 2021

1.1. Attached is the full Research, Science and Innovation Profile and summary profile, which have been updated.

1.2. The research, science and technology sector is a significant contributor to the Manawatū regional economy (Palmerston North City and Manawatū 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.

1.3. 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.

1.4. Estimates prepared for the profile suggest there were 2,500 people employed directly in the sector in the region in 2020, salaries and wages were $99 million in 2019, and the sector contributed $222 million to regional GDP in 2020.

2. COMPLIANCE AND ADMINISTRATION

Does the Committee have delegated authority to decide? If Yes quote relevant clause(s) from Delegations Manual 166	**Yes**
Are the decisions significant?	**No**
If they are significant do they affect land or a body of water?	**No**

Can this decision only be made through a 10 Year Plan?	**No**
Does this decision require consultation through the Special Consultative procedure?	**No**
Is there funding in the current Annual Plan for these actions?	**No**
Are the recommendations inconsistent with any of Council's policies or plans?	**No**
The recommendations contribute to Goal 1: An Innovative and Growing City	
The recommendations contribute to the achievement of action/actions in Economic Development The action is: Implement Inward Investment Strategy	
Contribution to strategic direction and to social, economic, environmental and cultural well-being	Reporting on economic trends in the city and Manawatū region, and the longer-term outlook for growth, is important for encouraging local businesses to invest in growing their business and attracting new businesses to the city.

ATTACHMENTS

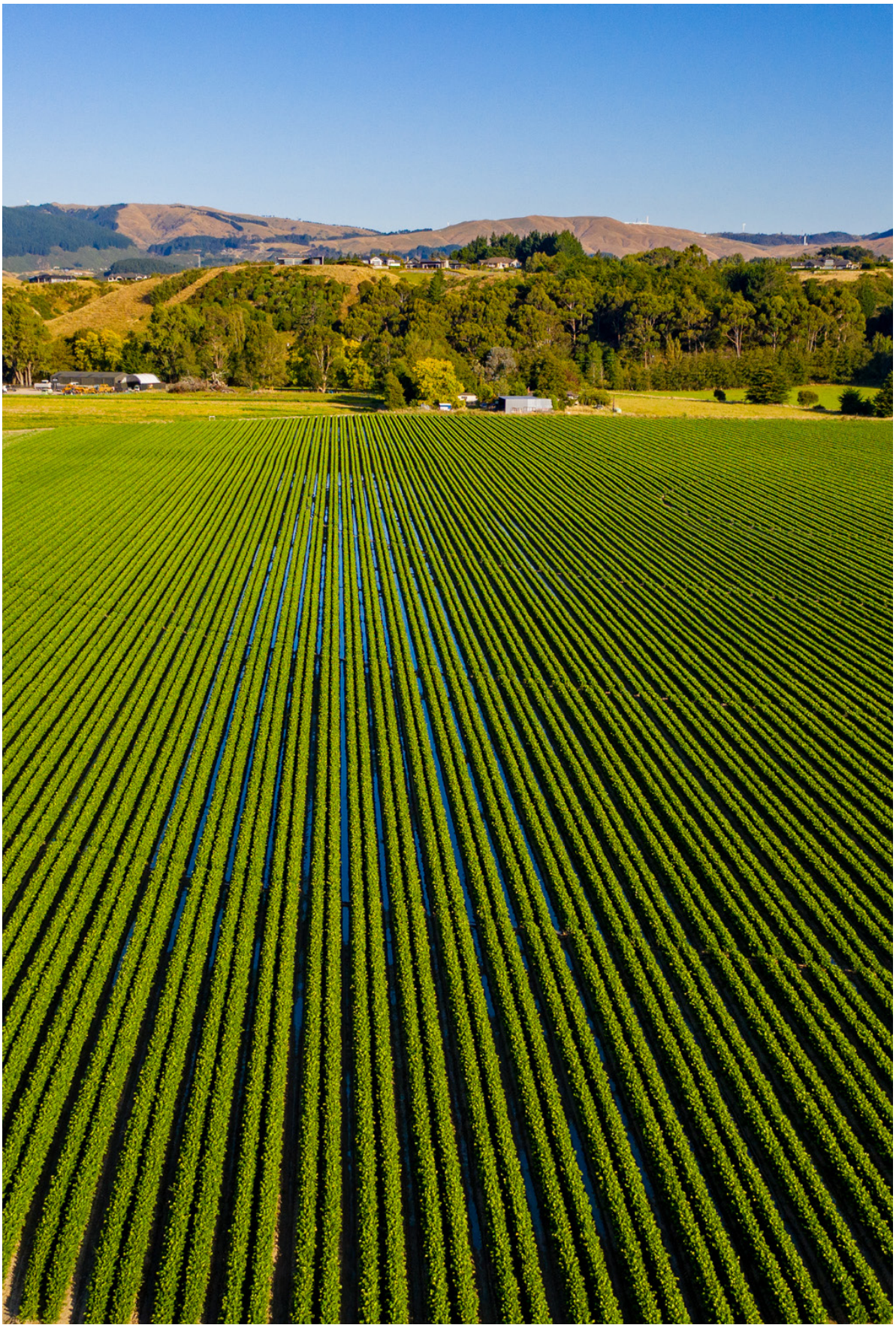
1. Research, Science and Innovation Sector Profile 2021 ⇩
2. Research, Science and Innovation Profile (Executive Summary) ⇩

TE RĀNGAI RANGAHAU, PŪTAIAO, AUAHA O MANAWATŪ ROHE

MANAWATŪ REGION RESEARCH, SCIENCE AND INNOVATION SECTOR

HŌNGONGOI 2021

JULY 2021



Contents

Executive Summary

The purpose of these economic sector profiles for the Manawatū 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 Manawatū regional economy (Palmerston North City and Manawatū 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.

EMPLOYEE COUNT	EARNINGS	GDP
2,500	$99M	$222M
3.9% of total employment	3.0% of total earnings	3.4% of total GDP

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.

Introduction

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 and funding through research grants to private businesses, independent research institutes and other not-for-profit institutions.

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).

Technology is an important factor determining differences in wealth between different communities which have equal access to the primary inputs for production (land, labour and capital). Technological sophistication, rarity and demand determine the price and value of a product or service. Technology also allows more output to be produced from the same quantity of inputs. Technology, therefore, is inextricably linked to the creation of profits, jobs, and economic growth.

Increased wealth is created in a community through:

- Creation of new products, process and services
- Creation of new industries
- Improvements in productivity

Research, science and technology play an important role in each of these wealth creation opportunities but the sector is also an important direct contributor to employment and wealth in the Manawatū regional economy.

The purpose of this profile document is to identify:

- The direct economic contribution of the research, science and technology sector to employment and economic activity in the Manawatū region.
- The indirect economic contribution of the sector to employment and economic activity in the Manawatū region and growth in its population.
- Opportunities to enhance growth in the sector through:
  - Increasing the level of the research, science and technology sector employment and economic activity in the Manawatū region
  - Increasing the local commercialisation of research, science and technology in the city and wider region.

Definition of research and development

The definition used by Statistics New Zealand for research and development is:

> Research and experimental development comprises creative work undertaken on a systematic basis in order to increase the stock of knowledge. Any activity classified as R&D is characterised by originality. Investigation is a primary objective.

Surveying research and development activity

The Statistics New Zealand Research and Development (R&D) survey has been produced for 29 years and has provided useful data on growth in R&D activity by the business and government sector and the distribution of R&D expenditure by activity. The survey does not include a regional expenditure question so the production of regional R&D expenditure data is not possible.

Statistics New Zealand published regional R&D estimates in 2007 for the 2002 period but has not repeated the regional estimates due to changes in the R&D survey and there has been a lack of any regional weighting in the surveys since 2002. As a result, estimates have been made for regional R&D activity using annual industry employment data published by Statistics New Zealand

Published Industry[2]	2006	2010	2012	2014	2016	2018	2020	Change in expenditure 2006 to 2020	
	$(million)							$(million)	Percent
Business sector									
Primary	72	72	125	92	96	98	101	29	40
Manufacturing	442	440	536	522	671	673	825	383	87
Food manufacturing	-	-	109	81	110	74	108		
Beverage and tobacco manufacturing	-	-	5	8	7	9	12		
Textiles, clothing, footwear, and leather manufacturing	7	6	7	11	6	9	12	5	71
Petroleum, coal, chemical, and associated product manufacturing	99	71	72	93	76	119	82	-17	-17
Non-metallic mineral product manufacturing	-	-	4	2	3	3	2		
Metal product manufacturing	19	27	31	28	67	71	93	74	389
Machinery and equipment manufacturing	195	243	295	287	392	372	497	302	155
Other manufacturing	16	8	14	11	10	17	18	2	13
Services	409	459	532	632	835	1,362	1,784	1,375	336
Wholesale trade	61	59	89	96	111	233	174	113	185
Scientific research and technical services	58	53	51	57	75	118	181	123	212
Computer services	163	190	221	311	436	582	924	761	467
Other services	126	157	171	168	212	428	505	379	301
Total business sector	**923**	**971**	**1,193**	**1,246**	**1,602**	**2,134**	**2,709**	**1,786**	**193**
Government (excluding higher education) sector									
Scientific research	484	542	536	557	589	762	671	187	39
Other government research	100	73	60	65	69	66	86	-14	-14
Total government sector (excl higher education)	584	615	596	622	658	828	758	174	30
Higher education sector									
Total higher education sector	653	802	836	817	877	960	1,082	429	66
All sectors combined									
All sectors combined	2,161	2,388	2,625	2,685	3,136	3,922	4,549	2,388	111

1. Figures exclude GST.
2. Sector and published industry breakdowns accord with the Organisation for Economic Co-operation and Development's (OECD) recommendations for international comparability.

Food innovation

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.

The Manawatu region has significant strengths in food innovation. The university, CRI and business research and development organisations described in this profile 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.

The strength of the region in food innovation was highlighted in a detailed comparison of R&D expenditure in 2004 by the Ministry of Research Science and Technology in its Research and Development in New Zealand: A Decade in Review report, published in 2006. While the data was only available at an institutional level rather than at a regional level, the data was still useful for an analysis of strengths in the Manawatū region. R&D surveys since 2004 have not provided a similar breakdown of expenditure. More detail on these strengths is provided in the following overviews for university and CRI research and development expenditure.

University research and development expenditure

An important strength for Massey University was in industrial development R&D expenditure.

Expenditure by Massey in 2004 was 31 percent of total university industrial development R&D expenditure, just behind Auckland University, which had a 33 percent share of total expenditure in this category.

A related sector of strength for Massey University was R&D expenditure on the agriculture, forestry and fishing sector, where Massey was again ranked second. Its R&D expenditure was 34 percent of total university expenditure in this category, closely behind Lincoln's 35 percent share.

A third and related category of importance to Massey University was development of infrastructure R&D expenditure. This expenditure category includes: commercial and trade services; urban and rural planning; transport; and information, communication, and technology software. Massey's R&D expenditure was 20 percent of total university expenditure in this category, closely behind Auckland's 22 percent share.

Since 2004 Massey University has added a Health Sciences School at its Palmerston North campus. Its research is focused on the science of promoting health, improving quality of life and our environment, and reducing health inequalities and disease for individuals, whānau and communities.

Massey at Palmerston North

The University's original campus is set on picturesque, park-like grounds across the Manawatū River from Palmerston North city. A combination of heritage buildings and purpose-built study and research facilities, the campus is at the centre of a science research and food innovation hub that includes Government-owned research organisations with close ties to Massey.

Established in 1927 as an agricultural college, today this campus plays a leading role in research and teaching for New Zealand's key agriculture and food industries. Surrounding the campus are commercially operated farms, used for research and teaching purposes. It is also home to New Zealand's only veterinary science school and university degree-level aviation qualification.

Research Excellence at Palmerston North

Massey University is a world-leading university in many academic disciplines and fields of research. Its point of difference is its world-leading research, which is connected to community and industry. With a commitment to both applied and discovery research, this "dual focus" gives the University the ability to address both real-world and pure research problems.

Massey University has numerous research centres that enhance the University's research and teaching capacity and provide staff and students with world-class infrastructure and support. With its historic roots in research in Palmerston North, Massey's commitment to the city and surrounding region is evidenced in the number of research centres based in or led from this location.

Research centres at Massey University are hosted across all three campuses and, in some cases, with other organisations and industries:

Palmerston North based

- Riddet Institute New Zealand
- Food Safety Science and Research Centre
- Te Mata o Te Tau (Academy for Māori Research and Scholarship)
- Centre for Research in Mathematics Education
- Te Au Rangahau (Māori Business Research Centre)
- Farmed Landscapes Research Centre
- Massey University and Beijing Language and Culture University Joint Research Centre in Applied Linguistics
- Massey University Working Dog Centre
- Wildbase
- Animal Welfare Science and Bioethics Centre
- Centre for Organisational Excellence Research
- Infectious Disease Research Centre
- EpiCentre (veterinary epidemiology training and research)
- New Zealand Life Cycle Management Centre
- Medical Physiology Research Unit
- Equity through Education
- Centre for Structural Biology
- New Zealand Centre for Precision Agriculture
- Centre for Additive Manufacturing
- Innovative River Solutions
- New Zealand BioChar Research Centre
- Centre for Postharvest and Refrigeration Research
- Centre of Excellence in Farm Business Management
- Joint Graduate School of Horticulture and Food Enterprise
- Centre for Industrial Management and Innovation

Based across Palmerston North and Auckland

- Vitamin D Research Centre

Based across Palmerston North, Wellington and Auckland

- Center for Culture-Centered Approach to Research and Evaluation

Wellington based

- Research Centre for Hauora and Health
- Financial Education and Research Centre
- Joint Centre for Disaster Research
- Sleep/Wake Research Centre

Auckland based

- Alpha-Massey Centre for Natural Nutraceutical Research
- Centre for Metabolic Health Research
- Centre for Advanced Retail Studies
- SHORE & Whāriki Research Centre
- Centre for Mathematics in Industry
- Centre for Theoretical Chemistry and Physics
- Centre for Parallel Computing
- Nutrition and Dietetics Centre
- Beverage Lab

Based at other centres close to industry

- AL Rae Centre for Genetics and Breeding (based at Ruakura)

Enterprise at Massey

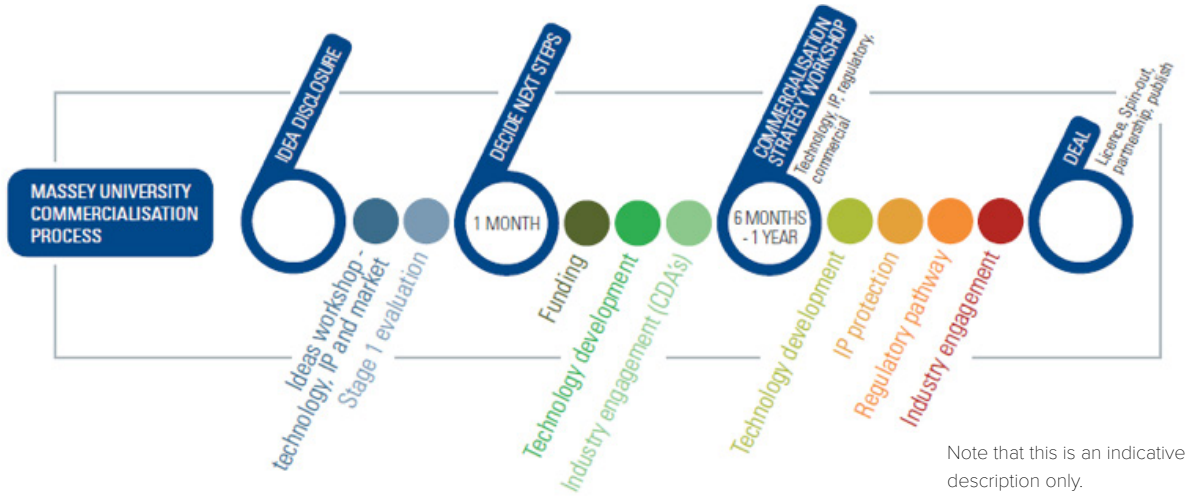
Massey University promotes collaborative arrangements, innovative research, technology transfer, and encourages links with national and international academic and research institutions and commercial organisations. Massey is committed to translating innovative academic research into commercial opportunities, through existing commercial enterprises or new ventures. The university also offers an enterprise programme to all of its students, with the goal of nurturing the spirit of entrepreneurship in all disciplines and professions.

Examples of recent enterprise successes at Massey University include:

- In 2018, Massey University's spinout company BioLumic secured a US$5 million (equivalent to around NZ$6.9 million) investment for their work developing products to support food growers around the globe using ultraviolet light.
- Global food company Nestlé has acquired a novel technology developed by New Zealand scientists that will enable it to address iron deficiency.
  The unique technology, FERRI PRO was developed to address iron deficiency, without adversely affecting the taste of food and beverages. It was developed by Massey University researchers at the Riddet Institute Centre of Research Excellence hosted by Massey in the Manawatū.

  "The technology was developed to help to address the world's most important nutritional deficiency, with over 1.6 billion people suffering from iron deficiency anaemia," Riddet Institute director and research team leader Distinguished Professor Harjinder Singh says.

  "But our goal was to not only address iron deficiency, but address it without impacting the product quality. So, we developed a novel protein-iron complex using food-grade materials and a unique processing method. The complex has substantially superior functionality compared with other products in the market. It provides advantages over other sources of iron present in foods, including ferrous sulphate, the recognised leading iron supplement."



Note that this is an indicative description only.

MASSEY UNIVERSITY
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Crown Research Institute research and development expenditure

A detailed comparison of Crown Research Institute (CRI) R&D expenditure in 2004 was also prepared by the Ministry of Research Science and Technology in its Research and Development in New Zealand: A Decade in Review report.

Four of the nine CRIs in 2004 had offices based in the Manawatu region but these CRIs were in the top five CRIs for total R&D expenditure in 2004. CRI R&D expenditure was heavily weighted towards agriculture, forestry and fishing in 2004, accounting for 39 percent of R&D expenditure in 2004, industrial development accounted for 21 percent and development of infrastructure accounted for 7 percent.

CRI R&D expenditure on agriculture, forestry and fishing was strongly concentrated in the three CRIs which have offices in the Manawatu region. AgResearch accounted for 35 percent of the total, Plant & Food Research[1] 38 percent and Manaaki Whenua – Landcare Research 12 percent. These three CRIs accounted for 85 percent of agriculture, forestry and fishing R&D expenditure.

There was also a significant share of industrial development R&D expenditure conducted by these CRIs. Plant & Food Research accounted for 36 percent of the total and AgResearch 12 percent, giving a total of 48 percent of total R&D expenditure.

Development of infrastructure R&D expenditure was strongly concentrated in Manaaki Whenua – Landcare Research, which accounted for 47 percent of total R&D expenditure in this category in 2004, while AgResearch accounted for an additional 7 percent.

[1] HortResearch and Crop & Food Research were merged in December 2008 to form Plant & Food Research

AgResearch

Leading agri-based science innovation

AgResearch is a Crown-owned research institute. It plays a key role in delivering new knowledge and technologies to support agriculture, one of New Zealand's largest export earners. Our two focus areas of research are creating smart, sustainable farming systems, and the most sought-after food and bio-products.

The Grasslands Research Centre in Palmerston North is one of four AgResearch campuses around New Zealand and the base for almost 300 of AgResearch's staff. Grasslands is located about five minutes' drive from the Palmerston North city centre, and is within 10 minutes' walk of Massey University's main campus.

AgResearch scientists also work with Massey University in a joint arrangement called the Hopkirk Research Institute, based at Massey University's Turitea campus. The Hopkirk Institute focuses on food safety, veterinary and public health research. In 2020 we opened Te Ohu Rangahau Kai, our joint food science hub with Massey University and Riddet Institute in Palmerston North.This facility is explicitly designed for collaboration, and is a key part of the Food HQ food science community in Palmerston North. We anticipate Te Ohu Rangahau Kai will significantly increase the visibility and credibility of New Zealand food science nationally and internationally.

Key research at AgResearch

Among the important research taking place at the Grasslands Research Centre is research into soil biology and improved pasture plants; and the nutrition of ruminant animals such as cattle. This includes work on endophytes – fungi that live within grasses – that have saved the New Zealand economy billions of dollars due to improvement in productivity of pasture and livestock health, and present further opportunity for economic gains.

Te Ohu Rangahau Kai hosts a large portion of the AgResearch Food & Bio-based Products team. They create the knowledge and tools to develop high value value foods, ingredients and bio-based products, particularly from pastoral-based agriculture. Areas of expertise include dairy foods, food nutrition & health, proteins & biomaterials, food assurance and meat quality.

Scientists based at Grasslands are also studying the inner workings of livestock, such as the rumen microbiome, to learn more about their digestion and how it for example affects the emission of greenhouse gas methane from the animal. Specialised chambers at Grasslands allow for gases from the livestock to be measured, to support the development of methods to reduce animal methane emissions, alongside the New Zealand Agricultural Greenhouse Gas Research Centre and the Pastoral Greenhouse Gas Research Consortium.

The Grasslands campus also features the Margot Forde Forage Germplasm Centre. The centre is New Zealand's national gene-bank of grassland plants and hosts the New Zealand Endangered Species Seed-bank. The centres collection includes more than 140,000 seed samples, and seeds from around 100 countries. Some

agresearch
āta mātai, mātai whetū

AgResearch
Grasslands Research Centre
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Palmerston North 4410

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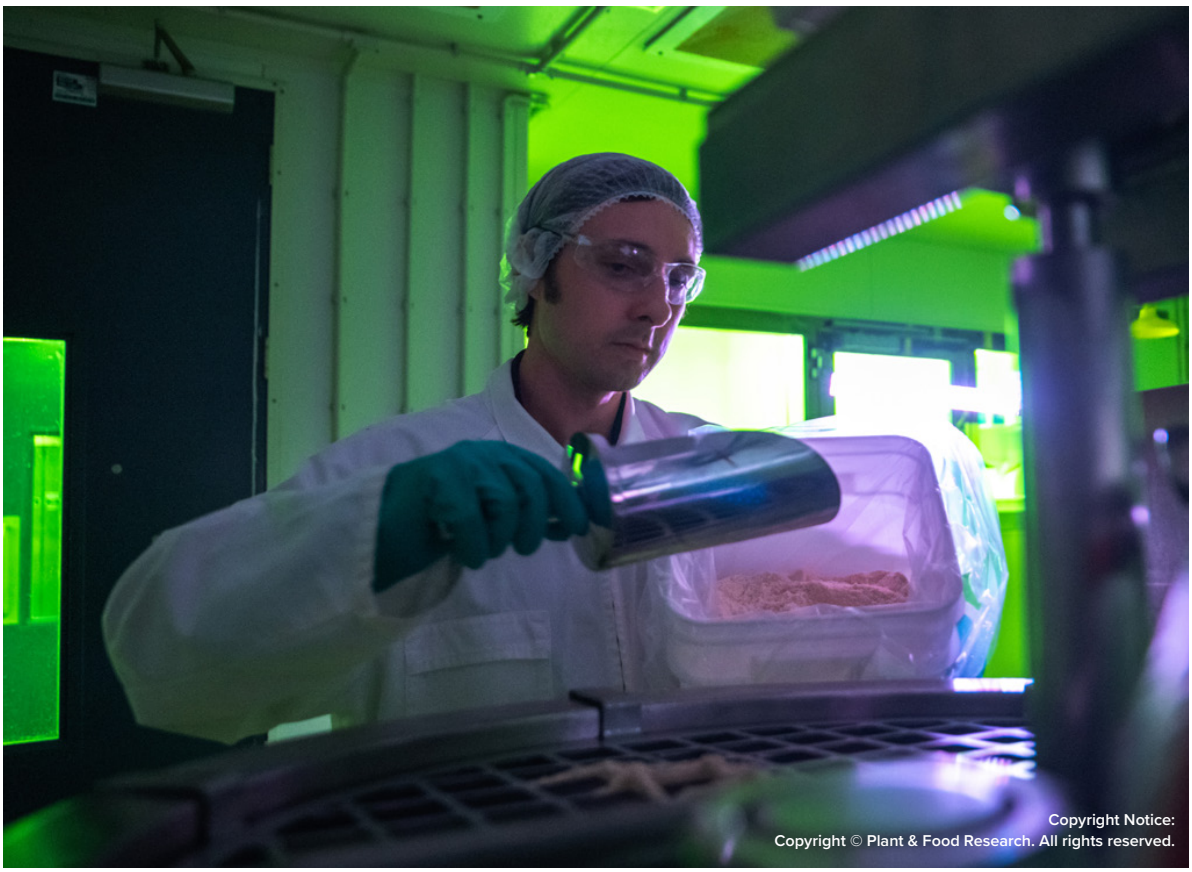

Plant & Food Research

At Plant & Food Research, we believe science can create a better future. By finding smarter, greener options today, we're helping secure the world we want to live in tomorrow. With our partners, we use world-leading science to improve the way they grow, fish, harvest and share food. Every day, we have 1000 people working across Aotearoa New Zealand and the world to help deliver healthy foods from the world's most sustainable systems.

The company's research is applied across the value chain, to create the world's most sustainable food systems, as well as novel, nutritious foods valued by producers and consumers.

Approximately 135 of Plant & Food Research's 1,000 staff are based in Palmerston North, making it the third largest of the company's 14 New Zealand locations. The Palmerston North site has modern, purpose built facilities, including a range of specialised laboratories, fumigation facilities, coolstores, glasshouses, a food development facility, and a state-of-the-art analytical chemistry suite.

Plant & Food Research's national and international connections ensures the right team can be built to answer customer questions. Plant & Food Research is a partner in the Riddet Institute, the New Zealand Food Safety Science and Research Centre, FoodHQ and the High-Value Nutrition National Science Challenge, and is a member of Foodvalley.

Research based in Palmerston North

Key research undertaken at Plant & Food Research's Palmerston North site includes:

Food Innovation

Plant & Food Research applies knowledge to support the preservation of harvested produce beyond the farm gate; the transformation of plant and marine bioresources into ingredient, processed food, beverage and bio-based products; and the analysis, design and presentation of products so that consumers purchase them for health and enjoyment.

This involves understanding the physiology of whole fresh foods, the components and structure of foods, and identifying health-promoting compounds. This knowledge is also applied to the development of new foods and ingredient concepts that deliver more and align with international regulations for food and health claims. The research team also has extensive knowledge in understanding consumer, producer and market drivers, to ensure any new food products meet requirements from field to plate.

Sustainable Productions Systems

Plant & Food Research undertakes research to help minimise the environmental impact of horticultural and arable production systems while optimising yield, quality and economic performance. This assists growers and exporters with meeting stringent sustainability requirements in New Zealand and overseas.

Researchers in Palmerston North collaborate with leading international research groups, environmental organisations, horticultural sector companies, industry bodies and regional councils to develop system models and decision support tools to minimise the environmental footprint of horticultural and arable production in New Zealand.

Bioprotection

Plant & Food Research develops new technologies, tools and protocols that protect the horticultural industry from pests and diseases while maintaining quality and productivity, ensuring growers and exporters maintain or gain access to global markets.

Scientists at Palmerston North specialise in the development of effective postharvest treatments for exported goods, ensuring New Zealand's international trade opportunities are maximised.

The Palmerston North site is home to New Zealand's largest disinfestation research facility which is used in the development of scientifically validated treatments for imported and exported goods, thereby playing a key role in the country's biosecurity.

New Cultivar Innovation

Plant & Food Research combines traditional breeding with modern genomics techniques to develop better cultivars, faster. This entails breeding new fruits, vegetables, arable and ornamental crops with novel characteristics that appeal to consumers and are of interest to producers; and working closely with industry partners to identify what product characteristics will have the greatest impact in important and emerging export markets.

Information and technologies developed at Palmerston North underpin breeding activities throughout New Zealand and have international application. Key research programmes include the development of specialised tissue culture and plant hybridisation techniques, gene mapping and marker identification, and understanding plant pigment development.

Plant & Food™ Research
Rangahau Ahumāra Kai

Plant & Food Research
Food Industry Science Centre,
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Manaaki Whenua – Landcare Research

Manaaki Whenua – Landcare Research is the Crown Research Institute for our land environment. We are tasked with helping New Zealanders understand and care for our land and the rich biology that shares this land with us. Our scientists and experts study New Zealand's biodiversity, ways to protect our land from biosecurity threats, and the sustainable use of our land resources and our changing environment. We work with government, Māori, industry, communities, individuals, and scientists from around the world to create lasting impacts for our land – because our land is our future. Tō tātou whenua, mō āpōpō.

Our Palmerston North site, the second largest of our eight sites and one of our major research locations, is based on the Massey University campus. It is home to the Environmental Chemistry lab, and work in a number of key research areas is also undertaken here.

Environmental Chemistry Lab

The Environmental Chemistry Laboratory (EC Lab) is an International Accreditation New Zealand (IANZ) accredited laboratory. Our staff are involved in commercial analytical projects as well as providing field and laboratory support for research teams within Manaaki Whenua. The laboratory offers a range of analytical services on soil, plant, and water samples to both company and external clients.

Soil research

Soil and landscape processes underpin both the productivity and health of New Zealand's land and freshwater ecosystems. They provide ecosystem and productive services on which our primary industries and infrastructure rely, act as the platform for communities to live, work and play, as well as underpin a national identity on which our culture and tourist trade are based. Our research looks at the complex interrelationships that control the response of soils and landscapes to climatic and human-induced pressures, evaluating current risk, and offering sustainable land management and land use options.

Our current research capabilities include: soil mapping and land capability assessment; erosion and sediment

processes, soil health, biology and toxicity assessment and management; carbon storage and soil carbon, nitrogen and trace element cycling; soil water storage and movement; soil chemistry and physics laboratories, in-field sensing technologies for mapping and real-time environmental monitoring; modelling of soil processes at scales from the soil profile to the nation; and management of the nationally significant soil data repository, and S-map Online website.

Informatics

Our Informatics research applies expertise in remote sensing, geographic information systems (GIS), database application development, web services, biodiversity information management, and biometrics to provide new ways of delivering research data and information to users of research, and to our own science community. Research in Palmerston North focuses on Geospatial Informatics, for example, providing information to MfE on changes in New Zealand forest cover to meet our international Kyoto Protocol reporting responsibilities.

Greenhouse gases and climate change

Our research is improving understanding of future climate change impacts on land use suitability and adaptability, and the processes that control greenhouse gas emissions and removals from New Zealand's managed and unmanaged land-based activities. We are also developing tools to help policy makers, land managers, and landowners evaluate and prioritise land-based options for mitigating and adapting to climate change.

Results from these tools will quantify the economic, social, and environmental impacts of climate change, maximising potential benefits for New Zealand. They will also strengthen both New Zealand's ability to meet its international reporting obligations, and the economic and biophysical impacts of proposed domestic climate change policy on agriculture and the environment.

Manaaki Whenua
Landcare Research

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Business research and development

Business expenditure on research and development has increased substantially from $322 million in 2000 to $2,407 million in 2019. The business sector has increased its share of total research and development expenditure from 30 percent in 2000 to 60 percent in 2020.

The Regional Business Partners Programme (RBP) in conjunction with Callaghan Innovation has been delivering funding for private sector R&D since 2013. From 2013 to 2015 The Factory (formerly the Bio Commerce Centre and Building Clever Companies) managed the Callaghan Innovation contract to provide co-funding for R&D activities in the private sector.

Figures up to 2015 show a slow decline in R&D activity in the region, which can be linked to a decline in the manufacturing sector. A rapid fall in global dairy prices also had an adverse effect on R&D activity over this period as it lowered farm incomes, resulting in reduced sales of agricultural machinery, equipment and services. Companies were forced to reduce or in some cases completely abandon their R&D activity.

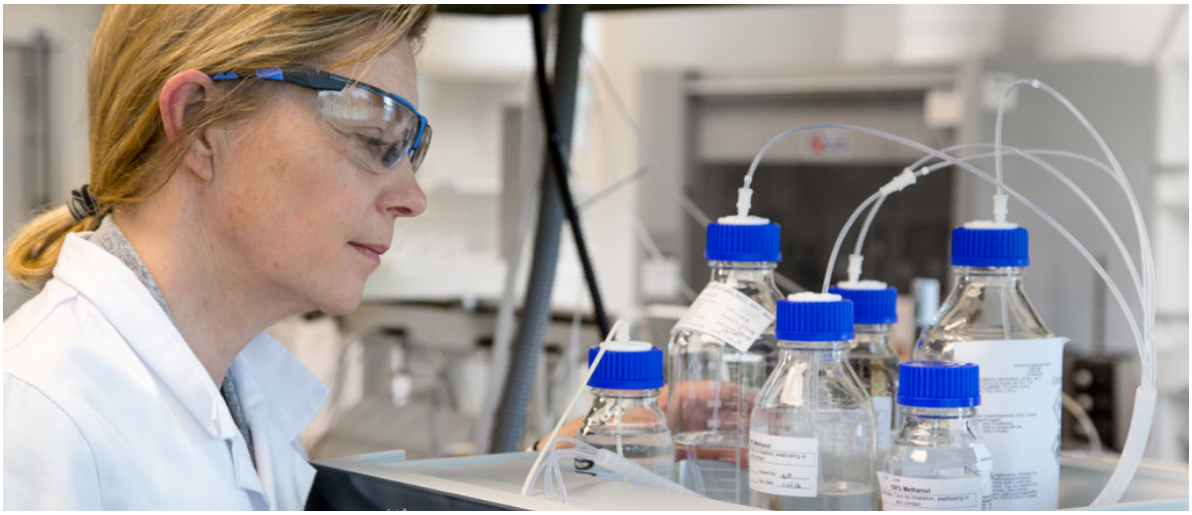
Central Economic Development Agency (CEDA) has been managing the Callaghan Innovation programme since July 2015 and has overseen a steady increase in R&D activity, especially in the agritech and digital sectors. There has also been an increase in the level of student funding that Callaghan Innovation provides to allow companies to utilise the skills and knowledge of tertiary students. There is a range of grants to cover small R&D projects over the summer break as well as for projects that will take two to three years to complete and result in a Master's or PhD graduate. In 2016 only two companies were participating in the programme but by the end of 2020 15 companies were on board with 35 students employed throughout the region.

Current R&D grant funding of $2 million is indicative of a private sector R&D spend of over $5 million per annum over the Manawatū-Whanganui region. This figure is very conservative as the R&D activities of Fonterra Research Centre, with over 300 researchers, add significantly to this figure.

In 2019 the government introduced the Research and Development Tax Incentive, which allows for a 15% tax credit on eligible expenditure. The upper cap is $120 million with a minimum of $50,000 R&D expenditure. The scheme replaces the Growth Grant from Callaghan Innovation, which is being phased out in the 2020/21 tax year.

The COVID-19 pandemic in 2020 also prompted some extra funding sources for R&D expenditure in the private sector. Companies that had R&D activities affected by COVID-19, either through a revenue drop or services not able to be delivered, could apply for a R&D loan from Callaghan Innovation. Loans were available for up to $400,000, with a range of repayment options to enable companies to continue their R&D projects. Callaghan Innovation also issued Booster Vouchers valued up to $5,000 for companies to complete critical parts of their R&D projects if affected by COVID-19. The R&D Loan Scheme and Booster Voucher scheme added a further $3.3 million of funding into the Manawatu-Whanganui region in 2020.

Sprout is an agritech & agrifood business accelerator supported by The Factory, that provides emerging start-ups with business advice, network connections and access to funding. Located at the Agritech Hub in Palmerston North, New Zealand, Sprout's activities include an annual intake of 8-12 start-ups from around the globe who join a six-month curriculum-based business accelerator. Sprout also provides investment and advisory services to agritech & agrifood companies. Sprout is supported by both public and private partners that seek to lead the future of primary industries both in New Zealand and around the world.



Fonterra Research and Development Centre

The Fonterra Research and Development Centre (FRDC) in Palmerston North is a world leader in dairy innovation and food technology, providing vital support for the co-operative's business, from its grass roots in New Zealand through to cutting-edge technology in dairy research, production and processing around the world.

The complex, across the road from Massey University, comprises more than 4000 square metres of laboratories and offices. It houses one of the globe's largest registered dairy pilot plants and its staff – numbering about 300 – are responsible for world-leading innovation that is creating exciting new products and foods that support healthy, active lifestyles in more than 140 countries.

Among the dedicated people working there are hundreds with tertiary qualifications, more than 150 post-graduates and some of the world's top dairy and nutrition scientists.

One of them, Dr Skelte Anema, was recently named as one of 18 New Zealanders to be made a Fellow of the Royal Society of New Zealand, in recognition of his world class research – a rarity for someone working in dairy research.

The FRDC and the wider co-op also draw on expertise in leading research centres around New Zealand and across the globe, which enables Fonterra to be a global leader in dairy innovation.

The facility in Palmerston North is complemented by innovation centres in key markets, such as China, Malaysia, Brazil, Chile, Australia, Sri Lanka, Indonesia and in other centres in New Zealand, all of which aim to bring innovative new products for consumers. These centres allow Fonterra to rapidly apply technologies in-market to suit the needs of those customers.

FRDC has been a centre of great science and innovation for many decades. That work began when the New Zealand Dairy Research Institute was founded in 1927. When Fonterra Co-operative Group was formed in 2001 the NZDRI became a Fonterra subsidiary and was renamed the FRDC on June 1, 2002.

Fonterra's commitment to innovation allows the company to reduce costs and develop new food and dairy technologies in a broad range of areas, including on-farm productivity, new consumer products and ingredients, and processes to help reduce its environmental footprint.

This work has produced numerous breakthroughs that address the needs of consumers across the life stages, from infancy through to old age and for multiple eating occasions, be they in the home or when eating out.

These include patented probiotics providing health and nutritional benefits to infants and adults; Anlene™ and Anmum™, providing mobility and cognition benefits; reduced fat and low salt cheeses; spreadable butter; cutting-edge mozzarella technology; and numerous

proprietary dairy proteins for use in yoghurts and dairy beverages, as well as, sports, healthy aging and medical nutrition applications.

In the food service platform, our mozzarella technology provides a step change in the manufacture of the product and allows us to adjust the taste and textural properties of the cheese to meet customer needs. Close to half of the pizzas made in China are now topped with Fonterra's mozzarella and the co-op recently announced the building of a new $240 million mozzarella plant at Clandeboye, near Timaru, on the back of that science.

In our advanced nutrition platforms, our patented protein ingredients such as functional whey and functional milk protein concentrates enable the protein fortification of dairy beverages and yoghurts, which is meeting the growing consumer desire for more protein whilst still providing products that have great taste and texture.

Much of that work has been highlighted in national innovation awards and through international recognition. Fonterra has won four NZ Innovators Awards in the last four years and an independent review panel comprising some of the globe's top dairy and nutrition scientists has described the co-op's food-structure science programme as one of the top three, if not the top, programme of its type in the world.

The work above and in other important projects is contributing to the growth of Fonterra's value-add business and the positive impact of that in the dairy industry and wider economy.

Fonterra™
Dairy for life

Fonterra Research & Development Centre
Dairy Farm Rd,
Palmerston North 4442

P (06) 350 4649 | W fonterra.com

Synlait Palmerston North

At Synlait we combine expert and sustainable farming practices with state-of-the-art manufacturing processes to produce a range of nutritional milk products that provide genuine benefits for human health and wellbeing. Our purpose Doing Milk Differently For A Healthier World **is driven by being different, essential nutrition, and sustainability. Our disruptive, innovative spirit combined with resolute determination to do the right thing for planet and people sets us apart.**

Our research and development centre is no exception. With 20 staff the team might be small, but they are delivering some impressive results. The team are Synlait's Centre of Excellence for Liquids with a focus on research and development in the liquids space. The work they do is supporting Synlait to explore new opportunities, to streamline Synlait's existing processes, optimise our plant and equipment, and to make the most of every drop of milk.

Partnering with Massey University and FoodPILOT, one of the New Zealand Food Innovation Network's four hubs, Synlait Palmerston North is located at the forefront of innovative food technology research and commercialisation in New Zealand.

Synlait's Technical and Applications Manager, Kirsty Blair, commented: "We're doing some really exciting things right now. There's so much to explore in this industry and this team certainly isn't short of ideas. But we're also really proud of some of our achievements to date."

Kirsty's team were heavily involved in the refinement of Synlait Dunsandel's Advanced Liquid Dairy Packaging Facility which supplies private label fresh milk and cream to Foodstuffs South Island. They have also been supporting the development of whipping cream which is getting a lot of interest in China.

In addition to an administration office, Synlait Palmerston North has a fully-equipped Research and Development laboratory which is well set-up for functional dairy product development. There is also a pilot scale processing plant, affectionately known as Syndi. Syndi arrived from Sweden on 17 September 2018 and is located at FoodPILOT. Syndi is designed to mimic the processing capability of Synlait Dunsandel's Advanced Liquid Dairy Packaging Facility on a much smaller scale and is used for product development, scale-up, and product improvement trials.

As well as the new product and process development work, a number of Synlait's staff support Massey's Food Technology students. The team also welcomes summer student interns each year, from universities throughout New Zealand.

"We have a Masters student and we support Massey fourth year food technology students in their final year projects. This year we have three student projects. Providing industry experience and incorporating the students into the culture of Synlait is something we take seriously," Kirsty commented.

Synlait

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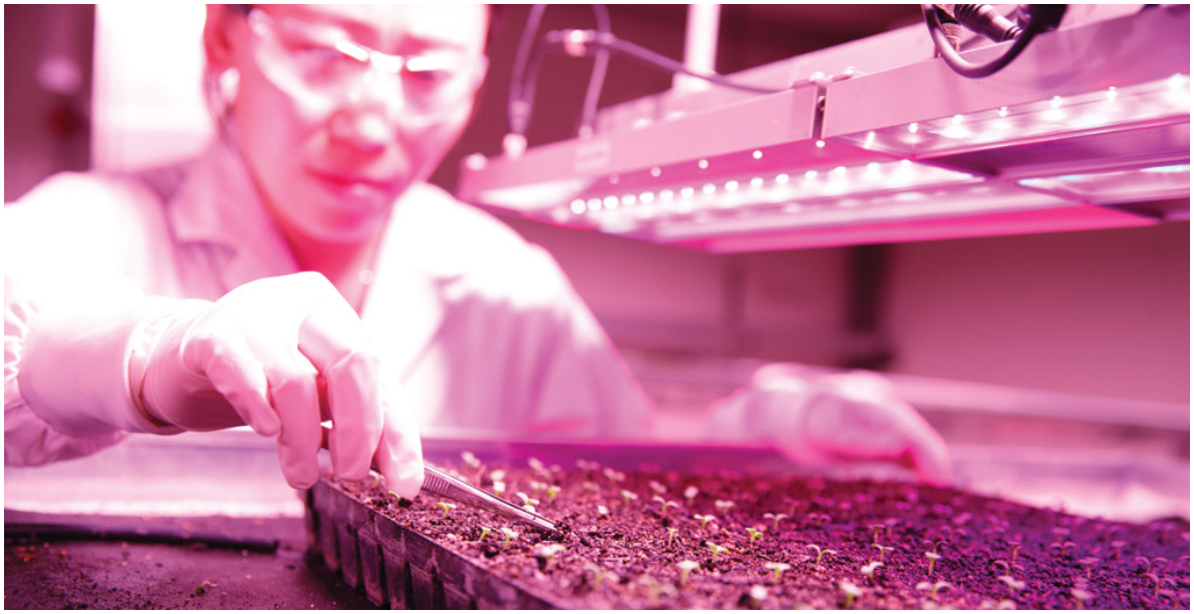

Biolumic

BioLumic is a biotechnology company that programmes plants with light. Creating a new agricultural paradigm where precise light treatments can be used to direct crop development, BioLumic is developing a world-changing, clean and green agtechnology in the Manawatū.

Founded in 2014 as a spinout from Massey University and The Factory, BioLumic is located on the Food HQ campus in Palmerston North. BioLumic develops Light Signal Recipes that are applied to seeds or young plants for short durations, which induce preferential genetic expression patterns, leading to increased crop yields, upregulation of plant defence against disease and pests, and beneficial regulation of crop composition, such as phytochemical concentration.

BioLumic employs a team of more than 20 in Palmerston North, and has staff and operations located in the United States. BioLumic operates across disciplines, with team expertise in plant biology, molecular biology, engineering, software, agronomy, and electronics. BioLumic's Plant Photobiology Centre on the Food HQ campus is a world-first R&D facility, which is also licenced by the Ministry of Health for Cannabis research.

BioLumic offers yearly summer internships to undergraduates, supports postgraduate research programmes, and collaborates with a number of partners in the local innovation ecosystem. Supported by local, regional, and global investors, BioLumic was the first New Zealand agtech company to complete a Series A capital raise from overseas venture funds.

biolumic

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Centres of Research Excellence, Research Institutes, Research Associations and Innovation Centres

The standard classification for research and development activity based on the business, government and higher education (university) sectors has hidden the growth of collaborative research arrangements in the Manawatū region through a range of different institutions, which include a Centre of Research Excellence, Research Institutes, Research Associations and Innovation Centres.

Many of these collaborative organisations do not appear in the Statistics New Zealand Business Frame database as separate economic entities. This is because the buildings and facilities are usually owned by one of the partners to the collaborative organisations and the staff remain employees of the partner organisations but are able to work together on collaborative projects. The activity of the organisations is still measured but is identified as being either undertaken by a university, a CRI or business organisation.

FoodHQ

FoodHQ is where science meets food. It is a collaborative initiative that brings together New Zealand's smartest food science minds to drive innovation in the food industry.

The Riddet Institute

Partners: Massey University (host), AgResearch, Plant & Food Research, University of Auckland, University of Otago.

The Riddet Institute is a premier national centre for fundamental and strategic scientific research in food.

Its area of expertise is at the intersection of food material science, gastrointestinal biology and human nutrition.

The Institute is engaged in discovery-based scientific research into foods and human nutrition, particularly "future foods in harmony with nature".

Hopkirk Research Institute

A collaborative venture between AgResearch and Massey University to create a team of animal health researchers of a size and expertise to rival that anywhere in the world.

New Zealand Food Safety Science and Research Centre

Brings together seven research partners to form a national, virtual, scientific network jointly funded by the New Zealand Government and industry. The scientific collaboration is aimed at protecting and enhancing New Zealand's $50 billion plus food sector, and to protect the health of children and families who consume New Zealand food products.

New Zealand Leather and Shoe Research Association (LASRA)

The organisation is funded by industry subscriptions, government contracts and a range of private contract and testing services. LASRA has a preferred partnership arrangement with Massey University.

The FoodPilot – part of New Zealand Food Innovation Network (NZFIN)

NZFIN is a national network of facilities supporting the food and beverage Industry in its innovation. Each of the four regional centres has a different focus reflecting its local businesses. They are complementary. Three have equipment sized to support first manufacture of new food products. But the FoodPilot is sized for research and development and is stationed in the heart of Massey University & FoodHQ. It is open to all sectors of the food industry offering product and process development capability to test processing, performance and appeal of new products before they migrate to larger-scale processing plants within NZFIN or elsewhere.

The Factory

The Factory is a team of curious individuals that thrive to support entrepreneurs, founders, start-ups and companies. They are a business development, training and innovation hub located in Palmerston North on Dairy Farm Road that works regionally, nationally and internationally.

Sprout Agritech

Sprout is an AgTech & FoodTech business accelerator and investment company supported by Finstere, OurCrowd, Fonterra and The Factory. Sprout provides emerging start-ups with business advice, network connections and access to funding. Located at the Agritech Hub in Palmerston North, New Zealand, Sprout's activities include a twice a year intake of 8-12 start-ups from around the globe who join a 3-month curriculum-based accelerator. Sprout also provides investment and advisory services to AgTech & FoodTech companies. Sprout is supported by both public and private partners that seek to lead the future of the Food & Fibre sector both in New Zealand and around the world.

FoodHQ

FoodHQ is an independent, not-for-profit collaboration that brings together New Zealand's smartest food minds to drive innovation in the food industry. It is headquartered in Manawatū due to the critical mass of food science and innovation capability located here, but works nationally and internationally to connect and facilitate.

It is a challenging and exciting time for the global food industry as evolving customer demands and new technologies create huge opportunities to reinvent our food production future. To succeed at this, New Zealand researchers, entrepreneurs, food producers, growers and manufacturers need to innovate and collaborate.

FoodHQ aims to bring different people and organisations together and help make things happen. It can facilitate introductions and connections to accelerate the development of ideas and capturing of more value. It works to improve the collaboration between research and commercial interests, make it easier for businesses to access the right facilities and expertise to address their needs.

Much of FoodHQ's more recent focus has been on New Zealand's nascent emerging proteins sector. It formed Emerging Proteins NZ (emergingproteins.co.nz), a virtual network bringing together those from across the value chain who are working on plant, insect, fungi, algae and biotechnology-based protein production. This has provided much needed coordination, and FoodHQ is working closely with industry, researchers and government to identify initiatives to accelerate the development of the sector.

FoodHQ Partners include public and private sector research, education and industry organisations, including AgResearch, Fonterra, Massey University, Plant & Food Research, Sprout Agritech, the Riddet Institute, the New Zealand Food Innovation Network, the New Zealand Food Safety Science and Research Centre, B.linc, Cawthron Institute, ESR and Pūhoro STEM Academy. Collectively, these organisations have approximately 2,500 researchers involved in food science and innovation activities, most of whom are based Manawatū.

food HQ
Where food ideas meet science

FoodHQ
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Palmerston North

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The Riddet Institute

The Riddet Institute is a premier centre for fundamental and strategic scientific research. Its area of expertise is at the intersection of food material science, novel food processing, human nutrition and gastrointestinal biology. The Riddet Institute's environment for discovery and learning is fertile ground for building research capacity. Its students of today will be the leaders of a prosperous food industry in the future, one that develops innovative, sustainable, healthier foods.

The Institute has five main partners (Massey University is the host institution, the University of Otago, the University of Auckland, AgResearch and Plant & Food Research) and is led by Distinguished Professor Harjinder Singh, winner of the Prime Minister's Science Prize in 2012. Massey University's Manawatū campus is a hub of agrifood research in New Zealand and an ideal base for the Riddet Institute national headquarters. Our headquarters can now be found within Te Ohu Rangahau Kai – a new collaborative community of food researchers. This state of the art AgResearch-Massey University research facility houses New Zealand's largest collection of food research scientists and is a very significant investment in future collaboration, with its ease of access to other researchers and industry partners in the area.

The Riddet Institute is one of ten Centres of Research Excellence funded by the Government, bringing together New Zealand's leading scientists in food and nutrition in a collaborative, multidisciplinary national and international network. The funding for the institute was renewed in 2020 for a further eight years. The Riddet Institute also has many government funded programmes in collaboration with its partners, including the High Value Nutrition National Science Challenge and other Ministry of Business, Innovation and Employment funded research.

Institute quick facts*:

- The Riddet Institute has published 1600 peer-reviewed journal papers
- More than 160 postgraduate students have graduated with a doctorate
- The Institute secured $95 million in research funding, $30 million from industry
- Our patented invention FerriPro™ was sold to global food company Nestlé in 2019 and is the biggest commercialisation deal in Massey University history. This technology will help address global iron deficiency and was winner of the 2020 PwC Commercial Impact Award from KiwiNet
- Our students come from over 37 different countries, leading to a unique multi-cultural environment. 60% of our graduates find employment in New Zealand and 83% are employed within research or industry
- We have hosted 9 national agrifood summits and 7 international conferences on food and related topics and how they impact New Zealand

* Data as of June 2021

Distinguished Professor Harjinder Singh

Riddet Institute
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The Riddet Institute

Hopkirk Research Institute

Hopkirk Research Institute

The Hopkirk Research Institute is focused on achieving and promoting scientific and technological excellence in areas relevant to food safety, animal and public health. In particular the work has an emphasis on infectious zoonotic diseases endemic to New Zealand which may threaten the livelihood of the pastoral sector and health of New Zealanders.

The $17m state-of-the-art Hopkirk Research Institute was opened in March 2007. Scientists enjoy award-winning, architecturally-designed surroundings that allow the assimilation of skills, expertise and knowledge of AgResearch's food microbiologists, immunologists and parasitologists with Massey University's clinicians, epidemiologists and pathologists.

Built on the Palmerston North Campus of Massey University, the Hopkirk Research Institute offers nearly 4,000 sqm of laboratory space, and can house approximately 70 research staff. The Institute also hosts the New Zealand Food Safety Science and Research Centre, the New Zealand/China Food Protection Network, Massey's mEpiLab and the TB Diagnostic Laboratory.

Researchers at the Institute work collaboratively on many different projects ranging from Anti-Microbial Resistance to development of vaccines for animal diseases.

AgResearch's Food Assurance Team's research is aimed at addressing industry needs across the whole value chain from rumen to retail. This approach involves every stage of food production from on-farm to food consumption. That includes food microbiology, food safety, product quality, processing technology, packaging, refrigeration and transportation, social or religious requirement (such as Halal), as well as identifying ways of measuring quality and authentication of products for export and domestic markets.

AgResearch's Animal Health Team is investigating ways to mitigate methane emissions in ruminants, vaccines for ovine pneumonia and diagnostics for bovine tuberculosis.

Massey's mEpiLab research area covers epidemiology, evolution and control of agents of infectious disease and contributed to major reductions in the rates of foodborne disease in New Zealand. The team comprises scientists with expertise in the fields of epidemiology, microbiology, molecular biology, bioinformatics/computational biology, mathematical modelling, veterinary science and public health. The Hopkirk Institute supports the Government's surveillance preparedness and management of disease events eg: the campylobactor outbreak in Hawkes Bay and provided laboratory space and technical assistance for COVID-19 testing at the facility.

The laboratory facilities include PC2 and PC3 containment laboratories, and PCR suites. These suites have both real-time and conventional PCR machines used for speciation and multilocus genotyping, and advanced technologies, such as next generation sequencing, phenotypic arrays and flow cytology. They also allow scientists to carry out specialist microbiological culture work, including aerophillic and microaerophillic workstations and tissue culture suites for infectivity assays.

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New Zealand Food Safety Science and Research Centre

The New Zealand Food Safety Science & Research Centre (NZFSSRC) was launched in 2016 and brings together seven research partners to form a national, virtual, scientific network jointly funded by the New Zealand Government and Industry. The scientific collaboration is aimed at protecting and enhancing New Zealand's $50 billion plus food sector, and to protect the health of children and families who consume New Zealand food products.

The NZFSSRC's research partners are Crown Research Institutes AgResearch, ESR and Plant & Food Research Limited, the Cawthron Institute, a private research institute, and three Universities; Massey University (Host), The University of Auckland and the University of Otago. The Centre's Governance Board is chaired by (retired or former) biotechnologist and chemical engineer, Dr Kevin Marshall. The NZFSSRC's investors are the Dairy Companies Association of New Zealand, the Meat Industry Association of New Zealand, Zespri International, and the New Zealand Government; Ministry of Business, Innovation, & Employment and the Ministry for Primary Industries.

The Centre's role is to promote, co-ordinate, and deliver food safety science and research for all of New Zealand, where, according to the Investors Guide to the New Zealand Food and Beverage Industry report issued in November 2016, the top 100 food and beverage firms collectively generate annual revenue of $51 billion.

The NZFSSRC takes a systems approach to food safety science and research, working across entire supply and value chains from farm to fork. A significant number of research projects have been undertaken covering the breadth of food safety related issues including traceability and provenance of food products, development of smart technologies for detection and mitigation of pathogens, understanding and mitigating the impact of chemical residues and hazards and understanding the perceptions and preferences of consumers.

The NZFSSRC has been successful in identifying food safety science and capability nationally, resulting in a web-based, searchable database that is being used as an exemplar for other agencies across the country.

Since its establishment the NZFSSRC has also secured $1.25 million in funding for the New Zealand-China Food Protection Network (NZ-CFPN), one of three China Research Collaboration Centres funded by the New Zealand Government (www.crcc.nz). The NZ-CFPN is hosted by Massey University and involved nine research collaborators focused on strengthening collaboration between New Zealand and China in the area of food safety and security.

New Zealand
FOOD SAFETY SCIENCE
& RESEARCH CENTRE

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New Zealand Leather and Shoe Research Association (LASRA)

New Zealand Leather & Shoe Research Association (LASRA) LASRA is an Incorporated Society, owned by its industry clients who process 100% of New Zealand's hides and deerskins and over 90% of its lamb and sheepskins, mostly for export, providing around $400M p.a. in export earnings to NZ Inc. It provides research, technology, and consultancy and training services to the hide, skin and leather exporting industry, the footwear manufacturing industry and a number of other related producers.

LASRA began life in 1928 as a section of the DSIR and was sited at Gracefield. It became an incorporated body in 1949. In 1973 LASRA moved into new, purpose built facilities in Palmerston North. LASRA's unique blend of expertise and experience in leather science and technology has made the organisation the Southern Hemisphere's premier research, technology and training provider for the hide and skin processing and leather and footwear manufacturing industries. New Zealand is a key player in the global leather industry. LASRA is the international leader in ovine leather research, reflecting New Zealand's dominant position as a supplier of some 10% of the material used in global leather garment manufacture. LASRA research also underpins the country's hide leather exports to countries like Italy where the final artistic touches are applied. Research from this Palmerston North institute has contributed to New Zealand's position as the leading supplier of deerskin leathers to high fashion houses such as Prada, Gucci, Hugo Boss, Mont Blanc and Ralph Lauren. LASRA is the leading Southern Hemisphere provider of testing services for safety footwear. We house testing facilities that are shared by only a handful of other institutes around the world, such as equipment for testing footwear and clothing for chain saw resistance and apparatus for testing fire fighters footwear.

LASRA enjoys a strong partnership arrangement with Massey University. The research relationship has made ground-breaking discoveries, using advanced tools such as the Australian Synchrotron, that are especially relevant to New Zealand's hides and skins, under investment and encouragement from the Ministry of Business, Innovation and Employment. Our testing laboratories operate to ISO/IEC 17025.

We're accredited by IANZ (International Accreditation New Zealand), a signatory to ILAC's Mutual Recognition Agreement with counterpart authorities in nearly a hundred economies, which gives international recognition to LASRA test results in countries such as the USA, UK, Germany and Japan. LASRA represents NZ on technical committees developing international standards for leather testing. We carry out technical evaluations and arbitration work for exporting companies and help them resolve market access issues that arise with our trading partners in places like India, the EU and China.

New Zealand Leather and Shoe Research Association (LASRA)
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New Zealand Food Innovation Network (NZFIN)

The FoodPilot is one of four physical elements of the New Zealand Food Innovation Network. It is the place companies come to make 10 to 500 kg of some new food product. Then those companies can go to the FoodBowl in Auckland or FoodWaikato in Hamilton or FoodSouth in Christchurch to make batches large enough to sell to measure market response or to make profits.

The FoodPilot centres on a modern1800 m2 pilot plant building housing a huge collection of food process equipment housed amongst chillers, freezers, and storerooms. It carries the registrations to make product for sale or consumption in New Zealand or for export. Supporting the FoodPilot is every shade of laboratory and food scientist. And it has a fully equipped 200 L microbrewery.

The FoodPilot has on tap all that is needed for sensory and consumer insighting work, for shelf-life trials and for nutritional testing. Making it all happen is a dedicated staff of specialists.

The biggest users of the FoodPilot today are companies undertaking product development, followed by an army of PhD students with their food process research and followed by undergraduate food technologists – the food pioneers of tomorrow.

Today's FoodPilot belongs to everyone. It is open-access. Run by Massey University it is part of both the Food Innovation Network and of FoodHQ. It is the second home of staff from the Riddet Institute, AgResearch and Synlait not to mention some from Plant & Food Research, Fonterra, and other New Zealand food companies.

It is the Food Innovation Network that ties the FoodPilot in Palmerston North to the larger scale facilities elsewhere. The network can ensure companies are migrated to the most apt facility when they need to make larger quantities for market testing or commercial sale.

The Massey Microbrewery

In 2007 Massey built a microbrewery. It has a 200 L brew house servicing a suite of ten 200L unitanks for fermentation and maturation. Since then Massey has periodically run its 4-day residential brewing course and twice yearly its 2-day brewing short course.

The brewery is open-access and is well used by brewers perfecting new brews for initial sale. They take away kegs to prove they can achieve repeat sales through taps they can access – and then they are off to a contract brewer to move up to 2-5,000 L batches. This puts them in business for the cost of only a little working capital and a bit of sweat.

The brewery is now well embedded into multiple undergraduate courses – a great way to learn the science, engineering and business of modern craft brewing. And for one student masterbrewer each year it can be a pathway to a dream career.

New Zealand Food Innovation Network

New Zealand Food Innovation Network (NZFIN)

P 0508 NZ FOOD | W foodinnovationnetwork.co.nz

The Factory

The Factory are experts at getting ideas off the ground, launching start-ups, and helping businesses grow. They've worked with and supported over 10,000 founders. Launched in 2003, The Factory incubation process supports entrepreneurs and founders get there businesses started and thriving.

The Factory is a team of curious individuals that thrive to support entrepreneurs, founders, start-ups and companies. They are a business development, training and innovation hub located in Palmerston North on Dairy Farm Road that works regionally, nationally and internationally.

The Factory helps individuals, start-ups and companies with new ideas begin the process of scaling and becoming contributors to our communities. The Factory is a world leader in business acceleration and are specialists in agritech, agrifood and new technologies.

Their expertise working with founders, start-ups and business owners runs deep, having been established almost two decades ago, being a Callaghan Innovation Founder Incubator that's supported over 10,000 entrepreneurs and start-ups. In addition, The Factory owns and manages Manawatu Investment Group who collectively have invested more than $50 million into local and national companies.

THE FACTORY

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Sprout Agritech

Sprout Agritech, a Palmerston North based agritech business accelerator, is one of four partners in Callaghan Innovations' 'technology incubator' programme. The technology incubators are designed to share connections and expertise to help new companies build up to competing internationally, and provide funding in the crucial early stages of development.

Sprout can make seed investments of $1m in up to 40 fledgling companies. $250,000 of the investment comes from Sprout's Limited partners, Finistere Ventures, OurCrowd, and Fonterra, and $750,000 from Callaghan Innovation.

Scentian Bio is Sprout's first of 40 investments planned in agritech and foodtech start-ups over the next seven years.

Dr Andrew Kralicek spent the past 19 years at Plant & Food Research determining how smell receptors in insects work. These receptors are the result of 400 million years of evolution and enable insects to easily find mates, detect predators, find food, or where to lay eggs with their receptors. Kralicek's team investigated whether insect smell receptors could be combined with electronics to create an "insect nose/tongue". A new technology developed from this research is the basis of new company Scentian Bio.

"We know this technology detects volatile organic chemicals which is the basis of a completely new sensor technology. We discovered that no one else can do this," explains Dr Kralicek. "This is deep tech, hard-core science that will have a massive impact as we have developed a tool to detect and analyse complex aroma and taste profiles. That means that we could use the technology to detect variation in water, wine or food quality for example, or even detect the presence of disease in humans."

Andrew went through Sprout Agritech's Accelerator to understand how to commercialise this discovery, which highlighted the need for connected capital to be able to establish this world-leading technology.

SPROUT
BREAK NEW GROUND

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Estimating the economic benefits of the research and development sector to the Manawatū region economy

Estimated direct economic benefits

Estimating the wider economic benefits of the research and development sector to the Manawatū region is difficult because of the lack of any comprehensive survey data for R&D activity in the region.

Statistics New Zealand employment data is collected using the Australian and New Zealand Standard Industrial Classification (ANZSIC06), which classifies every institution by its primary activity. Institutions engaged in similar productive activities are grouped together but problems occur when an institution engages in several activities. This is particularly an issue for research and development, since it is carried out by a wide range of institutions but is not the primary activity of the institutions. For example, R&D is a significant output for Massey University but the primary activity for the university is education, so all of its staff are classified in the "Higher Education" ANZSIC code.

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

These estimates only cover the paid staff employed by research institutions and not the post-graduate research students enrolled at the Massey University Palmerston North campus. The income of these students from scholarships and allowances is additional to the salary and wage estimates below.

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.

	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
Estimated total salaries and wages for R&D employees	99	2,387
	Employee count	**Employee count**
Number of employees	2,500	70,000

Source: Statistics New Zealand and Massey University

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 around nine manufacturing business units producing agriculture machinery and equipment, employing 220 people in the Manawatū region, 10 percent of national employment in the sector.

The broader Manawatū-Whanganui region experienced strong growth in food processing sector employment between 2000 and 2020. Total employment in the sector increased by 1,600 jobs between 2000 and 2020, a 41 percent increase. National employment in the sector increased by 19 percent over this period. In 2020 the region accounted for 7.0 percent of the national food processing sector labour force and 5.0 percent of the national population.

CEDA
CENTRAL ECONOMIC DEVELOPMENT AGENCY

MANAWATU
DISTRICT COUNCIL

PALMY™
PAPAIOEA
PALMERSTON
NORTH
CITY

Te Kaunihera o Papaioea Palmerston North City Council

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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 Manawatū 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 Manawatū regional economy (Palmerston North City and Manawatū 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	EARNINGS	GDP
2,500	$99M	$222M
3.9% of total employment	3.0% of total earnings	3.4% of total GDP

CEDA CENTRAL ECONOMIC DEVELOPMENT AGENCY

MANAWATU DISTRICT COUNCIL

PALMY PAPAIOEA PALMERSTON NORTH CITY

COMMITTEE WORK SCHEDULE

TO: **Economic Development Committee**

MEETING DATE: **15 September 2021**

TITLE: **Committee Work Schedule**

RECOMMENDATION(S) TO ECONOMIC DEVELOPMENT COMMITTEE

1. **That the Economic Development Committee receive its Work Schedule dated September 2021.**

ATTACHMENTS

1. Committee Work Schedule_September 2021 ⇩

ECONOMIC DEVELOPMENT COMMITTEE

COMMITTEE WORK SCHEDULE – SEPTEMBER 2021

Item No.	Estimated Report Date	Subject	Officer Responsible	Current Position	Date of Instruction/ Point of Origin
1.	15 September 2021	**Sector Profiles:** Retail Health Check (full and summary) Research, Science & Innovation (full and summary)	Chief Planning Officer	Waiting for further information to be supplied	
2.	15 September 2021	Portfolio Update – Science, Technology & Innovation	Cr Brent Barrett		
3.	8 December 2021	Portfolio Update – Education & Students	Cr Rachel Bowen		
4.	8 December 2021	**Sector Profiles:** Construction (full and summary) Healthcare & Social Assistance (full and summary) Logistics (full and summary) Government (full and summary) Agriculture (full and summary) Tourism (full and summary)	Chief Planning Officer		
5.	March 2022	Quarterly Economic Report	Chief Planning Officer		
6.	March 2022	International Relations Six Monthly Report	Chief Planning Officer		
7.	March 2022	**Sector Profiles:** Research, Science & Innovation (full and summary)	Chief Planning Officer		

Oasis # 13972982

Item No.	Estimated Report Date	Subject	Officer Responsible	Current Position	Date of Instruction/ Point of Origin
		Defence (full and summary) Manufacturing (full and summary)			
8.	March 2022	Portfolio Update – Housing	Cr Susan Baty		
9.	June 2022	Portfolio Update – Inner City/CBD	Cr Leonie Hapeta		
10.	June 2022	Sector Profiles: Manufacturing (full and summary)	Chief Planning Officer		