

ANNUAL REPORT

| 2018 |

**Callaghan
Innovation**

New Zealand's
Innovation
Agency



As New Zealand's Innovation Agency

WE PROMOTE THE GROWTH OF THE INNOVATION ECOSYSTEM



Investment in research and development is growing

14% GROWTH
in Business
Expenditure on
R&D (BERD)
in 2017

**OUR GRANT
CUSTOMERS**
account for
\$1.07bn
OF R&D SPEND

7,740

businesses
introduced new
or improved
goods and
services in 2017

+10%
ON 2015

We're expanding the reach and depth of our support



2,711

ORGANISATIONS
ENGAGED WITH US
IN 2017/18

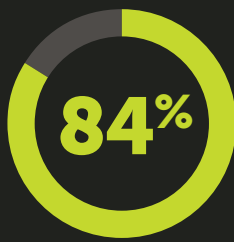


growth in our
customer base compared
with last year

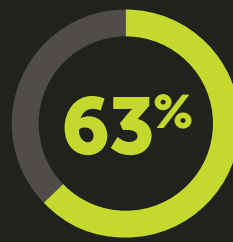


uplift in customers
receiving a deeper multi-
service package of support

We liberate innovators



of customers say our services directly contributed to the innovations they introduced in the last year



of customers stated that the service they received from Callaghan Innovation contributed to their ability to undertake R&D

Grant customers



1.7x

MORE LIKELY TO HAVE
**INTRODUCED NEW
INNOVATIONS IN NZ IN 2017**



UP TO

2.5x

MORE LIKELY TO HAVE
**MAINTAINED THEIR
R&D INVESTMENT**

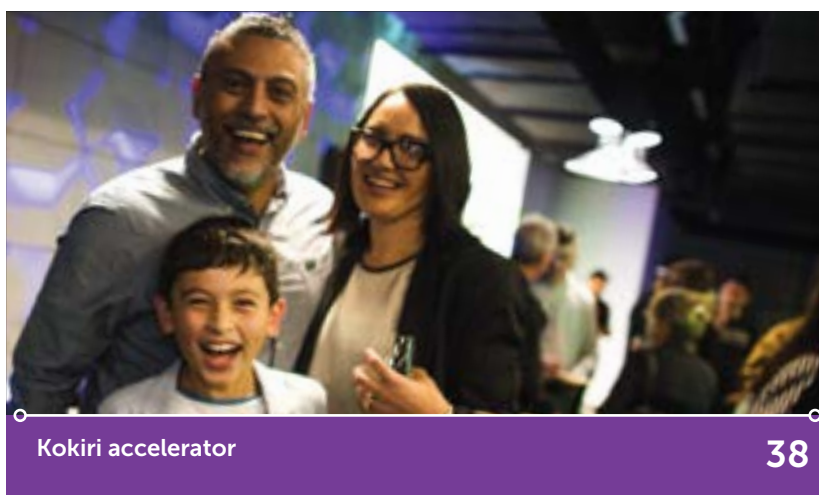
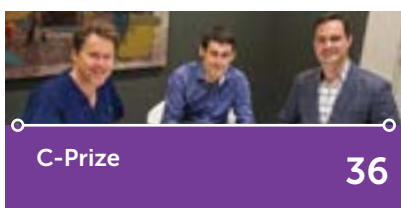
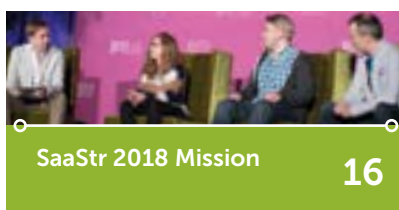
NPS of **+53**

*our customers are **strong** advocates of our services*

CONTENTS

Report		Our relationships	40
From our Chair and Chief Executive	6	Our people	42
Our strategy	8	Our governance	50
Innovation skills	10	Statement of Responsibility	52
Business collaborations	12	Statement of Performance	53
Technology and product development	18	Financial Statements	61
Access to experts	26	Notes to the Financial Statements	69
R&D grants	28	Independent Auditor's Report	100
Building New Zealand's innovation capability	32	Statutory Reporting Requirements	104

CASE STUDIES



REPORT

From our Chair & Chief Executive

New Zealand's innovation ecosystem is growing. Investment in research & development (R&D) is being powered by the business sector. In 2017 there was a 14 percent increase in business R&D expenditure to \$1.79 billion. One in nine businesses are now undertaking R&D – the highest rate since 2007. New Zealand's start up sector has seen strong growth, with \$86m in angel investment. However, despite this improvement we still lag behind other OECD countries in total R&D spend as a proportion of GDP.

Since Callaghan Innovation's establishment five years ago, we have played an important role supporting some of New Zealand's most exciting and fastest growing companies. Our role in helping businesses succeed through technology supports the Government's goal to increase overall R&D expenditure in New Zealand to 2 percent of GDP by 2027.

As an organisation we continue to change and evolve to reflect an environment that is changing faster than ever before. We want to show New Zealand businesses the future and how to not just survive the transformation but stay at the forefront and thrive.

In the past year the number of brilliant businesses we worked with grew by 10 percent, to 2,711. These customers are increasingly using more than one of our services. We are investing in New Zealand's businesses responsible for 60 percent of New Zealand's R&D spend. Our customers are successful. Last year our customers represented 67 percent of the TIN200, almost half of the Innovation Award winners were customers, and 82 percent of companies with Angel Deals worked with us.

We had 465 customers take part in our programmes to build innovation capability. Our scientists in our Research and Technical Services (RTS) team supported 270 organisations to take their ideas from concept to commercial reality. 996 customers also had grant contracts that were active during the year. Our customers are strong advocates of our services – overall we achieved a Net Promoter Score (NPS) of +53, with exceptionally high numbers recommending us for Grants (NPS +82) and International (NPS +79).

Our customers are at the heart of everything we do, and this Annual Report contains just some of the highlights from our engagement with our customers and our impact on their success. Software as a Service (SaaS) company ezyVet is taking its technology to the next level with R&D in AI and machine learning and Hot Lime Labs, a spinout from our Research and Technical Services (RTS) division, is commercialising technology that could have significant benefits for global food production. We ran another successful C-Prize competition, with teams challenged to create the next generation of wearable technology and positively impact on the lives of New Zealanders.

In April we hosted the first ever Innovation Challenge, a week-long online interactive event, where nearly 80 New Zealand thought leaders from industry, business and government gave their views and vision for New Zealand. These discussions provided valuable insights into how innovation might help New Zealand to succeed and laid the foundation to form a collective vision of New Zealand in 2040.

The Gracefield Innovation Quarter (GIQ) in Lower Hutt continues to be a significant focus for Callaghan Innovation. We have prepared a business case for Government outlining the long-term vision for GIQ and what investment is needed to make GIQ a world-class innovation hub. We look forward to progressing this vision in the coming years.

We work in close partnership with other organisations in the innovation system – universities, Crown Research Institutes, Regional Business Partners and government agencies, in particular New Zealand Trade and Enterprise, to provide a comprehensive approach to growing internationally successful businesses in New Zealand.

We welcomed the Government's 2018 Budget announcement of \$1 billion for research and development, and are supporting the implementation of the R&D Tax Incentive. We look forward to the uplift in business investment in R&D that this new investment will help drive.

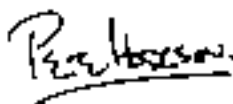
But this success is just the start. If we are to put New Zealand at the forefront of innovation and achieve

the Government's goal to increase R&D expenditure, we need a step change. Callaghan Innovation is well placed to support customers to achieve the highest impact and contribute to this goal.

This year we engaged with our stakeholders and those in the innovation eco-system to create our new long-term strategy. Our purpose is clear – we are here to activate innovation and accelerate the commercialisation of innovation for a better New Zealand. We'll do this by showing New Zealand what the future looks like and how we will get there. We will stimulate demand for New Zealand innovation, connect New Zealand innovators into, and remove friction from, the innovation ecosystem. We will partner with businesses to empower them to innovate.

This year we had a number of leadership changes. We farewelled our inaugural Chair, Sue Suckling, and welcomed Pete Hodgson as Chair. Rosalie Nelson and Heather Deacon also joined Callaghan Innovation, completing our refreshed Senior Leadership team.

As Callaghan Innovation moves into its next phase, we are in a solid position to build on our existing foundations, achieve our strategic objectives, and help even more New Zealand businesses to succeed. To us success is when there are more New Zealand businesses being successful through technology. A success that brings benefits to New Zealand's economic, social and environmental well-being.



Pete Hodgson
Chair



Vic Crone
Chief Executive

OUR STRATEGY



We activate innovation and accelerate commercialisation for a better New Zealand.

We support the Government's economic strategy to improve the wellbeing and living standards of New Zealanders through productive, sustainable and inclusive growth.

We grow New Zealand's innovation economy and contribute to improved social outcomes by helping businesses succeed through the use of technology and innovation.

Callaghan Innovation's strategy is focused on:

- **Show the future** – Showing New Zealand where technology is taking the world, how we must adapt and how innovation drives success
- **Fuel demand** – Fuelling demand for New Zealand innovation and being a voice for innovators
- **Connect the ecosystem** – Connecting innovators into local and global ecosystems and collaborating to remove friction in the R&D ecosystem
- **Empower innovators** – Empowering innovators by partnering with businesses and delivering the right services and funding support at the right time, for the greatest impact.

In 2017/18, we delivered the following innovation services to businesses:

Innovation skills

Helping businesses to build in-house innovation skills and capability.

Business collaborations

Leading collaborative innovation projects and technology missions for businesses.

Technology and product development

Helping businesses take an idea from concept to commercial reality.

Access to experts

Opening doors for New Zealand businesses seeking innovation advice, skills, support and technical expertise.

R&D grants

Adding scale to businesses R&D investment for greater impact.

Building New Zealand's innovation capability

Building and strengthening New Zealand's innovation capability through a strong innovation system.

To ensure we delivered on our strategy we focused on three strategic objectives:

- Delight our customers
- Every connection counts
- Drive One Callaghan, Digital First

Our customers value our services, with a strong Net Promoter Score of +53, with our grants, programmes and international offerings particularly well received. In 2017/18 we grew our customer base to 2,711, an increase of 10 percent on the previous year. We have also seen a 21 percent increase in the number of our customers using more than one of our services. Internally we've started to introduce new collaboration tools as we move towards a digital first approach.

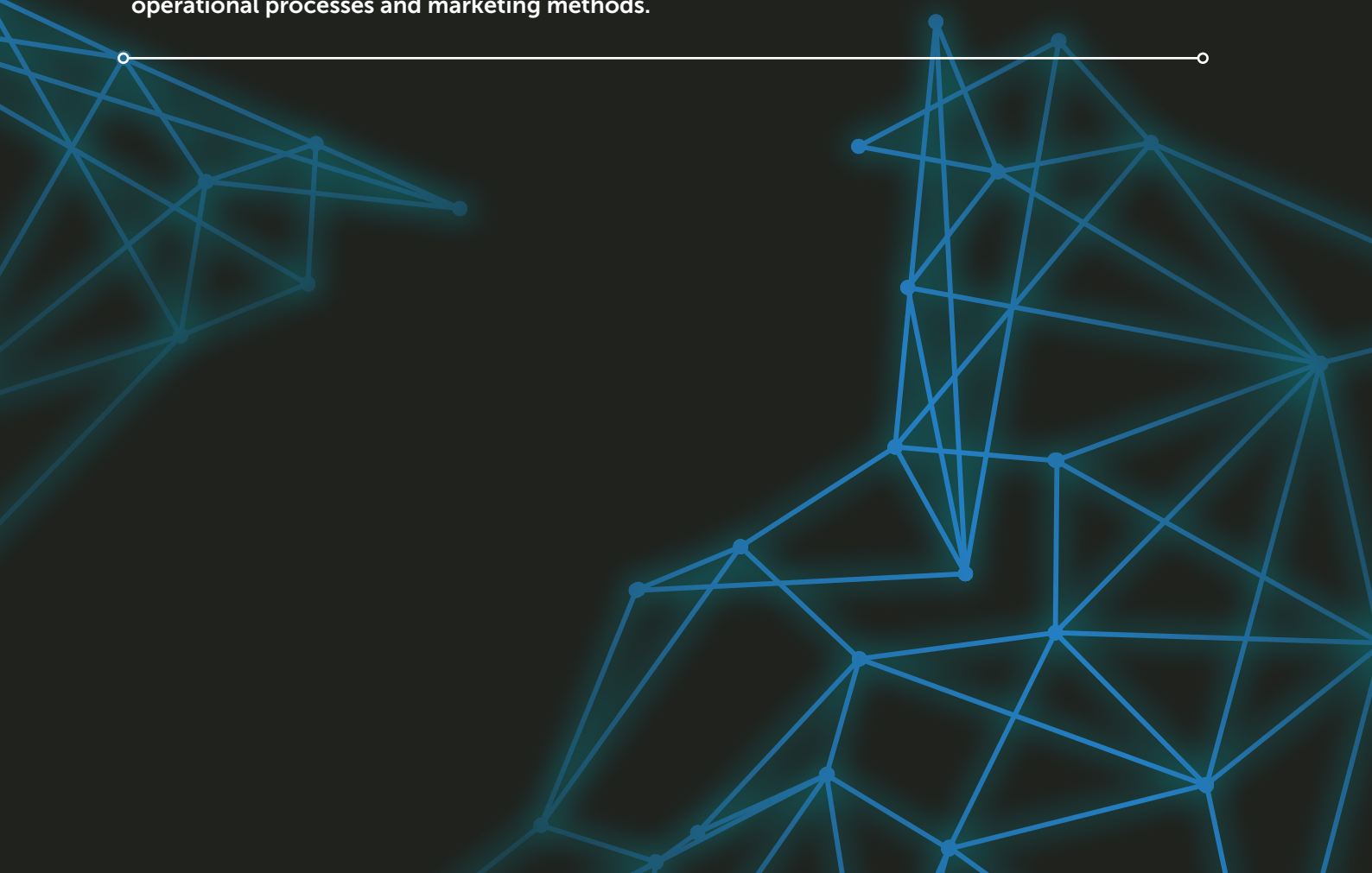
We have recently refined our strategy and will be strengthening our performance measurement framework and indicators to monitor our progress. The strategy is represented in our Statement of Intent 1 July 2018 – 30 June 2020.

We will continue to work in close partnership with other organisations that also contribute to increasing business expenditure on R&D and innovation in New Zealand. Together we will ensure a comprehensive and integrated response to opportunities and challenges that our customers face.

Innovation skills

Callaghan Innovation helps businesses to build the in-house skills and capability they need to ensure they are innovation-ready. We provide a range of programmes, training courses and workshops to improve business performance, eliminate inefficient processes and activities, and increase customer satisfaction. We are constantly improving our programme suite, responding to feedback and ensuring that we're catering to our customers' needs.

Customers are positive about the impact of our programmes, with a Net Promoter Score (NPS) of +64. Customers have told us that programmes have helped them implement new organisational or managerial processes, operational processes and marketing methods.



Our programmes
Over the past year

Innovation IP is an extended programme that gives innovative and willing New Zealand businesses the knowledge, capability and confidence to leverage their intellectual property (IP) and intellectual assets for accelerated business growth.

A total of 47 businesses worked with us on the Innovation IP Programme. Businesses said that as a result of undertaking the programme they have significantly improved their practices concerning strategic management of IP.

This year we consolidated Innovation IP as a core offering in our programme portfolio. We worked closely with our Regional Business Partners to extend the reach of the programme and identify new businesses needing to improve their strategic management of IP.

Driving Innovation helps businesses to improve the pace of innovation through improved product development methods.

This year 12 customers took part in a 12 month programme to increase the pace of innovation by changing traditional product development methods. Callaghan Innovation ran an open tender choosing four suppliers to deliver the programme, ensuring greater capacity to manage its demand.

Build for Speed helps businesses in the digital sector to accelerate software development and product delivery through the application of continuous delivery principles.

This year 81 software development businesses took part in the Discovery phase of the programme and 1 in the Deep Dive phase. An external review of the pilot programme found that the participating businesses had made enduring improvements, and the review's recommendations are being incorporated into the programme. We ran an open tender process to increase programme provider capacity, increase regional reach and introduce an agile process improvement option. A new Christchurch based provider is now authorised to deliver Build for Speed.

Better By Lean helps businesses to review their processes and management systems in order to improve productivity, eliminate waste, empower employees, and introduce a mindset of continuous improvement.

We continue to have strong demand from customers to participate in this programme. 253 businesses attended workshops across New Zealand, resulting in 52 co-funding agreements. We ran an open tender, where 21 providers were selected to deliver the programme.

Callaghan Innovation refreshed the programme to incorporate more of an emphasis on employee engagement. Traditional Lean combined with Industry 4.0 principles was also piloted with two businesses.

The High Performance Working Initiative (HPWI) helps businesses to create environments in which innovation can occur and thrive by focusing on governance, leadership, strategy and culture.

This year 89 customers took part in HPWI across New Zealand. Participants said that after the programme their team culture incorporated more of an innovation mindset.

Following an external review of how to improve the delivery of the programme, we have refreshed and rebranded the programme to Innovation Foundations. Innovation Foundations will build upon the success of HPWI and it will be the first of our modular offerings with a digital presence.

In addition to this, a pilot programme named "Rukuhia" was run in Northland, with ten Māori businesses and Trusts participating. Three participants which produce Mānuka honey then went on to join a Māori food and beverage coalition in partnership with New Zealand Trade and Enterprise, New Zealand Post, and Alibaba.

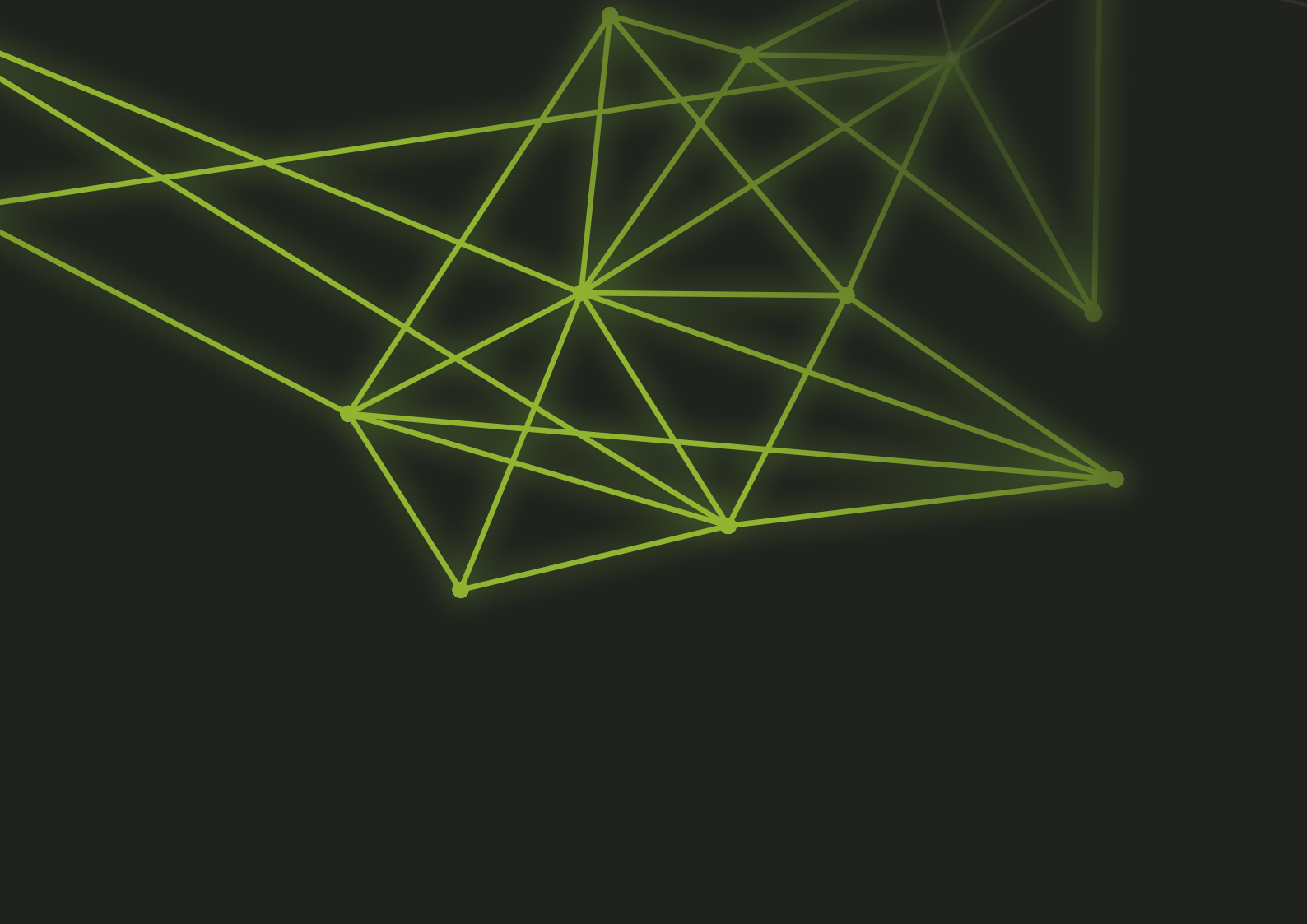
The Innovation Experts Series provides businesses with access to the world's leading innovation practitioners through targeted workshops.

This year we brought US innovation leader Langdon Morris to New Zealand. He ran two full day workshops on foresighting and scenario planning, titled 'Prosper or Perish', where 75 people attended from industry and business.

Business collaborations

Callaghan Innovation has given New Zealand businesses opportunities to work with partners on shared technology-based engagements and form mutually beneficial collaborations.

The aim is to reduce the costs of R&D and promote the sharing of knowledge among business partners.



We encourage and promote groups of businesses through

Collaborative innovation projects, where we invite businesses to tackle targeted technology projects jointly with other businesses, industry associations and research organisations.

Planning and facilitating technology-focused delegations to international events and visits to exemplary innovation facilities.

Developing partnerships to help solve common innovation and technology problems.

Over the past year we have completed the following collaborative work

We focused on wearable technology through the C-Prize technology challenge to address how people might live healthier, work safer and play smarter. Sponsors Southern Cross Health Insurance, Fuji Xerox, AUT Millennium and other supporting companies helped us connect people looking at wearable technology with potential industry application.

Our delegations have assisted New Zealand businesses to connect to international knowledge, expertise, ideas, innovation partners and facilities including the:

- Agritech mission to World Dairy Expo in Madison, Wisconsin: 11 businesses
- Software as a service mission to SaaStr Annual 2018 in San Francisco: 62 businesses
- Industry 4.0 manufacturing mission to Internet of Manufacturing conference in Chicago: 22 businesses
- Medtech mission with CMDT to the medical precinct in Houston: 10 businesses and 9 researchers

Our international missions delight our customers, with a Net Promoter Score of +79. Our customers said our delegations impacted their innovation strategy and they built strong relationships with their fellow delegates as well as international connections.

We developed a series of Emerging Technology workshops, which aimed to demystify technology and inspire greater adoption of emerging technology. Attendees heard from experts in Biotechnology, Advanced Materials, Advanced Manufacturing, and Data and Internet of Things. Four workshops were held in Wellington, Christchurch, Auckland and Tauranga, where about 100 businesses attended.



Establishing clusters of Māori businesses with a desire to innovate or create shared opportunities.

We continue to support the Nuku ki te Puku Māori Food and Beverage Cluster to collaborate with individual innovation initiatives, supporting business growth through ongoing contact and communication. Nuku ki te Puku has now established themselves as a standalone company and has entered into a \$1 million partnership with the High Value Nutrition National Science Challenge to look at how Māori businesses can work together with researchers to develop food for health products for export. This year Nuku ki te Puku took a delegation to Singapore.

The MIRO Blueberry Collective is another successful Maori cluster that was spawned through Nuku ki te Puku participants. We are continuing to support this cluster through our R&D grants and advice. This is NZ's largest Blueberry collective and is set to grow.

The Māori Economy Team supported the establishment of the Māori Digital Cluster, Te Tira Toi Whakangao. The members of this cluster were selected as a result of the Māori Innovation Award sponsored by Callaghan Innovation for the New Zealand Hi-Tech Awards. We are an enabler for the cluster and partner closely with NZTE to support Māori Digital Business growth. NZTE has seconded a member of their team to the Maori Economy team to establish a technology platform that connects and supports Māori technology hubs in the regions and build global connections and opportunities.

Providing customised innovation services to address the unique needs of a specific industry.

As part of our focus on supporting the growing agritech sector, our agritech experts are working with companies to develop and protect their technology, commercialise their products, source R&D support, grow their markets and connect into the domestic and global innovation ecosystem. We supported ten early stage agritech businesses to attend the World Dairy Expo in Wisconsin to learn, network and connect with the international dairy tech community. We are also a proud sponsor of Fieldays, and at this year's event we hosted agritech business seminars, innovation tours, and sponsored the Callaghan Innovation Partnership & Collaboration Award won by Holsim. We were pleased to support the launch of Agritech New Zealand, set up to build a more effective and efficient collaborative ecosystem.





In 2018 we supported 60 software as a service (SaaS) companies to San Francisco to learn, network and connect with the international SaaS community.

100 Kiwi software as a service (SaaS) founders and leaders joined 10,000 global players at the 2018 SaaStr Annual conference. Their aim was to accelerate the commercialisation of their high-tech businesses and bring back lessons to share in New Zealand.

There are around 500 SaaS businesses in New Zealand, from publicly listed, high-growth companies like PushPay to startups in garages. These SaaS businesses can grow faster than many other sectors. Callaghan Innovation Group Manager for Digital Sector, Bruce Jarvis, is pleased to see the growth of SaaS companies. "Callaghan Innovation is committed to assisting the innovation

and growth for SaaS companies. It is especially great to see SaaS business leaders connecting and sharing their know-how and resources at local events like Southern SaaS coming up in August".

The mission created momentum, bringing the Kiwi community of SaaS founders and leaders closer together. The SaaS community is focused on sharing learnings and know-how, accelerating business growth, creating high value jobs, and generating export value. Jamie MacDonald from Storypark reflected on the benefits of the mission, saying that "it is important being able to meet other CEOs and founders of companies and be able to talk about everything from how they structure their business, to how they reach their customers, to how they develop their product".

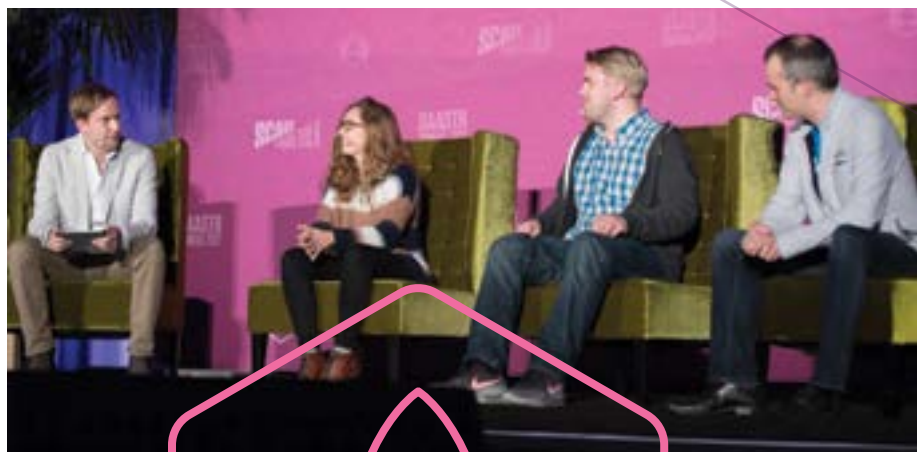
Making connections that matter is an important ingredient for the New Zealand SaaS success story. Penny Anderson from Feature IT agrees that connections are essential, saying "it is about SaaS being an ecosystem of a lot of solutions that need to work together. That's the exciting part, for NZ to be a part of that".

After returning from San Francisco, 35 percent of the companies planned to increase their prices, one third planned to introduce product management practices and 20 percent planned to focus on one use-case and market. With a sold-out Southern SaaS event locally, SaaS founders and leaders are hungry for more.



"SaaStr 2018 helped our business to think strategically about the next stages of development in the US market and refine our business plan"

Tim Winstone, Group Commercial Manager, Jumpshift Development



Technology and product development

There is a myriad of paths available when it comes to taking an idea from concept to commercial reality.

Our experienced advisors, specialist scientists and engineers have helped businesses to navigate each step and deliver tailored R&D solutions.



Callaghan Innovation provides end-to-end support by helping businesses to

Over the past year

Identify the steps needed to commercialise their ideas.

Research and Technical Services (RTS) and Commercial Group achieved total commercial revenue actuals at \$19.6 million, an increase of 8 percent, the best full year result since Callaghan Innovation was established.

Develop components, products, processes and technology from proof of concept through to production.

In addition to managing the MSL budget, the Commercial Group achieved \$10.4 million in international revenue and \$0.9 million in domestic revenue, with total commercial revenue at \$11.3 million. This is a significant achievement given some of the disruptions to facilities at Gracefield as repairs, maintenance and upgrades were undertaken. The Commercial Group undertook major contracts for customers in North America, Europe, India and Australia and won new international contracts during the year. The momentum in this business provides the Commercial Group with a strong platform to build on for next year.

Apply and adapt existing technology or develop their own ground-breaking research.

RTS worked with 270 New Zealand businesses and entities, a 21 percent increase on the previous year. RTS achieved its best full year result since Callaghan Innovation was established, with \$8.2 million in commercial revenue. RTS provided a range of advisory services to its customers, from educating businesses on how technology can be applied in their workplace, to preparing R&D project plans on behalf of industry. Customers highly rate the quality of RTS work, with 97 percent saying the research or technical work was completed to a high standard, and 79 percent saying the work successfully addressed the needs of their organisation. RTS works closely with other parts of the organisation to provide an integrated service to customers, generating a strong pipeline of opportunities for the year ahead.

Access our superior equipment, facilities, workshops, pilot plants, labs and people for R&D.

Perform testing and measurement for specialised analysis of their products, materials, processes and calibration systems.

The Measurement Standards Laboratory (MSL) delivered metrology training to 88 participants and provided 244 measurement, testing and calibration jobs to customers. It also performed 27 laboratory assessments for International Accreditation New Zealand (IANZ).

REPORT

Measurement Standards Laboratory

Callaghan Innovation's Measurement Standards Laboratory (MSL) is responsible for providing national measurements, standards and related services in accordance with section 4 of the Measurement Standards Act 1992.

In 2017/18 MSL provided New Zealand with uniform units of measurement and maintained standards of measurement of physical quantities in the following areas:

- Electricity
- Temperature and humidity
- Time and frequency
- Length
- Mass and pressure
- Photometry and radiometry

MSL maintained 182 internationally recognised calibration and measurement capabilities. It also maintained signatory status of the Mutual Recognition Arrangement between international and national metrology institutes.

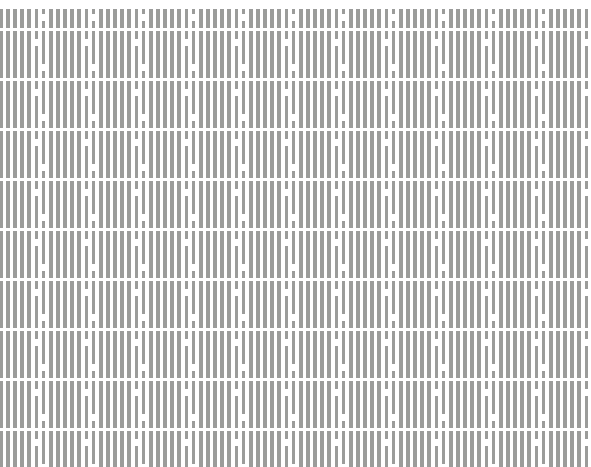
New Zealand participated in the following international measurement comparisons:

- APMP.T-K6.2013
(Dew point; humidity standards)
- APMP.T-S13
(Dew point; humidity standards)
- APMP.T.S14 (Relative humidity)
- CCPR-K2b
(Detector Spectral Responsivity; light standards)
- APMP.M.D-K4
(Density 640 kg/m³ to 1320 kg/m³)
- APMP.M.P-K9
(Pressure 10 kPa to 110 kPa absolute)
- APMP.M.M-K5
(Mass standards Set 2, 200 mg, 1 g, 50 g, 200 g, 2 kg)

International comparisons are how MSL proves that New Zealand's measurements are equivalent to other countries' measurements.

MSL supported the development and management of the International System of Units through research and collaborations in the following areas:

- Advancing the global redefinition of the kilogram.
- Measuring Boltzmann's constant to support the global redefinition of the kelvin.
- Measurement of light scattering – MSL is contributing to an international effort to normalise and document best practice for quantifying human perceptions of material characteristics such as glossiness, matte, sparkling and colour changes with angle.
- Determining and publishing best uncertainties for thermodynamic temperature measurement by absolute radiometry.
- Building capability to calibrate few-photon and small area detectors of light to support future industries such as quantum cryptography.



Redefinition of the International System of Units (the SI)

The measurement world is about to undergo its biggest change in decades. The entire metric measurement system is based on seven very precise definitions for measurement units such as for the metre, the kilogram, and the second. World-wide, all metric measurements should be linked to the definitions. Although the definitions are already very precise, some of them are slightly fuzzy when translated into real-world measuring instruments and have become a barrier to the development of more accurate measuring instruments. On 20 May 2019, World Metrology Day and the anniversary of the first signing of the Metre Convention in 1875, the last four of the fuzzy unit definitions will be replaced by assigning exact values to four fundamental physical constants. The assignment of exact numerical values means there will be no longer any uncertainty or fuzziness in any of the unit definitions.

Boltzmann's Constant

Since 2008, the Measurement Standards Laboratory has been working with the National Measurement Institutes of USA and China to measure Boltzmann's constant, the physical constant that will be used to define the unit of temperature, the kelvin. The measurement uses a noise thermometer to compare the electrical noise caused by the random thermal movement of electrons with a synthetic noise voltage measured in terms of much more precise electrical standards.

After more than 15 years of effort, a team of scientists from the USA and China, and including MSL Distinguished Scientist Dr Rod White, has completed its measurement of the Boltzmann constant. The team measured the voltage generated by the random thermal motion of electrons in a resistor. With a measurement uncertainty of 0.00027 %, it is the most accurate noise thermometry measurement ever made.

The new definition will allow the application of a wide range of new technologies to the measurement of temperature, and ultimately much cheaper and more accurate temperature measurements for science and industry.

The Kiwi Kibble Balance

Over a similar period, teams of scientists world-wide – including a team in New Zealand – have been measuring the Planck constant with an instrument known as a Kibble balance to provide an exact reference for the “new” kilogram. Redefining the kilogram is proving to be a major challenge as the Planck constant must be measured with an uncertainty of about five parts in 100 million. Results from several different measurements must agree with each other to within the same level of uncertainty.

There are currently seven Kibble balances around the world, some of them costing millions of dollars to build and are the size of two story buildings. The New Zealand Kibble balance – the only Kibble balance in the Southern Hemisphere – has a unique and simple style of operating that is based on a twin pressure balance approach and has received a significant amount of international interest as it is considered desktop in size and being built for a fraction of the cost. The MSL Kibble balance is mid-way through development and expected to be operational in 2019.

Heating up world food production

HOT LIME LABS

A Callaghan Innovation-developed process to capture CO₂ has huge potential to boost the horticulture industry, increase world production of fruit and vegetables, and reduce the carbon footprint.

Hot Lime Labs, a spinout from Callaghan Innovation's Research and Technical Services (RTS) division, is commercialising its new greenhouse CO₂ capture technology for the global market. Hot Lime Labs started

when former Callaghan Innovation scientist and founder and CEO Dr Vlatko Materić realised that greenhouse operators were crying out for a source of clean carbon dioxide.

Dr Materić developed a process that can recover clean CO₂ from the burning of wood chips or other suitable feed stocks, and then release it into the greenhouse. This process was tested with industry experts who advised the application could have significant benefits.





“With assistance and expertise from Callaghan’s Research and Technical Services we’ve been able to create a technology which could have significant benefits for food production”

Dr Vlatko Materić,
Founder and CEO, Hot Lime Labs.



The technology has the potential to improve crop yields by 15 to 25 per cent, an annual revenue boost for growers of \$40,000 to \$80,000 per hectare. The global market opportunity for the technology is estimated at over \$800m per annum and is growing rapidly.

“As well as helping greenhouse growers to operate at optimal yields and increase food production, the technology will simultaneously cut environmental harm by using a renewable source of clean CO₂”, says Dr Materić.

Callaghan Innovation’s RTS team played a key role in the development of the technology, supporting Dr Materić with time, access to expertise and equipment. After receiving funding from the KiwiNet Emerging Innovator Programme, Dr Materić decided to set up Hot Lime Labs as a commercial venture.

Callaghan Innovation Group Manager Advanced Materials Conrad Lendrum says it supported this venture, coming to an agreement with Dr Materić over intellectual property rights. “Callaghan Innovation wasn’t seeking to generate a whole lot of revenue, it was about giving Hot Lime Labs the best chance of succeeding and for the benefit of New Zealand,” he says.

Support from RTS has continued, with the Advanced Manufacturing Group developing control technology to support Hot Lime Labs’ first prototype units.

Hot Lime Labs recently raised its first round of early stage investment to fund the development of a pilot plant to prove the technology at scale. The pilot plant will be built inside a North Island commercial capsicum greenhouse and will supply CO₂ to around half a hectare of the grower’s 10-plus hectares of greenhouses.

Dr Materić says, “the next step will be a second investment round and the construction of a full-scale plant that will supply enough CO₂ for one to two hectares of greenhouses”.

After researching CO₂ capture systems at Callaghan Innovation for almost a decade, it’s great to see the huge potential Wellington-based Hot Lime Labs has to enhance the worldwide production of fruit and vegetables.



A Great Partnership

Measurement Standards Laboratory and KiwiStar Optics

As global leaders in precision optics for astronomy, KiwiStar Optics are making some of the largest telescope lenses ever made, enabled by measurement experts from Callaghan Innovation's Measurement Standards Laboratory.

KiwiStar Optics, a business unit of Callaghan Innovation, has built a significant reputation globally for its highly-specialised lenses and mirrors helping astronomers unlock the universe. This has partly been made

possible by the skills and knowledge residing within MSL, who already had proven expertise in providing high precision measurements and were able to adapt their techniques to be used for measuring the curvature, alignment and surface roughness of optical surfaces, so that KiwiStar can meet challenging specifications.

KiwiStar Optics' scientists, engineers and master opticians draw on decades of experience and a love of what they do to make some of the planet's biggest lenses and optical components. Their work can be found in telescopes across the world, including in Hawaii, India,

South Africa, Australia, the Canary Islands, Chile, and Arizona.

An important part of KiwiStar Optics' offering to customers is its access to the Measurement Standards Laboratory (MSL), with both teams located at Callaghan Innovation's Gracefield site.

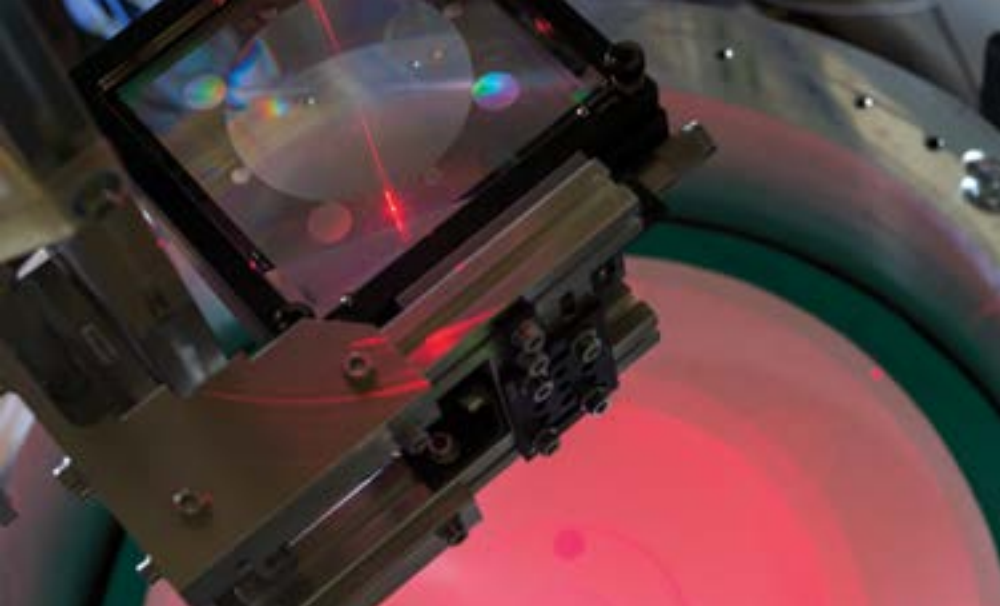
Sandra Ramsay, Group Manager, KiwiStar Optics, says the close relationship between KiwiStar Optics and MSL provides significant value and assurance for customers. "MSL's experts in length, photometry and radiometry have supported the development of some of the world's largest lenses and most advanced spectrographs."

Measurement Standards Laboratory
of New Zealand



K I W I S T A R
O P T I C S





"Our close relationship with MSL is a major advantage for our customers. Getting access to the southern hemisphere's best measurement scientists, and to their facilities, builds customer confidence – they can trust that our optics will give them the performance they need."

Sandra Ramsay, Group Manager, KiwiStar Optics



Astronomy lenses can take over 12 months to manufacture due to the complexity of the process. Starting with a large block of unpolished glass sourced from USA, Japan or Germany, KiwiStar Optics' master opticians gradually polish it to form the required shape. Throughout the process MSL metrologists use their high-precision machines to accurately measure the dimensions and geometry of the lens to within 2-3 micron of accuracy (a human hair is about 75 microns).

MSL's Director, Fleur Francois, says New Zealand's measurement system is accepted internationally and is consistent with best practice, making it an ideal partner for KiwiStar Optics. "The involvement of MSL's experts at every stage of the project means customers can trust the optics will give them the performance they need."

An example of the world leading work being done by KiwiStar Optics with MSL's support is the manufacture of one of the world's largest astronomical lenses. Measuring 1.1 metres in diameter, the lens was

made for WEAVE, a multi-object survey spectrograph at the William Herschel Telescope in the Canary Islands.

With projects in the pipeline including the manufacture of more large lenses, building three high-resolution cameras for the VISTA telescope in Chile, and constructing more

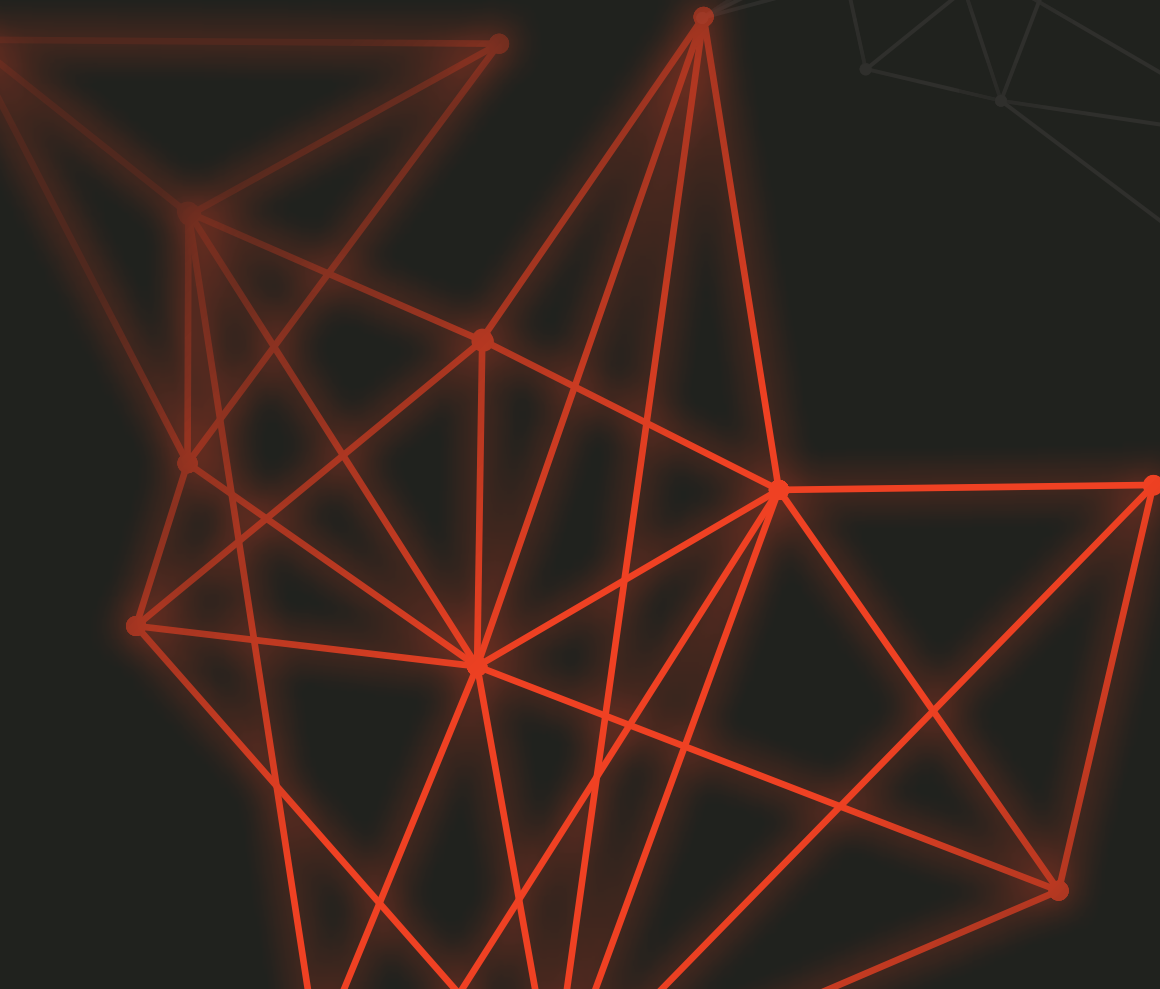
spectrographs, Ramsay is pleased about the bright future ahead. "KiwiStar Optics' global reputation for our highly-specialised lenses is due to the support and expertise from partners like MSL, and our teams are busy working to deliver for our customers and the astronomy community."



Access to experts

Callaghan Innovation opens doors for New Zealand businesses seeking innovation advice, skills, support and technical expertise, both from New Zealand and worldwide.

We offer businesses fast and easy access to experts who provide tailored solutions to meet their needs. We acted as 'innovation broker' to ensure that businesses have access to the right advisors, partners, mentors and technology providers.



Through our national and international network connections we

Offer Global Expert, our database of national and international innovation and R&D expertise, with sources that include business networks, universities and scientific institutes.

Offer the services of our technology networks and our own team, who apply their deep knowledge of national and international scientific and research expertise.

Refer businesses to our partner organisations, including New Zealand Trade and Enterprise (NZTE), regional economic development agencies and the venture capital community, so they have access to the full range of support available.

Over the past year

Connecting companies to the expertise they need is one of our core functions. The Global Expert programme is currently being reviewed to determine whether it is required as a standalone programme.

Through Scale-Up New Zealand, one of our key strategic initiatives to help connect the innovation ecosystem, we will provide a platform to connect innovative New Zealand companies with funders, support organisations and other collaboration partners, to support their growth and long-term success. Scale-Up New Zealand will be launched next year.

To ensure businesses understand the technology changes rapidly changing, and are prepared and comfortable with change, our experts regularly provide thought leadership and insights at conferences, meetings and industry events. We have talked about Artificial Intelligence, Industry 4.0 and Advanced Materials, to show the future to New Zealand businesses.

Callaghan Innovation reaches businesses in the regions through the Regional Business Partner programme. We have integrated working relationships with NZTE to create optimal outcomes for joint customers. 361 of NZTE's Focus 700 companies are joint customers with Callaghan Innovation.



R&D grants

Our suite of research and development (R&D) grants is designed to add scale to businesses' R&D investment for greater impact. They are structured to meet a range of business needs, whether businesses are start-ups or established R&D performers.

In 2017/18 we supported 996 businesses with an approved grant. Our grants support greater investment by businesses in R&D and contribute to increasing business expenditure on R&D (BERD).

Our suite of grants is strongly received by our customers, with a Net Promoter Score of +82. Our customers say that, while applying for the grant can take time, it is a robust process that helps them apply for venture capital and is a strong reference.

During 2017/18 our grants included

Growth Grants

Support evolving, multi-year R&D programmes in businesses that are experienced R&D performers.

Co-fund 20% of a business's R&D costs, up to \$5 million a year, available to businesses that invest over 1.5% of revenue in R&D. In the past year we approved 97 new Growth Grants with an estimated value of \$111,254,914.

In the past year, 48 Growth Grants were approved for a two year extension to their Growth Grant contract with an estimated value of \$73,298,049.

82% of Growth Grant customers said the grant enabled them to start their R&D sooner and 73% stated it enabled them to carry out additional R&D activities.

Project Grants

Help businesses to develop specific products, processes or services with the aim of growing their commitment to R&D.

Co-fund up to 40% of R&D costs of an R&D Project. Targeted towards companies that have less established R&D programmes with the goal of developing them into stable and substantial R&D performers. In 2017/18 we approved 355 Project Grants, at an average of 40% cover¹, for a total contract value of \$26,931,111.

81% of Project Grant customers said their business activities were positively affected by project grants.

Student Grants

Provide businesses with access to both undergraduate and postgraduate students who can assist in R&D projects and thereby gain commercial experience.

Support New Zealand students to gain and develop their technical skills in commercial R&D environments. Students received many benefits from a Student Grant, including acquiring new technical skills, R&D company exposure and experience towards their next job.

In the past year we supported the development of students by approving 225 Student Grants for 447 student placements, for a total contract value of \$5,890,630.



1 There was a change in direction in November 2015; prior to that we provided 30-50% co-funding of R&D costs



A Callaghan Innovation grant is helping ezyVet take its technology to the next level with R&D in artificial intelligence and machine learning.

Tucked down a back street on Auckland's city fringe a local business is quietly disrupting the global veterinary industry. Software-as-a-service (SaaS) company ezyVet is providing cloud-based practice management software to veterinary practices across the globe.

EzyVet first took its product to market five years ago and in the last two years it has tripled in size and sees no reason it can't continue that growth trajectory.

Now with customers in six continents, and nearly 100 staff and offices in London, Dallas and Auckland, ezyVet has also signed a deal with the vet school of US Ivy League college Cornell University which is rated in the top three in the world.

The partnership will see staff, undergraduate and post-graduate students, interns and residents across the seven facilities making up the Cornell University Hospital for Animals using the ezyVet cloud-hosted practice management system.

ezyVet



“Working with Callaghan Innovation business advisors who understand the needs of our R&D programme is one of the best models in the innovation space”

CEO and Founder Hadleigh Bognuda

Vets have been relatively slow to adopt the advantages of the cloud, with an estimated five per cent of US practices using cloud-based systems, CEO and Founder Hadleigh Bognuda says. But the tide is turning.

“As we saw with accounting software all of a sudden the bulk of businesses moved in a short space of time, and we’ll see that in the vet space as well,” he says.

Vet practices can run all their day-to-day operations on the platform, from making appointments to storing patient records. They can also integrate other tools such as x-ray imaging software into the system.

Callaghan Innovation has provided assistance through a Growth Grant,

which will be important as it takes its technology to the next level – turning the vast amounts of data contained within its platform into useful tools.

“By having that 20 per cent co-funding through the Growth Grant it means we can go 20 per cent further,” Bognuda says.

Going forward ezyVet hopes to work with Cornell and other universities on developing AI and machine learning technologies. In the next 12 to 36

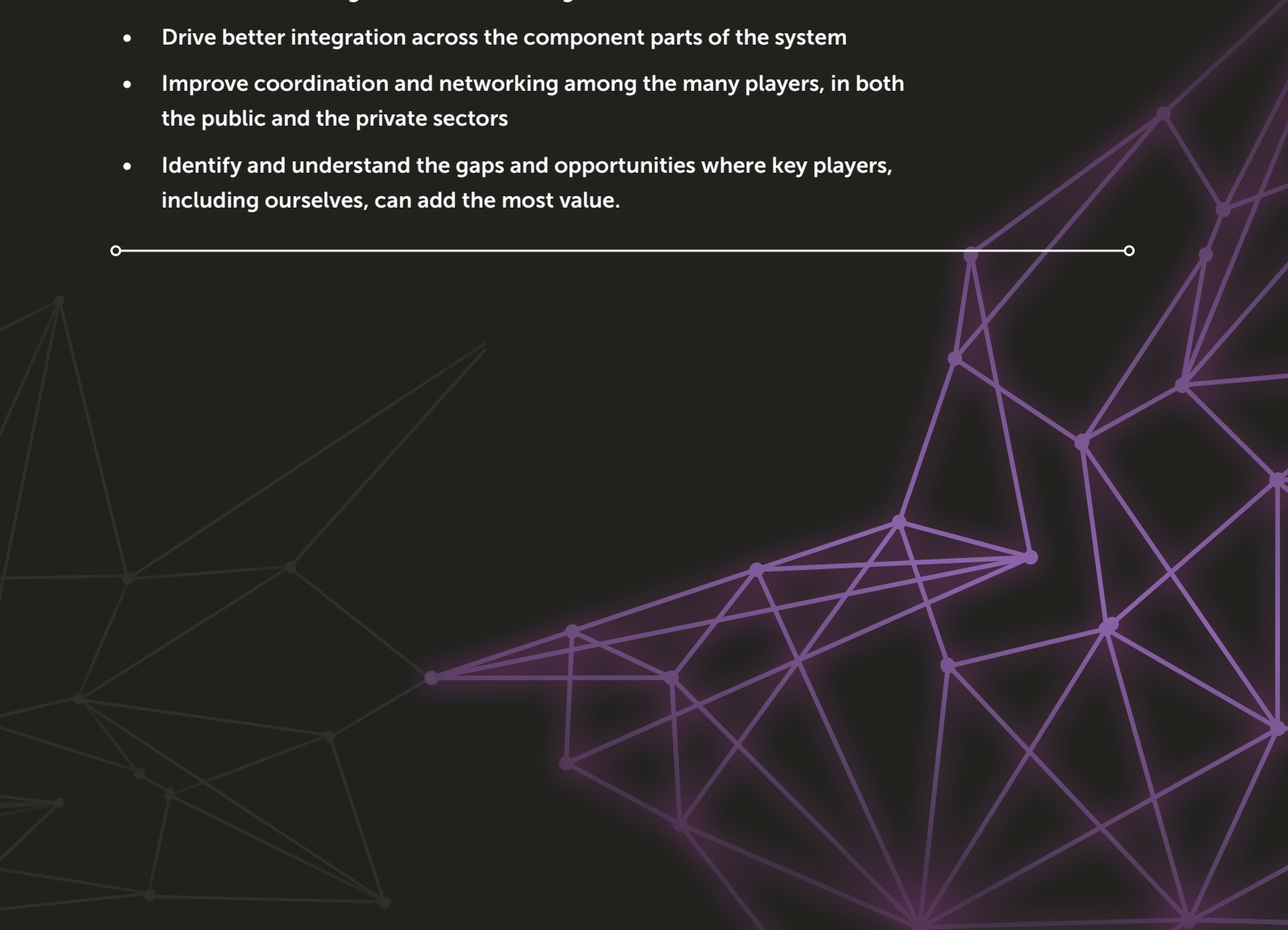
months it will be exploring concepts such as teaching the system to track user behaviour and send the data back, so that it can then train itself to perform the task.

“It’s this commitment to continually researching new applications for these technologies that will enable ezyVet to keep ahead of their competition and become the Xero of vet software,” says Marshall Couper, ezyVet’s Callaghan Innovation adviser.

Building New Zealand's innovation capability

Business success relies on a strong innovation system, and Callaghan Innovation plays a critical role in building and strengthening New Zealand's innovation capability.

We used our knowledge and understanding of business innovation needs to:

- Drive better integration across the component parts of the system
 - Improve coordination and networking among the many players, in both the public and the private sectors
 - Identify and understand the gaps and opportunities where key players, including ourselves, can add the most value.
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Building our capability in this area includes

Pilot plants, incubators and innovation precincts

We are part of a networked system of shared innovation facilities and pilot plant services for businesses. We also support two types of incubators, which work with start-up businesses to speed their paths to market, and five accelerator programmes.

Over the past year

Pilot plants

We support the New Zealand Food Innovation Network (NZFIN) of pilot plants. NZFIN has facilities located throughout New Zealand, including FoodBowl in Auckland, FoodWaikato in Hamilton, FoodPilot in Palmerston North and FoodSouth in Christchurch.

Incubators

Founder incubators worked with 149 start-ups, of which 69 joined the scheme in 2017/18. Technology incubators worked with 45 start-ups, with 5 new to the scheme in 2016/17. We worked with incubators in the following sectors:

	Founder	Tech
Agritech	12	8
Digital	70	12
Manufacturing & Niche	33	4
Energy & Environment	12	2
Food & Beverage	6	3
Health	10	15
Transport & Logistics	6	1
Total	149	45

Both types of incubator continued to contribute to the broader start-up ecosystem through activities such as:

- Increasing the pool of capable mentors and enabling access to specialist advice and expertise
- Raising investor funds
- Raising awareness of high-tech start-up ventures
- Hosting entrepreneurial capability development programmes.

Accelerator Programmes

Accelerator Programmes focus on rapid and intensive product development to establish an investment-ready start-up business.

Callaghan Innovation funded five Accelerator Programmes in 2017/18. The Icehouse Flux Accelerator; one Creative HQ Lightning Lab Accelerators (Kiwibank FinTech Accelerator); Mahuki Accelerator for Culture-Tech powered by Te Papa Tongarewa; Kōkiri Accelerator by Te Wānanga o Aotearoa; and the BCC's (Building Clever Companies) Sprout Agritech Accelerator.

Innovation Precincts

We are working towards turning our Gracefield location into a world-class innovation hub. Our vision for the Gracefield Innovation Quarter (GIQ) is for it to become a world-class provider of talent and services to support entrepreneurs to grow billion-dollar businesses. The programme of work is proposed to happen in two parts, starting with improvements to existing facilities. This will then be followed by the strategic development of the site. A business case for GIQ has been signed off by the Callaghan Innovation Board to go to Government for approval.

Our Balfour Road site in Auckland provides lab and workshop space to tech start-ups. It has been home to successful businesses including waste-to-energy firm LanzaTech, aerospace superstar Rocket Lab, and high-flying drone technology start-up Dotterel. To date alumni companies have created over \$1 billion in economic growth for the New Zealand economy, raised over \$600 million in investment, and gained global recognition.

We provided funding and support for the creation of the Vodafone xone, a telecommunications focused innovation facility based at the Christchurch Innovation Precinct.

Inspiring current and future innovators

We help encourage businesses and individuals to be excited by the possibilities that innovation holds and be ambitious about growth.

Championing Young Innovators

To enable more young people to make impact, Callaghan Innovation helps them to connect, gain skills and see opportunities for themselves along the future innovation pathway. We work to achieve these outcomes through partnerships on the following programmes and initiatives:

- Futureintech is a programme developed to generate interest in technology, science and maths at school and encourage students to choose STEM subjects at university and as a career. The first half of the year saw Futureintech continue to deliver science, technology, engineering and maths (STEM) programmes to 32,930 students and 1,662 teachers through 2,227 Ambassador visits. In the second half of the year an evolution of the Future in Tech programme was introduced. The evolved programme is now known as the Wonder Project and is continuing the work to inspire, excite and encourage children to pursue STEM careers, particularly those from low socio-economic areas and girls, targeting different age groups and mapping to the New Zealand curriculum. The evolved programme, once fully rolled out, will include a careers initiative, a nationwide Rocket Challenge, and a Community Challenge, all supported by a new digital platform and website. The pilot phase for the Rocket challenge is currently underway involving more than 29 schools, 1297 students and 72 Ambassadors and is being received with very positive feedback and huge interest from schools to become part of the nationwide roll out next year.
 - Venture Up is a fully immersive, 4-week experiential learning programme aimed at youth between 16-24 across New Zealand, some of who are looking to take their first steps into the entrepreneurship ecosystem. In the past 4 years since its inception, over 126 youth have taken part in Venture Up across New Zealand with participants noting a significant increase in confidence, capability and connection into the entrepreneurship world. In 2018, 26 youth were selected to take part in the programme with 5 teams being formed.
 - Chiasma is a national student-led organisation that creates links between academia and the wider science, technology and engineering (STEM) industries. Chiasma's mission is to inspire and help their members to develop a successful career in the STEM industry by providing them with the necessary skills, networks and mind-set. This last year Chiasma opened a new branch in Christchurch as part of the continuing work to further grow its overall membership of students and industry members which currently stands at nearly 4100. This past year also saw nearly 2000 students and industry members gaining knowledge and insights through Chiasma events and initiatives across the country, including the annual Synapse events run in Wellington, Auckland and Dunedin.
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Technology networks

We provide line-of-sight between research, technology and industry, giving businesses a single front door to the innovation system.

We released an Artificial Intelligence (AI) white paper which analysed the impact of AI on the agriculture, digital, energy and health sectors. The paper was designed to stimulate discussion and encourage business leaders to embrace the opportunities AI presents. We are focused on helping businesses to accelerate their adoption of AI and ensuring they have the capability they will need to take advantage of these ground-breaking new technologies.

International partnerships

We build and maintain strategic international partnerships to assist us, and the wider New Zealand innovation system, to be at the forefront of innovation best practice and to take advantage of technological trends and opportunities.

Callaghan Innovation is a partner in the Enterprise Europe Network (EEN), one of the world's largest innovation networks focused on supporting small and medium enterprises to grow internationally. We continue to build our innovation relationships with a number of countries through joint innovation forums, partnering with embassies, and leading workshops and groups of foreign companies visiting New Zealand.

National Science Challenge: Science for Technological Innovation

Callaghan Innovation hosts the National Science Challenge: Science for Technological Innovation, which aims to enhance New Zealand's ability to use physical and engineering science for economic growth.

In 2017/18 the National Science Challenge funded more than 35 leading edge high tech projects and supported more than 200 researchers from more than 29 research organisations.

Examples of projects in progress include:

- Inverting electromagnetics to help solve the New Zealand and global impasse in understanding groundwater flow.
- Precision farming technology for aquaculture to enable management of farms 'from the desk', and at bay-wide, regional, and national scales.
- Ātea, a project to provide Māori users with a learning environment that connects the past and the traditional, with the future of modern Te Ao Māori (Māori world).

The NSC worked with business leaders to shape its next five year research programme. New missions include:

- Place-based awareness – How might it be possible to bring together Artificial Intelligence, Internet of Things and other technologies to create contextual awareness about a place, what is happening there, how that place is performing, and how systems (human and technological) are working.
- Soft electronics – What is the potential to create new kinds of soft robotic technologies based on novel NZ soft, stretchy materials.
- Māori data sovereignty – How data can be used in ways that are appropriate and beneficial for Māori.
- Rangatahi Lead – How can we provide a permanent pathway for Rangatahi to contribute inspiring new leadership to NZ's technological innovation system.

The National Science Challenge continues to implement a Capacity Development Programme to ensure the high tech research community can deliver more from innovation and contribute to economic growth for New Zealand. More than 95% of research leaders and more than 75% of the larger research community took part.



P R I Z E

After the inaugural C-Prize in 2015, we were keen to set a different challenge for 2017, one that could have an impact on the lives of all New Zealanders.

Callaghan Innovation's C-Prize encourages people to push the boundaries of what's possible through technology. After a successful inaugural C-Prize in 2015, C-Prize was back in 2017 with New Zealand students, innovators and entrepreneurs challenged to create the next generation of wearable technology.

Wearables could play a significant role to help New Zealanders live healthier, work safer, and play smarter, and C-Prize aimed to accelerate the development of wearable technologies.

Uri-Go



92 diverse teams submitted their ideas, which were judged by a panel of experts. Ten finalists were chosen and received financial support to bring their concept to life. During the 4 month competition teams underwent training, received mentorship from those already working in the wearables industry, and took part in two intensive boot camps.

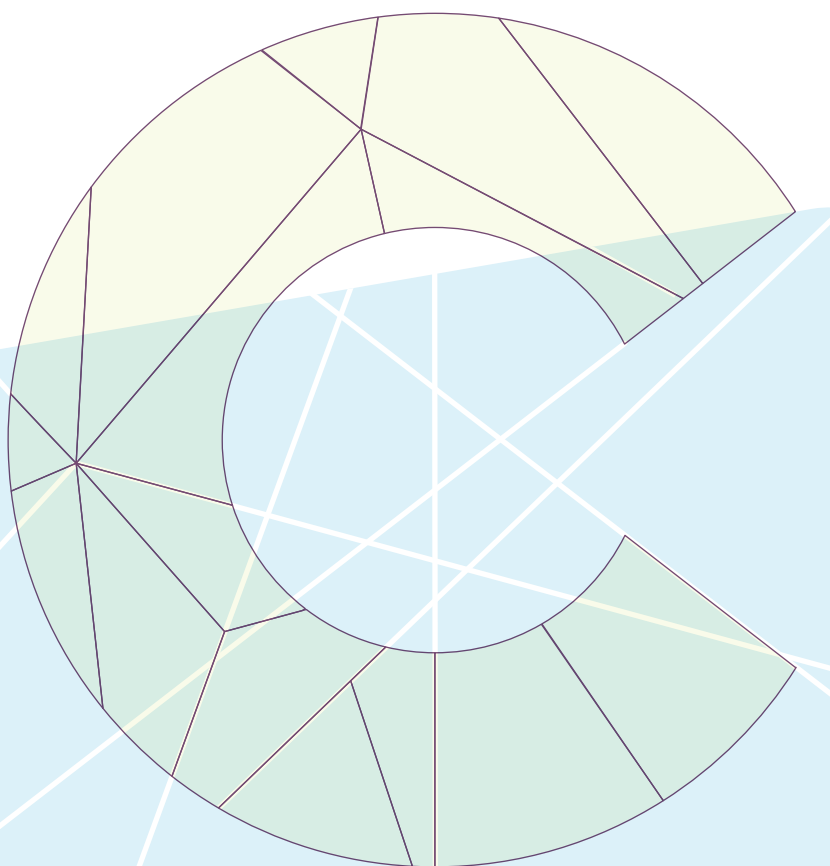
At the conclusion of the competition the teams pitched their idea to the judges. At the C-Prize Grand Final Night Uri-Go was announced the winner.

Uri-Go was co-founded by Mike Brown, who five years ago broke his back, leaving him with severe spinal injuries and bladder problems. The Uri-Go team created a wearable bladder sensor for people who have difficulties telling if they need to go to the bathroom. Their innovation could change the lives of millions of people living with spinal cord injury, Parkinson's disease or numerous other conditions.

For Uri-Go, winning C-Prize was life changing. Mike says he's "learned tremendously" from C-Prize and the connections he has made. "This competition is fantastic in its collaborative nature."

Since winning C-Prize, Uri-Go joined the Callaghan Innovation led delegation of NZ MedTech companies and researchers to Texas Medical Centre (TMC), the world's largest life-science campus. Uri-Go won the Audience Choice award at Callaghan Innovation's Innovation & Investment Workshop during 2018 HealthTech Week and has been admitted to Vodafone's Xone 6 month accelerator programme for 2018. Uri-Go are continuing to refine their ideas, product form and commercial strategy with advisory and Project Grant support from Callaghan Innovation.

This follows success from the winners of the inaugural 2015 C-Prize focused on Unmanned Ariel Vehicle (drone) technology for the screen industry. For the top two teams



92

ENTRIES RECEIVED

TEN

FINALISTS

ONE

WINNER

Vortec and Dotterel, C-Prize has already led to business success and acclaim on the world stage. Dotterel won 'most innovative product' at a major US tradeshow and completed one of the world's largest business accelerator programmes, Techstars. In 2017

Dotterel announced it had closed a funding round of AU\$500,000.

All C-Prize finalists have pushed the boundaries of what's possible through technology, making a difference to the communities in which they live.

"We really have to thank Callaghan – if it wasn't for C-Prize, we might never have even tried to solve this problem."

Brendon Hale,
Uri-Go co-founder



KŌKIRI

New Zealand's first business accelerator programme for Māori entrepreneurs, Kōkiri, was launched with 10 companies coming together to take their business to the next level.

Members from Te Wehi Haka open the 2018 Kōkiri Showcase evening





“Since Kōkiri we have built networks that could eventuate in exciting career opportunities in tech for whanau at home”

Mateawa Keelan,
General Manager
and Founder
of Hikurangi
Enterprises



Callaghan Innovation and Te Wānanga o Aotearoa teamed up with Creative HQ, Robett Hollis, Crowe Horwath and Ernst & Young Tahī to create and deliver a unique business accelerator dedicated to speeding up the development of early stage Māori businesses.

Kōkiri was built upon a foundation of Kia angitu te taurira (founder success) and designed to strengthen Māori business founders in the areas most important to them.

After receiving 106 applications, 10 early stage companies from across Aotearoa were selected to participate in the programme.

For Arataki Cultural Trails, who build solutions to enable users to hear and see stories of cultural significance using mobile apps and technology, Kōkiri provided the support and advice to help develop the business.

Arataki Cultural Trails' founder and Chief Executive Lee Timutimu says, “The fact that the Kōkiri accelerator was specifically for Maori business was what really attracted us to the programme.”

Kōkiri took place between February – June 2018, with the ten companies coming together in Kirikiriroa for a week-long workshop each month. Throughout the programme they received education, mentoring, networking opportunities and engagement with leading business figures.

Mateawa Keelan, General Manager and founder of Hikurangi Enterprises, a company taking New Zealand grown medicinal cannabis products to clinical trials, found the workshops very informative. “Being in a whanau-type situation with the other founders, we shared a lot of knowledge within our group.”

At the end of the programme the businesses presented their ideas to an audience of business leaders, angel investment groups, partners and sponsors, receiving overwhelmingly positive feedback and winning over investors.

Part of what makes Kōkiri unique, is that it defines success more broadly than just attracting investment or growing a business to a point where it can be sold for a profit. Success


also involved nurturing a sustainable business that brings income into a community or employs local people.

Arataki Cultural Trails are now busy growing their business across New Zealand and considering the global market opportunities. Founder Lee Timutimu says, “What we gained most from Kōkiri was a strong sense of whanaungatanga with the other founders.”

For Hikurangi Enterprises founder Mateawa Keelan the programme was inspiring. “I have grown in my ability to think of previously unthinkable possibilities for the future for our whanau, and communities on the east coast after taking in all the information and the atmosphere activity of Kōkiri – it was inspiring.”

For the 2018 cohort of Māori businesses that participated in Kōkiri, it's clear there is no limit to what they can achieve.

Connecting the Innovation Ecosystem

An abstract graphic consisting of a network of interconnected lines and nodes, forming a complex, multi-faceted structure. The lines are light blue and the nodes are small circles. The structure is more dense and prominent in the lower-left and bottom-center areas, and becomes sparser and more faint towards the upper-right corner. The overall background is dark grey.

Callaghan Innovation cannot achieve its mission alone. Critical to our success is our close relationships with other stakeholders in New Zealand's innovation system. Together we ensure a comprehensive and integrated response to opportunities and challenges that our customers face.

With our partners we aim to provide a platform from which innovators can be empowered to succeed, together, for a better New Zealand. We therefore place high importance on building and strengthening the connections we have with our stakeholders.

- We work closely with government agencies, including NZTE, the New Zealand Venture Investment Fund, Ministry of Business, Innovation and Employment, the Treasury, the Ministry for Primary Industries, and the Ministry of Foreign Affairs and Trade, to act as a platform for innovation in New Zealand.
- We partner with various regional bodies and economic development agencies to help us support regional businesses to develop and commercialise technology. Many of these are Regional Business Partners who provide local access our services.
- We partner with Crown Research Institutes, tertiary education organisations, and private R&D providers to ensure our customers are connected to the best expertise no matter where it sits in the system.

Our people are at the heart of our engagement with stakeholders. They are out and about engaging with, listening to, and understanding the needs of our stakeholders. The views of our stakeholders were used to inform the development of our new long-term strategy.

We will help connect the innovation ecosystem through Scale-Up New Zealand, a platform to connect innovative New Zealand companies with funders, support organisations and other collaboration partners, to support their growth and long-term success. When launched next year, Scale-Up New Zealand will expose innovative New Zealand companies to a broad local and global audience and raise their profile through a searchable, open access and free platform.

Callaghan Innovation and New Zealand Trade and Enterprise

Callaghan Innovation and New Zealand Trade and Enterprise (NZTE) work closely together to drive bigger, better, faster businesses. Our key principles of engagement include a 'no wrong door' approach, sharing information and ideas, an aligned approach, providing complementary functions, and providing the right skills at the right time. Our focus in the past year has been identifying opportunities to collaborate so customers can seamlessly access our services and capability.

OUR PEOPLE



Our people are our greatest asset



Our five core values – About Business, Bold, Connected, Delivering Results, and Home Safe Every Day – shape our culture and define the behaviours for our success. Our people are the most important resource we have. Our team of 407 people range from researchers, scientists and engineers to technologists, investment managers and innovation advisors. Despite coming from different backgrounds, experience and expertise, they bring drive and passion to help New Zealand businesses succeed through technology.

We remain committed to the principles of Equal Employment Opportunities and creating a workplace that attracts, retains and values diversity.

Leadership and Talent

We have a vision of being a place where talent wants to work. To meet this goal, we offer a range of learning and development opportunities, coaching and mentoring. This year we launched a Learning Management System to provide online and realtime development for our staff.

We are placing more emphasis on regularly monitoring our culture and the engagement of our people, and responding to their feedback to strengthen our culture. To do this, we have implemented 'Officevibe', a tool for understanding employee sentiment and engagement.

Home Safe Every Day

Our Home Safe Every Day programme remains integral to our organisation. This year we have been focused on ensuring our staff are safe and healthy at work, implementing a new Health Monitoring Strategy to protect employee health, and launching a new Wellbeing Programme for our staff.

Our online HSE information management system (HSE online) continues to be used for reporting incidents, hazards and near misses, tracking all HSE actions, carrying out workplace inspections, undertaking risk assessments, and recording equipment that may pose a HSE risk to employees.

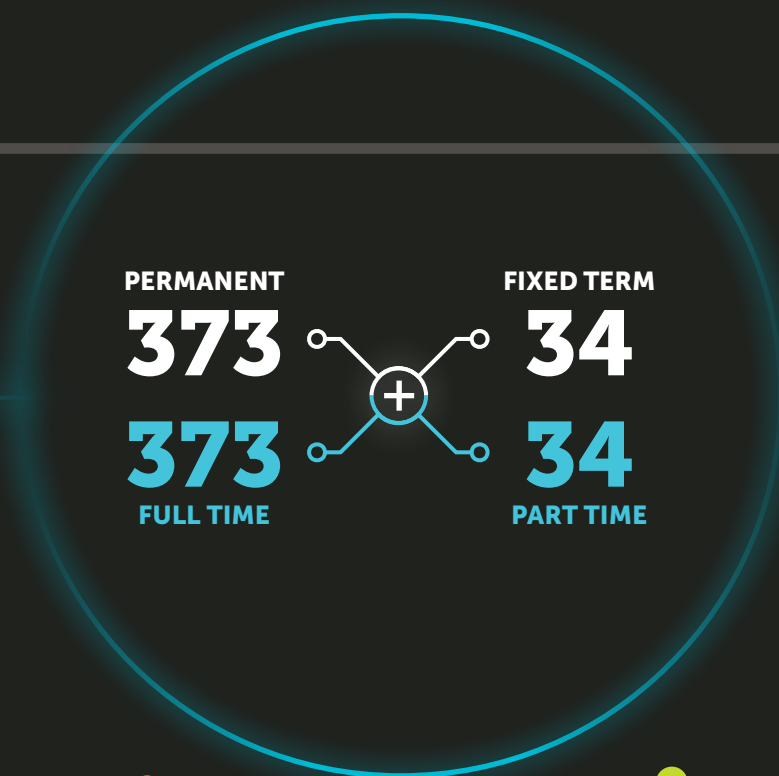
Our People

407

Headcount



Employees

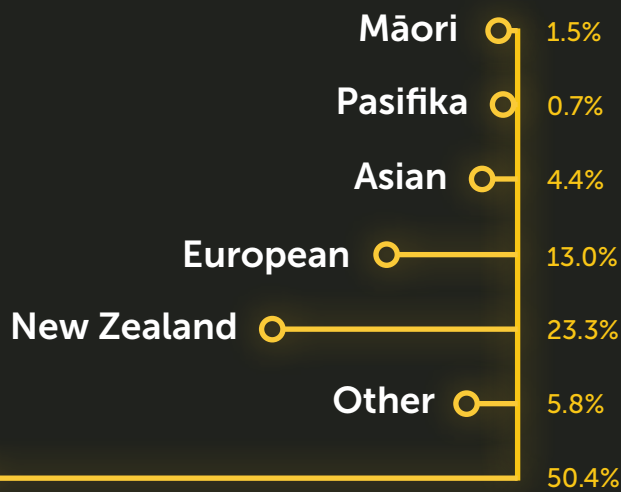
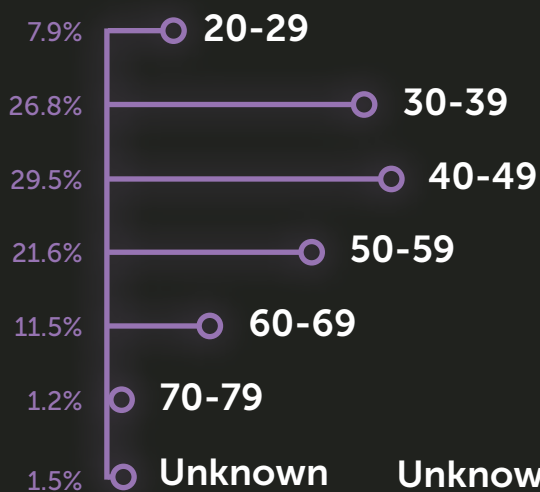


Gender



Age

Ethnicity



*Due to individual choice not to report and unavailable information.

Our commitment to being a good employer

Organisational Health and Capability

Callaghan Innovation regularly reviews, articulates and iterates policies, programmes and tools to ensure that they support the development of our people capability and reinforce our organisational values.

The table below gives an overview of Callaghan Innovation's activities and initiatives that support the seven good employer criteria.

1. Leadership, Accountability and Culture

- Developed our leaders' skills in Emotional Intelligence and Storytelling, through a series of workshops
- Rolled out 'Officevibe' a tool for understanding employee sentiment, engagement and gaining real-time feedback from our people across the organization; and provides critical insights for action planning and improvement initiatives
- Developed a Managers' induction for implementation during 2017/18
- Continued to promote our employee Values Awards, recognising team members who go above and beyond to support the work we do
- Continued our Women in Leadership mentoring programme
- Rolled out Workplace by Facebook as a digital collaboration tool
- Piloted an internal cultural competency programme as part of our commitment to improving diversity in the organisation
- Rolled out tools and support to build resilience for employees
- Delivered Kia Maia, a two-day programme for employees to develop understanding of the Māori economy, history, language and culture.

2. Recruitment, Selection and Induction

- Continued to welcome new staff through the executive-led orientation programme, Te Waka Nui
 - Promoted vacancies on our social media pages (Twitter, Facebook and LinkedIn) and on our corporate site to reach a wider audience
 - Actively recruited with the knowledge of our workplace profile and the need for diversity as a key driver.
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3. Employee Development, Promotion and Exit

- Launched a Learning Management System for our organisation
- Improved our Performance Development Plan process and documentation following feedback
- Provided individual support and coaching for new managers to enable them to grow and develop their teams
- Designed new starter interviews for implementation in 2017/18 and captured and analysed the information shared
- Reviewed process and content of exit interviews for implementation in 2017/18
- Continued ongoing work on our career pathways project for scientists, engineers and research staff
- Delivered agile training as a project management approach
- Completed sales and negotiation skills training for relevant staff
- Promoted a range of development and coaching opportunities for staff.

4. Flexibility and Work Design

- Maintained flexible work practices and policies, including providing for flexible working arrangements. This includes the ability to work from different locations.

5. Reward and Recognition

- Undertook the annual remuneration review process
- Presented 16 Callaghan Innovation awards to employees who had consistently demonstrated Callaghan Innovation values in their work
- Recognised employees who had completed 20, 30 and 50 years' loyal service at Callaghan Innovation (and its predecessor organisations)
- Reviewed the job evaluation framework to ensure relativities and fairness in our remuneration structures.

3. Harassment and Bullying Prevention

- Had no formal complaints about bullying
- Continued to monitor and act as appropriate.

6. Healthy and Safe Environment

- 227 events reported, an 18 percent decrease from the previous year (253). Most events reported are hazards or near misses, rather than incidents
 - Completed 107 workplace risk assessments
 - Completed 190 work area inspections
 - Identified 692 HSE related improvement actions, down from 965 the previous year. 882 actions were completed, including addressing historic issues.
 - Implemented a new Health Monitoring Strategy to protect employee health
 - Launched a new Wellbeing Programme for staff
 - Completed a review of building earthquake preparedness.
-

SENIOR LEADERSHIP TEAM

Vic Crone**CHIEF EXECUTIVE**

Vic has significant executive and governance experience in technology and innovation. She brings a strong customer focus, and a track record of leading and implementing strategy, and building organisational culture. Vic was previously the Managing Director of Xero, NZ and New Markets, following executive roles at Chorus and Telecom New Zealand. She has been an Independent Director on the Boards of a number of companies and organisations in the technology sector, including RedShield, Figure.NZ, Creative HQ and the Hi-Tech Trust.

Erica Lloyd**GENERAL MANAGER****Market, Engagement and Experience**

Erica has extensive experience in digital marketing, brand, stakeholder engagement and senior leadership. She was part of the Group Executive Team at Datacom, where she led all aspects of communications for this business as it grew across New Zealand, Australia and South-East Asia. Erica managed external relations for the BNZ for a number of years, where she played a key role in enabling the bank's brand evolution, supported change as part of the Canterbury Recovery Group and built social media capability for customers. Before this, Erica worked as news and current affairs producer and an on-air business journalist for both TVNZ and Mediaworks. She also ran her own technology services businesses for the film and television industry.

Esther Livingston**GENERAL MANAGER****People and Capability**

Esther has extensive public and private sector general management and HR experience. She specialises in HR strategy development and implementation, organisational design and development, and change management which includes organisational design, organisational and management audits and reviews, restructuring, and employment relations management and advice including mediation and collective employment agreement negotiations. She is former General Manager – Human Resources at Institute of Environmental Science and Research Ltd and previously held general manager positions for Tourism New Zealand, Infinity Solutions and Comtex Group. She has previously worked as an independent HR consultant and has a MBS (Hons).

Heather Deacon**GENERAL MANAGER****Research and Technical Services Operations**

Heather was formerly Director of NZ Operations at Airbus. A Masters Graduate from Cranfield University, Heather started her career as a Flying Instructor, which culminated in her training military pilots from each of the three British armed services, and running the Defence Elementary Flying Training School, delivering pilot training with a fleet of contractor-owned aircraft. Heather later managed the commercial aspects of support contracts with the UK Ministry of Defence within integrated project teams set up jointly between industry and defence. She has also worked for multi-national companies including Babcock, BAE Systems and Leonardo, and is an Executive Director on the NZ Defence Industry Association Board. Heather is experienced working in R&D-focussed environments, particularly within aeronautical engineering organisations using sophisticated design and manufacturing approaches. She has a passion for innovation, creative thinking and working collaboratively with partners to deliver optimal solutions.

Hēmi Rolleston**GENERAL MANAGER****Sectors**

Hēmi was Chief Executive of Te Awanui Huka Pak Limited for 8 years, a 100 per cent Māori-owned kiwifruit business with investments across the entire kiwifruit value chain. Te Awanui Huka Pak Limited won the 2012 TVNZ Māori Business of the Year Award and in 2012 and Hēmi was the winner of both the Export NZ, Export Achiever Award and the NZ Institute of Directors Aspiring Director Award for Bay of Plenty. Hēmi has sound commercial board experience having served on a number of economic development boards including Priority One and Grow Rotorua as well as a number of Māori Commercial entities. He has a business management degree and a post graduate qualification through Waikato University and has studied at Lincoln University and Stanford University. He is Wellington-based and has iwi affiliations to Ngati Whakaue and Tauranga Moana.

Paul Linton**GENERAL MANAGER****Commercial Business**

Paul has a background in international business and economic development in both the private and public sectors. He has been New Zealand trade commissioner in a number of locations throughout Asia, Australia and the Pacific Islands and run the Industry Capability Network for NZTE; held General Manager roles at the MetService winning Export NZ's Wellington regional exporter award; and has held senior roles with organisations such as Objective Corporation and Airways New Zealand. Paul runs the commercial businesses of Callaghan Innovation. These include export businesses KiwiStar Optics, and GlycoSyn; as well as the Measurement Standards Laboratory (MSL) of New Zealand.

Rosalie Nelson**GENERAL MANAGER****Strategy, Impact and Insights**

As an Executive Leader at New Zealand's Innovation Agency, Rosalie drives the research, insights and foresights team fuelling an important mission – to activate innovation and help New Zealand businesses grow faster. She has deep experience in technology market disruption, strategic response, and forecasting impact, previously being head of market strategy and insights at Chorus, and having held research director, principal analyst and strategist roles with global research and consulting companies Ovum and IDC.

Matt Kenny**ACTING CHIEF FINANCIAL OFFICER**

Matt is a Chartered Accountant with financial and senior level leadership experience across the health, government, wholesale supply and manufacturing sectors. He has held a number of CFO roles, most recently with private hospital provider Acurity Health Group. He began his career at global accounting firm Deloitte, where for 13 years he provided accounting and business advisory services to a diverse range of clients.

OUR GOVERNANCE

The Board is Callaghan Innovation's governing body; all decisions relating to the organisation's operation are made by, or under the authority of, the Board in accordance with the Callaghan Innovation Act 2012 and the Crown Entities Act 2004.

During the 2017/18 year there were a number of changes to the Board membership. Founding Chair Sue Suckling's term came to an end. We want to acknowledge Sue's considerable work over the last five years in leading the establishment of Callaghan Innovation. Pete Hodgson was appointed to the Board as Chairperson and a member for a three-year term. Stefan Korn and George Gong were appointed to the Board during this year for a one-year term. Alison Barrass and Kate McGrath finished their term during the year.

The Minister of Science and Innovation appointed the Chief Executive of the Ministry of Business, Innovation and Employment as an advisor to the Board. This role was delegated to Paul Stocks, Deputy Chief Executive – Science, Skills and Innovation.

The Board meets about six weekly and at other times as required.

There are four Board committees:

Audit and Risk

This committee assists the Board in fulfilling its responsibilities for the oversight of the internal control environment, external accountability, the internal audit function, legislative compliance, internal reporting, external audit, and oversight of the risk management framework.

Appointments and Remuneration

This committee oversees and recommends to the Board all matters in regard to the effective management of the appointment and remuneration of the Chief Executive and her direct reports.

Grants

The Grants Committee supports the Callaghan Innovation Board in its decision-making on proposals, including operational policy-setting and consideration of the impacts of grants for business-led research and development. In addition to the Board members, this committee includes two external members.

Health, Safety and Environment

The purpose of the HSE Committee is to assist the Board with its responsibilities with respect to the HSE practices of Callaghan Innovation.

Board terms and committee membership

Board Members	Board Term	Audit and Risk	Appointments and Remuneration	HSE	Grants
Sue Suckling (Board Chair)	23/03/2018 <i>Term ended</i>	Ex-officio member	Chair	Ex-officio member	Ex-officio member
PETE HODGSON (Board Chair)	31/03/2021 <i>Ongoing*</i>	Ex-officio member	Ex-officio member	Ex-officio member	Ex-officio member
Robin Hapi (Deputy Chair)	30/06/2018	-	-	Chair	-
Al Monro	06/07/2018 <i>Term ended</i>	Member	-	-	Chair
Alison Barrass	30/08/2017 <i>Term ended</i>	Member	-	Member	-
Frances Valintine	27/02/2019	-	Member from 28/02/16 Chair from 31/01/18	-	-
Simon Botherway	27/02/2019	Chair	-	Member	-
Kate McGrath	30/03/2018 <i>Term ended</i>	-	Member	-	-
Gorge Gong	27/08/2018	Member	-	-	-
Stefan Korn	27/08/2018	-	-	-	Member from 28/08/17 Chair from 04/05/18

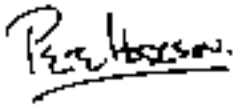
*Note: A member continues in office despite the expiry of their term in accordance with section 32(2) of the Crown Entities Act.

Non-Board Members	Board Term	Audit and Risk	Appointments and Remuneration	HSE	Grants
Peter Townsend	30/09/2017	-	-	-	Member
Dr Alastair MacCormick	30/09/2017	-	-	-	Member


Governance policies underpin the Board's responsibilities. These policies are regularly reviewed and include a Code of Conduct and obligations regarding the disclosure of interests. A formal delegation framework is in place relating to Callaghan Innovation's principal operations and the delegation of financial authority and decision rights from the Board to the Chief Executive, managers and staff. Business continuity plans are in place, and these are reviewed and refreshed to reflect organisational changes and context.

STATEMENT OF RESPONSIBILITY

The Callaghan Innovation Board is responsible for the preparation of the financial statements and the statement of performance for the period 1 July 2017 to 30 June 2018, and the judgements used in them. The Board is also responsible for establishing and maintaining a system of internal controls designed to provide reasonable assurance as to the integrity and reliability of financial reporting. In the opinion of the Board, the financial statements and statement of performance for the period from 1 July 2017 to 30 June 2018 fairly reflect the financial position and operations of Callaghan Innovation.



Pete Hodgson
Chair



Simon Botherway
Board member

STATEMENT OF PERFORMANCE

This statement of performance reports on progress against the performance measures contained in Callaghan Innovation's Statement of Performance Expectations 1 July 2017 – 30 June 2018.

We continued to make steady progress against the key performance measures set out in our Statement of Intent 2015–2019 and the Statement of Performance Expectations in the year ending 30 June 2018.

In 2016/17 three output classes were merged into the Callaghan Innovation Operations Multi-Category Appropriation to align better with our activities. The appropriation is made up of:

- Building Business Innovation
- Research and Development Services and Facilities for Business and Industry
- Business Research and Development Contract Management

We achieved 89% of our key performance measures and further information has been provided for the two measures we have not met. With the core building blocks in place we focused on further developing our suite of products and services in order to deliver value to our customers.

We continued to improve core systems and infrastructure to ensure we are a highly effective and efficient organisation. We have a strong focus on strengthening our information collection so that we can monitor the impacts of our services down to an individual business level.

OUTPUT CLASS

Callaghan Innovation Operations: Multi-Category Appropriation

This appropriation enables us to broker and provide innovation services to businesses and deliver programmes that enhance New Zealand's innovation system. We can then provide more support for businesses to successfully develop new and improved products, processes and services through R&D and technology-driven innovation by improving the performance of New Zealand's innovation system.

Performance measures

Performance Measures	Performance Standard	Result
Total number of organisations working with Callaghan Innovation on services this Financial Year and Net Promoter Score of all survey customers	Establish baseline	2711 organisations NPS score of +53
Total number of organisations working with Callaghan Innovation and NZTE as a F700	Establish baseline	361 organisations were also NZTE F700 customers

MULTI-CATEGORY APPROPRIATION

1. Building Business Innovation

This appropriation is limited to activities that raise awareness about and increase business investment in R&D. Raising awareness of and increasing business investment in R&D is a core function for Callaghan Innovation. We accelerate the growth of innovative companies and build the effectiveness and skills of New Zealand's innovation system. The services we provide support New Zealand's high-value manufacturing and services businesses in overcoming information problems and transaction costs by sourcing advice, technical expertise and training.

Financial Performance

	Budget Revenue 2017/18 – \$000	Actual Revenue 2017/18 – \$000	Actual Expenditure 2017/18 – \$000	Actual Surplus 2017/18 – \$000
Appropriation	32,378	25,978	-	-
Other	1,059	1,308	-	-
Total	33,437	27,286	27,118	168

Performance Measures

Quantity	Performance Standard	Result
Number of organisations working with Callaghan Innovation in the following services: <ul style="list-style-type: none"> • Programmes • Events • International Missions • Global expert 	Establish baseline	1503 organisations
Net promoter score for Callaghan Innovation Services: <ul style="list-style-type: none"> • Programmes • Events • International Missions • Global expert 	Establish baseline	NPS score of +45

MULTI-CATEGORY APPROPRIATION

2. Business Research and Development Contract Management

This appropriation is limited to the selection of businesses or individuals for either the provision of Research, Science and Technology output, or the award of grants, and to negotiate, manage and monitor appropriate contracts with these businesses or individuals. Callaghan Innovation currently manages three R&D grant funds on behalf of the Ministry of Business, Innovation and Employment. We provide robust, transparent and efficient allocation and monitoring services of these grants to business.

Financial Performance

	Budget Revenue 2017/18 – \$000	Actual Revenue 2017/18 – \$000	Actual Expenditure 2017/18 – \$000	Actual Surplus 2017/18 – \$000
Appropriation	7,751	10,230	-	-
Other	370	483	-	-
Total	8,121	10,713	10,576	137

Performance Measures

Quantity	Performance Standard	Result
Percentage of growth, project and student ² fellowship applications who have received a decision within 30 working days of receipt of the completed application	90%	80% (465 of 581) The process for calculating these figures changed in 2016/17 to reflect updated workflow processes. The timings are more reflective of the length of time taken to assess and approve an application. The R&D Grants Group has an ongoing programme of work to improve application completion and processing times.

2 To ensure representative reporting of this measure, the student grants included are student fellowship grants, R&D experience grants and student career grants.

MULTI-CATEGORY APPROPRIATION

3. Research and Development Services and Facilities for Business and Industry

This appropriation is limited to providing research and technical expertise and facilities to businesses and industry. We meet the R&D needs of businesses and industry to help them grow. Our R&D services provide New Zealand businesses outsourced access to product and process development capabilities, data and analytics expertise, open labs, engineering workshops and pilot plants. We have specialist equipment, facilities and technological expertise to assist business and industry to increase their R&D activity by combining their R&D teams, connecting them to further R&D capability across the ecosystem, and providing our own differentiated R&D portfolio. Our staff work diligently to find solutions that solve our customers' R&D challenges. We also facilitate interactions with other research providers, where they have complementary technical expertise. We are able to quickly assemble and deliver diverse R&D-enabled solutions for customer needs which provides differentiation from the rest of the New Zealand ecosystem.

Financial Performance

	Budget Revenue 2017/18 – \$000	Actual Revenue 2017/18 – \$000	Actual Expenditure 2017/18 – \$000	Actual Surplus 2017/18 – \$000
Appropriation	19,523	23,743	-	-
Other	34,239	35,087	-	-
Total	53,762	58,830	58,680	150

Performance Measures

Quantity	Performance Standard	Result
Number of New Zealand organisations with a research and technical service product this financial year (excluding commercial group)	Establish baseline	270 businesses
Total commercial revenue from Research and Technical Services (excluding commercial group)	\$10.4 million	<p>\$8.2 million</p> <p>RTS is operating in an environment where the facilities, systems and tools it needs to achieve its commercial objectives are being developed and implemented. RTS is reorganising its customer engagement process to adopt an integrated approach across the organisation.</p> <p>These initiatives are expected to improve RTS' ability to achieve growth in revenue from commercial sources.</p>
Total commercial revenue from the Commercial Group (excluding Research and Technical Services)	\$10.6 million	\$11.3 million
Net Promoter Score from Research and Technical Services, services (excluding commercial group)	Establish baseline	NPS score of +52

OUTPUT CLASS

4. National Measurement Standards

This appropriation is limited to providing specified standards to satisfy the needs for traceable physical measurement in New Zealand. We contribute to the success of companies selling products and services that are dependent on accurate and internationally accepted traceable physical measurements. Our Measurements Standards Laboratory (MSL) is New Zealand's national metrology institute, ensuring that New Zealand's units of measurement are consistent with the International System of Units. The delivery of services is provided by MSL in accordance with its role assigned under the Measurement Standards Act 1992.

Financial Performance

	Budget Revenue 2017/18 – \$000	Actual Revenue 2017/18 – \$000	Actual Expenditure 2017/18 – \$000	Actual Surplus 2017/18 – \$000
Appropriation	5,764	5,465	-	-
Other	832	796	-	-
Total	6,596	6,261	6,259	2

Performance Measures

Quantity	Performance Standard	Result
Provision of national measurements and standards and related services in accordance with statutory obligations under section 4 of the Measurement Standards Act 1992, reported annually to the Minister and accepted	Achieved	Achieved
All technical procedures related to the maintenance of national measurement standards (in accordance with the resolutions and recommendations of the Metre Convention) independently reviewed and validated, with all external review actions completed by 30 June 2018	Achieved	<p style="text-align: center;">Achieved</p> <p>There were 105 procedures in validation on 30 June 2018, of which 34 were validated or re-validated during 2017/18.</p> <p>An annual surveillance review of MSL was carried out by International Accreditation New Zealand (IANZ). IANZ also conducted technical reassessments of MSL's Length measurement standards, and Electricity measurement standards. All corrective actions arising from these assessments have been cleared.</p>

Business Research and Development Grants

In addition to our MCAs and National Measurements Standard Output Class, Callaghan Innovation administers three funding programmes aimed at helping businesses to invest more in R&D. We administer a range of R&D grants to add scale to businesses' own R&D investments for greater impact. Our R&D grants are structured to meet a range of business needs, whether those businesses are young start-ups or established R&D performers.

Research and Development Growth Grants

Growth Grants are designed to increase R&D investment by businesses that have a strong track record for R&D spending in New Zealand. We provide 20% co-funding for R&D for an initial three years with an extension option, capped at \$5 million a year. Growth Grants are funded by the Crown through a multi-year appropriation.

Quantity	Performance Standard	Result
Percentage of businesses receiving a growth grant that maintain or increase their research and development expenditure over the grant period ³	70%	86% (226 of 262 companies)

Targeted Business Research and Development Funding

R&D project grants support greater investment by businesses in R&D, especially those with less-established R&D programmes. We provide up to 40% co-funding of R&D costs.

Our R&D experience, career and fellowship grants support undergraduate and graduate students to work in commercial R&D environments as interns in New Zealand's excellent commercial R&D facilities; this is a win-win solution for both industry and the students. These grants are funded by the Crown through a multi-year appropriation.

Quantity	Performance Standard	Result
Percentage of businesses completing research and development project grants that positively rate Callaghan Innovation's assistance as valuable in their final reports	80%	99% (83 of 84 Project Grants)
Percentage of surveyed recipients who would recommend the research and development experience grants to others	80%	96% (258 of 268 responses)
Percentage stating that grant enabled them to improve or accelerate their research and development	Establish baseline	94% (79 of 84 of Project Grants)

³ This compares the average eligible quarterly R&D spend in the two years prior to the Growth Grant (the years used to enter the scheme) with the average eligible quarterly R&D spend during the Growth Grant period. Note: the wording about eligible R&D spend being maintained or increased has changed in the latest Ministerial direction. It was previously 'the business has maintained or increased non-government funded eligible R&D expenditure over the two years of the grant period as compared to the two years prior to the grant period'. It is currently 'has maintained or increased eligible R&D expenditure over the two years of the grant period as compared to the two years prior to the grant period'.

Repayable Grants for Start-ups

Our Incubator Support Programme accelerates the growth and success of high-value New Zealand start-up businesses through a range of services and funding. We intend to support the development and growth of new technology-focused business start-ups.

Quantity	Performance Standard	Result
Percentage of incubator contracts that are assessed as delivering as required (founder focused, and technology focused)	90%	91%
Percentage of surveyed start-ups who agree that they have gained business or commercialisation skills due to working with the incubator/ accelerator	Establish baseline	84% ⁴

Non-departmental Capital Expenditure

This appropriation is limited to capital expenditure to support the establishment and development of an advanced technology institute. This capital expenditure is to support the purchase or development of assets by and for the use of Callaghan Innovation to ensure we have the appropriate infrastructure to enable us to provide the best possible services to businesses.

Quantity	Performance Standard	Result
Any physical and virtual infrastructure investment is aligned with the overall strategy, mix of services and business engagement model	Achieved	Achieved
Any major capital project proposal is developed in accordance with published Treasury business case guidance	Achieved	Achieved

⁴ Note this figure is from a small sample who responded to the surveys.

FINANCIAL STATEMENTS

Statement of Comprehensive Revenue and Expenses	62
Statement of Changes in Equity	63
Statement of Financial Position	65
Statement of Cash Flows	67
Notes to the Financial Statements	69

STATEMENT OF COMPREHENSIVE REVENUE AND EXPENSES

For the year ended 30 June 2018

		GROUP 2018 ACTUAL	GROUP 2018 BUDGET	GROUP 2017 ACTUAL
		\$000	<i>Unaudited</i> \$000	\$000
	Notes			
Revenue				
Funding from the Crown	2	65,912	65,754	66,719
Funding from the Crown – grants	2	201,814	204,800	169,322
Commercial and other revenue	2	23,309	23,888	20,780
Interest revenue		1,081	932	1,305
Total revenue		292,116	295,374	258,126
Total revenue				
		292,116	295,374	258,126
Expenditure				
Personnel costs	3	(46,715)	(46,226)	(43,910)
Science project and subcontract costs	3	(11,501)	(11,082)	(10,904)
Other expenses	3	(27,004)	(26,055)	(28,264)
Depreciation and amortisation expense	8,9	(6,621)	(7,112)	(5,983)
Grant expense	4	(201,814)	(204,800)	(169,322)
Interest expense		-	-	(2)
Total operating expenditure		(293,655)	(295,275)	(258,385)
Share of surplus from joint venture and associate	11	1,556	-	374
Surplus for the period		17	100	115
Other comprehensive revenue and expense				
Item that will be reclassified to surplus/(deficit)				
Cash flow hedges (net of tax)		(334)	-	(271)
Total comprehensive revenue and expenses		(317)	100	(156)

Explanations of major variances against budget are provided in note 22.

The accompanying accounting policies and notes form an integral part of these Financial Statements.

STATEMENT OF CHANGES IN EQUITY

For the year ended 30 June 2018

GROUP	Notes	Contributed capital \$000	Accumulated surplus \$000	Hedge reserve \$000	Total equity \$000
Balance as at 1 July 2016		52,873	7,243	357	60,473
Surplus for the year		-	115	-	115
Other comprehensive revenue					
Cash flow hedge reserve		-	-	(271)	(271)
Total comprehensive revenue and expenses for the year		52,873	7,358	86	60,317
Other transactions					
Capital contribution		-	-	-	-
Balance as at 30 June 2017		52,873	7,358	86	60,317
Balance as at 1 July 2017		52,873	7,358	86	60,317
Surplus for the year		-	17	-	17
Other comprehensive revenue					
Cash flow hedge reserve		-	-	(334)	(334)
Total comprehensive revenue and expenses for the year		52,873	7,375	(248)	60,000
Other transactions					
Capital contribution		13,570	-	-	13,570
Balance as at 30 June 2018	6	66,443	7,375	(248)	73,570

Explanations of major variances against budget are provided in note 22.

The accompanying accounting policies and notes form an integral part of these Financial Statements.

STATEMENT OF CHANGES IN EQUITY CONTINUED

For the year ended 30 June 2018

GROUP BUDGET (unaudited)	Notes	Contributed capital \$000	Accumulated surplus \$000	Hedge reserve \$000	Total equity \$000
Balance as at 1 July 2016		53,670	8,426	(56)	62,040
Surplus for the year		-	115	-	115
Other comprehensive revenue					
Cash flow hedge reserve		-	-	(51)	(51)
Other transactions					
Capital contribution		-	-	-	-
Total comprehensive revenue and expenses for the year		53,670	8,541	(107)	62,104
Balance as at 30 June 2017		53,670	8,541	(107)	62,104
Balance as at 1 July 2017		53,670	8,541	(107)	62,104
Surplus for the year		-	100	-	100
Other comprehensive revenue					
Cash flow hedge reserve		-	-	-	-
Total comprehensive revenue and expenses for the year		53,670	8,541	(107)	62,104
Other transactions					
Capital contribution		26,500	-	-	26,500
Balance as at 30 June 2018	6	80,170	8,641	(107)	88,704

Explanations of major variances against budget are provided in note 22.

The accompanying accounting policies and notes form an integral part of these Financial Statements.

STATEMENT OF FINANCIAL POSITION

As at 30 June 2018

		GROUP 2018 ACTUAL	GROUP 2018 BUDGET	GROUP 2017 ACTUAL
		<i>Unaudited</i>		
	<i>Notes</i>	\$000	\$000	\$000
EQUITY				
Contributed capital	6	66,443	80,170	52,873
Accumulated surplus	6	7,375	8,641	7,358
Hedge reserve	6	(248)	(107)	86
TOTAL EQUITY		73,570	88,704	60,317
<i>Represented by:</i>				
CURRENT ASSETS				
Cash and term deposits	5	28,061	23,818	26,880
Trade and other receivables	7	5,956	5,914	5,405
Crown debtor – grants	7	106,010	73,774	76,420
Derivative financial instruments	18	-	-	86
Work in progress		1,328	133	967
Inventories		406	257	512
Total current assets		141,761	103,896	110,270
NON-CURRENT ASSETS				
Trade and other receivables	7	-	-	400
Investment in joint ventures and associates	11	9,327	7,127	7,771
Property plant and equipment	8	39,374	65,848	34,362
Intangible assets	9	3,041	2,553	2,049
Capital work in progress	8	4,996	3,971	5,441
Total non-current assets		56,738	79,499	50,023
TOTAL ASSETS		198,499	183,395	160,293

Explanations of major variances against budget are provided in note 22.

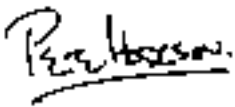
The accompanying accounting policies and notes form an integral part of these Financial Statements.

STATEMENT OF FINANCIAL POSITION CONTINUED

As at 30 June 2018

	<i>Notes</i>	GROUP 2018 ACTUAL \$000	GROUP 2018 BUDGET Unaudited \$000	GROUP 2017 ACTUAL \$000
CURRENT LIABILITIES				
Trade creditors and other payables	14	8,153	10,618	11,659
Employee benefits	12	3,554	3,421	3,539
Derivative financial instruments	18	248	-	-
Grant obligations	17	106,010	73,774	76,420
Funds received in advance	13	6,762	6,382	8,170
Total current liabilities		124,727	94,195	99,788
NON-CURRENT LIABILITIES				
Employee benefits	12	202	496	188
Total non-current liabilities		202	496	188
TOTAL LIABILITIES		124,929	94,691	99,976
NET ASSETS		73,570	88,704	60,317

For and on behalf of the members of the Board, which authorised the issue of the financial statements on 29 August 2018.



Pete Hodgson
Chair, Callaghan Innovation Board



Simon Botherway
Callaghan Innovation Board

Explanations of major variances against budget are provided in note 22.

The accompanying accounting policies and notes form an integral part of these Financial Statements.

STATEMENT OF CASH FLOWS

For the year ended 30 June 2018

	GROUP 2018 ACTUAL	GROUP 2018 BUDGET	GROUP 2017 ACTUAL
	\$000	<i>Unaudited</i> \$000	\$000
Notes			
CASH FLOW FROM OPERATING ACTIVITIES			
<i>Cash was provided from:</i>			
Receipts from the Crown – operating	77,794	75,220	77,035
Receipts from the Crown – grants	201,439	204,800	169,322
Receipts from commercial customers	20,648	23,896	20,884
Interest received	1,081	932	1,305
	300,962	304,848	268,546
<i>Cash was applied to:</i>			
Payments to suppliers	(55,211)	(49,629)	(47,359)
Payments to employees	(46,312)	(45,613)	(44,019)
Payments to grant recipients	(201,814)	(204,800)	(169,322)
	(303,337)	(300,042)	(260,700)
Net cash flow from operating activities	(2,375)	4,806	7,846
<i>15</i>			
CASH FLOW FROM INVESTING ACTIVITIES			
<i>Cash was provided from:</i>			
Sale of property, plant and equipment	3	-	11
Term deposit maturities	57,000	5,600	45,500
Finance lease receivables	2,401	-	1,545
	59,404	5,600	47,056
<i>Cash was applied to:</i>			
Purchase of property, plant and equipment	(10,736)	(36,418)	(11,437)
Purchase of intangible assets	(1,682)	-	(825)
Investment in term deposits	(58,570)	-	(41,500)
	(70,988)	(36,418)	(53,762)
Net cash flow from investing activities	(11,584)	(30,818)	(6,706)

Explanations of major variances against budget are provided in note 22.

The accompanying accounting policies and notes form an integral part of these Financial Statements.

STATEMENT OF CASH FLOWS CONTINUED

For the year ended 30 June 2018

	<i>Notes</i>	GROUP 2018 ACTUAL \$000	GROUP 2018 BUDGET Unaudited \$000	GROUP 2017 ACTUAL \$000
CASH FLOW FROM FINANCING ACTIVITIES				
<i>Cash was provided from:</i>				
Capital contribution		13,570	26,500	-
		13,570	26,500	-
Net cash flow from financing activities		13,570	26,500	-
Net increase/(decrease) in cash and cash equivalents		(389)	488	1,140
Cash and cash equivalents at the beginning of the year		2,880	1,430	1,740
CASH AND CASH EQUIVALENTS AT THE END OF THE YEAR	5	2,491	1,918	2,880

Explanations of major variances against budget are provided in note 22.

The accompanying accounting policies and notes form an integral part of these Financial Statements.

NOTES TO THE FINANCIAL STATEMENTS

For the year ended 30 June 2018

1. Statement of accounting policies

Reporting entity

Callaghan Innovation is a Crown Entity as defined by the Crown Entities Act 2004 and is domiciled in New Zealand. The relevant legislation governing Callaghan Innovation's operations include the Crown Entities Act 2004, Crown Service Enterprise Act 2002 and Callaghan Innovation Act 2012.

Callaghan Innovation's parent is the New Zealand Crown. The consolidated financial statements of the Group comprise Callaghan Innovation and its controlled entities, associates and joint ventures.

Callaghan Innovation's primary purpose is to grow New Zealand's innovation economy by helping businesses succeed through technology.

Callaghan Innovation does not operate to make a financial return.

Callaghan Innovation designated itself as a public benefit entity for financial reporting purposes.

Basis of preparation

The financial statements have been prepared on a going concern basis and the accounting policies have been applied consistently throughout the period.

Statement of compliance

The financial statements of the Group have been prepared in accordance with the Crown Entities Act 2004, which includes the requirement to comply with generally accepted accounting practice in New Zealand (NZ GAAP).

These financial statements comply with Public Sector PBE accounting standards.

Functional presentation currency and rounding

The functional currency of Callaghan Innovation is New Zealand dollars (NZ\$). The financial statements are presented in New Zealand dollars and all values are rounded to the nearest thousand dollars (\$000).

Standards issued and not yet effective and early adopted

In January 2017, the External Reporting Board issued PBE IFRS 9 Financial Instruments. This replaces PBE IPSAS 9 Financial Instruments: Recognition and Measurement. PBE IFRS 9 is effective for annual periods beginning on or after 1 January 2021, with earlier application permitted.

The main changes under the standard are new financial asset classification requirements for determining whether

an asset is measured at fair value or amortised cost, a new impairment model for financial assets based on expected losses which may result in the earlier recognition of impairment losses and revised hedge accounting requirements to better reflect the management of risks. The timing of Callaghan Innovation adopting PBE IFRS 9 will be guided by the Treasury's decision on when the Financial Statements of Government will adopt PBE IFRS 9. Treasury have advised they will be adopting PBE IFRS 9 in 2018/19, and therefore Callaghan Innovation will adopt PBE IFRS 9 in 2018/19.

Summary of significant accounting policies

Revenue

The specific accounting policies for significant revenue items are explained below.

Revenue from the Crown – operational funding

Callaghan Innovation is primarily funded from the Crown. This funding is provided for the purpose of Callaghan Innovation meeting its objectives as specified in the Statement of Intent and Statement of Performance Expectations and is recognised as revenue at the point of entitlement.

The fair value of revenue from the Crown has been determined to be the equivalent to the amounts due in the funding arrangements.

Grants (Crown revenue)

Grants received are recognised in the Statement of Comprehensive Revenue and Expense when they become receivable unless there is an obligation in substance to return the funding if the requirements under the grant have not been met. Any grants for which the requirements have not been completed are carried as liabilities until all conditions have been fulfilled and recognised as revenue when conditions of the grant are satisfied.

Provision of goods and services (commercial revenue)

Revenue from the sale of goods is recognised when the risk and reward of ownership have been transferred to the buyer.

Revenue from research contract services is recognised by reference to the stage of completion. The stage of completion is measured by reference to project milestones or costs incurred to date as a percentage of the total cost for each contract. Where the contract outcome cannot be measured reliably revenue is recognised only to the extent of the expenses recognised that are recoverable.

NOTES TO THE FINANCIAL STATEMENTS CONTINUED

Interest

Interest income is recognised using the effective interest method.

Royalty and licensing income

Royalty and licensing income arises from income earned from patent royalties and licensing of patents. Royalty and licensing income is recognised on an accruals basis in accordance with the substance of the relevant agreements.

Rental revenue and other income

Lease receipts and expense charges under an operating sublease are recognised as revenue on a straight-line basis monthly over the lease term.

Grants expenditure

Grants are approved and administered by Callaghan Innovation for the funding of research and development activities by New Zealand business and enterprise in accordance with Ministerial guidelines.

Grant expenditure is recognised in the Statement of Comprehensive Revenue and Expense when the third party recipient can demonstrate they have incurred expenditure that meets the grant conditions. An operating commitment is disclosed in the notes to the accounts for those grant contracts awarded but yet to be drawn down either in full or in part.

Repayable grants for start-ups are expensed in the Statement of Comprehensive Revenue and Expense in the period payment is made due to the uncertainty of future repayment. Repayable grants for start-ups are classified as a contingent asset.

Basis of consolidation

The consolidated financial statements combine the financial statements of Callaghan Innovation and its controlled entities, associates and joint ventures as at 30 June 2018 ("the Group").

Controlled entities are those entities over which the Group has the power to govern the financial and operating policies, generally accompanying a shareholding of more than one half of the voting rights. The financial statements of controlled entities are prepared for the same reporting period as Callaghan Innovation using consistent accounting policies.

All inter-company balances and transactions, including unrealised surplus and deficit arising from intra-Group transactions, have been eliminated in full.

Where there is loss of control of a controlled entity, the consolidated financial statements include the results for the part of the reporting year during which Callaghan Innovation has control. The purchase method is used to account for the acquisition of controlled entities by the Group.

The cost of an acquisition is measured at fair value of the assets given and liabilities incurred at the date of exchange. Identifiable assets and liabilities assumed in a business combination are measured initially at their fair value at the acquisition date.

Investment in joint ventures

A joint venture is the agreed sharing of control over an activity by a binding arrangement accounted for using the equity method from the date on which it becomes a joint venture. On acquisition of the investment any difference between the cost of the investment and the investor's share of the net fair value of the joint venture's identifiable assets and liabilities is accounted for as follows:

- a) goodwill relating to a joint venture is included in the carrying amount of the investment.
- b) any excess of the investor's share of the net fair value of the joint venture's identifiable assets and liabilities over the cost of the investment is included as income in the determination of the investor's share of the associate's surplus or deficit in the period in which the investment is acquired.

Under the equity method of accounting interests in joint ventures are initially recognised at cost and adjusted to recognise the Group's share of the post-acquisition surpluses or deficits and movements in other comprehensive revenue. When the Group's share of losses in a joint venture equals or exceeds its interests in the joint ventures (which includes any long-term interests that, in substance, form part of the Group's net investment in the joint ventures), the Group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the joint ventures.

NOTES TO THE FINANCIAL STATEMENTS CONTINUED

Investment in associates

Associates are those entities over which the Group has significant influence but not control, generally accompanying a shareholding of between 20% and 50% of the voting rights. Group investments in associates are accounted for using the equity method.

The financial statements of the associate are used by the Group to apply the equity method. Accounting policies of associates have been changed where necessary to ensure consistency with the policies adopted by the Group.

Foreign currency

Transactions in foreign currencies are initially recorded in the New Zealand dollar using the spot rates ruling at the date of the transaction.

Monetary assets and liabilities denominated in foreign currencies are retranslated at the rates of exchange ruling at the balance sheet date.

Exchange gains, losses and hedging costs arising on contracts entered into as hedges of firm commitments are deferred in equity as qualifying cash flow hedges until the dates that the underlying transactions will affect surplus or deficit.

All other foreign currency translation differences in the consolidated financial statements are taken to the income statement.

Non-monetary items that are measured in terms of historical cost in foreign currencies are translated to the New Zealand dollar using the exchange rates as at the date of the initial transaction. Non-monetary items measured at fair value in foreign currencies are translated to the New Zealand dollar using the exchange rate at the date when the fair value was determined.

Property, plant and equipment

Property, plant and equipment consists of land, freehold buildings, fittings, building auxiliary services, computer equipment, plant and scientific equipment, motor vehicles and office furniture. Property, plant and equipment are shown at cost less accumulated depreciation and impairment losses.

Additions

The cost of an item of property, plant and equipment is recognised as an asset only when it is probable that the future economic benefits or service potential associated with the item will flow to Callaghan Innovation and the cost of the item can be measured reliably.

In most instances an item of property, plant and equipment is initially recognised at its cost. Where an asset is acquired through a non exchange transaction, it is recognised at its fair value as at the date of acquisition.

Disposals

Gains and losses on disposals are determined by comparing the disposal proceeds with the carrying amounts of the assets. Gains and losses on disposals are included in the Statement of Comprehensive Revenue and Expense.

Subsequent costs

Costs incurred subsequent to initial acquisition are capitalised only when it is probable that the future economic benefits or service potential associated with the item will flow to Callaghan Innovation and the cost of the item can be measured reliably. The costs of day-to-day servicing of property, plant and equipment are recognised in the Statement of Comprehensive Revenue and Expense.

Depreciation

Depreciation is provided on a straight-line basis on all property, plant and equipment at rates that will write off the costs of the assets to their estimated residual values over their useful lives. The useful lives and associated depreciation rates of major classes have been estimated as follows:

	Estimated useful life	Rate
Freehold buildings	10-40 years (depending on age)	2.5%-10%
Building auxiliary services	8-20 years	5%-12.5%
Computer equipment	3-5 years	20%-33%
Plant and scientific equipment	3-15 years	6.7%-33%
Motor vehicles	3-5 years	20%-33%
Office furniture, fittings and equipment	3-10 years	10%-33%

NOTES TO THE FINANCIAL STATEMENTS CONTINUED

Intangible assets

Research and development costs

Research costs are expensed as incurred.

Development expenditure incurred on an individual project is carried forward when its future recoverability can reasonably be regarded as assured.

Following the initial recognition of the development expenditure from the point at which the asset is ready to use the cost model is applied requiring the asset to be carried at cost less any accumulated amortisation and accumulated impairment losses.

Any expenditure capitalised is amortised over the period of expected future sales from the related project from the point the asset is ready for use.

The amortisation period and amortisation method for development costs are reviewed at each financial year end. If the useful life or method of consumption is different from that in the previous assessment, changes are made accordingly. The carrying value of development costs is reviewed for indicators of impairment annually.

Computer software

Acquired computer software is capitalised on the basis of the costs incurred to acquire and gain the right to use the specific software.

Computer software development costs recognised as assets are amortised over their estimated useful lives (between three and five years).

The costs of maintaining computer software are expensed as incurred.

Patents

Costs associated with the registration of patents are expensed immediately due to the uncertainty of deriving economic benefits from the commercial use of the patents.

Impairment of property, plant, and equipment and intangible assets

The Group held both cash-generating assets and non-cash-generating assets. Assets are considered cash-generating where their primary objective is to generate a commercial return.

Property, plant, and equipment and intangible assets held at cost that have a finite useful life are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the

asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use.

If an asset's carrying amount exceeds its recoverable service amount, the asset is regarded as impaired and the carrying amount is written-down to the recoverable amount. The total impairment loss is recognised in the surplus or deficit. The reversal of an impairment loss is recognised in the surplus or deficit.

Cash-generating assets

Value in use for cash-generating assets is determined by the present value of the estimated future cash flows expected to be derived from the continuing use of the assets and from their disposal at the end of its useful life. The Group use a discount rate that reflects current market assessments of the time value of money and the risks specific to the assets.

Non-cash-generating assets

Value in use for non-cash-generating assets is determined by the present value of the asset's remaining service potential and is determined using an approach based on either a depreciated replacement cost approach, restoration cost approach, or a service units approach.

The most appropriate approach used to measure value in use depends on the nature of the impairment and availability of information.

Financial assets

The Group classifies its financial assets in two categories: at fair value through surplus or deficit, and loans and receivables. The classification depends on the purpose for which the financial assets were acquired. Management determines the classification of its financial assets at initial recognition.

(a) Financial assets at fair value through surplus or deficit

Financial assets at fair value through surplus or deficit are financial assets held for trading and those designated at fair value through surplus or deficit at inception.

A financial asset is classified in this category if acquired principally for the purpose of selling in the short term or if designated by management.

Derivatives are also categorised as at fair value through surplus or deficit unless they are designated as hedges.

(b) Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted

NOTES TO THE FINANCIAL STATEMENTS CONTINUED

in an active market. They are included in current assets except for those with maturities greater than 12 months after the balance sheet date which are classified as non-current assets.

The Group's loans and receivables comprise 'cash and term deposits' and 'trade and other receivables' in the Statement of Financial Position.

Regular purchases and sales of financial assets are recognised on the dates on which the Group commits to purchase or sell the assets.

Loans and receivables are carried at amortised cost using the effective interest method.

The Group assesses whether there is objective evidence that a financial asset or a group of financial assets is impaired at each balance date.

De-recognition of financial instruments

The de-recognition of a financial instrument takes place when the Group no longer controls the contractual rights that comprise the financial instrument which is normally the case when the instrument is sold, or all the cash flows attributable to the instrument are passed through to an independent third party.

Derivative financial instruments

Derivatives are initially recognised at fair value on the dates that derivative contracts are entered into and are subsequently re-measured to their fair value.

The method of recognising a resulting gain or loss depends on whether the derivative is designated as a hedging instrument and the nature of the item being hedged. The Group designates certain derivatives as hedges of highly probable forecast transactions (cash flow hedges).

The Group documents at the inception of a transaction the relationship between hedging instruments and hedged items as well as its risk management objective and strategy for undertaking various hedge transactions. The Group also documents its assessment, both at hedge inception and on an ongoing basis whether the derivatives that are used in hedging transactions have been and will continue to be highly effective in offsetting changes in cash flows of hedged items.

Cash flow hedge

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognised in equity in the hedge reserve.

The gain or loss relating to the ineffective portion is recognised immediately in the Statement of Comprehensive Revenue and Expense. Amounts accumulated in equity are recycled to the Statement of Comprehensive Revenue and Expense in the periods when the hedged items will affect surplus or deficit (for instance when a forecast sale that is hedged takes place). However, when a forecast transaction that is hedged results in the recognition of a non-financial asset (for example inventory) or a non-financial liability, the gains or losses previously deferred in equity are transferred from equity and included in the measurement of the initial cost or carrying amount of the asset or liability. When a hedging instrument expires or is sold or terminated, or when a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in equity at that time remains in equity and is recognised when the forecast transaction is ultimately recognised in the income statement. When a forecast transaction is no longer expected to occur the cumulative gain or loss that was reported in equity is immediately transferred to the Statement of Comprehensive Revenue and Expense.

Derivatives that do not qualify for hedge accounting

Certain derivative instruments do not qualify for hedge accounting, or hedge accounting has not been adopted. Changes in the fair value of those derivatives that don't qualify for hedge accounting are recognised immediately in surplus or deficit in the Statement of Comprehensive Revenue and Expense.

Inventories

Inventories held for use in the provision of goods and services on a commercial basis are valued at the lower of cost and net realisable value (NRV), where NRV is the estimated selling price in the ordinary course of business less estimated costs of completion and the estimated costs necessary to make the sale. Raw materials are recognised initially at purchase cost on a first-in, first-out basis.

Work-in-progress

Work-in-progress comprises the cost of any direct materials and labour incurred where a project milestone has not yet been met such that the client has not yet been invoiced.

Trade and other receivables

Debtors and other receivables are initially measured at fair value and subsequently measured at amortised cost using the effective interest method less any provision for impairment.

The impairment of a receivable is established when there is objective evidence that Callaghan Innovation will not be able

NOTES TO THE FINANCIAL STATEMENTS CONTINUED

to collect amounts due according to the original terms of the receivable. Significant financial difficulties of the debtor, probability that the debtor will enter into bankruptcy, and default in payments are considered indicators that the debtor is impaired. The amount of the impairment is the difference between the carrying amount of the asset and the present value of estimated future cash flows using the original effective interest rate. The carrying amount of the asset is reduced through the use of an allowance account and the amount of the loss is recognised in the Statement of Comprehensive Revenue and Expense. When the receivable is uncollectible, it is written off against the allowance account for receivables. Overdue receivables that have been renegotiated are reclassified as current (i.e. not past due).

Cash and cash equivalents

Cash and cash equivalents include cash on hand, deposits held on call with both domestic and international banks, and other short-term, highly liquid investments with original maturities of three months or less.

Trade and other payables

Short term payables are recognised initially at fair value and subsequently at amortised cost using the effective interest method.

Provisions

Callaghan Innovation recognises a provision for future expenditure of uncertain amount or timing when there is a present obligation (either legal or constructive) as a result of a past event, it is probable that expenditure will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. Provisions are measured at the present value of the expenditure expected to be required to settle the obligation using a discount rate that reflects a current market assessment of the time value of money and the risks specific to the obligation. The increase in the provision due to the passage of time is recognised as a finance cost.

Leases

Finance leases – lessor

Leases that transfer substantially all the risks and rewards incidental to the ownership of an asset, whether or not title is eventually transferred, are classified as finance leases. When assets are leased out under a finance lease, the present value of the lease payments is recognised as a receivable.

The difference between the gross receivable and the present value of the receivable is recognised as unearned finance income.

Operating leases – lessor

Leases that do not transfer substantially all the risks and rewards incidental to the ownership of an asset are classified as operating leases. When assets are leased out under an operating lease, the asset is included in the Statement of Financial Position based on the nature of the asset. Lease income on operating leases is recognised over the term of the lease on a straight-line basis.

Operating leases – lessee

Leases that do not transfer substantially all the risks and rewards incidental to ownership of an asset to Callaghan Innovation are classified as operating leases. Payments under operating leases are recognised as an expense on a straight line basis over the lease term.

Employee benefits

Short-term employee entitlements

Employee entitlements that Callaghan Innovation expects to be settled within 12 months of balance date are measured at the undiscounted amount expected to be paid based on accrued entitlements at current rates of pay. These include salaries and wages accrued up to balance date, annual leave earned but not yet taken at balance date, retirement and long service leave entitlements expected to be settled within 12 months. No provision is made for sick leave because absences are not expected to exceed the annual entitlement of staff and calculations show any amounts involved are likely to be immaterial.

Long-term employee entitlements

Entitlements that are payable beyond 12 months, such as long service leave and retirement leave, have been calculated on an actuarial basis.

The calculations are based on:

- Likely future entitlements accruing to staff, based on years of service, years to entitlement, the likelihood that staff will reach the point of entitlement and contractual entitlements information.
- The present value of estimated future cash flows. The discount rate is based on risk-free discount rates published by the New Zealand Treasury. An estimate of the average increase in remuneration for employees over the discount period is included in the calculation.

Superannuation schemes

Obligations for contributions to Kiwi Saver and the Government Superannuation Fund are accounted for as a defined contribution superannuation scheme and are recognised as an expense in the Statement of Comprehensive Revenue and Expense as incurred.

Termination benefits

Termination benefits are payable when employment is terminated by the Group before the normal retirement date or when an employee accepts voluntary redundancy in exchange for these benefits. The Group recognises termination benefits at the earlier of the following dates (a) when the Group can no longer withdraw the offer of those benefits; and (b) when the Group recognises a provision for costs for a restructuring and involves the payment of termination benefits. In the case of an offer made to encourage voluntary redundancy, the termination benefits are measured on the number of employees expected to accept the offer. Benefits falling due more than 12 months after the end of the reporting period are discounted to present value.

Income tax

Callaghan Innovation is a Crown Agent and is consequently exempt from paying income tax.

Goods and services tax (GST)

All items in the financial statements are presented exclusive of GST, except for trade receivables and trade payables, which are presented on a GST inclusive basis. Where GST is not recoverable as an input tax then it is recognised as part of the related asset or expense. The net amount of GST recoverable from or payable to the Inland Revenue Department is included as part receivables or payables in the Statement of Financial Position. The net GST paid to or received from the Inland Revenue Department including the GST relating to investing or financing activities is classified as an operating cash flow in the Statement of Cash Flows. Commitments and contingencies are disclosed exclusive of GST.

NOTES TO THE FINANCIAL STATEMENTS CONTINUED**2. REVENUE**

	GROUP 2018 ACTUAL \$000	GROUP 2017 ACTUAL \$000
Crown revenue – exchange transactions		
Ministry of Business, Innovation and Employment – Operational funding including Research and Development	65,912	66,719
Crown revenue – non-exchange transactions		
Ministry of Business Innovation and Employment – Research and Development Grants	201,814	169,322
Total Crown and other revenue	267,726	236,041
Commercial and other revenue – exchange transactions		
Commercial – domestic	8,565	7,434
Commercial – overseas	10,985	10,732
Royalty and licensing income	361	276
Property and equipment rental	1,673	901
Other revenue	1,725	1,437
Interest revenue	1,081	1,305
Total commercial and other revenue	24,390	22,085
Total revenue	292,116	258,126

Callaghan Innovation received operational funding from the Crown for specific purposes as set out in the Output Agreement and the scope of the relevant Government appropriations.

Callaghan Innovation received grant funding from the Crown to pay research and development grants to New Zealand businesses as set out in the Statement of Intent and the scope of the relevant Government appropriations.

NOTES TO THE FINANCIAL STATEMENTS CONTINUED

3. EXPENDITURE

During the 2018 year Callaghan Innovation changed its financial management information system. As part of this change Callaghan Innovation revised its chart of accounts. The 2017 comparative for expense categories science project and sub contract costs and other expenses disclosed on the face of the Statement of Comprehensive Revenue and Expense have been changed to align with the new coding structure.

The comparative 2017 year amounts (old coding structure in brackets) are as follows, Science Project and sub contract costs \$10,904,000 (\$14,132,000), Other expenses \$28,264,000 (\$24,873,000).

	GROUP 2018 ACTUAL \$000	GROUP 2017 ACTUAL \$000
Personnel costs include:		
Salary and wages	45,444	42,772
Defined contribution plan employer contributions	1,271	1,138
	<hr/> 46,715	<hr/> 43,910
Severance payments		
Severance payments include any consideration (monetary or non-monetary) provided to any employee in respect of the termination of their employment with Callaghan Innovation.		
Severance payments	520	787
Number of employees	14	16
Other expenses include:		
Repairs and maintenance	3,055	2,866
Premises and utility expenses	3,160	3,036
Fees to PWC		
- For auditing the financial statements	140	131
- Tax services	-	-
- Other services	-	21
Bad and doubtful debts	238	(14)
Directors' fees	256	259
Rent and lease expenses	2,444	2,671
Donations	4	2
Loss on disposal of fixed assets	235	64
Foreign exchange losses	52	50
Intellectual property (patents)	196	179

NOTES TO THE FINANCIAL STATEMENTS CONTINUED**4. GRANT EXPENSE**

	GROUP 2018 ACTUAL \$000	GROUP 2017 ACTUAL \$000
Grants approved for which recipients can demonstrate they have met grant conditions.	201,814	169,322
Total grants expense	201,814	169,322

5. CASH AND TERM DEPOSITS

	GROUP 2018 ACTUAL \$000	GROUP 2017 ACTUAL \$000
Cash at bank	2,491	2,880
Term deposits	25,570	24,000
Total cash and term deposits	28,061	26,880

Various term deposits were held at 30 June 2018 for periods of between 66 and 146 days.

The carrying value of cash at bank and term deposits approximates their fair value.

NOTES TO THE FINANCIAL STATEMENTS CONTINUED

6. EQUITY

	GROUP 2018 ACTUAL \$000	GROUP 2017 ACTUAL \$000
CONTRIBUTED CAPITAL		
Balance at 1 July 2017	52,873	52,873
Capital contribution	13,570	-
BALANCE AT 30 JUNE 2018	66,443	52,873
ACCUMULATED SURPLUS		
Balance at 1 July 2017	7,358	7,243
Surplus for the period	17	115
BALANCE AT 30 JUNE 2018	7,375	7,358
HEDGE RESERVE		
Balance at 1 July 2017	86	357
Fair value gain (loss) for the period	(334)	(271)
BALANCE AT 30 JUNE 2018	(248)	86
TOTAL EQUITY AT 30 JUNE 2018	73,570	60,317

A capital contribution of \$13,570,000 was received on 31 January 2018. No capital contribution was received from the owner in the 2017 financial year. The capital appropriation funded from the Ministry of Business Innovation and Employment is used to fund the purchase and development of assets for the use of Callaghan Innovation.

The hedge reserve is used to record gains or losses on foreign exchange forward contracts in a cash flow hedge. The amounts accumulated in the hedge reserve are reclassified to the Statement of Comprehensive Revenue and Expense when the associated hedge transaction affects surplus or deficit.

NOTES TO THE FINANCIAL STATEMENTS CONTINUED

7. TRADE AND OTHER RECEIVABLES

	GROUP 2018 ACTUAL \$000	GROUP 2017 ACTUAL \$000
Current		
Debtors	4,332	3,438
Less: Provision for impairment	(299)	(62)
	4,033	3,376
Accrued income	398	476
Other receivables	207	16
Prepayments	918	808
Finance leases – gross receivables	415	831
Unearned finance income	(15)	(102)
	400	729
	5,956	5,405
Crown debtor grants (non-exchange)		
Ministry of Business, Innovation and Employment – grants receivable	106,010	76,420
Total current and non-current Government grants receivable	106,010	76,420
Non-current receivables		
Finance leases – gross receivables	-	415
Unearned finance income	-	(15)
	-	400
Gross receivables from finance leases		
- Less than 1 year	415	831
- Greater than 1 year but less than 5 years	-	415
- Greater than 5 years	-	-
	415	1,246
Unearned finance income	(15)	(117)
Net investment in finance leases	400	1,129

NOTES TO THE FINANCIAL STATEMENTS CONTINUED

	GROUP 2018 ACTUAL \$000	GROUP 2017 ACTUAL \$000
Net investment in finance leases:		
- Less than 1 year	400	729
- Greater than 1 year but less than 5 years	-	400
- Greater than 5 years	-	-
	400	1,129

The carrying amount of trade receivables are equivalent to fair values.

Trade receivables includes amounts due from related parties see note 20 for details.

(a) Provision for impairment

At 30 June 2018 trade receivables of \$299,000 (2017: \$62,000) were considered impaired.

The impaired receivables were from a number of customers.

	GROUP 2018 ACTUAL \$000	GROUP 2017 ACTUAL \$000
Opening balance	62	115
Released	(62)	(115)
Recognised during the period	299	62
CLOSING BALANCE	299	62

(b) Past due but not impaired

At 30 June 2018 trade receivables of \$2,361,000 (2017: \$1,047,000) were past due but not impaired.

These relate to a number of independent customers for whom there is no recent history of default.

The aging of trade receivables is as follows:

	GROUP 2018 ACTUAL \$000	GROUP 2017 ACTUAL \$000
Within 1 month	1,689	427
Within 1 to 3 months	191	507
Beyond 3 months	481	113
	2,361	1,047

NOTES TO THE FINANCIAL STATEMENTS CONTINUED

8. PROPERTY, PLANT AND EQUIPMENT

GROUP	Land Assets \$000	Buildings Assets \$000	Plant Assets \$000	Total Actual \$000
1 July 2017				
Cost	3,001	22,145	26,146	51,292
Accumulated depreciation	-	(5,882)	(11,048)	(16,930)
Carrying amount	3,001	16,263	15,098	34,362
For the year ended 30 June 2018				
Carrying amount at 1 July 2017	3,001	16,263	15,098	34,362
Additions	-	3,424	7,750	11,174
Disposals	-	(24)	(122)	(146)
Depreciation	-	(1,732)	(4,284)	(6,016)
Carrying amount at 30 June 2018	3,001	17,931	18,442	39,374
Cost	3,001	25,341	32,958	61,300
Accumulated depreciation	-	(7,410)	(14,516)	(21,926)
Carrying amount	3,001	17,931	18,442	39,374

NOTES TO THE FINANCIAL STATEMENTS CONTINUED

GROUP	Land Assets \$000	Buildings Assets \$000	Plant Assets \$000	Total Actual \$000
1 July 2016				
Cost	3,001	19,521	23,603	46,125
Accumulated depreciation	-	(4,528)	(8,876)	(13,404)
Carrying amount	3,001	14,993	14,727	32,721
For the year ended 30 June 2017				
Carrying amount at 1 July 2016	3,001	14,993	14,727	32,721
Additions	-	2,828	4,317	7,145
Disposals	-	-	(66)	(66)
Depreciation	-	(1,558)	(3,880)	(5,438)
Carrying amount at 30 June 2017	3,001	16,263	15,098	34,362
Cost	3,001	22,145	26,146	51,292
Accumulated depreciation	-	(5,882)	(11,048)	(16,930)
Carrying amount	3,001	16,263	15,098	34,362
			GROUP 2018 \$000	GROUP 2017 \$000

Capital work in progress 4,996 5,441

The majority of assets under capital work in progress are specialised equipment \$1,531,000 and buildings \$3,465,000 (2017: buildings \$1,893,000, specialised equipment \$2,668,000).

Insurable values of fixed assets

The Group has established, maintains and regularly reviews comprehensive cover for business insurance. As part of this cover, it insures its fixed assets at either demolition, indemnity or replacement values. In line with other businesses in the Wellington region, the Group faces higher rates of exclusions on the fixed asset replacement policies. The Group has total insurable assets of \$269 million with an earthquake loss limit of \$115 million. The earthquake insurance deductible is \$10 million.

The category of building assets leased by the group to third parties under operating leases with the following carrying amounts:

	GROUP 2018 \$000	GROUP 2017 \$000
Cost	4,926	4,895
Accumulated depreciation	(2,673)	(2,540)
Depreciation charge for the year	(128)	(126)
Net book amount	2,125	2,229

NOTES TO THE FINANCIAL STATEMENTS CONTINUED**9. INTANGIBLE ASSETS**

	GROUP 2018 Software \$000	GROUP 2017 Software \$000
Balance at 1 July 2017		
Cost	3,148	2,832
Accumulated amortisation	(1,099)	(954)
Opening carrying amount	2,049	1,878
For the year ended 30 June 2018		
Additions	1,719	825
Disposals	(122)	(109)
Amortisation charge	(605)	(545)
Balance at 30 June 2018		
Cost	4,345	3,148
Accumulated amortisation	(1,304)	(1,099)
Closing carrying amount	3,041	2,049

Intangible assets consists of computer software acquired from third parties.

10. INVESTMENT IN CONTROLLED ENTITIES

The Parent's investment in controlled entities comprises shares at cost. Controlled entities comprise:

Name of entity	Principal activities	Interest held by the Group 30 June 2018	Interest held by the Group 30 June 2017
Non-trading controlled entities			
Callaghan Innovation Research Limited	Research contracts – ceased trading 1 December 2013.	100%	100%
Measurement Standards Laboratory of New Zealand Limited	Non-operating – name protection	100%	100%
GlycoSyn Technologies Limited	Non-operating – name protection	100%	100%

All controlled entities have 30 June balance dates.

All controlled entities are incorporated in New Zealand.

NOTES TO THE FINANCIAL STATEMENTS CONTINUED

11. INVESTMENT IN JOINT VENTURES AND ASSOCIATES

	GROUP	GROUP
	2018	2017
Details of associates		
Associates comprise the following:		
Name of entity	Principal Activities	
New Zealand Food Innovation (Waikato) Limited	Food innovation company	30.00%
New Zealand Food Innovation (South Island) Limited	Food innovation company	49.90%

Investment in associates

On 13th October 2014 Callaghan Innovation purchased a 30% shareholding in New Zealand Food Innovation Waikato Limited for \$3,000,000. As Callaghan Innovation does not control but has significant influence over New Zealand Food Innovation Waikato Limited, its interest in the associate is accounted for via the equity method. The fair value of the identifiable assets and liabilities of New Zealand Food Innovation Waikato Limited was determined via independent valuation on acquisition.

On 1 Dec 2017, the Hamilton City Council sold 100% of Waikato Innovation Park Limited. Prior to the sale, Hamilton City Council transferred its 70% share ownership of New Zealand Food Innovation Waikato Limited to a newly established council control organisation called Waikato Innovation Growth Limited. On sale date, Hamilton City Council further injected \$4 million from the sale proceeds into New Zealand Food Innovation Waikato Limited. To maintain Callaghan Innovation 30% shareholding of New Zealand Food Innovation Waikato Limited \$1.2 million was allocated to Callaghan Innovation. Callaghan Innovation has recognised this \$1.2 million one-off gain in its 2018 surplus.

New Zealand Food Innovation (Waikato) Limited

	ACTUAL	ACTUAL
	2018	2017
	\$000	\$000
Current assets	3,533	1,433
Non-current assets	18,914	19,899
Current liabilities	(940)	(631)
Non-current liabilities	(10,338)	(13,676)
Total revenue	7,100	6,980
Total expenditure	(6,688)	(6,033)
Net surplus/(deficit)	412	947
Results of the associate		
Share of surplus/(deficit)	1,324	285
Interest in associate		
Carrying amount at beginning of year	2,798	2,513
Acquisition at fair value	-	-
Impairment of acquisition value	-	-
Share of surplus/(deficit)	1,324	285
Carrying value at the end of the year	4,122	2,798

On 30th November 2014 Callaghan Innovation purchased a 49.9% shareholding in New Zealand Food Innovation (South Island) Limited for \$1.00. As Callaghan Innovation does not control but has significant influence over New Zealand Food Innovation (South Island) Limited, its interest in the associate is accounted for via the equity method.

NOTES TO THE FINANCIAL STATEMENTS CONTINUED**New Zealand Food Innovation (South Island) Limited**

	ACTUAL 2018 \$000	ACTUAL 2017 \$000
Current assets	1,316	2,072
Non-current assets	2,024	1,382
Current liabilities	(1,058)	(1,934)
Total revenue	1,834	1,110
Expenditure	(1,059)	(1,002)
Net surplus	775	108
Results of the associate		
Share of surplus	386	54
Interest in associate		
Carrying amount at beginning of year	741	687
Acquisition at fair value	-	-
Share of surplus	386	54
Carrying value at the end of the year	1,127	741

Investment in joint venture

On 1 August 2013 Callaghan Innovation purchased a 67% shareholding in New Zealand Food Innovation (Auckland) Limited for \$1.00. While Callaghan Innovation is the majority owner of New Zealand Food Innovation (Auckland) Limited, the shareholder agreement requires the unanimous consent of all owners for strategic financial and operating decisions. Callaghan Innovation jointly controls New Zealand Food Innovation (Auckland) Limited and its interest in the joint venture is accounted for via the equity method.

The fair value of the identifiable assets and liabilities of New Zealand Food Innovation (Auckland) Limited was determined via independent valuation on acquisition. A purchase gain of \$4,400,000 was recognised in the Statement of Comprehensive Revenue and Expense in the 2014 financial year to recognise the difference between fair value and the purchase price of \$1.00.

NOTES TO THE FINANCIAL STATEMENTS CONTINUED**New Zealand Food Innovation (Auckland) Limited**

	ACTUAL 2018 \$000	ACTUAL 2017 \$000
Total		
Current assets	1,242	1,665
Non-current assets	7,208	7,430
Current liabilities	(388)	(740)
Non-current liabilities	(2,001)	(2,070)
Results of the joint venture		
Revenue	3,870	3,837
Expenditure	(4,100)	(3,785)
Net surplus	(230)	52
Share of surplus	(154)	35
Interest in joint venture		
Carrying amount at beginning of year	4,232	4,197
Impairment	-	-
Share of total recognised revenues and expenses	(154)	35
Carrying value at the end of the year	4,078	4,232

All joint venture and associates have 30 June balance dates.

NOTES TO THE FINANCIAL STATEMENTS CONTINUED

12. EMPLOYEE BENEFITS

	GROUP 2018 \$000	GROUP 2017 \$000
Current		
Employee entitlements	501	434
Long service and retiring leave	230	255
Annual leave	2,823	2,775
Sick leave	-	75
	3,554	3,539
Non-current		
Long service and retiring leave	202	188

The retiring leave provision was calculated based on risk-free discount rates published by the New Zealand Treasury. The risk free discount rates range from 1.97% in 2019 to 3.86% for years to 2037. The inflation factor is based on the expected long term increase in remuneration for employees currently forecast at 3.1%.

13. FUNDS RECEIVED IN ADVANCE

	GROUP 2018 \$000	GROUP 2017 \$000
Payable under exchange transactions		
Government and other revenue received in advance	45	1,718
Funds held on behalf of third parties	6,717	6,452
	6,762	8,170

Funds received in advance represent funding received on behalf of third parties for agency activities and revenue received from government and other customers for project work not completed at 30 June.

NOTES TO THE FINANCIAL STATEMENTS CONTINUED

14. TRADE AND OTHER PAYABLES

	GROUP 2018 ACTUAL \$000	GROUP 2017 ACTUAL \$000
Payables under exchange transactions		
Trade creditors	3,020	5,303
Other payables	5,119	6,306
Total payables under exchange transactions	8,139	11,609
Payables under non-exchange transactions		
Goods and services tax (GST) payable	14	50
Total payables under non-exchange transactions	14	50
Total	8,153	11,659

Total trade and other payables

The carrying amounts of the above items are equivalent to the fair values.

Trade payables includes amounts due to related parties (see note 21 for details).

NOTES TO THE FINANCIAL STATEMENTS CONTINUED**15. RECONCILIATION OF SURPLUS WITH
CASH FLOW FROM OPERATING ACTIVITIES**

	GROUP 2018 ACTUAL \$000	GROUP 2017 ACTUAL \$000
Net surplus for the period	17	115
<i>Add/(less) non-cash items:</i>		
Depreciation	6,016	5,438
Amortisation of intangible assets	605	545
Share of surplus joint venture and associate	(1,556)	(374)
Loss on sale of fixed assets	235	64
Property and equipment rental income	(1,673)	(901)
Proceeds on sale of fixed assets classified as investing activity	3	-
<i>Add/(less) movements in working capital:</i>		
Trade and other receivables	(30,215)	(6,183)
Inventory	107	(254)
Work in progress	(360)	(148)
Funds received in advance	1,328	1,438
Employee benefits	(706)	85
Trade and other payables	24,158	8,292
Derivative financial instrument	(334)	(271)
NET CASH FLOWS FROM OPERATING ACTIVITIES	(2,375)	7,846

NOTES TO THE FINANCIAL STATEMENTS CONTINUED

16. CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

Critical accounting estimates and assumptions

The Group makes estimates and assumptions concerning the future. Estimates and adjustments are continually evaluated and are based on historical experience and other factors including expectations of future events that are believed to be reasonable under the circumstances.

(a) Fair value of long service and retiring leave

The fair value of long service and retiring leave liability is determined by use of estimates of retiring age, probability of meeting retirement criteria and discounting future estimated payments. The liability at 30 June 2018 was calculated internally using a discounted cash flow model. Using the discounted cash flow model the liability was calculated for 2018 at \$431,849 (2017: \$443,923).

Adjusting the discount rate down/up 1.0% results in a decrease/increase of the 2018 retiring/long service leave liability balance and end of period surplus of \$12,000 decrease/increase (2017: \$13,000 decrease/increase).

(b) Grant obligations and debtor

At balance date for each different grant type an assessment is made based on historical data of the probability of a grant recipient having incurred qualifying expenditure for which a claim has not yet been received.

Based upon this assessment an accrual for grants obligations is made and a receivable is recognised in the financial statements of \$106,010,000 (2017: \$76,420,000). Payments against the 30 June 2018 accrual are expected to be made during the 2018/19 financial year.

	GROUP 2018 ACTUAL \$000	GROUP 2017 ACTUAL \$000
Payable and Receivable under non-exchange transactions		
Grant obligations and debtor	106,010	76,420
Total grant obligations and debtor	106,010	76,420

(c) Revenue

Some revenue for the Group is project based. Revenue is recognised on an accruals basis in the Statement of Comprehensive Revenue and Expense when it is earned. Managers review projects and provide an assessment of project status.

Based upon this assessment revenue in advance adjustments are made to the financial statements 2018: \$45,000 (2017: \$1,718,000).

Critical judgement in applying the Group's accounting policy

(a) Grants (Crown revenue)

The Group receives funding for grants which it then distributes to businesses in order to support science and technology based innovation. The Group's view is that it is acting as principal in the transaction given it is the Group's responsibility to allocate the funding, manage the contracts and deal directly with the grant recipients.

NOTES TO THE FINANCIAL STATEMENTS CONTINUED

17. FINANCIAL INSTRUMENTS BY CATEGORY

	GROUP \$000	GROUP \$000
	Loans and Receivables	Derivatives used for hedging
As at 30 June 2018		
Financial assets		
Cash and cash equivalents	28,061	-
Crown debtor – grants	106,010	-
Debtors and other receivables	5,038	-
	139,109	-
	GROUP \$000	GROUP \$000
	Liabilities measured at amortised cost	Derivatives used for hedging
Financial liabilities		
Creditors and other payables	8,153	-
Grant obligations	106,010	-
Derivative financial instruments	-	248
Employee benefits	3,324	-
	117,487	248
	GROUP \$000	GROUP \$000
	Loans and Receivables	Derivatives used for hedging
As at 30 June 2017		
Financial assets		
Cash and cash equivalents	26,880	-
Crown debtor – grants	76,420	-
Debtors and other receivables	4,997	-
Derivative financial instruments	-	86
	108,297	86
	GROUP \$000	GROUP \$000
	Liabilities measured at amortised cost	Derivatives used for hedging
Financial liabilities		
Creditors and other payables	11,659	-
Grant obligations	76,420	-
Employee leave benefits	3,284	-
	91,363	-

The only financial liabilities held at fair value are foreign exchange contracts \$247,675 liability (2017: \$86,325 asset). These are level 2 instruments in the fair value hierarchy and have been valued using balance date financial institution valuations.

NOTES TO THE FINANCIAL STATEMENTS CONTINUED

18. FINANCIAL RISK MANAGEMENT

The Group's activities expose it to a variety of financial risks, market risk (including currency risk and interest rate risk), credit risk and liquidity risk.

The Group's overall risk management programme seeks to minimise potential adverse effects on the Group's financial performance.

The Group uses derivative financial instruments to hedge certain risk exposures. Risk management is carried out under policies approved by the Board of Directors. Management identifies, evaluates and hedges financial risks in consultation with operational units.

The Board approves the overall risk management policies covering specific areas such as foreign exchange risk, interest rate risk, credit risk, use of derivative financial instruments and non-derivative financial instruments, and investment of excess liquidity.

(a) Market risk

Foreign exchange risk

The Group operates and generates commercial revenue internationally and is exposed to foreign exchange risk arising from various currency exposure, primarily with respect to the US dollar and Australian dollar.

The Group's primary objective in managing foreign currency risk is to provide certainty of New Zealand dollar net cash flows. To manage the foreign exchange risk the Group use forward exchange contracts.

Group finance treasury policy is to hedge between 50% and 100% of anticipated cash flows (mainly overseas revenue receipts and purchase of materials). A process of

natural hedge and forward cover contracts are used to hedge foreign currency risk. Between 60% and 70% of foreign currency receipts are used to purchase goods payable in foreign currency. Forward cover contracts are utilised to repatriate remaining foreign currency balances.

Forward exchange contract volatility on designated hedged transactions is accounted for through the cash flow hedge reserve. For the period ended 30 June 2018 the balance of the cash flow hedge reserve representing unexpired designated hedged foreign exchange contracts was \$247,675 (loss) (2017: \$86,325 gain).

At 30 June 2018, if the currency had strengthened/weakened by 10% against the US dollar with other variables held constant, surplus for the period (Group) would have been: strengthened \$143,000 lower, weakened \$174,000 higher (2017: strengthened \$62,000 lower, weakened \$76,000 higher) as the result of foreign exchange translation of US dollar denominated trade receivables/payables.

At 30 June 2018, if the currency had strengthened/weakened by 10% against the Australian dollar with other variables held constant, surplus for the period (Group) would have been: strengthened \$50,000 lower, weakened \$61,000 lower (2017: strengthened \$11,000 lower, weakened \$14,000 lower) as the result of translation of Australian dollar denominated trade receivables/payables.

At 30 June 2018, the Group has forward foreign exchange contracts for the sale and purchase of currencies to cover firm foreign currency denominated receipts and payments. Details of forward foreign exchange contracts outstanding at balance date are:

Outstanding contracts	GROUP 2018		GROUP 2017	
	Currency (Thousands)	Contract value NZD\$000	Currency (Thousands)	Contract value NZD\$000
Bank buys				
United States dollar	3,165	4,467	2,010	2,875
Australian dollar	818	867	1,284	1,362
Euro	2,531	5,632	-	-
Bank sells				
United States dollar	1,018	1,450	849	1,192
Euro	-	-	1,289	2,037

All forward foreign exchange contracts are due for settlement within 12 months of balance date.

NOTES TO THE FINANCIAL STATEMENTS CONTINUED**(b) Interest rate risk**

The Group has interest-bearing assets arising from short-term cash deposits. However, the Group's income and operating cash flows are substantially independent of changes in market interest rates. Excess funds are invested in New Zealand registered banks with a minimum Standard and Poor's rating of A- or better.

(c) Credit risk

Financial instruments which potentially subject the Group to credit risk principally consist of bank deposits, trade and other receivables, and foreign exchange contracts.

Credit risk is minimised as a result of several key controls:

- maintaining maximum limits for each broad class of counterparty and individual counterparties
- limiting investments to organisations with a long-term Standard & Poor's credit rating of A- or better and
- controlling the level and spread of trade and other receivables outstanding.

There are no significant concentrations of credit risk other than the receivables from MBIE in respect of grants.

(d) Liquidity risk

Liquidity risk is the risk that Callaghan Innovation cannot meet its financial obligations in full.

The Group maintains sufficient liquid bank deposits to conservatively manage its liquidity requirements without the requirement for bank credit facilities.

The Group's financial assets and liabilities and net settled derivative financial liabilities are all due within 12 months of balance date. The amounts disclosed in the table are the contractual undiscounted cash flows.

	GROUP 2018 Less than One Year \$000	GROUP 2017 Less than One Year \$000
Cash and term deposits	28,061	26,880
Trade and other receivables	5,956	5,405
Crown debtor – grants	106,010	76,420
Derivatives used for hedging	(248)	86
Trade and other payables	(8,153)	(11,659)
Grant obligations	(106,010)	(76,420)
Employee benefits	(3,554)	(3,539)

The Group's derivative financial instruments which will be settled on a gross basis within 12 months of balance date.

The amounts disclosed in the table are the contractual undiscounted cash flows.

	GROUP 2018 Less than One Year	GROUP 2017 Less than One Year
Forward foreign exchange contracts		
– cash flow hedges		
Inflow	10,966	4,237
Outflow	(1,450)	(3,229)

The Group holds no forward foreign exchange contracts for trading purposes.

NOTES TO THE FINANCIAL STATEMENTS CONTINUED

19. CAPITAL RISK MANAGEMENT

The Group capital comprises general funds which represents capital invested by the Crown and accumulated funds. Equity is represented by net assets.

There has been no material change in the management of capital during the year.

Callaghan Innovation manages its net assets to ensure that the entity achieves its objectives and purpose while remaining a going concern.

20. RELATED PARTY DISCLOSURES

General

Callaghan Innovation is a wholly owned entity of the Crown.

Transactions with other government agencies (for example, Government departments and Crown entities) are not disclosed as related party transactions when they are consistent with the normal operating arrangements between government agencies and undertaken on the normal terms and conditions for such transactions.

Transactions with Joint Ventures and Associates

	GROUP 2018 \$000	GROUP 2017 \$000
Sales of services and general recoveries		
- New Zealand Food Innovation Auckland Limited	11	12
- New Zealand Food Innovation (South Island) Limited	10	10
- New Zealand Food Innovation (Waikato) Limited	29	25
	50	47
Operational and project funding		
- New Zealand Food Innovation Auckland Limited	2,056	2,001
- New Zealand Food Innovation (South Island) Limited	599	400
- New Zealand Food Innovation (Waikato) Limited	80	-
	2,735	2,401

All trading transactions with the above entities are on a commercial basis.

NOTES TO THE FINANCIAL STATEMENTS CONTINUED

	GROUP 2018 \$000	GROUP 2017 \$000
KEY MANAGEMENT PERSONNEL COSTS		
<i>Board members</i>		
Remuneration	256	259
Full-time equivalent members	1.0	1.0
<i>Leadership team</i>		
Remuneration	2,389	2,807
Other benefits other than remuneration and other short-term cash benefits	-	-
Total full-time equivalent personnel	7.1	6.7
	2,645	3,066

21. COMMITMENTS AND CONTINGENCIES

	GROUP 2018 \$000	GROUP 2017 \$000
CAPITAL COMMITMENTS		
Commitments for capital expenditure budgeted and approved		
Buildings	2,315	1,994
Plant	-	5,031
Intangible assets	-	-
TOTAL CAPITAL COMMITMENTS	2,315	7,025

NOTES TO THE FINANCIAL STATEMENTS CONTINUED

OPERATING COMMITMENTS

Commitments for non-cancellable operating leases, grant contractual obligations and other operating commitments:

	GROUP 2018 \$000	GROUP 2017 \$000
Not later than 1 year	1,925	1,943
Later than 1 year and not later than 5 years	4,618	5,639
Later than 5 years	1,949	2,678
TOTAL OPERATING COMMITMENTS	8,492	10,260

Leased assets comprise computer hardware, computer software, office equipment and property.

Grant commitments

	GROUP 2018 \$000	GROUP 2017 \$000
Grant commitments for those grant contracts awarded but yet to be drawn down	214,899	225,436

Operating leases rental receivables – group company as lessor

	2018 \$000	2017 \$000
No later than 1 year	583	226
Later than 1 year and no later than 5 years	14	22
Later than 5 years	-	-
	597	248

The Group leases property under various agreements which terminate in 2020.

CONTINGENCIES

Contingent liability

Callaghan Innovation is defending a court proceeding brought against it by a grant recipient, Trends Publishing International Limited, arising out of the termination by Callaghan Innovation of a growth grant. Based on this the claimant seeks damages of approximately \$22 million. The matter is set down for a trial in August 2018. Callaghan Innovation denies all liability and considers that it has sufficient indemnity insurance to cover any liabilities arising including costs.

NOTES TO THE FINANCIAL STATEMENTS CONTINUED

Contingent asset	GROUP 2018 \$000	GROUP 2017 \$000
Repayable incubator grants	14,983	11,557

Incubator grants are repayable once the grant recipients product produces commercial revenue. A percentage of the commercial revenue generated is payable to Callaghan Innovation as repayment of the outstanding loan each year until the loan is repaid. Due to these grants only being made since 2014/15 there is limited information on which to assess the timing of any future repayments from grant recipients and the likely quantum of such repayments.

22. MAJOR BUDGET VARIANCE

Explanation of major budget variations are provided below for the Statement of Comprehensive Revenue and Expense, Statement of Financial Position and Statement of Cash Flows. The budget is published in the Callaghan Innovation Group Statement of Intent and Statement of Performance Expectations for the 12 months ended 30 June 2018. The budget figures have been prepared in accordance with NZ GAAP using accounting policies that are consistent with those adopted by the Board in preparing these financial statements.

Statement of Comprehensive Revenue and Expense

Revenue from the Crown is above budget due to the timing of recognition of Crown funding.

Revenue from the Crown – Crown grants funding was below budget due to lower than planned Research and Development grants expenditure paid to New Zealand businesses.

Commercial and other revenue is below budget due to lower than plan domestic commercial revenue.

Finance income is above budget due to higher than planned cash balances during the year.

Depreciation is below budget due to later than planned capital expenditure in the current year.

Statement of Financial Position and Statement of Changes in Equity

Cash and cash equivalents is above budget due to lower than planned capital expenditure.

Crown debtor – represents grant funding owed by the Ministry of Business Innovation and Employment for grants owing to third parties at balance date.

Crown debtor grants increased due to a greater number and value of grant obligations outstanding at 30 June 2018.

Fixed assets are below budget due to later than planned capital expenditure.

Intangible assets are lower than budget due to later implementation of various Software as a Service applications.

Funds received in advance is above budget due to higher than planned unspent agency funding held on behalf of third parties.

Equity is lower due to non receipt of planned capital contribution from owner.

Statement of Cash Flows

Higher operating receipts are due to higher receipts from the Crown for operational payments.

Higher operating payments are due to higher payments to suppliers.

Higher investing receipts due to higher receipts from term deposits transferring funds from term deposits.

Higher investing payments due to higher term deposit payments transferring funds to term deposits.

Lower financing receipts due to lower than planned owner capital contribution.

NOTES TO THE FINANCIAL STATEMENTS CONTINUED

Reconciliation: Statement of Performance Expectations to Statement of Comprehensive Revenue and Expense

For the twelve months ended 30 June 2018

	<i>Output class</i>	2018 Year \$000
Statement of Performance Expectations: Outputs		
Building business innovation	1	25,978
Research and development and facilities for business and industry	2	23,743
Business Research and Development contract management	3	10,230
National measurement standards	4	5,465
Total output revenue		65,416
Revenue from the Crown – Grants income		196,888
Revenue from the Crown – Incubator funding		4,926
Revenue from the Crown – Science contestable funding and other		496
Other revenue, including interest		24,390
Funds received in the capacity of an agent (shown net in Statement of Comprehensive Revenue and Expenses)		13,032
Total revenue per Statement of Comprehensive Revenue and Expenses		305,148
Minus:		
Personnel costs		(46,715)
Science project and subcontract costs:		
Acting as principal	(11,501)	
Acting as agent (refer above)	(13,032)	(24,533)
Other expenses including interest		(27,004)
Depreciation and amortisation expense		(6,621)
Grant expense		(201,814)
Total expenses per Statement of Comprehensive Revenue and Expenses		(306,687)
Share of surplus from joint venture and associate		1,556
Surplus for the year		17

23. EVENTS AFTER THE BALANCE SHEET DATE

There were no significant events arising after balance date requiring adjustment or disclosure in these financial statements.



INDEPENDENT AUDITOR'S REPORT

*To the readers of Callaghan Innovation's Group financial statements
and performance information for the year ended 30 June 2018*

The Auditor-General is the auditor of Callaghan Innovation group (the Group). The Auditor-General has appointed me, Chris Barber, using the staff and resources of PricewaterhouseCoopers, to carry out the audit of the financial statements and the performance information, of the Group on his behalf.

Opinion

We have audited:

- the financial statements of the Group on pages 62 to 99, that comprise the statement of financial position as at 30 June 2018, the statement of comprehensive revenue and expenses, statement of changes in equity and statement of cash flows for the year ended on that date and the notes to the financial statements including a summary of significant accounting policies and other explanatory information; and
- the performance information of the Group on pages 53 to 60.

In our opinion:

- the financial statements of the Group on pages 62 to 99:
 - present fairly, in all material respects:
 - its financial position as at 30 June 2018; and
 - its financial performance and cash flows for the year then ended; and
 - comply with generally accepted accounting practice in New Zealand and have been prepared in accordance with Public Benefit Entity Standards.

- the performance information on pages 53 to 60:
 - presents fairly, in all material respects, the Group's performance for the year ended 30 June 2018, including for each class of reportable outputs:
 - its standards of delivery performance achieved as compared with forecasts included in the statement of performance expectations for the financial year; and
 - its actual revenue and output expenses as compared with the forecasts included in the statement of performance expectations for the financial year; and
 - complies with generally accepted accounting practice in New Zealand.

Our audit was completed on 13 September 2018. This is the date at which our opinion is expressed.

The basis of our opinion is explained below. In addition, we outline the responsibilities of the Board of Directors and our responsibilities relating to the financial statements and the performance information, we comment on other information and we explain our independence.

Basis of opinion

We carried out our audit in accordance with the Auditor-General's Auditing Standards, which incorporate the Professional and Ethical Standards and the International Standards on Auditing (New Zealand) issued by the New Zealand Auditing and Assurance Standards Board. Our responsibilities under those standards are further described in the Responsibilities of the auditor section of our report.

We have fulfilled our responsibilities in accordance with the Auditor-General's Auditing Standards.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of the Board of Directors for the financial statements and the performance information

The Board of Directors is responsible on behalf of the Group for preparing financial statements and performance information that are fairly presented and that comply with generally accepted accounting practice in New Zealand.

The Board of Directors is responsible for such internal control as it determines is necessary to enable it to prepare financial statements and the performance information that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements and the performance information, the Board of Directors is responsible on behalf of the Group for assessing the Group's ability to continue as a going concern. The Board of Directors is also responsible for disclosing, as applicable, matters related to going concern and using the going concern basis of accounting, unless there is an intention to merge or terminate the activities of the Group, or there is no realistic alternative but to do so.

The Board of Director's responsibilities arise from the Crown Entities Act 2004.

Responsibilities of the auditor for the audit of the financial statements and the performance information

Our objectives are to obtain reasonable assurance about whether the financial statements and the performance information, as a whole, are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit carried out in accordance with the Auditor-General's Auditing Standards will always detect a material misstatement when it exists. Misstatements are differences or omissions of amounts or disclosures, and can arise

from fraud or error. Misstatements are considered material if, individually or in the aggregate, they could reasonably be expected to influence the decisions of readers taken on the basis of these financial statements and the performance information.

For the budget information reported in the financial statements and the performance information, our procedures were limited to checking that the information agreed to the Group's statement of performance expectations.

We did not evaluate the security and controls over the electronic publication of the financial statements and the performance information.

As part of an audit in accordance with the Auditor-General's Auditing Standards, we exercise professional judgement and maintain professional scepticism throughout the audit. Also:

- We identify and assess the risks of material misstatement of the financial statements and the performance information, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- We obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- We evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors.
- We evaluate the appropriateness of the reported performance information with the Group's framework for reporting its performance.
- We conclude on the appropriateness of the use of the going concern basis of accounting by the Board of Directors and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements and the performance information, or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- We evaluate the overall presentation, structure and content of the financial statements and the performance information, including the disclosures, and whether the financial statements and the performance information represent the underlying transactions and events in a manner that achieves fair presentation.
- We obtain sufficient audit evidence regarding the financial statements and the performance information of the entities or business activities within the Group to express an opinion on the consolidated financial statements and the consolidated performance information. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our opinion.

We communicate with the Board of Directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Our responsibilities arise from the Public Audit Act 2001.

Other Information

The Board of Directors is responsible for the other information. The other information comprises the information included on pages 2 to 106, but does not include the financial statements and the performance information, and our auditor's report thereon.

Our opinion on the financial statements and the performance information does not cover the other information and we do not express any form of audit opinion or assurance conclusion thereon.

In connection with our audit of the financial statements and the performance information, our responsibility is to read the other information. In doing so, we consider whether the other information is materially inconsistent with the financial statements and the performance information or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on our work, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Independence

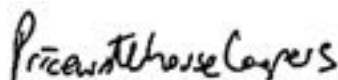
We are independent of the Group in accordance with the independence requirements of the Auditor-General's Auditing Standards, which incorporate the independence requirements of Professional and Ethical Standards 1 (revised): Code of Ethics for Assurance Practitioners issued by the New Zealand Auditing and Assurance Standards Board.

Other than the audit, we have no relationship with or interests in the Group.



Chris Barber

On behalf of the Auditor-General
Wellington, New Zealand



PricewaterhouseCoopers

STATUTORY REPORTING REQUIREMENTS

Ministerial directions (section 151(1)(f) Crown Entities Act 2004)

Callaghan Innovation received an updated Ministerial Direction in April 2017. Current Ministerial Directions applicable to Callaghan Innovation can be found on our website.

Systems and procedures for administration of government grants

Section 15(2) of the Callaghan Innovation Act 2012 requires that we report on the systems and procedures that provide fairness and transparency around the administration of government research, science and technology (RS&T) grants.

Callaghan Innovation undertook a grants enhancement programme in the 2015/16 financial year, which reviewed all the systems and procedures for RS&T grants. This review resulted in updated systems and procedures to provide further clarity and transparency and to ensure that current processes were in accordance with the revised Ministerial Direction. The review streamlined processes across the four schemes where feasible and simplified the application process for customers. Callaghan Innovation has

embedded the streamlined processes and is undertaking continuous improvements.

To give effect to the requirement of the Act, the following systems and procedures have been implemented and operated throughout the year across all our grants:

- Grants criteria are published on our website
- Application forms are standard for grant type and not amended for individual circumstances
- Eligible research and development is assessed by a minimum of two persons. Grant applications that do not meet the R&D eligibility criteria are not accepted
- A qualified Financial Risk Analyst performs financial due diligence on all Project Grants and Growth Grants to confirm that the grant recipient has sufficient financial stability to be able to conduct the R&D activity for the period of the grant
- All grants are approved in line with a delegations policy approved by the Callaghan Innovation Board. The amount and type of the grant will determine at what level it can be approved. For Project and

Growth grants, approval is by way of investment committee, with larger grants requiring approval by committees that comprise both internal and external members

- Funding contracts are standard and not amended for individual circumstances
- Project grants greater than \$200,000 are independently reviewed by an external reviewer in order that the internal assessment of criteria is supported by relevant industry experts.

Callaghan Innovation has a robust Conflicts of Interest policy and where any conflicts of interest are identified, additional information is required to be provided to explain how the conflict will be managed.

In administering and allocating RS&T grants, Callaghan Innovation no longer provides any contestable grant funding.

Enforcements of Acts (section 20(3) Crown Entities Act 2004)

Callaghan Innovation did not enter into any transaction that was invalid under section 19 of the Crown Entities Act 2004, and therefore was not required under section 20 of the Crown Entities Act to perform any such transaction.

A transaction would be invalid under section 19 if:

- Callaghan Innovation breached the Crown Entities Act by entering into it
- Callaghan Innovation was acting outside its authority under the Crown Entities Act by entering into it, or
- Callaghan Innovation did not enter into it for the purpose of performing its functions.

Employee remuneration

The table below shows the number of Callaghan Innovation employees who received remuneration and/or benefits (excluding redundancy and cessation payments) of \$100,000 or more for the financial year ended 30 June 2018.

Band	Number of Employees
\$470,000 - \$479,999	1
\$390,000 - \$399,999	1
\$380,000 - \$389,999	0
\$370,000 - \$379,999	0
\$360,000 - \$369,999	0
\$350,000 - \$359,000	0
\$340,000 - \$349,999	1
\$330,000 - \$339,999	0
\$320,000 - \$329,999	0
\$310,000 - \$319,999	0
\$300,000 - \$309,999	1
\$290,000 - \$299,999	1
\$280,000 - \$289,999	0
\$270,000 - \$279,999	0
\$260,000 - \$269,999	1
\$250,000 - \$259,999	0
\$240,000 - \$249,999	0
\$230,000 - \$239,999	1
\$220,000 - \$229,999	0
\$210,000 - \$219,999	2
\$200,000 - \$209,999	0
\$190,000 - \$199,999	5
\$180,000 - \$189,999	5
\$170,000 - \$179,999	4
\$160,000 - \$169,999	11
\$150,000 - \$159,999	10
\$140,000 - \$149,999	16
\$130,000 - \$139,999	17
\$120,000 - \$129,999	24
\$110,000 - \$119,999	34
\$100,000 - \$109,999	29

Board of Directors' remuneration**Callaghan Innovation
Board of Directors** **2017/18 (\$)**

Sue Suckling – Board Chair	58,000
Pete Hodgson – Board Chair	14,500
Robin Hapi	35,000
Al Monro	28,000
Alison Barrass	4,666
Frances Valintine	28,000
Simon Botherway	28,000
Kate McGrath	28,000
George Gong	23,333
Stefan Korn	23,333

**Grants Committee (Non-Board members)
remuneration****Callaghan Innovation
Non-Board Members** **2017/18 (\$)**

Peter Townsend	5,250
Dr Alastair MacCormick	6,000

**Rukuhia te wāhi ngaro,
hei maunga tātai whetū.**

Explore the unknown,
pursue excellence.

AUCKLAND / WELLINGTON / CHRISTCHURCH

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ISSN 2382-1523 (Printed) / ISSN 2382-1531 (Digital)

**Callaghan
Innovation**

New Zealand's
Innovation
Agency