CallaghanInnovation

STATEMENT OF INTENT

TO 30 JUNE 2016

Callaghan Innovation accelerates commercialisation of innovation by firms in New Zealand

Contents

Foreword

The Callaghan Innovation Board is pleased to present this Statement of Intent for Callaghan Innovation for the three years to 30 June 2016.

Callaghan Innovation is charged with:

- Unlocking the potential of New Zealand's High Value Manufacturing and Services (HVMS) sector and businesses through increased commercialisation of research, including science, engineering, technology and design (SETD) led innovation, and
- Achieving this in ways which strengthen the SETD system's potential and contribution to meeting businesses' current and future innovation needs.

Callaghan Innovation will do this through increasing the intensity, ambition, capability and benefits – including commercial returns – of engagement between business and SETD providers, and will be held to account for growing commercial outcomes which are directly attributable to leveraging science, technology, engineering and design based innovations.

Callaghan Innovation's performance will be critical to achieving the government's aims of doubling business expenditure on research and development as a percentage of GDP, and ultimately achieving a step change in the value add and export intensity of New Zealand's HVMS sector. Achieving these ambitious targets will require Callaghan Innovation to have the courage to champion change and challenge existing expectations, behaviours and operating paradigms between firms, SETD providers, government and others.

Callaghan Innovation is obligated to provide strategic direction and constructive alternatives for how best to structure, fund, govern, and hold to account how we work and collaborate together to achieve such a step-change.

Callaghan Innovation is a Crown agent established on 1 February 2013 (Callaghan Innovation Act 2012). Callaghan Innovation's creation is an exciting and important milestone for New Zealand's science and innovation system: it brings together in one organisation the means to grow more and larger successful innovative businesses.

Innovation is a critical driver of prosperous economies, but prosperity comes only when innovation is commercialised into successful products and services. New Zealand has no shortage of creative and inventive people but has historically been less effective than some OECD countries in converting that innovation into large, profitable businesses.

Over the next three years, the Board will focus on building an integrated and responsive organisation focused on the needs of current and future businesses, offering a range of new and innovative services and facilitating access to the talent and resources they need to grow and prosper faster than they would otherwise. Callaghan Innovation will be a learning organisation; trying a range of approaches, evaluating impact and making changes as necessary.

We will work closely with others, including New Zealand Trade and Enterprise and the New Zealand Venture Investment Fund, as well as with regional development agencies and the many providers of innovation services throughout New Zealand, to collaboratively drive a joined-up "New Zealand Inc." approach. We will work closely with Māori, recognising the scale and potential of the Māori economy and the growing value and diversity it contributes to our national wellbeing.

Callaghan Innovation's effectiveness and success will be measured by the profitable growth of high value manufacturing and services businesses in New Zealand and the subsequent impact on GDP per capita for the country. When Callaghan Innovation succeeds, all New Zealanders will benefit from a stronger economy, higher-value exports, more productive and sustainable resource use, more jobs and higher incomes.

The Board of Callaghan Innovation looks forward to the opportunity for the plan to be put in place.

This document has been prepared in accordance with the requirements of sections 141 and 142 of the Crown Entities Act 2004.

Sue Suckling
Chair

Richard Janes
Board member

CallaghanInnovation

What We Do

- We provide research and technical services to support near-to-market innovation by firms
- We support and coordinate national technology networks including partnering, collaborating and investing
- We assist firms to develop skills and expertise to successfully take ideas to market
- We award and administer R&D grants to firms
- We foster a culture of innovation and build excitement about business growth potential among current and future business leaders

1. Introduction

New Zealand continues to lag behind other advanced economies in economic performance and our per-capita income remains significantly lower than other advanced economies.

Extensive work has been undertaken in the past two years to identify the main roadblocks in this area and propose solutions, including the *Powering Innovation* report[1] and the *Building Innovation* and *Building Export Markets* progress reports, part of the government's *Business Growth Agenda*[2]. In November 2011, the government committed to establish Callaghan Innovation (Callaghan Innovation Act 2012) to step-change NZ's commercialisation performance.

There are many examples of innovative businesses in New Zealand that have successfully grown and entered global markets or raised their productivity through adoption of new technology. New Zealand also has world-class science, a relatively low cost of doing research and development (R&D), and a creative and inventive culture on its side. Our level of business expenditure on R&D (BERD) has been slowly growing as a percentage of GDP.

However, New Zealand continues to lag other OECD countries on measures of business investment in R&D and global filing of patents, indicators of how ideas are being translated into commercial outcomes. We need many more technology-rich innovative businesses able to operate successfully in local and global markets, with products and services that attract high margins through their use of leading-edge knowledge and clever technology.

Technologies such as 3-D printing, automation, digital applications, biotechnology and the growing power of the internet and social media, will continue to transform business models, distribution and value chains in the future. New Zealand needs to be part of this and earn its share of the opportunities it brings. It is not enough for us to just match other countries' progress – we need to do better.

The Government's *Business Growth Agenda* targets growth in manufacturing and services exports of 5% per annum – equivalent to 250 more high value manufacturing and services firms generating $100m each year from exports. The government has also set a target of lifting private sector R&D spending to 1% of GDP.

Callaghan Innovation has been created to help accelerate New Zealand's progress and identify and implement initiatives that drive innovation performance over and above what can already be achieved. This complements and adds to New Zealand Trade and Enterprise's (NZTE) focus on export-led growth and business internationalisation. Both organisations are central to delivery of the Government's *Business Growth Agenda*.

We have inherited our initial configuration of resources, staff and contractual arrangements from a number of sources. Over the next three years we will realign all components of our organisation to focus on our primary objective. The speed with which we can do this is contingent on some decisions yet to be taken in the broader environment within which we operate, in particular decisions on the implementation of the National Science Challenges, and the future framework for science funding more generally.

1 http://www.callaghaninnovation.govt.nz/sites/all/files/sites/all/files/pictures/Powering%20Innovation.pdf
2 http://www.mbie.govt.nz/what-we-do/business-growth-agenda

The plan outlined here balances the need for change to achieve our goals with the need to manage the risks associated with that change. We are in many respects breaking new ground, introducing new approaches to dealing with issues that have proved intractable to earlier policy initiatives. There is no single "right way" to support innovation by businesses, as highlighted by the wide range of instruments and agencies in innovation systems worldwide. This will require a level of experimentation and learning as we implement our plans and identify more clearly where the greatest demand and opportunities lie.

The main measure of success will be the rapid growth of many more HVMS businesses whose revenues result from innovative applications of science, engineering, technology and design. Such companies include not only those owned by New Zealanders and operating in both domestic and international markets, but also New Zealand-based subsidiaries of international companies. The revenue growth of these HVMS companies will contribute to New Zealand's ultimate goal of higher GDP per capita and 40% of GDP generated from exports, with HVMS revenues representing a growing share of those exports.

2. Vision for the future

Callaghan Innovation will have a wide-reaching impact on New Zealand's ability to convert innovation into high value products and services.

By the end of 2016 our programmes and actions will be transforming the speed with which New Zealand firms commercialise their ideas and inventions. Our vision is that the following Top Ten outcomes have been achieved three years from now:

1. New Zealand firms are engaging more intensively and productively with research and technical service providers. The innovation system's science, engineering and technology capability – spanning basic and applied research, and development – is better joined up and aligned with commercial needs and is more accessible to firms. Callaghan Innovation is a trusted broker to assist firms with scoping their technical needs and priorities, and connecting firms with prospective service providers and other solutions. There is a demonstrable increase in the speed and frequency with which ideas are being commercialised, and this translates into a significant increase in the economic contribution of high value manufacturing and service companies.
2. Callaghan Innovation is delivering a portfolio of Accelerator Services to firms throughout New Zealand. These services assist firms with identifying the issues constraining their growth, developing their growth strategies, linking them to the resources and talent they need, evaluating their eligibility for R&D grants and administering grants provided. New services continue to be developed, with the effective ones being expanded and the ineffective ones quickly identified and modified or discontinued.
3. The foundation for delivery of these services is a highly skilled team of Innovation Agents who work directly with firms to help them identify and access the Research and Technical Services and Accelerator Services they need to deliver winning products and services into global markets. Innovation Agents are knowledgeable about the capabilities of partner organisations such as NZTE and New Zealand Venture Investment Fund (NZVIF), and the full range of technical services and research available across New Zealand. They link firms to whichever institutions and resources

are most appropriate, inside or outside Callaghan Innovation. An advanced "Avatar" website, which utilises state of the art social media and database tools to link firms to the resources, tools and talent they need, is a key asset to support these activities.

4. A number of National Technology Networks have been established, with each Network comprising a collaborative mix of institutions, teams or individual researchers who together provide key capacity for fundamental and applied research in an important field of technology. Callaghan Innovation has in place a group of experienced Network Managers who provide coordinating and facilitating roles to National Technology Networks, but Network members have full autonomy over their individual programmes. The National Technology Networks provide a mechanism for engagement between the National Science Challenges and relevant research and business communities. National Technology Networks are providing the environment for the creation of new joint ventures and funding models – drawing on relevant overseas experience – and involving research institutions and firms, to generate and commercialise innovations. Numerous firms in multiple industry sectors rely on these National Technology Networks for the fundamental and applied research essential to remaining globally competitive in the medium to long term.

5. Callaghan Innovation has transformed its internal R&D capabilities to focus on more applied and technical services that directly help firms complete their product development or manufacturing processes for faster launch into global markets. Examples of Research and Technical Services include facilities for manufacturing prototype products, advice and training on product and process development methods, access to pilot plants to scale up production volumes (e.g. The FoodBowl), access to specialised equipment, and testing and failure analysis. Callaghan Innovation's facilities and experts are part of a well-defined nationwide set of product and process development facilities owned by Crown Research Institutes (CRIs), private industry, polytechnics and universities that are available on a fee-for-service basis for use by firms.

6. New Zealand's research capabilities have been strengthened by the transfer to appropriate universities or CRIs of some Callaghan Innovation research personnel and programmes that are primarily focused on more early-stage, fundamental research rather than near-to-market research and product development. Most of these basic research programmes are co-located with Callaghan Innovation Research and Technical Services and firms at the Gracefield innovation precinct or at other university or precinct sites. These stronger and better financed research teams are continuing to build New Zealand's global scientific reputation and provide the knowledge advances that are fundamental to innovation and commercialisation in the long term, and strengthen the learning experience for university students. Callaghan Innovation continues to have access and some influence over this research through the teams' participation in the National Technology Networks (and potentially the National Science Challenges), responding to opportunities identified by our Innovation Agents to provide solutions for firms, and in some cases through formal partnerships or joint venture arrangements with the receiving university or CRI.

7. Our Gracefield campus has been revitalised as an innovation precinct for the high value manufacturing sector. With Callaghan Innovation as the on-site manager the campus is home to a vibrant mix of firms, university research teams, CRIs and Callaghan Innovation's Accelerator and Research and Technical Services staff. A longer term plan for private and public development of this precinct, aligned with the needs of HVMS firms, the development goals of the Wellington region, and the intentions of other innovation precincts around the country, has been completed

and endorsed by stakeholders. Callaghan Innovation also has staff and facilities co-located within other innovation precincts around New Zealand, including in Auckland and Christchurch. These sites provide fertile ground for interaction between firms, providers of SETD services and universities.

8. Māori-owned businesses are well represented among the firms with whom Innovation Agents are working. All Callaghan Innovation's services, both Technical and Accelerator, have taken into account the needs of the Māori economy. Māori innovations and ideas have directly influenced and expanded the country's total innovation environment.

9. Other countries are starting to notice the New Zealand model of accelerating commercialisation and Callaghan Innovation is increasingly well connected with the Europe Enterprise Network and has affiliations with innovation initiatives and institutions in Australia, Asia and the United States.

10. These results have been achieved not through the actions of Callaghan Innovation alone, but through partnerships across all New Zealand's stakeholder organisations. In particular Callaghan Innovation has partnered closely with NZTE, the Ministry of Business, Innovation and Employment (MBIE), the Ministry of Foreign Affairs and Trade (MFAT), universities, polytechnics, CRIs, commercialisation partners including KiwiNet, the venture capital community including NZVIF, economic development agencies, industry associations and many hundreds of businesses to achieve a shared vision of national commercialisation and economic success.

3. Our mission, operating environment and objectives

Mission: To accelerate the commercialisation of innovation by firms in New Zealand

Callaghan Innovation's mission is to accelerate the commercialisation of innovation by firms in New Zealand. We are therefore focused on the needs of businesses, and on delivering services and resources which help them be more competitive and/or launch their own new products and services faster, thereby growing more quickly than they would otherwise.

We measure our effectiveness and success by the profitable growth of HVMS firms in New Zealand that have benefited from our products and services and the subsequent impact on GDP per capita for the country.

Three important characteristics of the New Zealand business environment, compared to other OECD countries, are that:

- The country's economy continues to be dominated by primary industries in agriculture, food production, timber and fisheries, which make up 58% of national annual exports
- Most New Zealand HVMS companies are very small by international standards (less than $5m in revenues) and we have very few large global HVMS companies (above $500m in revenues)

- New Zealand firms' investment in R&D is well below the OECD average with our medium and large firms investing less by proportion than their OECD counterparts, while SMEs (fewer than 50 employees) invest more by proportion. This is partly a consequence of the dominance of primary industries such as agriculture, fisheries and forestry in New Zealand's economy. These industries are less R&D intensive than the automotive, pharmaceutical, semiconductor, defence and computer hardware industries which are more prevalent in other OECD nations and increasingly underpin their higher productivity and incomes per capita.

Relative to other OECD countries, these characteristics are holding back New Zealand's economic growth rate in the high-value, highly-productive industry sectors, which are critical for long term prosperity and quality of life. Therefore the primary roles for Callaghan Innovation are to:

- **Motivate** more people to innovate and commercialise their ideas by creating new HVMS companies and inspire existing business owners and leaders to build bigger companies
- **Connect** those businesses with the resources and skills they need to accelerate their growth, including access to capital, markets, talent and technology
- **Deliver** research and technical services that directly assist companies with the speed and success rate of innovation, supporting the design, production and launch of their new HVMS products and services into global markets and/or innovating their production processes to increase competitiveness.

Callaghan Innovation has developed initial strategies to perform each of these three roles and will continue to add to and improve these strategies over time. To be successful Callaghan Innovation will need to establish itself as a well-informed "honest broker" in the eyes of both firms and SETD providers nationwide.

Our guiding principles

We will operate according to the following key principles:

- Be firm-focused and firm-driven
- Prioritise firms that demonstrate commitment to and potential for growth
- Invest in services that meet business needs, shown by firms' willingness to co-invest or pay for these services
- Try out new ideas quickly
- Do more of what works and "call failure fast" on what doesn't work
- Take a national perspective
- Engage fully with the Māori economy and aspirations
- Collaborate with and support partner organisations
- Provide new services while minimising competition with existing service providers
- Be transparent and responsive to all stakeholders.

What we do

Our primary focus in the New Zealand innovation system is to:

- Provide research and technical services to support near-to-market innovation by firms
- Support and coordinate national technology networks including partnering, collaborating and investing
- Assist firms to develop skills and expertise to successfully take ideas to market
- Award and administer R&D grants to firms
- Foster a culture of innovation and build excitement about business growth potential among current and future business leaders

KEY FEATURES OF OUR OPERATIONAL FRAMEWORK

- Callaghan Innovation is a Crown Agent established on 1 February 2013 under the Callaghan Innovation Act 2012.
- Our statutory objective is to support science and technology-based innovation and its commercialisation by businesses, primarily in the manufacturing and services sectors, in order to improve their growth and competitiveness. The Act sets out a range of functions for the entity to achieve this goal.
- Callaghan Innovation is governed and informed by a Board composed of individuals with a broad range of experience in business, science and innovation, and governance, responsible to the Minister of Science and Innovation. The Act provides for the Responsible Minister to appoint a stakeholder advisory group to support Callaghan Innovation's work.
- The Ministry of Business, Innovation and Employment is our monitoring agency and the Chief Executive or their delegate attends Board meetings to ensure alignment of Callaghan Innovation's strategic priorities with government policy.
- Callaghan Innovation is Crown-funded through five output classes, reflecting the scale and diversity of our public good activities. Callaghan Innovation also receives commercial revenue from the private sector.
- Callaghan Innovation will no longer participate in the government's contestable funding process after the current round. Our role in future Crown science funding processes will be guided by alignment with our mission, and will be determined as those processes evolve.

Working with the high-value manufacturing and services sector

A number of manufacturing and services subsectors embody or make use of advanced technology, either directly or indirectly through production and distribution processes. Our customer base therefore includes businesses that are "high-value", as they produce specialised knowledge-intensive products and services that command premiums in markets, and also firms in sectors that have scale and represent significant opportunities for productivity gains through the application of new technologies in New Zealand – such as Food and Beverage.

HVMS defined in this way already produces approximately 29% ($37.5 billion) of New Zealand's total value added and employs around 16% of workers. These businesses have higher labour productivity, spend more on R&D and product development, are more likely to have introduced "new to market" products and have higher export intensity than other businesses.

Entrepreneurs in emerging export sectors (e.g. IT services, specialised manufacturing, processed foods) are developing the skills and acquiring the experience needed to succeed internationally. A number of entrepreneurs are on their second or third business, recycling both capital and skills. In addition, the supporting network of service providers is also developing in sophistication and knowledge of the emerging export sectors.

However, to reach the Government's targets requires faster growth across all these attributes, particularly given the continuing challenging economic conditions. Lifting business expenditure on R&D to 1% of GDP means nearly doubling the current spend, requiring a broad-based approach so that more firms undertake R&D as well as existing investors increasing their R&D intensity. Lifting the ratio of exports to GDP to 40% requires a significant lift in export performance from manufacturing and services firms, to 5% per annum – equivalent to 250 more knowledge-intensive manufacturing and services businesses generating $100m each year from exports.

We will work with a broad range of businesses, from start-ups and SMEs with potential to innovate through to innovating business with the potential to grow faster. We will work in a number of ways – directly with individual firms, through to sponsoring broad collaborative projects with multiple business and research partners.

Some of our target businesses will be existing customers of NZTE and other agencies, and we will work closely together to leverage their knowledge, business relationships and programmes to accelerate success for those customers and avoid duplication between the agencies. In other cases, we will be working to create and grow the next generation of innovative businesses with the skills and aspirations to prosper in global markets, and will connect them to the services of NZTE and others as appropriate to support this.

MOTIVATING an Innovation Culture

The role of motivating the commercialisation of innovation implies potentially changing human behaviour and deeply held cultural values. However, Callaghan Innovation believes it can effectively motivate more interest in commercialising ideas by targeting two population segments with specific initiatives:

- **Today's Innovators:** Entrepreneurs, business owners and leaders who are receptive to creating or growing big HVMS businesses. The message to this segment is "Better by Big" – business growth is good and personally rewarding for you and your employees, and it is well within your grasp. New entrepreneurs will be encouraged to "Go for Growth" from the earliest days of launching their businesses.

- **Tomorrow's Innovators:** Young people at the primary, secondary or tertiary education levels who are still developing their interests, discovering their talents, and making life and career choices. The message to this segment is that many exciting and interesting career choices, and doing cool things, are in store for kids who study science, engineering, design, and business.

Callaghan Innovation will cultivate engagement with, and enthusiasm for, innovation, challenge people to take risks and grow ambition. The table below lists the initial programmes that are being introduced to inspire an innovation and commercialisation mind-set in these two segments of New Zealand's population.

Segment	Motivate an Innovation Culture Programmes
Today's Innovators – Entrepreneurs, business owners & leaders	**Innovation Events & Forums** – thought provoking information about innovation **Innovation Information** – access to stories, tips, trends and tools from New Zealand and offshore to motivate and inspire **Trade Missions, Tours and Site Visits** – opportunities to see new technologies and best practice in action in New Zealand and offshore **Academic Interface Programme** – this programme implements the Prime Minister's Chief Science Advisor's idea of organising a pool of volunteer academics and researchers to meet one-on-one with entrepreneurs for informal discussions and brainstorming. The programme addresses the fact that many firms have limited knowledge of what R&D is all about and how R&D professionals can add innovation value **Collaboration with NZTE, NZVIF and NZX** – a joint effort to motivate growth aspirations and capabilities among willing entrepreneurs **Engagement with the Media** – to promote stories on successful entrepreneurs and create the HVMS equivalents of Country Calendar
Tomorrow's Innovators	**Futureintech** – tools, insights and advice about the exciting career opportunities in technology, engineering and science **Internship Marketplace** – opportunities to work with firms, apply existing training and learn new skills **Sponsorship** – sponsorship of existing and new programmes to inspire innovation such as Young Enterprise or an annual "Take Your Child to Work" Day

We will work closely with the Education sector, at the primary through tertiary levels, to explore how a passion for SETD and entrepreneurship can be intensified among young New Zealanders who are still in the education system and represent the entrepreneurs of tomorrow.

We will work with our significant government and business partners on unified messages and strategies to motivate growth. Our shared effort will focus on that subset of business owners and leaders who are willing to pursue growth but may not have the necessary capabilities or aspirations in place yet.

Callaghan Innovation will also work with the media and encourage it to highlight successful entrepreneurs and the rewards of business growth in magazines, radio and television.

CONNECTING Firms to Resources and Support

For a relatively compact country with a small population New Zealand's innovation system is surprisingly fragmented. It has diverse and often excellent skills and expertise spread across multiple organisations and locations, making it hard for businesses to identify sources of help for their commercialisation problems. Callaghan Innovation is designing and implementing a portfolio of tools and programmes under the umbrella of Accelerator Services, which will more efficiently help firms identify and address weaknesses or gaps in their business skills.

Accelerator Services

The driving force in delivering our Accelerator Services will be our newly created Innovation Agent positions, each of whom will work with multiple individual firms to assess their commercialisation capability and help them access the help they need to accelerate bringing innovations to market. The Innovation Agents will be supported by expert teams specialising in:

- **Access to Technology** – a team of experienced technically trained professionals who can understand and assess a firm's underlying technology, identify the SETD expertise a firm may need and, through the Innovation Agent, connect the firm to the appropriate resource. A number of firms have expressed the difficulty they face in finding someone within the New Zealand system, or overseas, with the right knowledge and the time to help them. *Global Expert* is a programme that connects firms to technical experts nationally and internationally.

  Over time this team will build a comprehensive readily-accessed database of experts, many of whom will be part of the National Technology Networks described in a later section. In some cases the required expertise will be sourced from Callaghan Innovation's own Research and Technical Services teams and in some cases they will be sourced from overseas.

- **Access to Training** – "Better By" training courses are developed and offered in conjunction with NZTE. NZTE's Better by Design and Better by Lean (transferred to Callaghan Innovation from 1 July 2013) programmes are already available, with NZTE currently rolling out Better by Capital. Subject to market testing, we are looking to introduce *Better By IP* in 2014 and *Better by Market Creation* in 2015 alongside NZTE's programmes.

  Accelerator Services also provides access to information about a range of skill development programmes available nationally and internationally. Self-assessment tools will be made available on-line to allow firms to evaluate their innovation readiness and identify the training available to take their internal capabilities to the next level.

- **Access to Talent** – many firms report a lack of skilled employees in New Zealand as their single biggest growth constraint. The Talent Team will provide links to recruiting capabilities throughout New Zealand and work with the Education sector

to help translate firms' requirements into curricula design choices made by schools, polytechnics and universities. Through this team Callaghan Innovation will also provide services that link interns to HVMS firms or facilitate joint appointments between firms and providers of SETD services.

The Talent Team will build a network of experienced entrepreneurs and investors who may be willing to mentor a business owner or act as an interim executive or director, where there is no conflict of interest. This "Freelance Army" will tap the wealth of expertise among successful returned expatriates and foreigners who spend time in New Zealand and wish to stay active in the business world on a part-time basis.

- **Access to Capital** – this team will have deep understanding of the various sources of capital available to businesses and will be able to link an entrepreneur to those sources. They will also help firms polish their skills at making pitches to investors, working with NZTE and its *Better By Capital* initiative. This team will coordinate its programmes with the initiatives of NZVIF and other providers of capital including banks, venture capital firms, private equity firms, and angel investor groups.
- **Access to Markets** – Accelerator Services will include a small team who are closely aligned with NZTE, to ensure HVMS firms can access the knowledge they need about potential markets and competition for their products and services. As we work with more firms and different industries we will identify the kinds of marketing assistance firms need and locate resources that can help them.

"Avatar" project

An especially important and fundamental new initiative for Callaghan Innovation is the project "Avatar", in which state-of-the-art social media and cloud-based search techniques will be used to build an on-line site for access to many of the Accelerator Services listed above, and the Research and Technical Services and National Technology Networks described in a later section.

Avatar will enable a dynamic virtual community of firms and service providers to connect with each other and share information and ideas. Individuals will be able to post résumés and seek jobs or internships. Firms will be able to identify the expertise they need, including finding up to date information on who is doing what and where, the quality of their work using a "trip advisor" type function, what training is available , and how to make direct contact in regard to this information(including internationally).

Avatar will require a high level of IT innovation and expertise and will be developed in phases. It will be managed in line with best practice guidelines set out in the Governance and *Oversight of Large Information Technology Projects* by the Office of the Auditor General in 2000.

Opportunity driven projects ("Big Projects")

These projects will target the needs of very large customers, including government procurers, through collaboration between New Zealand businesses and SETD providers to deliver attractive new technology-based commercialisation opportunities. These may be based for example around emerging global technologies, local opportunities or resource utilisation.

Callaghan Innovation will build, support or adopt strategic consortia of New Zealand firms to pursue these opportunity-driven, mission-focused "Big Projects". The consortia will be based around product and development value-chains, and will enable collaboration between New Zealand firms (supported by appropriate SETD input) to address market opportunities of scale.

Callaghan Innovation's roles will include discovering and validating opportunities, assessing the potential for domestic capability to provide a compelling solution, bringing together the right consortium of domestic and international capabilities, coordination and project management, and helping realise wider commercialisation and export opportunities for New Zealand. This is expected to be an increasingly significant area of work, linking closely with Innovation Agents to identify firms and capabilities to be involved and highlight potential opportunities.

Grants Services

Callaghan Innovation will continue to administer the government's Business R&D Grants, through the new investment categories and increased funding announced in Budget 2013:

- **Growth Grants:** significant grants of up to $5m per year to support a programme of R&D activity for three years (alongside 80% investment from business)
- **Project Grants:** project-focussed grants, aimed more at businesses early in their R&D investment activity, or to support collaborative projects (alongside 50–70% investment from the business)
- **Student Grants:** to support undergraduate and graduate students to work in a commercial R&D environment.

DELIVERING Research and Technical Services

This third role of Callaghan Innovation requires a deep understanding of the needs of firms, both revealed and emerging; an appreciation of the SETD expertise in Callaghan Innovation and other organisations such as universities and CRIs; and insight into the different forms of funding that sustain the country's R&D capabilities.

Research and Technical Services

In keeping with its principles of collaboration and national perspective, Callaghan Innovation will focus its internal research and SETD activities on those that directly impact the ability of a firm to bring a product from idea to launch in the fastest possible time and/or improve its manufacturing processes to ensure its products are at competitive prices and optimum performance. This means Callaghan Innovation will develop world class research and expertise to support near market innovation in fields such as:

- **Research and expertise supporting product development processes and procedures.** Callaghan Innovation will build over time a team of experts who can assist firms with planning and executing the series of steps required for successful product development. Project management expertise is part of this.
- **Customised research and product development assistance** to solve specific process or product related problems for firms. Callaghan Innovation's SETD experts will directly help firms solve their toughest problems.
- **A "one-stop-shop" source of expertise about the standards, regulations and compliance issues** required for products in foreign markets. This service will avoid each company having to figure this out for themselves, or, through ignorance, making costly mistakes in product design, documentation or packaging. Because of the wide range of regulations and regulatory environments it is likely Callaghan Innovation will initially specialise in certain product categories and identify third parties with expertise in others.

- **Machine shop and workshop facilities** that firms need to create prototype products or evaluate manufacturing equipment. This will include additive manufacturing equipment and expertise.
- **Testing and failure analysis services** through which firms can quickly understand what is causing performance problems with a product or component. Callaghan Innovation will make available testing equipment and expertise that individual firms could not afford and would only occasionally use.
- **Pilot plant research capability and facilities** to assist a firm in scaling up its manufacturing from prototype to production quantities. The GlycoSyn, superfluid extraction and FoodBowl facilities are three existing examples of this service but more pilot capability may be added, driven by what firms in different industries need. There is no expectation that these pilot plant facilities will generate a profit, or break even, in their own right. Their success will be measured by the successful commercialisation ramp-up of the firms that use the pilot plants.
- **Open Lab services and research expertise** through shared use of physical locations with fit-for-purpose accommodation and access for short-term stays by businesses wanting direct access to technical specialists, equipment, services and advice that are world-class, professional and business friendly. In addition to offering our own open lab facilities, Callaghan Innovation will link firms to the facilities available at other institutions including through its Avatar and its Innovation Agents.

Implications of new focus

Callaghan Innovation Research Limited, Callaghan Innovation's subsidiary formed from Industrial Research Limited (IRL), currently has a mix of both product development and more fundamental science and research programmes, which are not fully aligned to the new Callaghan Innovation focus. Teams whose research is primarily fundamental and early stage, may be a better fit with research-focused universities or CRIs. Over the first six months of the 2013/14 year we will be engaging in a process with our research teams and with universities and CRIs to finalise which teams will transfer from Callaghan Innovation creating the best fit for the longer term, and ensuring a smooth transition.

While these research teams are better located in universities or CRIs – so that they can continue to participate in contestable funding rounds and be a part of wider longer term research programmes and cultures – their underlying capability and pipeline of new discoveries will remain important to Callaghan Innovation. Research is critical to a sustainable innovation system and Callaghan Innovation will require access to research capabilities across all research organisations.

Callaghan Innovation will continue to engage with and support the capability and discoveries of relocated research teams through:

- These teams being members of the National Technology Networks which Callaghan Innovation will establish and lead. The opportunities for coordination and alignment between Callaghan Innovation – with our focus on providing more applied research and technical services – and these research teams has the potential to be further strengthened through the design of, and involvement in, the National Science Challenges
- Helping firms access the most appropriate SETD services across the innovation system; our Innovation Agents will identify opportunities for these research teams to contribute to solutions for firms

- Joint venture arrangements around these teams agreed with the receiving university or CRI where it is deemed necessary to ensure continuing access and alignment

In addition, Callaghan Innovation will retain teams where research directly supports our more technical services – for example, glycotherapeutics research which will support the Glycosyn pilot plant services.

The new focus also has implications for Callaghan Innovation's future involvement in government science funding processes. In particular, Callaghan Innovation will not pursue contestable funding in the future, since that funding is primarily intended for scientific research. Callaghan Innovation's services will be sustained by funding from the government, and commercial revenues (including services provided to other research organisations). This approach also addresses the long-standing concern about direct competition between Callaghan Innovation and research organisations, which may otherwise undermine the success of the honest-broker role.

It is also Callaghan Innovation's intent to no longer create, own or manage for-profit businesses other than those entities that deliver our Research and Technical Services. This will mean rationalising the current ownership of joint ventures and companies to simplify and focus our structure on achieving our new objectives. This process is already underway. We will also rationalise property locations to reflect on-going Research and Technical Services requirements, moving product and service delivery closer to business customers and opportunities in innovation precincts.

Gracefield Innovation Precinct

The Board proposes to develop the Gracefield site into an innovation precinct housing Callaghan Innovation's Research and Technical Services specialists, HVMS firms (14 of which already have tenancies on the campus), and research teams from universities and/or Crown Research Institutes (including our own transferred teams, where appropriate). Some transferred staff are expected to hold joint appointments between Callaghan Innovation and their new employer.

Callaghan Innovation will run the precinct, where organisations will share facilities such as the cafeteria, machine shops and meeting rooms, creating "water cooler" exchanges of ideas between the different entities on the campus. In addition to the firms currently located at Gracefield, Callaghan Innovation will also seek out one to three well-regarded successful high value firms who may be willing to relocate parts of their business to Gracefield as anchor tenants for the site. Such firms would act as valuable motivators to the earlier stage companies in the precinct, providing a daily reminder of what is possible.

The innovation precinct will enable firms to collaborate and build scale with each other and SETD providers, both nationally and internationally, to improve knowledge and skills, deploy technology and develop a cohort of growth-oriented firms. It will build a critical mass of HVMS businesses and science, engineering, technology and design providers focussed on taking full advantage of domestic and international opportunities including integration into global supply chains and opportunities arising out of Asia. It will bring together industry, Callaghan Innovation's Research and Technical Services capability, research organisations such as CRIs and universities, firms and government.

This innovation precinct concept allows for co-location and collaboration between Callaghan Innovation's retained and expanded firm-focused product development teams and the more science and research focused efforts of the participating universities and CRIs. It lets Callaghan Innovation focus on its firm-driven Research and Technical Services, preserve the teams and the value of their research skills and knowledge for New Zealand, and avoid extensive relocation.

Realising an innovation precinct at Gracefield will require substantial investment in the buildings and facilities on the campus, and a dedicated business case for the site will need to be completed and approved for the development to be undertaken. However, the precinct proposal fits well with local economic development plans, which recognise the potential of the Seaview/Gracefield area to significantly increase its role as a major industrial, commercial and advanced manufacturing hub for the Wellington region and for New Zealand.

Over the next 9–12 months Callaghan Innovation will work with MBIE, The Treasury, local government, developers, businesses, iwi and the community to develop the detailed business case for the innovation precinct.

Incubators and "Open Labs"

Callaghan Innovation's focus on providing world class capability in product development, and in particular, its "Open Labs" initiative, has synergies with the Incubator Support Programme currently managed by NZTE. The incubator services are targeted at entrepreneurs, and start-up ventures with high growth, export potential.

Strong linkages between the "Open Labs' and incubators will accelerate the creation of new HVMS businesses by ensuring entrepreneurs are able to easily access technical specialists, equipment and services within a disciplined new product development process. This customised product development assistance will help entrepreneurs with prototyping of products, testing and failure analysis, and ensure products are manufacture-ready.

Callaghan Innovation will work with NZTE and MBIE to determine how best to build links between the Incubator Support Programme and "Open Labs" so as to maximise the benefits of these services for the HVMS sector.

National Technology Networks

Another major initiative by Callaghan Innovation is the formation and development of proposed National Technology Networks. The table below shows a preliminary list of industries (columns) and possible technology networks that could support these sectors (rows), focussed on high-value manufacturing and services. Callaghan Innovation will explore this concept further by engaging with SETD providers and firms to validate the definitions of the Networks and identify those that are most critical to support industry groups, as well as the main organisations that need to be part of them. In addition, we will incorporate learning from other successful international initiatives such as Fraunhofer-Gesellschaft in Germany.

These Networks will evolve over time and will operate as a mechanism to harness and provide access to SETD capability across the system, taking a "NZ Inc." approach and reducing fragmentation. Many of New Zealand's CRIs, universities and corporations have product development equipment and staff. Callaghan Innovation will have line of sight to the full range of product development services across New Zealand and Innovation Agents will connect firms to these. The Networks will support both the broad scope of technical needs in manufacturing and services firms, as well as supporting firms' access to deep specialist expertise. They will carry out planned projects with research and industry partners, and act as a hub for collaboration and connectivity across local and international networks.

Callaghan Innovation will have roles in:

- Operating as a broker and facilitator to initiate and maintain the connections required to make the Networks effective system-wide mechanisms that meet business needs
- Providing its own resources into these Networks and using its product development support and technology transfer skills to connect industry needs with national science expertise.

Assuming there is consensus about the value of promoting and investing in National Technology Networks, and appropriate proposals presented, the Board will support Callaghan Innovation appointing research and technically-literate Network Managers to identify the nationwide components of Networks, identify any gaps, link to any offshore institutions related to a Network, and generally promote and support the network of teams within them. These Networks could become a framework for a national science and innovation strategy which can help define a more strategic approach to funding rather than making one-off decisions on individual proposals.

The Network Managers will initially focus on gaining a deep understanding of the science and research skills and projects underway in each area across New Zealand, and build relationships with the relevant research institutions to ensure this information remains current. We will use this information and work closely with research organisations, such as Science New Zealand, universities, polytechnics and CRIs, to define and select Networks that will meet New Zealand businesses' innovation priorities. The information will also be used to populate the Avatar and inform Accelerator Services, to assist firms to connect to the relevant research and technical services.

The next step will be to build greater connection and community amongst the research institutions which are members of each Network, and the industry organisations and firms for which the network is relevant. We anticipate the Networks will provide an efficient mechanism for engagement with the National Science Challenges. Ultimately the Networks will provide the environment for the member research institutions and client firms to explore new organisational structures – such as formal joint ventures – and co-funding models. These will provide improved alignment and stronger pipelines of commercially relevant discoveries spanning both research and technical solutions.

We will look to overseas experience with network-like structures, such as those operated by Germany's Fraunhofer Institutes and the Danish Innovation Networks, to inform the development of the Networks in New Zealand. Like New Zealand, these countries have also seen the opportunity to better connect up the research and technology skills distributed across their regions in order to help firms access expertise needed for innovation. However, we need to be mindful of the particular structure of our HVMS sector – notably the absence of a large number of firms of global scale which can act as foundation and funding partners – and how this might impact the design, funding and evolution of fit-for-purpose Networks in New Zealand.

National Technology Networks – initial thinking

	INDUSTRIES (example products)	FOOD & BEVERAGE Nutraceuticals Innovative foods & beverages	HEALTH Medical devices, pharmaceuticals, animal health, genetics & breeding	SPECIALISED MANUFACTURING Ag equipment, automation, controls, processing equipment, marine	ICT & SERVICES Audio, wireless & navigation, digital entertainment, telecommunications	CONSTRUCTION Wood products, construction methods, specialty materials, sensing devices	OTHER*	Indicative partners involved (see key)
National Technology Networks	**Applied chemistry & biotechnology**	✓	✓					AUT, CI, LU, Malaghan, MU, NZFIN/FoodBowl, PFR, Riddet, Scion, UA, UC, UO, VUW
	Advanced materials		✓	✓		✓		AUT, BRANZ, CI, MacDiarmid, TiDA, UA, UC, UW, VUW
	Robotics & automation		✓	✓				AgR, AUT, CI, LA, MU, UA, UC
	Imaging & sensing		✓	✓	✓	✓		CI, GNS, LA, DTA, PFR, UA, VUW
	Photonics		✓	✓	✓			CI, UA, UO
	Digital technologies & software		✓	✓	✓	✓		AUT, CI, DTA, LU, LA, MU, UA, UC, UO, UW, VUW
	Data processing & modelling		✓	✓	✓			AUT, GNS, MU, UA, UC, UW, VUW
Other*								

* Other sectors and technology networks refer both to those existing but not yet identified, and to those newly emerging and future sectors and networks. Both of these will become clearer and be incorporated over time; equally, some existing networks and sectors may be of lower priority in the future.

KEY: AgR-AgResearch, AUT-Auckland University of Technology, BRANZ-Building Research Association of New Zealand, CI-Callaghan Innovation , DTA-Defence Technology Agency, HERA-Heavy Engineering Research Association, LA-Lincoln Agritech, UO-University of Otago, LR-Landcare Research, LU-Lincoln University, MU-Massey University, NZFIN-New Zealand Food Innovation Network, PFR-Plant and Food Research, TiDA-Titianium Industry Development Association, UA-University of Auckland, UC-University of Canterbury, UW-University of Waikato, VUW-Victoria University

National Science Challenges

Callaghan Innovation will work with MBIE and take a proactive role in positioning and delivering National Science Challenges. The Challenges, especially *Science for Technological Innovation*, have significant potential to further the commercialisation of innovation across many industry sectors. Maintaining a clear line of sight to the needs of firms and the realities of global competition will ensure the Challenges achieve their potential to drive not just science, but the transfer of science to commercially viable products.

Callaghan Innovation will align its Research and Technical Services and the National Technology Networks in support of the National Science Challenge objectives.

4. Partnerships are key to our success

The mission of Callaghan Innovation cannot be achieved without active engagement by many institutions and individuals, both government and private sector.

New Zealand Trade and Enterprise as a key partner

NZTE and Callaghan Innovation have complementary roles, each making a distinctive contribution to supporting firms to innovate, grow and succeed internationally. The combined offerings of NZTE and Callaghan Innovation work together to support firms' R&D activities, improve operations and productivity, develop talent, access capital, develop effective growth strategies, create and access markets, and connect with global opportunities.

Callaghan Innovation and NZTE are already working together to align our product and service offerings across the key areas of access to technology, training talent, capital and markets. Callaghan Innovation will frequently refer firms to NZTE services and training programmes. The transfer of the MBIE-funded incubator programme from NZTE to Callaghan Innovation is also under discussion.

The two agencies will share client segmentation and engagement processes and systems as much as possible to provide clients with a consistent experience and to support the "No Wrong Door" principle. In addition, Callaghan Innovation and NZTE will share staff training programmes so that staff understand the role of each organisation, the service offerings, and how to leverage their respective capabilities.

Other domestic and international partnerships

The following organisations are also particularly important partners for Callaghan Innovation.

Domestic partnerships

- Universities, their commercialisation units, polytechnics, Industry Research Organisations, CRIs and private research organisations will be the backbone of the National Technology Networks, which form the collective national SETD capability in each field, and which must be readily accessible by firms.
- KiwiNet and other commercialisation partners will be important and will link with Callaghan Innovation to provide investment panel services to evaluate start-up innovations for firms.

- Organisations that provide capital are important partners for Callaghan Innovation since access to capital will frequently be essential for firms to invest in SETD and fund their growth.
- Policies and programmes established by government through MBIE and MFAT, and initiatives of the Prime Minister's Chief Science Advisor provide another driving force in accelerating commercialisation.
- Working closely with the tertiary education providers on curricula and career pathways, including innovative internships, will be critical to ensure technical graduates meet the current and future needs of firms in New Zealand.
- Constructive engagement with the media is an important means by which Callaghan Innovation can keep the importance of HVMS business growth in the public eye, and spread the word of success stories that encourage venture capital investment and inspire entrepreneurs to pursue growth strategies.

International Partnerships

- Callaghan Innovation will be a point of contact into New Zealand firms for European Union networks, regulatory advice and funding mechanisms.
- Callaghan Innovation will seek out similar R&D networks in Asia and the USA to further expand the access of New Zealand firms to global resources and opportunities.
- Callaghan Innovation will form strategic partnerships with successful international institutes such as the Fraunhofer-Gesellschaft in Germany, both to support business access to global services and also to adapt learnings from initiatives that have fostered commercialisation success.
- An active relationship with the Kiwi Expatriate Association is a means by which Callaghan Innovation can connect firms to the resources and networks of New Zealanders living abroad.

Māori economy

Māori economic development and the growth of the New Zealand economy are closely linked. Callaghan Innovation will ensure that it is actively supporting and addressing the needs of Māori business to grow and be competitive in the global market. The key Pou or pillars of Callaghan Innovation's strategy for the Māori Economy are Leadership, Strategic Partnerships, and continual Māori Business Outcome Monitoring (review). The Callaghan Innovation Board will be supported by a Māori Advisory Group that will be tasked with guiding and supporting the Board's Māori Innovation initiatives. A General Manager, Māori Economy, will report directly to the CEO and drive Māori engagement across all Callaghan Innovation programmes and services.

Callaghan Innovation will work closely with the Māori Business Strategy Leaders in NZTE, MBIE and Te Puni Kōkiri to promote a "one plan" approach for Māori Businesses and Government. This approach is consistent with the contribution that these combined organisations are making to the transformational actions in *He kai kei aku ringa* – a blueprint for Māori economic development through to 2040. Visits to Māori organisations and marae, sponsorships of training for Māori leaders such as the Stanford University bootcamp, and periodic hui to assess progress and brainstorm new ideas will be on-going elements of the Callaghan Innovation approach.

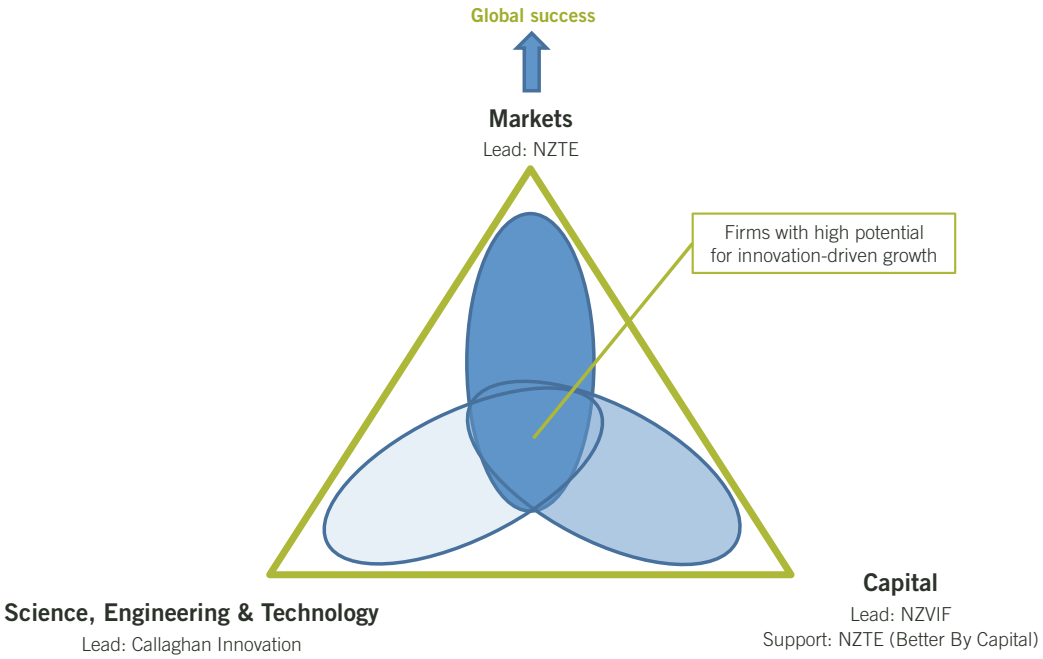
"NZ Inc" approach to marketing services

Callaghan Innovation will work with firms of all sizes in need of commercialisation help, recognising the wide variation in needs across firms of different size, industry and innovation maturity, and focusing on where Callaghan Innovation can have an impact.

To be effective Callaghan Innovation will need to get the word out to its wide range of potential customers to grow demand for its services. Callaghan Innovation will work closely with other government partners to ensure a joined-up "NZ Inc." approach to this marketing.

NZTE has segmented firms in New Zealand and identified around 500 firms that have potential for international growth. NZVIF also has expertise and knowledge of the venture capital and angel investment communities. There are sets of firms working within incubators or at the commercialisation units of universities, all of which can benefit from using Callaghan Innovation's services. The set of firms that have already received grants from Callaghan Innovation represent another target group.

Callaghan Innovation will partner with NZTE, informed by NZVIF's knowledge of the capital investment community, to identify firms that are demonstrating strong aspirations for growth. Our focus will be on the firms most willing to take advantage of Callaghan Innovation's services. The "sweet spot" will be firms that are already seeking market access help from NZTE and help in raising capital. Where these firms also need access to technology and technical services there is a powerful opportunity to bring together the skills and knowledge of several government entities in supporting a firm's growth.



A priority group for intensive engagement by Callaghan Innovation are businesses within the Māori economy with innovation potential. Increasing Māori business R&D intensity and supporting these businesses to more effectively commercialise is critical to achieving better outcomes both for Māori and for New Zealand.

Once priority firms are identified, Callaghan Innovation will work to connect them to the full range of available resources, expertise and grants. Other marketing approaches will be used to reach a broader cross-section of firms, including web-based approaches, publicity at events, etc.

Whenever a marketing initiative is tried but fails to get much response it will quickly be discontinued, consistent with our "call failure fast" principle. It will be important to analyse why a particular approach did not work so that the learning can be applied to alternative strategies.

5. Managing organisational health and capability

Callaghan Innovation is a national employer with around 400 employees spread across multiple sites in Auckland, Wellington and Christchurch.

The majority of employees came to us from IRL, a former CRI, and the Business R&D grants group previously in MBIE.

Over the second half of 2013, Callaghan Innovation will be consulting on, reorganising and recruiting into a new organisational structure that reflects the product and services offerings of the new organisation. This is a critical change management process for the organisation that requires attention to maintaining existing services, and business confidence in them, while rolling out new services. Callaghan Innovation requires new skills and capabilities and needs to grow a strong and integrated business-focused, responsive culture throughout the new organisation. This will include:

- Embedding key principles of fast to market, fast to adapt, and fast to change if something is not working, and a continual focus on improvement with results measured by impact on customer success
- Developing an internal culture that embraces change and flexibility, that helps make Callaghan Innovation a preferred employer as well as making our staff sought after externally for their skills and knowledge.

As outlined above, there will be a particular focus on aligning our internal SETD capability with our mission including the Research and Technical Services we will provide and the National Technology Networks that Callaghan Innovation will be sponsoring, and developing the range of skills and expertise that will best support Callaghan Innovation's role in business and network support.

Staff will be consulted on any changes and will be supported through this process with regular communications, opportunities for participation and a comprehensive change-support programme.

Organisational health and capability – initiatives to 30 June 2014

Area	Initiative
Organisational design	Complete organisational design, consult with staff and implement Māori whakatauki developed and endorsed by Māori Induct staff into new organisation Rationalise accommodation across sites Human Resources policies updated
Culture building	Define and build desired business-facing culture for integrated organisation Develop programme for ensuring organisation is fully engaged with and responsive to Māori economy Initiate benchmarked staff engagement survey
Better Public Services	Customer Relationship Management system in place, integrated with NZTE Data archiving and management systems in place
Stakeholder communication	Upgrade the corporate intranet and website Continue to publish Accelerate – Callaghan Innovation's e-zine Undertake a stakeholder survey Plan and deliver a series of meetings and events with key stakeholders Plan and deliver a programme of media and social media activity Develop a range of print and electronic collateral to build awareness of Callaghan Innovation's role and purpose

Good employer

Callaghan Innovation is required to be a good employer under the Crown Entities Act 2004 and seeks an inclusive high-performance business-facing culture built on mutual trust and respect. All appointments are on merit. Managers and employees are responsible for promoting a work culture in which all personnel, whatever their gender, ethnic or social background, sexual orientation or role, are valued, and treated equitably and with respect.

Callaghan Innovation has a range of policies covering:

- Equal employment opportunities
- Professional code of ethics

- Flexible working
- Career stages and review
- Protected disclosures
- Health and safety

Callaghan Innovation provides access to the Employee Assistance Support programme, workstation assessments and access to annual flu vaccinations.

These and other policies are currently being progressively updated for the new organisation.

Health Safety and Environment

The Board and senior management of Callaghan Innovation are committed to the operation of a Health and Safety framework to the highest standards of health, welfare and environmental safety across the organisation. We expect every member of Callaghan Innovation to share this commitment and to work together to achieve it.

We are committed to ensuring the health and safety of everyone who may be affected by our activities by providing, managing and maintaining a work environment that is, so far as reasonably practicable, safe and in which risks to psychological and physical health are controlled.

We will consult with and equip our staff with the information, instruction, training and supervision at all levels necessary to ensure that they are competent to supervise or undertake their work activities and are aware of any related hazards and the measures to be taken to protect against them.

We have a focus on continual improvement informed by on-going external review and keeping up to date with best practice in relation to health and safety. We will ensure we comply with all relevant legislation and authoritative guidance including the joint Ministry of Business, Innovation and Employment and Institute of Directors *Good Governance Practices Guideline for Managing Health and Safety Risks* May 2013.

We employ occupational health nurses at our Gracefield and Auckland sites.

6. Consultation and reporting to the Minister

The relationship between a Crown agent and its Responsible Minister is an important one to ensure the alignment of activities with government expectations and manage risks for ministers and their agencies.

The Minister of Science and Innovation is the Responsible Minister for Callaghan Innovation and we operate a "no-surprises" policy on matters of significance and relevance. The following table outlines the agreed levels of reporting and consultation.

What	Who	When
Regular meetings: • Matters of materiality requiring discussion with the Minister	Chair of Callaghan Innovation Board Callaghan Innovation Chief Executive and senior management	Fortnightly or as required by Minister Weekly or as required by Minister
Written reports: • Matters of interest • Priority projects • Policy briefings	Callaghan Innovation Chief Executive	Fortnightly or as required
Quarterly report: • Progress against Statement of Intent and performance measures • Risks and issues including organisational capability and relationships • Financial management • Other matters as agreed with Minister	Callaghan Innovation Board and Chief Executive	Within 30 days following the end of the September and March quarters, and within 45 days of the end of the December quarter
Annual reporting to Minister and Parliament	Callaghan Innovation Board	In line with statutory requirements

Ministerial support and services: • Responses to information requests from the Minister • Responses to Ministerial enquiries • Responses to requests under the Official Information Act • Responses to written Parliamentary Questions	Callaghan Innovation Board Chair or Chief Executive	As required by Minister or Callaghan Innovation. 95% of responses are provided within required timeframes
Matters requiring consultation with the Minister: • Any material change in the capabilities and functionality of Callaghan Innovation • Any activities that are potentially outside the scope of appropriations made by Parliament or relevant legislation applying to Callaghan Innovation • Any significant organisational decisions that will give rise to Parliamentary interest or public debate	Callaghan Innovation Board Chair or Chief Executive	As soon as practicable

7. Key risks and mitigation strategies

- **Re-orienting SETD focus towards near-to-market research and technical services:** The recommended Business Case for Callaghan Innovation involves changing some long-term programmes that originate as far back as the DSIR era. Understandably there will be staff that feel uncomfortable with this approach and may feel their roles and even their employment are at risk. Communication with staff will be critical to a successful transition. We will work in partnership with universities, CRIs and our key SETD leaders and scientists to implement the changes to ensure the fundamental research goes to the best place and preserves that valuable skill base within New Zealand.
- **Failure to build business confidence in Callaghan Innovation:** Callaghan Innovation can only be successful if firms see value in its role and trust its services and advice. Callaghan Innovation will continue to engage frequently with firms, listening to their concerns and priorities and visibly demonstrating responses to those needs. A communications plan in the business media will promote success stories and raise firms' awareness of how Callaghan Innovation has assisted other companies and can assist them. The Callaghan Innovation brand will be associated widely with the companies we support in a campaign analogous to the "Intel Inside" concept on computer hardware.

- **Funding model:** Considerable work remains to be done to align existing funding with this Business Case. Callaghan Innovation will work closely with MBIE, including through the National Science Challenge process, to ensure that funding is appropriately allocated to the initiatives and priorities of the Business Case. In-depth discussion with firms will ensure funds are spent on the Research and Technical Services which most quickly impact commercialisation and for which firms are therefore most willing to pay. Over the course of 2013/14 Callaghan Innovation will work with MBIE to ensure an appropriate charging regime is developed and implemented for these services, consistent with Auditor-General and Treasury guidelines, and which appropriately balances the potential crowding out of other providers with the need to ensure uptake of services to meet the government's objectives. Institutions co-locating at the Gracefield innovation precinct will be a source of rent and capital investment in the buildings they use.

8. Forecast statement of service performance

Statement of responsibility

The prospective financial statements for Callaghan Innovation presented in this report for the three years ended 30 June 2014, 2015 and 2016 have been prepared in accordance with the Crown Entities Act 2004.

The Board of Callaghan Innovation is responsible for the preparation of Callaghan Innovation's Forecast Statement of Service Performance and the Prospective Financial Statements, and for the judgements contained within them.

The Board of Callaghan Innovation is responsible for establishing and maintaining a system of internal control designed to provide reasonable assurance as to the integrity and reliability of financial reporting.

In the Board's opinion, the Forecast Statement of Service Performance and the Prospective Financial Statements fairly reflect the expected operations of Callaghan Innovation for the three years ended 30 June 2016.

However the Board notes that Callahan Innovation is a new entity established on 1 February 2013 and the financial projections are consistent with the Business Case and expectations agreed with Ministers at the time of preparing this statement. There are likely to be adjustments necessary, especially beyond the first year, as Callaghan Innovation implements its plans as set out in this document. National Science Challenges and changes to Business Research and Development Grants, which Callaghan Innovation administers, may also affect Callaghan Innovation's activities in the year to June 2014.

The Board also notes that delivery of its intentions is contingent on Ministers approving the Business Case and enabling transfers of funding between appropriated output classes as indicated. If this does not occur, an amended Statement of Intent will be prepared based on the revised expectations of operations.

Sue Suckling
Chair, Callaghan Innovation Board
1 July 2013

Richard Janes
Member, Callaghan Innovation Board
1 July 2013

Introduction

This Statement of Service Performance sets out the services, standards and performance for Callaghan Innovation's outputs. The overarching outputs sought from the activities in the first year are:

- the further development and implementation of a portfolio of products and services that will accelerate commercialisation of innovation by firms in New Zealand
- the creation of an integrated and fit-for-purpose organisation to support this

The services, standards and performance for Callaghan Innovation's outputs cover the following areas:

Output Class	Description	Budget 2013 appropriation 2013/14 $000	Business Case proposed expenditure 2013/14 $000
Output Class 1	Building Innovation Potential	6,178	6,232
Output Class 2	Realising the Benefits of Innovation	17,500	11,190
Output Class 3	Callaghan Innovation Strategic Investment	18,523	26,352
Output Class 4	Business Research and Development Contract Management	6,256	7,914
Output Class 5	National Measurement Standards	5,764	6,731

The right-hand column shows the expenditure proposed in the Business Case currently before Ministers. It differs from the current appropriation in distribution and amount. The most significant change is slower growth in Accelerator Services (within Output Class 2) than was originally envisaged, and an increase in expenditure in Output Class 3 as internal activities are aligned to the new Research and Technical Services. Increases in Output Classes 4 and 5 reflect an allocation of new overhead costs to those services, to ensure the funding allocation fully takes into account the cost of delivery.

The difference between total appropriation and proposed business case expenditure reflects the conversion of part of the capital appropriation to operating expenditure.

Delivering on the Board's intentions as set out in this Statement is contingent on Ministers' approval of the Business Case and subsequent processes to reallocate the output classes to reflect expenditure in-line with the approved business case.

Callaghan Innovation provides grants to businesses on behalf of the Minister of Science and Innovation. Criteria for these grants are set out in Ministerial Directions to Callaghan Innovation and published in the New Zealand Gazette.

Callaghan Innovation currently provides research services within Vote Science and Innovation under contract to MBIE and Royal Society of New Zealand (RSNZ) as a result of successful bids in contestable funding rounds. These are currently delivered through Callaghan Innovation Research Limited, a Crown entity subsidiary owned by Callaghan Innovation. The performance standards and monitoring of these contracts rests with MBIE and RSNZ.

Callaghan Innovation Research Limited also provides contracted research and development services to the private sector either as part of its MBIE contracts or directly.

In most cases, baseline data for quantity and quality measures will need to be established in the first year to determine appropriate performance measures once new products and services are operational.

Some effectiveness measures are necessarily measured over periods longer than one year – reflecting the expected lag between businesses' use of services and support, and the impact on their performance.

Output Class One: Building Innovation Potential

This appropriation funds activities which build innovation potential through providing and enhancing access to information, training, mentoring, foresighting, networking and leadership across the innovation system, and facilitating human capital mobility, for both businesses and Research Science and Technology providers.

Callaghan Innovation will deliver services and outputs in two areas:

- **Motivating an innovation culture:** outputs providing a coordinated programme of events, sponsorship, internships and information. This is also supported by Business R&D Student Grants that support internships.
- **Building innovation skills and expertise:** outputs providing training courses, information and tailored advice and support from commercial and technical specialists. This is also supported by Business R&D Project Grants that support business to up-skill.

In 2013/14 we will start to implement these programmes and progressively roll them out in years two and three in response to demand and opportunity.

The effectiveness of these outputs over time will show up in increased numbers and size of innovating businesses and greater levels of R&D being carried out in business.

Cost and funding	2013/14 $000
Income	
Crown	6,178
Other	-
Total income	6,178
Expenses	6,178
Net funded to/(from) Callaghan Innovation reserves	0

Note: Following approval of Callaghan Innovation's business case by Joint Ministers, funding provided through this output class maybe be reallocated to reflect the approved business case.

Performance Measures	Performance Standard 20113/14
Quantity	
Establishment of a coordinated programme of events, sponsorship, internships and information	In place
Proportion of businesses from target sectors participating in Callaghan Innovation-run events	Establish baseline
Number of contacts to Customer Engagement Centre	Average of 75 per month by year end
Number of unique accesses to Innovation Readiness Self-Assessment Tool	Establish baseline
Quality	
Net number of attendees at workshops and sponsored business events rating the event positively	Establish baseline but at least 75% in first year
Effectiveness	
Number of businesses with product and process innovations as percentage of all businesses measured in the biennial R&D survey	Increase

Output Class Two: Realising the Benefits of Innovation

This appropriation funds activities that build the level of, and returns from, science and technology-driven innovation through providing tailored brokerage and access to advice, technical services and facilities, and creating linkages, projects and collaborations between business and industry and Research Science and Technology providers.

Callaghan Innovation will deliver outputs in two areas:

- **Business-focussed connectivity:** outputs that enable firms to connect to the R&D and related services they need to commercialise successfully. This is also supported by Business R&D Project and Growth Grants that support technology development.
- **Networks and projects:** Outputs that support and coordinate national networks of science, engineering, technology and design expertise across New Zealand and offshore, and help companies find and effectively utilise these resources. This is also supported by Business R&D Project Grants that support collaboration.

In 2013/14 we will start to implement these programmes and progressively roll them out in years two and three in response to demand and opportunity.

The effectiveness of these outputs over time will show up in increased numbers and size of innovating businesses and greater levels of R&D being carried out in business.

Cost and funding	2013/14 $000
Income	
Crown	17,500
Other	-
Total income	17,500
Expenses	17,500
Net funded to/(from) Callaghan Innovation reserves	0

Note: Following approval of Callaghan Innovation's business case by Joint Ministers, funding provided through this output class maybe be reallocated to reflect the approved business case.

Performance Measures	Performance Standard 2013/14
Quantity	
Number of customers with engagement plans, including shared with NZTE	Establish baseline
Number of businesses accessing Accelerator Services	Establish baseline
Business case for Avatar initiative	Accepted by Board
Quality	
Percentage of businesses that give a positive satisfaction rating to services provided through Accelerator Services	Establish baseline
Effectiveness	
Number of businesses reporting they access SETD providers	Increase
Business expenditure on R&D as percentage of GDP as measured in the biennial business R&D survey	Increase
Number of businesses with product and process innovations as percentage of all businesses measured in the biennial R&D survey	Increase

Output Class Three: Callaghan Innovation Strategic Investment

This appropriation funds Callaghan Innovation for the development and maintenance of science, engineering, technology, design and other strategic capabilities required to develop, deliver, improve and evaluate its services and activities to meet the immediate and future needs of business and industry, and to facilitate its interactions with Research Science and Technology providers.

Services provided through this output class include applied research and product development, measurement, technical analysis and support services, testing and failure analysis, pilot facilities and infrastructure, and Open Labs.

Current services are heavily focussed on underpinning R&D in support of existing competitive contracting in Callaghan Innovation Research Limited. This focus will progressively shift to the broader set of technical services and product development support as existing contracts mature and new funding mechanisms are worked through with MBIE.

Cost and funding	2013/14 $000
Income	
Crown	18,523
Other	-
Total income	18,523
Expenses	18,523
Net funded to/(from) Callaghan Innovation reserves	0

Note: Following approval of Callaghan Innovation's business case by Joint Ministers, funding provided through this output class maybe be reallocated to reflect the approved business case.

Performance Measures	Performance Standard 2013/14
Quantity	
New arrangements in place for early-stage fundamental research teams that best fit with universities or CRIs, in line with MBIE processes and requirements	Achieved
Percentage of funds invested at any time	90%
Quality	
New investment projects are subject to peer review and Callaghan Innovation Board – approved investment process	100%

Effectiveness	
Percentage of new investment projects that have a related contribution from business in the form of co-funding, in-kind contributions, participation or endorsement	80%

Output Class Four: Business Research and Development Contract Management

This appropriation funds 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.

Cost and funding	2013/14 $000
Income	
Crown	6,256
Other	-
Total income	6,256
Expenses	6,256
Net funded to/(from) Callaghan Innovation reserves	0

Note: Following approval of Callaghan Innovation's business case by Joint Ministers, funding provided through this output class maybe be reallocated to reflect the approved business case.

Performance Measures	Performance Standard 2013/14
Quantity	
Percentage of grants made consistent with ministerial requirements	100%
Contracts are on track to achieve their objectives, and critical steps	95% of contracts
Contracts are monitored in terms of their likelihood of delivering on the contract outcomes	100% monitored

Number of active Internships	270
Quality	
Applications for on-demand investments over $250,000 are independently reviewed by experts	100% of proposals
Timeliness	
Establish baseline for meaningful timeliness and customer satisfaction measures identified and implemented	Achieved

Output Class Five: National Measurement Standards

This appropriation is limited to providing specified standards to satisfy the needs for traceable physical measurement in New Zealand.

Section 4 of the Measurement Standards Act 1992: The Minister of Science and Innovation shall provide for the use throughout New Zealand of uniform units of measurement of physical quantities, and for the establishment and maintenance of standards of measurement of physical quantities.

Callaghan Innovation Research Limited has current responsibility for the Measurement Standards Laboratory of New Zealand functions under the Measurement Standards Act 1992 and the National Standards Regulations 1976.

Cost and funding	2013/14 $000
Income	
Crown	5,764
Other	-
Total income	5,764
Expenses	5,764
Net funded to/(from) Callaghan Innovation reserves	0

Note: Following approval of Callaghan Innovation's business case by Joint Ministers, funding provided through this output class maybe be reallocated to reflect the approved business case.

Performance Measures	Performance Standard 2013/14
Ensuring provision of national measurements and standards and related services in accordance with the Minister's statutory obligations under section 4 of the Measurement Standards Act, reported as required by the Minister	100% of reports accepted
Maintenance of the national measurement standards in accordance with the resolutions and recommendations of the Metre Convention with all technical procedures related to the measurement standards validated and reviewed each six months by Callaghan Innovation Research Limited	100% of reviews completed

Business Research and Development Grants

Research and Development *Growth Grants*

These are funded by the Crown through a multi-year appropriation that expires on 30 June 2017.

These grants are three-year grants targeting businesses with a track record of R&D spending in New Zealand providing 20% of government co-funding. These grants support established businesses to grow further and faster through investment in R&D.

Cost and funding	Est. 2013/14 $000
Income	90,900
Expenses	90,900
Net funded to/(from) Callaghan Innovation reserves	0

Targeted Business Research and Development Funding

These grants are funded by the Crown through a multi-year appropriation that expires on 30 June 2017.

Project Grants target firms with smaller R&D programmes and those that are new to R&D, typically providing 30–50% government co-funding. This delivers benefits for both businesses and the wider economy.

Student Grants fund students to work in research and development-active businesses.

Cost and funding	Est. 2013/14 $000
Income	50,600
Expenses	50,600
Net funded to/(from) Callaghan Innovation reserves	0

Estimated new grant commitments 2013/14

Grant	Number	Average Size $000	Govt. share %	Performance Standard 2013/14
Growth	100	1,500	20	Achieved
Project	250	103	40	Achieved
Students	300	13	100	Achieved

New Zealand Food Innovation Auckland Limited, trading as The FoodBowl – Te Ipu Kai

This facility will be jointly owned by Callaghan Innovation (67%) with Auckland Tourism Events and Economic Development (33%).

Output	Performance Measures	Performance standard 2013/14
Segmentation and targets for contacting businesses with possible new product development projects	Segmentation and targets in place	Achieved
Conversion of contacts to projects	Percent conversion	Establish baseline

Prospective financial statements to 30 June 2016

The financial statements are presented in accordance with generally accepted accounting principles and the Crown Entities Act 2004. They comply with New Zealand equivalents to International Financial Reporting Standards (NZ IFRS), NZFRS No 42 – Prospective Financial Statements and other applicable financial reporting standards, as appropriate for Public Benefit entities.

Financial assumptions

The key financial assumptions are:

- The financial statements are based on an assumed growth path for delivery of services, in line with the proposals in the Business Case submitted to Ministers by 30 June 2013.
- Some rebalancing of expenditure across output classes may be required, including a transfer from the non-departmental capital appropriation to operating expenses, if decisions are approved to alter the mix of services as outlined in the Business Case.
- The financial forecast assumes the appropriations will be updated for approved changes following Ministers' approval of the Business Case.
- 'Other Crown Revenue' represents contestable scientific research and development funding from the Ministry for Business, Innovation, and Employment. No further contestable funding is sought after the current 2013 round the outcome of which will be known in August 2013. No additional Crown funding has been assumed to replace this decrease in revenue.
- The FoodBowl has been accounted for through a grant of $2.0m per annum included within Direct Operating costs. The FoodBowl will be consolidated into Callaghan Innovation's accounts but the financial projections included in this Statement of Intent do not include this consolidation, which will occur once due diligence is completed.
- Third party commercial domestic and overseas revenues are included for Research and Technical Services.
- Operating expenses are recognised in the period in which they are incurred including salary and wage related costs, PAYE and withholding tax.
- Depreciation and amortisation is expensed once the capital item is commissioned.
- Prepayments are amortised over the period in which they relate.
- Capital expenditure is budgeted over the period in which the payments are expected to be made. Some of the major capital expenditure budgeted will be subject to separate business cases to be submitted during the period covered by this SOI and may therefore change.
- Accounts receivable and accounts payable, unless otherwise specified, are due on the 20th of the month following invoice.
- Crown Grants have been included in the forecast financial statements. Grants paid to companies for Research & Development activities are matched with Grant Funding revenue received from MBIE. The net impact on the forecast net surplus is therefore nil.

Other Information

These financial statements have been prepared on the basis of government policies and Callaghan Innovation outputs at the time the statements were finalised. This is forecast information and therefore the actual results achieved for the period will vary from the information presented due to external factors.

Statement of Forecast Comprehensive Income

For the year ended 30 June	Budget 2013/14 $000's	Forecast 2014/15 $000's	Forecast 2015/16 $000's
Revenue			
Revenue Crown Operating	58,611	62,921	66,056
Other Crown Revenue	17,112	11,299	9,909
Non-Crown – Domestic Revenue	7,600	8,085	9,296
Non-Crown – International Revenue	11,456	11,745	10,853
Other Income	2,766	2,766	2,766
Finance Income	539	391	375
	98,084	**97,207**	**99,256**
Revenue Crown Grants	141,500	141,500	141,500
Total Income	**239,584**	**238,707**	**240,756**
Operating Expenditure			
Personnel	40,666	44,825	42,937
Direct Operating Costs	26,615	26,669	23,618
Project Expenses	1,560	400	100
Property Costs	7,348	7,735	7,740
Other Operating Costs	15,630	10,432	13,531
Depreciation	6,073	7,077	8,164
Grant Expense	141,500	141,500	141,500
Total Expenditure	**239,392**	**238,637**	**237,589**
Net Surplus / (Deficit)	**192**	**70**	**3,166**

Statement of Forecast Financial Position

For the year ended 30 June	Budget 2013/14 $000's	Forecast 2014/15 $000's	Forecast 2015/16 $000's
Current Assets			
Cash / Bank	11,588	7,885	10,817
Receivables	3,958	4,065	4,109
Prepayments	1,342	1,342	1,342
Work-in-progress	885	917	930
Other Current Assets	290	300	304
Current Assets	**18,063**	**14,509**	**17,502**
Current Liabilities			
Payables and Accruals	10,497	10,232	10,095
Revenue in Advance	3,232	3,232	3,232
Current Liabilities	**13,730**	**13,464**	**13,327**
Net Working Capital	**4,334**	**1,045**	**4,175**
Non-Current Assets			
Investments	0	0	0
Fixed Assets	39,292	47,651	57,687
Total Non-Current Assets	**39,292**	**47,651**	**57,687**
Non-Current Liabilities			
Deferred Tax Liability	128	128	128
Other Term Liabilities	629	629	629
Total Non-Current Liabilities	**757**	**757**	**757**
Net Assets	**42,869**	**47,938**	**61,104**

Statement of Forecast Changes in Equity

For the year ended 30 June	Budget 2013/14 $000's	Forecast 2014/15 $000's	Forecast 2015/16 $000's
Equity at the beginning of the year	42,677	42,869	47,938
Capital Appropriation Drawdown	0	5,000	10,000
Net Operating Surplus/(Deficit) for the year	192	70	3,166
Equity at the end of the year	**42,869**	**47,938**	**61,104**

Statement of Forecast Cash Flows

For the year ended 30 June	Budget 2013/14 $000's	Forecast 2014/15 $000's	Forecast 2015/16 $000's
Net Cash Flows from;			
Operating Activities	6,215	6,732	11,132
Investing Activities	(9,900)	(15,435)	(18,200)
Financing Activities*	0	5,000	10,000
Net increase/(decrease) in cash and cash equivalents	(3,685)	(3,703)	2,932
Cash and Cash equivalents at beginning of year	15,273	11,588	7,885
Balance Cash at end of period	**11,588**	**7,885**	**10,817**

* Equity injection from the Crown to fund Capital Expenditure – subject to separate business case approval.

Statement of Costs by Output Class

For the year ending 30 June	Budget 2013/14 $000's	Forecast 2014/15 $000's	Forecast 2015/16 $000's
1. Building Innovation Potential	6,178	9,078	9,078
2. Realising the Benefits of Innovation	17,500	23,300	23,300
3. Callaghan Innovation Strategic Investment	18,523	18,523	18,523
4. Business Research and Development Contract Management	6,256	6,256	6,256
5. National Measurement Standards	5,764	5,764	5,764
	54,221	**62,921**	**62,921**

Statement of Grant Costs*

For the year ending 30 June	Budget 2013/14 $000's	Forecast 2014/15 $000's	Forecast 2015/16 $000's
Research & Development Growth Grants	90,900	90,900	90,900
Targeted Business and Research Development Funding	50,600	50,600	50,600
	141,500	**141,500**	**141,500**

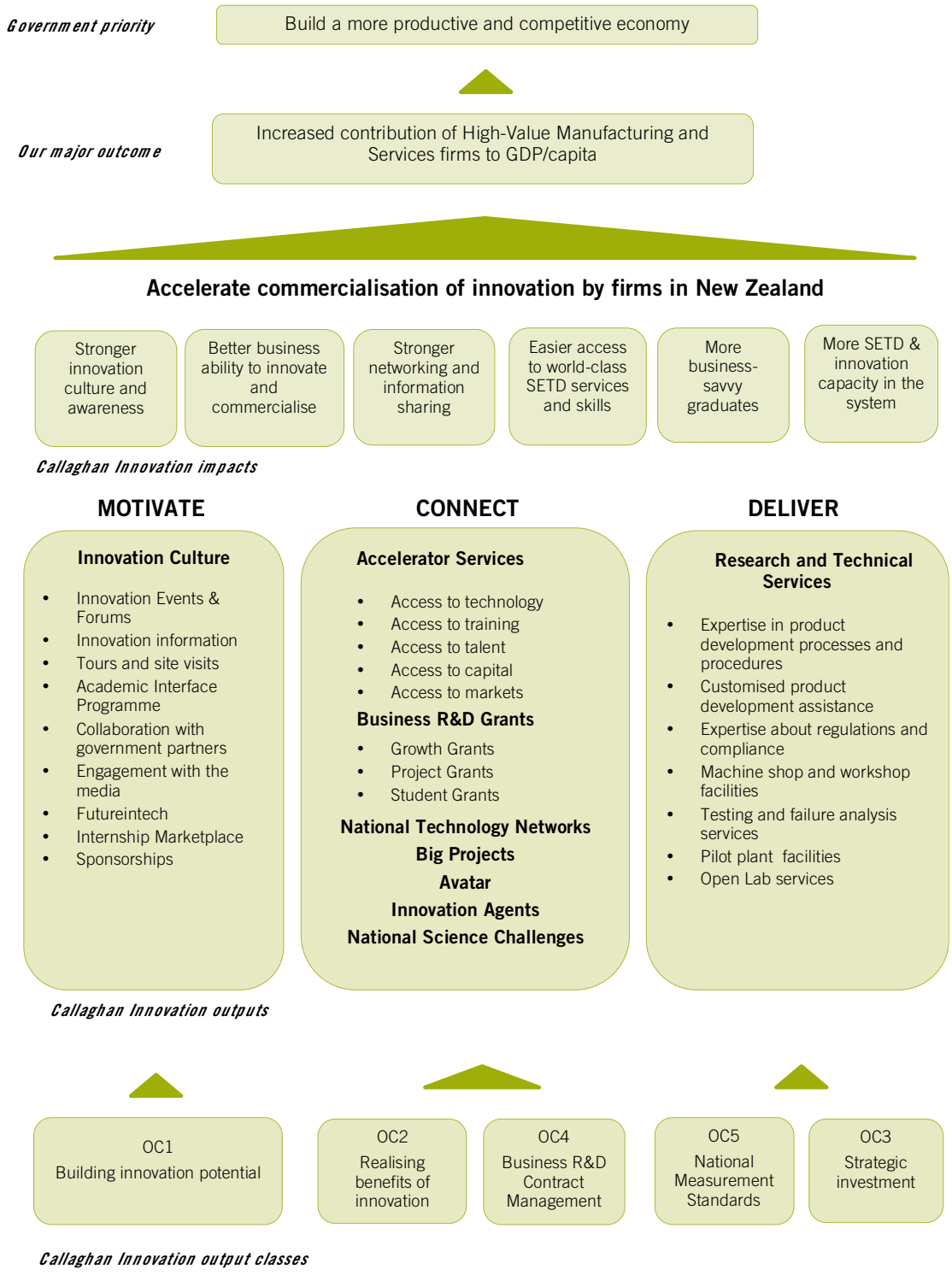
* Business R&D Grants are a multi-year appropriation. The three year budget/forecasts above reflect an estimated average spend per annum.

Reconciliation: Statement of Costs by Output Class to Statement of Comprehensive Income

For the period ending 30 June	Budget 2014 $000's	Forecast 2015 $000's	Forecast 2016 $000's
Statement of Costs by Output Class	54,221	62,921	62,921
Revenue Crown Grants	141,500	141,500	141,500
Sundry Revenue including Interest	3,305	3,157	3,141
Crown Contracts	17,112	11,299	9,909
Third Party Revenue	19,056	19,830	20,149
Additional Crown Funding*	4,390	0	3,135
(Surplus)/Deficit	(192)	(70)	(3,166)
Total Expenditure	**239,392**	**238,637**	**237,589**

* Fiscally neutral transfer to be requested from Capital appropriation to Operating appropriation

Appendix One: Intervention logic and indicators



Callaghan Innovation major outcome indicators

Outcome	Logic	Indicators
Increased contribution of HVMS firms to GDP/capita	HVMS firms can exploit higher-than-average margins and economies of scale in niche global markets to lift New Zealand's overall productivity	Growing BERD to 1% of GDP (government target) Doubling the revenues of "TIN 100" firms Growth in contribution of high-value exports to total export growth (contribution to government target of increasing exports to 40% of GDP)
Broader base	Diversity in specialisation provides more opportunities for innovation at the margins of existing products and services	Number of firms undertaking R&D Export product, service and market mix *Source: Statistics NZ*
Higher intensity	Increases in private sector R&D lead to increases in GDP (OECD)/ NZ business R&D is low compared to comparator countries	R&D expenditure by business as % of GDP *Source: Statistics NZ*
Higher value	Leveraging more value from the same level of R&D and other innovation raises productivity	Value and number of firms in HVMS medium and high technology exports *Source: Statistics NZ*

Callaghan Innovation impact indicators

Impact	Logic	Indicators
Stronger innovation culture and awareness	Businesses don't know what they don't know. Greater awareness will make it more likely that businesses will invest (more) in high-value innovation Graduates will be more likely to consider starting or going into business	Number of HVMS innovating firms Number of HVMS innovating firms doing R&D Value of R&D carried out by HVMS innovating firms Number of first-time Callaghan Innovation business customers *Sources: Statistics NZ, Callaghan Innovation*
Better business ability to innovate and commercialise	Most New Zealand businesses are micro-scale by global standards and many don't have sufficient in-house skills and expertise Raising skills and capacity through publicly funded services will result in more successful commercialisation of innovation. As more businesses succeed, more businesses are likely to follow	Value and number of triadic patents BERD % GDP BERD financed from abroad % GDP Number of firms accessing Callaghan Innovation business services Business satisfaction rating survey against benchmarked public sector services delivery *Sources: Patents Office, Statistics NZ, Callaghan Innovation, survey*

Callaghan Innovation impact indicators (continued)

Impact	Logic	Indicators
Stronger networking and information sharing	Leads to more efficient use of resources though scale, awareness, alignment and shared services Leads to more innovation ideas through increasing the contact between different types of knowledge Economic geography arguments suggest innovation and wealth creation is correlated with urban size. NZ needs to act as a single city to mitigate the lack of urban scale relative to other countries	Measurements of domestic network intensity using proxies: • Co-authoring • Co-invention • Co-patenting International co-authoring, co-invention, co-patenting Level of use and access of Callaghan Innovation Avatar *Sources: Patents Office, Statistics NZ, Callaghan Innovation*
Easier access to world-class SETD services and skills • Research • Technical • Commercial • Project management	Businesses have identified the need to get faster and easier access to the SETD resources, services and facilities they need to innovate New Zealand has a high proportion of small SMEs which have limited capacity to provide their own in-house resources and expertise and need to access it elsewhere	Number of businesses accessing public SETD organisations for assistance Number of Callaghan Innovation referrals in/out Research organisations' private sector income Value of Callaghan Innovation SETD services to businesses *Sources: Patents Office, Statistics NZ, Callaghan Innovation, Survey*
More public SETD capacity including: • Pilot & scale up facilities • Open-licencing • National technology networks	Growing firms face challenges in the "Valley of Death". This can be supported with more and better infrastructure and better leverage of public investment though national platforms Non-exclusive licencing in areas that support multiple business opportunities will drive more innovation opportunities from the same technology	GERD % GDP Growth in the number of people with advanced SETD skills in the private sector Number of open or non-exclusive licences to businesses Value of business co-investment in public R&D&C
More innovation-ready graduates and entrepreneurs	It is harder for NZ to grow and retain large HVMS businesses here (owing to our economic geography), so we are likely to be more reliant on smaller dynamic SETD-intensive businesses operating in niche markets Business dynamic statistics indicate new business creation and young businesses will be significant drivers of HVMS growth over 10–20 years	Number of graduates moving between firms and research organisations Number of firms reporting lack of skills as barrier to innovation Number of HVMS businesses 2–5 years old

Appendix Two: Statement of accounting policies

Reporting entity

Callaghan Innovation is a Crown agent as defined by the Crown Entities Act 2004 and is domiciled in New Zealand. Callaghan Innovation's parent is the New Zealand Crown.

The consolidated financial statements of the Group consist of Callaghan Innovation, and Callaghan Innovation Research Limited. New Zealand Food Innovation Auckland Limited, (trading as The FoodBowl – Te Ipu Ka) is consolidated following acquisition.

Callaghan Innovation Group commenced activities on 1 February 2013.

Basis of preparation

Statement of compliance

The financial statements of Callaghan Innovation 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 have been prepared in accordance with NZ GAAP and they comply with NZ IFRS.

Measurement base

The financial statements have been prepared on a historical cost basis, modified by the revaluation of certain investments and financial instruments as identified in specific accounting policies and accompanying notes.

Functional and presentation currency

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

Significant accounting policies

The accounting policies set out below have been applied to these financial statements.

Revenue

Revenue is measured at fair value of consideration received or receivable.

Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Group and the revenue can be reliably measured. The following specific recognition criteria must also be met before revenue is recognised:

Revenue from the Crown

Callaghan Innovation is primarily funded through revenue received from the Crown which is restricted in its use for the purpose of Callaghan Innovation meeting its objectives as specified in the Statement of Intent.

Grants (Crown Revenue)

Grants received are recognised in the income statement when the requirements under the grant have been met. Any grants for which the requirements have not been completed are carried as liabilities until all conditions have been fulfilled.

Government grants are recognised at their fair value where there is reasonable assurance that the grant will be received and all attaching conditions will be complied with.

When the grant relates to an expense item, it is recognised as income over the periods necessary to match the grant on a systematic basis to the costs that it is to compensate.

Where the grant relates to an asset the fair value is credited to an income in advance account and is released to the income statement over the expected useful life of the relevant asset by equal annual instalments.

Interest

Interest income is recognised using the effective interest method.

Royalty income

Royalty income is recognised on an accruals basis in accordance with the substance of the relevant agreements.

Provision of goods and services (commercial revenue)

Revenue from the sale of goods is not recognised until the goods have been shipped and the customer invoiced.

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. Non-government grants are recognised as revenue when they become receivable unless there is an obligation to return funds if the conditions of a grant are not met. If there is such an obligation, the grant is initially recorded as grant received in advance and recognised as revenue when the conditions of the grant have been satisfied.

Borrowing costs

Borrowing costs are recognised as an expense in the periods in which they are incurred.

Grants Expenditure

Grants are approved and administered by Callaghan Innovation for a variety of purposes and periods. Grant expenditure is recognised in the Statement of Comprehensive Income when the third party recipient can demonstrate they have met 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.

Basis of consolidation

The consolidated financial statements combine the financial statements of Callaghan Innovation and its subsidiaries and associates as at 30 June 2013 (“the Group”).

Subsidiaries are all 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 subsidiaries are prepared for the same reporting period as the parent company, using consistent accounting policies.

All inter-company balances and transactions, including unrealised profits arising from intra-Group transactions, have been eliminated in full. Unrealised losses are also eliminated but considered an impairment indicator of the assets transferred.

Where there is loss of control of a subsidiary, 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 subsidiaries 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 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 functional currencies at the exchange rates ruling at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies are retranslated at the rates of exchange ruling at the balance sheet date.

Exchange gains and 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 profit or loss.

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 using the exchange rates as at the dates of the initial transactions.

Non-monetary items measured at fair value in foreign currencies are translated using the exchange rate at the date when the fair value was determined.

Property, plant and equipment

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

Leased assets

Leases where Callaghan Innovation assumes substantially all the risks and rewards of ownership are classified as finance leases. Assets acquired by way of a finance lease are stated at the amount equal to the lower of their fair value and the present value of the

minimum lease payments at the inception of the lease 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. Where an asset is acquired at no cost or for a nominal cost, it is recognised at fair value when control over the asset is obtained.

Disposals

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

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 income.

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%

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 licences are 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 non-financial assets

Plant and equipment and intangible assets that have finite useful lives are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amounts 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.

Value in use is depreciated replacement cost for an asset where its future economic benefits or service potential are not primarily dependent on its ability to generate net cash inflows and where Callaghan Innovation would, if deprived of the asset, replace its remaining future economic benefits or service potential.

If an asset's carrying amount exceeds its recoverable amount, the asset is impaired and the carrying amount is written down to the recoverable amount. The total impairment loss is recognised in the statement of comprehensive income.

For assets not carried at a re-valued amount the reversals of impairment losses are recognised in the statement of comprehensive income.

Recoverable amount of non-current assets

At each reporting date the Group assesses whether there is any indication that a non-current asset may be impaired. Where an indicator of impairment exists, the Group makes a formal estimate of the recoverable amount. Where the carrying amount of an asset exceeds its recoverable amount the asset is considered impaired and is written down to its recoverable amount.

The recoverable amount is the greater of fair value less costs to sell and value in use. It is determined for an individual asset, unless the asset's value in use cannot be estimated to be close to its fair value less costs to sell and it does not generate cash inflows that are largely independent of those from other assets or groups of assets, in which case the recoverable amount is determined for the cash-generating unit to which the asset belongs.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

Financial assets

The Group classifies its financial assets in two categories: at fair value through profit and loss, 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 profit and loss

Financial assets at fair value through profit and loss are financial assets held for trading and those designated at fair value through profit and loss at inception. A financial asset is classified in this category if acquired principally for the purpose of selling in the short term or if so designated by management.

Derivatives are also categorised as at fair value through profit and loss 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 in an active market. They are included in current assets, except for those with maturities greater than 12 months after the balance sheet date. These are classified as non-current assets.

The Group's loans and receivables comprise "cash and cash equivalents" and "trade and other receivables" in the balance sheet.

Regular purchases and sales of financial assets are recognised on the trade dates, 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 at each balance sheet date whether there is objective evidence that a financial asset or a group of financial assets is impaired.

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 if so, 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 on-going 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 income statement. Amounts accumulated in equity are recycled in the income statement in the periods when the hedged items will affect profit or loss (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 income statement.

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 these derivative instruments are recognised immediately in the income statement.

Inventories

Inventories 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. Costs incurred in bringing each item to its present location and condition, are accounted for as follows:

- Raw materials – purchase cost on a first-in, first-out basis
- Work-in-progress – cost of direct materials and labour and a proportion of manufacturing overheads based on normal operating capacity but excluding borrowing costs.

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 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 income. 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.

For the purposes of the cash flow statement, cash and cash equivalents consist of cash and cash equivalents as defined above, net of outstanding bank overdrafts.

Interest-bearing loans and borrowings

All loans and borrowings are initially recognised at cost, being the fair value of the consideration received net of issue costs associated with the borrowings.

After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the effective interest method. Amortised cost is calculated by taking into account any issue costs, and any discount or premium on settlement.

Gains and losses are recognised in the income statement when the liabilities are de-recognised and through the amortisation process.

Trade and other payables

Creditors and other payables are initially measured at fair value and subsequently measured 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 pre-tax 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.

Restructuring

A provision for restructuring is recognised when an approved, detailed, formal plan for the restructuring has been announced publicly to those affected, or for which implementation has already commenced.

Leases

Finance leases

Leases that transfer substantially to Callaghan Innovation all the risks and rewards incidental to the ownership of an asset, whether or not title is eventually transferred, are classified as finance leases. At the commencement of the lease term, Callaghan Innovation recognises finance leases as assets and liabilities in the statement of financial position at the lower of the fair value of the leased item or the present value of the minimum lease payments.

The finance expense is charged to the statement of comprehensive income over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability. The amount recognised as an asset is depreciated over its useful life. If it is uncertain that Callaghan Innovation will obtain ownership at the end of the lease term, the asset is fully depreciated over the shorter of the lease term and its useful life.

Lease incentives received are recognised in the statement of comprehensive income over the lease term as an integral part of the total lease charge.

Operating leases

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. Lease payments under an operating lease are recognised as an expense on a straight-line basis over the term of the lease in the statement of comprehensive income.

Employee benefits

Short-term employee entitlements

Employee entitlements that Callaghan Innovation expects to be settled within 12 months of balance date are measured at undiscounted nominal values 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, and sick leave. Callaghan Innovation recognises a liability for sick leave to the extent that compensated absences in the coming year are expected to be greater than the sick leave entitlements earned in the coming year. The amount is calculated based on the unused sick leave entitlement that can be carried forward at balance date to the extent that Callaghan Innovation anticipates it will be used by staff to cover those future absences.

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. The inflation factor is based on the expected long-term increase in remuneration for employees.

Superannuation schemes

Obligations for contributions to KiwiSaver 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 Income as incurred

Income tax

Callaghan Innovation is a public authority and is consequently exempt from paying income tax. However, its subsidiary Callaghan Innovation Research Limited is a limited liability for profit entity and pays income tax on any operating surplus.

The tax expense for the period comprises current and deferred tax. The income tax expense for the period is the tax payable on the current period's taxable income based on the tax rate enacted for that period. This is then adjusted by changes in deferred tax assets and liabilities attributable to temporary differences.

CallaghanInnovation

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