



ECONOMIC DEVELOPMENT
NEW ZEALAND

SUBMISSION TO NZPC

15 February 2021

EDNZ Submission to NZPC ‘New Zealand firms: Reaching for the frontier’ Draft report.

EDNZ

Economic Development NZ is a national, not for profit organisation that represents thousands of economic developers throughout New Zealand. Our members are agents of change intent on advancing the economic wellbeing of all New Zealanders.

EDNZ exists to support its members and the goal of an inclusive economy through building capability, collaboration and thought leadership that is trusted and valued at a local, regional and national level. Our activities touch every corner of New Zealand.

EDNZ wishes to congratulate the New Zealand Productivity Commission (NZPC) for its work on Frontier Firms and their contribution to productivity growth, innovation, quality, mix and value of exports, and thus prosperity. It also congratulates NZPC on looking at “similar others” in the form of Small Advanced Economies (SAEs).

Primary Concerns

There are multiple factors to consider when trying to address New Zealand’s poor performance in productivity growth. The NZPC has addressed many of these factors during its existence however New Zealand’s productivity growth record remains, stubbornly, one of the lowest in the OECD and even worse when compared to SAEs. This is because there is no one silver bullet factor. Work on several fronts needs to be undertaken increase productivity. Innovation is one factor, distance is another, technology, frontier firms, terms of trade, monetary policy, labour market policies, industrial structure are others. With multiple factors to consider and prioritise a systemic whole-of-government approach, in partnership with Maori and the private sector, is required.

EDNZ and its members were disappointed at not being consulted widely during NZPCs consultation period, as EDNZs members stand ready to support the growth of frontier firms, innovation and productivity in New Zealand.

EDNZ’s primary concerns with the draft report are:

- EDNZ believes that productivity growth is one of the most important policy areas to address for New Zealand’s future well-being.
- The role that frontier firms may play in increasing productivity is a good area to explore, especially in relation to other small advanced economies. However, there are many factors that need to be addressed in NZ and directionality in cause and effect is not clear.
- We would like to think that efforts in supporting frontier firms would be seen in a multifactor context among a cohesive set of policies and programmes, that would include increased support for frontier firms.
- EDNZ and its members can provide crucial policy implementation support supporting a whole of government approach. This systemic approach, however, will require greater institutional innovation, focus, and strengthening at a regional level.

Introduction

‘The Government has asked the Commission to investigate how the economic contribution of frontier firms can be maximised, through policies and interventions aimed at:

- improving the performance of frontier firms themselves; and
- helping new technologies, efficient business practices, and other productivity-enhancing innovations diffuse more effectively to other New Zealand firms.’

EDNZ and its members would welcome working with the commission and central government in advancing these goals through its network of regional and local economic development agencies and associate members. EDNZ realises that not all Economic Development Agencies (EDAs) have the capacity, and in some cases capability, to address all the interventions needed to increase national productivity growth but emphasises the importance of using this network to implement national policy at a regional level.

EDAs can provide the connections and relationships at firm, cluster, and regional levels to implement national policy in line with national and regional goals. However, government must provide the fabric to support EDAs to be successful and this would be instrumental in making innovation and productivity front of mind for all businesses.

Accordingly, we have divided this submission into three parts:

1. Comments on the commission’s findings and recommendations
2. EDNZ response to commission question 7
3. A rationale for a regional approach to implementation of productivity policies

1. Comments on Findings and Recommendations

Chapter 2. New Zealand’s Productivity Challenge

Geography is still destiny.

NZPC Finding 2.5 stated that ‘Geography is not destiny. The existence of a few New Zealand firms at or close to the global frontier shows that it is possible to overcome the disadvantages of a small domestic market and distant location.’

EDNZ comment: Geography is still destiny. It has been and is fundamental in considering what is possible in development (see section 3 below). Physical geography talked about in F2.5, with implications for import/export supply chains, talent and transaction costs are still crucial competitive factors. Ones which MNCs would consider, for example, when looking at new sites and or Investment. While the cost of sea freight has been reducing in real terms over time, air freight is still expensive and amplified due to our distance.

We agree shifting more towards ‘specialised distinctive exports’ or ‘knowledge intensive’ or ‘weightless’ products and services are key strategies, but most of our exports are still bulky and heavy and our export mix remains stubbornly narrow and unsophisticated.

We therefore emphasise the importance of endogenous regional economic development ie working on our ability to specialise and trade, building on regional comparative and competitive advantages, distinctiveness, assets and strengths, in order to diversify and innovate.

There is also much more room to consider inter-regional collaboration and integration to reduce transaction costs (eg in logistics), and increase sophistication through shared R&D services.

Therefore, a wider view of economic and geographical factors together (human, social, cultural, and economic) can address the tyranny of distance in a more comprehensive way. Regional Economic Development theory and practice have much to offer in these regards. Taking advantage of the wealth of knowledge in this area, collaborating with regions to learn, innovate and grow, and possibilities that greater vertical and horizontal integration would uncover are opportunities for New Zealand moving forward.

Context matters.

F2.6 states that: ‘Unlike high-performing small advanced economies, New Zealand has few, if any, large globally competitive firms with outstanding records of exporting sophisticated and distinctive goods and services. Around these large businesses exist ecosystems of complementary firms, researchers and innovators, pipelines of highly educated graduates, investments in enabling infrastructure and regulations, and investors with deep knowledge and understanding of the particular industry.’

EDNZ Comment: We agree that New Zealand does not have enough globally competitive frontier firms. However, the notion that large businesses spur ecosystems of complementary firms, researchers, and innovators (harking back fifty years to Perroux’s Growth Pole theory, or even New Zealand’s Think Big strategy) is challenged by other evidence and theories, such as evolutionary and institutional economics.

We would urge the commission to consider that this is a two-way, systemic, and dynamic process. Comparative advantages create a context for the growth of firms and industries and large competitive firms grow out of that context. For example, which came first Hennessey or Cognac - the product, the company or the place? Therefore, we ask that the NZPC consider that innovation or technology transfer are not one-way processes or transactions but dynamic ones. For these reasons smaller innovative firms are often gobbled up by larger firms, become part of supply or specialise to become part of global value chains, and sophisticated large firms will spin out small firms to enable riskier innovative activities. Silicon Valley provides a context for hi-tech firm growth and innovation, Marlborough produces world class Sauvignon Blanc, Manawatu has strong food related innovation. Context matters.

We also encourage the commission to consider that economic gardening¹ may actually in the long run benefit New Zealand more than economic hunting², whereby the growth of frontier firms is

¹ Providing the right conditions to Grow your own businesses.

² Hunting for MNCs and FDI to solely provide jobs, and or where New Zealand’s resources are used for foreign benefit.

rooted in New Zealand regional and industry contexts and possibly ownership. Successful Maori firms and incorporations exemplify this strategy.

Partnering with the private sector

F2.9 states that: ‘The most promising path for New Zealand to lift its productivity performance is to learn from the successes and failures of high-performing small advanced economies – while duly tailoring its approach to the country’s starting point and distinctive circumstances. Businesses primarily, supported by government, will need to deploy dynamic capabilities to identify areas of competitive advantage in export markets and drive innovation that will push out the productivity frontier. Dynamic capabilities involve sensing areas of competitive advantage, then seizing the opportunities in these areas by innovating – including in business models and processes – while identifying risk and effectively managing it.’

EDNZ agrees with this finding and is interested in how the public sector partners with the private sector to take advantage of market opportunities not just market failures. PPPs could advance beyond infrastructure in for example research and market identification and exploration, and investment attraction by providing catalytic investment in new ventures.

A system of government

Recommendation 2.1 states that ‘The Government should develop a clear overall strategy and take deliberate steps (in collaboration with business, workers, educators and researchers) to upgrade New Zealand’s innovation ecosystem and support the export, at scale, of goods and services with a difficult-to-imitate competitive advantage.’

Comment: EDNZ agrees with the triple helix approach to innovation but believe that ‘the Government’ should be viewed as a system of government that includes infrastructure, land, SOEs, CRIs, COREs, research entities, local and regional government, CCOs and EDAs.

Chapter 3 – Frontier firms: analysis and comparisons

EDNZ found Findings 3.1-3.3 informative but urges the NZPC to do further research into the relatedness of technology diffusion, the productivity gap, labour productivity, frontier firms and non-frontier firms, in New Zealand.

Technology diffusion is a dynamic process.

NZPC F3.4 states that: ‘Technology diffusion to non-frontier firms mainly comes from firms at the national frontier (in the same country). Yet non-frontier firms in the European countries in the Commission’s small-advanced-economy study benefit also from technology diffusion from firms at the small-advanced-economies frontier (albeit to a lesser extent than from their national frontier firms). This did not happen in New Zealand over 2003–16. This result likely reflects New Zealand’s distant location, and that diffusion of tacit and non-codified technologies is difficult over distance. It emphasises the criticality of New Zealand’s frontier firms, performing well and improving the country’s international connections.

EDNZ Comment: we agree that tacit and non-codified technologies, and data and information, is difficult over distance. We also agree that it emphasises the criticality of New Zealand’s frontier firms, performing well and improving the country’s international connections. However, we would add that clusters and regions can learn too, and that they are just if not more critical to frontier firms, innovation, and productivity. Creating innovative milieux, clusters and RISs, given New Zealand’s distance challenges, are critical to success.

Growing our own frontier firms

NZPC F3.5 states that: ‘...comparing New Zealand with several European small advanced economies, the most productive firms in terms of multifactor productivity employed high shares of total labour and capital. While this is a good result on the allocation of resources, the European countries allocated a higher proportion of capital to their frontier firms demonstrating the scope to do better.

F3.6 states that: ‘...European countries perform better than New Zealand on two margins that impact overall labour productivity performance: their frontier firms generally are significantly more productive (partly because of higher capital intensity), and they employ more people than firms in lower deciles.

F3.7 states that: ‘...in New Zealand’s overall population of firms, a striking feature is the low number of large exporting firms...’

EDNZ Comment: We are aware of the criticality of exports for learning and competitiveness, and for trade connections. We would, therefore, like to see a more systematic approach to encouraging exports domestically and firms growing into export. EDA local knowledge and experience in identifying future frontier firms would be helpful in concert with NZTE’s outward focus and in-market assistance. The RBP programme should be further leveraged and expanded, via EDAs/RDAs, to place more emphasis on firm and export development in its services.

Chapter 4 – Insights from Māori firms

EDNZ welcomes the insights gained in this research on the Maori economy and looks forward to being part of the national discussion on support for Maori enterprise, innovation and productivity.

Chapter 5 – Exporting and innovation

Attracting Multinational corporations, growing our own or both?

NZPC F5.3 states that: ‘New Zealand lacks multinational corporations (MNCs) that are knowledge-intensive, oriented to exporting and a source of spillover benefits. MNCs of this type are attracted to locations by:

- world-class, leading edge research institutions and researchers in their area of business;
- a good prospect of being highly competitive in international markets (for example by accessing lower-cost inputs);
- a supply of creative talent and well-trained graduates in their area of business;
- attractive urban, social and environmental amenities for their staff, including the quality of schooling and affordable housing;
- high quality infrastructure;
- a community of firms that provide relevant inputs;
- a conducive regulatory environment; and

NZPC R5.1 states that: ‘The Government should take a more proactive and deliberate approach to attracting multinational corporations (MNCs) that are knowledge-intensive, oriented to exporting and a source of spillover benefits. The approach should develop programmes of attraction similar to those used successfully in some small advanced economies (SAEs). In practice, creating the conditions that act as a magnet for MNCs will require upgrading the innovation ecosystem and building deep networks between industry, researchers and government. In SAEs, this has been best achieved by focusing efforts on a few target areas of existing domestic strength. Such a programme requires careful monitoring, evaluation and adaptation to New Zealand circumstances to ensure it is in the national interest.

Comment: EDNZ agrees with the list of factors that support inward investment and MNC attraction (F5.3) but would point out that all of these factors are easy to outline in a dot point list, but huge effort lies behind each of them with diffuse and confounding attribution effects. They would also require a far stronger whole-of-government approach and partnering with the private sector in “places” to achieve some of the bullet points.

Further, FDI attraction programmes are currently not competitive in New Zealand with a negative view of taxpayer inducements and subsidies.

In the USA, for example, subsidised inducements are common in business attraction programmes. However, these are losing favour as MNCs simply locate to the highest bidder (aka a race to the bottom) and move on when a better offer comes along, making them somewhat footloose and in a position of power. Chris Gibbons’ economic gardening programme in Littleton Colorado was started after one such large exit (Lockheed Martin) took 7,800 of jobs with it. The programme is designed to support local firms to grow and create opportunities for investment rather than hunting for the next big employer at high public cost.

So where does one start? First and foremost, an MNC will want to take advantage of market opportunities and conditions to improve their performance. There is little to be gained, and an awful lot of effort and cost required to attract MNCs if opportunities or competitive advantages are not present. Social and urban amenity is not enough, there are thousands of locations offering those and New Zealand currently struggles to offer relevant skills and talent at scale.

Therefore, EDNZ agrees that ‘creating the conditions that act as a magnet for MNCs will require upgrading the innovation ecosystem and building deep networks between industry, researchers and government’ (R5.1). This should be the priority for attracting knowledge intensive and export oriented MNCs. EDNZ would add that this is also the priority for growing our own frontier firms and attracting world class talent and investment interested in our specialisations. In other words, improve our ground game first so that we have something to offer MNCs, investors, researchers and talented workers.

Evaluation of NZTE services

R5.2 states that: ‘NZTE should regularly commission independent evaluations of their services. These evaluations should assess the effectiveness of their range of services, to inform choices around the future mix and design of services. To facilitate evaluation, businesses receiving NZTE support should be tagged in the Longitudinal Business Database (LBD) to allow for more robust long-term assessment of NZTE’s performance.

EDNZ Comment: We support longitudinal outcome data but would hesitate in inferring causation from correlation in a multi-factor environment. Therefore, we believe that this recommendation should be implemented in concert with other evidence sources such as case studies and customer surveys to present a complete picture. Some sense of realistic evaluation that includes analysis of context, mechanisms employed and outcomes in multiple sites would be the next level up. This could include the Regional Business Partnership.

Chapter 6 – Innovation ecosystems

Moving from the ‘What’ to the ‘How’ in creating Innovation ecosystems

NZPC F6.1 states that: ‘Innovation is complex, cumulative, risky and path dependent. An innovation ecosystem includes the capabilities that are:

- held by individual firms, research institutions and the workforce;
- reflected in the network of relations among firms (including international links), and with research centres;
- contributed by government agencies and their investments in hard and soft infrastructure; and
- provided by the wider regulatory and institutional framework.

Together these capabilities shape the rate and direction of innovation.’

F6.2 states that: ‘The leading edge of innovation is most often driven by firms, yet government is an integral part of the innovation ecosystem because it provides many of the capabilities that influence innovation by firms.

And **NZPC F6.3** states that: ‘Innovation has spill-over benefits. These provide the rationale for broad government support for innovation through policies like R&D tax credits, research grants and intellectual property protection; and also, more widely, for policies such as support for venture capital and skills (the benefits of which are not restricted to R&D-intensive firms).

EDNZ Comment: The quality of institutional innovation, and the institutional fabric that facilitates innovation, is crucial to improving innovation and productivity. So, while the capabilities required are well outlined in F6.1 and demand-led innovation and spillover effects are outlined in F6.2 and 6.3, the mechanisms by which capabilities are connected and taken to the next level are missing. Moving from the “what” to the “how” is the key to formulating an innovation ecosystem and EDNZ strongly supports strengthening institutions, and connections between them, to achieve this. Providing foundational and long-term funding for the facilitation of networks, clusters, RISs, and access to international markets will create an environment for continual learning and innovation.

Regional specialisations contribute to national productivity.

NZPC F6.4 states that: ‘Each country has a specific set of capabilities that mean some technologies or types of goods or services provide more opportunities for productivity-enhancing innovation than others. As a result, and with limited resources, many small-advanced-economy governments play an active role in selected areas of their economy to support platforms of research and innovation, with associated investments in skills, the national science system, and building links between firms and researchers.’

Comment: EDNZ agrees with this finding but would add that regional differences and strengths are fundamental in improving the national position. The fact that ‘Each country has a specific set of capabilities...’ is mostly the sum of regional specialisations. Bottom-up processes can be just as, if not more, revelatory than determining strategic goals, policies and plans at the top.

Top down and bottom-up discovery can be contested and orchestrated, in terms of focus, at a regional level with regional and national stakeholders where interventions are visible, specialised, easily evaluated and there is enough critical mass to make a difference. Regions are the nexus between ‘the national’ and ‘the local’. They are where the rubber hits the road. Generalised industry groupings and high-level policy and advisory groups are not enough. To increase competitive advantage in specialised products and services work has to be done on the ground over the long-term, building networks and connections. EDAs can, do, and should facilitate this kind of work.

Clusters reach across standard classifications and use ubiquitous technologies as platforms for specialisation.

NZPC F6.5 states that: ‘The areas of the economy that governments select for focus often do not correspond to industries defined by standard classifications. They may, for instance, include

upstream and downstream industries (such as biotechnologies that depend on a supply of primary products); or cover technologies that are used across different parts of the economy (such as digital technologies).

EDNZ Comment: The long-ignored cluster development tools employed in other SAEs and RED practice, but not in New Zealand, provide the right level of intervention to raise the chances of developing unique, specialised and high value products. Clusters reach across standard classifications and use ubiquitous technologies as platforms for specialisation. New Zealand needs a finer grained demand-led approach to developing smart specialisations where industry definitions and classifications become almost irrelevant.

Partnering with the regions for effective implementation

NZPC F6.7 states that: ‘Effective implementation of focused innovation policy requires:

- high-level governance arrangements that bring together senior government ministers and officials, top industry representatives (firms and workers), and leading researchers and educators to select broad areas for focus, shape the strategic direction and marshal the resources needed for success;
- governance of specific initiatives that involves participants having “skin in the game” to oversee an ongoing process of discovering and realising opportunities for innovation and tackling barriers;
- implementation processes that develop a shared view of what is needed, and build linkages and collaboration among researchers, firms and government agencies;
- government and private co-funding of initiatives to bring forth common and realistic perspectives on opportunities for success;
- a willingness to take an experimental “portfolio” approach, accepting that not all initiatives will succeed;
- transparency around what the key judgement calls are on where to focus effort;
- transparency around the nature, extent and target of government assistance;
- transparent monitoring and evaluation of initiatives and adjustment of the mix over time; and
- a consistent but adaptive approach to strategic direction that allows sufficient time for innovative initiatives to bear fruit.

EDNZ Comment: these dot points seem somewhat Wellington-centric and top down. On the first dot point, this may be true, but these kinds of governance arrangements need to be supported by multi-level and multi-actor governance arrangements at regional and cluster levels, providing both vertical and horizontal integration and reach. Then subsidiary systems can inform higher tiers of governance in a two-way conversation for policy development and strategic intervention.

All of the succeeding dot points can be orchestrated at a regional level to enable execution, adaptability, realistic evaluation and a stronger partnership between central government and the regions (all regions) in both governance and operations.

Chapter 7 – Innovation policy and New Zealand firms

Connecting a National Innovation System with Regional Innovation Systems

EDNZ commends the commission for this comparative analysis and identification of weaknesses in our National Innovation System (NIS) in Chapter 7. We believe that the NIS is central government's core business in addressing New Zealand's productivity paradox, research sophistication, skills and talent production. This can also provide the platform for successful RISs.

EDNZ agrees with the goals of the draft RSI strategy, however, thinks that the goal of 'New Zealand being a global innovation hub by 2027' will not be achieved unless the RSI system includes a strong foundation of Regional Innovation Systems (RISs) as well. These will have a far greater chance of being demand-led, incorporating the private sector in national innovation focus areas, in creating their own specialisations, and in providing transparent governance, implementation and monitoring arrangements.

EDNZ also agrees with **F7.4**: that 'Some of the Government's Industry Transformation Plans (ITPs) intend to focus innovation effort to raise productivity in high-potential sectors of the economy that have an export focus. Other than in the primary sector, the Government has devoted only a very small proportion of its research, science and innovation funding, export assistance funding and economic development funding directly to its chosen areas of focus. This is not consistent with taking focused innovation effort seriously.' But would add that much of what is proposed as supportive of ITPs can be facilitated and orchestrated via EDAs/RDAs.

NZPC F7.5 states that: 'The Government has varying areas of focus in its support for research, science and innovation and economic development. Some of this variety reflects different, yet well considered, objectives. The Government has not yet settled on consistent, clear areas of the economy to focus innovation efforts at scale for the purposes of raising firm productivity and export success.'

EDNZ Comment: While Government may have clear ideas in generic terms about the direction of travel for certain sectors that it believes New Zealand may have comparative or competitive advantages or export development opportunities in, markets and market dynamics change, technology changes, and global competition changes continuously. Adaptability is important and market intelligence is vital in these regards. While senior leaders from business, government, academia and iwi may have a handle on these dynamics, grounded intel, from those in industry and exporting every day can see constraints and opportunities clearly. This kind of market intel needs to be gathered more formally, something that EDNZ has learnt and supported during Covid-19 regional responses. RSI should not be a top-down direction setting process only; formal intelligence gathering needs to continually inform RSI.

Joining the dots

NZPC F7.6: states that 'Most Government funding channelled through Callaghan Innovation and New Zealand Trade and Enterprise to support innovation and exporting by firms is targeted at individual firms. Some of Callaghan's assistance is targeted at firms in sectors that reflect the Government's choice of areas of the economy or technologies for focused innovation effort. Yet, this

assistance aims to build firm capabilities; it does not directly support strengthening the innovation ecosystems in which these firms operate.

EDNZ Comment: it is clear to EDNZ that creating innovation platforms and or Regional Innovation Systems is not part of the RBP programme. Many REDAs have done extensive work on the ground to facilitate RISs and connecting government agencies into this is a challenge. Funding to facilitate clusters and RISs is virtually non-existent and inconsistent, with EDA shareholders/owners questioning the outputs of staff working on long term innovation support that does not have a direct return on investment, particularly to shareholders. EDAs also have extensive experience in working with firms on their innovation journey.

NZPC F7.7 states that: ‘New Zealand firms seeking government assistance for innovation and exporting have a bewildering choice of programmes and points of contact. This likely makes it difficult for:

- firms to access the assistance they desire; and for
- government agencies to apply assistance in a way that best achieves the Government’s objectives.

EDNZ Comment: EDNZ agrees with this finding and suggests more actively involving RDAs/EDAs in early-stage innovation and support. EDNZ also suggests supporting EDAs to be the one-stop-entry point for all government economic development programmes in the regions. This would not mean that they would deliver all government programmes, but it would ease access, reduce duplication, and increase efficiency.

NZPC R7.2 states that: ‘The Government should engage with relevant stakeholders (Māori, researchers, firms and workers, and educational institutions) to develop a transparent implementation plan for its research, science and innovation strategy...’

EDNZ Comment: EDNZ agrees with the intent of this recommendation and urges that government include EDAs as stakeholders. Learning has been gained through cluster and Regional Innovation System work, RBP work, as well as working with skills providers, ITPs, TIs and universities, and businesses on their innovation journey.

Implementing a national Research, Science and Innovation strategy

NZPC R7.3 states that: ‘In implementing its research, science and innovation (RSI) strategy, the Government should:

- pay close attention to strengthening the capacity and capability for collaboration between businesses and public (or publicly funded) research institutions on innovative technologies, including strengthening international connections;
- prioritise building collaboration in areas of existing and emerging strength in the economy where it has chosen to focus its innovation efforts; and
- allocate a proportion of its RSI budget to building business-oriented research capabilities in public research institutions in chosen areas of focus.

EDNZ Comment: throughout this submission we have been promoting a regional lens for innovation, economic development strategy and implementation.

- The triple helix of innovation; government, business and research, can best be orchestrated close to firms, regional specialisations and comparative advantages. The National Innovation System, the platform for innovation and RISs, can best be orchestrated centrally. RISs can best be orchestrated regionally.
- Existing and emerging strengths in the economy can be found in firms and clusters in regions, not just across generic industry classifications where regional differentiation, smart specialisations and clusters are easily missed.
- Supporting business-oriented, mission- or demand-led research capabilities in public research institutions needs to follow actual innovation projects. These need to be developed on the ground with firms and clusters, not by central government .

Partnering with Stakeholders and Regions

NZPC R7.4 states that: ‘As a complement to broad innovation policy, the Government should partner with stakeholders to:

- choose a small number of areas of the economy to focus innovation effort for the purposes of raising firm productivity and export success; and
- support these focus areas with a large enough proportion of its funding for research, science and innovation, export assistance and economic development to make measurable progress towards its policy objectives.

And R7.5 and 7.6 state that: ‘The Government should partner with stakeholders to develop and put in place transparent arrangements for the governance, implementation, monitoring and evaluation of its focused innovation strategies...’

And R7.7: ‘The Government should review the suite of programmes designed directly to assist firms with innovation and exporting. The review should identify and implement ways to:

- reduce and consolidate the number of programmes;
- simplify the process for firms to apply for assistance; and
- make it easier for firms to identify and access relevant programmes, including by providing a common platform and “front door” across programmes.

EDNZ Comment: Agree and Government’s natural partners are capable REDAs. If they do not exist, or lack capability and or capacity, then building them enables a more grounded, systemic and partnered approach. In this way the NIS will have partner RISs providing reach, governance, implementation, specialisation, monitoring and evaluation. Our NIS should be responsive to market led innovation that comes from a series of RISs and frontier firms (hooked into RISs). Governance and operations should follow system level needs – NIS is different from RIS but they are connected. While government can signal mission-led, national or international priorities, ‘areas of focus’ should be demand-led not government-led and facilitated by EDAs. Encouraging collaboration among private sector firms is a long game and takes on the ground persistent work.

If NZTE and Callaghan continue to work with firms on focus areas of innovation in isolation this will be suboptimal. It will also limit network effects in technology transfer and innovation as neither of those institutions have the time or resources to connect with a wider number of related firms in a cluster or region, nor will they necessarily know who they are. EDNZ suggests a far more systemic approach utilising EDA networks.

Supporting EDAs to be the one-stop-entry point for all government economic development programmes in the regions would not mean that they deliver all government programmes, but it would ease access, reduce duplication, and increase efficiency. It would also provide the opportunity to build trust between government and the private sector in clusters and networks rather than individual firms.

EDNZ supports R7.8 with some additions highlighted in blue. It also recommends the proposed review panel take careful note of the comments / research / other recommendations made in this NZPC report.

‘The Government should commission a comprehensive independent review of New Zealand’s innovation policies. The review should take into account:

- the Government’s full range of objectives for its innovation policy, but pay particular attention to the objective of:
 - providing policies for creating joined up national and regional innovation systems and
 - increasing the success of frontier firms in exporting in areas of sustained competitive advantage;
- New Zealand’s circumstances as a small advanced economy, its economic geographies and regional comparative and competitive advantages and how these shape a preferred approach to innovation policy and practice;
- the role of mātauranga Māori in New Zealand’s innovation ecosystem; and
- the broad range of policies that impact export success.

A review panel should have expertise in assessing the scope, shape and resourcing of innovation policy and the governance of innovation institutions and processes, as well as a thorough knowledge of New Zealand’s existing institutions and innovation policies. It should have experience in assessing the effectiveness of innovation policies in small advanced economies. It should include expertise on mātauranga Māori and regional economic development.’

Chapter 8: Talent and Leadership

In broad terms EDNZ agrees with and commends NZPC for its findings and recommendations for talent and leadership development. We do have some more detailed comments on R8.1 and 8.2

NZPC R8.1 states that: ‘New Zealand Trade and Enterprise currently provides its customers with access to a range of coaching and support services to help build firm-level capabilities. These services should be evaluated for their effectiveness.

EDNZ Comment: this would not be the first time these services have been evaluated, and then continued. The issue is not so much in the policy, it is more in the execution of the programmes which could be: re-focused on strategic national objectives, beefed up and strengthened in terms of providing high-level advice and expertise. A second issue is that the KPIs are process KPIs. Outcome

evaluation is difficult; you are dealing with multi-factor causation and a lack of data transparency (confidentiality issues within firms) and longitudinal evaluation. None of which is insurmountable but all of which needs to be implemented to gain real insight into the value or otherwise of programmes like the Regional Business Partnership. As a footnote, the RBP became absolutely vital for local firms during and following Covid-19 lockdowns in particular and EDAs were (and still are) run off their feet. This presents an opportunity to increase RBP effectiveness.

NZPC R8.2 states that: ‘The Government should refocus migration policy more towards improving the productivity of actual and future frontier firms, by:

- having a principle of primarily accepting highly skilled migrants; and
- reducing the inflows of low-cost temporary workers.

Comment: EDNZ Agrees with the sentiment in this recommendation but is concerned about our Pacific Island neighbours and suggests that New Zealand also needs to be working with island nations in their productivity efforts as well. As EDNZ has been at pains to advocate for addressing regional differences we would add that different industry sectors also have different labour requirements. Therefore, any blanket decision on immigration will have differentiated effects by region and by sector. We suggest that labour needs assessments need to be more fine-grained, taking account of regional and sectoral effects.

Chapter 9 – Innovation-enabling regulation

In broad terms EDNZ agrees with and commends NZPC for its findings and recommendations for innovation-enabling regulation.

2. EDNZ answer to the Commission Question 7.1: Innovation policy and New Zealand firms.

NZPC Q7.1

How could Callaghan Innovation and New Zealand Trade and Enterprise (NZTE) best marshal a proportion of their resources to build the innovation ecosystem of firms operating in areas chosen by the Government for focused innovation policy?

How would this fit with their current services to individual firms? How should responsibility for this approach best be shared between Callaghan Innovation and NZTE?

A one-stop-shop for government programmes in the regions

EDNZ Response: NZTE and Callaghan Innovation have differing but complementary mandates. At a regional, cluster and firm level, looking back to central government functions and navigating these is difficult and time consuming. Furthermore the ‘firm only’ approach by both creates confusion and isolation. Firms exist in a context and a place not a vacuum. A one-stop-shop in regions, REDAs, would be helpful in providing a user-led response. The Regional Business Partnership (RBP) and the

functions within it may need refreshing, yes, but as the Covid-19 response demonstrated these programmes and connections are extremely valuable and need to be ramped up and devolved to REDAs.³

NZTE is primarily outward and export focused, the RBP is a domestic focus and has traditionally been more of a contractual relationship with regional partners, although many leverage local government funding to provide a more-rounded service. More recently NZTE has placed more emphasis on capability building for their regional partners. In practice, working with NZTE at a regional level is a good experience, especially in export promotion and inward investment. Because of the different foci within NZTE (outward versus inward) we believe that the RBP could easily be devolved to regional partners (REDAs) with a set of outcome measures, for example related to frontier firms and productivity, alongside process measures.

Callaghan has a similar set up in that certain programmes are delivered, in a tight contractual relationship, regionally, while other services are provided to individual firms directly, in regions, in isolation. Once again this is confusing and incoherent for firms, clusters and regions. As regions are the best level to at which to orchestrate delivery of government economic and business development programmes such as these more needs to be done to support capacity and capability in [R]EDAs. For a firm R&D and innovation are a part of their business, a vital part yes but they have many other demands in the running of their businesses. Thus, to separate out, R&D or export promotion or product development to discrete public service agencies is nonsensical. EDNZ recommends beefing up regionally delivered business growth and innovation services that triage and facilitate specialist [government] advice.

3. A regional approach to increase productivity growth and support for frontier firms in New Zealand⁴

“Smart strategies alone will not be sufficient; execution is crucial. The Government should partner with other stakeholders to put in place effective arrangements for the governance, resourcing, implementation, monitoring and evaluation of its strategy. Senior political and public service leadership is also needed, to unlock resources from across government agencies.” (NZPC Draft 2020, Dec p. 93).

In the case of frontier firms, interventions need to be thought through at national, regional, cluster and firm levels. At each of these levels different theories and practices need to be orchestrated and implemented. The firm and cluster level can best be orchestrated at a regional level.

EDNZ agrees that frontier firms are crucial to productivity growth, and that they are more likely to export and innovate. We also agree that specialised, distinctive, and or knowledge intensive goods are needed and that our export mix needs more complexity to add value. Where we differ from

³ For governance and operational arrangements see Wilson, D (2020) Powering up the Regions: Improving the Mechanisms to achieve a Productive, Sustainable and Inclusive economy.

⁴ This section draws on Wilson (2020, *ibid*)

NZPC is in the institutions (EDAs), capability and capacity needed to support these goals at a regional level.

The notion that New Zealand is geographically challenged is patently true. It has determined our historical development. From the moment that refrigerated exports became possible, for example, a whole new set of opportunities opened for New Zealand exports.

At the forefront of economic development practice is the consideration and combination of geographic with economic factors. Geography, however, is not just considered in the physical sense. One may consider the economic, human, social and relational geographies for example. When these are combined with functional economic theories like endogenous growth, institutional and evolutionary economics, which invariably include systems, complexity and management theories, the fun begins, and new insights are gained.

At the forefront of these kinds of considerations is Regional Economic Development (RED) theory and practice. It is self-evident in the name 'regional' 'economic' development. RED differs in practice internationally at subnational levels due to geographic, social, cultural, environmental, and economic factors. That is to be expected and New Zealand should be no different in applying RED practice. However, there are common practices, tools and theories that cross jurisdictions, allow for regional differences and variations and accentuate development.

Unfortunately, RED is largely absent from the NZPC consideration of frontier firms and productivity growth. It is as though frontier firms exist in a geographic vacuum. This is a mistake that ignores a whole set of regional development theories and practices which include clusters, smart specialisations, and innovation systems. Regional innovation systems (RIS), for example, consider geographic factors and regional economies together and acknowledge the system effects by sector, region, nation, and global value chains.

Frontier firms do not exist in a vacuum they are nested in networks, industries, sectors, supply chains and a tight geography of relationships and innovation. When digital communications are observed, for example, the incidence of communication rises with proximity. So, while ICT has advanced global communications, social and relational connections still count. This is especially so when complex and tacit information needs to be exchanged for innovation.

New Zealand's geographic factors present us with a combination of global/national and national/regional characteristics. However, regions differ in their economies and specialisations and by type; rural, city and tourism, for example. City-regions are often thought to have innovation advantages due to the fact they are likely to have a more diversified economy, more innovation assets (universities, research organisations, large firms, critical mass and advanced institutions) and dense cultural and social interaction allowing for higher "bump" [into] factor and opportunities to explore white spaces⁵ and related variety⁶. Rural regions, on the other hand are more likely to be involved in goods production (eg agriculture, horticulture, forestry) with less diversified economies, where development may require a small set of deep specialisations built on comparative and competitive advantages. With improved mandates and governance, EDAs would be able to collaborate better and attend to comparative advantages and economic geographies that cross political boundaries and provide scale.

⁵ The space between different industries and technologies and new opportunities

⁶ Where adjacent clusters and technologies can be explored

Interventions, therefore, need to be part of an overall economic plan but nuanced to take advantage of differing economic geographies and characteristics. In short, a more subsidiary, place-based approach. A national innovation systems approach, by industry sector, pulls against and may ignore regional differences and specialisations and yet this is where the gold is. Agritech, for example is fine as a national strategic sector to develop, given our history and revealed competitive advantages, but what is/are the particular specialisation/s that produce a sustainable long-term advantage and which will attract firms, researchers and investment? These can best be orchestrated at a regional level, through RISs, clusters and smart specialisation practices. Ubiquitous digital technologies are not enough to gain advantages and knowledge intensive specialisations; all OECD nations have them, it is the special combination of people, firms and researchers that take ubiquitous technologies to marketable specialisations. This most often happens in a place.

Technology diffusion is not a one-way transaction. Innovation and technology diffusion can happen between frontier firms and suppliers, collaborators, and competitors within RISs, clusters and networks. Thus, the notion of “firm learning” is primary in the NZPC draft but the notion of a “learning region” is absent, when in reality this holds the most promise for frontier firm growth, cluster development, specialisation and productivity growth in New Zealand.

We agree that attracting MNCs and FDI needs to be strategic, adding to our development aspirations and becoming part of our clusters. So inward investment needs to be led by those that know their patch, what is strategic, what is needed, who to work with, connections to be made, skills required, capacity and capability gaps to be filled, and opportunities available. In short, these related functions need regional “conductors”.

Regions provide the intervention level at which relationships are close enough to support and facilitate and where there is enough critical mass to make a difference at a national level. Whereas national innovations systems can be beset by information asymmetries, high-level goals, diffuse interventions, and agency clutter, an RIS can be at risk of bounded rationality. At a national level strategic direction and policy needs to be formulated, such as an Agritech plan, whereas implementation needs to be devolved as close to the frontline as possible. Connecting the two takes time, relationship and trust building. The national innovation ecosystem, therefore, becomes an overview and orchestration of on-the-ground innovation activities within a strategic national framework.

We believe that a key level of innovation and implementation capability and capacity is missing from the NZPC draft to support the growth of frontier firms in New Zealand. That is a regional component that can orchestrate much of what is suggested in the NZPC draft.

The work required of REDAs does not fit neatly within the current core services performed by local and/or regional government, despite re-incorporating the ‘four well-beings’ into Local government mandates, as they are fiscally challenged. This has created an environment for the continual review and re-examination of the RED function (although with some regional exceptions) and a tendency toward gearing REDA activities toward short term local government priorities⁷ over long term national RED functions and priorities, such as productivity growth.

The nature of RED work is that it is both a national and a regional undertaking. It fits between national and local/community development taking advantage of opportunities within

⁷ See Hutchings and Garland (2019) for primary research into the challenges and opportunities for RED in New Zealand

macroeconomic policy settings and exogenous forces. Fundamentally the goal of RED is to diversify and/or strengthen a regional economy, in the public interest, within nationally strategic goals and aspirations. In that vein high level enablers such as transport systems, skills and talent development, digital connectivity, regulatory settings and tax regimes provide platforms for regional development. This requires a far more sophisticated and integrated approach than we currently have.

Regions have different strengths and weaknesses and start development efforts from different platforms but are interdependent and together make up the national economy. Growing Northland's economy, for example, is intimately related to Auckland. Many of the wider effects of Auckland's growth are felt in Northland and Northland provides opportunities to address Auckland's growth. There are also many mutual opportunities for economic development and the geo-political demarcations are not always helpful.

What is of more importance in regional economic development is the *economic geographies* - local productive systems and functional economic connections. If government were to take an endogenous RED approach, such as focusing on frontier firms, cluster development, smart specialisations and productivity growth, much more effort would need to be put in to building local human capital, institutions, leadership, and regional innovation systems to diversify and strengthen regional economies.

The Board and members of EDNZ thank the New Zealand Productivity Commission for the opportunity to submit on their draft.