



# Sustainable New Zealand Party Innovation Policy

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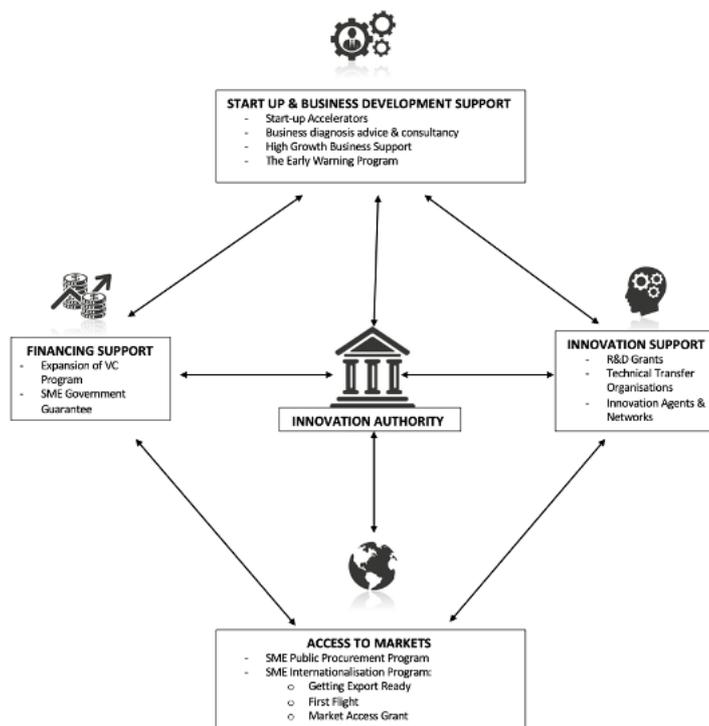
## A Plan for Unleashing Kiwi Ingenuity

**‘The fact that we haven’t compellingly imagined a thriving, dynamic, sustainable world is a major reason we don’t already live in one.’**  
Alex Steffen (American futurist)

### Our Vision

The Sustainable New Zealand Party are proponents of the 'Bright Green' environmental movement i.e. based on the belief that the convergence of [technological change](#) and [social innovation](#) provides the most successful path to [sustainable development](#).

**Our Innovation Policy provides a plan to effectively harness the creativity and synergy between business, academia and government to deliver a sustainable, prosperous future for all New Zealanders and return us to the top of the international environmental, economic and innovation rankings.**



### The Problems we need to address

The world continues to become more interconnected and complex. New Zealand’s growth model, based largely on exploiting natural resources, is starting to show its environmental limits. In addition, despite New Zealand experiencing high growth over the last decade, its labour productivity has remained low, and its income inequality has increased. The OECD

average GDP per working hour is \$54.70, while ours is \$43.50 and Australia's is \$59. R&D is needed to help us work smarter rather than harder.

There is a broad recognition that two of the main problems confronting New Zealand are continuing:

1. Environmental degradation
2. Decline in economic performance

New Zealand's decline in these areas is also reflected in the spectacular slide in its world rankings:

**1. Environmentally:** New Zealand ranked first out of the 146 countries in Yale University's 2006 Environmental Performance Index (EPI). The index ranks countries on the quality of their environmental policies, as originally outlined in the UN Millennium Development Goals. Since then, we have slipped from 7th in 2008, 14th in 2012 and a poor 19th in 2020.

**2. Economically:** New Zealand's drift down the OECD rankings for GDP per capita can't be ignored. New Zealand, below the OECD's average income levels for the last two decades, is now ranked 22nd out of 30 countries – 20% below the OECD average and about 35% below Australia.

**3. With Regard to Innovation:** In this year's Bloomberg innovation index, New Zealand was notably the biggest loser falling five spots to number 29 amid a slide in value-added manufacturing performance.

### **Factors Contributing to Success**

A recent report from the Productivity Commission provides an analysis of the main factors contributing to the economic success of 'small advanced economies' such as ours. In summary, there are two main factors determining success.

1. **Level of International Engagement.** The performance of internationally oriented sectors is central to the performance of small advanced economies. Productivity performance in the domestic economy is constrained in small advanced economies, because the small size of the market limits competitive intensity as well as opportunities for scale and specialization. However, firms and internationally oriented sectors that scale into international markets are much more likely to be close to the productivity frontier.
2. **Dense innovative clusters or ecosystems.** Small economy firms at the productivity frontier tend to operate in dense innovative ecosystems, in which they can benefit from external scale economies: flows of knowledge, access to highly skilled labor, dense backward and forward linkages, specialist advisory services, and so on. This context makes it more likely that firms will be able to develop positions of sustainable competitive advantage based on knowledge and innovation and move towards the productivity frontier.

### **Implications for New Zealand**

There are several distinctive features of New Zealand's economic structure and dynamics that account for its poor performance relative to other small advanced economies. NZ has relatively low levels of international economic engagement; has few firms exporting or

investing offshore at scale; and does not have dense innovative high growth clusters of scale around its major areas of competitive advantage in the primary sector and the weightless economy.

Also, large parts of New Zealand's international sectors are in ownership structures that constrained growth. The cooperative structure and regulatory context constrained risky investments and make it more likely that the product mix is commodity based. This has improved overtime, but New Zealand has not produced competitive, high growth multinational companies around the primary sector.

In addition, there has been less of a shift into knowledge intensive activities than seen in many other small advanced economies. Directly knowledge or technology intensive exports remain a relatively small part of New Zealand's export structure despite recent growth. This is largely due to policy choices: NZ has not invested in skills and innovation to nearly the same extent as high performing small advanced economies; and has not focused on developing knowledge intensive competitive advantage.

### **Innovation is the Key**

Innovation is becoming more and more critical both in halting and reversing New Zealand's environmental degradation and to national economic performance, job creation and standards of living.

**As the historical drivers of our productivity growth wane, we need to strengthen our capacity to generate value from our ideas and our inventiveness to preserve our natural heritage and provide a broad base of prosperity and wellbeing for all who live in New Zealand.**

Given the impacts of the current pandemic, driving productivity via innovation has taken on a new urgency. In lean times firms are often quick to cut R&D spending and become less concerned about sustainable practices, but this is the last thing we need during the post-pandemic recovery. The future will not be a return to business as usual. In many sectors customer behavior and the nature of competition will permanently change. Pivoting to find new products and new ways of doing things will be critical.

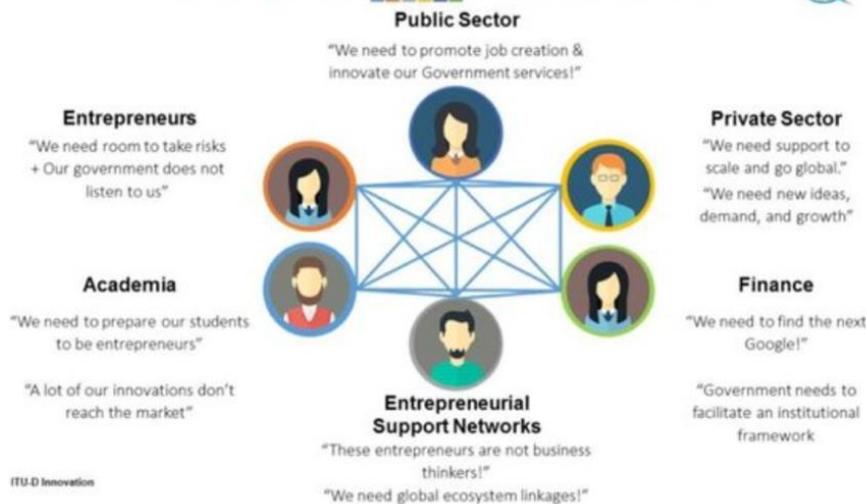
### **The role and importance of the Innovation Eco System**

[In a recent NBR article](#) Rosalie Nelson, general manager of strategy, impact and insights at Callaghan Innovation, argues:

“We need a better-connected innovation ecosystem. R&D involves reaching out to other companies, innovators and researchers to tackle problems that can't be solved internally. We don't do this well, or enough, in New Zealand, so it's an area we've put extra effort into.... “

**‘The term innovation ecosystem refers to a dynamic, interactive network that breeds innovation’**

# Ecosystem Stakeholders



Prerequisites to building a sustainable innovation ecosystem include:

1. The availability of financial capital
2. Human resources
3. Economic incentives
4. Information access,
5. The collaboration and interaction between:
  - a. Government,
  - b. The private sector,
  - c. Educational & research centers and
  - d. Individual entrepreneurs who are aspired to produce innovative products/solutions.

Silicon Valley, India, Singapore, Scandinavia and Israel provide some of the better-known examples.

As Israel's highly successful 'innovation economy' was a direct result of its government's innovation policies it provides an excellent example and model for understanding government's role in the development of an effective innovation ecosystem. In addition we referred to the work of economists Shahid Yusuf and Kaoru Nabeshima's 2012 book *Some Small Countries do it Better*, which looked at three small countries (Singapore, Finland and Ireland) who, since the mid-1980s have transformed their economies from middle-income countries to some of the richest in the world.

The common factors which led to the rapid growth of the so-called SIFIRE (Singapore, Finland and Ireland) countries were:

- Forging consensus on the long-term strategic economic direction with political opponents and key stakeholders: business associations, labour unions, the financial community and the education sector.
- Creating a "learning economy" to develop the country's human capital by providing high-quality education at all levels with innovation as a deliberate by-product.
- Encouraging entrepreneurship by building a culture that rewards initiative and risk-taking and is relatively tolerant of failure.

- Building a networked economy by concentrating entrepreneurship around urban centres.
- Building competition and openness to trade.

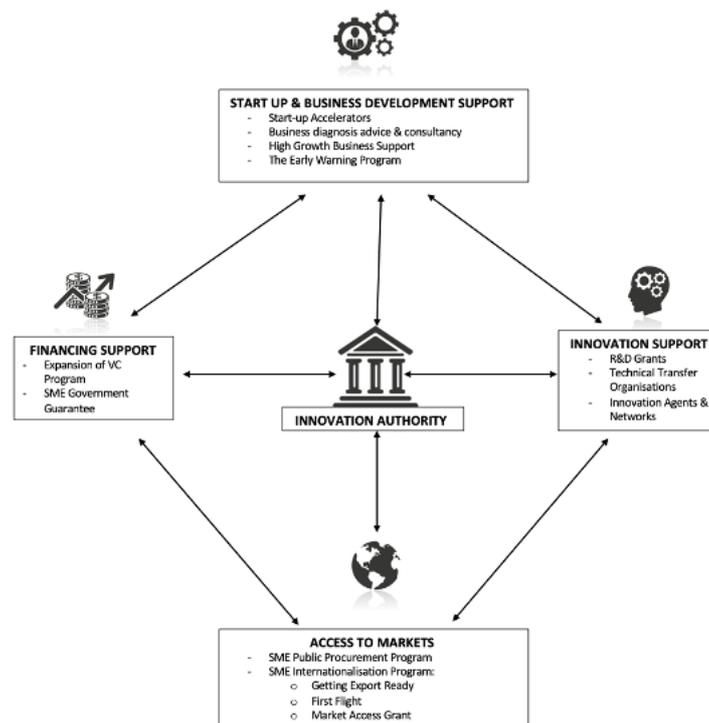
Our economic plan is underpinned by these principles and the lessons learned from Israel in the creation of a framework for the effective collaboration between the government, private sector, academia, innovative entrepreneurs and risk capital. A dynamic and fertile innovation ecosystem creating the conditions under which a prosperous, clean green economy and its people will flourish.

Throughout this document, we have explained our reasoning and provided examples of both how each initiative detailed will work, the benefits we expect it will achieve as well as examples and results from where similar programs have been applied.

Therefore, after a thorough survey of best practice and the leading academic ideas regarding preconditions for innovation we have distinguishing those factors which can be emulated by New Zealand from those which resulted from historical chance (i.e. luck) spelling out some key public policy lessons, which have underpinned the design of SNZP’s innovation policy following.

## Summary of Initiatives

The following diagram provides a visual representation of SNZP’s proposed innovation policy. Central to its execution is the establishment of a New Zealand Innovation Authority (NZIA) to foster collaboration and interaction between government, the private sector, educational & research centers and individual entrepreneurs who aspired to produce innovative products/ solutions. This would be headed up by a CEO who would assign a team to administer an **annual budget of NZ\$1.2 billion**.



**You will note that the NZIA will oversee 4 main areas:**

### **1. Startup and business development support**

- A significant (5 x) expansion of current incubator programs
- Wrap around support for businesses identified as having high growth potential to help them thrive
- Support for businesses in distress. If determined viable then provide rescue support, if non- viable, reduce economic loss and help entrepreneurs avoid unmanageable debt and manage stress and loss of self-esteem, understand that failure is a natural part of entrepreneurial endeavors.

### **2. Innovation Support**

- **R&D Grants** designed to support pre-competitive, collaborative R&D projects in areas of weightless and environmentally positive technologies including AI, agritech, biotech, nanotech, elaborately transformed manufacturing, robotics and energy.
- **Technology Transfer Organisations** established within universities to actively encourage the level of collaboration between Universities and business through funding support of collaborative R&D projects. In turn this should greatly enhance their contribution to the NZ Innovation Ecosystem. SNZP proposes appointing an advisor / specialist in the establishment of successful TTOs to, in the first instance, assist with their application for funding and collaboration with suitable industry partners. If a collaboration project looks to be feasible and satisfy requirements of the policy, then the advisor would provide assistance in structuring activities in alignment with best practice and most likely the institution's particular research strength.
- **Innovation Agents** This program's aim is to strengthen innovation in SMEs through linkages with research organisations. It is an important conduit for helping improve the adoption and commercialisation of work developed in conjunction with R&D and Technology Transfer Organisation innovation support programs.
- **Innovation Networks** We would advocate for government-funded innovation networks to be established to support the advancement and adoption of innovation in sectors including agriculture, food processing, ICT, green energy, communication technology, medical technology, manufacturing and service industries. They are best defined as a framework for cooperation, knowledge sharing and knowledge development between companies, knowledge institutions and other relevant players within a sector or a professional or technological area.

### **3. Financing**

- **Expansion of VC Funds / Risk Capital availability** \$250,000,000 will be invested across 10 new private VC Funds by the government. The objective is to attract 'smart risk capital' financing from experienced successful VC investors to New Zealand companies at the same time as further nurturing the domestic private venture capital industry by offering matched co-financing at a rate of 50/50 with the obligation to invest in start-up and early stage innovation companies in New Zealand.
- **SME Government Credit Guarantee** An initiative designed to ensure innovative SMEs have sufficient access to bank financing including longer term financing for innovation-based projects, which due to their risk profile would not normally be funded, by reducing finance providers' risk in doing so by guaranteeing 80% of the risk.

#### 4. Access to markets

- **Improve SME Access to Government Procurement Spending:**
  - **By the use of 'set-asides'** i.e. policies that earmark a certain volume of public procurement contracts to SMEs in New Zealand.
  - **Establishing an integrated e-commerce marketplace** for NZ SMEs to provide increased access to public procurement on a platform where all public tender notices are published and which uses an integrated system of e-bidding, e-ordering, e-contracting and e-payment.
- **Internationalisation Programs** to actively support and develop increased levels of international engagement. Programs will span from those to assist companies starting out to the more experienced that are seeking support to undertake substantive research to assess the viability of proposed expansion opportunities and establish overseas networks.
  - The Getting Export Ready program will be aimed at pre-export and early stage exporting companies.
  - The first flight program will help first time exporters and currently exporting firms manage the risk of entering new markets.
  - The market access grant will provide up to 50% of \$150,000 in eligible costs, met by a firm to undertake an intensive six-month market research project to examine a new export market or the potential for introducing a new product or service into an existing export market.

# **SNZP Cleantech Innovation Policy (in detail)**

## **Development of a New Zealand Innovation Authority (NZIA) accountable to the Minister of Research, Science and Innovation**

The first step in implementing SNZP's innovation policy is the creation of the New Zealand Innovation Authority (NZIA) accountable to the Minister of Research, Science and Innovation:

The role of the authority is to foster collaboration and interaction between government, the private sector, educational & research centers and individual entrepreneurs who are aspired to produce innovative products/ solutions. The management of the authority would be assigned to a CEO who would employ a team to administer an **Annual budget of NZ \$1.5 billion.**

Overseeing 4 main areas:

1. Startup and business development support
2. Innovation Support
3. Financing
4. Access to markets

## **1. Startup and business development support**

### **1.1. Startup accelerators**

#### **Expansion of Technological Incubator Program - \$200 million**

A 5 x expansion of the current technological incubator program from the current network of 4 to 20 tech incubators over a period of 5 years.

The goal is to support new entrepreneurs at the earliest stages of technological entrepreneurship by providing assistance in determining the technical and marketing applications of their ideas, developing a business plan, organizing a team, raising capital and preparing to enter the market with commercially viable ventures.

Through a call for tenders, the NZIA will issue incubator licenses to private operators to establish and operate an incubator. The incubator operators (likely to be tech development companies and VC funds) will provide advice, mentoring by industry experts (both from within and outside of NZ) and networking opportunities. In addition, they can submit grant applications to the NZIA to co-fund innovative projects in new startup companies. Projects approved by the incubator's committee can receive up to NZ\$1 million in funding (85% from the NZIA and 15% from the incubator licensee. In exchange for investing 15% of the project funding, the licensee can take up to 50% equity of the incubated company.

Successful companies are required to repay the grant to the government (with interest) in the form of royalties of between 3% to 5% of revenue. To encourage incubators to locate in the regions an additional \$150,000 is provided towards operational costs and are eligible for up to an additional \$100,000 in financial support.

Incubators are structured to accommodate 10 – 15 projects at a time with an incubation term for a project of 2 years.

## 1.2. Business diagnosis advice and consultancy - \$100 million

**High growth business support:** This type of program is increasingly offered in other OECD countries, based on evidence that high growth potential businesses - which are found in all sectors - are more likely than firms in general to create jobs and foster productivity growth.

The program would be actively promoted and interested parties qualified in the first instance via a combination of website, web chat, phone and online form/s. Qualifying firms would then be directed to the appropriate combination of three integrated schemes:

Business management: This would be made available to established firms (3 years or older) that have a willingness to engage with change and have growth potential. Those that are successful are able to benefit from business growth evaluations from a network of advisers from senior private sector management roles. These evaluations are conducted at the firm's premises and result in a detailed report and recommendations for future improvements. Business can use these reports to aid applying for business growth grants and access to dedicated workshops and learning events.

Research connections: Eligible SMEs (those that can demonstrate a need for research support from a research institution and can match government funding) can receive a brokerage service designed to foster links with research institutions. This can lead to up to \$50,000 of financial assistance to bring in outside research capabilities to the SME.

Commercialising ideas: New and existing businesses with a novel product or service that can be commercialised can apply for support designed to increase the visibility of their innovation, provide critical networking capabilities and facilitate the use of experience and independent advisers. Such services may include coaching to develop presentation skills, facilitated and qualified introductions, linkages to markets and investors and the availability of match funding of up to \$250,000

**The Early Warning Program:** The recent pandemic shock has highlighted the need for and benefits of a program to support businesses in distress. The Early Warning Program is modeled on a successful initiative in Denmark counselling SMEs facing the risk of bankruptcy. There the program has helped over 4,000 Danish businesses deal with the severe economic challenges and helped keep alive about 2/3 of these companies.

The purpose of the Early Warning Scheme is:

1. To help viable companies survive a severe slump and renew with growth;
2. To reduce economic losses for society, creditors and entrepreneurs by helping nonviable companies to close down quickly;
3. To promote entrepreneurial culture and help recognise failure as a natural part of entrepreneurial endeavours;
4. To give bankrupt entrepreneurs a second chance by helping them to avoid unmanageable debt and loss of self-esteem so that they may start a new company within a foreseeable future.

The proposed early warning organization will comprise of 10 specially trained consultants collaborating with insolvency lawyers and a group of approximately 100 voluntary advisers. It is envisaged that the advisers will consist of current and former directors of large corporations, owners of smaller companies, board members and chairpersons as well as a few professionals (accountants, lawyers, financial advisers, psychologist, coaches etc.).

The overall approach of the early warning process is as follows:

1. The early warning organization receives the request for help from a company owner facing a severe economic crisis.
2. A consultant undertakes an initial screening of the company and provides an assessment of the economic situation and the future prospects of the company.
3. If the company can be saved, one of the voluntary advisers will be assigned to the company to support a turn-around of the company.
4. In case the future prospects are unclear or negative, early warning will organise a meeting with an insolvency lawyer to determine if the company can be fully or partially reconstructed, or if the company shall be closed / declared bankrupt.
5. A voluntary adviser can be assigned to assist a bankrupt entrepreneur with economic and personal advice following a declaration of bankruptcy.

The experience with the early warning program in Denmark is extremely positive. Two impact evaluation studies comparing participants in the early warning program with a control group show that early warning companies that survive are capable of maintaining or increasing their turnover, employment and export. Moreover, the early warning companies that are declared bankrupt do so with less debt to the public sector such as unpaid income tax than the corresponding control group. Both evaluations find that the economic benefits of the early warning program outweigh its economic costs much less social considerations which were not part of the evaluation studies.

The key success factor for the early warning program is the group of voluntary advisers that bring with them the experience and skills needed to turn around companies going through difficulty. Furthermore, there is a strong focus in the early warning organisation on facilitating exchange of experience and the joint development and testing of methodologies to assist the viable and non-viable companies in the in the best possible way.

## 2. Innovation Support

### 2.1. R&D Grants for academic institutions - \$100 million

Designed to support pre-competitive collaborative R&D projects in areas of cleantech including biotech, nanotech and energy.

Similarly, to the *Magnet* university-business co-operation programs in Israel, funds will be allocated to support precompetitive collaborative R&D projects by consortia of NZ firms working with researchers from at least one academic or research institution for joint projects on generic technologies potentially leading to new advanced projects. As detailed in the following this program will provide conditional grants to firms of up to 66% of the approved costs and to academic institutions of up to 80% of their approved costs, with the remaining 20% covered by the industrial partners. The projects will have a life of between three to five years.

**Tier 1:** Multi-year R&D grants (of between 3 to 5 years) will be offered to academic institution/s to cooperate with respective consortia of industrial firms for joint projects on generic technologies potentially leading to new advanced projects. The program will provide up to 66% of the firm's and up to 80% of the academic institution's approved costs, with the remaining 20% covered by the industrial partners.

**Tier 2:** 66% of R&D costs of an already existing relationship between a single industrial company and an academic institution.

**Tier 3:** 90% of the development costs to industrial companies for the transfer of academic research to an industrial application, especially in biotechnology and nanotechnology.

This program will play an important role in facilitating cooperation between the academic and industrial sector. The ideal outcome of this initiative is to encourage strong R&D technological programs, Knowledge Centres for Innovation and technological incubators in one or more of NZ's universities such as those that have become a major contributor to Israel's technological innovation performance. A good example of this is the Technicon-Israel Institute for Technology. Technicon has become a globally significant centre of technology research and teaching with over 12,500 students and 80 graduate programmes and is a global pioneer in biotechnology, satellite research, computer science, nanotechnology, aerospace and energy.

The large number of graduates from Technicon is one of the engines driving Israel's high technology economy. Technicon graduates account for over 70% of the founders and managers of high technology companies in Israel, including almost half of those listed on the NASDAQ stock market. Furthermore 74% of managers in Israel's electronic industries hold Technicon degrees 17% of work in or have worked in start-ups and 25% have initiated a business.

## **2.2. Technology Transfer Organisations - \$20 million**

Traditionally universities have strived to achieve their two core missions, research and education. However, another mission, commercialisation, has emerged over recent decades. This third mission enables knowledge to be transferred out of the university with a commercial orientation, in order to provide a range of social and economic benefits to society. This led to the introduction of technology transfer offices (TTOs) that sit on the interface between university and industry and conduct commercial activities on behalf of the university.

TTOs have proven to be an important contributor to the innovation eco system in Israel. It's no coincidence that Harvard and UCLA chose experienced Israelis to direct their technology-transfer offices (TTOs). Israeli TTOs have a remarkable track record of generating more revenue from IP sales than any other country.

“Universities are reinventing themselves as microenvironments for innovation and entrepreneurship. A university that can't demonstrate its impact on industry and the marketplace will become less relevant in the future,” says Benjamin Soffer, chairman of [Israel Tech Transfer Network](#).

This is an area in New Zealand where there is considerable room for improvement as the contribution of TTOs in New Zealand has been relatively poor. SNZP proposes actively encouraging the level of collaboration between Universities and business necessary to improve the contribution of TTOs locally through funding support of collaborative R&D projects. In turn this should greatly enhance their contribution to the NZ Innovation Ecosystem.

To this end SNZP will appoint an advisor / specialist in the establishment of successful TTOs to, in the first instance, assist with their application for funding and collaboration with suitable industry partners. If a collaboration project looks to be feasible and satisfy requirements of the policy then the advisor would provide assistance in structuring activities in alignment with best practice and most likely the institutions particular research strength.

## **2.3. Innovation agents & networks - \$50 million:**

Based on a highly successful program in Denmark, this initiative is founded on the principle that specialised innovation agents, specifically trained and selected for their innovation expertise are better placed to offer innovation support than business advisors who are typically more geared towards management consultancy.

We propose that initially a pilot program employing 5 trained innovation agents is launched in selected regions to test and refine the model as well as allowing time to build internal expertise. It is envisaged that this will be expanded to 30 trained innovation covering the entire country over the course of 3 years.

The program's aim is to strengthen innovation in SMEs through linkages with research organisations. The trained innovation agents will carry out a free innovation diagnostic analysis 'The innovation check' of NZ SMEs and provide support towards the implementation of the proposed actions.

The basic approach of the scheme is as follows:

- SMEs are identified and contacted by the innovation agents, although SMEs can also request assistance from the program directly or be referred to it by other business advisory services.
- An innovation agent carries out an in-depth innovation diagnostic analysis of the small business based on a standard methodology and field visits with managers and relevant workers.
- The innovation agent then submits a short report to the participant SME which summarises the main innovation related challenges and opportunities and proposes possible solutions, including a list of relevant research organisations, external experts and public innovation support schemes which can contribute to the future innovation endeavours of the company.
- The innovation agent can further support the implementation of the suggested actions by directly establishing contacts with relevant knowledge institutions or experts or by helping the SME to apply for public support schemes.
- Finally, the innovation agent carries out an assessment of the innovation diagnostic analysis to which participating SMEs are required to provide feedback.

Companies recruited in the scheme should fit with at least two of the following three criteria:

1. Have at least 10 employees;
2. Be at least two years old and have positive financial accounts;
3. Have expressed an interest for knowledge-based support and show some innovation potential.

The program addresses many of the barriers to innovation experienced by SMEs, such as lack of knowledge about the innovation process lack of capacity to undertake innovation, and limited awareness of external innovation services. Evaluations suggest that it has been successful in effectively boosting innovation activities in Danish SMEs.

Since 2010, more than 2,300 innovation checks have been carried out; more than 60% of participating SMEs have subsequently launched technological and non-technological innovation projects; Almost 60% have established relationships with private or public innovation sectors such as cluster organisations, private consultants and universities: and as many as 85% state that they would recommend the scheme to other small or medium enterprises.

**Innovation Networks:** Alongside the other initiatives, it would be appropriate to expand support for collaborative innovation in small non high technology firms, since these rarely have the resource to invest in long term uncertain innovation projects on their own. The innovation networks program from Denmark offers a good example of a network-based approach to innovation in SMEs.

Innovation networks are best defined as a framework for cooperation, knowledge sharing and knowledge development between companies, knowledge institutions and other relevant players within a sector or a professional or technological area.

We would advocate for government funded innovation networks to be established to include: Agriculture, Food Processing, ICT, Green Energy, Communication Technology, Medical Technology, Manufacturing and Service Industries.

A key feature of the proposed innovation networks is that they will provide both technological and non-technological innovation support to companies, i.e. they will address managerial and organizational issues as well as product and process development. Furthermore, it is envisaged that some of the networks are focused on sectors that are largely based on non-technological innovation. For example, a network will be established for service companies providing access to the latest knowledge in the field of innovation in services.

The approach to establishing the networks is as follows:

1. An open competition for funding will be launched by the government
2. National partnerships will be formed and will submit applications for government funding. It is intended that the partnerships will consist of research organizations, knowledge institutions and key actors such as leading companies, industry organisations trade unions and regional or national authorities.
3. The winners of the competition will be selected to be innovation networks only if there is considerable growth potential within the selected focus area. Moreover, there must be a significant target group of companies and knowledge institutions that have substantial expertise in the area concerned.
4. The selected partnerships will establish the secretariats of the innovation networks and launched their activities.

The main responsibilities of the networks are to implement knowledge dissemination activities, kick start joint development projects and provide innovation services to SMEs for example by helping them with applications for funding and support from other public innovation programs.

The government will provide up to 50% of total funding while the rest of their respective budget is to come from private companies, regional funds etc. Companies also have to finance their own participation in the activities of the innovation networks and in some cases are expected to pay a membership fee. Public funding is therefore mainly used to cover the management costs of the networks.

**Factors for success:** In Denmark, over any one year, over 6,000 companies will participate in activities organised by the innovation networks: of them two thirds will typically be SMEs. The networks in place collectively contributed the introduction of innovations in 780 companies. 72% of which were small companies with less than 50 employees. The positive contribution of the innovation networks is also supported by the evaluation of cluster policy in Denmark which showed how the probability to introduce innovations by network companies is 4 times higher than in similar firms which do not participate in networks.

A key success factor has been the ability of the innovation networks to connect actors in highly specialized areas across different regions and clusters in Denmark. This makes it possible to exploit innovation and growth potential in areas where there is no critical mass of knowledge at the regional level. Moreover, the innovation

networks have helped create a one stop shop for access to commercially relevant knowledge in very specifically focused areas thus improving the functioning of the national innovation system.

### 3. Financing

#### 3.1. Expansion of VC Fund Industry - \$250 million

When we apply the lessons learned from other successful national innovation strategies to a New Zealand context it is clear that a significant expansion of our VC Fund Industry is a crucial priority to providing the funding needed for the scale and scope of innovative programs required.

An example of the potential of such an initiative is provided by Israel's Yozma Venture Capital Fund. This is a co-investment platform designed to attract foreign investment. It played a pivotal role in addressing the realization that, similarly to New Zealand's, Israel's citizens were able to develop innovations but were weak on entrepreneurial skills. The solution was to stimulate a private sector venture capital industry that would bring 'smart money' to the table. Not only investment capital but also management advice and mentoring and develop strong ties with foreign financial markets, the commercially savvy technology-based venture capital industry abroad.

The structure of this proposed initiative will be similar to that successfully established in Israel. \$250,000,000 will be invested by the government at the outset to launch the fund. The objective will be to invest in 10 new private venture capital funds. Each fund is to have three partners:

1. A NZ venture capitalist;
2. A foreign venture capital firm and;
3. A New Zealand investment company or bank.

The objective is to attract financing in New Zealand companies at the same time as further nurturing the domestic private venture capital industry by offering matched co financing at a rate of 50/50 with the obligation to invest in start-up and early stage [cleantech](#) companies in New Zealand.

Ten hybrid public / private funds would be established over a three year period. Each would be capitalised with around \$50,000,000 (\$25,000,000 from each party). The government will retain a 40% equity stake in the funds, which the private partners will have the option to buy out after five years if the fund is successful. This provides a particularly attractive deal for foreign venture capital firms as well as providing an exit strategy for the government. In Israel the buy out options were exercised in most cases leading to the almost complete privatisation of the venture capital funds within 10 years. In parallel, the government created an additional fund through which it could invest directly in further technology ventures.

It is expected that this initiative will, as it did in Israel, also develop close working relationships with several of the leading academic institutions and technology incubators. Some of the most promising companies in the Yozma portfolio have come directly from those institutions.

**CEO Club:** Another initiative adopted from Yozma is the development of a CEO Club. This was a very successful avenue for involving senior executives and founders of successful enterprises in its activities and became a valuable source of deal flow.

Members of the club will add value in the following ways:

- Referring prospective deals to the group
- Providing additional reference during the due diligence process of new investment opportunities.
- Added value post investment to portfolio companies

### **3.2. SME Government Credit Guarantee Allocation \$500 million with target of leveraging \$4 billion in bank loans**

An initiative designed to ensure cleantech SME's have sufficient access to bank financing including longer term financing by reducing finance providers risk in doing so.

An SME finance guarantee scheme was introduced in April 2020 as a temporary pandemic measure. [In a recent NBR article](#) Dr Ben Fath from the University of Auckland Business School argues that a version of this should be made permanent to support capital investment. For example, R&D investment in expensive new machinery that can't be easily resold domestically if it doesn't deliver hoped-for gains.

The current default rate on SME business loans is tiny – around 1-2%, Fath added. “Every country in the OECD has a loan guarantee scheme except New Zealand and Australia – now we have one as a bandage. But couldn't businesses use it as a strategic tool so they can use their R&D spending more effectively?”

Under the current temporary scheme, businesses with annual revenue between \$250,000 and \$80m can apply to participating banks for loans up to \$500,000 for up to three years. Government will guarantee 80% of the risk, with the banks covering the remaining 20%.

SNZP is proposing the introduction of a more permanent Government Credit Guarantee (GCG) scheme structured as follows:

#### **Eligibility**

Small (fewer than 20 employees) and Medium (20 to 49 employees) sized businesses in the Cleantech sector.

#### **Types of loans guaranteed**

- The new business loan (businesses that have not yet started operation)
- The investment loan (investment in plant and building, renovations, equipment, information technology and means of production)
- The working capital loan (cash flow management and cash shortfall)
- The export loan (loan for up to 5 years to cover export activity)

### **Guarantee coverage**

The Government Credit Guarantee (GCG) fund guarantees up to 70% of loan value to existing SME's and 85% for loans to new businesses. In addition, it will guarantee 60% of second and third loans but may request a deposit of 15% - 25% to reduce exposure.

### **Nature of loans**

The maximum size of a guaranteed loan depends on a firm's turnover. For existing firms with a turnover of up to \$1.5 million and firms which have not yet started operations, the maximum guaranteed loan is \$50,000. For businesses with turnover of up to \$3 million, the maximum guaranteed loan is \$250,000. Guaranteed loans for firms above this threshold will be set at 8% of their turnover up to a loan of \$4 million. The guaranteed loans are interest free for 6 months and are offered at market interest rates. Loans can extend over 5 years with investment loans extending to over 12 years

### **Application and selection**

Implementation will be outsourced to selected consulting firms contracted to act as intermediaries between applicants and banks. Applications are assessed based on an in depth financial and operational analysis.

## 4. Access to markets

### 4.1. SME Public Procurement Program - \$20 million

In New Zealand each year, government agencies spend approximately \$41 billion, around 18% of GDP, procuring a wide range of goods and services from third party suppliers. Government also spends approximately \$330 million each year managing the Crown's property portfolio. Improved access to this market by local business would help significantly in providing the impetus and additional market opportunity to drive innovation. To that end The Ministry of Business, Innovation and Employment (MBIE) has released a draft version of the fourth edition of the Government Procurement Rules for consultation.

The proposed amendments to the Government Procurement Rules reflect Cabinet's desire to enhance the effectiveness of government procurement and to leverage additional outcomes for government contracts in line with broader Government policy objectives (e.g. to increase businesses' access to government procurement and to provide employment opportunities to targeted groups).

SNZP proposes the following initiatives are included in the proposed amendments:

1. **The use of set-asides:** One approach to increasing public procurement from SMEs is the use of set-asides, i.e. policies that earmark a certain volume of public procurement contracts to SMEs. NZ does not operate set asides for small businesses or new businesses. This is in contrast to various other OECD countries for example The United States, the Netherlands, Mexico and Slovenia where there are clear targets for the involvement of SMEs in public tenders. In the USA, for example, the Small Business Administration have set asides that reserve 23% of direct contracts and 40% of subcontracts to SMEs whilst in Mexico there is a set aside of 50% of the volume of low value contracts. Set asides or targets for the value or volume of contracts from SMEs or new and young firms could be introduced as an important part of the public procurement policy framework in New Zealand.
2. **Improvement in e-Procurement:** Another policy area in which there is much room for improvement is in the current New Zealand system of e-procurement. This would facilitate the access of SMEs to procurement opportunities by reducing the bureaucracy and fixed costs associated with the public tendering process. The case of Korea illustrates how the complexity of the tendering process can be reduced to support SMEs.

SNZP proposes that we seek to adopt an e-procurement system with the same functionality as that in Korea (the KONEPS).

The KONEPS is an integrated e-commerce marketplace that has given Korean SMEs increased access to public procurement. All public tender notices are published on KONEPS, which uses an integrated system of e-bidding, e-ordering, e-contracting and e-payment. It is used by 45,000 government agencies and 244,000 registered businesses. In 2012 66% of all Korea's public procurement budget of USD 100 billion went through KONEPS. The advantages of the system to Korean SMEs is that it allows information to be swiftly accessed, eases searching of tender opportunities and reduces administrative transaction costs.

It is estimated that the Korean system has led to an estimated USD 6.6 billion in transaction cost savings to the private sector. Because the system offers end to end functionality and an online marketplace where sellers and buyers can come together, the number of SMEs involved in KONEPS doubled over the last decade and the SMB share of the online marketplace for government goods tripled, increasing from around 1/4 in 2006 to 3/4 by 2010.

To support awareness of the new system, it is proposed that the government runs nationwide training sessions, has a web-based call center and markets the services to both government departments and SMEs.

International evidence also suggests that small enterprises are more likely to apply for and win small size contracts and these are often tendered by local municipalities. Thus, there is scope for the national governments to set the example by launching an e-procurement system which can subsequently be integrated by local authorities posting their own tenders.

Additional components of an effective system to promote public procurement from SMEs may include training and support to government procurement officers in how to ensure that their procurement processes are open to SMEs and online guidance for SMEs in the form of a step by step guide for contracting with the government.

#### **4.2. Internationalisation programs - \$60 million**

New Zealand Trade & Enterprise (NZTE) provide assistance to export oriented clients by arranging international exhibitions for New Zealand companies. Its activities include intelligence on foreign markets, market research, market counseling courses and training on international marketing. It also provides assistance with meeting international standards, identifying local agents and distributors and advice on trade agreements and logistics. In addition, it offers training, consulting and guidance for first time and small exporters.

While NZTE offers export training, it tends to be in the form of one off courses and seminars. A more comprehensive approach would consist of the development of activities along the different stages of export promotion. This would range from:

- Awareness raising events among groups of companies potentially interested in exporting to;
- Export readiness courses designed to instruct new and occasional exporters on how to export for the first time or expand export volumes and progressing to;
- Advanced bespoke training for more experienced exporters.

Consultancy and mentoring of this kind are common types of support for high growth potential SMEs across a range of OECD countries such as Canada, the United Kingdom and Denmark.

Of these Enterprise Ireland, the main government SME and entrepreneurship support agency there, provides an ideal model for addressing the export development needs of SMEs through a range of activities tailored to the different stages of export activity. We have consequently modelled SNZP's proposal on theirs, as an extension to the services currently offered by NZTE. These are detailed in the following:

## 1. Eligibility

To be eligible for the following proposed programs firms should have between 10 – 250 employees, be operating in the cleantech space and have an established trading record. Funding is awarded on the basis of the need for financial support for the project, potential employment and sales growth, previous funding provided to the company and its regional location.

## 2. Support

The support offered will span the stages of regular Export Awareness seminars for potential exporters, Exploring Export workshops for pre-exporters, building the export skills and capacity of new and currently exporting SMEs, and supporting new and existing exporters to undertake market research on new export markets. Overall there will be a suite of program support available with specific activities aimed at particular types of exporters and potential exporters.

Programs will include:

### **4.2.1. Stage 1 support - Getting Export Ready**

The getting export ready program will be aimed at pre export and early stage exporting companies. The program will provide practical measures for new and early exporters focusing on export readiness, the importance of research, developing a value proposition and the skills of export selling. It will offer workshops, seminars and training; Mentoring support; Access to market information; Online access to how to guides: links to relevant information, and self-assessment tools in templates ; Access to a get ready to export help desk ; Access to advice from successful exporting companies; and help with preparing an export plan as well as access to a range of available financial support. To promote the program and encourage SMEs to explore an export path to growth, a series of seminars will be conducted in locations around the country.

### **4.2.2. Stage 2 - First Flight Program**

The first flight program will help first time exporters and currently exporting SMEs manage the risk of entering new markets. The program will offer a systemic market readiness assessment to help SMEs research, prepare and develop an export strategy. This program is specifically targeted to high growth potential startups that want to learn about the key factors that will contribute to the success of exporting activity and build their export development skills and capacity. Participating enterprises will attend a full day introductory workshop and will then be matched to an experienced business mentor who will assist them in undertaking an export readiness assessment. and the development of a first flight action plan (i.e. export strategy). The workshops and mentoring are offered free of charge.

### **4.2.3. Stage 3 - Market Access Grant**

The market access grant will provide up to 50% of \$150,000 (or \$75,000) in eligible costs, met by a firm to undertake an intensive six month market research project to examine a new export market or the potential for introducing a new product or service into an existing export market. Eligible costs include salary costs of an employee placed in the market for up to six months, in-market consultancy fees and rent, and marketing costs up to the time of market launch.

