Asia-Pacific
Economic Cooperation

Advancing Free Trade
for Asia-Pacific Prosperity

# APEC Workshop on Catalysing the Growth of Inclusive and Sustainable Start-up Ecosystems

## APEC Economic Committee

February 2022

Asia-Pacific
Economic Cooperation

# APEC Workshop on Catalysing the Growth of Inclusive and Sustainable Start-up Ecosystems

**New Zealand | 29 September 2021**

**APEC Economic Committee**

**February 2022**

APEC Project: EC 02 2021S

Produced by
Dana Goodacre
Ministry of Business, Innovation and Employment, New Zealand

For
Asia-Pacific Economic Cooperation
Secretariat 35 Heng Mui Keng Terrace
Singapore 119616
Tel: (65) 68919 600
Fax: (65) 68919 690
Email: info@apec.org
Website: www.apec.org



APEC#222-EC-04.1

# Contents

Contents ..... 3

Summary ..... 5

Introduction ..... 6

Workshop ..... 7

Session 1: Why are startups important? ..... 7

Policy Research – Startup Genome ..... 7

Accelerating Māori Enterprises – Kōkiri Māori Business Accelerator ..... 9

Round table discussion ..... 11

Session 2: What policies can spur start-up growth and inclusiveness, hand-in-hand with the private sector? ..... 13

Role of Government – Startup Genome ..... 13

Breakout discussion ..... 15

Session 3: Cleantech in start-up ecosystems. ..... 17

Cleantech in startup ecosystems – Cleantech Group ..... 17

Round table discussion ..... 18

Key findings ..... 19

Annex: Further reading ..... 20

# Summary

On 29 September 2021 officials from New Zealand's Ministry of Business Innovation and Employment (MBIE) chaired an APEC Economic Committee workshop on Catalysing the Growth of Inclusive and Sustainable Start-up Ecosystems. This workshop was facilitated in partnership with Startup Genome. The workshop was attended by around 80 participants from 16 APEC economies, representing a mixture of public and private sector organisations.

This project sought to bring together international experts on startup ecosystems, public sector policy makers, investors, and intermediaries to consider how innovation can be nurtured to kick-start inclusive and sustainable growth that can be enjoyed throughout the region.

It considered the overall impact of start-up ecosystems, identified key policies to promote inclusive and sustainable ecosystem growth, and the specific contribution made by cleantech startups. The Honourable Dr Megan Woods, New Zealand Minister of Research, Science and Innovation, provided the opening address. Startup Genome CEO, JF Gauthier, provided context setting analysis on supportive policies. Aubrey Te Kanawa from Kōkiri, New Zealand's Māori business accelerator, gave a presentation on achieving inclusiveness for Indigenous Peoples in startup ecosystems. Todd Allmendinger from Cleantech Group presented on how policy makers could support cleantech startups as a measure towards sustainability objectives. Participants from Canada, Russia, Singapore and the United States also led discussions and facilitated breakout rooms.

The workshop identified a number of potential policy levers which could help startup ecosystems achieve greater and more positive impact, including:

- Reliable data on startup ecosystems
- Public-private partnership
- Encouraging local collaboration to address global challenges
- Demand-side policy
- Coordination within governments
- Continued international discussions on supporting startup ecosystems.

Continued collaboration across APEC economies is encouraged to catalyse the growth of startups with global impact, and to create the critical mass required to address inclusion and sustainability challenges.

# Introduction

In the context of this APEC workshop, startups are defined as young, technology-enabled businesses with a scale-able business model. The evidence suggests that such businesses disproportionately create high-value jobs and adjacent employment (estimates are that five other jobs are created with every technology job), help commercialise science and research assets, and contribute to improved productivity, especially as they "scale up". Many founders of such firms look to create "impact" and can offer innovative solutions in terms of new goods and services which can contribute to social and environmental wellbeing.

However, value creation by startup ecosystems remains concentrated, with about 74 per cent of the global value produced limited to 10 top performing city-regions. APEC economies host seven of these ecosystems (Silicon Valley, New York, Beijing, Boston, Los Angeles, Shanghai and Seattle). There are also a number of early stage, but growing, startup ecosystems within APEC.

Analysis suggests that several barriers can disrupt the flow of human and financial capital towards innovation, slowing the emergence of entrepreneurs, and the establishment and growth of startups. Contributing factors can include poor connectivity between stakeholders, a lack of understanding and capability around new or emerging innovative technologies, and how the local culture handles risk. This workshop sought to better address these barriers and explore how we can address them to unlock growth of startup ecosystems throughout the APEC region.

The objectives of the discussion were to:

1. Explore the role of government and the private sector, and how they can work together to encourage startup ecosystem growth.
2. Identify which policies can make most impact in triggering self-sustaining growth of startup ecosystems.
3. Discuss how governments can ensure benefits are balanced, secure, sustainable and inclusive, both within and across ecosystems.
4. Identify opportunities for future collaboration between economies, and the private and public sector.

The economic challenges and technological shifts triggered by the COVID-19 pandemic make this a particularly critical moment to support emerging and developing startup ecosystems and harness their growth to accelerate recovery. At the same time some regions may be rapidly left behind if action is not taken to make them more attractive and competitive. This is a unique opportunity to rebuild our economic communities with a stronger focus on inclusion, by encouraging visibility and wider market access to connect remote and emerging startup ecosystems, and by harnessing the untapped talent of women, Indigenous Peoples and other disadvantaged communities.

# Workshop

On 29 September 2021, New Zealand held a three-hour online APEC workshop on catalysing the growth of inclusive and sustainable startup ecosystems.

The workshop was chaired by Jess Robertson, Manager of the Innovation Policy team at MBIE, New Zealand. It was facilitated in partnership with Startup Genome, an innovation policy advisory and research firm, that has advised more than 40 governments on startup ecosystem development in the past year. The Honourable Dr Megan Woods, New Zealand Minister of Research, Science and Innovation, gave the opening address. The workshop consisted of three sessions:

1. Why are startups important?
2. What policies can spur startup growth and inclusiveness, hand-in-hand with the private sector?
3. Cleantech in startup ecosystems.

## Session 1: Why are startups important?

The first session considered the economic impact of startups, particularly where they can make a positive and inclusive impact. In this session, JF Gauthier presented on Startup Genome policy research and Aubrey Te Kanawa, Programme Manager at Kōkiri, New Zealand's Māori business accelerator, gave a presentation on achieving inclusiveness for Indigenous Peoples in startup ecosystems. The presentations were followed by a round-table discussion where speakers from Canada, Russia, Singapore and the United States shared their successes and challenges in achieving impact.

### Policy Research – Startup Genome

*JF Gauthier, Founder and CEO, Startup Genome*

To identify trends and factors in startup ecosystem growth, Startup Genome evaluated survey results collected from startup founders, alongside web data, information on patents, and ecosystem performance indicators. JF Gauthier presented key findings based on this research:

- **Startups are critical to recovery from economic shocks – economies need to learn from each other to make the most of their potential.**

  Large established corporations have been losing employees over recent years, while almost all job creation is concentrated in new companies. Startups kept growing through the last recession and will be critical to overall economic recovery from the COVID-19 pandemic. However, this job creation is very concentrated, and a wider set of regions could benefit from startup growth.

- **Resources and multipliers are the success factors which determine economic impact in startup ecosystems**.

The startup success rate can be visualized as a funnel (Figure 1), shaped by **resources**, which are proportional to ecosystem size, and **multipliers**, such as connectivity, which influence startup success rate.

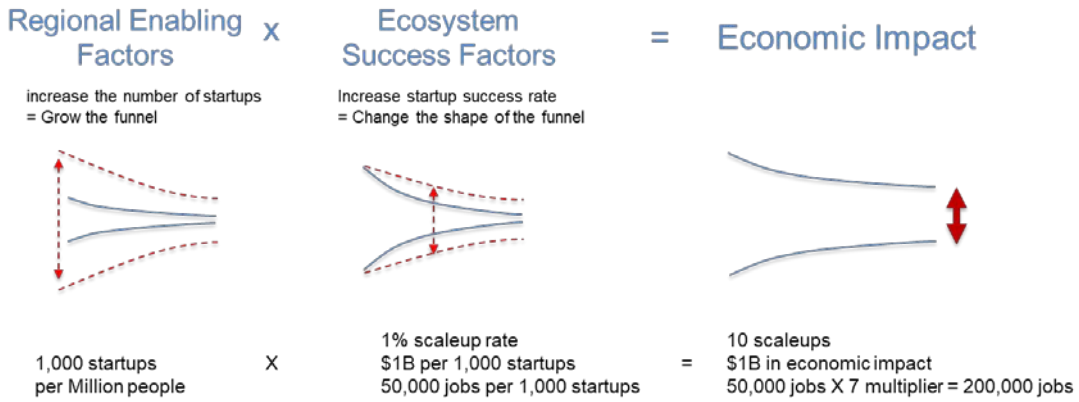


**Figure 1** Startup Genome's startup ecosystem development model, where economic impact of startup ecosystems is proportional to the number of startups and their success rate.

- **Evolution of startup ecosystems can be divided into four distinct stages.**

  Activation, Globalisation, Attraction and Integration (Figure 2).

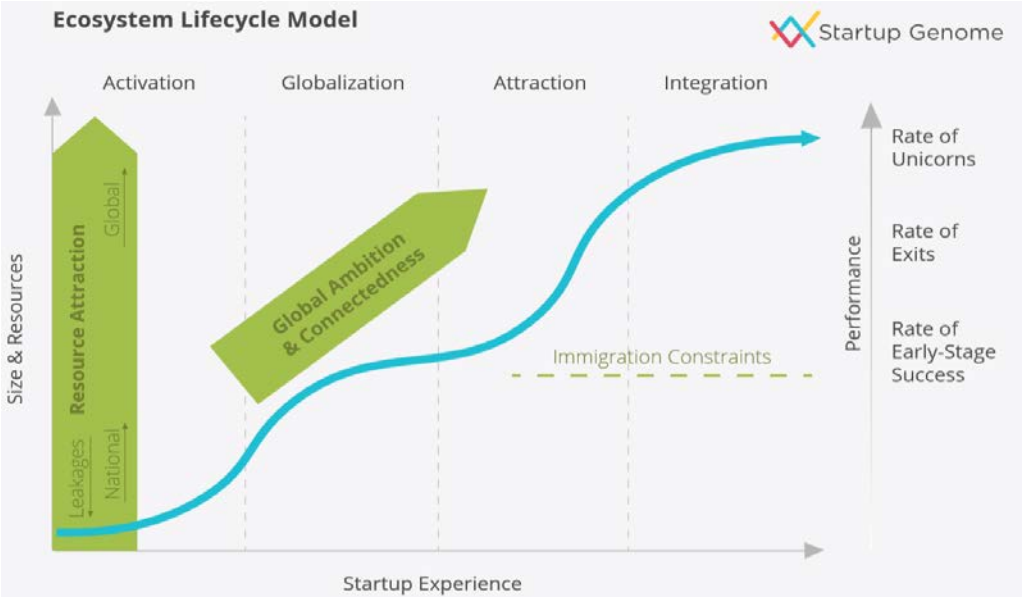


**Figure 2** Startup Genome's ecosystem lifecycle model.

- **In the activation phase, it is important to focus on getting critical mass.**

  The evidence suggests that, until a region has 600-1,000 startups it cannot create scaleups at a predictable rate. Community is the first goal – an ecosystem needs founders and angel investor groups helping each other. Inclusiveness is also important. For example, if women are excluded, only half of the population is taking part.

- **Once this foundation is established it is important to connect globally**

  Global connection is vital for knowledge exchange between entrepreneurs, of what has failed and what has succeeded. With success, an ecosystem starts attracting and integrating regional and global talent.

## Accelerating Māori Enterprises – Kōkiri Māori Business Accelerator

*Aubrey Te Kanawa, programme director, Kōkiri Māori Business Accelerator*

Kōkiri is New Zealand's first indigenous themed startup accelerator that supports impact-positive early-stage Māori-led enterprises on a journey to sustainable business growth. Aubrey Te Kanawa presented on lessons learned in the development of the Kōkiri:

- **People and networks are vital for startup growth. Indigenous Peoples need to be integrated into incubator and accelerator networks.**

  Indigenous Māori make up 17 per cent of New Zealand's population, but they have a higher unemployment rate than the general population and have not been participating in traditional startup incubators and accelerators. Capital is available in New Zealand, but it is not easily accessible by indigenous communitie. Kōkiri have been looking at how to address this.

- **It is not enough just to label a program "indigenous" – Kōkiri have adjusted their 14-week accelerator program to work in an indigenous context.**

  Indigenous Peoples can think on a different timescale and may have a different attitude toward making profit, instead thinking about impact, the environment and cultural loss. Recognising that Indigenous Peoples are not often born into entrepreneurial families, Kōkiri simplify business terminology to make entrepreneurship more accessible. For example, many participants do not understand what validation is when first starting out in the Kōkiri pre-accelerator. Kōkiri introduces these concepts at the early stage. They describe the startup development process to be like starting a fire: it involves collecting resources, building a prototype, providing a spark and fuel, and keeping it going (Figure 3).

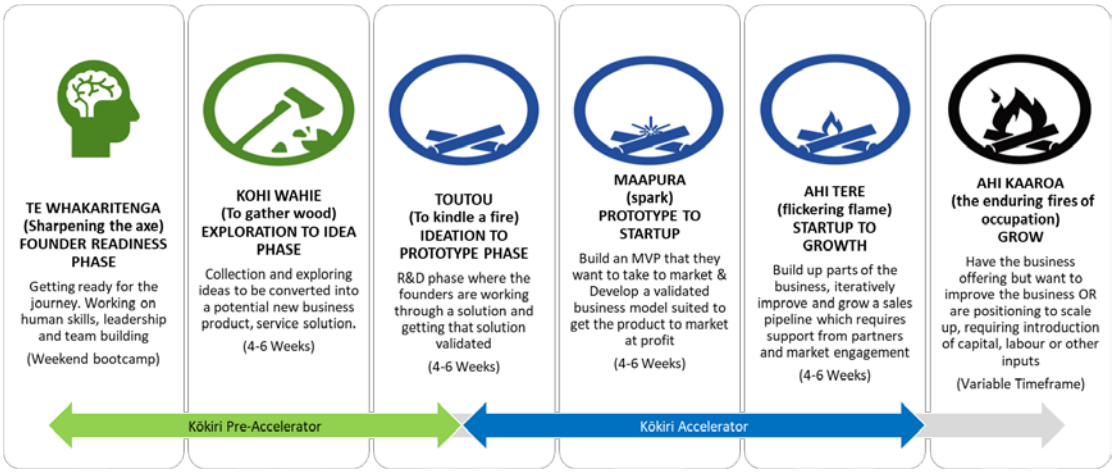


**Figure 3** The Kōkiri startup development process.

- **Flexible working arrangements can make programs more inclusive and accessible.**

  To move diverse participants through the program at the same rate, one solution has been to break the program up into "sprints" (short, intense periods of work). The program is punctuated by in-person bootcamps and can easily switch to an online context – this is especially helpful for those Māori who live in rural areas, and who cannot afford to leave their family for an extended period.

- **Context matters – An effective program will build up resilience of startups to face the local culture.**

  New Zealand investors have a very different culture and approach compared to investors in other economies. Accelerator programs need to broker relationships in the local context, teaching participants how to approach investors, but also educating investors on the importance of local cultural values.

- **A startup ecosystem depends not just on the players, but on the infrastructure behind it.**

  Governments need to consider how coordinated their ecosystems are, and how this supports success.

## Round table discussion

| *Michelle Sinclair – Innovation Science and Economic Development, Canada* | *Tina Metzer, Vice-President at the National Center for Resource Development and Co-Founder of RuralRISE, United States* |
|---|---|
| **What does "impact" mean to you?**<br><br>Impact within a startup ecosystem comes not just from the creation of new businesses, but from new businesses with high growth potential. While growth is important, it is also important not to leave anyone behind. | **What does "impact" mean to you?**<br><br>Impact of startups in rural areas can be even stronger than in cities, because innovation is often driven by necessity. They solve problems, create jobs and provide an example of success. Once there is a culture of innovation, people decide to stay in the community. |
| **Key policy that has worked well:**<br><br>In 2016, the Canadian Government decided to take a new approach, where they invested more substantially in skills and science. They now have over 1,000 programs to support this pipeline, including support for women, Indigenous Peoples, and other disadvantaged groups. | **Key policy that has worked well:**<br><br>Rural communities do well when they stop chasing big companies, and instead realise the value of startups and change their policies to support development of their startup ecosystems. It is important that people are encouraged to help each other, e.g. by sharing knowledge of who to contact for capital. |
| **Key challenge in your economy:**<br><br>With over 1 million SMEs, Canada has succeeded at creating start-ups, but creating businesses which continue to grow at scale remains a challenge. There is a need to create a government-wide coordinated approach.<br><br>Over the past few years, the Government has tried to address this gap. A key part of the process was asking businesses owners how to support them and make government support more accessible. In 2019 they launched the Accelerator Growth Service to provide a coordinated approach, which has been very successful helping businesses over COVID-19. | **Key challenge in your economy:**<br><br>One key challenge for rural communities, which were hit really hard in pandemic, is the lack of broadband. Locals might have the best idea, but startups need broadband that is affordable and reliable. There is no simple solution, but it must be addressed. |

| *Jingxi Yew – Deputy Director of Startup Development, Enterprise Singapore, Singapore* | *Maxim Romanov – Deputy Vice President for International Development, Skolkovo Foundation, Russia* |
|---|---|
| **What does "impact" mean to you?**<br><br>Enterprise Singapore looks at ecosystem impacts, impacts on traditional businesses, and growth in jobs and wages to characterise Singapore's startup ecosystem. | **What does "impact" mean to you?**<br><br>The Skolkovo Foundation started a government project 10 years ago, aimed at moving Russia from an economy based on exporting raw materials to a more technology-driven economy, by boosting innovative entrepreneurship. |
| **Key policy that has worked well:**<br><br>The Startup SG accelerator program, which supports startup incubators and accelerators through partnership, has established around 200 startups. Public-private partnership was key in the program's success. | **Key policy that has worked well:**<br><br>This project has passed several milestones since its inception. They have created a unique ecosystem, within a 400-hectare startup park, where people working on many different projects are part of a community, having lunch together and collaborating. |
| **Key challenge in your economy:**<br><br>A key challenge for startups in Singapore is access to talent. Singapore is a small economy and is host to some big companies, so smaller companies may find it hard to compete and secure the talent they need. | **Key challenge in your economy:**<br><br>The Skolkovo Foundation has over 3,000 startups in their pipeline. The supply of innovative solutions is there but creating demand within industry remains a challenge.<br><br>Now the Foundation are shifting their focus away from a development function to act more as a service company. They have special acceleration programs, where startups are selected by independent experts, who confirm that the businesses are innovative, the team is capable, and idea is commercially viable. They provide business angels and minority shareholders with tax deductions for their startup and capital support up to 50 per cent of their investment value. They also provide technology scouting services for large industrial companies to match supply with demand. |

# Session 2: What policies can spur start-up growth and inclusiveness, hand-in-hand with the private sector?

The purpose of this session was to identify the most effective policies that support startup ecosystems and discuss how they could be prioritised and sequenced. JF Gauthier gave a second presentation on the role of government in startup ecosystems, which was followed by a 30-minute discussion in six breakout rooms where participants considered the following challenges facing start-up ecosystems:

- Access to capital
- Talent pool development (entrepreneurs, technical, growth)
- Local community and culture
- Global Connectedness and market reach
- Support Organizations: portfolio, quality, sustainability
- Foundation: digital infrastructure and regulatory framework.

Participants also explored how such challenges can be addressed in a way that also supports inclusion and sustainability, with regard to:

- Gender diversity
- Supporting vulnerable communities – especially indigenous communities
- Rural economic growth
- Environmental sustainability
- Founder/team wellbeing.

## Role of Government – Startup Genome

*JF Gauthier, Founder and CEO, Startup Genome*

Startup Genome scored 30-40 cities on their early stage and globalised ecosystems. Some cities, such as New York City were found to have increased their scores more than other cities. To understand why these cities were able to outperform other ones, Startup Genome quantified the types of policies their governments applied and identified key policy tools used to catalyse growth of startup ecosystems:

- **Governments can promote ecosystem growth in a supporting role alongside private actors.**

  Governments can help take ecosystems from 0-1 so that the private sector can multiply them.

- **Rather than just providing funding, it is important for governments to understand the funding gap**

  Before they introduce new policies, governments are first encouraged to develop a system to quantify the gaps in the ecosystem (Figure 4), to focus on what the private sector cannot do by itself.

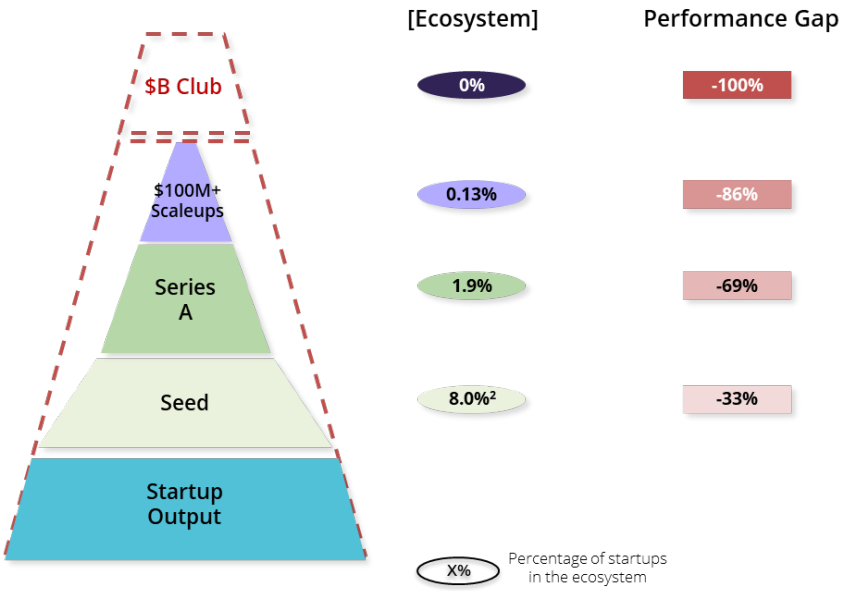


**Figure 4.** Breakdown of the funding gap in a startup ecosystem, to identify stages where there is too fast an attrition rate.

- **It is important for governments to connect locally and globally with stakeholders to better understand how they can then play a supporting role.**

  Governments could survey entrepreneurs and get consensus with the community on priorities before moving forward and designing policies in isolation.

- **Success depends on more than just capital.**

  Startup Genome has observed lower rates of exits when angel investors are replaced by public funding. Governments need to act holistically – everything is linked, and startup quality (capability, connectivity) also matters. Angel investors play an important role in starting fast growth – they know where to target investments, and they can provide peripheral benefits (networks, business advice) that government cannot offer. Governments can build talent and capability, such as through supporting incubators and accelerators, education, or immigration.

## Breakout discussion

| *The challenges* | *Key policy tools and impacts* |
|---|---|
| **Access to capital:**<br><br>Access to capital is challenging for deep technology startups (such as cleantech and biotech), as private sector investors may want to avoid the high risk and long timeframes associated with their commercialisation. | • **Policy tool:** Public-private co-investment and progressive procurement (procurement for social and public good).<br><br>• **Impact:** Deep technology startups are de-risked and can obtain the runway they need – e.g. government co-investments in battery technology.<br><br>• **Inclusion:** Access to capital can be a barrier to founder diversity. For example, female-led startups receive only 2 per cent of venture capital funding globally. Targeted investment for women and other under-represented groups can even out the playing field. |
| **Capability and talent:**<br><br>There is a disconnect between supply and demand for talent. Startups require a niche employee skillset (such as digital skills), which is not being satisfied by the home-grown or international talent pipelines. | • **Policy tool:** Public-private partnerships can identify skills needed in the startup ecosystem, which can then be addressed domestically (industry placements for students) or internationally (immigration, and visa support services).<br><br>• **Impact:** Local students could gain experience that matches startup needs, while skilled workers from overseas have a clear pathway to joining a startup.<br><br>• **Inclusion:** Targeted skill development programs for women and other under-employed groups could improve inclusion. |
| **Local community and culture:**<br><br>Emerging startup ecosystems lack a supportive community which provides role-models, mentors and business advice. Communities need to build a safe space where people from various backgrounds can develop and validate ideas. | • **Policy tool:** Pre-accelerators give startup founders access to experienced business mentors who can share their stories of success – and failure – as well as testing facilities which teach the importance of product validation.<br><br>• **Impact:** Startup founders can quickly learn how to navigate the startup ecosystem, have access to important networks, and create a minimum viable product which can be further developed and scaled.<br><br>• **Inclusion:** Pre-accelerators can increase inclusiveness of start-up communities by providing role models from diverse backgrounds, so that participants can see people like them who have been successful. |

| *The challenges* | *Key policy tools and impacts* |
|---|---|
| **Going global - connectivity:**<br><br>Startups look to go global from day one, however, global growth is limited by geographical distance, a focus on local issues, a lack of knowledge on international markets, and local competition between startups. | • **Policy tool:** Cooperate with global corporations to identify global issues and create incentives for founders to tackle them. Design funding programs to encourage collaboration between local startups, rather than competition.<br><br>• **Impact:** Local founders will be able to create networks and connections that enable them to easily tap into international markets, delivering benefits for their local economy.<br><br>• **Inclusion/sustainability:** It is important to apply this lens from the start. Critical scale for inclusion and sustainability initiatives can be reached through larger networks. |
| **Support organisations:**<br><br>Fully public incubators can struggle to 'pick winners' as they lack knowledge on specific startup sectors, but fully private incubators can struggle to meet inclusivity and sustainability metrics. | • **Policy tool:** Public-private partnership via Government-funded, but privately-run incubators.<br><br>• **Impact:** Privately-run incubators can match startups accurately with local markets and demand, while the government has the final say over funding decisions.<br><br>• **Inclusion/sustainability:** Governments can work selectively with socially responsible private organisations which address inclusion and sustainability priorities (climate change, poverty, etc.). |
| **Foundation:**<br><br>Lack of coordination between agencies makes it difficult for private actors, especially new startups, to navigate government systems. In early-stage ecosystems, the foundations (such as digital infrastructure) can also be lacking. | • **Policy tool:** Have one ministry to act as a coordinating body and build user-friendly consultation infrastructure to ensure proper public-private partnership. Investment in digital infrastructure – such as high-speed, reliable broadband – is also important.<br><br>• **Impact:** A central coordinator and removal of bureaucratic barriers facilitates the flow of information and trust between governments and the private sector, increasing efficiency.<br><br>• **Inclusion:** Investment in digital infrastructure in rural regions will enable those people to participate in the startup ecosystem without having to move to the city. |

# Session 3: Cleantech in start-up ecosystems.

**Clean technology**, in short **cleantech**, is any process, product, or service that reduces negative environmental impacts through significant energy efficiency improvements, the sustainable use of resources, or environmental protection activities.

This session focused on how the tools and strategies discussed in Session 2 could be applied to improve time to impact for Cleantech startups. It included a 20-minute discussion between the Chair, Todd Allmendinger of Cleantech Group, JF Gauthier of Startup Genome, and speakers from Canada, Singapore, Russia and the United States. The conversation was centred around demand-side policies and opportunities for international collaboration.

## Cleantech in startup ecosystems – Cleantech Group

*Todd Allmendinger, Head of Research and Consulting, Cleantech Group*

Cleantech Group provides research and consulting services, delivering data, insights, analysis and relationships for businesses in the cleantech sector. Cleantech spans several sectors, including:

- agriculture and food
- energy and power
- materials and chemicals
- resources and environment
- transportation and logistics.

Cleantech startups want to make systemic impact by creating new tech products to address environmental problems in the above sectors. However, this impact cannot be realised if there are no customers to buy these products and put them to use. Cleantech group has identified actions governments can take to stimulate demand for cleantech.

- **Most government policies are focussed on the supply side of the cleantech sector, without consideration for the demand side.**

  This focus has led to an oversaturation of the sector, with around 75 per cent of cleantech companies not returning cash to investors as they fail to find customers.

- **Policy strategies need to support demand-led programs in collaboration with global corporations and investors (demand owners).**

  Governments can address this market failure by surveying demand owners to create a product-market fit or by developing progressive procurement policies for niche cleantech products. Governments could seek feedback from demand owners as they develop innovation promotion programs (Figure 5).

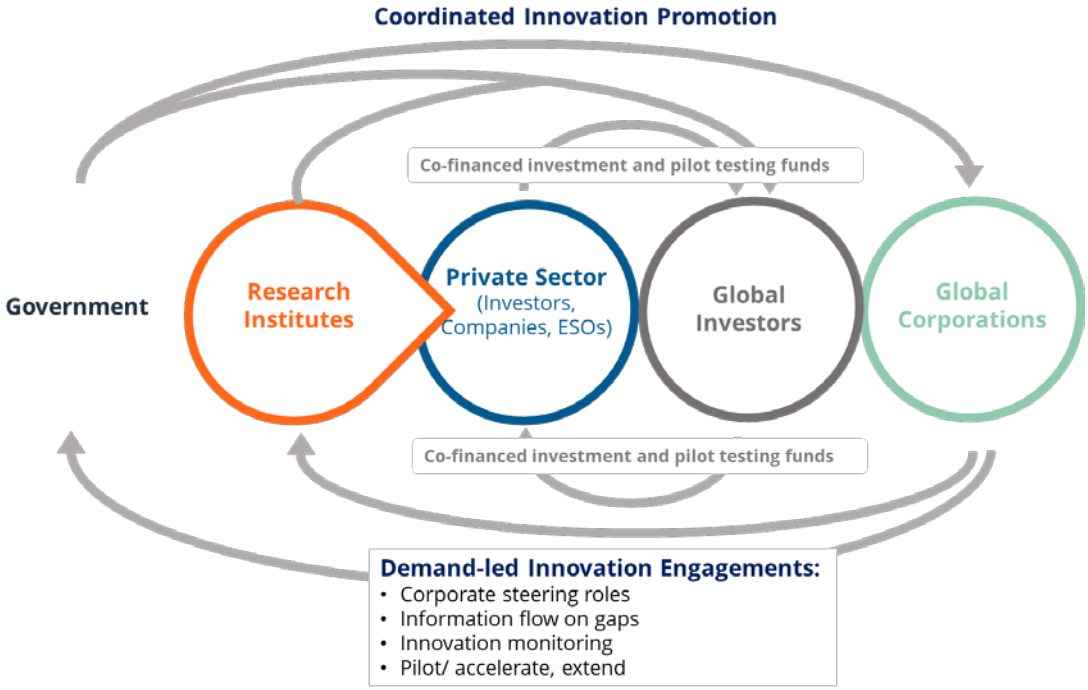


**Figure 5.** Model of how a government can engage in coordinated innovation promotion by working together with and gathering feedback from demand owners.

## Round table discussion

### *What can the government do to stimulate demand for cleantech innovation and improve time to impact?*

- Change metrics of success to include environmental factors, as well as economic factors.
- Develop progressive procurement policies for cleantech products.
- Develop public-private partnerships to create product-market fits, both domestically and internationally.
- Disincentivise alternatives to cleantech – such as oil and gas.
- Broaden definitions of cleantech so that policies include all innovative products that mitigate negative environmental impacts.

### *How can governments bridge the gap between supply and demand through international collaboration?*

- Develop global hubs for cleantech market knowledge and research.
- Work together to understand global value chains for clean technology.
- Create a map of problems economies want to solve and develop accelerator programs which specifically target these problems.

# Key findings

Overall the workshop identified some key policy tools to better support startup ecosystems:

- **Reliable data on startup ecosystems**

  Data collection enables governments to identify gaps in their startup ecosystems, so they can better target support. Policies can be tailored for the stage of the ecosystem's development according to evidence-based models. It is important to have effective consultation processes which engage investors and founders, to identify how best to support the private sector.

- **Public-private partnerships**

  These partnerships enable better data collection by governments, while also better supporting the startup pipeline – from capability development to meeting consumer demand. Partnership includes governments funding private startup incubators, pre-accelerators and accelerators, which have access to business expertise that governments do not have. These partnerships also enable a degree of influence for both parties on one another, with private actors having access to policy levers, and governments able to influence private investment to meet social and environmental objectives.

- **Encouraging local collaboration to address global challenges**

  Local competition between startups can hinder their growth on an international scale. Governments can cooperate with global corporations to identify global issues and design funding programs which encourage founders to collaborate in tackling these issues. By working together, startups can tap into international markets, delivering benefits for their local economy.

- **Demand-side policy**

  Startups are disruptive companies, which makes them risky to invest in. Effective policy strategies go beyond startup creation and help create demand for innovation by supporting demand-led programs in collaboration with global corporations and investors (demand owners). Governments can de-risk startups through co-investment or progressive procurement policies.

- **Coordination within governments**

  Economies could consider appointing a lead ministry or agency to act as a coordinating body, to align different functions, in support of startup ecosystems. This body will enable governments to better coordinate policies and provide startups a one-stop-shop for accessing government services.

- **Continued international discussions on supporting startup ecosystems**

  Discussions across APEC economies will help us to identify common issues, coordinate and evaluate policies, and understand international trends.

# Annex: Further reading

*Startup Genome*

- Website: startupgenome.com
- The Global Startup Ecosystem Report 2021: https://startupgenome.com/report/gser2021

*Kōkiri*

- Website: https://kokiri.nz/

*Cleantech group*

- Website: https://www.cleantech.com/

*Canada*

- Building a Nation of Innovators (part of Canada's current Innovation & Skills Plan): https://www.ic.gc.ca/eic/site/062.nsf/eng/h_00105.html
- Information about the Accelerated Growth Service (for serving scale-ups): https://www.ic.gc.ca/eic/site/117.nsf/eng/home