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# SCIENCE SYSTEM ADVISORY GROUP

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<b>TITLE</b>	Innovation Functions in New Zealand		
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<b>PURPOSE</b>	Provide further information on government-provided innovation functions in New Zealand and peer countries, highlighting relevant features of the New Zealand context, commenting on 'optimal' functions for New Zealand, areas for priority attention, and exploring some considerations for how these functions are delivered through government entities.		



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# Innovation Functions in New Zealand

Information for the Science System Advisory Group

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# **This slide deck provides information on government-provided innovation functions in New Zealand**

We build on the international comparison provided in SSAG-MBIE-017, regarding the nine types of innovation functions, by exploring the questions:

- What is most interesting about how these functions show up in NZ?
- What are the distinct features of the NZ context that have a bearing on these functions?
- Is there a set of optimal innovation functions for NZ?

Then we turn to questions of form:

- Which functions work more effectively if delivered in an integrated form, such as via a single government agency, and which functions work more effectively if kept separate?
- How does that map onto our current institutional landscape and compare to peer nations?

If requested, we can provide further information on:

- Options for change in Innovation Functions; and
- Options for the form of relevant entities.

## Key insights

The status quo can be improved. For some functions, we should consider adapting the international best practices. But in some areas we will need to carefully consider the NZ context.

NZ is not aligned with international best practice in a few innovation functions. Most clearly, these are **Strategic Policy** and **Innovation Infrastructure**. The weakness of these functions harms the efficiency of public investment in SI&T, and other innovation functions are made less effective. We would recommend dealing with these first before turning to other functions which could benefit from strengthening, like **International Connectivity**, **Networking** and **Regulatory Responsiveness**.

Some functions work better when delivered in a coordinated or integrated way with other functions, such as **Financial Innovation Support + Human Capital + International Connectivity**; or **System Optimisation + Networking**. Other functions are best separated (some aspects of **Networking** and **Financial Innovation Support**) or stratified in certain ways (**Strategic Policy** above the entities that deliver other functions).

Potential options for changing the suite of innovation functions range from low to high disruption. At the low end, stronger **Strategic Policy** and **Innovation Infrastructure** functions are low-hanging fruit to lift outcomes from all functions. There would be benefits from **integration of entities that deliver innovation functions**, but change would need to be carefully managed to minimise cost and disruption. Most other countries we studied, especially Israel, have higher integration and we can envision scenarios where NZ goes part way, as far, or further than our peers.

# Rationale for government support for innovation

- NZ needs to lift innovation and international connectivity to meet economic and other objectives.
- The opportunity to do this is through the ongoing development of emerging, technology-based industries to evolve a pipeline of innovative and internationally-competitive businesses.
- This is not possible without higher levels of innovation across our economy in order to develop new products and services.
- Government has a crucial role to play in ensuring that the science, innovation and technology system supports the development of innovative businesses.
- Government's role in innovation is to create the favourable market conditions, and correct the market and system failures, to enable innovation to occur.
- **Definition of innovation functions:** as for paper 1, these are the government functions that seek to create grow, attract and retain research and development (R&D) and other innovative activity by private firms.
- **Scope of innovation functions:** you are exploring options for an Advanced Technology Initiative – that is outside the scope of this paper. Here we focus on functions for innovation (private sector R&D + innovation), not other SI&T lenses like science or advanced tech.

# The nine Innovation Functions in the NZ context



**Strategic policy** – meaning, the degree to which there is coherence around, and prioritisation of, a national approach to innovation. This encompasses fore-sighting, setting national strategies about innovation, developing and evaluating policies, having delivery agencies with clear mandates and adequate resourcing, and coordinating relevant agencies

### **How does NZ differ?**

Lacking a strategy that brings coherence, continuity and adequate resourcing to the design and delivery of innovation functions. Public entities are relatively free to direct their own attention. Unclear roles hinder performance assessment of entities and policies. The divergence of NZ from international best practice is stark.

### **Is the NZ context significantly different?**

We seem to be challenged with strategy-setting, policy continuity, and coordinated delivery across agencies and the boundaries of ministerial portfolios. Continuity is especially important, given the long timeframes for outcomes to be realised from innovation. This does not mean the basic conditions in NZ are different, although short electoral cycles and a relatively weak presence of multipartisanship in our political culture could be background factors/blockers.

### **What is optimal?**

We consider this a critical missing function and something that can realistically be attempted via a new entity (ideally with decision-making powers), e.g. a council with external/private sector and multipartisan/nonpartisan mechanisms. Our view of the context indicates that setting up this function will require substantial political capital to harness/encourage the goodwill of relevant agencies and political elements.

**Confidence that change should be considered = High**

**Financial innovation support** – can be provided in the form of grants, equity, loans or tax incentives to startups, businesses, or via intermediaries like incubators and venture capital firms to incentivise innovation.

### **How does NZ differ?**

We are not much different but NZ stakeholders often express concern that some of the support mechanisms are outdated (e.g., tech incubators) or underfunded (commercialisation support).

### **Is the NZ context significantly different?**

Given disparity in wealth between NZ and some peer countries, it is doubtful that NZ can match our peers on the generosity of government financial innovation support. This is where hard choices about prioritisation and targeting emerge, i.e. does NZ benefit from an extra government dollar invested in R&D grants to corporates, in university technology commercialisation, behind certain technologies or sectors or in bolstering private venture capital. Another typical prioritisation debate is whether to invest in innovative firms or laggards, or both.

Since the 1980s, NZ has a strong culture of public finance prudence, holding to a simple tax system and strong cultural aversion to ‘picking winners’, particularly via government loans and grants (although screen and gaming incentives could be indications that the tide is changing).

### **What is optimal?**

This is a critical function to retain. Some support can be scaled up or retargeted, but not as an immediate priority. We can look at what support NZ firms say they lack most and how different types and stages of firm finance their growth. We suggest looking at this function later, once larger questions about the SI&T system are settled. Also, financial supports have been redesigned multiple times recently – firms will react negatively to frequent changes.

**Confidence that change should be considered = Low**



**Networking** – meaning, helping productive connectivity between actors (both businesses-research and business-government) by sharing information about the capabilities and assets of different parts of the system, facilitating navigation and introductions, convening different kinds of public and private actors around shared interests, and brokering agreements.

#### **How does NZ differ?**

The function is relatively absent (NZPA and TTOs aside) and stakeholders often comment on trouble navigating relevant agencies for innovation support (NZTE, CI, NZGCP and MBIE). When CI was established, a shared customer management system with NZTE was debated, or at least a ‘no wrong door’ approach. Also, connecting business with research is a function CI was established for but lacks adequate resourcing to do. Some of CI’s other functions (and relationships with other entities) may preclude the neutrality that is desirable for a networking function.

#### **Is the NZ context significantly different?**

We cannot identify any reason why this function should be weaker in NZ. Arguably, networking can be a distinct advantage given NZ’s small size, if done well. But poor knowledge diffusion from the global frontier is a particular issue for NZ, indicating interventions should be stronger than in peer nations, to develop richer networks between innovators, research and industry – domestically and internationally.

#### **What is optimal?**

Because of NZ’s geographic challenges, adapting overseas models will be less effective than bespoke solutions. If we look at adapting, Finland has a networking mechanism (Team Finland) that works across several relevant public agencies – a passive ‘no wrong door approach’. Singapore, Ireland and Israel provide more active networking functions that connect across the public AND private sections of the innovation ecosystem. Another way to deal with a fragmented network is integrating government entities – Israel is the strongest example of this and Finland recently moved in that direction (the equivalent of NZTE and CI were merged).

**Confidence that change should be considered = Medium**

**Innovation Infrastructure** – can be subject to intervention via sole or joint state ownership of land, facilities and equipment, as well as incentives or agreements that drive shared use of assets and co-location of organisations

### How does NZ differ?

NZ is a clear outlier. Infrastructure happens but, with no function to jointly plan/own/access, we see ad hoc and divided decision-making across agencies, ministerial portfolios, universities, private firms, etc. Particularly at universities, there are substantial investments made without consideration of national-level interests or user/industry relevance. And we often hear that infrastructure for piloting is a particular gap.

### Is the NZ context significantly different?

If past difficulties are an indication, the politics of infrastructure might be tougher in NZ. For SI&T, there is a powerful tension pulling the investment locus to and fro – between the regions and largest cities, between the equity of spreading the investment versus the spillovers of agglomeration. There are other difficulties: geography and natural hazards, restrictive regulatory and market conditions for large capital projects, and relatively limited (and politically disputed) experiences with Public Private Partnerships. Also, our distance from other countries may preclude opportunities for joint infrastructure.

### What is optimal?

This should be a priority concern for improving the innovation system in New Zealand – we spend substantial amounts and might as well spend wisely. There are a few overseas models we can learn from, like Switzerland and Israel. Israel has an enduring, voluntary infrastructure forum. Such a forum in NZ could engage all the relevant players, including local and foreign investors, universities, CRIs, ministries and local government. The function could involve planning joint investments, sharing access and creating joint projects using the infrastructure. The Swiss approach looks more like central planning by a strategic body, with financial incentives for shared use and co-location. Also, there are emerging models of global infrastructure-as-a-service, e.g. in AI and biotech – these could help NZ leapfrog in flexible infrastructure provision.

Confidence that change should be considered = **High**

**Human Capital** – is lifted through measures like subsidies to tertiary education, applied learning and secondments, and training in entrepreneurship for researchers. Including, for firms, training in R&D, digital skills, IP, market expansion, etc, and other business advice. These measures often come packaged with financial support, eg startup incubators

### How does NZ differ?

Although we are largely aligned with the way other countries address human capital, we are relatively hands-off in incentivising the research workforce to work with/for industry and in business advice.

### Is the NZ context significantly different?

The relatively poor management capability of NZ firms is a longstanding bottleneck and we have a university sector that is relatively independent of national-level concerns or businesses. Also, skills gaps in things like management capability and venture capital investment are closely tied to the lack of presence of large multinational R&D performing firms – reinforcing the advisability of stronger interventions in attracting foreign investment and developing richer domestic and international networks (dealt with in other slides).

### What is optimal?

Overseas models could be adapted but the NZ context is daunting – major improvement may have to come from elsewhere, like reform of the tertiary sector. For incentivising the research workforce to work with business, we can look to Switzerland’s well-regarded programmes. For improved business advisory support, existing CI programmes could be expanded and new approaches piloted, like the Irish R&D advocates that seek to influence innovation-inactive firms. However, akin to financial support, it is worth evaluating what knowledges firms lack, and whether the private sector is better-placed than government to deliver some kinds of advice and education (including whether these are funded or not by government).

Confidence that change should be considered = **High**

**International Connectivity** – is the inward and outward flows of investment, talent, and IP which are subject to regulation and treaties, and can be supported by state financing, advice, trade missions and access to overseas innovation facilities. These flows are critical to internationally competitive research organisations and businesses at all stages.

#### **How does NZ differ?**

Other countries deliver this function in close alignment or even fully integrated with financial innovation support. CI has commented they suffer from not sharing the benefits of NZTE's overseas footprint. In other countries the innovation agencies have overseas offices/labs. And our peer countries seem to put more resources into attracting the R&D activity of multinationals, as well as in pushing domestic innovative firms to the world.

#### **Is the NZ context significantly different?**

Substantially so. Distance and small scale of markets, lack of competition, dominated by non-innovative SMEs, immigration policies not (yet) focused on technology talent, high barriers to foreign investment – both regulation (OIO regime) and taxation (high tax rate on inbound investment and high cost of capital). Policies mirror a (perhaps gradually weakening) mainstream NZ cultural aversion to foreign ownership/business. Also, it is unlikely that NZ can compete against the generosity of peer countries' foreign investment attraction schemes.

#### **What is optimal?**

This is a critical area yet we cannot adapt overseas models for attracting talent or investment, or expect our domestic firms to be broadly competitive. A targeted strategy could be viable (i.e., niche innovation and areas of sectoral focus like geothermal and space). Better storytelling can influence culture – around the benefits to NZ from innovation and international connectivity. And we can work more efficiently; meaning that there is an opportunity to seek higher alignment or even integration between the international connectivity functions and other innovation functions, particularly the financial innovation supports.

**Confidence that change should be considered = High**

**System Optimisation** – means routinely launching small, experimental policies that respond to emerging conditions. This can include: initiatives bringing together capabilities of several organisations; targeting niches not addressed by the main suite of innovation functions; scaling or spinning out effective experiments, and swiftly shutting down unsuccessful ones.

### How does NZ differ?

We lack a function to run policy experiments, as do most peers. Breznits explains that it is hard to hold the space – optimisers become victims of their own success – from political interference or burdened with too much BAU, e.g. hard to focus on change if the optimiser agency is also saddled with running significant R&D grants. The entity should have independence, low resourcing, low profile and focus on piloting/scaling/shutting down.

### Is the NZ context significantly different?

Our agencies are not setup for experimentation. It is uncertain whether a public sector entity can be given a core mandate for experimentation given our public sector management and finance frameworks. We have a high bar to justify new funding and a low bar for continuing spending (it is hard to shut down things that someone considers their legacy even when we have years of implementation experience and we are confident it is not value for money). These aspects interfere with both the ability to setup and shutdown programmes, even if small-scale pilots, without recourse to political decisionmakers. SOEs/some kinds of entities can be given independence from ministers but still subject to public finance rules, OIA, and the political culture and public perception problems that preclude operational flex.

### What is optimal?

We see some potential benefits from introducing this function but it is a doubtful concept in the literature – no country seems to have maintained a system optimiser. Given bigger issues, this would not be of highest priority for improving the innovation ecosystem in NZ. Similar to Regulatory Responsiveness, you could think about initiatives to lift experimentation and policy evaluation across government (like Singapore does), rather than designate a single agency as an optimiser.

Confidence that change should be considered = **Low**

**Regulatory responsiveness** — is designing, monitoring, and adapting regulations in ways that prioritise the enablement of innovation. This can include regulatory approaches that enable business innovation broadly, helping particular sectors where compliance is a high burden (e.g. medicines and banking) or specific efforts to enable a new sector to emerge.

### **How does NZ differ?**

We do not have an agency working on emerging sectors. We do not have a regulatory responsiveness policy. Regulators and policy agencies have varying degrees of openness to guide or respond to business. We don't do regulatory sandboxes or access to state facilities, labs, testing areas, except in aerospace (more of a historic instance of success than a capability we are choosing to maintain and replicate).

### **Is the NZ context significantly different?**

This should be an advantage given our small size and strong public sector institutions but we have a public sector bias favouring incumbents. Our policy and funding tools are designed to build on existing strengths - 200 years of extractive export industries (mining, ag). Worth noting that we have experienced challenges, as MBIE, influencing other agencies to enable innovation – e.g. Health and CAA. Agencies have more immediate concerns and aren't incentivised, resourced or directed to consider innovation.

### **What is optimal?**

A serious look at regulatory responsiveness is timely – it aligns with the NZ government's new push for better regulation. NZ can be a world leader if regulators are better-enabled by direction, capability and capacity – akin to Singapore. In the NZ context, it may pay to have focus areas rather than go broad because regulatory responsiveness means extra cost and not all sectors will benefit from responsiveness. Also, aspects of the Israel approach could be adapted: designating an innovation agency that bridges business and government, helping firms work with regulators.

**Confidence that change should be considered = High**

## **Government procurement of innovation — is the extent to which governments try to bring innovation into the public sector and support innovative domestic firms by procuring locally**

### **How does NZ differ?**

We do not have a self-recognition that the government, whether it wants to or not, is an anchor purchaser of science, tech, digital programmes and infrastructure. Israel and Finland are the two countries we have observed that do embrace this role.

### **Is the NZ context significantly different?**

We have a troubled past/memory of ‘picking winners’ but we have relatively robust public sector procurement processes. There is a relatively strong NZ commitment to free trade rules – not wanting to be seen to favour local firms. And political culture/public perception is a factor (risk aversion, bad history with missions and public sector big plays, bad history with public sector tech and innovation projects, perception that NZ firms can’t be trusted with big public sector projects)

### **What is optimal?**

As with infrastructure the NZ context is tougher but substantial sums will nevertheless be invested/risked in the status quo approach. We could consider how we can reap improved procurement outcomes and avoid disadvantaging innovative domestic firms. MBIE is well-placed to play a role. There is a question of whether to lift cross-departmental capability and/or have a supportive intermediary innovation agency. Finland and Israel are good examples of the latter: the Israel Innovation Authority partners with public entities when they go procuring, whereas Business Finland offers incentives to push public entities to procure domestic innovation.

**Confidence that change should be considered = **Medium****

# The fit/misfit of Innovation Functions in entities





# It is important to consider the interaction between innovation functions

	What could be optimal changes to enable this function?	Fit/misfit with other functions
Strategic policy	<ul style="list-style-type: none"> <li>Alignment, role-setting and resourcing of all functions via an overarching strategy</li> <li>Mechanism for coordinating relevant agencies (shared customer systems, branding, shared locations/resources)</li> <li>Stronger entity performance tracking</li> <li>Integrated delivery agency for some/all functions</li> <li>Policy development separate from monitoring</li> </ul>	<p><b>Innovation infrastructure</b> – these functions fit well together as strategic planning is also a key consideration for infrastructure.</p> <p><b>Other innovation functions</b> – should be kept distant/above policy and delivery agencies of most other functions, particularly any entity that administers contestable funding processes.</p> <p><b>The form in which this function is delivered depends on the aim(s) of the function:</b></p> <ul style="list-style-type: none"> <li>For expediency and political relevance it would have higher involvement by ministers / Prime Minister.</li> <li>For confidence from the science sector and businesses via science/business/tech representatives.</li> <li>For political consensus-building and continuity via a mechanism that engages multipartisanship and communities.</li> </ul>
Financial innovation support	<ul style="list-style-type: none"> <li>Important to retain. Change is not a priority.</li> <li>Alignment of delivery of this function with the international connectivity function (e.g., financial support for business expansion into international markets)</li> <li>Clear monitoring and evaluation of all financial innovation support programmes</li> <li>Changing the targeting of financial innovation support programmes to be more responsive to business needs.</li> </ul>	<p><b>International connectivity</b> – these functions should be closely aligned or integrated to ensure an end-to-end system view from idea to international expansion. Without integration, a coordination mechanism could be used.</p> <p><b>Human capital</b> – these functions can benefit from close coordination or integrated delivery (human capital interventions are naturally often packaged with financial support).</p>
Networking	<ul style="list-style-type: none"> <li>Establishment of a coordination mechanism to develop networks between innovators, research and industry.</li> <li>Enabling a navigator service to sit across public/private systems</li> <li>Integration of most innovation functions into a single entity to facilitate navigation and information provision across the system.</li> </ul>	<p><b>Financial innovation support</b> – administering this function alongside networking may undermine neutrality of the networking function.</p> <p><b>System optimisation</b> – A networking function works well with the system optimisation function – deep knowledge of innovation functions, convener, neutrality and a system-wide view.</p> <p><b>There are many forms this function could take</b> – Single mandate agency vs multiple agency delivery</p>

	What could be optimal changes to enable this function?	Fit/misfit with other functions
Infrastructure	<ul style="list-style-type: none"> <li>Strategy setting for SI&amp;T infrastructure being done via a forum or dedicated agency.</li> </ul>	<p><b>Networking</b> – As above.</p> <p><b>Strategic policy</b> – As above.</p>
Human capital	<ul style="list-style-type: none"> <li>Provide new incentives to drive behavior of tertiary workforce towards R&amp;D and innovation skills.</li> <li>Scale up, shutdown or expand programmes for firm capability.</li> </ul>	<p><b>Financial innovation support and international connectivity</b> – Human capital support is often usefully packaged with other functions.</p> <p><b>This function has interventions across several policy domains</b> – tertiary education, SI&amp;T, small business and digital policy. However, this would not preclude delivery of all relevant programmes via one innovation agency.</p>
International connectivity	<ul style="list-style-type: none"> <li>Establishing a targeted approach to support areas of focus.</li> <li>To enable this function to be most effective, more alignment/integration with other functions.</li> </ul>	<p><b>Financial innovation support</b> – Often firms that access financial innovation support need to access international connectivity support at the same time or soon after, so situating these functions together may improve an end-to-end system of support for innovative businesses.</p>
System optimisation	<ul style="list-style-type: none"> <li>Lifting capability to evaluate and experiment across government interventions.</li> </ul>	<p><b>The form for delivery of this innovation function is crucial</b> – If made the mandate of one agency, this function must be low-profile and lightly-resourced, and cannot also deliver significant BAU programmes in areas like financial innovation support.</p>
Regulatory responsiveness	<ul style="list-style-type: none"> <li>Lifting regulatory responsiveness across government</li> <li>Mandating an innovation agency with a role for responsiveness.</li> </ul>	<p><b>Financial innovation support</b> – These functions could sit well together in an agency that already has strong connections with the business community and business thinking.</p> <p><b>Form should consider business-facing and central government components</b> – This presents a tough tension. The function would work better if its delivery agency was business-facing/friendly but also carried weight and had authority to deal with regulators.</p>
Government procurement of innovation	<ul style="list-style-type: none"> <li>Lift cross-government capability</li> <li>Mandating an innovation agency with a role in incentivising and guiding public entities to procure innovation.</li> </ul>	<p><b>Form of this function should consider public sector expertise</b> – This function works better if located in an entity with expertise in procurement and/or an existing influence over procurement rules.</p>

# High vs low disruption approaches to change, and the packaging of functions in NZ versus key peers

The tables in the following two slides present different forms or structures for entities that could deliver a set of desired innovation functions. These options and examples are purely illustrative and do not present an MBIE view of what an 'optimal' or 'recommended' configuration would be. Rather, slide 19 illustrates the differing level of disruption that may be created by different structures (which may need to be balanced with the anticipated impact of change), and slide 20 illustrates what a reconfiguration of existing New Zealand entities would be required to broadly match the models of Singapore and Israel.

We can provide further information regarding MBIE views on options for an 'optimal' structure for New Zealand, if requested.

## If functions change, there are significant implications to consider for which entities do what

	1. Status quo	2. <b>Low hanging fruit</b> - Status quo with strategic coherence and infrastructure planning	3. <b>Comprehensive transformation</b> - Full integration of delivery of functions, and new regulation and procurement functions
Strategic policy	None	New entity or mechanism	New entity or mechanism
Financial innovation support	CI and NZGCP	CI and NZGCP	Merged CI+NZTE+NZGCP mainly responsible
Networking	None	None	Merged CI+NZTE+NZGCP mainly responsible
Infrastructure	None	New entity or mechanism	New entity or mechanism
Human Capital	CI administers most innovation-relevant human capital interventions	CI administers most innovation-relevant human capital interventions	Merged CI+NZTE+NZGCP mainly responsible
International connectivity	NZTE administers most international connectivity interventions	NZTE administers most international connectivity interventions	Merged CI+NZTE+NZGCP mainly responsible
System optimisation	None	None	Change in general stance across government
Regulatory responsiveness	None	CI playing an intermediary role between regulators and industry	Merged CI+NZTE+NZGCP playing an intermediary role between regulators and industry
Government procurement of innovation	None	CI playing an intermediary role between regulators and industry; and/or MBIE having an influence as designated government procurement lead	Merged CI+NZTE+NZGCP playing an intermediary role across government; and/or MBIE having an influence as designated government procurement lead
General comments		<p>Low disruption while raising effectiveness and efficiency of entire suite of functions.</p> <p>Can be starting point for later changes.</p> <p>Many choices for how policy agencies (MBIE/MFAT) fit, for each function, regarding policy development / informing decisionmakers / monitoring.</p>	<p>Significantly disruptive but may offer greatest benefits in long-term.</p> <p>Potential conflict between some functions; but can be acknowledged and addressed by specific mitigations.</p> <p><b>We note this is a simplified picture for illustrative purposes, with unaddressed nuances in the CI+NZTE+NZGCP areas, as not all functions of all entities are as relevant to innovation.</b></p>

## The comprehensive option is more integrated than Singapore and about the same as Israel

	Singapore	Israel	3. <b>Comprehensive transformation</b> – Full integration of delivery of functions, and new regulation and procurement functions
Strategic policy	<u>Research, Innovation and Enterprise Council</u> : Approves strategies. <u>National Research Foundation</u> : prepares national strategy for SI&T.	Ministry of Economy and Industry	New entity or mechanism
Financial innovation support	<u>Enterprise Singapore</u> : Business innovation support. <u>A*STAR</u> : R&D services for business and general support to encourage research-industry connection.	Israel Innovation Authority (IIA)	Merged CI+NZTE+NZGCP mainly responsible
Networking	<u>Enterprise Singapore</u> : Navigation of business-facing innovation and internationalisation supports. <u>A*STAR</u> : Matching PRO and industry capability around areas of R&D strength.	IIA	Merged CI+NZTE+NZGCP mainly responsible
Infrastructure	<u>ITC</u> : Development of industrial infrastructure for science and business, and general support for industry growth.	National Infrastructure Forum	New entity or mechanism
Human Capital	<u>Enterprise Singapore</u> : Business capability packaged with startup support <u>A*STAR</u> : Research-industry talent pipeline <u>Singapore Economic Development Board</u> : Funds tertiary institutions to provide industry-relevant STEM qualifications	IIA	Merged CI+NZTE+NZGCP mainly responsible
International connectivity	<u>Enterprise Singapore</u> : Helping domestic firms go global <u>Singapore Economic Development Board</u> : Foreign investment attraction	<u>IIA</u> : Support and funding for innovation that involves foreign partners. <u>Israel Export Institute</u> : Export promotion generally for Israeli companies.	Merged CI+NZTE+NZGCP mainly responsible
System optimisation	Generalised capability to experiment across government	IIA (arguably, the function was recently eroded)	Change in general stance across government
Regulatory responsiveness	None – although Singapore's regulatory environment is regarded as being effective at engaging with business need.	IIA	Merged CI+NZTE+NZGCP playing an intermediary role between regulators and industry
Government procurement of innovation	<u>Open Innovation Network</u> : Government agencies and companies co-developing innovative solutions.	IIA	Merged CI+NZTE+NZGCP playing an intermediary role; and/or MBE having an influence as designated government procurement lead

