

Submission on the government consultation document: *Towards a Digital Strategy for Aotearoa*

by
Catalyst

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catalyst 

expert open source solutions

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1 Submission Outline

1.1 In this submission we:

- Tell you a little bit about Catalyst
- Share and recommend adoption of the principles in the *Digital Strategy for New Zealand*, developed by Catalyst in 2020
- Offer thoughts on the strategy making process
- Discuss issues that have been missed or not fully appreciated in the consultation document that we think should be included in the Digital Strategy for Aotearoa.

2 About Catalyst

- 2.1 Catalyst IT was founded in 1997 in Wellington, with a vision to deliver effective and efficient technology solutions using open source software. We are now the largest New Zealand-owned company specialising in free and open source technologies and services.
- 2.2 Based in Wellington with approximately 300 staff spread across our offices in Wellington, Auckland, Christchurch, Australia and the United Kingdom, we have established an impressive track record for successfully delivering, hosting and maintaining many large-scale systems for a wide range of clients, including clients at all levels of the New Zealand government.
- 2.3 We take a keen interest in government policy and regulation on digital technology issues, and have been a consistent voice for New Zealand owned digital businesses.

3 Our approach to a Digital Strategy

- 3.1 Last year we developed the *Digital Strategy 2020*. It contains our thinking on the contribution of the local digital sector to New Zealand's economic and social well-being. We propose three principles - open, sovereign and resilient - that will:
- Increase the value of digital exports
 - Deliver high-value jobs now and for future generations
 - Protect Tikanga Māori and New Zealand culture
 - Promote efficiencies in the public sector
 - Underpin innovation in our key industries.



3.2 We recommend these principles and the issues they highlight be factored into the Government’s Digital Strategy for Aotearoa. While the consultation document refers to some of the issues under the pillars of trust, growth and inclusion, we see some big omissions in areas such as data and other digital technology sovereignty issues, cultural relevance and the Treaty of Waitangi, and the critical role that government procurement of digital services plays in the digital economy. We talk about this in more detail below.

4 Government strategy making process

- 4.1 We think it is important for government to set a digital strategy. It gives the digital sector and other stakeholders a steer on priorities and the areas we can expect government investment, support or intervention. But three things can get in the way of a strategy being a useful tool:
- Taking too long to develop it: we urge you to finalise the strategy quickly and move resources to “the doing”.
 - Not resourcing implementation: resources for implementation need to be included in the next budget. Taking too long with the strategy could jeopardize this.
 - A lack of accountability: please ensure specific ministers and agencies have responsibility for implementation. Otherwise things fall between the cracks and will be overlooked.

5 What’s missing?

5.1 In this part of our submission we talk about the things we didn’t see in the discussion document that we think are essential for a successful Digital Strategy for Aotearoa.

Sovereignty

- 5.2 Sovereignty is one of the principles in the Digital Strategy for New Zealand developed by Catalyst (introduced above). It's about:
- Ensuring New Zealanders retain control of their data (and destinies) in a world mediated by technology, and increasingly controlled by software.
 - Recognising and protecting digital information or knowledge that is about Māori people, language, culture, resources or environments.
 - Enshrining the right to digital privacy and providing protections for it.
 - Encouraging a fair market where New Zealand digital service companies are able to compete and operate in a principled fashion.
- 5.3 The direction proposed in the consultation document is not strong enough (or is completely missing) in these areas. The final strategy should:
- 5.4 ***Acknowledge that sovereignty is the platform on which trust is built, and that digital sovereignty is something to protect and promote.***
- 5.5 The consultation document points to our public service having a global reputation for political neutrality and being free of corruption through its principled independence. Capitalising on “our trusted brand” will be similarly reliant on forging our own path in the digital world, for example in the software we choose to run our in public institutions, and the algorithms we use in our Artificial Intelligence (AI).
- 5.6 The strategy therefore needs to support alternatives to relying on global supply chains and multinational digital technology corporations that view us as an exploitable market. In other words, it needs to provide support for local and open source solutions.
- 5.7 This issue of technology sovereignty is relevant to your trust and growth pillars.
- 5.8 ***More specifically, address the issue of data sovereignty.***
- 5.9 Data sovereignty is an example of the issues we raise above. In order to maintain control of one's destiny, as an individual, business or society, control of one's data is essential. The consultation document touches on this to an extent, but it doesn't really speak to what is at stake, in terms of the opportunities and the risks, for the economy and our well-being.
- 5.10 In the opportunities for growth section there is a reference to “the potential of data and how we can encourage greater use of data”. This isn't thought through very far, and the only example given is that of a digital twin framework. A more useful example is the aggregation of localised data to produce AI models that can be used by businesses or individuals. Globalised large aggregated data sets have resulted in large biases and resulting flaws in AI models. It is important to have local nuance. Software and algorithms deployed in New Zealand need to

encode and reflect our values and cultural environment, and not import more bias and implicit prejudices into our society.

- 5.11 Data production, processing, storage and cyber security are areas where New Zealand is too vulnerable and dependent on a global supply chain. But arguably New Zealand has a comparative advantage in data processing IP for specific industries such as the primary sector. The strategy needs to acknowledge this situation and commit to managing the risks and leveraging the opportunities.
- 5.12 In the work underway section of the Trust part of the consultation document, there is a reference to the Government Chief Data Steward's Data Ethics Group. While a useful place for government agencies to talk about proposed uses of government data, this doesn't address the broader issues. Adopting the principle of sovereignty would be a useful first step, and a guardrail, for this developing conversation.
- 5.13 *Learn from New Zealand's growing focus on Māori data science perspectives***
- 5.14 The introductory part of the consultation document talks about opportunities for Māori. It says the strategy will need to reflect Te Ao Māori and embody Te Tiriti o Waitangi. We think this is critical. Te Tiriti o Waitangi, as the founding document of Aotearoa New Zealand, should be the base on which all strategies are anchored.
- 5.15 How this is done is the question and the consultation document doesn't say much about the "how" except that the completed strategy would provide "a basis for fuller and ongoing engagement with Māori". Making this a place holder and sorting it all out after the strategy is completed doesn't sound good enough, but we defer to Māori submitters on this issue.
- 5.16 One area we think the strategy should consider is how we can learn from New Zealand's growing focus on the importance of Māori data science perspectives and how this can bring fresh thinking and new opportunities to local and international audiences. These perspectives, along with indigenous concepts such as Mātauranga Māori, are drivers of innovation and international collaboration.
- 5.17 The focus here should be on sharing standards, sharing open technologies and joining together to create capabilities that allow our economies to thrive and ensure our future is not captured by monopolies that are outside national and international control.
- 5.18 The issues raised here are relevant to your trust, inclusion and growth pillars.

Digital government

- 5.19 We think the strategy should have more focus on the role of digital government in growing the local digital technology sector. References to digital government are scarce in the consultation document, and there is no reference to government procurement as a lever. The strategy can't stay silent on this and leave it to the Digital Sector Industry Transformation Plan. We are also concerned that the approach being proposed for the ITP doesn't move us fast or far enough.
- 5.20 In a land of small business, state sector agencies represent a significant gateway to growth and a stepping stone to exporting digital products and services. The consultation document positions the New Zealand IT sector as a key contributor to our future economy. It can't do this if we rely on large, foreign-domiciled multinational IT firms to dominate the New Zealand market. Their products and services are not tailored for our people, businesses and communities, they are indifferent to our laws, and do not pay their fair share of tax. Yet they usually the chosen suppliers to our government agencies, schools and tertiary institutions.
- 5.21 As an industry we have spent years working with government on this issue, raising pain points, solutions and missed opportunities. The strategy should include commitments to make changes in government procurement practices. At the very least it needs to deliver a level playing field, where the public value of procurement includes consideration of corporate social responsibility (e.g. paying tax).
- 5.22 The issues raised here are relevant to your growth pillar.

More on digital skills

- 5.23 The consultation document has references to the importance of digital skills, for trust, inclusion and growth. The sector is facing skills shortages and mismatches and has significant diversity and inclusion issues. Only 27 per cent of the workforce are women, 4 per cent Māori and 2.8 per cent Pasifika. We need diversity to ensure the software and algorithms developed and deployed by the digital sector have cultural relevance. We need to equip a wide range of New Zealanders with the digital skills they need to build digital tools for our communities; rather than sell licences for foreign corporations.
- 5.24 We think the strategy itself will need to contain a commitment to government resourcing and support in this area (acknowledging the sector needs to do its part). We understand a digital skills reference group has recommended a number of actions in this report ([Digital Tech](#)) to be taken forward as part of the Digital Sector Industry Transformation Plan. We support these.

Openness

5.25 One of the three principles of the Digital Strategy for New Zealand we developed was to be open. This includes:

- Ensuring public and private sector systems are built on open standards, allowing interoperability and integration with other local and international systems.
- Adopting “best of breed” open source solutions and adapting them for local needs and cultural appropriateness, to fuel innovation and opportunities for businesses and communities.
- Making open source the default for public sector systems, to encourage reuse and sharing, maximise government investment in software, and minimise reliance on licensing.
- Making government data and algorithms open by default, to build trust in our democracy. Also making publicly funded data open for commercialisation to foster innovation.

5.26 The consultation document doesn’t realise the value that openness can bring to growth, trust and inclusion.

5.27 *Open source and open standards as an enabler for digital inclusion*

5.28 Open source and open standards are two critical enablers for inclusion that deserve significant focus in the strategy. Open source software respects the rights of users, and does not require expensive licensing to use, adapt, or share with communities. New Zealand is a signatory to the D7 Charter that commits us to:

- 3.2. Open standards – technology requires interoperability and so a clear commitment to a credible royalty free open standards policy for software is needed.
- 3.3. Open source – where possible all future Government systems, tradecraft, manuals and standards are created as open source and are shareable between participants.

5.29 And yet neither term, open source or open standards, is mentioned in the consultation document. This is a significant oversight.

5.30 Continuing to focus and rely on proprietary software, almost all of which is licensed by foreign controlled corporations, will exclude cohorts of New Zealanders; either those that can not afford the licenses required to use the software, or those that choose not to in order to protect their privacy and personal information.

5.31 Similarly, with open standards, New Zealanders will be assured that public services can be delivered efficiently, as government agencies will be able to interoperate in order to deliver joined up services, but Kiwis will also be confident that they will be able to access those

service using the tools and applications of their choosing, rather than being forced to endure more “upgrade to this browser to view this publicly funded website” messages.

5.32 *Growth isn't just about IP*

- 5.33 The proposed goal for growth is that “our tech sector continues to be fast growing and becomes more inclusive, selling **home-grown IP** the world over ...” .
- 5.34 Growth doesn't just come from IP. In fact, when IP settings are too strong (e.g. the recent announcement about the government succumbing to copyright extension as part of the UK FTA) that can hinder cumulative innovation. Open source doesn't have these limitations. Rather it encourages people to build on the good ideas of others. The strategy needs to acknowledge this and promote open source approaches.

6 Further discussion

- 6.1 Catalyst would welcome the opportunity to engage more directly on the issues that we have raised in this submission. Please contact:

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