Peter Bayley - Web form submission

Critical Infrastructure Resilience

What is your name?

Peter Bayley

What is your email address?

petersbayley@gmail.com

Are you responding as an individual or on behalf of an organisation?

Individual

Do you consent for your submission (including identifying information) to be published and shared in lines with terms for this public consultation?

Yes

Do you consent for your submission (including identifying information) to be published and shared in lines with terms for this public consultation? - Please note what should be withheld and for what reasons.

[Nil]

Does more need to be done to improve the resilience of New Zealand's critical infrastructure system?

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While change is occurring in many fields, there are some areas that can be identified as impinging more directly on New Zealand's well being as so are areas for which plans can usefully be drawn:

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Since 1971 when they floated their dollar, the US has been able to print any amount of the world’s Reserve currency (effectively a blank cheque book) and has been doing so ever since to the tune of $Trillions. This places all other nations at a disadvantage which is a fact that needs to inform New Zealand’s financial interactions and decision making. In other worlds, New Zealand’s financial standing and freedom to adapt is a component of its Critical Infrastructure that affects and informs all other activity. Of course activity both arising and concluding within New Zealand is relatively immune from these monetary externalities so plans for greater monetary independence, where possible, can help mitigate problems if the $US experiences future difficulties. One of these plans might, for example, involve developing an independent store of non-fiat value such as gold.

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Have you had direct experience of critical infrastructure failures, and if so, how has this affected you?

No. Indirect experience, through a Christchurch friend who experienced the earthquakes and the days afterwards without electricity or water. I arranged for the family to relocate to Auckland for a few weeks.

I was living in Christchurch during the mosque shooting attacks at which the emergency services appeared to work properly and as designed.

I am prompted mostly by the threats and opportunities that the rapid changes currently occurring

have on how NZ should do things, including in its management of critical infrastructure. My background is in land-based information technology (Geographic Information Systems). To me, the accelerating rate of technical change is a chance for both great benefits and great losses to NZ, depending on how it plans for and executes actions in response to those changes.

How would you expect a resilient critical infrastructure system to perform during adverse events?

By exploring, analysing and, where appropriate, adoption new technologies to better manage the NZ infrastructure.

Would you be willing to pay higher prices for a more resilient and reliable critical infrastructure system?

It's always a hard sell but it is evident, even just taking the Christchurch earthquake as an example, that money spent on better information on, and management of, Critical Infrastructure is ultimately much cheaper than having to play catch-up or finding there IS no useful information at the time a critical event occurs.

The work programme's objective is to enhance the resilience of New Zealand's critical infrastructure system to all hazards and threats, with the intent of protecting New Zealand's wellbeing, and supporting sustainable and inclusive growth. Do you agree with these objectives? If not, what changes would you propose?

The objectives are laudable and I agree with them. I hope the initiative does not just end in large, expensive contracts for foreign consultancy (see Mariana Mazzocuto's "The Big Con") corporations. it sounds expensive but the NZ Government should develop a high level of internal expertise in managing Infrastructure. The whole world is experiencing the same challenges as are affecting NZ so managing them well with innovative tech could even be a profitable exercise in working with other countries on their similar challenges.

Do you agreed with the proposed criteria for assessing reform options? If not, what changes you would propose?

The available criteria are fine but I think you are missing the opportunity to benefit and profit from preemptive actions to reduce problems and increase resilience. Each measure that provides actions to ameliorate challenges to infrastructure could also provide ways in which the action could benefit new Zealand and even provide a return on the resilience-raising actions

Do you think the megatrends outlined pose significant threats to infrastructure resilience?

Yes. The world is more interconnected and interdependent. Also a small number of very large, unelected and largely uncontrollable corporations now control most aspects of the lives of most people on the planet. The net effect to NZ is that there will arise powerful externalities we can't control. Fortunately, other nations of similar size to NZ are facing the same issues and problems so we can potentially work internationally to address our common challenges.

Are there additional megatrends that are also important that we haven't mentioned? If so, please provide details.

Please refer to my rave in the first answer box above. I site
1. Monetary systems
2. Climate
3. Technology
4. Space
5. Remote technologies
6. Foreign Energy dependence
7. Information

Do you think we have described the financial implications of enhancing resilience accurately? If not, what have we missed?

In general, you are emphasising the need for resilience which is good, but you are missing out on the positive opportunities that can occur out of the same applications of technology. I mention soem of these opportunities in my first answer.

How important do you think it is for the resilience of New Zealand's infrastructure system to have a greater shared understanding of hazards and threats?

Generally, New Zealanders are well aware of threats, based on recent experiences: Christchurch Earthquake, White Island, Pandemic, Christchurch Mosque shootings and North Island floods.

It probably needs to be explained that pre-emptive action will usually be much cheaper than suprised reaction after the event. For example, this is a well-defined principle within the military and security sectors and should also apply to the management of infrastructure.

If you are a critical infrastructure owner or operator, what additional information do you think would best support you to improve your resilience?

The most important preemptive action is to access and understand information. Hence the accurate and timely provision of information (as happened, for example, during the pandemic) is the best way to keep New Zealanders engaged and ready if circumstances dictate.

What do you think the government should do to enable greater information sharing with, and between, critical infrastructure owners and operators?

The Government's Pandemic response showed us how government can usefully interact with New Zealanders. more of the same, especially through elective media such as Social Media, We content etc, rather than concentrating on the few one-to-many outlets - NewsHub etc which tend to produce a bland output that helps many people but only a little.

Would you support the government having the ability to set, and enforce, minimum resilience standards across the entire infrastructure system?

Resilience standards are necessary, simply because substandard infrastructure is the most likely to cause problems and costs. Again i think there is an opportunity for a positive side to infrastructure benefits with dual-purpose resources etc. These ideas are also in my first answer.

Would you support the government investing in a model to assess the significance of a critical infrastructure asset, and using that as the basis for imposing more stringent resilience requirements?

I would support the development of such a model but such initiatives often fall away after an initial honeymoon period because fund and resources are not made available to keep the model accurate and useful; therefore, an essential component of such a model, would be a comprehensive regime to maintain and regularly update the model in the light of new internal and external developments.

What criteria would you use to determine a critical infrastructure asset's importance? Investing in a model to assess a critical infrastructure asset's criticality, and using that as the basis for imposing resilience requirements that are more stringent on particularly sensitive assets?

Ultimately, the built environment in general should be evaluated and judged on its overall benefit or impediment to society - how many New Zealanders does it benefit? How large is that benefit. How much are problems with the infrastructure likely to cost how many New Zealanders etc.

Do you think there is a need for the government to have greater powers to provide direction or intervene in the management of significant national security threats against a critical infrastructure? - Is there a need for greater powers? If so, what type of powers should the government consider? What protections would you like to see around the use of such powers to ensure that they were only used as a last resort, where necessary?

The current emphasis on the saving of LIVES first and foremost followed by actions to save Infrastructure seems correct. Of course it needs to be remembered that some failures of infrastructure can also threaten lives. Again I'm interested in which infrastructure-management measures could also provide a component of benefit when there are NOT infrastructure challenges - the "dual-use" argument - an agricultural drone re-tasked to rescue people from a floundering vessel at sea, for example

Do you think there is a need for a government agency or agencies to have clear responsibility for the resilience of New Zealand's critical infrastructure system?

I think the regulatory functions should be vested in a single entity but also that that entity should be VIRTUAL. By that, I mean we need government entities that do not exist in a single building at a single location but are an organisation much as any other with management and staff etc - but connected virtually from people physically residing ANYWHERE (including overseas) or even on the move, and connecting via NZ-Controlled communications infrastructure (Not Teams or Zoom - the tech is essentially available in any modern browser and does not need US Corporate overhead and

control) This allows a greater pool of potential staff can be drawn and do not all need to reside in Wellington.

Do you think there is a need for compliance and enforcement mechanisms (eg. mandatory reporting, penalties, offences) to ensure that critical infrastructure operators are meeting potential minimum standards?

The stick needs to be there but generally speaking once the stick needs to be used, the system has already broken down. This "bottom-of-the-cliff" reaction when, hopefully in most cases, preemptive action can avoid the need for such measures. Most people respond to carrots rather than sticks.

What additional comments do you have?

I have repeated by wordy diatribe pasted into the first response textbox in order to better drive my points home. Many thanks for the opportunity to comment. I only found out about it yesterday so apologies for my rushed reply

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