

6 March 2019

Governance and Administration Select Committee
Hearing on National Disaster Resilience Strategy

1. Introduction

1.1 Presenter

- 1.1.1 The submission is presented by Mark Dyer, Chief Executive of Survey and Spatial New Zealand (S+SNZ), the trading name of the New Zealand Institute of Surveyors Incorporated.
- 1.1.2 Mark is the former Surveyor-General of New Zealand, previously having practiced as a consulting surveyor and director of a surveying and spatial consultancy. He is a Fellow of the profession.

1.2 Survey and Spatial New Zealand

- 1.2.1 S+SNZ was formerly a creature of statute and is now a not-for-profit incorporated society representing survey and spatial professionals.
- 1.2.2 We are strategically focussed to have an impact where it matters most. To this end, we have identified resilience, the built environment, and relevant regulatory systems as the most important areas to make our contribution. The opportunity to have collective impact is how we bind ourselves to a common goal internally and how we seek an impact for the broader benefit of New Zealand. We endorse this approach to the development and implementation of national resilience strategy.
- 1.2.3 Survey and spatial professionals have a critical role to play, both in the policy level and in the practical implementation through their day to day work.

2. Submission

2.1 S+SNZ submission

- 2.1.1 At the heart of our profession is enabling and making connections between the earth sciences, engineering, and applied geography. We do this locally, nationally and globally.
- 2.1.2 Fundamentally, this is about providing the spatial context to enable informed decisions, in this case to manage risks, and to provide input into an effective response and recovery. We support the strategy in the belief that good planning and design of our communities at the outset, and good frameworks including the management of spatial information, will build resilience into our communities and our institutional systems.

2.1.3 Survey and spatial professionals are involved at all phases of risk – much is written of the *what, why, and how* or resilience. We submit that *where* is fundamentally important to the planning, response, recovery, and monitoring phases. Enabling decision making with spatial information to those phases is missing from the strategy. It should not be taken for granted that it ‘just happens’.

2.2 Data availability

2.2.1 There is some great work through the likes of Geonet and Lahar monitoring and but monitoring related to dams, bridges and other critical structures and infrastructure is, in our view lacking.

2.2.2 We also submit that there is a vast amount of information existing – but it is not available to those that need it when they need it in a standardised form. Our experience is that spatial data is often in different or out-dated reference frames or linked in ambiguous ways rendering it less valuable or effectively unusable to be used with other spatial data. This slows decision-making, reduces confidence, and increases costs.

2.3 Institutional arrangements to support data quality and availability

2.3.1 While standards describing assets and their location, and to a degree machine-to-machine interfaces will go a long way to having all critical infrastructure information in common terms, it is our view that, without a degree of regulatory intervention and funding, there is little incentive to move from legacy platforms (such as the local Council asset management system) or local reference frames (for example heights relative to a tide gauge at the local port) to enable the easy sharing and use of information from various sources across organisations in times of need.

2.3.2 We refer to the legal framework for property boundaries in our submission. Knowing where to locate a new sewer line, stormwater pump, or structure is essential. It became evident following the Canterbury earthquakes that the law lacked clarity which created significant delay and stress for the community and stakeholders. We submit that resilience (at a minimum how to resolve conflicts) should be incorporated into the legislative framework that underpins property rights and the economy. The Canterbury Property Boundaries and Related Matters Act 2016 was required to respond to the Canterbury earthquake sequence. Further legislative interventions will be required in the future to maintain economic capital – but there is an opportunity to absorb that ‘shock’ through strategic direction.

2.3.3 This drive for good information and institutional arrangements is reflected through the Sendai Framework and the work of the UN – the UN Committee of Experts on Global Geospatial Management (UN-GGIM). Our organisation is aligned with this through our membership of the International Federation of Surveyors (FIG). New Zealand is both influencing and being influenced by this global agenda. This requires a joined-up approach by agencies such as Statistics NZ, Land Information NZ, and importantly, local government where much of the community level information is held.

3. Conclusion

3.1 Survey and spatial professionals are engaged with the land and communities at a local level, and respond to disasters from land slips to earthquakes, as well as spatial analysis to support urban planning, health and social responses, fires and floods, and biosecurity. They provide critical input into the planning, design, construction, management, and monitoring of our environment. They provide the underpinning spatial infrastructure that supports our society in many ways. They see the ongoing need for interoperable, open data and for institutional strengthening as fundamental to a successful resilience strategy.

We refer to Figure 3 *Model of a Resilient Nation* p20.

3.2 Rapid evolution and continually evolving knowledge and technology requires on-going investment. Knowledge of the earth sciences, how we can (or should) engineer our environment to meet New Zealand's needs, and how we can apply geographic understanding, are all rapidly changing along with the tools and technology that support good decisions related to those things.

Our systems of hazard management, resource management, buildings and physical infrastructure, and land administration are all linked as they are founded in 'real-world' location.

We submit that those decisions will be better informed when we have standardised spatial data with appropriate levels of trust and supported by institutional arrangements that ensures the information is maintained, current, trusted, and available in common terms, when needed and not just in emergencies (Objective 12).

3.3 Finally, informed decisions are needed not just to achieve resilience outcomes. Encouraging or even mandating better spatial data infrastructure will drive New Zealand's success in many areas.

We support the development of the National Disaster and Resilience Strategy and look forward to further engagement in its implementation.

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