

Canterbury SDI: Lessons Learned from Post-Earthquake Recovery

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SUMMARY

In the wake of the devastation caused to the Canterbury region of New Zealand in 2010 and 2011 by a series of earthquakes, a number of Spatial Data Infrastructure (SDI) related projects were established to help assist and accelerate the rebuild process. This 3-year work programme is now complete. This paper discusses some of the key lessons that have emerged, technical and organisational, and how they are being used to shape ongoing work to develop elements of New Zealand's national SDI.

In the immediate aftermath of the 22nd February 2011 earthquake, which caused significant loss of life and infrastructure disruption, the use of geospatial information and associated technology became invaluable to the agencies and organisations involved in the response and recovery. They were also widely used by the public and volunteer groups to find out what was happening where, and to help plan response activities within those communities.

Recognising the utility and value of this, the New Zealand Government provided approximately \$5 million funding to eight projects focused on the use of SDI concepts to help improve the planning and execution of the rebuild process. This "Canterbury SDI Programme" was managed by Land Information New Zealand (LINZ) and concluded in 2015. LINZ is now in the process of transitioning some of the projects to business-as-usual operations and reviewing how lessons learned from the projects can help influence the development of New Zealand's national SDI.

The eight projects focused on:

- GIS

interoperability

- Forward works planning
- 3D enabled cities
- Improved sharing of utilities data
- Developing a “Property Data Management Framework”
- Enhancing the Canterbury Maps web portal
- Promoting the use of open data and open APIs
- Geospatial data discovery

Some of these projects demonstrate quantifiable benefits that clearly show the value of coordinated data sharing that can support the operations of multiple organisations engaged in a complex rebuild process. The programme has also highlighted some of the organisational difficulties encountered, exacerbated by working in a challenging and dynamic environment.

In presenting this paper we aim to share those lessons so that others may benefit from them, both in terms of planning and response to disasters, and also in the development of spatial data infrastructures.