

Land Information New Zealand Limited

Development of a Property Data Management Framework

Together e-Spatial and LINZ have begun the evolution of a property framework to create greater efficiencies and promote innovation.

THE ISSUE

In the years immediately following the 2010/11 Christchurch earthquakes, the rebuild was not progressing at the desired pace. Many of the delays have been attributed to the role that Property Data played in the recovery and rebuild.

The earthquakes in Canterbury exposed the lack of consistency within property datasets held by different organisations and led to an inability to easily and confidently connect or match data. Dealing with separate sources for addresses, property, ownership and building information proved to be challenging. Sharing data between agencies and organisations was difficult due to security, privacy and technical issues. This resulted in duplication of effort, significant rework, reduced quality of decision making, reduced quality of service and a significant cost burden.

THE SOLUTION

Following the Christchurch earthquakes, the Canterbury Spatial Data Infrastructure (SDI) programme was developed to help solve issues facing the rebuild, and at the same time provide important lessons and building blocks towards a national SDI. The Property Data Management Framework (PDMF) was one of the eight projects commissioned by the government as part of the Canterbury SDI programme. The aim of the PDMF was to look at how property information, maintained and managed by disparate agencies, could be connected to make the rebuild and future services as easy as possible.

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The Canterbury SDI PDMF project was divided into three phases:

1. The design of a comprehensive Property Data Framework Model – a conceptual model for property data that brings together addresses, parcel, titles, buildings and rating units, and includes the registration of unique, persistent identifiers;
2. Creating a test and demonstration environment for the PDMF;
3. A stakeholder engagement plan to ensure a wide adoption of the PDMF by users, industry and government.

LINZ engaged e-Spatial Ltd to undertake phase one – to develop a conceptual model for property data that identifies the core information items, and to describe how these items are related to each other. A project report under creative commons licensing provides a summary of the work done to date, documents relevant user stories, provides model diagrams, and highlights key areas of need with respect to existing national property related datasets. The PDMF Data Model Report (March 2015) is located on the LINZ website ([click here](#)). This work will be further informed and modified by the implementation of the next phase “Proof of Concept”. It is worth noting that this work contains some new ideas that challenge existing thinking, and provides the basis for ongoing work to further develop the framework and it should be viewed as a step on a continuing journey. Beyond the “Proof of Concept” phase, the framework is expected to grow and evolve as it is tested and implemented in government and private sector enterprises.

THE RESULT

The design, and eventual implementation, of an effective PDMF which contains well-defined, reliable, accurate relationships is crucial to unlocking process improvement, greater efficiencies and innovation in NZ’s property-related sectors.

The PDMF model has the potential not only to inform the situation in Canterbury, but also to inform projects at a national level. On a wider scale, a PDMF could provide the basis for some key national initiatives moving forwards, including LINZ’s Advanced Survey and Title System (ASaTS), Better Property Services and their Address Information Management System.

The demand for better public services is putting location information at the forefront of a new information economy. Smart Cities, BIM and integrated land and property information systems are all converging and driving rapid change throughout the emergency services, insurance, construction, transport, health and utility sectors. To meet this challenge, innovative new solutions are needed and e-Spatial, together with LINZ and key stakeholders have begun the evolution with the Property Data Management Framework.