



1 Post earthquake inspections. 2 Example map layout. 3 Example screenshot on mobile device of asset details.

THE BEACON SYSTEM

Beca for ANZ Bank

Project Location: Nationwide



The Beacon System offers clients a real-time notification and response service to assess and manage the impacts of a seismic event. Designed for clients with geographically dispersed portfolios, it incorporates two components: An innovative new software application to assess the impact of an earthquake, and a prioritised inspection and response service following the event.

In the aftermath of a seismic event, quick access to information is critical. That's why the Beacon System was developed and provides clients with an immediate first-cut of information, so they can understand the impacts, make informed decisions, communicate with key stakeholders, and get back to business as soon as possible. The first component assesses the potential impact of an event, by combining real-time earthquake information with our knowledge of the clients' assets. Referencing Geonet's earthquake alert data, it runs an algorithm for each earthquake that occurs and estimates ground shaking at the coordinates of a clients' assets. It then calculates the likelihood of damage – by cross-referencing the estimated ground shaking with our knowledge of the asset's vulnerability. Automated alerts are sent, via text message and email, to key clients and Beca contacts, along with a list of buildings in the vicinity of the earthquake that may be affected. A GIS based map depicts the location and impact of the earthquake. The next critical step is getting engineers on the ground as soon as possible.

The second component of the system is a prioritised, coordinated and efficient response by Beca's structural engineering teams. This includes working with clients in advance to develop a post-event mobilisation and inspection plan – including establishing business drivers and employer obligations, mapping inspection routes, and agreeing key communication methods. With this plan on hand, Beca can mobilise the inspection teams quickly and effectively provide critical information back to the clients' Crisis Management Teams from the field.

To Beca's knowledge, there is currently no other solution this advanced in New Zealand. Beacon leverages exclusive information on the thousands of buildings throughout New Zealand that Beca's structural and seismic engineers have assessed over the last decade – giving the system a unique advantage.

Judging & Copyright Statement

This project is an entrant in the 2016 INNOVATE NZ Awards of Excellence competition. The winners will be celebrated at our Awards Gala Dinner on Saturday, 12th August 2017 in Taupo.

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