



NEW ZEALAND SOCIETY FOR EARTHQUAKE ENGINEERING
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Delivering an effective, community focused, infrastructure rebuild to enable faster recovery

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ABSTRACT

ENGAGE is a concept founded on lessons from the recent earthquakes in the South Island of New Zealand. It focuses on planned and effective rebuilding of infrastructure following an earthquake or other disaster impacting a community.

The origins of ENGAGE, the intended structure, and the inter-relationships with the wide range of stakeholders are all described. Earthquake scenarios are presented to demonstrate how ENGAGE can provide a service to address the challenges that always arise. These include facilitating and supporting the collaboration of local, regional, and central government funders and asset owners and demonstrates how ENGAGE works in practice to address the circumstances posed by differing earthquakes, enabling quicker and more effective community recovery, leading to a more resilient society.

The authors assert that New Zealand needs to ENGAGE.

1 CURRENTLY

1.1 Disaster rebuild problems

New Zealand is not well prepared for infrastructure rebuild following a disaster, especially due to lack of recognition of the complexity of the challenges involved. The authors know the problems and know that rebuild will not happen well by conventional process, hampering community recovery.

Government sectors and industry are siloed from each other and fragmented in their operations, causing fundamental problems when communities need cohesive support. Additionally, design and construction are fragmented with processes and contracts commonly not delivering good outcomes against objectives. Add to these no pre-existing proven information systems to integrate planning, design, construction and handover activities exist. Additionally, an absence of dependable, up-to-date infrastructure data systems compounds the problems and adds to complexity.

For all these reasons, funding, governance, management and delivery of post-disaster rebuild is unlikely to be achieved consistently or well without a better approach.

1.2 Fresh start

The result of all these inadequacies is rebuild must start from scratch, bringing parties together, creating working arrangements, then focusing on the work needed, how to fund it and how to get it done, costing additional set up efforts and creating a ‘lottery’ for a successful outcome.

1.3 Experience

The authors propose a concept of how to do things better, shared as a not-for-profit entity, serving all New Zealand. It is founded on three key elements: people with knowledge and working in collaborative relationships from networks of shared experience, all bringing an attitude of trust. ENGAGE gives structure and function on this foundation.

2 CONCEPT

Engage is proposed as an enduring, nation-wide disaster readiness and rebuild capability for large or small events. It is proposed as a working collaboration of all sectors of governments, non-government organisations, asset owners, operators and industry concerned with built infrastructure, working together with community organisations and iwi.

The features of ENGAGE apply to all infrastructure from public facilities such as three-waters and roads, river stop-banks, harbours and ports, to public buildings and housing.

ENGAGE will share comprehensive information about the damaged or impacted assets, enabling early start-up, with communities linked, and decision-making, planning and progress visible to all. Funders and communities will understand work scope, criticalities, priorities, shared funding arrangements, resource managements, delivery of throughput, and communication of intentions and progress, to all parties.

2.1 Start-up parent

Immediately after a disaster, ENGAGE will facilitate collaboration of funders and impacted asset owners to form a parent group, defining recovery funding and objectives, for a rebuild entity.

ENGAGE provides a framework for action, defining structure and functions of the rebuild entity – ‘how everyone can work together to get rebuild done’. It will include statutory and legal arrangements, governance

structures, appropriations and funding processes, procurement, project management and a value framework against which performance can be measured.

2.2 Information System

A comprehensive information system is included in ENGAGE, providing a 'single source of truth', widespread visibility of assets and environment, preparedness, work scope and priorities and rebuild management, creating confidence for communities, funders and the nation. The system captures information and costs for every project, retaining data for records and on-going asset management.

2.3 Culture

A special feature of the framework and system is the creation of a positive culture of the enterprise, particularly important in a post-disaster environment, benefiting the communities.

3 HOW IT WILL WORK

ENGAGE will exist as a small entity in 'peace time' to react quickly following a disaster, to facilitate early commencement of rebuild. It will support the creation of a parent body of funding collaboration, then support the creation of the specific rebuild entity, structured, governed, led, managed and resourced to match the nature and demands of the disaster, to suit the community.

3.1 Outcomes

All those impacted will be supported, including the recovery decision makers such as mayors, CEOs, recovery managers and key infrastructure providers. The rebuild entity people will have the right skills and experience whatever level and scale is needed, delivering rapid deployment of capability and resources, focus on strategic issues and priorities, community buy-in, faster recovery, and ultimately provide assurance and value for money.

4 SUPPORT

Register your interest in ENGAGE by emailing: engage@engagenow.org.nz

5 FURTHER INFORMATION

The ENGAGE web page high level view www.engagenow.org.nz

ENGAGE – What is it and why? <http://resources.quakecentre.co.nz/engage-what-is-it-and-why/>

6 CONCLUSIONS

Our experience tells us that New Zealand must be organised for rebuild and recovery from disaster, large or small, fast or slow, to enable timely efficient valued rebuild enabling the shortest possible community recovery. It is widely recognised that it is not currently organised and the consequences of this have strong financial and emotional impacts on our society. We urge readers to join in our determination that the situation must change.