1st NZGIS4EM Workshop

Executive Summary

This was a two-day workshop with an emphasis and GIS for Emergency Management for the Lower North Island. There were over 50 attendees across National, Regional, and Local Government, as well as private sector and not for profit organisations.

The first day included both thought provoking presentations and also a discussion panel and breakout session. The second day was designed to train GIS staff to be deploy geospatial decision support tools ahead of disaster and test their preparedness with a short exercise.

The overall goal of this event was to raise awareness, build community, and to give participants action items to take back to their organisations. While participants gain new skills and successfully deployed geospatial decision support tools, the stress test on Day 2 showed critical knowledge gaps**.**

> *The key finding of this workshop is that a National & Regional geospatial concept of operations is required for the civil defence and the geospatial community to be sufficiently prepared for the next large-scale disaster.*

Geospatial Concept of Operations

A GeoConOps provides a mission blueprint that supports emergency managers and geospatial practitioners to identify points of collaboration, best practices, technical capabilities and authoritative data sources to improve the effectiveness of geospatial information and tools that support incident management. In New Zealand, the group has identified the following requirements:

- Data Sponsors with Contact Information
- Data Standards / Schema
- A Conceptual Diagram of Information Flow (see page 3)

Key focus areas include:

- Operational Areas and Points
- Rapid Impact Assessment
- Welfare Assessments
- Rapid Building Assessment
- Welfare Assessment
- Geotechnical Hazard Assessment
- Lifelines Level of Service

Resources

As a result of the workshop – 4 key resources have been made available to the community. Please bookmark these links.

1. Agenda with Presentations as links: http://arcg.is/2kSYHWE
2. Training Website: http://bit.ly/NZGIS4EMPublic
3. A Slack Channel for communication: nzemgeo.slack.com [email pjd@eagle.co.nz]
4. A Stress Test Story Map: http://arcg.is/2kJ32bm [requires membership in Group]

Action Items

The breakout session on Day 1 was split into a National, Regional, and Local groups. They were tasked with identifying the highest priority action items and presenting them back to the Group.

Regional Council GIS (Horizons, Wellington, Hawke's Bay, Waikato, and Canterbury)

1. Identify best practices for minimum essential datasets through the LGGA or similar organisation.
2. Host (online) and store minimum essential datasets for use during disaster.
3. Assist in hosting two more Regional NZGIS4EM Workshops (Auckland and Christchurch) in 2017.

National Government (MCDEM, NZ Fire Service, NZ Defence Force, MBIE, and NZ Red Cross)

1. Form a Geospatial Concept of Operations strategy – identify a lead agency or empower a working group.
2. Hosting standard symbol set (for download and live display) for the geospatial community.

Local Government

1. Identify core members of a Regional GIS Leadership team for Wellington to meet regularly and train on geospatial decision support tools.
2. Raise awareness of the potential benefit of geospatial decision support tools for CDEM functions by participating in the next National Level exercise and local exercise events.
3. Provide minimum essential base datasets to Regional Council GIS for aggregation.

Eagle Technology

1. To host a pre-conference event for Emergency Management at the 2017 NZ Esri User Conference.
2. Incorporate Emergency Management Solutions content in the Regional User Conferences.
3. Support the Regional NZGIS4EM Workshops (Auckland and Christchurch, dates to be determined).

Special thanks to our student volunteer Lorin Lima lorinlima@gmail.com who is a student in the Advanced Academic Program at Johns Hopkins University and currently enrolled in the GIS for Emergency Management online course.

	Incident Notification & Alerts	Emergency Planning Zone	Operational Points and Areas	Rapid Impact Assessment	Welfare Assessment	Lifelines	Building Assessment
Type	Points	Points & Polygons	Points & Polygons	Points	Points	Points & Lines	Polygons
Data Standard / Schema	Common Alerting Protocol	?	?	NZ FIRE	MCDEM	NZ Lifelines Council	MBIE
Data Hosting / Access	MCDEM	To Be Determined during Incident	To Be Determined during Incident	USAR	Emergency Coordination Centre	Regional Lifelines Group	Emergency Coordination Centre
Data Collection	Automated	To Be Determined during Incident	To Be Determined during Incident	USAR	Emergency Operations Centre	Regional Lifelines Group	Emergency Operations Centre (Engineers)
Delay	10 minutes	8 hours	24 hours	2 Days	3 Days	3 - 4 Days	7 days

Hazard Analysis and Risk Assessment throughout - we would identify data owners, by event type (Flooding - NIWA, Earthquakes - GNS, Disease - ESR)

Each of these would have a 1-page summary and clickable links to the schemas

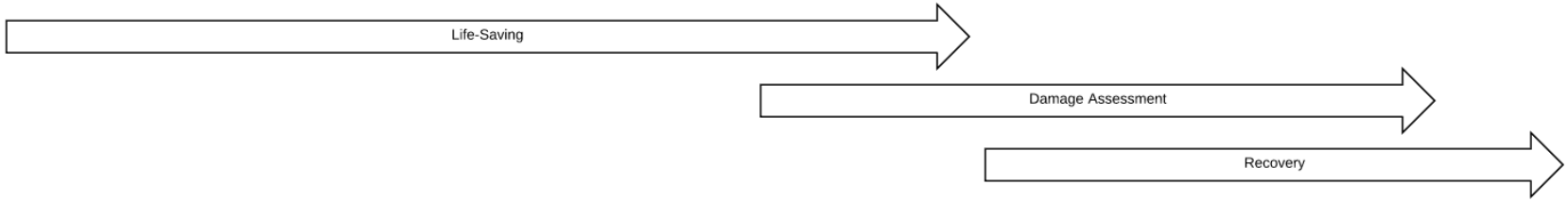

Figure 1 Draft schematic of a New Zealand GeoConOps conceptual diagram https://www.lucidchart.com/documents/view/d50da8c5-3ee1-4e0b-b656-80898f10087e .