From Strategy to Benefits: Spatially Enabling New Zealand

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Land Administration Forum for the Asia and Pacific Region: Beyond Spatial Enablement
New Zealand’s Journey

- Environment and context
- Implementing a geospatial work programme
- The national Spatial Data Infrastructure (SDI)
- Ongoing challenges
- The path to success
Office of the Minister for Land Information
Cabinet Economic Growth and Infrastructure Committee

Capturing Economic Benefits from Location-Based Information

Proposal

1. This paper seeks Cabinet’s agreement to better connect government’s location-based information to boost economic growth and improve public sector efficiency. It also proposes to strengthen the role of Land Information New Zealand (LINZ) to help achieve this goal.

ACCELERATING OPEN GOVERNMENT

Proposal

1. This paper proposes that Cabinet approve a declaration endorsing open and transparent government, updated principles for managing all government held data and information, and a programme to accelerate proactive release of government’s high value non-personal and unclassified data and information for re-use.

Office of the Minister of Finance

Expenditure Control Committee
Implementing a Geospatial Work Programme

- Work Stream approach to a broad programme of work:

  1. Strengthen **governance** structures
  2. Develop **fundamental data**
  3. Support discoverability and access, through **SDI**
  4. Facilitate interoperability, through a **standards** framework
  4. Support geospatial **research**
  5. Grow geospatial **capability**
  6. Raise awareness through **engagement**
  7. Structure **operations** to deliver the programme
Implementing a Geospatial Work Programme

- Rapid transition from NZ Geospatial Strategy engagement (*establish*) to NZ SDI (*deliver*)
- “Flying while building the wings”
- “Strategically opportunistic”
- Hybridised programme of work model:
  - Open engagement
  - Exploratory (semi-formal) projects
  - Formal projects
- Pulling together geospatial and open government information work programmes
A National SDI

• Introductory \implies Formal
  (uptake) \implies (increased sophistication, BAU, benefits realisation)

• Find – Share – Use
• Distinguishing producers and consumers
• Data Stewards and Custodians
• Transactional
• User community feedback and input
**SDI Vision**

A formal national SDI will connect the providers and users of New Zealand’s geospatial information as a catalyst for economic growth through enhanced decision-making and innovation and allowing its transformational re-use in ways beyond its original purpose.

30 June 2012 – Introductory SDI

**What will success look like?**

Agencies are consciously deciding to participate in NZ SDI to meet their own business needs with awareness of the broader value to New Zealand. Agencies are being supported by the SDI programme and the SDI programme is learning from the experiences of participants. Evidence of the use of geospatial information in strategic decision making is growing and awareness of its value among Ministers and CE’s is high. There is demonstrable growth in geospatial skills and research projects are starting to explore ways to better leverage geospatial information.

**What will the authorising environment look like?**

An all of government formal work programme to deliver NZ SDI is underway, governed by GEG and GSC. Individual agencies are accountable for delivering projects within the work programme supported by NZGO and cross-agency technical working groups. Data steward and custodian roles and responsibilities formally mandated. NZGO is enforcing its mandate for government agencies to consult with NZGO for use of geospatial information and services. LINZ has aligned the mandate for SDI with both the government ICT roadmap and open government data approaches.

**What key organisations will be participating?**

- LINZ
- Christchurch Earthquake Recovery (regional SDI)
- Auckland (regional SDI including Waikato RC, BOPLASS & Northland)
- NZTA

- DOC
- MFE
- MSI & DIA
- CRIs and research community

**What will the system look like?**

The key organisations listed above and others will have undertaken data and/or systems initiatives to find, share and use geospatial information in the following ways:

**Find:** All identified fundamental datasets are catalogued, and at the least, conform to the core metadata requirements set by the ANZLIC Metadata Profile. Some non-fundamental datasets available are catalogued i.e. to at least the minimum metadata requirements of the ANZLIC Metadata Profile. Datasets are able to be found in the Environment and Geospatial Catalogue and data.govt.nz

**Share:** Most fundamental reference datasets are available via the web as downloadable files in common GIS formats e.g. shape, tab, kml, geotiff etc. Some fundamental datasets are provided using standards compliant services (e.g. WMS). A small number of fundamental datasets are accessible via standards compliant web interfaces that allow clients to selectively use data (e.g. using WFS or WCS). Some non-fundamental data are also available via the web as downloadable files or via web services.

**Use:** Some agencies are sourcing geospatial data from within their organisations and/or from other agencies via web downloads or web services to inform strategic decision making and some operational decision making, predominantly using specialist tools/staff. Users of some fundamental datasets are able to send user feedback/changes to improve quality and value. The Christchurch Earthquake Recovery and Auckland Spatial Plan spatial viewers are in use by specific user groups and have been developed as proof of concepts for SDI. Some agencies e.g. CRIs will have developed mature SDI models within their user communities.
SPATIAL DATA INFRASTRUCTURE COOKBOOK
V.1 – 5 JULY 2011

Essential
OGC Web Map Service v1.3
ANZLIC Metadata Profile v1.1

Highly Desirable
OGC Web Feature Service v1.1
OGC Filter Encoding v2.0
OGC Geography Markup Language v3.2.1
OGC KML v2.2
OGC Catalogue Service 2.0.2

Additionally Useful
OGC Web Coverage Service 1.1.2
OGC Styled Layer Descriptor Profile v1.0
OGC WFS (Transactional) v1.1
OGC Web Processing Service
OGC Web Map Tile Service (includes a REST option)

Other Standard Interfaces
OGC Web Map Context v1.1
OpenGIS Sensor Model Language, Version 1.0.0
OpenGIS Sensor Observation Service, Version 1.0.0

Abbreviation
WMS
ANZLIC Profile
WFS
Filter
GML
KML
CSW
WCS
SLD
WFS(T)
WPS
WMTS
WMC
SensorML
SOS

NZ SPATIAL DATA INFRASTRUCTURE

PRICING AND FUNDING

GUIDANCE FOR STEWARDS AND CUSTODIANS
Welcome to geodata.govt.nz. New Zealand’s catalogue of publicly-funded environmental and geospatial data. You can use this service to find out how to access New Zealand's geo-referenced information resources. Geo-referenced information is information that includes reference to a place on, about, or below the Earth's surface.

You can also use geodata.govt.nz to list and/or describe any data or other resources you or your organisation may hold.

Geodata.govt.nz is a core part of New Zealand's developing spatial data infrastructure and will continue to be developed based on your feedback.

Search for data or other resources
Discover existing environmental and geospatial data for New Zealand. Click here for help how to use the map and how to search.

Describe the data or other resources you hold
Describe an environmental or geospatial dataset and submit your metadata to the catalogue.

Harvest this catalog
Do you want to harvest these metadata records into your own catalogue using Catalog Services for the Web (CSW)? If yes, use this service URL.
Key Challenges – Top 6

- Designing a national work programme that services a broad spectrum of users and stakeholders

- Mapping a national work programme to the NZ industry
Key Challenges – Top 6

- Initiating business cases for geospatial

- Building the critical mass of adopters

  or

  “Getting the horse to drink”
Key Challenges – Top 6

- Mitigating capability and capacity shortages
- Partnering successfully with the commercial sector

NZ$525M in GDP

5% = New Revenues

95% = Efficiency Gains
New Zealand’s Path to Success

- Highly engaged geospatial community
- Champions through all levels of government
- An environment conducive to open government and information
- Relatively simple government structure and a contained market
- Kiwi pride of character based on:
  - Self-sufficiency/Getting things done
  - Innovation
- “Solutions Islands”
Thank You!

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www.geospatial.govt.nz