Hosted by

Toitū Te Whenua
Land Information
New Zealand

Starting soon...

Aotearoa Property Data Network

5th General Webinar - 10am-12pm, Tuesday 18 July 2023

18 July 2023

Opening karakia

Whāia te mātauranga kia mārama, kia tupu, kia tiaki ngā whenua, ngā moana, ngā arawai	Pursue knowledge for understanding, developing and caring for the lands, bodies of water and waterways
Kia whai take ngā mahi katoa	Seek purpose in all that we do
Aroha atu aroha mai, tātou i a tātou	Let us show respect for each other
Toi te kupu	Hold fast to our language
Toi te mana	Hold fast to our spiritual strength
Toitū te whenua	Sustain the land
Haumi ē, hui ē, tāiki ē!	Gather and go forward together

Agenda

10am-10:05	Welcome and opening karakia
10:05-10:20	**Toitū Te Whenua | LINZ** news and updates *various Toitū Te Whenua stakeholders*
10:20-10:40	**Te Kooti Whenua Māori | Māori Land Court -** Live demo of the newly launched Pātaka Whenua | Māori Landonline *Zeniff Haika, Puna Kōrero Matua*
10:40-11am	**Toitū Te Whenua | LINZ -** 'Joined-up Land Development' innovation initiative *Ben Reilly, Customer Relationship Manager – Property & Spatial Data*
11am-11:55	**Emergency management lightning talks** **Auckland Council –** red/yellow stickering of properties after flood events **GNS –** assessing landslip risks to property **Manaaki Whenua | Landcare Research –** Māori frameworks for recovery **Toitū Te Whenua | LINZ –** emergency management data portal
11:55-12pm	Closing comments and karakia

LINZ News & Updates

Miramar buildings rendering

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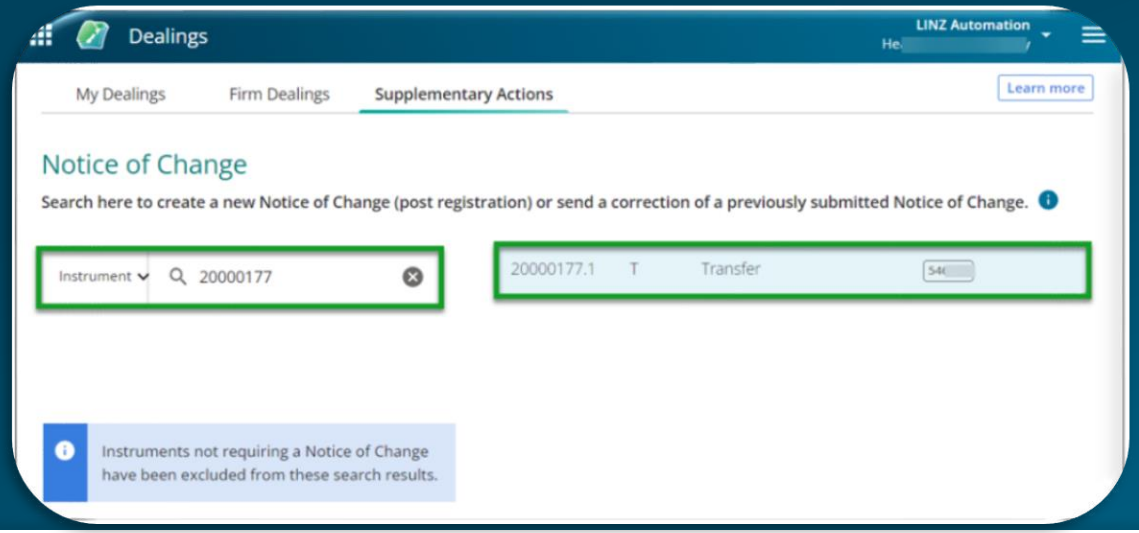
Land Information New Zealand

Te Kāwanatanga o Aotearoa
New Zealand Government

Notice of Change

- All 67 Territorial Authorities now signed!
- Solicitor uptake figures >80%
- NEW: Post-registration and correction NoC

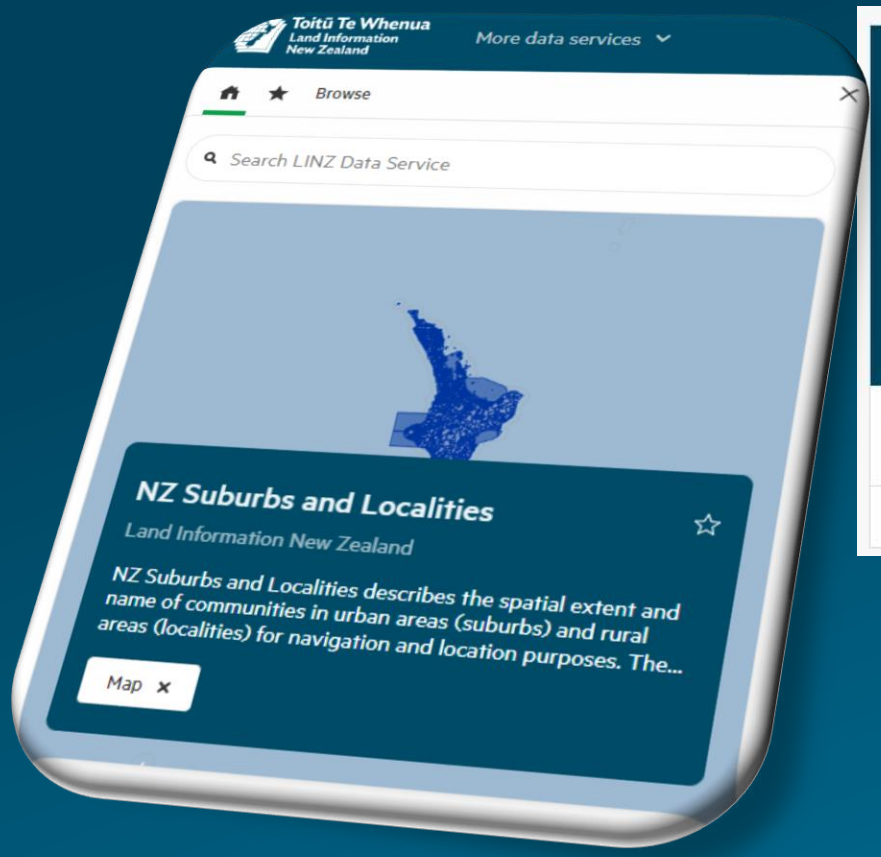


Connected Property Data

- Hybrid layer restricted access
- Exploring next steps, including wider availability
- Parent/child update to NZ Properties
- UUID – Universally Unique Identifier for NZ Properties
- Release 1.2 of PDMF published in May. Lessons learned from dwellings pilot with Stats NZ.

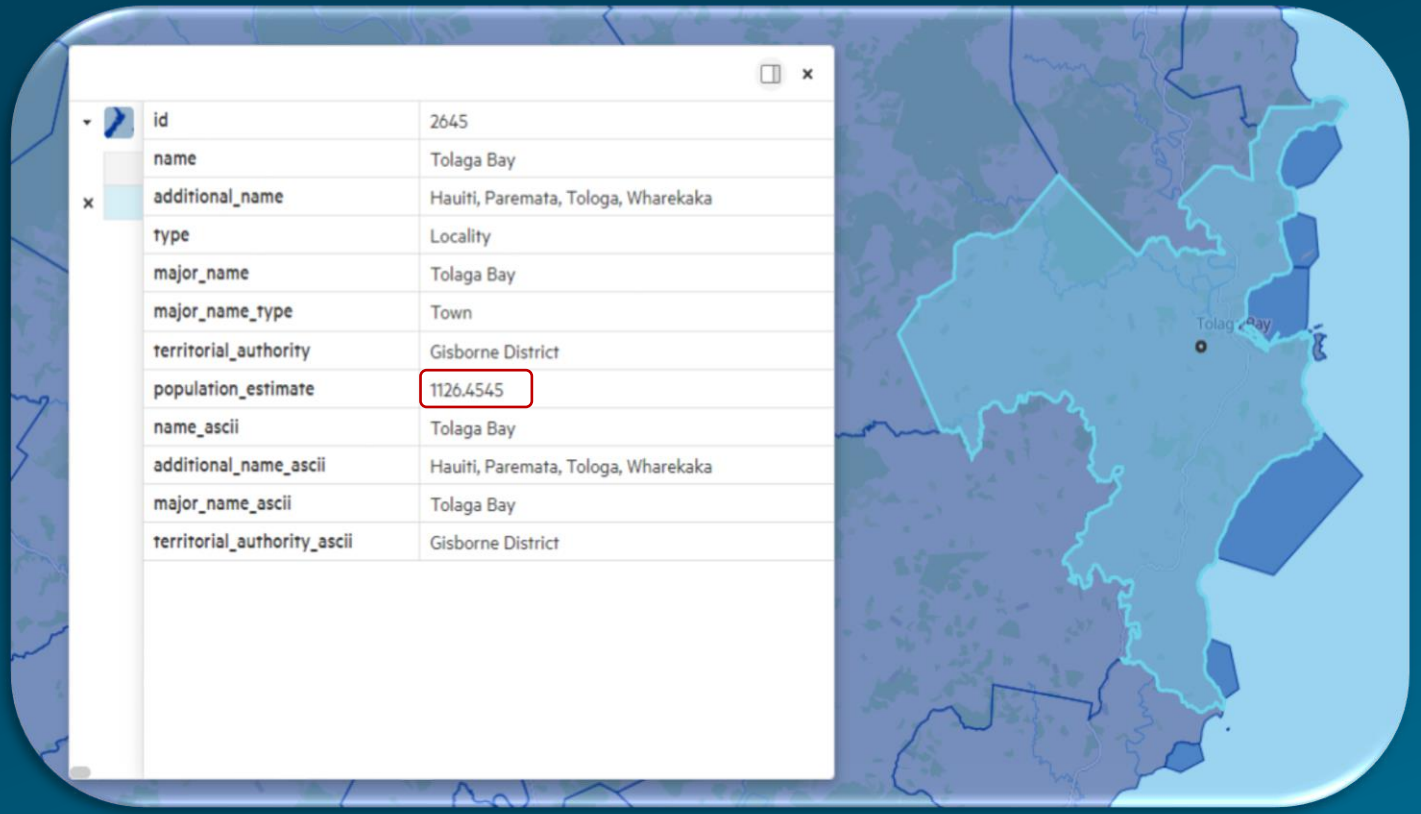
NZ Suburbs and Localities

- Published June 2023



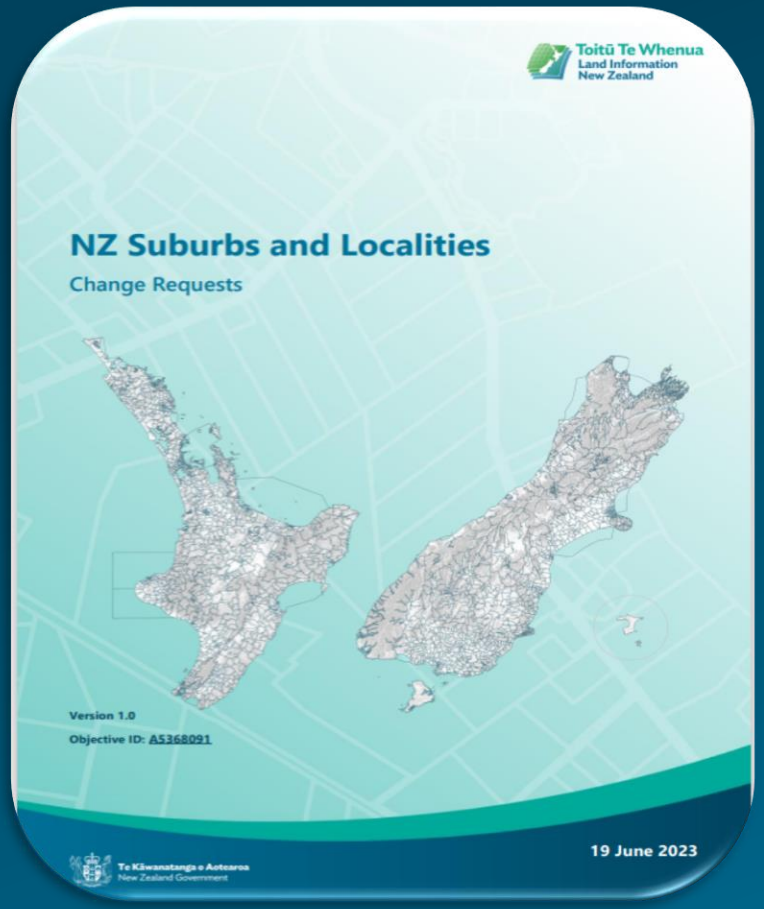
NZ Suburbs and Localities

- Published June 2023
- Population estimate



NZ Suburbs and Localities

- Published June 2023
- Population estimate
- Change Request App



Key Dates

Wednesday 16 August 2023

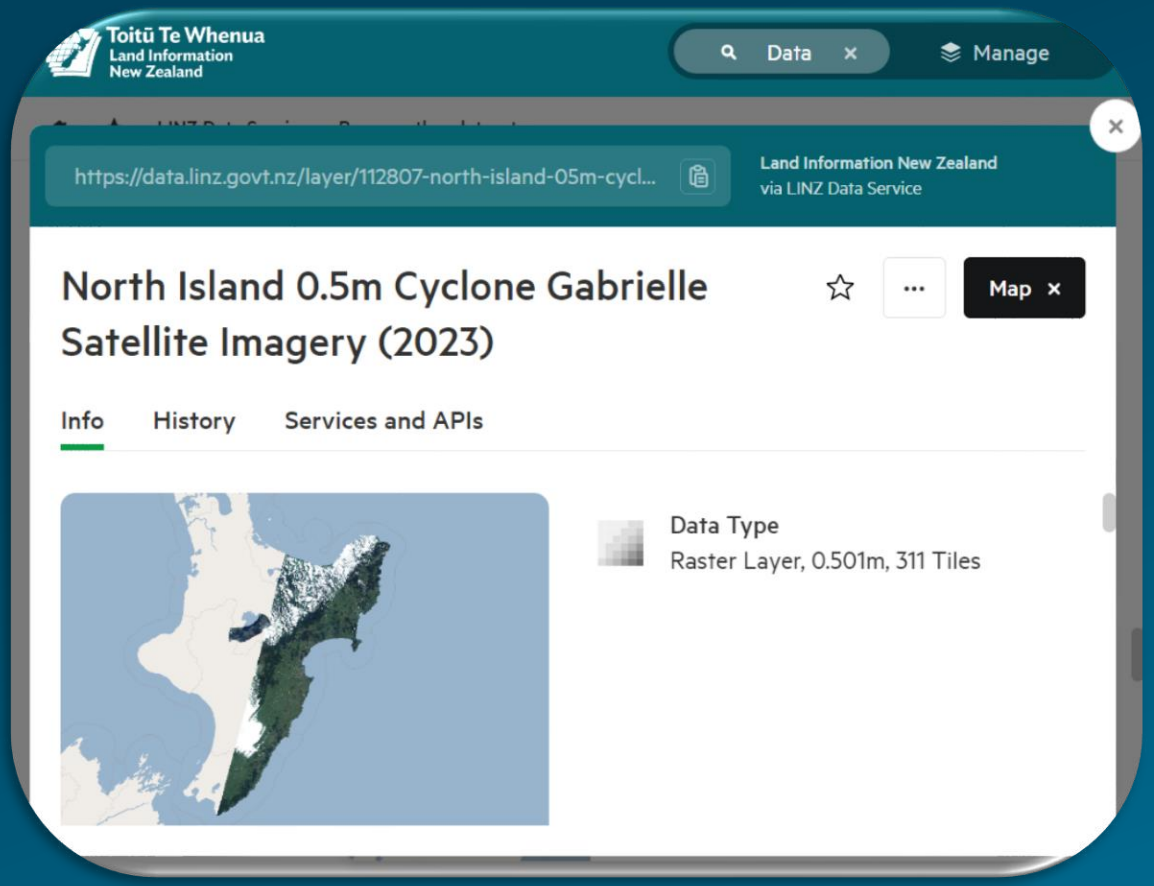
- ✗ NZ Suburbs and Localities (Pilot)
- ✓ NZ Suburbs and Localities
- ✗ NZ Street Address
- ✓ NZ Addresses

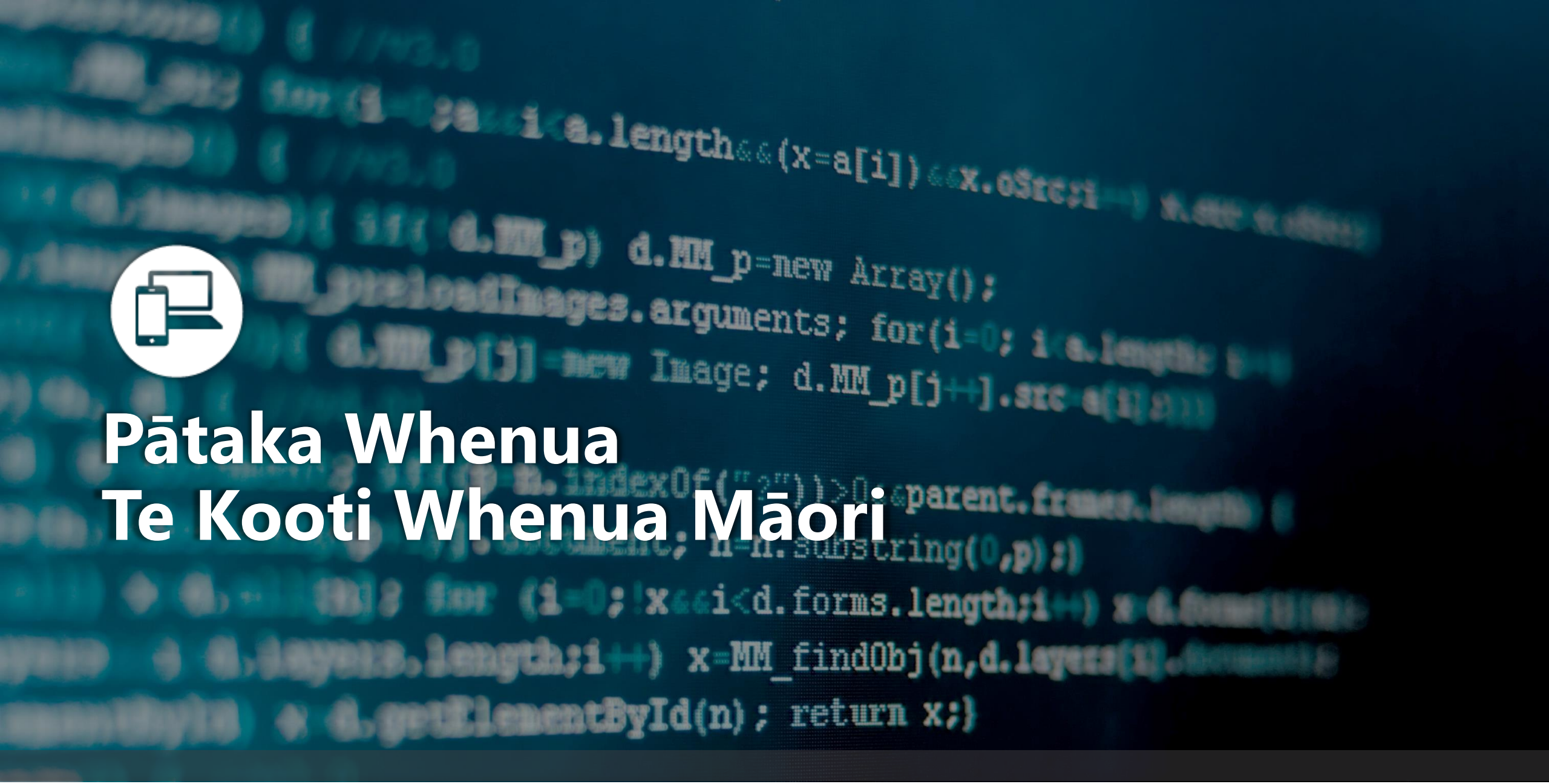
November 2023

- ✗ NZ Localities

LINZ Data Service

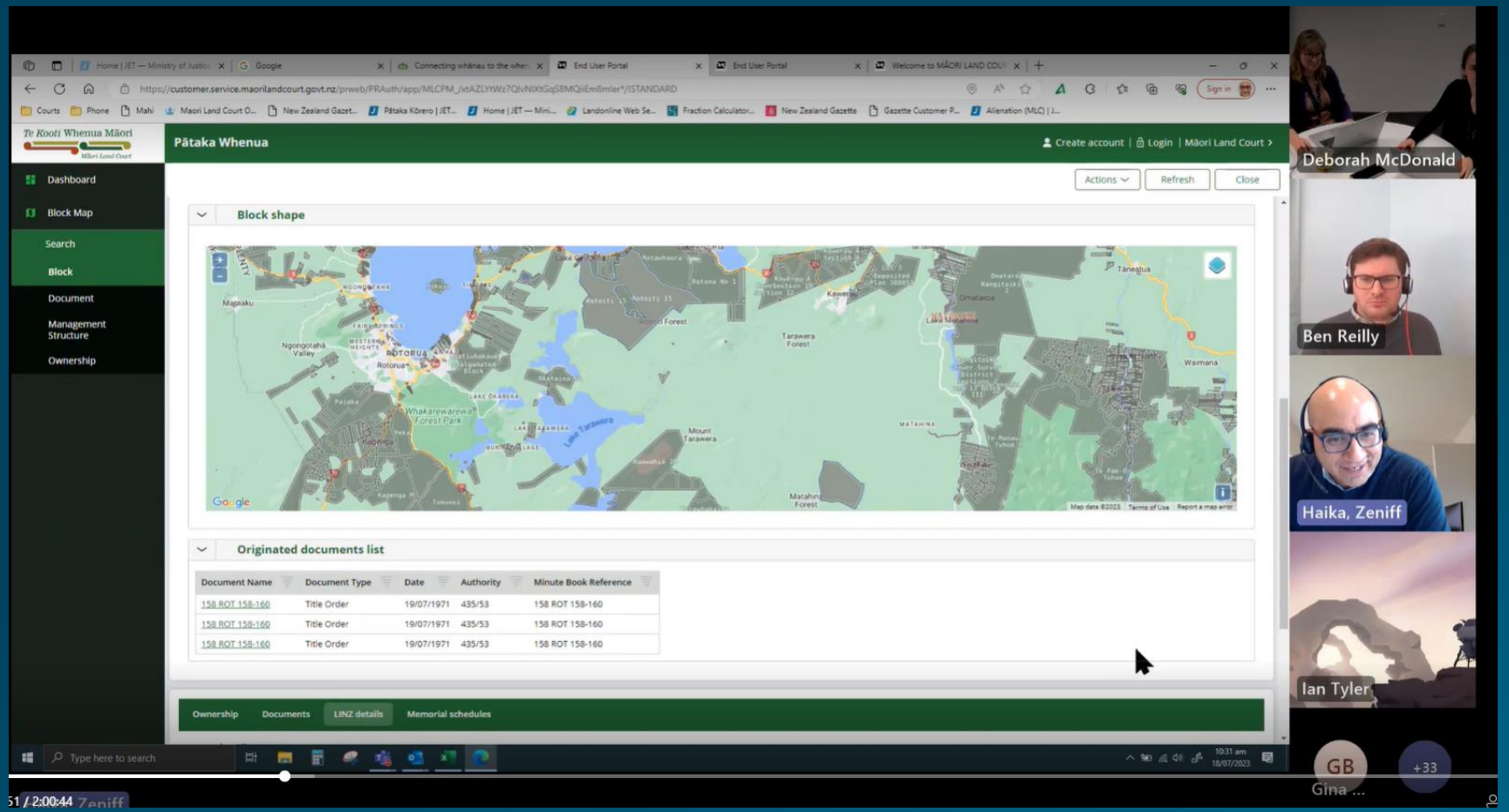
- New UI launched!
- Point Cloud data coming to LDS





Pātaka Whenua
Te Kooti Whenua Māori

Watch recording from 17:50 for live demo of Pātaka Whenua



Contact Zeniff with any questions:

zeniff.haika@justice.govt.nz

Joined-up Land Development

New subdivision, Auckland

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Te Kāwanatanga o Aotearoa
New Zealand Government

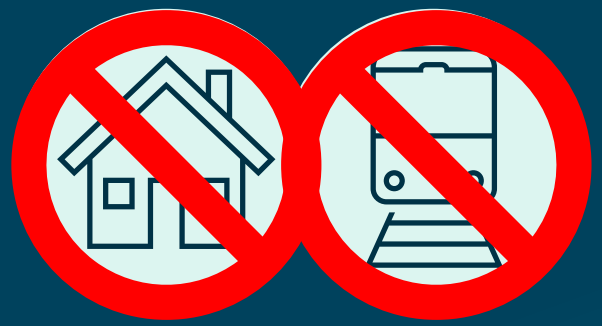
The Problem

Resource consenting is too hard and takes too long because it is disjointed, labour-intensive, and lacks transparency.

This leads to project congestion, additional costs, and prevents evidence-based decision-making.

No visibility of development pipeline for LINZ Property Rights teams, so cannot anticipate resourcing needs.

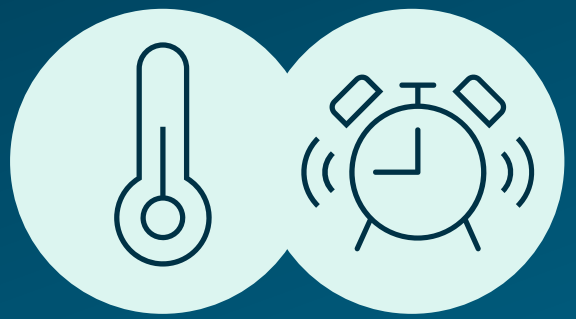
Context



Deficits

Population

Complexity



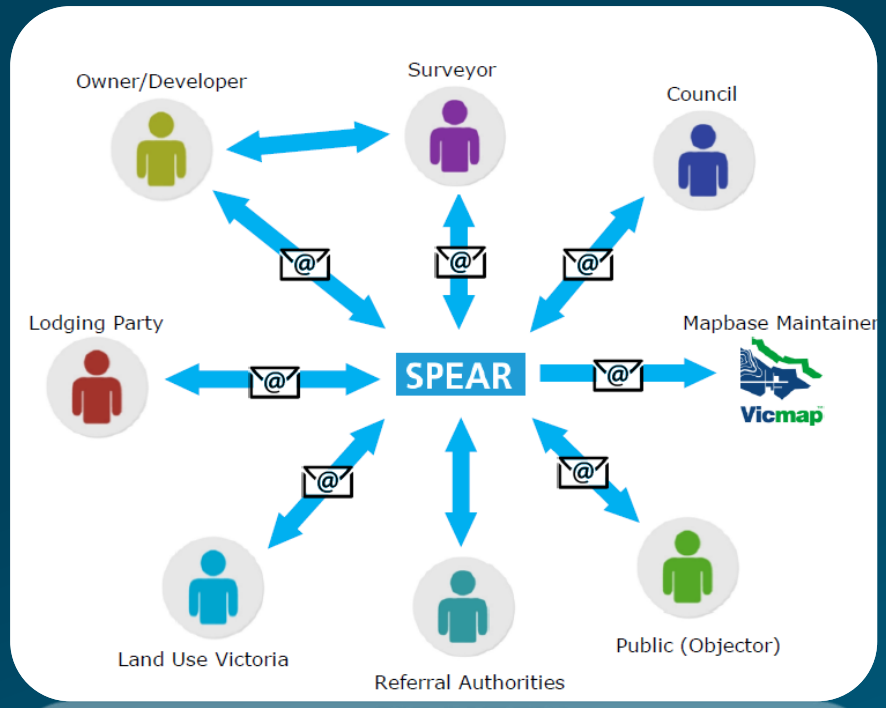
Climate

Joined-up Land Development

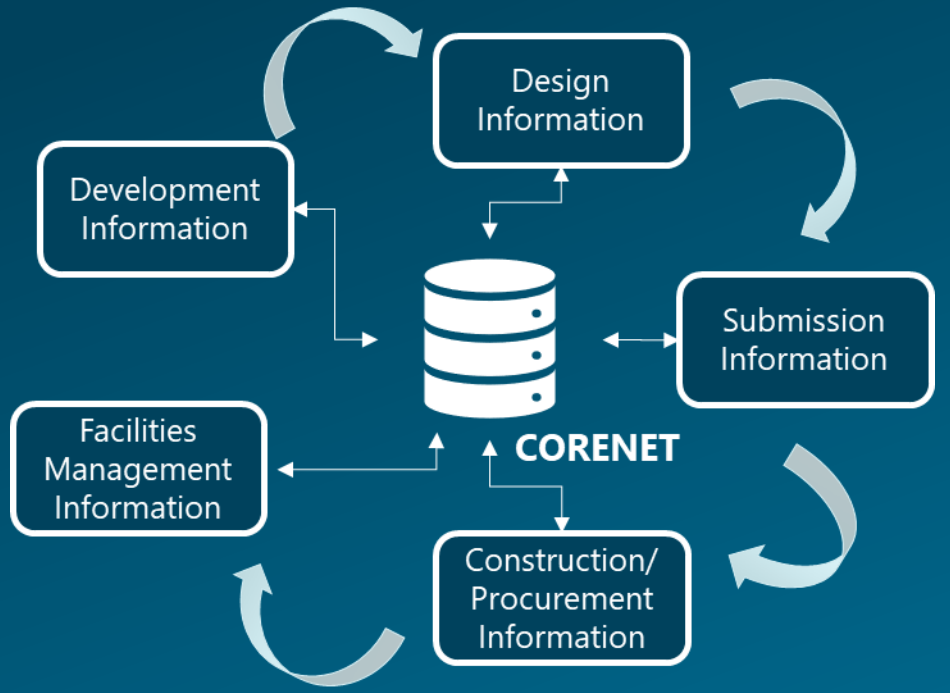
- Integrated land development process
- Increase transparency
- Promote efficiency

Overseas examples

SPEAR (Surveying and Planning through Electronic Applications & Referrals)
VIC, Australia



CORENET e- Submission
Singapore



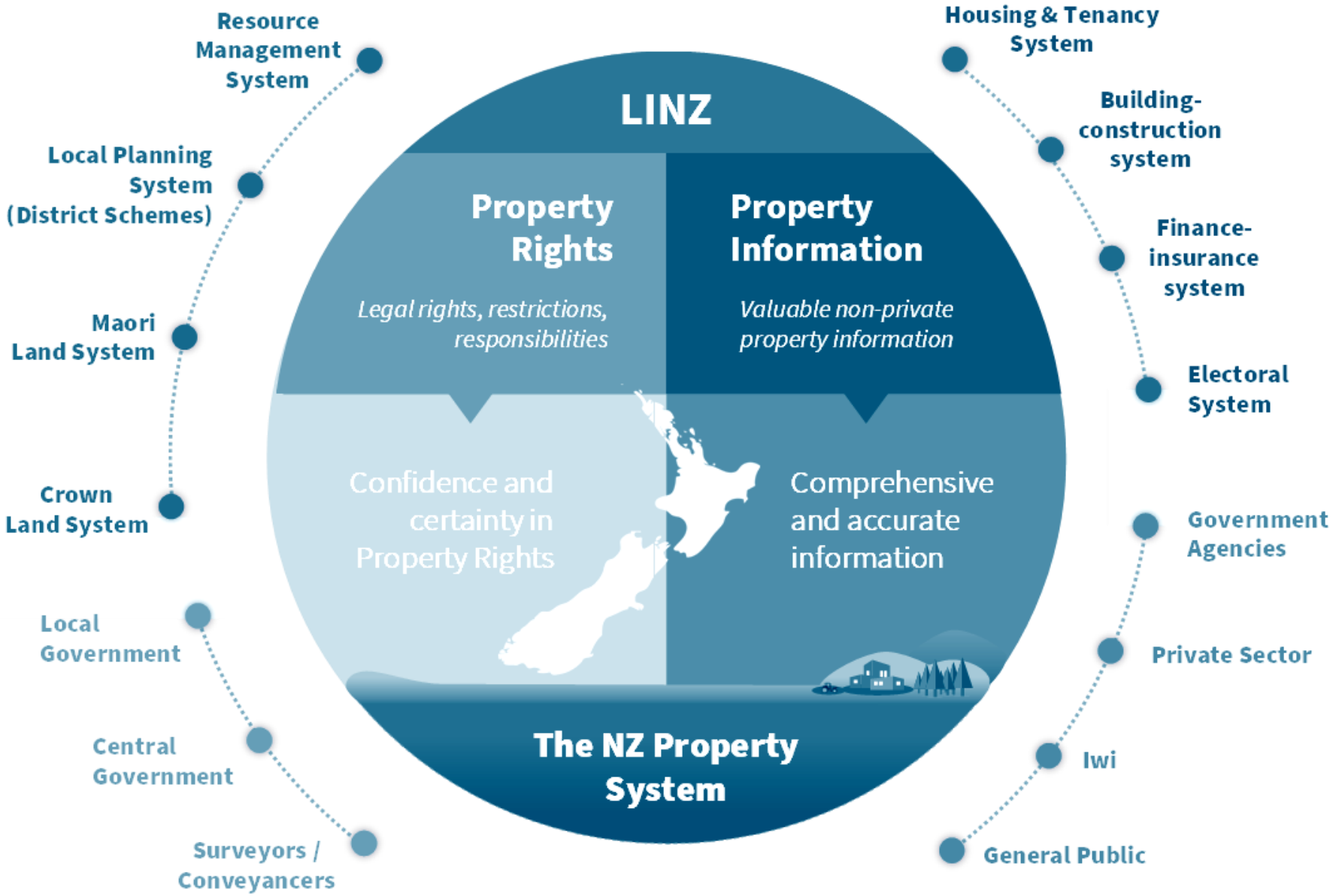
Why LINZ?

Property system stewards

Stakeholder networks

Regulatory roles

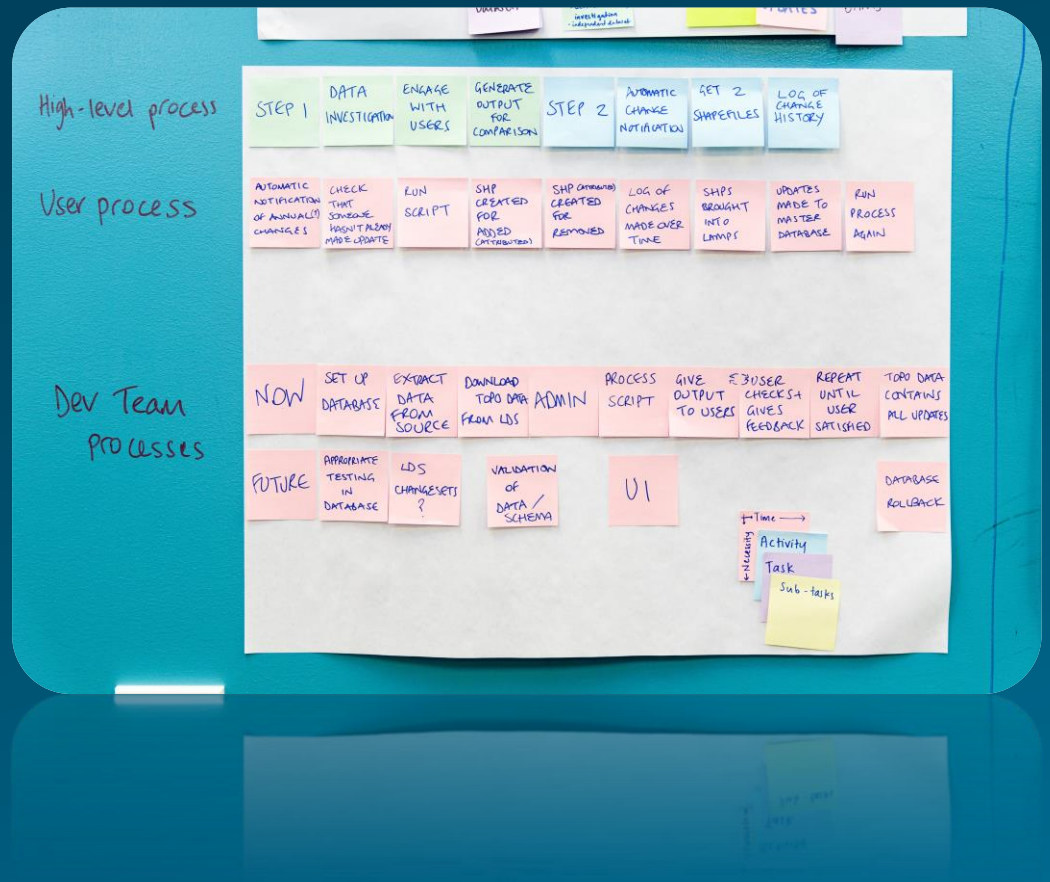
IT build capability


LINZ
Property Rights
Legal rights, restrictions, responsibilities
Property Information
Valuable non-private property information
Confidence and certainty in Property Rights
Comprehensive and accurate information
The NZ Property System
Resource Management System
Local Planning System (District Schemes)
Maori Land System
Crown Land System
Local Government
Central Government
Surveyors / Conveyancers
Housing & Tenancy System
Building-construction system
Finance-insurance system
Electoral System
Government Agencies
Private Sector
Iwi
General Public

Problem definition and benefits-casing

We want to hear from:

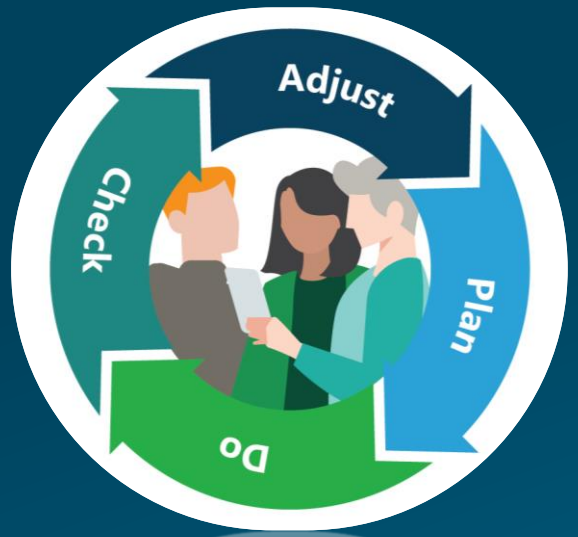
- Central government agencies
- Te Ao Māori
- Local councils and associated authorities
- End-customers in land development
- Technology experts



Indicative roadmap

2023 2026

Requirements | Design | Prototype | Business case



2024-26 Enhancement	2026-30 Possible enhancements
All customers only using New Landonline (2025)	Increased digital data capture and automation
Improve Māori Land Court dealings	Integration with third-party software and councils' consenting processes
Generate fully digital plans	
Improve subdivision processes	

Modernising Landonline project timeline

We are here

Our timeline going forward

Ⓓ Dealings Ⓢ Survey

2020-21 Foundation

Web Search

Land Record Search

Notice of Change

Notice to Mortgagee

2021-22 Building the foundation

- Ⓓ Dealings pilot started
- Ⓓ Web-based platform
- Ⓓ High volume instruments
- Ⓢ Cadastral Survey Rules 2021
- Ⓢ Land Transfer survey (pilot)
- Ⓢ 3D Cadastral Survey Data Model
- Ⓢ Survey creation tools

2022-23 Transition

New self-service experience

- Ⓓ New application available
- Ⓓ Further functionality built
- Ⓢ New application available
- Ⓢ Capture tools redeveloped

2023-24 Migration

- Ⓓ Investigate templating some image-only instrument types
- Ⓢ Enabling an increased amount of data entered from survey software
- Ⓢ Submit and approve a survey
- Ⓢ Council certifications

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2026-30 Possible enhancements

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Looking ahead

Our timeline going forward

D Dealings S Survey

2020-21 Foundation

- Web Search
- Land Record Search
- Notice of Change
- Notice to Mortgagee

2021-22 Building the foundation

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Emergency Management lightning talks

Bluff Harbour, Southland Region.

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New Zealand Government

EM lightning talks

Auckland Council – red/yellow stickering of properties after flood events
Jade Rutledge

GNS – assessing landslip risks to property
Chris Massey & Gerry Blair

Manaaki Whenua | Landcare Research – Māori frameworks for recovery
Dr Shaun Awatere

Toitū Te Whenua | LINZ – emergency management data portal
Rob Deakin

Auckland Council AEM – Rapid Building Assessment Placards

Property Data

xxxxx 2023

Context of issue

- Auckland was hit with its first regional natural disaster (of recent times) during 2023 Auckland Anniversary weekend, 27/01/2023, which resulted in the Mayor activating the State of Emergency for the first time in Auckland's history.
- This was a 1 in a 200-year event which resulted in an entire summers worth of rain falling in a matter of hours
- Only weeks later in February we were hit with Cyclone Gabrielle. Following this we were hit with a localised tornado in April and another flooding event early May.
- During a State of Emergency, councils have access to MBIEs Survey 123 application for inspectors to do Rapid Building Assessments but how do we get this information brought across from a Central Government database into out AC database.
- How are we learning from past mistakes and future proofing procedures, so we are in a better position when the next disaster strikes?
- What does this the information mean for us in terms of Property Files and LIMs?

AEM Disaster Images

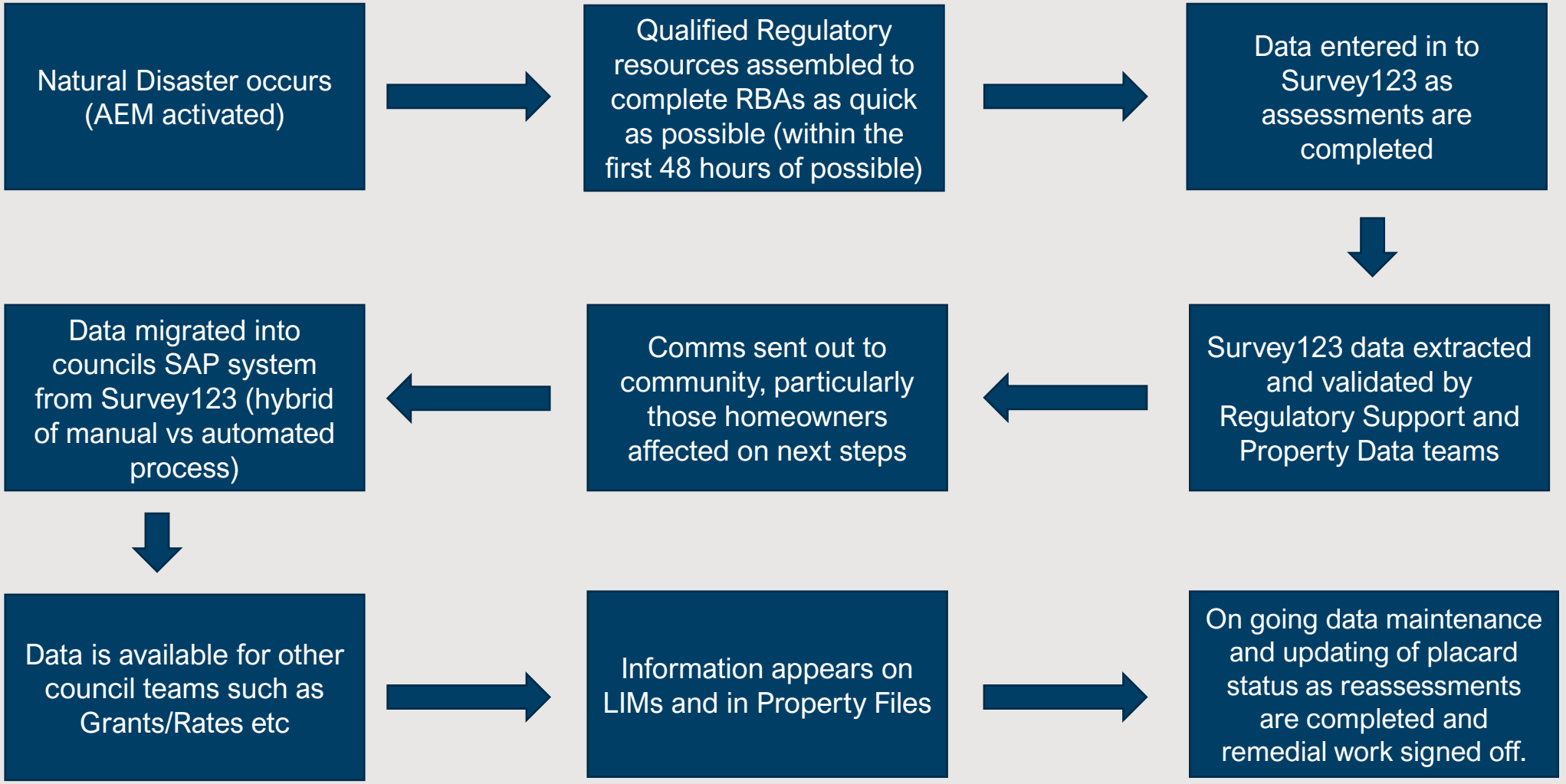
RBA Placards, What do they mean?

- At risk from external factors such as adjacent buildings or from ground failure.
- Significant damage

- No entry to parts of building with significant damage.
- Entry restricted to removal of contents and securing work OR until contractors can further access damage.

- No immediate further evaluation required however owners may wish to of their own accord.

Our Process – High level



What are our legal obligations for Property Files and LIMs?

Council has a legal obligation under Section 44A(2)(d) and (g) and Section 44A(3) of the LGOIMA Act. to disclose of any information, we have regarding to the history of the property on the LIMs and in the PFPs. Wording applied to LIMs is at a high level and indicates that there was a placard issues, the colour or the placard and what date it was issued on + whether its Open/Closed; as to not breach on privacy. Details of the damage, such as descriptions and photos, as well as works needed can be found on the RBA document in the Property File. These are done by adding characteristic flags to the property (like how consent notices/aggressive dogs and people are attached to the property)

Placards will not be able to be removed from the property unless they were issued in error, particularly if they were issued in relation to land. Therefore, we need to specific whether the placard is still open and of concern to council or has been closed.

Initial advice was that legal risk was low (just after the Anniversary floods) however the longer we waited on getting this information updated, the higher the risk got if something went wrong.

Ongoing discussions are needing to be had around how we treat the Sites/Flats/Units/Occupancy properties in the future and the logistics around how it all appears on the LIMs.

Document Examples

Rapid Building Assessment PDF

Documents are named in the format of councils current naming conventions, which include NOT transaction that they relate to + event that caused the RBA + property ID

Documents contain Assessors detail (Name/ID/Local Authority), Date/Time of Assessment, Building Location Details, Photos (if there are any), Details of the assessment damage + notes/further actions that are required

** Address' have been redacted for privacy reasons*

NOT21666232_RB
)23_Flood_114964

NOT21667272_RB
23_CycloneGabriel

LIMs

Example of wording to appear on the LIM highlighted yellow from Page 5

LIM Example

Lessons learned

What went well:

- Good lines of communication with a good roadmap in the interim stages
- Great collaborated between multiple different departments (Regulatory, Legal, ICT, Communications, Property Data)
- Skilled people who knew what was needed from each perspective.
- Ability to prioritise and work to quick time frames
- Able to adapt to the unexpected
- Future proofing to the best of our ability
- Improvements made to Survey123. Particularly the need for people having to manually identify property IDs and the predictive address searches
- Creation of new INB/NOT types in SAP to maintain information in the council database
- Migration of information and documentation (photos) from Survey123

What we could improve:

- Automate the generation of survey pdfs and migration of documents upload to ACCORD (from Survey123) in bulk without the need for external provider help.
- Automate the creation of Incidents (INBs) and Notices (NOTs)
- Improve cleansing of the data in the early stages
- Remove the reliance of spreadsheets so we are resolving confusion on what is the “true source of truth”

Where to next

- On going training for users
- Extend property search project as we have a range of service/vanity addresses that are not currently picked up
- End point automation of emails to update customers when new notices are added.
- Continual of process improvements
- FME server view to flag properties that are occupancies
- Compliance monitoring team working on processes of using SAP directly to update/change placards instead of using Survey123 (as this then causes confusion for customers downstream)

Questions ?

Contact details:

Jade Rutledge – Property Information Technician

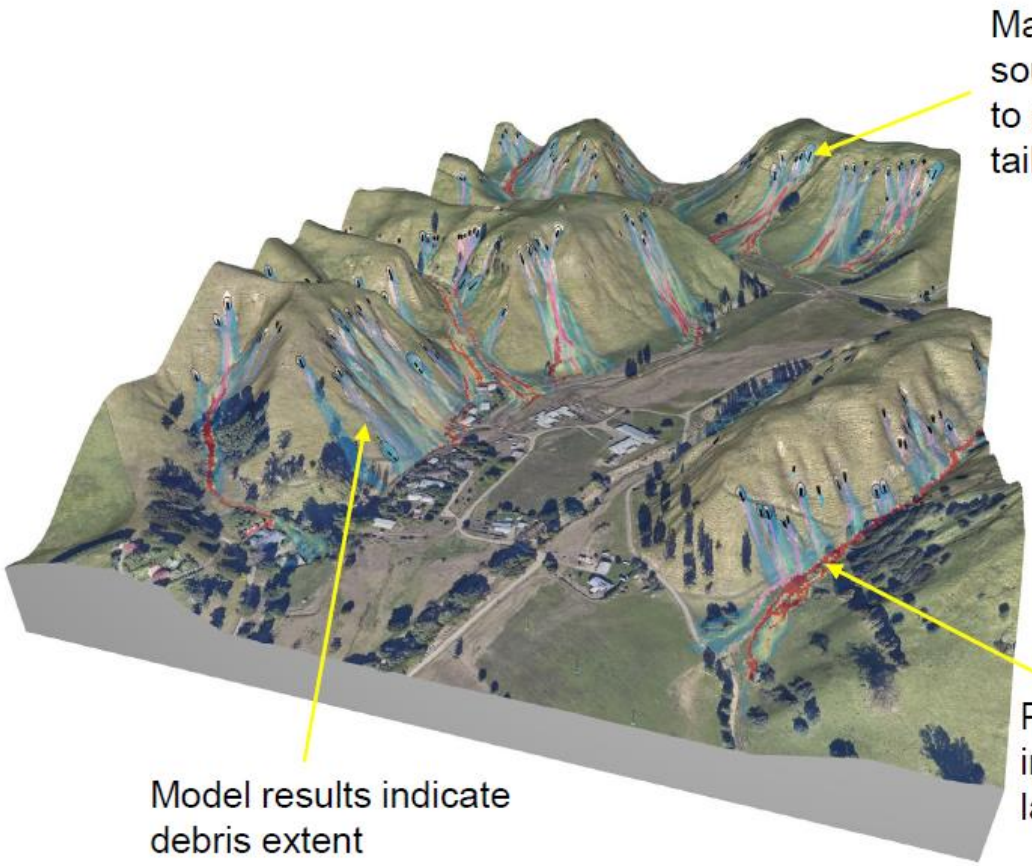
jade.rutledge@aucklandcouncil.govt.nz

Introduction: Why map landslides

Many landslides occurred after Cyclone Gabrielle – destroying infrastructure and lives across the North Island.

End users need to know where these landslides (and debris) are and where other landslides could occur in future rain (and EQ) events.

Providing valuable underpinning data for development of rainfall induced landslide (RIL) forecast tool, and hazard and risk models



EXTREME WEATHER RESEARCH PLATFORM
Te Rāngai Rangahau Āhuarangi

Outcomes and stakeholders

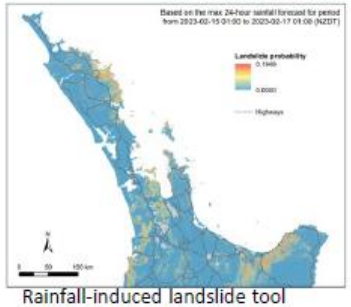
Jan 2023 — **Dec 2023 >**

Feb 2023 | **Feb - Dec 2023** | **Late 2023 >**

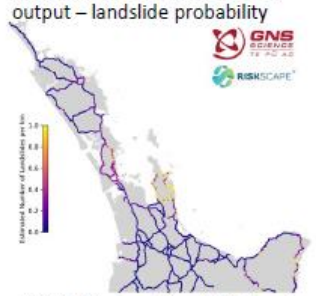
Stakeholders are able to have an idea (based on our models) where landslides might have occurred immediately after the event.

Stakeholders are able to know (based on our mapping and imagery) where landslides did occur after the event.

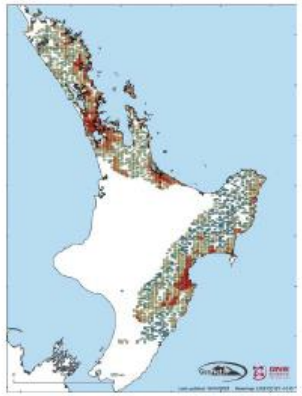
Stakeholders can find out (with improved accuracy) where future landslides may occur in the future (using our models).



Rainfall-induced landslide tool output – landslide probability

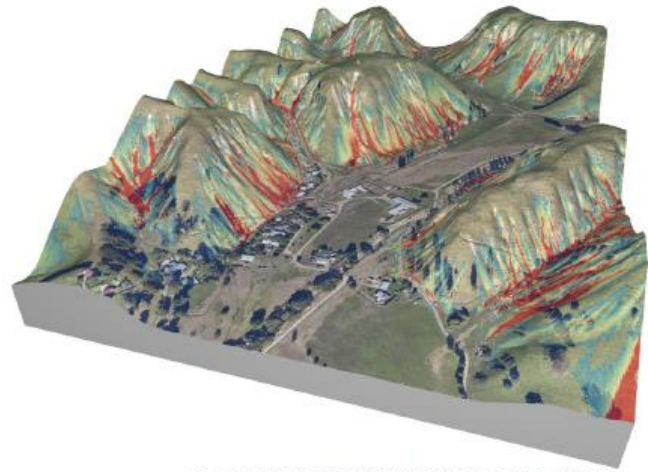


Rainfall-induced landslide tool output – landslide impact on roads



Map showing grid cells to be mapped with landslides, coloured by priority

Aerial image showing Ex-Tropical Cyclone Gabrielle landslides (left) with overlaid mapped landslides (right)



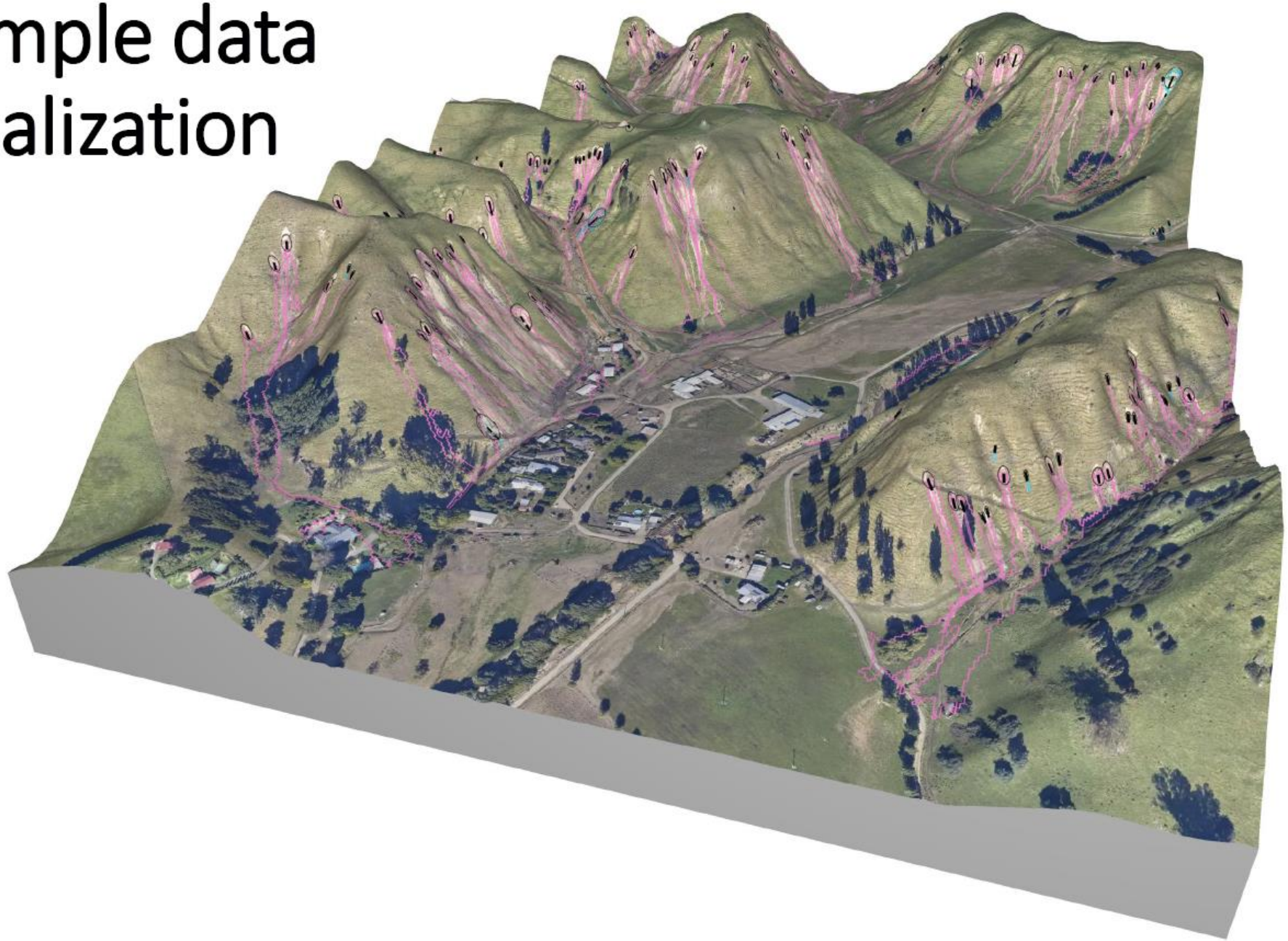
Improved model outputs for increased accuracy

Stakeholders:

National rail, road & electricity network agencies; affected local government agencies

EXTREME WEATHER RESEARCH PLATFORM
Te Rāngai Rangahau Āhuarangi

Example data visualization



Outputs and timelines

Output	Date/timeline
'Raw' & quality checked mapping data showing locations of landslides with given volume and type triggered by Cyclone Gabrielle.	Available now, continually uploaded to webmap stakeholders have access to
Science report outlining methodology used to aid landslide mappers for future events.	Fully published at completion of project (early 2024)
Landslide susceptibility & rainfall-induced landslide forecast models (using existing data for immediate response & Cyclone Gabrielle mapped data for improved accuracy models for long-term use)	Initial models available before, during and immediately after event (February 2023) Improved accuracy models available upon completion of project (early 2024)

Example of mapped landslides at 1:5000 scale. The first example is a stopbank breach using the 'unclear' movement type

MovalType	Size_Area	Material	Activity	Urgency	Comment	CreateDate	Creator	EditDate	Editor	rotope movement
Slide	Bus or large truck	Soil or debris	First-time failure	Observation	NULL	2023-04-22T19:...	kerry leith	2023-04-22T19:...	kerry leith	Certain
Slide	Family car	Soil or debris	First-time failure	Observation	NULL	2023-04-22T19:...	kerry leith	2023-04-22T19:...	kerry leith	Certain
Slide	Family car	Soil or debris	First-time failure	Observation	NULL	2023-04-22T19:...	kerry leith	2023-04-22T19:...	kerry leith	Certain
Flow	Family car	Soil or debris	First-time failure	Observation	NULL	2023-04-22T19:...	kerry leith	2023-04-22T19:...	kerry leith	Certain
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Slide	Bus or large truck	Soil or debris	First-time failure	Observation	NULL	2023-04-22T19:...	kerry leith	2023-04-22T19:...	kerry leith	Certain
Slide	House	Rock	First-time failure	Observation	NULL	2023-04-22T19:...	kerry leith	2023-04-22T19:...	kerry leith	Certain
Slide	Bus or large truck	Soil or debris	First-time failure	Observation	NULL	2023-04-22T19:...	kerry leith	2023-04-22T19:...	kerry leith	Certain
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Slide	Family car	Soil or debris	First-time failure	Observation	NULL	2023-04-22T19:...	kerry leith	2023-04-22T19:...	kerry leith	Certain

Sample output of part of attribute table in QGIS

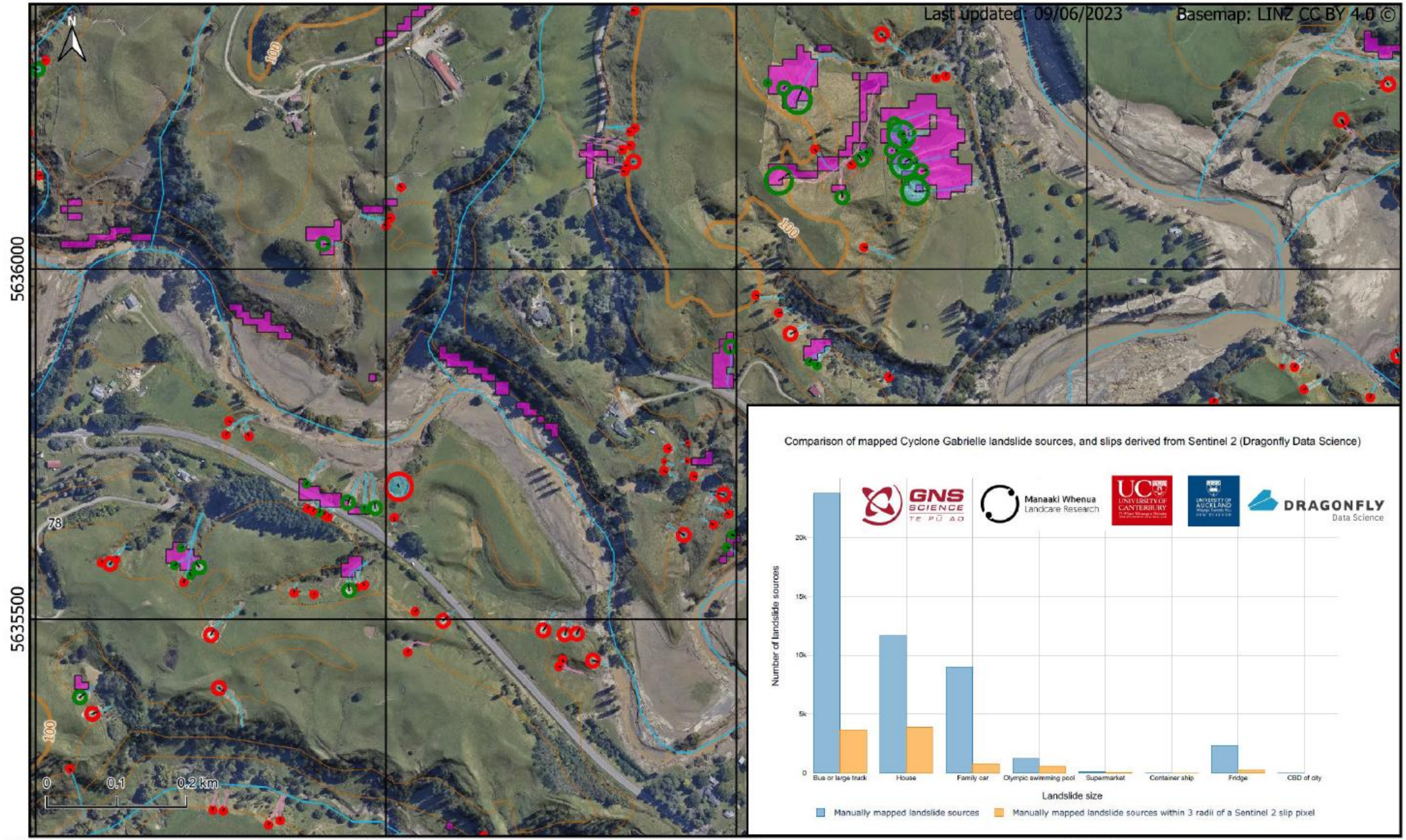
Project lead: *Chris Massey (c.massey@gns.cri.nz)*

Project co-lead: *Kerry Leith (k.leith@gns.cri.nz)*

Project manager: *Janine Bidmead (j.bidmead@gns.cri.nz)*

Tom Robinson (UC), Liam Wotherspoon (UofA) & Hugh Smith and Harley Betts (Manaaki Whenua) + 15 students and 10 GNS scientists.

Snapshot of manually mapped, and satellite-derived, rainfall-induced landslide observations following Cyclone Gabrielle
(Basemap: EarthScanner 0.5m satellite image (LINZ), and Cyclone Gabrielle Hawke's Bay 0.1m Aerial Photos (19-21 February 2023))

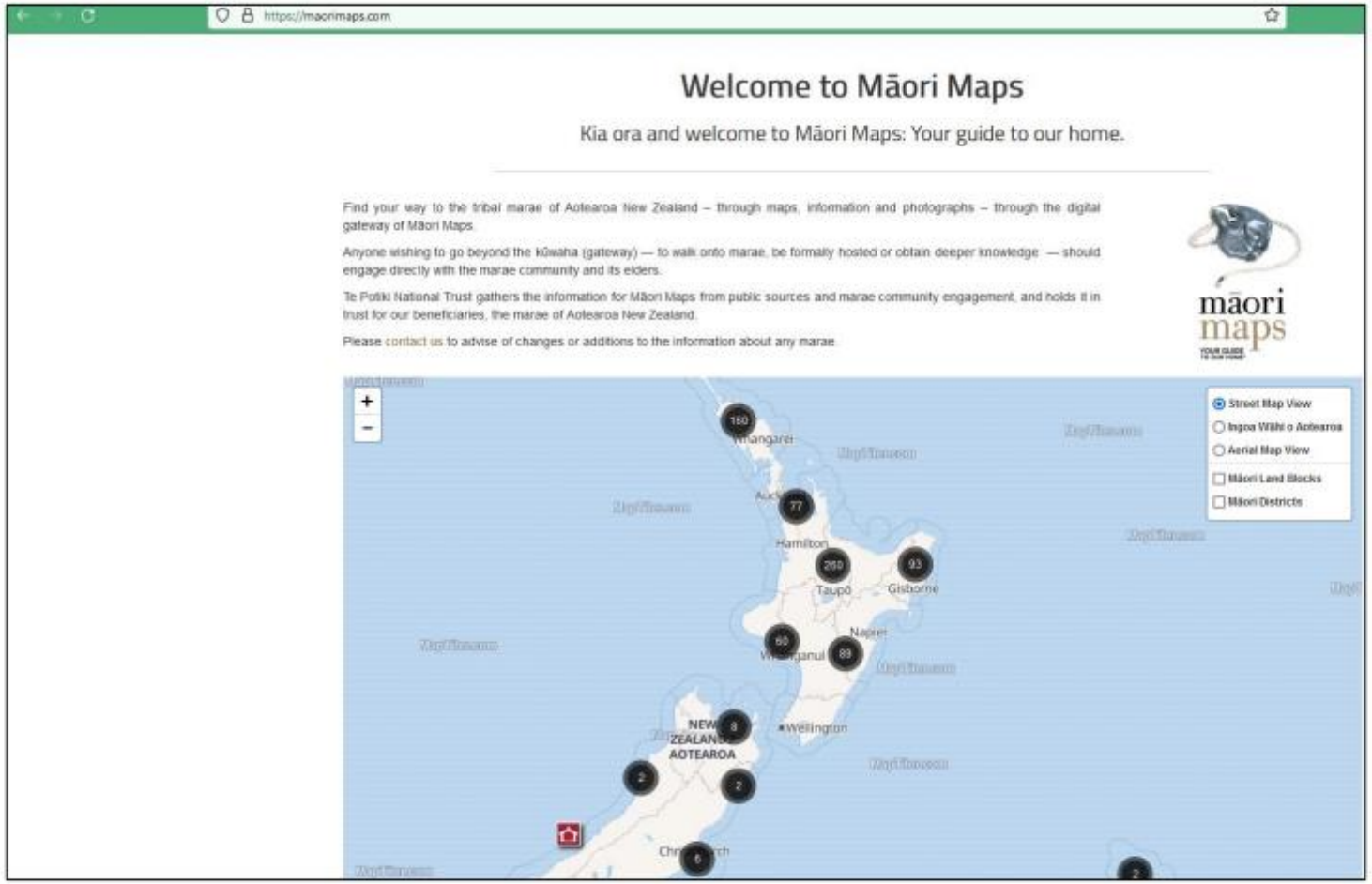


What is the place of Māori land and property data within disaster recovery?

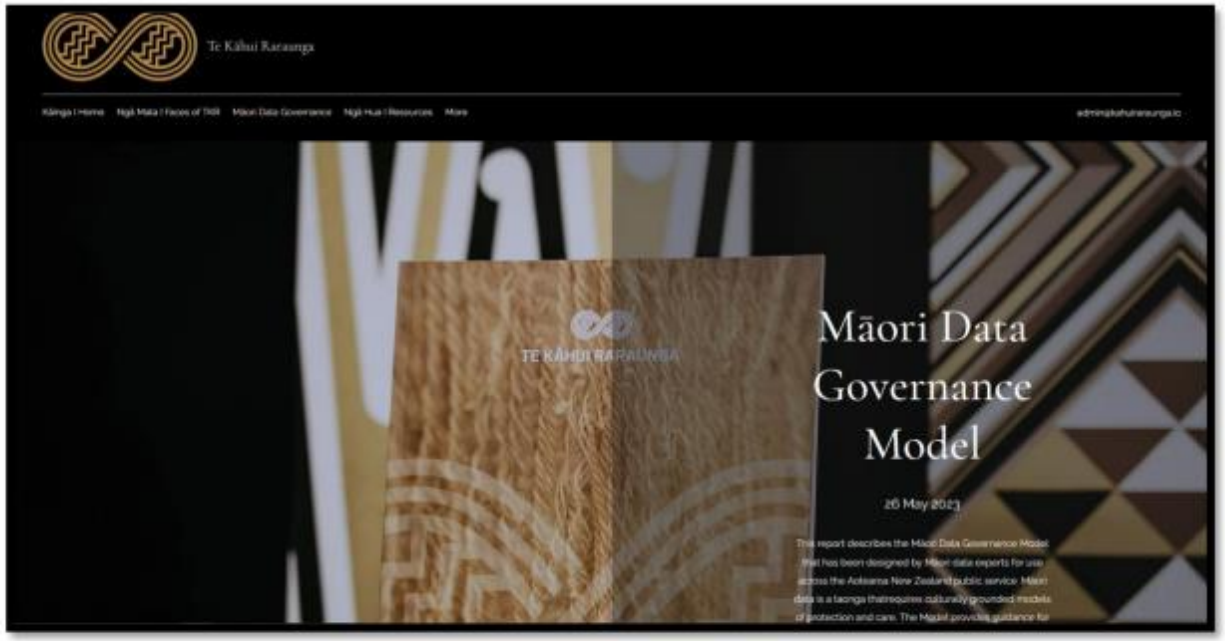
Shaun Awatere
Manaaki Whenua

Manaaki Whenua
Landcare Research

How can better information and mapping be provided for critical social infrastructure (e.g. marae, papakāinga, and urupa)?



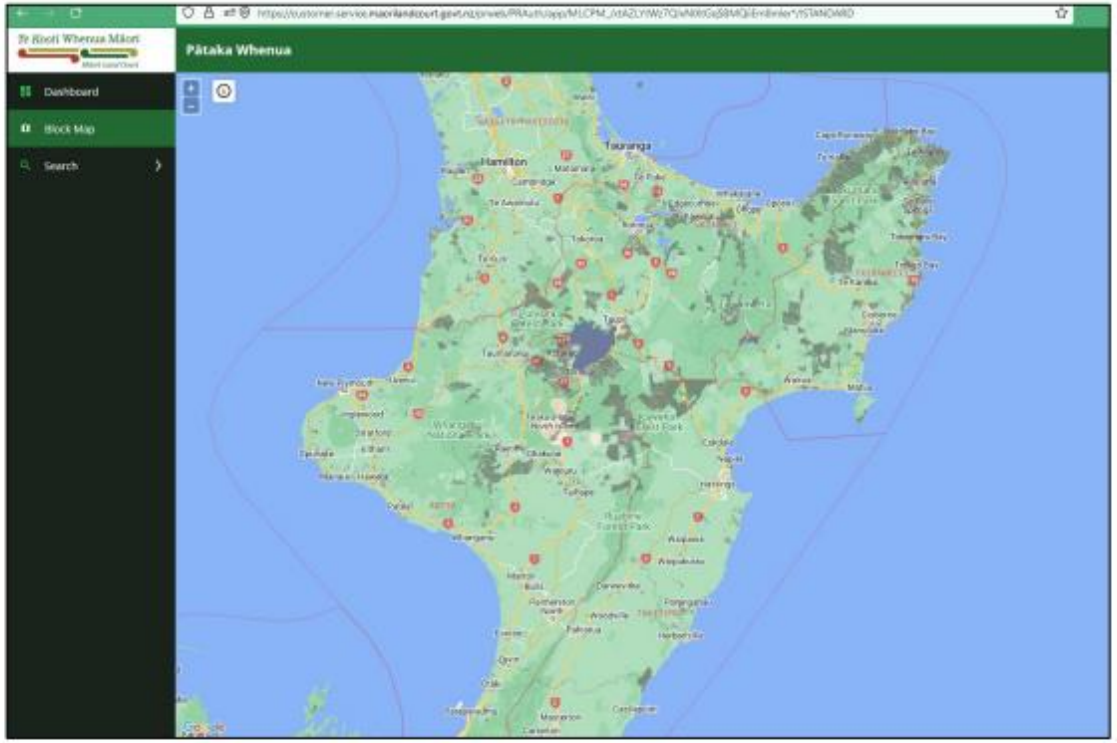
How do we define and map local communities, the people, land and properties within their boundaries?

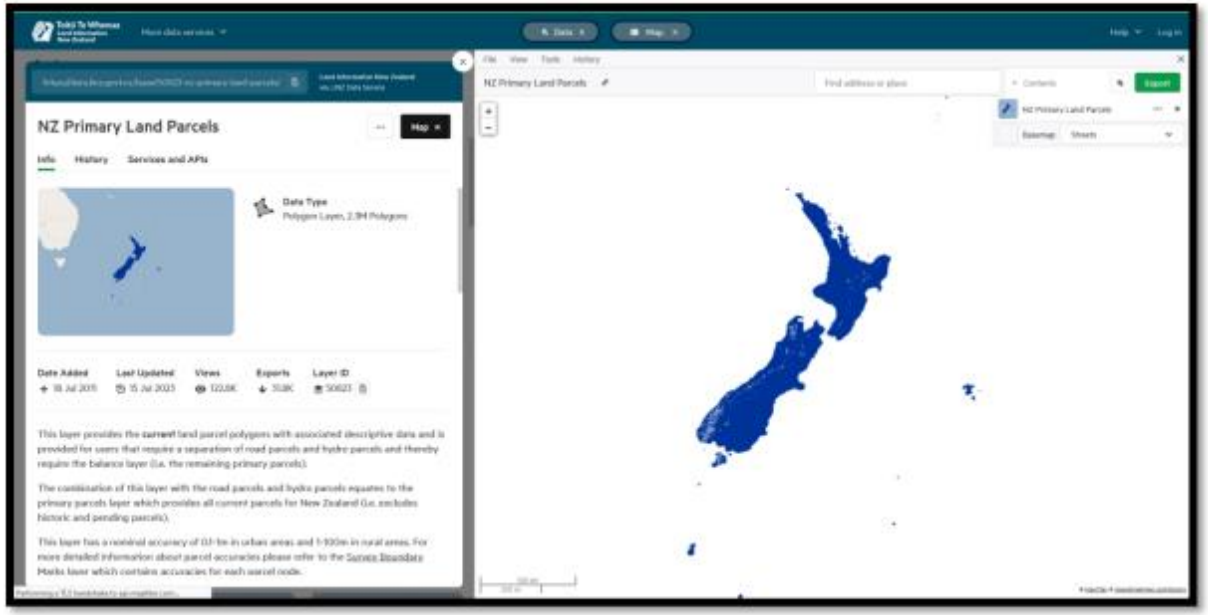


https://www.kahuiraraunga.io/

https://www.tkm.govt.nz/map/

Māori land and property data is fragmentary and relatively inaccessible, holding back effective and Tiriti-centred decision making. Central and local government often want to do the right thing but can't empower communities they don't know about.





https://toitutairawhiti.co.nz/

Toitū Te Whenua
Land Information
New Zealand

Common Operational Dataset for Emergency Management

Improved data sharing for emergency management

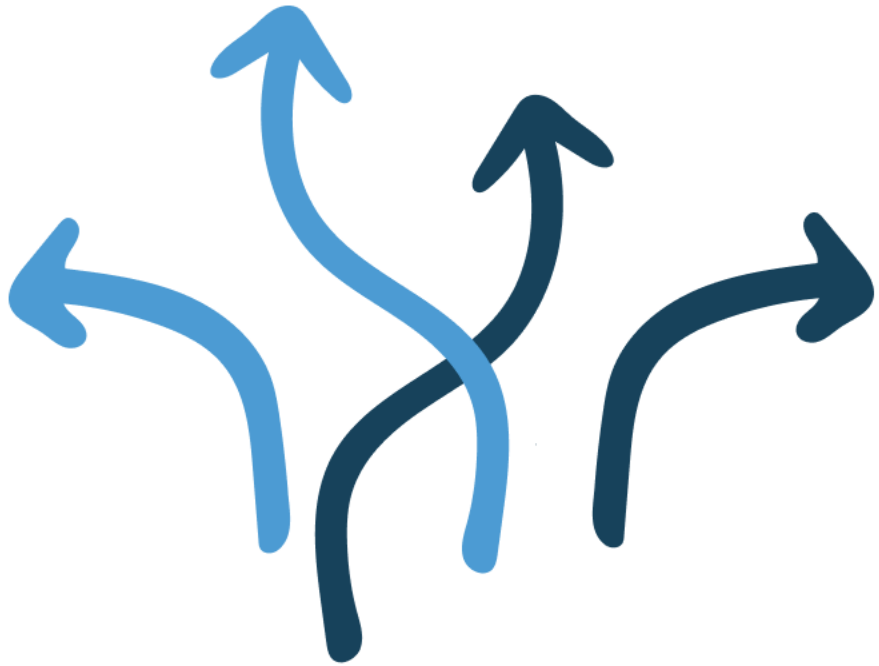
Rob Deakin
Manager Resilience

18 July 2023

All-of-Government Geospatial Information for Emergencies Leadership Group

Background

- Hard to find, analyse and act on
- Relying on existing relationships
- Unclear which data is authorative
- Duplicate effort
- Lose valuable time

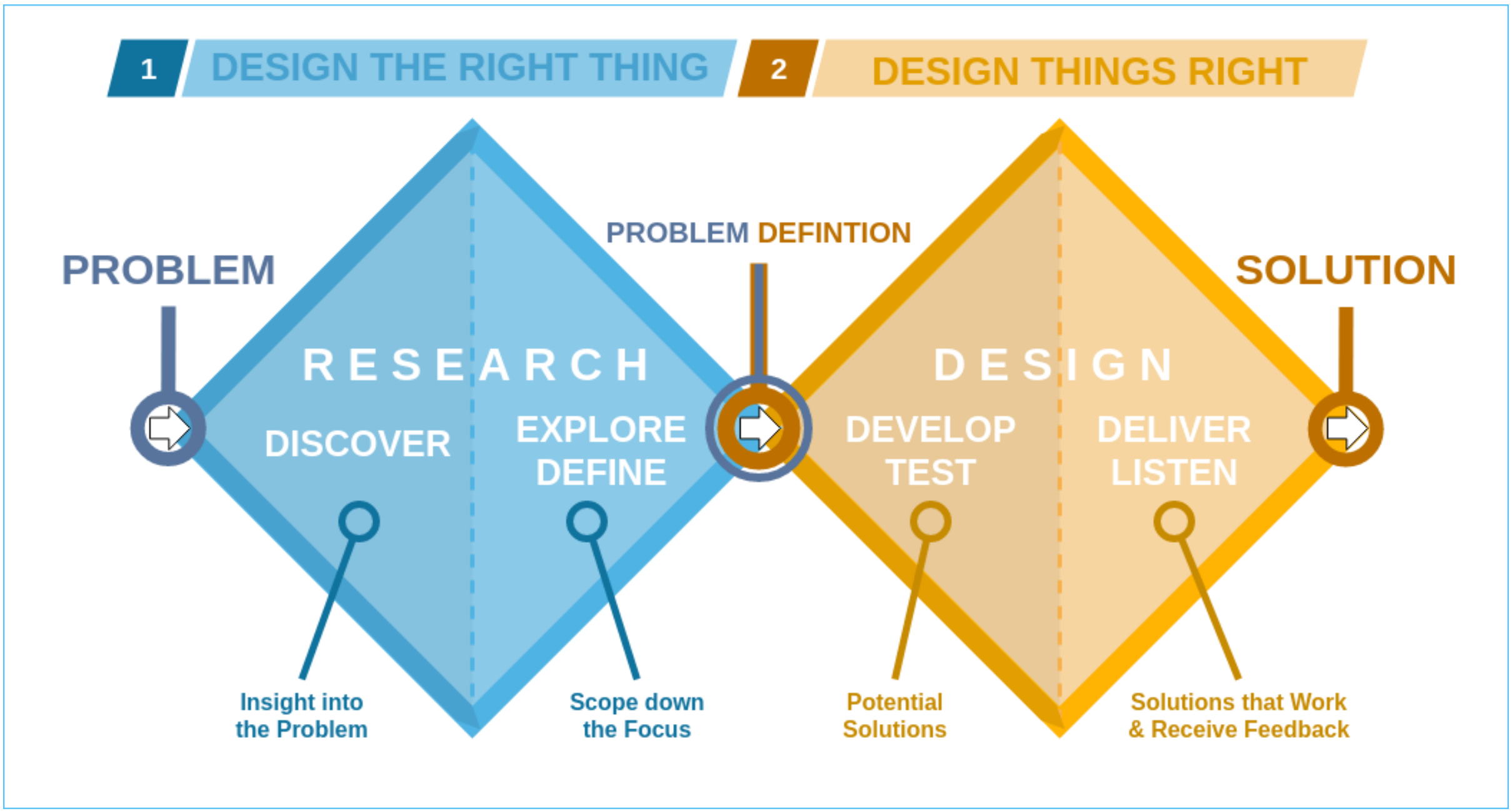


How might we make geospatial information more accessible before, during and after emergencies for those who need it?

A shared goal

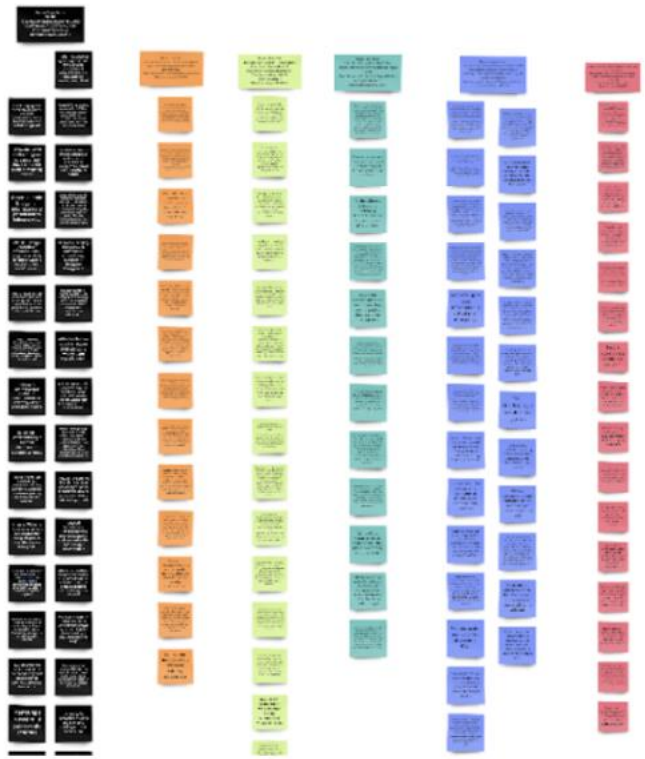
“Quality geospatial information and services are available and accessible in a timely and coordinated way to support decision-making and operations within and across all sectors and phases of the emergency cycle”

Strategic Framework on Geospatial Information and Services for Disasters, UN-GGIM, 2017


1
DESIGN THE RIGHT THING
2
DESIGN THINGS RIGHT
PROBLEM
PROBLEM DEFINTION
SOLUTION
RESEARCH
DESIGN
DISCOVER
EXPLORE
DEFINE
DEVELOP
TEST
DELIVER
LISTEN
Insight into
the Problem
Scope down
the Focus
Potential
Solutions
Solutions that Work
& Receive Feedback

Analysis

Interviews



Findings

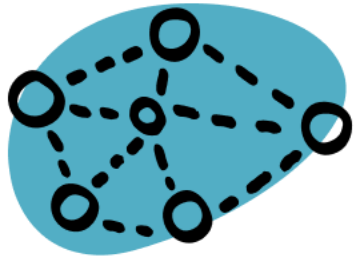
Insights

Our solution

Find data easily

Trust data is valid

Before they need it

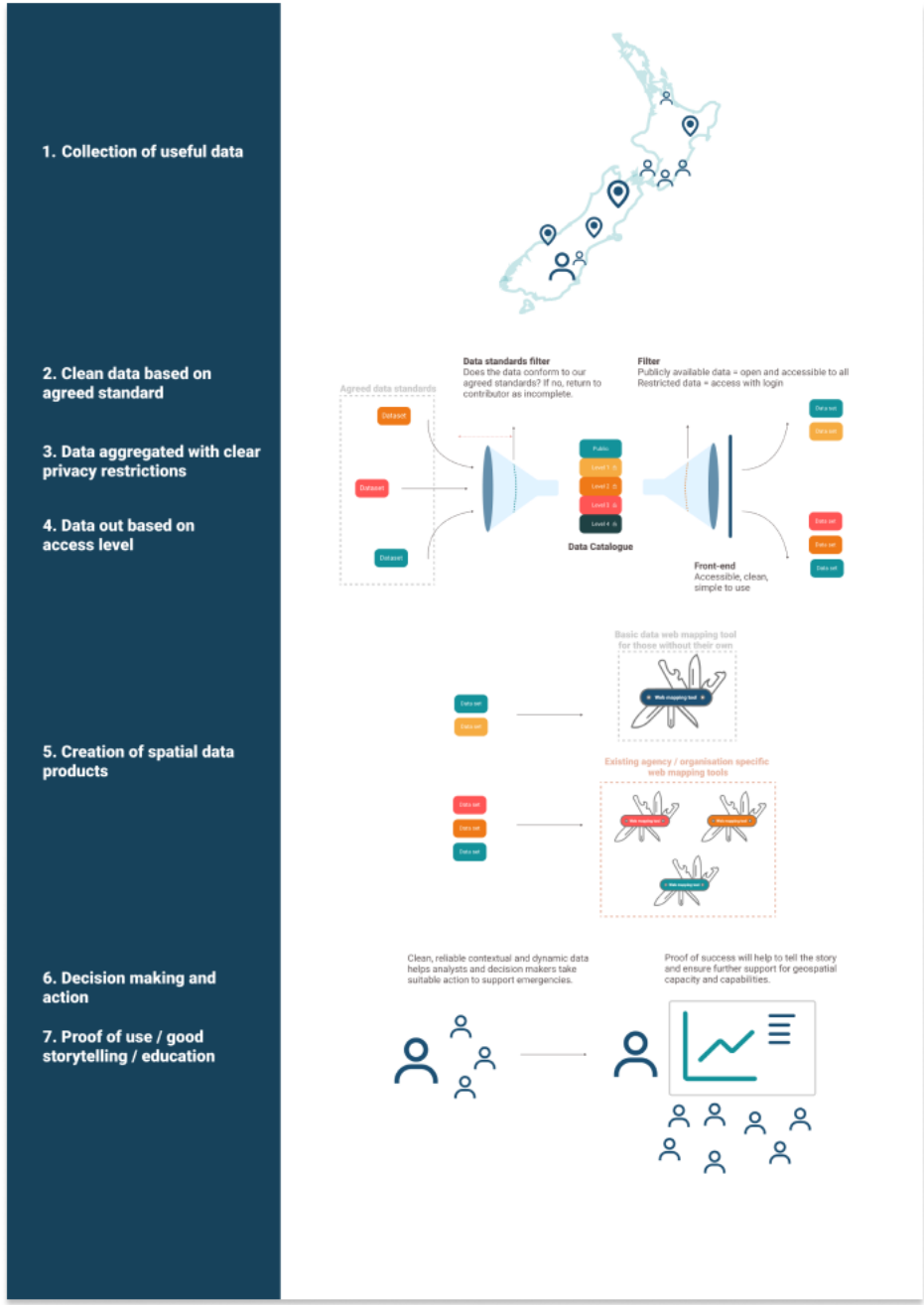


Share data easily

Promote use of data

A solution in 5 parts

- Web-based catalogue
- Curated data collections
- Data Sharing Agreements
- Data Standards
- Communities of Practice

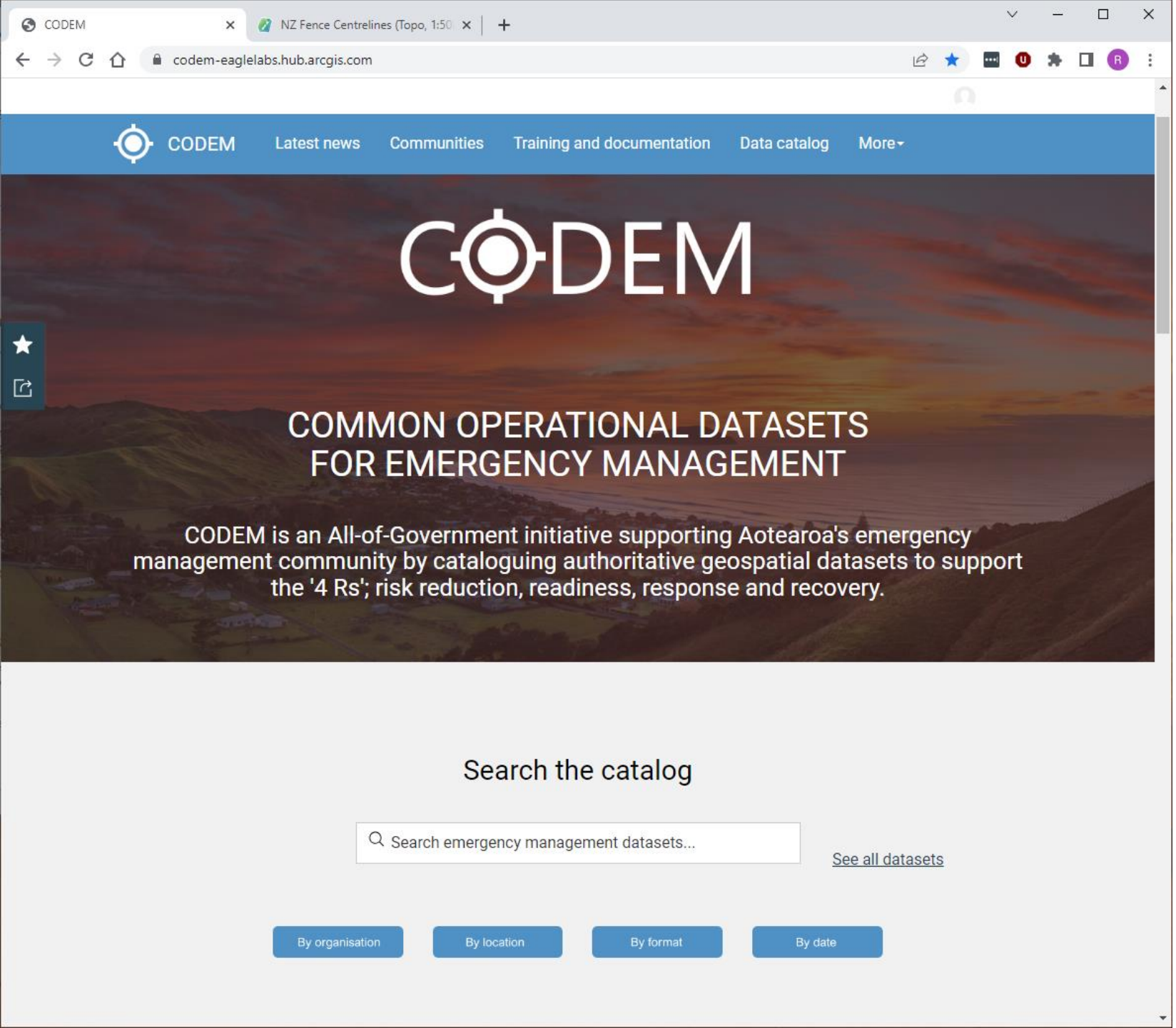


Design process

- Research
- Ideation
- Paper-prototype
- Lo-fi wireframes
- Testing and iterating . . .
- High-fi prototype

Stage 2 focus:

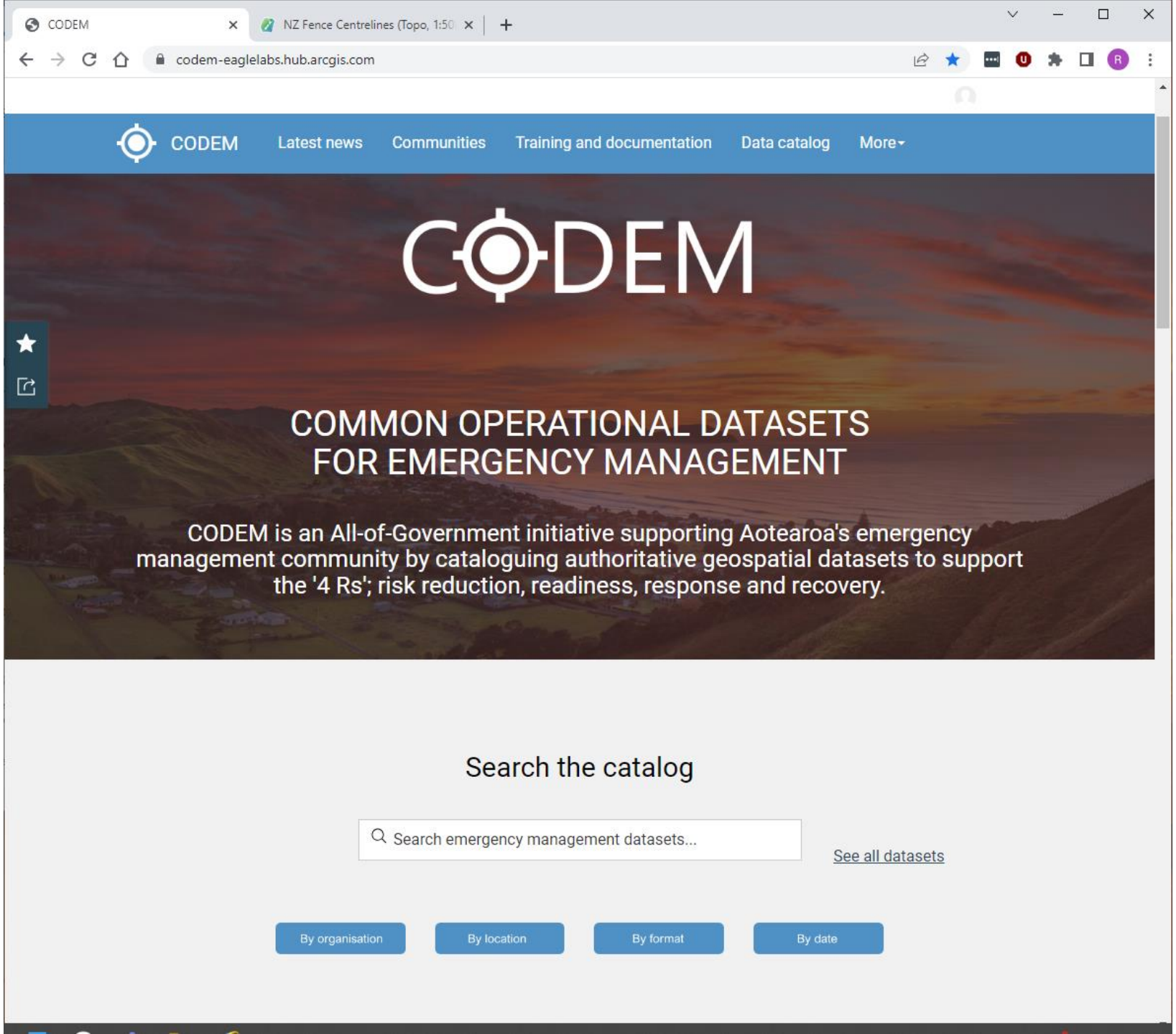
- Iwi / Māori user cases
- Data sharing agreements
- Prototype user testing
- Options assessment



Stage 3 aims:

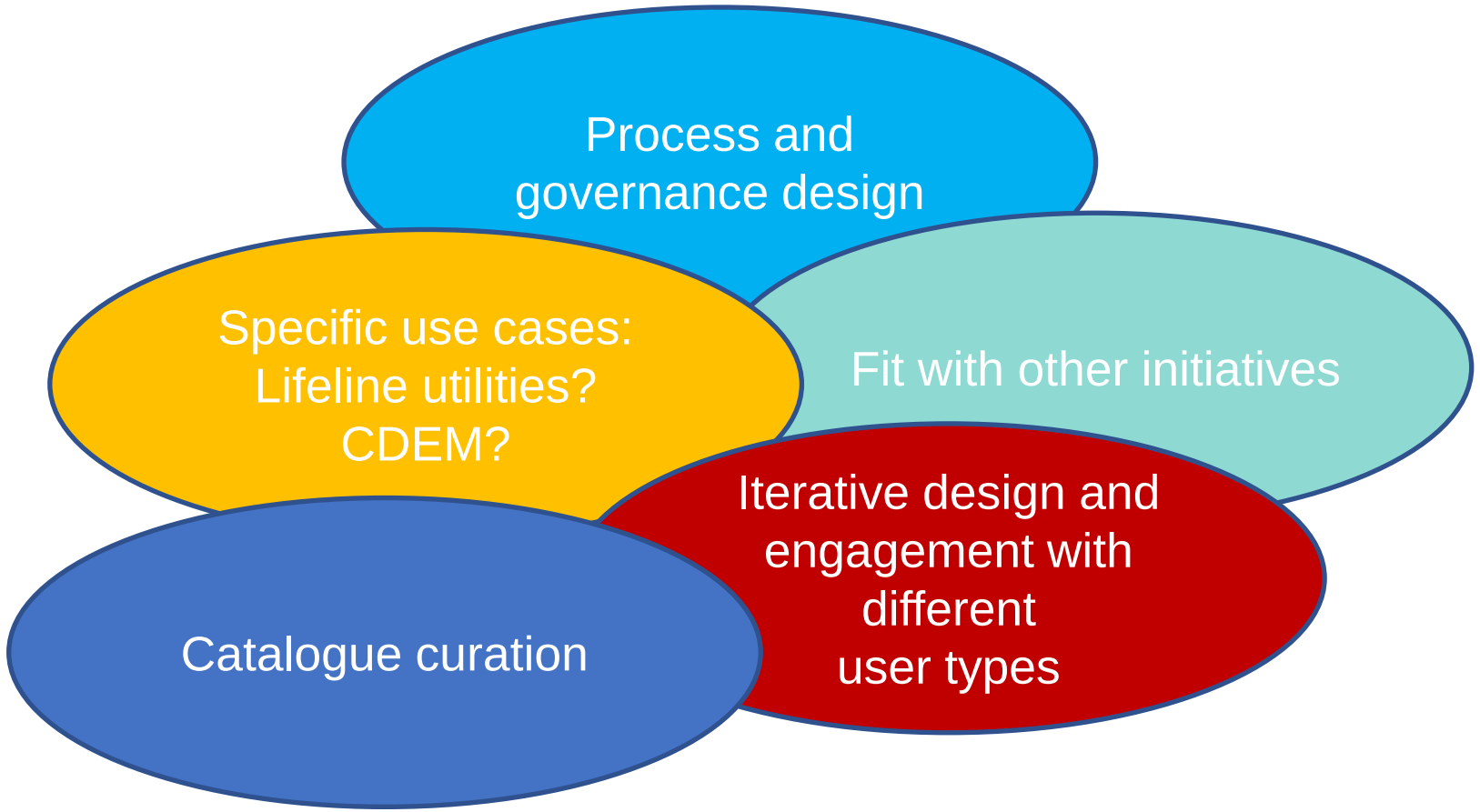
1) Access GADA catalogue content
2) Assess AGOL functionality
3) Test metadata access
4) Workable in LINZ SaaS
5) User engagement

Demo


CODEM
NZ Fence Centrelines (Topo, 1:50
codem-eaglelabs.hub.arcgis.com
CODEM
Latest news
Communities
Training and documentation
Data catalog
More
CODEM
COMMON OPERATIONAL DATASETS
FOR EMERGENCY MANAGEMENT
CODEM is an All-of-Government initiative supporting Aotearoa's emergency management community by cataloguing authoritative geospatial datasets to support the '4 Rs'; risk reduction, readiness, response and recovery.
Search the catalog
Search emergency management datasets...
See all datasets
By organisation
By location
By format
By date

Next steps

12-month continued prototyping



You can help:

Are you interested in sharing your data and information?

Are you interested in being a tester?

Any questions?

Do you want to help test the prototype?
Do you have datasets you'd like to share?

Please contact me:

rdeakin@linz.govt.nz

LINZ Emergency Support

emergency@linz.govt.nz

Toitū Te Whenua
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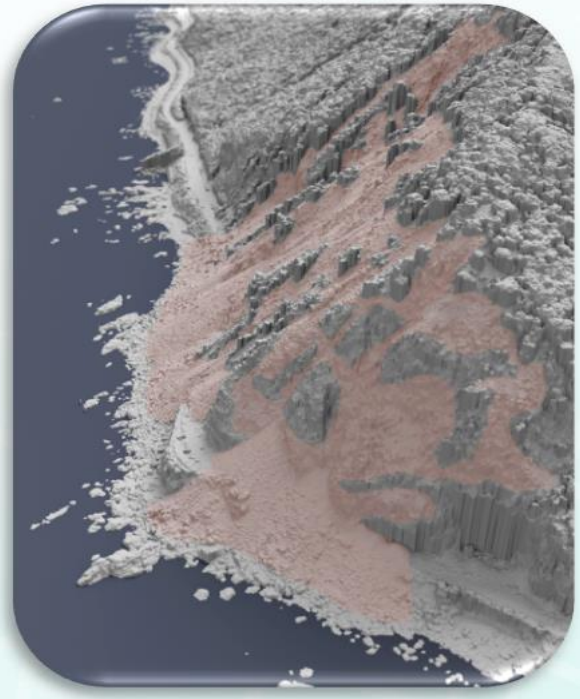
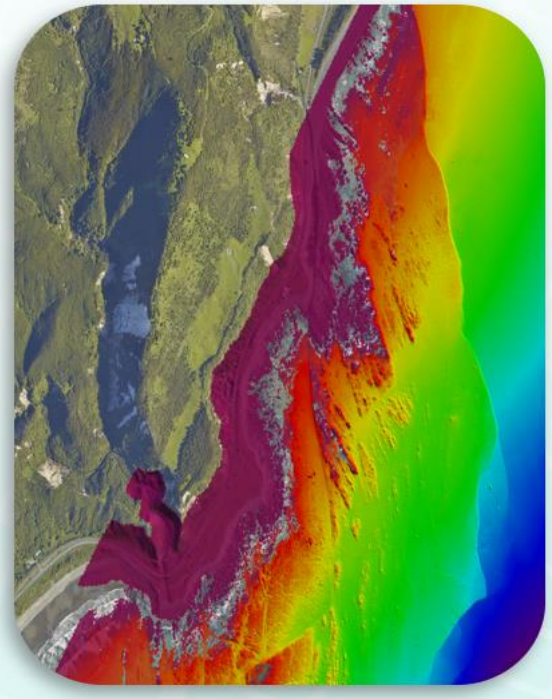
New Zealand

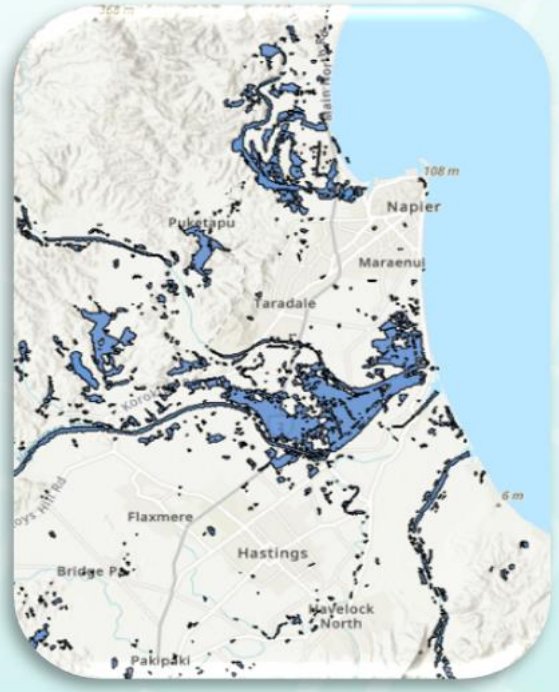
Imagery



LiDAR



Bathymetry



Flood Extents

Toitū Te Whenua
Land Information
New Zealand

Te Kāwanatanga o Aotearoa
New Zealand Government

Emergency Contact Details

Toitū Te Whenua
Land Information
New Zealand

Email emergency@linz.govt.nz

Phone 027 357 0029

AGOL emergencyintel_LINZ

Brad Cooper

Nic Donnelly

Susan Shaw

Closing karakia

Kua ea te kaupapa	Our work has come to a satisfactory conclusion
Ka rea ngā hua	The fruit is growing (therefore the land and the environment are healthy)
Ka rere ngā arawai	The waterways continue to flow (therefore the waterways are strong and moving forward)
Kua mau te mātauranga	We now have the knowledge
Hei arahina ngā mahi o Toitū Te Whenua	To lead and drive the work of Toitū Te Whenua
Kia tau te rangimarie	May peace settle
Ki runga i a tātou katoa	Upon all of us (includes the wider LINZ whānau and our own whānau)
Haumi ē, hui ē, tāiki ē!	Gather and go forward together

Thank you!