

**RIMS**  
Roading Infrastructure Management Support

in association  
**IDS**  
Infrastructure  
Decision Support

# NAVIGATING THE FUTURE: AMDS MULTIMODAL NETWORK MODEL AND NEW ZEALAND'S TRANSPORT TRANSFORMATION

Elke Beca

*Technical Director – Asset Management*

Claire-Louise Bode

*Principal Asset Manager*

**WSP**



Fostering Collaboration: Whanaungatanga in transport asset management

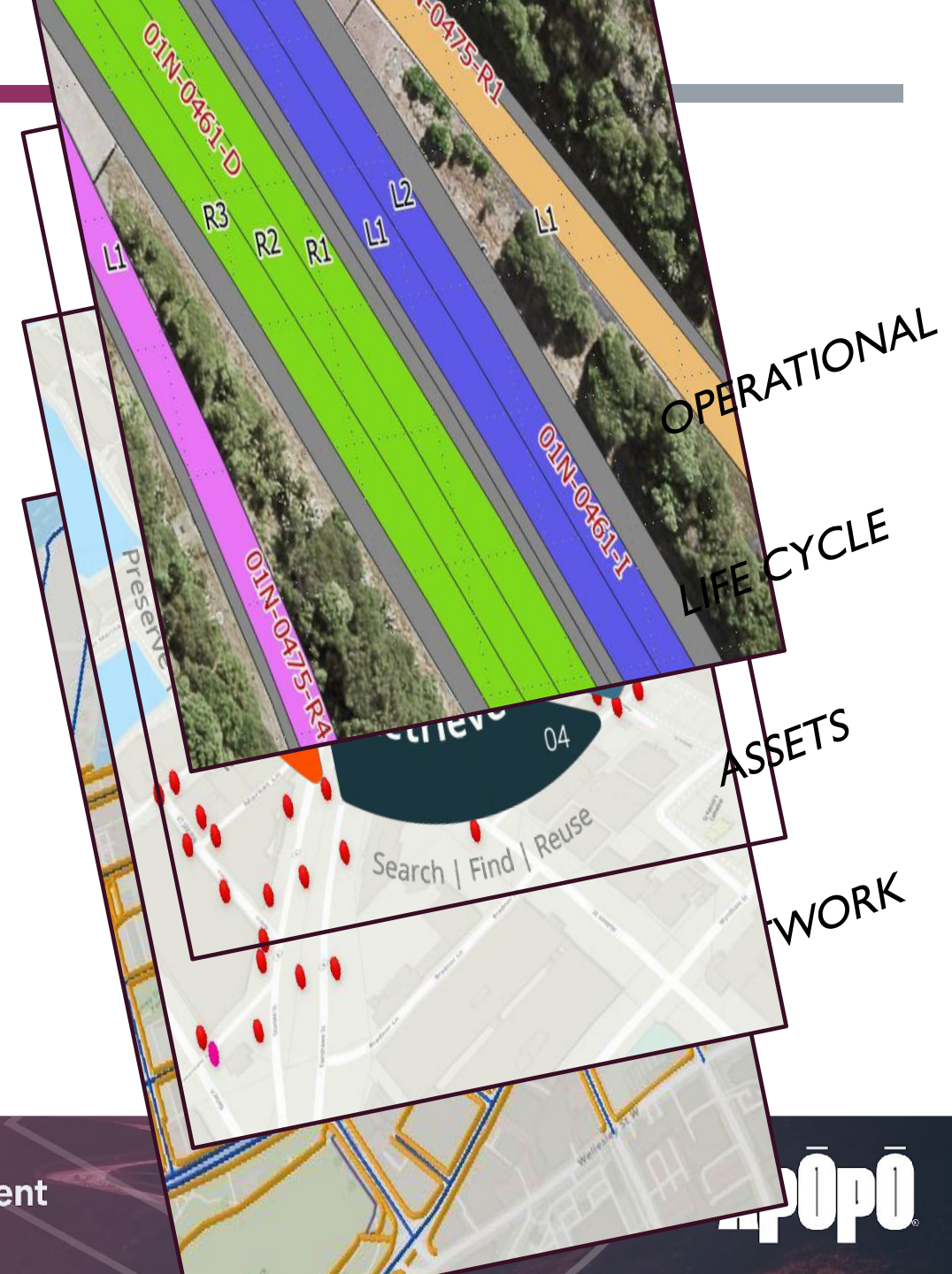
**IDS**  
Infrastructure  
Decision Support

**Āpōpō**

# What is the Model?

The network definition is the **backbone** to the AMDS and critical to the management, analysis and reporting of land transport assets.

This definition underpins the standard and is foundational to pulling the **performance** and associated asset data together.



# What will the Model Provide?

## Visualised as a map of inter-connected lines

- Direction of flow
- Modes of flow
- Route planning
- Navigation
- Asset location
- Restrictions

## Modes Enabled



**Scalable as new modes come online**

## Intent of the network model



# Benefits to the Transport Sector



- First coherent Network Model for Aotearoa New Zealand
- Cost savings and efficiency
- Cross-boundary planning enabled
- Better understanding of our networks and future plans
- Accessed by the sector without restrictions
- Improved infrastructure and better decisions
- Consistent foundation for other data to be overlaid

- Collaboration
- Accurate planning
- Consistent analysis and reports
- Real-time information
- Multimodal Customer Journeys
- Visual roading infrastructure used by public transport providers
- Open Data

# Think BIGGER!

**WAKA KOTAHI**  
MŌHIOU  
AGENCY

**AMDS**  
Data Partner Ecosystem



Long Term / Strategic

- Investment
- Planning
- Policy
- National



Mid Term / Tactical

- Tactical Asset Management
- Resilience
- Programme
- Regional/Corridor



Short Term / Operational

- Journey Management
- Maintenance and Emergency Response
- Real-time
- Project



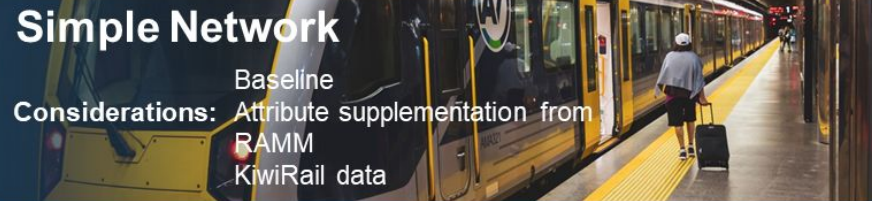
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# Use Cases

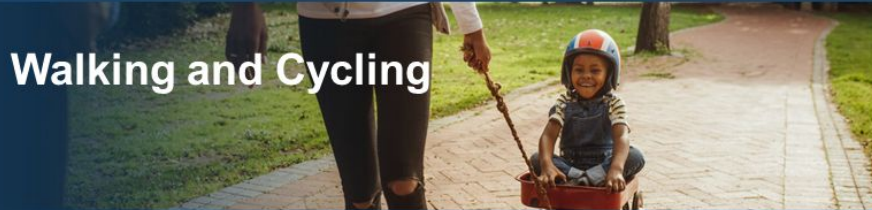
# Data Capture

## Simple Network

Baseline  
 Considerations: Attribute supplementation from  
 RAMM  
 KiwiRail data



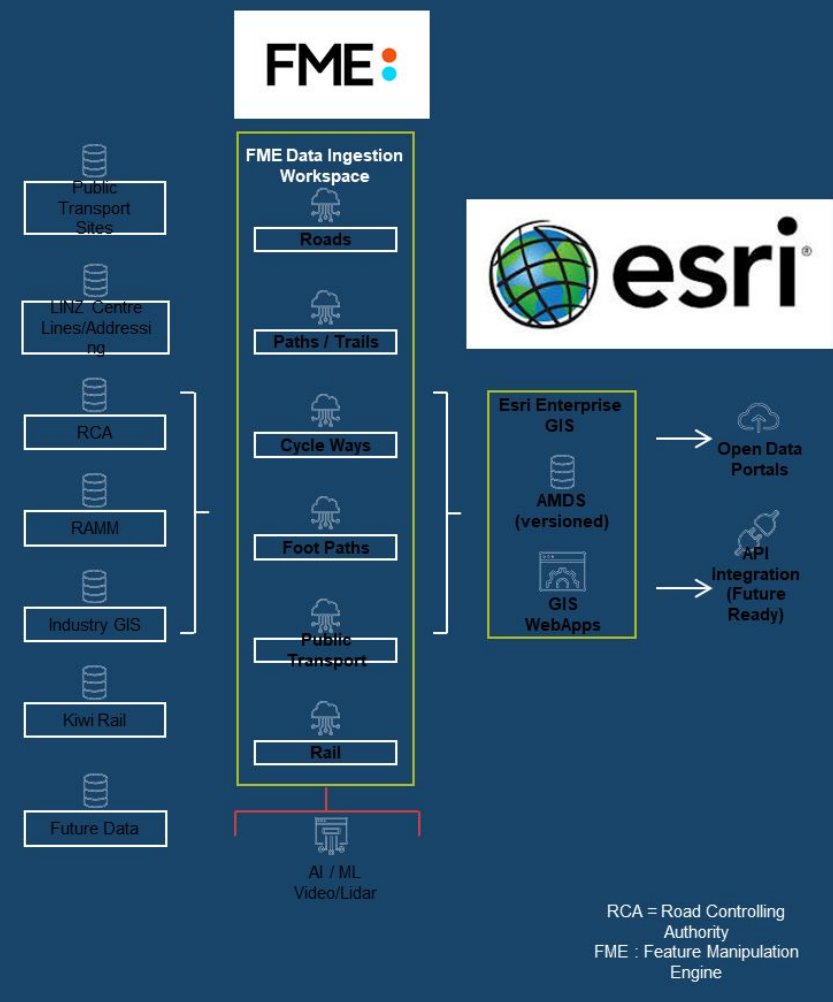
## Walking and Cycling



## Public Transport



## Restrictions

AMDS Network Model

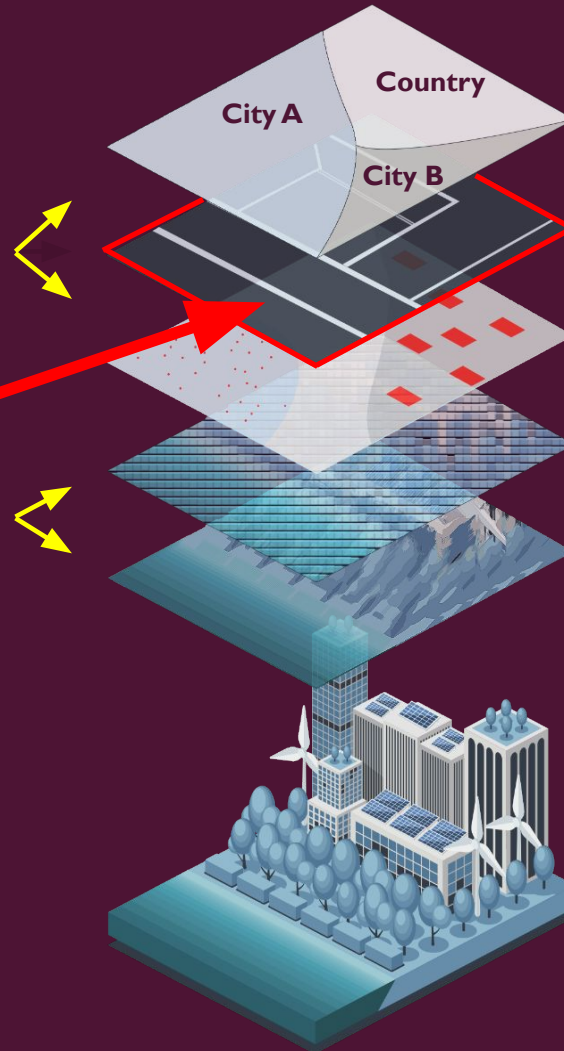


# Foundational Digital Twin Data

AMDS Multimodal  
Network Model

Vector

Raster



Administrative  
Boundaries

**Transport Modes**

Parcels

Land Usage

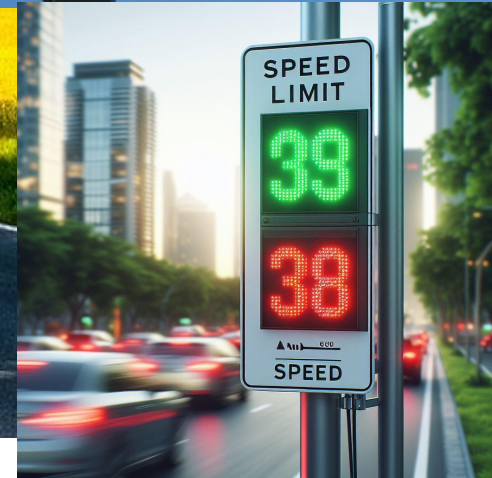
**Elevation**

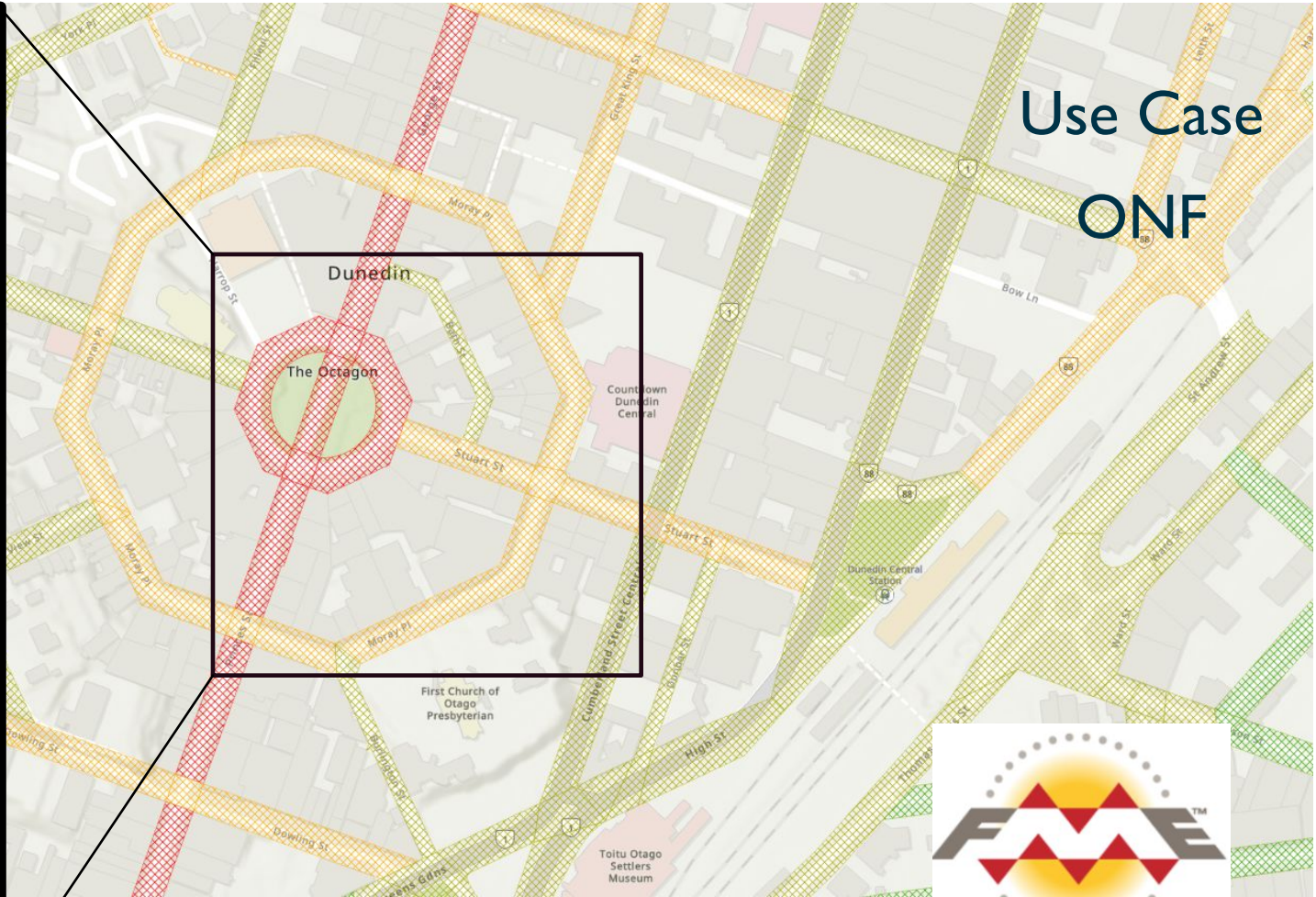
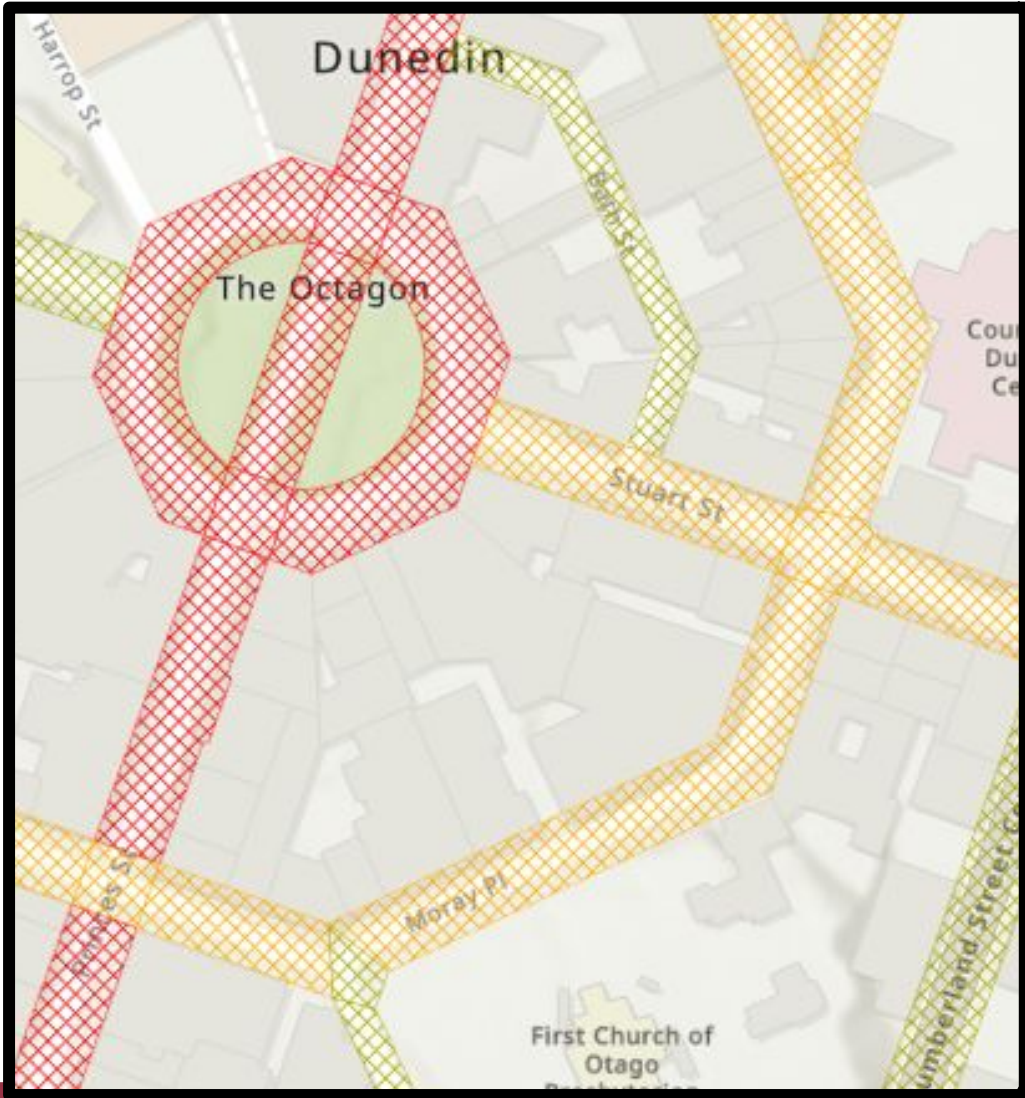
Real  
World

# Use Case – National Speed Limit Register



# Use Case – National Speed Limit Register





Legend

Bridge (mmi)

mmi

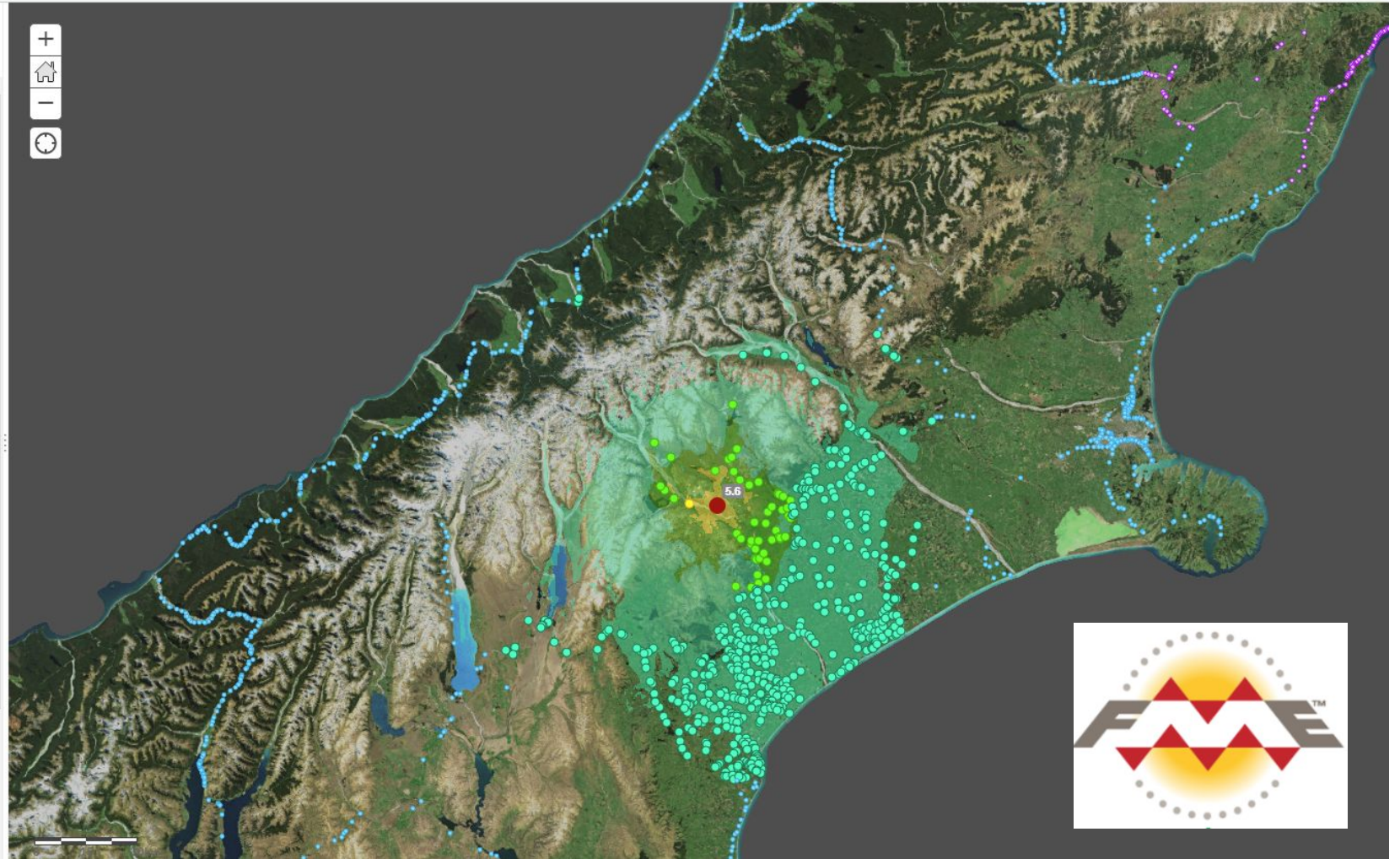
- >10
- >=9 and <10
- >=8 and <9
- >=7 and <8

- Mag 4.5 to 6
- Mag 3 to 4.5
- Mag < 3

Shake Intensity

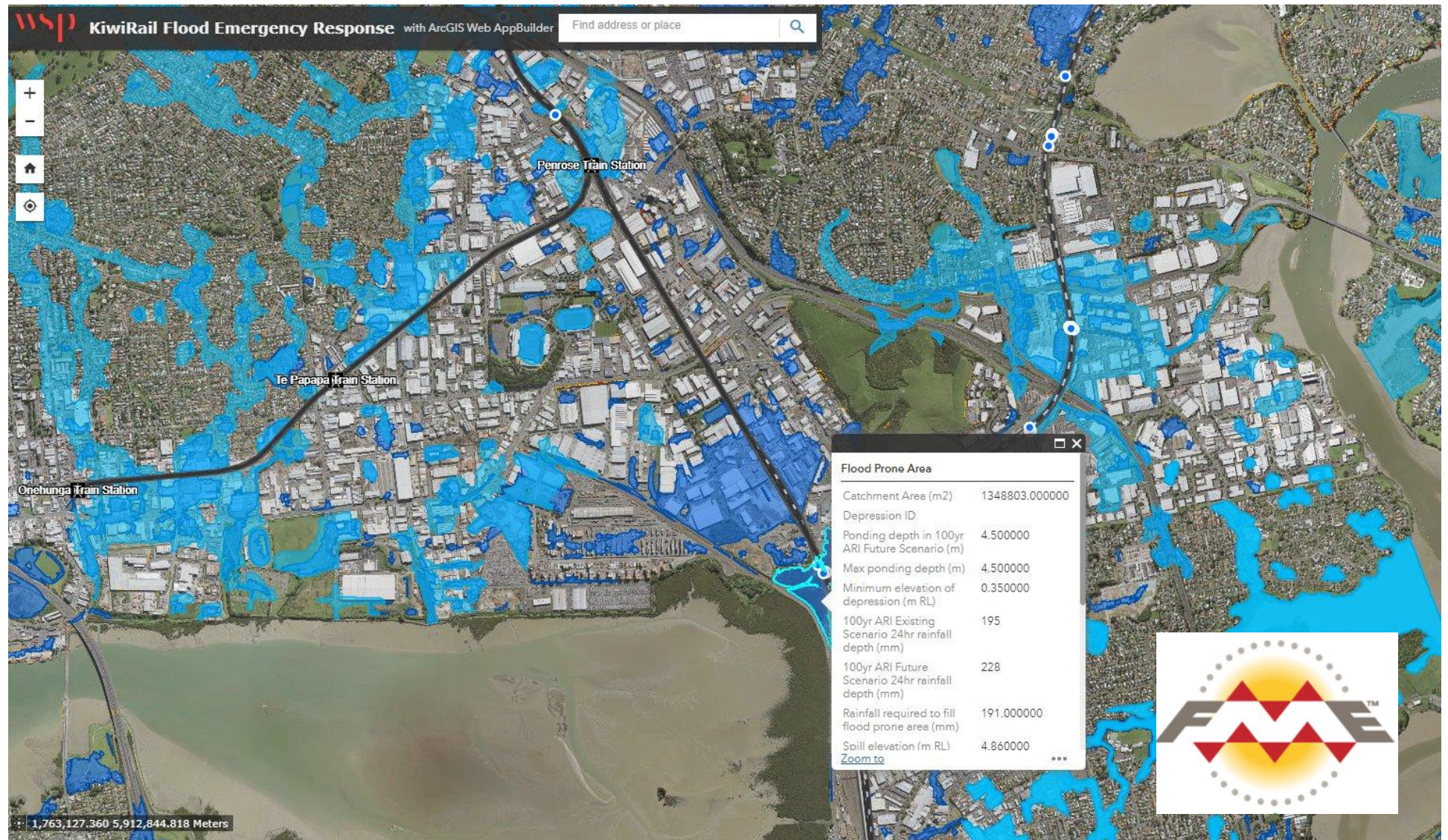
grid\_value

- X+ (Extreme)
- IX (Violent)
- VIII (Severe)
- VII (Very Strong)



# Use Case Network Resilience

# Use Case Network Resilience





**Understand**  
Exposure, Risk,  
Vulnerability



**Plan**  
Prioritise, Investigate,  
Prepare Options



**Have Action**  
Share, Monitor, Use

# The Power Within

Unleash the Power of Connectivity

- Strategic Synergy
- Operational Excellence





# Revolutionise Coordination

Enhanced Coordination for  
Evidence-Based Decision-Making

- Resilience Amplified
- Emission Reduction Strategies



# Infrastructure of The Future

Endless Possibilities for Decision  
Makers Shaping the Infrastructure  
of Tomorrow

- Safety at its Core
- Freight Revolution



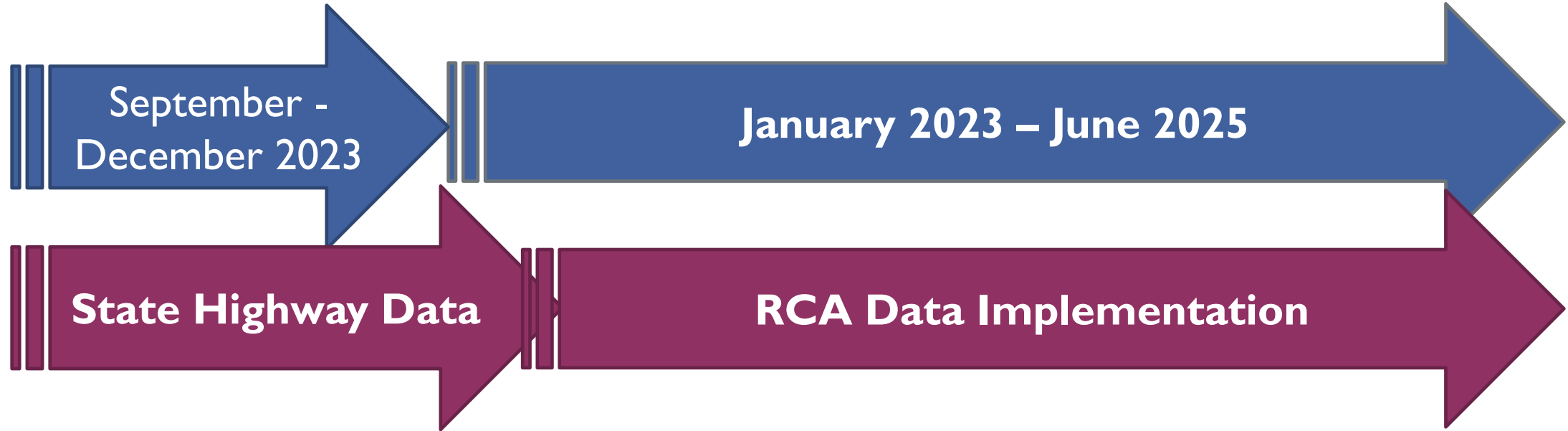
# Collective Platform

AMDS Multimodal Network Model  
A Collective Industry Platform for  
Development

- Sustainable Development



## Quick Update on Implementation



# Key Contacts



<https://www.nzta.govt.nz/roads-and-rail/asset-management-data-standard/amds-network-model/>



**Elke Beca**  
[elke.beca@wsp.com](mailto:elke.beca@wsp.com)



**Claire-Louise Bode**  
[claire-louise.bode@wsp.com](mailto:claire-louise.bode@wsp.com)



**John Kreft**  
[John.Kreft@wsp.com](mailto:John.Kreft@wsp.com)



**Chau Nguyen**  
[Chau.nguyen@wsp.com](mailto:Chau.nguyen@wsp.com)