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Aurecon

AUTOMATING ASSET CONDITION REVIEW:

SMARTER DECISIONS, LESS EFFORT

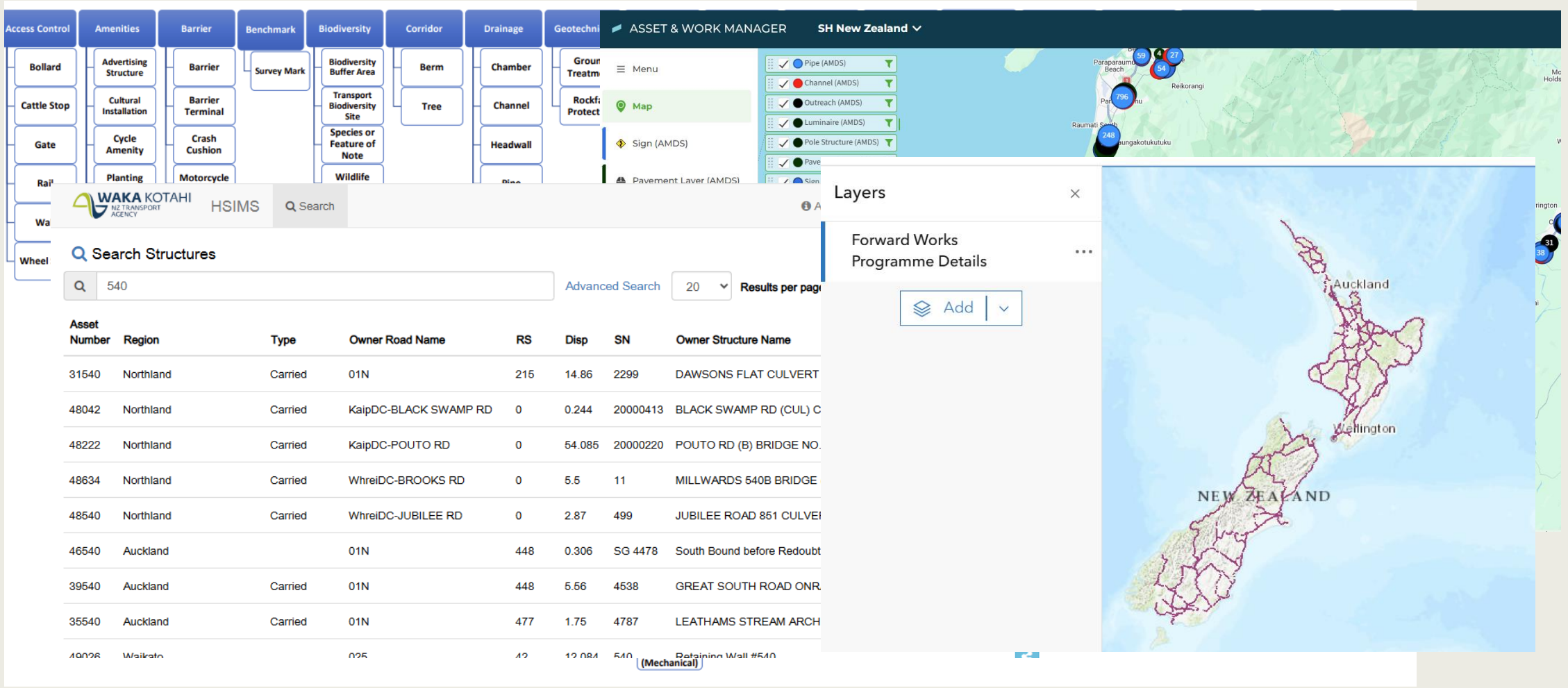
AMDS

Asset Management Data Standard

Purpose

As part of revocation, we need a clear understanding of the **condition of existing assets** to be handed over.

Challenges: Fragmented asset data



Challenges: Limited resources

Manual Data Reconciliation

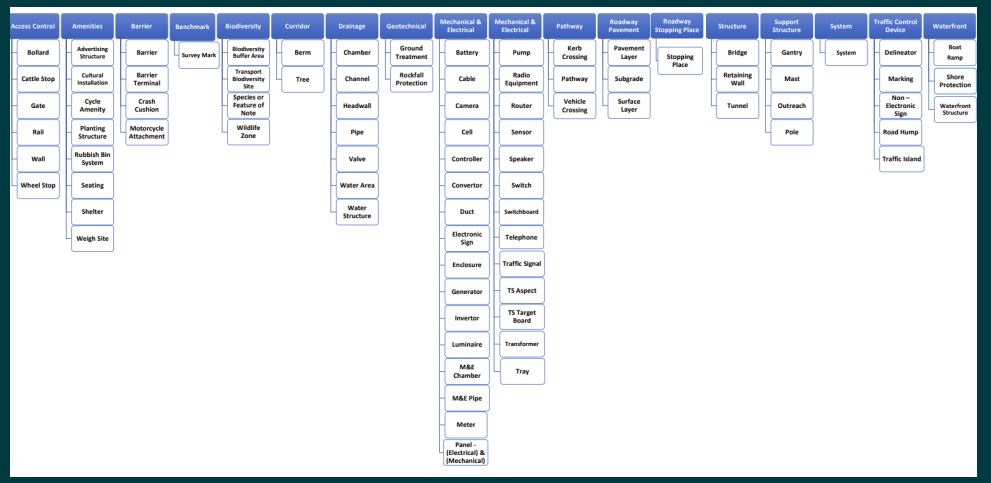
Excessive hours spent on data extraction, cleaning and processing, risking human errors.

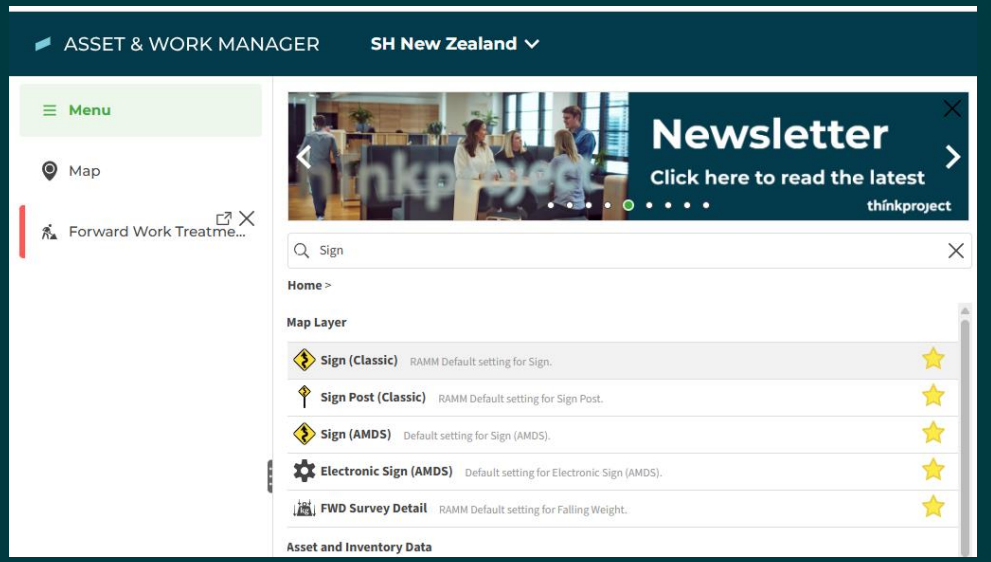
Scaling Challenges

70+ asset types in the current AMDS (v1.5) + Forward works, etc.

Need for Automation

Automation and integration are critical to unify data and enable reliable, scalable decision-making.





Solution: How does it work?

NZTA's Forward Works Programme

Forward Works Programme

Pavement and surfacing planned works

Asset data

Asset Work Manager (AWM)/ RAMM

API

Asset data/information includes:

- Barriers
- Pavement
- Signs
- Streetslights etc
- High Speed Data etc

AMDS format

Highway Structures Information Management System (HSIMS)

Asset data includes:

- Bridges
- Culverts
- Gantry
- Retaining wall

Direct and automatic retrieval of data

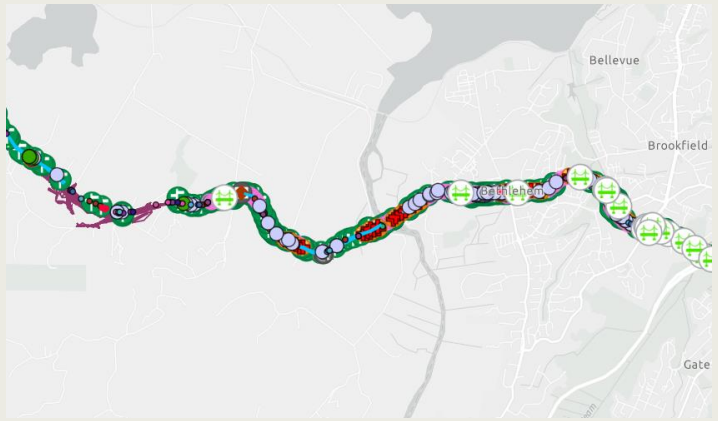
GIS / Scripts

Scripts to extract condition, or apply age-based assessment

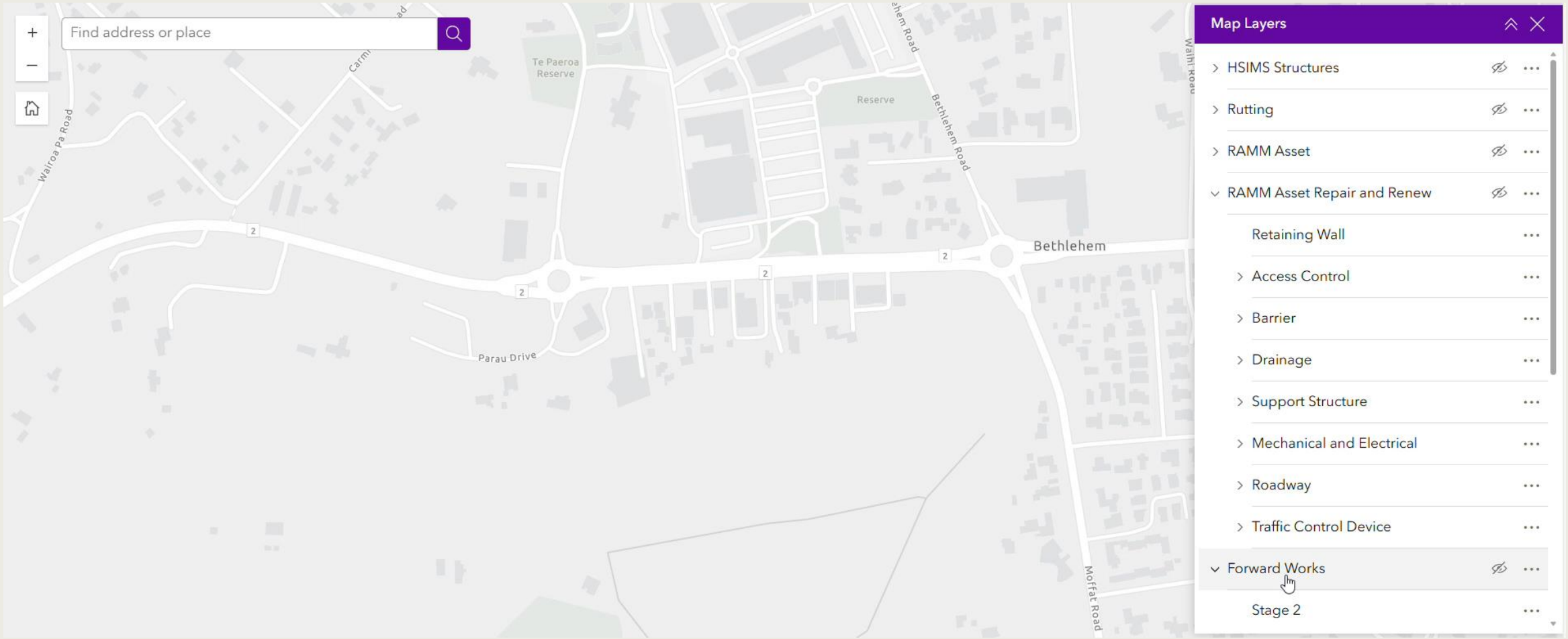
Visual representation of the assets – need for repairs/renewals

Support stakeholder engagement – conversations with NZTA, local Councils.

Cost Estimates



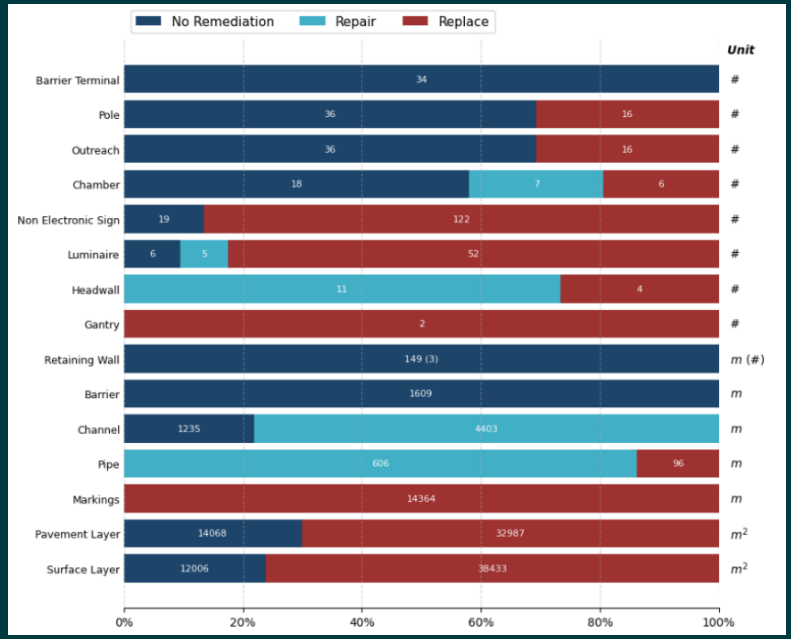
Example Only - Visualisation



Benefits

- Fast processing: Efficient method to extract AWM/RAMM data for 70+ asset types, and over thousands of assets on the network for the relevant area
- **Replicable, consistent** across projects
- **Geospatial visual representation** for stakeholder engagement and discussions
- Efficiently **test different scenarios** – e.g. change in handover years or other parameters

Example ONLY - Results



Example ONLY - Barrier

Challenges we've found

- Inaccuracy AWM asset data
  - Missing assets – e.g. bus stops/shelter not identified.
  - Inaccurate location
  - Missing information (install date, condition, etc.) – e.g. traffic signals has placeholder install date of 1900.
- Condition data availability
  - In AWM/RAMM, assets such as barrier, barrier terminal proportionally have recent more conditions assessment available, but others less so.
  - In HSIMS, assets including bridge, retaining wall typically have recent inspections and conditions.
- Age-based assessment not fully reflective of the actual condition of the asset
- Funding constraints meanings assets are stretched /more reactive maintenance

Stockpile Site, but it is a bus stop. Bus stop/shelter not identified in RAMM.

Final Message

Good asset data today helps build a stronger transport network in the future.

Just imagine what decisions we can make when we know the real condition of every asset on our network.