Redland City Council Trials RoadMetrics AI for Asset Capture

About City of Redland

Redland City Council is located in Southeast Queensland, Australia, overseeing network of 1,300 km that spans both urban areas and coastal townships. The council is responsible for maintaining a growing network of highways infrastructure, including road signage, kerbing, footpaths, and more, while supporting sustainable development and community wellbeing.

Challenges

Redland City Council lacked an updated digital inventory of its road assets, making it difficult to monitor, track, or maintain signage and road furniture effectively.

Traditional methods of capturing sign information were time-consuming and resource-heavy, limiting the council's ability to plan proactively or integrate asset insights into their existing systems.

Trial Objectives

The council sought a modern approach to:

- Capture comprehensive and verified signage data across their road network.
- Improve asset register integrity by addressing missing or inaccurate entries.
- Enable faster and more cost-effective asset data collection.
- Provide a visual and geospatial baseline for future audits and maintenance planning.
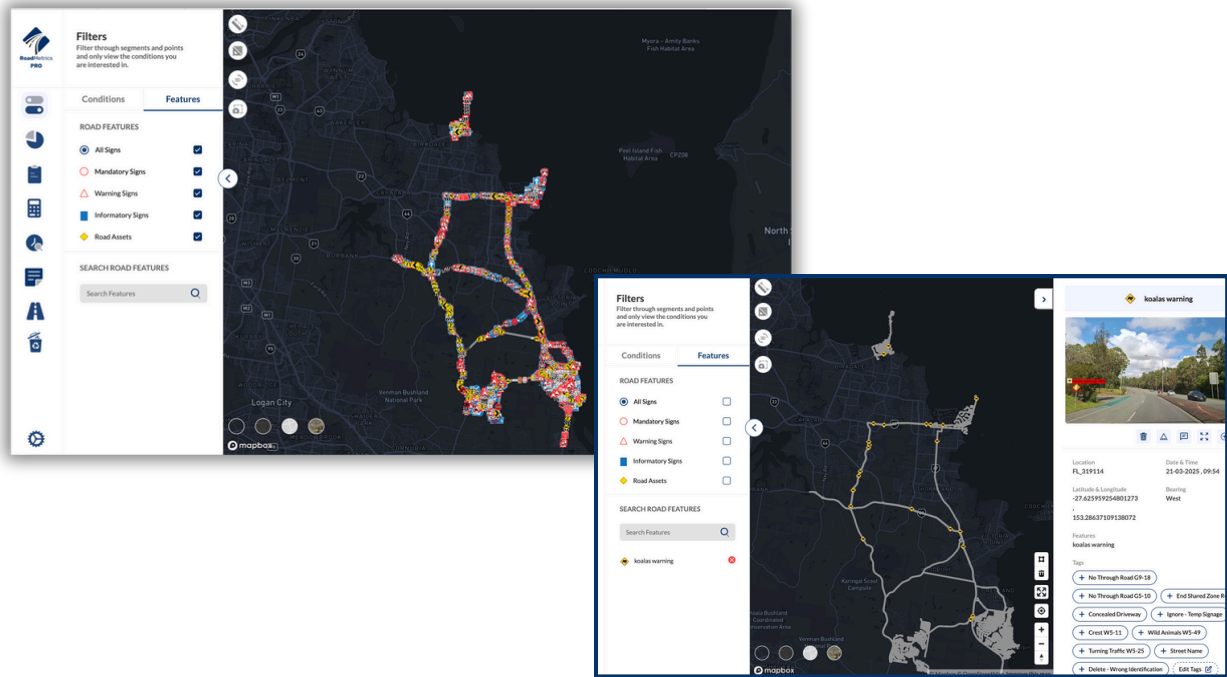
Solution

The Asset Management Team at Redland City Council commissioned a trial to use RoadMetrics AI to perform a sign/asset capture survey, from January 2025 until June 2025.

Using a smartphone based data collection app, the AI system provided high-resolution sign imagery, GPS coordinates, and functional location information that aligned with the council's asset management system.

The results were accessible on a web-based GIS platform to visualise sign data.

An output was provided in a Shapefile format and overlaid on to the council's Assetic asset management software.

Implementation

The pilot was commissioned by Christine Cartwright and led by Alvin Kong.

A total of 300 km of Redland City's road network was covered in less than 24 total operational hours using one RoadMetrics hardware kit. A single staff member operated the vehicle a few hours per week, demonstrating the efficiency and scalability of the technology.

The AI model was refined during the trial to capture Queensland (QLD) specific sign information based on the Department of Transport and Main Roads standards, resulting in a more complete and accurate asset inventory capture.

Results

- SAFM comparison output revealed that approximately 50% of signage data was missing in the sample estate in Mount Cotton.

Customisation

- Adding functional location data to align with Assetic asset management system.

- Delete functionality to maintain accurate asset data

Benefits

Improved Asset Data Integrity
Fully verified, up-to-date inventory of signage assets to strengthen asset register reliability.

Eliminating Inefficient Work Orders
Reduced "asset not found" issues, ensuring accurate work orders and maintenance reporting.

Creating a Visual and Spatial Baseline
Comprehensive photographic and geospatial record of all signage across the surveyed network..

> " *Our work with RoadMetrics was focused on Signage Capture. While engaging contractors to conduct a manual survey of all signage is an option, this approach is resource-intensive, costly, and time-consuming, often taking weeks or months to complete. RoadMetrics helped with planning a comprehensive, accurate view of signage assets, thereby enhancing operational efficiency and enabling more informed decision-making.* "
>
> **-Christine Cartwright, Service Manager Asset Management**

Conclusion

As Redland City Council looks to extend the program, RoadMetrics AI is positioned to play a central role in accelerating the city's Asset Management System Data Cleanse Program, strengthening operational efficiency, and enabling better-informed decision-making for the years to come.

RoadMetrics

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