

Autonomous Defect Identification

Retina Visions



Downer

Relationships creating success

Downer manages and maintains road networks across New Zealand and manufactures and supplies products and services to create safe, efficient and reliable journeys.

We maintain more than 25,000 kilometres in New Zealand.

We create and deliver solutions to our customers' challenges through strategic asset management and a leading portfolio of products and services.

Project Overview

Downer conducts road inspections by driving the network and manually noting down defects identified on the roads. The driver would identify the defect, park the car nearby, exit the vehicle and visually inspect the defect before getting back into the vehicle to continue the inspection. This is a very time consuming and inefficient method, with a lot of time, money and human labour required to perform the task.

In 2020, Downer conducted a market review of machine learning technologies within the asset management space, to assist with the inspection of assets across the New Zealand network. After this review, it was identified that Retina Visions provided the best fit for Downer, providing a vast catalogue of defect types and a flexible API to enable simple integration into the RAMM asset management system.

Realised Benefits

Downer has been using Retina Visions' services for 1 year around the Auckland network, with many proven benefits displayed over this time.

- ◆ Flexible and easy to use API to pull large amounts of useful information
- ◆ A 3x reduction in inspectors required on projects, with the ability to reassign these staff members to other crucial roles
- ◆ Increased worker safety, removing the need for inspectors to walk high traffic areas
- ◆ Highly accurate identification of defects, with minimal amounts of missed data on the network

Future Plans

As Retina Visions continues to improve its service and offer additional functionality, Downer looks to expand the use of Retina Visions across more contracts in NZ to further improve the efficiencies of how road inspections are conducted.

