LGMA QUEENSLAND

AWARDS FOR EXCELLENCE 2020

QUEENSLAND LOCAL GOVERNMENT – GARBAGE TRUCKS BECOME DATA COLLECTION UNITS

For local governments across Australia, roads are often the largest asset held. So, it is no surprise that the ongoing management and maintenance of roads will have a material impact on a Council's financial health. The challenge for councils, is how to manage and maintain these road assets in the most effective and efficient way possible balancing immediate need and capacity against long-term costs and liabilities.

For Moreton Bay Regional Council, the road network managed is valued at over two billion dollars. Understanding the risks of traditional road condition assessment methods, council took up the challenge of finding a better and more timely data collection method to facilitate improved and better targeted road maintenance and management. Investigating the capacity of Artificial Intelligence (AI) techniques to scan infrastructure assets to identify issues, Council found that AI offered a solution utilising existing vehicles to capture the quality, live data. With kerbside waste collection trucks travelling almost every road in the region each week, an innovative project was created combining AI and the weekly garbage collection.

A consumer grade dashcam mounted on the trucks along with a small computing device, GPS and 4G modem collects video footage from garbage trucks on their daily rounds. Footage is collated, machine learning algorithms applied and issues such as potholes, cracking, line markings, signs etc. are then able to be identified and mapped. This data is transmitted to Council's Asset Management system as defect records against the corresponding road records allowing for measured, timely and cost-effective management. Additional benefits of the project have been the application of the same technique for footpath defects and stormwater pipe defects. As a result of its success, the project is being scaled up with a view to cameras being active within 15 waste collection trucks by the end of 2020 and a further 15 by the end of 2021.

MBRC have nominated this project into the LGMA Queensland Awards for Excellence as an exemplar of Innovation.