



Improving our Data Asset Management

We manage approximately \$10 billion worth of pavement and surface assets across our network. To effectively preserve these critical public assets, we embarked on a digital transformation journey to improve our asset management practices.

We have a dedicated team that manages the research, development, implementation and maintenance of road pavement and surfacing modelling systems and related information systems. One of their aims is to produce long-term strategic pavement and surfacing preservation guidance for Main Roads.

A recently completed network condition survey used the cutting-edge Traffic Speed Deflectometer survey vehicle, known as iPAVe (pictured above), from the Australian Road Research Board. The iPAVe simultaneously collects road video, road geometry, pavement condition and structural parameters while moving at traffic speeds.

The innovative approach provides fast and cost effective survey results and significantly reduces disruption and safety risk for the public during the survey process.

Data is analysed and modelled using the Deighton Total Infrastructure Management System. Data assists us to forecast long-term strategic asset preservation needs and develop operational road maintenance programs.

The team has also developed business intelligence tools, enabling our people to access data in regions, both at the office and in the field. The tools provide interactive data analytics and visualisation capacity based on the asset inventory, pavement defects, and iPAVe data.

This innovative approach replaces previous cumbersome paper-based practice and allows for more evidence-based maintenance planning and improved decision-making within the regions.

Efforts from this team allow Main Roads to draw insights from asset management data and formulate targeted maintenance work programs across the entire state. This optimal work programming means we balance the needs of multiple objectives, such as cost, safety and performance, which often compete for limited resources. This achievement is a significant step forward in our asset management digital transformation journey.

iPAVe survey

3.5 million records of pavement strength data was collected

iPAVe surveys have been undertaken across the country except in Victoria and South Australia

VIP status of iPAVe in the metropolitan area: in order for iPAVe to maintain a minimum speed of 40 km/h, the Road Network Operations Centre tracked its location and gave green lights to the signalised intersections ahead of the iPAVe, clearing traffic when it arrived at intersections.