



Smart Freeways Policy

Main Roads is progressively introducing Smart Freeway solutions¹ into our existing and future road assets, aiming to provide the safest, and most reliable, productive and resilient state road network for our customers.

Objectives

Our objectives are to create a world-class state road network through appropriate implementation and operation of Smart Freeways to:

- provide reliable travel times
- enable efficient movement of people and freight
- improve network productivity contributing to the state's economic prosperity
- improve safety of all road users including road workers
- reduce congestion, emissions and cost of travel
- add additional capacity to the existing roads through targeted improvements and using appropriate technology
- improve network resilience and flexibility to meet abrupt change in demand or available capacity due to incidents
- enhance real-time information to improve customer travel experience
- support connected and automated vehicles, aligned with national guidance.
- Smart Freeway solutions will be designed to address specific performance issues identified by network analysis and based on robust data.
- All Intelligent Transport System (ITS) solutions will take into consideration national ITS architecture, systems engineering, whole-of-life costs, and existing and emerging technologies.
- Planning and design decisions will consider the potential impacts of connected and automated vehicles as they emerge.
- All Smart Freeway designs will be subject to operational efficiency audits.
- All roads currently at, or planned to be upgraded to, a freeway standard will, as a minimum, have real-time network monitoring capability and intelligence, and provision for higher-order Smart Freeway treatments when needed.
- Customer perspective and education are essential to the Smart Freeway solutions.
- We will confirm objectives and benefits through on-going performance monitoring, evaluation and operational fine tuning.
- We will encourage innovation and development of skills and expertise through research and development trials, as well as strategic partnerships with other road agencies, industry, research institutions and universities.

Principles

This policy is underpinned by the following principles:

- Smart Freeway solutions will be guided by this policy and Smart Freeways guidelines, which are aligned with best practice.
- Smart Freeways are to be part of an integrated transport system and aligned with long-term network planning.

Peter Woronzow
Managing Director of Main Roads



¹ Smart Freeway solutions use, in addition to freeway mainline and ramp improvements, a multitude of Intelligent Transport Systems (ITS) including:

- Vehicle Detection Stations (VDS) and Closed Circuit Television (CCTV) cameras to collect real time traffic data and monitor traffic conditions
- Variable Message Signs (VMS) to provide near real-time traffic and road condition information to road users
- Coordinated Ramp Signals (CRS) to manage traffic flow on to the freeway mainline depending on the current freeway traffic conditions, to reduce stop-start conditions and ease congestion on the freeway, and also to make merging easier and safer
- Lane Use Management System (LUMS) and Variable Speed Limits (VSL) to manage lane closures and if implemented All Lane Running (ALR) where previous hard shoulder is converted to a running lane, and changes to speed limits to improve traffic flow and safety
- Automatic Incident Detection (AID) to automatically detect and report incidents such as a broken down vehicle on the freeway or a vehicle in an emergency stopping bay, enabling us to respond more quickly.