Jenny Aitchison
Minister for Regional Transport and Roads

Media Release
Smart tech trials to drive safer behaviour on the roads

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The Minns Labor Government has launched a new program of low-cost technology trials on highways throughout regional NSW to prompt safer driver behaviour on roads in 2025.

The $5 million Smarter Highways program will harness emerging and existing technologies in innovative ways to address driver behavioural issues that can lead to crashes. The aim is to improve journey management, especially when a major disruption occurs.

Each trial will feature technology that detects an issue on the network causing systems to be activated to warn drivers about hazards and, if possible, provide alternative options.

Most of the trial technologies are wireless solar-powered systems that can be installed relatively cheaply and are also tailored to suit individual sites, taking into account the environment and conditions of the road.

Smarter Highways is part of a suite of measures to improve road safety but also aims to use technology to help create a safer work environment for road crews, traffic managers and emergency workers by reducing the amount of time they are exposed to live traffic.

Transport for NSW will trial the technologies on state managed highways but also consider how they could be adapted for use on local roads, in partnership with councils.

Minister for Regional Transport and Roads Jenny Aitchison said:

“The Minns Labor Government is committed to making our road network safer, more reliable and more resilient to better connect our communities. We are always looking at harnessing innovations in technology as they become available.

“What's so important about Smarter Highways is that the technology's focus is to effect behavioural change and reduce risky driving actions, such as not driving to the conditions, that we know contribute to deaths and injuries on our roads.

“I’m glad that the Smarter Highway technologies will be trialled in the regions because outside of the cities, driving is often the only available form of transport and sometimes there are no alternative routes, so we need to make those journeys safer.

“Key to these innovations is improving safety for road crews by reducing the risks of carrying out works near traffic. The aim is to minimise the amount of time work crews have to spend in live traffic environments by increasing the use remotely controlled traffic operations, which creates a safer work environment."

THE SMARTER HIGHWAYS TRIALS

Smarter Highway Activated Vehicle and Environmental Systems (SHAVES)

- Self-adaptive electronic signage with machine learning capability which is able to predict events and provide motorists with advance warning of hazards such as black ice, smoke or wildlife.
- Designed to replace the current processes whereby maintenance crews need to source and locate portable Variable Message Signs (VMS) to high-risk areas.
- Includes three components to warn motorists - prism signs with vertical slats that slide across to reveal different warnings, VMS screens and flashing lights
- Solar powered with high-capacity batteries, localised radio communications between signs, and full Internet of Things (IoT) connectivity for real-time remote access and status reporting.
- Trial locations under investigation

Permanent traffic counters - Road Pod Vehicle Magnetometer (VM)

- A new form of permanent traffic counter device installed on the road which can detect and provide information on vehicle volumes, classifications, speeds, headways, road temperatures and system health in real time.
- A very low-cost 4G technology system that is powered by solar-panels and offers significant cost and time savings compared to ad-hoc traffic surveys. It is also easy to install and takes less than an hour to set up.
- Allows live monitoring of traffic in various scenarios but will be especially beneficial particularly during the start and end of holidays, during harvest sessions, and situations where monitoring seasonal variations and natural disaster periods is critical.
- Importantly, data collected will be provided via NSW Traffic Viewer.
- Can be deployed relatively quickly when a part of the network is likely to face disruption to help monitor and address impacts. For example, key routes that connect ports to renewable energy zones.
- Trial locations – Great Western Highway, Kelso and Newell Highway, Dubbo.

Rural Intersection Activated Warning System (RIAWS)

- When a vehicle on a side road approaches a high-speed main road, sensors trigger Variable Speed Limit Signs (VSLS), which instruct drivers on the main road to slow down.
- Designed to provide safer gaps in the traffic and provide more time for better driver reactions. This is particularly important for larger vehicles (such as trucks and buses) looking to turn from a side road onto a main road with a higher speed limit.
- Less severe crashes due to the reduced speed limit when traffic is merging from the side roads.
- Reduces the need for permanent speed reductions on main roads.
- This technology is currently being used in Victoria.
- Trial location under investigation

Improving local area traffic management during major disruptions

- Using technology to provide safe reliable access in times of unplanned and planned events that cause disruption on the roads.
- One trial will be conducted at Jenolan Caves ahead of its planned opening to the public in late 2025, the other will be Cowra, where roads are often flooded.
- The type of technology to be used is still to be determined.

Permanent Congestion Management

- Using existing technology, such as radars and traffic signals, and combining them in a way that will enable dynamic management of traffic congestion at a notorious breakdown location in the Blue Mountains.
- Designed to resolve issues caused by vehicles breaking down while queuing on the steep climb up Victoria Pass during peak periods such as holiday periods and around key events such as the Bathurst 1000.
- The system will detect eastbound queues forming at the top of Victoria Pass and that data would then be fed into the operation of traffic lights at the bottom of the hill. The vehicles will then be released up the hill in a managed way that is safe and reduces the number of vehicles breaking down on the incline.
- If the trial is successful, this system will be a more permanent replacement for the current system whereby crews have to stay onsite during congested periods and use temporary signals to control the flow of traffic.
- Trial location – Victoria Pass – Great Western Highway near Mount Victoria.