Examples of cooperative vehicles in action:



In-vehicle speed warning

This warning provides drivers with information about active, static or variable speed limits. It then alerts them if they are exceeding that limit.



Hazard warning

This warning alerts drivers to upcoming hazards, such as water on the road, road closures, or a crash.



Red light violator warning This warning alerts drivers that another cooperative vehicle is likely to run a red light across their path at the intersection ahead.

Benefits of C-ITS

A recent Rapid Cost Benefit Analysis of C-ITS in Southeast Queensland conducted by the department showed a benefit-cost ratio of a moderate penetration of C-ITS over a 30 year period as 3.4:1 – that is \$3.40 for every \$1.00 spent.

The analysis of ten C-ITS applications resulted in a cumulative crash reduction of 20% and a 3% fuel and emissions savings under 100% penetration of C-ITS devices in new cars.







For more information go to www.qld.gov.au/cavi

Testing new technology on our roads

Cooperative and Automated Vehicle Initiative (CAVI)





The CAVI project is co-funded by the Motor Accident Insurance Commission



13 QGOV (13 74 68)

www.qld.gov.au www.tmr.qld.gov.au

What is CAVI?

The Cooperative and Automated Vehicle Initiative (CAVI) is a Department of Transport and Main Roads project designed to prepare for advanced vehicle technologies on Queensland roads.

Some examples of new vehicle technologies we are testing include:





Cooperative vehicles

Talk to other cars and the road environment (like traffic signals) and alert the driver of hazards like a car suddenly braking ahead. *The driver is in control at all times*.

Automated vehicles

Have built-in sensors to track the road environment, and can do some steering, accelerating or braking itself. *The vehicle is in control some of the time*.

Goal

The department will conduct tests involving cooperative and automated vehicle technologies with the objective to make roads safer, and contribute towards the Queensland Government's vision of zero road deaths and serious injuries on the state's roads.

Timeframe

2017 – 2021

Why do we need CAVI?

CAVI will lay the technical foundations for the next generation of smart transport infrastructure that supports the state's objectives of prosperity, productivity, connectivity and sustainability.

CAVI incorporates four components:

1 C-ITS Pilot



The Cooperative Intelligent Transport Systems (C-ITS) Pilot will take place on public roads in Ipswich from 2019 for up to one year. It will incorporate around 500 public and fleet vehicles retro-fitted with C-ITS technologies.

CHAD Pilot



A small number of cooperative and automated vehicles will be tested on public and private roads using trained and public participants.

Vulnerable road users



A proof-of-concept pilot will look at how new technology applications can benefit vulnerable road user safety including pedestrians, motorcycle riders and bicycle riders.

Change management



A change management process for the department will be determined to identify the changes required to our current business and practices.

C-ITS Pilot

The largest component of CAVI is the Cooperative Intelligent Transport Systems (C-ITS) Pilot. From 2019, around 500 vehicles in Ipswich will be retro-fitted with C-ITS technologies as part of the largest C-ITS Pilot planned in Australia to date. The pilot aims to:

- validate the impacts and safety benefits of C-ITS
- demonstrate technologies and build public awareness
- grow government's technical and organisational readiness
- encourage partnerships and build capability in private and public sectors.

The Pilot will run for up to one year, and will test and anlalyse a number of C-ITS safety use-case applications.

Examples of cooperative vehicles in action:



Emergency braking warning This warning alerts drivers to a cooperative vehicle braking hard some distance ahead.



Turning warning for bicycle riders and pedestrians This warning alerts drivers to pedestrians or bicycles crossing at an upcoming intersection.



Road works warning This warning alerts drivers to upcoming roadworks, giving them time to slow down or change lanes.