The Digital Vehicle of the Future

John Wall

Program Manager Future Vehicles & Technology

Austroads National Office

Sydney, Australia.

Austroads

Austroads acknowledges the Australian Aboriginal and Torres Strait Islander peoples as the first inhabitants of the nation and the traditional custodians of the lands where we live, learn and work. We pay our respects to Elders past, present and emerging for they hold the memories, traditions, culture and hopes of Aboriginal and Torres Strait Islander peoples of Australia.

Austroads acknowledges and respects the Treaty of Waitangi and Maori as the original people of New Zealand.

The Future Vehicles & Technology Program

- **Established in July 2019**
- **Our vision**

  All employees of our members have an understanding of how future vehicles and technology can be used to improve the capacity of their organisation to deliver services that improve the lives of the communities they serve.

- **Program themes**
  - Connected & Automated Mobility
  - Low & Zero Emission Vehicles
  - Physical Infrastructure
  - Digital Infrastructure
  - Member Capability

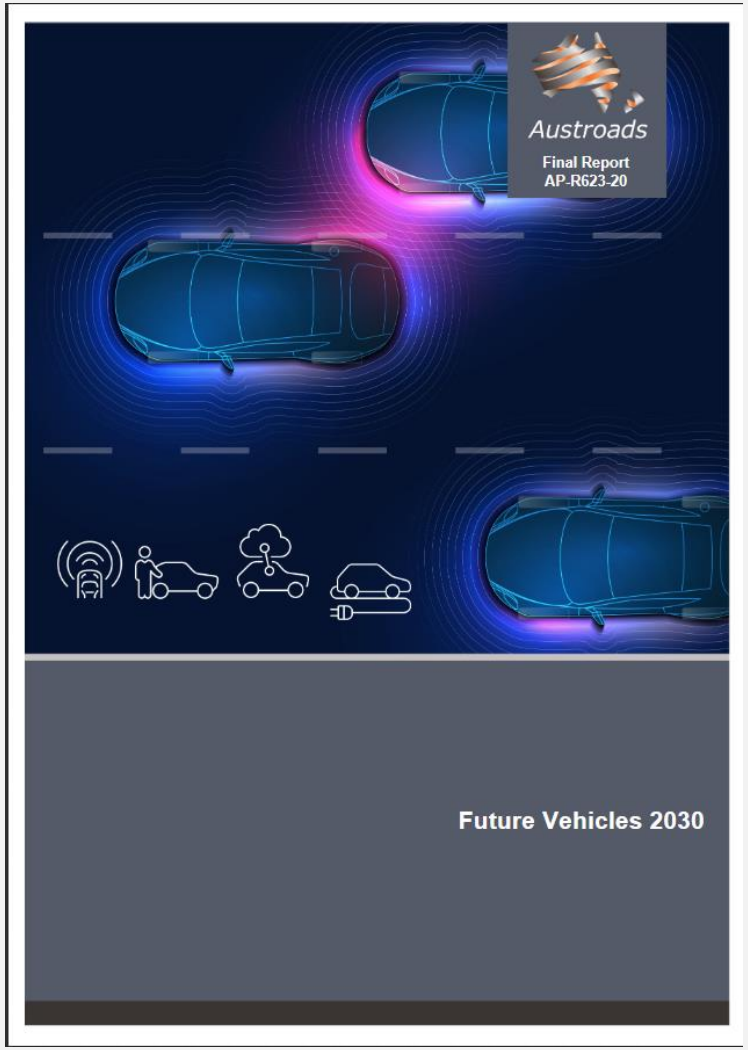
My analogue past

Austroads

My digital present

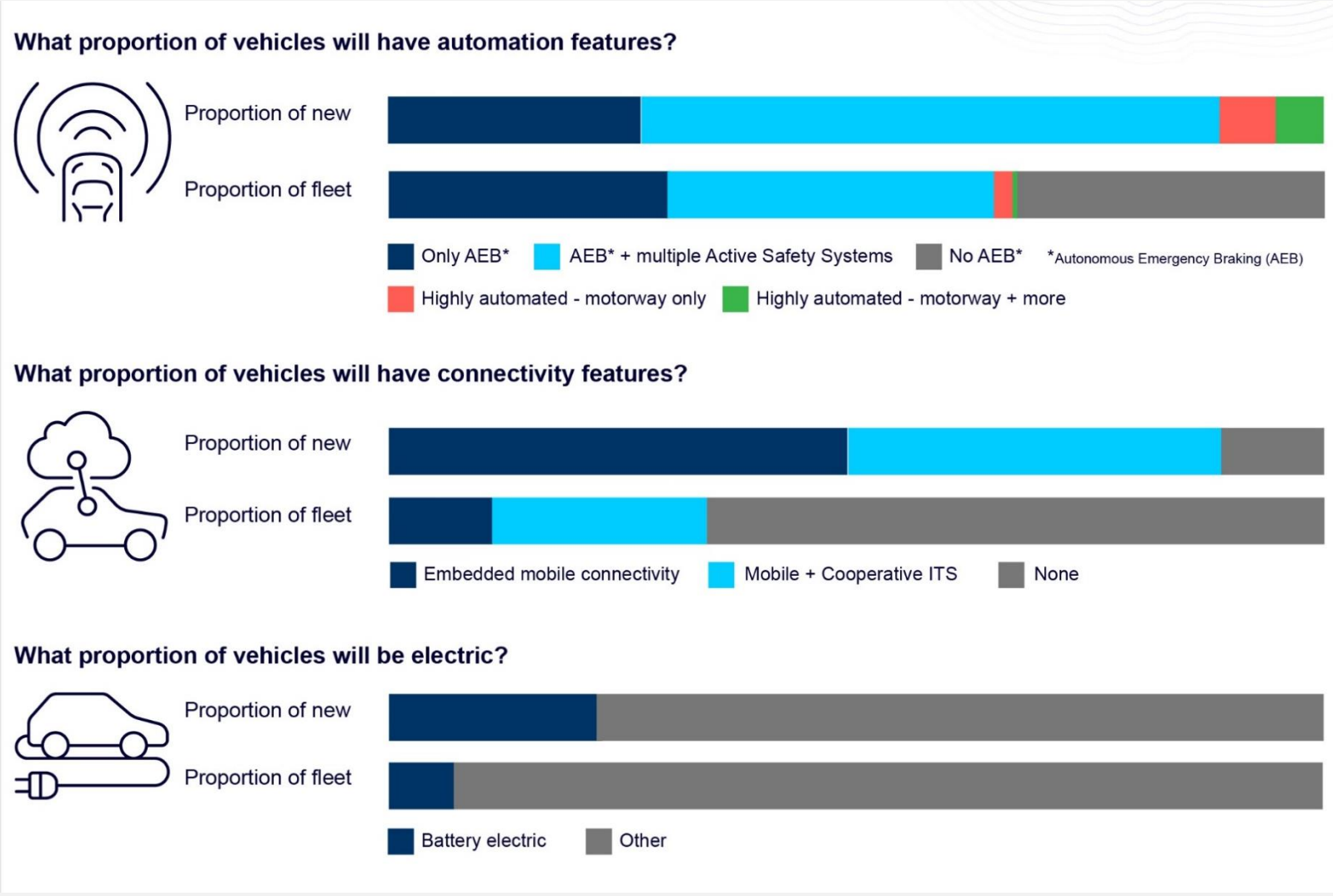
Future Vehicles 2030 Report

- Focused on the next decade
- Forecasts for:
  - Automated driving
  - Connectivity
  - Electrification
  - Shared mobility



What do we anticipate for 2030?

- Adoption is forecast to be in progress for all technologies shown here
- Substantial lag between adoption in new vehicles and penetration into fleet
- Project assumed continuity of current government approach – for Electric Vehicles this is a key assumption



The analogue network

Today’s network

Source: Google Maps
Image capture Mar 2020

The analogue rules

The analogue rules

(2) If a stationary emergency response vehicle on a road is displaying a flashing blue or red light or, in relation to a tow truck or motor breakdown service vehicle, a flashing yellow light, a driver must not drive past the vehicle unless--

(a) where the speed limit applying to the driver for the length of the road does not exceed 80 kilometres per hour--the driver does not exceed 40 kilometres per hour when passing the stationary emergency response vehicle, or

(b) where the speed limit applying to the driver for the length of the road exceeds 80 kilometres per hour--the driver--

(i) passes the stationary emergency response vehicle at a reasonable speed having regard to the conditions, and

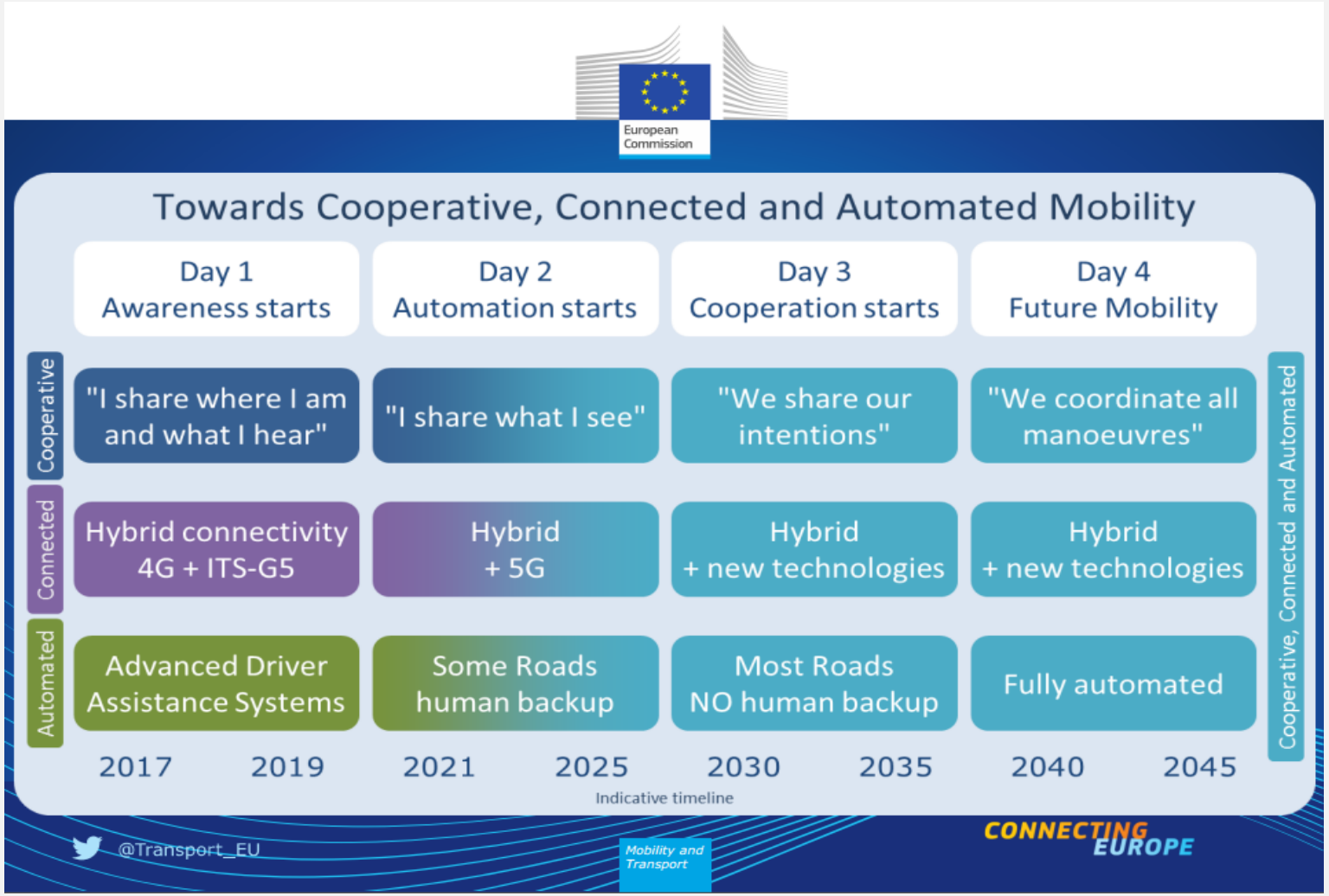
(ii) ensures that there is sufficient distance between the driver's vehicle and the emergency response vehicle to allow the driver to safely avoid a collision with a person in the immediate vicinity of the emergency response vehicle, and

(iii) if the road is a multi-lane road--vacates the lane nearest the emergency response vehicle.

: Maximum penalty--20 penalty units.

The CCAM Roadmap

Austroads

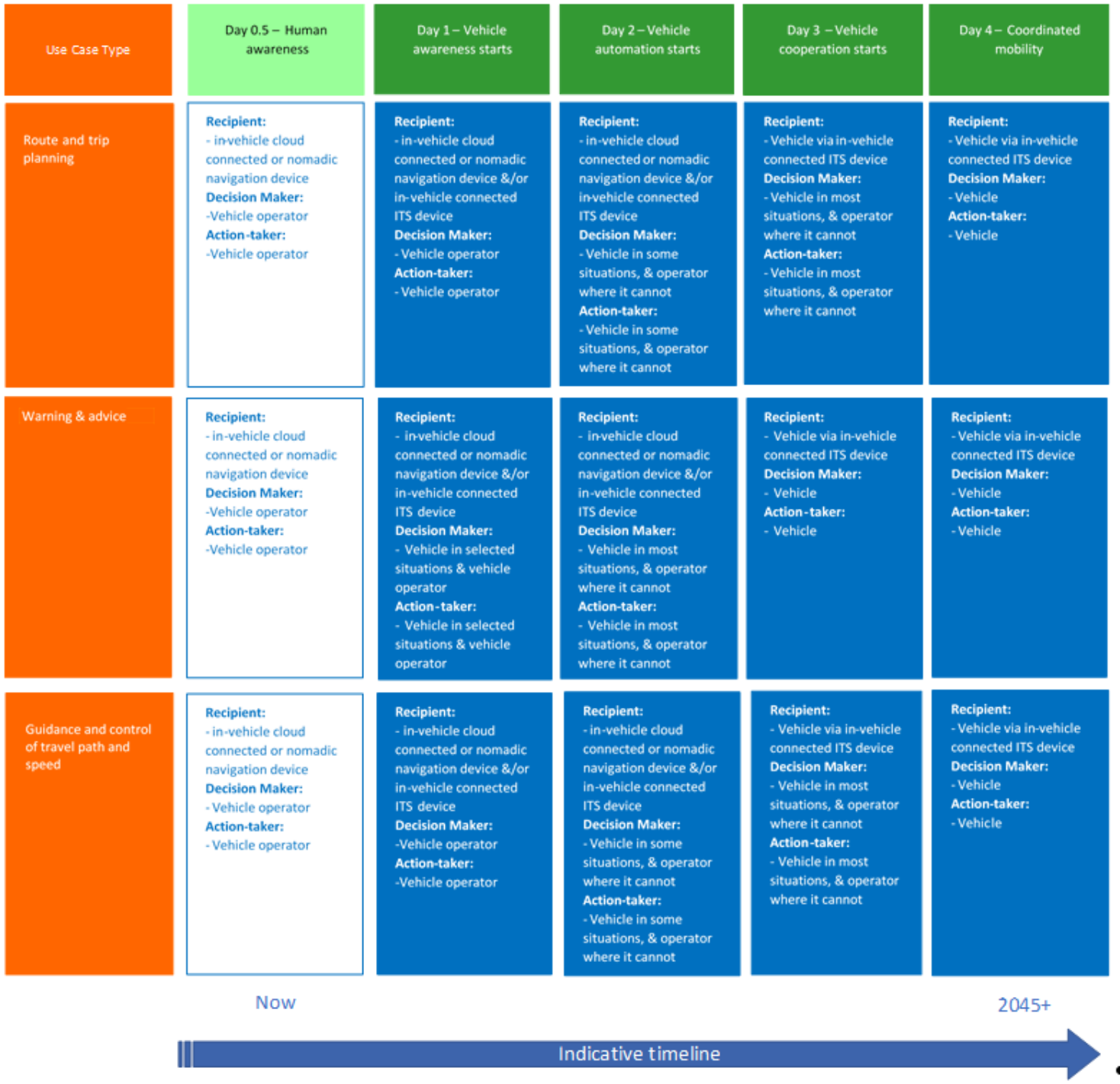


The RADCAV Project

The purpose of the Road Authority Data for Connected and Automated Vehicles (RADCAV) project is to investigate and report on the optimal model for the provision of Connected and Automated Vehicle (CAV) data (including architectural methods, standards and approach) to map makers and CAV manufacturers/C-ITS device manufacturers that will benefit both agencies and CAV manufacturers, along with the steps to achieve the target state for CAV data provision.

RADCAV

Data Provision Capability Model



The major challenge

Austroads

Thank you

John Wall

Program Manager – Future Vehicles & Technology

jwall@austroads.com.au

(+61) 0418617975

https://austroads.com.au/drivers-and-vehicles/future-vehicles-and-technology

Austroads