

Tech-enabled Transport: Informing the Transition to Technology Enabled Transport Vehicles and Infrastructure

April 2017 - September 2018

The coming decades will see a significant increase in the level of technology applied to the transport sector, both in vehicles and the infrastructure itself. If harnessed effectively, this will see numerous opportunities for travellers, freight stakeholders and infrastructure managers. However, if assumptions by transport agencies around this technology transition are not well informed, this will create a number of risks. This project seeks to work with State government transport agencies and associated consultants to identify specific areas in which assumptions around the scale and pace of the use of technology in transport can be revised and updated to inform the effective deployment of such advances. The goal is to harness technology as it is developed and deployed, to ensure agencies continue to provide affordable and effective mobility and freight services for our rapidly growing cities and in connecting population centres across Australia.

Objectives

This aim of this project is to assist Australian transport related agencies and infrastructure consultants navigate the transition to technology enabled vehicles and transport infrastructure in the coming decade.

The specific objectives of this project are to:

1. Identify and update assumptions: identify currently held assumptions around the scale and pace of technology enablement of vehicles and infrastructure across all modes used in business case development, risk assessment and economic modelling, along with transport planning, design and operation. The project will compare findings with global practices and emerging consensus to identify specific areas where Australian assumptions could be updated or amended to better reflect anticipated future conditions and to inform sensitivity testing and future planning.
2. Identify specific recommendations to support the tech-enabled transition: This will include a review of existing reports and studies related to the policy implications of the increase in technology enablement of vehicles and transport infrastructure to identify those applicable to Project participants, informed by updated assumptions from above. It will provide guidance as to how specific policies and regulations may be renewed to better underpin the transition to technology enabled vehicles and transport infrastructure, to complement the recommended updates to assumptions.
3. Provide strategic considerations for investment: Provide clear guidance on how technology enablement of vehicles and infrastructure is likely to transition in the coming decade and the implications for risk management and infrastructure investment.

Industry Outcomes

There are growing risks that transport infrastructure may not keep pace with growing levels of technology enablement of vehicles, across all modes. In addition, it must account for a mix of vehicles with differing levels of technology enablement, from those with little to none, to vehicles that communicate with other vehicles and the transport infrastructure itself, to vehicles that do not require drivers or operators. Authorities around the world are now adapting and rethinking their approaches to regulating the use of technology in transport in order to avoid conflicts without stifling the innovative uses of these technologies.

The project will seek to build the capacity of road and transport related agencies and companies to understand the implications and opportunities associated with technology enabled transport. It will provide industry with robust guidance on how the transition to technology enabled vehicles and transport infrastructure will present risks and opportunities. The project will deliver outcomes in the area of harnessing value from technology enablement in the planning, operation and maintenance of our transport networks and guidance on to how to reflect the identified assumptions in associated policies and legislation, and the implications for transport infrastructure investment.



Dr Ken Michael AC
Chair, Project Steering Group



Dr Charlie Hargroves
BE (Civil), PhD
Project Leader, Curtin University
charlie.hargroves@curtin.edu.au



Image courtesy of Curtin University:
Curtin University Autonomous Bus