

Our Ref:

Your Reference:

28 October 2020

Director
Airspace and Emerging Technology
Department of Infrastructure, Transport, Regional Development and Communications
GPO Box 594
Canberra
ACT 2601

Dear Sir

Emerging Aviation Technologies – National Aviation Policy Issues Paper

We thank you for the opportunity to make a submission to inform the direction of the National Emerging Aviation Technologies policy and the proposed outcomes articulated in the Department's Issues Paper.

The Australian Road Research Board (ARRB) is the source of independent expert transport knowledge, advising key decision makers on our nation's most important challenges. ARRB was established 60 years ago by the Australian Commonwealth and State Transport and Road agencies and the New Zealand Transport Agency. We employ over 200 staff who form a multi-disciplinary pool of highly qualified research professionals, experienced engineers, specialist technical and support staff. ARRB has offices located in Melbourne, Perth, Brisbane, Sydney, and Adelaide. We have a national and international reputation for transport and infrastructure solutions through applied research, knowledge transfer and information services.

On behalf of Australian and New Zealand Road Agencies, we have been substantially involved in operational and infrastructure areas to benefit transport outcomes. Since 2015, our activities in connected, automated and autonomous vehicles and field operational trials have considered impacts for our Members related to safety, registration and licensing, traffic management, and infrastructure assets (both physical and digital). There are many parallels with the aviation sector. In 2015, we established the Australian New Zealand Driverless Vehicle Initiative, ADVI, (www.advi.org.au) which currently has over 180 members. We are members of AAUS and I presented at the last AAUS Conference in 2019 with Luke Gumley from CASA.

We wish to make two comments and two suggestions.

Comment 1- Airspace Integration

Please also consider airspace integration with land transport operations as our land transport corridors will most likely be the same corridors for drone operations tasked for freight and mobility. As much as we have road space allocations for parking, shoulders, centre medians, and dynamic allocations for transit and occupancy levels and traffic flow, we will soon have to consider drone operations in road design and operations, be it for federal, state and local roads.

Comment 2 – Flight Information Management System (FIMS)

Unlike aviation, in land transport, road managers rarely have any trip origin-destination information. With advanced technology and connectivity, such OD information is now becoming a reality. And if we believe the future of land transport as being connected and automated, then the land transport sector will also be looking

towards a FIMS-like environment for traffic management. ARRB believes that there is much we can learn from the aviation sector's lead and recognise the possibility of increased land / air integration as a desirable outcome.

Suggestion 1: Comparing notes with the others in Government

(e.g., the Department's Connected and Automated Vehicle Policy and Regulation branch, the National Transport Commission's Connected and Automated Vehicle team and Austroads Future Vehicles and Technology team.)

We have been liaising with the Department's equivalent team in land transport and this team is responsible for the Department's National Land Transport Technology Action Plan. There may be joint work that can be progressed on opportunities for national action and policy.

Suggestion 2: Dialogue with ARRB.

I attach as an Attachment, our conceptual view of the Future Transport and Mobility Environment, which has the Service Provider model, similar to the FIMS environment as depicted in the Issues Paper (p.21).

In building readiness for the future in land transport, ARRB has started its journey with a restructuring of our resources into six strategic work groups; Future Transport Systems, Future Transport Infrastructure, Transport Safety, Next Generation Asset Management, Sustainability and Resilience and Data Collection and Analysis. We will be happy to provide further input as required from all our six groups.

Yours Sincerely

Dr Charles Karl
National Discipline Leader – Transport Systems
Future Transport Systems

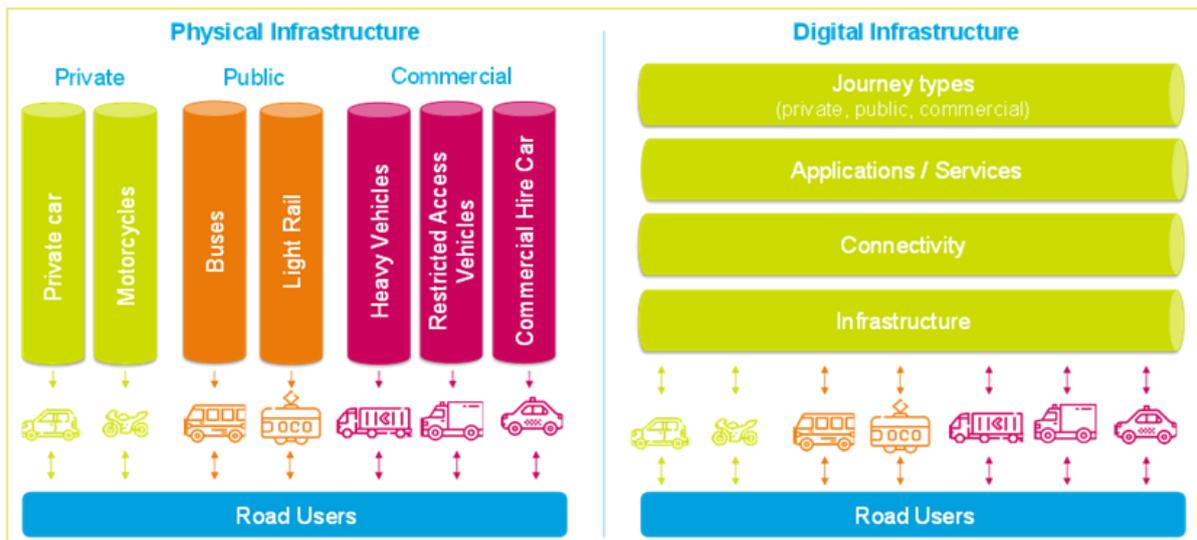


YOUR NATIONAL
TRANSPORT
RESEARCH
ORGANISATION

VIC | 80a Turner St, Port Melbourne, 3207 VIC, Australia | +61 3 9881 1555
NSW | 36 – 42 Chippen Street, Chippendale, NSW 2008, Australia | +61 2 9282 4444
QLD | 21 McLachlan St, Fortitude Valley, QLD 4006, Australia | +61 7 3260 3500
SA | Level 1, Featherstone Place Adelaide, SA 5000, Australia | +61 8 8235 3300
WA | Suite 4B, Level 2,1 Hood Street, Subiaco, WA, 6008 | +61 8 9227 3000
arrb.com.au | ABN 68 004 620 651

Future Transport and Mobility Environment

Digitisation and advances in mobile communications have changed our lives significantly. It is important to see the forest from the trees. The current silos in land transport associated with private vehicles, commercial vehicles, and public transport are beginning to change whereby service delivery is largely independent of the specific transport silo. A car can be operated as a private vehicle, a service, commercial or freight vehicle and a public transport vehicle all in the same 24 hours. Journeys (or mobility) are enabled by applications and services provided by Service Providers. In essence, digital infrastructure has been rolled out across the physical infrastructure of the land transport network. The change in thinking from a silo based view to a layer based view of the transport and mobility eco-system requires alignment of technology and innovation with the other key elements of a system; policy, legislation, infrastructure and people.



The increasingly integrated nature of transport and mobility calls for a fresh definition of roles and responsibilities of actors such as the System Manager and Regulator which are currently fragmented across a number of actors in roads, heavy vehicles, public transport and freight. Further consideration and refinement of the concept and roles among the stakeholders provides the context for alignment with other programs and projects.

