

RAC Intellibus® Trial

Post-ride Survey: 12 Month Summary

While there are still many unknowns about what a future with automated vehicles (AVs) will look like, these vehicles will no doubt have considerable implications for our transport networks, towns and cities, and will change the way we move around.

RAC's Intellibus® Trial (the Trial) which began in 2015 involves three stages with each stage designed to test and evaluate AV technology in a variety of settings, involving increasing levels of complexity and finally, interactions with road users.

The third and final stage is being conducted in South Perth along the South Perth Esplanade. With the support of the State Government and the City of South Perth, the Trial was officially launched on the 31st of August, 2016. It is a 3.5 kilometre journey which takes around 30 minutes in total and the participants have the opportunity to see

how the the RAC Intellibus® (also known as the 'shuttle') interacts with traffic and the environment while RAC's Driverless Vehicle Chaperones explain how the shuttle operates.

Members of the public are encouraged to take part in the Trial and can register online or visit the Driverless Vehicles Chaperones at the RAC Intellibus® Hub in South Perth.

A crucial aim of the Trial's third stage is to give Western Australians an opportunity to see and experience AV technology with a view to understanding

the perceptions of individuals who have had first-hand experience on a level four high automated vehicle¹, such as RAC's Intellibus®.

To this end, an online survey is sent to participants following their ride on the shuttle. Given the public Trial continues to operate in South Perth, this survey paper is a 12-month summary of the online surveys completed by the 30th of August, 2017. Of the 4,100 members of the community who participated in the first year of operation, almost 1,900 people completed the survey.

Staging for the Trial

Stage 1: Closed testing undertaken on a private track.

Stage 2: Closed stage undertaken on public roads, without the RAC Intellibus® carrying passengers.

Stage 3: Open stage on public roads with the opportunity for the public to register and ride on the RAC Intellibus®.



For the better

Awareness of automated vehicles

The survey has shown that awareness of AV technology is high among those who choose to participate in RAC's Intellibus® Trial, with 85 per cent of respondents who experienced a ride on the RAC Intellibus® indicating that they had previously heard of driverless vehicles.

Based on the Australia & New Zealand Driverless Vehicle Initiative estimated timeframes for the industry accepted SAE International's levels of automation, Level 4 (high automation) vehicles could be available between 2020 and 2025 and Level 5 (full automation) vehicles between 2026 and 2030.

The high rate of unprompted AV awareness reported by Trial participants is not surprising and may indicate a pre-existing interest, particularly given participation requires time and effort.

“(I had heard about it) as a child on science fiction cartoon programs on TV in the UK - was fascinated by the concept but never thought it would become a reality! Also saw RAC’s spot on TV regarding this opportunity earlier this year, which is when I signed up.”

- RAC Intellibus® Trial participant

When asked about where they had first learned about AVs (Figure 2),

approximately 39 per cent said that they had heard about them through news about the RAC's AV Program, 21 per cent of respondents said through RAC, 18 per cent had learned about AV technology through general media such as blogs, movies and the internet, 14 per cent said that they had encountered them directly in airports or mine sites around the world, or had previously worked in an AV related industry and eight per cent had heard about them from friends or family.

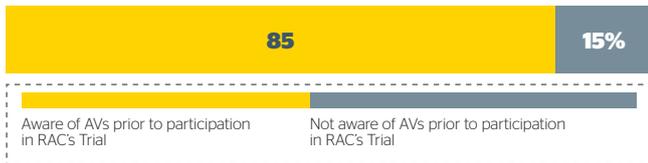


Figure 1 » Awareness of AVs

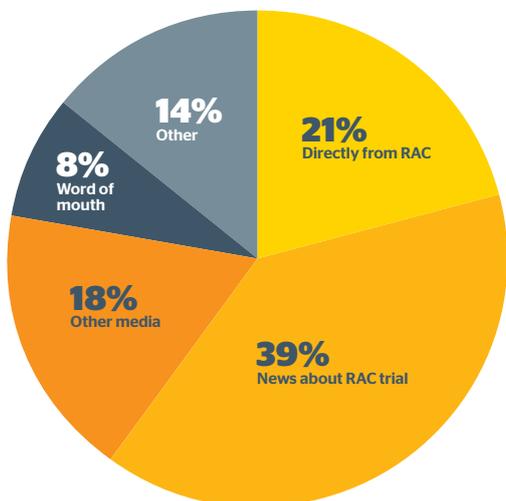


Figure 2 » Respondents who had already heard about AV technology and from which source



RAC Automated Vehicle Trial Registration

Thank you for your interest in participating in RAC's Automated Vehicle Trial and riding the RAC Intellibus®. Please follow these **three steps**:

- 1 Register:** This will only take a few minutes and we ask that you answer a few questions about automated vehicles.
- 2 Book:** Next, you'll receive an email with a unique link to a booking site allowing you to select your preferred time and date. You can book for up to 6 people per time slot.
- 3 Guests:** If you've selected to invite a guest(s), you'll receive a confirmation email with a guest registration link. Forward the email to your guest(s) for them to complete.

Please **complete the form below to register**. If you require assistance please call 6102 2517 or email rac@eventandconferenceco.com.au

Please remember:

- As it is a prototype vehicle, it is not yet wheelchair accessible.
- Due to space restrictions, mobility devices cannot be taken aboard.
- 0-6 year olds are not permitted to ride in the vehicle.
- 7-14 year olds must be accompanied by a parent/guardian.
- 15-17 year olds need permission from a parent or guardian.
- All participants must read and agree to the terms and conditions of the trial.

Do these restrictions impact your eligibility to participate in the trial?

- No
- Yes

Figure 3 » Trial Registration Page www.rac.com.au/Intellibus

Attitudes toward automated vehicles

During the ride, RAC's Chaperones describe how each of the sensors located on the RAC Intellibus® assist to make it driverless and operational. Following their experience, members of the public were largely positive about its possibilities and expressed few concerns.

Eighty-four per cent of those who had experienced a ride on the RAC Intellibus® reported their experience as extremely positive. Almost half (48 per cent) said that it had been a fun, interesting or informative learning experience, and 15 per cent explicitly stated that they had felt safe in the RAC Intellibus® while the vehicle was in control.

“The bus did everything right and I noticed that people and drivers were the erratic ones such as impatient overtaking.”
- RAC Intellibus® Trial participant

When asked how they felt about AVs after riding on the RAC Intellibus®, 77 per cent of respondents reported feeling extremely positive about AVs.

“The vehicle has more awareness of its surroundings than a driver sat in a vehicle could ever have. The vehicle is not distracted by things happening within i.e. mobile phone, children etc. Nor is it distracted by things happening away from the road.”
- RAC Intellibus® Trial participant

The greatest perceived benefit of AV technology (Figure 6) was the increased freedom and better mobility for the young, ageing and those with mobility difficulties with 91 per cent of respondents saying so.

Other perceived benefits included lower vehicle emissions (87 per cent), fewer crashes (86 per cent), better fuel efficiency (86 per cent) and the possibility of using travel time more productively (86 per cent). Respondents were most conflicted about the impact of AVs on insurance rates (Figure 7).

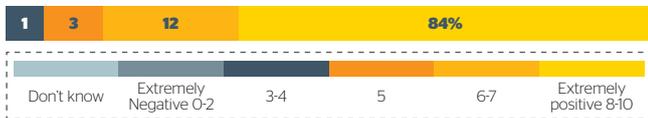


Figure 4 » Experience participating in the Trial

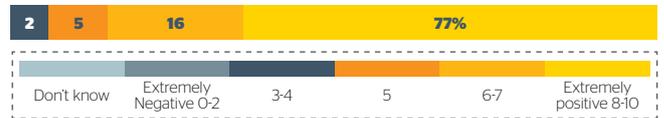


Figure 5 » Attitudes about driverless vehicles after riding on the RAC Intellibus®

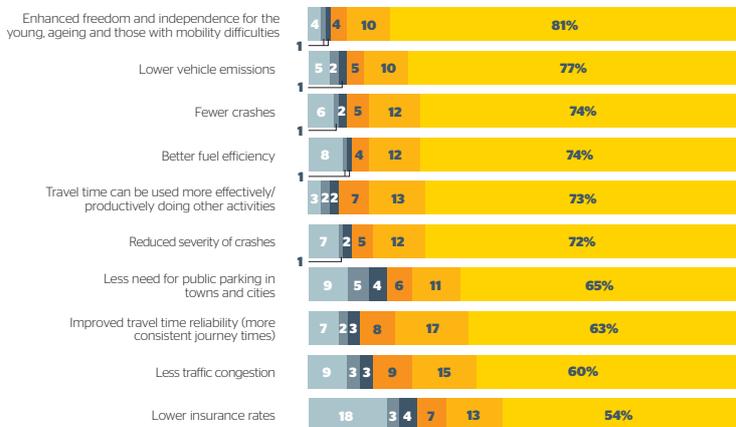


Figure 6 » Perceived benefits of automated vehicles²

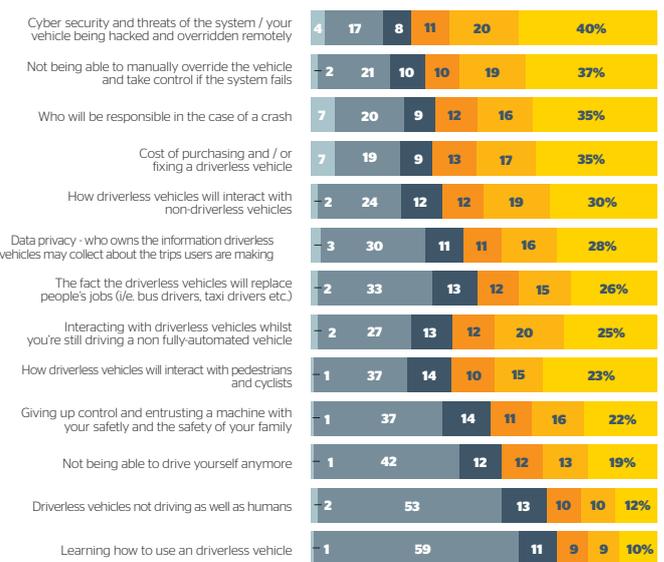


Figure 7 » Perceived concerns about automated vehicles³

²⁻³Values may not add to 100% due to rounding

Future of automated vehicles in WA

A well-defined roadmap for how we plan and manage the challenges of regulating AV technology has never been more important to ensure the safe transition of AVs onto roads and maximise their contribution as part of an integrated transport system.

Opinions about how easily WA might transition to AV technology were conflicted; although 89 per cent of respondents who had been on a ride on the RAC Intellibus® agreed or strongly agreed that they would be happy to travel in an automated vehicle, only 27 per cent agreed or strongly agreed that the WA Government would be prepared for driverless vehicles by 2025 (Figure 9).

With respect to which steps should be taken in preparation for AV technology (Figure 10), 85 per cent of respondents agreed or strongly agreed that the WA Government should be investing in initiatives now to ensure that the road infrastructure is ready for the introduction of AVs by 2025, and 84 per cent agreed or strongly agreed that vehicle manufacturers and

industry should lead the way in the implementation of driverless vehicles.

In terms of how a vehicle like the RAC Intellibus® could be used to improve the lives of Western Australians, 98 per cent of community members who experienced a ride agreed that an AV could be used as a service in WA in the future (Figure 8).

Services suggested by respondents included free public transport in the Perth Central Business District, patient transfer for hospitals, at universities to improve campus safety and mobility, transport for the ageing and those with mobility issues, ride sharing services, tourism, cost-efficient regional public transport, airports and as feeder transport to major bus and train stations.

“Hospital car parks. Use like robotic meal delivery to get people from different sections of a hospital. University campuses. Suburbia, short trips. Near retirement villages. Airport.”

- RAC Intellibus® Trial ride participant

RAC’s AV Trial continues to provide the community, industry and government with the opportunity to experience an AV in a complex traffic environment while the technology remains in the early stages of development. By working together with our partners, we are preparing Australia for the safe transition to automated vehicles and to safer, easier and cleaner mobility choices.

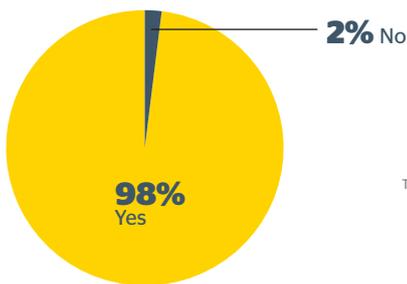


Figure 8 » Proportion of respondents who believe that automated vehicles such as the RAC Intellibus® could be used as a future service in WA

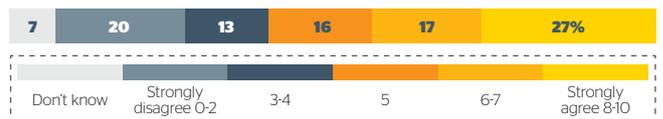


Figure 9 » Level of agreement that WA Government will be ready for the introduction of automated vehicles by 2025

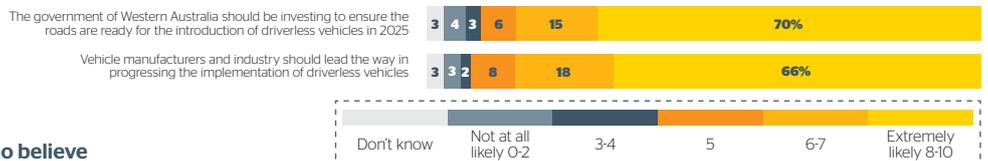


Figure 10 » Perceptions of which organisations should prepare for AVs⁴

⁴Values may not add to 100% due to rounding

