

# Progress Towards the Introduction of Autonomous Vehicles into Australia

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5<sup>th</sup> REAAA Business Forum, Manila, July 2017



Australia &  
New Zealand  
Driverless Vehicle  
Initiative

OUR VISION:

To accelerate the safe and successful introduction of driverless vehicles onto Australia and New Zealand roads.



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# ADVI Partnership | 8 June 2017



# Why driverless vehicles?

## The benefits are substantial

Productivity improvement for drivers

Accessibility and mobility for the disadvantaged

Reduced congestion and reduced emissions

Creation of flexible and adaptive public transport services

~50-90 % reduction in crashes

Increased economic competitiveness to stimulate industry

Improved air quality & other environmental benefits

# Economic benefits to Australia



- **A\$95 billion (≈ US\$75 billion) economic opportunity per annum (societal benefits alone)**
- **Creation of 16,000 direct & indirect jobs**
- **Australia high-tech research & design capabilities**

# Issues to be explored



# What is a driverless vehicle?



A driverless vehicle is a fully connected and automated vehicle that replaces the human driver in the management of all dynamic driving tasks.

# 5 levels of automation

- Level 0: No automation
- Level 1: Driver assistance
- Level 2: Partial automation
- Level 3: Conditional Automation
- Level 4: High Automation
- Level 5: Full Automation

Feet off

Hands off

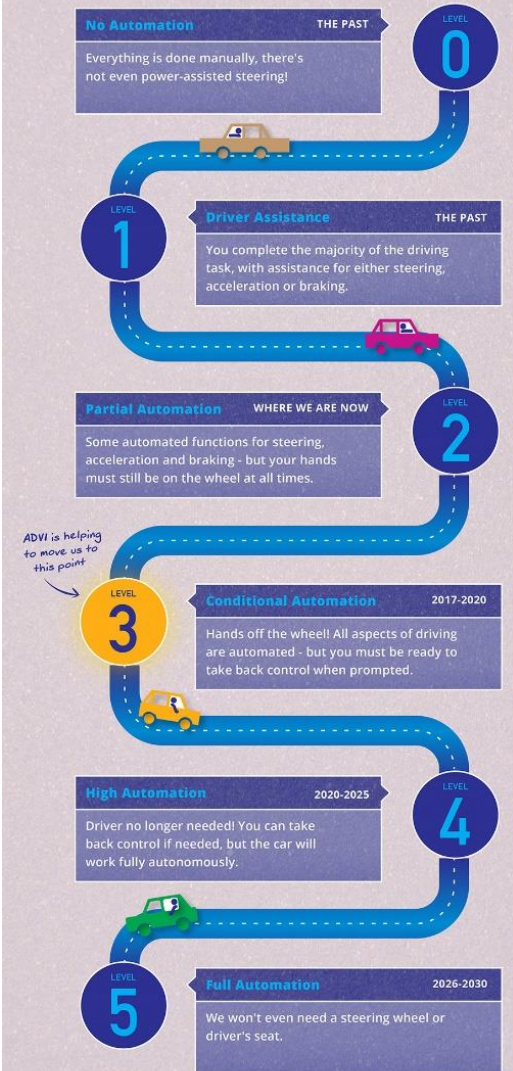
Mind off

Body off

Driver off

## Journey to Driverless Cars

The Australian Driverless Vehicle Initiative



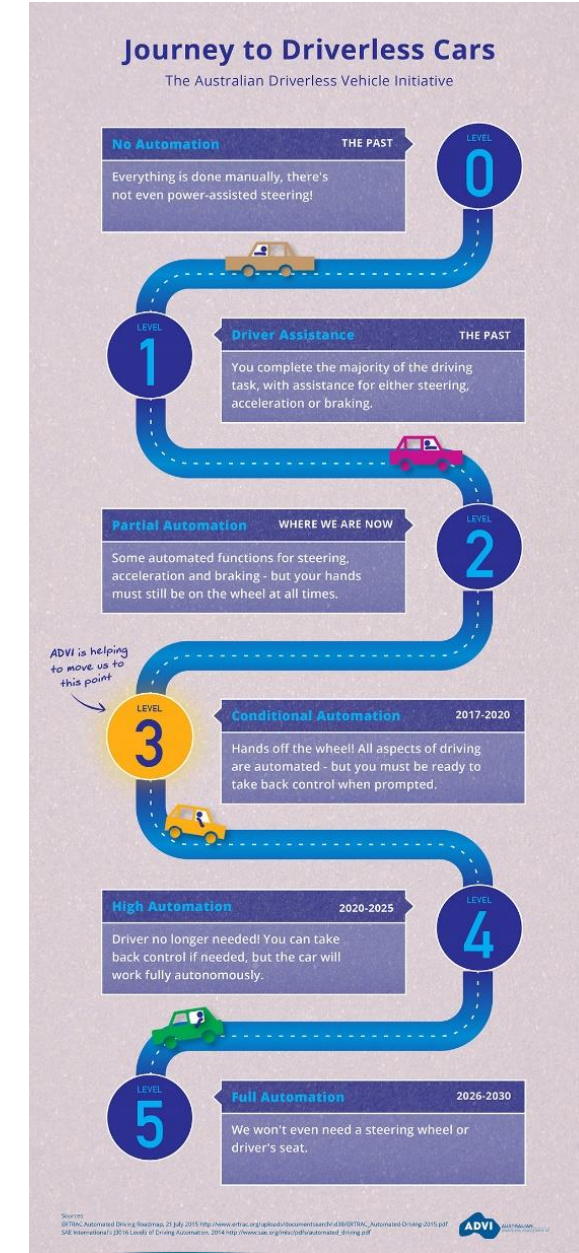


# 5 levels of automation

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- **Level 3: Conditional Automation**
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FUNCTION.
– Observes all traffic rules.
– Speed 0 – 80 mph (130 km/h).
– Remains in the lane.
– Overtakes slower vehicles.
– Cooperative characteristics at merging entrances to the motorway.
– Highly automated changes between motorways.
– In appropriate situations the driver can delegate all driving tasks to the car.





**AUTONOMOUS DRIVE**  
DEMONSTRATION VEHICLE



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RAC Intellibus

Automated Vehicle Trial

100% driverless automated electric



GOVERNMENT OF WESTERN AUSTRALIA



For the better

**ANZI**

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Layed-back seating position and inward facing seating set the scene for a social environment

Ambient glowing blue light creates vibrant lounge bar feel

Recesses in floor act as adjustable foot rests



Structural spinal sections



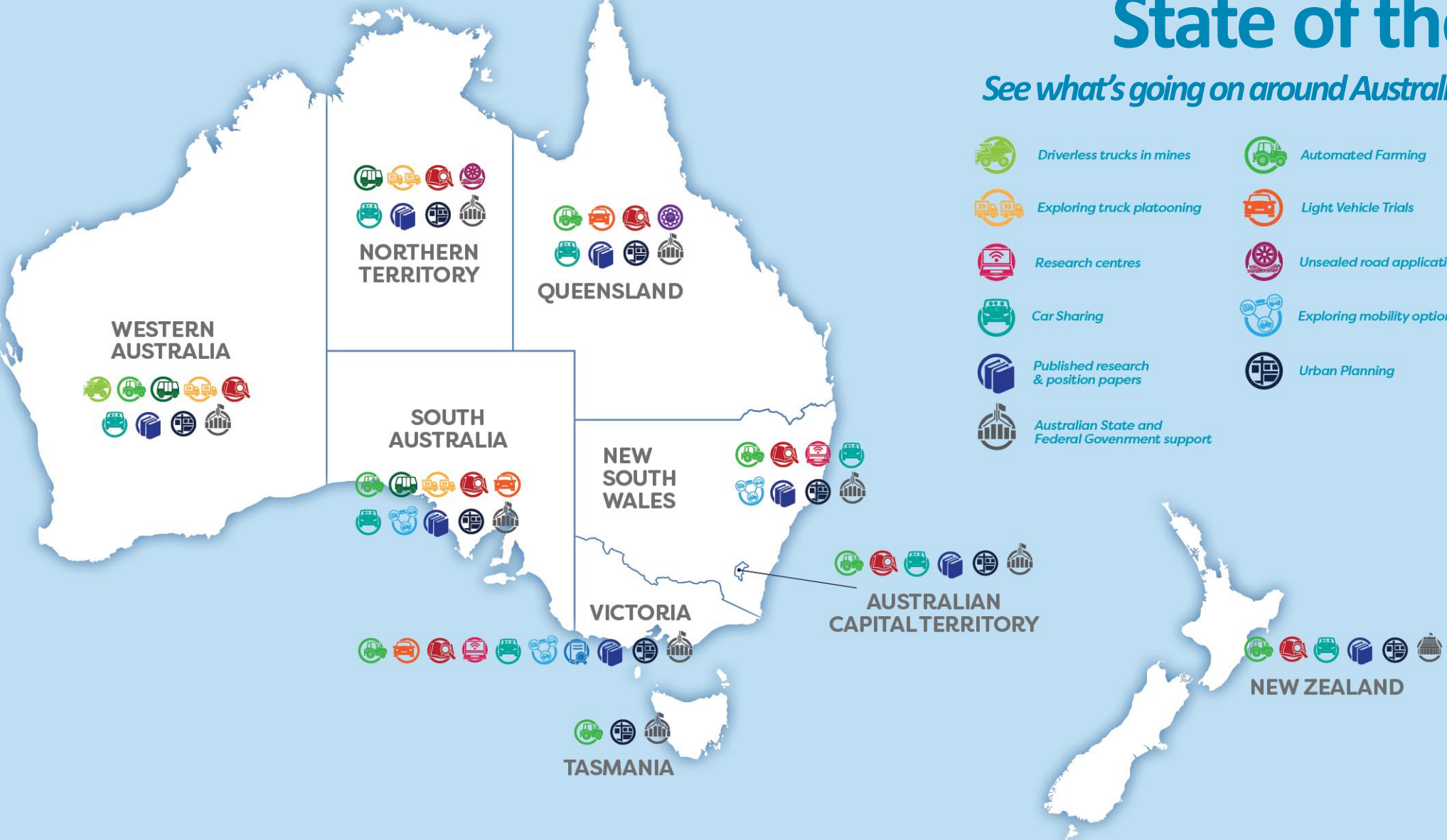
360° screen can act as a pillar-less windscreen or show any number of multimedia visuals



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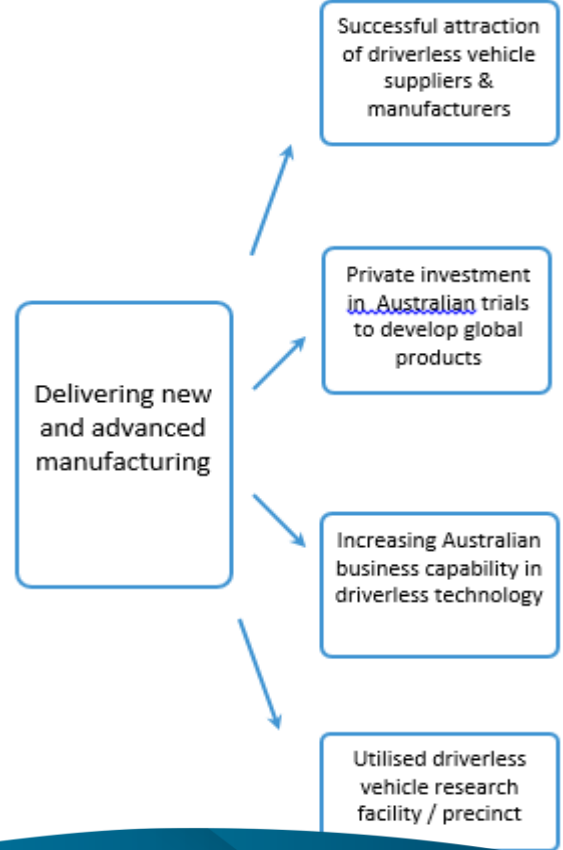
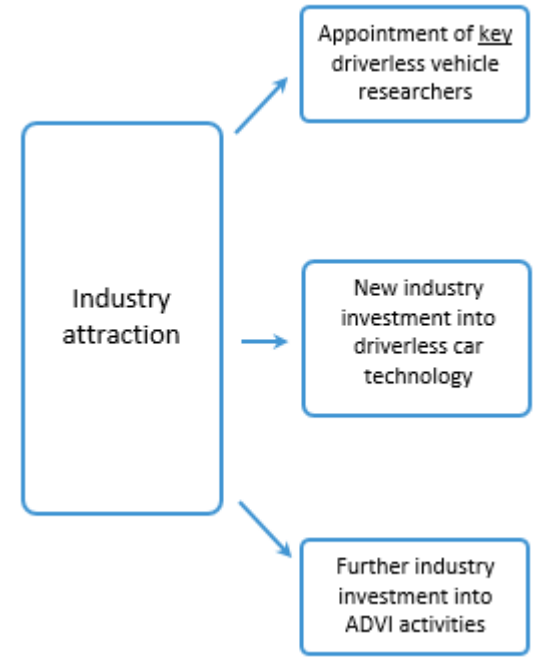
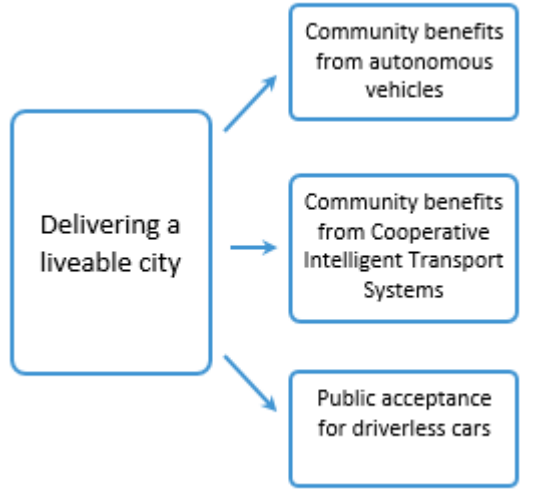
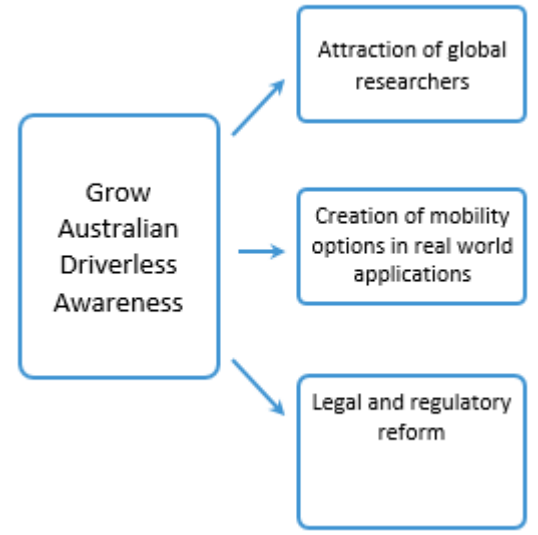
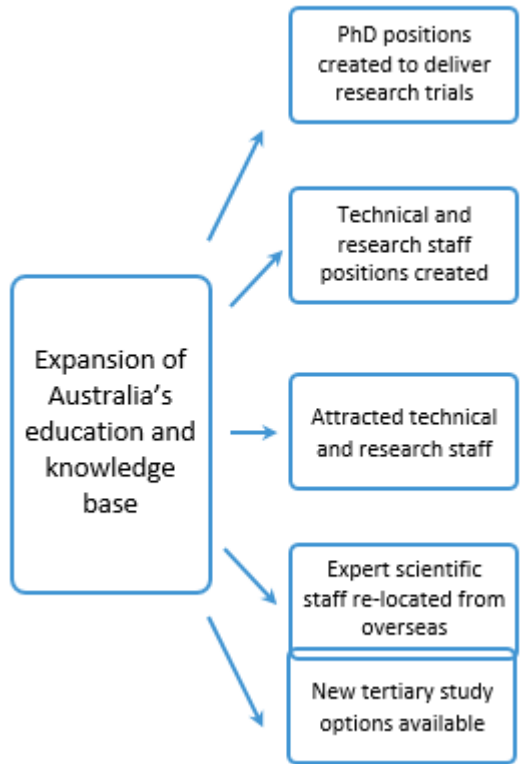
# State of the nation

See what's going on around Australia and New Zealand



- Driverless trucks in mines
- Automated Farming
- Shuttle trials
- Exploring truck platooning
- Light Vehicle Trials
- Legislation reviews & implementation
- Research centres
- Unsealed road applications
- Connectivity trials
- Car Sharing
- Exploring mobility options
- Certification
- Published research & position papers
- Urban Planning
- New Zealand Central Government support
- Australian State and Federal Government support

# Roadmap to achieving benefits





# Change is coming ... our cities will gradually transform



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# What will be the impacts on the community?

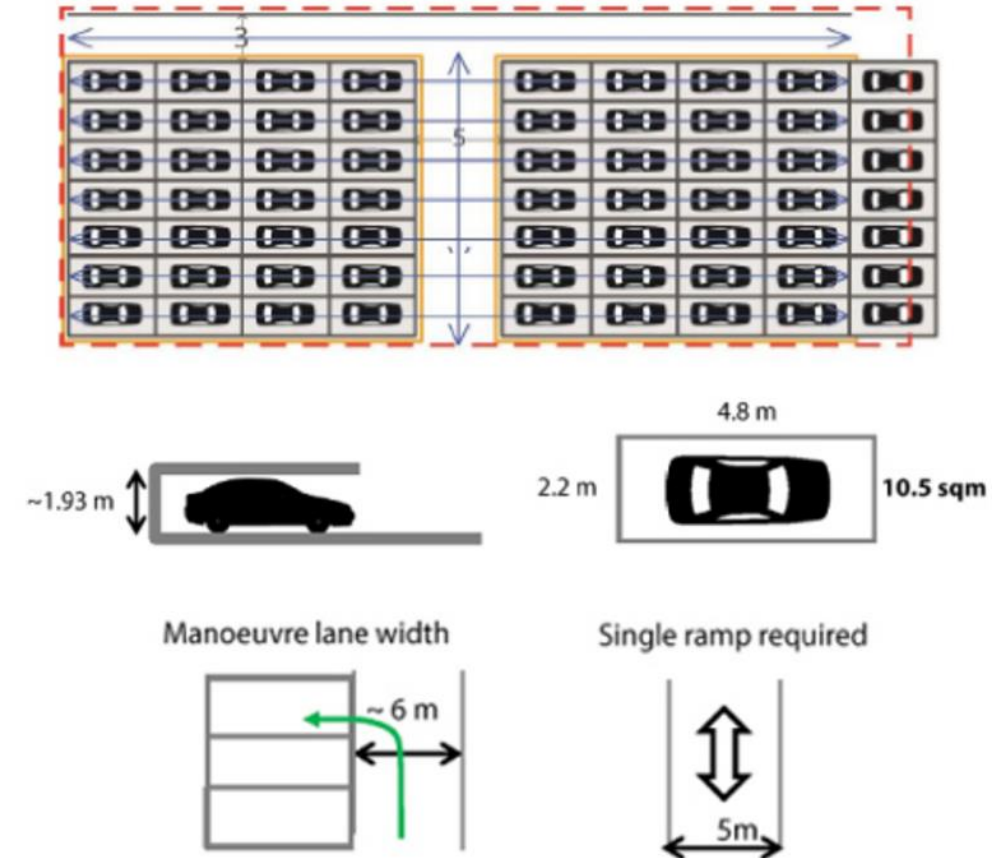
- People will interact with their vehicles differently
- Parking will move or disappear and reduced space will be needed to operate
- Urban form and function will change
- Potentially reduced revenue streams from infringements, etc.
- Communication and data needs will grow exponentially
- Infrastructure needs will change
- Policies and practices will need to be modified



# What do Governments need to do?

- Review existing laws and standards
- Identify needs & then develop infrastructure plans that are smart, adaptable and resilient
- Update assumptions, parameters and goals built into city and town planning
- Integrate driverless vehicles into land use plans
- Alter parking policies to reduce the availability of parking

DRIVERLESS PARKING



# What do Governments need to do?

- Educate, build awareness and engage in community outreach
- Influence public transport/transit decisions including pricing
- Establish active policies, e.g. a fleet procurement policy
- Review insurance
- Track and monitor development
  - sponsor and support testing, deployments and trials



# Cycles of change

Technology

1-5 years

Legislation

5-20 years

Infrastructure

20-100 years



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# 2nd International Driverless Vehicle Summit

15-17 November 2017

Adelaide, South Australia

Join us in showcasing global advances  
in autonomous vehicles technology

Go to [advi.org.au](http://advi.org.au) for further details.



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# Thank you

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**נספח**

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