Session 8: **Outlook**

Gerard Waldron

Managing Director, ARRB Group

Presentation outline

- Who is ARRB ?
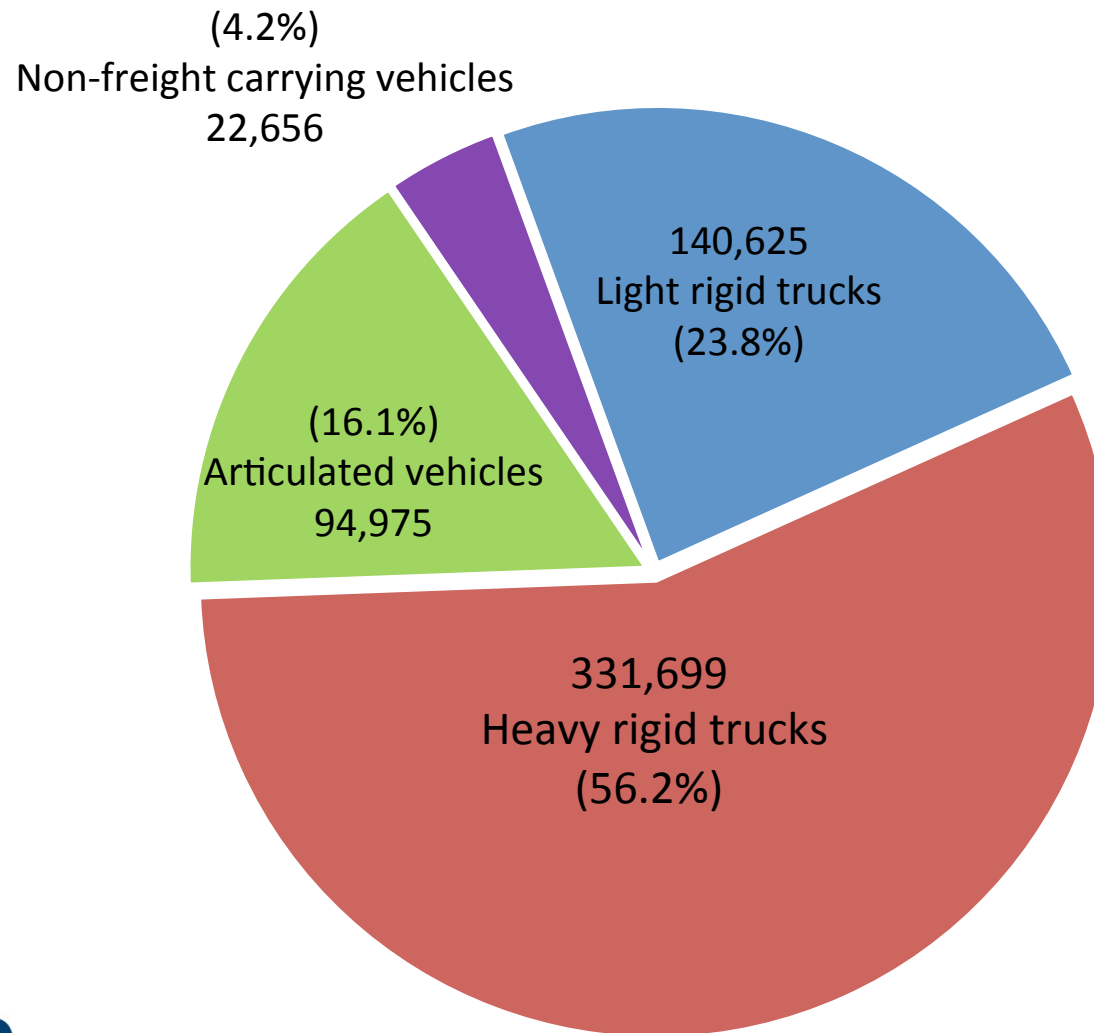- Truck Safety
- What is ADVI ?
- Planning for the freight task
- Technology, human factors, automation and platooning

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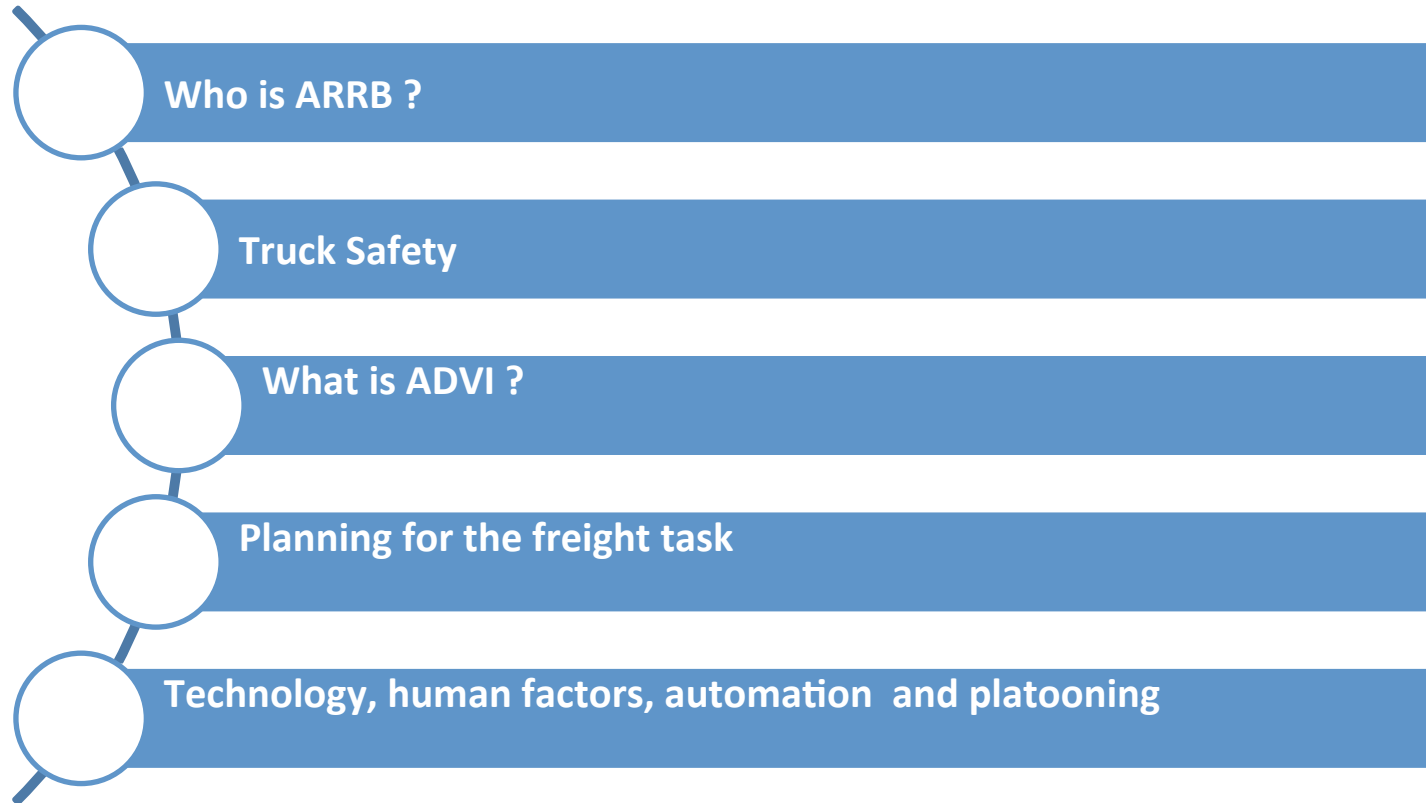
Who is ARRB?

- Leading Australian provider of road transport research
- 11 members Transport agencies and associations

Trucks in Australia (2015)

(4.2%)
Non-freight carrying vehicles
22,656

140,625
Light rigid trucks
(23.8%)

(16.1%)
Articulated vehicles
94,975

331,699
Heavy rigid trucks
(56.2%)

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Road safety outcomes – basic facts

	Articulated	Heavy Rigid	Bus	All HV	All vehicles	Source
Deaths	114	88	20		1156	BITRE 2015a
Fatal Crashes	100	76	16		866	BITRE 2015a
Number registered	93853	329464	94131		17633493	BITRE 2015a
VKT	7.84b	9.84b	2.43b		245b	BITRE 2015b/ ABS
Fatal crash rate per bkm	12.8	7.7	6.6			BITRE 2015b
Fatal crash rate per 10,000 registered	10.7	2.3	1.7			BITRE 2015b
% Fatal crashes in urban area	20	58	55			BITRE 2015b
% Fatal crashes single vehicle	15	9				BITRE 2015b
% Fatal crashes multiple vehicles	74	78				BITRE 2015b
% of casualty crashes resulting in a fatality (NSW)	5%	4%			2%	TfNSW (2015)
Registration Charges	Up to $17,000	Up to $2000				NTC website
Road User Charge	26.14c/l	26.14c/l				NTC website
Average annual road user charges	$13,000	$7,000				ABS/ NTC websites
Total road user charge per truck	$20-30,000	$7-9,000				
Total revenue to be collected 2015/16				$3.14b		ATA submission to ATA

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HV Fatalities as a Proportion of All Road Fatalities

Year	All Road Fatalities	HV Fatalities	% of HV Fatalities
2009	1,488	253	17.0
2010	1,353	248	18.3
2011	1,277	235	18.4
2012	1,300	264	20.3
2013	1,187	193	16.3
2015	1155	212	18.0
Average	1293	234	18.0

Making the truck a safer workplace

- In 2015 there were 196 workplace deaths recognised by Work Safe Australia.

- Road crashes were not included in this number?

- Australian road toll was 1155.

- How many of people killed were working at the time of their crash i.e. workplace deaths were really far greater in my view.

Crash avoidance – is PRACTICABLE

- Road is a workplace

- Crash avoidance technology is **PRACTICABLE**

- Sending a driver out in a truck without these technologies is the same as sending a worker into a factory with unguarded machines - **Nobody would do this today.**

The Road to Autonomous Heavy vehicles in Australia

Trusted advisor on roads and transport

Australian Driverless Vehicle Initiative (ADVI)

Our Vision is that the ADVI Initiative will…
"Accelerate the safe and successful introduction of driverless vehicles onto Australian roads".
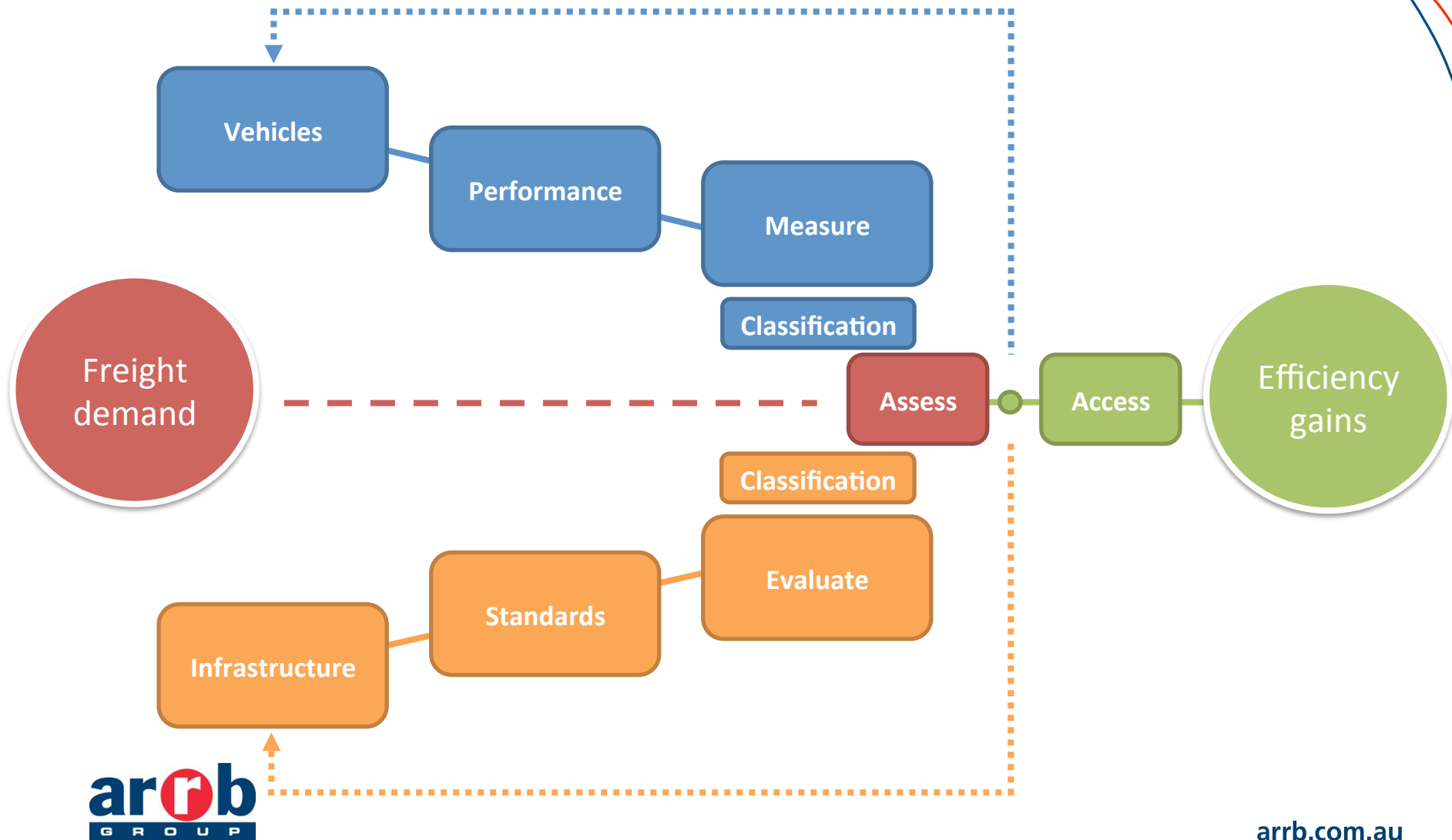
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Driverless Car Demonstration

- ARRB's Australia Driverless Vehicle Initiative (ADVI)

- ARRB was successful in hosting Australia's first on-road demonstration of automated vehicles on Saturday 7th November 2015

- Over 12,000 people connected to watch the live stream

- The #ADVIDemos hash tag trended in Australia on twitter

Areas of technology

Safety
- Electronic stability control
- Rollover warning/protection system
- Lane -change warning

Productivity
- Vehicle tracking and monitoring
- On-board weigh-in-motion
- Electronic vehicle logbooks

Infrastructure
- Active steering systems
- Road friendly suspensions
- Wide single / low rolling resistance tyres
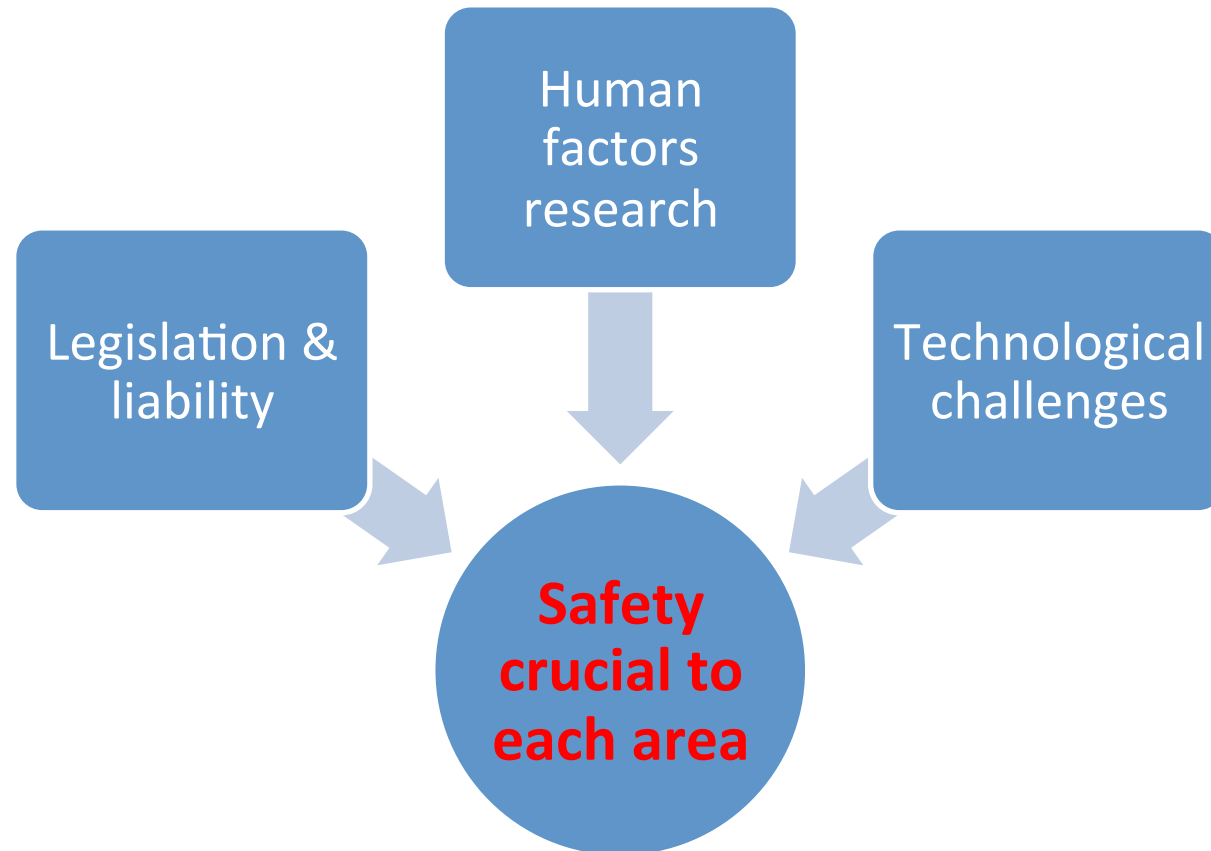
Human Factors and Technological R&D Challenges

Interaction of driver with new technology

Interaction with other traffic

Infrastructure and road network

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Transition towards higher levels of automation

Interaction with other traffic

- Interaction with other vehicles
  - Interaction between vehicles with different levels of automation (non, partly, highly, fully automated)
  - Connected Vehicles (V2V)

- Interaction with vulnerable road users
  - Recognisability, intent and predictability of (partly) automated vehicles
  - Smart and connected bicycles, scooters and pedestrians (V2X)

Creating next generation mobility...

Preparing your business/industry

- Automated technology is coming rapidly

- How to remain relevant

- Identify new opportunities

- Visit Australian Driverless Vehicle Initiative, subscribe to our monthly newsletter www.advi.org.au

Rate of change outside of your business is greater than that inside, you are destined for failure (Bosch Australia)

Questions?

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