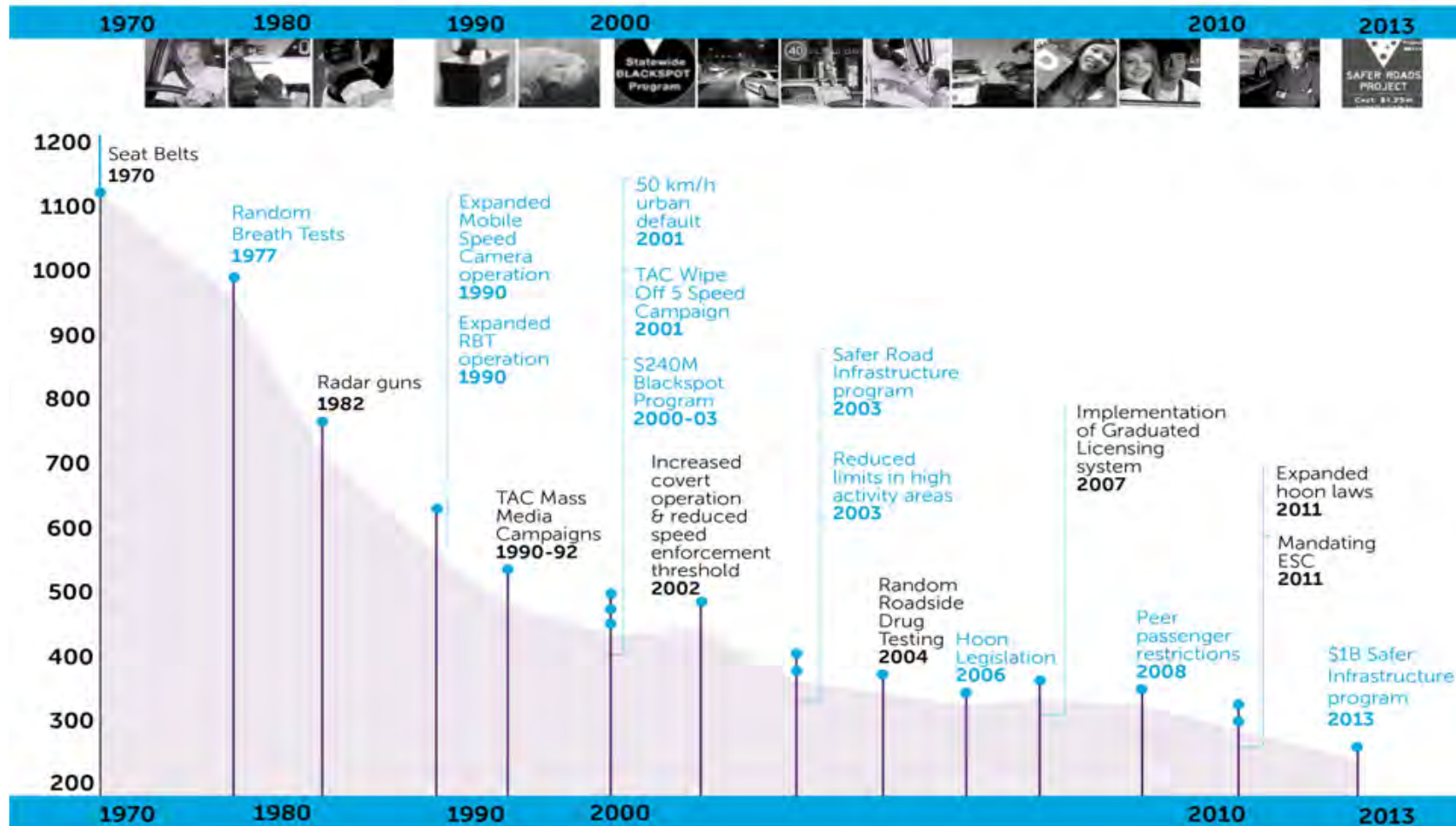**Global Heavy Vehicle Leaders Summit**
May 2016

The story so far

Where do we want to be?

Long term vision

- Automated vehicles where vehicles never (or almost nearly) crash.
- Examples include:
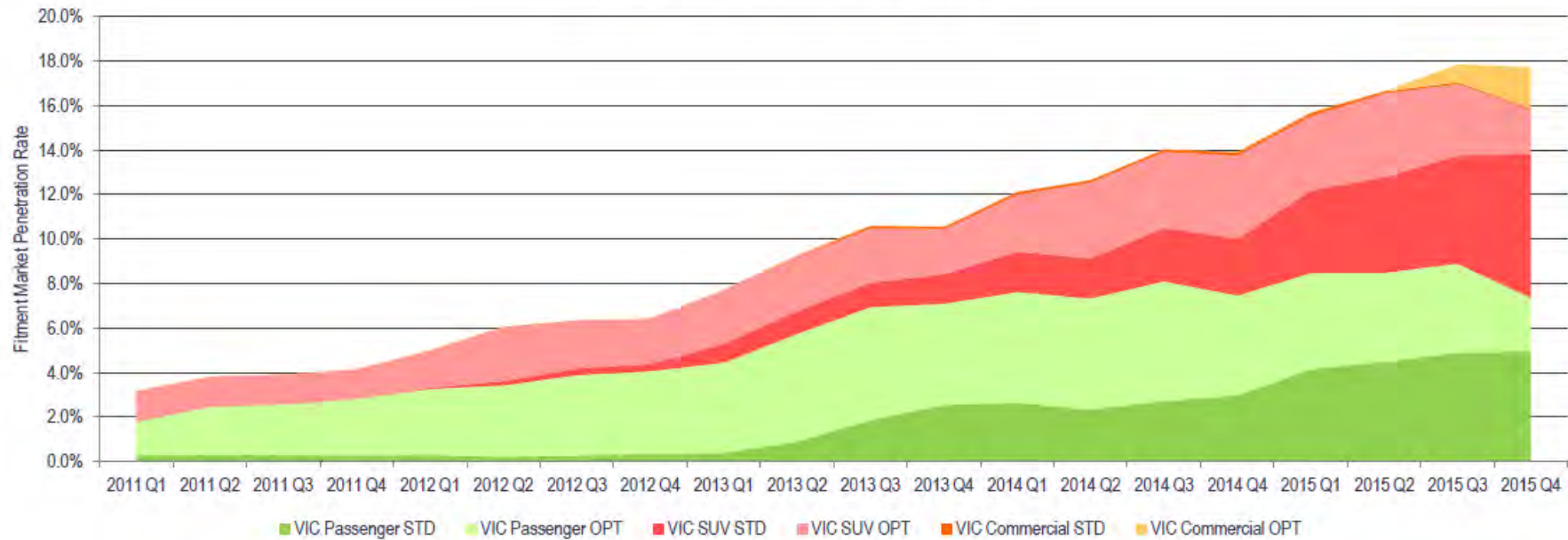 - Driverless vehicles
  - Vehicle platooning

Where are we now?

Lane Departure Warning STD and OPT Fitment:
New Vehicle light and light commercial sales in Victoria

Lane Departure Warning Fitment (STD vs OPT)
Victoria: Passenger, SUV, Commercial Segments

Legend: ■ VIC Passenger STD ■ VIC Passenger OPT ■ VIC SUV STD ■ VIC SUV OPT ■ VIC Commercial STD ■ VIC Commercial OPT

Top 5 Vehicle Models: Lane Departure Warning Fitment

1. TOYOTA CAMRY
2. SUBARU OUTBACK
3. SUBARU FORESTER
4. NISSAN QASHQAI
5. MERCEDES-BENZ C-CLASS

Rate of Vehicle Sales with Lane Departure Warning Fitment

	Passenger %		SUV %		Commercial %	
	STD	OPT	STD	OPT	STD	OPT
2011	0.28%	2.13%	0.00%	1.33%	0.00%	0.00%
2012	0.27%	3.39%	0.22%	2.07%	0.00%	0.00%
2013	1.44%	4.64%	1.08%	2.33%	0.06%	0.00%
2014	2.66%	4.96%	2.15%	3.30%	0.12%	0.00%
2015 YTD	4.63%	3.66%	4.87%	3.08%	0.09%	0.68%

Attention Assist STD and OPT Fitment:
New Vehicle light and light commercial sales in Victoria

Attention Assist Fitment (STD vs OPT)
Victoria: Passenger, SUV, Commercial Segments

Legend: ■ VIC Passenger STD ■ VIC Passenger OPT ■ VIC SUV STD ■ VIC SUV OPT ■ VIC Commercial STD ■ VIC Commercial OPT
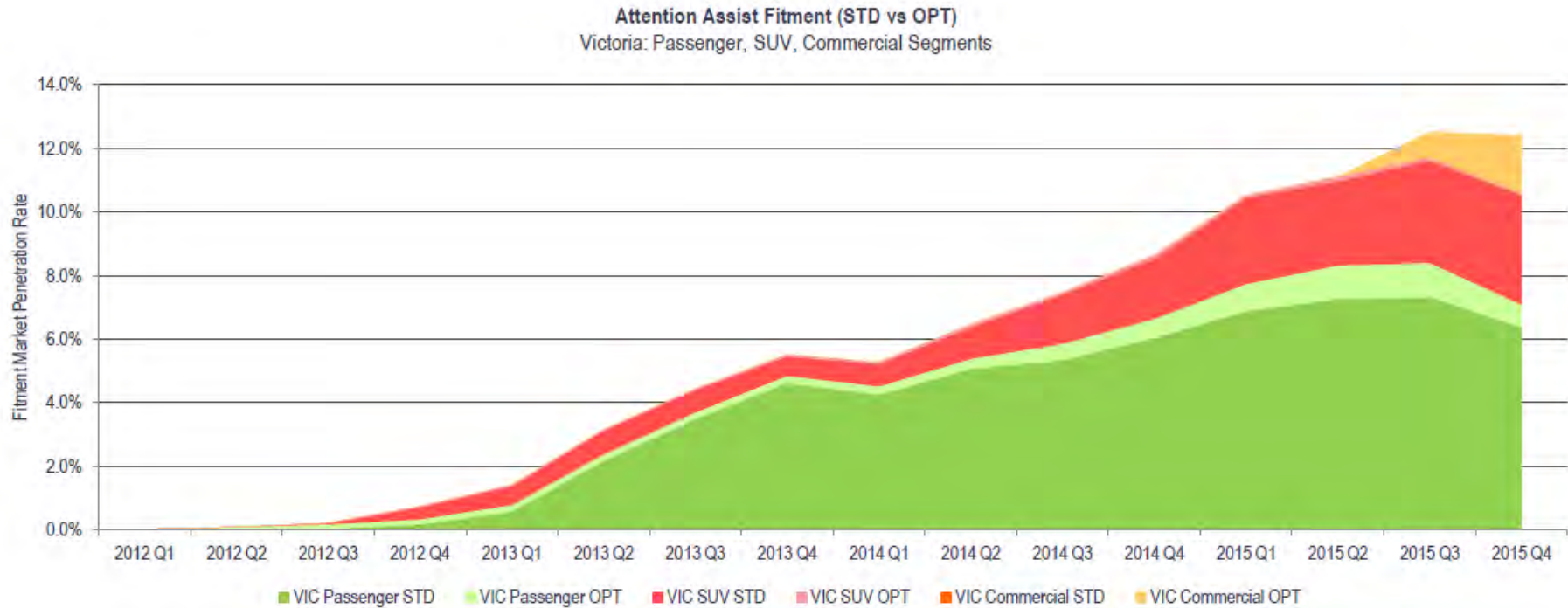
Top 5 Vehicle Models: Attention Assist Fitment

1 VOLKSWAGEN GOLF
2 MERCEDES-BENZ C-CLASS
3 VOLKSWAGEN TIGUAN
4 NISSAN QASHQAI
5 MERCEDES-BENZ GLC-CLASS

Rate of Vehicle Sales with Attention Assist Fitment

|	Passenger %		SUV %		Commercial %	
	STD	OPT	STD	OPT	STD	OPT
2011	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2012	0.05%	0.10%	0.11%	0.01%	0.00%	0.00%
2013	2.74%	0.21%	0.67%	0.04%	0.00%	0.00%
2014	5.19%	0.42%	1.29%	0.08%	0.00%	0.00%
2015 YTD	6.95%	0.92%	3.02%	0.09%	0.00%	0.68%

Current approach

- Australia has a National Heavy Vehicle Braking Strategy

- Heavy vehicle anti-lock brakes, load proportioning valves for all new prime movers and trailers from July 2014 (new models) to July 2015 (all new vehicles)

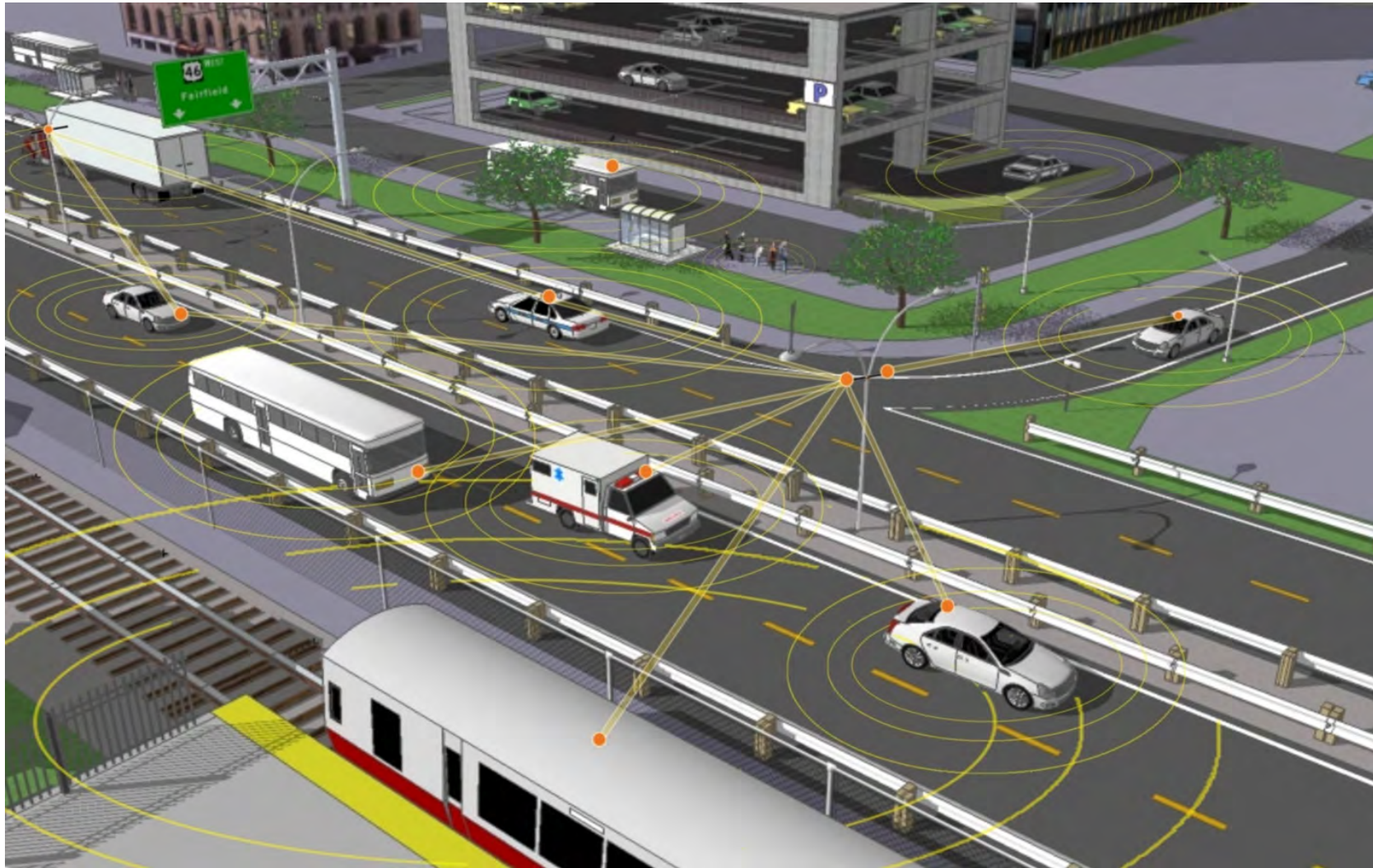- Electronic stability control to be required on all new heavy vehicles

Where are we going?
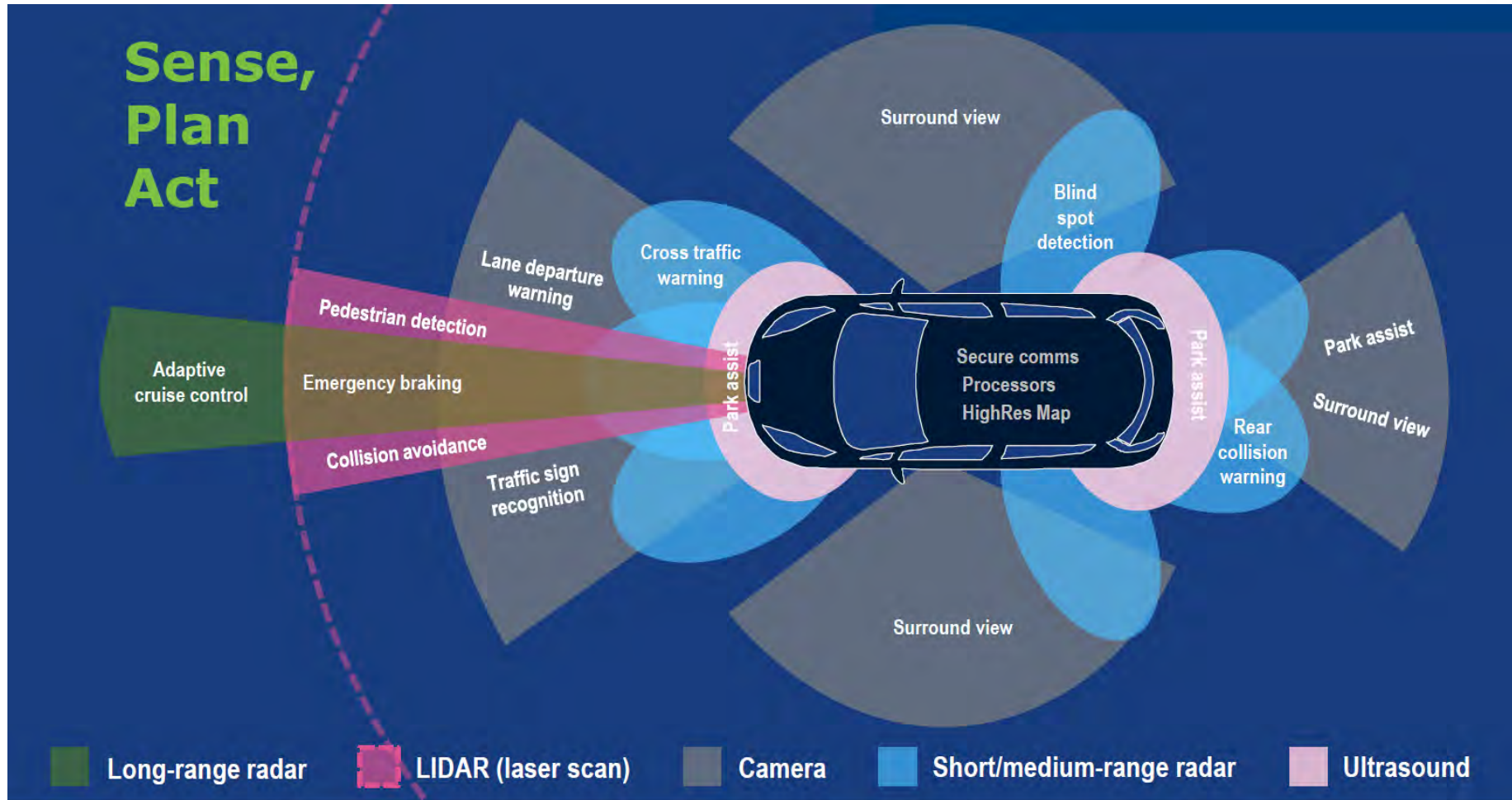
- Truck with sensors and connected

Connected vehicles – wireless connectivity

Current – understanding crash avoidance features already on vehicles

- Forward collision warning and automatic emergency braking (front crashes)
- Blind spot warning
- Unintentional lane departure warning and prevention (active assist)
- Rear view assist (cameras, ultrasonics, radar)
- Adaptive headlamps
  - Steering responsive
  - Automatic high beams
- Cross traffic alert – front and rear
- Night view assist
- Highway pilot – adaptive cruise with lane keeping control
- Pedestrian detection and avoidance

How well are we doing – what does the data show?

- A survey was sent in April 2016 to ARTSA members who provide key safety technology to the truck and trailer manufacturers and the road transport industry.

- The survey targeted:
  - High value/high volume respondents
  - Major safety component suppliers

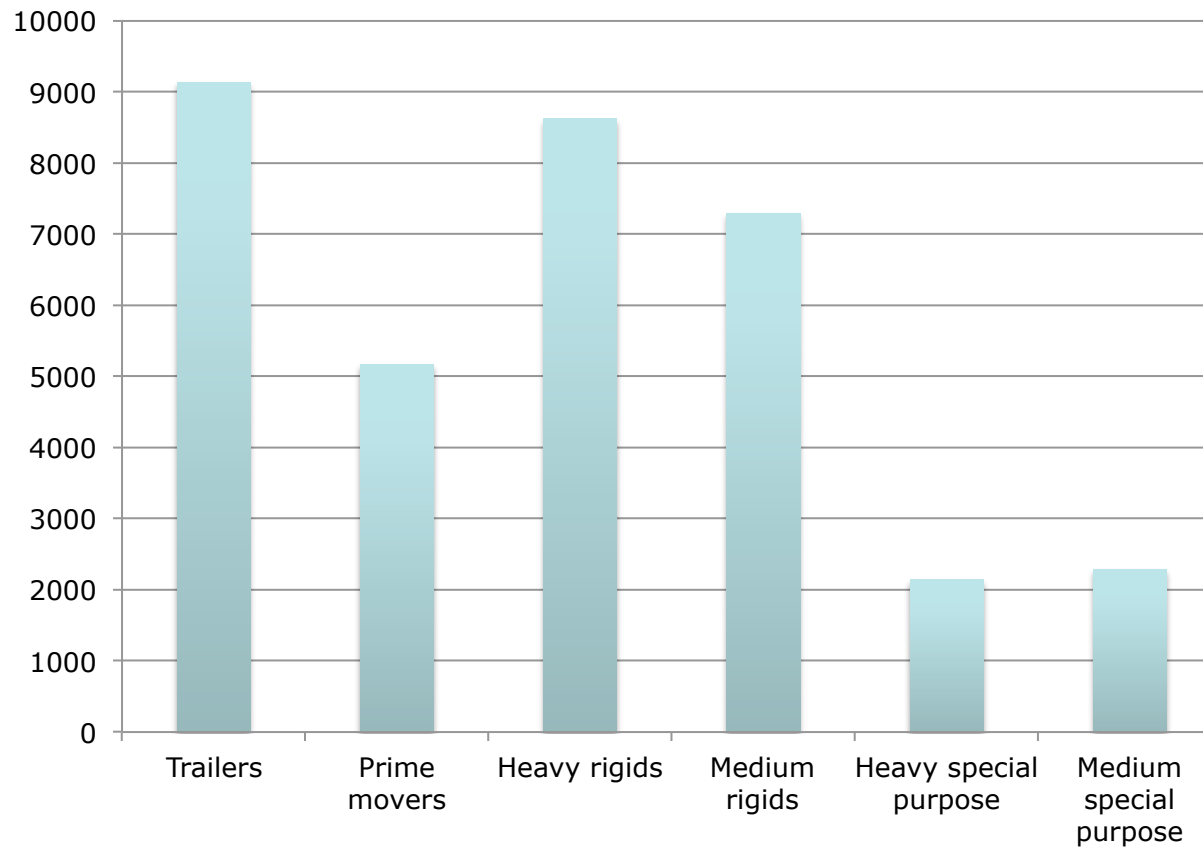- The results have shown that we have plenty of work ahead of us to increase the technology uptake.

Number of heavy vehicles
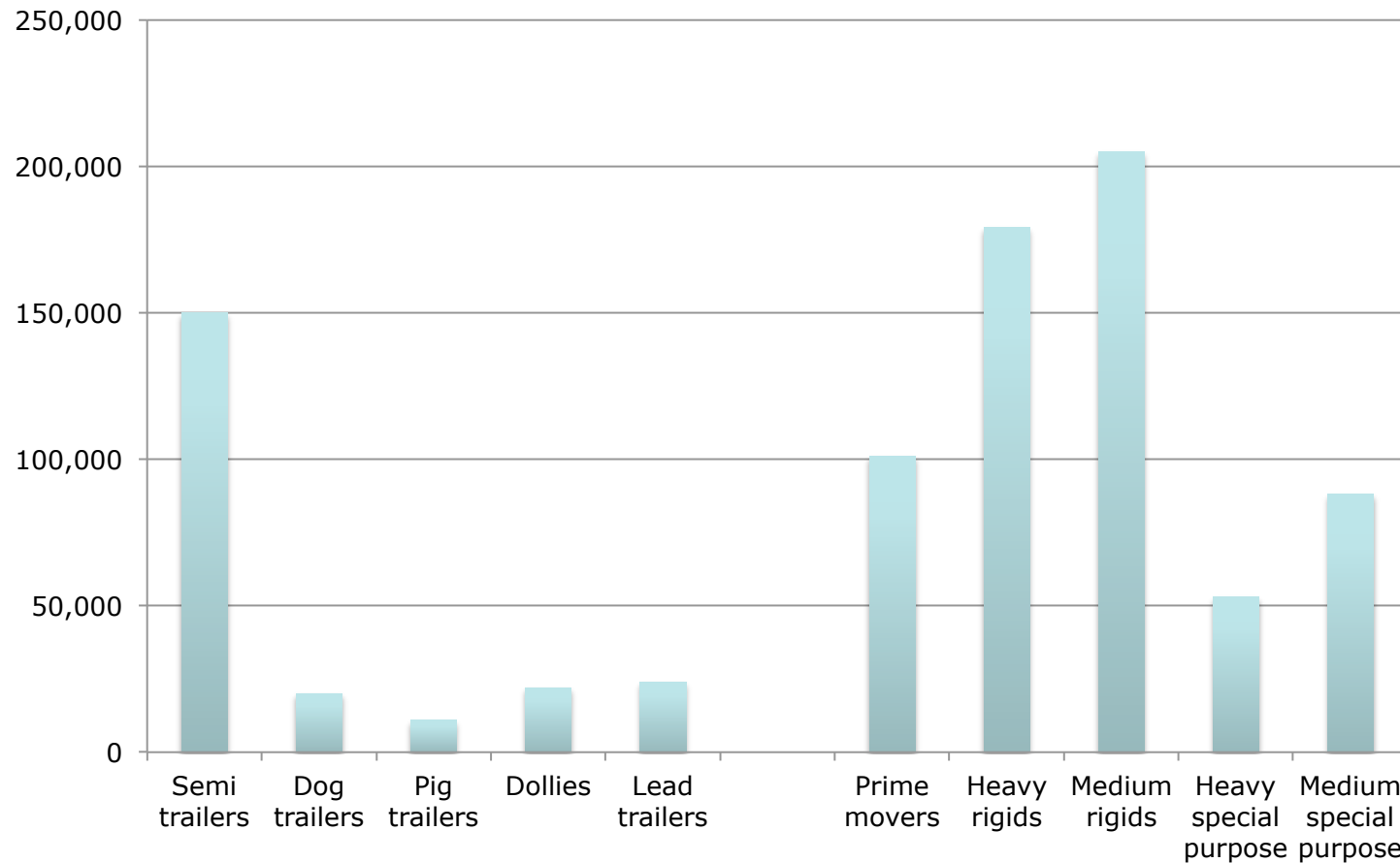
- 880,000 heavy and medium duty trucks and trailers registered in Australia

'Pieces of equipment'

- Around 35,000 new pieces of equipment registered each year

How old are our vehicles?

- Fleet renewal is running around **4% per annum.**

- Average age of equipment is **13 to 17 years** depending on the type of equipment and the average age appears to be increasing.

Type of vehicle	Average age (years)	Median age (years)
Heavy trailers	15.5	11.3
Prime Movers	13.2	9.9
Rigids	17.6	13.8
All heavy vehicles	15.4	11.4

Where are the vehicles coming from?
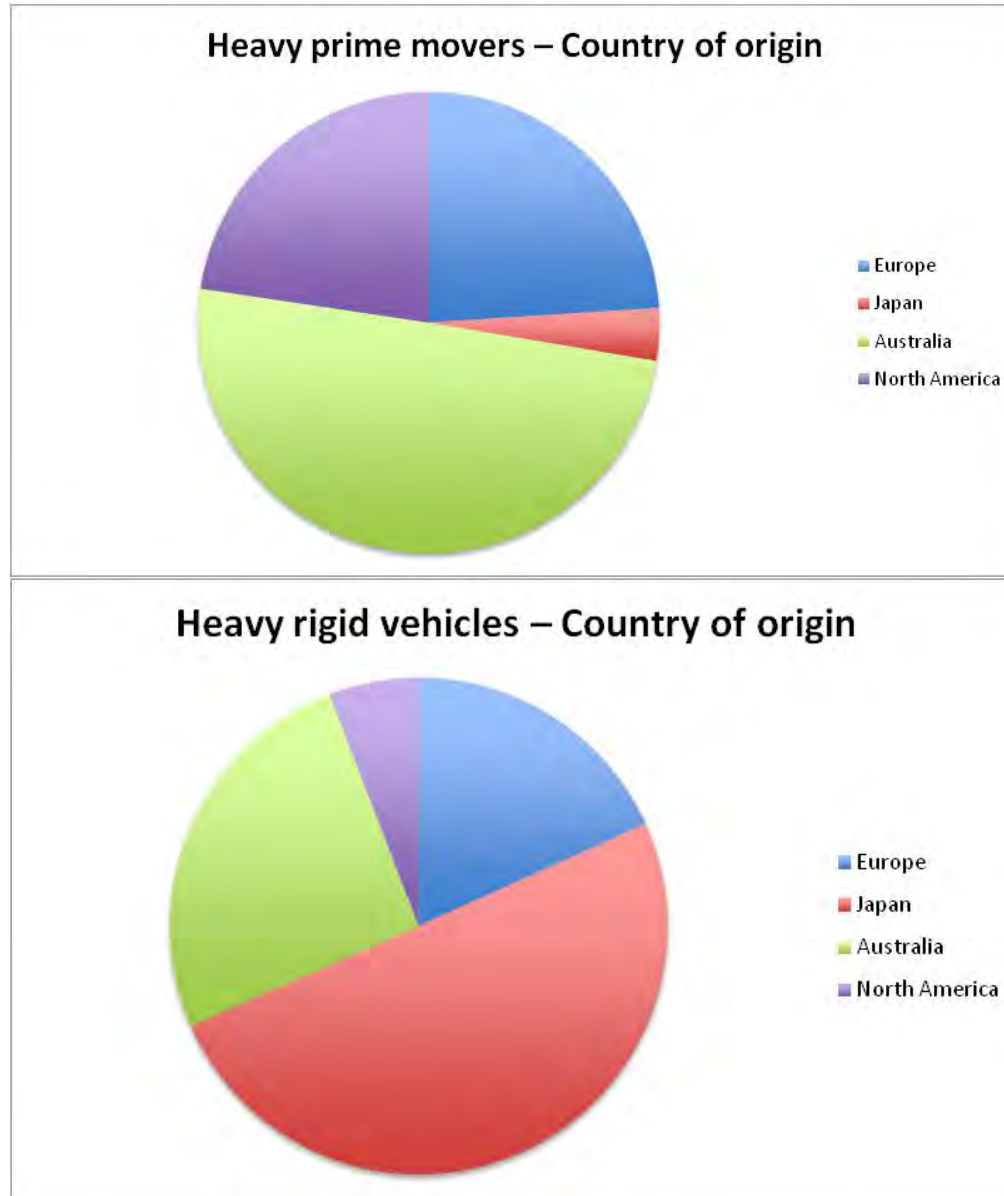
What the data shows

Prime movers

- Around 25% of the entire fleet is of European origin.

- They tend to come "safety equipped."

- Some 70% of the prime mover fleet is of US or Australian origin.

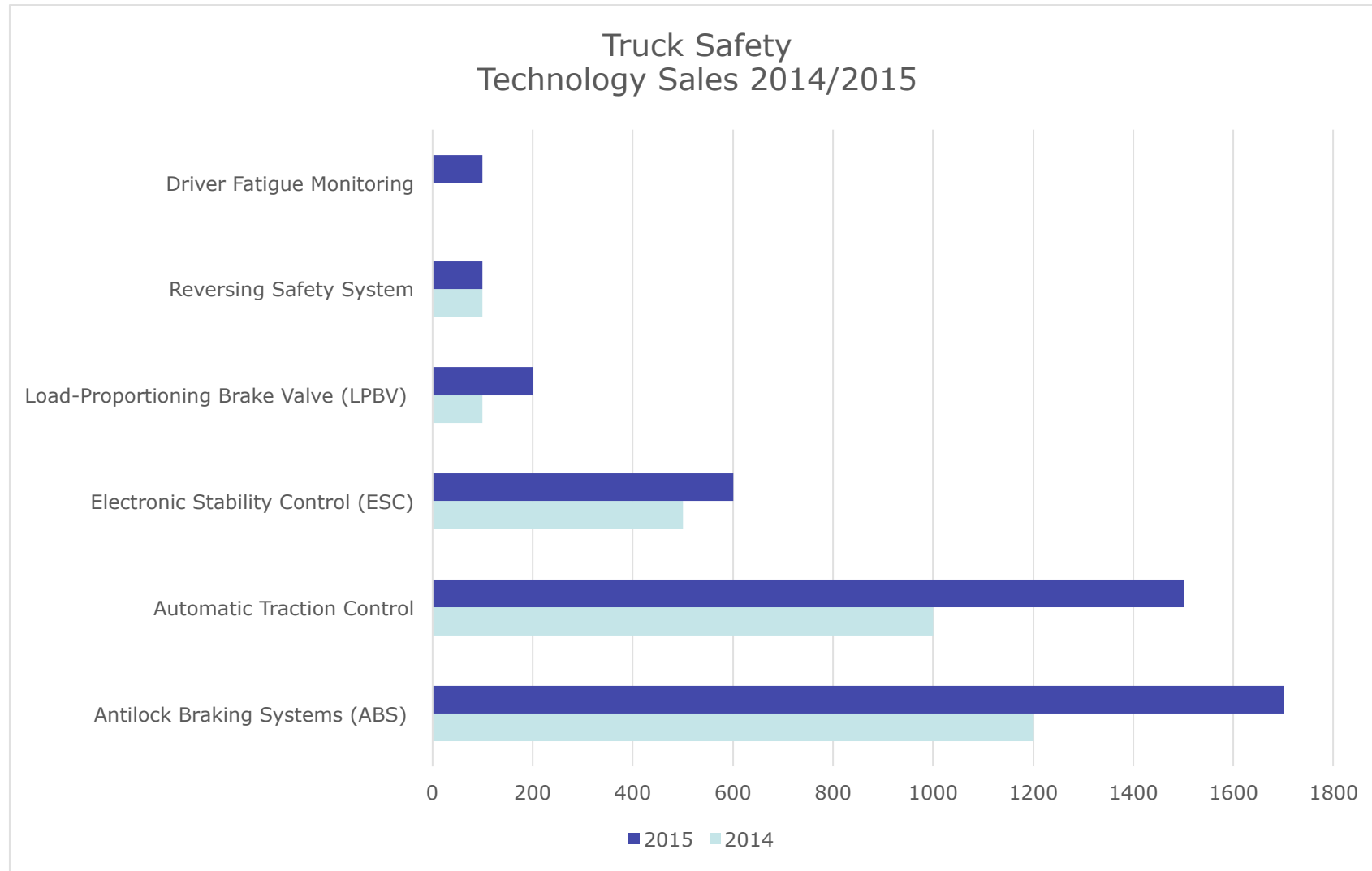**Heavy Rigids**

- Predominantly Japanese manufacturers.

What about trailers?

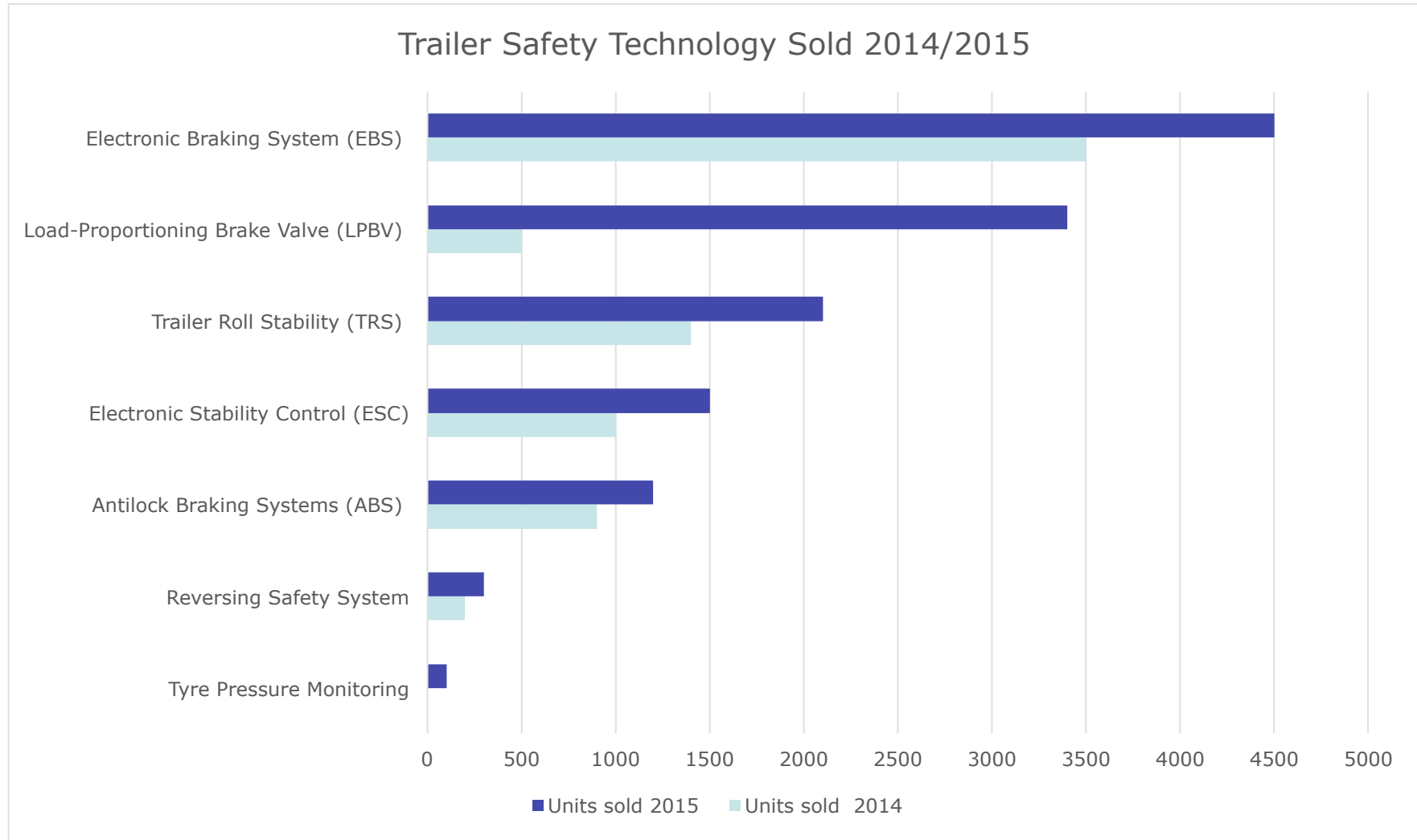- Over **90%** of trailers are manufactured in Australia from local and imported components.

Truck safety technology sales

Truck Safety
Technology Sales 2014/2015

Category	
Driver Fatigue Monitoring	
Reversing Safety System	
Load-Proportioning Brake Valve (LPBV)	
Electronic Stability Control (ESC)	
Automatic Traction Control	
Antilock Braking Systems (ABS)	

0   200   400   600   800   1000   1200   1400   1600   1800

■ 2015   ■ 2014

Trailer safety technology sales

Trailer Safety Technology Sold 2014/2015

The 'mandation' question

How does VicRoads work to influence vehicle design?

Regulatory push

Market pull

- *Howsafeisyourcar.com.au*
- *Safety Technologies for Heavy Vehicles and Combinations*
- Safe Wheels Save Lives Simulator
- Advocacy at the national level for new Australian Design Rules
- Fleet procurement policy
- Contributing research to the national agenda

What are the game changer questions?

- What is the role of:
  - Manufacturers?
  - Regulators?

- When do regulators intervene?

- How do we influence consumers/fleet buyers?

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