



TOWARDS ZERO
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A Strategic Approach to Road Safety in Western Australia

Presentation for Transafe on 17 March 2014



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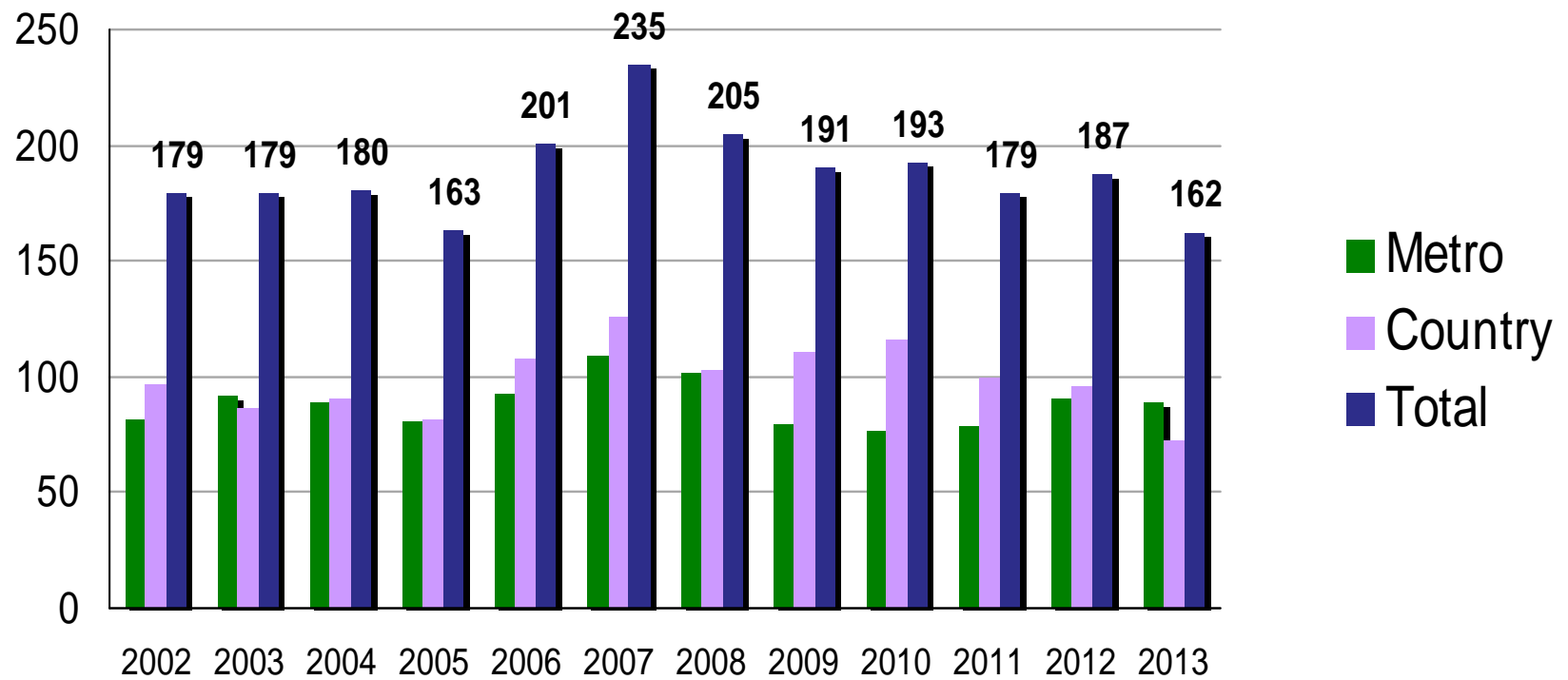
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From the Driver to the Safe System

Overview:

- 1. Picture of Road Trauma in WA**
- 2. Towards Zero and the Safe System Response**
- 3. Road Trauma Trust Account**
- 4. Shared Responsibility**
- 5. Questions / Discussion**

Number of Fatal Traffic Crashes over the past 10+ years



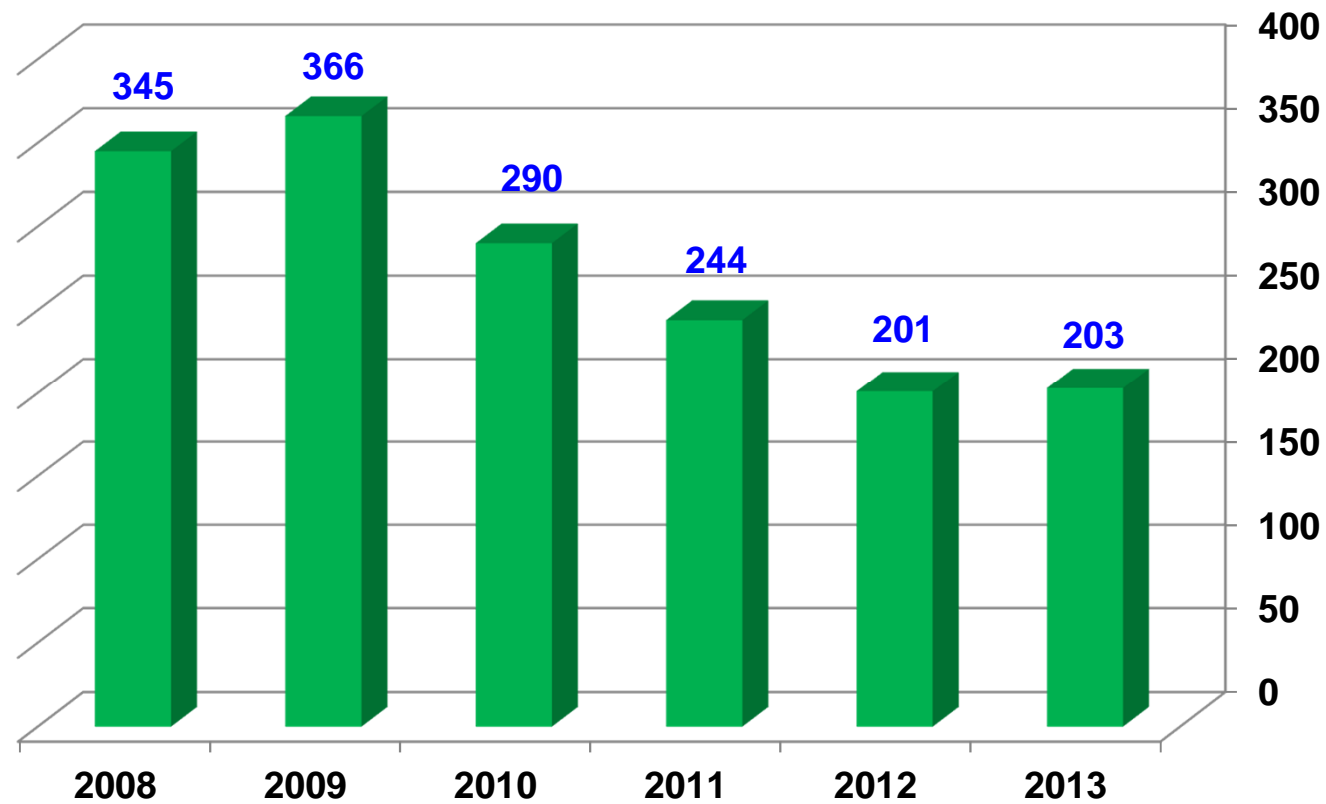
Year to date as at 10th of March 2014

*** FATAL CRASHES YEAR TO DATE ***

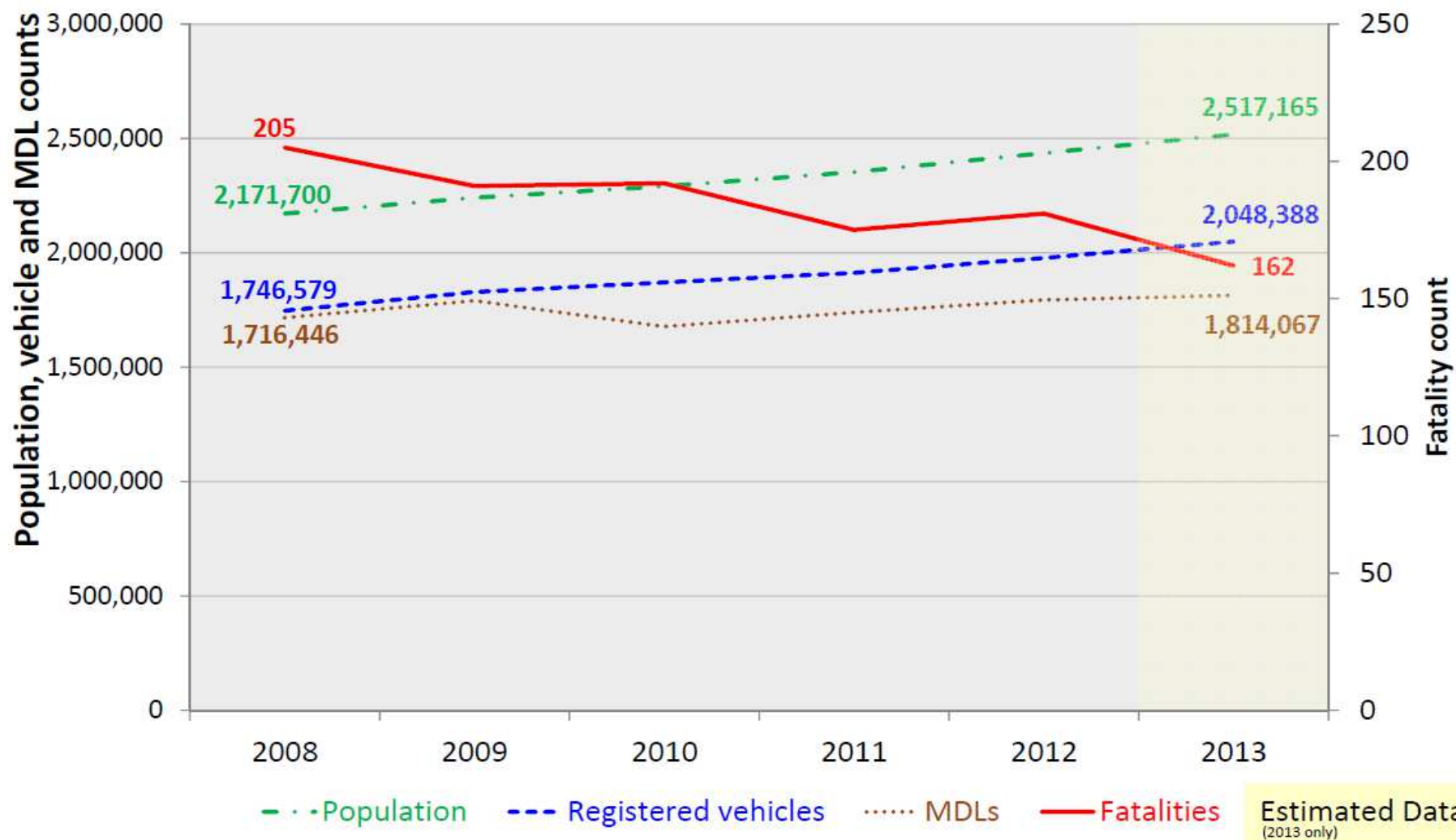
Year	Metro	Regional WA	Total
2009	14	20	34
2010	13	6	19
2011	14	17	31
2012	22	14	36
2013	18	14	32
Year	Metro	Regional WA	Total
2014	9	15	24

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Year to Date Critical Injuries (as at 30 Dec 2013)



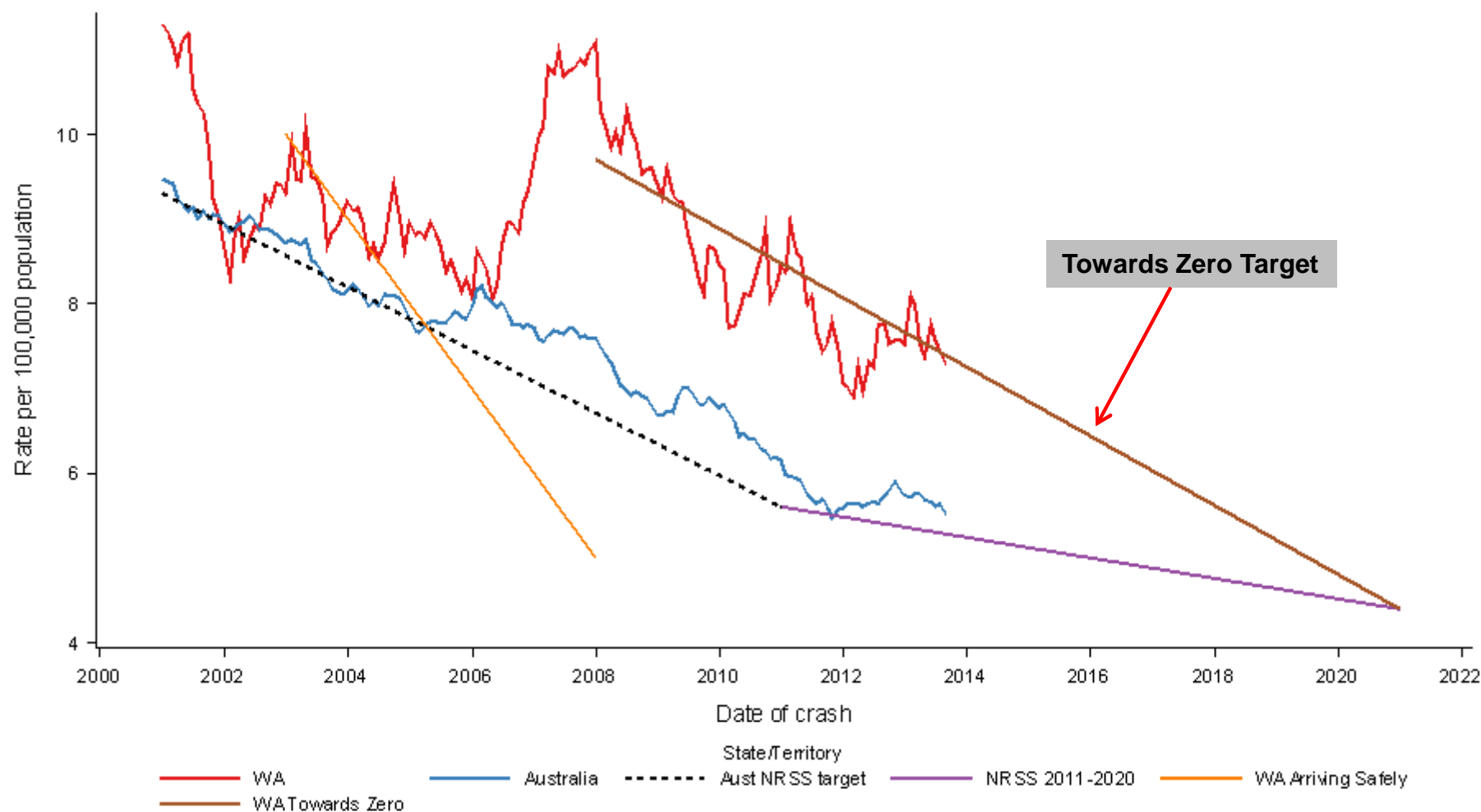
Counts of fatalities, population, registered vehicles and MDLs by calendar year, WA, 2008-2013



Exposure to road safety risk

- More drivers and riders, more vehicles...
- No. licensed drivers/riders increasing per quarter by:
 - ~75,000 - Car class
 - ~25,000 - R class (motorcycles)
 - ~28,000 – Heavy Vehicle classes
- New vehicles sales in WA in Dec 2012 quarter = 32,203
- More alcohol drunk per capita
 - WA residents consume more alcohol than national average 2008/9
= 11.21 litres per capita (over 20m litres) cf 10.08 litres national

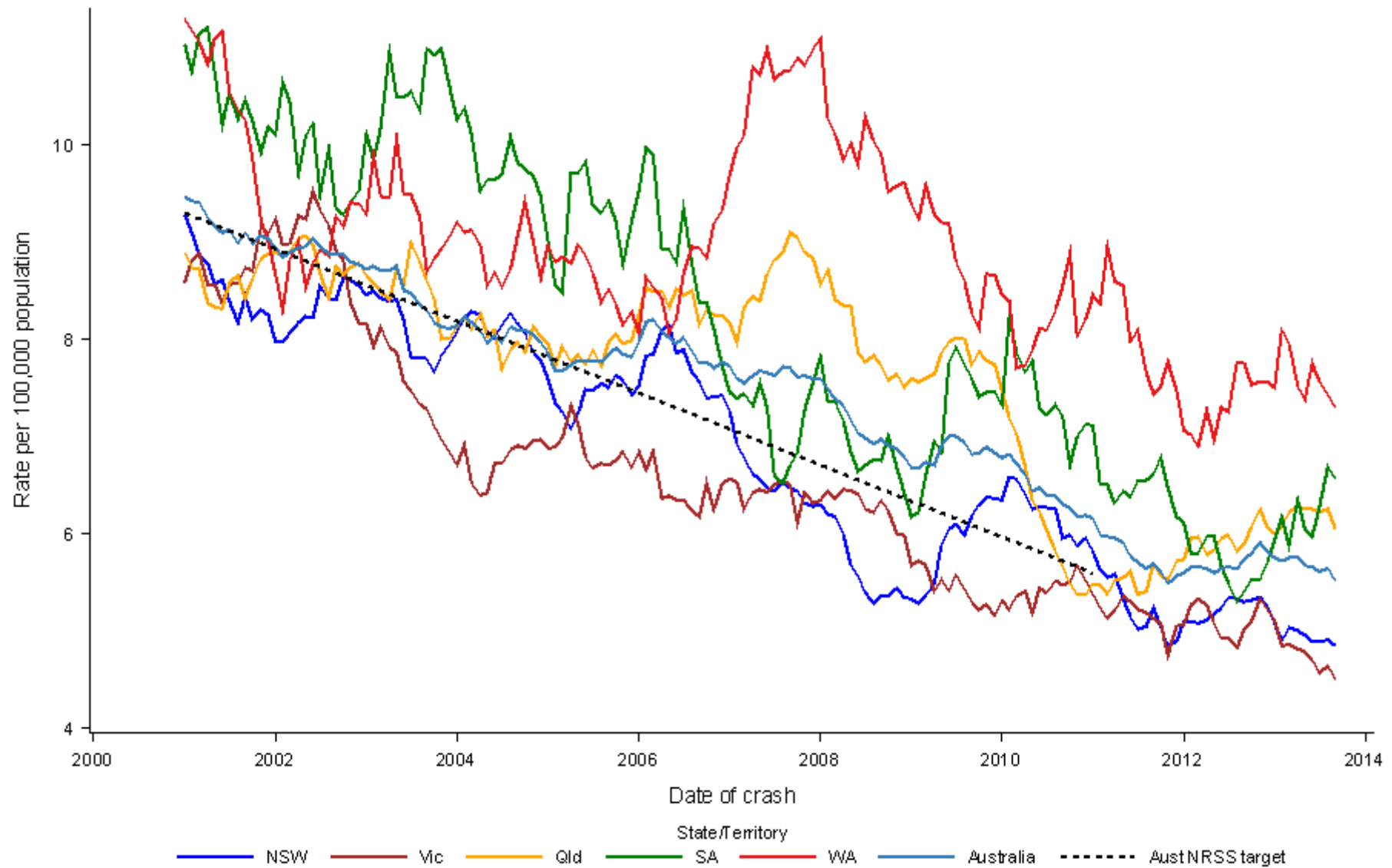
Fatality rates per 100,000 population, WA and Australia - Moving 12-monthly data



Source: Fatality data from the BITRE Road Deaths Australia - Monthly Bulletins series, updated 26 September 2013

The 2020 estimate of the WA Towards Zero fatality rates was calculated as a 40% reduction of the annual average fatality count for 2005 to 2007, divided by the projected population for WA in 2020.

Fatality rates per 100,000 population, Selected Australian States and Territories - Moving 12-monthly data



Source: Fatality data from the BITRE Road Deaths Australia - Monthly Bulletins series, updated 26 September 2013

Measurement of Killed per 100,000 of population for 2013

• Australian Average	5.17	130
• Victoria (best)	4.22	106
• Western Australia	6.50	162

• New Zealand	5.68	143
• Sweden (best)	2.17	68
• Western Australia	6.50	162

Major Crash Types and Contributing Factors

High Priority Category	Metropolitan		Rural		Remote		WA	
	n	%#	n	%#	n	%#	n	%#
Intersections	1,855	44%	1,006	29%	102	7%	2,963	33%
Run-off-road	774	18%	1,349	39%	860	62%	2,983	33%
Head-on	141	3%	289	8%	67	5%	497	5%
Other crash types	1,444	34%	810	23%	357	26%	2,611	29%
Speed	582	34%	556	32%	316	40%	1,454	34%
Fatigue	na	na	na	na	na	na	2,263	25%
Distraction	na	na	na	na	na	na	2,263-3,621	25-40%
Drug driving	na	na	na	na	na	na	42	26%
Drink driving	418	10%	350	10%	228	16%	996	11%
Non-restraint use	122	5%	202	8%	280	26%	604	10%
Young drivers	768	29%	680	29%	203	27%	1,651	29%
Indigenous drivers	na	na	na	na	na	na	814	9%
Motorcyclists	516	12%	440	13%	107	8%	1,063	12%
Pedestrians	403	10%	151	4%	63	5%	617	7%
Bicyclists	198	5%	84	2%	11	1%	293	3%
Older road users	518	12%	387	11%	92	7%	997	11%
Heavy vehicle occupants	19	0.5%	56	2%	71	5%	146	2%
Casualties involved in heavy vehicle crashes	170	4%	262	8%	130	9%	562	6%

Summary of Road Trauma - 2010

- 193 people killed (2010)
- 2,452 seriously injured
- 8.4 deaths/100,000 pop. (7th)
- 70% male
- 2/3 deaths – regional
- 2/3 seriously injured – metro
- \$2 bn cost annually

Summary of Road Trauma - 2012

- 183 people killed (2012)
- 2,463 seriously injured
- 7.6 deaths/100,000 pop. (7th)
- 68% male
- 54% deaths – regional 85/98R
- 2/3 (64%) seriously injured – metro
- \$2.7 bn cost annually

Approx 250,000 kms of Roads







Intersection Crashes



Our challenges - Regional WA



Thailand
19.6
deaths per 100 000



**Regional
WA**
21.0



Uganda
24.7



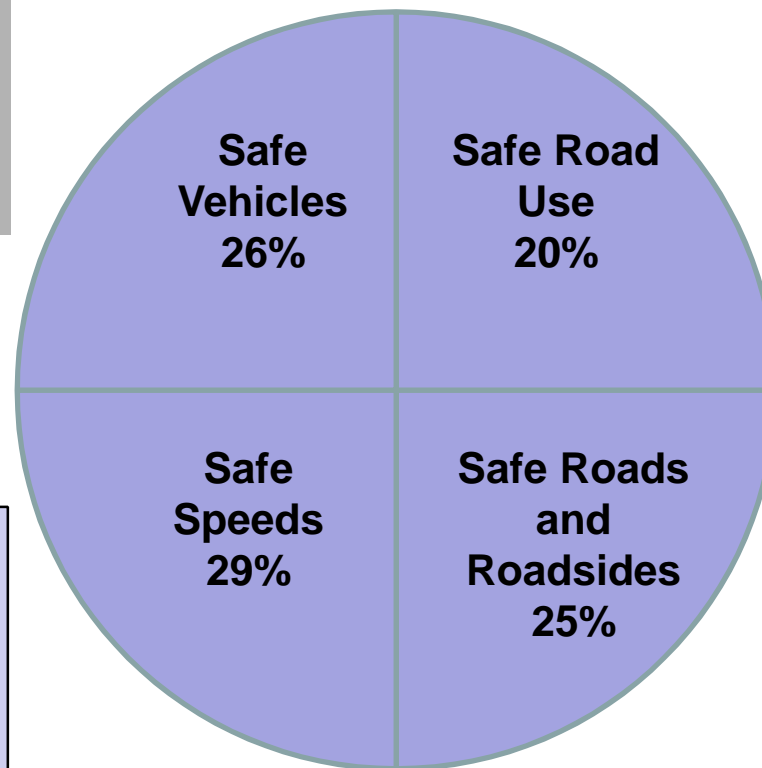
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Improving the safety of vehicles by:

- **promoting safety features that reduce the likelihood of a crash for vehicles, pedestrians and cyclists**
- **purchase safer vehicles**; and
- mandatory **safe vehicle procurement** in government fleets

Ensuring speed limits and travel speeds reflect the safety on the road by:

- **speed enforcement and education:**
- **establishing speed limits considering according to the features of the road and roadside.**



Influencing road user behaviour by:

- **education** and encouragement
- **shared responsibility** and **drive unimpaired**
- **gradual intro of novices into the system**

Improving road infrastructure by:

- **designing and maintaining roads**
- providing a **transport system** that supports safe outcomes

Safe System – what is it?

- A road transport system where people are not killed or seriously injured from traffic crashes
- Two fundamental principles
 - Humans are not infallible, we make mistakes and errors of judgement at times
 - We have a limited tolerance to physical impact forces

**e.g. $\leq 50\text{km/h}$ side impact
 $\geq 30\text{ km/h}$ car vs. pedestrian**



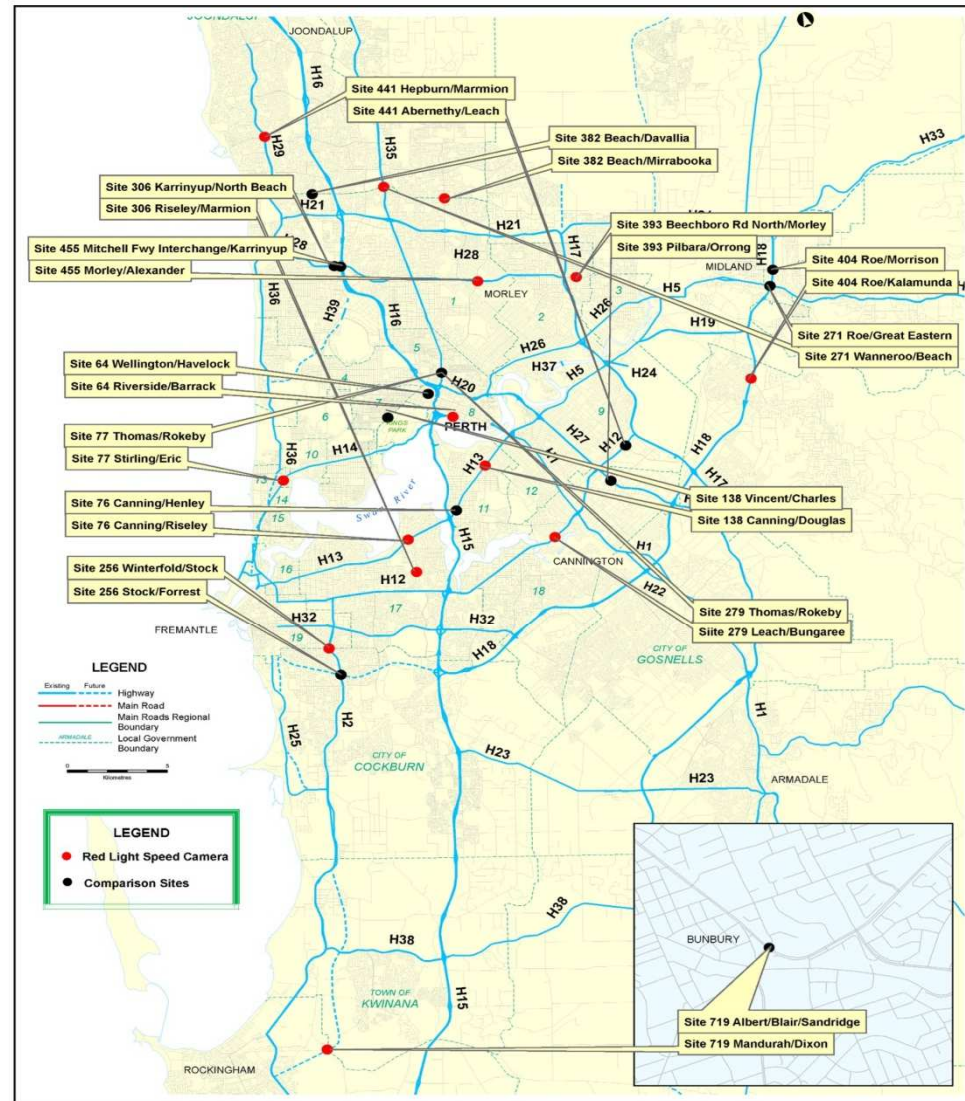
The Road Trauma Trust Account – 2012 / 2013

= 100% of speed and red light camera revenue (protected by Legislation)

Overview of approx Funding for 2012/2013

• Main Roads WA	=	\$44,461,551
• WA Police	=	\$18,439,841
• Office of Road Safety	=	14,302,503
• Depts Health and Education	=	\$2,995,003
• Neurotrauma Research	=	\$1,700,000
• RAC, Transport, Drug & Alcohol, Local Govt /others	=	\$6,260,000

Speed & Red Light Camera's have been allocated to 14 Priority Sites



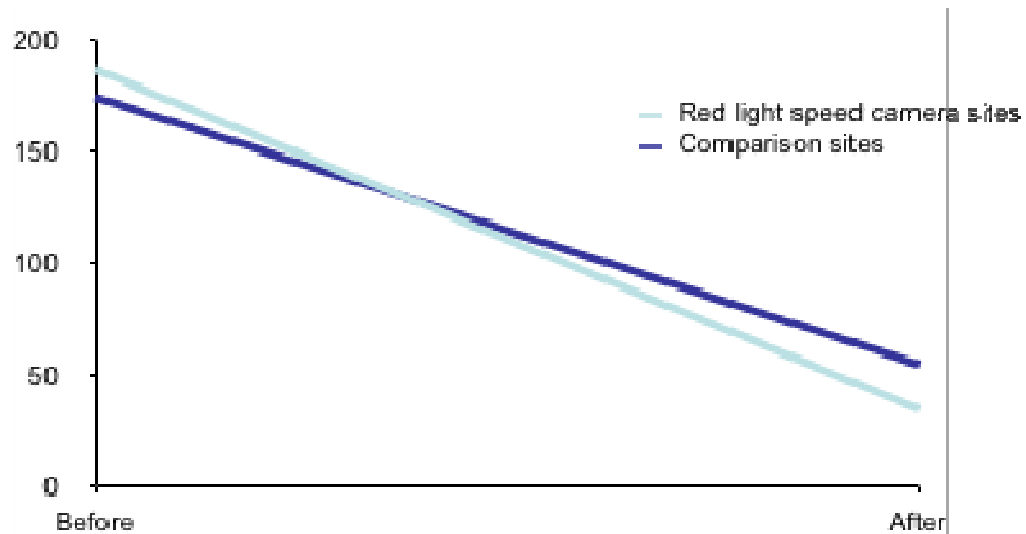
MAP INFORMATION

The focus of this map is the pictorial representation of the Local Roads and State Road Network. State Roads depicted on this drawing are those for which Main Roads Western Australia has responsibility as defined by the Main Roads Act 1930, as amended. The alignment of Future State Roads is subject to change.

State road names are for Main Roads internal use only and subject to change. This information is sourced from IRIS (Integrated Road Information System). All other features on this map are included for pictorial representations only and should not be used where accuracy is a consideration.

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Number of Right Angle / Right Turn through Crashes



Before and After 18 month study

Sites upgraded from red light cameras (n=11)

<input type="checkbox"/> All-reported Crashes	19% (p<0.0001)
<input type="checkbox"/> Right angle/right turn through Crashes	41% (p=0.004)
<input type="checkbox"/> Rear-end Crashes	20% (p<0.0001)
<input type="checkbox"/> Serious injury Crashes*	72% (p=0.003)

*Serious injury crashes: fatality or hospitalisation crashes

WA Police - Concept Cars



Some Sad Realities

- Males are more likely to be killed on our roads than females. The ratio of more than two male fatalities to each female fatality continued in 2012 and is the case for both Regional and Metropolitan WA.
- Motorcycle riders and passengers continued to be a highly vulnerable group in 2012. In metropolitan WA, 30% of fatalities were motorcycle riders or passengers. State-wide, 18.5% of fatalities were motorcycle riders or passengers.
- Weekends remained particularly dangerous times with 34.9% of fatal crashes occurring on Saturdays and Sundays.
- Non use of seat belt restraint remained an issue in 2012. The proportion of fatalities where restraint use is known, and had not been used, is 31.7% in 2012.

Regional Run-Off Road Crashes

Treatment	Crash Reduction Factor	Time to Treat with Current Funding
<i>Seal shoulders</i>	40%	over 25 years
<i>Audible edge lines</i>	20%	
<i>Safety barriers</i>	90%	



Safety
barrier

Sealed
shoulder

Audible
edge line



Managing Personal Risk in the Safe System

1. Behaviour

- Speeding (5k above in 60k doubles risk, 1% increase = 4 fold increased risk)
- Seatbelts (doubles survival chances, all safety systems rely)
- Alcohol/drugs (.05 double risk, 0.15 = 25 x risk)
- Fatigue (journey time + hrs. awake - 17 hrs. = .05BAC risk)

2. Speed Management: - at or below limit, allow margin for error

3. Vehicle Safety :

- 5 star where fit for purpose allows
- ESC especially for regional
- 5 star halves fatal and serious injury risk
- stars are above minimum standards

4. Road/roadside safety: - route selection - consider safety



Thank you

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