



Mr. Yogendra Bhatnagar

Manager Speed Management Engineering, NSW-Australia

Yogendra Bhatnagar

BEng, MEng, MTMgt, MIE (Aus)

NSW Centre for Road Safety
Roads & Traffic Authority NSW
Australia

Acknowledgement:

Delilah Marta, NSW Centre for Road Safety

*Michael de Roos, NSW Centre for Road
Safety*





NSW Centre for
Road Safety

Agenda



- Introduction – change your thinking!
- New approach to road safety
- Mainstreaming road safety
- Mandating road safety audit
- What is important?
- Need of the hour
- Conclusion



Use of term road 'accident'

Means happened by chance?

Implies nothing could be done to prevent it?

We want people to know that they are preventable!

How?

Speeding – is it an accident?

Drink and driving – is it an accident?

Not driving to conditions – is it an accident?

Sleeping on the wheels – is it an accident?

Driving an un-roadworthy vehicle etc etc.

Instead we must use term 'road crashes'



NSW Centre for Road Safety

Introduction

Change your thinking 2



We blame the victims – speeding – drink driving – behaviour – road sense etc as the cause of crashes!
And that death and serious injuries are inevitable results of using our road system
Is it true? Is it acceptable?



NSW Centre for
Road Safety

Introduction

Change your thinking 3



Is India unique?

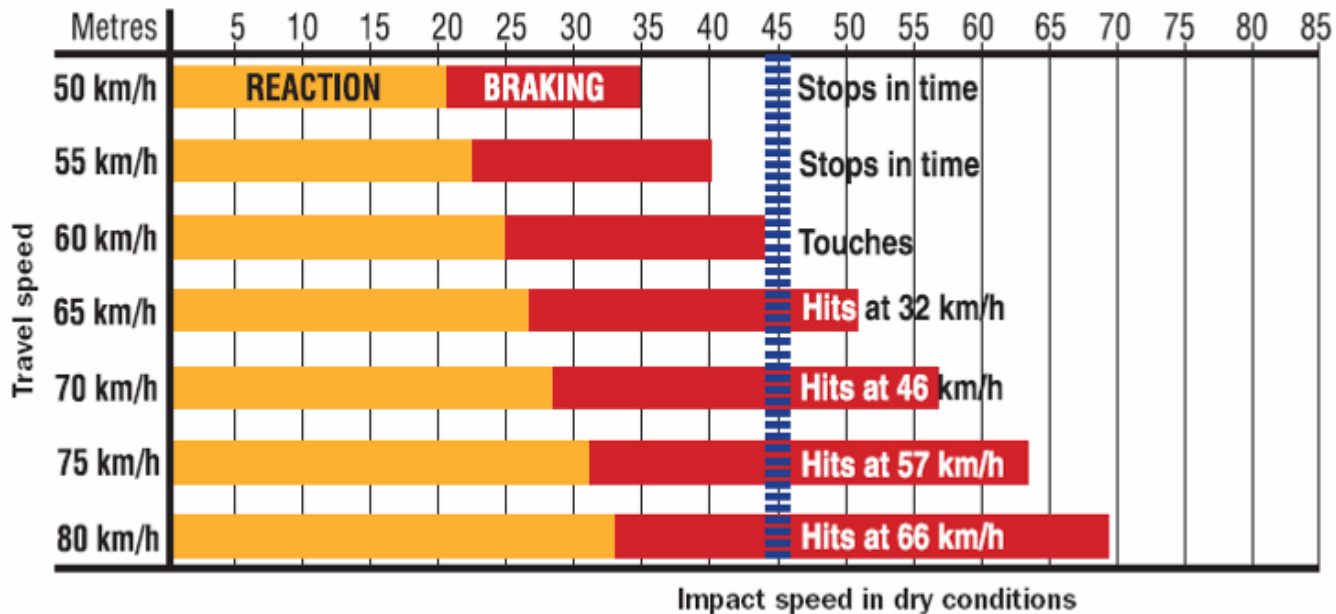
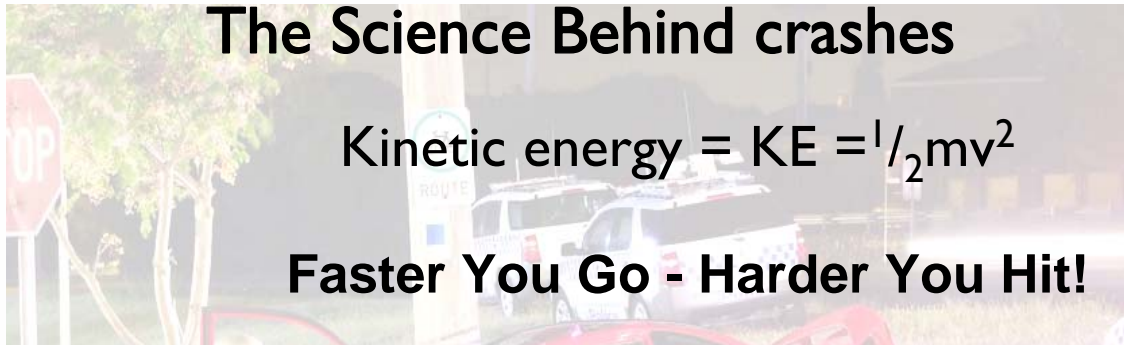




NSW Centre for Road Safety

Introduction

Change your thinking 3





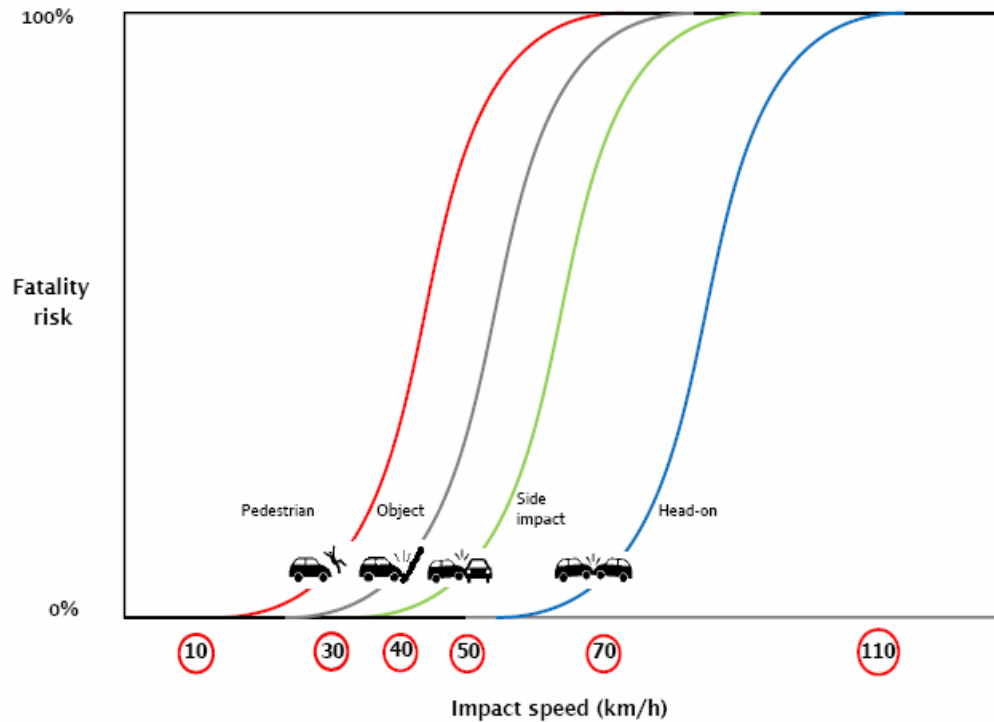
NSW Centre for
Road Safety

Introduction

Change your thinking 3



Human Tolerances To Physical Force



New Approach



Humans are fallible and therefore road crashes are inevitable.....

But we should not deliver catastrophic punishment to road users for their errors

Road deaths are preventable



New Approach – a Safe System

World's leading countries with safety record have adopted this approach

Challenges us to take a **different view of risk** on the network, to work towards a **system which is safe**

The **institutional means** of achieving the long term vision

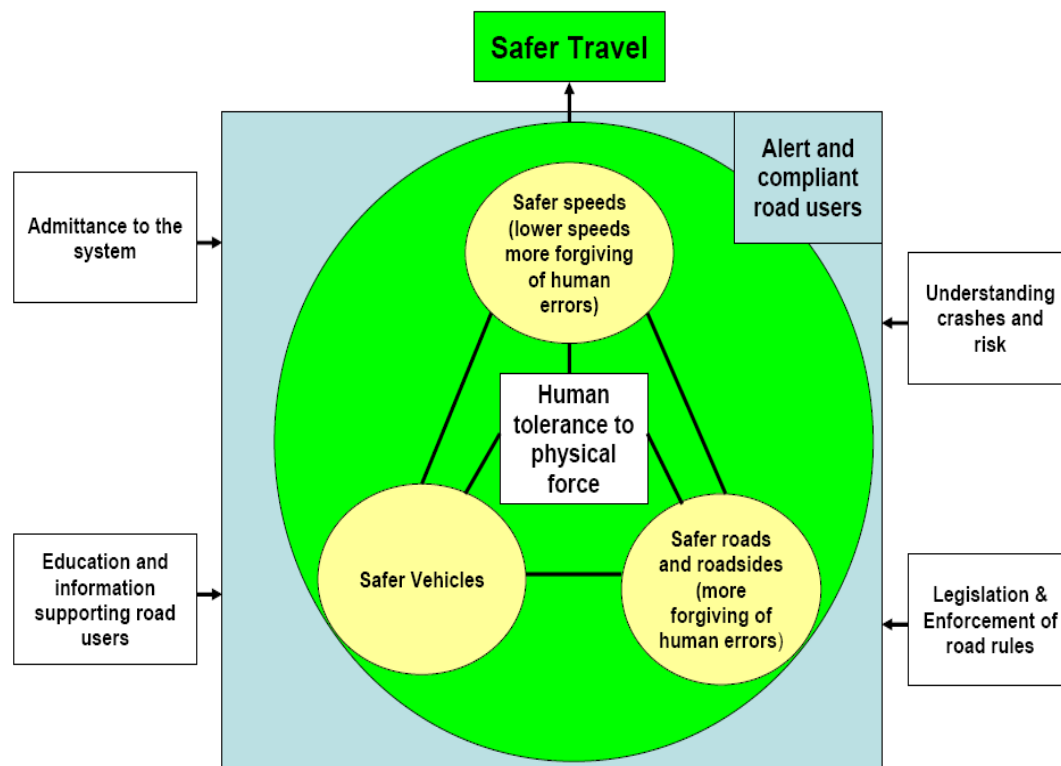
Shapes **interventions** to meet this goal – rather than relying on **“traditional”** interventions to set the limits of any long term targets



Safe System

The road transport system is to be designed to accommodate human failings -

- recognising that crashes will happen due to human error
- better managing crash forces by respecting biomechanical limits of the human body
- continued efforts to improve user compliance
- licensing policy, roads and roadsides, vehicles, speed limits, new road rules



New Approach – fundamental change

Safety is no longer to be the variable that is always traded off to maintain mobility



What is a Safe System?

This is not



Reduced Risk





New Approach - Australia Accepts Challenge



The safe system approach was adopted at a national level in the *National Road Safety Action Plan in 2007*



New South Wales - Accepting the challenge



The NSW approach to meeting this challenge includes the adoption of the safe system approach to road safety

The NSW Government has identified road safety as one of its key State Plan priorities

The State Plan has identified the RTA as the lead agency for the delivery of road safety for NSW



NSW Centre for
Road Safety

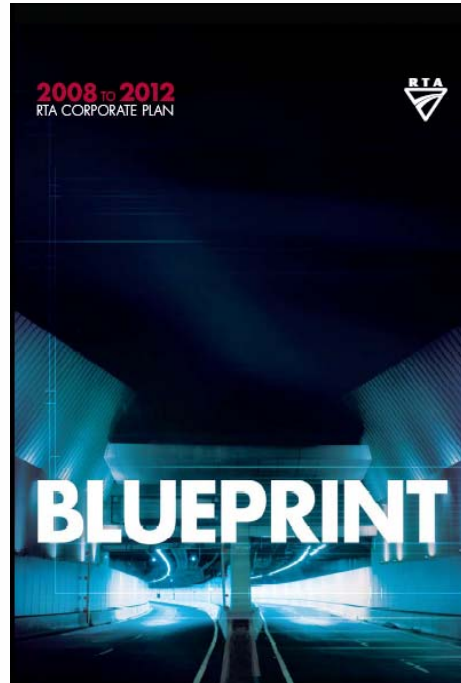


NSW Centre for Road Safety

Safe System Approach NSW Accepts Challenge



State Plan



NSW Centre for Road Safety

“Safer Roads -- RTA is lead agency to deliver road safety”

“Reducing road fatalities to 0.7 per 100 million vehicle kilometres travelled by 2016.”



NSW Centre for
Road Safety

NSW Centre for Road Safety

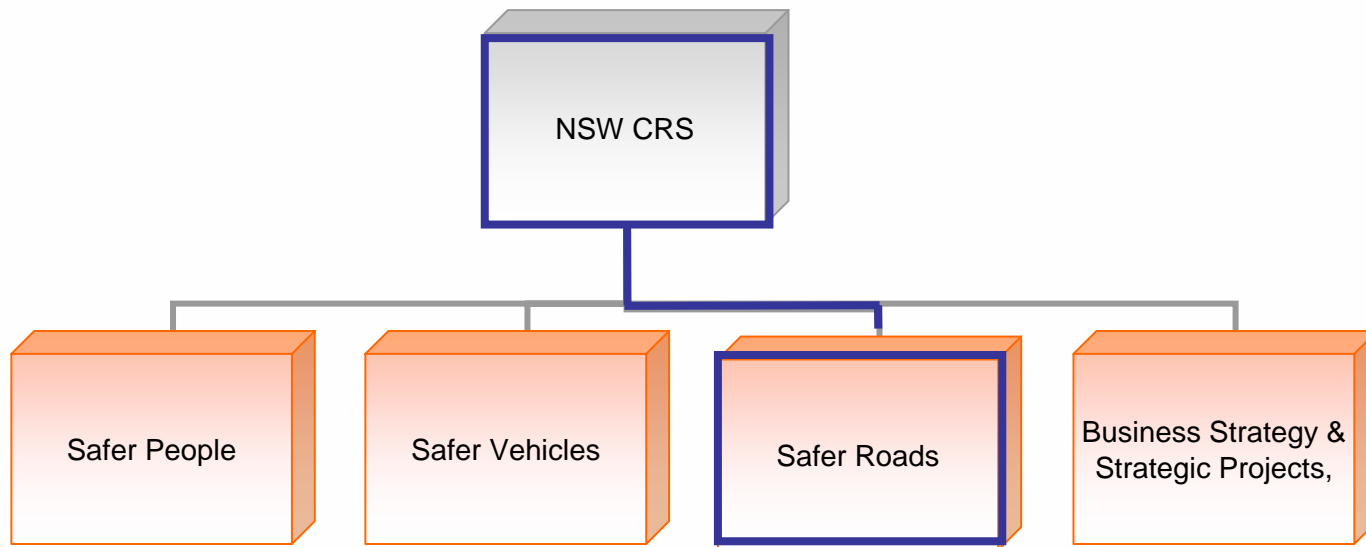


NSW Centre for
Road Safety

“Created as an apex body to develop strategies to reduce road toll”



NSW Centre for
Road Safety



Two key roles of the
Centre for Road Safety lead
and manage the -

- Implementation of 'safe system' approach
- The concept of mainstreaming of road safety across the RTA





New South Wales - Mainstreaming road safety



It is important that all administrative processes associated with project development effectively support the new focus on road safety.

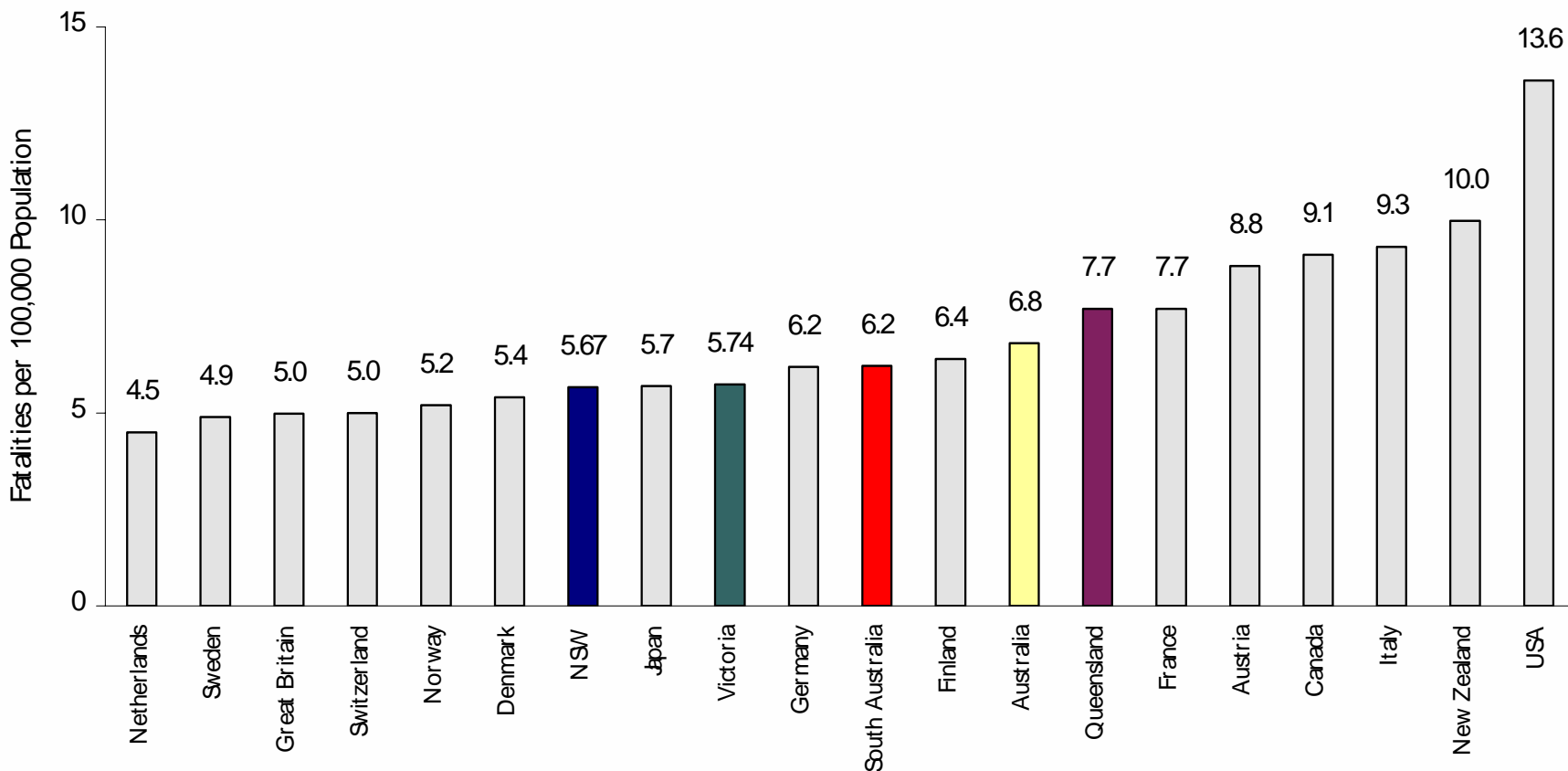


Road safety audits are mandated in all the project development processes



NSW Centre for
Road Safety

**Fatalities per 100,000 Population,
NSW, Victoria, Queensland, South Australia, Australia and Selected Countries,
2008p (Australia) or Most Recent for Other (mostly 2006)**



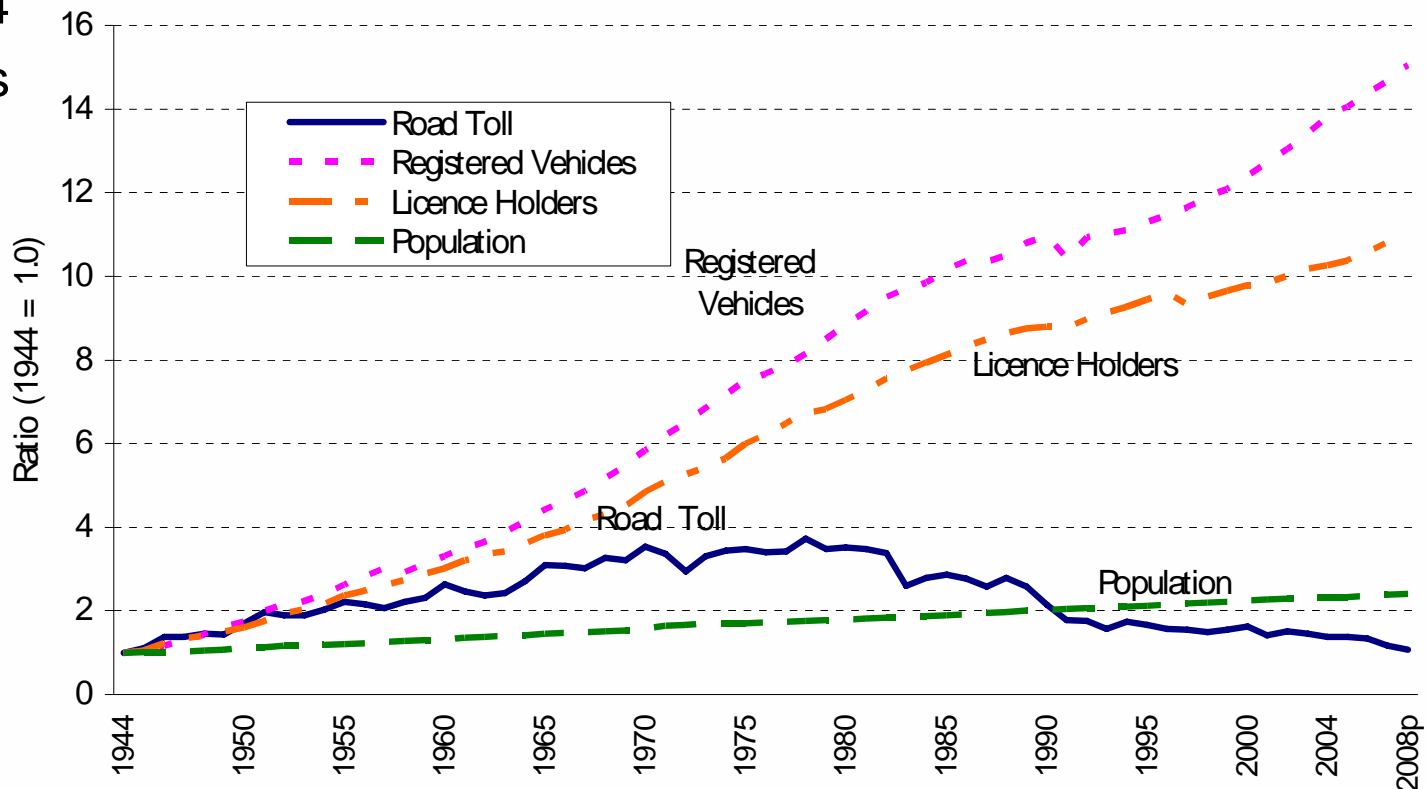
Comparison of
2008 v 1944

Population x 2.4

Licence Holders
x 11

Vehicles x 15

Road Toll, Registered Vehicles, Licence Holders and Population in NSW,
1944 - 2008p (Base Year = 1944)



- ~18,000 km of State roads (manage)
 - ~18,000 km of regional roads (financial assistance)
 - ~145,000 km of local roads (Council managed)
 - ~7000 staff
 - 6 regional areas (manage)
-



NSW Centre for
Road Safety

RSA -Version I



	National guide	RTA policy	RTA procedures	Training	Performance schemes	Monitoring
1974				1974 commenced courses •2 days •No assessments		
↓		1991 Manual Edition 1 •20 RSA/yr on new works •20% RSA/yr on existing roads •Checklists				
	1994 Edition I •Background •How to •Checklists	1995 Manual Edition 2 (must do) •20 RSA/yr on new works •20% RSA/yr on existing roads •Checklists				
2001						



NSW Centre for Road Safety

RSA - Version 2



	National guide	RTA policy	RTA procedures	Training	Performance schemes	Monitoring
2002	2002 Edition 2 •Background •How to •Checklists	Continue... 2003 TD ver 1 •Design & pre-opening projects only •Decision based on financial	Continue...	Continue...	Register of road safety auditors www.roadsafetyauditors.com	2003 •Compliance •RSA outputs •@ Regions
2009	2009 guide RS Part 6	2005 TD ver 2 •Design & pre-opening projects only •Decision based on financial	2005 guide •procedures •Checklists			

2006 State Plan

2007 CEO directive

2007 Audit of audits





NSW Centre for Road Safety

RSA - Version 3



	National guide	RTA policy	RTA procedures	Training	Performance schemes	Monitoring
2010	Continue...	Continue...	2010 new guide	Continue...	Continue...	Continue...
↓		New TD <ul style="list-style-type: none"> • Design, construction and post-construction projects • Decision based on level of risk 	<ul style="list-style-type: none"> • RS Audit • RS Evaluation • RS Checks 	<u>New</u> <ul style="list-style-type: none"> • Introducing • Conducting • Leading • Actioning • Trends analysis 	2011 Re-launch Register of Road Safety Auditors	New corporate systems <ul style="list-style-type: none"> • Compliance • RSA outputs
		New TD <ul style="list-style-type: none"> • Trends analysis • Preventative actions 	New <ul style="list-style-type: none"> • Trends analysis 		New <ul style="list-style-type: none"> • Register criteria 	

When do we do a Road Safety Audit?

Project Phase	Project Stage
Pre-Construction	Feasibility Design
	Preliminary Design
	Detailed Design
Construction	Roadworks
	Pre-Opening
Post-Construction	Post-Opening
	Existing Roads, Thematic

SINGLE ROAD SAFETY AUDIT

Commissioning



Conducting



Completing



MULTIPLE ROAD SAFETY AUDITS



Analysing trends



Applying preventative actions

Practices



What Is The Road Safety Audit Process?

altering practices



return

What are the Road Safety Audit Practices?

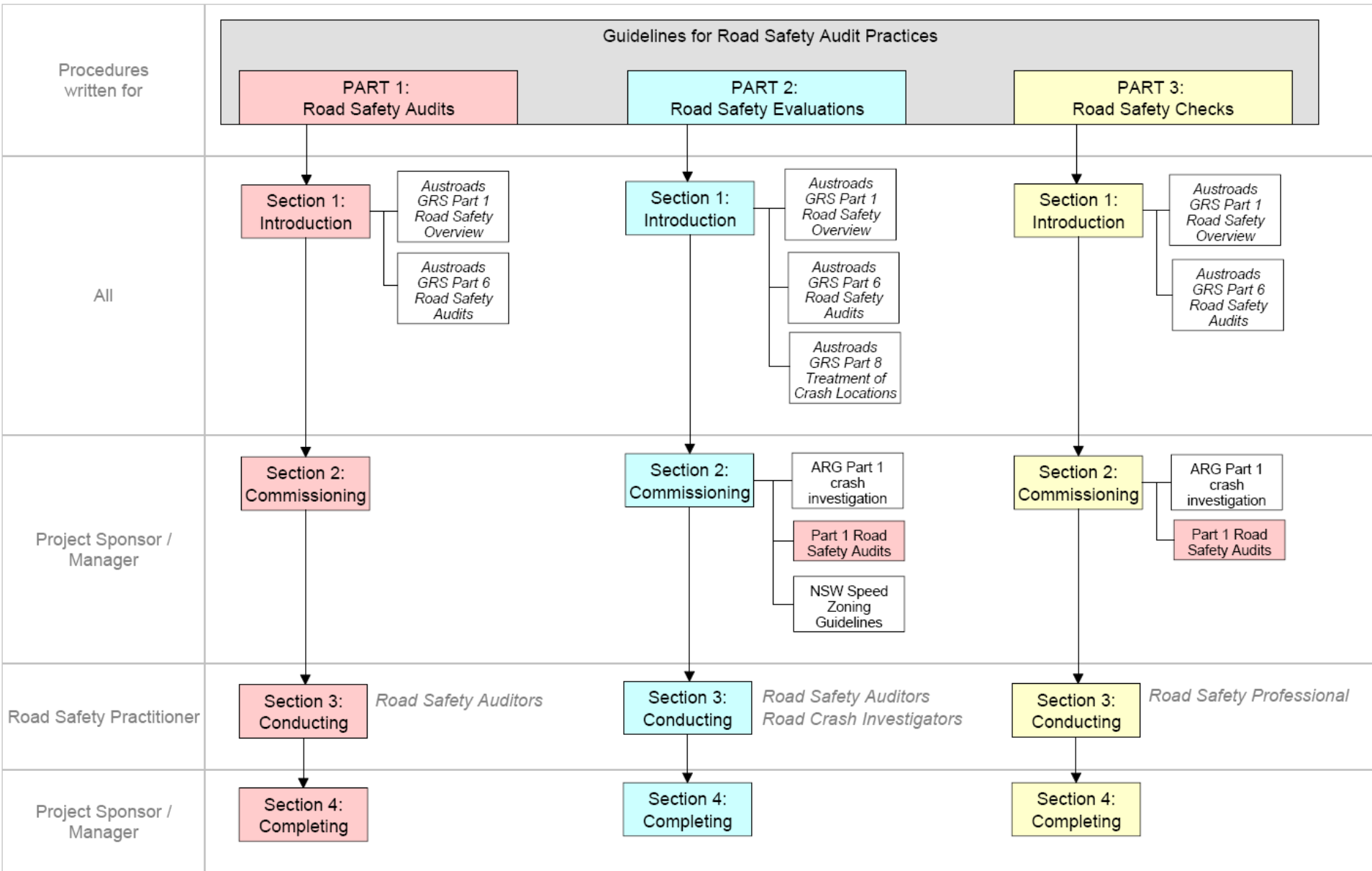
Road Safety Audit



Road Safety Evaluation (post-construction)
= road safety audit + crash investigation +
speed zone review



Road Safety Check (low risk projects)





NSW Centre for
Road Safety

Training for Road Safety Audits



Proposed courses

⇒ Introducing road safety audits

(for project managers and potential auditors - awareness and how to commission a road safety audit)

⇒ Conducting road safety audits

(for auditors – how to do road safety audits)

⇒ Conducting road safety audits refresher

(for auditors)

⇒ Leading road safety audits

(for lead auditors)

⇒ Actioning road safety audits

(for project managers – how to manage corrective actions)

Will have assessments

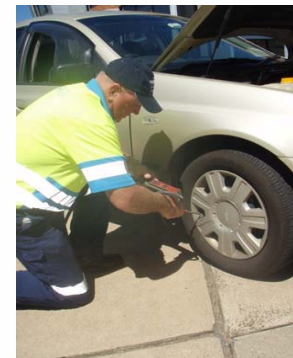
[return](#)

What is important in mandating RSA?

- ✓ Senior management commitment
- ✓ Policy statements that are achievable and that do not increase risks for the organisation (take small steps)
- ✓ Clear and concise written policy and procedures
- ✓ Supportive training programs for all roles in the RSA process
- ✓ Establishing monitoring for compliance and RSA outputs

Conclusion - Need of hour!

RSA is integral part of Safe System Approach to Road Safety



Conclusion – Everyone to Embrace

We all need to work in partnership to create a safe system!





Conclusion - Need of hour!



Road crashes occur when there are weaknesses or failures in each of the lines of defence.

Conclusion - Need of hour!

6th August 1945



Hiroshima - Japan



Conclusion - Need of hour!

$$E = MC^2$$

90,000 people died
instantly



$$\text{Kinetic Energy} = \frac{1}{2} MV^2$$

1.3 million deaths and 50 million injuries
annually – biggest killer of young people



What India needs today – A road safety champion!

Like NSW, today I urge India to take
the moral high ground

Refuse to accept that death and
serious injury are an inevitable result
of using the road system

Lets take ownership of road safety for
our present generation!

*India is no 1 in cricket – soon it should become no 1
in road safety!*





Thank You !



www.rta.nsw.gov.au

Contact details - Yogendra Bhatnagar

Yogen_bhatnagar@rta.nsw.gov.au

NSW Centre for Road Safety

Australia

+61 2 85885847

