The Need for Road Safety Targets in South Asian Developing Countries

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Road safety data: collection and analysis
for target setting and monitoring performances and progress

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Today's Presentation

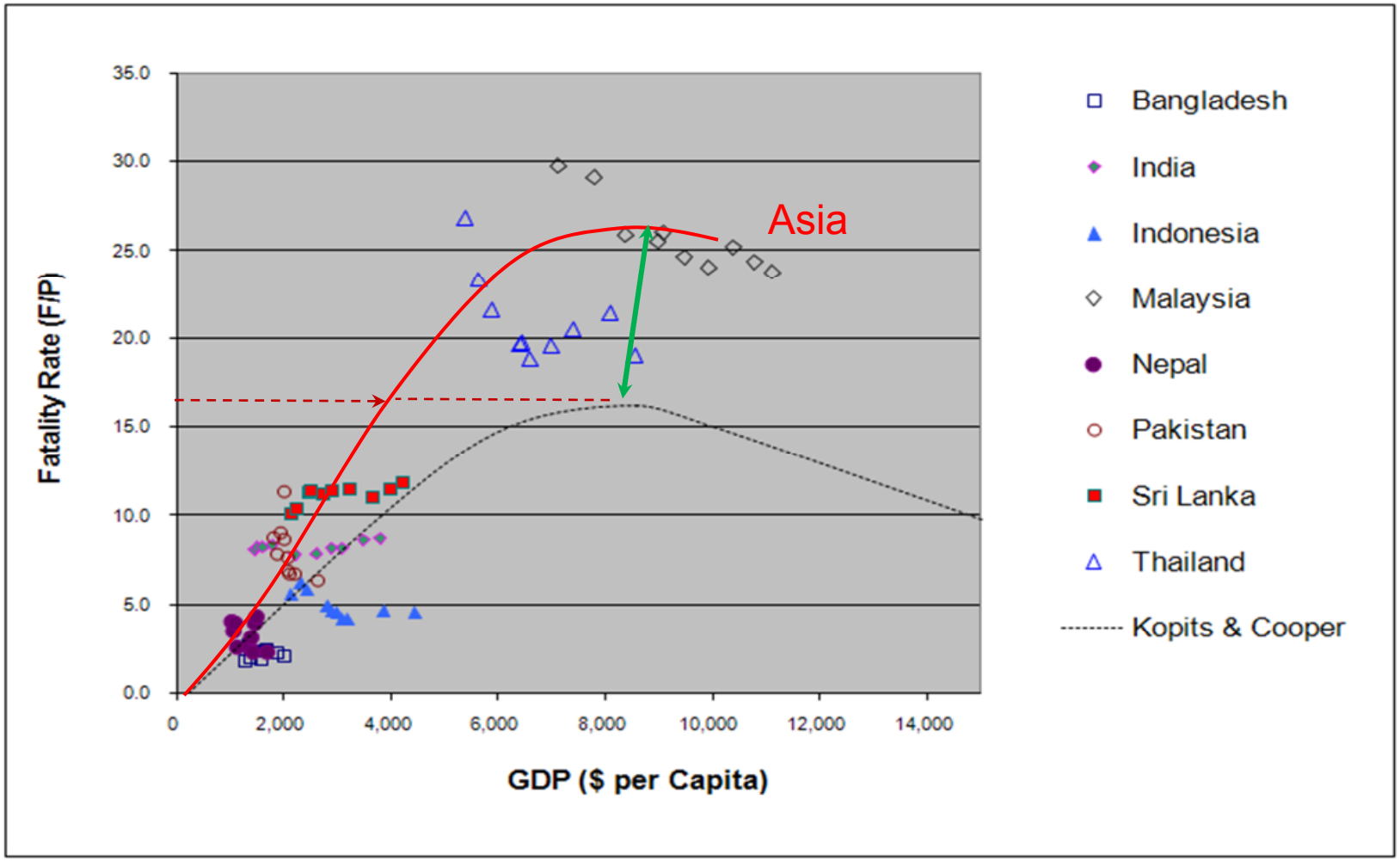
- Introduction
- Setting safety targets
- Learning from experience
- Conclusion

Introduction

- Fatalities are real peoples
- Developed countries
  - Road safety improved during last two decades
  - Setting safety targets helped

- South Asian countries
  - Road crashes increasing
  - Unsafe roads, unsafe vehicles with common practices contribute to crashes

Situation in Asia



Notable problems in Asia

- Rapid motorization
  - Diversity of unsafe vehicles
  - Half of the vehicles are motor cycles
- Substandard road infrastructure
- Lack of capacity
- Reduced enforcement impacts
  - Speeding
  - Drink driving
- Economic factors
- Political ….

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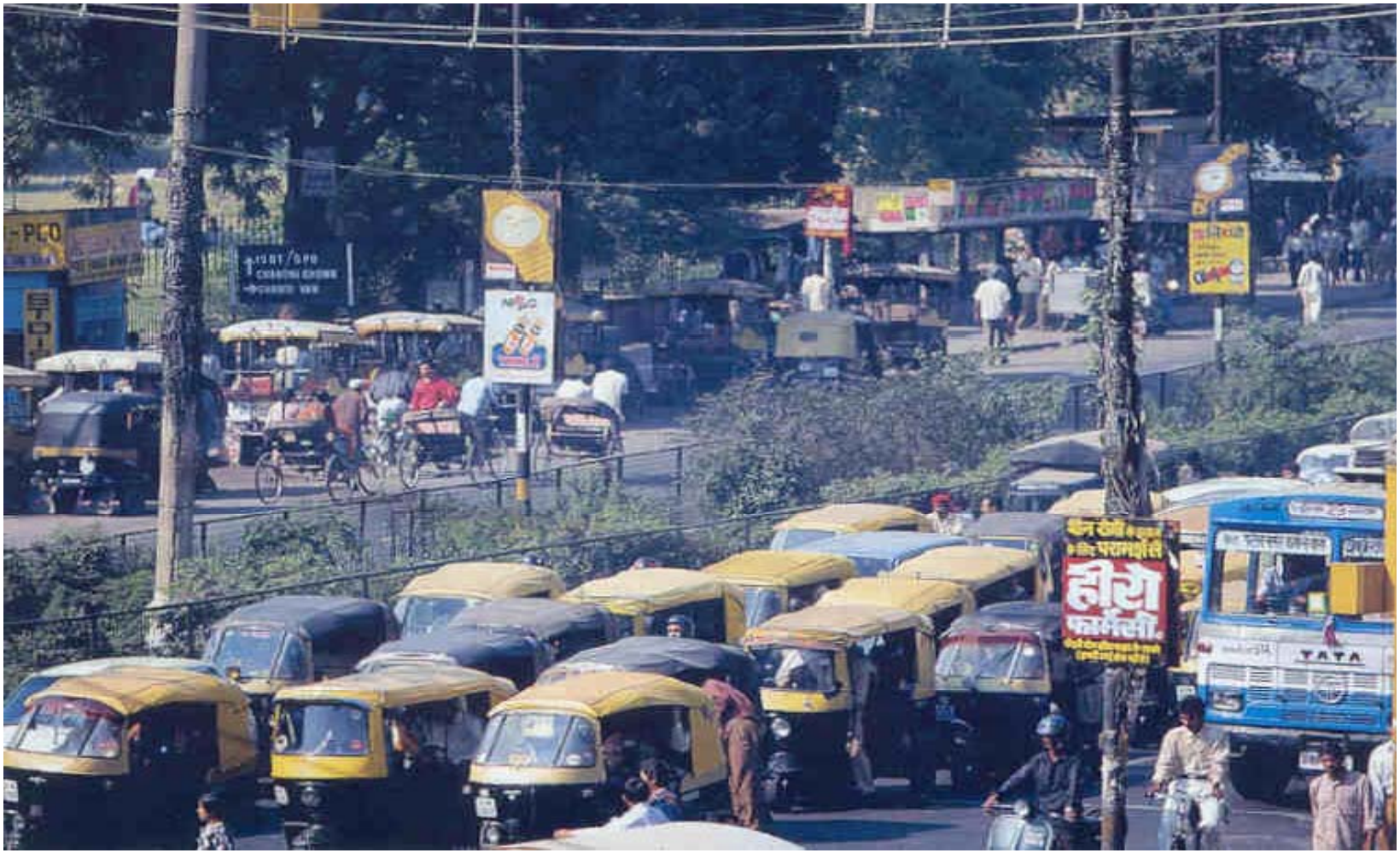
Conditions in South Asia



Different traffic sharing the same unsafe road space

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Poor Infrastructure

Drivers' ability Vs. Drivers' Choice

Ability Vs. **Common practice**

Half of the vehicles are motorcycles

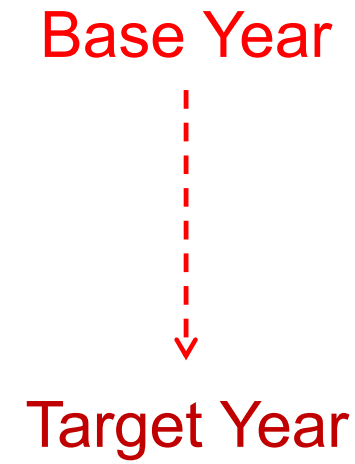
Most of the vehicles were used (old) vehicles

Happy ride

Motorcycles offer both ‘consumer benefits’ and ‘potential environmental benefits’

Setting safety targets

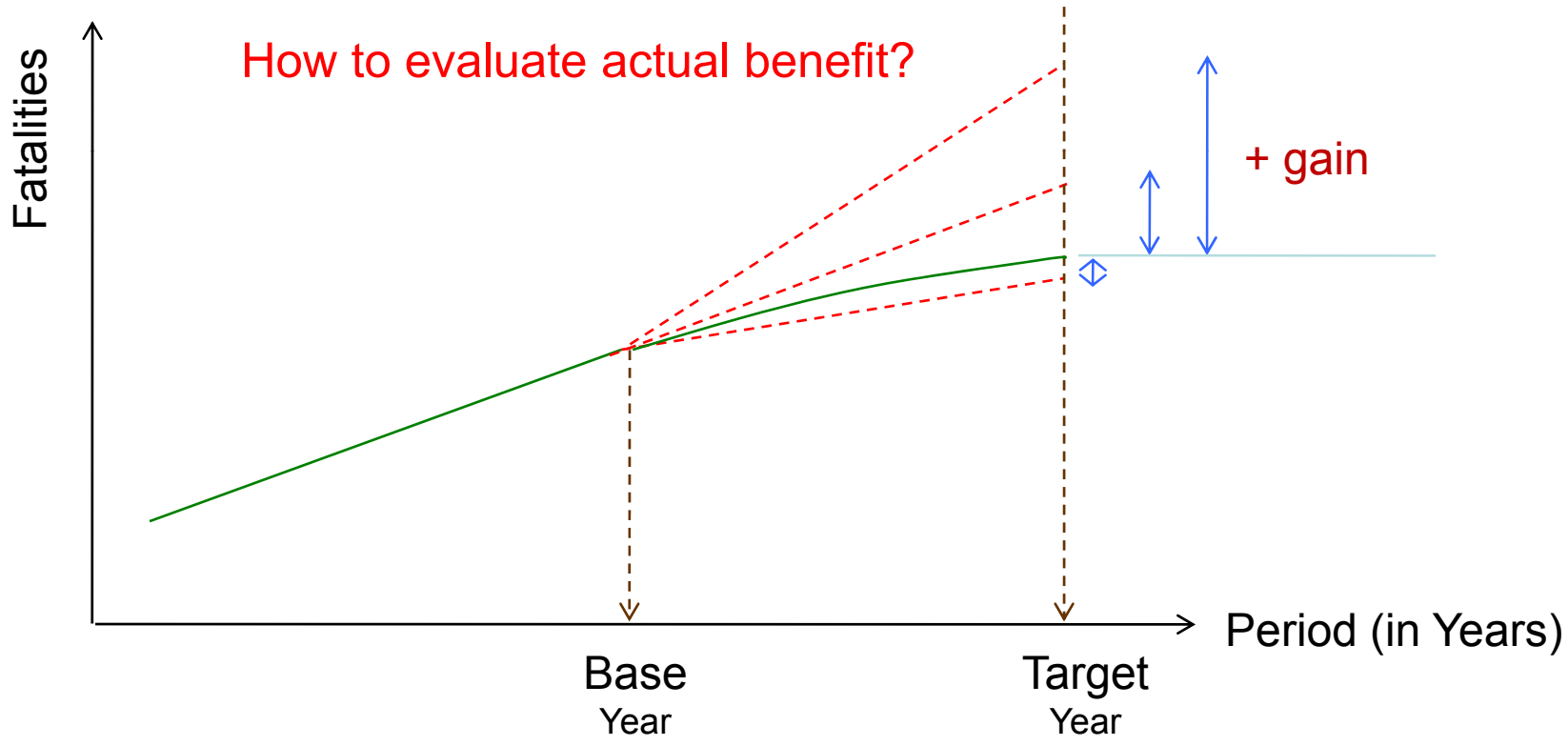
- Performance evaluation used for target setting (Realistic approach)
  - F (Number of fatalities)
  - F/P (Fatalities per 100,000 population)
  - F/V (Fatalities per 10,000 vehicles)
  - F/L (Fatalities per million kms of travel)



- Top priority approaches
  - 'Vision *Zero*' by Sweden
  - 'Safest roads in the world' by Canada
  - 'Zero deaths on the roads' by Hong Kong

Actual effect of safety targets

- Trend might be Upward or Downward



Vehicle ownership

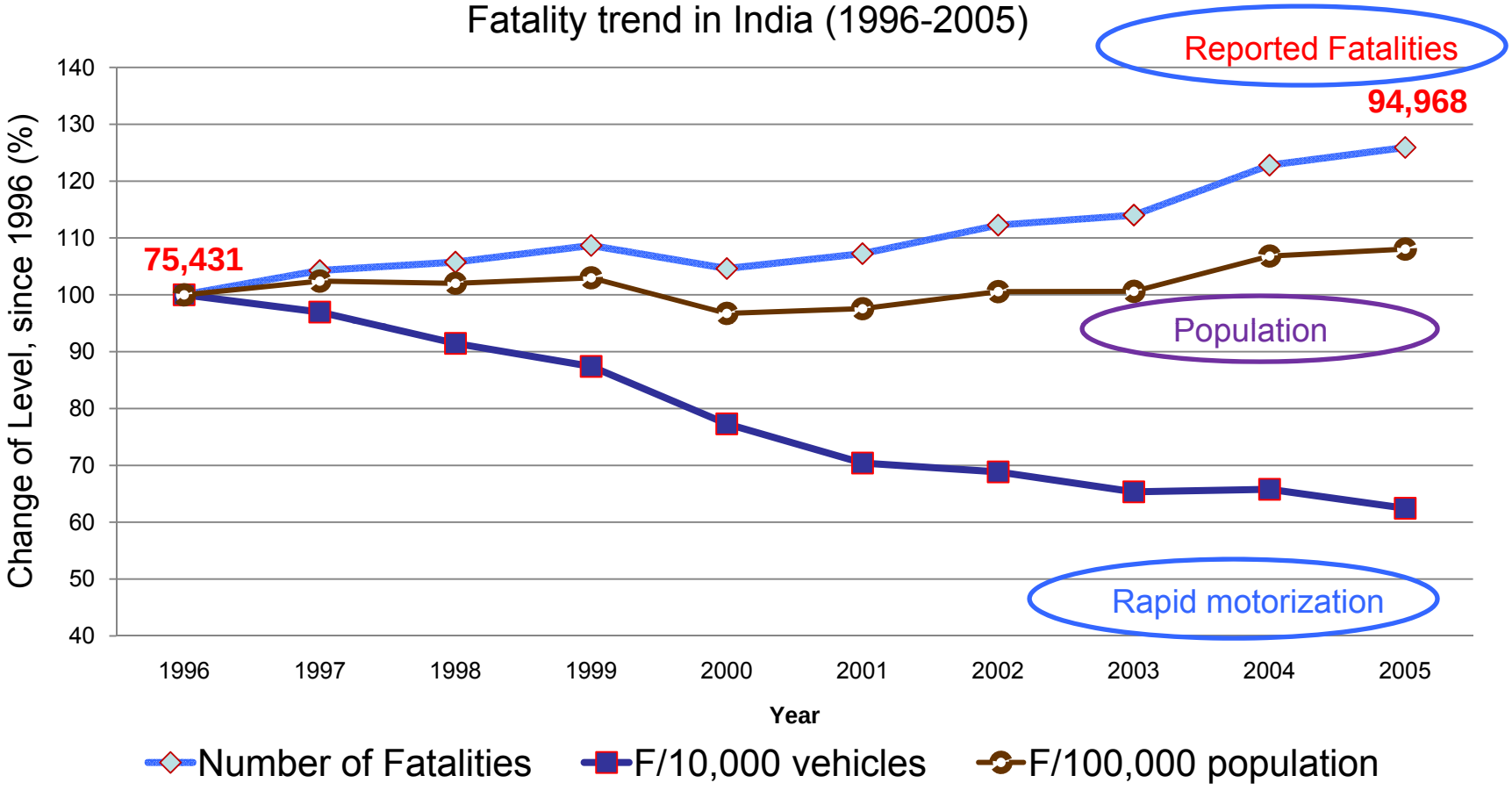
- Ownership DATA in some countries based on addition of registered vehicles
- All vehicles are NOT in use

YEAR	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Vehicles	1,162	1,246	1,324	1,407	1,511	1,614	1,706	1,779	1,892	2,073	2,262	2,527	2,828	3,126	3,439

Table: Car ownership in Sri Lanka (in 1,000)

- Correction is required for ownership
- Error in F/V calculation

Other issues



Available safety targets

- Which is good parameter?

Country	Base Year	F	F/P	F/V	F/L	Target Year
Nepal	2001	- 6.5 %				2010
Indonesia	2005	∑ F < 13,000				2010
Thailand	2005	∑F < 12,000				2010
Malaysia	2001		< 10.0	< 2.0		2010
South Korea	2002	< 3000				2012
New Zealand	2001	< 300	< 7.3	< 1.1	< 6.1	2010
Germany EU	2000	- 50 %				2010
France	2007	< 3,000				2012
Japan	2006	< 5,750				2012
Great Britain	1994-98	- 40 %				2010
Australia	2001		< 5.6			2010
Canada	1991-96	- 30%				2008-2010
Switzerland	2000	- 50%				2010
USA	1996				< 1.0	2008

- 5 ~ 10 years of realized period are found to be effective

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Different Approaches

- Bottom-up (realistic) approach

  Based on investigation and analysis of specific safety issues and countermeasures

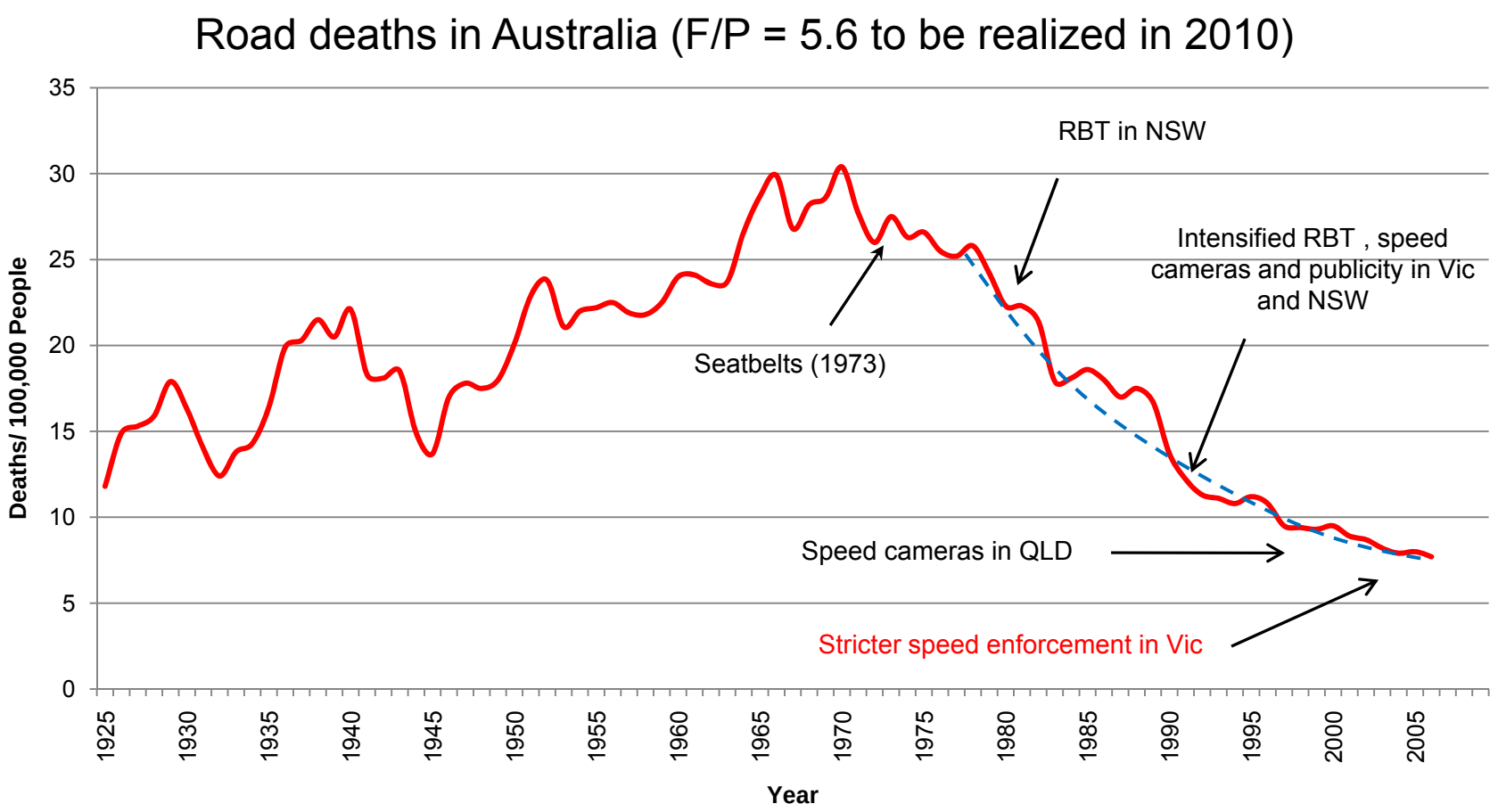
  – eg., Australia, Great Britain, Japan and New Zealand

- Top-down (idealistic) approaches

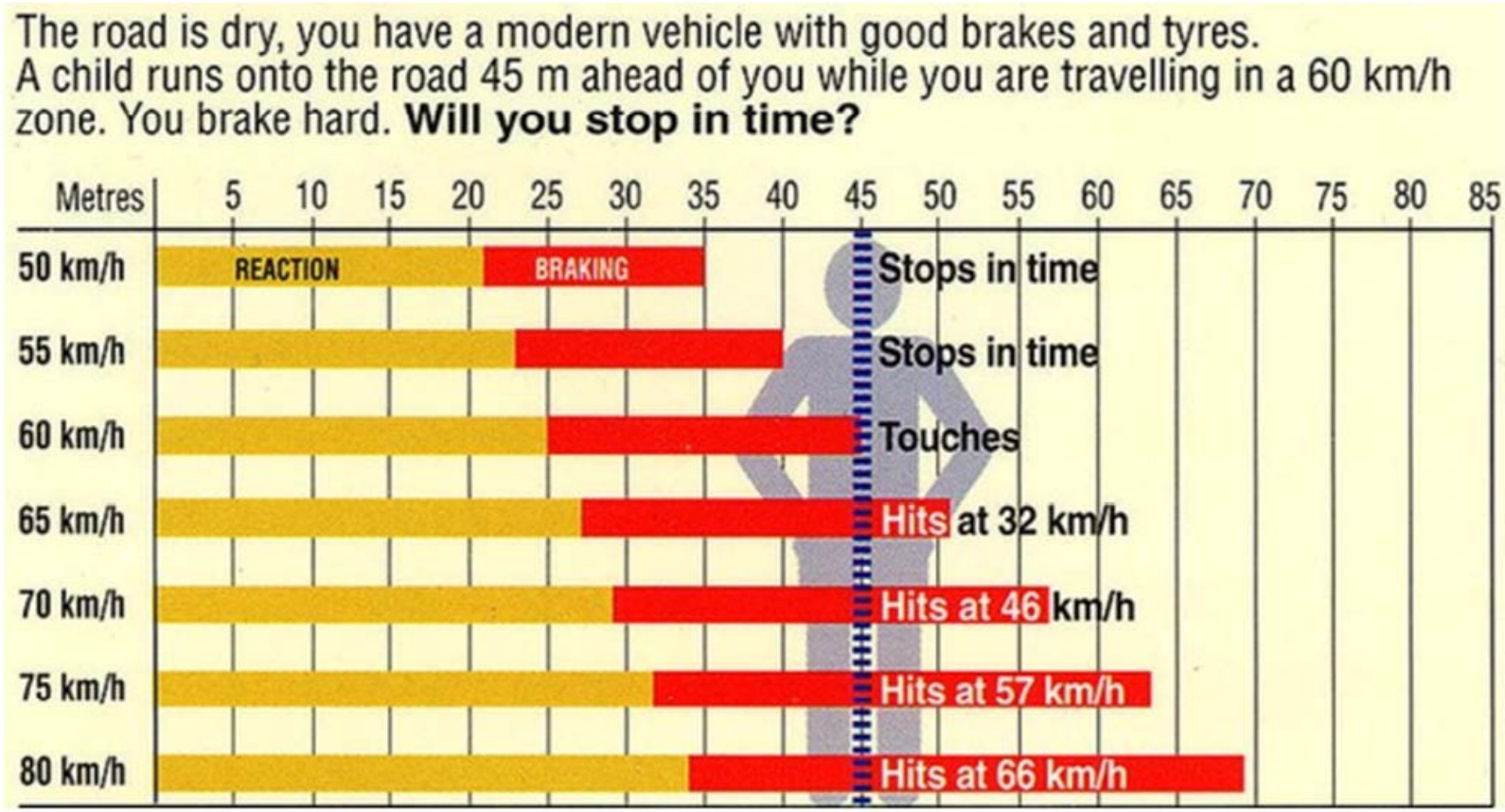
  Based on ideal standard, which places priority on prevention before other consideration

  – eg., Sweden, Canada, Hong Kong

Learning from experience

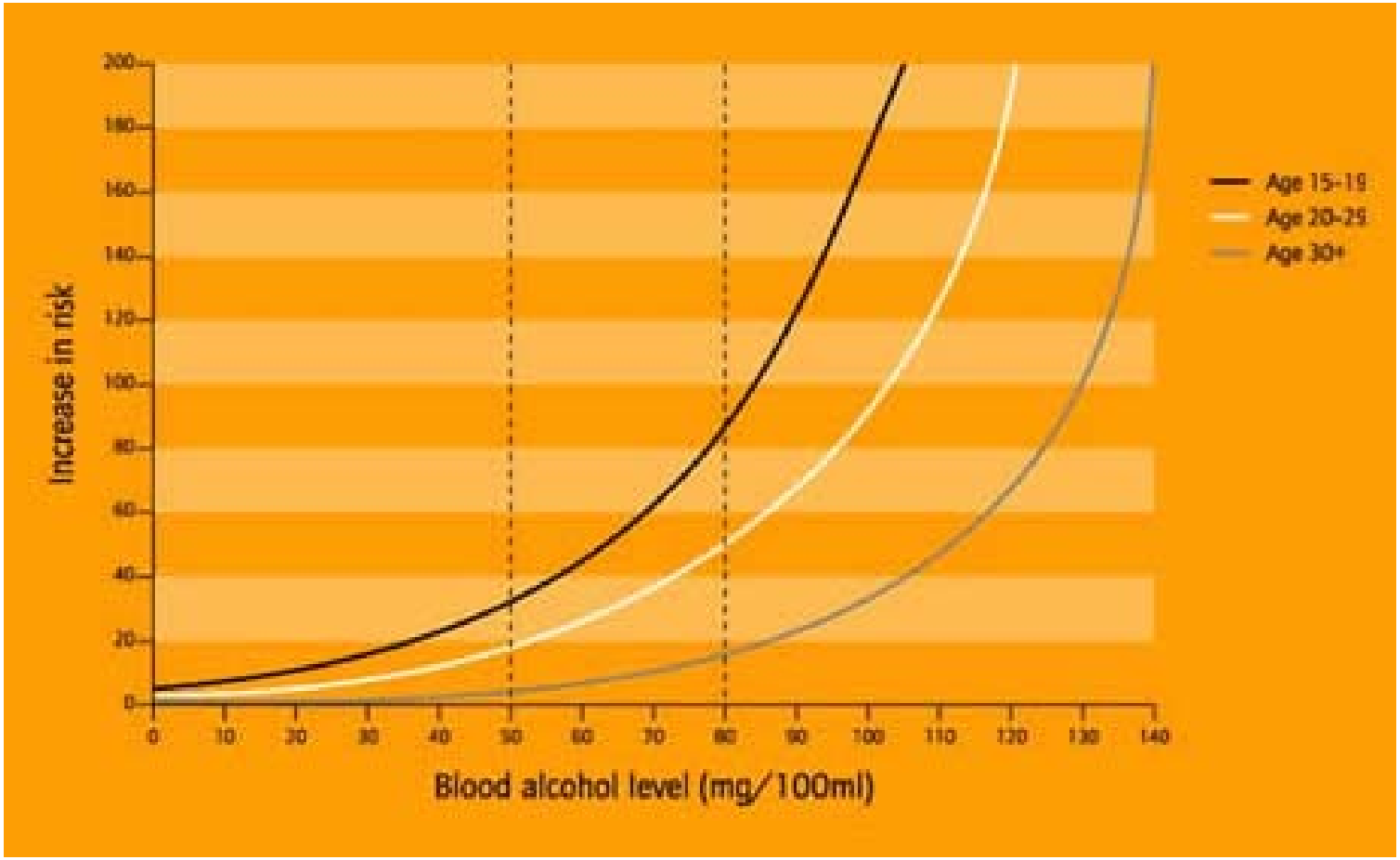


Speed and Risk



Small changes in travel speed make a big difference to the risk

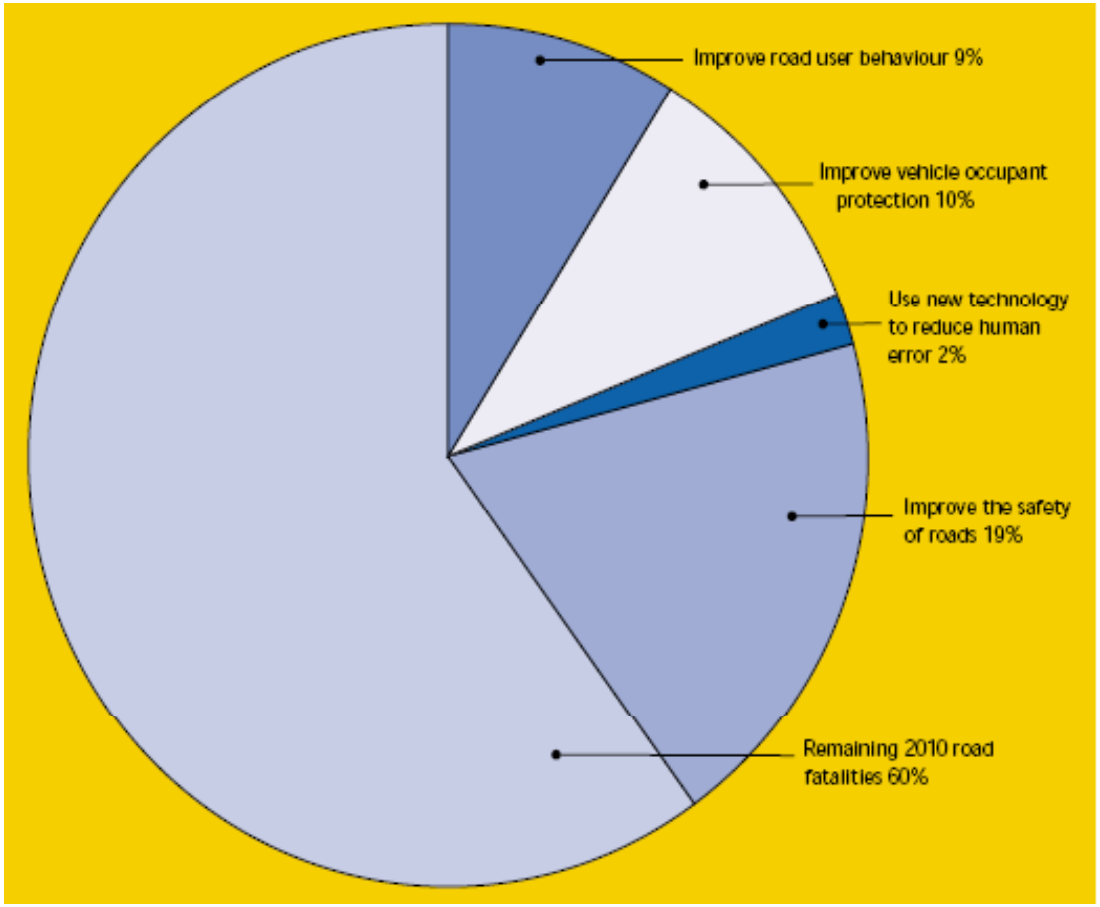
Alcohol Vs. Risk



Source: www.ltsa.govt.nz

Australian Road Safety Strategies 2001 – 2010 (Reduce 40%)

Reduce F/P
from
9.3 in 1999
To
no more than
5.6 in 2010



Sourece Australian Transport Council

Australian Transport Council

- Comprises Federal, all state, Territory and Local

- Targeting high-risk and high-incidence groups
  - Improve road user behaviour (9%)
  - Improve vehicle occupant protection(10%)
  - Use new technologies to reduce the human error (2%)
  - Improve the safety of the road (19%)

[Need to identify a leading authority]

Strategic objectives (Australia)

- Continuing existing effective measures
  - eg. easier gains in road safety tend were considered
- Wider implementation of measures with further potential
  - eg. a uniform speed reduction of 5m/h would cut casualty crashes by quarter (27%)
- Introducing new measures
  - eg, to monitor driver alertness & speed, etc

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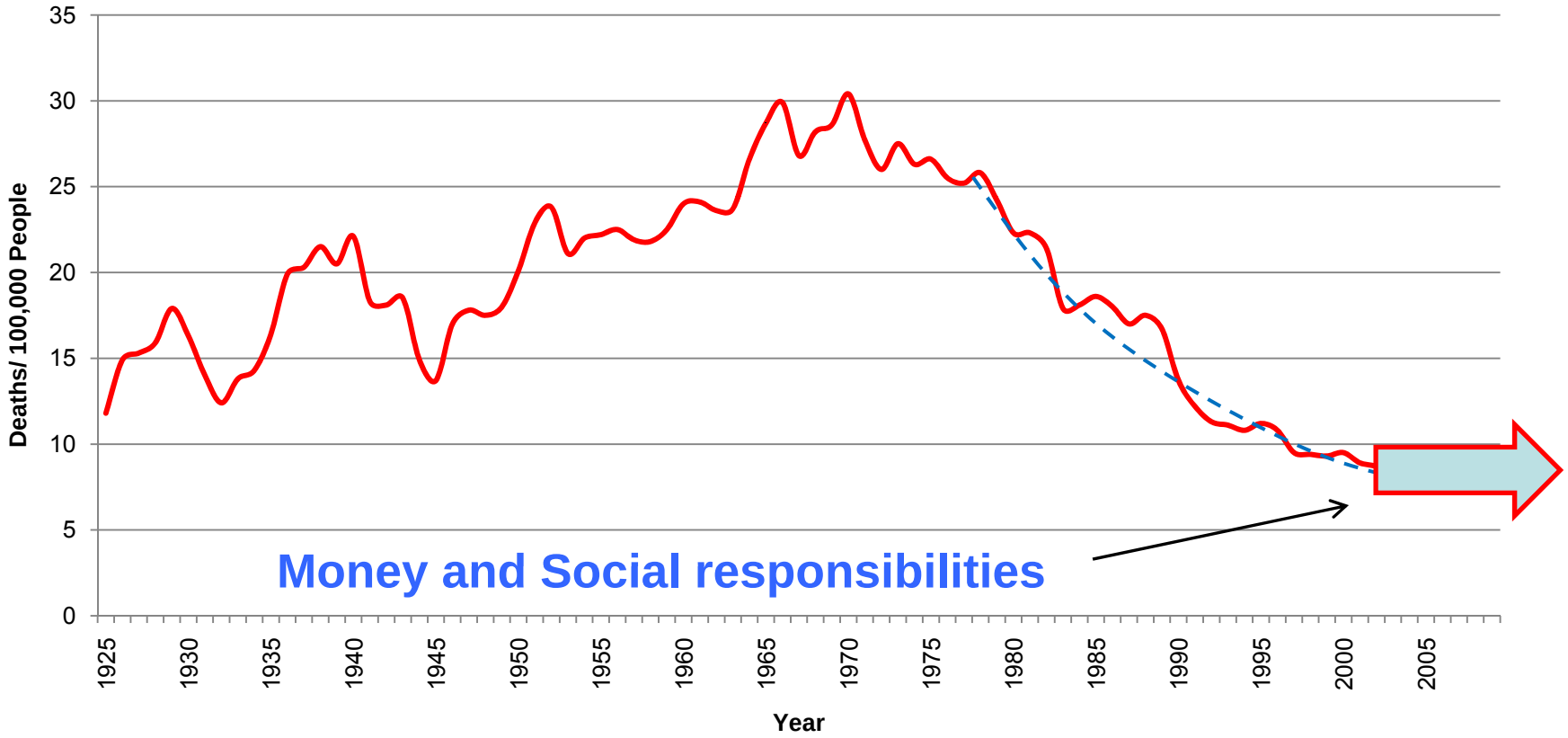
Future strategies in Australia

How long to reduce **F/P** from **5.6** in 2010 to **2.8 ?**



Actions - Examples

- Use of technology to reduce human error
  - *Austroads' e-transport*: Estimates that an overall total cost (crashes, congestion, vehicle emission) of at least 12% achievable by 2012 using ITS.
- Enforcement
  - "everywhere, all the time"
- Improve the safety of the roads
  - Found to be reduce fatalities by TWO lives per annum per $100 million invested and provide Benefit/Cost averaging 3.3

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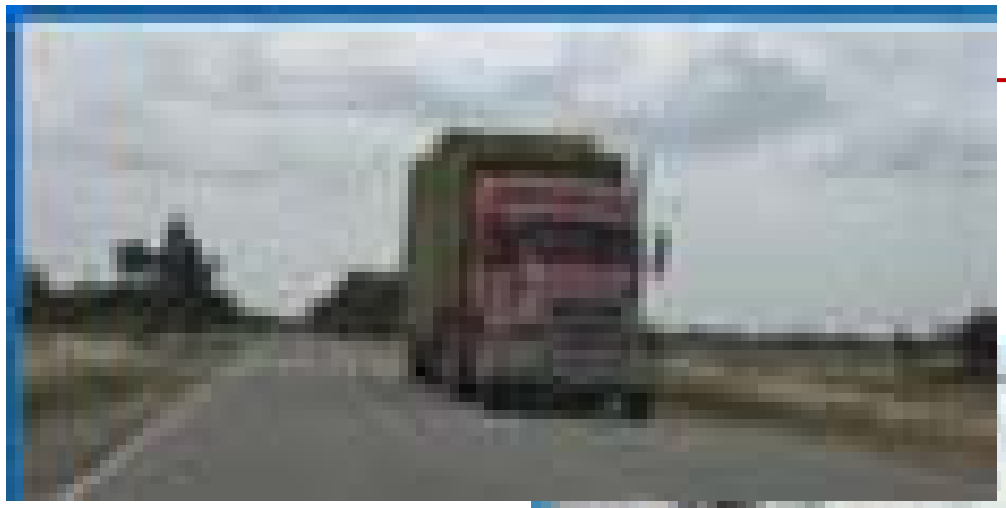
Design for Road Safety



→ **Strategies A, B, C, .. etc**

Strategies P, Q, R,.. etc ←

Conclusion

- South Asian's needs to deal with several key issues
  - Different traffic sharing the same unsafe road space
  - Road safety influenced by attitude and common practices
  - More unsafe old vehicles
  - Limited budget and lack of capacity
  - Low priority for road safety & very weak political attraction

- Need a lead agency within each country
- Realistic road safety improvement (during early target period) could be notice during a period of 5 ~ 10 years
- Identify appropriate parameter for road safety target
- Develop appropriate strategies to achieve the set targets
  - Easier gains in road safety tend are simple and effective way to start (Applicable to South Asia)
- Bottom-up approach is working well
- Improvement has come at a price in terms of money and social responsibility.

Thank you!