

THE USE OF ROAD SAFETY TARGET SETTING ON FATALITY AND INJURY REDUCTION

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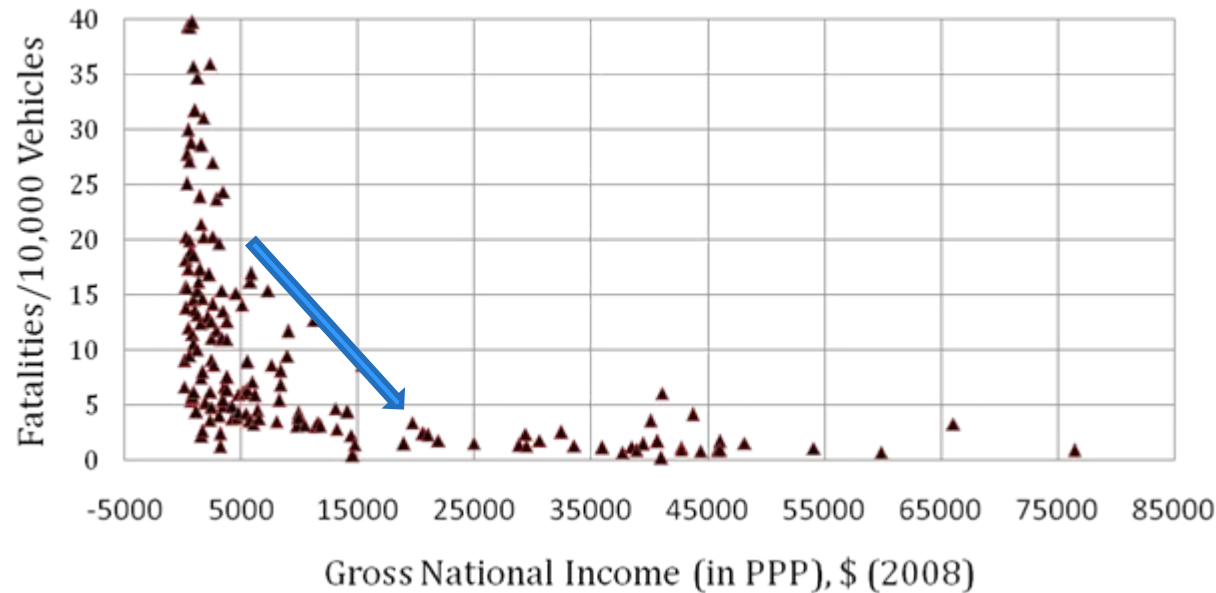
Faculty of Engineering and Surveying

Introduction

- ❑ Estimated 2 million fatalities per year by 2030
- ❑ We have tools, the knowledge, to undertake road safety related tasks - Target setting helped
 - ❑ Finland introduced target setting in 1973
- ❑ Historically greater attention has been paid in developed countries
- ❑ Decade of Action for Road Safety: 2010 – 2020, with an objective of 50% reduction.
- ❑ Road safety gap between developing and developed countries is widening

Overview

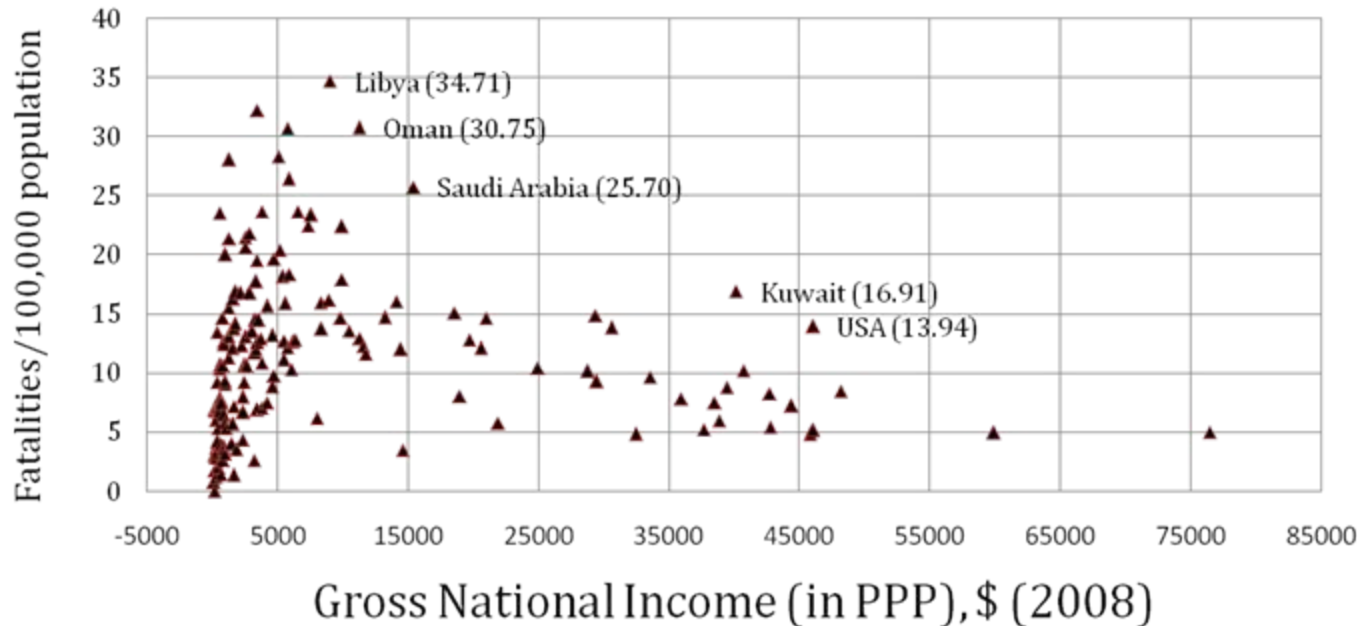
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- About half of the registered vehicles are motor cycles in low income countries
- Rapid drop as country develops (GNI increases)

Annual fatalities per 100,000 people

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- ❑ Differences in road safety levels within the countries with similar economic condition
- ❑ Historical development, political background, vehicle ownership and other specific situations contribute to this differences

Objective

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- ❑ Planned strategies within target help



- ❑ Establish a local level road safety framework

Targets setting practices

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Target: Often expressed in the form of percentage of reduction during a period of time

- Performance Indices
 - Traditionally evaluation on fatality rates
 - Currently composite indicators are in use

- Target periods: 5 ~ 10 years

- Geographical coverage
 - Example
 - Australia: QLD, NSW, VIC, SA, WA, TAS, ACT and NT

Use of performance indices

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□ 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 km of travel)

□ Top priority approaches

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

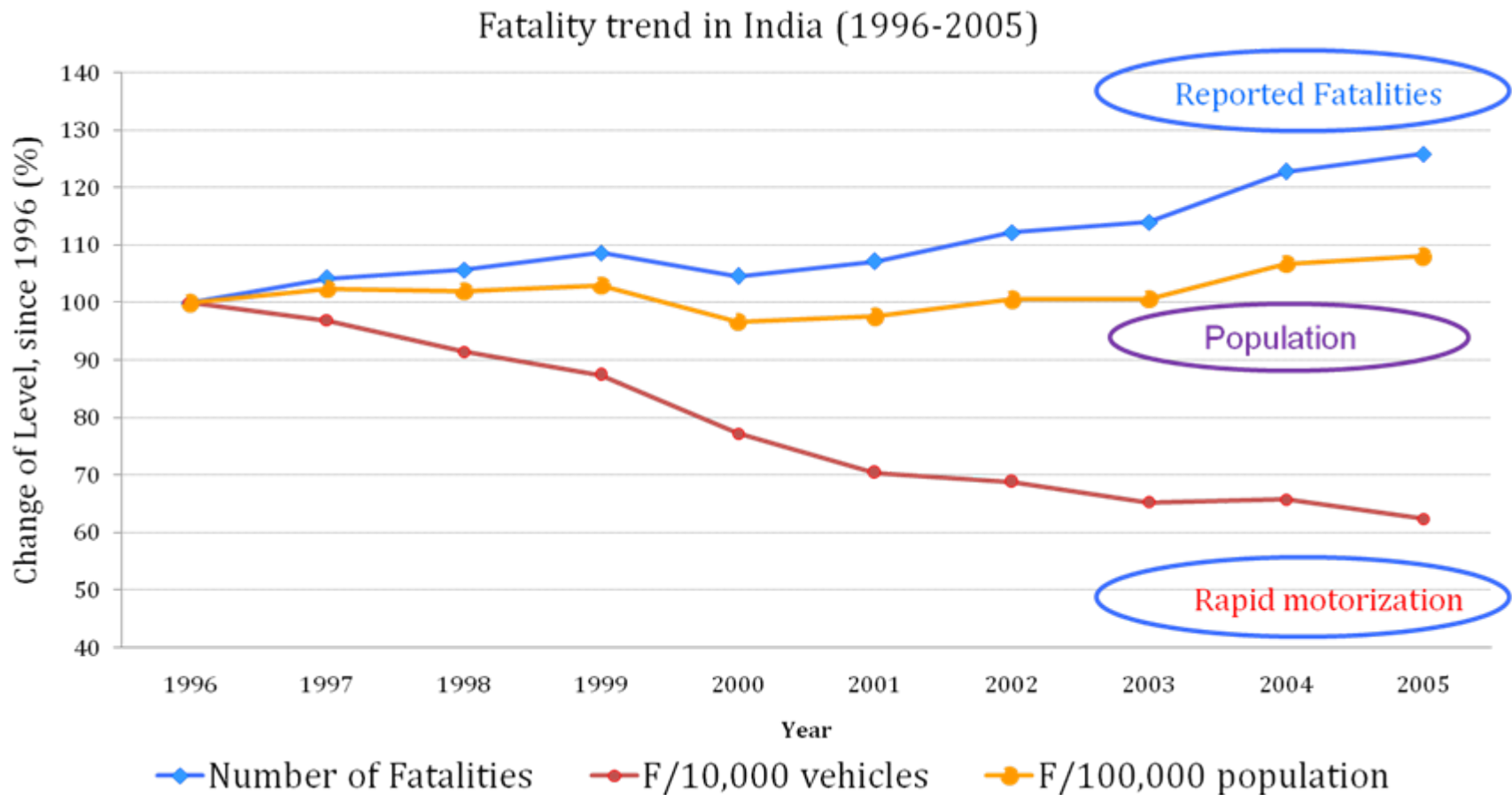
Target Year



Base Year

Other issues

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- Wegman F & Oppe S (2010) – Benchmarking road safety performance

Road safety targets in selected countries

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Country ^{2,3&4}	GNI in 2008 ¹ (\$)	Target Initiated	Latest target	Overall Targets
Bangladesh	520		2008-2010	F by -(10~12) %
Myanmar	-		2005-2010	940 P & 32,900 SI
Viet Nam	890		2005-2010	7,000 P & 16,100 SI
Indonesia	2,010		2005-2010	20,411 P & Reduce F growth by 2.4%
Thailand	2,840		2005-2010	13,000 P & 1,508,000 I
Malaysia	6,970		2001-2010	F/V < 2, F/P < 10 & F/L* < 1
South Korea	21,530		2008-2012	F by -50%
New Zealand	27,940	1990	2001-2010	F < 300, F/L < 6.1, F/P < 7.3 & F/V < 1.1
Japan	38,210		2006-2010	F < 5,500
Australia	40,350	1993	2001-2010	F/P by - 40 % (F/P < 5.6)
Canada	41,730	1996	1996-2010	KSI by 30 % of average in 1996-2001
France	42,250	1997	2007-2012	F < 3,000
Germany ^{EU}	42,440		2010-2020	F by -40 %
Great Britain	45,390	1981	1998-2010	KSI by - 40 % of Average in 1994~98
USA	47,580	1996	1996-2008	F/L < 1.0
Switzerland	65,330		2000-2010	KSI by -50 %



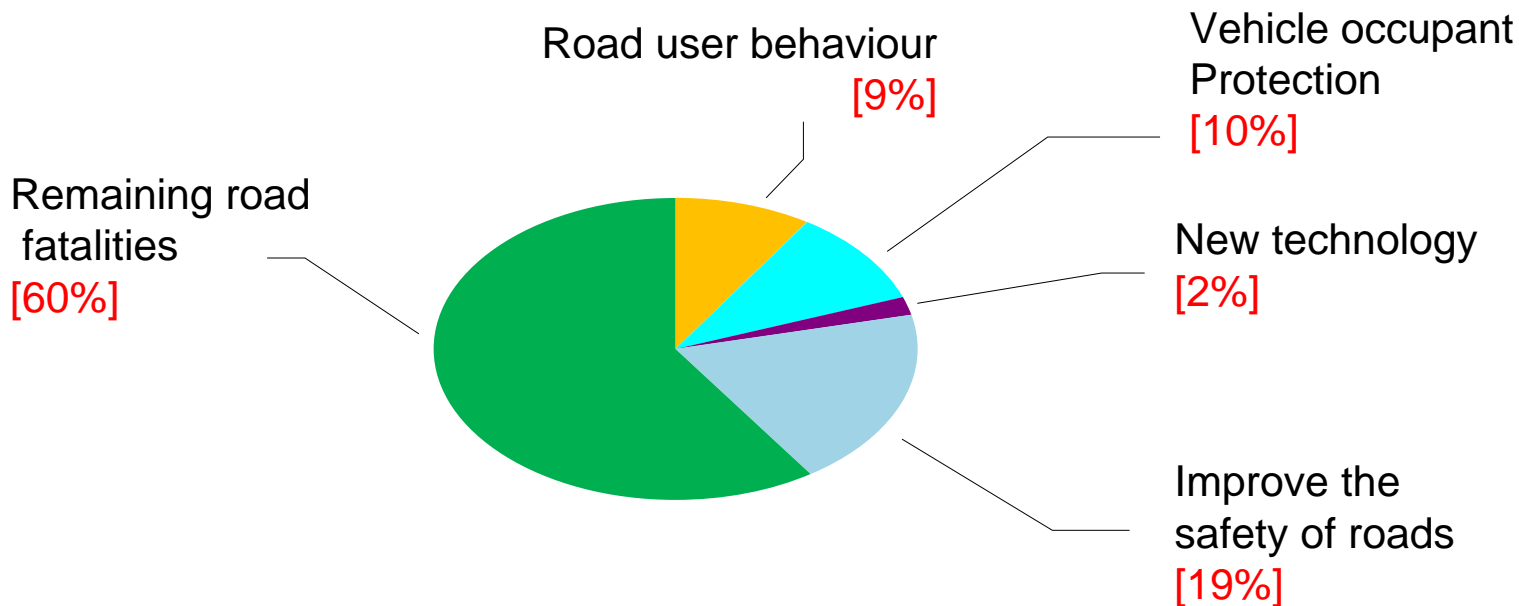
Geographical coverage

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- ❑ Global target: Decade of Action for Road Safety
Death by 50% reduction [2010 – 2020]
- ❑ European commission
Death and serious injuries by 40% [2010-2020]
- ❑ ESCAP
Save 600,000 lives [2007 – 2015]
- ❑ State level: Example – Australia
Generally matches the appropriate efforts to the resources at regional and local level [Road infrastructure, capacity and law & order]

Split of Australia's strategies

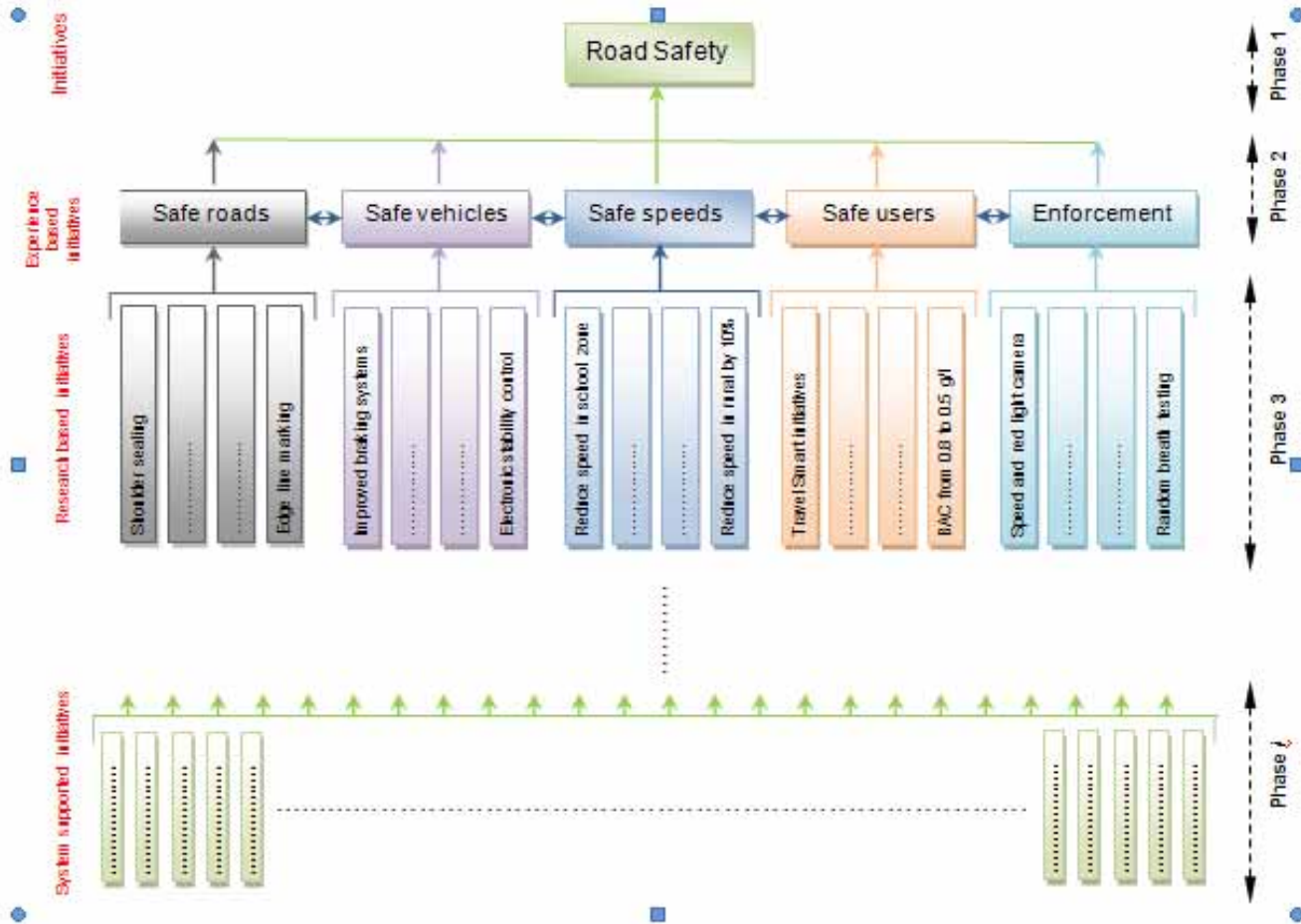
- The National Road Safety Strategy 2001 – 2010 [40%]



- Strategies change over a period of time
- Key changes in institutional responsibility

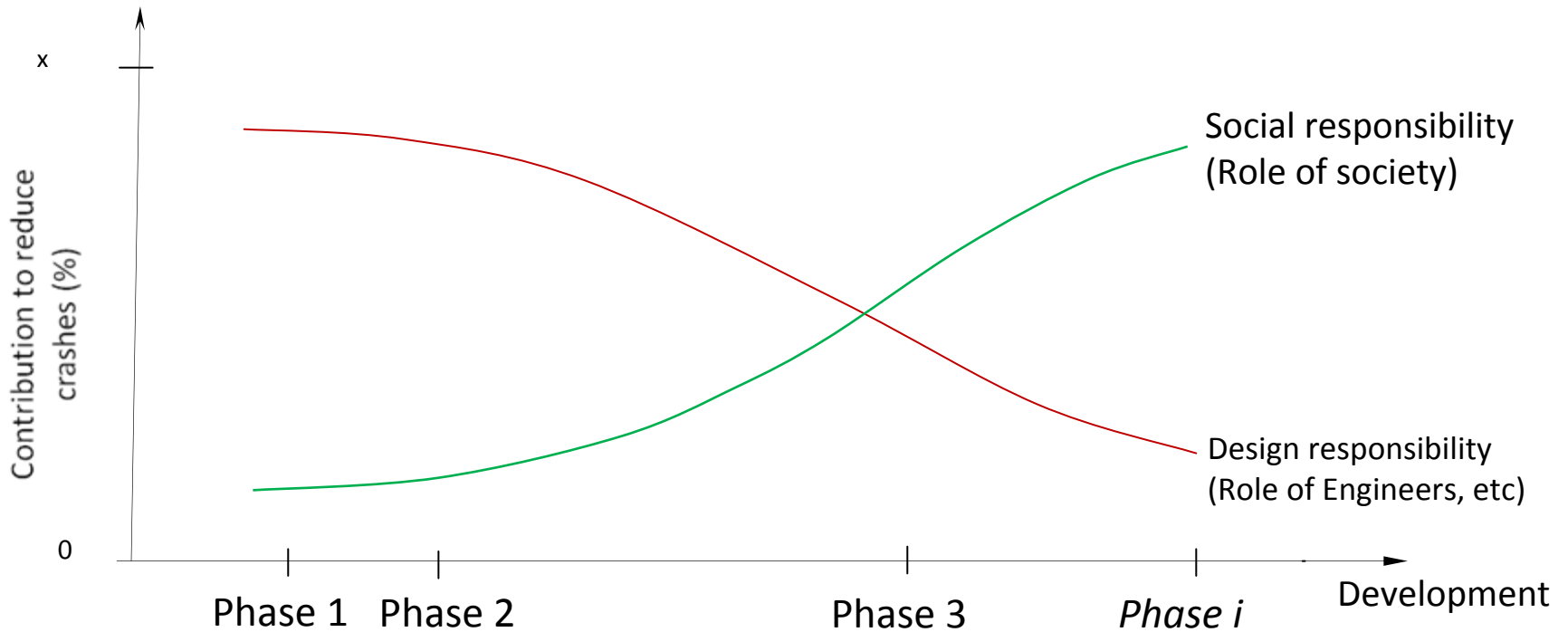
Phases of Target setting practices

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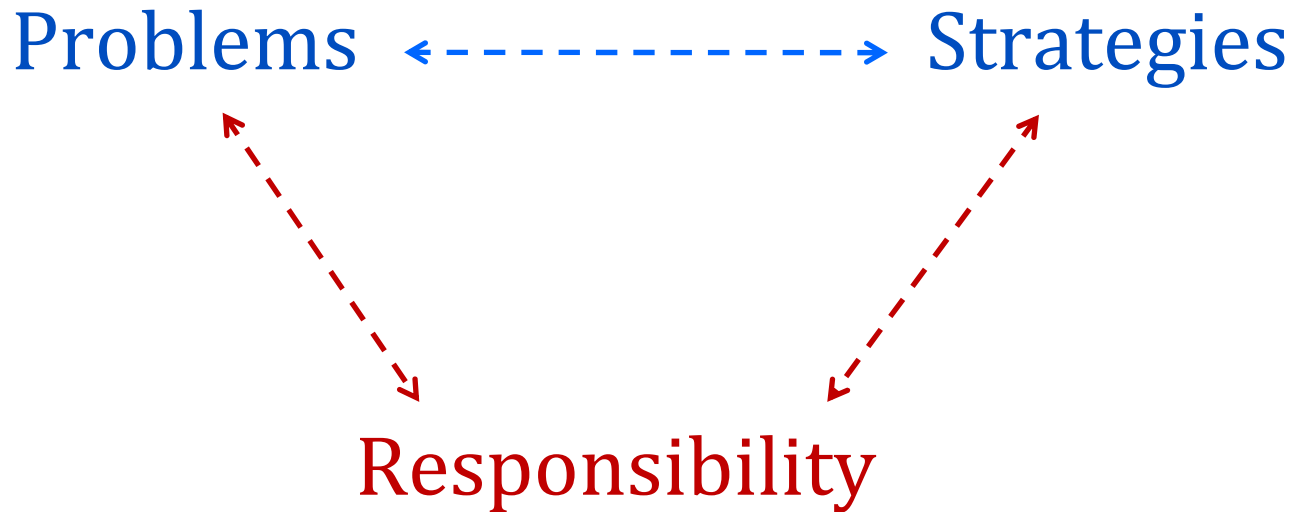
Responsibility towards road safety

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Institutional Framework

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- ❑ Problems-Strategies matrix
- ❑ Institutional-Responsibility matrix (at local context)

Some possible problems in developing countries

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- ❑ Culture, politics, budget allocation, ways of utilising allocated budget, and availability of other resources
- ❑ Complex environment created by alcohol industry
- ❑ Political and other transparency issues
- ❑ Poor trauma management, and so on

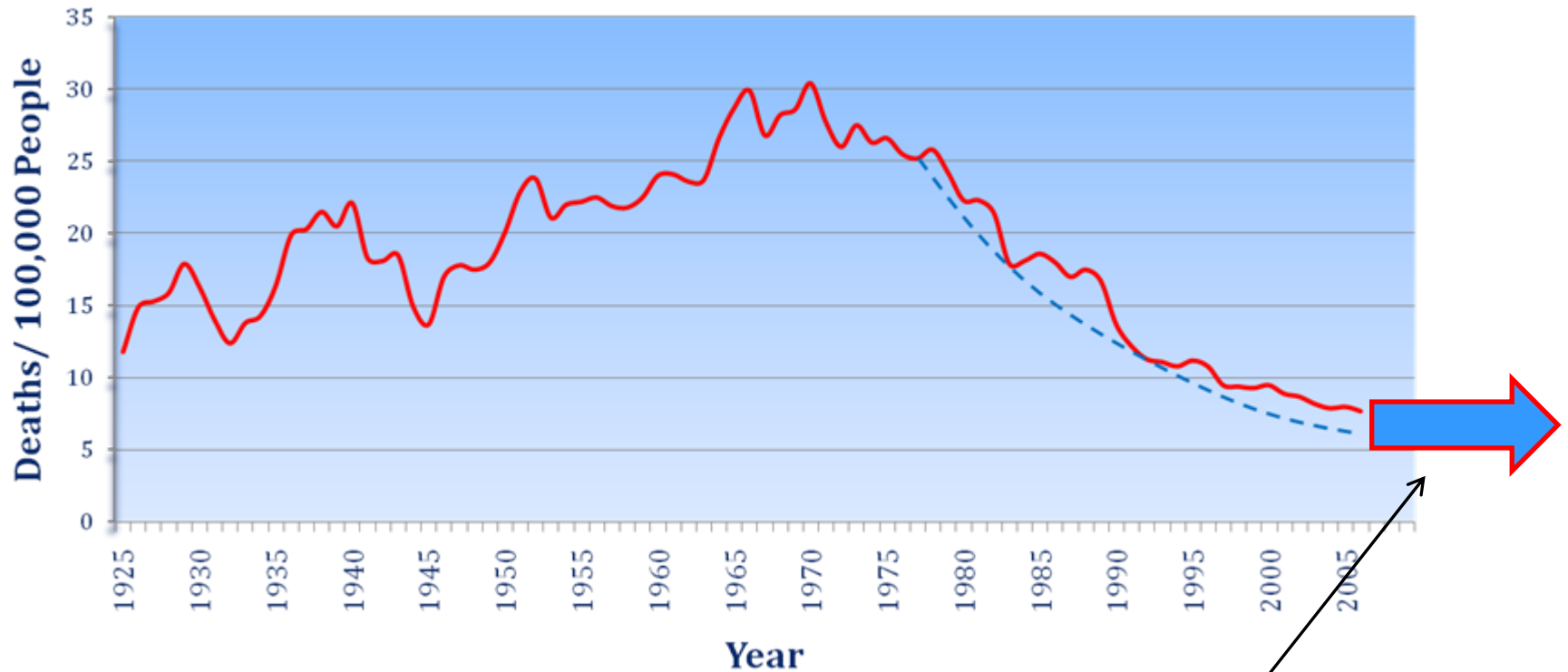
What is expected?

- ❑ Determination to start
- ❑ Data collection and monitoring
- ❑ Developmental Capacity

Future of performance indices

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How long to reduce F/P from 6.2 in 2010 to 3.1 ?



Additional gains: Money and Social responsibilities

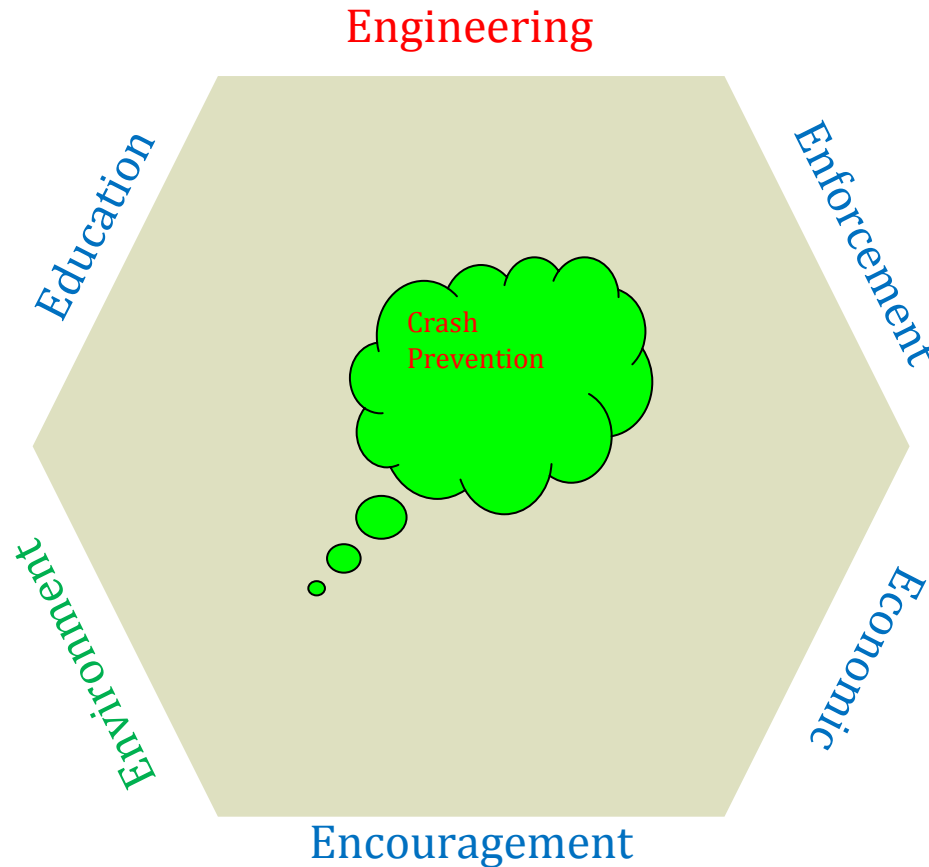
Few possible problems in rich countries

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- ❑ Economic factors
 - ❑ Annual vehicle use increasing more than predicted
- ❑ Familiar environment for many drivers
 - ❑ *Drivers*: when and where enforcement is likely or unlikely
 - ❑ *Significant experience*: offending without being caught

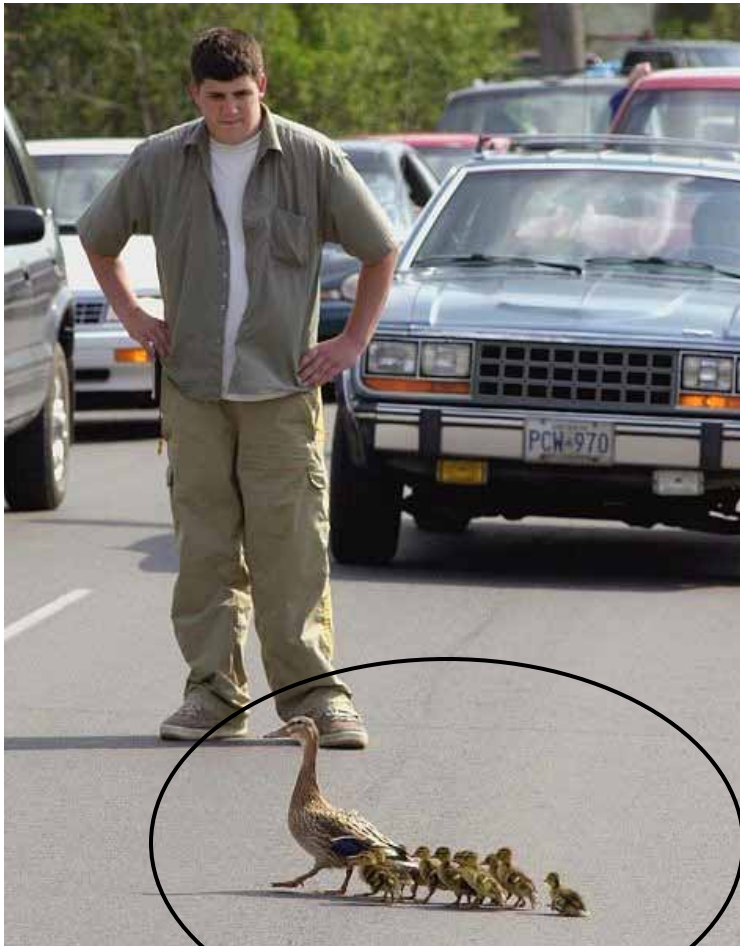
Crash prevention

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Complex solution = function (E1, E2, E3, E4, E5, E6, ?Etc)

Environment with Road & vehicles



**Road safety is a
multidisciplinary area**

Conclusion

- ❑ Road safety target setting helps to reduce the burden.
- ❑ We have the tools, the knowledge to taggle the road safety problem.
- ❑ Problems in developing countries are not same as in developed countries.
- ❑ Various phases (with local level institutional framework) have have been identified.

Conclusion

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- ❑ Determination to start, data collection, monitoring, and capacity development are vital in developing countries.
- ❑ Collecting data and identification of future performance indices are more challenging.
- ❑ Continuous assessment process help to identify new specific actions.

Thank you!