

Evaluation : A public Health point of view

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What do we mean by
'Healing'?

03

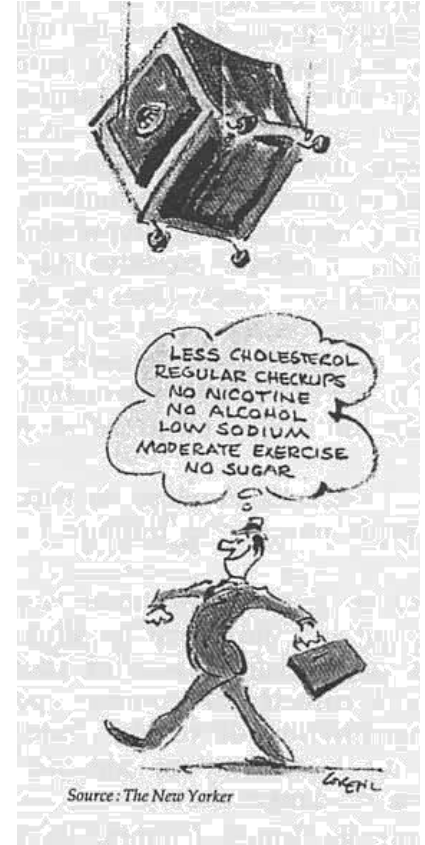
The Safety Benefits

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01

The Big Question



Most important issues of Human Kind

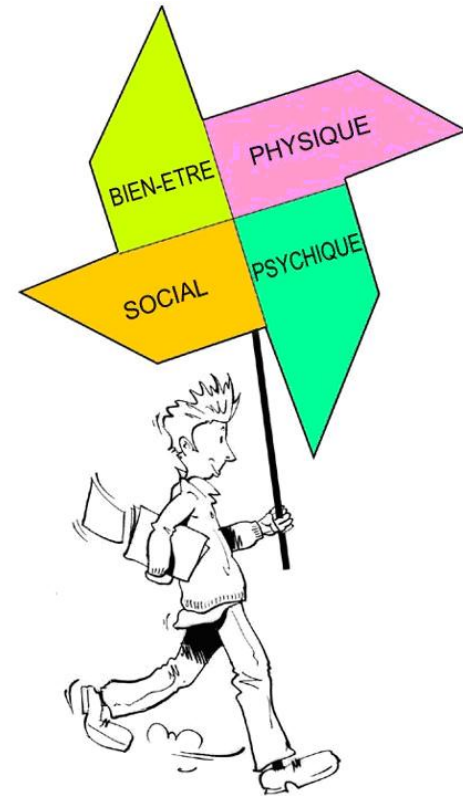
- ✚ Health
- ✚ Eradication of starving
- ✚ Elimination of Poverty
- ✚ Eradication of Criminality
- ✚ Eradication of Suicides
- ✚ Accident and Injury Prevention
- ✚ Ensure employment
- ✚ Avoidance of Conflicts, wars, etc.



...for everyone, everywhere, now and in the future

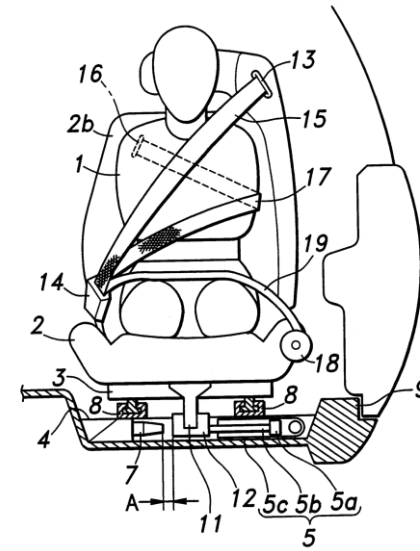
Therefore, the question is:

**In any human action,
do we properly treat
at least one of these
issues, i.e. do we
really **heal** the
illnesses?**



02

What do we mean by 'Healing'?



What does 'We' mean ?

- + Do we (collectively or individually) heal the illness for **everyone** ?
- + Do we heal the illness for **ourselves** only?
- + Do we heal the illness for **others** ?
- + Do we heal the illness for **some groups** while others **suffer** from the partial healing?
- + Do we heal **a few illnesses** at the same time, or do we **create other illness(es)**?



What does 'Illness healing' mean (with regards to Road Safety)?

- + Do we save lives?
- + Do we mitigate injuries?
- + Who takes benefits
(what group) of the healing?
- + Who pays and how much
money do we save (e.g. in
terms of price of life)



We therefore 'Think' the healing in terms of:

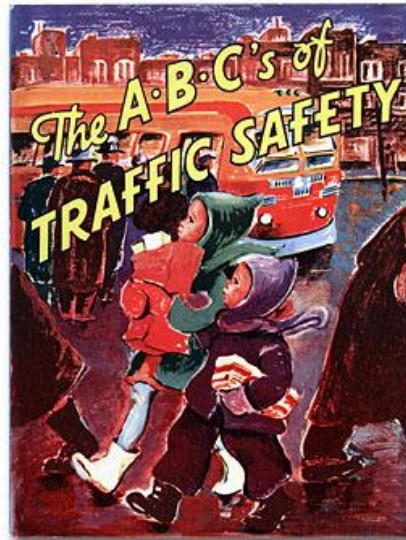
Safety Benefits

(Injury and fatality reduction)









03

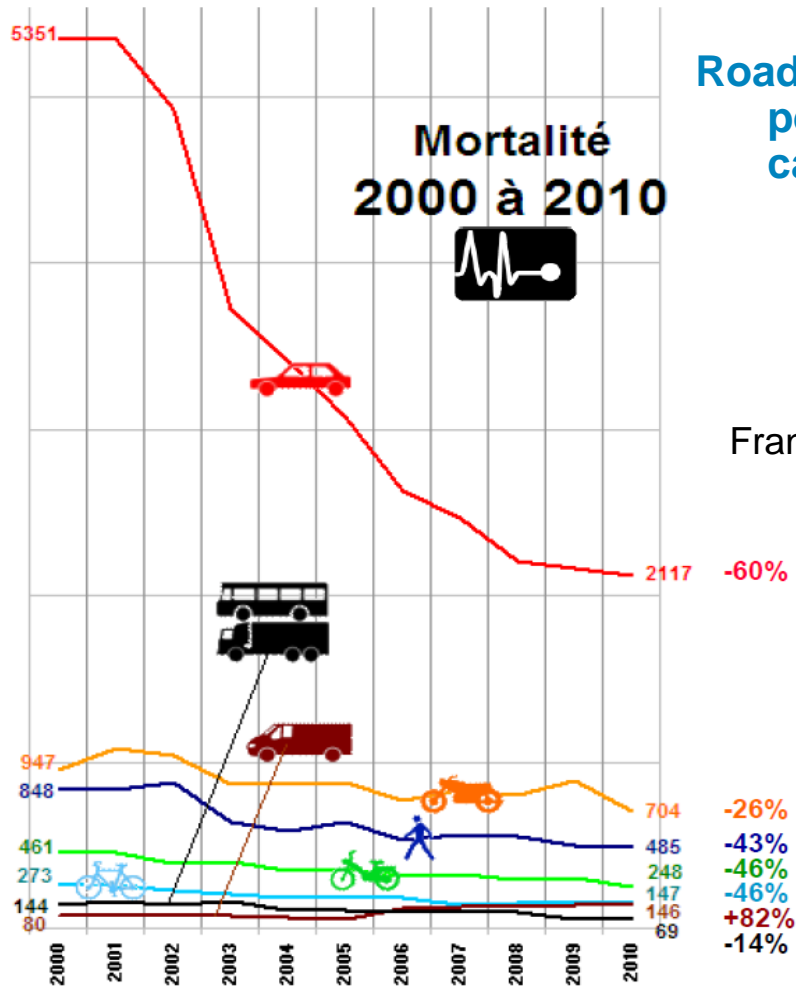
The Safety Benefits



Example 1

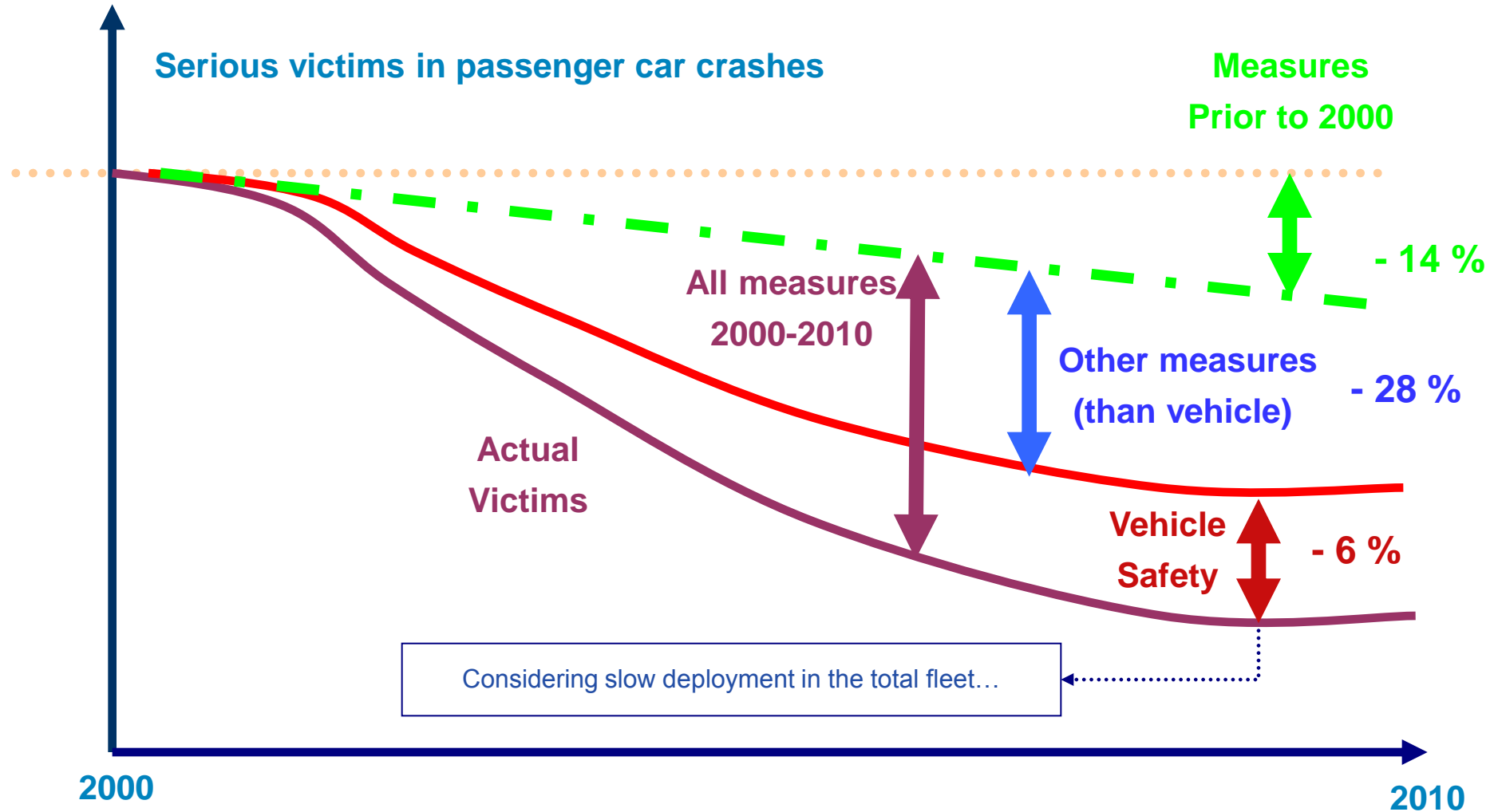
A decrease in road fatalities and serious injuries over 10 years (2000 – 2010)

-  ▪ **France: - 48 %**
-  ▪ **Average Europe: -38 %**
-  ▪ **Spain: - 53 %**
-  ▪ **Germany: - 39%**
-  ▪ **UK: - 40 %**
-  ▪ **Sweden: - 39 %**

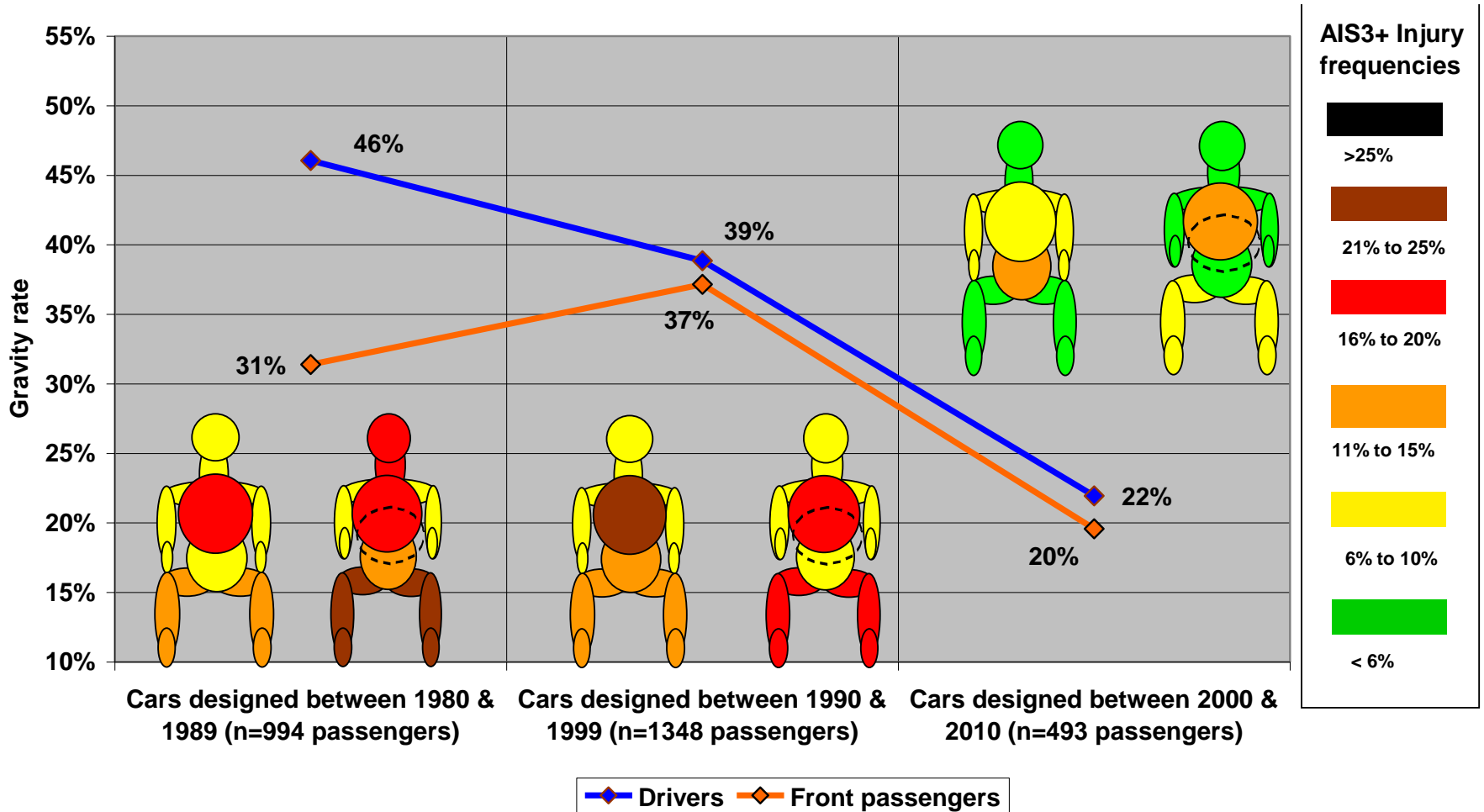


Source :
France, ONISR, 2011

Example 1: (Page, Hermitte et Cuny, AAAM, 2011)

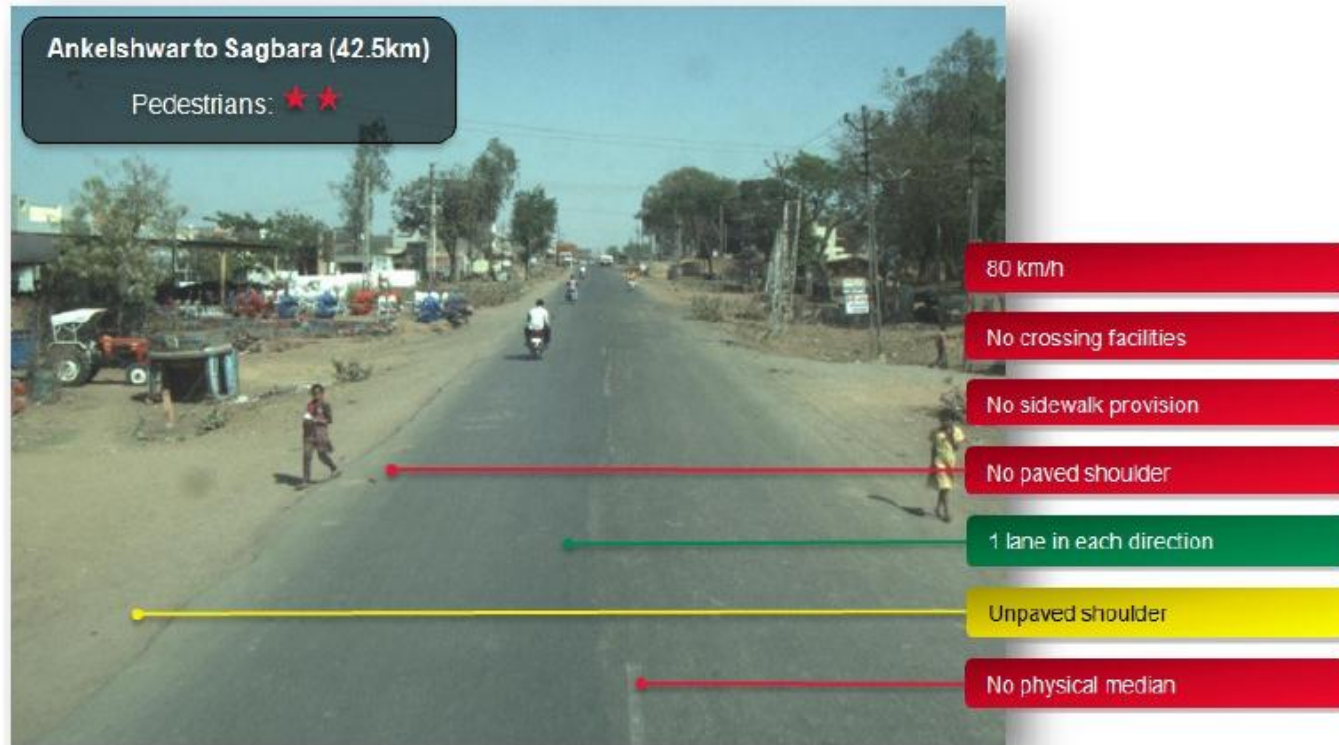


Evolution of the risk to suffer AI3+ injuries for belted front seat occupants with breakdown by body regions and designed model years. EES Between 45 km/h and 75 km/h



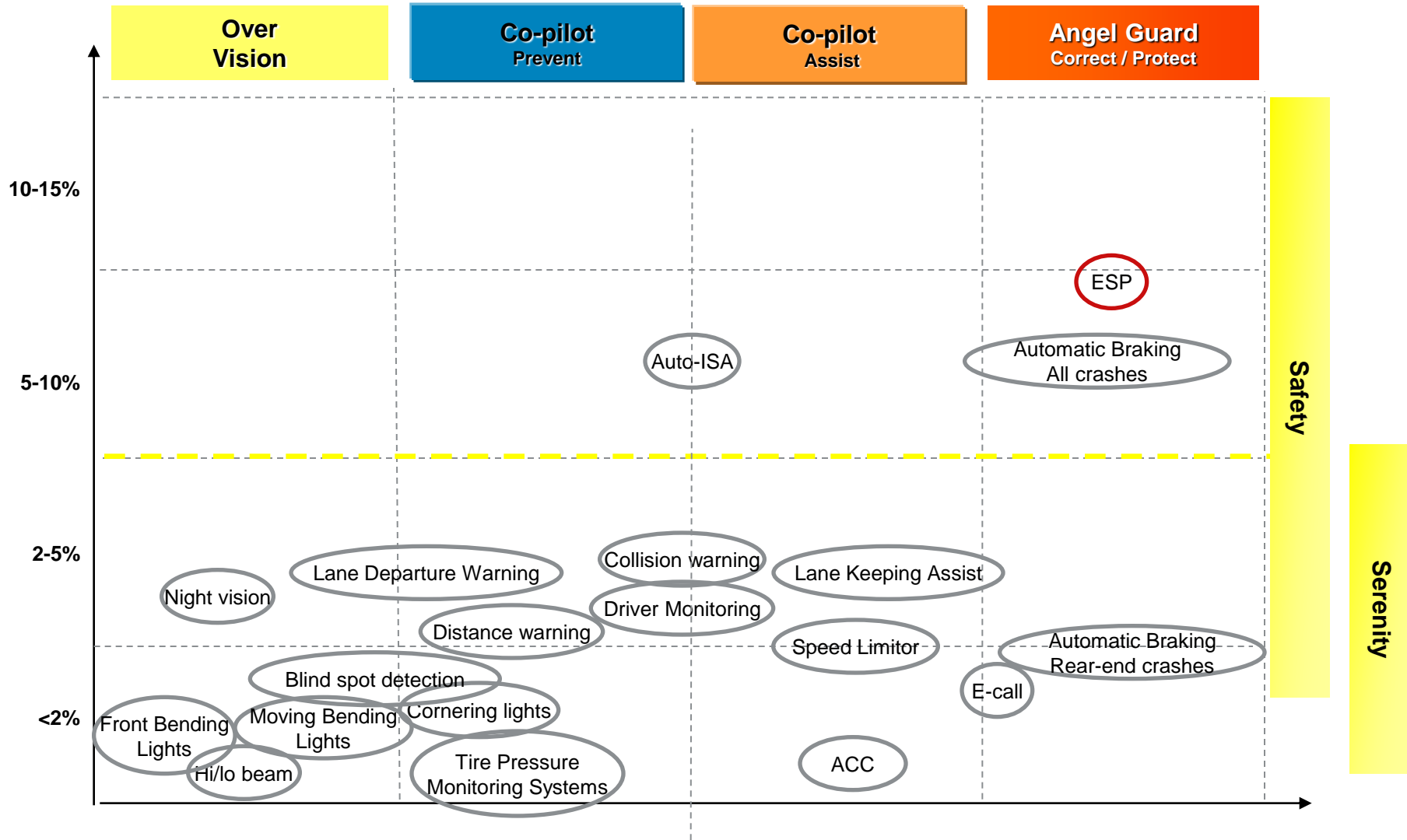
Example 2: IRap rating in India

Figure 9 Example of 2-Star Rating for pedestrians



Source : IRAP

Example 3: Effectiveness a priori of safety technologies

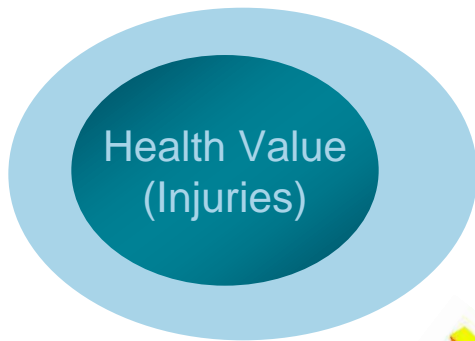


Source: TRACE and Renault, 2008

Example 4: cost-benefit analysis

	Package 'Optimal use of road safety measures'	Package 'Strengthening present policy'
Benefits:		
Road safety	10.042	8.471
Travel time	-816	1.591
Transport costs	184	-240
Environment	121	-17
Public health	66	80
Increase of mobility	8	70
<i>Total benefits</i>	<i>9.604</i>	<i>9.953</i>
Costs:		
	6.472	11.042
Profitability:		
Benefits-costs balance	3.132	-1.088
Benefits-costs ratio	1,48	0,90

Table 1. *Example of a cost-benefit overview of two measure packages in Norway in million euros. The costs and benefits in the table are those as compared to the null alternative in which these measures are not applied (price level 2005; Elvik, 2007, edited by SWOV).*



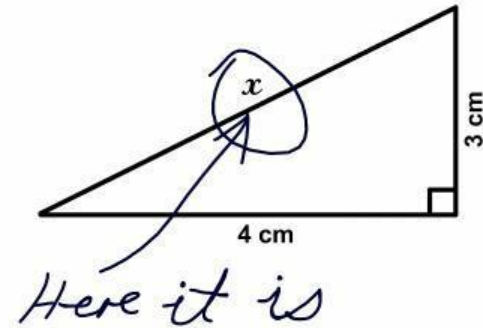
This is the angle (approach) generally chosen but there are others...

04

Other Points of view




$$\frac{\sqrt{2}}{2} = \frac{1}{\sqrt{2}}$$

3. Find x.



Ocular Trauma - by Wade Clarke ©2005

Could we heal other illnesses with traffic safety measures ?

- ✚ Health (other than injuries) 
- ✚ Eradication of Suicides
- ✚ Elimination of Poverty
- ✚ Eradication of Criminality 
- ✚ Ensure employment 
- ✚ Avoidance of Conflicts, wars, etc.

Health (Other than injuries)

- ✚ Limitation of pollution
(*clean energy, traffic calming, lower speeds, car sharing, etc.*)



- ✚ Mode changes

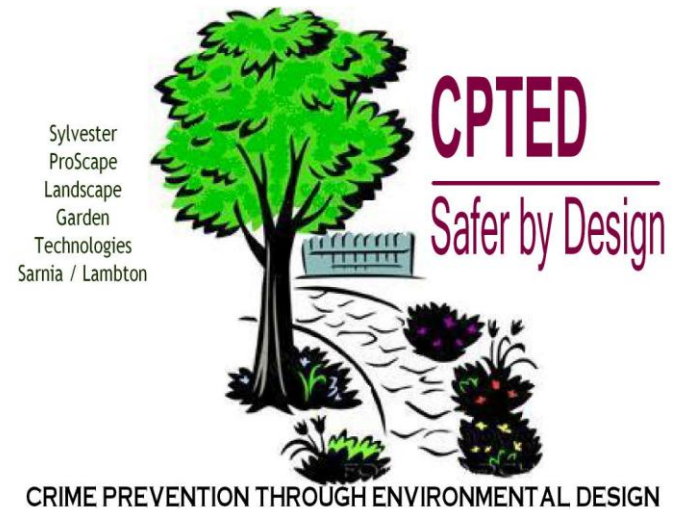


With however possible side effects....

Criminality

(Crime prevention through environmental design)

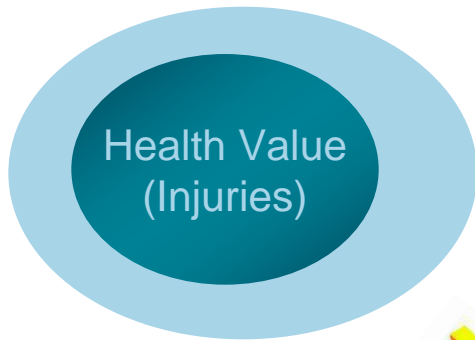
✚ Transport Planning
*(clean energy, traffic calming,
lower speeds, car sharing,*



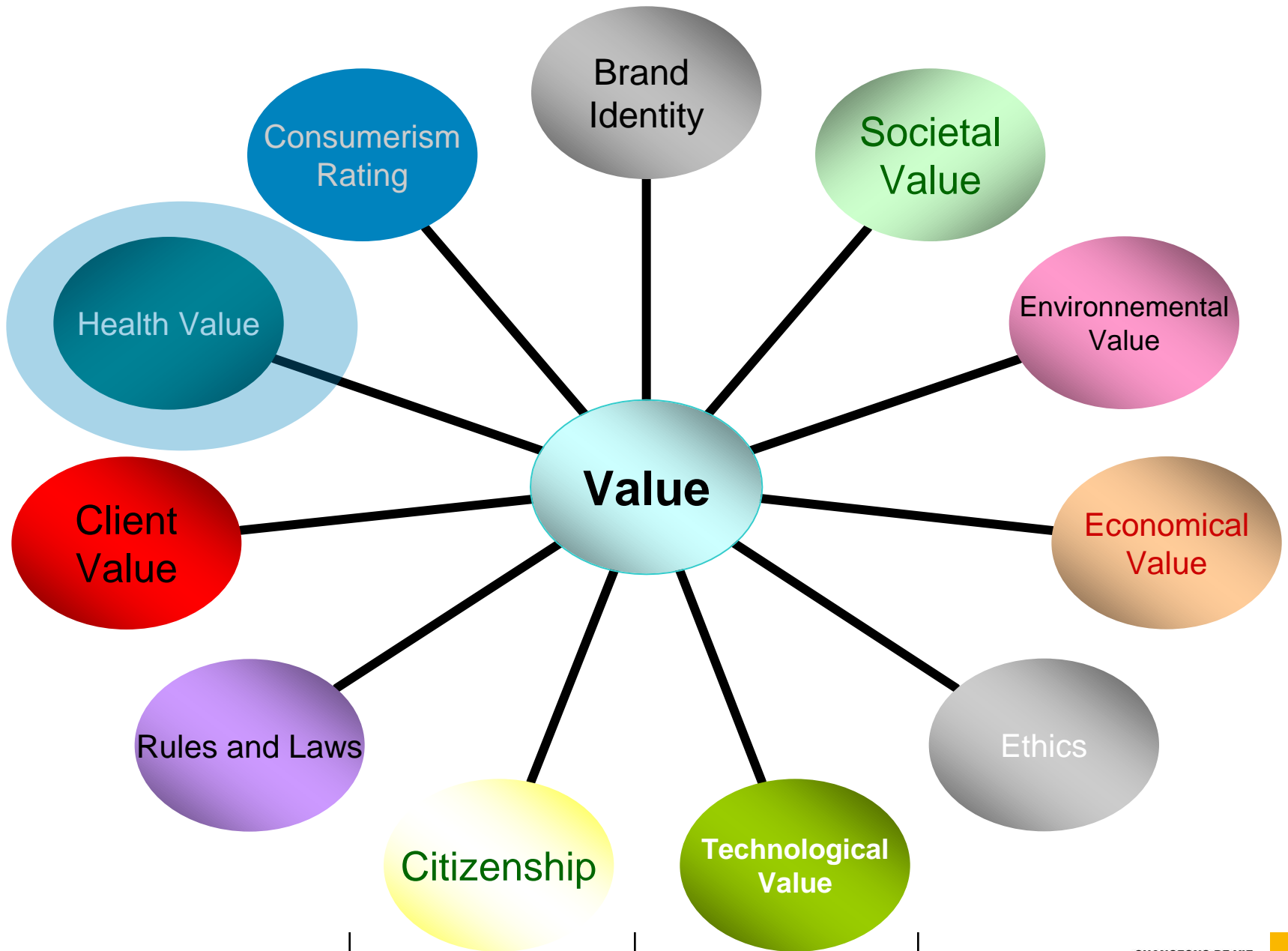
✚ Urban planning

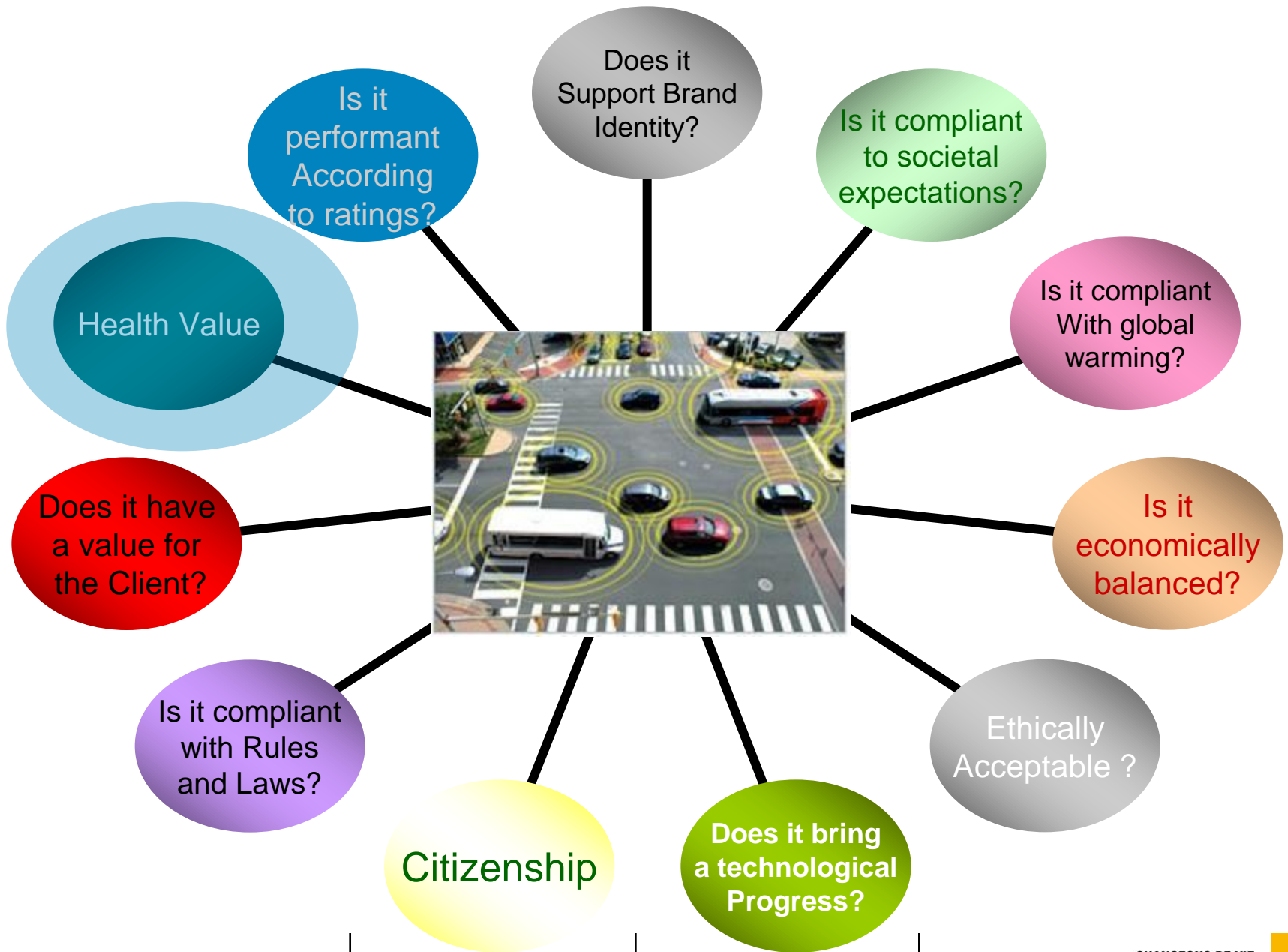


Eye on the road concept



This is the angle (approach) generally chosen but there are others...





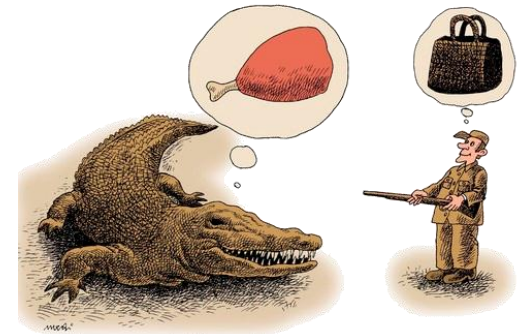
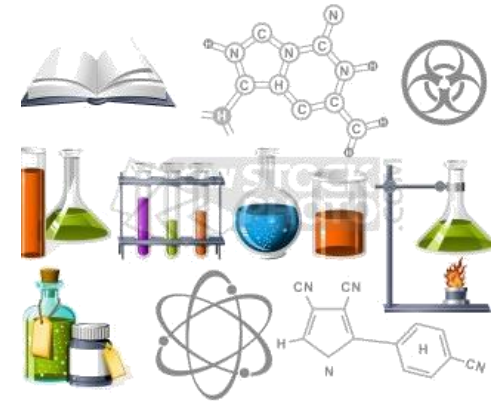
05

Conclusion & Perspectives



Conclusion

- Methods for safety benefits analysis and results are widely disseminated
- They are mainly focussing on casualties reductions and cost-benefit analysis
- A lot is known about past road safety measures effectiveness and also future ones
- Outcomes of such studies are generally poorly addressing who takes benefits of the measures (mostly general)
- Different actors can have different interests



Perspectives

- Continue exploring and developing methods for evaluating the safety benefits of crash and injury deterrence actions
- Improvements are largely expected considering prioritization of most efficient safety actions
- Other values (than injuries prevention) are also possibly addressed by road safety
- ...Especially pollution and health welfare
- and also criminality



