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Reaping the Benefits of Safe Speeds

Overview

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Bloomberg Philanthropies

UKaid from the British people

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Overview of this talk: Speed

(great deal is known - graphs)

1. Trading off death and injury for speed
2. The Scale of the Global Road Safety Crisis
3. Value of Managing speed
4. Resistance to Managing Speed
5. Opportunities

1. Trading off death and injury for speed (economy)

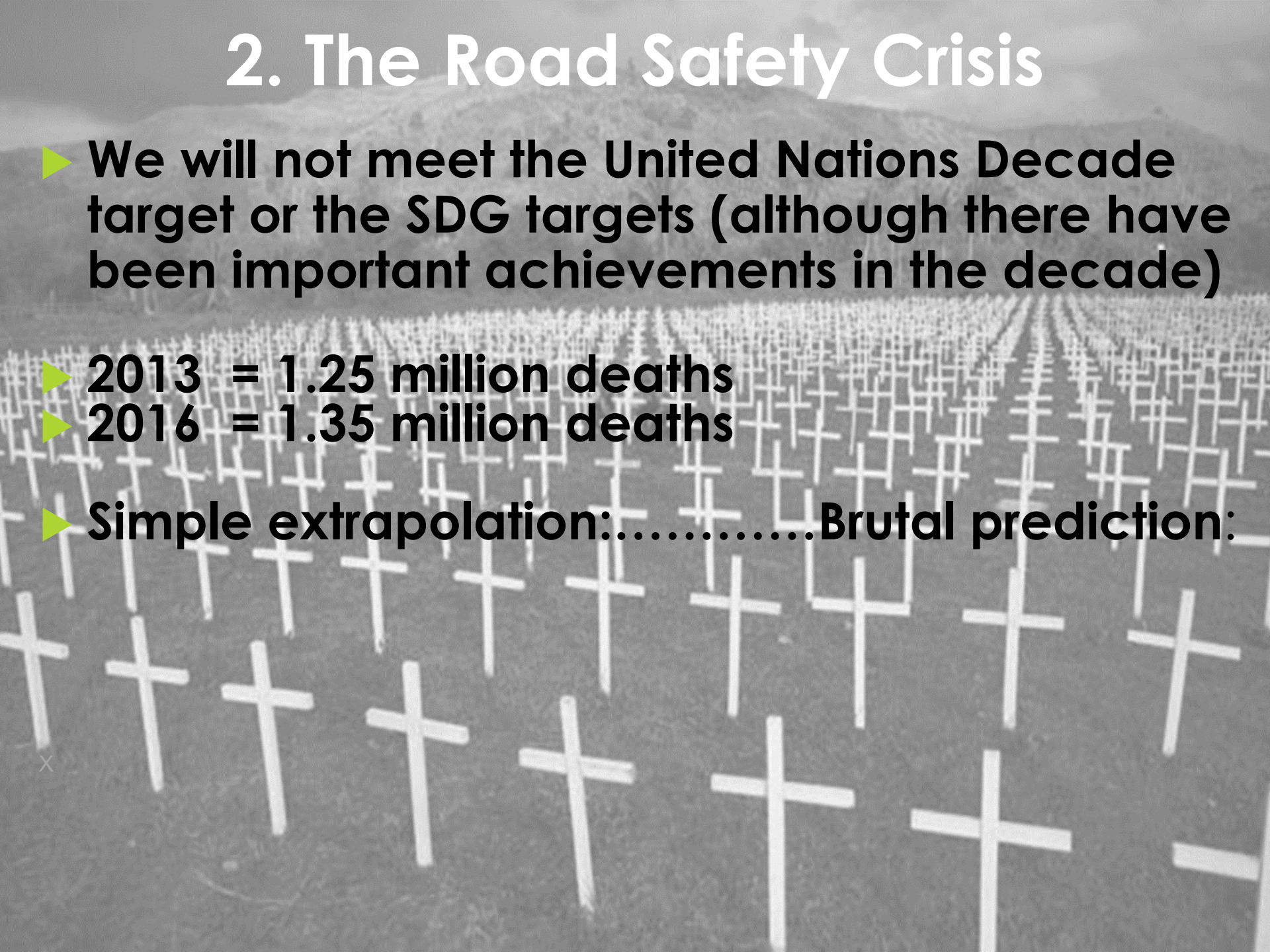
- Road safety is one of the last vestige failures of civilization
- IMAGINE if the **law courts** run by Government worked like roads:
  - Soames you were speeding- take Chika out and cut off her leg then make her wait 2 hours for help; take that guy there (innocent bystander) and kill him –painfully in front of his family. Now we react this by punishing Soames. This is exactly what our roads allow to happen.
  - What about we make it worse: Trade off time spent on murder cases in expensive court time- limit cases to two days in court and only get an extra 50 executions of innocent people. The economy will be better.
- No one would accept this, but we have been fooled into accepting it from our road transport system (through Victim Blaming)
- Road crash deaths and injuries are THE ONLY ARENA run by government in which such a trade-off is considered sane to even contemplate

2. The Road Safety Crisis

- We will not meet the United Nations Decade target or the SDG targets (although there have been important achievements in the decade)

- 2013 = 1.25 million deaths
- 2016 = 1.35 million deaths

- Simple extrapolation:……Brutal prediction:



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- Simple extrapolation:……Brutal prediction:

The decade 2021 to 2030 =
17.4 million deaths and 500m+ injuries

Road crashes are the scale of a World War

Deserving of a 2030 UN Target, and full resourcing

1. Road Crashes Limit Development

- GDP of LMICs grows faster, if crash deaths and injuries are reduced:

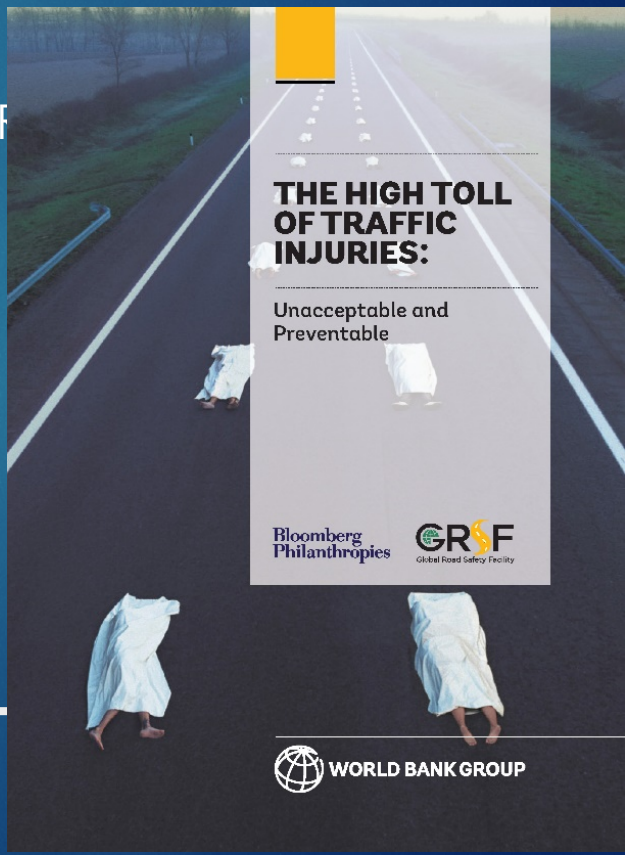
  7% to 22% more over 24 years

  (Economic analysis of 5 countries by World Bank/GF

Road safety =

Sound economic investment

Sound development investment



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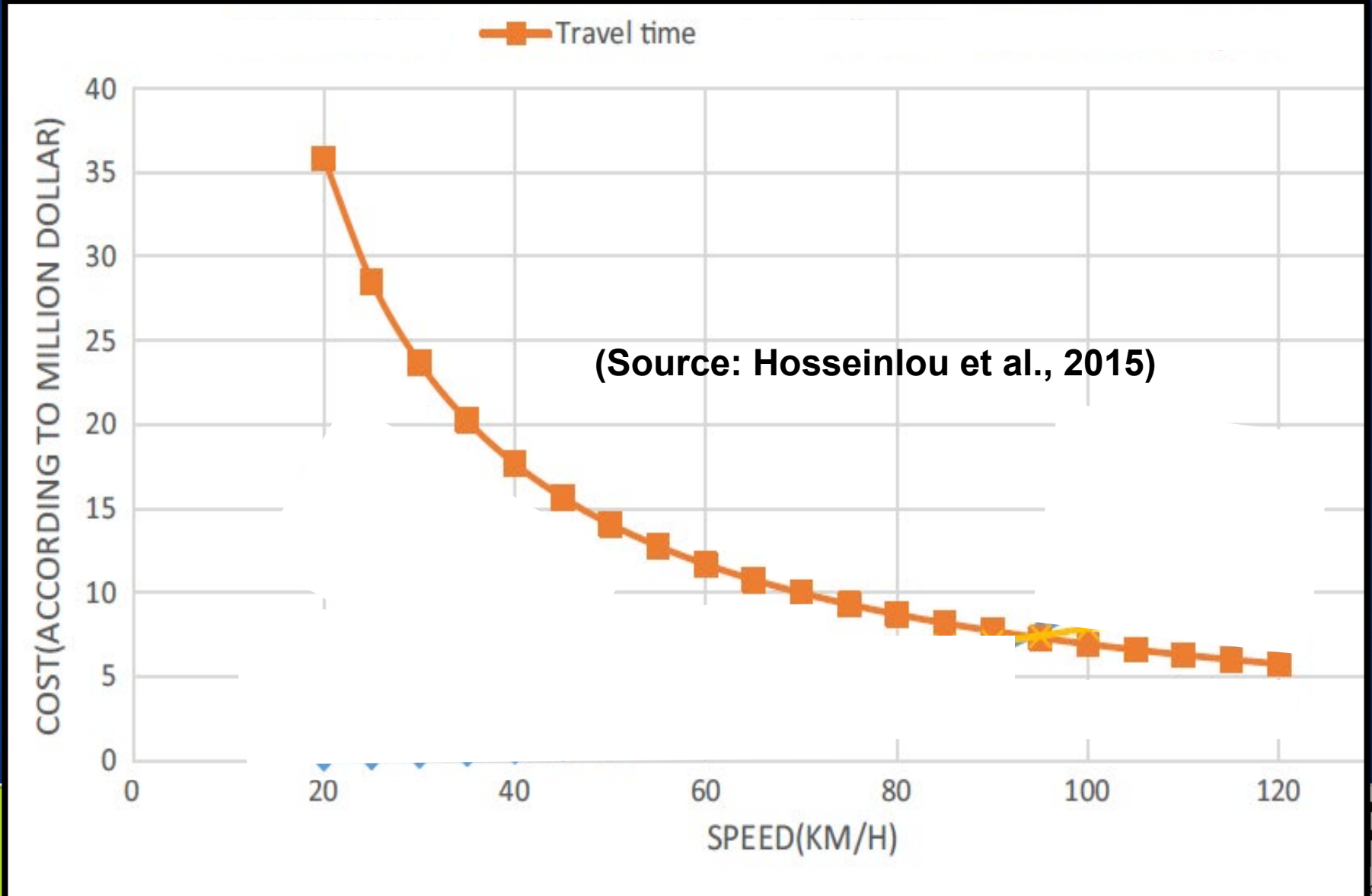
2. Trading off death and injury for speed (economy) is an Illusion



(Source: Hosseinlou et al., 2015)

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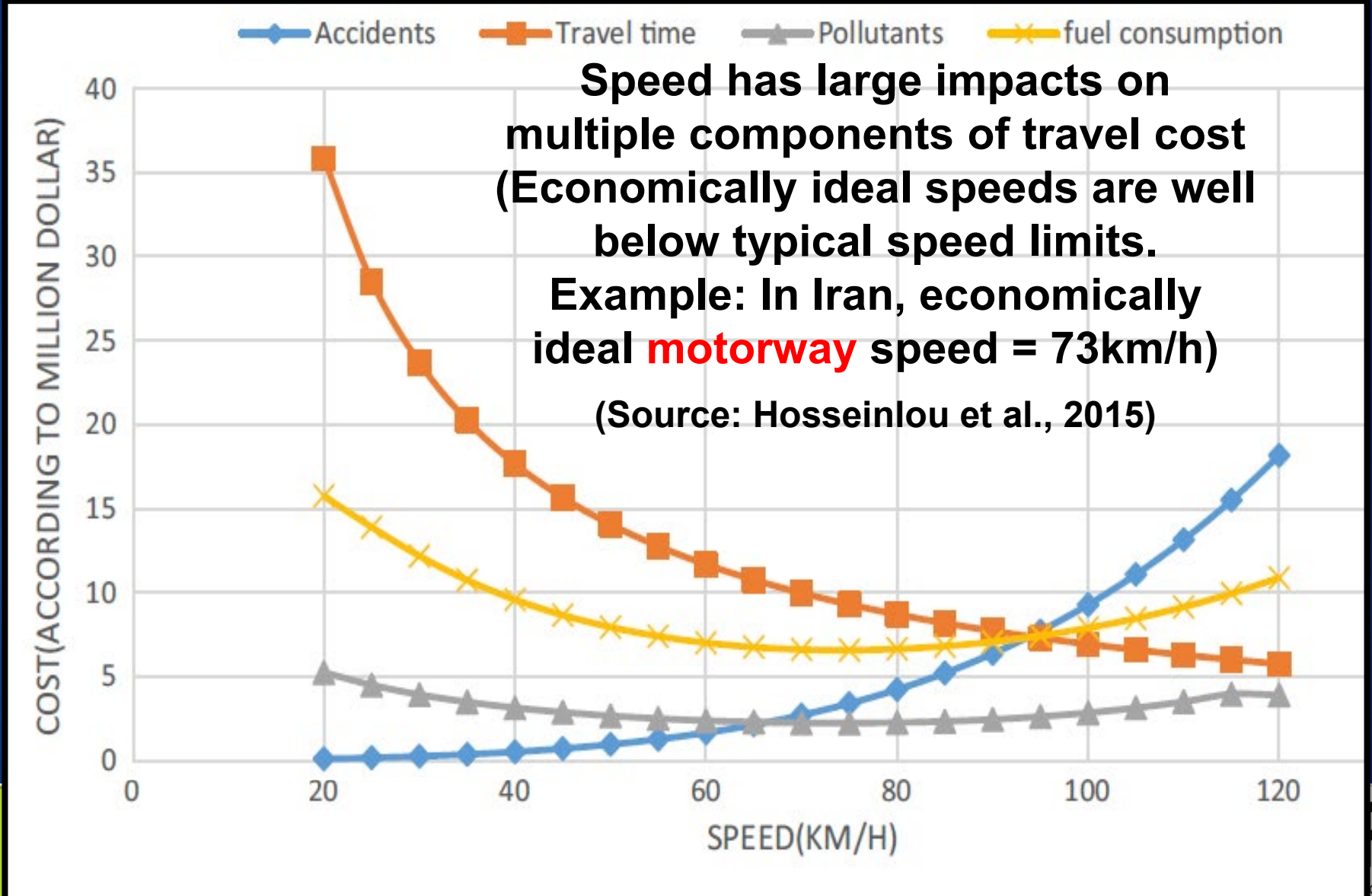


Speed has large impacts on multiple components of travel cost (Economically ideal speeds are well below typical speed limits. Example: In Iran, economically ideal motorway speed = 73km/h)

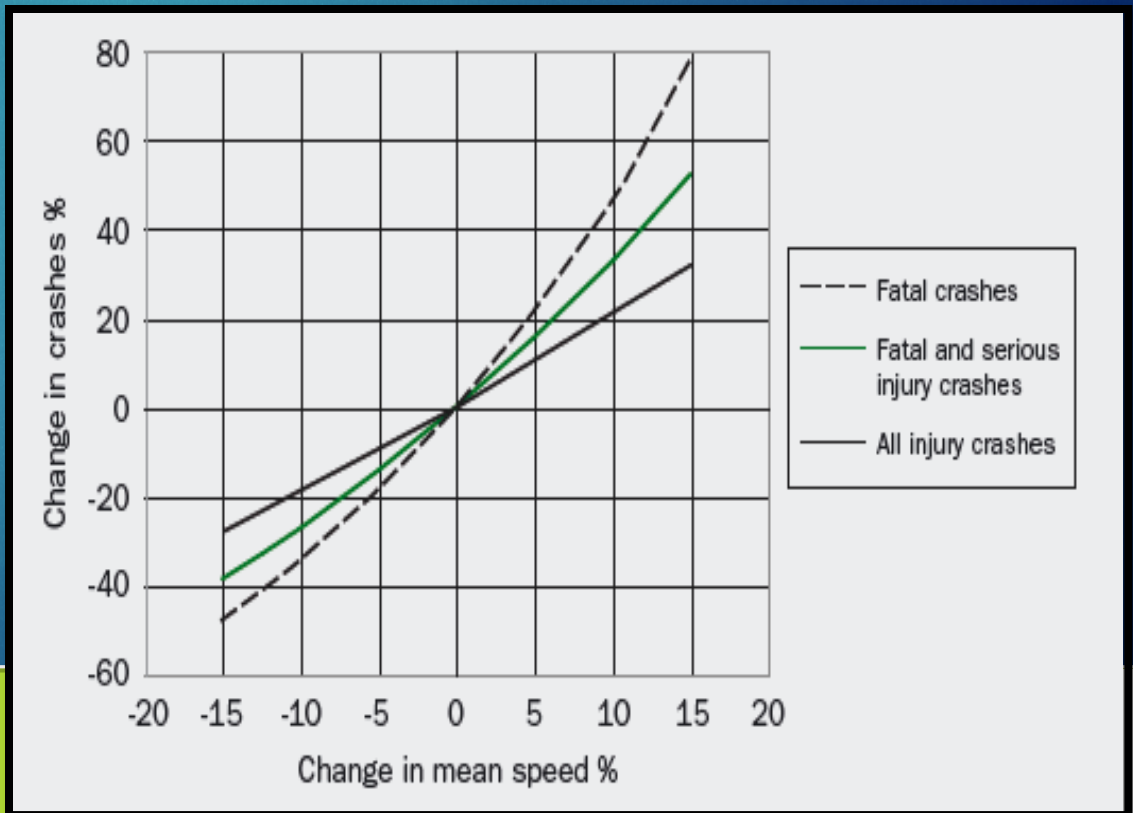
(Source: Hosseinlou et al., 2015)

3. Value of managing speed

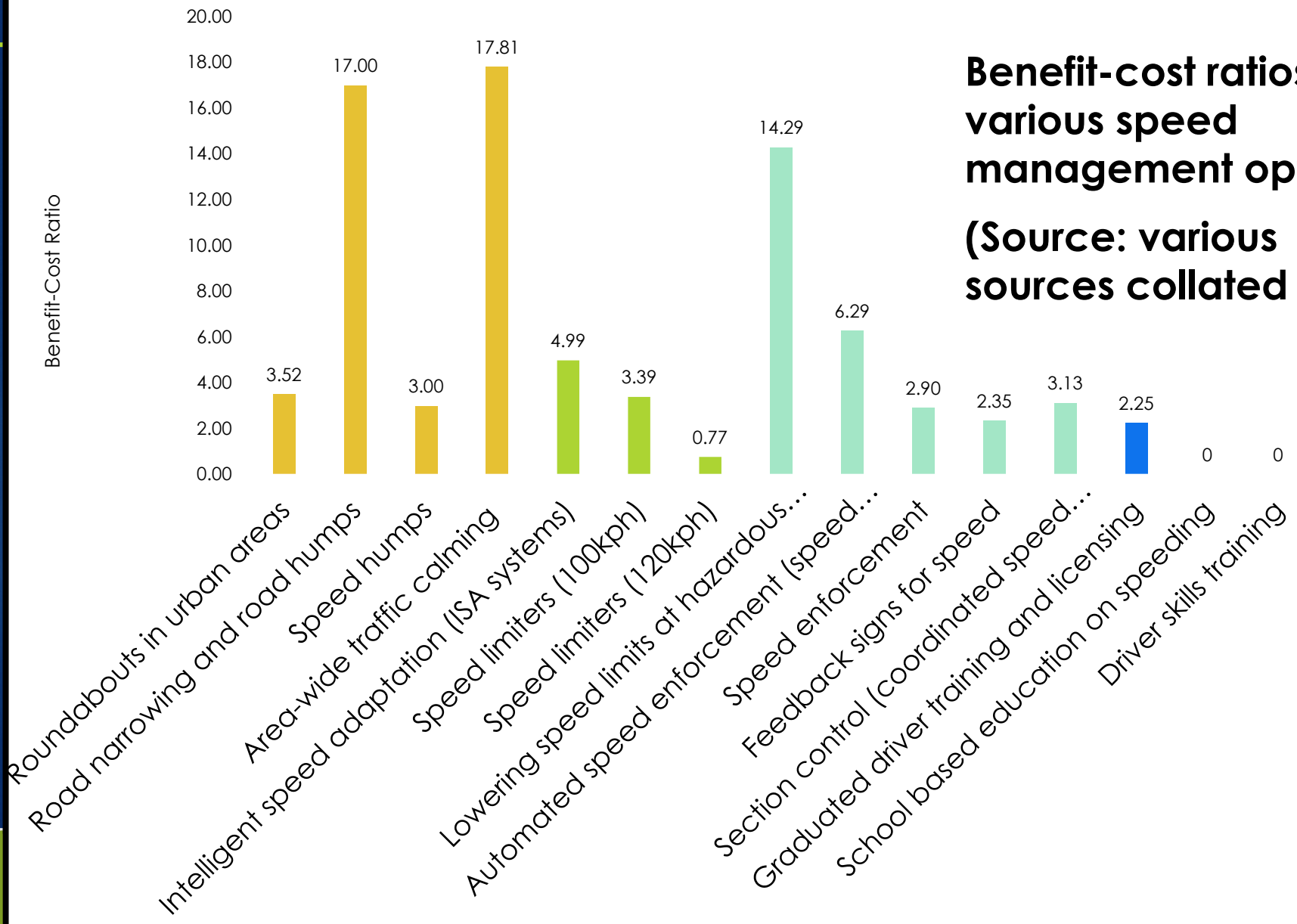
- Small changes in speed have large impacts on road crash deaths and injuries:
  - **Each 1% increase in speed results in a ~ 4% increase in deaths**

(Source: Nilsson, 2004

& Many other studies)



3. Value of managing speed



Benefit-cost ratios for various speed management options

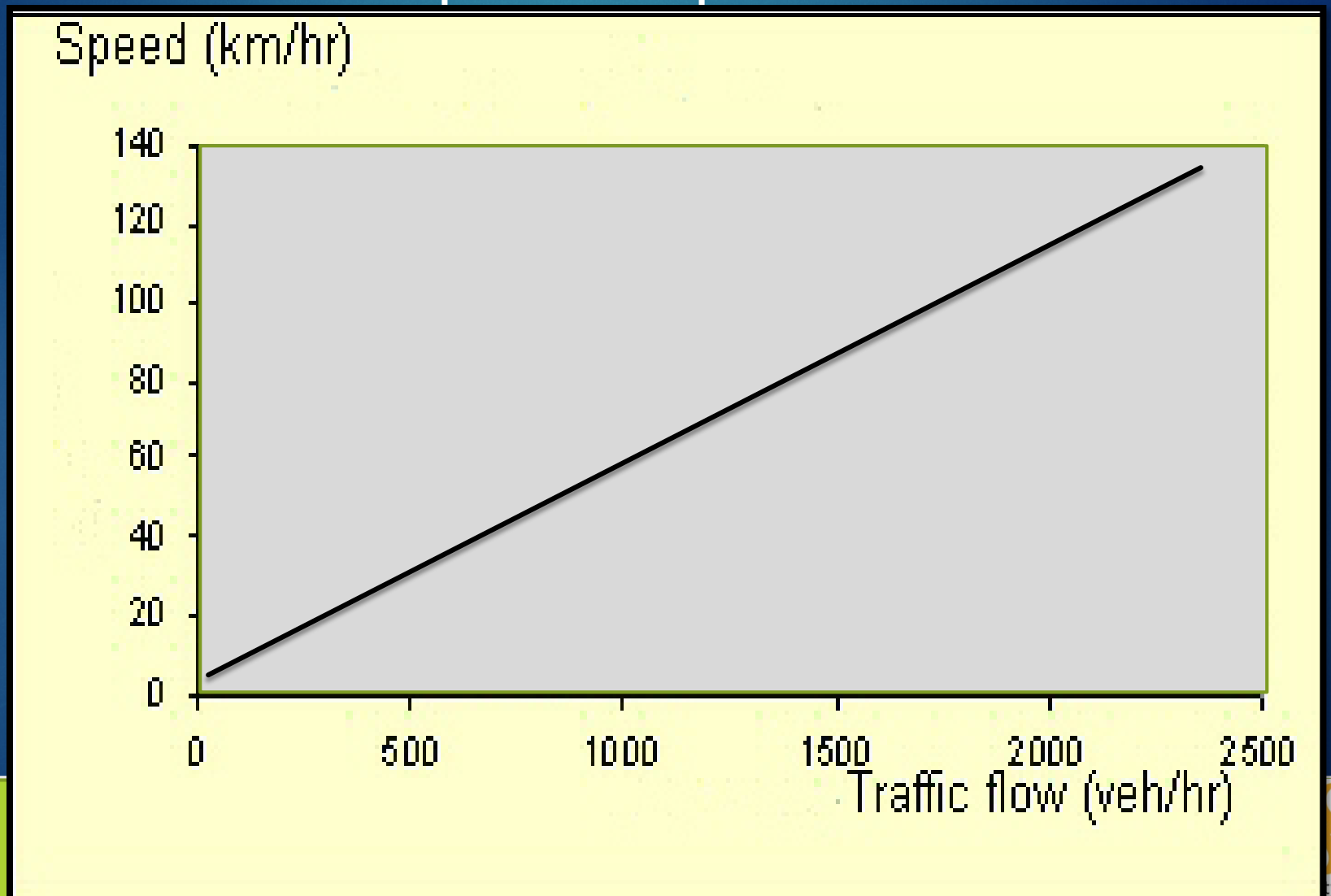
(Source: various sources collated here)

4. Resistance to Managing Speed

- Mistaken belief in economic benefits (as just shown)
- Personal experience as a basis for judging the risk of speeding (optimism bias, and other judgment errors make this a poor source)
- Mistaken belief in the effects of speed on congestion

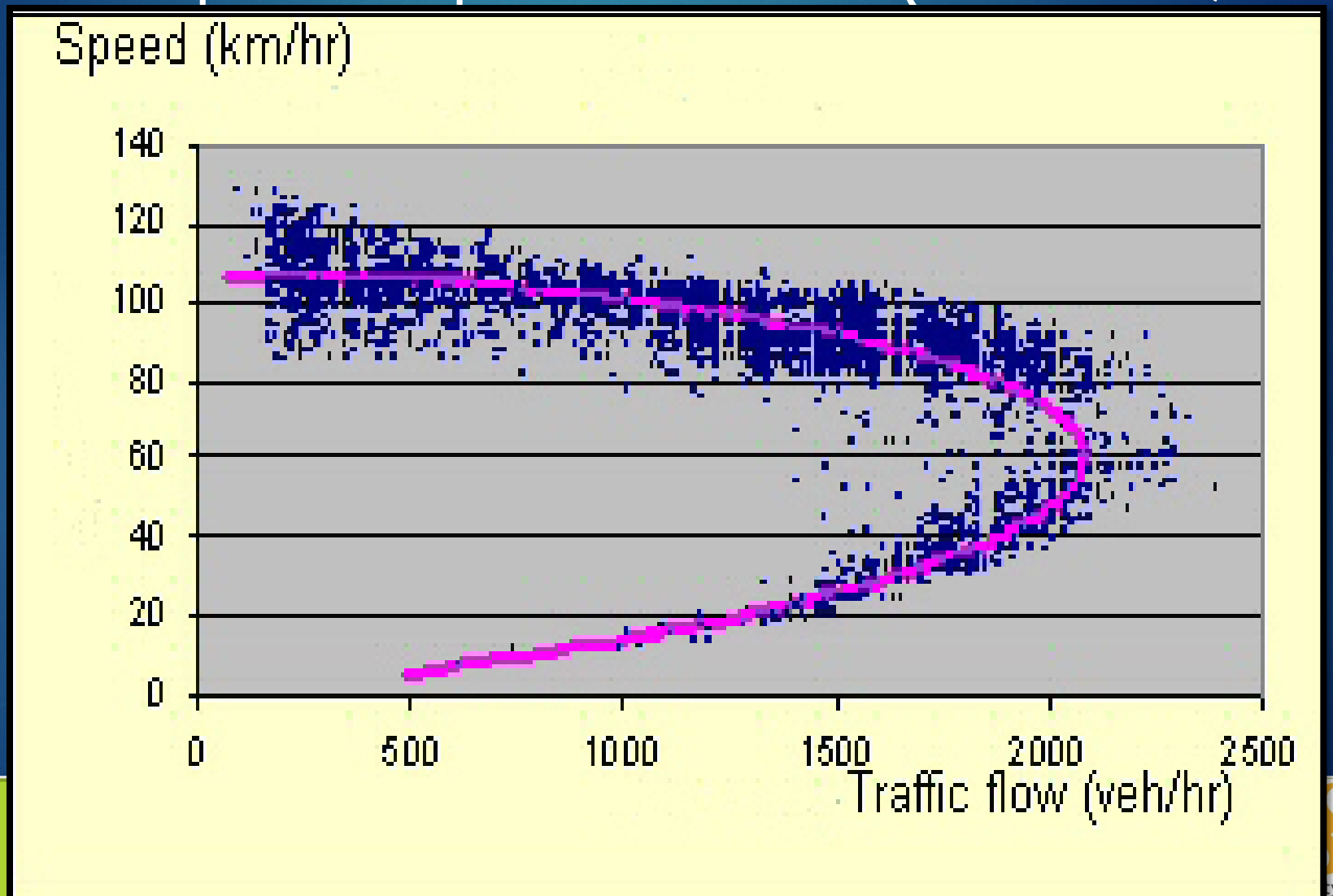
4. Resistance to Managing Speed

Common-sense relationship between speed and traffic flow



4. Resistance to Managing Speed

Real relationship between speed and traffic flow (Source: OECD, 2006)



5. Opportunities

Managing speeds down to safe levels = huge opportunities for road safety, environment, inclusion, efficiency, and reduced pollution

Mistake: People don't want speeds down, don't want speed humps ……

Practical evidence: lower speed limits work

Changing speed limits:

NHTSA (1989): 89km/h up 105km/h 21% ↑ fatal crashes

Sliogeris (1992): 100km/h up 110km/h 25% ↑ injury crashes

Sliogeris (1992): 110km/h to 100km/h 19% ↓ injury crashes

Nilsson (1990): 110km/h to 90km/h 21% ↓ fatal crashes

Scharping (1994): 60km/h to 50km/h 20% ↓ all crashes

Bhatnagar (2010):110km/h to 100km/h 26% ↓ casualty crashes

- Note this is not assuming that everyone obeys the limits. If they did benefits would be greater.

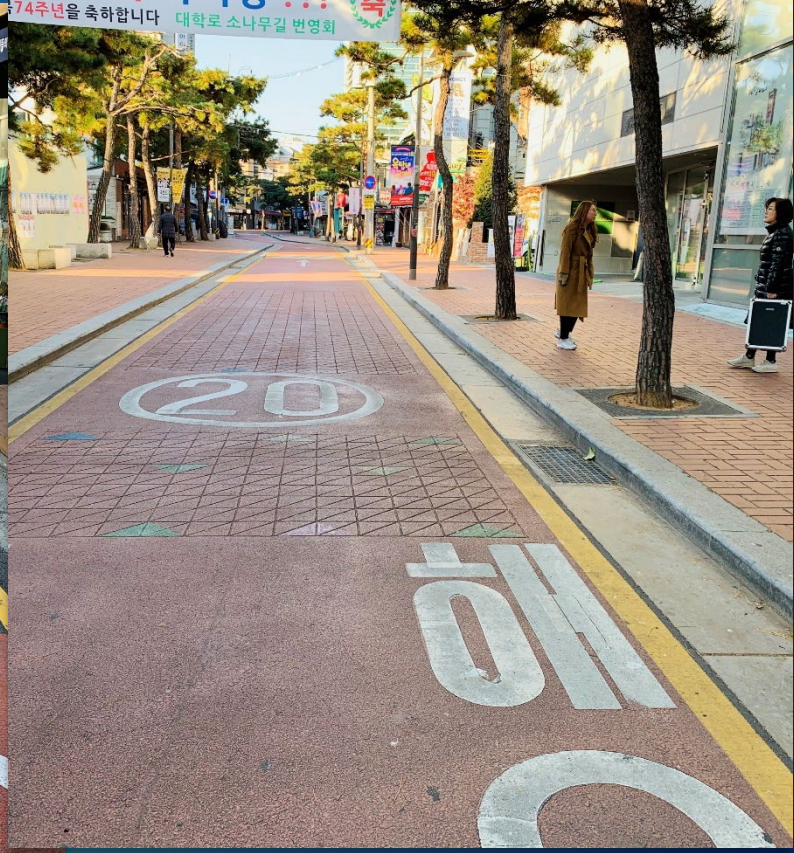
INFRASTRUCTUR SOLUTIONS:

Raised crossings

Speed humps

speed management on the road surface

(Examples from South Korea and Senegal)



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Three messages

- Road deaths & injuries are a global crisis with huge economic cost in LMICs
- Speed is THE TOXIN is crash probability and severity
- Managing speed is a powerful, low-cost, cost-effective method achieving sustainability:
  - saving deaths and injuries
  - improving the economy
  - reducing GHGs
  - improving health
  - increasing inclusion.

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Thank you for your attention

3. The role of speed in Road Safety

- Risk of death by speed of impact changes for different crash types (Source: GRSP)